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MD520 Series General-Purpose AC Drive

Function Guide

Industrial Automation | Intelligent Elevator | New Energy Vehicle | Industrial Robot | Rail Transit

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Preface

About This Guide

The MD520 series AC drive is a general-purpose high-performance current vector control AC drive. It is designed to control and regulate the speed and torque of three-phase AC asynchronous motors. The AC drive can be used to drive textile machines, paper machines, wire drawing machines, machine tools, packaging machines, food machines, fans, water pumps, and other automated production equipment.

This guide introduces function application, fault codes, and parameters of the AC drive.

More Documents

Document Name	Document No.	Description
Quick Installation and Commissioning Guide	19011712	Describes the installation, wiring, commissioning, troubleshooting, parameters, and fault codes of the AC drive.
Hardware Guide	19011713	Describes the composition, technical specifications, components, dimensions, options (including installation accessories, cables, and peripheral electrical components), and expansion cards of the MD520 series AC drive, as well as routine maintenance and repair, and certification and standard compliance of the AC drive.
Installation Guide	19011714	Describes the installation dimensions, space design, specific installation steps, wiring requirements, routing requirements, and option installation requirements of the AC drive, as well as common EMC troubleshooting recommendations.
Commissioning Guide	19011715	Describes the tools, processes, and specific steps of commissioning of the AC drive, as well as troubleshooting, fault codes, and parameters related to the AC drive.
Communication Guide	19011716	Describes the communication method, networking, and communication settings of the AC drive.
Function Guide (this document)	19011717	Introduces function application, fault codes, and parameters of the AC drive.

Revision History

Date	Version	Description
January 2022	A00	First release

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1 Function Application

1.1 Drive Configuration

1.1.1 Operation Command Sources

1.1.1.1 Setting Operation Command Source

Operation commands are used to control the start, stop, forward run, reverse run, and jog operations of the AC drive. Four command sources are available: operating panel, terminal I/O, communication, and customization. You can select the operation command source by setting F0-02.

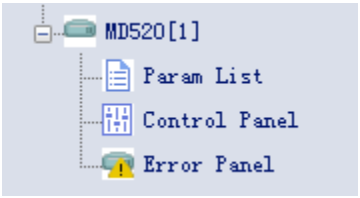
Para.	Name	Default	Value Range	Description
F0-02	Operation command source	0	0: Operating panel control 1: Terminal I/O control 2: Communication control 3: Customization	This parameter defines the source of the AC drive control commands, such as run, stop, forward run, reverse run, and jog. 0: Operating panel control Control commands are input using the RUN, STOP/RES, and MF.K keys on the operating panel. This mode is suitable for initial commissioning. 1: Terminal I/O control Control commands are input through the DI terminals of the AC drive. The DI terminal control commands can be set based on different scenarios, such as start/stop, forward/reverse run, jog, two-wire/three-wire control, and multi-speed. It is suitable for most applications. 2: Communication control Control commands are input through remote communication. The AC drive must be equipped with a communication card to communicate with the host controller. This mode applies to remote control or centralized control of multiple equipment. 3: Customization The command source can be selected flexibly. It is used for expansion.

1.1.1.2 Operating Panel Control

1. When F0-02 is set to 0, the start and stop of the AC drive are controlled by pressing keys (and) on the operating panel.

- When you press , the AC drive starts to run (the RUN indicator is on).
- When you press during running, the AC drive stops running (the RUN indicator is off).

2. When F0-02 is set to 0, you can also use commissioning software to control running of the AC drive.
3. Open InoDriverShop and connect to the AC drive, as shown in the following figure.



4. Double-click Control Panel under the AC drive on the commissioning software to open the control panel interface. The following figure shows the control panel interface:

- Enter the set frequency in the input box on the panel and click Update Frequency to change the preset frequency defined by F0-08.
- Click on the panel.The AC drive starts forward running.
- Click on the panel. The AC drive starts reverse running.
- When the AC drive is running, click on the panel. The AC drive stops running.
- Hold on the panel. The AC drive starts forward jogging. When the key is released, jogging stops.
- Hold on the panel. The AC drive starts reverse jogging. When the key is released, jogging stops.
- When the AC drive is faulty, click to reset the fault.

1.1.1.3 Terminal I/O Control

When F0-02 is set to 1, the start and stop of the AC drive are controlled through terminals.

You can set F4-11 to select a terminal control mode. Four terminal I/O control modes are available, including two-wire mode 1, two-wire mode 2, three-wire mode 1, and three-wire mode 2.

Para.	Name	Default	Value Range	Description
F4-11	Terminal control mode	0	0: Two-wire mode 1 1: Two-wire mode 2 2: Three-wire mode 1 3: Three-wire mode 2	This parameter defines the mode in which the AC drive is controlled by external terminals.

You can use any of multi-functional input terminals DI1 to DI10 as external input terminals. You can define he functions of DI1 to DI10 by setting F4-00 to F4-09. For details, see the description of F4-00 (DI1) to F4-09 (DI10) in *“5.1 List of Parameters” on page 1315*.

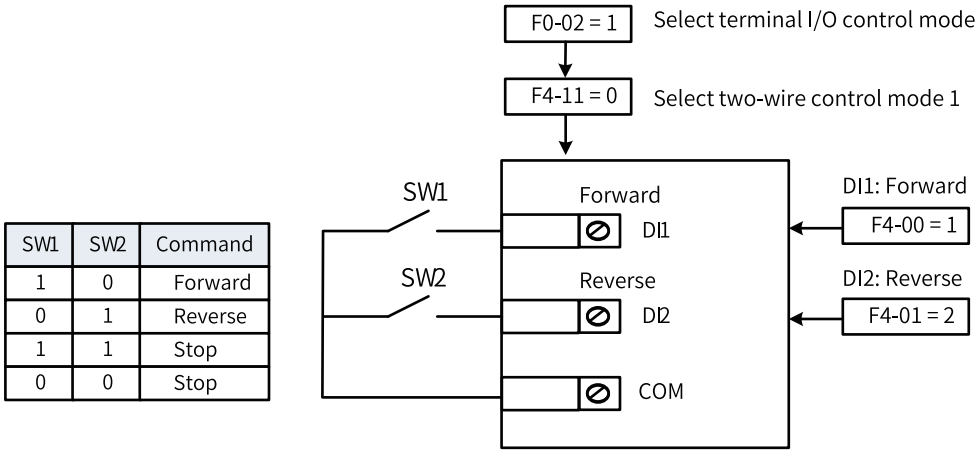
Two-wire mode 1

When F4-11 is set to 0, two-wire mode 1 is used. This is the most commonly used two-wire mode.

For example, DI1 is assigned with the forward run function, and DI2 is assigned with the reverse run function. Connect the forward run switch to DI1 and the reverse run switch to DI2.

Related Parameter	Name	Reference	Function Description
F4-11	Terminal control mode	0	Two-wire mode 1
F4-00	DI1 function	1	Forward RUN (FWD)
F4-01	DI2 function	2	Reverse RUN (REV)

When SW1 is closed and SW2 is open, the motor rotates in the forward direction. When SW1 is open and SW2 is closed, the motor rotates in the reverse direction. When SW1 and SW2 are both open or closed, the motor stops. See the following figure.



SW1	SW2	Command
1	0	Forward
0	1	Reverse
1	1	Stop
0	0	Stop

Figure 1-1 Wiring and parameter setting for two-wire mode 1

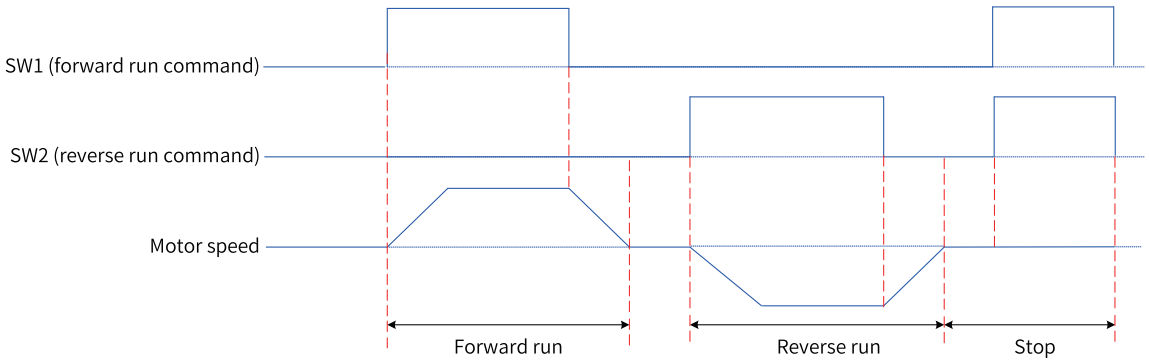


Figure 1-2 Timing diagram of two-wire mode 1 (normal)

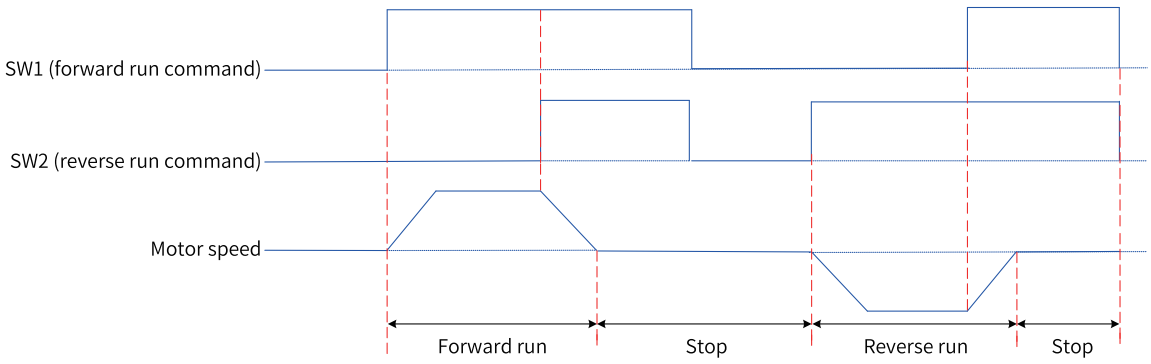


Figure 1-3 Timing diagram of two-wire mode 1 (abnormal)

Two-wire mode 2

In this mode, DI1 is assigned with the operation command function, and DI2 is assigned with the running direction function. The parameters are set as follows.

Related Parameter	Name	Reference	Function Description
F4-11	Terminal control mode	1	Two-wire mode 2
F4-00	DI1 function	1	Operation command
F4-01	DI2 function	2	Running direction

When SW1 is closed, the motor rotates in the forward direction with SW2 open, and it rotates in the reverse direction with SW2 closed. When SW1 is open, the motor stops regardless of the status of SW2. See the following figure.

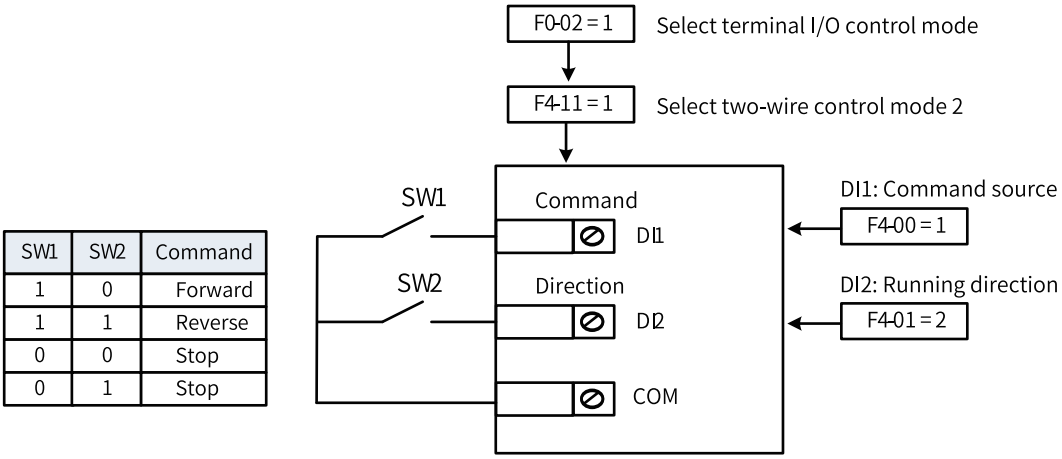


Figure 1-4 Wiring and parameter setting for two-wire mode 2

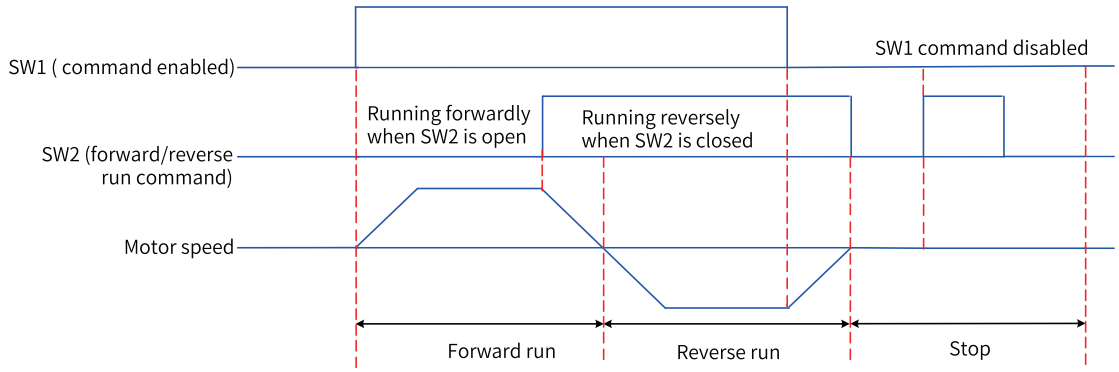


Figure 1-5 Timing diagram of two-wire mode 2

Three-wire mode 1

In this mode, DI3 is assigned with the three-wire operation control function, DI1 is assigned with the forward run function, and DI2 is assigned with the reverse run function. The AC drive buttons are used as the start/stop switch. The start/stop button is connected to DI3, the forward RUN button is connected to DI1, and the reverse RUN button is connected to DI2. The parameters are set as follows.

Related Parameter	Name	Reference	Function Description
F4-11	Terminal control mode	2	Three-wire mode 1
F4-00	DI1 function	1	Forward RUN (FWD)

Related Parameter	Name	Reference	Function Description
F4-01	DI2 function	2	Reverse RUN (REV)
F4-02	DI3 function	3	Three-wire operation control

SW3 is a normally-closed (NC) button, whereas SW1 and SW2 are normally-open (NO) buttons. If SW3 is closed, the motor rotates in the forward direction when you press down SW1, and it rotates in the reverse direction when you press down SW2. The motor stops immediately when SW3 opens. SW3 must remain closed during normal start and running. A signal from SW1 or SW2 takes effect once SW1 or SW2 is closed.

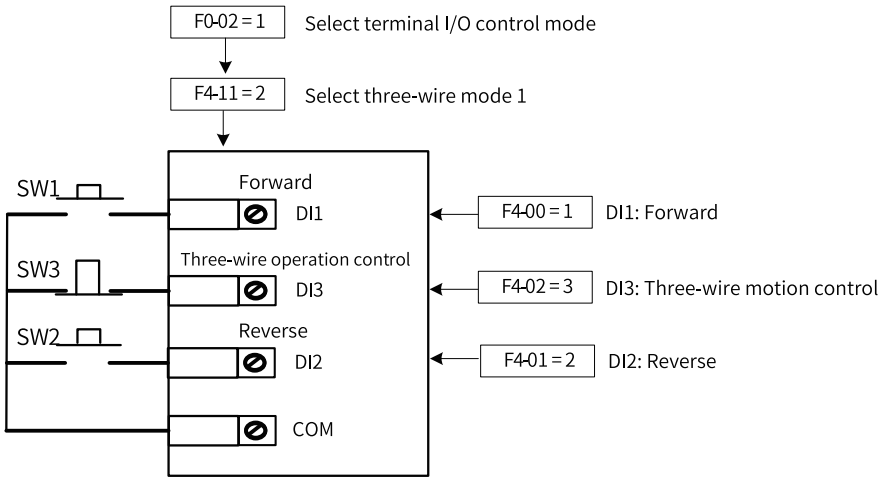


Figure 1-6 Wiring and parameter setting for three-wire mode 1

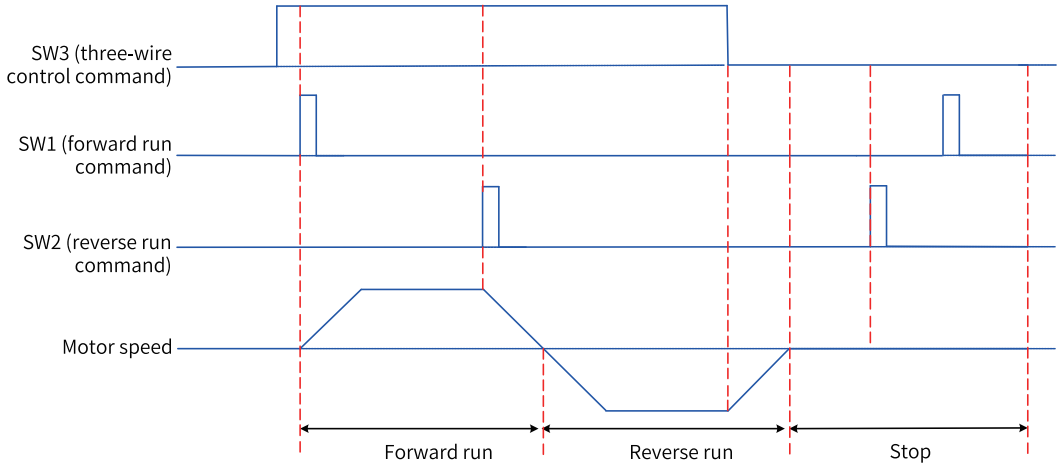


Figure 1-7 Timing diagram of three-wire mode 1

Three-wire mode 2

For example, DI3 is assigned with the three-wire operation control function, DI1 is assigned with the command function, and DI2 is assigned with the forward/reverse run switchover function. The start/stop button is connected to DI3, the running enable signal is connected to DI1, and the forward/reverse RUN button is connected to DI2. The parameters are set as follows.

Related Parameter	Name	Reference	Function Description
F4-11	Terminal control mode	3	Three-wire mode 2
F4-00	DI1 function	1	Operation command
F4-01	DI2 function	2	Running direction
F4-02	DI3 function	3	Three-wire operation control

If SW3 is closed, the AC drive runs when you press down SW1. The AC drive runs in the forward direction if SW2 is open and in the reverse direction if SW2 is closed. The motor stops immediately after SW3 is open. SW3 must remain closed during normal start and running. A signal from SW1 takes effect once SW1 is closed.

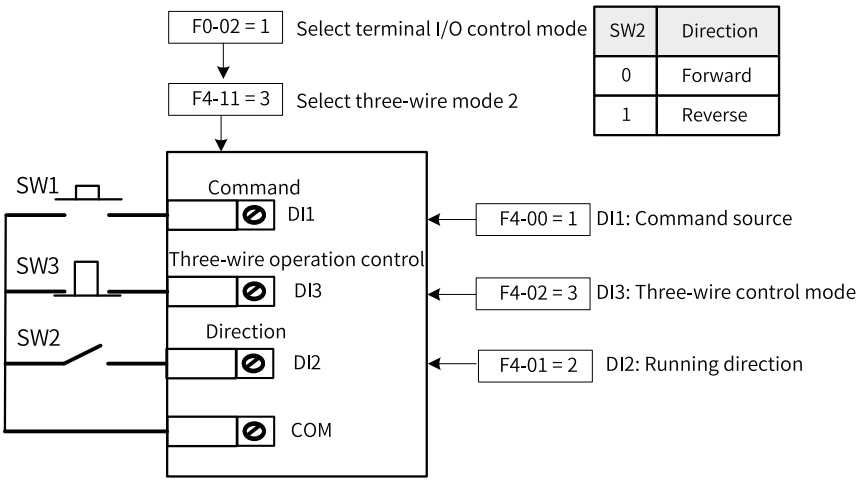


Figure 1-8 Wiring and parameter setting for three-wire mode 2

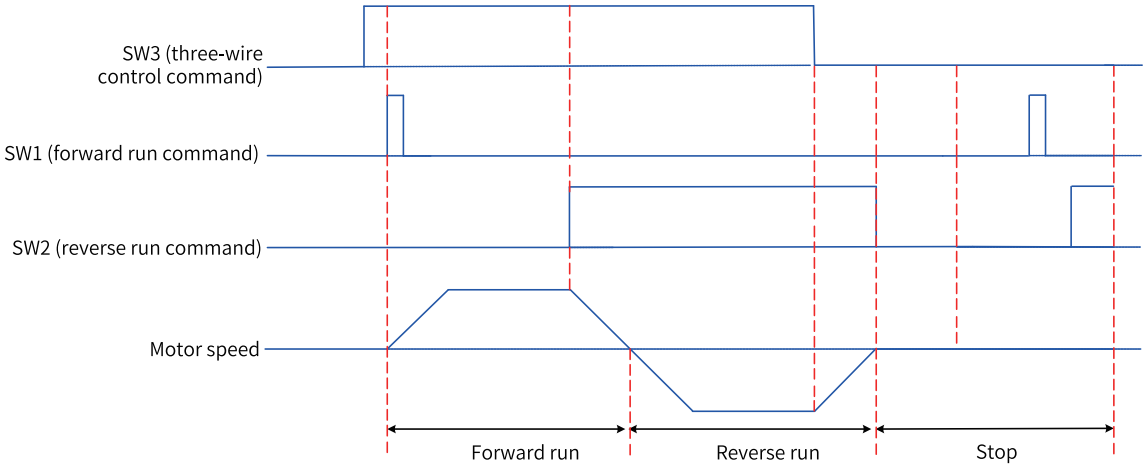


Figure 1-9 Timing diagram of three-wire mode 2

1.1.1.4 Communication Control

When F0-02 is set to 2, the start and stop of the AC drive are controlled through communication.

The AC drive supports six types of communication with the host computer: Modbus (Modbus RTU, Modbus ASCII, and Modbus TCP), PROFIBUS DP, CANlink, CANopen, PROFINET, and EtherCAT, which

cannot be used at the same time. To enable communication as the command source, you must install a communication card. The AC drive supports six optional communication cards. If Modbus, PROFIBUS DP, CANopen, PROFINET, or EtherCAT is used, you need to set F0-28 (communication protocol selection) to select an applicable serial communication protocol. The CANlink protocol is valid all the time.

When the AC drive is controlled through serial communication, the host controller must send a write command to the AC drive. Here takes the Modbus protocol as an example to describe how to control the AC drive through communication.

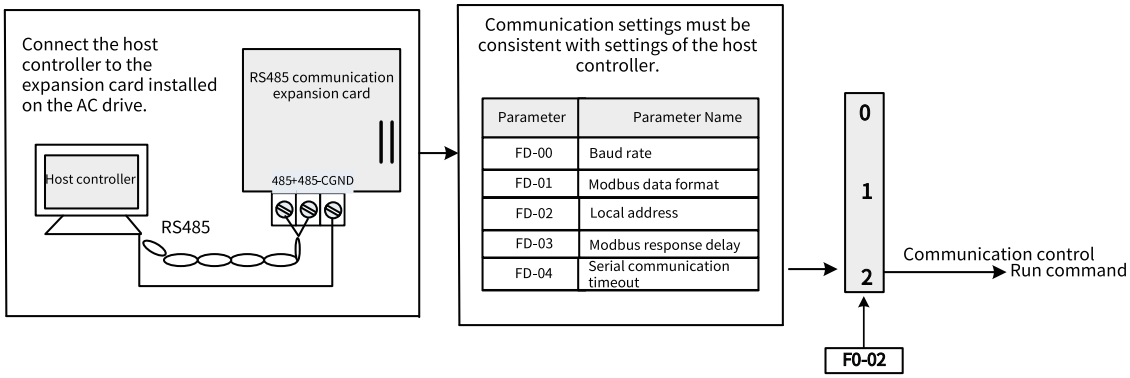


Figure 1-10 Setting commands through communication

For example, to make the AC drive run in reverse direction, the host computer sends the write command 01 06 20 00 00 02 03 CB (hexadecimal). The following table describes the meaning of each byte in the command. The command is in hexadecimal format. For other communication addresses and control commands, see "Appendix B: Communication Data Address Definition and Modbus Protocol".

Command	Description
01H (configurable)	AC drive address
06H	Write command
2000H	Control command communication address
02H (reverse RUN)	Control command
03CBH	CRC check

The following table describes the master and slave communication commands and responses:

Host Command		Slave Response	
ADDR	01H	ADDR	01H
CMD	06H	CMD	06H
High-order bits of parameter address	20H	High-order bits of parameter address	20H
Low-order bits of parameter address	00H	Low-order bits of parameter address	00H
High-order bits of data content	00H	High-order bits of data content	00H
Low-order bits of data content	02H	Low-order bits of data content	02H
CRC high-order bits	03H	CRC high-order bits	03H
CRC low-order bits	CBH	CRC low-order bits	CBH

1.1.1.5 Customization

When F0-02 is set to 3, the start and stop of the AC drive are controlled through a custom channel. The AC drive supports two sets of custom channel parameter configurations.

Table 1–1

Para.	Name	Default	Value Range	Description
A4-00	Custom channel selection	0	0: Control channel 1 1: Control channel 2	Selection between two custom channels
A4-01	Custom OFF1 source	0	0: Disabled 3–18: DI1 to DI16 Others: B connector	Source of start/stop control OFF1 for custom channel 1
A4-02	Custom OFF2 source 1	0	0: Enabled 1: Disabled 3–18: DI1 to DI16 Others: B connector	Source 1 of coast to stop command OFF2 for custom channel 1. The coast to stop command OFF2 is valid if any of the three sources is active low.
A4-03	Custom OFF3 source 1	0	0: Enabled 1: Disabled 3–18: DI1 to DI16 Others: B connector	Source 1 of emergency stop command OFF3 for custom channel 1. The emergency stop command OFF3 is valid if any of the three sources is active low.
A4-04	Custom running permission source	0	0: Not permitted 1: Permitted 3–18: DI1 to DI16 Others: B connector	Running permission source for custom channel 1
A4-05	Custom fault reset source 1	0	0: Disabled 1: Enabled 3–18: DI1 to DI16 Others: B connector	Source 1 of the fault reset command for custom channel 1. The fault reset command is valid if any of the three sources is active high.
A4-06	Custom JOG1 source	0	0: Disabled 3–18: DI1 to DI16 Others: B connector	Source of the JOG1 command for custom channel 1

Para.	Name	Default	Value Range	Description
A4-07	Custom JOG2 source	0	0: Disabled 3–18: DI1 to DI16 Others: B connector	Source of the JOG2 command for custom channel 1
A4-08	Custom speed negation source	0	0: Disabled 1: Enabled 3–18: DI1 to DI16 Others: B connector	Source of the negation command for custom channel 1
A4-21	Custom OFF1 source	0	0: Disabled 3–18: DI1 to DI16 Others: B connector	Source of start/stop control OFF1 for custom channel 2
A4-22	Custom OFF2 source 1	0	0: Enabled 1: Disabled 3–18: DI1 to DI16 Others: B connector	Source 1 of coast to stop command OFF2 for custom channel 2. The coast to stop command OFF2 is valid if any of the three sources is active low.
A4-23	Custom OFF3 source 1	0	0: Enabled 1: Disabled 3–18: DI1 to DI16 Others: B connector	Source 1 of emergency stop command OFF3 for custom channel 2. The emergency stop command OFF3 is valid if any of the three sources is active low.
A4-24	Custom running permission source	0	0: Not permitted 1: Permitted 3–18: DI1 to DI16 Others: B connector	Running permission source for custom channel 2
A4-25	Custom fault reset source 1	0	0: Disabled 1: Enabled 3–18: DI1 to DI16 Others: B connector	Source 1 of the fault reset command for custom channel 2. The fault reset command is valid if any of the three sources is active high.
A4-26	Custom JOG1 source	0	0: Disabled 3–18: DI1 to DI16 Others: B connector	Source of the JOG1 command for custom channel 2

Para.	Name	Default	Value Range	Description
A4-27	Custom JOG2 source	0	0: Disabled 3–18: DI1 to DI16 Others: B connector	Source of the JOG2 command for custom channel 2
A4-28	Custom speed negation source	0	0: Disabled 1: Enabled 3–18: DI1 to DI16 Others: B connector	Source of the negation command for custom channel 2

1.1.2 Frequency Reference Sources

1.1.2.1 Setting Frequency Reference Sources

The AC drive supports three frequency references: main frequency reference, auxiliary frequency reference, and main and auxiliary frequency superposition.

1.1.2.2 Selecting Source of Main Frequency Reference

The AC drive supports more than 10 main frequency sources, including digital setting (non-retentive at power failure), digital setting (retentive at power failure), AI1, AI2, AI3, pulse input, multi-reference, simple PLC, PID, communication, and other F connector, which can be selected by setting F0-03 (0 to 9).

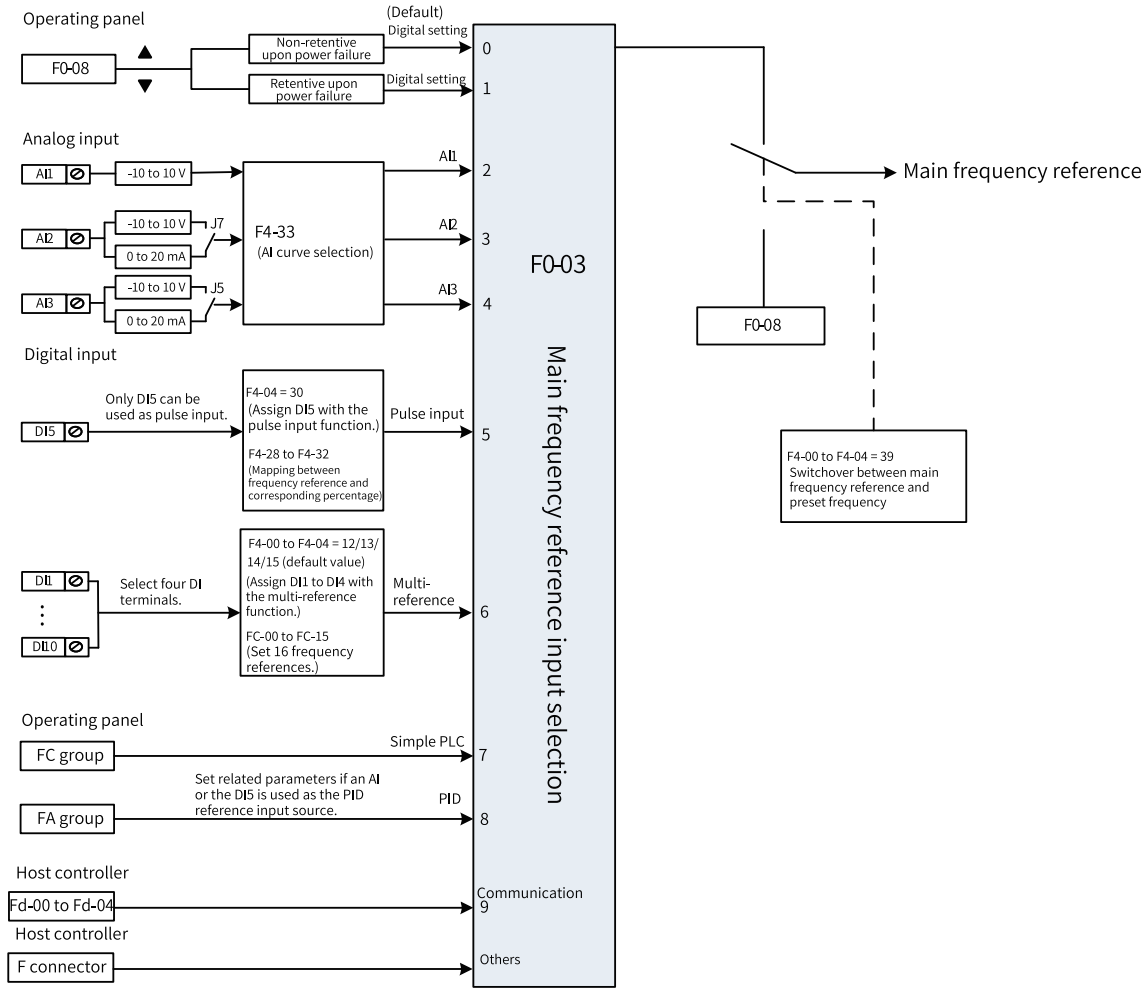


Figure 1-11 Main frequency reference selection

Para.	Name	Value Range	Default
F0-03	Main frequency source X	0: Digital setting (preset frequency (F0-08) that can be changed by pressing UP/DOWN; non-retentive at power failure) 1: Digital setting (preset frequency (F0-08) that can be changed by pressing UP/DOWN; retentive at power failure) 2: AI1 3: AI2 4: AI3 5: Pulse reference (DI5) 6: Multi-reference 7: Simple PLC 8: PID 9: Communication Others: F connector	0

1.1.2.3 Setting Main Frequency Through Operating Panel

There are two ways to set the main frequency by using the operating panel:

- Set F0-03 to 0 (non-retentive at power failure). That is, when the AC drive is powered on again after stop or power failure, the frequency reference is restored to the preset frequency (F0-08). Modifications made to the preset frequency (F0-08) by using the and keys or UP and DOWN of terminals are cleared when the AC drive stops.
- Set F0-03 to 1 (retentive at power failure). That is, when the AC drive is powered on again after stop or power failure, the frequency reference is restored to the value memorized at the moment of the last power failure. Modifications made to the preset frequency (F0-08) by using the and keys or UP and DOWN of terminals are retained when the AC drive stops.
  For example, the preset frequency (F0-08) is set to 40 Hz and is adjusted to 45 Hz by using the key on the operating panel. If F0-23 is set to 0 (non-retentive), the target frequency is restored to 40 Hz (value of F0-08) after the AC drive stops; if F0-23 is set to 1 (retentive), the target frequency is still 45 Hz after the AC drive stops.

Note

Distinguish this parameter from F0-23 (Retentive memory of digital setting frequency upon stop). F0-23 determines whether the frequency setting is retained or cleared after the AC drive stops. F0-23 is related only to the stop state of the AC drive, rather than power failure.

The related parameters are as follows.

Para.	Name	Default	Value Range
F0-08	Preset frequency	50.00 Hz	0.00 Hz to maximum frequency (F0-10)
F0-10	Maximum frequency	50.00 Hz	50.00 Hz to 600.00 Hz

Para.	Name	Default	Value Range
F0-23	Retention of digital setting of frequency upon stop	0	0: Non-retentive 1: Retentive

1.1.2.4 Setting Main Frequency Through AI

When the main frequency is set through analog input, AI1, AI2, or AI3 can be used. When F0-03 is set to 2, AI1 is used as the main frequency reference source; when F0-03 is set to 3, AI2 is used as the main frequency reference source; when F0-03 is set to 4, AI3 is used as the main frequency reference source.

When an AI terminal is used as the frequency source, it supports five types of AI curves. The AI curve defines the relationship between the analog input voltage (or current) and the corresponding setpoint.

Step	Related Parameters	Description
(Step 1) Set the AI curve: Set the relationship between the AI voltage/current inputs and frequency setpoints.	F4-13 to F4-16	Curve 1 setting
	F4-18 to F4-21	Curve 2 setting
	F4-23 to F4-26	Curve 3 setting
	A6-00 to A6-07	Curve 4 setting
	A6-08 to A6-15	Curve 5 setting
	F4-34	Setting for AI less than the minimum input (When AI is used as the frequency reference source, the setpoint 100% corresponds to the maximum frequency (F0-10).)
(Step 2) Select an AI curve for the AI terminal: Select a curve and filter time for the AI terminal.	F4-33	AI curve selection (You can select any AI curve for the AI terminal. Typically the default value is used (F4-33 = 0x321). That is, select curve 1 for AI1, curve 2 for AI2, and curve 3 for AI3.)
	F4-17, F4-22, and F4-27	Filter time of AI1 to AI3
(Step 3) Select an AI terminal as the frequency reference source: Select the AI terminal for setting the frequency reference based on terminal characteristics.	F0-03 (main frequency reference source)	F0-03 = 2 Select AI1.
		F0-03 = 3 Select AI2. You can choose voltage input or current input by using the DIP switches S1 to S3 on the control board.
		F0-03 = 4 Select AI3. You can choose voltage input or current input by using the DIP switch S1 on the control board.

Setting AI Curve

Five types of AI curves are available. Curve 1, curve 2, and curve 3 are two-point curves, which are defined by parameters F4-13 to F4-27. Curves 4 and 5 are four-point curves, which are defined by parameters are in group A6.

The following takes AI curve 1 as an example to describe the settings. The related parameters are F4-13 to F4-16.

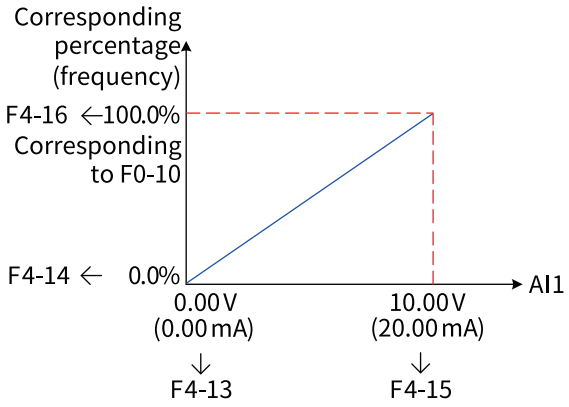


Figure 1-12 Settings of AI curve 1

When an AI terminal is used as the main frequency source, the voltage/current input setpoint 100% indicates the percentage relative to the maximum frequency (F0-10).

When AI current mode 1 input is used, 1 mA current corresponds to 0.5 V voltage, and 0 to 20 mA current correspond to –10 V to +10 V voltage.

When AI current mode 2 input is used, 1 mA current corresponds to 0.25 V voltage, and 0 to 40 mA current correspond to –10 V to +10 V voltage.

Curve 2 and curve 3 are set in a similar way as curve 1. Curve 2 is set by parameters F4-18 to F4-21, and curve 3 is set by parameters F4-23 to F4-26.

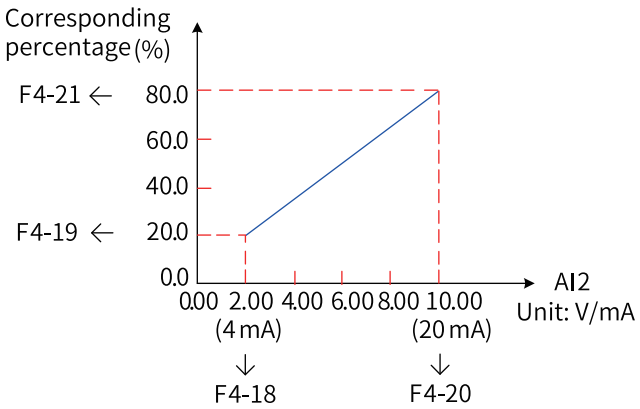


Figure 1-13 Settings of AI curve 2

The function of curve 4 and curve 5 is similar to that of curve 1 to curve 3. However, curve 1 to curve 3 are straight lines, while curve 4 and curve 5 are 4-point curves, which offer more flexible mapping. The x-axis of the AI curves 4 and 5 indicates the analog input voltage (or current), and the y-axis indicates the setpoint corresponding to the analog input, that is, the percentage relative to the maximum frequency (F0-10). The four points on curves 4 and 5 are the minimum input point, inflection 1, inflection 2, and maximum input point. A6-00 corresponds to the x-axis of the minimum input point, that is, the minimum analog input voltage (or minimum analog input current).

When setting curve 4 and curve 5, note that the curve's minimum input voltage, inflexion 1 voltage, inflexion 2 voltage, and maximum voltage must be in ascending order. Curve 4 is set by parameters A6-00 to A6-07, and curve 5 is set by parameters A6-08 to A6-15.

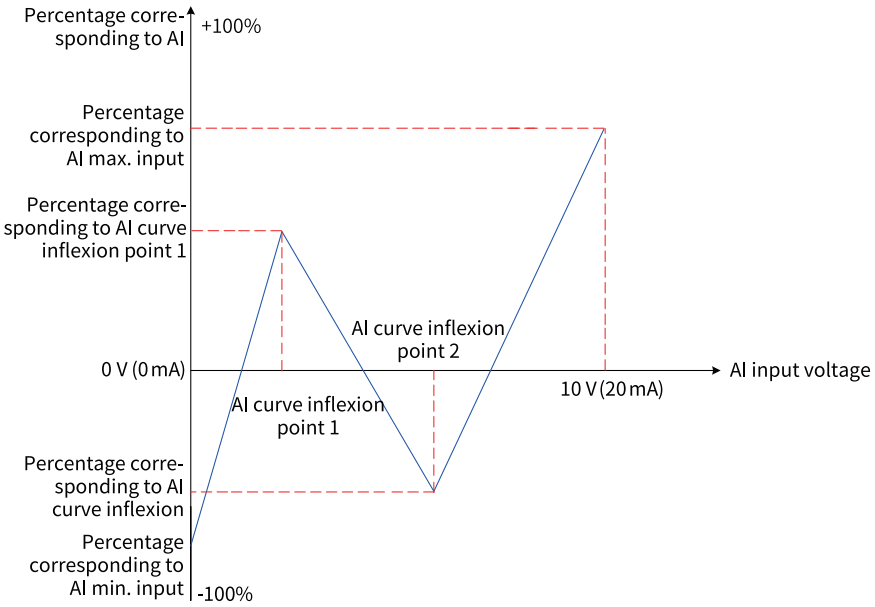


Figure 1-14 Curve 4 and curve 5

Selecting AI Curve for AI Terminal

The curves of terminals AI1 and AI2 are determined by the ones and tens positions of F4-33, which can be set to any of the five curves.

Longer AI input filter time indicates stronger anti-interference capability but slower adjustment response. Shorter filter time indicates faster adjustment response but weaker anti-interference capability. If the onsite analog input is prone to interference, you can increase the filter time to stabilize the detected analog input. However, increasing the AI filter time will slow down the response to analog detection. Therefore, the filter time must be set properly based on actual conditions.

Selecting AI Terminal as Frequency Reference Source

The control board provides three AI terminals: AI1, AI2, and AI3. AI1 provides voltage input of –10 V to +10 V. AI2 and AI3 provide voltage input of –10 V to +10 V or current input of 0 mA to 20/40 mA. You can choose voltage input, current input, or temperature input for AI2 by using the DIP switches S1 to S3 on the control board, and you can select voltage input or temperature input for AI3 by using the DIP switch S1 on the expansion card. (For details, see Chapter 3 "Installation and Wiring".) The following describes how to set each AI terminal as the main frequency source.

For example, assume that curve 1 is selected for AI1 (the ones position of F4-33 is set to 1), and AI1 voltage input is selected as the main frequency source. To set the frequency reference to 10 Hz to 40 Hz (corresponding to 2 V to 10 V), set the parameters according to the following figure.

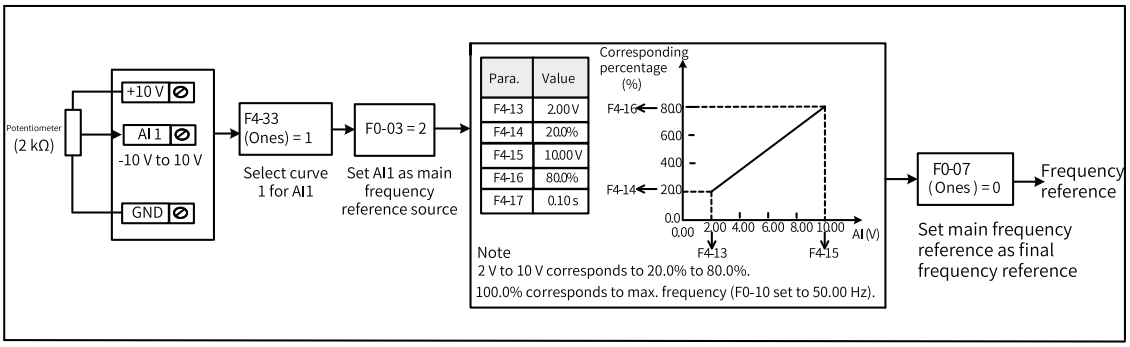


Figure 1-15 Parameter settings for AI1 voltage input as the main frequency source

AI2 can provide analog voltage input (–10 V to +10 V) or analog current input (0 mA to 20 mA).

When AI2 provides analog current input of 0 mA to 20 mA, the corresponding input voltage ranges from 0 V to +10 V. If the input current ranges from 4 mA to 20 mA, the corresponding input voltage ranges from 2 V to 10 V.

For example, assume that curve 2 is selected for AI2 (the tens position of F4-33 is set to 2), and AI2 current input is selected as the main frequency source. To set the frequency reference to 0 Hz to 50 Hz (corresponding to 4 mA to 20 mA), set the parameters according to the following figure.

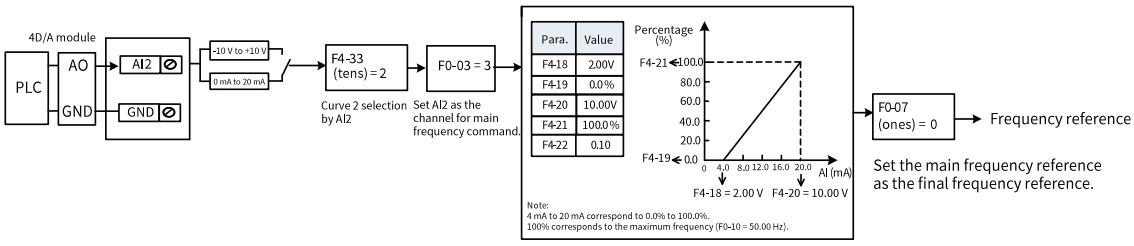


Figure 1-16 Parameter settings for using AI2 current input as main frequency reference

1.1.2.5 Setting Main Frequency Through Multi-reference

When F0-03 is set to 6, multi-reference is selected as the main frequency reference source. It is suitable for applications where only several frequency values are required without the need for continuous frequency adjustment.

The AC drive supports a maximum of 16 frequency references, which can be set by using FC-55 to FC-58 or input signal combinations of four DI terminals. Terminal control takes priority. For example, if DI1 is assigned with the function of multi-reference terminal 1, FC-55 does not take effect. You can also use less than four DI terminals, and the missing bits are considered to be 0.

The relationship between the reference quantity and DI terminal quantity is as follows:

- 2 frequency references: one DI terminal (K1); FC-55 to FC-58 are set to 0.
- 3–4 frequency references: two DI terminals (K1 and K2); FC-57 to FC-58 are set to 0.
- 5–8 frequency references: three DI terminals (K1, K2, and K3); FC-58 is set to 0.
- 9–16 frequency references: four DI terminals (K1, K2, K3, and K4).

The required multi-reference frequencies are defined by the multi-reference table in group FC. The following table describes the related parameters.

Para.	Name	Default	Value Range	Description
FC-00	Multi-reference 0	0.00%	–100.0% to +100.0%	The multi-reference value is a relative value, which is a percentage relative to the maximum frequency. The positive or negative property of the parameter value determines the running direction. If the value is negative, the AC drive runs in the reverse direction. The acceleration and deceleration time are defined by F0-17 and F0-18 by default.
FC-01	Multi-reference 1	0.00%	–100.0% to +100.0%	
FC-02	Multi-reference 2	0.00%	–100.0% to +100.0%	
FC-03	Multi-reference 3	0.00%	–100.0% to +100.0%	
FC-04	Multi-reference 4	0.00%	–100.0% to +100.0%	
FC-05	Multi-reference 5	0.00%	–100.0% to +100.0%	
FC-06	Multi-reference 6	0.00%	–100.0% to +100.0%	
FC-07	Multi-reference 7	0.00%	–100.0% to +100.0%	
FC-08	Multi-reference 8	0.00%	–100.0% to +100.0%	
FC-09	Multi-reference 9	0.00%	–100.0% to +100.0%	
FC-10	Multi-reference 10	0.00%	–100.0% to +100.0%	
FC-11	Multi-reference 11	0.00%	–100.0% to +100.0%	
FC-12	Multi-reference 12	0.00%	–100.0% to +100.0%	
FC-13	Multi-reference 13	0.00%	–100.0% to +100.0%	
FC-14	Multi-reference 14	0.00%	–100.0% to +100.0%	
FC-15	Multi-reference 15	0.00%	–100.0% to +100.0%	
FC-51	Multi-reference 0 source	0	0 to 6	0: FC-00 1: AI1 2: AI2 3: AI3 4: Pulse (DI5) 5: PID 6: F0-08 (preset frequency), which can be changed by using terminal UP/DOWN

When using multi-reference as the main frequency source, set the DI function selection parameters to 12 to 15 to select the input terminals.

Para.	Name	Reference	Function Description
F4-01	DI2 function	12	Multi-reference terminal 1
F4-03	DI4 function	13	Multi-reference terminal 2
F4-06	DI7 function	14	Multi-reference terminal 3
F4-07	DI8 function	15	Multi-reference terminal 4

Application

In the following figure, terminals DI2, DI4, DI7, and DI8 are used as multi-reference input terminals. They each contribute one bit to a 4-bit binary value, and different combinations of the bits represent different frequencies. When values of (DI2, DI4, DI7, DI8) are (0, 0, 1, 0), they constitute a value of 2. In this case, the frequency value set by FC-02 is selected. (See Table 6-1 for details about frequency selection.) Then, the target running frequency is calculated automatically by using the formula (FC-02) x (F0-10). The following figure shows the frequency setting.

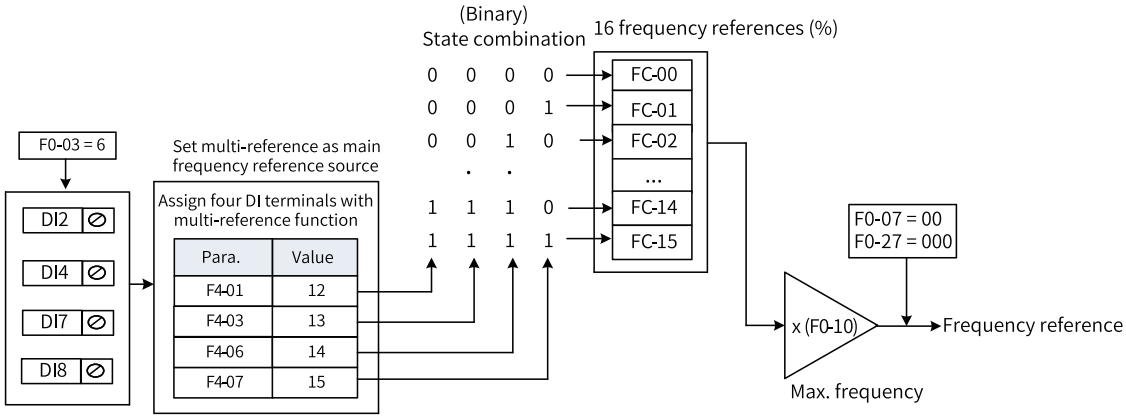


Figure 1-17 Frequency setting in multi-speed mode

The four multi-reference terminals can provide 16 state combinations, corresponding to 16 frequency reference values. See the following table.

Table 1–2 State combinations of the four multi-reference terminals

K4	K3	K2	K1	Reference	Parameter
OFF	OFF	OFF	OFF	Multi-reference 0	FC-00 (FC-51 = 0)
OFF	OFF	OFF	ON	Multi-reference 1	FC-01
OFF	OFF	ON	OFF	Multi-reference 2	FC-02
OFF	OFF	ON	ON	Multi-reference 3	FC-03
OFF	ON	OFF	OFF	Multi-reference 4	FC-04
OFF	ON	OFF	ON	Multi-reference 5	FC-05
OFF	ON	ON	OFF	Multi-reference 6	FC-06
OFF	ON	ON	ON	Multi-reference 7	FC-07
ON	OFF	OFF	OFF	Multi-reference 8	FC-08
ON	OFF	OFF	ON	Multi-reference 9	FC-09
ON	OFF	ON	OFF	Multi-reference 10	FC-10
ON	OFF	ON	ON	Multi-reference 11	FC-11
ON	ON	OFF	OFF	Multi-reference 12	FC-12
ON	ON	OFF	ON	Multi-reference 13	FC-13
ON	ON	ON	OFF	Multi-reference 14	FC-14
ON	ON	ON	ON	Multi-reference 15	FC-15

In the preceding description, the multi-reference values are determined by selecting functions based on terminals using parameters in group F4. You can also set the multi-reference values by selecting terminals using parameters in group FC.

Para.	Name	Reference	Function Description
FC-55	Multi-reference value bit0	4	DI2
FC-56	Multi-reference value bit1	6	DI4
FC-57	Multi-reference value bit2	9	DI7
FC-58	Multi-reference value bit3	10	DI8

1.1.2.6 Setting Main Frequency Through Simple PLC

Step 1: Set F0-03 to 7 to select simple PLC as the main frequency source.

Step 2: Set parameters FC-00 to FC-15 and FC-18 to FC-49 to define the running time and acceleration/deceleration time for each reference.

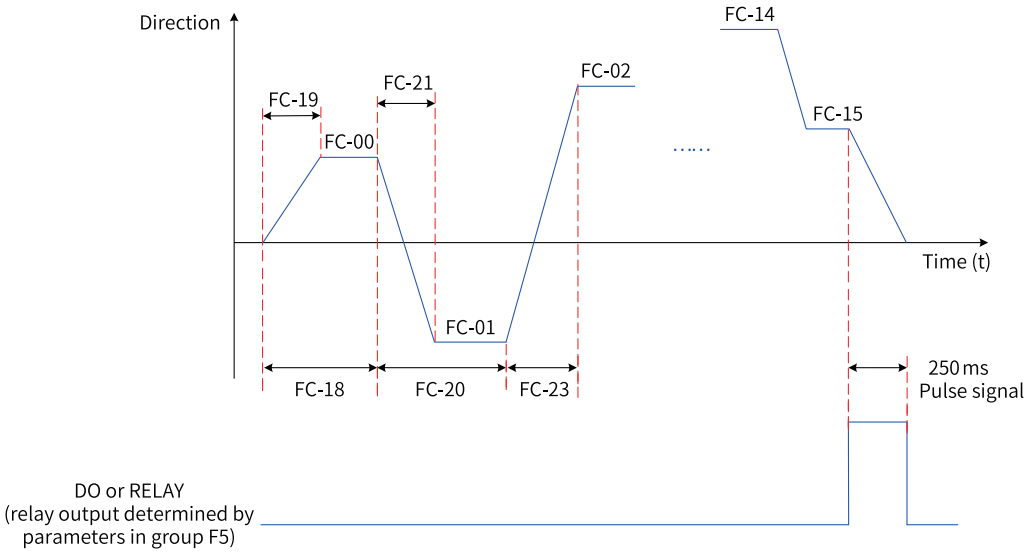


Figure 1-18 Setting simple PLC as the main frequency source

Step 3: Set FC-16 to select the simple PLC running mode.

Step 4: Set FC-17 to determine whether to retain the PLC running stage and running frequency upon a power failure or stop.

1.1.2.7 Setting Main Frequency Through PID

As a general process control method, PID control is a closed-loop mechanism in which each controlled variable is stabilized at the target level through proportional, integral, and differential calculation of the difference between the feedback signal and the target signal of the controlled variable. The output of PID control is used as the running frequency, which generally applies to on-site closed-loop control applications, such as constant pressure closed-loop control and constant tension closed-loop control.

- Proportional gain Kp: Once the deviation between PID output and input occurs, the PID controller adjusts the output to reduce the deviation. The speed at which the deviation decreases depends on the proportional coefficient Kp. A larger Kp tends to reduce the deviation faster, but may cause system oscillation, especially at large hysteresis. A smaller Kp indicates lower possibility of oscillation but also slower adjustment. (The value 100.0 indicates that when the difference between PID feedback and reference is 100.0%, the adjustment amplitude of the PID controller on the output frequency reference is the maximum frequency.)
- Integral time Ti: It determines the integral adjustment intensity of the PID controller. Shorter integral time indicates greater adjustment intensity. (Integral time refers to the time required for continuous adjustment of the integral regulator to reach the maximum frequency when the deviation between the PID feedback and reference is 100.0%.)
- Derivative time Td: It defines the deviation variation adjustment intensity of the PID controller. Longer derivative time indicates greater adjustment intensity. (Derivative time refers to the time within which the feedback value change reaches 100.0%, and the adjustment amplitude reaches the maximum frequency.)

Application

Step 1: Set F0-03 and F0-04 to 8 to select PID as the main frequency reference input source and auxiliary frequency input source.

Step 2: Set FA-00 to select a source of PID target reference. If FA-00 is set to 0, set FA-01 (digital setting of PID). The value 100% of this parameter corresponds to the maximum value of PID feedback.

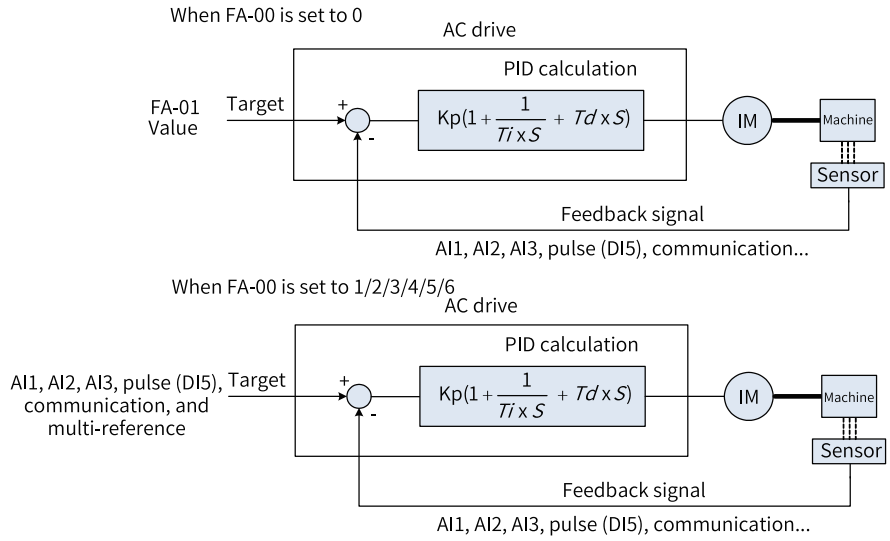


Figure 1-19 Block diagram of process PID control principle

Step 3: Set FA-02 to select a PID feedback source.

Step 4: Set FA-03 to select a PID action direction.

The following figure shows the logic of process PID control parameter configuration.

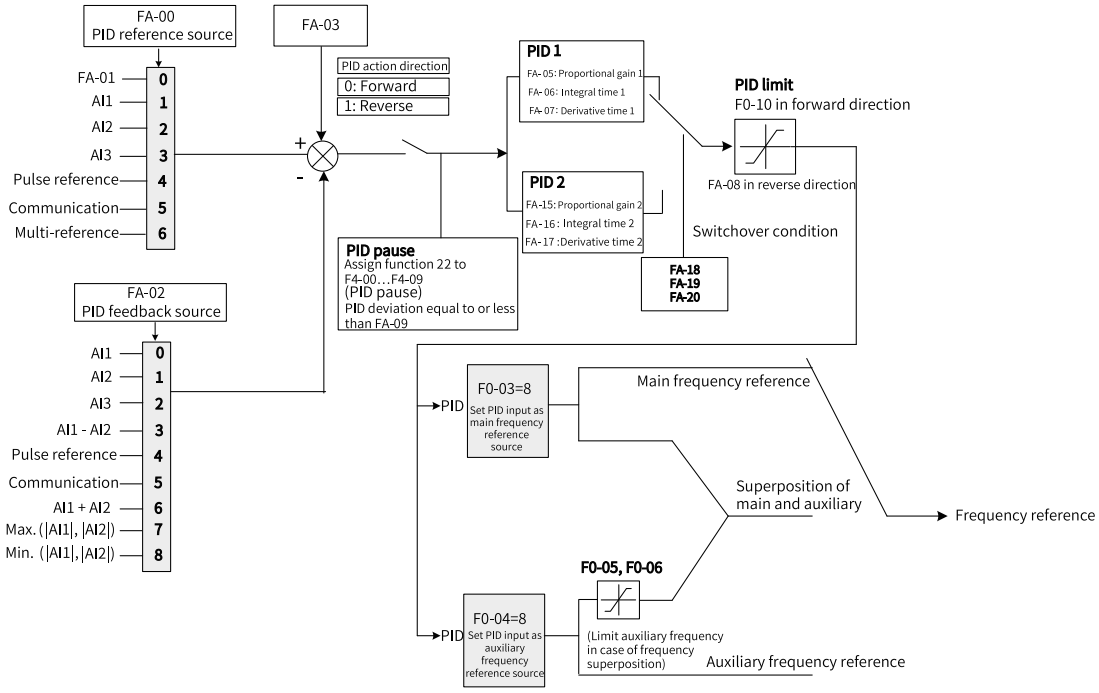


Figure 1-20 Block diagram of process PID control parameter configuration

The upper and lower limits and range of the frequency output when the PID is used as the main frequency source are described as follows (for example, when the frequency source is only PID or main + PID).

- When the reverse cut-off frequency is 0 or reverse running is inhibited (that is, any of the following): ① FA-08 = 0, F8-13 = 0; ② FA-08 = 0, F8-13 = 1; ③ FA-08 ≠ 0, F8-13 = 1

  Output upper limit = Frequency upper limit

  Output lower limit = Frequency lower limit

  Output range = Frequency lower limit to frequency upper limit (that is, F0-14 to F0-12)

- When the reverse cut-off frequency is not 0 and reverse running is allowed (that is, FA-08 ≠ 0, F8-13 = 0):
  Output upper limit = Frequency upper limit, Output lower limit = –Reverse cut-off frequency

  Output range = –Reverse cut-off frequency to +Frequency upper limit (that is, –FA-08 to +F0-12)

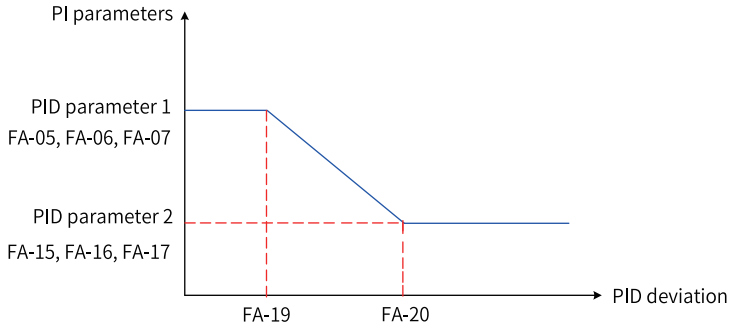


Figure 1-21 PID parameter switchover

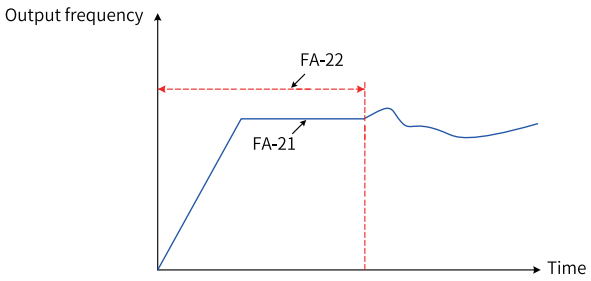


Figure 1-22 PID initial value function

1.1.2.8 Setting Main Frequency Through Communication

The following seven communication protocols are supported: Modbus, PROFIBUS DP, CANopen, CANlink, PROFINET, EtherCAT, and EthernetIP.

- When PROFIBUS DP, PROFINET, EtherCAT, EthernetIP, or CANopen (CANopen expansion card) is used, set Fd-00 to 9 and Fd-01 to 3.
- When a CANlink card is used for CANopen communication, set Fd-10 to 1. Set Fd-12 and Fd-13 to specify the CAN communication baud rate and CAN station number, respectively.
- When a CANlink card is used for CANlink communication, set Fd-10 to 2. Set Fd-12 and Fd-13 to specify the CAN communication baud rate and CAN station number, respectively.

- When Modbus is used for communication, set Fd-00, Fd-01, and Fd-02 to specify the baud rate, data format, and local address, respectively.

Application

Step 1: Set F0-03 to 9 to select communication as the main frequency source.

Step 2: Send a write command to the AC drive from the host controller.

Here takes the Modbus protocol as an example to describe how to set the main frequency through communication. For example, to set the frequency to 10000 through communication, send the write command 01 06 10 00 27 10 97 36.

The bytes are described as follows.

Byte	Description
01H (configurable)	AC drive address
06H	Write command
1000H	Frequency reference address
2710H (10000 in decimal)	Target frequency
9736H	CRC check

Similarly, to set the frequency to –10000 through communication, send the write command 01 06 10 00 D8 F0 D7 4E. In this command, D8F0 is the low-order four bits of the hexadecimal number converted from –10000.

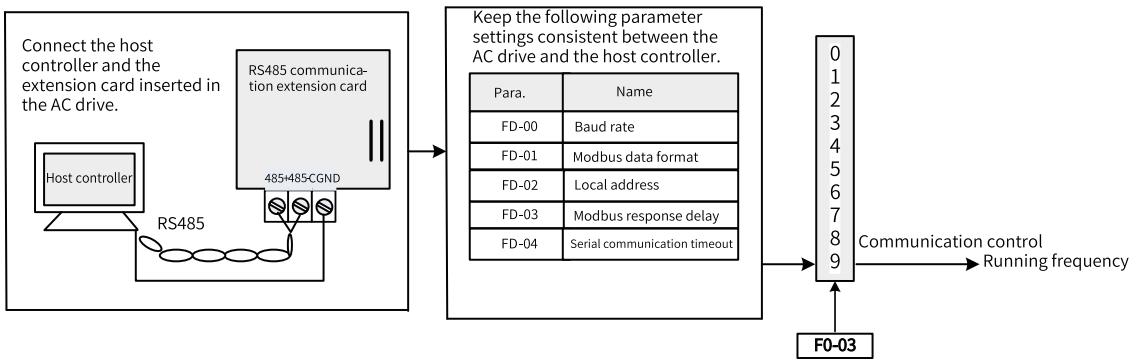


Figure 1-23 Parameter settings when the main frequency is set through communication

Table 1–3 Correspondence between host commands and slave responses

Host Command		Slave Response	
ADDR	01H	ADDR	01H
CMD	06H	CMD	06H
High-order bits of parameter address	10H	High-order bits of parameter address	10H
Low-order bits of parameter address	00H	Low-order bits of parameter address	00H
High-order bits of data content	27H	High-order bits of data content	27H
Low-order bits of data content	10H	Low-order bits of data content	10H

Host Command		Slave Response	
CRC high-order bits	97H	CRC high-order bits	97H
CRC low-order bits	36H	CRC low-order bits	36H

The range of frequency reference set through communication is –10000 to +10000 (in decimal), corresponding to –100.00% (negative max. frequency) to +100.00% (positive max. frequency). Assume that F0-10 (maximum frequency) is set to 50 Hz. If the frequency reference in the write command is 2710H, which is equivalent to 10000 in decimal, the actual written frequency reference is 50 Hz (50 x 100%).

1.1.2.9 Selecting Source of Auxiliary Frequency Reference

The AC drive supports 10 auxiliary frequency sources, including digital setting (non-retentive at power failure), digital setting (retentive at power failure), AI1, AI2, AI3, pulse input, multi-reference, simple PLC, PID, and communication, which can be selected by setting F0-04 (0 to 9).

When used as an independent frequency reference source, the auxiliary frequency reference source is used in the same way as the main frequency reference source. The following figure shows the block diagram. When the auxiliary frequency reference is used together with the main frequency reference to set the frequency reference, see "Setting Frequency Based on Main and Auxiliary Frequency References".

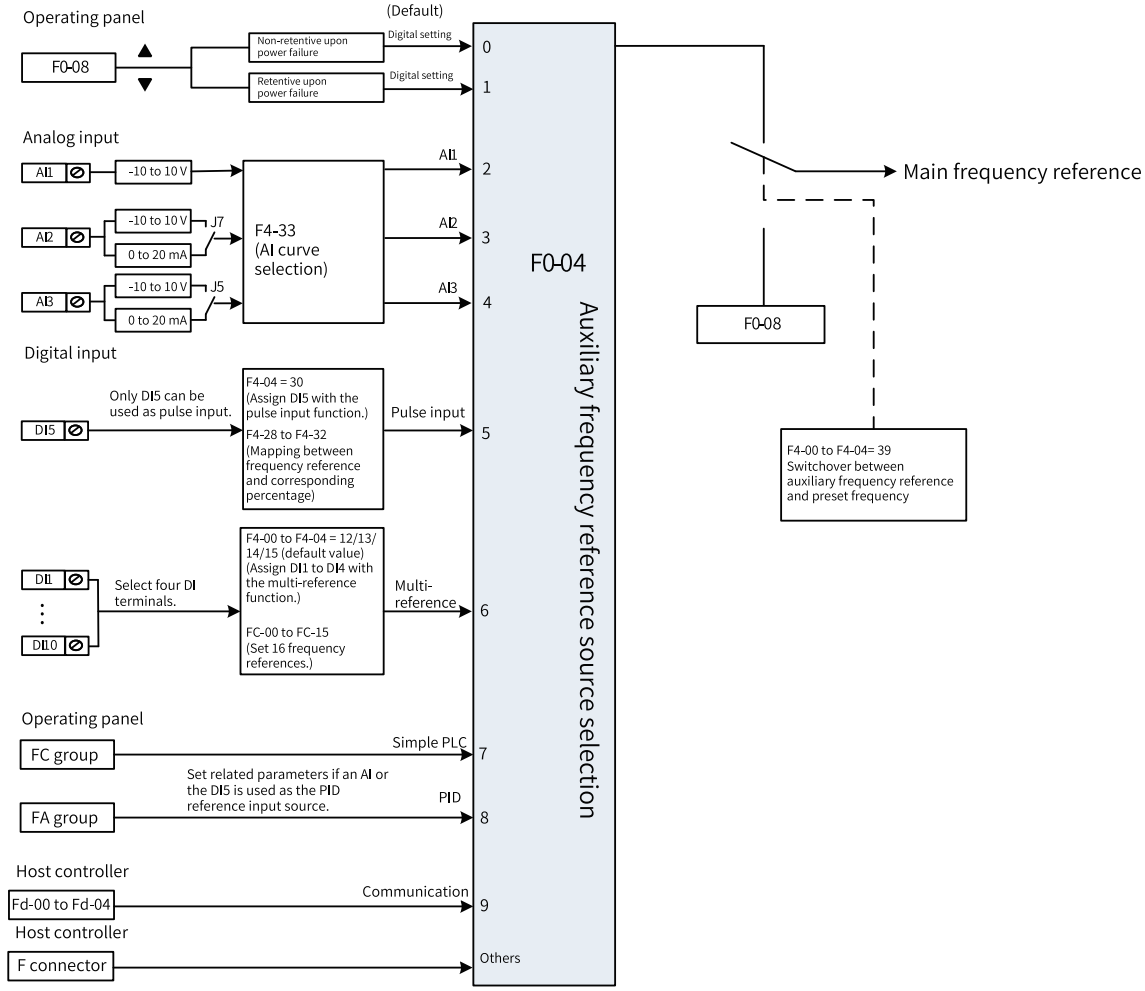


Figure 1-24 Setting auxiliary frequency reference source

Para.	Name	Value Range	Default
F0-04	Auxiliary frequency source Y	0: Digital setting (preset frequency (F0-08) that can be changed by pressing UP/DOWN; non-retentive at power failure) 1: Digital setting (preset frequency (F0-08) that can be changed by pressing UP/DOWN; retentive at power failure) 2: AI1 3: AI2 4: AI3 5: Pulse (DI5) 6: Multi-reference 7: Simple PLC 8: PID 9: Communication Others: F connector	0

1.1.2.10 Setting Frequency Based on Main and Auxiliary Frequency References

Main and auxiliary frequency reference superposition is used to set the frequency reference by combining the main frequency reference and auxiliary frequency reference. F0-07 defines the relationship between the target frequency and the main and auxiliary frequency references, which is described as follows.

Table 1–4 Relationship between target frequency and main and auxiliary frequency references

No.	Relationship Between Target Frequency and Main and Auxiliary Frequency References	
1	Main frequency reference	The main frequency reference is directly used as the target frequency.
2	Auxiliary frequency reference	The auxiliary frequency reference is directly used as the target frequency.
3	Main and auxiliary operation	There are four main and auxiliary operation results: main frequency reference + auxiliary frequency reference, main frequency reference – auxiliary frequency reference, larger value between main frequency reference and auxiliary frequency reference, and smaller value between main frequency reference and auxiliary frequency reference.
4	Frequency switchover	Any of the preceding three frequency sources selected or switched by using the DI terminal. The DI terminal must be assigned with function 18 (frequency reference switchover).

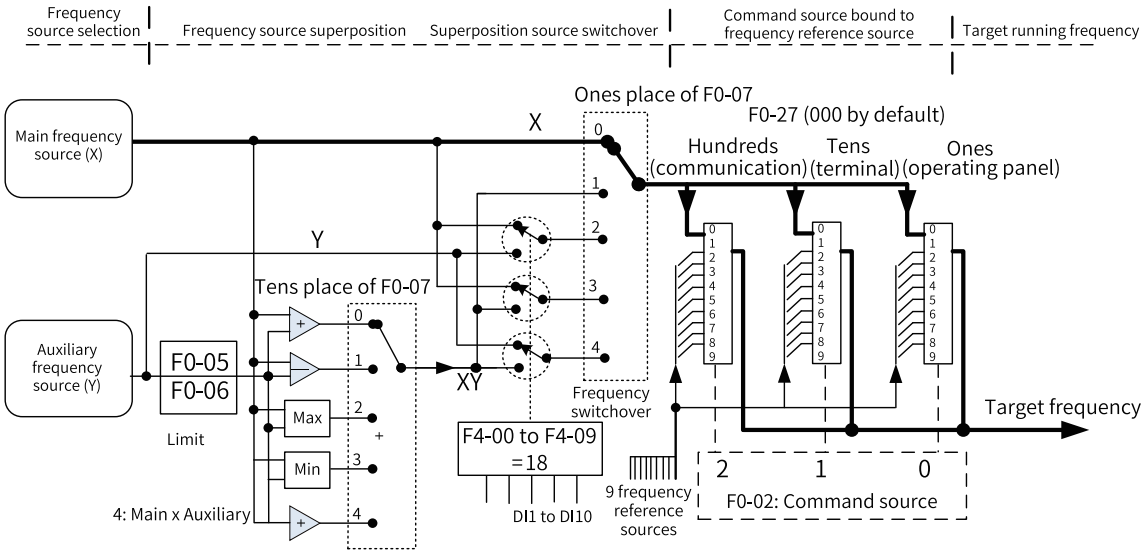


Figure 1-25 Selecting main and auxiliary frequency reference superposition result as frequency reference

Table 1–5 Main and auxiliary frequency reference superposition

Para.	Name	Default	Value Range
F0-05	Base value of range of auxiliary frequency source Y for superposition	0	0: Relative to the maximum frequency 1: Relative to main frequency reference
F0-06	Range of auxiliary frequency source Y for superposition	100%	0% to 150%

Para.	Name	Default	Value Range
F0-07	Frequency source superposition	0	Ones: Frequency source selection 0: Main frequency source X 1: Main and auxiliary operation result (based on the tens) 2: Switchover between main frequency source X and auxiliary frequency source Y 3: Switchover between main frequency source X and main and auxiliary operation result 4: Switchover between auxiliary frequency source Y and main and auxiliary operation result Tens: Main and auxiliary frequency source operation 0: Main + Auxiliary 1: Main – Auxiliary 2: Max. (main, auxiliary) 3: Min. (main, auxiliary) 4: Main x Auxiliary
F0-27	Frequency source bound to the command source	0	Ones: Frequency source bound to operating panel control 0: No binding 1: Frequency digital setting 2: AI1 3: AI2 4: AI3 5: Pulse (DI5) 6: Multi-reference 7: Simple PLC 8: PID 9: Communication Tens: Frequency source bound to terminal I/O control Hundreds: Frequency source bound to communication control

F0-05 and F0-06 are used to limit the auxiliary frequency reference range and are only valid when the main + auxiliary operation is used.

F0-27 allows you to set the frequency sources for the three command sources of the AC drive, as shown in the preceding figure. When the specified command source (F0-02) is bound to a frequency source (corresponding bit of F0-27), the frequency is determined by the frequency reference source set in F0-27. In this case, both main and auxiliary frequency sources are ineffective.

1.1.2.11 Setting Offset Frequency and Supplementary Frequency

The offset frequency is defined by F0-21. It is directly superimposed on the raw main and auxiliary frequency operation result as a correction value before the ramp function generator (RFG).

Para.	Name	Value Range	Default
F0-21	Frequency offset for the frequency source	50.00 Hz to 600.00 Hz	50.00 Hz

The supplementary frequency is defined by A4-61. It is used in scenarios where speed adjustment needs to take effect directly without the acceleration and deceleration time. The supplementary frequency is only effective during normal operation, and the effective value is directly added to the RFG output.

Para.	Name	Value Range	Default
A4-61	Supplementary frequency	0: 0 1: AI1 2: AI2 3: AI3 4: Pulse 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0

1.1.2.12 Setting Frequency Reference Limits

Frequency upper limit: Limits the maximum operating frequency for motors.

Frequency lower limit: Limits the minimum operating frequency for motors.

Maximum frequency: Defines the maximum output frequency.

Frequency upper limit source: Defines the reference source of the frequency upper limit.

Frequency upper limit offset: Defines the offset of the frequency upper limit. This parameter is valid only when the frequency upper limit source is set to AI.

Para.	Name	Default	Value Range
F0-10	Maximum frequency	50.00 Hz	50.00 Hz to 600.00 Hz
F0-11	Source of frequency upper limit	0	0: F0-12 1: AI1 2: AI2 3: AI3 4: Pulse (DI5) 5: Communication 6: Multi-reference Others: F connector
F0-12	Frequency upper limit	50.00 Hz	Frequency lower limit (F0-14) to maximum frequency (F0-10)
F0-13	Frequency upper limit offset	0.00 Hz	0.00 Hz to maximum frequency (F0-10)
F0-14	Frequency lower limit	0.00 Hz	0.00 Hz to frequency upper limit (F0-12)

1.1.2.13 Setting Action to Take When Frequency Is Below Lower Limit

The frequency lower limit defines the minimum running frequency for the motor.

If the frequency of the AC drive is set to a value below the frequency lower limit (F0-14), you need to set F8-14 to select the action of the AC drive. The actions include the following: run at frequency lower limit, stop, run at zero speed, and coast to stop.

- 0: Run at frequency lower limit
  When the running frequency is lower than the frequency lower limit, the AC drive runs at the frequency lower limit.
- 1: Stop
  When the running frequency is lower than the frequency lower limit, the AC drive stops.
- 2: Run at zero speed
  When the running frequency is lower than the frequency lower limit, the AC drive runs at zero speed.
- 3. Coast to stop
  If the running frequency is below the frequency lower limit, the AC drive coasts to stop.

Para.	Name	Default	Value Range	Description
F8-14	Action to take when frequency is below lower limit	0	0: Run at frequency lower limit 1: Stop 2: Run at zero speed 3. Coast to stop	-

1.1.2.14 Setting Main Frequency Through Pulse Input

When F0-03 is set to 5, the pulse input is selected as the main frequency source. When the main frequency source is set to pulse (DI5), the pulse reference must be obtained from multi-functional input terminal DI5. The pulse reference signal specifications are 9–30 V (voltage range) and 0–100 kHz (frequency range).

The procedure for setting the main frequency through pulse input is as follows:

Step 1: Set F0-03 to 5 to select pulse input as the main frequency source. In this mode, the pulse reference must be obtained from multi-functional input terminal DI5.

Step 2: Set F4-04 to 30 to assign DI5 with the pulse frequency input function.

Step 3: Set F0-07 to 00 to select the main frequency reference as the final frequency reference setting selection.

Step 4: Set the pulse reference curve. This curve defines the mapping between the pulse input of DI5 and the frequency setpoint, which is set by F4-28 to F4-31. It is a 2-point straight line.

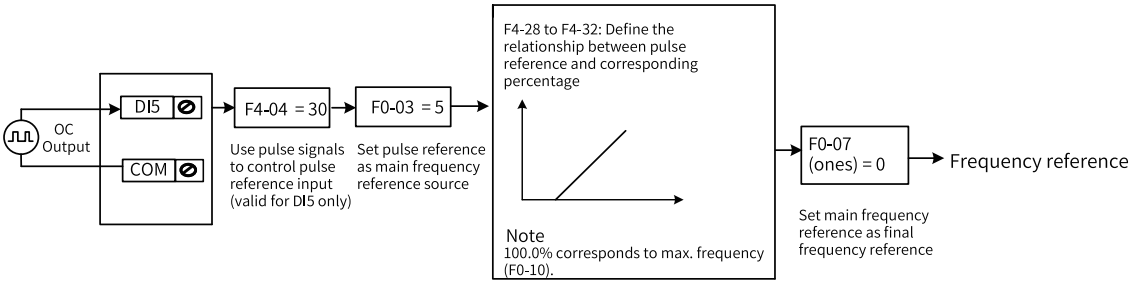


Figure 1-26 Parameter settings for pulse input as the main frequency source

Step 5: Set F4-32 to specify the filter time of the pulse frequency reference.

Set this parameter to well balance the response speed and anti-interference capability. If quick response is required, reduce the parameter value. If the onsite interference is high, increase the parameter value.

A large value of this parameter enhances the anti-interference capability, but slows down the response to adjustments. A small value of this parameter speeds up the response to adjustments, but weakens the anti-interference capability. If the onsite pulse signal is prone to interference, you can increase the filter time to stabilize the detected pulse signal. However, increasing the filter time will slow down the response to pulse signal detection. Therefore, the filter time must be set properly based on actual conditions.

1.1.3 Startup/Stop Modes

1.1.3.1 Startup Modes

The AC drive supports four startup modes: direct start, flying start, pre-excitation start, and SVC quick start. You can set F6-00 to select the startup mode of the AC drive.

Direct Start

When F6-00 is set to 0, the direct start mode is adopted, which applies to most load applications.

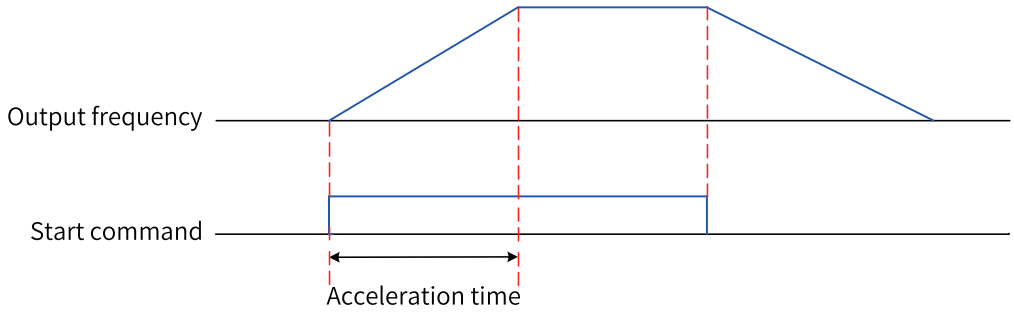


Figure 1-27 Timing diagram of direct start

Startup with startup frequency is applicable to applications with lifting loads, such as elevators and cranes.

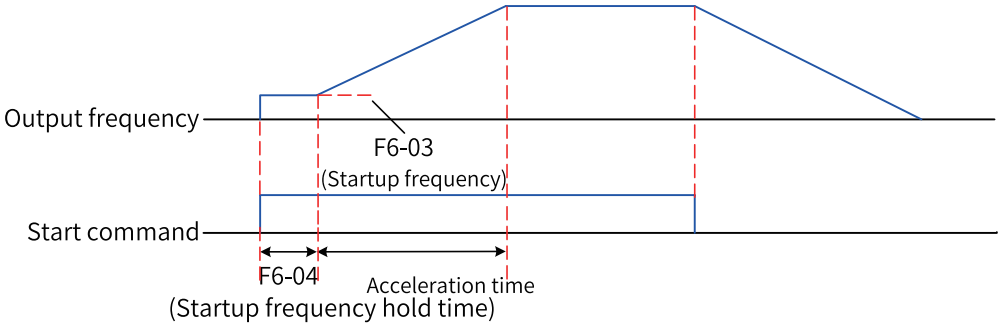


Figure 1-28 Timing diagram of startup with startup frequency

Startup with DC braking is applicable to applications where the motor may rotate at startup.

If the DC braking time is set to 0, the AC drive starts to run at the startup frequency. If the DC braking time is not 0, the AC drive performs DC braking first and then starts to run at the startup frequency. This mode applies to most small-inertia load applications where the motor is likely to rotate at startup.

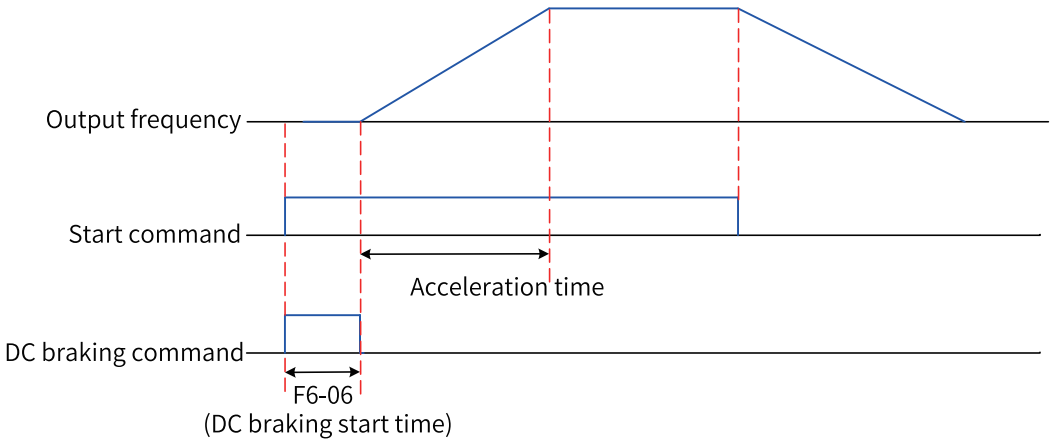


Figure 1-29 Timing diagram of startup with DC braking

Startup with DC braking is applicable to drives of elevators and cranes. Startup with startup frequency is applicable to equipment drives that require burst startup under startup torque, such as cement mixers. The following figure shows the frequency curve during startup.

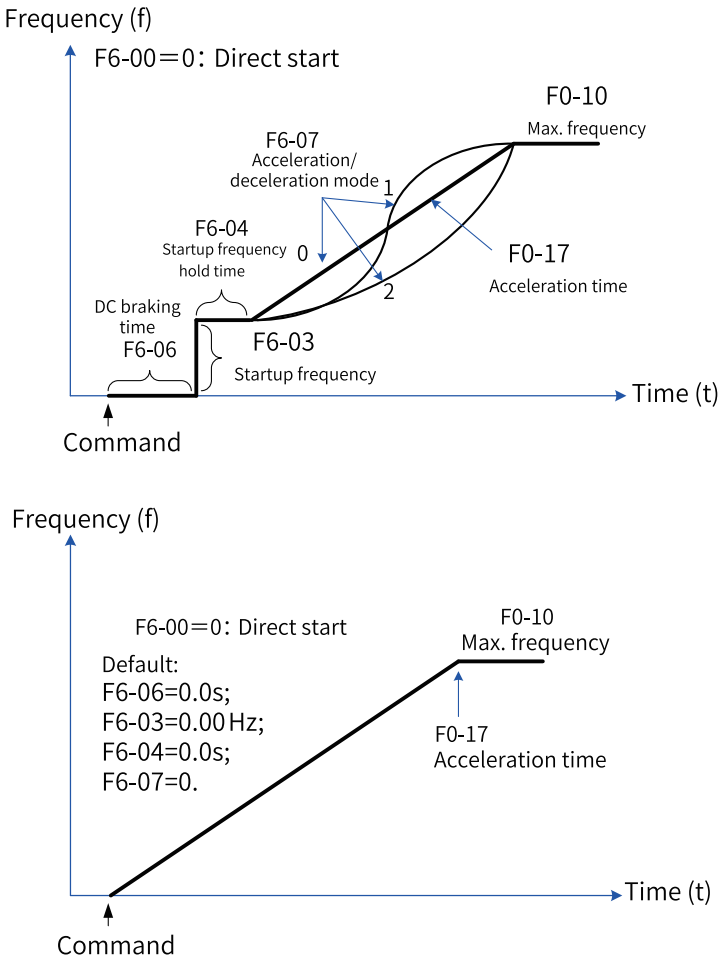


Figure 1-30 Direct start mode

Flying Start

When F6-00 is set to 1, the AC drive uses the flying start mode. In this mode, the AC drive first determines the motor rotation speed and direction, and then starts at the detected frequency of the motor. It is applicable when the AC drive is used to drive large-inertia machinery loads.

If the AC drive needs to be started again when the motor is still rotating due to inertia, the flying start mode can prevent overcurrent at startup. The following figure shows the frequency curve during startup.

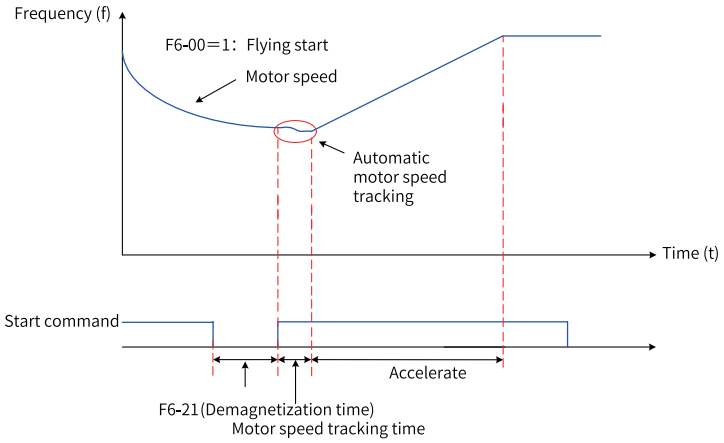


Figure 1-31 Flying start mode

Pre-excitation Start

When F6-00 is set to 0, 2, or 3 and the DC braking time (F6-06) is 0, the AC drive enters the pre-excitation start mode. This mode applies only to asynchronous motors in SVC or FVC mode. Performing pre-excitation on the motor before start improves the responsiveness of the motor and reduces the starting current.

You can change the pre-excitation mode by modifying bit 11 and bit 12 of the flux linkage control command word (AB-32 for motor 1 and B9-32, BE-32, and CE-32 for other motors). Pre-excitation by current is used by default. The pre-excitation current (AB-51, B9-51, BE-51, and CE-51) is the percentage relative to the rated current. A larger pre-excitation current setpoint indicates shorter pre-excitation time.

SVC Quick Start

SVC quick start is also called quick pre-excitation start.

Note

- Flying start is recommended if you need to start a motor that is rotating at a high speed.
- Pre-excitation start and SVC quick start apply only to AC asynchronous motors.

1.1.3.2 Stop Modes

The AC drive supports three stop modes: decelerate to stop, coast to stop, and stop at maximum capability.

You can set F6-10 to select a stop mode as required.

Para.	Name	Default	Value Range	Description
F6-10	Stop mode	0	0: Decelerate to stop 1: Coast to stop 2: Stop at maximum capability	0: Decelerate to stop Once the stop command takes effect, the AC drive decreases the output frequency to 0 based on the deceleration time and stops. 1: Coast to stop Once the stop command takes effect, the AC drive immediately stops output, and the motor coasts to stop under the action of mechanical inertia. 2: Stop at maximum capability The motor deceleration time is fixed at 20 ms, and the output torque may reach the torque limit during the deceleration process.
F6-11	Start frequency of DC braking at stop	0.00 Hz	0.00 Hz to maximum frequency (F0-10)	The AC drive starts DC braking when the running frequency decreases to the value of this parameter during deceleration to stop.
F6-12	DC braking delay at stop	0.0s	0.0s to 100.0s	When the running frequency decreases to the start frequency of DC braking at stop, the AC drive stops output for a period of time and then starts DC braking. This prevents faults such as overcurrent caused due to DC braking at a high speed.
F6-13	DC braking current at stop	0%	0% to 150%	A larger DC braking current indicates stronger braking force. 100% corresponds to the rated motor current (the current upper limit is 80% of the rated current of the AC drive). The current upper limit can be set in F6-34, and its maximum value is 135% of the rated current of the AC drive.
F6-14	DC braking time at stop	0.0s	0.0s to 100.0s	This parameter indicates the hold time of DC braking. If it is set to 0, DC braking is disabled.

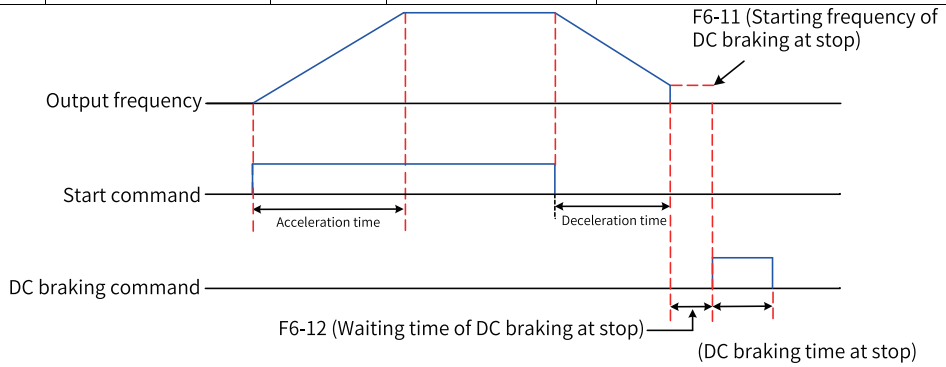


Figure 1-32 Timing diagram of DC braking at stop

Decelerate to Stop

When F6-10 is set to 0, the AC drive decelerates to stop. Once the stop command takes effect, the AC drive decreases the output frequency to 0 based on the deceleration time and stops.

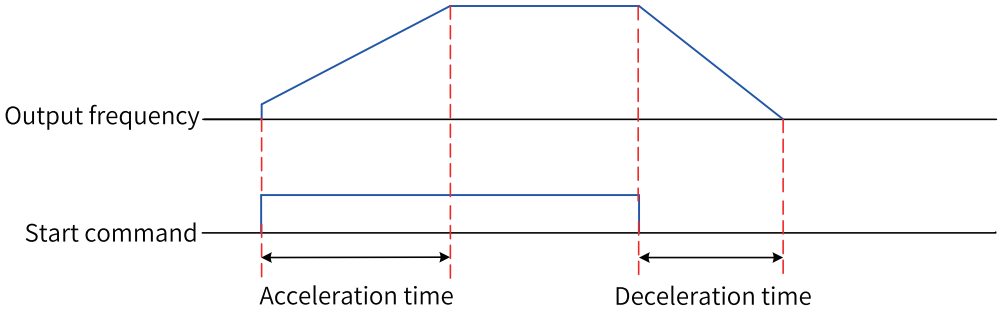


Figure 1-33 Timing diagram of decelerating to stop

Coast to Stop

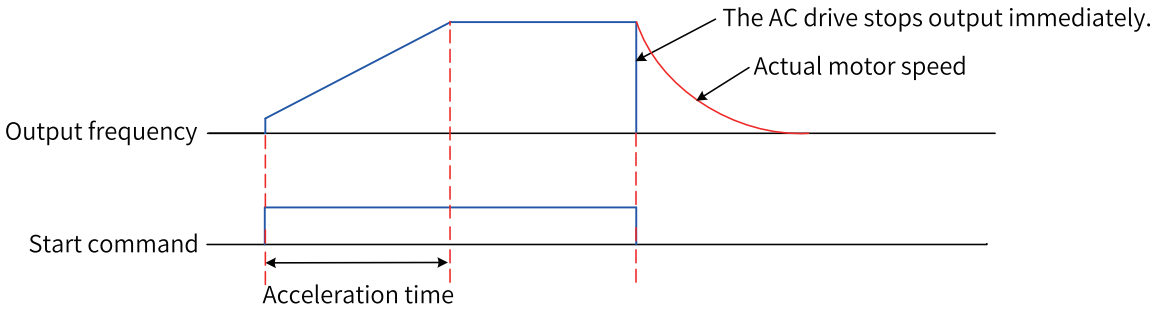


Figure 1-34 Timing diagram of coasting to stop

1.1.3.3 Acceleration/Deceleration Time

The acceleration time indicates the time required for the output frequency of the AC drive to rise from 0 to the acceleration/deceleration base frequency (F0-25). The deceleration time indicates the time required for the output frequency of the AC drive to decrease from the acceleration/deceleration base frequency (F0-25) to 0 Hz.

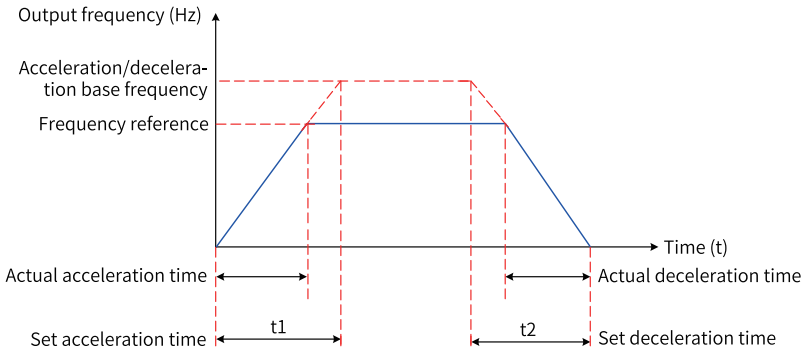


Figure 1-35 Acceleration/Deceleration time

The AC drive provides totally four groups of acceleration/deceleration time, which can be selected by using a DI terminal (assigned with function 16/17). The acceleration/deceleration time is defined by the following parameters:

Group 1: F0-17, F0-18

Group 2: F8-03, F8-04

Group 3: F8-05, F8-06

Group 4: F8-07, F8-08

Application

The following takes DI7 and DI8 as the input switchover terminals to describe how to set the acceleration/deceleration time.

1. Set F4-06 and F4-07 to select DI7 and DI8 for switchover.

Para.	Name	Reference	Function Description
F4-06	DI7 function	16	Acceleration/deceleration time selection terminal 1
F4-07	DI8 function	17	Acceleration/deceleration time selection terminal 2

2. Set the acceleration/deceleration time by using the four groups of acceleration/deceleration time parameters.

DI8 State	DI7 State	Acceleration/Deceleration Time
OFF	OFF	Group 1: F0-17, F0-18 (Acceleration time 1)
OFF	ON	Group 2: F8-03, F8-04 (Acceleration time 2. For details, see F0-17 and F0-18.)
ON	OFF	Group 3: F8-05, F8-06 (Acceleration time 3. For details, see F0-17 and F0-18.)
ON	ON	Group 4: F8-07, F8-08 (Acceleration time 4. For details, see F0-17 and F0-18.)

3. Set F0-19 (acceleration/deceleration time unit). Note that when this parameter is modified, the decimal places of the four groups of acceleration/deceleration time will change, and the corresponding acceleration/deceleration time will also change.
4. Set F6-07 (acceleration/deceleration mode) to select the frequency change mode during the start and stop process of the AC drive.
   - 0: The output frequency increases or decreases linearly.
   - 1: The output frequency increases or decreases according to the S-curve (select the arc symmetry mode or acceleration/deceleration segmentation in F6-20) when the target frequency changes dynamically. This mode is applicable to applications requiring supreme comfort and fast real-time response.
5. Set F6-08 and F6-09 to select the time proportions of S-curve start segment and end segment. The values of F6-08 and F6-09 must meet the following condition: F6-08 + F6-09 ⩽ 100.0%.
6. Select the arc type.
   When the acceleration/deceleration is abrupt, the RFG output frequency change is unsmooth, and the output frequency acceleration is incontinuous, which will lead to torque oscillation of the motor and may damage the mechanical gear.

   If A4-65 is set to 0 (incontinuous smoothing), acceleration/deceleration is executed immediately when the input value changes.

   If A4-65 is set to 1 (continuous smoothing), even if the input value decreases suddenly during acceleration, the AC drive will execute the end arc (causing overshoot) and then decelerate; even if

the input value increases suddenly during deceleration, the AC drive will execute the end arc (causing overshoot) and then accelerate.

Take sudden deceleration in the forward acceleration process as an example. As shown in the figure, the target frequency at t0 is F3. The AC drive accelerates to F2 at t1, and the target frequency is F1 at this time. The RFG output frequency changes according to curve 3 (execute the end arc of the acceleration segment to reduce acceleration v to 0 and then start deceleration) rather than curve 2 (set acceleration to 0 immediately and directly start deceleration) to cope with sudden change in acceleration v at t1, thereby reducing the impact of sudden changes on mechanical equipment.

1.2 Motor Configuration

The simple commissioning procedure of the AC drive is as follows:

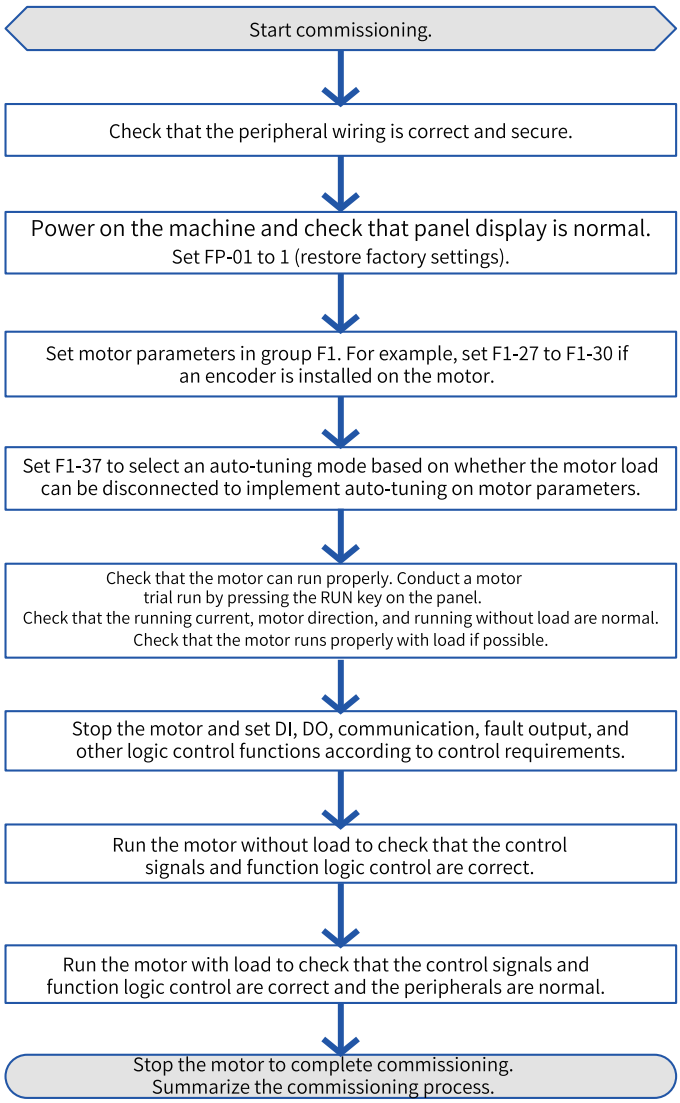


Figure 1-36 Quick commissioning process

The commissioning steps are as follows:

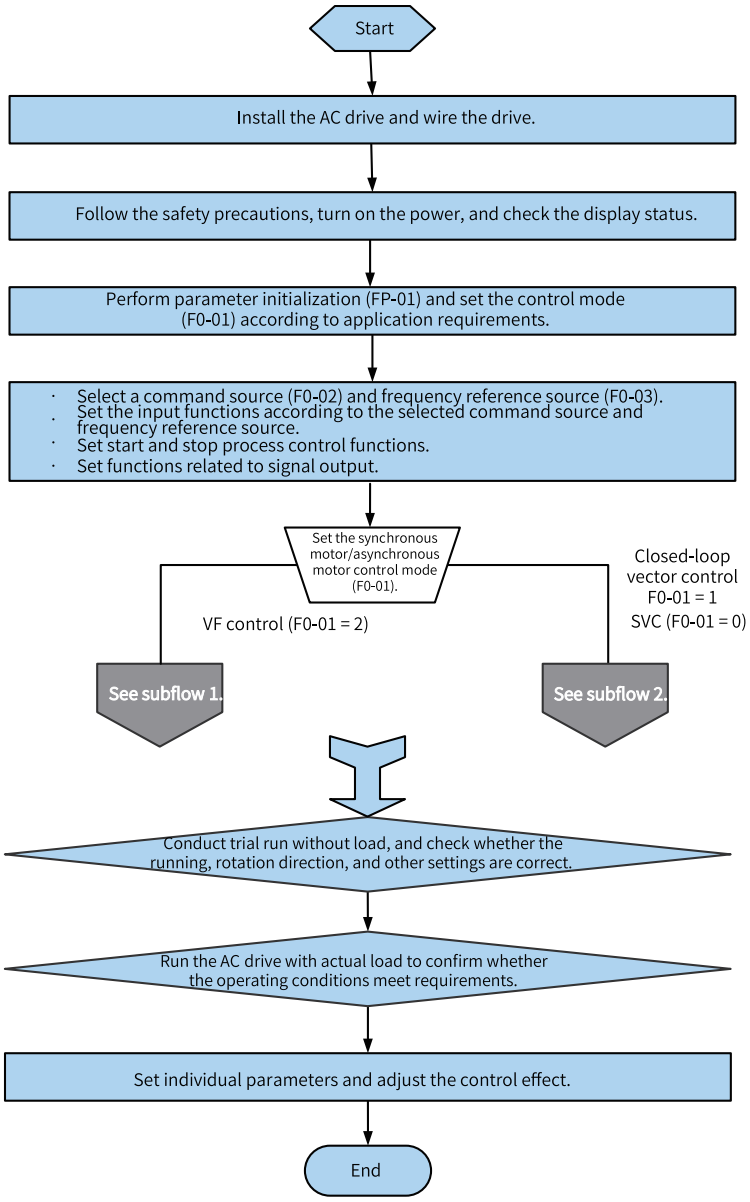


Figure 1-37 Commissioning flowchart

You can set F1-37 to select different auto-tuning modes:

- 1: Static auto-tuning on partial parameters of asynchronous motor
- 2: Dynamic auto-tuning on asynchronous motor
- 3: Static auto-tuning on all parameters of asynchronous motor
- 4: Inertia auto-tuning
- 5: Deadzone auto-tuning
- 11: With-load auto-tuning on synchronous motor
- 12: No-load dynamic auto-tuning on synchronous motor
- 13: Static auto-tuning on all parameters of synchronous motor

For permanent magnet synchronous motors and excited synchronous motors, select 11, 12, or 13.

1.2.1 Auto-tuning on Asynchronous Motor

Auto-tuning is required in vector control mode; otherwise, faults such as overcurrent will occur during running. Auto-tuning is also recommended in V/f control mode. The control performance of speed tracking (at least static auto-tuning on all parameters of the asynchronous motor), overcurrent suppression, and torque boost is enhanced when the parameters are accurate. The following table compares the application scenarios and performance of different auto-tuning methods.

Auto-tuning Method	Application Scenario	Auto-tuning Effect
Static auto-tuning on some parameters of asynchronous motor	Scenarios where the motor cannot be disconnected from the load and dynamic auto-tuning is not allowed	Ordinary
Dynamic auto-tuning on all parameters of asynchronous motor	Scenarios where the motor can be easily disconnected from the load. If the motor load is a roller type load (pure inertia load), you can perform auto-turning directly without removing the roller.	Optimal
With-load auto-tuning on all parameters of asynchronous motor	Scenarios where the motor cannot be disconnected from the load and dynamic auto-tuning on all parameters is not allowed	Good

The following figure shows subflow 1 (V/f control mode) in the commissioning flowchart.

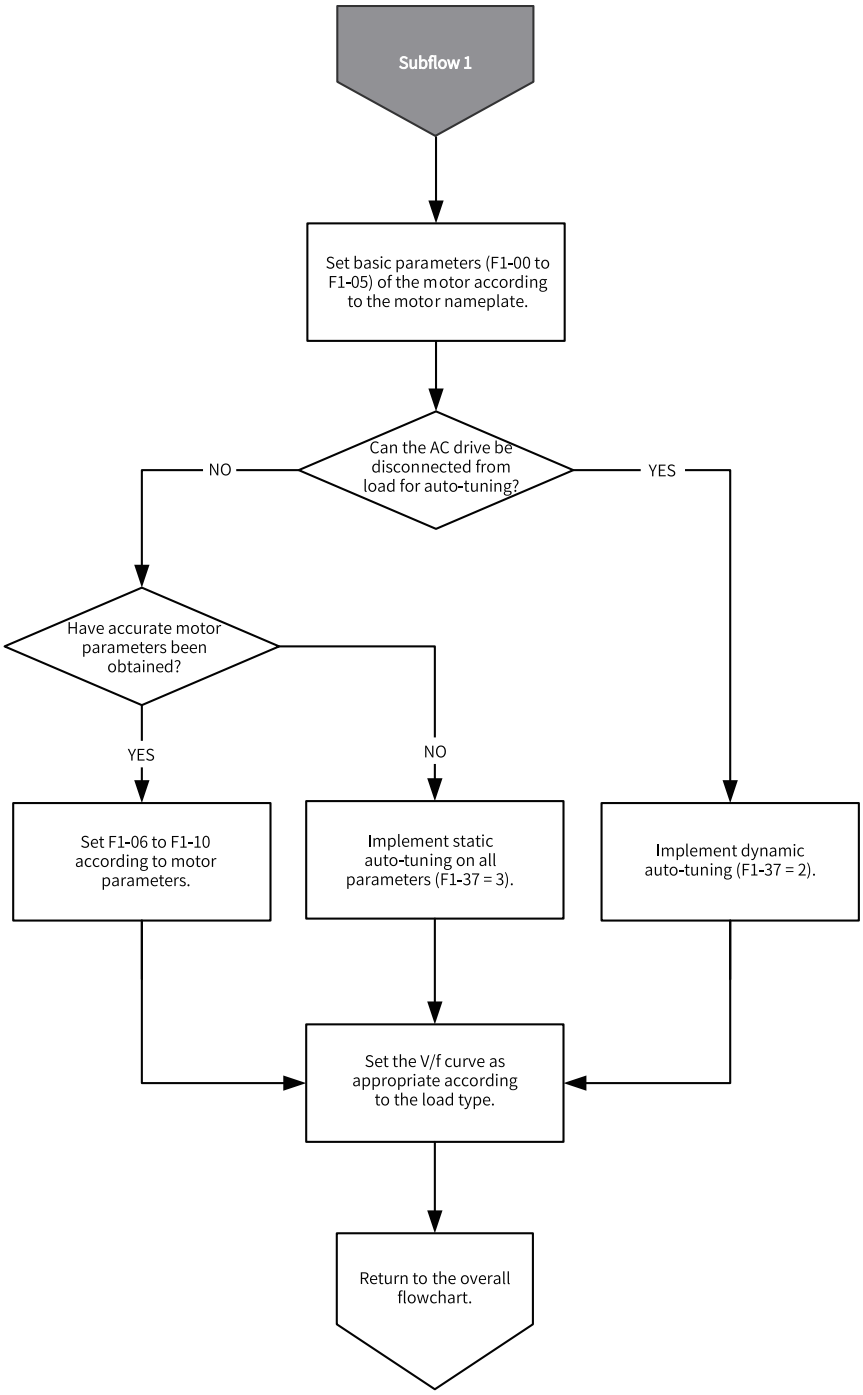


Figure 1-38 AC drive commissioning subflow 1 (V/f control)

The following figure shows subflow 2 (vector control mode) in the commissioning flowchart.

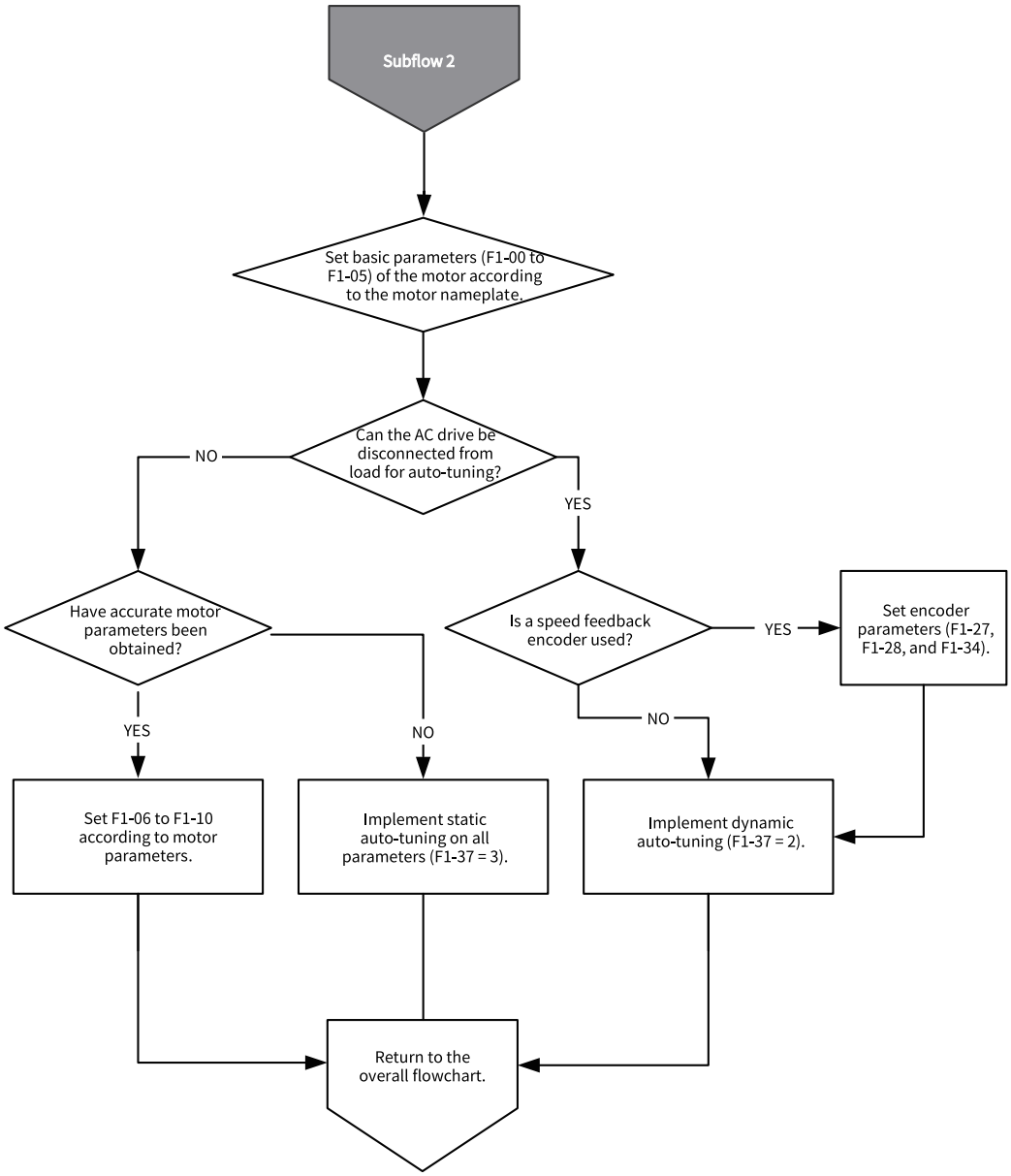


Figure 1-39 AC drive commissioning subflow 2 (vector control)

Taking motor parameter group 1 as an example, the following table lists the parameters obtained by using different auto-tuning methods.

Para.	Name	F1-37 = 1	F1-37 = 2	F1-37 = 3	F1-37 = 4[2]
F1-06	Motor stator resistance	√	√	√	-
F1-07	Asynchronous motor rotor resistance	√	√	√	-
F1-08	Asynchronous motor leakage inductance	√	√	√	-
F1-09	Asynchronous motor mutual inductance	√[4]	√	√[3]	-

Para.	Name	F1-37 = 1	F1-37 = 2	F1-37 = 3	F1-37 = 4[2]
F1-10	Asynchronous motor no-load current	√[4]	√	√[3]	-
F1-31	Encoder phase sequence	-	√[1]	-	-
A9-19	Asynchronous magnetic field saturation current coefficient 1	-	√	-	-
A9-20	Asynchronous magnetic field saturation current coefficient 2	-	√	-	-
A9-21	Asynchronous magnetic field saturation current coefficient 3	-	√	-	-
A9-22	Asynchronous magnetic field saturation current coefficient 4	-	√	-	-
A9-23	Asynchronous magnetic field saturation flux coefficient 1	-	√	-	-
A9-24	Asynchronous magnetic field saturation flux coefficient 2	-	√	-	-
A9-25	Asynchronous magnetic field saturation flux coefficient 3	-	√	-	-
A9-26	Asynchronous magnetic field saturation flux coefficient 4	-	√	-	-
F1-30	Input A/B phase sequence	-	√	-	-
A9-16	Inertia ratio	-	√	-	√
A9-17	Inertia	-	√	-	√
A9-18	Friction torque	-	√	-	√
F2-00	FVC speed loop Kp	-	√	-	√
F2-01	FVC speed loop Ti	-	√	-	√
F2-03	SVC speed loop Kp	-	√	-	√
F2-04	SVC speed loop Ti	-	√	-	√

Note [1]: If the encoder detection corresponding to the first bit of A9-09 is enabled or the motor control mode is set to FVC mode, the corresponding encoder phase sequence will be detected, and the detection result will be written into the corresponding function code in F1-30.

Note [2]: Inertia auto-tuning is performed when the motor control mode is set to V/f, FVC, or SVC mode.

Note [3]: No-load auto-tuning on all parameters (F1-37 = 2) is preferred if allowed. When F1-37 is set to 2, the motor mutual inductance and no-load current obtained from rotation auto-tuning are more accurate, and the magnetic field saturation coefficient of the asynchronous motor is also auto-tuned to improve the torque control accuracy. In scenarios where the motor cannot rotate during auto-tuning, the obtained motor mutual inductance and no-load current are more accurate when F1-37 is set to 3 (however, the saturation coefficient cannot be auto-tuned and the auto-tuning accuracy is lower, compared with the situation in which F1-37 is set to 2).

Note [4]: When F1-37 is set to 1, static auto-tuning is performed. In this case, the calculated mutual inductance and no-load current will be used. The accuracy is lower than when F1-37 is set to 2 or 3.

Note [5]: You can optimize auto-tuning items by setting AA-09.

Note [6]: In addition to the abovementioned auto-tuning methods, you can also manually input motor parameters or download the entire parameter file.

Note [7]: Motor auto-tuning can also be performed through communication in addition to the operating panel. You can set F0-02 to select the command source. For the Modbus, PROFIBUS, and CANopen protocols, the PKW parameters support auto-tuning but the PZD parameters do not. To perform motor auto-tuning through communication, set F1-37 or A2-37 to select an auto-tuning mode, and then enter the command.

When F1-37 is set to 2 (no-load auto-tuning on all parameters), the motor will rotate at a high speed during auto-tuning. Be sure to perform auto-tuning under the premise that mechanical safety is guaranteed. Meanwhile, ensure that the load torque of the motor at constant speed is as close to no load as possible. A smaller load indicates more accurate auto-tuning results. If the load is too heavy, AC drive overload or overcurrent may occur.

Application

The following uses the parameters of motor 1 (set F0-24 to 0 to select motor parameter group 1) as an example to describe the motor auto-tuning methods. If you need to perform auto-tuning on parameters of motor 2, set F0-24 to 1 (motor parameter group 2). The auto-tuning method for motor 2 is similar to that for motor 1. For details about the related parameters, see parameter group A2.

- Static auto-tuning on some parameters of asynchronous motor

Table 1–6 Static auto-tuning on some parameters of asynchronous motor

Step	Description
Step 1	Power on the AC drive, and then set F0-02 to 0 to select the operating panel as the command source.
Step 2	Set F1-00 to F1-05 to input motor nameplate parameters correctly.

Step	Description
Step 3	Set F1-37 to 1 to select static auto-tuning on some parameters of the asynchronous motor, and press Enter on the operating panel. The operating panel displays:
Step 4	Press the RUN key on the operating panel for more than 3 seconds to start motor auto-tuning. The RUN indicator is steady on. The TUNE/TC indicator blinks. The motor does not rotate but the AC drive energizes the motor. After the preceding display disappears and the operating panel returns to normal parameter display state, auto-tuning is completed. Parameters F1-06 to F1-08 are obtained.

- Dynamic auto-tuning on all parameters of asynchronous motor
  If the motor has constant output or is used for high-accuracy applications, perform dynamic auto-tuning on all parameters after disconnecting the motor from the load for optimal auto-tuning effect.

Table 1–7 Dynamic auto-tuning on all parameters of asynchronous motor

Step	Description
Step 1	Power on the AC drive, and then set F0-02 to 0 to select the operating panel as the command source.
Step 2	Set F1-00 to F1-05 to input motor nameplate parameters correctly.
Step 3	If F0-01 is set to 1 (FVC control), enter the encoder parameters (F1-27, F1-28, and F1-30).
Step 4	Set F1-37 to 2 to select dynamic auto-tuning on all parameters of the asynchronous motor, and press Enter on the operating panel. The operating panel displays:
Step 5	Press the RUN key on the operating panel for more than 3 seconds to start motor auto-tuning. The RUN indicator is steady on. The TUNE/TC indicator blinks. The AC drive drives the motor to accelerate/decelerate and run in the forward/reverse direction, and performs auto-tuning. After the preceding display disappears and the operating panel returns to normal parameter display state, auto-tuning is completed. Parameters F1-06 to F1-10 and F1-30 are obtained.

- With-load auto-tuning on all parameters of asynchronous motor
  If the motor cannot be disconnected from the load, perform auto-tuning on all parameters of the asynchronous motor with load, that is, static auto-tuning on all parameters of the asynchronous motor.

Table 1–8 Static auto-tuning on all parameters of asynchronous motor

Step	Description
Step 1	Power on the AC drive, and then set F0-02 to 0 to select the operating panel as the command source.
Step 2	Set F1-00 to F1-05 to input motor nameplate parameters correctly.

Step	Description
Step 3	Set F1-37 to 3 to select static auto-tuning on all parameters of the asynchronous motor, and press Enter on the operating panel. The operating panel displays:
Step 4	Press the RUN key on the operating panel for more than 3 seconds to start motor auto-tuning. The RUN indicator is steady on. The TUNE/TC indicator blinks. The motor does not rotate but the AC drive energizes the motor. After the preceding display disappears and the operating panel returns to normal parameter display state, auto-tuning is completed. Parameters F1-06 to F1-10 are obtained.

1.2.2 Auto-tuning on Synchronous Motor

Motor auto-tuning is the process by which the AC drive obtains the parameters of the controlled motor.

Synchronous motor auto-tuning includes static auto-tuning on some parameters (excluding back EMF) of synchronous motor, no-load dynamic auto-tuning on all parameters of synchronous motor, and static auto-tuning on all parameters of synchronous motor.

The following table compares the effect of different auto-tuning methods.

Table 1–9 Motor auto-tuning effect

Auto-tuning Method	Application Scenario	Auto-tuning Effect
Static auto-tuning on some parameters of synchronous motor	Scenarios where the motor cannot be disconnected from the load and dynamic auto-tuning is not allowed After auto-tuning, the back EMF (SVC and PMVVC) and encoder phase sequence need to be set manually.	Good
No-load dynamic auto-tuning on all parameters of synchronous motor	Scenarios where the motor can be disconnected from the application system easily	Optimal
Static auto-tuning on all parameters of synchronous motor	The motor cannot be disconnected from the load and motor rotation is not allowed. After auto-tuning, the back EMF (SVC and PMVVC), encoder zero position angle (FVC), and encoder phase sequence (FVC) need to be set manually.	Ordinary

The rated frequency of the motor is limited by the maximum frequency and the frequency upper and lower limits. The default maximum frequency is 50 Hz. Before motor commissioning, you need to set F0-10 (maximum frequency), F0-12 (frequency upper limit), and F0-14 (frequency lower limit). If the rated frequency of the motor is greater than 50 Hz, ensure that the maximum frequency is no lower than the frequency upper limit, and the rated frequency falls between the upper and lower frequency limits.

Synchronous motors support both vector control and V/f (VVC) control. The vector control mode is preferred. V/f (VVC) control can be used if the load is a high-speed steady load. The commissioning steps are as follows.

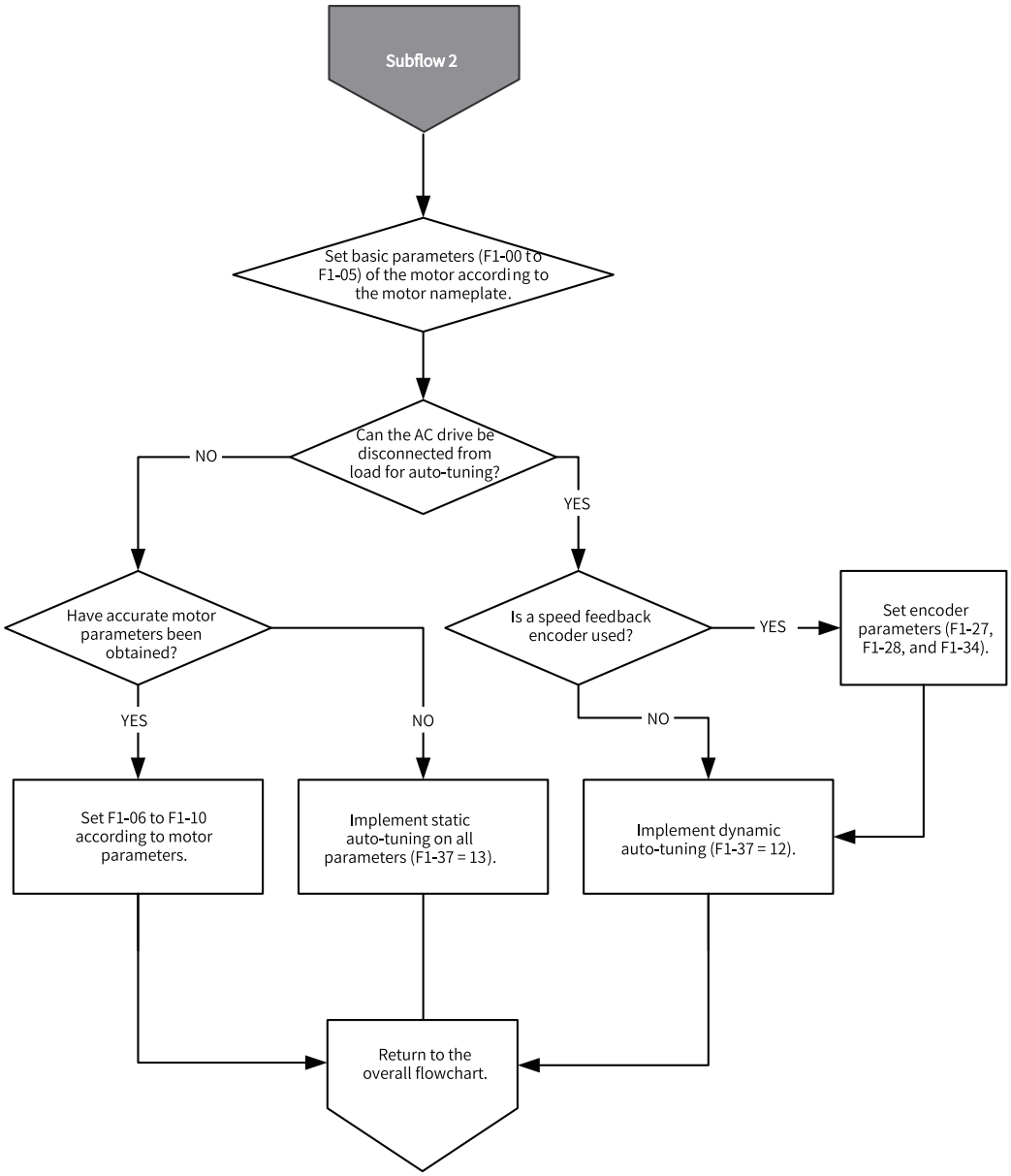


Figure 1-40 Synchronous motor commissioning subflow 1 (vector control FVC/SVC)

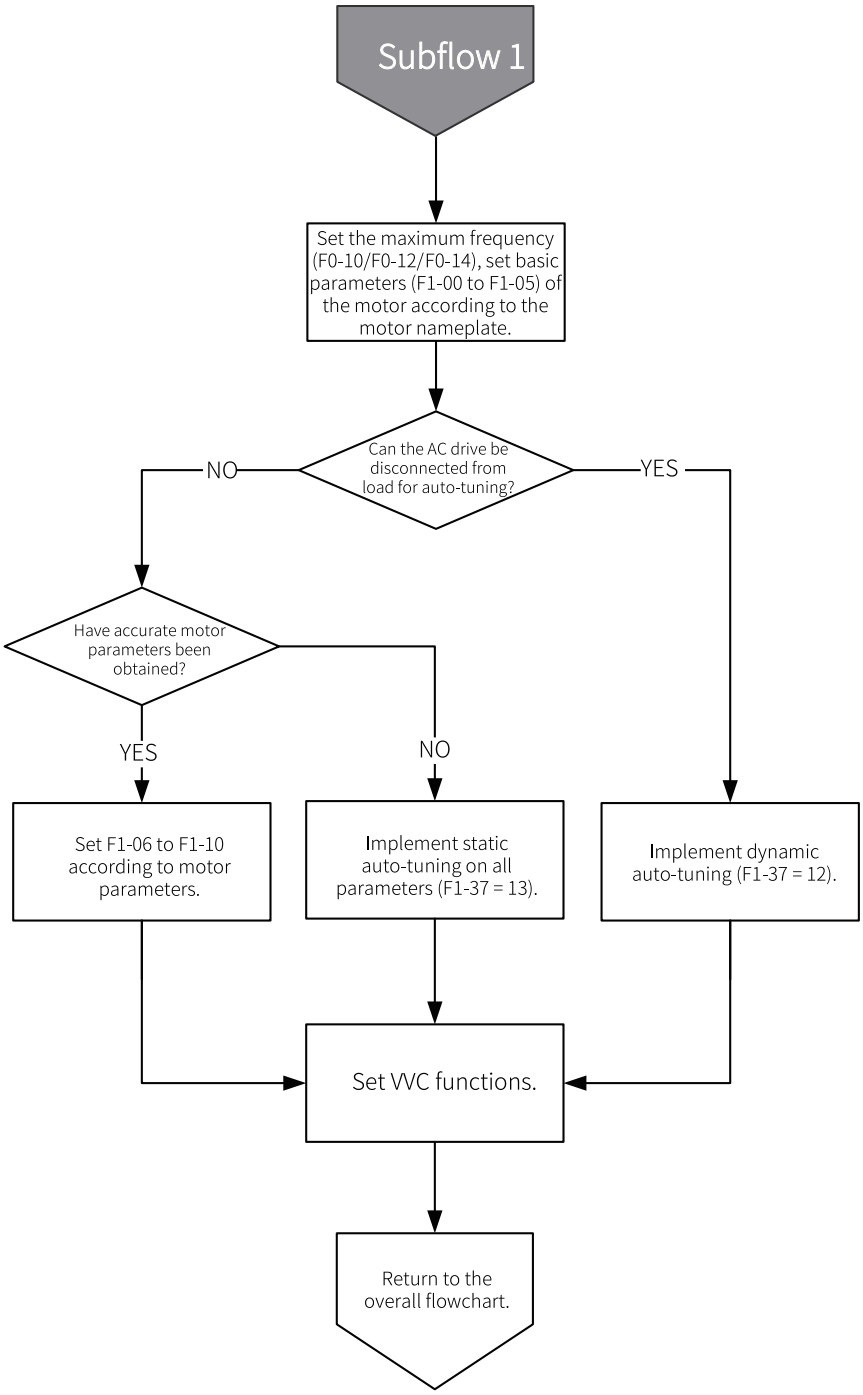


Figure 1-41 Synchronous motor commissioning subflow 2 (vector control FVC/SVC)

Para.	Name	F1-37 = 11	F1-37 = 12	F1-37 = 13	F1-37 = 4
F1-16	Motor stator resistance	√	√	√	-
F1-17	Synchronous motor D axis inductance	√	√	√	-
F1-18	Synchronous motor Q axis inductance	√	√	√	-

Para.	Name	F1-37 = 11	F1-37 = 12	F1-37 = 13	F1-37 = 4
F1-20	Synchronous motor CEMF voltage	√[1]	√	-	-
F1-30	Encoder input A/B phase sequence	-	√[3]	-	-
F1-31	Encoder installation position angle	√[2]	√[3]	-	-
A9-16	Inertia	-	√	-	√
A9-17	Inertia ratio	-	√	-	√
A9-18	Friction torque	-	√	-	√
F2-00	FVC speed loop Kp	-	√	-	√
F2-01	FVC speed loop Ti	-	√	-	√
F2-03	SVC speed loop Kp	-	√	-	√
F2-04	SVC speed loop Ti	-	√	-	√

Note [1]: When F1-37 is set to 11 (with-load auto-tuning on synchronous motor), the obtained back EMF is an estimated value, of which the accuracy is lower than when F1-37 is set to 12 or 13.

Note [2]: When F1-37 is set to 11 (with-load auto-tuning on synchronous motor), the encoder phase sequence cannot be auto-tuned. Make sure that the encoder direction is consistent with the motor rotation direction before auto-tuning. System inertia is also not auto-tuned.

Note [3]: In SVC or V/f (PMVVC) control mode, if encoder detection (first bit of A9-09) is disabled, the zero position angle of the encoder is not auto-tuned.

Note [4]: If a resolver or 23-bit encoder is used, the motor does not rotate during the auto-tuning process. If an ABZ encoder is used, the motor rotates briefly during the auto-tuning process.

Note [5]: You can also manually input motor parameters or download the parameter file (to ensure accurate motor direction and encoder direction).

Note [6]: Motor auto-tuning can also be performed through the LCD operating panel (F0-02 = 0), DI terminal (F0-02 = 1), and communication (F0-02 = 2) in addition to the LED operating panel. For the Modbus, PROFIBUS, and CANopen protocols, the PKW parameters support auto-tuning but the PZD parameters do not. To perform motor auto-tuning through communication, set F1-37 to select an auto-tuning mode, and then enter the command.

When F1-37 is set to 12 (no-load auto-tuning on all parameters), the motor will rotate at a high speed during auto-tuning. Be sure to perform auto-tuning under the premise that mechanical safety is guaranteed. Meanwhile, ensure that the load torque of the motor at constant speed is as close to no load as possible. A smaller load indicates more accurate auto-tuning results. If the load is too heavy, AC drive overload or overcurrent may occur.

Note In FVC control mode of the synchronous motor, the encoder installation position angle must be set or auto-tuned correctly before running. If no-load auto-tuning on all parameters (F1-37 = 12) cannot be performed because the load cannot be disconnected, with-load auto-tuning (F1-37 = 11) is required.

Application

- Static auto-tuning on some parameters of synchronous motors

Table 1–10 Static auto-tuning on some parameters of synchronous motors

Step	Description
Step 1	Power on the AC drive, and then set F0-02 to 0 to select the operating panel as the command source.
Step 2	Set F1-00 to F1-05 to input motor nameplate parameters correctly.
Step 3	Set F1-37 to 11 to select static auto-tuning on some parameters of the synchronous motor, and press Enter on the operating panel. The operating panel displays:
Step 4	Press the RUN key on the operating panel for more than 3 seconds to start motor auto-tuning. The RUN indicator is steady on, the TUNE/TC indicator blinks, and the AC drive energizes the motor. After the preceding display disappears and the operating panel returns to normal parameter display state, auto-tuning is completed. Parameters F1-06, F1-17, F1-18, and F1-31 (FVC) are obtained. Manually set F1-19 (SVC and PMVVC) and F1-30 (FVC).

- No-load dynamic auto-tuning on all parameters of synchronous motors
  If the motor has constant output or is used for high-accuracy applications, perform dynamic auto-tuning on all parameters after disconnecting the motor from the load for optimal auto-tuning effect.

Table 1–11 Dynamic auto-tuning on all parameters of synchronous motors

Step	Description
Step 1	Power on the AC drive, and then set F0-02 to 0 to select the operating panel as the command source.
Step 2	Set F1-00 to F1-05 to input motor nameplate parameters correctly.
Step 3	If F0-01 is set to 1 (FVC control), enter encoder parameters (F1-27 and F1-28).
Step 4	Set F1-37 to 12 to select no-load dynamic auto-tuning on all parameters of the synchronous motor, and press Enter on the operating panel. The operating panel displays:
Step 5	Press the RUN key on the operating panel for more than 3 seconds to start motor auto-tuning. The RUN indicator is steady on, the TUNE/TC indicator blinks, and the AC drive energizes the motor. After the preceding display disappears and the operating panel returns to normal parameter display state, auto-tuning is completed. Parameters F1-06, F1-17, F1-18, F1-19, F1-30 (FVC), and F1-31 (FVC) are obtained.

- Static auto-tuning on all parameters of synchronous motors
  You can use this method in scenarios where the motor is not allowed to rotate at all.

Table 1–12 Static auto-tuning on all parameters of synchronous motors

Step	Description
Step 1	Power on the AC drive, and then set F0-02 to 0 to select the operating panel as the command source.
Step 2	Set F1-00 to F1-05 to input motor nameplate parameters correctly.
Step 3	Set F1-37 to 13 to select static auto-tuning on all parameters of the synchronous motor, and press Enter on the operating panel. The operating panel displays:
Step 4	Press the RUN key on the operating panel for more than 3 seconds to start motor auto-tuning. The RUN indicator is steady on, the TUNE/TC indicator blinks, and the AC drive energizes the motor. After the preceding display disappears and the operating panel returns to normal parameter display state, auto-tuning is completed. Parameters F1-06, F1-17, and F1-18 are obtained. Manually set F1-19 (SVC and PMVVC), F1-31 (FVC), and F1-30 (FVC).

1.2.3 Motor Parameters

MD520 supports four groups of motor parameters, as listed in the following table.

Motor Parameter Group	Function Code
Motor parameter group 1	F0, F1, F2, F3, F6, F8, A9, AA, AB
Motor parameter group 2	A2, A3, B6, B7, B8, B9
Motor parameter group 3	BA, BB, BC, BD, BE
Motor parameter group 4	CA, CB, CC, CD, CE

The motor parameter group can be switched in the following two ways:

- Set F0-24 to select a motor parameter group. Set F0-24 to 0 to select motor parameter group 1, set F0-24 to 1 to select motor parameter group 2, set F0-24 to 2 to select motor parameter group 3, and set F0-24 to 3 to select motor parameter group 4.
- Set DI terminal functions to select a motor parameter group. Set the functions of any two DI terminals among DI1 to DI10 (F4-00 to F4-09) to 41 (motor selection terminal 1) and 76 (motor selection terminal 2) respectively. The following table describes the correspondence between DI terminal states and motor parameter group selection.

State of DI Terminal Assigned with Function 41	State of DI Terminal Assigned with Function 76	Motor parameter group
0	0	1
1	0	2
0	1	3
1	1	4

If any of F4-00 to F4-09 is set to 41 (motor selection terminal 1) or 76 (motor selection terminal 2), the DI terminal determines motor selection. The motor parameter group is selected by F0-24 only when no DI terminal (F4-00 to F4-09) is assigned with the motor selection function.

You can also obtain the current motor parameter group in U2-00. When U2-00 is 0, motor parameter group 1 is selected; when U2-00 is 1, motor parameter group 2 is selected; when U2-00 is 2, motor parameter group 3 is selected; when U2-00 is 3, motor parameter group 4 is selected.

Note The motor parameter group switching command is invalid during running. You need to switch the motor parameter group after the AC drive stops.

1.3 Control Interfaces

1.3.1 DI

The AC drive is equipped with a number of multi-functional DI terminals (among which DI5 can be used as the pulse input terminal). Each DI terminal can be assigned with a DI function.

Table 1–13 Related parameters

Para.	Name	Default	Value Range	Description
F4-00	DI1 function	1	0 to 80 (The value 30 (pulse frequency input function) is unavailable for F4-00.)	See *"Table 1–14 Functions of DI terminals" on page 60*.
F4-01	DI2 function	4		
F4-02	DI3 function	9		
F4-03	DI4 function	12		
F4-04	DI5 function	13		
F4-05	DI6 function	0		
F4-06	DI7 function	0		
F4-07	DI8 function	0		
F4-08	DI9 function	0		
F4-09	DI10 function	0		
F4-10	DI filter time	0.010s	0.000s to 1.000s	This parameter defines the delay upon DI terminal state change. It is available only for DI1 and DI2 currently.

Para.	Name	Default	Value Range	Description
F4-38	DI active mode setting 1	00000	Ones: DI1 active mode 0: Active high 1: Active low Tens: DI2 active mode (0 or 1, the options are the same as those of DI1). Hundreds: DI3 active mode (0 or 1, the options are the same as those of DI1). Thousands: DI4 active mode (0 or 1, the options are the same as those of DI1). Ten thousands: DI5 active mode (0 or 1, the options are the same as those of DI1).	The ones, tens, hundreds, thousands, and ten thousands of this parameter define the active modes for terminals DI1 to DI5. 0: Active high The DI terminal (DI1 to DI5) is active when being connected to COM and inactive when being disconnected from COM. 1: Active low The DI terminal (DI1 to DI5) is inactive when being connected to COM and active when being disconnected from COM.
F4-39	DI active mode setting 2	00000		
F4-41	DI1 switch-on delay	0.0s	0.0s to 3600.0s	-
F4-42	DI1 switch-off delay	0.0s	0.0s to 3600.0s	-
F4-43	DI2 switch-on delay	0.0s	0.0s to 3600.0s	-
F4-44	DI2 switch-off delay	0.0s	0.0s to 3600.0s	-
F4-45	DI3 switch-on delay	0.0s	0.0s to 3600.0s	-
F4-46	DI3 switch-off delay	0.0s	0.0s to 3600.0s	-
F4-47	DI4 switch-on delay	0.0s	0.0s to 3600.0s	-
F4-48	DI4 switch-off delay	0.0s	0.0s to 3600.0s	-
F4-49	DI force data	0x0	0x0 to 0x03FF	This parameter is used to set the level states of DI1 to DI10 (arranged by bit) forcibly. If the bit value is 0, the corresponding level is forced to be inactive; otherwise, it is active.
F4-50	DI communication data	0x0	0x0 to 0xFFFF	This parameter is used to set the level states of DI1 to DI10 and VDI1 to VDI6 (arranged by bit) through communication. If the bit value is 0, the corresponding level is inactive; otherwise, it is active.

Para.	Name	Default	Value Range	Description
F4-51	DI1 hardware source	0	0: Hardware 1: Force value	-
F4-52	DI2 hardware source	0	0: Hardware 1: Force value	-
F4-53	DI3 hardware source	0	-	-
F4-54	DI4 hardware source	0	-	-
F4-55	DI5/HDI hardware source	0	-	-
F4-56	DI6 hardware source	0	0: Hardware 1: Force value 2: Communication 4: AI1 5: AI2 6: AI3 11: DI1 12: DI2 13: DI3 14: DI4 15: DI5/HDI 17: DI7 18: DI8 19: DI9 20: DI10 21: VDI1 22: VDI2 23: VDI3 24: VDI4 25: VDI5 26: VDI6 31: Relay 1 32: Relay 2 33: DO1 (To be continued)	-

Para.	Name	Default	Value Range	Description
(Continued)	(Continued)	(Continued)	(Continued) 34: Expansion card relay 35: Expansion card DO2 36: VDO1 37: VDO2 38: VDO3 39: VDO4 40: VDO5 41: VDO6 42: VDO7 43: VDO8 44: VDO9 45: VDO10 46: VDO11	-
F4-57	DI7 hardware source	0	Same as F4-56	-
F4-58	DI8 hardware source	0	Same as F4-56	-
F4-59	DI9 hardware source	0	Same as F4-56	-
F4-60	DI10 hardware source	0	Same as F4-56	-
F4-61	DI5/HDI terminal type	1	0: HDI 1: DI	-

Table 1–14 Functions of DI terminals

Reference	Function	Description
0	No function	Set 0 for reserved terminals to avoid malfunction.
1	Forward RUN (IN1)	The terminal is used to set the operation mode of the AC drive to forward run. (FWD indicates forward.) In two-wire mode 1 (F4-11 = 0), the terminal is used to set the operation mode of the AC drive to forward run. In two-wire mode 2 (F4-11 = 1), the terminal is used to issue a running command.
2	Reverse RUN (IN2)	The terminal is used to set the operation mode of the AC drive to reverse run. (REV indicates reverse.) In three-wire mode 1 (F4-11 = 2), the terminal is used to set the operation mode of the AC drive to reverse run. In three-wire mode 2 (F4-11 = 3), the terminal is used to set the forward/reverse run direction.
3	Three-wire control mode (IN3)	The terminal is used to set the AC drive to run in three-wire control mode. To use a terminal as the command source, set F4-11 (terminal control mode) to 2 (three-wire mode 1) or 3 (three-wire mode 2), and set this parameter to 3. The three-wire control modes include three-wire mode 1 and three-wire mode 2.
4	Forward jogging (FJOG)	The terminal is used to set the operation mode of the AC drive to forward jogging. In jogging mode, the AC drive runs at low speed for a short time, which is typically used for maintenance and commissioning of field equipment.

Reference	Function	Description
5	Reverse jogging (RJOG)	The terminal is used to set the operation mode of the AC drive to reverse jogging. In jogging mode, the AC drive runs at low speed for a short time, which is typically used for maintenance and commissioning of field equipment.
6	Terminal UP	The terminal is used to increase the frequency when terminal I/O is used as the frequency reference source. When the terminal is active, it works as if the key is pressed and held. When the terminal is inactive, it works as if the key is released.
7	Terminal DOWN	The terminal is used to decrease the frequency when terminal I/O is used as the frequency reference source. When the terminal is active, it works as if the key is pressed and held. When the terminal is inactive, it works as if the key is released.
8	Coast to stop	When the terminal is active, a coast to stop command is issued, upon receiving which the AC drive stops output immediately, allowing the load to stop following mechanical inertia. The AC drive stops by stopping the output. At this time, the power supply of the motor is cut off and the drive system is in a free braking state. Since the stop time is determined by the inertia of the drive system, it is also called inertia stop.
9	Fault reset (RESET)	The terminal is used to reset faults of the AC drive, which functions the same as the STOP/RES key on the operating panel. Remote fault reset can be implemented by using this function.
10	Running pause	When the terminal is active, the AC drive decelerates to stop with all running parameters memorized (such as PLC, wobble, and PID parameters). When the terminal is inactive, the AC drive resumes its running state as recorded.
11	External fault NO input	When the terminal is active, the AC drive reports E015.1 upon receiving an external signal.
12	Multi-reference terminal 1	Multi-reference is selected as the main frequency source. You can set the 16 states of the four terminals to define 16 speeds or 16 other references. This function is applicable to applications where continuous adjustment of the AC drive running frequency is not required and only several frequency values are required.
13	Multi-reference terminal 2	
14	Multi-reference terminal 3	
15	Multi-reference terminal 4	
16	Acceleration/deceleration time selection terminal 1	The AC drive supports four groups of acceleration/deceleration time, which can be selected through combinations of four states of these two terminals. The acceleration time indicates the time required for the output frequency of the AC drive to rise from 0 to the acceleration/ deceleration base frequency (F0-25). The deceleration time indicates the time required for the output frequency of the AC drive to decrease from the acceleration/deceleration base frequency (F0-25) to 0 Hz.
17	Acceleration/deceleration time selection terminal 2	
18	Frequency source switchover	The terminal is used to switch between different frequency reference sources. The frequency reference is set in F0-07 (frequency source superposition).
19	UP and DOWN setting clear	When the main frequency is set through the operating panel and this terminal is active, the frequency set by using the or key on the operating panel or terminal UP/DOWN (6 or 7) can be cleared and the frequency will be reset to the value of F0-08.

Reference	Function	Description
20	Command source switchover terminal 1	When the command source is set to terminal control (F0-02 = 1), activating the terminal switches from terminal control to operating panel control. When the command source is set to communication control (F0-02 = 2), activating the terminal switches from communication control to operating panel control.
21	Acceleration/Deceleration inhibition	The terminal is used to keep the AC drive at the current running frequency regardless of changes of the external input frequency (unless a stop command is received).
22	PID pause	The terminal is used to suspend PID control temporarily, so that the AC drive retains the current output frequency with no more PID tuning on the frequency source.
23	Simple PLC state reset	The terminal is used to reset the AC drive to the initial state of the simple PLC.
24	Wobble pause	In the wobble process, when the terminal is active, the wobble function is paused (the AC drive outputs at the center frequency).
25	Counter input	In the counting process, a counting pulse is input when the terminal is active.
26	Counter reset	In the counting process, the counter state is cleared when the terminal is active.
27	Length count input	In the fixed length process, the length count is input when the terminal is active.
28	Length reset	In the fixed length process, the length is cleared when the terminal is active.
29	Torque control inhibition	When the terminal is active, the AC drive switches from the torque control mode to speed control mode. When the terminal is inactive, the AC drive resumes the torque control mode.
30	Pulse input	This function must be selected when DI5 is used for pulse input.
32	Immediate DC braking	When the terminal is active, the AC drive switches to the DC braking state directly. During DC braking, the AC drive feeds DC into the stator winding of the asynchronous motor to form a static magnetic field to set the motor to braking with energy consumption. In this state, the rotor cuts the static magnetic field to generate braking torque, which stops the motor quickly.
33	External fault NC input	When the terminal is active, the AC drive reports E015.2 upon receiving an external signal.
34	Frequency modification enable	When the terminal is active, the frequency can be modified. When the terminal is inactive, the frequency cannot be modified.
35	PID action direction reversal	The terminal is used to reverse the direction set by FA-03 (PID action direction).
36	External stop terminal 1	When the command source is set to operating panel control (F0-02 = 0), the terminal is used to stop the AC drive, which functions the same as the STOP/RES key on the operating panel.
37	Control command switchover terminal 2	The terminal is used for switchover between terminal control and communication control. If the command source is set to terminal control, the system switches to communication control when the terminal is active. If the command source is set to communication control, the system switches to terminal control when the terminal is active.
38	PID integral pause	The integral adjustment function pauses when the terminal is active. However, the proportional and derivative adjustment functions are still valid.

Reference	Function	Description
39	Switchover between main frequency and preset frequency	The terminal is used to switch from the main frequency X to the preset frequency (F0-08).
40	Switchover between auxiliary frequency and preset frequency	The terminal is used to switch from the auxiliary frequency Y to the preset frequency (F0-08).
41/76	Motor selection	The terminal is used to select the motor. Assume that DI1 and DI2 are assigned with functions 41 and 76. Motor 1 is selected when both DI1 and DI2 are inactive; motor 2 is selected when DI1 is active and DI2 is inactive; motor 3 is selected when DI1 is inactive and DI2 is active; and motor 4 is selected when both DI1 and DI2 are active.
43	PID parameter switchover	If the PID parameter switchover condition is set to "switchover by DI" (FA-18 = 1), the PID parameters are FA-05 to FA-07 (proportional gain Kp1, integral time Ti1, and derivative time Td1) when the terminal is inactive, or FA-15 to FA-17 (proportional gain Kp2, integral time Ti2, and derivative time Td2) when the terminal is active.
44	User-defined fault 1	When E027.1 is reported, the AC drive will take measures according to the value of F9-49 (fault protection action).
45	User-defined fault 2	When E28.1 is reported, the AC drive will take measures according to the value of F9-49 (fault protection action).
46	Switchover between speed control and torque control	The terminal is used to switch between speed control and torque control. When A0-00 (speed/torque control mode) is set to 0, the torque control mode is used when the terminal is active, and the speed control mode is used when the terminal is inactive. When A0-00 (speed/torque control mode) is set to 1, the speed control mode is used when the terminal is active, and the torque control mode is used when the terminal is inactive.
47	Emergency stop	Upon an emergency, the AC drive decelerates according to the deceleration time for emergency stop set in F8-59, or it decelerates according to the minimum unit time when the deceleration time for emergency stop is 0s in V/f mode. The terminal does not need to be kept in the closed state. Even if it stays closed only for an instant, the AC drive will come to an emergency stop. Different from general deceleration, the emergency stop action prevents the AC drive from restarting even if the emergency stop input terminal is opened after the deceleration time for emergency stop expires and the run signal is still valid on the AC drive terminal. To restart the AC drive in this case, disconnect the running terminal and input the run command.
48	External stop terminal 2	The terminal is used to make the AC drive decelerate to stop in any control mode (operating panel, terminal, or communication control). In this case, the deceleration time is fixed to deceleration time 4 (F8-08).
49	Deceleration DC braking	The terminal is used to make the AC drive decelerate to the start frequency of DC braking during stop (F6-11) before entering the DC braking state.
50	Current running duration clear	The terminal is used to clear the current running duration of the AC drive. If the current running duration is less than the setpoint of F8-53 (current running duration threshold, which is greater than 0) and the terminal is active in the process, the current running duration is cleared. If the current running duration is greater than the setpoint of F8-53 (greater than 0) and the terminal is active, the current running duration is not cleared.

Reference	Function	Description
51	Switchover between two-wire and three-wire control	The terminal is used to switch between two-wire and three-wire control. If F4-11 is set to 0 (two-wire mode 1), the AC drive switches to three-wire mode 1 when the terminal is active. When the terminal is inactive, two-wire mode 1 is used. If F4-11 is set to 1 (two-wire mode 2), the AC drive switches to three-wire mode 2 when the terminal is active. If F4-11 is set to 2 (three-wire mode 1), the AC drive switches to two-wire mode 1 when the terminal is active. If F4-11 is set to 3 (three-wire mode 2), the AC drive switches to two-wire mode 2 when the terminal is active.
52	Reverse running inhibition	When the terminal is active, even if the reverse frequency is set, the actual frequency reference of the AC drive is fixed to 0. This function is the same as F8-13.

1.3.2 DO

Table 1–15 Related parameters

Para.	Name	Default	Value Range	Description
F5-01	FMR output function	0	0 to 43	See *"Table 1–16 Functions of DO terminals" on page 67*.
F5-02	Control board relay (DO3) output function	2		
F5-03	Expansion card relay (DO4) output function	0		
F5-04	DO1 function	1		
F5-05	Expansion card DO2 function	4		
F5-17	FMR output delay (invalid)	0.0s	0.0s to 3600.0s	These parameters are reserved for compatibility with MD500. The settings are invalid.
F5-18	Relay 1 (DO3) output delay (invalid)	0.0s	0.0s to 3600.0s	
F5-19	Relay 2 (DO4) output delay (invalid)	0.0	0.0s to 3600.0s	
F5-20	DO1 output delay (invalid)	0.0s	0.0s to 3600.0s	
F5-21	DO2 output delay (invalid)	0.0s	0.0s to 3600.0s	

Para.	Name	Default	Value Range	Description
F5-22	DO active mode	0	Ones: FMR 0: Positive logic active 1: Negative logic active Tens: Relay 1 (DO3) 0: Positive logic active 1: Negative logic active Hundreds: Relay 2 (DO4) 0: Positive logic active 1: Negative logic active Thousands: DO1 0: Positive logic active 1: Negative logic active Ten thousands: DO2 0: Positive logic active 1: Negative logic active	The ones, tens, hundreds, thousands, and ten thousands of this parameter define the active modes for DO terminals corresponding to F5-01 to F5-05. 0: Positive logic (same as NO contact) Active: The DO terminal and COM/ CME terminal are connected inside the AC drive. Inactive: The DO terminal and COM/ CME terminal are disconnected. 1: Negative logic (same as NC contact) Active: The DO terminal and COM/ CME terminal are disconnected. Inactive: The DO terminal and COM/ CME terminal are connected inside the AC drive.
F5-24	Control board relay (DO3) switch-on delay	0.0s	0.0s to 3600.0s	Output delay of the relay on the expansion card. F5-01 outputs the active signal only after the set delay time expires.
F5-25	Control board relay (DO3) switch-off delay	0.0s	0.0s to 3600.0s	
F5-26	FMR output switch-on delay	0.0	0.0s to 3600.0s	Output delay of relay 1 on the control board. F5-02 outputs the active signal only after the set delay time expires.
F5-27	FMR output switch-off delay	0.0s	0.0s to 3600.0s	
F5-28	DO1 output switch-on delay	0.0s	0.0s to 3600.0s	Output delay of relay 2 on the control board. F5-03 outputs the active signal only after the set delay time expires.
F5-29	DO1 output switch-off delay	0.0s	0.0s to 3600.0s	
F5-30	Expansion card relay (DO4) switch-on delay	0.0s	0.0s to 3600.0s	DO1 output delay. F5-04 outputs the active signal only after the set delay time expires.
F5-31	Expansion card relay (DO4) switch-off delay	0.0s	0.0s to 3600.0s	
F5-32	Expansion card DO2 output switch-on delay	0.0s	0.0s to 3600.0s	Output delay of DO2 on the expansion card. F5-05 outputs the active signal only after the set delay time expires.
F5-33	Expansion card DO2 output switch-off delay	0.0s	0.0s to 3600.0s	

Para.	Name	Default	Value Range	Description
F5-34	DO/RO source	0x0	Bit00: Relay 1 (DO3) output source 0: Output function 1: Communication Bit01: FMR output source 0: Output function 1: Communication Bit02: DO1 output source 0: Output function 1: Communication Bit03: Relay 2 (DO4) output source 0: Output function 1: Communication Bit04: DO2 output source 0: Output function 1: Communication Bit05: VDO1 output source 0: Output function 1: Communication Bit06: VDO2 output source 0: Output function 1: Communication Bit07: VDO3 output source 0: Output function 1: Communication Bit08: VDO4 output source 0: Output function 1: Communication (To be continued)	-

Para.	Name	Default	Value Range	Description
(Con-tinued)	(Continued)	(Continued)	(Continued) Bit09: VDO5 output source 0: Output function 1: Communication Bit10: VDO6 output source 0: Output function 1: Communication Bit11: VDO7 output source 0: Output function 1: Communication Bit12: VDO8 output source 0: Output function 1: Communication Bit13: VDO9 output source 0: Output function 1: Communication Bit14: VDO10 output source 0: Output function 1: Communication Bit15: VDO11 output source 0: Output function 1: Communication	-
F5-35	DO/RO terminal communication control	0x0	Same as F5-34	-

Table 1–16 Functions of DO terminals

Refer ence	Function	Description
0	No output	The output terminal has no function.
1	AC drive running	The DO terminal outputs an active signal when the AC drive is running with an output frequency (which can be zero).
2	Fault output	The DO terminal outputs an active signal when the AC drive stops due to a fault.
3	Frequency-level detection FDT1	When the running frequency is higher than the detected value, the DO terminal outputs an active signal. When the running frequency is lower than the result of the detected value minus the FDT hysteresis value (F8-19 x F8-20), the active signal is canceled.
4	Frequency reach	The DO terminal outputs an active signal when the running frequency of the AC drive is within a certain range (target frequency±setpoint of F8-21 x Maximum frequency).

Reference	Function	Description
5	Running at zero speed (no output at stop)	The DO terminal outputs an active signal when the AC drive is running with the output frequency of 0. When the AC drive stops, the signal becomes inactive.
6	Motor overload pre-warning	The AC drive determines whether the motor load exceeds the overload pre-warning threshold according to the overload pre-warning coefficient (F9-02) before performing the protection action. The terminal outputs an active signal when the overload pre-warning threshold is exceeded. (For the calculation of the pre-warning threshold, see description of the motor overload protection function.)
7	AC drive overload pre-warning	The DO terminal outputs an active signal 10 seconds before AC drive overload protection is performed.
8	Reference count value reach	The DO terminal outputs an active signal when the count value reaches the setpoint of FB-08.
9	Designated count value reach	The DO terminal outputs an active signal when the count value reaches the setpoint of FB-09.
10	Length reach	The DO terminal outputs an active signal when the detected actual length exceeds the setpoint of FB-05.
11	Simple PLC cycle completion	The terminal outputs a pulse signal with a width of 250 ms when the simple PLC completes one cycle.
12	Accumulative running duration reach	The terminal outputs an active signal when the accumulative running duration of the AC drive exceeds the setpoint of F8-17 (accumulative running duration threshold).
13	Wobble limit reach	The DO terminal outputs an active signal when the frequency reference exceeds the frequency upper or lower limit and the output frequency of AC drive reaches the upper or lower limit.
14	Torque limit reach	The DO terminal outputs an active signal when the output torque reaches the torque limit in speed control mode.
15	Ready to run	The DO terminal outputs an active signal when the AC drive is ready for running without any fault after power-on.
16	AI1 > AI2	The DO terminal outputs an active signal when the value of AI1 is greater than that of AI2.
17	Frequency upper limit reach	The DO terminal outputs an active signal when the running frequency reaches the upper limit (F0-12).
18	Frequency lower limit reach (no output at stop)	If F8-14 (running mode when frequency reference lower than lower limit) is set to 1 (stop), the terminal outputs an inactive signal no matter whether the running frequency reaches the frequency lower limit. If F8-14 (running mode when frequency reference lower than lower limit) is set to 0 (run at frequency lower limit) or 2 (run at zero speed), the terminal outputs an active signal when the running frequency reaches the frequency lower limit.
19	Undervoltage state	The DO terminal outputs an active signal when undervoltage occurs on the AC drive.
20	Communication control	Whether the terminal is active or inactive is determined by the setpoint in communication address 0x2001.
23	Running at zero speed 2 (output at stop)	The DO terminal outputs an active signal when the AC drive is running with the output frequency of 0. The DO terminal also outputs an active signal when the AC drive is stopped.
24	Accumulative power-on duration reach	The DO terminal outputs an active signal when the accumulative power-on duration (F7-13) of the AC drive exceeds the accumulative power-on duration threshold (F8-16).

Reference	Function	Description
25	Frequency-level detection FDT2	When the running frequency is higher than the detected value, the DO terminal outputs an active signal. When the running frequency is lower than the result of the detected value minus the frequency detection hysteresis value (F8-28 x F8-29), the active signal is canceled.
26	Frequency 1 reach	The DO terminal outputs an active signal when the running frequency of the AC drive is within the frequency detection range of F8-30 (detection value 1 for frequency reach). The frequency detection range is as follows: (F8-30 – F8-31 x F0-10) to (F8-30 + F8-31 x F0-10).
27	Frequency 2 reach	The DO terminal outputs an active signal when the running frequency of the AC drive is within the frequency detection range of F8-32 (detection value 2 for frequency reach). The frequency detection range is as follows: (F8-32 – F8-33 x F0-10) to (F8-32 + F8-33 x F0-10).
28	Current 1 reach	The DO terminal outputs an active signal when the output current of the AC drive is within the detection range of F8-38 (detection level of current 1). The current detection range is as follows: (F8-38 – F8-39 x F1-03) to (F8-38 + F8-39 x F1-03).
29	Current 2 reach	The DO terminal outputs an active signal when the output current of the AC drive is within the detection range of F8-40 (detection level of current 2). The current detection range is as follows: (F8-40 – F8-41 x F1-03) to (F8-40 + F8-41 x F1-03).
30	Timing reach	When the timing function (F8-42) is enabled, the DO terminal outputs an active signal when the current running duration of the AC drive reaches the timing duration defined by F8-43 and F8-44.
31	AI1 input overlimit	The DO terminal outputs an active signal when the AI1 input is higher than the setpoint of F8-46 (AI1 input voltage upper limit) or lower than the setpoint of F8-45 (AI1 input voltage lower limit).
32	Load loss	The DO terminal outputs an active signal when load loss occurs.
33	Reverse running	The DO terminal outputs an active signal when the AC drive runs in the reverse direction.
34	Zero current state	The DO terminal outputs an active signal when the output current of the AC drive is within the zero-current range for a period longer than the setpoint of F8-35 (zero current detection delay). The zero current detection range is 0 to (F8-34 x F1-03).
35	IGBT temperature reach	The DO terminal outputs an active signal when the IGBT heatsink temperature (F7-07) reaches the IGBT temperature threshold (F8-47).
36	Output overcurrent	The DO terminal outputs an active signal when the output current of the AC drive remains higher than the setpoint of F8-36 (output overcurrent threshold) for a period longer than the setpoint of F8-37 (output overcurrent detection delay).
37	Frequency lower limit reach (output at stop)	The DO terminal outputs an active signal when the running frequency reaches the frequency lower limit (F0-14). The DO terminal also outputs an active signal when the AC drive is stopped.
38	Alarm (all faults)	The DO terminal outputs an active signal when a fault occurs on the AC drive and the AC drive continues to run upon the fault. For details about fault protection actions, see the description of parameters F9-47 to F9-50.
39	Motor overtempera-ture	The DO terminal outputs an active signal when the motor temperature reaches the setpoint of F9-58 (motor overtemperature pre-warning threshold). (You can check the motor temperature in U0-34.)
40	Current running duration reach	The DO terminal outputs an active signal when the current running duration of the AC drive exceeds the setpoint of F8-53 (current running duration threshold).

Reference	Function	Description
41	Fault output (no output at undervoltage)	The DO terminal outputs an active signal when an AC drive fault (except the undervoltage fault) occurs.
42	STO output	The DO terminal outputs an active signal when the AC drive triggers STO.
43	Running with limits	The DO terminal outputs an active signal when the AC drive generates a minor fault of running with limits and the operating panel displays "LXXX.XX".

1.3.3 VDI

The virtual digital input (VDI) terminals have similar functions as those of DI terminals on the control board and can be used as multi-function DI terminals.

The AC drive supports four VDI sources:

- A1-06 and A1-42. You can directly set A1-06 and A1-42 to activate the DI. This mode mainly applies to communication scenarios in which physical DIs are not used and DI functions are implemented by writing to A1-06 and A1-42. The ones place of A1-06 corresponds to VDI1, the tens place corresponds to VDI2, and so on. The ten thousands place of A1-06 corresponds to VDI5, and A1-42 corresponds to VDI6.
- VDO state. There are six VDOs, and VDOx corresponds to VDIx (x = 1, 2, 3, 4, 5, or 6).
- DI state. DI1 corresponds to VDI1, DI2 corresponds to VDI2, and so on.
- AI state. AI1 corresponds to VDI1, AI2 corresponds to VDI2, and AI3 corresponds to VDI3. The other three virtual terminals are AI1AsDI, AI2AsDI, and AI3AsDI

Application

The following examples illustrate how to use the VDI.

- Example 1: When A1-05 (VDI1 active state source) is set to 00001 (DO is used as the source), to enable the AC drive to generate an alarm and stop when the AI1 input exceeds the upper limit or lower limit, set as follows.

Step	Settings
1	Set A1-00 to 44 to assign VDI1 with the function of "user-defined fault 1".
2	Set F5-04 to 31 to assign DO1 with the function of "AI input overlimit".
3	Set A1-05 to 00001 to use DO as the VDI1 state source.

  After the setting, when the AI1 input exceeds the upper or lower limit, DO1 becomes ON. At this moment, VDI1 becomes active and the AC drive receives user-defined fault 1. Then the AC drive reports E27.00 and stops.

- Example 2: To use the VDI to implement the emergency stop function without physical DIs in a communication scenario, set as follows:

Step	Settings
1	Set A1-00 to 47 to assign VDI1 with the function of "emergency stop".
2	Set A1-05 to 00000 to use the parameter as the VDI1 active state source.
3	Change the value of the ones place of A1-06 through communication.

After the setting, the emergency stop function can be implemented when the ones place of A1-06 is set to 1 through communication.

Related Parameters

Para.	Name	Default	Value Range	Description
A1-00	VDI1 function	0	0 to 80	Same as F4-00
A1-01	VDI2 function	0		
A1-02	VDI3 function	0		
A1-03	VDI4 function	0		
A1-04	VDI5 function	0		
A1-05	VDI active state source	00000	Ones: VDI1 0: VDO1 1: A1-06 2: DI1 3: Communication setpoint (bit10 of F4-50) 4: AI1 5: Reserved Tens: VDI2 0: VDO2 1: A1-06 2: DI2 3: Communication setpoint (bit11 of F4-50) 4: AI2 5: Reserved (To be continued)	This parameter defines the state of VDIx (x ranges from 1 to 5). 0: VDOx The VDI state depends on the corresponding VDO output. VDIx (x ranges from 1 to 5) is uniquely bound to VDOx (x ranges from 1 to 5). 1: A1-06 The state of VDIx (x ranges from 1 to 5) is set through the binary bits of A1-06. 2: DIx (x ranges from 1 to 5) The VDI state depends on the corresponding DI output. VDIx (x ranges from 1 to 5) is uniquely bound to DIx (x ranges from 1 to 5). 3: Communication setpoint (bit10 to bit14 of F4-50) 4: AIx (x ranges from 1 to 3) The VDI state depends on the corresponding AI output. VDIx (x ranges from 1 to 3) is bound to AIx (x ranges from 1 to 3). 5: Reserved

Para.	Name	Default	Value Range	Description
(Continued)	(Continued)	(Continued)	(continued) Hundreds: VDI3 0: VDO3 1: A1-06 2: DI3 3: Communication setpoint (bit12 of F4-50) 4: AI3 5: Reserved Thousands: VDI4 0: VDO4 1: A1-06 2: DI4 3: Communication setpoint (bit13 of F4-50) 4–5: Reserved Ten thousands: VDI5 0: VDO5 1: A1-06 2: DI5 3: Communication setpoint (bit14 of F4-50) 4–5: Reserved	(Continued)
A1-06	VDI state	00000	Ones: VDI1 0: Inactive 1: Active Tens: VDI2 0: Inactive 1: Active Hundreds: VDI3 0: Inactive 1: Active Thousands: VDI4 0: Inactive 1: Active Ten thousands: VDI5 0: Inactive 1: Active	This parameter defines whether VDIx (x ranges from 1 to 5) is active or inactive.
A1-40	VDI6 function	0	0 to 80	Same as F4-00

Para.	Name	Default	Value Range	Description
A1-41	VDI6 hardware source	0	Ones: VDI6 0: VDO6 1: A1-42 2: DI6 3: Communication setpoint (bit15 of F4-50) 4–5: Reserved	Same as A1-05
A1-42	VDI6 state	0	Ones: VDI6 0: Inactive 1: Active	Same as A1-06
A1-43	VDI1–VDI5 active mode	0	Ones: VDI1 0: Active low 1: Active high Tens: VDI2 0: Active low 1: Active high Hundreds: VDI3 0: Active low 1: Active high Thousands: VDI4 0: Active low 1: Active high Ten thousands: VDI5 0: Active low 1: Active high	This parameter defines the active mode of VDIx (x ranges from 1 to 5).
A1-44	VDI6 active mode	0	Ones: VDI6 0: Active low 1: Active high	Same as A1-43

1.3.4 VDO

The virtual digital output (VDO) terminals have similar functions as those of DO terminals on the control board. They can be used together with VDI terminals to implement some simple logic control.

VDO and VDI terminals can work together to implement flexible control. For details about the usage, see the examples in the VDI section.

Related Parameters

Para.	Name	Default	Value Range	Description
A1-11	VDO1 function	0	0 to 43	Same as F5-01
A1-12	VDO2 function	0		
A1-13	VDO3 function	0		
A1-14	VDO4 function	0		
A1-15	VDO5 function	0		
A1-21	VDO active mode	0	Ones: VDO1 0: Positive logic active 1: Negative logic active Tens: VDO2 0: Positive logic active 1: Negative logic active Hundreds: VDO3 0: Positive logic active 1: Negative logic active Thousands: VDO4 0: Positive logic active 1: Negative logic active Ten thousands: VDO5 0: Positive logic active 1: Negative logic active	Positive logic: The terminal outputs 0 when it is inactive. The terminal outputs 1 when it is active. Negative logic: The terminal outputs 1 when it is inactive. The terminal outputs 0 when it is active.
A1-22	VDO1 output switch-on delay	0.0	0.0s to 3600.0s	-
A1-23	VDO2 output switch-on delay	0.0	0.0s to 3600.0s	
A1-24	VDO3 output switch-on delay	0.0	0.0s to 3600.0s	
A1-25	VDO4 output switch-on delay	0.0	0.0s to 3600.0s	
A1-26	VDO5 output switch-on delay	0.0	0.0s to 3600.0s	
A1-27	VDO1 output switch-off delay	0.0	0.0s to 3600.0s	
A1-28	VDO2 output switch-off delay	0.0	0.0s to 3600.0s	
A1-29	VDO3 output switch-off delay	0.0	0.0s to 3600.0s	
A1-30	VDO4 output switch-off delay	0.0	0.0s to 3600.0s	
A1-31	VDO5 output switch-off delay	0.0	0.0s to 3600.0s	
A1-32	VDO6 function	0	0 to 43	Same as F5-01
A1-33	VDO7 function	0		
A1-34	VDO8 function	0		
A1-35	VDO9 function	0		
A1-36	VDO10 function	0		
A1-37	VDO11 function	0		

Para.	Name	Default	Value Range	Description
A1-38	VDO6–VDO10 active mode	0	Ones: VDO6 0: Positive logic active 1: Negative logic active Tens: VDO7 0: Positive logic active 1: Negative logic active Hundreds: VDO8 0: Positive logic active 1: Negative logic active Thousands: VDO9 0: Positive logic active 1: Negative logic active Ten thousands: VDO10 0: Positive logic active 1: Negative logic active	Positive logic: The terminal outputs 0 when it is inactive. The terminal outputs 1 when it is active. Negative logic: The terminal outputs 1 when it is inactive. The terminal outputs 0 when it is active.
A1-39	VDO11 active mode	0	0: Positive logic active 1: Negative logic active	

1.3.5 DIO

The DIO counting function, that is, DIO edge statistics, can help users to record the number of active level actions (retentive at power failure), so as to meet application requirements such as device lifetime measurement and level jump count pre-warning.

Application

The following example illustrates how to use the DIO counting function.

The AC drive provides four counting modules (which can count at the same time without affecting each other) and 32 counting channels (DI/VDI/DO/RO/VDO). They are used as follows.

Step	Settings
1	1. Select a target counting module (out of 4 modules) and reset it by setting A1-50. 2. Set A1-50 to 0 (not reset).
2	Specify the pre-warning threshold for the target counting module by using A1-55/A1-56/A1-57/A1-58.
3	Select a target counting channel (out of 32 channels) and set its active mode (that is, level jump direction, "from inactive to active/positive logic" or "from active to inactive/negative logic") by using F4-38/F4-39/A1-43/A1-44/F5-22/ A1-21/A1-38/A1-39.
4	Set the target counting channel by using A1-51/A1-52/A1-53/A1-54.
5	After the program runs for a period of time, check the count value in A1-59/ A1-60/A1-61/A1-62 and check the comparison result in L1-03/L1-04/L1-05/ L1-06.

·Example 1: To use counting module 1 to count the times that DO1 level jumps from active to inactive with a pre-warning threshold of 100, set as follows.

Step	Settings
1	1. Set A1-50 to 1 to reset counting module 1. 2. After the reset, set A1-50 to 0 (not reset).
2	Set A1-55 to 100 (pre-warning threshold of counting module 1).
3	Set F5-22 to 1 (negative logic).
4	Set A1-51 to 19 (counting channel DO1 of counting module 1).
5	After the program runs for a period of time, check the count value in A1-59 and check the comparison result in L1-03.

Related Parameters

Para.	Name	Default	Value Range	Description
A1-50	DIO edge count reset	0	0: Not reset 1: Counting module 1 2: Counting module 2 3: Counting module 3 4: Counting module 4 5: All counting modules	This parameter is used to reset the counting modules. You can select the corresponding value to clear a counting module. Note: Set this parameter again after the reset.
A1-51	DIO edge counting channel selection 1	0	0: None 1: DI1 2: DI2 3: DI3 4: DI4 5: DI5 6: DI6 7: DI7 8: DI8 9: DI9 10: DI10 11: VDI1 12: VDI2 13: VDI3 14: VDI4 15: VDI5 16: VDI6 17: Relay 1 (DO3) 18: FMR 19: DO1 20: Relay 2 (DO4) 21: DO2 22: VDO1 23: VDO2 24: VDO3 25: VDO4 26: VDO5 27: VDO6 28: VDO7 29: VDO8	This parameter is used to select the channel (counting object) for counting module 1.
A1-52	DIO edge counting channel selection 2	0	30: VDO9	This parameter is used to select the channel (counting object) for counting module 2.

Para.	Name	Default	Value Range	Description
A1-53	DIO edge counting channel selection 3	0	31: VDO10	This parameter is used to select the channel (counting object) for counting module 3.
A1-54	DIO edge counting channel selection 4	0	32: VDO11	This parameter is used to select the channel (counting object) for counting module 4.
A1-55	DIO edge counting comparison value 1	0	0 to 65535	This parameter is used to set the comparison value.
A1-56	DIO edge counting comparison value 2	0	0 to 65535	-
A1-57	DIO edge counting comparison value 3	0	0 to 65535	-
A1-58	DIO edge counting comparison value 4	0	0 to 65535	-
A1-59	DIO edge counting module count value 1	0	0 to 65535	This parameter is used to display the current count value.
A1-60	DIO edge counting module count value 2	0	0 to 65535	-
A1-61	DIO edge counting module count value 3	0	0 to 65535	-
A1-62	DIO edge counting module count value 4	0	0 to 65535	-

1.3.6 AI

MD520 provides two AI terminals. If the AI terminals cannot meet requirements of field application, you can install an I/O expansion card. (For the quantity of AI terminals on the expansion card, see the optional expansion card section.) For example, MD38IO1 provides one AI terminal (AI3).

To use AIs as DIs, the following parameters need to be set. When an AI is used as an DI, the AI state is high level if the input voltage is higher than 7 V and is low level if the input voltage is lower than 3 V. The AI is in hysteresis state if the input voltage is between 3 V and 7 V. The following figure shows the relationship between AI input voltages and DI states.

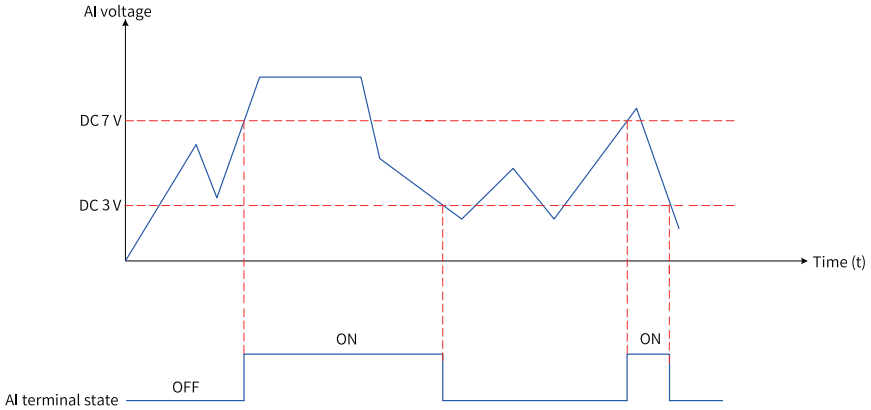


Figure 1-42 Relationship between AI input voltages and DI states

Table 1–17 Related parameters

Terminal	Name	Type	Input Voltage Range
AI1-GND	Control board AI terminal 1	Voltage type	0 V to 10 V DC
AI2-GND	Control board AI terminal 2	Voltage type	0 V to 10 V DC
		Current type (impedance: 500 Ω)	0 mA to 20 mA
		Current type (impedance: 250 Ω)	0 mA to 40 mA
		Temperature type	Select different input types and temperature sensors by using the DIP switch on the main control board and F9-75: PT100: –25°C to +200°C PT1000: –25°C to +200°C KTY84-130: –40°C to +260°C PTC130: –20°C to +180°C
AI3-GND	I/O expansion card AI terminal	Voltage type	0 V to 10 V DC
		Temperature type	Select different input types and temperature sensors by using the DIP switch on the expansion board and F9-56: PT100: 0°C to 200°C PT1000: 0°C to 200°C

Functions of the AI terminals are switched by using the DIP switches on the main control board.

Table 1–18 DIP switches

Port Definition				Pin Description
Pin	1	2	3	
S1	NC	AI_I	AI_I1	1–2: AI2 uses the voltage input mode. 2–3: AI2 uses the current input mode (impedance: 500 Ω).
S2	NC	AI_I1	AI_I2	1–2: The input mode of AI2 is controlled by S1. 2–3: AI2 uses the current input mode (impedance: 25 Ω).
S3	NC	AI_I	AI_T1	1–2: The input mode of AI2 is controlled by S1 and S2. 2–3: AI2 uses the temperature sensor input mode.
S4	AO_U	AO1	AO_I	1–2: The AO mode is the voltage output mode. 2–3: The AO mode is the current output mode.

Note S2 and S3 cannot be set to 2–3 at the same time; otherwise, a sampling error may occur.

The sensors for temperature-type AI terminals can be switched by using F9-56 and F9-75. Note that if AI2/AI3 is not used for temperature input, these two parameters need to be set to 0 (no sensor type).

Table 1–19 Related parameters

Para.	Name	Default	Value Range	Description
A1-07	AI1 (used as DI) function	0	0 to 80	Same as F4-00; function selection for AIs used as DIs.
A1-08	AI2 (used as DI) function	0		
A1-09	AI3 (used as DI) function	0		
A1-10	AI (used as DI) active mode	000	Ones: AI1 0: Active low 1: Active high Tens: AI2 0: Active low 1: Active high Hundreds: AI3 0: Active low 1: Active high	If the AI terminal inputs high level, it is inactive when the corresponding bit of A1-10 is set to 0 and active when set to 1. If the AI terminal inputs low level, it is active when the corresponding bit of A1-10 is set to 0 and inactive when set to 1.
F4-13	Minimum input of AI curve 1	0.00 V	–10.00 V to F4-15	These parameters are used to set AI curve 1. F4-13 and F4-15 are interlocked.
F4-14	Percentage corresponding to minimum input of AI curve 1	0.0%	–100.0% to +100.0%	
F4-15	Maximum input of AI curve 1	10.00 V	F4-13 to 10.00 V	
F4-16	Percentage corresponding to maximum input of AI curve 1	100.0%	–100.0% to +100.0%	
F4-17	AI1 filter time	0.10s	0.00s to 10.00s	This parameter is used to set the time coefficient of AI1 filtering.
F4-18	Minimum input of AI curve 2	0.00 V	–10.00 V to F4-20	These parameters are used to set AI curve 2. F4-18 and F4-20 are interlocked.
F4-19	Percentage corresponding to minimum input of AI curve 2	0.0%	–100.0% to +100.0%	
F4-20	Maximum input of AI curve 2	10.00 V	F4-18 to 10.00 V	
F4-21	Percentage corresponding to maximum input of AI curve 2	100.0%	–100.0% to +100.0%	
F4-22	AI2 filter time	0.10s	0.00s to 10.00s	This parameter is used to set the time coefficient of AI2 filtering.
F4-23	Minimum input of AI curve 3	0.00 V	–10.00 V to F4-25	These parameters are used to set AI curve 3. F4-23 and F4-25 are interlocked.
F4-24	Percentage corresponding to minimum input of AI curve 3	0.0%	–100.0% to +100.0%	
F4-25	Maximum input of AI curve 3	10.00 V	F4-23 to 10.00 V	
F4-26	Percentage corresponding to maximum input of AI curve 3	100.0%	–100.0% to +100.0%	
F4-27	AI3 fitter time	0.10s	0.00s to 10.00s	This parameter is used to set the time coefficient of AI3 filtering.

Para.	Name	Default	Value Range	Description
F4-33	AI curve	0x321	Ones: AI1 curve 1: Curve 1 (2-point curve; F4-13 to F4-16) 2: Curve 2 (2-point curve; F4-18 to F4-21) 3: Curve 2 (2-point curve; F4-23 to F4-26) 4: Curve 4 (4-point curve; A6-00 to A6-07) 5: Curve 5 (4-point curve; A6-08 to A6-15) Tens: AI2 curve 1: Curve 1 (2-point curve; F4-13 to F4-16) 2: Curve 2 (2-point curve; F4-18 to F4-21) 3: Curve 3 (2-point curve; F4-23 to F4-26) 4: Curve 4 (4-point curve; A6-00 to A6-07) 5: Curve 5 (4-point curve; A6-08 to A6-15) (To be continued)	This parameter defines the curve model of AIx (x ranges from 1 to 3).

Para.	Name	Default	Value Range	Description
(Contin-ued)	(Continued)	(Contin-ued)	(continued) Hundreds: AI3 curve 1: Curve 1 (2-point curve; F4-13 to F4-16) 2: Curve 2 (2-point curve; F4-18 to F4-21) 3: Curve 3 (2-point curve; F4-23 to F4-26) 4: Curve 4 (4-point curve; A6-00 to A6-07) 5: Curve 5 (4-point curve; A6-08 to A6-15)	This parameter defines the curve model of AIx (x ranges from 1 to 3).
F4-34	AI lower limit	0x0	Ones: Setting for AI less than minimum input 0: Percentage corresponding to minimum input 1: 0.0% Tens: Setting for AI2 less than minimum input 0: Percentage corresponding to minimum input 1: 0.0% Hundreds: Setting for AI3 less than minimum input 0: Percentage corresponding to minimum input 1: 0.0%	This parameter defines the lower limit of AIx (x ranges from 1 to 3).
F9-56	AI3 temperature mode - motor temperature sensor type	0	0: No temperature sensor (AI channel used as analog input) 1: PT100 2: PT1000	This parameter is used to select the sensor type when AI3 is used for temperature input.
F9-57	AI3 temperature mode - motor overheat protection threshold	110°C	0°C to 200°C	This parameter is used to define the overheat protection threshold when AI3 is used for temperature sampling.

Para.	Name	Default	Value Range	Description
F9-58	AI3 temperature mode - motor overheat pre-warning threshold	90°C	0°C to 200°C	This parameter is used to define the overheat pre-warning threshold when AI3 is used for temperature sampling.
F9-75	AI2 temperature mode - motor temperature sensor type	0	0: No temperature sensor (AI channel used as analog input) 1: PT100 2: PT1000 3: KTY84-130 4: PTC130	This parameter is used to select the sensor type when AI2 is used for temperature input.
F9-76	AI2 temperature mode - motor overheat protection threshold	110°C	0°C to 200°C	This parameter is used to define the overheat protection threshold when AI2 is used for temperature sampling.
F9-77	AI2 temperature mode - motor overheat pre-warning threshold	90°C	0°C to 200°C	This parameter is used to define the overheat pre-warning threshold when AI2 is used for temperature sampling.
F9-78	AI2 temperature mode - motor temperature reach	75°C	0°C to 100°C	This parameter is used to define the temperature threshold when AI2 is used for temperature sampling.
F9-80	AI3 temperature mode - motor temperature reach	75°C	0°C to 100°C	This parameter is used to define the temperature threshold when AI3 is used for temperature sampling.
A6-00	Minimum input of AI curve 4	0.00 V	–10.00 V to A6-02	These parameters are used to set AI curve 4. A6-00, A6-02, A6-04, and A6-06 are interlocked.
A6-01	Percentage corresponding to minimum input of AI curve 4	0.0%	–100.0% to +100.0%	
A6-02	Inflection 1 input of AI curve 4	3.00 V	A6-00 to A6-04	
A6-03	Percentage corresponding to inflection 1 input of AI curve 4	30.0%	–100.0% to +100.0%	
A6-04	Inflection 2 input of AI curve 4	6.00 V	A6-02 to A6-06	
A6-05	Percentage corresponding to inflection 2 input of AI curve 4	60.0%	–100.0% to +100.0%	
A6-06	Maximum input of AI curve 4	10.00 V	A6-04 to 10.00 V	
A6-07	Percentage corresponding to maximum input of AI curve 4	100.0%	–100.0% to +100.0%	

Para.	Name	Default	Value Range	Description
A6-08	Minimum input of AI curve 5	–10.00 V	–10.00 V to A6-10	These parameters are used to set AI curve 5. A6-08, A6-10, A6-12, and A6-14 are interlocked.
A6-09	Percentage corresponding to minimum input of AI curve 5	–100.0%	–100.0% to +100.0%	
A6-10	Inflection 1 input of AI curve 5	–3.00 V	A6-08 to A6-12	
A6-11	Percentage corresponding to inflection 1 input of AI curve 5	–30.0%	–100.0% to +100.0%	
A6-12	Inflection 2 input of AI curve 5	3.00 V	A6-10 to A6-14	
A6-13	Percentage corresponding to inflection 2 input of AI curve 5	30.0%	–100.0% to +100.0%	
A6-14	Maximum input of AI curve 5	10.00 V	A6-12 to 10.00 V	
A6-15	Percentage corresponding to maximum input of AI curve 5	100.0%	–100.0% to +100.0%	
A6-24	AI1 skip point	0.0%	–100.0% to +100.0%	This parameter is used to set the AI1 skip point. If the input relative skip point falls within the skip amplitude defined by A6-25, the value of the skip point is output.
A6-25	AI1 skip amplitude	0.1%	0.0% to +100.0%	This parameter is used to set the AI1 skip amplitude. If the input relative skip point defined by A6-24 falls within the skip amplitude defined by A6-25, the value of the skip point is output.
A6-26	AI2 skip point	0.0%	–100.0% to +100.0%	This parameter is used to set the AI2 skip point. If the input relative skip point falls within the skip amplitude defined by A6-27, the value of the skip point is output.
A6-27	AI2 skip amplitude	0.1%	0.0% to +100.0%	This parameter is used to set the AI2 skip amplitude. If the input relative skip point defined by A6-26 falls within the skip amplitude defined by A6-27, the value of the skip point is output.
A6-28	AI3 skip point	0.0%	–100.0% to +100.0%	This parameter is used to set the AI3 skip point. If the input relative skip point falls within the skip amplitude defined by A6-29, the value of the skip point is output.
A6-29	AI3 skip amplitude	0.1%	0.0% to +100.0%	This parameter is used to set the AI3 skip amplitude. If the input relative skip point defined by A6-28 falls within the skip amplitude defined by A6-29, the value of the skip point is output.

Para.	Name	Default	Value Range	Description
A6-30	AI automatic curve calibration	0	Ones: Point selection (for setting) 0: Disabled 1: Point 1 2: Point 2 3: Point 3 4: Point 4 Tens: AI channel selection (for setting) 0: Disabled 1: AI1 2: AI2 3: AI3 Hundreds: Enable control (for setting) 0: Disabled 1: Enabled Thousands: X-point curve (for display) 0: The function is disabled or the channel is not selected. 2: 2-point curve 4: 4-point curve Ten thousands: Reserved	-
A6-31	AI1 input enable	0	0: Disabled 1: Enabled Others: B connector	-
A6-32	AI2 input enable	0	0: Disabled 1: Enabled Others: B connector	-
A6-33	AI3 input enable	0	0: Disabled 1: Enabled Others: B connector	-

Para.	Name	Default	Value Range	Description
A6-34	AI polarity	0	Ones: AI1 0: Normal 1: Absolute value 2: Negated value 3: Negated absolute value Tens: AI2 0: Normal 1: Absolute value 2: Negated value 3: Negated absolute value Hundreds: AI3 0: Normal 1: Absolute value 2: Negated value 3: Negated absolute value	-
A6-35	AI hardware source	0	Ones: AI1 source 0: Hardware sampling 1: Force setpoint Tens: AI2 source 0: Hardware sampling 1: Force setpoint Hundreds: AI3 source 0: Hardware sampling 1: Force setpoint	When this parameter is set to 0, the AI values are obtained by hardware sampling. When this parameter is set to 1, the AI values can be set forcibly by using A6-36 to A6-38.
A6-36	AI1 force setpoint	0.00 V	–10.00 V to +10.00 V	When the ones place of A6-35 is set to 1, the AI1 value can be set forcibly by using A6-36.
A6-37	AI2 force setpoint	0.00 V	–10.00 V to +10.00 V	When the tens place of A6-35 is set to 1, the AI2 value can be set forcibly by using A6-37.
A6-38	AI3 force setpoint	0.00 V	–10.00 V to +10.00 V	When the hundreds place of A6-35 is set to 1, the AI3 value can be set forcibly by using A6-38.
A6-39	High level for AI used as DI	7.0 V	5.5 V to 9.0 V	This parameter is used to set the threshold of high level for AI used as DI.
A6-40	Low level for AI used as DI	3.0 V	1.0 V to 4.5 V	This parameter is used to set the threshold of low level for AI used as DI.
A6-41	AI1 gain	1.00	–10.00 to +10.00	This parameter defines the gain for AI1 analog sampling.

Para.	Name	Default	Value Range	Description
A6-42	AI1 offset	0.00 V	–10.00 V to +10.00 V	This parameter defines the offset for AI1 analog sampling.
A6-43	AI1 denoising threshold	0.5%	0.0% to +100.0%	This parameter defines the AI1 denoising threshold. If the absolute value of the difference between the current input and the last input does not exceed the threshold, denoising is performed.
A6-44	AI1 deadzone width	0.5%	0.0% to +100.0%	This parameter defines the AI1 deadzone width. The output within the zone is 0.0%, which is used to eliminate fluctuations near zero.
A6-47	AI2 gain	1.00	–10.00 to +10.00	This parameter defines the gain for AI2 analog sampling.
A6-48	AI2 offset	0.00 V	–10.00 V to +10.00 V	This parameter defines the offset for AI2 analog sampling.
A6-49	AI2 denoising threshold	0.5%	0.0% to +100.0%	This parameter defines the AI2 denoising threshold. If the absolute value of the difference between the current input and the last input does not exceed the threshold, denoising is performed.
A6-50	AI2 deadzone width	0.5%	0.0% to +100.0%	This parameter defines the AI2 deadzone width. The output within the zone is 0.0%, which is used to eliminate fluctuations near zero.
A6-53	AI3 gain	1.00	–10.00 to +10.00	This parameter defines the gain for AI3 analog sampling.
A6-54	AI3 offset	0.00 V	–10.00 V to +10.00 V	This parameter defines the offset for AI3 analog sampling.
A6-55	AI3 denoising threshold	0.5%	0.0% to +100.0%	This parameter defines the AI3 denoising threshold. If the absolute value of the difference between the current input and the last input does not exceed the threshold, denoising is performed.
A6-56	AI3 deadzone width	0.5%	0.0% to +100.0%	This parameter defines the AI3 deadzone width. The output within the zone is 0.0%, which is used to eliminate fluctuations near zero.

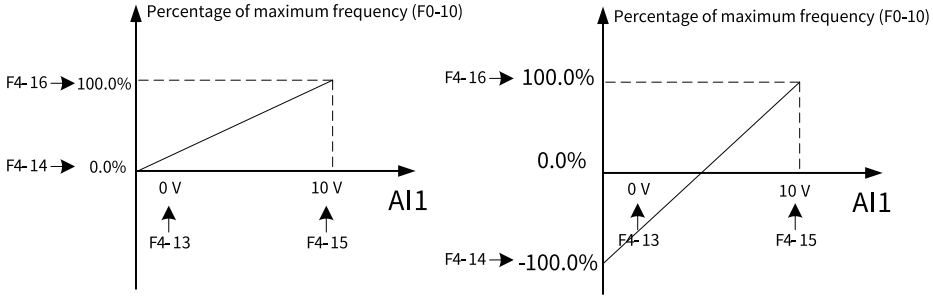
Table 1–20 Setting AI as the frequency reference source

Step	Related Parameters	Description	
Select an AI terminal: Select the AI terminal for setting the frequency reference based on terminal characteristics.	F0-03	F0-03 = 2	Select AI1.
		F0-03 = 3	Select AI2.
		F0-03 = 4	Select AI3.
Select a curve that defines mapping between AI voltages[1] and frequencies: Select a curve out of five curves.	F4-33	Typically the default value is used (F4-33 = 321). That is, select curve 1 for AI1, curve 2 for AI2, and curve 3 for AI3.	
Set the curve that defines mapping between the AI voltages[1] and frequencies: Set the correspondence between AI voltage inputs and frequency setpoints.	F4-13 to F4-16[2]	Set curve 1.	Typical curve[3]
	F4-18 to F4-21	Set curve 2.	Typical curve[4]
	F4-23 to F4-27	Set curve 3.	Typical curve[5]
	A6-00 to A6-07	Set curve 4.	
	A6-08 to A6-15	Set curve 5.	
	F4-34	Define setting for AI less than minimum input[2].	
	F0-10	When an AI terminal is used as the frequency source, the voltage/current input setpoint 100% indicates the percentage relative to the maximum frequency (F0-10).	
Set AI filter time.	F4-17	The default value is 0.1s. Set this parameter based on onsite signal interference and requirements on responsiveness. Decrease the value if quick response is required, and increase it if onsite interference is large.	

[1] For the current type AI curve, 1 mA current corresponds to 0.5 V voltage, and 20 mA current corresponds to 10 V voltage.

[2] When the analog input voltage exceeds the maximum input defined by F4-15, the maximum input is used as the analog voltage. When the analog input voltage is lower than the minimum input defined by F4-13, the minimum input or 0.0% is used as the analog voltage according to the setpoint of F4-34 (setting for AI less than minimum input).

[3] The following figure shows the typical curves for AI1.

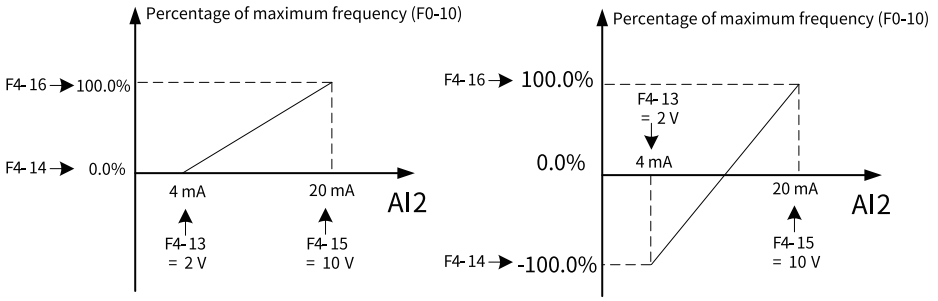


Settings involving no negative frequency reference (default)

Settings involving negative frequency reference

Figure 1-43 Typical curves for AI1

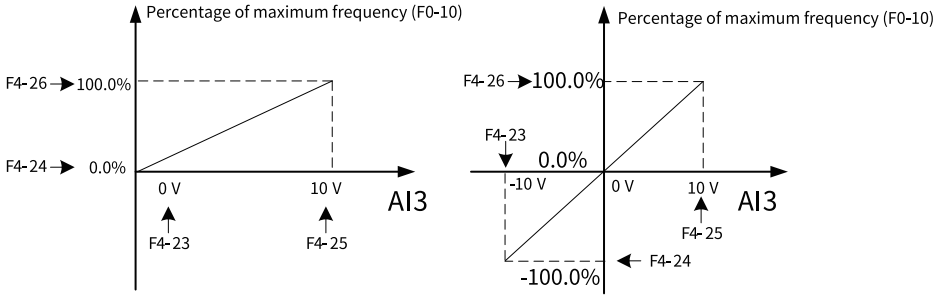
[4] When AI2 is used for voltage input, the typical curve is the same as that for AI1. When it is used for current input, the input range is 4 mA to 20 mA, corresponding to 0 to 50 Hz or –50 Hz to +50 Hz.



Settings involving no negative frequency reference Settings involving negative frequency reference

Figure 1-44 Typical curves for AI2

[5] The following figure shows the typical curves for AI3. The mappings of the two setting modes within the range of 0 to 10 V are consistent. However, when a negative voltage is input, it is considered 0 V (minimum voltage defined by F4-24) in the setting mode shown on the left.



Settings involving no negative frequency reference (default) Settings involving negative frequency reference

Figure 1-45 Typical curves for AI3

Compared with manual curve calibration by users, the automatic calibration of AI curves enables automatic fill-in of voltage values at the calibration points. The parameter for setting automatic curve calibration is A6-30. The following figure shows the function of each bit of the parameter.

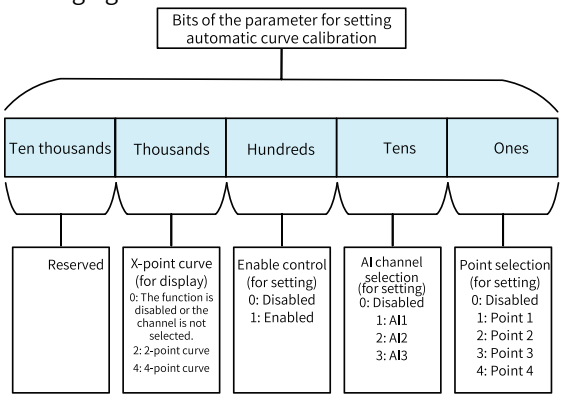


Figure 1-46 Bits of the parameter for setting automatic curve calibration

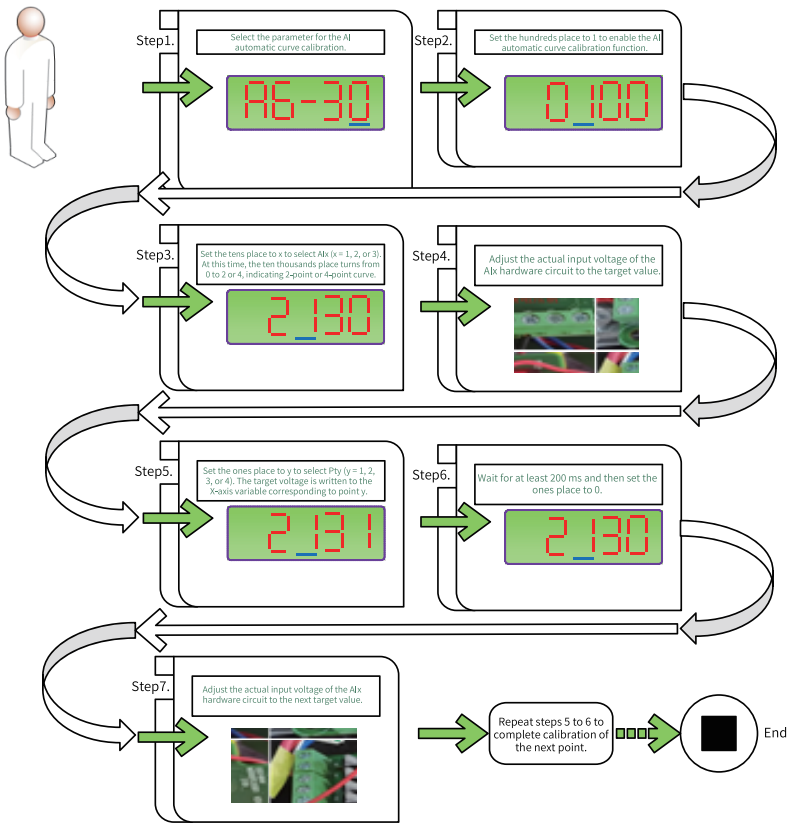


Figure 1-47 Automatic calibration of AI curves

1.3.7 AO and HDO

MD520 is equipped with one analog output (AO) terminal and one high-speed pulse output (HDO) terminal. If the AO terminal cannot meet requirements of field application, you can install an I/O expansion card. (For the quantity of AO terminals on the expansion card, see the optional expansion card section.) For example, MD38IO1 provides one AO terminal (AO2).

The following parameters are generally used to correct the zero drift of the analog output and the deviation of the output amplitude, and they can also be used to customize the required AO/HDO output curve.

Table 1–21 Related parameters

Para.	Name	De fault	Value Range	Description
F5-00	FM multi-function terminal output	0	0: Pulse output (FMP) 1: Digital output (FMR)	The FM terminal is a programmable multiplexing terminal, which functions as either a high-speed pulse output terminal (FMP) or an open-collector digital output terminal (FMR). When used as a high-speed pulse output terminal (FMP), the maximum frequency of the output pulse is 100 kHz. For details about the FMP function, see the description of F5-06.
F5-06	FMP output function	0	0: Running frequency 1: Frequency reference 2: Output current 3: output torque (absolute value) 4: Output power 5: Output voltage 6: Pulse input 7: AI1 8: AI2 9: AI3 10: Length 11: Count value 12: Communication control 13: Motor speed 14: Output current 15: Bus voltage 16: Output torque (actual value) Others: F connector	See *"Table 1–22 Relationship between pulse output/analog output functions and ranges" on page 95*.
F5-07	AO1 function	0		
F5-08	Expansion card AO2 function	1		
F5-09	Maximum FMP output frequency	50.00 kHz	0.01 kHz to 100.00 kHz	This parameter defines the maximum pulse output frequency when the FM terminal is used for pulse output.

Para.	Name	De fault	Value Range	Description
F5-10	AO1 zero offset coefficient	0.0%	–100.0% to +100.0%	On the AO curve, if b indicates zero offset, k indicates gain, and X indicates standard output, the actual output Y is (kX + b). The zero offset coefficient 100% of AO1 and AO2 corresponds to 10 V (or 20 mA). The standard output refers to the value corresponding to the analog output of 0 to 10 V (or 0 to 20 mA) with no zero offset or gain adjustment. Zero offset = Zero offset coefficient x 10 V (or 20 mA) The AC drive supports two AO output channels, of which AO1 is equipped on the control board, and AO2 needs to be provided through an expansion card. AO1 and AO2 can be used to indicate the internal running parameters in the analog mode. The indicated parameters are defined by F5-07 and F5-08.
F5-11	AO1 gain	1.00	–10.00 to +10.00	
F5-12	AO2 zero offset coefficient	0.0%	–100.0% to +100.0%	On the AO curve, if b indicates zero offset, k indicates gain, and X indicates standard output, the actual output Y is (kX + b). The zero offset coefficient 100% of AO1 and AO2 corresponds to 10 V (or 20 mA). The standard output refers to the value corresponding to the analog output of 0 to 10 V (or 0 to 20 mA) with no zero offset or gain adjustment. Zero offset = Zero offset coefficient x 10 V (or 20 mA) The AC drive supports two AO output channels, of which AO1 is equipped on the control board, and AO2 needs to be provided through an expansion card. AO1 and AO2 can be used to indicate the internal running parameters in the analog mode. The indicated parameters are defined by F5-07 and F5-08.
F5-13	AO2 gain	1.00	–10.00 to +10.00	On the AO curve, if b indicates zero offset, k indicates gain, and X indicates standard output, the actual output Y is (kX + b). The zero offset coefficient 100% of AO1 and AO2 corresponds to 10 V (or 20 mA). The standard output refers to the value corresponding to the analog output of 0 to 10 V (or 0 to 20 mA) with no zero offset or gain adjustment. Zero offset = Zero offset coefficient x 10 V (or 20 mA) The AC drive supports two AO output channels, of which AO1 is equipped on the control board, and AO2 needs to be provided through an expansion card. AO1 and AO2 can be used to indicate the internal running parameters in the analog mode. The indicated parameters are defined by F5-07 and F5-08.

Para.	Name	De fault	Value Range	Description
F5-36	Minimum input of AO1 curve	0.0%	–100.0% to F5-38	These parameters are used to set the AO1 curve. F5-36 and F5-38 are interlocked.
F5-37	Setpoint correspond-ing to minimum input of AO1 curve	0.00 V	0.00 V to 10.00 V	
F5-38	Maximum input of AO1 curve	100.0-%	F5-36 to 100.0%	
F5-39	Setpoint correspond-ing to maximum input of AO1 curve	10.00 V	0.00 V to 10.00 V	
F5-40	AO1 output offset	0.00 V	–10.00 V to +10.00 V	-
F5-41	Minimum input of AO2 curve	0.0%	–100.0% to F5-43	These parameters are used to set the AO2 curve. F5-41 and F5-43 are interlocked.
F5-42	Setpoint correspond-ing to minimum input of AO2 curve	0.00 V	0.00 V to 10.00 V	
F5-43	Maximum input of AO2 curve	100.0-%	F5-41 to 100.0%	
F5-44	Setpoint correspond-ing to maximum input of AO2 curve	10.00 V	0.00 V to 10.00 V	
F5-45	AO2 output offset	0.00 V	–10.00 V to +10.00 V	-
F5-46	AO curve	11	Ones: AO1 curve 0: 2-point curve 1: Gain+offset Tens: AO2 curve 0: 2-point curve 1: Gain+offset	When this parameter is set to 0, you can set the AO curves by using F5-36 to F5-39 and F5-41 to F5-44. When this parameter is set to 1, you can set the AO curves by using F5-10 to F5-13.

Para.	Name	De fault	Value Range	Description
44F5-47	AO polarity	00	Ones: AO1 0: Normal 1: Absolute value 2: Negated value 3: Negated absolute value Tens: AO2 0: Normal 1: Absolute value 2: Negated value 3: Negated absolute value	-
F5-48	AO hardware source	00	Ones: AO1 source 0: Output function 1: Force setpoint Tens: AO2 source 0: Output function 1: Force setpoint	When this parameter is set to 0, the AO values are determined by function setting. When this parameter is set to 1, the AO values can be set forcibly by using F5-49 and F5-50.
F5-49	AO force setpoint 1	0.00 V	0.00 V to 10.00 V	When the ones place of A5-48 is set to 1, the AO1 force output value can be set by using A5-49.
F5-50	AO force setpoint 2	0.00 V	0.00 V to 10.00 V	When the tens place of A5-48 is set to 1, the AO2 force output value can be set by using A5-50.
F5-51	Minimum input of HDO curve	0.00%	–100.00% to F5-53	These parameters are used to set the HDO curve. F5-51 and F5-53 are interlocked.
F5-52	Percentage correspond-ing to minimum input of HDO curve	0.00%	0.00% to 100.00%	
F5-53	Maximum input of HDO curve	100.0-0%	F5-51 to 100.00%	
F5-54	Percentage correspond-ing to maximum input of HDO curve	100.0-0%	0.00% to 100.00%	
F5-55	HDO polarity	0	Ones: 0: Normal 1: Absolute value 2: Negated value 3: Negated absolute value	-
F5-56	HDO hardware source	0	0: Output function 1: Force value	When this parameter is set to 0, the HDO output value is determined by function setting. When this parameter is set to 1, the HDO output value can be set forcibly by using F5-57.
F5-57	HDO force setpoint	0	0.00% to 100.00%	When F5-56 is set to 1, the HDO force output value can be set by using F5-57.

The analog output (AO) 0 to 10 V corresponds to 0% to 100%. When the AO function is set to 1 (frequency reference), if the frequency reference of the AC drive is 50% of the maximum frequency, the AO output voltage is calculated as follows: 50% x 10 V = 5 V.

The pulse output (FM) 0 to 100 kHz corresponds to 0% to 100%. When the FM output function is set to 1 (frequency reference), if the frequency reference of the AC drive is 50% of the maximum frequency and F5-09 is set to 100 kHz, the FM output frequency is calculated as follows: 50% x 100 kHz = 50 kHz.

Table 1–22 Relationship between pulse output/analog output functions and ranges

Reference	Name	Value Range
0	Running frequency	0 to maximum output frequency; 100.0% corresponds to the maximum frequency (F0-10)
1	Frequency reference	0 to maximum output frequency
2	Output current	0 to twice the rated motor current; 100.0% corresponds to twice the rated motor current
3	Motor output torque	0 to rated motor torque; 100.0% corresponds to the rated motor torque (absolute value, percentage relative to the rated torque)
4	Output power	0 to twice the rated power; 100.0% corresponds to twice the rated motor power
5	Output voltage	0 to 1.2 times the rated motor voltage; 100.0% corresponds to 1.2 times the rated motor voltage
6	Pulse input	0.01 kHz to 100.00 kHz; 100.0% corresponds to 100.0 kHz
7	AI1	–10 V to +10 V; 100.0% corresponds to 10 V
8	AI2	–10 V to +10 V (or 0 to 20 mA or 0 to 40 mA); 100.0% corresponds to 10 V
9	AI3	–10 V to +10 V; 100.0% corresponds to 10 V
10	Length	0 to maximum length; 100.0% corresponds to FB-05
11	Count value	0 to maximum count value; 100.0% corresponds to FB-08
12	Communication control	0.0% to 100.0%; 100.0% corresponds to AO communication control
13	Motor speed	0 to rotation speed corresponding to the maximum output frequency; 100.0% corresponds to the maximum frequency (F0-10)
14	Output current	0.0 A to 1000.0 A; 100.0% corresponds to 1000.0 A
15	Output voltage	0.0 V to 1000.0 V; 100.0% corresponds to 1000.0 V
16	Output torque of the motor (actual value, percentage relative to the rated motor torque)	–2 times the rated motor torque to 2 times the rated motor torque; 100.0% corresponds to 2 times the rated motor torque, 50% corresponds to 0, and 0 corresponds to –2 times the rated motor torque

The following describes how to calculate the AO zero offset coefficient (F5-10) and AO gain (F5-11):

Assume that the AO terminal is used for output of the running frequency and you want to obtain the output of 8 V (Y1) at 0 Hz (X1) and output of 4 V (Y2) at 40 Hz (X2).

The gain is calculated as follows:

$$K = \frac{(Y1\text{-}Y2) \times Xmax}{(X1\text{-}X2) \times Ymax}$$

The zero offset coefficient is calculated as follows:

$$b = \frac{(X1 \times Y2)(-X2 \times Y1)}{(X1-X2) \times Ymax} \times 100\%$$

Xmax (maximum output frequency) is 50 Hz (assuming that the maximum frequency F0-10 is 50 Hz), and Ymax (voltage) is 10 V.

In this case, the AO gain (F5-11) is –0.5 and AO zero offset coefficient (F5-10) is 80%.

Table 1–23 Relationship between AO signal types and maximum values (Ymax)

Output Signal	Maximum Value (Ymax)
Voltage	10 V
Current	20 mA/40 mA

Table 1–24 Relationship between AO outputs and maximum values (Xmax)

AO Output	Maximum Value (Xmax)
Running frequency	Maximum output frequency
Frequency reference	Maximum output frequency
Output current	Twice the rated motor current
Output torque (absolute value)	Twice the rated motor torque
Output power	Twice the rated power
Output voltage	1.2 times the rated AC drive voltage
Pulse input	100.00 kHz
AI1	10 V
AI2	10 V or 20 mA or 40 mA
AI3	10 V
Length	Maximum length
Count value	Maximum count value
Communication	100.0%
Motor speed	Rotation speed corresponding to the maximum output frequency
Output current	1000.0 A
Output voltage	1000.0 V
Output torque (actual value)	Twice the rated motor torque

1.4 Control Performance

1.4.1 V/f Curve

Table 1–25 Straight-line, multi-point, and square V/f curve setting parameters

Para.	Name	Default	Value Range	Description
F3-00	V/f curve	0	0: Straight-line V/f curve 1: Multi-point V/f curve 2–9: Reserved 10: V/f complete separation 11: V/f half separation	0: Straight-line V/f curve Below the rated frequency, the output voltage of the AC drive changes linearly with the output frequency. This curve is applicable to general mechanical drive applications such as large-inertia fan acceleration, punch presses, centrifuges, and water pumps. 1: Multi-point V/f curve The range of the frequency points is 0.00 Hz to the rated motor frequency. The range of the voltage points is 0.0% to 100.0%, which corresponds to the range of 0 V to the rated motor voltage. The multi-point V/f curve references are typically determined based on load characteristics of the motor. Ensure that the following conditions are met: F3-03 ⩽ F3-05 ⩽ F3-07. 2–9: Reserved 10: V/f complete separation The output frequency and output voltage of the AC drive are independent of each other. The output frequency is determined by the frequency source, and the output voltage is determined by voltage source for V/f separation. This curve is generally applicable to scenarios such as motor torque control. 11: V/f half separation In this mode, the voltage (V) is proportional to the frequency (f). The relationship between V and f can be set by the voltage source, and it is also related to the rated motor voltage and rated motor frequency in group F1. Assuming that the voltage source input is X (X ranges from 0% to 100%), the relationship between V and f is as follows: V/f = 2 x X x (Rated motor voltage)/(Rated motor frequency).
F3-01	Torque boost	Model depend-ent	0.0 to 30.0 0.0%: Automatic torque boost	The torque boost function generally applies to the AC drive at low frequency. The output torque of the AC drive in V/f control mode is proportional to the frequency. Under the condition of low frequency, the torque is very low when the motor is running at a low speed. In this case, you can set this parameter to increase the output voltage of the AC drive, thereby increasing the current and output torque. Do not set this parameter to a large value, otherwise, overload protection may be triggered.
F3-02	Cut-off frequency of torque boost	50.00 Hz	0.00 Hz to maximum frequency	When the running frequency reaches the cutoff frequency of torque boost, the torque boost function is disabled.

Para.	Name	Default	Value Range	Description
F3-03	Multi-point V/f frequency 1	0.00 Hz	0.00 Hz to F3-05	-
F3-04	Multi-point V/f voltage 1	0.0%	0.0% to +100.0%	
F3-05	Multi-point V/f frequency 2	0.00 Hz	F3-03 to F3-07	
F3-06	Multi-point V/f voltage 2	0.0%	0.0% to +100.0%	
F3-07	Multi-point V/f frequency 3	0.00 Hz	F3-05 to F1-04 (rated motor frequency)	
F3-08	Multi-point V/f voltage 3	0.0%	0.0% to +100.0%	

Straight-line V/f Curve

The following figure shows the general constant-torque straight-line V/f curve.

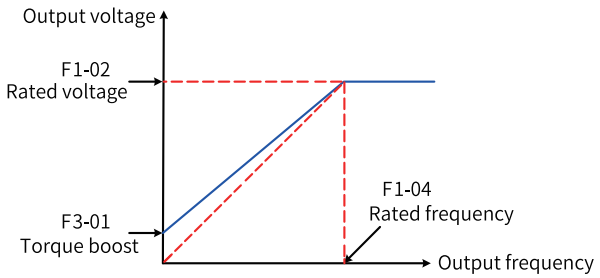


Figure 1-48 General constant-torque straight-line V/f curve

Below the rated frequency, the output voltage changes linearly with the frequency. This curve is applicable to general mechanical drive applications such as large-inertia fan acceleration, punch presses, centrifuges and water pumps.

Multi-point V/f Curve

The following figure shows a user-defined multi-point V/f curve.

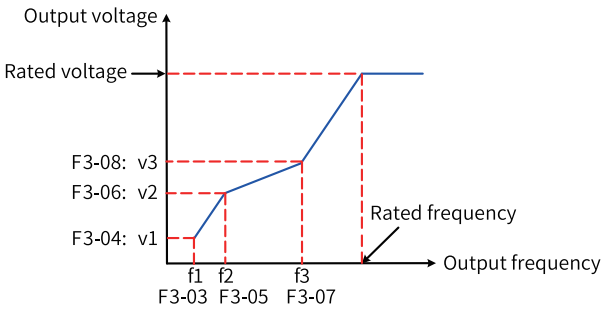


Figure 1-49 User-defined multi-point V/f curve

The multi-point V/f curve is defined by F3-03 to F3-08. The range of the frequency points is 0.00 Hz to the rated motor frequency. The range of the voltage points is 0.0% to 100%, which corresponds to the range of 0 V to the rated motor voltage. The multi-point V/f curve references are typically determined based on load characteristics of the motor. Ensure that the following conditions are met: F3-03 ⩽ F3-05 ⩽ F3-07. To ensure correct setting, this AC drive has restrictions on the relationship between the upper and lower limits of the frequency points F3-03, F3-05, and F3-07. F3-07, F3-05, and F3-03 must be set in sequence.

Table 1–26 V/f separation curve parameters

Para.	Name	De fault	Value Range	Description
F3-13	Voltage source for V/f separation	0	0: F3-14 1: AI1 2: AI2 3: AI3 4: Pulse reference (DI5) 5: Multi-reference 6: Simple PLC 7: PID 8: Communication Others: F connector	This parameter defines the source of the target voltage in V/f separation mode. 0: F3-14 The V/f separation voltage is set by F3-14 (voltage digital setting of V/f separation). 1: AI1 The V/f separation voltage is input with current or voltage signals through the AI1 terminal. The frequency is calculated according to the preset AI curve. 2: AI2 The V/f separation voltage is input with current or voltage signals through the AI2 terminal. The frequency is calculated according to the preset AI curve. 3: AI3 The V/f separation voltage is input with current or voltage signals through the AI3 terminal. The frequency is calculated according to the preset AI curve. 4: Pulse reference (DI5) The V/f separation voltage is set through DI5. The frequency is calculated based on the curve reflecting the relationship between the pulse frequency and running frequency. 5: Multi-reference When multi-reference is used as the source of the V/f separation voltage, different combinations of DI terminal states correspond to different reference values. The four multi-reference terminals can provide 16 state combinations, corresponding to 16 reference values (percentage x maximum frequency) of parameters in group FC. 6: Simple PLC The V/f separation voltage is set by simple PLC. For details, see the function description of simple PLC. 7: PID The V/f separation voltage is set by PID. For details, see the PID function description. 8: Communication The main frequency is set through communication. The running frequency is input through remote communication. The AC drive must be equipped with a communication card to implement communication with the host controller. This mode applies to remote control or centralized control of multiple equipment. Others: F connector
F3-14	V/f separation voltage	0 V	0 V to rated motor voltage (F1-02)	The reference value is between 0 V and the rated voltage.

Para.	Name	De fault	Value Range	Description
F3-15	Voltage rise time of V/f separation	0.0s	0.0s to 1000.0s Note: This parameter indicates the time required for the voltage to change from 0 V to the rated motor voltage.	This parameter indicates the time required for the output voltage to rise from 0 to the V/f separation voltage reference.
F3-16	Voltage fall time of V/f separation	0.0s	0.0s to 1000.0s Note: This parameter indicates the time required for the voltage to change from 0 V to the rated motor voltage.	This parameter indicates the time required for the output voltage to fall from the V/f separation voltage reference to 0.
F3-17	Stop mode for V/f separation	0	0: The frequency and voltage decrease to 0 independently. 1: The frequency decreases to 0 after the voltage decreases to 0.	0: The frequency and voltage decrease to 0 independently. 1: The frequency decreases to 0 after the voltage decreases to 0.

The voltage rise time of V/f separation indicates the time required for the voltage to rise from 0 to the rated motor voltage. See t1 in the following figure.

The voltage fall time of V/f separation indicates the time required for the voltage to fall from rated motor voltage to 0. See t2 in the following figure.

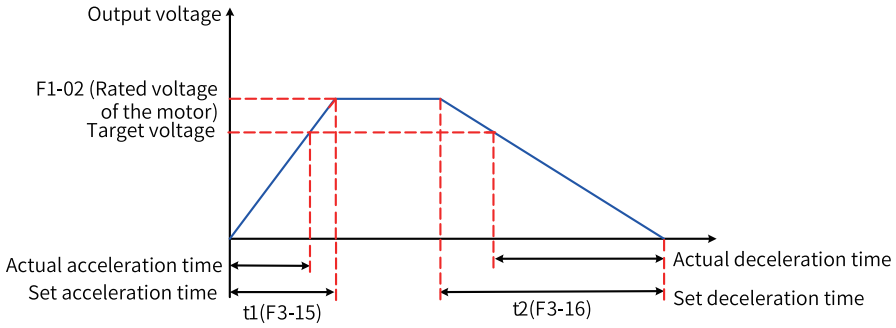


Figure 1-50 Schematic diagram of V/f separation

1.4.2 Output Current (Torque) Limit

During acceleration, operation at constant speed, or deceleration, if the current exceeds the overcurrent stall suppression action current (150% by default, indicating 1.5 times the rated AC drive

current), the overcurrent stall suppression mechanism is activated. In this case, the output frequency decreases until the current drops below the overcurrent stall suppression action current. Then, the output frequency increases toward the target frequency. Therefore, the acceleration is prolonged. If the actual acceleration time cannot meet your requirement, increase the value of F3-18 (overcurrent stall suppression action current) accordingly.

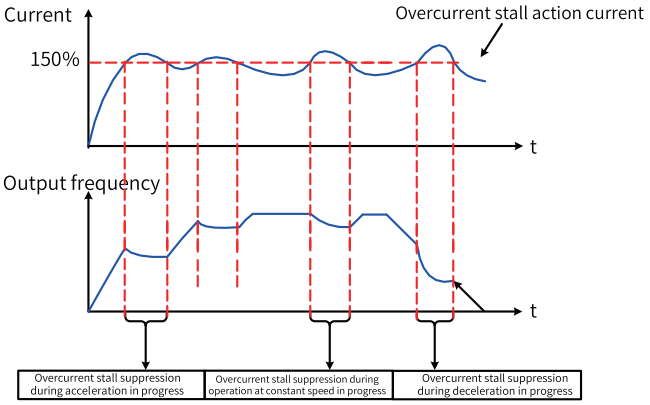


Figure 1-51 Overcurrent stall suppression action

Table 1–27 Related parameters

Para.	Name	Default	Value Range	Description
F3-18	V/f overcurrent stall suppression action current	150%	50% to 200%	When the motor current reaches the value of this parameter, the AC drive starts overcurrent stall suppression. The default value is 150%, indicating 1.5 times the rated current of the AC drive.
F3-19	V/f overcurrent stall suppression	1	0: Disabled 1: Enabled	This parameter defines whether to enable V/f overcurrent stall suppression.
F3-20	V/f overcurrent stall suppression gain	20	0 to 100	When the current exceeds the overcurrent stall suppression action current, the overcurrent stall suppression function is triggered. The output frequency decreases until the current drops below the overcurrent stall suppression action current, and then the output frequency increases to the target frequency, which prolongs the actual acceleration time automatically. A larger setpoint indicates better suppression effect.
F3-21	Compensation coefficient of V/f speed multiplying overcurrent stall suppression action current	50%	50% to 200%	This parameter is used to reduce the overcurrent stall suppression action current during high-speed operation. It is invalid when set to 50%. The recommended value for F3-18 in the field-weakening range is 100%.

When the frequency is high, the motor drive current is small, and the overcurrent stall suppression action current can result in greater motor speed dip compared with situations when the frequency is below the rated level. To improve motor running performance, you can lower the overcurrent stall suppression action current for situations when the frequency is above the rated level. This helps to improve acceleration performance and prevent motor stall in high-frequency applications with large load inertia and multiple field weakening requirements, such as centrifuges.

Overcurrent stall suppression action current when the frequency is above the rated level = (fn/fs) x k x LimitCur

In the formula, fs is the running frequency, fn is the rated motor frequency, k is the value of F3-21 (compensation coefficient of V/f speed multiplying overcurrent stall suppression action current), and LimitCur is the value of F3-18 (overcurrent stall suppression action current).

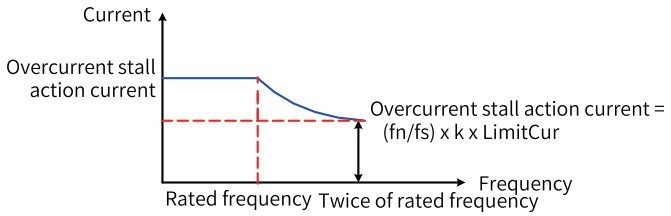


Figure 1-52 Speed multiplying overcurrent stall suppression action current

Note

For high-power motors with carrier frequency below 2 kHz, lower the overcurrent stall action current. Otherwise, the pulse-by-pulse current limit function is enabled before the overcurrent stall prevention function as ripple current increases, resulting in insufficient torque output.

1.4.3 Overvoltage Stall Suppression

When the bus voltage rises above the overvoltage stall suppression action voltage (F3-22), the motor becomes regenerative (motor speed > output frequency). In this case, overvoltage stall suppression is triggered to prevent overvoltage trips by adjusting the output frequency to extend the deceleration time. If the actual deceleration time cannot satisfy the requirement, increase the overexcitation gain as appropriate.

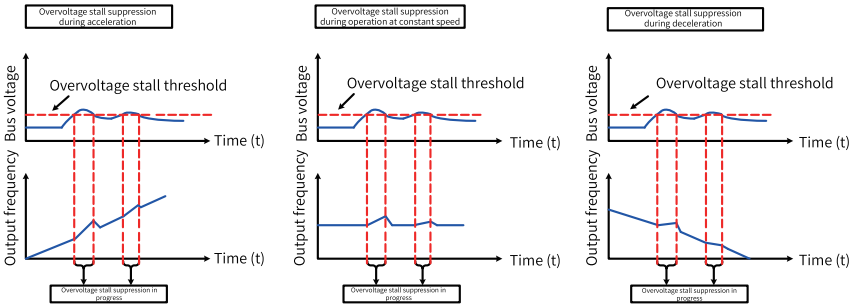


Figure 1-53 Overvoltage stall suppression action

Para.	Name	Default	Value Range	Description
F3-22	V/f overvoltage stall suppression action voltage	770.0 V	200.0 V to 2000.0 V	F3-22 functions the same as F9-04.
F3-23	V/f overvoltage stall suppression	1	0: Disabled 1: Enabled	0: Disabled 1: Enabled (default)

Para.	Name	Default	Value Range	Description
F3-24	Frequency gain for V/f overvoltage stall suppression	30	0 to 100	Increasing F9-03 will improve the control effect of the bus voltage but cause fluctuations in the output frequency. If the output frequency fluctuates greatly, you can reduce F3-24 as appropriate.
F3-25	Voltage gain for V/f overvoltage stall suppression	30	0 to 100	This parameter is used to suppress the bus voltage. Increasing the parameter value reduces the overshoot of the bus voltage.
F3-26	Frequency rise threshold during overvoltage stall suppression	5 Hz	0 Hz to 50 Hz	The running frequency may increase when overvoltage stall suppression is enabled. This parameter limits the increase of the running frequency.
F3-10	V/f overexcitation gain	64	0 to 200	A larger overexcitation gain indicates better suppression effect. When a braking resistor, braking unit, or energy feedback unit is used, set this parameter to 0. Otherwise, overcurrent may occur during operation.
F3-11	V/f oscillation suppression gain	Model dependent	0 to 100	A larger oscillation gain indicates better suppression effect.

Note

Observe the following requirements when using the braking resistor or energy feedback unit.

- Set F3–10 (Overexcitation gain) to 0. Failure to comply may lead to overcurrent during operation.
- Set F3–23 (Overvoltage stall selection) to 0. Failure to comply may prolong the deceleration time.

1.4.4 Speed Loop

The speed loop PI parameters are divided into two groups: low speed and high speed. When the running frequency is lower than switchover frequency 1 (F2-02), the speed loop PI is adjusted by F2-00 and F2-01. When the running frequency is higher than switchover frequency 2 (F2-05), the speed loop PI is adjusted by F2-03 and F2-04. When the running frequency is between switchover frequency 1 and switchover frequency 2, PI parameters are obtained from linear switchover between the two groups of PI parameters, as shown in the following figure.

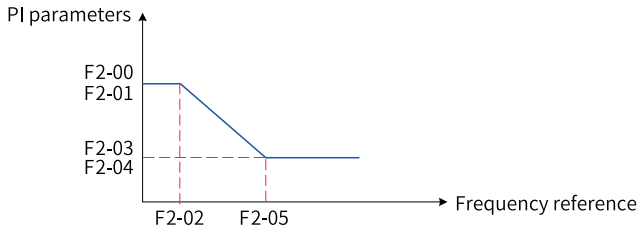


Figure 1-54 Speed loop PI parameters

By setting the proportional gain and integral time of the speed regulator, you can adjust the dynamic response to speed changes in vector control.

Increasing the proportional gain or reducing the integral time can speed up dynamic response of the speed loop. However, excessively large proportional gain or excessively short integral time may cause system oscillation.

In this case, you are advised to perform dynamic auto-tuning on all parameters of the motor to obtain a set of parameters. If the parameters obtained by auto-tuning cannot meet the requirements, make fine adjustments based on the parameter values. Increase the proportional gain first to ensure that the system does not oscillate, and then reduce the integral time to ensure that the system has quick response and small overshoot.

Note

Improper PI parameter settings may lead to a high overshoot. Even worse, overvoltage may occur when overshoot drops.

Increasing the value of F2-07 can improve motor stability, but this may also slow dynamic response. Decreasing it will bring faster system response but also motor oscillation if the value is too small. No adjustment is required under normal circumstances.

Para.	Name	Default	Value Range	Description
F2-00	Low-speed speed loop Kp	30	1 to 300	This parameter indicates the speed loop PID control parameter Kp, which affects the response to the motor speed. A larger Kp value indicates higher adjustment sensitivity and adjustment intensity. A smaller Kp value indicates lower adjustment sensitivity and adjustment intensity. The low-speed speed loop Kp is used in the case of low speed.
F2-01	Low-speed speed loop Ti	0.500s	0.001s to 10.000s	The reciprocal of the speed loop integral time constant is the integral gain. The speed loop integral time constant affects the steady-state speed error of the motor and the stability of the speed loop system. Increasing the speed loop integral time constant slows down the response of the speed loop. In this case, increase the speed loop proportional gain to shorten the response time of the speed loop. The low-speed speed loop Ti is used in the case of low speed.
F2-02	Switchover frequency 1	5.00 Hz	0.00 to F2-05	The speed loop PI parameters are divided into two groups: low speed and high speed. When the running frequency is lower than switchover frequency 1 (F2-02), the speed loop PI is adjusted by F2-00 and F2-01. When the running frequency is higher than switchover frequency 2 (F2-05), the speed loop PI is adjusted by F2-03 and F3-04. When the running frequency falls between switchover frequency 1 and switchover frequency 2, PI parameters are obtained from linear switchover between the two groups of PI parameters. The value of this parameter must be smaller than F2-05 (switchover frequency 2).

Para.	Name	Default	Value Range	Description
F2-03	High-speed speed loop Kp	20	1 to 300	This parameter indicates the speed loop PID control parameter Kp, which affects the response to the motor speed. A larger Kp value indicates higher adjustment sensitivity and adjustment intensity. A smaller Kp value indicates lower adjustment sensitivity and adjustment intensity. The high-speed speed loop Kp is used in the case of high speed.
F2-04	High-speed speed loop Ti	1.00s	0.01s to 10.00s	The reciprocal of the speed loop integral time constant is the integral gain. The speed loop integral time constant affects the steady-state speed error of the motor and the stability of the speed loop system. Increasing the speed loop integral time constant slows down the response of the speed loop. In this case, increase the speed loop proportional gain to shorten the response time of the speed loop. The high speed loop Ti is used in the case of high speed.
F2-05	Switchover frequency 2	10.00 Hz	F2-02 to F0-10	The speed loop PI parameters are divided into two groups: low speed and high speed. When the running frequency is lower than switchover frequency 1 (F2-02), the speed loop PI is adjusted by F2-00 and F2-01. When the running frequency is higher than switchover frequency 2 (F2-05), the speed loop PI is adjusted by F2-03 and F3-04. When the running frequency falls between switchover frequency 1 and switchover frequency 2, PI parameters are obtained from linear switchover between the two groups of PI parameters. The value of this parameter must be smaller than F2-05 (switchover frequency 2).
F2-07	Speed feedback filter time	0.004s	0.000s to 0.100s	In FVC control mode (F0-01 = 1), the speed loop feedback filter time is valid. You can improve the stability of the motor by adjusting this parameter. Increasing the speed loop feedback filter time can enhance motor stability but slow down dynamic response. Decreasing it will bring faster dynamic response. An excessively small parameter value may lead to motor oscillation. Generally, the motor stability meets requirements, and no adjustment is required.

1.4.5 Vector Control Slip Auto-tuning

In vector control mode (F0-01 = 0 or 1), this parameter is used to adjust the speed stability accuracy of the motor. For example, when the running frequency of the motor is lower than the output frequency of the AC drive, you can increase the value of this parameter.

In FVC control mode (F0-01 = 1), this parameter is used to adjust the output current of the AC drive with the same load. For example, you can decrease the value of this parameter gradually when a high-rate AC drive is used to control a motor with low load capacity. Note: No adjustment is required under normal circumstances.

Para.	Name	Default	Value Range	Description
F2-06	VC slip compensation gain	100%	50% to 200%	In SVC control mode, this parameter is used to adjust the speed stability accuracy of the motor. For example, when the running frequency of the motor is lower than the output frequency of the AC drive, you can increase the value of this parameter. In FVC control mode, this parameter is used to adjust the output current of the AC drive with the same load. For example, you can decrease the value of this parameter gradually when a high-rate AC drive is used to control a motor with low load capacity. No adjustment is required under normal circumstances.

1.4.6 Vector Control Overexcitation

In the case of large inertia, over-excitation in vector control mode can speed up the deceleration process of the motor. A larger overexcitation gain indicates better improvement. However, overexcitation in vector control mode increases the output current of the AC drive.

The following table describes the parameters of motor 1 as an example. The parameters of other motors need to be modified in the corresponding motor parameter group.

Para.	Name	De fault	Value Range	Description
F6-23	Overexcita-tion active mode	0	0 to 2	This parameter defines the active mode of overexcitation in vector control mode for asynchronous motors. When it is set to 2, overexcitation takes effect during acceleration, operation at constant speed, and deceleration.
F6-24	Overexcita-tion suppres-sion current	100	0 to 150	This parameter defines the target current after overexcitation takes effect and is a percentage relative to the rated motor current.
F6-25	Overexcita-tion gain	1.25	0.01 to 2.5	-

1.4.7 Torque Upper Limit

The following table describes the torque upper limit settings in vector control mode (FVC or SVC).

Para.	Name	De fault	Value Range	Description
F2-09	Torque upper limit source in speed control (motoring)	0	0: F2-10 1: AI1 2: AI2 3: AI3 4: Pulse reference (DI5) 5: Communication 6: MIN (AI1, AI2) 7: MAX (AI1, AI2) Others: F connector	0: F2-10 The torque upper limit in speed control mode is set by F2-10 (digital setting of torque upper limit in speed control). 1: AI1 The torque upper limit is input with the current or voltage signal through the AI1 terminal. The frequency is calculated according to the preset AI curve. 2: AI2 The torque upper limit is input with the current or voltage signal through the AI2 terminal. The frequency is calculated according to the preset AI curve. 3: AI3 The torque upper limit is input with the current or voltage signal through the AI3 terminal. The frequency is calculated according to the preset AI curve. 4: Pulse reference (DI5) The torque upper limit in speed control is set through DI5. The frequency is calculated based on the curve reflecting the relationship between the pulse frequency and running frequency. 5: Communication The main frequency is set through communication. The running frequency is input through remote communication. The AC drive must be equipped with a communication card to implement communication with the host controller. This mode applies to remote control or centralized control of multiple equipment. 6: MIN (AI1, AI2) The torque upper limit in speed control mode is the smaller value between AI1 and AI2 inputs. 7: MAX (AI1, AI2) The torque upper limit in speed control mode is the larger value between AI1 and AI2 inputs. Others: F connector
F2-10	Torque upper limit reference in speed control (motoring)	150.0-%	0.0% to 200.0%	The torque upper limit under motoring state takes the rated current of the motor as the base value. **Note**: When the AC drive and the motor are well-matched, the limit value must be smaller than the default value. The limit can be set to 200% only when the power class of the AC drive is higher than that of the motor.

Para.	Name	De fault	Value Range	Description
F2-11	Torque upper limit source in speed control (generat-ing)	0	0: F2-10 1: AI1 2: AI2 3: AI3 4: Pulse reference (DI5) 5: Communication 6: MIN (AI1, AI2) 7: MAX (AI1, AI2) 8: F2-12 Others: F connector	0: F2-10 The torque upper limit in speed control mode is set by F2-10 (digital setting of torque upper limit in speed control). 1: AI1 The torque upper limit is input with the current or voltage signal through the AI1 terminal. The frequency is calculated according to the preset AI curve. 2: AI2 The torque upper limit is input with the current or voltage signal through the AI2 terminal. The frequency is calculated according to the preset AI curve. 3: AI3 The torque upper limit is input with the current or voltage signal through the AI3 terminal. The frequency is calculated according to the preset AI curve. 4: Pulse reference (DI5) The torque upper limit in speed control is set through DI5. The frequency is calculated based on the curve reflecting the relationship between the pulse frequency and running frequency. 5: Communication The main frequency is set through communication. The running frequency is input through remote communication. The AC drive must be equipped with a communication card to implement communication with the host controller. This mode applies to remote control or centralized control of multiple equipment. 6: MIN (AI1, AI2) The torque upper limit in speed control mode is the smaller value between AI1 and AI2 inputs. 7: MAX (AI1, AI2) The torque upper limit in speed control mode is the larger value between AI1 and AI2 inputs. 8: F2-12 The torque upper limit in speed control mode is set by F2-12 (torque upper limit reference in speed control (generating)). Others: F connector
F2-12	Torque upper limit reference in speed control (generat-ing)	150.0-%	0.0% to 200.0%	The torque upper limit under generating state takes the rated current of the motor as the base value.

There are eight torque upper limit sources available in speed control mode. In motoring state, the torque upper limit source is determined by F2-09; in generating state, the torque upper limit source is defined by F2-11.

In speed control mode, if F2-11 is set to 1 to 8, the torque upper limit differs in motoring state and generating state. The torque upper limit FS in motoring state is defined by F2-10, and that in generating state is defined by F2-12, as shown in the following figure.

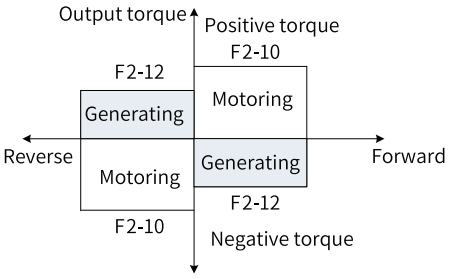


Figure 1-55 Torque upper limit in speed control mode

Para.	Name	Default	Value Range	Description
F2-53	Generating power limiting	0	0: Disabled 1: Enabled	-
F2-54	Generating power upper limit	Model dependent	0.0% to 200.0%	-

For scenarios with cam load, quick acceleration/deceleration, and sudden unloading in which braking resistors are not used, enabling power limit during generating can effectively reduce bus voltage overshoot during motor braking so as to prevent overvoltage. F2-54 (generating power upper limit) is a percentage relative to the rated motor power. If overvoltage still occurs after power limit during generating is enabled, decrease the value of F2-54.

1.4.8 Torque Control

1. **Selecting speed/torque control mode (A0-00)**

   The speed or torque control mode is defined by A0-00.

   The multi-function DI terminals have two functions related to torque control: torque control disable (function 29) and switchover between speed control and torque control (function 46). The two DI terminals work with A0-00 to implement switchover between speed control and torque control.

   When the terminal assigned with function 46 (switchover between speed control and torque control) is inactive, the control mode is determined by A0-00; when it is active, the control mode is reverse to A0-00.

   When the terminal assigned with function 29 (torque control disable) is active, the AC drive always runs in speed control mode.

2. **Selecting torque mode (A0-00)**

   The AC drive supports two torque control modes: speed loop output limiting torque mode (A0-10 = 0) and direct torque setting mode (A0-10 = 1).

   a. Speed loop output limiting torque mode

You can select this mode by setting A0-10 to 0.

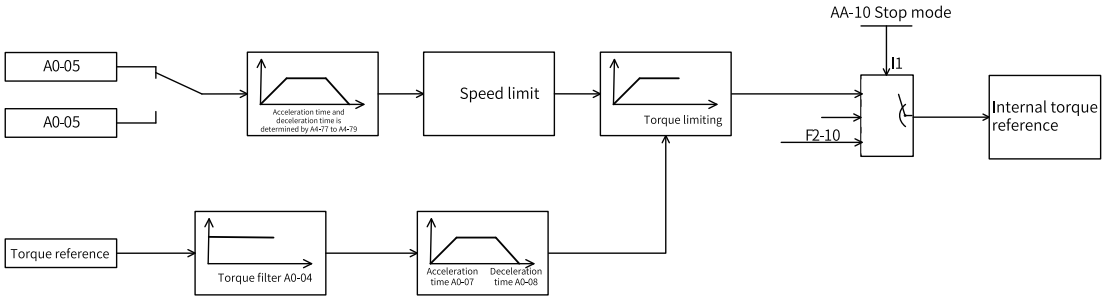


Figure 1-56 System diagram of speed loop limiting torque control mode

The following table describes the related parameters.

Para.	Name	Default	Value Range	Description
A0-01	Torque reference source	0	0: A0-03 1: AI1 2: AI2 3: AI3 4: Pulse 5: Communication (1000H) 6: MIN (AI1, AI2) 7: MAX (AI1, AI2) Others: F connector	This parameter defines the torque reference source. There are a total of nine torque reference sources. Extension by using connectors is supported.
A0-03	Torque digital setting	100.0%	–200.0% to +200.0%	This parameter defines the torque in torque control mode. The torque reference is a relative value. The value 100.0% corresponds to the rated torque of the AC drive. The value range is –200.0% to +200.0%, indicating that the maximum torque is twice the rated torque. When the torque reference is a positive value, the AC drive runs in the forward direction. When it is a negative value, the AC drive runs in the reverse direction. When the torque reference is a positive value, the AC drive runs in the forward direction. When it is a negative value, the AC drive runs in the reverse direction.
A0-04	Torque filter time	0.000s	0 to 5.000s	This parameter defines the torque reference filter time.
A0-05	Maximum forward frequency in torque control	0 Hz	0.00 to F0-10	This parameter defines the maximum running frequency of the AC drive in forward direction in torque control mode.
A0-06	Maximum reverse frequency in torque control	0 Hz	0.00 to F0-10	This parameter defines the maximum running frequency of the AC drive in reverse direction in torque control mode.
A0-07	Torque rising filter time	0.00s	0.00s to 650.00s	This parameter defines the torque reference ramp-up time (relative to the rated torque).

Para.	Name	Default	Value Range	Description
A0-08	Torque falling filter time	0.00s	0.00s to 650.00s	This parameter defines the torque reference ramp-down time (relative to the rated torque).
A4-77	Frequency acceleration time in torque control	0.00s	0.00s to 650.00s	This parameter defines the frequency acceleration time in torque control mode. It is invalid when A4-79 is set to 1.
A4-78	Frequency deceleration time in torque control	0.00s	0.00s to 650.00s	This parameter defines the frequency deceleration time in torque control mode. It is invalid when A4-79 is set to 1.
A4-79	Forced use of the fourth set of time in torque control	0	0: Disabled 1: Enabled	This parameter specifies the frequency acceleration/deceleration time in torque control mode. When it is active, the fourth set of acceleration/deceleration time is used. Otherwise, the time set by A4-77 and A4-78 is used.

b. Direct torque setting mode

You can select this mode by setting A0-10 to 1.

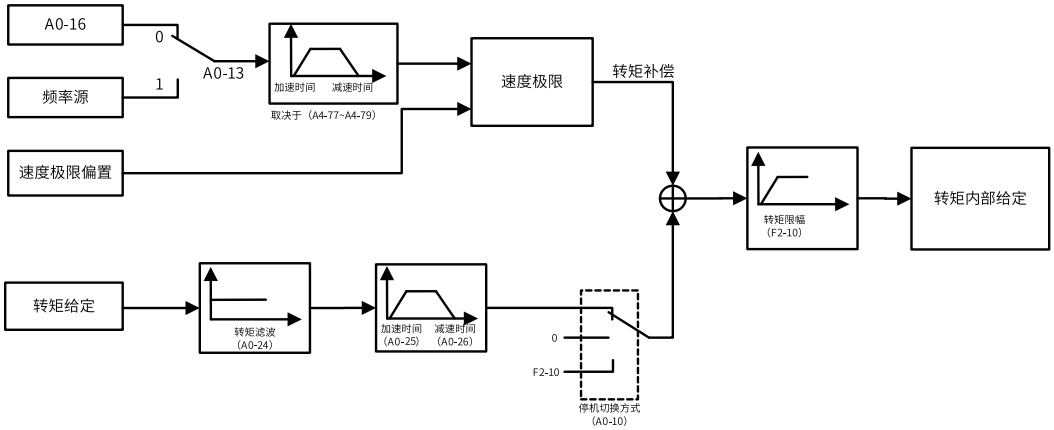
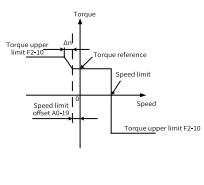
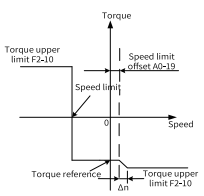
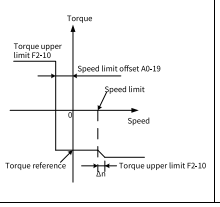
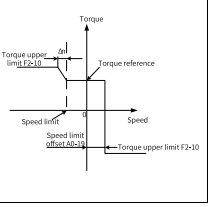
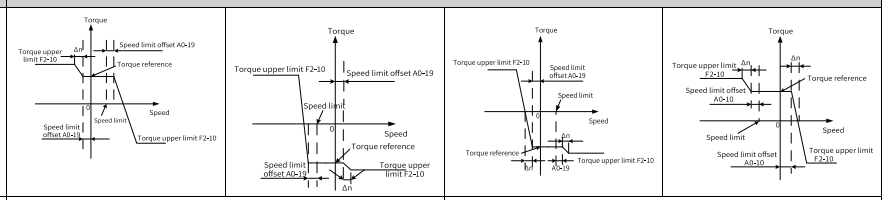
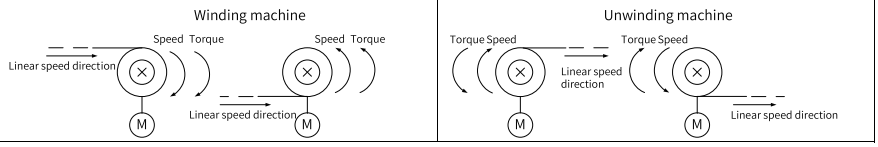


Figure 1-57 System diagram of direct torque setting control mode

Table 1–28 Speed limit/speed limit offset

Item	Operation Conditions			
Operation command	Forward RUN	Forward RUN	Forward RUN	Forward RUN
Torque reference direction	+	-	-	+
Speed limit direction	+	-	+	-
Normal running direction	Forward RUN	Reverse RUN	Forward RUN	Reverse RUN
Uni-directional speed limit offset (A0-17 = 1)				

Item	Operation Conditions
Bidirectional speed limit offset (A0-17 = 0)	
Application	

3. **Setting torque reference in torque control mode**

   A0-13 and A0-14 are used to set the torque reference in direct torque setting mode. In addition, this mode also supports setting of the supplementary torque by using A0-20 and A0-23.

   The torque reference is a relative value. The value 100.0% corresponds to the rated motor torque. (The output torque of the motor can be viewed in U0-06, where the value 100% corresponds to the rated torque of the motor.)

   A0-05, A0-09, A0-10, and A0-11 define the frequency upper limit in torque control mode.

   In torque control mode, the frequency upper limit can be set by A0-05 or the frequency source and switched by A0-09.

4. **Setting frequency upper limit in torque control mode**

   In torque control mode, if the load torque is smaller than the output torque of the motor, the motor speed keeps rising. Therefore, to prevent accidents such as runaway in the mechanical system, the maximum motor speed must be controlled within a proper range. That is, the frequency upper limit must be set in torque control mode.

   In speed loop output limiting mode, the frequency upper limit is defined by A0-05 and A0-06.

   In direct torque setting mode, the frequency limit and limit offset are set by using A0-15, A-16, A0-17, A0-18, and A0-19.

   The torque upper limit acceleration and deceleration time are defined by A4-77, A4-78, and A4-79.

5. **Setting torque reference acceleration/deceleration time**

   In speed loop output limiting mode, the torque reference filter time and acceleration/deceleration time are defined by A0-04, A0-07, and A0-08.

   In direct torque setting mode, the torque reference filter time and acceleration/deceleration time are defined by A0-24, A0-25, and A0-26.

   In torque control mode, the difference between the output torque of the motor and the torque of the load determines the speed change rate of the motor and load. The motor speed may change rapidly, causing excessive noise or mechanical stress. Setting the acceleration and deceleration time in torque control mode as appropriate can ensure smooth change of the motor speed. The torque acceleration time corresponds to the time required for the torque to rise from 0 to the rated torque of the motor, and the deceleration time corresponds to the time required for the torque to fall from the rated torque to 0.

However, setting the torque acceleration/deceleration time is not recommended in scenarios in which the startup torque is small. For scenarios where rapid torque response is required, set the torque acceleration/deceleration time to 0.00s.

For example, when two motors are rigidly connected to drive the same load, one AC drive is set as the master in speed control and the other is set as the slave in torque control to ensure balanced load distribution. The slave uses the master's output torque as its torque reference, which requires quick response to the output torque. In this case, the acceleration/deceleration time of the slave in torque control needs to be set to 0.00s.

In torque control mode, the difference between the output torque of the motor and the torque of the load determines the speed change rate of the motor and load. The motor speed may change rapidly, causing excessive noise or mechanical stress. Setting the acceleration and deceleration time in torque control mode as appropriate can ensure smooth change of the motor speed. The torque acceleration time corresponds to the time required for the torque to rise from 0 to the setpoint of A0-03.

However, setting the torque acceleration/deceleration time is not recommended in scenarios in which the startup torque is small. For scenarios where rapid torque response is required, set the torque acceleration/deceleration time to 0.00s.

For example, when two motors are rigidly connected to drive the same load, one AC drive is set as the master in speed control and the other is set as the slave in torque control to ensure balanced load distribution. The slave uses the master's output torque as its torque reference, which requires quick response to the output torque. In this case, the acceleration/deceleration time of the slave in torque control needs to be set to 0.00s.

1.4.9 Current Loop

Current loop PI parameters for vector control are automatically calculated based on motor parameters and do not need not be modified in normal cases. The parameters indicate magnification relative to the calculated values, and 1.0 corresponds to the calculated value.

Note that an excessively large current loop PI gain may lead to oscillation of the entire control loop. Therefore, when current oscillation or torque fluctuation is large, you can manually decrease the proportional gain or integral gain here.

The following table describes the parameters of motor 1 as an example. The parameters of other motors need to be modified in the corresponding motor parameter group.

Para.	Name	Default	Value Range	Description
AB-59	Low-speed current loop Kp adjustment	1.0	0.1 to 10.0	The AC drive automatically calculates the current loop gain based on motor parameters. You can decrease the value of this parameter as appropriate when low-speed current oscillation or torque fluctuation is large.
AB-60	High-speed current loop Kp adjustment	1.0	0.1 to 10.0	The AC drive automatically calculates the current loop gain based on motor parameters. You can decrease the value of this parameter as appropriate when low-speed current oscillation or torque fluctuation is large.

Para.	Name	De fault	Value Range	Description
AB-61	Low-speed current loop Ki adjustment	1.0	0.1 to 10.0	The AC drive automatically calculates the current loop gain based on motor parameters. You can decrease the value of this parameter as appropriate when low-speed current oscillation or torque fluctuation is large.
AB-62	High-speed current loop Ki adjustment	1.0	0.1 to 10.0	The AC drive automatically calculates the current loop gain based on motor parameters. You can decrease the value of this parameter as appropriate when low-speed current oscillation or torque fluctuation is large.
AB-63	D-axis current loop complex vector adjustment	1.0	0.1 to 10.0	-
AB-64	Q-axis current loop complex vector adjustment	1.0	0.1 to 10.0	-

1.4.10 Performance of Field Weakening Region

Para.	Name	Default	Value Range	Description
F2-19	Field weakening gain	5	1 to 50	This parameter corresponds to the voltage loop bandwidth. Increasing the setpoint can improve dynamic response. However, an excessively large setpoint may also cause current oscillation.
A5-05	Voltage overmodula-tion coefficient	105%	100% to 110%	This parameter indicates the boost capacity of the maximum output voltage of the AC drive. Increasing the setpoint can improve the maximum load capacity of the motor field weakening region but also increase current harmonics and aggravate motor heating. Decreasing the setpoint will reduce the maximum load capacity of the motor field weakening region but also alleviate motor heating. No adjustment is required under normal circumstances.
AB-33	Output voltage upper limit margin for field weakening adjustment	5	1 to 50	Decreasing the setpoint can improve voltage utilization. The current is smaller under the same load in the field weakening region. However, an excessively small setpoint will affect dynamic performance. The parameter for motor 2 is B9-33. The parameter for motor 3 is BE-33. The parameter for motor 4 is CE-33.

1.4.11 FVC Control Mode and Performance Improvement

Table 1–29 Setting FVC speed control mode

Step	Related Parameters	Description
Check the AC drive wiring.	-	Check the AC drive wiring and motor parameter setting if E19.xx is reported during auto-tuning.
Set motor parameters.	F1-01, F1-02, F1-03, F1-04, and F1-05	
Set the encoder type and pulses per revolution.	F1-27 and F1-28	Check the encoder and PG card if E20.xx is reported.
Select a control mode.	F0-01	-
Select a motor auto-tuning method.	F1-37	Select dynamic auto-tuning on all parameters (set the parameter to 2 for asynchronous motors or 12 for synchronous motors) if possible, and disconnect the load to allow the motor to run at a high speed. Select static auto-tuning on all parameters if the load cannot be disconnected (such as hoisting scenarios). Dynamic auto-tuning on all parameters may take some time. Wait until auto-tuning is complete before proceeding to the next step.
Set the command source and frequency reference source.	F0-02, F0-03, and F0-08	-
Perform a trial run.	A0-00 = 0	-

Table 1–30 Setting FVC torque control mode

Step	Related Parameters	Description
Check the AC drive wiring.	-	Check the AC drive wiring and motor parameter setting if E19.00 is reported during auto-tuning.
Set motor parameters.	F1-01, F1-02, F1-03, F1-04, and F1-05	
Set the encoder type and pulses per revolution.	F1-27 and F1-28	Check the encoder and PG card if E20.00 is reported.
Select a control mode.	F0-01	-
Select a motor auto-tuning method.	F1-37	Select dynamic auto-tuning on all parameters (set the parameter to 2 for asynchronous motors or 12 for synchronous motors) if possible, and disconnect the load to allow the motor to run at a high speed. Select static auto-tuning on all parameters if the load cannot be disconnected (such as hoisting scenarios). Dynamic auto-tuning on all parameters may take some time. Wait until auto-tuning is complete before proceeding to the next step.
Set the command source.	F0-02	-
Set the torque control parameters.	A0-00, A0-01, A0-03, and A0-05	-
Perform a trial run.	-	-

Setting Speed Loop

The motor may oscillate or generate abnormal noise when running below the rated frequency if the speed loop gains are set too high. In this case, reduce the speed loop gains (decrease the values of F2-00 and F2-03 and increase the values of F2-01 and F2-04).

If the system speed overshoot is high during rapid acceleration, increase the speed loop proportional gain Kp (increase the values of F2-00 and F2-03) and reduce the speed loop integral gain Ki (increase the values of F2-01 and F2-04).

In a winding/unwinding scenario, the roll diameter changes in inverse proportion to the motor speed. Therefore, when the roll diameter is large, increase the speed loop gain at low speed to ensure dynamic response of the system (increase the value of F2-00 and reduce the value of F2-01).

For a load running at an extremely low speed (for example, a milling machine running at 0.01 Hz), increase the speed loop gains, especially the integral gain (increase the value of F2-00 and reduce the value of F2-01) to ensure smooth running.

Note

In scenarios with poor encoder feedback signals, the speed loop gains cannot be too high. Otherwise, the dynamic response speed of the system is affected. In this case, first take measures to improve the quality of encoder feedback signals (for example, separate power cables of the motor from signal cables of the encoder, and ensure good grounding of the system). Otherwise, directly reducing the speed loop gains will slow down dynamic response of the system, degrading the system operation performance.

Setting Current Loop

Current loop parameters are automatically obtained through complete auto-tuning and do not need to be modified. However, you can fine tune these parameters in the following conditions:

The motor oscillates or generates abnormal noise in FVC mode, and the situation does not improve much after the speed loop parameters are reduced. In this case, decrease the values of current loop parameters as appropriate.

The system requires a small overshoot, and therefore the speed loop gains cannot be too small. In this case, if the motor oscillates or generates abnormal noise in FVC mode, decrease the values of current loop parameters as appropriate.

Troubleshooting Exceptions During High-Speed Running in FVC Control Mode

Oscillation or running exceptions may occur when a motor runs at a high frequency (for example, above 200 Hz) in FVC mode. In this case, run the motor at the same frequency in V/f control mode and check whether the feedback frequency (U0-29) is the same as the frequency reference. If the deviation is large (for example, more than 4 Hz), the exceptions are caused by encoder signal distortion (quadrature distortion or abnormal duty cycle). Do as follows:

Replace the encoder. Check whether the encoder is damaged or installed incorrectly, and whether the encoder model supports the current pulse frequency.

Shortening Acceleration/Deceleration Time in FVC Control Mode

During rapid acceleration/deceleration, the actual acceleration/deceleration time is longer than the preset value. To shorten the acceleration/deceleration time, take the following measures:

To shorten the motor acceleration time, increase the torque upper limit in FVC control mode (moderately increase the value of F2-10, but in no case greater than 180%).

Although increasing the torque upper limit can shorten the motor acceleration time, this operation leads to an increase of the motor current, which is more likely to cause faults such as overload.

Limiting Bus Voltage to Prevent Overvoltage in FVC Control Mode

In high inertia or rapid deceleration scenarios, overvoltage often occurs during deceleration. The solutions are the same as those in V/f control mode:

1. Enable overvoltage suppression. For motor 1, set bit01 of AB-25 to 1. For other motors, set B9-25, BE-25, or CE-25 accordingly.
2. Enable overexcitation by setting F6-23.
3. Select a suitable braking resistor to reduce the deceleration time.

1.4.12 Auxiliary Control

Para.	Name	Default	Value Range	Description
A5-00	DPWM switchover frequency upper limit	12.00 Hz	0 to maximum frequency (F0-10)	The AC drive supports two PWM modes: CPWM and DPWM. When the running frequency is higher than A5-00 (switchover frequency), the DPWM mode is used. When the running frequency is lower than A5-00 (switchover frequency), the CPWM mode is used. The DPWM mode can improve the AC drive efficiency, whereas the CPWM mode can reduce the motor noise. Increasing the value of this parameter to the maximum frequency will reduce the motor noise.
A5-01	PWM modulation mode	0	0: Asynchronous modulation 1: Synchronous modulation	Output current oscillation or high harmonics can occur if the carrier frequency divided by the running frequency is less than 10. In this case, you can use the synchronous modulation mode to reduce current harmonics. 0: Asynchronous modulation In this mode, the carrier frequency and signal wave frequency are not synchronized. The carrier frequency usually remains unchanged. The carrier ratio changes with the signal wave frequency. 1: Synchronous modulation In this mode, the carrier frequency and signal wave frequency are synchronized. The carrier frequency and signal frequency change simultaneously, and the carrier ratio remains unchanged. Therefore, the number of transverse SPWM pulses formed in one cycle is fixed, and the equivalent sine wave has good symmetry.

Para.	Name	Default	Value Range	Description
A5-02	Deadzone compensation	1	0: Disabled 1: Enabled (compensation mode 1)	During PWM modulation of the AC drive, a deadzone is set to ensure turn-off before turn-on, so as to avoid bridge arm shoot-through. However, this deadzone causes additional voltage loss during PWM modulation, resulting in output current distortion. The lower the running frequency, the more obvious the current distortion. Therefore, deadzone compensation is required to alleviate the impact exerted by the deadzone. 0: Disabled In conditions where current sampling is inaccurate, such as power mismatch between the AC drive and motor and running at ultra-high speed (with a small carrier frequency ratio), deadzone compensation can be disabled to additional current distortion caused by false compensation. 1: Enabled (compensation mode 1) Deadzone compensation is performed based on the deadzone effect of the AC drive.
A5-03	Random PWM depth	0	0: Random PWM inactive 1 to 10: Random PWM depth	If the motor noise is strong, setting A5-03 to a non-zero value can suppress the motor noise. A larger value indicates better noise suppression effect. However, an excessively high value may affect motor control. Therefore, set this parameter to 1 at the beginning of commissioning and then increase it by 1 each time as required.
A5-04	Pulse-by-pulse current limit protection	0	0: Disabled 1: Enabled	When pulse-by-pulse current limit protection is enabled, the output is blocked in the case of occasional or short-term large current to prevent overcurrent; modulation output continues automatically after the current reduces. If pulse-by-pulse current limit protection is triggered for several consecutive times, a pulse-by-pulse current limit fault is reported. This function is only valid in V/f control mode.
A5-05	Voltage overmodulation coefficient	105	100 to 110: Overmodulation depth	Increasing the voltage overmodulation coefficient can enhance the voltage output capacity and effectively improve the load capacity of the motor in the field weakening region, but will increase output current distortion at the same time. Therefore, you need to make a trade-off between improving the output voltage capacity and controlling current distortion when setting this parameter.

Para.	Name	Default	Value Range	Description
A5-08	Low speed carrier frequency upper limit	0	0 to 8.0 kHz: Carrier frequency upper limit	This parameter defines the upper limit of the carrier frequency when the AC drive is running at a low speed. The limit takes effect when the setpoint is greater than 0. In SVC control mode, the smaller one between A5-08 and F2-37 is used. In non-SVC control mode, A5-08 is used.
A5-10	Energy conservation control	0: Disabled	1: Enabled	This function is only valid for asynchronous motors in V/f control mode. Enabling energy conservation control can reduce energy consumption of the asynchronous motor when running with no load or light load. Note that this function applies to working conditions with stable loads. In scenarios with frequent sudden loading and unloading, exercise caution when enabling this function.

1.4.13 Encoder Signal Processing

The following table describes the parameters of motor 1 as an example. The parameters of other motors need to be modified in the corresponding motor parameter group.

Para.	Name	Default	Value Range	Description
A9-07	Encoder speed measurement filter time constant	0.004s	0.000 to 10.000s	This parameter is used to adjust the filter time of encoder signals.

Adjusting the encoder speed measurement filter time constant can change the encoder signal filtering effect. Longer filter time indicates smoother encoder feedback speed but longer feedback delay. Shorter filter time indicates shorter feedback delay but larger encoder feedback speed fluctuations. The filter time constant needs to be adjusted based on the actual working conditions and encoder signal quality. It cannot be too small if the signal quality of the resolver and other encoders is poor.

Table 1–31 Encoder wire breakage detection

Para.	Name	Default	Value Range	Description
F1-36	PG wire breakage detection	0	0: Disabled 1: Enabled	-

The PG card provides the function of hardware detection of encoder wire breakage. This function only supports encoders with differential interfaces. To use this function, you need to enable PG fault detection by using bit02 of AA-30. When the AC drive detects a wire breakage fault and the fault lasts for a period longer than the time specified by F1-36, it reports ERR20.

1.4.14 Synchronous Motor PMVVC

Para.	Name	Value Range	Default	Description
F0-01	Motor 1 control mode	0: SVC	0	The SVC mode is a type of open-loop vector control applicable to high-performance control applications in which one AC drive can drive only one motor, such as machine tools, centrifuges, wire drawing machines, and injection molding machines.
		1: FVC		The FVC mode is a type of closed-loop vector control. An encoder must be installed at the motor end, and the AC drive must be equipped with a PG card of the same type as the encoder. This mode is applicable to scenarios requiring high-precision speed control and torque control, in which one AC drive can drive only one motor, such as high-speed paper machines, cranes, and elevators.
		2: V/f control		The V/f control mode (open-loop speed control) is applicable to scenarios with no high requirement on loads (such as fans and pumps). The V/f control mode is the only choice if one AC drive needs to drive multiple motors.
F3-01	Torque boost	0.0%: Automatic torque boost 0.1% to 30.0%	Model dependent	The torque boost function generally applies to the AC drive at low frequency. The output torque of the AC drive in V/f control mode is proportional to the frequency. Under the condition of low frequency, the torque is very low when the motor is running at a low speed. In this case, you can set this parameter to increase the output voltage of the AC drive, thereby increasing the current and output torque. Do not set this parameter to a large value, otherwise, overload protection may be triggered.
A9-40	Low-speed closed-loop current selection (for VVC)	0: Disabled 1: Enabled	0	-
A9-41	Low-speed closed-loop current (for VVC)	30% to 200% (rated motor current as the base value)	50%	-

Para.	Name	Value Range	Default	Description
A9-42	Oscillation suppression damping coefficient (for VVC)	0 to 500	100%	-
A9-43	Initial position compensation angle (for VVC)	0 to 5	0	-

Note

- When F1-00 is set to 0 or 1 (asynchronous motor) and F0-01 is set to 2, the V/f control mode is used.
- When F1-00 is set to 2 (synchronous motor) and F0-01 is set to 2, the PMVVC mode is used.

1.4.15 PID Adjustment

This section describes general rules for PID parameter adjustment, which can be used as reference for adjusting closed-loop control PID parameters (FA-05 to FA-07 and FA-15 to FA-17) and speed loop PI parameters (F2-00, F2-01, F2-03, and F2-04).

1. If the response is slow, increase Kp.

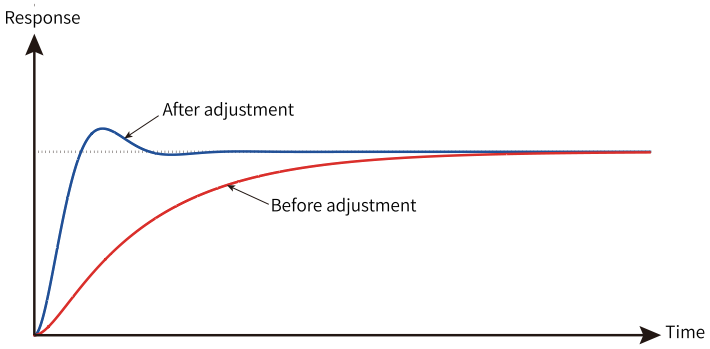


Figure 1-58 Response-time trend after increasing Kp

2. If fast oscillation occurs, decrease Kp.

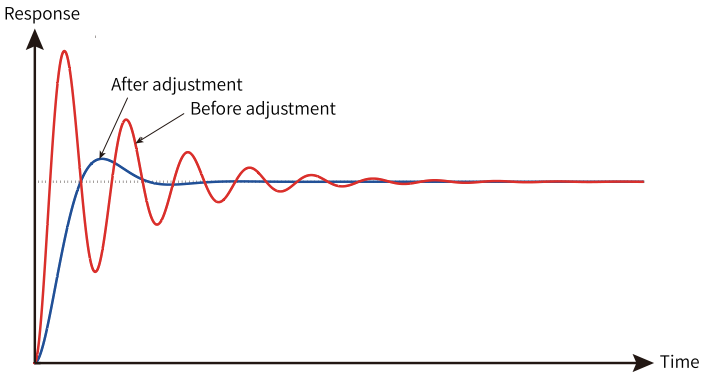


Figure 1-59 Response-time trend after decreasing Kp

3. If the overshoot is large and the fluctuation is slow, increase Ti.

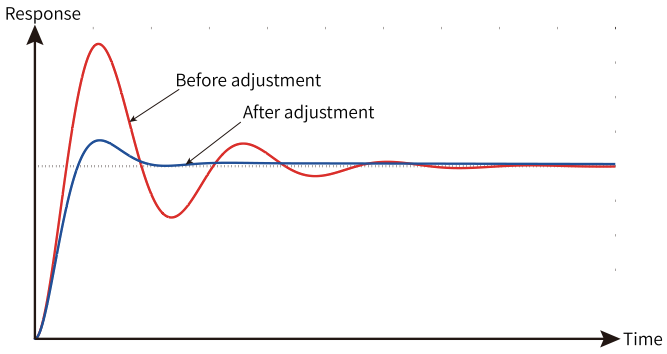


Figure 1-60 Response-time trend after increasing Ti

4. If the static difference is large and the recovery is slow when the load fluctuates, increase Kp or decrease Ti.

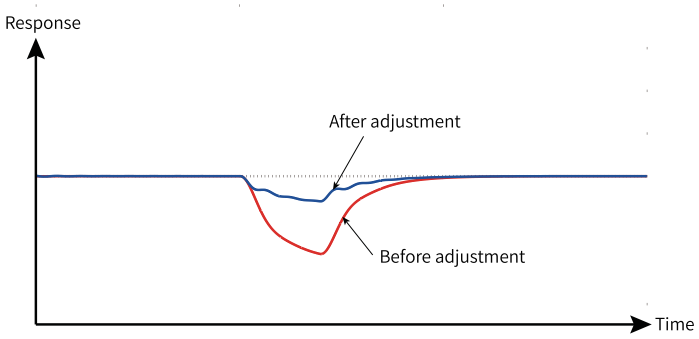


Figure 1-61 Response-time trend after increasing Kp at load fluctuation

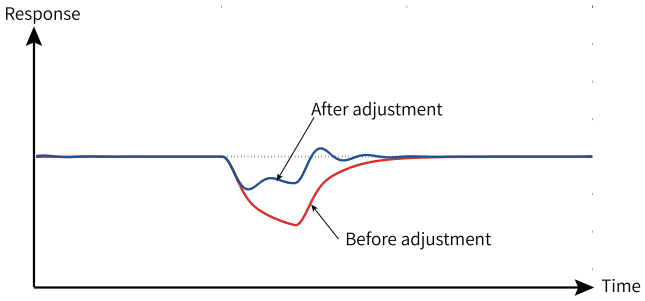


Figure 1-62 Response-time trend after decreasing Ti at load fluctuation

5. The system stability can be improved by incorporating derivative time Td properly (excessive proportion may cause interference and oscillation).

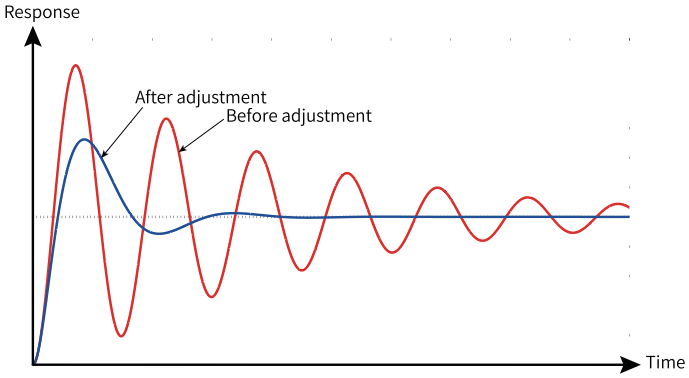


Figure 1-63 Response-time trend after incorporating Td

1.5 Application Control

1.5.1 Jogging

Jogging applies to applications in which the AC drive needs to run at low speed temporarily to facilitate equipment testing. The following figure shows the relationship between the output frequency and acceleration/deceleration time during running.

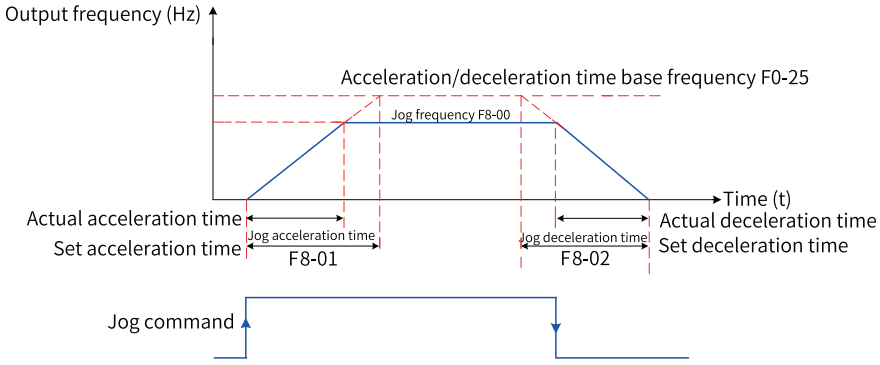


Figure 1-64 Schematic diagram of jogging

Related Parameters

Para.	Name	Default	Value Range	Description
F0-02	Operation command source	0	0: Operating panel control 1: Terminal I/O control 2: Communication control	-
F0-25	Acceleration/ Deceleration time base frequency	1	0: Maximum frequency (F0-10) 1: Target frequency 2: 100 Hz	-

Para.	Name	Default	Value Range	Description
F7-01	MF.K key function	0	0: MF.K key disabled 1: Switchover between operating panel control and remote control (terminal I/O control or communication control) 2: Switchover between forward and reverse run 3: Forward jogging 4: Reverse jogging	-
F8-00	Jog frequency	2.00 Hz	0 to maximum frequency (F0-10)	-
F8-01	Jog acceleration time	20.0s	0.0s to 6500.0s	-
F8-02	Jog deceleration time	20.0s	0.0s to 6500.0s	-
F8-13	Reverse frequency inhibition	0	0: Disabled 1: Enabled	-
F8-27	Jog preferred	0	0: No priority (Respond to the operation command that arrives first) 1: Jog preferred 2: OFF1 preferred	-
A4-62	JOG1 speed source	0	0: F8-00 1: AI1 2: AI2 3: AI3 4: Pulse 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	-
A4-66	Jog ramp source	1	0: Normal running ramp time 1: Jog ramp time	-

Application

The following introduces how to set parameters related to jogging by taking implementation of jogging using the operating panel as an example.

Table 1–32 Setting parameters related to jogging

Step	Forward Jogging	Reverse Jogging
1	Set F7-01 to 3 to assign the forward jogging function to the MF.K key.	Set F7-01 to 4 to assign the reverse jogging function to the MF.K key. Set F8-13 (reverse frequency inhibition) to 0 to allow reverse run.
2	Set F0-02 to 0 to select the operating panel as the command source.	Set F0-02 to 0 to select the operating panel as the command source.

Step	Forward Jogging	Reverse Jogging
3	Set F8-00 (jog frequency), F8-01 (jog acceleration time), and F8-02 (jog deceleration time) properly.	Set F8-00 (jog frequency), F8-01 (jog acceleration time), and F8-02 (jog deceleration time) properly.
4	Press down the MF.K key when the AC drive is in stop state. The AC drive starts to jog in the forward direction. Release the MF.K key. The AC drive decelerates to stop.	Press down the MF.K key when the AC drive is in stop state. The AC drive starts to jog in the reverse direction. Release the MF.K key. The AC drive decelerates to stop.

1.5.2 Frequency Detection

1.5.2.1 Multi-speed Reference

In the multi-reference mode, different combinations of DI terminal states correspond to different frequency references.

Table 1–33 Using multi-reference as the frequency reference source

Step	Related Parameters	Description
Step 1: Select multi-reference as the frequency reference source.	F0-03	Set F0-03 to 6.
Step 2: Determine the number of speed references required.	None	A total of 16 speed references are supported, which are defined by using four DI terminals. The relationship between the number of speed references and the number of DI terminals is as follows: 2 speed references: 1 DI terminal (K1) 3 to 4 speed references: 2 DI terminals (K1 and K2) 5 to 8 speed references: 3 DI terminals (K1, K2, and K3) 9 to 16 speed references: 4 DI terminals (K1, K2, K3, and K4)
Step 3-1: Assign the DI terminals with the multi-reference function by setting parameters in group F4.	F4-00 to F4-09	Multi-reference terminal K1: Set the parameter to 12.
		Multi-reference terminal K2: Set the parameter to 13.
		Multi-reference terminal K3: Set the parameter to 14.
		Multi-reference terminal K4: Set the parameter to 15.

Step	Related Parameters	Description
Step 3-2: Assign the DI terminals with the multi-reference function by setting parameters in group F4.	FC-55	0: Disabled 1: Enabled 2: Terminal function input 3–18: DI1 to DI16 Others: B connector
	FC-56	0: Disabled 1: Enabled 2: Terminal function input 3–18: DI1 to DI16 Others: B connector
	FC-57	0: Disabled 1: Enabled 2: Terminal function input 3–18: DI1 to DI16 Others: B connector
	FC-58	0: Disabled 1: Enabled 3–18: DI1 to DI16 Others: B connector
Step 4: Set the frequency corresponding to each speed reference.[Note]	FC-00 to FC-15	The frequency corresponding to each speed reference is set to a percentage value. 100% corresponds to the maximum frequency (F0-10).
	F0-10	When multi-reference is used as the frequency reference source, the value 100% of FC-00 to FC-15 corresponds to the maximum frequency (F0-10).

[Note] The four multi-reference terminals can provide 16 state combinations, corresponding to 16 frequency reference values, as listed in the following table.

Table 1–34 State combinations of the four multi-speed reference terminals

K4	K3	K2	K1	Reference	Percentage Relative to Max. Frequency
OFF	OFF	OFF	OFF	Multi-reference 0	FC-00
OFF	OFF	OFF	ON	Multi-reference 1	FC-01
OFF	OFF	ON	OFF	Multi-reference 2	FC-02
OFF	OFF	ON	ON	Multi-reference 3	FC-03
OFF	ON	OFF	OFF	Multi-reference 4	FC-04
OFF	ON	OFF	ON	Multi-reference 5	FC-05
OFF	ON	ON	OFF	Multi-reference 6	FC-06
OFF	ON	ON	ON	Multi-reference 7	FC-07
ON	OFF	OFF	OFF	Multi-reference 8	FC-08
ON	OFF	OFF	ON	Multi-reference 9	FC-09
ON	OFF	ON	OFF	Multi-reference 10	FC-10

K4	K3	K2	K1	Reference	Percentage Relative to Max. Frequency
ON	OFF	ON	ON	Multi-reference 11	FC-11
ON	ON	OFF	OFF	Multi-reference 12	FC-12
ON	ON	OFF	ON	Multi-reference 13	FC-13
ON	ON	ON	OFF	Multi-reference 14	FC-14
ON	ON	ON	ON	Multi-reference 15	FC-15

1.5.2.2 Frequency Detection (FDT)

This function allows you to set the detection value of the output frequency as well as the hysteresis value upon output cancellation. The hysteresis value is valid only during deceleration. Hysteresis does not occur in detection during acceleration. The following figure shows the frequency detection function.

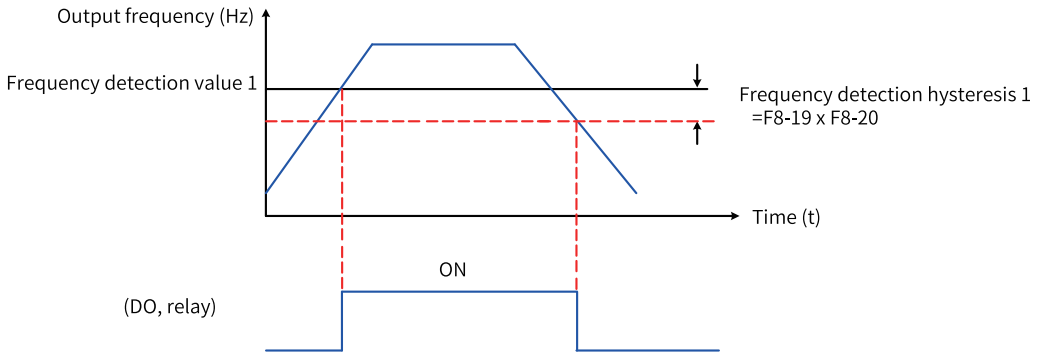


Figure 1-65 Frequency detection

Table 1–35 Parameters related to frequency detection

Para.	Name	Default	Value Range	Description
F8-19	Frequency detection value (FDT1)	50.00 Hz	0 to maximum frequency (F0-10)	When the running frequency is higher than the frequency detection value (FDT1), the DO terminal outputs an active signal; when the running frequency is lower than the result of the frequency detection value (FDT1) minus the frequency detection hysteresis (FDT1), the DO terminal outputs an inactive signal. The valid value range is 0.00 Hz to F0-10 (maximum frequency).
F8-20	Frequency detection hysteresis (FDT1)	5.0%	0.0% to +100.0%	The frequency detection hysteresis (FDT1) is F8-19 multiplied by F8-20. When the running frequency is higher than F8-19, the DO terminal outputs an active signal. When the running frequency is lower than a specific value (F8-19 – F8-19 x F8-20), the DO terminal outputs an inactive signal.

Para.	Name	Default	Value Range	Description
F8-28	Frequency detection value (FDT2)	50.00 Hz	0 to maximum frequency (F0-10)	When the running frequency is higher than the frequency detection value (FDT2), the DO terminal outputs an active signal; when the running frequency is lower than the result of the frequency detection value (FDT2) minus the frequency detection hysteresis (FDT2), the DO terminal outputs an inactive signal. The valid value range is 0.00 Hz to F0-10 (maximum frequency).
F8-29	Frequency detection hysteresis (FDT2)	5.0%	0.0% to +100.0%	The frequency detection hysteresis (FDT2) is F8-28 multiplied by F8-29. When the running frequency is higher than F8-28, the DO terminal outputs an active signal. When the running frequency is lower than a specific value (F8-28 – F8-28 x F8-29), the DO terminal outputs an inactive signal.

1.5.2.3 Skip Frequency

The skip frequency enables the AC drive to avoid any frequency at which a mechanical resonance may occur. The AC drive supports four skip frequencies. If they are all set to 0, the frequency skip function is disabled.

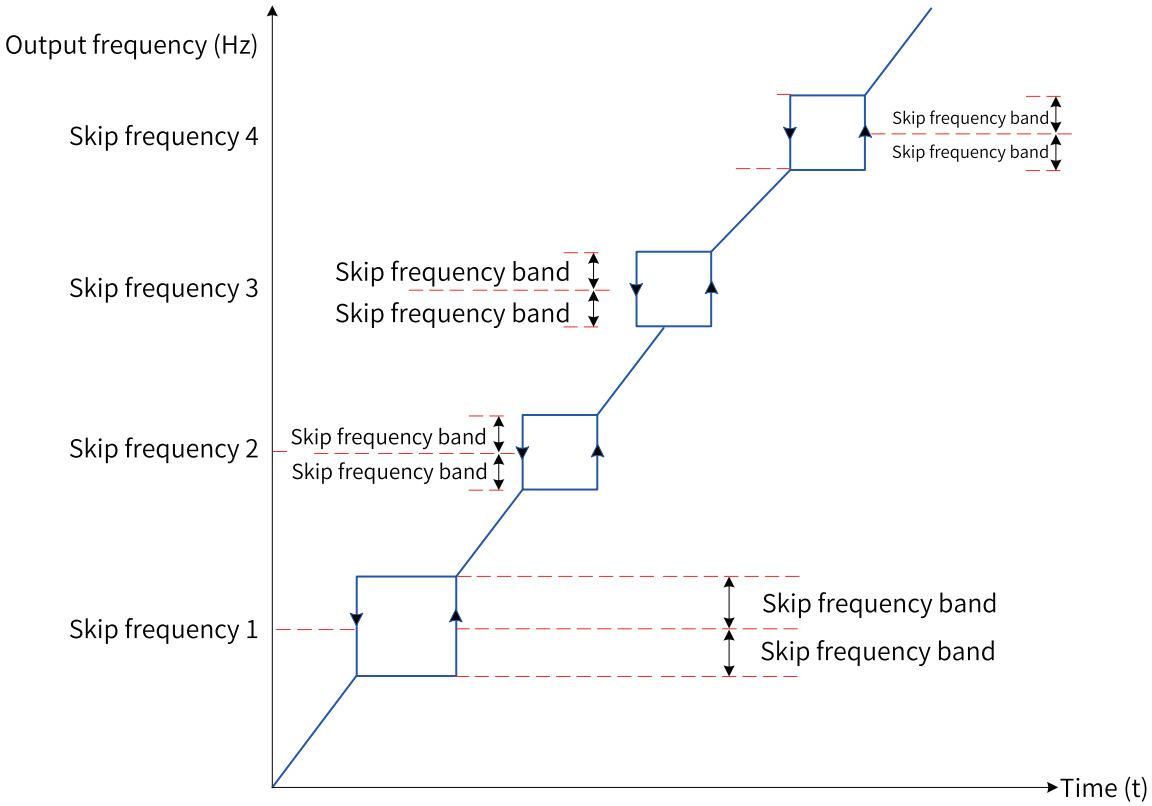


Figure 1-66 Skip frequency

During acceleration, when the running frequency increases to a value that is close to the skip frequency, the AC drive runs for a period at the current frequency and then skips over the skip frequency. The skip range is twice the value of F8-11 (skip frequency band).

During deceleration, when the running frequency decreases to a value that is close to the skip frequency, the AC drive runs for a period at the current frequency and then skips over the skip frequency. The skip range is twice the value of F8-11 (skip frequency band).

Related Parameters

Para.	Name	Default	Value Range	Description
F8-09	Skip frequency 1	0.00 Hz	0.00 to maximum frequency (F0-10)	The skip frequency enables the AC drive to avoid any frequency at which a mechanical resonance may occur. This parameter defines the first skip frequency. If it is set to 0, the first skip frequency is canceled.
F8-10	Skip frequency 2	0.00 Hz	0.00 to maximum frequency (F0-10)	The skip frequency enables the AC drive to avoid any frequency at which a mechanical resonance may occur. This parameter defines the second skip frequency. If it is set to 0, the second skip frequency is canceled.
F8-72	Skip frequency 3	0.00 Hz	0.00 to maximum frequency (F0-10)	The skip frequency enables the AC drive to avoid any frequency at which a mechanical resonance may occur. This parameter defines the third skip frequency. If it is set to 0, the third skip frequency is canceled.
F8-73	Skip frequency 4	0.00 Hz	0.00 to maximum frequency (F0-10)	The skip frequency enables the AC drive to avoid any frequency at which a mechanical resonance may occur. This parameter defines the fourth skip frequency. If it is set to 0, the fourth skip frequency is canceled.
F8-11	Skip frequency band	0.00 Hz	0.00 Hz to 5.00 Hz	During acceleration, when the running frequency increases to a value that is close to the skip frequency, the AC drive runs for a period at the current frequency and then skips over the skip frequency. The skip range is twice the value of F8-11 (skip frequency band). During deceleration, when the running frequency decreases to a value that is close to the skip frequency, the AC drive runs for a period at the current frequency and then skips over the skip frequency. The skip range is twice the value of F8-11 (skip frequency band).
F8-22	Skip frequency enable during acceleration/ deceleration	0	0: Disabled 1: Enabled	This parameter defines whether the skip frequency function is enabled during acceleration/deceleration. 0: During acceleration/deceleration, when the running frequency reaches the skip frequency boundary, the AC drive continues to run at the running frequency. 1: During acceleration/deceleration, when the running frequency reaches the skip frequency boundary, the AC drive skips over the skip frequency. The skip range is twice the value of F8-11 (skip frequency band).

1.5.2.4 Reverse Frequency Inhibition

You can set F8-13 to inhibit reverse frequency. The following figure shows the diagram of reverse frequency inhibition.

F0-09 defines the running direction of the motor. You can change the rotation direction of the motor by modifying this parameter without changing the motor wiring. Modifying this parameter is equivalent to exchanging any two of the motor's U, V, W wires.

Note

After the parameter is initialized, the original rotation direction of the motor is resumed. Exercise cautions when using this function if motor rotation direction change is prohibited after system commissioning is complete.

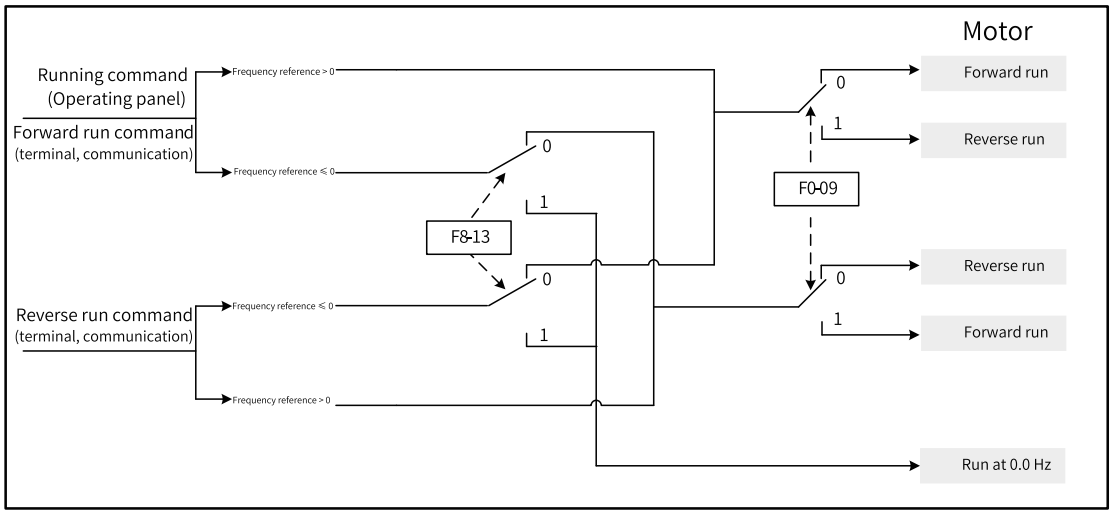


Figure 1-67 Reverse frequency inhibition

Related Parameters

Para.	Name	Default	Value Range	Description
F8-13	Reverse frequency inhibition	0	0: Disabled 1: Enabled	When F8-13 is set to 1, the motor runs at zero frequency when a reverse run command is input to the AC drive.
F0-09	Running direction	0	0: Default direction 1: Direction opposite to the default direction	You can change the rotation direction of the motor by modifying this parameter without changing the motor wiring. Modifying this parameter is equivalent to exchanging any two of the motor's U, V, W wires.

1.5.2.5 Frequency Reach Detection Range

F8-21 defines the frequency reach detection range. The following figure shows the timing diagram of this function.

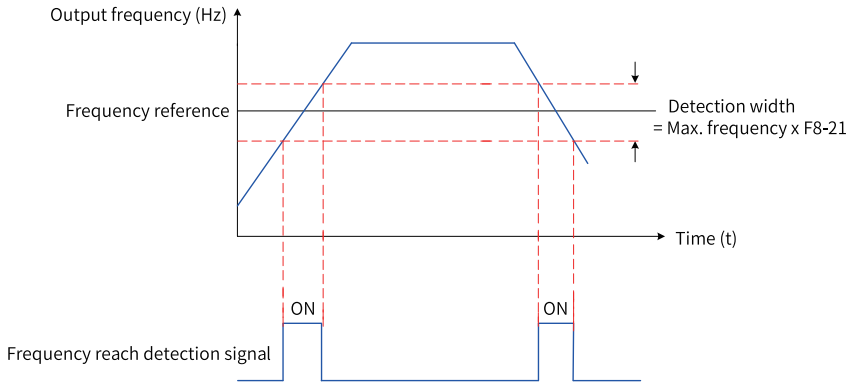


Figure 1-68 Timing diagram of the frequency reach detection range

Related Parameters

Para.	Name	Default	Value Range	Description
F8-21	Frequency reach detection range	0.00%	0.00% to 100% (maximum frequency)	Frequency reach detection limit is F8-21 (frequency reach detection range) multiplied by F0-10 (maximum frequency). The DO terminal outputs an active signal when the running frequency of the AC drive falls within the specific range (Frequency reference±F0-10 x F8-21).

1.5.2.6 Acceleration/Deceleration Time Switchover Frequency

This function is used to switch the acceleration/deceleration time based on the running frequency range when the AC drive is running.

The following figure shows the schematic diagram of acceleration/deceleration time switchover. During acceleration, acceleration time 2 is selected if the running frequency is lower than F8-25, and acceleration time 1 is selected if the running frequency is higher than F8-25. During deceleration, deceleration time 1 is selected if the running frequency is higher than F8-26, and deceleration time 2 is selected if the running frequency is lower than F8-26.

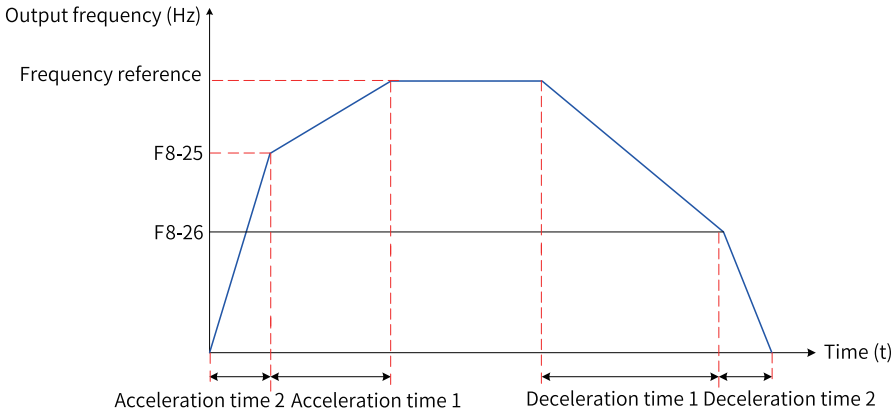


Figure 1-69 Acceleration/Deceleration time switchover

This function is valid only when the DI terminal is not assigned with function 16 (acceleration/deceleration time selection terminal 1) or 17 (acceleration/deceleration time selection terminal 2).

Related Parameters

Para.	Name	Default	Value Range	Description
F8-25	Switchover frequency of acceleration time 1 and acceleration time 2	0.00 Hz	0 to maximum frequency (F0-10)	This function is used to switch the acceleration/deceleration time based on the running frequency range when the AC drive is running. This function is valid only when the DI terminal is not assigned with function 16 (acceleration/deceleration time selection terminal 1) or 17 (acceleration/deceleration time selection terminal 2). The valid value range is 0.00 Hz to F0-10 (maximum frequency).
F8-26	Switchover frequency of deceleration time 1 and deceleration time 2	0.00 Hz	0 to maximum frequency (F0-10)	

1.5.2.7 Frequency Reach Detection Value

When the running frequency of the AC drive is within the range of frequency reach detection value ±frequency reach detection range, the DO terminal outputs an active signal.

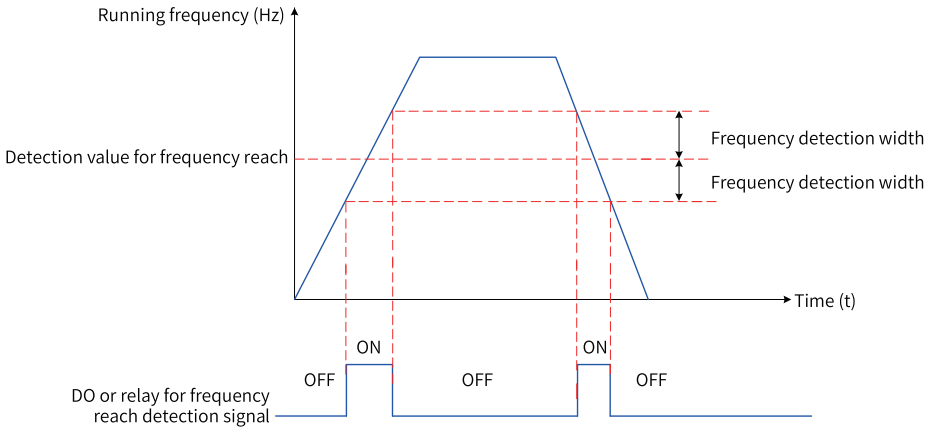


Figure 1-70 Frequency reach detection

Related Parameters

Para.	Name	Default	Value Range	Description
F8-30	Frequency reach detection value 1	50.00 Hz	0 to maximum frequency (F0-10)	When the running frequency of the AC drive is within the frequency detection range, the DO terminal outputs an active signal. The valid value range is 0.00 Hz to F0-10 (maximum frequency).
F8-31	Frequency reach detection range 1	0.0%	0.0% to +100.0%	Frequency reach detection range 1 is F0-10 (maximum frequency) multiplied by F8-31, and the frequency detection range is F8-30 (frequency reach detection value 1)±F8-31 (frequency reach detection range 1), that is, F8-30±F8-31 x F0-10.
F8-32	Frequency reach detection value 2	50.00 Hz	0 to maximum frequency (F0-10)	When the running frequency of the AC drive is within the frequency detection range, the DO terminal outputs an active signal. The valid value range is 0.00 Hz to F0-10 (maximum frequency).
F8-33	Frequency reach detection range 2	0.0%	0.0% to +100.0%	Frequency reach detection range 2 is F0-10 (maximum frequency) multiplied by F8-33, and the frequency detection range is frequency reach detection value ±frequency reach detection range, that is, (F8-32 – F8-33 x F0-10) to (F8-32 + F8-33 x F0-10).

1.5.3 Current Detection

1.5.3.1 Zero Current Detection

When the output current of the AC drive is lower than or equal to F8-34 (zero current detection level) for a period longer than the time defined by F8-35 (zero current detection delay), the DO terminal outputs an active signal.

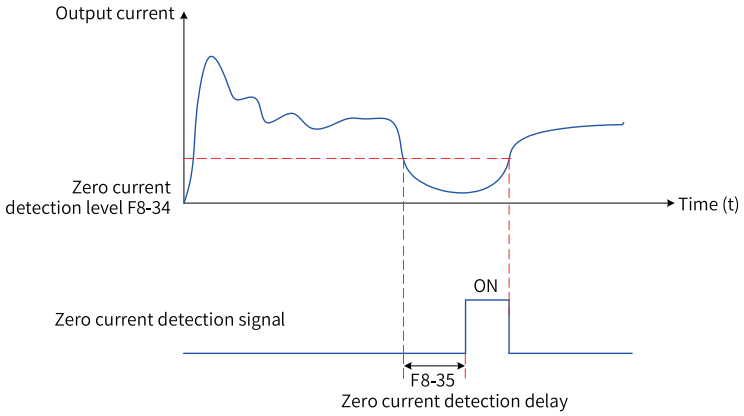


Figure 1-71 Zero current detection

Related Parameters

Para.	Name	Default	Value Range	Description
F8-34	Zero current detection level	5.0%	0.0% to 300.0% (rated motor current)	When the output current of the AC drive is lower than or equal to F8-34 (zero current detection level) for a period longer than the time defined by F8-35 (zero current detection delay), the DO terminal outputs an active signal.
F8-35	Zero current detection delay	0.10s	0.00s to 600.00s	

1.5.3.2 Output Overcurrent Threshold

When the output current of the AC drive is higher than F8-36 (output current threshold) for a period longer than the time defined by F8-37 (output overcurrent detection delay), the DO terminal outputs an active signal.

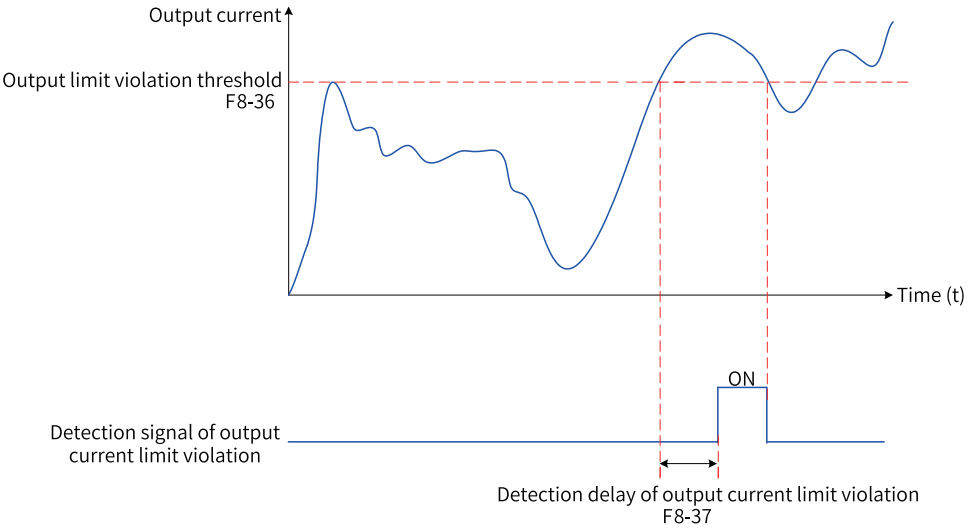


Figure 1-72 Output overcurrent threshold

Related Parameters

Para.	Name	Default	Value Range	Description
F8-36	Output overcurrent threshold	200.0%	0.0% (no detection) 0.1% to 300.0% (rated motor current)	When the output current of the AC drive is higher than F8-36 (output current threshold) for a period longer than F8-37 (output overcurrent detection delay), the DO terminal outputs an active signal.
F8-37	Output overcurrent detection delay	0.00s	0.00s to 600.00s	

1.5.3.3 Current Detection Level

When the output current of the AC drive is within the range of Detection level of current 1±Detection width of current 1 x Rated motor current, the DO terminal outputs an active signal.

The AC drive provides two groups of current detection level and width parameters. The following figure shows the timing diagram.

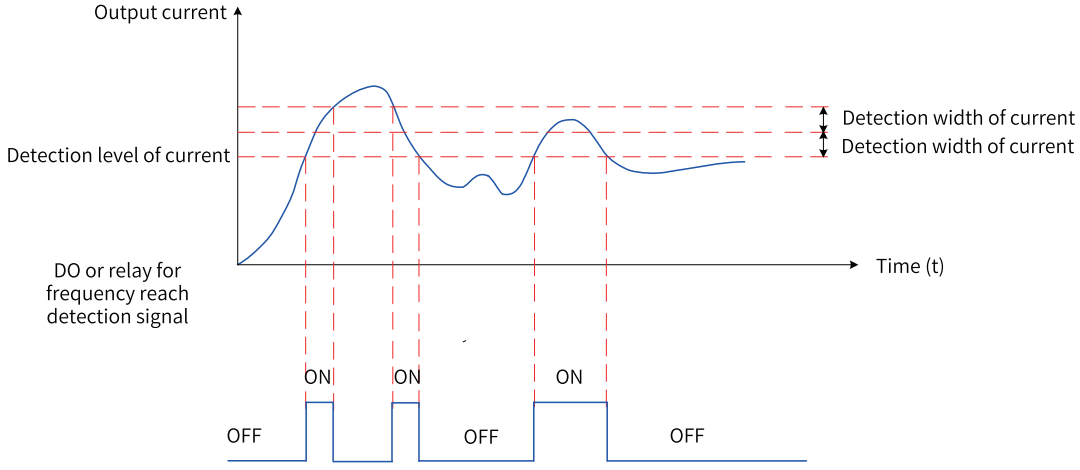


Figure 1-73 Current detection timing diagram

Related Parameters

Para.	Name	Default	Value Range	Description
F8-38	Detection level of current 1	100.0%	0.0% to 300.0% (rated motor current)	When the output current of the AC drive is within the range of F8-38 (detection level of current 1)±F8-39 (detection width of current 1) x F1-03 (rated motor current), the DO terminal outputs an active signal.
F8-39	Detection width of current 1	0.0%	0.0% to 300.0% (rated motor current)	The detection width of current 1 is F8-39 (detection width of current 1) multiplied by F1-03 (rated motor current).
F8-40	Detection level of current 2	100.0%	0.0% to 300.0% (rated motor current)	When the output current of the AC drive is within the range of F8-40 (detection level of current 2)±F8-41 (detection width of current 2) x F1-03 (rated motor current), the DO terminal outputs an active signal.
F8-41	Detection width of current 2	0.0%	0.0% to 300.0% (rated motor current)	The detection width of current 2 is F8-41 (detection width of current 2) multiplied by F1-03 (rated motor current).

1.5.2 FWD/REV Switchover Deadzone Time

FWD/REV switchover deadzone time (F8-12) indicates the transition time at 0 Hz output during transition between forward running and reverse running of the AC drive.

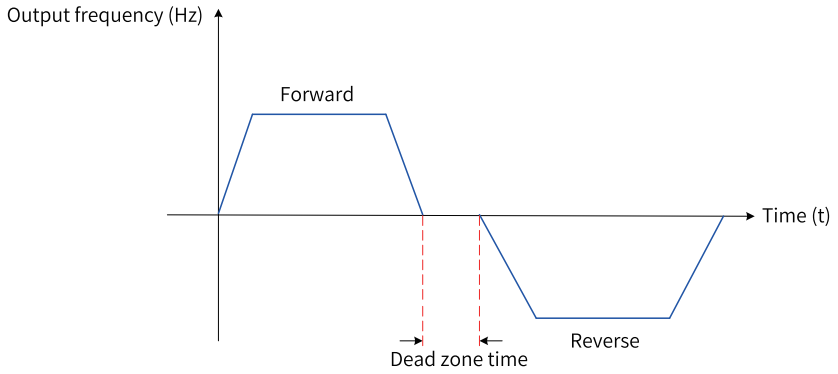


Figure 1-74 FWD/REV switchover deadzone time

Related Parameters

Para.	Name	Default	Value Range	Description
F8-12	FWD/REV switchover deadzone time	0.0s	0.0s to 3000.0s	This parameter defines the transition time at 0 Hz output during transition between forward running and reverse running.

1.5.3 Timing Function

The AC drive starts timing from 0 each time it starts. When the timing duration defined by F8-44 is reached, the AC drive stops automatically and the DO terminal outputs an active signal. You can view the remaining timing duration by using U0-20.

Related Parameters

Para.	Name	Default	Value Range	Description
F8-42	Timing function	0	0: Disabled 1: Enabled	If F8-42 (timing function) is set to 1, the DO terminal outputs an active signal when the current running duration of the AC drive reaches the timing duration defined by F8-43 and F8-44.
F8-43	Timing duration source	0	0: F8-44 1: AI1 2: AI2	0: The timing duration is defined by F8-44. 1: Timing duration = (AI1 voltage/10 V) x F8-44. 100% of analog input corresponds to the value of F8-44. 2: Timing duration = (AI2 voltage/10 V) x F8-44. 100% of analog input corresponds to the value of F8-44.
F8-44	Timing duration	0.0 min	0.0 min to 6500.0 min	The timing duration is defined by F8-43 and F8-44.

1.5.4 Accumulative Duration Reach

The DO terminal outputs an active signal when the following condition is met: F7-13 (accumulative power-on duration (hour)) x 3600 + F7-29 (accumulative power-on duration (second)) > F8-16 (power-on duration threshold (hour)) x 3600 + F8-74 (power-on duration threshold (second)).

Related Parameters

Para.	Name	Default	Value Range	Description
F8-16	Power-on duration threshold (hour)	0 h	0 h to 65000 h	The DO terminal outputs an active signal when the following condition is met: F7-13 (accumulative power-on duration (hour)) x 3600 + F7-29 (accumulative power-on duration (second)) > F8-16 (power-on duration threshold (hour)) x 3600 + F8-74 (power-on duration threshold (second)).
F8-74	Power-on duration threshold (second)	0s	0s to 3599s	

The DO terminal outputs an active signal when the following condition is met: F7-09 (accumulative running duration (hour)) x 3600 + F7-28 (accumulative running duration (second)) > F8-17 (running duration threshold (hour)) x 3600 + F8-75 (running duration threshold (second)).

Related Parameters

Para.	Name	Default	Value Range	Description
F8-17	Running duration threshold (hour)	0 h	0 h to 65000 h	The DO terminal outputs an active signal when the following condition is met: F7-09 (accumulative running duration (hour)) x 3600 + F7-28 (accumulative running duration (second)) > F8-17 (running duration threshold (hour)) x 3600 + F8-75 (running duration threshold (second)).
F8-75	Running duration threshold (second)	0s	0s to 3599s	

1.5.5 Current Running Duration Threshold

Current Running Duration Threshold

Para.	Name	Default	Value Range	Description
F8-53	Current running duration threshold	0.0 min	0.0 min to 6500.0 min	The DO terminal outputs an active signal when the current running duration reaches the value of F8-53. Only the current running duration counts. The previous running duration is not included.

1.5.6 AI1 Voltage Upper/Lower Limit

Para.	Name	Default	Value Range	Description
F8-45	AI1 input voltage lower limit	3.10 V	0.00 V to F8-46	When the AI1 input is greater than F8-46 or smaller than F8-45, the DO terminal of the AC drive outputs an "AI1 input overlimit" active signal to indicate whether the AI1 input voltage is within the setting range.
F8-46	AI1 input voltage upper limit	6.80 V	F8-45 to 10.00 V	
A6-51	AI2 input voltage lower limit	8.00 V	A6-52 to 10.00 V	When the AI2 input is greater than A6-51 or smaller than A6-52, the DO terminal of the AC drive outputs an "AI2 input overlimit" active signal to indicate whether the AI2 input voltage is within the setting range.
A6-52	AI2 input voltage upper limit	2.00 V	0.00 V to A6-51	
A6-57	AI3 input voltage lower limit	8.00 V	A6-58 to 10.00 V	When the AI3 input is greater than A6-57 or smaller than A6-58, the DO terminal of the AC drive outputs an "AI3 input overlimit" active signal to indicate whether the AI3 input voltage is within the setting range.
A6-58	AI3 input voltage upper limit	2.00 V	0.00 V to A6-57	
A6-59	AI input protection time	0.01s	0.00s to 1.00s	The fault flag is set only when the AI input exceeds the limit for a continuous duration greater than or equal to the setpoint of this parameter.

1.5.7 IGBT Temperature

Para.	Name	Default	Value Range	Description
F8-47	IGBT temperature reach	75°C	0°C to 100°C	The DO terminal outputs an active signal when the heatsink temperature of the IGBT reaches the setpoint of F8-47.
F7-07	IGBT heatsink temperature	-	–20°C to +120°C	This parameter defines the heatsink temperature of the IGBT.

1.5.8 Cooling Fan Control

Para.	Name	Default	Value Range	Description
F8-48	Cooling fan control	0	0: Working during drive running	When the AC drive is running, the fan keeps working until the AC drive stops for 10s. When the AC drive is in stop state, the fan works if the heatsink temperature is higher than 40°C and stops if the heatsink temperature is lower than 40°C.
			1: Working always	The fan keeps working after power-on.
			2: Working under temperature-based control	The fan works when the temperature is higher than 45°C and stops when the temperature is lower than 43°C regardless of the AC drive state.

1.5.9 Output Power Correction

Para.	Name	Default	Value Range	Description
F8-54	Output power correction coefficient	100.0%	0.0% to 200.0%	This parameter defines the correction coefficient of linear correction on the output power when the output power (U0-05) is not equal to expected value.

1.5.10 User-defined Parameters

Group FE consists of user-defined parameters (FE-00 to FE-31). Users can define commonly used parameters for easier check and modification. Up to 30 user-defined parameters are supported.

- If F0.00 is displayed, the corresponding user-defined parameter is empty. In the user-defined parameter mode, the displayed parameters are defined by FE-00 to FE-31, and the sequence is consistent with that in group FE. The parameters are skipped if the displayed value is F0.00.
- Displayed values U3-17 and U3-16 indicate PZD1 (AC drive command word) in communication control and PZD2 (AC drive target frequency) in communication control, respectively.

Related Parameters

Para.	Name	Default	Value Range	Description
FP-03	Display of individualized parameters	111	Ones: 0: Hide user mode 1: Display user mod Tens: 0: Hide correction mode 1: Display correction mode Hundreds: 0: Hide error menu 1: Display error menu	This parameter determines whether to display the user-defined parameters, user-modified parameters, and error menus on the operating panel.
FE-00	User-defined parameter 0	F0-00	F0-00 to FP-xx A0-00 to Ax-xx U0-xx to U0-xx U3-00 to U3-xx	-
FE-01	User-defined parameter 1	Same as FE-00	Same as FE-00	-
FE-02	User-defined parameter 2	Same as FE-00	Same as FE-00	-
FE-03	User-defined parameter 3	Same as FE-00	Same as FE-00	-
FE-04	User-defined parameter 4	Same as FE-00	Same as FE-00	-
FE-05	User-defined parameter 5	Same as FE-00	Same as FE-00	-
FE-06	User-defined parameter 6	Same as FE-00	Same as FE-00	-
FE-07	User-defined parameter 7	Same as FE-00	Same as FE-00	-
FE-08	User-defined parameter 8	Same as FE-00	Same as FE-00	-
FE-09	User-defined parameter 9	Same as FE-00	Same as FE-00	-
FE-10	User-defined parameter 10	Same as FE-00	Same as FE-00	-
FE-11	User-defined parameter 11	Same as FE-00	Same as FE-00	-
FE-12	User-defined parameter 12	Same as FE-00	Same as FE-00	-
FE-13	User-defined parameter 13	Same as FE-00	Same as FE-00	-
FE-14	User-defined parameter 14	Same as FE-00	Same as FE-00	-
FE-15	User-defined parameter 15	Same as FE-00	Same as FE-00	-
FE-16	User-defined parameter 16	Same as FE-00	Same as FE-00	-

Para.	Name	Default	Value Range	Description
FE-17	User-defined parameter 17	Same as FE-00	Same as FE-00	-
FE-18	User-defined parameter 18	Same as FE-00	Same as FE-00	-
FE-19	User-defined parameter 19	Same as FE-00	Same as FE-00	-
FE-20	User-defined parameter 20	Same as FE-00	Same as FE-00	-
FE-21	User-defined parameter 21	Same as FE-00	Same as FE-00	-
FE-22	User-defined parameter 22	Same as FE-00	Same as FE-00	-
FE-23	User-defined parameter 23	Same as FE-00	Same as FE-00	-
FE-24	User-defined parameter 24	Same as FE-00	Same as FE-00	-
FE-25	User-defined parameter 25	Same as FE-00	Same as FE-00	-
FE-26	User-defined parameter 26	Same as FE-00	Same as FE-00	-
FE-27	User-defined parameter 27	Same as FE-00	Same as FE-00	-
FE-28	User-defined parameter 28	Same as FE-00	Same as FE-00	-
FE-29	User-defined parameter 29	Same as FE-00	Same as FE-00	-
FE-30	User-defined parameter 30	Same as FE-00	Same as FE-00	-
FE-31	User-defined parameter 31	Same as FE-00	Same as FE-00	-

1.5.11 Hibernation and Wakeup

Hibernation is also known as sleep. Any time period within 24 hours can be set as a hibernation period, during which the AC drive stops running and enters hibernation state.

Wakeup is a process that the AC drive wakes up from the hibernation state and starts to run.

Parameters related to hibernation and wakeup include the wakeup frequency, hibernation frequency, and hibernation time. Generally, the wakeup frequency (F8-49) should be higher than or equal to the hibernation frequency (F8-51). The hibernation and wakeup function is disabled if both the wakeup frequency and hibernation frequency are set to 0.00 Hz.

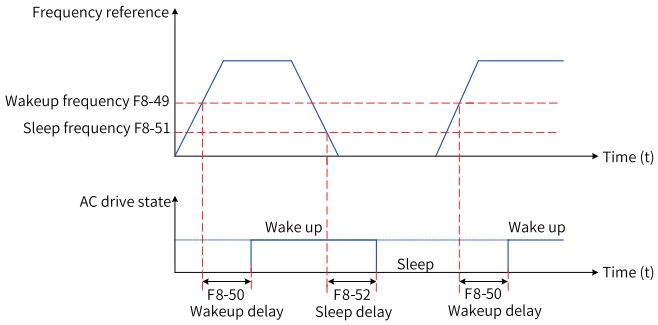


Figure 1-75 Hibernation and wakeup

Note

When sleep is enabled during PID operation, you can set FA-28 (selection of PID operation at stop) to 1 to continue the PID operation or to 0 to stop PID operation.

Related Parameters

Para.	Name	Default	Value Range	Description
F8-49	Wakeup frequency	0.00 Hz	Hibernation frequency (F8-51) to maximum frequency (F0-10)	In hibernation state, when the frequency reference is greater than or equal to F8-49 (wakeup frequency) and the current running command is valid, the AC drive starts directly after the delay defined by F8-50 (wakeup delay) elapses.
F8-50	Wakeup delay	0.0s	0.0s to 6500.0s	
F8-51	Hibernation frequency	0.00 Hz	0.00 Hz to wakeup frequency (F8-49)	When the frequency reference is lower than or equal to F8-51 (hibernation frequency) during running, the AC drive enters the hibernation state and stops after the time defined by F8-52 (hibernation delay) elapses.
F8-52	Hibernation delay	0.0s	0.0s to 6500.0s	

1.6 Faults and Protection

1.6.1 Startup Protection

When F8-18 is set to 1, startup protection is enabled to prevent the motor from responding to a command upon unexpected power-on or fault reset of the AC drive.

The startup protection works in the following two scenarios:

- If a command is issued upon power-on of the AC drive (for example, the terminal used as the command source are ON before power-on), the AC drive does not respond to the command. Instead, the AC drive responds only after the command is revoked and re-issued.
- If a command is issued upon fault reset of the AC drive, the AC drive does not respond to the command. Instead, the AC drive responds only after the command is revoked and re-issued.

Related Parameters

Para.	Name	Default	Value Range	Description
F8-18	Startup protection	0	0: Disabled 1: Enabled	The AC drive is equipped with the startup protection function to prevent the motor from responding to a command upon unexpected power-on or fault reset.

1.6.2 Undervoltage/Overvoltage Threshold and Fast Current Limiting

When the bus voltage falls below A5-06 or exceeds A5-09, the AC drive reports a fault.

Related Parameters

Para.	Name	Default	Value Range	Description
A5-06	Undervoltage threshold	350.0 V	140.0 V to 420.0 V	When the bus voltage is lower than the setpoint of A5-06, the AC drive reports E005.1.
A5-09	Overvoltage threshold	820 V	330.0 V to 820.0 V	When the bus voltage is higher than the setpoint of A5-09, the AC drive reports E009.1/E009.3.
A5-04	Fast current limiting	1	0: Disabled 1: Enabled	This function is used to minimize the overcurrent faults, ensuring normal operation of the AC drive. You are advised to disable this function in hoist applications such as cranes. This function applies only to asynchronous motors in V/f control mode. The AC drive reports E40.1 after it works in fast current limiting state for some time.

1.6.3 Phase Loss Protection

Para.	Name	De fault	Value Range	Description
F9-12	Input phase loss/ Contactor pickup protection	11	Ones: Input phase loss protection 0: Disabled 1: Enabled Tens: Contactor pickup protection 0: Disabled 1: Enabled	This parameter defines whether to enable input phase loss or contactor pickup protection.
F9-13	Output phase loss protection	01	Ones: Output phase loss protection 0: Disabled 1: Enabled Tens: Output phase loss protection before running 0: Disabled 1: Enabled	Ones: This bit defines whether to enable output phase loss protection. If the protection is disabled and output phase loss occurs, the AC drive will not report the fault. In this case, the actual current is larger than the current displayed on the operating panel, which is risky. Exercise caution when disabling this function. Tens: Output phase loss detection during running takes about several seconds. For low-frequency running applications or applications where risks exist in start with phase loss, this function enables quick detection of output phase loss during startup. However, it is not recommended for applications that have strict requirements on startup time.

1.6.4 Motor Overheat Protection

You can view motor temperature by using U0-34. Parameters related to motor overheat protection are described as follows.

Related Parameters

Para.	Name	Default	Value Range	Description
F9-56	Motor temperature sensor type	0	0: No temperature sensor 1: PT100 2: PT1000	The motor temperature sensor signal needs to connect to AI3 and PGND on the MD38IO1 expansion card. The drive supports both PT100 and PT1000. You must set the sensor type correctly. You can view motor temperature by using U0-34.
F9-57	Motor overheat protection threshold	110°C	0°C to 200°C	When the motor temperature exceeds the motor overheat protection threshold (f9-57), the AC drive reports Err45 and handles the fault according to the fault protection action defined by F9-48.
F9-58	Motor overheat pre-warning threshold	90°C	0°C to 200°C	When the motor temperature exceeds the motor overheat pre-warning threshold (F9-58), the DO terminal assigned with function 39 (motor overheat pre-warning) outputs an active signal.

1.6.5 Motor Overload Protection

Related Parameters

Para.	Name	Default	Value Range	Description
F9-00	Motor overload protection	1	0: Disabled	Motor overload protection is disabled. In this case, you are advised to install a thermal relay before the motor.
			1: Enabled	The AC drive determines whether the motor is overloaded according to the inverse time delay curve of motor overload protection.
F9-01	Motor overload protection gain	1	0.20 to 10.00	This parameter can be used to adjust the motor overload current level and overload protection time.
F9-02	Motor overload pre-warning coefficient	80%	50% to 100%	The pre-warning coefficient is used to determine how early to send the pre-warning signal before the motor overload protection starts. The larger the value is, the later the pre-warning signal is sent.

To effectively protect motors with different loads, you need to set the overload protection gain of motors based on their overload capacity. The motor overload protection curve is an inverse time delay curve, as shown in the following figure.

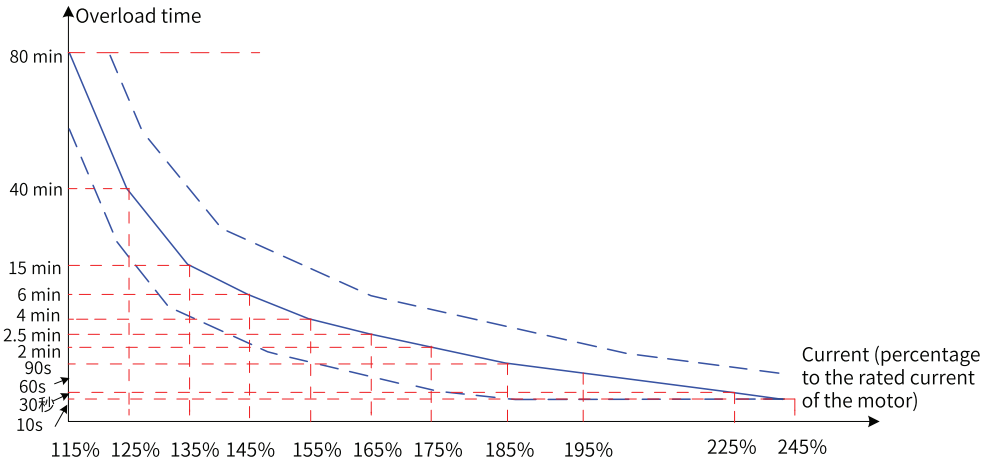


Figure 1-76 Inverse time delay curve of protection

When the motor runs at 175% of the rated motor current for 2 minutes, or when it runs at 115% of the rated motor current for 80 minutes, the AC drive reports the motor overload fault (E11.00).

1. Example 1

- Assume that the rated motor current is 100 A. If F9-01 is set to 1.00, the AC drive reports a motor overload fault (E11.00) after the motor runs at 125 A (125% of 100 A) continuously for 40 minutes, according to the preceding curve.
- If F9-01 is set to 1.20, the AC drive reports a motor overload fault (E11.00) after the motor runs at 125 A (125% of 100 A) continuously for 48 minutes (40 x 1.2), according to the preceding curve.

Note

The maximum overload time is 80 minutes and the minimum overload time is 10 seconds.

2. Example 2

The AC drive reports a motor overload fault after the motor runs at 150% of the rated current for 2 minutes. As shown in the overload curve, 150% (I) of the rated current falls between 145% (I1) and 155% (I2) of the rated current. The overload fault report delay for 145% of the rated current is 6 minutes (T1), and that for 155% of the rated current is 4 minutes (T2). Therefore, the overload fault report delay for 150% of the rated current is 5 minutes by default. The calculation is as follows.

"T = T1 + (T2 – T1) x (I – I1) / (I2 – I1) = 4 + (6 – 4) x (150% – 145%) / (155% – 145%) = 5 (minutes)"

To report the overload fault after the motor runs continuously at 150% of the rated current for 2 minutes, set the motor overload protection gain as follows: F9-01 = Desired overload protection time/Default overload protection delay = 2/5 = 0.4.

Caution

Set F9–01 properly based on the actual overload capacity of the motor. Note that setting F9–01 to an excessively high value may easily result in motor damage caused by overtemperature without warning.

When the motor overload detection level reaches the set motor overload pre-warning coefficient, the DO or fault relay outputs the motor overload pre-warning signal. The motor overload pre-warning coefficient is the percentage of time during which the motor runs at an overload threshold continuously without reporting an overload fault.

For example, if the motor overload protection gain is set to 1.00 and the motor overload pre-warning coefficient is set to 80%, the DO terminal or fault relay outputs the motor overload pre-warning signal after the motor runs at 145% of the rated motor current for 4.8 minutes (80% x 6).

The motor overload pre-warning function enables the AC drive to send a pre-warning signal to the control system through the DO before motor overload protection starts. The pre-warning coefficient is used to determine how early to send the pre-warning signal before the motor overload protection starts. The larger the value is, the later the pre-warning signal is sent. When the accumulative output current of the AC drive is greater than the overload time (value Y of the motor overload protection inverse time delay curve) multiplied by the motor overload pre-warning coefficient (F9-02), the multi-function DO terminal of the AC drive outputs a motor overload pre-warning signal. When F9-02 is set to 100%, motor overload pre-warning and motor overload protection are performed simultaneously.

Related Parameters

Para.	Name	Default	Value Range	Description
F9-00	AC drive overload protection	0	0: Disabled 1: Enabled	This parameter specifies whether to enable or disable the motor overload protection function. The AC drive determines whether the motor is overloaded according to the inverse time delay curve. When motor overload is detected, the AC drive will report an overload fault. 0: Disabled The motor overload protection function is disabled. If this parameter is set to 0, you are advised to install a thermal relay before the motor for protection. 1: Enabled The motor overload protection function is enabled.
F9-01	Motor overload protection gain	1.00	0.20 to 10.00	The motor overload protection gain is calculated according to the percentage of time during which the motor runs continuously at an overload threshold without reporting an overload fault. It is used to adjust the actual overload fault report time of the AC drive when motor overload occurs.
F9-02	Motor overload pre-warning coefficient	80%	50% to 100%	The motor overload pre-warning coefficient is the percentage of time during which the motor runs at an overload threshold continuously without reporting an overload fault. The AC drive sends a pre-warning signal to the control system through DO before motor overload protection starts. This signal is used to determine how early to send the pre-warning signal before the motor overload protection starts. The larger the value is, the later the pre-warning signal is sent. When the accumulative output current of the AC drive is greater than the overload time (value Y of the motor overload protection inverse time delay curve) multiplied by the motor overload pre-warning coefficient (F9-02), the multi-function DO terminal of the AC drive outputs a motor overload pre-warning signal.

1.6.6 Load Loss Protection

You can set the ten thousands place of F9-51 to enable load loss detection. When the output current of the AC drive stays below F9-64 (load loss detection level) for a period longer than the time set by F9-65 (load loss detection time), the AC drive performs the load loss protection action. Once the load recovers during protection, the AC drive automatically runs at the reference frequency.

Para.	Name	Default	Value Range	Description
F9-51	Fault protection action 4	10111	-	-
F9-64	Load loss detection level	10.0%	0.0% to +100.0%	
F9-65	Load loss detection time	1.0s	0.1s to 60.0s	

1.6.7 Overspeed Protection

Overspeed protection is valid only when the AC drive works in FVC mode (F0-01 = 1).

When this protection is enabled, if the AC drive detects that the actual motor speed exceeds the maximum frequency (F0-10) by a percentage greater than the overspeed detection level (F9-67) for a period longer than the overspeed detection time (F9-68), the AC drive reports the motor overspeed fault (E43.00) and acts according to the fault protection action defined by F9-50.

When F9-68 (overspeed detection time) is set to 0.0s, overspeed detection is disabled.

Related Parameters

Para.	Name	Default	Value Range	Description
F9-67	Over-speed detection level	20.0%	0.0% to 50.0% (maximum frequency)	When the AC drive detects that the actual motor speed exceeds the maximum frequency (F0-10) by a percentage greater than the overspeed detection level (F9-67) for a period longer than the overspeed detection time (F9-68), the AC drive reports Err43.1 and acts according to the fault protection action defined by F9-50. When F9-68 is set to 0, motor overspeed detection is disabled. The overspeed detection time automatically decreases to 0.1s when the back EMF converted from the actual speed of the synchronous motor exceeds the overvoltage threshold of the AC drive.
F9-68	Over-speed detection time	1.0s	0.0s to 60.0s	

1.6.8 Protection Against Excessive Speed Deviation

The excessive speed deviation protection function is valid only when the FVC mode is selected for the AC drive (F0-01 is set to 1).

When this protection is enabled, if the AC drive detects that the deviation between the actual motor running frequency and the frequency reference stays above the detection level of excessive speed deviation (F9-69) for a period longer than the detection time of excessive speed deviation (F9-70), the AC drive reports E42.00 (excessive speed deviation) and acts according to the fault protection action defined by F9-50.

If F9-70 (detection time of excessive speed deviation) is set to 0.0s, the excessive speed deviation detection function is disabled.

Related Parameters

Para.	Name	Default	Value Range	Description
F9-69	Detection level of excessive speed deviation	20.0%	0.0% to 50.0% (maximum frequency)	-
F9-70	Detection time of excessive speed deviation	5.0s	0.0s to 60.0s	

1.6.9 Motor Locked-rotor Protection

Take motor 1 as an example:

Para.	Name	Default	Value Range	Description
AA-30	Bit05: motor locked-rotor protection	0	0-01	When motor locked-rotor protection is enabled by setting bit05 of AA-30, the motor locked-rotor fault E093.1 is reported when the output torque of the motor has reached the torque limit and the feedback speed stays lower than AA-32 (percentage relative to the rated motor speed) for a time period defined by AA-31. This fault is reported only in vector control mode.
AA-31	Motor locked-rotor protection time	2s	0.0s to 65.0s	
AA-32	Motor locked-rotor protection speed	6.0%	0.0% to 600.0%	

1.6.10 Motor Stall Protection

Para.	Name	Default	Value Range	Description
AA-30	Bit04: motor stall protection	1	0-01	When motor stall protection is enabled by setting bit04 of AA-30, E093.2 is reported when the stall protection threshold (AA-34) and stall protection time (AA-33) are reached.
AA-33	Motor stall protection time	0.5s	0.0s to 10.0s	
AA-34	Motor stall protection threshold	30.0%	0.0% to 100.0%	

1.6.11 Current Control Fault Protection

Para.	Name	Default	Value Range	Description
AA-30	Bit03: current control fault protection	1	0-01	When current control fault protection is enabled by setting bit03 of AA-30, E093.3 is reported when the current control fault protection threshold (AA-36) and protection time (AA-35) are reached.
AA-35	Motor control fault protection time	0.05s	0.0s to 1.00s	
AA-36	Motor control fault protection threshold	25.0%	0.0% to 200.0%	

1.6.12 Power Dip Ride-Through

The power dip ride-through function ensures continuous system running upon instantaneous power failure. When instantaneous power failure occurs, the AC drive keeps the motor in the power generating state to keep the bus voltage around the "voltage threshold for enabling power dip ride-through". This prevents the AC drive from stopping due to undervoltage. See the following figure.

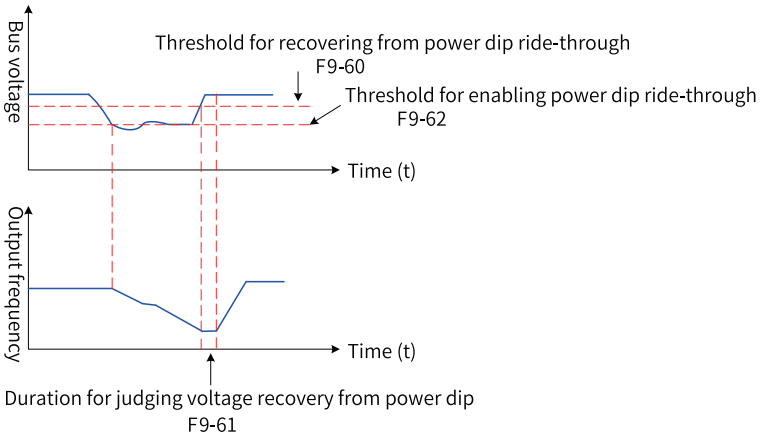


Figure 1-77 Power dip ride-through

In the "keep bus voltage constant" mode, when the grid resumes power supply, the AC drive restores the target output frequency based on the acceleration time. In the "decelerate to stop" mode, when the grid resumes power supply, the AC drive continues to decelerate to 0 Hz and stops, and will restart only after receiving a start command.

Related Parameters

Para.	Name	Default	Value Range	Description
F9-59	Power dip ride-through	0	0: Disabled 1: Keep bus voltage constant 2: Decelerate to stop 3: Suppress voltage dip	This parameter defines whether the AC drive runs continuously upon instantaneous power failure. When instantaneous power failure occurs, the AC drive keeps the motor in the power generating state to keep the bus voltage around the "voltage threshold for enabling power dip ride-through". This prevents the AC drive from stopping due to undervoltage. 0: Disabled Power dip ride-through is disabled. 1: Keep bus voltage constant When power failure occurs, the bus voltage stays around the "voltage threshold for enabling power dip ride-through". In this mode, when the grid resumes power supply, the AC drive accelerates to the target frequency based on the acceleration time. 2: Decelerate to stop When power failure occurs, the AC drive decelerates to stop. In this mode, when the grid resumes power supply, the AC drive decelerates to 0 Hz and stops. The AC drive will start again only when a new start command is received. 3: Suppress voltage dip In this mode, the AC drive will not stop due to undervoltage caused by voltage dip. The voltage dip suppression time is set by F9-66.
F9-60	Voltage threshold for disabling power dip ride-through	85%	80% to 100%	This parameter defines the voltage threshold for disabling power dip ride-through. 100% corresponds to 540 V. This value is slightly lower than the bus voltage before power failure. Upon grid power failure, the bus voltage is maintained around F9-62 (voltage threshold for enabling power dip ride-through). When the power supply recovers, the bus voltage rises from F9-62 (voltage threshold for enabling power dip ride-through) to F9-60 (voltage threshold for disabling power dip ride-through). During this period, the output frequency of the AC drive keeps decreasing until the bus voltage reaches F9-60 (voltage threshold for disabling power dip ride-through).
F9-61	Delay of voltage recovery from power dip	0.5s	0.0 to 100.0s	This parameter defines the time required for the bus voltage to rise from F9-60 (voltage threshold for disabling power dip ride-through) to the voltage before power failure.

Para.	Name	Default	Value Range	Description
F9-62	Voltage threshold for enabling power dip ride-through	80%	60% to 100%	This parameter defines the voltage level at which the bus voltage is maintained upon power failure. Upon power failure, the bus voltage is maintained around F9-62 (voltage threshold for enabling power dip ride-through).
F9-71	Power dip ride-through gain	0 to 100	40	This parameter is valid only in the "keep bus voltage constant" mode (F9-59 = 1). If undervoltage occurs frequently during power dip ride-through, increase the power dip ride-through gain and integral coefficient.
F9-72	Power dip ride-through integral coefficient	0 to 100	30	
F9-73	Deceleration time of power dip ride-through	0 to 300.0s	20.0s	This parameter is valid only in the "decelerate to stop" mode (F9-59 = 2). When the bus voltage is lower than the value of F9-62, the AC drive decelerates to stop. The deceleration time is determined by this parameter but not F0-18.

1.6.13 Fault Reset

The undervoltage fault (E009.1) is automatically reset when the bus voltage resumes normal, and the reset is not included in the auto reset count. The short-to-ground fault (E023.1) and STO buffer chip fault (E047.5) cannot be reset automatically or manually. They can only be reset after the AC drive is completely powered off and then powered on again. Fault protection action selection is required when the set number of fault auto reset times is reached.

Related Parameters

Para.	Name	Default	Value Range	Description
F9-09	Auto reset attempts	0	0 to 20	This parameter defines the maximum number of auto resets allowed for the AC drive when the fault protection action is set to auto reset. If the number of reset attempts exceeds the value of this parameter, the AC drive will remain in the faulty state.
F9-10	DO action during auto reset	1	0: Disabled 1: Enabled	This parameter defines whether the faulty DO (assigned with function 2) acts during auto fault reset if the auto fault reset function is enabled.
F9-11	Auto reset interval	1.0s	0.1s to 100.0s	This parameter defines the delay of auto reset after the AC drive reports a fault.
H2-12	Auto reset enable	1	0: Disabled 1: Enabled	This parameter defines whether to enable the auto fault reset function.
H2-15	Auto reset disabled upon manual reset	1	0: Yes 1: No	This parameter defines the effect of manual reset on auto reset. When it is set to 0, faults are not reset automatically after manual reset. When it is set to 1, faults are still reset automatically after manual reset.
H2-16	Interval for clearing auto reset count	10 min	0 min to 6000 min	After the interval for clearing auto reset count, the number of auto reset attempts is restored to that defined by F9.09.

Para.	Name	Default	Value Range	Description
H2-17	Active fault reset attempt count	0	0 to 65535	This parameter shows the number of auto resets that have occurred so far.
H2-18	Clearing upon fault reset count reach	0	0: Enabled 1: Disabled	This parameter defines whether to automatically clear the auto reset count when the set number of auto reset attempts is reached after the interval defined by H2-16.

You can set an auto reset blacklist to forbid auto reset of some faults. The AC drive supports 10 non-resettable fault codes, which can be set as required.

Related Parameters

Para.	Name	Default	Value Range	Description
H2-10	Code of non-resettable exception 1	0	0 to 200	The AC drive supports 10 groups of main codes and subcodes of non-resettable faults. The main codes and subcodes are combined to form specific fault codes. These faults cannot be reset automatically.
H2-11	Subcode of non-resettable exception 1	0	0 to 9	
H2-12	Code of non-resettable exception 2	0	0 to 200	
H2-13	Subcode of non-resettable exception 2	0	0 to 9	
H2-14	Code of non-resettable exception 3	0	0 to 200	
H2-15	Subcode of non-resettable exception 3	0	0 to 9	
H2-16	Code of non-resettable exception 4	0	0 to 200	Continued
H2-17	Subcode of non-resettable exception 4	0	0 to 9	
H2-18	Code of non-resettable exception 5	0	0 to 200	
H2-19	Subcode of non-resettable exception 5	0	0 to 9	
H2-20	Code of non-resettable exception 6	0	0 to 200	

Para.	Name	Default	Value Range	Description
H2-21	Subcode of non-resettable exception 6	0	0 to 9	Continued
H2-20	Code of non-resettable exception 7	0	0 to 200	
H2-21	Subcode of non-resettable exception 7	0	0 to 9	
H2-20	Code of non-resettable exception 8	0	0 to 200	
H2-21	Subcode of non-resettable exception 8	0	0 to 9	
H2-20	Code of non-resettable exception 9	0	0 to 200	Continued
H2-21	Subcode of non-resettable exception 9	0	0 to 9	
H2-20	Code of non-resettable exception 10	0	0 to 200	
H2-21	Subcode of non-resettable exception 10	0	0 to 9	

1.6.14 Auto Restart Upon Fault

If auto reset and restart upon fault is enabled, when a fault is reported during running and reset automatically, the AC drive automatically restarts after the delay of restart after auto reset. During restart, the AC drive will stop if a stop or manual reset command is received.

Related Parameters

Para.	Name	Default	Value Range	Description
H2-42	Restart after auto reset	0	0: Disabled 1: Enabled	This parameter defines whether to enable restart after auto reset. The AC drive can restart upon auto fault reset only after this function is enabled (on the premise that an operation command is received and fault auto reset is successful).
H2-43	Waiting time of restart after auto reset	0.5s	0 to 600.0s	This parameter defines the waiting time of auto restart of the AC drive after auto reset.
H2-44	Forced flying start during auto restart	0	0 to 1	This parameter defines whether to force flying start during auto restart upon fault.

You can set an auto restart blacklist or whitelist to forbid or allow auto restart upon auto reset of some faults. The AC drive supports 6 fault codes for which auto restart upon auto reset is allowed, which can be set as required.

Related Parameters

Para.	Name	Default	Value Range	Description
H2-45	Source of exceptions that allow restart		0: Whitelist 0: Blacklist	This parameter defines the source for allowing restart after fault auto reset. When it is set to 0, restart after fault auto reset is allowed only for faults with fault codes defined by H2-46 to H2-57. When it is set to 1, restart after fault auto reset is not allowed for faults with fault codes defined by H2-46 to H2-57.
H2-46	Code of specified exception 1	0	0 to 200	The AC drive supports 6 groups of main codes and subcodes of special faults. The main codes and subcodes are combined to form specific fault codes. H2-45 (source of exceptions that allow restart) determines whether restart after fault auto reset is allowed for these faults.
H2-47	Subcode of specified exception 1	0	0 to 9	
H2-48	Code of specified exception 2	0	0 to 200	
H2-49	Subcode of specified exception 2	0	0 to 9	
H2-50	Code of specified exception 3	0	0 to 200	
H2-51	Subcode of specified exception 3	0	0 to 9	
H2-52	Code of specified exception 4	0	0 to 200	
H2-53	Subcode of specified exception 4	0	0 to 9	
H2-54	Code of specified exception 5	0	0 to 200	
H2-55	Subcode of specified exception 5	0	0 to 9	
H2-56	Code of specified exception 6	0	0 to 200	
H2-57	Subcode of specified exception 6	0	0 to 9	

1.6.15 Fault Protection Actions

The AC drive supports six fault protection actions: coast to stop, stop according to the stop mode, continue to run, run with power limit, run with current limit, and ignore.

The protection actions are arranged as follows based on severity (from high to low) of corresponding faults: coast to stop, stop according to the stop mode, run with limit (continue to run, run with power limit, and run with current limit), and ignore.

Continue to run, run with power limit, and run with current limit correspond to the same severity.

When the fault protection action is continue to run, run with power limit, or run with current limit, the operating panel displays Lxxx.x, such as

.

When the fault protection action is set to ignore, no message is displayed on the operating panel when a fault occurs. Exercise caution when setting this action.

Related Parameters

Para.	Name	Default	Value Range	Description
F9-47	Fault protection action selection 1	10000	Ones: Motor overload (Err11) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit 5: Ignore Tens: Input phase loss (Err12) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit 5: Ignore Hundreds: Output phase loss (Err13) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit Thousands: External fault (Err15) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit Ten thousands: Communication exception (Err16) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit 5: Ignore	This parameter defines the fault protection actions for different types of faults. 0: Coast to stop The AC drive coasts to stop. 1: Stop according to the stop mode The AC drive stops according to the stop mode defined by F6-10. 2: Continue to run The AC drive continues to run without stop. The running frequency is defined by A4-40 to A4-42, F9-54, and F9-55. 3: Run with power limit The AC drive continues to run without stop. The power limit is defined by A4-83 and A4-84. 4: Run with current limit The AC drive continues to run without stop. The current limit is defined by A4-87. 5: Ignore The fault is ignored.

Para.	Name	Default	Value Range	Description
F9-48	Fault protection action selection 2	0	Ones: Encoder/PG card exception (Err20) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit 5: Ignore Tens: Parameter read-write exception (Err21) 0: Coast to stop 1: Stop according to the stop mode Hundreds: Reserved (Err24) 0: Coast to stop Thousands: Reserved (Err25) 0: Coast to stop Ten thousands: Running duration reach (Err26) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit	Same as F9-47

Para.	Name	Default	Value Range	Description
F9-49	Fault protection action selection 3	220	Ones: User-defined fault 1 (Err27) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit Tens: User-defined fault 2 (Err28) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit Hundreds: Power-on duration reach (Err29) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit Thousands: Load loss (Err30) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit 5: Ignore Ten thousands: PID loss during running (Err31) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit	Same as F9-47

Para.	Name	Default	Value Range	Description
F9-50	Fault protection action selection 4	55	Ones: Excessive speed deviation (Err42) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit 5: Ignore Tens: Motor overspeed (Err43) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit 5: Ignore Thousands: Pole position auto-tuning error (Err55) 0: Coast to stop	Same as F9-47
F9-54	Frequency for continuing to run upon fault	1	0: Current running frequency 1: Frequency reference 2: Frequency upper limit 3: Frequency lower limit 4: Alternative frequency upon exception	This parameter defines the frequency at which the AC drive continues to run upon fault. If a fault occurs during running of the AC drive and the fault protection action is set to "Continue to run", the AC drive displays "Lxxx.x" and continues to run at the frequency defined by F9-54.
F9-55	Alternative frequency upon exception	100.0%	0.0% to 100.0% (100.0% corresponds to the maximum frequency defined by F0-10)	This parameter defines the alternative frequency of the AC drive upon fault. If a fault occurs during running and the fault protection action is to run at the alternative frequency upon exception (F9-54 = 4), the AC drive displays "Lxxx.x" and continues to run at the alternative frequency.
A4-80	Speed limited running mode	-	0: Run with a maximum speed limit 1: Run at a specified safe speed	This parameter defines the mode in which the AC drive continues to run upon fault.
A4-81	Forward speed limit in restricted running mode	100.0%	0% to 600.0%	-
A4-82	Reverse speed limit in restricted running mode	100.0%	0% to 600.0%	-

Para.	Name	Default	Value Range	Description
A4-83	Maximum motoring power in restricted running mode	50.0%	0% to 400.0%	-
A4-84	Maximum regenerative power in restricted running mode	50.0%	0% to 400.0%	-
A4-87	Maximum allowable current in restricted running mode	90.0%	50.0% to 400.0%	-

1.6.16 Self-check

The self-check function is used to automatically detect some exceptions that may occur on the AC drive. You are advised to perform a manual static self-check before using the system for the first time to confirm whether the AC drive and external wiring are normal.

Self-check items include IGBT shoot-through check, short-to-ground check, output phase loss check, and encoder check.

There are two self-check modes: manual self-check and self-check before running.

- Manual self-check
  Manual self-check involves static self-check and full self-check, which can be selected by setting F6-29. The following table lists the sub-items of static self-check and full self-check. Each sub-item can be enabled or disabled separately by setting corresponding bit of F6-28.

F6-28 Self-check Item	Static Self-check (F6-28 = 1)	Full Self-check (F6-29 = 2)
IGBT shoot-through self-check (bit1)	√	√
Short-to-ground self-check (bit2)	√	√
Output phase loss self-check (bit3)	√	√
Encoder self-check (bit4)	-	√

  During static self-check, the motor does not rotate. During encoder self-check, the motor accelerates to 50% of the rated speed, performs self-check, and then decelerates to 0 according to the acceleration/deceleration time defined by F0-17 and F0-18.

  1. If encoder self-check is selected during full self-check, check the following before self-check to ensure that the motor can rotate freely:
     - Check that there is no construction going on around the motor.
     - Check that there are no obstacles around the motor shaft.

- Check whether the motor has a brake. If yes, open it forcibly.
- Check that the motor fan works properly.
- Check whether devices connected to the motor, if any, meet operating conditions, for example, whether lubrication is required.

2. The motor runs in vector control mode without an encoder during encoder self-check. Therefore, ensure that parameter auto-tuning has ever been performed before auto-tuning.

- Self-check before running
  Self-check is performed each time before the AC drive runs. Self-check before running involves IGBT shoot-through check, short-to-ground check, and output phase loss check, but not encoder check.

  Each sub-item can be enabled or disabled separately by setting the corresponding parameter:

  - IGBT shoot-through self-check before running is set by bit4 of AA-00.
  - Short-to-ground self-check before running is set by bit2 of F9-07.
  - Output phase loss self-check before running is set by bit2 of F9-13.

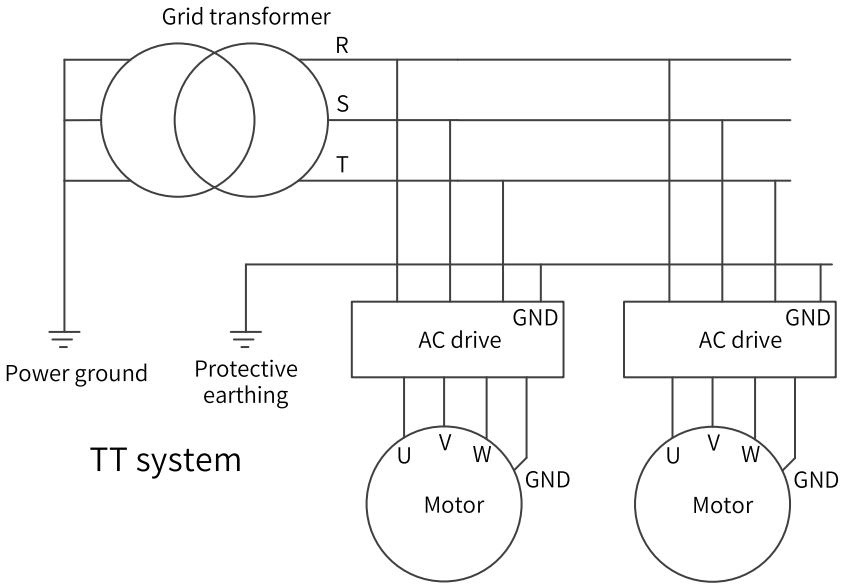
  Note the following for self-check before running:

  When the motor start mode is set to flying start, self-check before running is forcibly disabled and not performed.

Note the following for self-check:

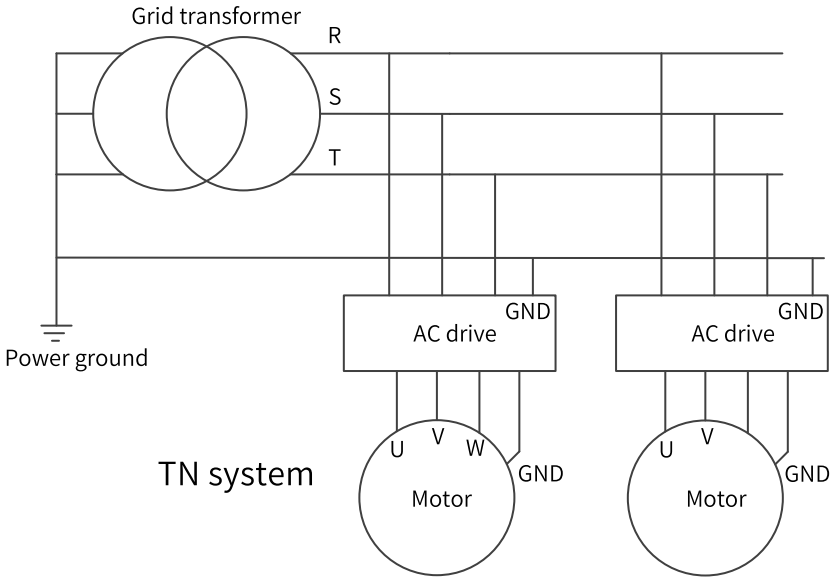
1. When using the self-check function, ensure that the rated current of the motor is greater than 0.2 times the rated current of the AC drive. If the motor power is far less than the power of the AC drive, self-check may fail. In this case, self-check is not recommended.
2. Do not perform self-check when the motor is rotating. If the motor has back EMF, a fault will be reported falsely during self-check.
3. When the power grid is an IT system, short-to-ground cannot be detected during self-check. In this case, an insulation monitoring device is required. The following describes different grids.

- **TT system**

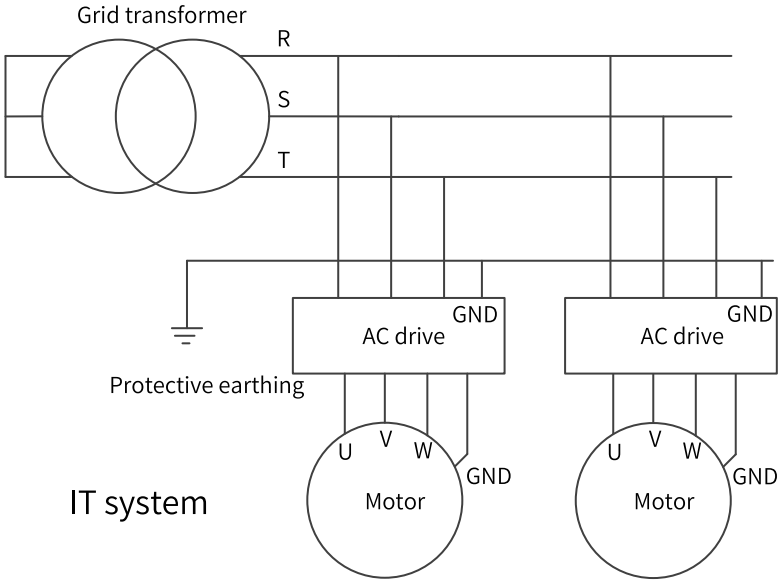


TT system

- **TN system**



- **IT system**



Related Parameters

Para.	Name	Default	Value Range	Description
F6-28	Manual self-check enable	0xF	Bit00: IGBT shoot-through self-check 0: Disabled 1: Enabled Bit01: Short-to-ground self-check 0: Disabled 1: Enabled Bit02: Output phase loss self-check 0: Disabled 1: Enabled Bit03: Encoder self-check 0: Disabled 1: Enabled	
F6-28	Manual self-check command	2	0: None 1: Static self-check 2: Full self-check	-
F9-07	Short-to-ground detection	11	Ones: Short-to-ground detection upon power-on 0: Disabled 1: Enabled Tens: Short-to-ground detection before running 0: Disabled 1: Enabled	-

Para.	Name	Default	Value Range	Description
F9-13	Output phase loss protection	11	Ones: Output phase loss protection during running 0: Disabled 1: Enabled Tens: Output phase loss protection before running 0: Disabled 1: Enabled	-
AA-00	Parameter auto-tuning upon startup	1	Bit00: Synchronous motor pole position auto-tuning upon startup 0: Disabled 1: Enabled Bit01: Quick stator resistance auto-tuning upon startup 0: Disabled 1: Enabled Bit02 and bit03: HFI pole position auto-tuning 0: Disabled 1: Enabled 2: Adaptive Bit04: IGBT shoot-through self-check upon startup 0: Disabled 1: Enabled Bit05: Short-to-ground self-check upon startup (reserved) 0: Disabled 1: Enabled Bit06: Phase loss self-check upon startup (reserved) 0: Disabled 1: Enabled	

1.7 Monitoring

The monitoring function enables you to view the AC drive state in the LED display area on the operating panel. You can monitor AC drive status in the following two ways:

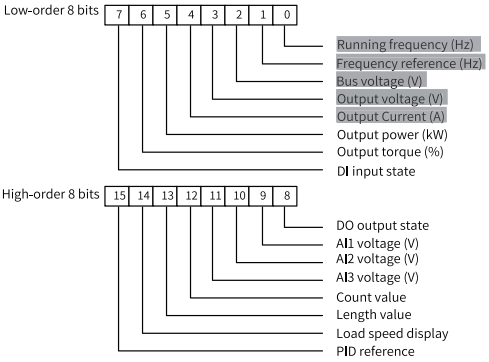
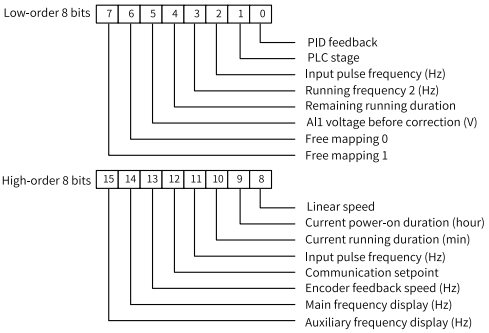
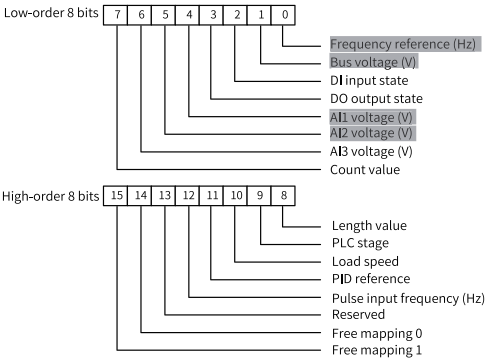
1. When the AC drive is in the stop or running state, press the key on the operating panel to switch between bytes of F7-03, F7-04, and F7-05 to view state parameters on the panel.
   There are 32 running state parameters available. You can select whether to display a parameter by setting the corresponding binary bit of F7-03 (LED display 1 in running state) and F7-04 (LED display 2 in running state). There are 16 stop state parameters available. You can select whether to display a parameter by setting the corresponding binary bit of F7-05 (LED display in stop state).

For example, to view the running frequency, bus voltage, output voltage, output current, output power, and PID reference on the panel, perform the following operations:

Set corresponding bits to 1 according to the mapping between each byte of F7-03 (LED display 1 in running state) and the preceding parameters. Convert the binary number into a hexadecimal equivalent, and set the hexadecimal number in F7-03. For details about the conversion, see *"Table 1–37 Converting a binary number into the hexadecimal equivalent" on page 168*. Press the key on the operating panel to switch between bytes of F7-03 to view parameter settings.

You can view other monitoring parameters in the same way. The following table describes the mapping between the monitoring parameters and bytes of F7-03, F7-04, and F7-05.

Table 1–36 Mapping between monitoring parameters and bytes of F7-03, F7-04, and F7-05

Para.	Name	Default	Value Range	Description
F7-03	LED display 1 in running state	0x1F	0000 to 0xFFFF	To display a parameter during running, set the corresponding bit to 1, convert the binary number to a hexadecimal equivalent, and set it in F7-03. Note: Shaded parameters are displayed by default. 
F7-04	LED display 2 in running state	0	0000 to 0xFFFF	To display a parameter during running, set the corresponding bit to 1, convert the binary number to a hexadecimal equivalent, and set it in F7-04. 
F7-05	LED display in stop state	0x33	0000 to 0xFFFF	To display a parameter upon stop, set the corresponding bit to 1, convert the binary number to a hexadecimal equivalent, and set it in F7-05.  Note: Shaded parameters are displayed by default.

Note

When the AC drive is powered on again after power-off, the parameters selected before power-off are displayed.

The monitoring parameters corresponding to each bit in F7-03, F7-04, and F7-05 do not completely correspond to all the monitoring parameters in group U0. If parameters to be monitored cannot be found in F7-03, F7-04 and F7-05, view them in group U0.

The following describes how to convert a binary number into a hexadecimal equivalent.

Divide the binary number into groups of 4 digits from right to left. Each digit group corresponds to a hexadecimal number. If the MSB is not the fourth bit, add 0s. Then, convert the divided binary bits into the decimal equivalent. 0000 to 1111 correspond to 0 to 15 in decimal and 0 to F in hexadecimal. Convert the decimal number into the hexadecimal equivalent according to the mapping between decimal and hexadecimal. (See the following table.)

For example, the binary number 011 1101 1111 1001 can be divided into 0011 1101 1111 1001. According to the following table, its hexadecimal equivalent is 3DF9.

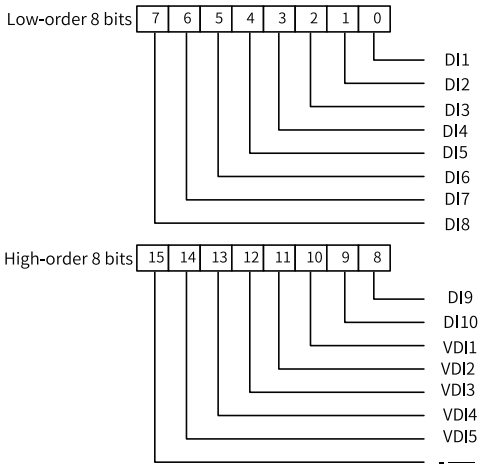
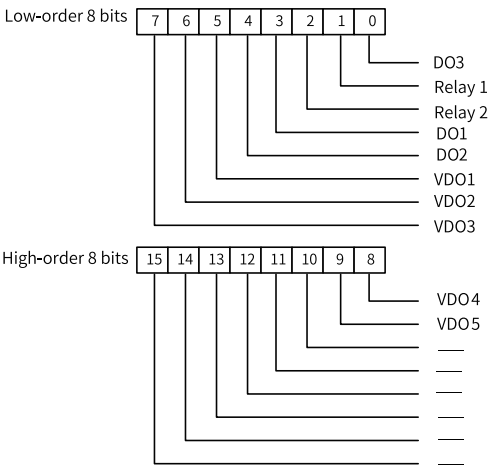
Table 1–37 Converting a binary number into the hexadecimal equivalent

Binary	1111	1110	1101	1100	1011	1010	1001	1000	0111	0110	0101	0100	0011	0010	0001	0000
Decimal	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Hexadecimal	F	E	D	C	B	A	9	8	7	6	5	4	3	2	1	0

2. Select group U0 on the operating panel to view monitoring parameters. *"Table 1–38 Monitoring parameters in group U0" on page 168* lists the monitoring parameters, which are read-only.

Table 1–38 Monitoring parameters in group U0

Para.	Name	Basic Unit	Value Range	Description
U0-00	Running frequency (Hz)	Determined by F0-22	0.0 to 500.0 Hz (F0-22 = 1) 0.00 to 500.00 Hz (F0-22 = 2 by default)	Absolute value of the running frequency of the AC drive
U0-01	Frequency reference (Hz)	Determined by F0-22	0.0 to 500.0 Hz (F0-22 = 1) 0.00 to 500.00 Hz (F0-22 = 2 by default)	Absolute value of the frequency reference of the AC drive
U0-02	Bus voltage (V)	0.1 V	0.00 to 6553.5 V	Bus voltage of the AC drive
U0-03	Output voltage (V)	1 V	0.00 to 65535 V	Output voltage of the AC drive during running
U0-04	Output current (A)	0.01 A	0.00 A to 655.35 A (AC drive power ≤ 55 kW) 0.0 A to 6553.5 A (AC drive power 55 kW)	Output current of the AC drive during running

Para.	Name	Basic Unit	Value Range	Description
U0-05	Output power (kW)	0.1 kW	–3276.8 kW to +3276.7 kW	Output power of the AC drive during running
U0-06	Output torque (%)	0.10%	–3276.8% to +3276.7%	Output torque of the AC drive during running. The value is a percentage of the rated motor torque.
U0-07	DI state	1	0x0000 to 0x7FFF	Current DI terminal input state. Each bit of the binary number converted from this value corresponds to one DI signal. The value 1 indicates that the input is high level. The value 0 indicates that the input is low level. Each bit maps to an input terminal as follows: 
U0-08	DO state	1	0x0000 to 0x03FF	Current DO terminal output state. Each bit of the binary number converted from this value corresponds to one DO signal. The value 1 indicates that the output is high level. The value 0 indicates that the output is low level. Each bit maps to an output terminal as follows: 
U0-09	AI1 voltage (V)	0.01 V	–10.57 V to +10.57 V	-
U0-10	AI2 voltage (V)	0.01 V	–10.57 V to +10.57 V	-
U0-11	AI3 voltage (V)	0.01 V	–10.57 V to +10.57 V	-

Para.	Name	Basic Unit	Value Range	Description
U0-12	Count value	1	0 to 65535	Count value in the count function
U0-13	Length value	1	0 to 65535	Length value in the fixed length function
U0-14	Load speed	Determined by the ones place of F7-12	0 to 65535 RPM (the ones place of F7-12 is 0) 0 to 6553.5 RPM (the ones place of F7-12 is 1) 0 to 655.35 RPM (the ones place of F7-12 is 2)	Target load speed, which is affected by the load speed display coefficient defined by F7-06
U0-15	PID reference	1	0 to 65535	PID reference = PID reference (percentage) x FA-04 (PID reference feedback range)
U0-16	PID feedback	1	0 to 65535	PID feedback = PID feedback (percentage) x FA-04 (PID reference feedback range)
U0-17	PLC stage	1	0 to 15	16 speeds in total
U0-18	Pulse input reference (kHz)	0.01 kHz	0.00 kHz to 100.00 kHz	High-speed pulse sampling frequency of DI5
U0-19	Feedback speed (Hz)	Determined by the tens place of F7-12	–5000.0 Hz to +5000.0 Hz (the tens place of F7-12 is 1) –500.00 Hz to +500.00 Hz (the tens place of F7-12 is 2 by default)	Feedback speed (Hz)
U0-20	Remaining running duration	0.1 min	0.0 to 6553.5 min	Remaining runtime during timed running
U0-21	AI1 voltage before correction	0.001 V	–10.570 V to +10.570 V	Actual AI sampling voltage/current Linear correction is performed to reduce the deviation between the sampling voltage/current and the actual voltage/current. For the voltage/current after correction, see U0-09 and U0-10.
U0-22	AI2 voltage (V)/current (mA) before correction	0.001 V/0.01 mA	–10.570 V to +10.570 V	
U0-23	AI3 voltage before correction	0.001 V	–10.570 V to +10.570 V	-
U0-24	Motor speed (RPM)	Determined by the ones place of F7-12	0 to 65535 RPM (the ones place of F7-12 is 0) 0 to 6553.5 RPM (the ones place of F7-12 is 1) 0 to 655.35 RPM (the ones place of F7-12 is 2)	Motor feedback speed (RPM)
U0-25	Current power-on duration	1 min	0 min to 65535 min	-

Para.	Name	Basic Unit	Value Range	Description
U0-26	Current running duration	0.1 min	0.0 min to 6553.5 min	-
U0-27	Pulse input reference (Hz)	1 Hz	0–65535 Hz	High-speed pulse sampling frequency of DI5. It is the same as U0-18, except for the unit.
U0-28	Communication	0.01%	–100.00% to +100.00%	Data written through communication address 0x1000. The percentage base is determined by the value set in address 0x1000.
U0-29	Encoder feedback speed (Hz)	Determined by the tens place of F7-12	–5000.0 Hz to +5000.0 Hz (the tens place of F7-12 is 1) –500.00 Hz to +500.00 Hz (the tens place of F7-12 is 2 by default)	Motor running frequency measured by encoder (Hz)
U0-30	Main frequency X	Determined by the hundreds place of F7-12	–5000.0 Hz to +5000.0 Hz (the hundreds place of F7-12 is 1) –500.00 Hz to +500.00 Hz (the hundreds place of F7-12 is 2 by default)	Setpoint of main frequency X (Hz)
U0-31	Auxiliary frequency Y	Determined by the hundreds place of F7-12	–5000.0 Hz to +5000.0 Hz (the hundreds place of F7-12 is 1) –500.00 Hz to +500.00 Hz (the hundreds place of F7-12 is 2 by default)	Setpoint of auxiliary frequency Y (Hz)
U0-33	Synchronous motor rotor position	0.1	0.0° to 359.9°	-
U0-34	Motor temperature	1°C	0°C to 200°C	Motor temperature sampled through AI3 For details about motor temperature measurement, see the description of F9-56 (motor temperature sensor type).
U0-35	Target torque (%)	0.1%	–200.0% to +200.0%	Current torque upper limit. The value is a percentage of the rated motor torque.
U0-36	Resolver position	1	0 to 4095	-
U0-37	Power factor angle	0.1°	0.0° to 6553.5°	Current power factor angle

Para.	Name	Basic Unit	Value Range	Description
U0-38	ABZ position	1	0 to 65535	Number of phase-A and phase-B pulses of the ABZ encoder This value is four times the number of pulses that the encoder runs. For example, if the display is 4000, the actual number of pulses that the encoder runs is 1000 (4000/4). The value increases when encoder rotates in forward direction and decreases when encoder rotates in reverse direction. The count value restarts from 0 upon increasing to 65535 and restarts from 65535 upon decreasing to 0. You can check whether the encoder is correctly installed by viewing this parameter.
U0-39	V/f separation target voltage	1 V	0 V to rated motor voltage	Target output voltage in V/f separation mode
U0-40	V/f separation output voltage	1 V	0 V to rated motor voltage	Current actual output voltage in V/f separation mode
U0-45	Fault subcode	1	0 to 51	Fault subcode
U0-46	Limit code	0.1	0 to 6553.5	Heatsink temperature of the IGBT
U0-58	Motor running revolution count	1	0 to 65535	Number of phase-Z pulses of the current ABZ or UVW encoder The value increases or decreases by 1 each time the encoder rotates one revolution in forward or reverse direction. You can check whether the encoder is correctly installed by viewing this parameter.
U0-59	Frequency reference (%)	0.01%	–100.00% to +100.00%	Current frequency reference. The value is a percentage of the maximum frequency (F0-10) of the AC drive.
U0-60	Running frequency (%)	0.01%	–100.00% to +100.00%	Current running frequency. The value is a percentage of the maximum frequency (F0-10) of the AC drive.
U0-61	AC drive state	1	Bit1 and Bit0	0: Stopped; 1: Running in forward direction; 2: Running in reverse direction
			Bit3 and Bit2	0: Running at constant speed; 1: Accelerating; 2: Decelerating
			Bit4	0: Bus voltage normal; 1: Undervoltage
U0-62	Current fault code	1	0 to 99	-
U0-65	Torque upper limit	0.1%	–2000.0 to +2000.0%	-
U0-66	Model of communica-tion expansion card	1	0 to 65535	-

Para.	Name	Basic Unit	Value Range	Description
U0-67	Software version of communication expansion card	1	0 to 65535	-
U0-68	AC drive state on the communication expansion card	1	Bit0	0: Stopped; 1: Running
			Bit1	0: Running in forward direction; 1: Running in reverse direction
			Bit2	Whether the AC drive is faulty
				0: Not faulty
				1: Faulty
			Bit3	Whether the running frequency reaches the preset frequency
				0: Not reach
				1: Reach
			Bit4	Whether DP communication is normal
				0: Normal
				1: Abnormal
			Bit5	Communication control as the reference source for the AC drive
			Bit6	Communication control as the command source for the AC drive
			Bit7	Speed control/Torque control
			Bit8 to Bit15	Fault code. For details, see the description of faults.
U0-69	Frequency transmitted to the communication expansion card/0.01 Hz	0.01 Hz	0.00 to 655.35 Hz	-
U0-70	Speed transmitted to the communication expansion card/RPM	1 RPM	0 to 65535 RPM	-
U0-71	Current specific to communication expansion card (A)	0.1 A	0 to 6553.5 A	-
U0-72	Communication card error state	1	0 to 65535	-
U0-73	Motor SN	1	0 to 65535	-
U0-74	AC drive output torque	0.1%	–200.0% to +200.0%	-

Para.	Name	Basic Unit	Value Range	Description
U0-76	Low-order bits of accumulative power consumption	0.1 kW·h	0 to 6553.5 kW·h	-
U0-77	High-order bits of accumulative power consumption	1 kW·h	0 to 65535 kW·h	-
U0-78	Linear speed	1 m/min	0 to 65535 m/min	-
U0-80	EtherCAT slave name	1	0 to 65535	-
U0-81	EtherCAT slave alias	1	0 to 65535	-
U0-82	EtherCAT ESM transmission error code	1	0 to 65535	-
U0-83	EtherCAT XML file version	1	0 to 65535	-
U0-84	EtherCAT synchronization loss count	1	0 to 65535	-
U0-85	Maximum errors and invalid frames of EtherCAT port 0 per unit time	1	0 to 65535	-
U0-86	Maximum errors and invalid frames of EtherCAT port 1 per unit time	1	0 to 65535	-
U0-87	Maximum forwarding errors of EtherCAT port per unit time	1	0 to 65535	-

Para.	Name	Basic Unit	Value Range	Description
U0-88	Maximum error count of EtherCAT data frame processing unit per unit time	1	0 to 65535	-
U0-89	Maximum link loss of EtherCAT port per unit time	1	0 to 65535	-
U0-90	DI function selection display 1	1	0 to 65535	DI function selection. Bit0 to bit15 show whether function 1 to function 16 are selected. When a function is selected, the corresponding bit is 1; otherwise, the bit is 0.
U0-91	DI function selection display 2	1	0 to 65535	DI function selection. Bit0 to bit15 show whether function 17 to function 32 are selected. When a function is selected, the corresponding bit is 1; otherwise, the bit is 0.
U0-92	DI function selection display 3	1	0 to 65535	DI function selection. Bit0 to bit15 show whether function 33 to function 48 are selected. When a function is selected, the corresponding bit is 1; otherwise, the bit is 0.
U0-93	DI function selection display 4	1	0 to 65535	DI function selection. Bit0 to bit15 show whether function 49 to function 64 are selected. When a function is selected, the corresponding bit is 1; otherwise, the bit is 0.
U0-94	DI function selection display 5	1	0 to 65535	DI function selection. Bit0 to bit15 show whether function 65 to function 80 are selected. When a function is selected, the corresponding bit is 1; otherwise, the bit is 0.
U0-95	STO initialization flag	1	0 to 65535	-
U0-96	STO status word monitoring	1	0 to 65535	-
U0-97	STO model	1	0x0 to 0xFFFF	-
U0-98	STO 1.2 V AD sampling value	1	0 to 65535	-
U0-99	STO 5 V AD sampling value	1	0 to 65535	-

2 Process Control

2.1 Wobble Control Function

With the wobble control function, the output frequency of the AC drive wobbles up and down around the frequency reference (F0-07). This function is applicable to industries such as textile and chemical fiber as well as occasions where traverse and winding functions are required.

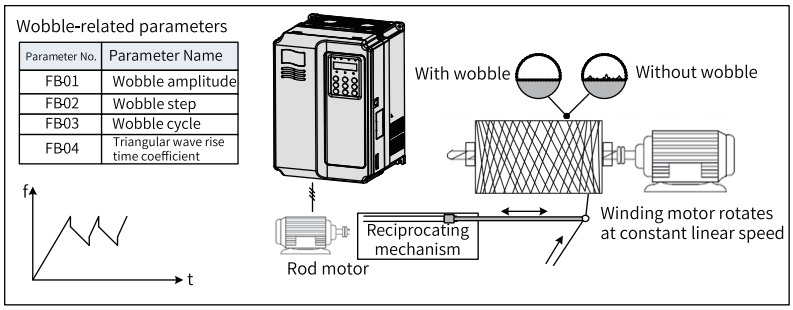


Figure 2-1 Application scenario of the wobble function

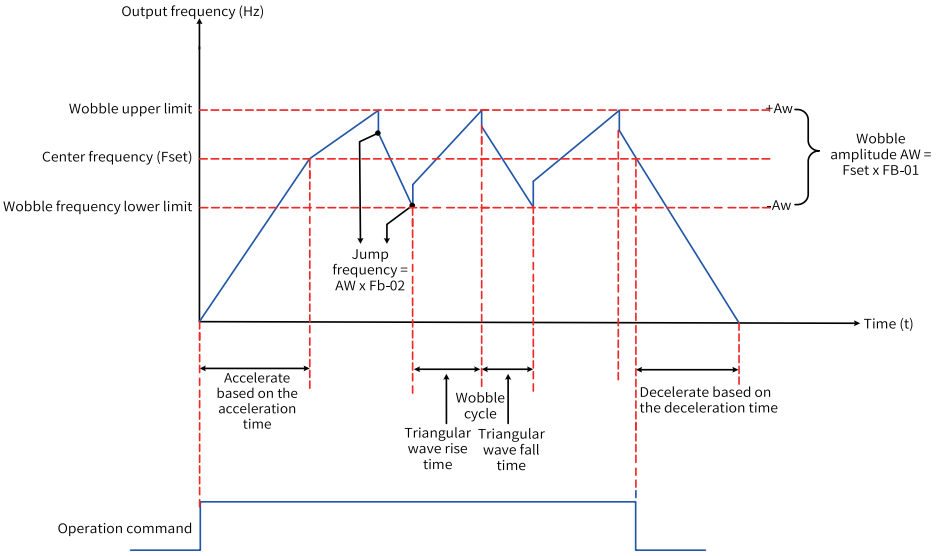


Figure 2-2 Schematic diagram of the wobble function

Para.	Name	Default	Value Range	Description
FB-00	Swing setting mode	0	0: Relative to center frequency 1: Relative to the maximum frequency	0: Relative to center frequency (F0-07, frequency reference superposition). This mode applies to variable swing systems, in which the swing changes with the center frequency (frequency reference). 1: Relative to the maximum frequency (F0-10). This mode applies to fixed swing systems, in which the swing is a fixed value calculated based on the maximum frequency.
FB-01	Wobble amplitude	0.00%	0.0% to 100.0%	When FB-01 is set to 0, the swing is 0, indicating that the wobble function is disabled.
FB-02	Wobble step	0.00%	0.0% to 50.0%	This parameter determines the swing and jump frequency. The wobble running frequency is limited by the frequency upper limit and frequency lower limit.

Para.	Name	Default	Value Range	Description
FB-03	Wobble cycle	10.0s	0.1s to 3000.0s	This parameter defines the time of a complete wobble cycle.
Fb-04	Triangular wave rise time coefficient	50.00%	0.1% to 100.0%	This parameter defines the triangular wave rise time as a percentage relative to the wobble cycle (FB-03).

1. **Calculation of the swing**
   When FB-00 is set to 0 (relative to center frequency): Swing (Aw) = F0-07 (frequency reference) x FB-01 (wobble amplitude)

   When FB-00 is set to 1 (relative to maximum frequency): Swing (Aw) = F0-10 (maximum frequency) x FB-01 (wobble amplitude).

2. **Calculation of the jump frequency**
   During wobble control, the jump frequency is a value relative to the swing. That is: Jump frequency = Aw (wobble amplitude) x FB-02 (Wobble step).

   When FB-00 is set to 0 (relative to center frequency), the jump frequency is a variable.

   When FB-00 is set to 1 (relative to maximum frequency), the jump frequency is a fixed value.

3. **Calculation of the triangular wave rise/fall time**
   Triangular wave rise time = FB-03 (wobble cycle) x FB-04 (triangular wave rise time coefficient) (unit: s)

   Triangular wave fall time = FB-03 (wobble cycle) x [1 – FB-04 (triangular wave rise time coefficient)] (unit: s)

   (Wobble cycle = Triangular wave rise time + Triangular wave fall time)

2.2 Fixed Length Control Function

The AC drive supports fixed length control in which the length pulses can be collected by DI5 only, which requires DI5 to be assigned with function 27 (length count input).

Para.	Name	Default	Value Range	Description
FB-05	Reference length	1000 m	0 m to 65535 m	This parameter specifies the length value to be controlled in fixed length control mode.
FB-06	Actual length	0 m	0 m to 65535 m	The actual length is a monitored value. Actual length (FB-06) = Number of pulses sampled by DI/Number of pulses per meter (FB-07).
FB-07	Number of pulses per meter	100.0	0.1 to 6553.5	The number of pulses output per meter. The length pulses can be sampled by DI5 if DI5 is assigned with function 27 (length count input) (set F4-04 to 27).

In the following figure, the actual length is a monitored value. Actual length (FB-06) = Number of pulses sampled by DI/Number of pulses per meter (FB-07). When the actual length (FB-06) exceeds the reference length (FB-05), the relay or DO terminal (function 10) outputs the "length reach" ON signal. Length reset can be implemented through the multi-functional DI terminal assigned with function 28 (length reset). For details, see the following figure.

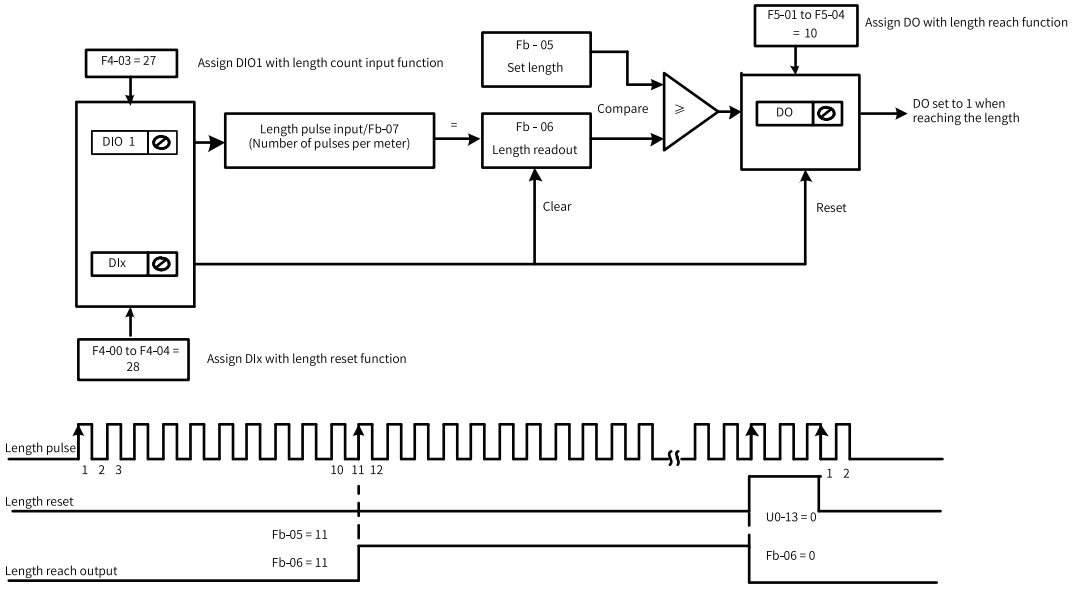


Figure 2-3 Schematic diagram of fixed length control

Para.	Name	Reference	Function Description
F4-04	DI5 function	27	Length count input
F4-00 to F4-09 (any one)	DI1 to DI10 function (any one)	28	Length reset
F5-01 to F5-05 (any one)	Terminal output function (any one)	10	Length reach

Only length can be calculated according to the number of pulses but the rotation direction cannot be identified in fixed length control mode. An automatic stop system can be implemented by connecting the output length reach T/A-T/B signal of the relay to the stop input terminal.

2.3 Counting Function

The count values are collected through a DI terminal (DI5 is required in the case of high pulse frequency), which must be assigned with function 25 (counter input).

Para.	Name	Default	Value Range	Description
FB-08	Reference count value	1000	1 to 65535	When the count value reaches FB-08, the DO terminal outputs an active signal indicating that the reference count value is reached.
FB-09	Designated count value	1000	1 to 65535	When the count value reaches FB-09, the DO terminal outputs an active signal indicating that the designated count value is reached. FB-09 must be less than or equal to FB-08 (reference count value).

In the following figure, the count values need to be collected by a DI terminal, and therefore the DI terminal is assigned with function 25 (counter input). When the count value reaches FB-08, the DO terminal outputs an "ON" signal indicating that the reference count value is reached. When the count value reaches FB-09, the DO terminal outputs an "ON" signal indicating that the designated count value is reached.

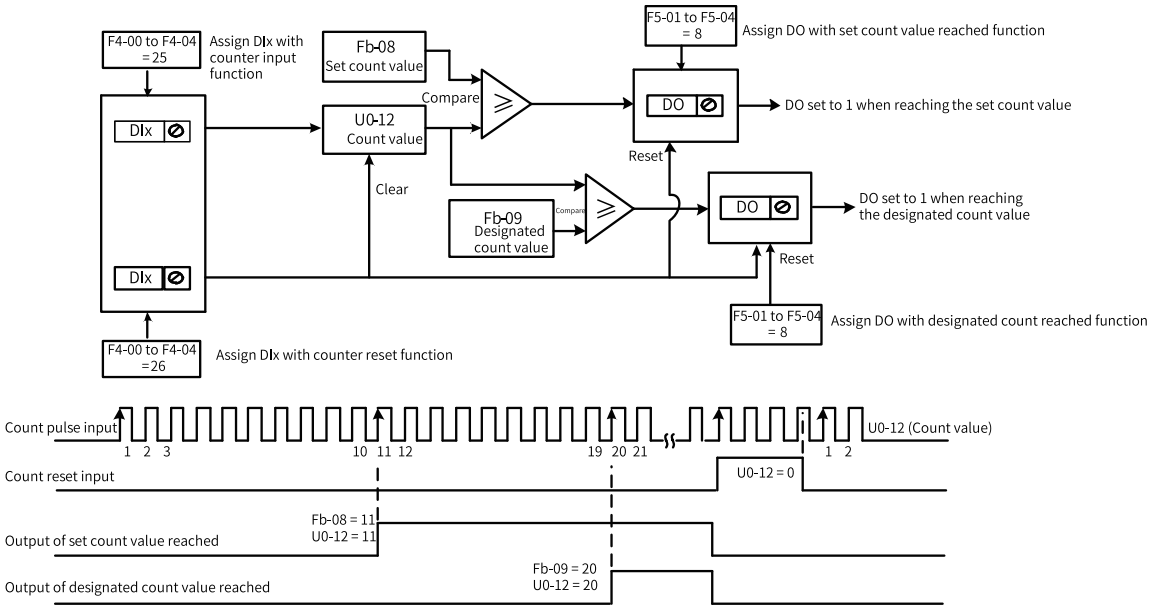


Figure 2-4 Schematic diagram of the counting function

Para.	Name	Reference	Function Description
F4-00 to F4-09 (any one)	DI1 to DI10 function (any one)	25	Counter input
F4-00 to F4-09 (any one)	DI1 to DI10 function (any one)	26	Counting reset
F5-01 to F5-04 (any one)	Terminal output function (any one)	8	Reference count value reach
F5-01 to F5-04 (any one)	Terminal output function (any one)	9	Designated count value reach

- DI5 is required if the pulse frequency is high.
- A DO terminal cannot be assigned with the "reference count value reach" function and "designated count value reach" function at the same time.
- The counter keeps counting when the AC drive is in the running/stop state until the reference count value is reached.
- The count value is retentive at power failure.
- An automatic stop system can be implemented by feeding the count value reach signal output by the DO terminal to the stop input terminal of the AC drive.

2.4 Simple PLC Function

Different from the user programmable function of MD500, the simple PLC function can only complete simple combination of multi-reference. The user programmable function is more diversified and practical. For details, see descriptions of parameters in group A7.

FC-16	Simple PLC running mode	Default	0
	Value Range	0	Stop after running for one cycle
		1	Keep final values after running for one cycle
		2	Repeat after running for one cycle

The simple PLC can be used as either the frequency source or V/f separation voltage source. The following figure shows how to use the simple PLC as the frequency source. When the simple PLC is used as the frequency source, whether the values of FC-00 to FC-15 are positive or negative determines the running direction. If the parameter values are negative, the AC drive runs in reverse direction.

When being used as the frequency source, the PLC supports three running modes (not supported when the PLC is used as the V/f separation voltage source), which is described as follows. 0: Stop after running for one cycle The AC drive stops automatically after running for one cycle, and starts only upon another running command. 1: Keep final values after running for one cycle The AC drive automatically maintains the final running frequency and direction after running for one cycle. 2: Repeat after running for one cycle The AC drive automatically starts another cycle after running for one cycle, and stops only upon a stop command.

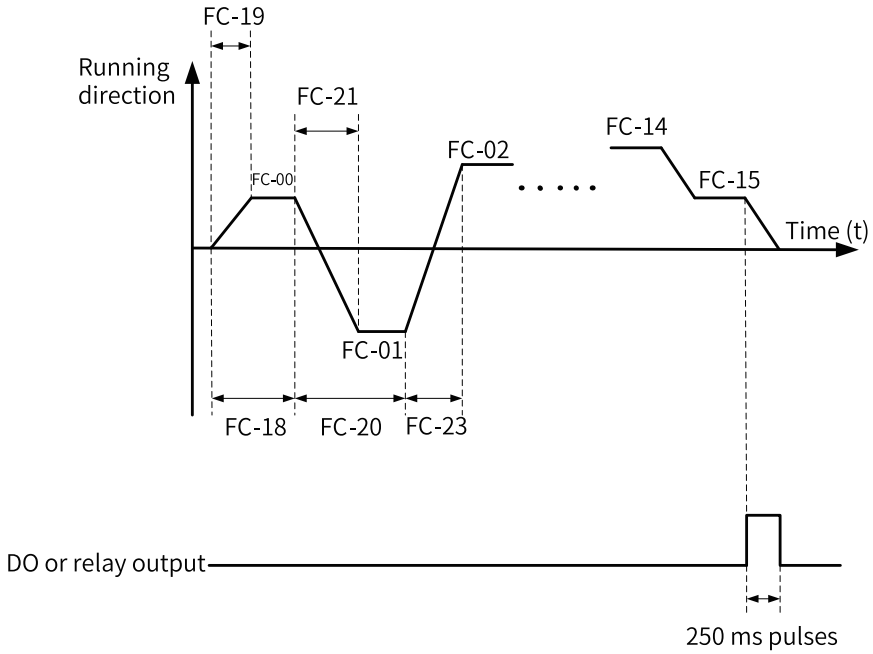


Figure 2-5 Simple PLC used as the frequency source

When being used as the frequency source, the PLC supports three running modes (not supported when the PLC is used as the V/f separation voltage source), which is described as follows:

- 0: Stop after running for one cycle The AC drive stops automatically after running for one cycle, and starts only upon another running command.
- 1: Keep final values after running for one cycle The AC drive automatically maintains the final running frequency and direction after running for one cycle.
- 2: Repeat after running for one cycle The AC drive automatically starts another cycle after running for one cycle, and stops only upon a stop command.

Table 2–1

FC-17	Simple PLC memory retention upon power failure	Default	0
	Value Range	Ones	Memory retention upon power failure
		0	Non-retentive upon power failure
		1	Retentive upon power failure
		Tens	Memory retention upon stop
		0	Non-retentive upon stop
		1	Retentive upon stop

Retentive upon power failure indicates that the AC drive retains the PLC running stage and running frequency upon power failure and continues to run from the retained values after it is powered on again. Non-retentive upon power failure indicates that the AC drive restarts the PLC process all over again upon power-on. Retentive upon stop indicates that the AC drive retains the PLC running stage and running frequency upon stop and continues to run from the retained values after it is started again. Non-retentive upon stop indicates that the AC drive restarts the PLC process all over again upon startup.

FC-18	Running duration of simple PLC reference 0	Default	0.0s (h)
	Value Range	0.0s (h) to 6553.5s (h)	
FC-19	Acceleration/Deceleration time of simple PLC reference 0	Default	0
	Value Range	0 to 3	
FC-20	Running duration of simple PLC reference 1	Default	0.0s (h)
	Value Range	0.0s (h) to 6553.5s (h)	
FC-21	Acceleration/Deceleration time of simple PLC reference 1	Default	0
	Value Range	0 to 3	
FC-22	Running duration of simple PLC reference 2	Default	0.0s (h)
	Value Range	0.0s (h) to 6553.5s (h)	
FC-23	Acceleration/Deceleration time of simple PLC reference 2	Default	0
	Value Range	0 to 3	
FC-24	Running duration of simple PLC reference 3	Default	0.0s (h)
	Value Range	0.0s (h) to 6553.5s (h)	
FC-25	Acceleration/Deceleration time of simple PLC reference 3	Default	0
	Value Range	0 to 3	

FC-26	Running duration of simple PLC reference 4	Default	0.0s (h)
	Value Range	0.0s (h) to 6553.5s (h)	
FC-27	Acceleration/Deceleration time of simple PLC reference 4	Default	0
	Value Range	0 to 3	
FC-28	Running duration of simple PLC reference 5	Default	0.0s (h)
	Value Range	0.0s (h) to 6553.5s (h)	
FC-29	Acceleration/Deceleration time of simple PLC reference 5	Default	0
	Value Range	0 to 3	
FC-30	Running duration of simple PLC reference 6	Default	0.0s (h)
	Value Range	0.0s (h) to 6553.5s (h)	
FC-31	Acceleration/Deceleration time of simple PLC reference 6	Default	0
	Value Range	0 to 3	
FC-32	Running duration of simple PLC reference 7	Default	0.0s (h)
	Value Range	0.0s (h) to 6553.5s (h)	
FC-33	Acceleration/Deceleration time of simple PLC reference 7	Default	0
	Value Range	0 to 3	
FC-34	Running duration of simple PLC reference 8	Default	0.0s (h)
	Value Range	0.0s (h) to 6553.5s (h)	
FC-35	Acceleration/Deceleration time of simple PLC reference 8	Default	0
	Value Range	0 to 3	
FC-36	Running duration of simple PLC reference 9	Default	0.0s (h)
	Value Range	0.0s (h) to 6553.5s (h)	
FC-37	Acceleration/Deceleration time of simple PLC reference 9	Default	0
	Value Range	0 to 3	
FC-38	Running duration of simple PLC reference 10	Default	0.0s (h)
	Value Range	0.0s (h) to 6553.5s (h)	
FC-39	Acceleration/Deceleration time of simple PLC reference 10	Default	0
	Value Range	0 to 3	
FC-40	Running duration of simple PLC reference 11	Default	0.0s (h)
	Value Range	0.0s (h) to 6553.5s (h)	

FC-41	Acceleration/Deceleration time of simple PLC reference 11	Default	0
	Value Range	0 to 3	
FC-42	Running duration of simple PLC reference 12	Default	0.0s (h)
	Value Range	0.0s (h) to 6553.5s (h)	
FC-43	Acceleration/Deceleration time of simple PLC reference 12	Default	0
	Value Range	0 to 3	
FC-44	Running duration of simple PLC reference 13	Default	0.0s (h)
	Value Range	0.0s (h) to 6553.5s (h)	
FC-45	Acceleration/Deceleration time of simple PLC reference 13	Default	0
	Value Range	0 to 3	
FC-46	Running duration of simple PLC reference 14	Default	0.0s (h)
	Value Range	0.0s (h) to 6553.5s (h)	
FC-47	Acceleration/Deceleration time of simple PLC reference 14	Default	0
	Value Range	0 to 3	
FC-48	Running duration of simple PLC reference 15	Default	0.0s (h)
	Value Range	0.0s (h) to 6553.5s (h)	
FC-49	Acceleration/Deceleration time of simple PLC reference 15	Default	0
	Value Range	0 to 3	
FC-50	Time unit of simple PLC running	Default	0
	Value Range	0	s (second)
		1	h (hour)
FC-51	Multi-reference 0 source	Default	0
	Value Range	0	FC-00
		1	AI1
		2	AI2
		3	AI3
		4	Pulse reference
		5	PID
		6	Preset frequency (F0-08), modified using terminal UP/DOWN

2.5 Master-Slave Control

Rigid Connection and Flexible Connection

The master-slave control function is designed for multi-drive applications, in which the system is driven by multiple AC drives and motor shafts are coupled by gears, chains, or conveyor belts. Master-slave control enables even distribution of loads among the AC drives. External control signals are connected only to the master, and the master controls the slaves through serial communication links.

The master works in typical speed control mode and the slaves follow the torque or speed reference of the master. There are two types of master-slave control connection modes: rigid connection and flexible connection, as shown in the following figure.

- When motor shafts of the master and slaves are connected rigidly by chains or gears, the slaves must work in torque control mode to avoid speed difference among drives.
- When motor shafts of the master and slaves are connected flexibly, the slaves should work in speed control because slight speed difference among AC drives is allowed. When both the master and slaves work in speed control mode, the droop rate is required.

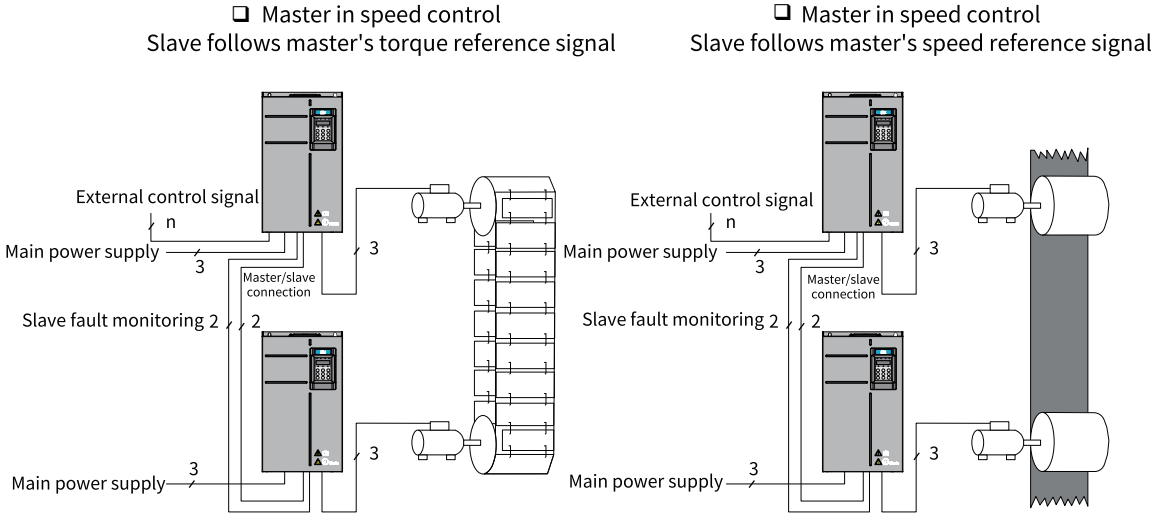


Figure 2-6 Rigid/Flexible connection

Master-slave Connection

To avoid control conflict, all drives (connected to the same mechanical equipment) should receive external control signals through the master. Therefore, connect all external control signals only to the master during wiring and do not use the operating panel or fieldbus to control the slaves, as shown in the following figure.

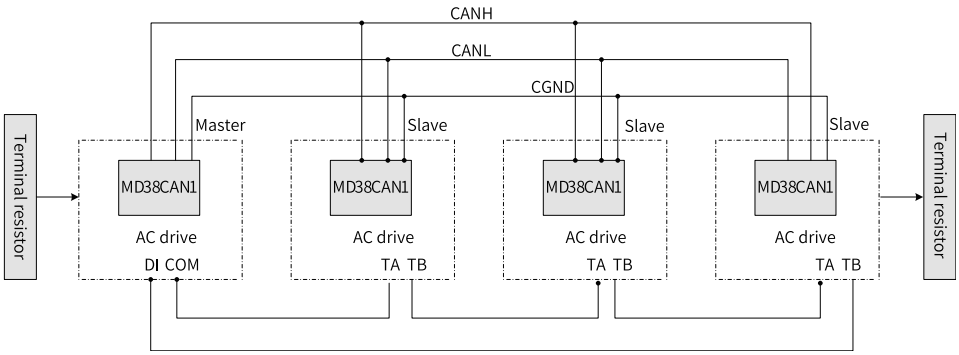


Figure 2-7 Master-slave connection

When a slave fails, the fault information is sent to the master in either of the following two ways. When a slave stops upon a fault, the master stops running.

1. The relay is used for slave fault feedback.
2. The slave sends the fault information to the master through communication (set the tens place of A8-02 to 1).

Droop Control

Defined by F8-15, the droop control function allows slight speed differences between the master and slaves to avoid conflict between them. This function is required only when both the master and slaves work in speed control mode. A proper droop rate is gradually obtained during drive running. Therefore, do not set F8-15 to a very large value. Otherwise, the steady-state speed will drop significantly when the load is very large. You need to set F8-15 for both the master and slaves.

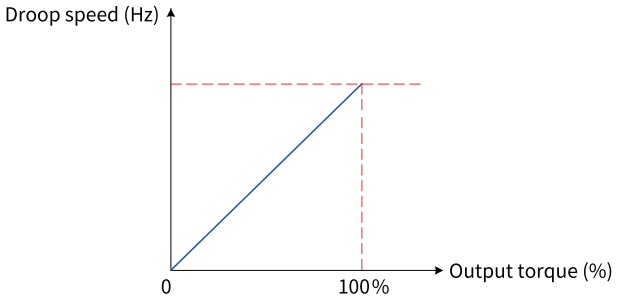


Figure 2-8 Relationship between droop speed and output torque

Droop speed = Sync frequency x Output torque x (F8-15/10)

For example, if F8-15 is set to 1.00, the sync frequency is 50 Hz, the output torque is 50%, the actual frequency of the AC drive is calculated as follows: Actual frequency of the AC drive = 50 Hz – 50 Hz x 50% x (1.00/10) = 47.5 Hz

Related Parameters

The related parameters include A8-00 to A8-07 and A8-11.

Application

The following describes parameter settings for rigid connection and flexible connection.

- Rigid connection

Table 2–2 Parameter settings for master in speed control mode (A0-00 = 0)

Parameter	Parameter Name	Value Range	Setting	Adjustment Required
FD-00	Baud rate	0000 to 6009	Setpoint of the thousands place Same for the master and slave	No
A8-00	Point-point communication	0 to 1	1	No
A8-01	Master/Slave selection	0 to 1	0	No
F0-10	Maximum frequency	5.00 Hz to 500.00 Hz	50.00 Hz (Same for the master and slave)	No
F2-10	Torque upper limit	0.0% to 200.0%	130.0%	Yes

Table 2–3 Parameter settings for slave in torque control mode (A0-00 = 1)

Parameter	Parameter Name	Value Range	Setting	Adjustment Required
FD-00	Baud rate	0000 to 6009	Setpoint of the thousands place Same for the master and slave	No
A8-00	Point-point communication	0 to 1	1	No
A8-01	Master/Slave selection	0 to 1	1	No
A8-02	Slave following master's command	Ones: Whether the slave follows the operation command of the master 0: No 1: Yes Tens: Whether the slave sends fault information to master when a fault occurs 0: No 1: Yes Hundreds: Whether the master reports a fault (ERR-16) upon disconnection of the slave 0: No 1: Yes	Ones: 1 Tens: 1	No
A8-03	Function of slave RX data	0: Running frequency 1: Target frequency	0	No
A8-11	Window width	0.20 Hz to 10.00 Hz	0.50 Hz	Yes
F0-10	Maximum frequency	5.00 Hz to 500.00 Hz	50.00 Hz (Same for the master and slave)	No

Parameter	Parameter Name	Value Range	Setting	Adjustment Required
F8-07	Acceleration time 4 (Frequency acceleration time in torque control)	0.0s to 6500.0s	0.0s	No
F8-08	Deceleration time 4 (Frequency deceleration time in torque control)	0.0s to 6500.0s	0.0s	No
F0-02	Command source	0 to 2	2	No
FD-02	Local address	0: Broadcast address 1 to 247 (valid for Modbus, PROFIBUS DP, CANlink, PROFINET, and EtherCAT)	1	No
A0-00	Speed/Torque control mode	0 to 1	1	No
A0-01	Torque reference source in torque control	0 to 7	0	No
A0-03	Torque digital setting	–200.0 to +200.0%	130.0%	Same as the setting of F2-10 of the master
A0-07	Torque acceleration time	0.00s to 650.00s	0.00s	No
A0-08	Torque deceleration time	0.00s to 650.00s	0.00s	No

Note

转矩控制模式时，请不要设置启动频率，否则将导致启动冲击电流较大。

You can decrease the value of A8-11 (ensure that it is greater than 0.20 Hz) of the slave as appropriate in master-slave control mode to improve startup smoothness. Meanwhile, if the system acceleration/deceleration time is very short, you can increase the value of A8-11 as appropriate. A larger value of A8-11 indicates weaker window effect.

You are advised to set the initial value of A8-11 to half of the rated motor slip. The rated motor slip is calculated as follows:

- Number of motor pole pairs = (60 x Rated motor frequency)/Rated motor speed (rounded)
- Motor sync speed = (60 x Rated motor frequency)/Number of motor pole pairs
- Rated motor slip = (Motor sync speed – Rated motor speed)/Motor sync speed x Rated motor frequency

- Flexible connection

Table 2–4 Parameter settings for master in torque control mode (A0-00 = 1)

Parameter	Parameter Name	Value Range	Setting	Adjustment Required
FD-00	Baud rate	0000 to 6009	Setpoint of the thousands place Same for the master and slave	No
A8-00	Point-point communication	0 to 1	1	No
A8-01	Master/Slave selection	0 to 1	0	No
F0-10	Maximum frequency	5.00 Hz to 500.00 Hz	50.00 Hz (Same for the master and slave)	No
F8-15	Droop control	0.00 to 10.00 Hz	1.00 Hz	Yes
F0-17	Acceleration time 1	0.0s to 6500.0s	Same for the master and slave	No
F0-18	Deceleration time 1	0.0s to 6500.0s	Same for the master and slave	No

Table 2–5 Parameter settings for slave in speed control mode (A0-00 = 0)

Parameter	Parameter Name	Value Range	Setting	Adjustment Required
FD-00	Baud rate	0000 to 6009	Setpoint of the thousands place Same for the master and slave	No
A8-00	Point-point communication	0 to 1	1	No
A8-01	Master/Slave selection	0 to 1	1	No
A8-02	Ones: 0: No 1: Yes Tens: 0: No 1: Yes	0 to 11	Ones: 1 Tens: 1	No
A8-03	Function of slave RX data	0: Running frequency 1: Target frequency	0	No
F0-02	Command source	0 to 2	2	No
F0-03	Main frequency reference source	0 to 9	9	No
F0-10	Maximum frequency	5.00 Hz to 500.00 Hz	50.00 Hz (Same for the master and slave)	No
F0-17	Acceleration time 1	0.0s to 6500.0s	Same for the master and slave	No
F0-18	Deceleration time 1	0.0s to 6500.0s	Same for the master and slave	No
F8-15	Droop control	0.00 to 10.00 Hz	1.00 Hz	Yes

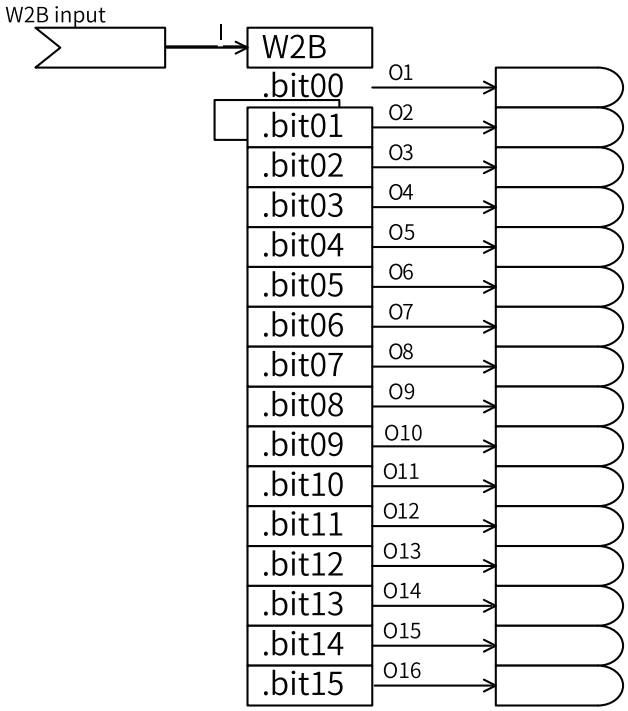
Parameter	Parameter Name	Value Range	Setting	Adjustment Required
FD-02	Local address	0: Broadcast address 1 to 247 (valid for Modbus, PROFIBUS DP, CANlink, PROFINET, and EtherCAT)	1	No
A0-00	Speed/Torque control mode	0 to 1	0	No

2.6 Free Programming Modules

2.6.1 Word-Bit Conversion

W2B Modules (A–H)

1. **Illustration**



2. **Operation**

When the input I is a word, the outputs O1 to O16 correspond to bit00 to bit15 of input I.

When the input I is a DWord, the outputs O1 to O16 correspond to bit00 to bit15 of high-order 16 bits of input I.

3. **Connection**

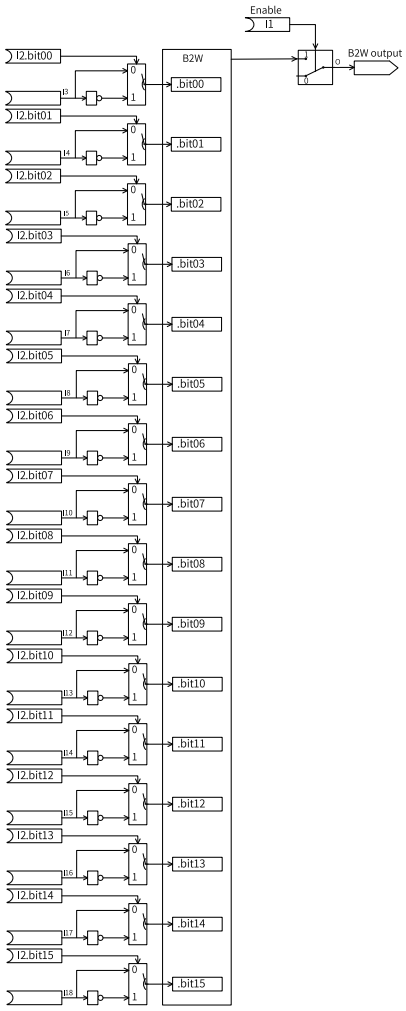
Input I: word connector, DWord connector

Outputs O1 to O16: bit connector

W2B Module		A	B	C	D	E	F	G	H
Input	I	C1-00	C1-01	C1-02	C1-03	C1-04	C1-05	C1-06	C1-07
Output	O1 (bit00)	L1-76	L1-92	L2-08	L2-24	L2-40	L2-56	L2-72	L2-88
	O2 (bit01)	L1-77	L1-93	L2-09	L2-25	L2-41	L2-57	L2-73	L2-89
	O3 (bit02)	L1-78	L1-94	L2-10	L2-26	L2-42	L2-58	L2-74	L2-90
	O4 (bit03)	L1-79	L1-95	L2-11	L2-27	L2-43	L2-59	L2-75	L2-91
	O5 (bit04)	L1-80	L1-96	L2-12	L2-28	L2-44	L2-60	L2-76	L2-92
	O6 (bit05)	L1-81	L1-97	L2-13	L2-29	L2-45	L2-61	L2-77	L2-93
	O7 (bit06)	L1-82	L1-98	L2-14	L2-30	L2-46	L2-62	L2-78	L2-94
	O8 (bit07)	L1-83	L1-99	L2-15	L2-31	L2-47	L2-63	L2-79	L2-95
	O9 (bit08)	L1-84	L2-00	L2-16	L2-32	L2-48	L2-64	L2-80	L2-96
	O10 (bit09)	L1-85	L2-01	L2-17	L2-33	L2-49	L2-65	L2-81	L2-97
	O11 (bit10)	L1-86	L2-02	L2-18	L2-34	L2-50	L2-66	L2-82	L2-98
	O12 (bit11)	L1-87	L2-03	L2-19	L2-35	L2-51	L2-67	L2-83	L2-99
	O13 (bit12)	L1-88	L2-04	L2-20	L2-36	L2-52	L2-68	L2-84	L3-00
	O14 (bit13)	L1-89	L2-05	L2-21	L2-37	L2-53	L2-69	L2-85	L3-01
	O15 (bit14)	L1-90	L2-06	L2-22	L2-38	L2-54	L2-70	L2-86	L3-02
	O16 (bit15)	L1-91	L2-07	L2-23	L2-39	L2-55	L2-71	L2-87	L3-03

B2W Modules (A–D)

1. **Illustration**



2. **Operation**

   When input I1 is set to 0, the module is disabled, and the output O is 0.

   Bit00 to bit15 of I2 are the inversion flags of I3 to I18. The value 1 indicates that the corresponding I3 to I18 input is inverted. The inverted I3 to I18 are used as bit00 to bit15 of the hexadecimal number and output to O.

3. **Connection**

   Input I1: 0 indicates disabled, and 1 indicates enabled.

   Input I2: 16-bit unsigned data

   Inputs I3 to I18: 0, 1, DI input, and bit connector input

   Output O: word connector

W2B Module		A	B	C	D
Input	I1	C1-12	C1-30	C1-48	C1-66
	I2	C1-13	C1-31	C1-49	C1-67
	I3 (bit00)	C1-14	C1-32	C1-50	C1-68
	I4 (bit01)	C1-15	C1-33	C1-51	C1-69
	I5 (bit02)	C1-16	C1-34	C1-52	C1-70
	I6 (bit03)	C1-17	C1-35	C1-53	C1-71
	I7 (bit04)	C1-18	C1-36	C1-54	C1-72
	I8 (bit05)	C1-19	C1-37	C1-55	C1-73
	I9 (bit06)	C1-20	C1-38	C1-56	C1-74
	I10 (bit07)	C1-21	C1-39	C1-57	C1-75
	I11 (bit08)	C1-22	C1-40	C1-58	C1-76
	I12 (bit09)	C1-23	C1-41	C1-59	C1-77
	I13 (bit10)	C1-24	C1-42	C1-60	C1-78
	I14 (bit11)	C1-25	C1-43	C1-61	C1-79
	I15 (bit12)	C1-26	C1-44	C1-62	C1-80
	I16 (bit13)	C1-27	C1-45	C1-63	C1-81
	I17 (bit14)	C1-28	C1-46	C1-64	C1-82
	I18 (bit15)	C1-29	C1-47	C1-65	C1-83
Output	O	L7-21	L7-22	L7-23	L7-24

2.6.2 W-DW Conversion

W-DW Modules (A–D)

1. **Illustration**

2. **Operation**

$$O=\begin{cases} O1:\dfrac{I1\times 65535+I2}{I3\times 65535+I4}, I3\times 65535+I4\neq 0 \\ O2:I1\times 65535+I2, I3\times 65535+I4=0 \end{cases}$$

When the base value with I3 as the high-order 16 bits and I4 as the low-order 16 bits is a non-zero value, the output is the result of DWord with I1 as the high-order 16 bits and I2 as the low-order 16 bits divided by the base value, which is output to O1.

When the base value with I3 as the high-order 16 bits and I4 as the low-order 16 bits is 0, the output is the DWord with I1 as the high-order 16 bits and I2 as the low-order 16 bits, which is directly output to O2.

3. **Connection**

Inputs I1 and I2: word connector, DWord connector

Inputs I3 and I4: 16-bit unsigned data

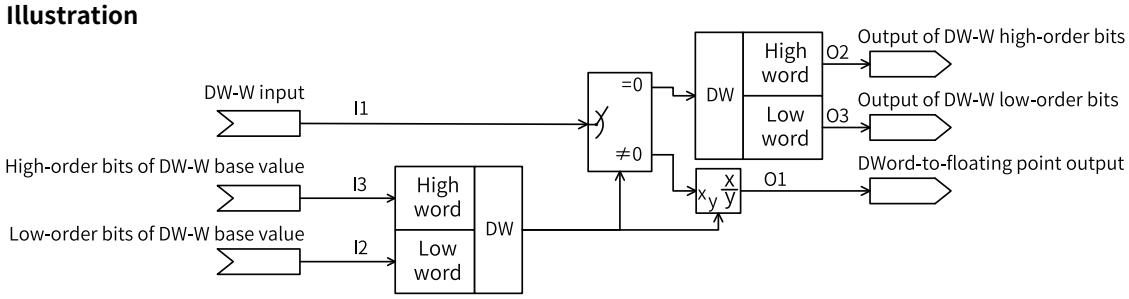
Output O1: floating-point connector

Output O2: DWord connector

W-DW Module	Input				Output	
	I1	I2	I3	I4	O1	O2
A	C2-00	C2-01	C2-02	C2-03	LD-31	L9-00
B	C2-04	C2-05	C2-06	C2-07	LD-32	L9-01
C	C2-08	C2-09	C2-10	C2-11	LD-33	L9-02
D	C2-12	C2-13	C2-14	C2-15	LD-34	L9-03

DW-W Modules (A–D)

1. **Illustration**



2. **Operation**

$$O=\begin{cases} O1:\dfrac{I1}{I2\times 65535+I3}, & I2\times 65535+I3\neq 0 \\ \begin{cases} O2:(I1>>16)\&0xFFFF \\ O3:I1\&0xFFFF \end{cases}, & I2\times 65535+I3=0 \end{cases}$$

When the base value with I2 as the high-order 16 bits and I3 as the low-order 16 bits is a non-zero value, the output is the result of I1 divided by the base value, which is output to O1.

When the base value with I2 as the high-order 16 bits and I3 as the low-order 16 bits is 0, the output O2 is the high-order 16 bits of I1, and the output O3 is the low-order 16 bits of I1.

3. **Connection**

Input I1: DWord connector

Inputs I2 and I3: unsigned data

Output O1: floating-point connector

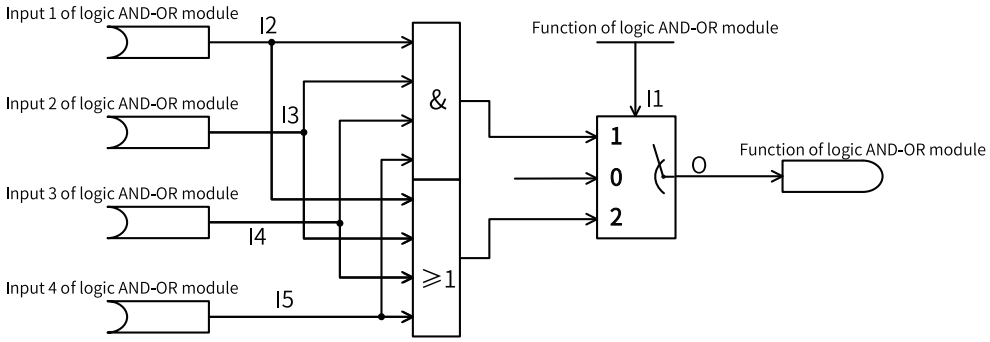
Outputs O2 and O3: word connector

W-DW Module	Input			Output		
	I1	I2	I3	O1	O2	O3
A	C2-32	C2-33	C2-34	LD-35	L7-25	L7-26
B	C2-35	C2-36	C2-37	LD-36	L7-27	L7-28
C	C2-38	C2-39	C2-40	LD-37	L7-29	L7-30
D	C2-41	C2-42	C2-43	LD-38	L7-31	L7-32

2.6.3 Logic Operations

Logic AND-OR Modules (A–L)

1. **Illustration**



2. **Operation**

When the logic AND-OR module enable selection I1 is set to 0, the module is disabled, and the output O is 0.

When the logic AND-OR module enable selection I1 is set to 1, logic AND is active, and the output O is I1 & I2 & I3 & I4.

If the inputs I1, I2, I3, and I4 are all true, the output O is true; otherwise, the output O is false. The following is the truth table.

Input				Output
I1	I2	I3	I4	O
0	X	X	X	0
X	0	X	X	0
X	X	0	X	0
X	X	X	0	0
1	1	1	1	1

When the logic AND-OR module enable selection I1 is set to 2, logic OR is active, and the output O is I1|I2|I3|I4.

If the inputs I1, I2, I3, and I4 are all false, the output O is false; otherwise, the output O is true. The following is the truth table.

Input				Output
I1	I2	I3	I4	O
1	X	X	X	1
X	1	X	X	1
X	X	1	X	1
X	X	X	1	1
0	0	0	0	0

3. **Connection**

Input I1: 0 indicates module disabled, 1 indicates logic AND, and 2 indicates logic OR.

Inputs I2, I3, I4, and I5: 0, 1, DI input, and bit connector input

Output O: bit connector

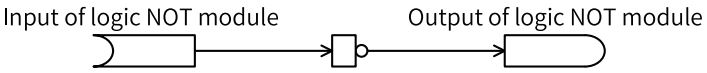
Logic AND-OR Module	Input					Output
	I1	I2	I3	I4	I5	O
A	C3-00	C3-01	C3-02	C3-03	C3-04	L3-36
B	C3-05	C3-06	C3-07	C3-08	C3-09	L3-37
C	C3-10	C3-11	C3-12	C3-13	C3-14	L3-38
D	C3-15	C3-16	C3-17	C3-18	C3-19	L3-39
E	C3-20	C3-21	C3-22	C3-23	-	L3-40
F	C3-24	C3-25	C3-26	C3-27	-	L3-41

Logic AND-OR Module	Input					Output
	I1	I2	I3	I4	I5	O
G	C3-28	C3-29	C3-30	C3-31	-	L3-42
H	C3-32	C3-33	C3-34	C3-35	-	L3-43
I	C3-36	C3-37	C3-38	C3-39	-	L3-44
J	C3-40	C3-41	C3-42	C3-43	-	L3-45
K	C3-44	C3-45	C3-46	C3-47	-	L3-46
L	C3-48	C3-49	C3-50	C3-51	-	L3-47

Note Logic AND-OR modules A–D have four inputs, and modules E–L have three inputs.

Logic NOT Modules (A–P)

1. **Illustration**



2. **Operation**

- When input I is set to 0, the module is disabled, and the output is 0.
  O = 0
- When input I is not 0, the output is the inversion of the input I.
  O = $\overline{I}$

The following is the truth table.

Input	Output
I	O
0	1
1	0

3. **Connection**

Input I: 0, 1, DI input, and bit connector input

Output O: bit connector

Logic NOT Module	Input	Output
	I	O
A	C3-56	L3-52
B	C3-57	L3-53
C	C3-58	L3-54
D	C3-59	L3-55
E	C3-60	L3-56
F	C3-61	L3-57
G	C3-62	L3-58
H	C3-63	L3-59
I	C3-64	L3-60
J	C3-65	L3-61
K	C3-66	L3-62
L	C3-67	L3-63
M	C3-68	L3-64
N	C3-69	L3-65
O	C3-70	L3-66
P	C3-71	L3-67

Logic XOR/XNOR Modules (A–H)

1. **Illustration**

2. **Operation**

- When the logic XOR/XNOR module enable selection I1 is set to 0, the module is disabled. O = 0
- When the logic XOR/XNOR module enable selection I1 is set to 1, logic XOR is active. O = (`I1 & I2)|(I1 &`I2)
- When the logic XOR/XNOR module enable selection I1 is set to 2, logic XNOR is active. O = (I1 & I2)|(`I1 &`I2)

When I1 and I2 are the same, the output is 0; when I1 and I2 are different, the output is 1. The following is the truth table.

Input		Output
I1	I2	O
0	0	0
1	0	1
0	1	1
1	1	0

When I1 and I2 are the same, the output is 1; when I1 and I2 are different, the output is 0. The following is the truth table.

Input		Output
I1	I2	O
0	0	1
1	0	0
0	1	0
1	1	1

3. **Connection**

Input I1: 0 indicates module disabled, 1 indicates XOR, and 2 indicates XNOR.

Inputs I2 and I3: 0, 1, DI input, and bit connector input

Output O: bit connector

Table 2–6

Logic XOR/XNOR Module	Input			Output
	I1	I2	I3	O
A	C3-72	C3-73	C3-74	L3-68
B	C3-75	C3-76	C3-77	L3-69
C	C3-78	C3-79	C3-80	L3-70
D	C3-81	C3-82	C3-83	L3-71
E	C3-84	C3-85	C3-86	L3-72
F	C3-87	C3-88	C3-89	L3-73
G	C3-90	C3-91	C3-92	L3-74
H	C3-93	C3-94	C3-95	L3-75

2.6.4 Arithmetic Operations

Absolute Value Modules (A–H)

1. **Illustration**

2. **Operation**

$$O=|I|$$

$$SN=\begin{cases}1, I<0\\0, I\geqslant 0\end{cases}$$

The output O is the absolute value of input I. When the input I is a negative value, SN is 1; otherwise, SN is 0.

3. **Connection**

Input I: AI, HDI, Aim, motor-driven potentiometer, PID, word connector, DWord connector, and floating-point connector

Output O: word connector, DWord connector, and floating-point connector

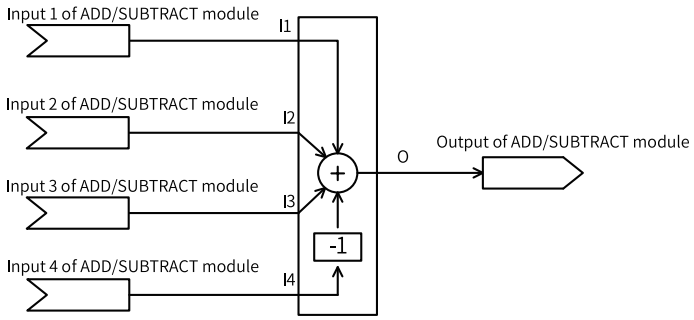
Output SN: bit connector

Absolute Value Module	Input	Output	
	I	O	SN
A	C4-00	LD-08	L4-16
B	C4-01	LD-09	L4-17
C	C4-02	LD-10	L4-18
D	C4-03	LD-11	L4-19
E	C4-04	LD-12	L4-20
F	C4-05	L9-08	L4-21
G	C4-06	L9-09	L4-22
H	C4-07	L9-10	L4-23

Note The modules A–E are floating-point absolute value modules, and the modules F–G are fixed-point absolute value modules.

ADD/SUBTRACT Modules (A–H)

1. **Illustration**



2. **Operation**

O = I1 + I2 + I3 – I4

The output O is the sum of inputs I1, I2, and I3 minus I4.

3. **Connection**

Inputs I1, I2, I3, and I4: AI, HDI, Aim, motor-driven potentiometer, PID, word connector, and floating-point connector

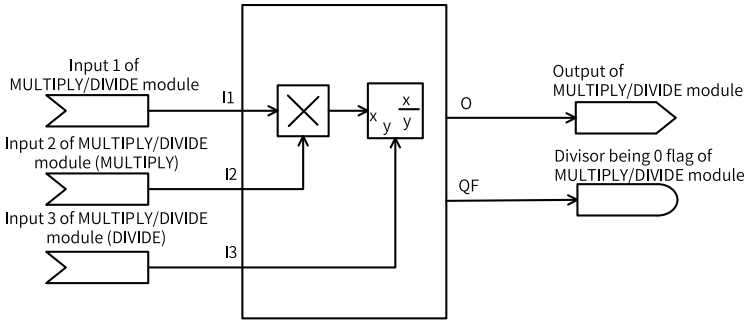
Output O: DWord connector and floating-point connector

ADD/SUBTRACT Module	Input				Output
	I1	I2	I3	I4	O
A	C4-08	C4-09	C4-10	C4-11	LD-13
B	C4-12	C4-13	C4-14	C4-15	LD-14
C	C4-16	C4-17	C4-18	C4-19	LD-15
D	C4-20	C4-21	C4-22	C4-23	LD-16
E	C4-24	C4-25	C4-26	C4-27	LD-17
F	C4-28	C4-29	C4-30	C4-31	L9-11
G	C4-32	C4-33	C4-34	C4-35	L9-12
H	C4-36	C4-37	C4-38	C4-39	L9-13

Note The modules A–E are floating-point ADD/SUBTRACT modules, and the modules F–H are fixed-point ADD/SUBTRACT modules.

MULTIPLY/DIVIDE Modules (A–H)

1. **Illustration**



2. **Operation**

$$O = \begin{cases} I1 \times I2, I3 = 0 \\ \frac{I1 \times I2}{I3}, I3 \neq 0 \\ 0 \quad , I3 = 0 \end{cases}$$

$$QF = \begin{cases} 1 \ , I3 = 0 \\ 0 \ , I3 \neq 0 \end{cases}$$

When I3 is set to 0, the output is the product of I1 and I2.

When I3 is set to others, if the I3 input value is 0, the output is 0, and the divisor being 0 flag is 1; if the I3 input value is not 0, the output is the product of I1 and I2 divided by I3, and the divisor being 0 flag is 0.

3. **Connection**

Inputs I1, I2, and I3: AI, HDI, Aim, motor-driven potentiometer, PID, word connector, DWord connector, and floating-point connector

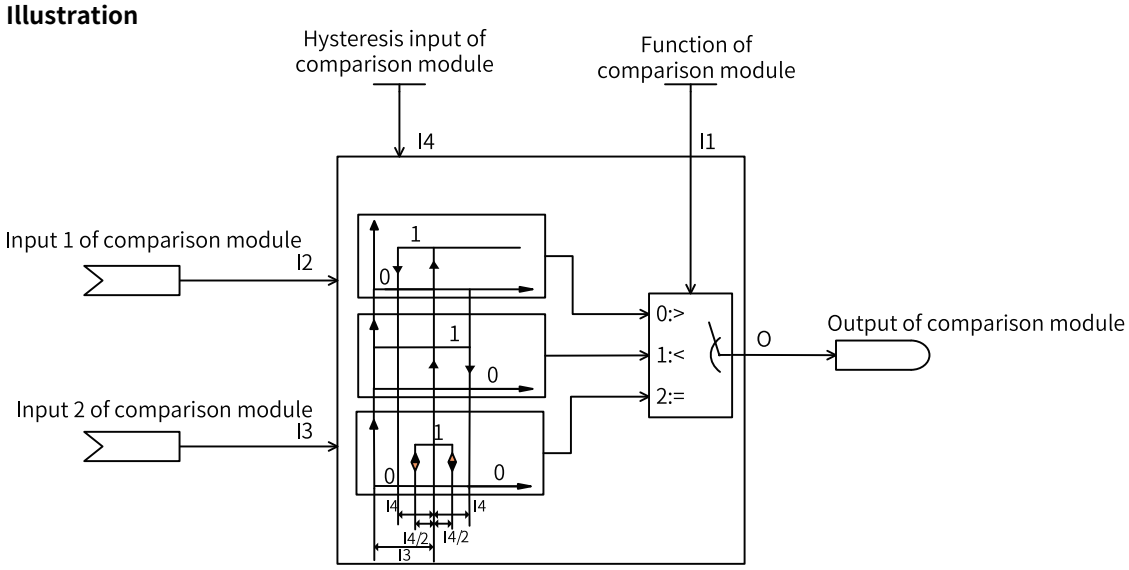
Output O: DWord connector and floating-point connector

MULTIPLY/DIVIDE Module	Input			Output
	I1	I2	I3	O
A	C4-40	C4-41	C4-42	LD-18
B	C4-43	C4-44	C4-45	LD-19
C	C4-46	C4-47	C4-48	LD-20
D	C4-49	C4-50	C4-51	LD-21
E	C4-52	C4-53	C4-54	LD-22
F	C4-55	C4-56	C4-57	L9-14
G	C4-58	C4-59	C4-60	L9-15
H	C4-61	C4-62	C4-63	L9-16

Note The modules A–E are floating-point MULTIPLY/DIVIDE modules, and the modules F–H are byte MULTIPLY/DIVIDE modules.

Comparison Modules (A–H)

1. **Illustration**



2. **Operation**

The hysteresis input I4 implements suppression of frequent on-off.

- If the comparison module function selection I1 is set to 0, the output O keeps low level when I2 increases from 0 toward I3 in the positive direction; it changes from low level to high level when I2 increases to a value greater than I3; and it remains high when I2 continues to increase. When I2 decreases, the output O remains high as long as I2 is greater than I3 minus I4; it changes from high level to low level only when I2 is smaller than I3 minus I4.
- If the comparison module function selection I1 is set to 1, the output O keeps high level when I2 increases from 0 toward the sum of I3 and I4 in the positive direction; it changes from high level to low level when I2 increases to a value greater than the sum of I3 and I4; and it remains low when I2 continues to increase. When I2 decreases, the output O remains low as long as I2 is greater than I3; it changes from low level to high level only when I2 is smaller than I3.
- If the comparison module function selection I1 is set to 2, the output is high level when I2 is between (I3 – I4) and (I3 + I4/2); otherwise, it is low level.

3. **Connection**

Input I1: 0: Module disabled; 1: Input 1 > Input 2; 2: Input 1 < Input 2; 3: Input 1 = Input 2.

Inputs I2 and I3: AI, HDI, Aim, motor-driven potentiometer, PID, word connector, DWord connector, and floating-point connector

Input I4: floating-point number with two decimal places

Output O: bit connector

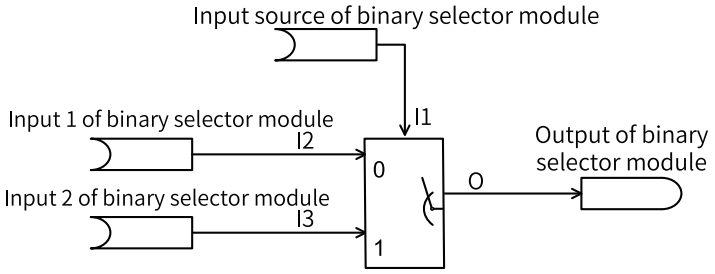
Comparison Module	Input				Output
	I1	I2	I3	I4	O
A	C4-64	C4-65	C4-66	C4-67	L4-00
B	C4-68	C4-69	C4-70	C4-71	L4-01
C	C4-72	C4-73	C4-74	C4-75	L4-02
D	C4-76	C4-77	C4-78	C4-79	L4-03
E	C4-80	C4-81	C4-82	C4-83	L4-04
F	C4-84	C4-85	C4-86	C4-87	L4-05
G	C4-88	C4-89	C4-90	C4-91	L4-06
H	C4-92	C4-93	C4-94	C4-95	L4-07

Note The modules A–E are floating-point comparison modules, and the modules F–H are fixed-point comparison modules.

2.6.5 Switch Functions

Binary Selector Modules (A–H)

1. **Illustration**



2. **Operation**

$$O = \begin{cases} I2, I1=0 \\ I3, I1=1 \end{cases}$$

When the input I1 of the binary selector module is set to 0, the output O is I2; when the input I1 is set to 1, the output O is I3.

3. **Connection**

Inputs I1, I2, and I3: 0, 1, DI input, DWord connector input, and bit connector input

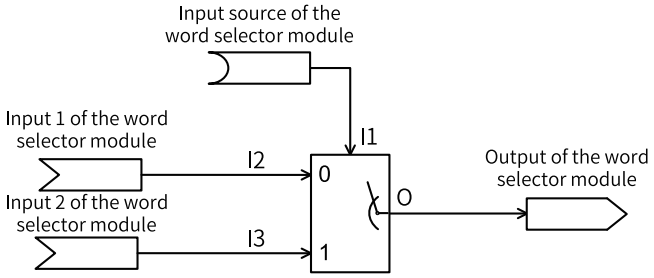
Output O: bit connector

Binary Selector Module	Input			Output
	I1	I2	I3	O
A	C5-00	C5-01	C5-02	L3-04
B	C5-03	C5-04	C5-05	L3-05

Binary Selector Module	Input			Output
	I1	I2	I3	O
C	C5-06	C5-07	C5-08	L3-06
D	C5-09	C5-10	C5-11	L3-07
E	C5-12	C5-13	C5-14	L3-08
F	C5-15	C5-16	C5-17	L3-09
G	C5-18	C5-19	C5-20	L3-10
H	C5-21	C5-22	C5-23	L3-11

Word Selector Modules (A–D)

1. **Illustration**



2. **Operation**

$$O = \begin{cases} I2, I1=0 \\ I3, I1=1 \end{cases}$$

When input selection I1 of the word selector module is set to 0, the output O is I2; when I1 is set to 1, the output O is I3.

3. **Connection**

Input I1: 0, 1, DI input, and bit connector input

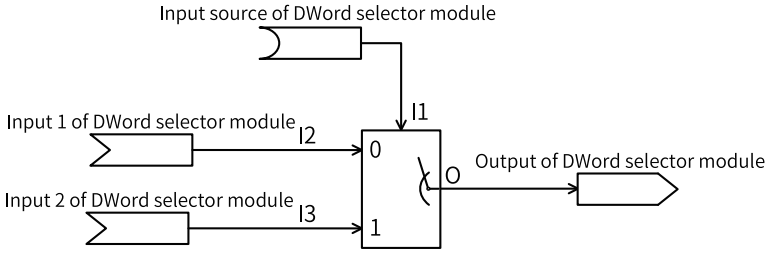
Inputs I1 and I2: word connector, DWord connector

Output O: word connector

Word Selector Module	Input			Output
	I1	I2	I3	O
A	C5-24	C5-25	C5-26	L7-41
B	C5-27	C5-28	C5-29	L7-42
C	C5-30	C5-31	C5-32	L7-43
D	C5-33	C5-34	C5-35	L7-44

DWord Selector Modules (A–D)

1. **Illustration**



2. **Operation**

$$O = \begin{cases} I2, I1=0 \\ I3, I1=1 \end{cases}$$

When input selection I1 of the DWord selector module is set to 0, the output O is I2; when I1 is set to 1, the output O is I3.

3. **Connection**

Input I1: 0, 1, DI input, and bit connector input

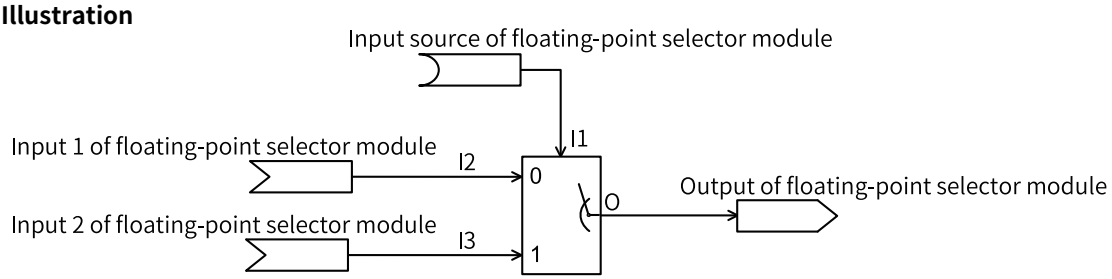
Inputs I2 and I3: word connector, DWord connector

Output O: DWord connector

DWord Selector Module	Input			Output
	I1	I2	I3	O
A	C5-36	C5-37	C5-38	L9-04
B	C5-39	C5-40	C5-41	L9-05
C	C5-42	C5-43	C5-44	L9-06
D	C5-45	C5-46	C5-47	L9-07

Floating-point Number Selector Modules (A–H)

1. **Illustration**



2. **Operation**

$$O = \begin{cases} I2, I1=0 \\ I3, I1=1 \end{cases}$$

3. **Connection**

Input I1: 0, 1, DI input, and bit connector input

Inputs I2 and I3: AI, HDI, Aim, motor-driven potentiometer, PID, and floating-point connector

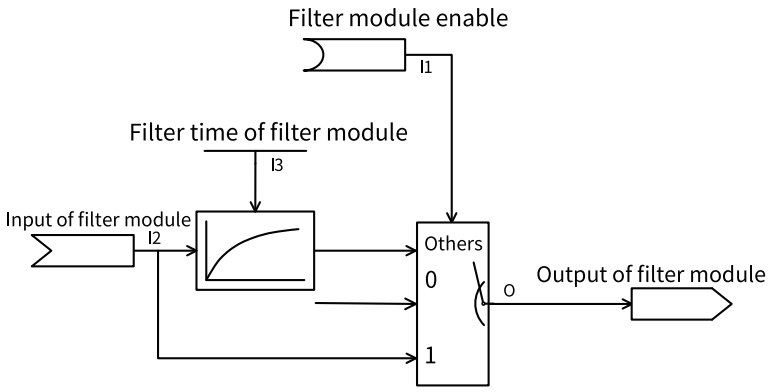
Output O: floating-point connector

Floating-point Number Selector Module	Input			Output
	I1	I2	I3	O
A	C5-48	C5-49	C5-50	LD-00
B	C5-51	C5-52	C5-53	LD-01
C	C5-54	C5-55	C5-56	LD-02
D	C5-57	C5-58	C5-59	LD-03
E	C5-60	C5-61	C5-62	LD-04
F	C5-63	C5-64	C5-65	LD-05
G	C5-66	C5-67	C5-68	LD-06
H	C5-69	C5-70	C5-71	LD-07

2.6.6 Control Functions

Filter Modules (A–F)

1. **Illustration**



2. **Operation**

If module enable selection I1 is set to 0, the module is disabled, and the output is 0.

If module enable selection I1 is not 0, if the input value is 1, the filter is disabled, and the output O is I2; if the input value is 0, the output O is the filter value of input I.

3. **Connection**

Input I1: 0: Module disabled; 1: Filter disabled; 2: Filter enabled, DI input, bit connector input

Input I2: AI, HDI, Aim, motor-driven potentiometer, PID, word connector, and floating-point connector

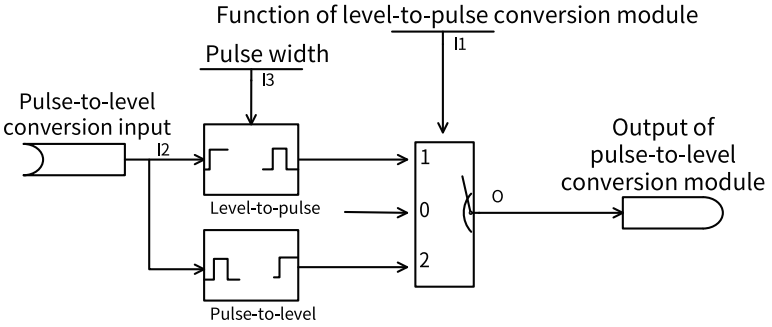
Input I3: floating-point number with three decimal places

Output O: DWord connector and floating-point connector

Filter Module	Input			Output
	I1	I2	I3	O
A	C6-00	C6-01	C6-02	LD-23
B	C6-03	C6-04	C6-05	LD-24
C	C6-06	C6-07	C6-08	LD-25
D	C6-09	C6-10	C6-11	LD-26
E	C6-12	C6-13	C6-14	L9-17
F	C6-15	C6-16	C6-17	L9-18

Level-to-Pulse Conversion Modules (A–D)

1. **Illustration**

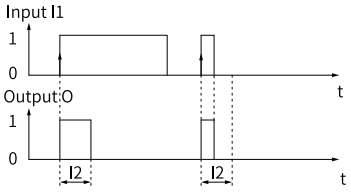


2. **Operation**

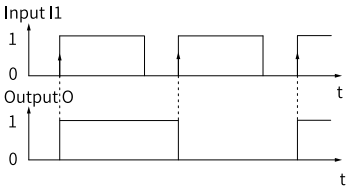
When module enable selection I1 is set to 0, the module is disabled, and the output is 0.

When module enable selection I1 is set to 1, level-to-pulse conversion is active, and the output is set to high level within the pulse time I3 on the rising edge of the input I2.

If input I1 is 0, the output becomes 0 immediately, regardless of whether the pulse duration is reached.



When module enable selection I1 is set to 2, pulse-to-level conversion is active. The output is set to high level on the first rising edge and low level on the second rising edge of the input I2. Then the output is set to high level on every odd-numbered rising edges and low level on every even-numbered rising edges.



3. **Connection**

Input I1: 0: Module disabled; 1: Conversion from level to pulse; 2: Conversion from pulse to level.

Input I2: 0, 1, DI input, and bit connector input

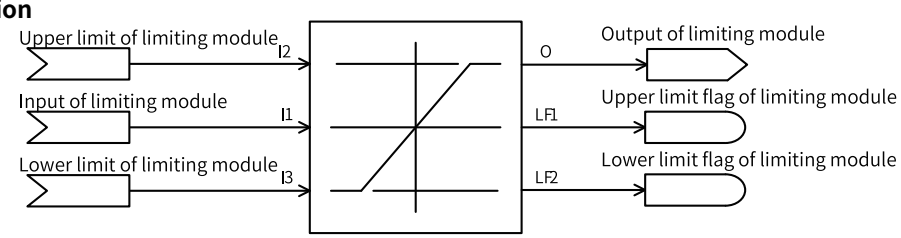
Input I3: floating-point number with two decimal places

Output O: bit connector

Level-to-Pulse Conversion Module	Input			Output
	I1	I2	I3	O
A	C6-24	C6-25	C6-26	L3-84
B	C6-27	C6-28	C6-29	L3-85
C	C6-30	C6-31	C6-32	L3-86
D	C6-33	C6-34	C6-35	L3-87

Limiting Modules (A–F)

1. **Illustration**



2. **Operation**

$$O=\begin{cases} I1, I3 \le I1 \le I2 \\ I2, I1 \ge I2 \\ I3, I1 \le I3 \end{cases}$$

$$LF1=\begin{cases}0, I3\le I1\le I2\\1, I1\ge I2\end{cases}$$

$$LF1=\begin{cases}0, I3\le I1\le I2\\1, I1\le I3\end{cases}\quad LF1=\begin{cases}0, I3\le I1\le I2\\1, I1\le I3\end{cases}$$

When the input I1 is greater than the upper limit I2, the output O is I2, and the upper limit flag LF1 is set to 1; when the input I1 is less than the lower limit I3, the output O is I3, and the lower limit flag LF2 is set to 1; when the input I1 is between the upper and lower limits, the output is the input value.

3. **Connection**

Inputs I1, I2, and I3: AI, HDI, Aim, motor-driven potentiometer, PID, word connector, and floating-point connector

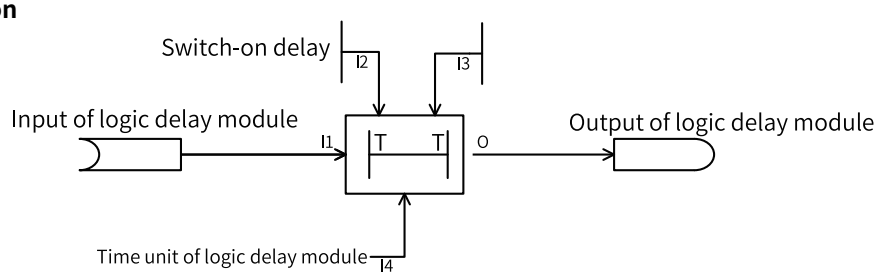
Output O: DWord connector and floating-point connector

Outputs LF1 and LF2: bit connector

Limiting Module	Input			Output		
	I1	I2	I3	O	LF1	LF2
A	C6-36	C6-37	C6-38	LD-27	L4-48	L4-49
B	C6-39	C6-40	C6-41	LD-28	L4-50	L4-51
C	C6-42	C6-43	C6-44	LD-29	L4-52	L4-53
D	C6-45	C6-46	C6-47	LD-30	L4-54	L4-55
E	C6-48	C6-49	C6-50	L9-19	L4-56	L4-57
F	C6-51	C6-52	C6-53	L9-20	L4-58	L4-59

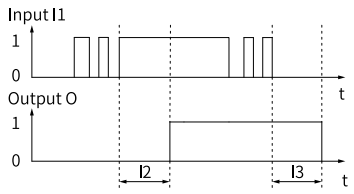
Logic Delay Modules (A–H)

1. **Illustration**



2. **Operation**

The output O has switch-on delay when the input I1 changes from low level to high level, and the delay time is determined by the switch-on delay time I2 and the time unit I4. It also has switch-off delay when the input I1 changes from high level to low level, and the delay time is determined by the switch-off delay time I3 and the time unit I4. During the delay, the pulse signals less than the delay time will be filtered out. See the following figure.



3. **Connection**

Input I1: 0, 1, DI input, and bit connector input

Inputs I2 and I3: unsigned data

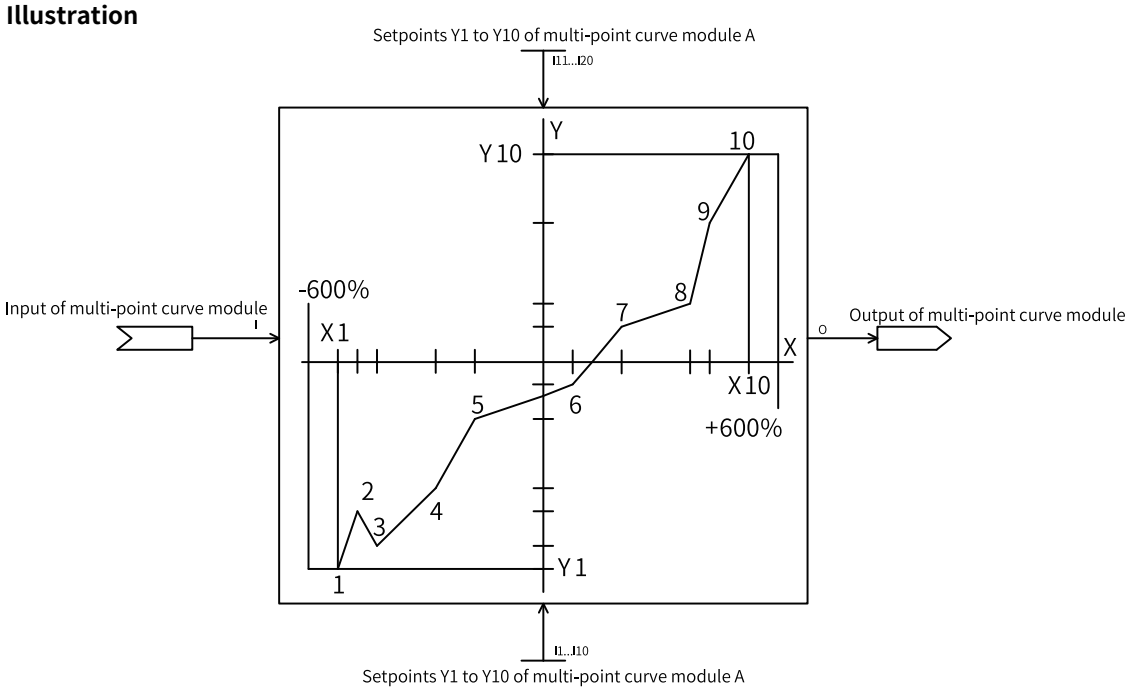
Input I4: 0: No delay; 1: 10 ms; 10: 100 ms; 100: 1s; 1000: 10s; 6000: 1 min; 12000: 2 min.

Output O: bit connector

Logic Delay Module	Input				Output
	I1	I2	I3	I4	O
A	C6-54	C6-55	C6-56	C6-57	L3-20
B	C6-58	C6-59	C6-60	C6-61	L3-21
C	C6-62	C6-63	C6-64	C6-65	L3-22
D	C6-66	C6-67	C6-68	C6-69	L3-23
E	C6-70	C6-71	C6-72	C6-73	L3-24
F	C6-74	C6-75	C6-76	C6-77	L3-25
G	C6-78	C6-79	C6-80	C6-81	L3-26
H	C6-82	C6-83	C6-84	C6-85	L3-27

2.6.7 Multi-point Curve

1. **Illustration**



2. **Operation**

The set coordinates are valid only when the following condition is met: X1 ⩽ X2 ⩽ ... ⩽ X10. When the input is beyond the valid coordinate points, the output is the ordinate of the adjacent valid coordinate point; when the input is within the valid coordinate points, the ordinate corresponding to the output is calculated based on the curve.

When the input coordinates meet the condition and the quantity is less than 10, if the last input abscissa is a negative value, the last negative abscissa and the abscissa with the value of 0 after it are retained, and the other coordinate values after it are discarded. If the last input abscissa is a positive value, the last positive abscissa is retained, and other coordinate values after it are discarded.

If the condition X1 ⩽ X2 ⩽ ... ⩽ X10 is not met, the AC drive reports L32.4. If two points have the same X coordinate but different Y coordinates, the AC drive also reports L32.4.

3. **Connection**

Input I: floating-point connector

Inputs I1 to I20: floating-point number with one decimal place

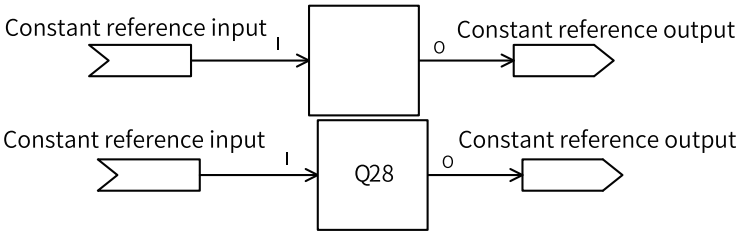
Output O: floating-point connector

Multi-point Curve Module		A	B
Input	I	C7-00	C7-21
	I1 (X1)	C7-01	C7-22
	I2 (X2)	C7-02	C7-23
	I3 (X3)	C7-03	C7-24
	I4 (X4)	C7-04	C7-25
	I5 (X5)	C7-05	C7-26
	I6 (X6)	C7-06	C7-27
	I7 (X7)	C7-07	C7-28
	I8 (X8)	C7-08	C7-29
	I9 (X9)	C7-09	C7-30
	I10 (X10)	C7-10	C7-31
	I11 (Y1)	C7-11	C7-32
	I12 (Y2)	C7-12	C7-33
	I13 (Y3)	C7-13	C7-34
	I14 (Y4)	C7-14	C7-35
	I15 (Y5)	C7-15	C7-36
	I16 (Y6)	C7-16	C7-37
	I17 (Y7)	C7-17	C7-38
	I18 (Y8)	C7-18	C7-39
	I19 (Y9)	C7-19	C7-40
	I20 (Y10)	C7-20	C7-41
Output	O	LD-46	LD-47

2.6.8 Constant Value

Constant Value Setpoints (1–42)

1. **Illustration**



2. **Operation**

O = I

The output O is equal to the input I.

Constant value setpoints 1–5 are floating-point numbers with two decimal places, and the value range is –300.00 to +300.00.

Constant value setpoints 6–21 are floating-point numbers with one decimal place, and the value range is –3000.0 to +3000.0.

Constant value setpoints 22–26 are floating-point numbers with two decimal places, which are converted into Q28 fixed-point numbers for output, and the value range is –300.00 to +300.00.

Constant value setpoints 27–42 are fixed-point numbers, and the value range is 0 to 65535.

3. **Connection**

Input I: unsigned number, floating-point number with one decimal place, and floating-point number with two decimal places

Output O: word connector and floating-point connector

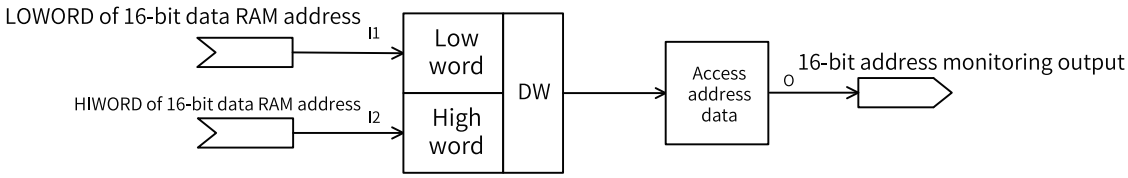
Constant Value Setting Module	Input	Output	Remarks
	I	O	
1	C8-00	LD-65	Floating-point number with two decimal places
2	C8-01	LD-66	Floating-point number with two decimal places
3	C8-02	LD-67	Floating-point number with two decimal places
4	C8-03	LD-68	Floating-point number with two decimal places
5	C8-04	LD-69	Floating-point number with two decimal places
6	C8-05	LD-70	Floating-point number with one decimal place
7	C8-06	LD-71	Floating-point number with one decimal place
8	C8-07	LD-72	Floating-point number with one decimal place
9	C8-08	LD-73	Floating-point number with one decimal place
10	C8-09	LD-74	Floating-point number with one decimal place
11	C8-10	LD-75	Floating-point number with one decimal place
12	C8-11	LD-76	Floating-point number with one decimal place
13	C8-12	LD-77	Floating-point number with one decimal place
14	C8-13	LD-78	Floating-point number with one decimal place
15	C8-14	LD-79	Floating-point number with one decimal place
16	C8-15	LD-80	Floating-point number with one decimal place
17	C8-16	LD-81	Floating-point number with one decimal place

Constant Value Setting Module	Input	Output	Remarks
	I	O	
18	C8-17	LD-82	Floating-point number with one decimal place
19	C8-18	LD-83	Floating-point number with one decimal place
20	C8-19	LD-84	Floating-point number with one decimal place
21	C8-20	LD-85	Floating-point number with one decimal place
22	C8-21	L7-00	Floating-point number converted into Q28 fixed-point number
23	C8-22	L7-01	Floating-point number converted into Q28 fixed-point number
24	C8-23	L7-02	Floating-point number converted into Q28 fixed-point number
25	C8-24	L7-03	Floating-point number converted into Q28 fixed-point number
26	C8-25	L7-04	Floating-point number converted into Q28 fixed-point number
27	C8-26	L7-05	Fixed-point number
28	C8-27	L7-06	Fixed-point number
29	C8-28	L7-07	Fixed-point number
30	C8-29	L7-08	Fixed-point number
31	C8-30	L7-09	Fixed-point number
32	C8-31	L7-10	Fixed-point number
33	C8-32	L7-11	Fixed-point number
34	C8-33	L7-12	Fixed-point number
35	C8-34	L7-13	Fixed-point number
36	C8-35	L7-14	Fixed-point number
37	C8-36	L7-15	Fixed-point number
38	C8-37	L7-16	Fixed-point number
39	C8-38	L7-17	Fixed-point number
40	C8-39	L7-18	Fixed-point number
41	C8-40	L7-19	Fixed-point number
42	C8-41	L7-20	Fixed-point number

2.6.9 Any Parameter Control

Any 16-bit Data Address Monitoring (1–5)

1. **Illustration**



2. **Operation**

   The 32-bit address with I1 as the LOWORD and I2 as the HIWORD is used to locate the data for output.

   The range of addresses that can be monitored is as follows:

   0x20000000 to 0x2001FFFE

   0x24000000 to 0x2404FFFE

3. **Connection**

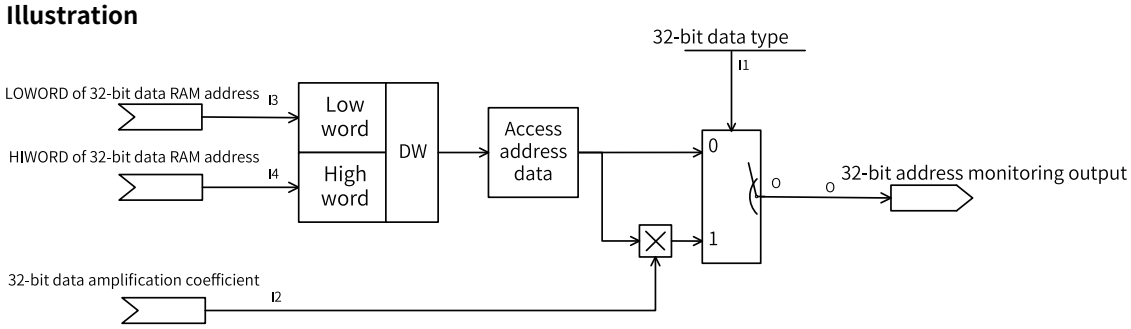
   Inputs I1 and I2: hexadecimal unsigned data

   Output O: word connector

16-Bit Data Address Monitoring	Input		Output
	I1	I2	O
1	C9-00	C9-01	L7-36
2	C9-02	C9-03	L7-37
3	C9-04	C9-05	L7-38
4	C9-06	C9-07	L7-39
5	C9-08	C9-09	L7-40

Any 32-bit Data Address Monitoring (1–5)

1. **Illustration**



2. **Operation**

   The 32-bit address with I1 as the LOWORD and I2 as the HIWORD is used to locate the data for output. If data type selection I3 is set to 0, the data is directly output to O; if I3 is set to 1, the data is multiplied by the amplification factor I4 and then output to O.

   The range of addresses that can be monitored is as follows:

   0x20000000 to 0x2001FFFC

   0x24000000 to 0x2404FFFC

3. **Connection**

   Inputs I1 and I2: unsigned data

   Inputs I3 and I4: hexadecimal unsigned data

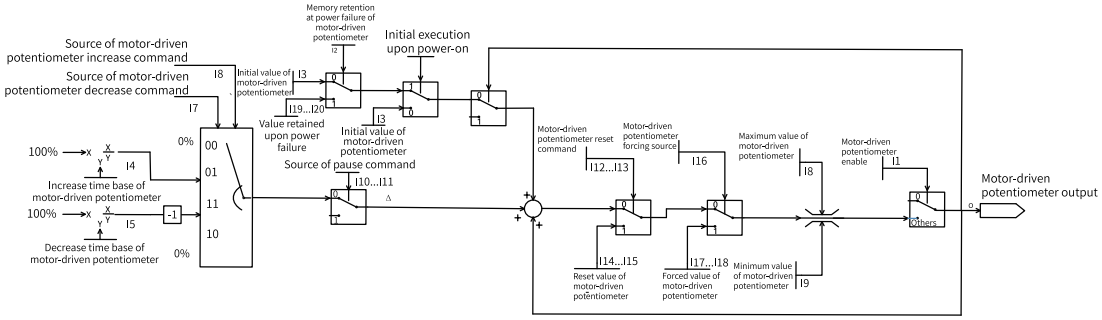
Output O: word connector

32-Bit Data Address Monitoring	Input				Output
	I1	I2	I3	I4	O
1	C9-10	C9-11	C9-12	C9-13	L9-21
2	C9-14	C9-15	C9-16	C9-17	L9-22
3	C9-18	C9-19	C9-20	C9-21	L9-23
4	C9-22	C9-23	C9-24	C9-25	L9-24
5	C9-26	C9-27	C9-28	C9-29	L9-25

2.6.10 Motor-driven Potentiometer

Constant Value Setpoints (1–42)

1. **Illustration**



2. **Operation**

- When I1 is set to 0, the motor-driven potentiometer is disabled, and the output O is 0; when I1 is set to 1, the motor-driven potentiometer is enabled.
- When I2 is set to 1, the motor-driven potentiometer restores the values retained upon power failure (I19 and I20) upon first power-on; when I2 is set to 0, the motor-driven potentiometer restores the initial value (I3) upon first power-on.
- When I1 is enabled, if the values retained upon power failure are not restored, the output O of the motor-driven potentiometer is the initial value I3.
- When the increase command source I5 is 1, the motor-driven potentiometer increases the output O at the speed of the increase time base I4; when the increase command source I6 is 1, the motor-driven potentiometer increases the output O at the speed of the increase time base I7.
- When the value of the motor-driven potentiometer increases, the maximum output O is the maximum output value I8; when the value of the motor-driven potentiometer decreases, the minimum output O is the minimum output value I9.
- When I10 and I11 are 1, the output O stops changing; when I10 and I11 become 0, the output O continues to change.
- When I12 and I13 are 1, the output O is reset to a specified value: if the reset value source I14 is 0, the output O is reset to the reset value digital setting I15; if the reset value source I14 is others, the output O is reset to the value specified by I14.
- When I16is 1, the output O is forcibly set to a specified value: if the force value source I17 is 0, the output O is forcibly set to the forced value digital setting I18; if the force value source I17 is others, the output O is forced to be the value specified by I17.

- I19 and I20 are the per-unit values of the retained output values of the motor-driven potentiometer after Q28 conversion.

3. **Connection**

   Input I: unsigned number, floating-point number with one decimal place, and floating-point number with two decimal places

   Output O: word connector and floating-point connector

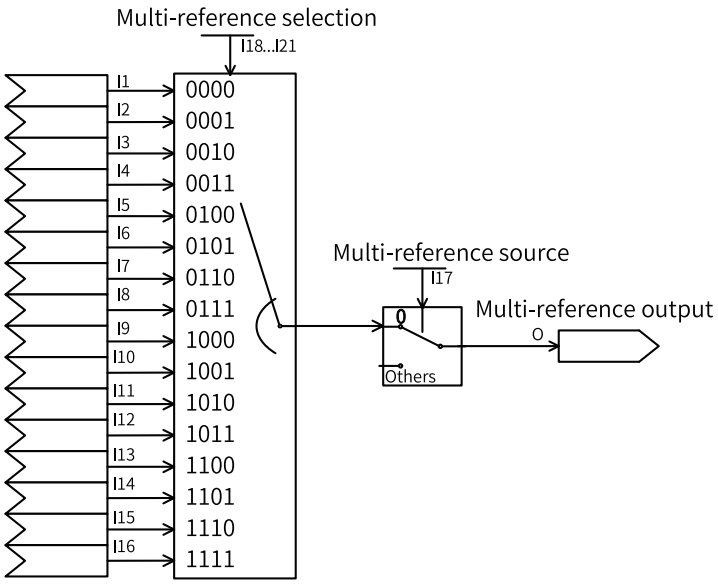
Motor-driven Potentiometer			Remarks
Input	I1	FB-20	Motor-driven potentiometer enable
	I2	FB-21	Retentive upon power failure enable
	I3	FB-22	Initial value after power-on
	I4	FB-23	Increase speed
	I5	FB-24	Decrease speed
	I6	FB-25	Increase or decrease according to the set rate when the increase or decrease command is active
	I7	FB-26	The output value remains unchanged when the increase and decrease commands are active or inactive at the same time.
	I8	FB-27	Maximum value
	I9	FB-28	Minimum value
	I10	FB-29	High level indicates pause and low level indicates continue.
	I11	FB-30	-
	I12	FB-31	Reset is triggered on the rising edge of the reset command. The motor-driven potentiometer is reset to the set value.
	I13	FB-32	-
	I14	FB-33	-
	I15	FB-34	-
	I16	FB-35	High level indicates forcing enabled and low level indicates forcing disabled.
	I17	FB-36	-
	I18	FB-37	-
	I19	FB-38	Per-unit value of the value retained upon power failure after Q28 conversion
	I20	FB-39	-

Motor-driven Potentiometer			Remarks
Output	O	LD-45	Final output
	ForceVal	LD-39	Force value of motor-driven potentiometer
	ResetVal	LD-40	Reset value of motor-driven potentiometer
	MaxVal	LD-41	Maximum value of motor-driven potentiometer
	MinVal	LD-42	Minimum value of motor-driven potentiometer
	InitVal	LD-43	Initial value of motor-driven potentiometer
	ProcessOutput	LD-44	Process operation output

2.6.11 Multi-reference

Multi-reference Module

1. **Illustration**



2. **Operation**

When the multi-reference source I17 is set to 0, the 4-bit binary number of multi-reference selection I18 to I21 map to multi-reference I1 to I16, and the corresponding multi-reference value is output to O.

When the multi-reference source I17 is set to others, the multi-reference value selected by using the corresponding method is output to O.

Multi-reference	I21 (BIT3)	I20 (BIT2)	I19 (BIT1)	I18 (BIT0)	Actual Effective Value
Multi-reference 1	0	0	0	0	I1
Multi-reference 2	0	0	0	1	I2
Multi-reference 3	0	0	1	0	I3
Multi-reference 4	0	0	1	1	I4
Multi-reference 5	0	1	0	0	I5

Multi-reference	I21 (BIT3)	I20 (BIT2)	I19 (BIT1)	I18 (BIT0)	Actual Effective Value
Multi-reference 6	0	1	0	1	I6
Multi-reference 7	0	1	1	0	I7
Multi-reference 8	0	1	1	1	I8
Multi-reference 9	1	0	0	0	I9
Multi-reference 10	1	0	0	1	I10
Multi-reference 11	1	0	1	0	I11
Multi-reference 12	1	0	1	1	I12
Multi-reference 13	1	1	0	0	I13
Multi-reference 14	1	1	0	1	I14
Multi-reference 15	1	1	1	0	I15
Multi-reference 16	1	1	1	1	I16

3. **Connection**

Inputs I1 to I16: floating-point number with one decimal place

Input I17: AI, pulse, PID, preset frequency, and floating-point connector

Inputs I18 to I21: 0, 1, DI input, and bit connector input

Output O: floating-point connector and system information

Multi-reference			Output Connector	
Input	I1	FC-00	SetVal1	LD-49
	I2	FC-01	SetVal2	LD-50
	I3	FC-02	SetVal3	LD-51
	I4	FC-03	SetVal4	LD-52
	I5	FC-04	SetVal5	LD-53
	I6	FC-05	SetVal6	LD-54
	I7	FC-06	SetVal7	LD-55
	I8	FC-07	SetVal8	LD-56
	I9	FC-08	SetVal9	LD-57
	I10	FC-09	SetVal10	LD-58
	I11	FC-10	SetVal11	LD-59
	I12	FC-11	SetVal12	LD-60
	I13	FC-12	SetVal13	LD-61
	I14	FC-13	SetVal14	LD-62
	I15	FC-14	SetVal15	LD-63
	I16	FC-15	SetVal16	LD-64
	I17	FC-51	-	-
	I18	FC-55	-	-
	I19	FC-56	-	-
	I20	FC-57	-	-
	I21	FC-58	CurSel	FC-52/U2-05
Output	O	LD-48/FC-53/U2-06	-	-

3 Troubleshooting

3.1 Common Faults and Diagnosis

3.1.1 Display of Alarms and Faults

When a fault occurs during running, the AC drive stops output immediately, the fault indicator becomes steady on, and the contact of the fault relay acts. The operating panel displays the fault code, such as E002.1. The following figure shows the fault display screen.

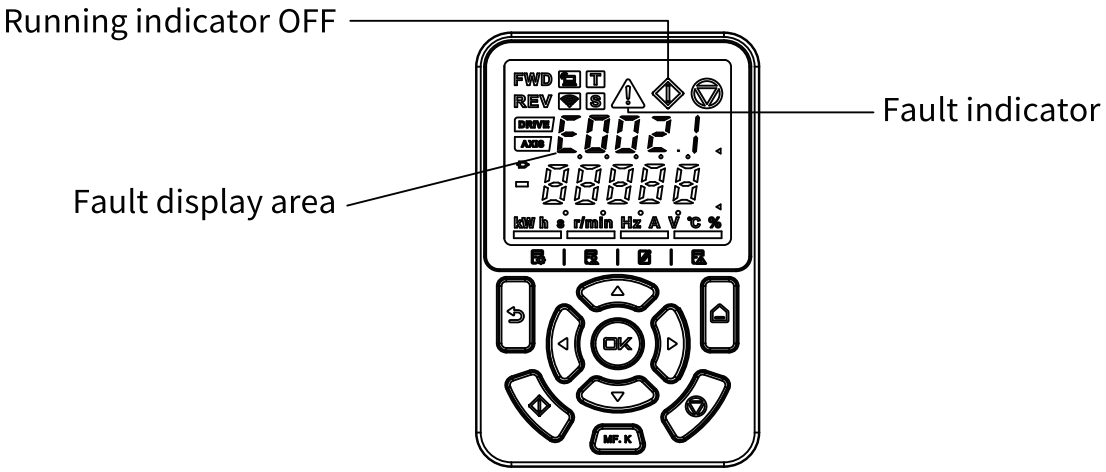


Figure 3-1 Display of faults

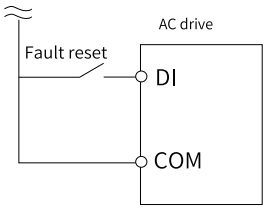
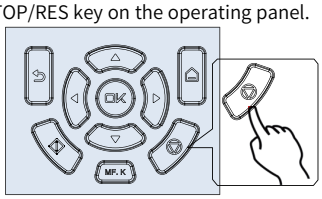
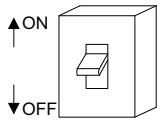
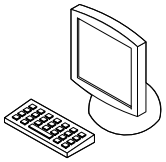
Caution

Do not repair or modify the AC drive by yourself. In case of any fault that cannot be rectified, contact the agent or Inovance for technical support.

3.1.2 Restart upon Faults

You can view the active fault code, active fault subcode, active fault information, active limit code, active limit subcode, active limit information, active alarm code, active alarm subcode, and active alarm information on the operating panel.

Table 3–1 Restart upon faults

Stage	Solution	Description
When a fault occurs	Fault record 1: View the active fault code, active fault subcode, active fault information, active limit code, active limit subcode, active limit information, active alarm code, active alarm subcode, and active alarm information on the operating panel.	View the information by using H0-00 to H0-53.
	Fault record 2: View the frequency, current, bus voltage, input terminal state, output terminal state, AC drive state, power-on duration, running duration, status word A, progression status word B, and command word upon the latest three faults on the operating panel.	View the information by using F9-14 to F9-44.
	Fault record 3: View the fault code, fault subcode, fault information, frequency, current, bus voltage, input terminal state, output terminal state, AC drive state, power-on duration, running duration, status word A, progression status word B, and command word upon the latest six faults on the operating panel.	View the information by using parameters in groups H3 to H8.
Before fault reset	Locate and rectify the fault cause based on the fault code displayed on the operating panel.	-
During fault reset	1. Set any of F4-00 to F4-09 to 9 (fault reset).	
	2. Verify that F7-02 is set to 1 (default value), indicating that the STOP/RES key is available in any operating mode.	Press the STOP/RES key on the operating panel. 
	3. Power off and then power on the AC drive for automatic reset. Disconnect the main circuit power supply and reconnect the power supply after the display on the operating panel disappears.	
	4. Use a host controller for reset (for communication control mode). Verify that F0-02 is set to 2 (communication control mode) and write "7" to the communication address 2000H by using the host controller.	

3.1.3 Common Troubleshooting

Table 3–2 Symptoms and troubleshooting

No.	Symptom	Possible Cause	Solution
1	The display does not work upon power-on.	The grid voltage is not input or too low.	Check the input power supply.
		The switched-mode power supply (SMPS) on the drive board of the AC drive is faulty.	Check whether the 24 V output voltage and 10 V output voltage on the control board are normal.
		The control board is disconnected from the drive board or the operating panel.	Re-connect the 8-conductor and 40-conductor flat cables.
		The pre-charge resistor of the AC drive is damaged.	Contact Inovance.
		The control board or operating panel is faulty.	
		The rectifier bridge is damaged.	
2	"–H–C–" is displayed upon power-on.	The connection between the drive board and the control board is poor.	Re-connect the 8-conductor and 28-conductor flat cables.
		Related components on the control board are damaged.	Contact Inovance.
		The motor or motor cable is shorted to ground.	
		The Hall device is faulty.	
		The grid voltage is too low.	
3	"E023.1" is displayed upon power-on.	The motor or output cable is shorted to ground.	Use a megger to measure the insulation resistance of the motor and motor cable.
		The AC drive is damaged.	Contact Inovance.
4	The display is normal upon power-on. But after the AC drive starts to run, "–H–C–" is displayed and the AC drive stops immediately.	The fan is damaged, or locked-rotor occurs.	Replace the cooling fan.
		Wiring of any external control terminals is short-circuited.	Rectify the short circuit fault.
5	E14.00 (module overheat) is reported frequently.	The carrier frequency is set too high.	Reduce the carrier frequency (F0-15).
		The fan is damaged, or the air filter is blocked.	Replace the fan or clean the air filter.
		Components (thermistor or other devices) inside the AC drive are damaged.	Contact Inovance.

No.	Symptom	Possible Cause	Solution
6	The motor does not rotate when the AC drive is running.	The AC drive and motor are incorrectly connected.	Double check the connection between the AC drive and motor.
		Related AC drive parameters (motor parameters) are set incorrectly.	Restore the AC drive to factory settings and re-set the following parameters correctly:
			Encoder parameters and rated motor specifications (such as rated motor frequency and rated motor speed)
			F0-01 and F0-02
			F3-01 for heavy-load start in V/f control mode
		The connection between the drive board and the control board is poor.	Re-connect the cables and ensure secure wiring.
		The drive board is faulty.	Contact Inovance.
7	DI terminals are inactive.	Related parameters are set incorrectly.	Check and set parameters in group F4 again.
		External signal transmission errors occur.	Re-connect external signal cables.
		The jumper across the OP and +24 V terminals becomes loose.	Check and ensure secure connection of the jumper across OP and +24 V.
		The control board is faulty.	Contact Inovance.
8	In FVC mode, the motor cannot speed up.	The encoder is faulty.	Replace the encoder and double check the wiring.
		The encoder wiring is incorrect or in poor contact.	Reconnect the encoder to ensure good contact.
		The PG card is faulty.	Replace the PG card.
		The drive board is faulty.	Contact Inovance.
9	The AC drive reports overcurrent and overvoltage frequently.	Motor parameters are incorrectly set.	Adjust motor parameters or perform motor auto-tuning again.
		The acceleration/deceleration time is improper.	Set acceleration/deceleration time properly.
		The load fluctuates.	Contact Inovance.
10	E017.1 is reported upon power-on or during running.	The soft start contactor is not closed.	Check whether the contactor cable is loose.
			Check whether the contactor is faulty.
			Check whether the 24 V power supply of the contactor is faulty.
			Contact Inovance.
11	The motor coasts to stop, or braking is disabled during deceleration or deceleration to stop.	The encoder is disconnected, or overvoltage stall protection is enabled.	Check the encoder wiring in FVC mode (F0-01 = 1).
			If a braking resistor is configured, set F3-23 to 0 to disable overvoltage stall suppression.

3.1.4 Troubleshooting During Trial Run in Different Control Modes

- SVC mode (F0-01 = 0, default setting)

In this mode, the drive controls the speed and torque of motor in scenarios without an encoder for speed feedback. Motor auto-tuning is required to obtain motor-related parameters.

Table 3–3 Troubleshooting in SVC mode

Problem	Solution
Overload or overcurrent reported during motor startup	Set motor parameters F1-01 to F1-05 according to the motor nameplate. Perform motor auto-tuning (by setting F1-37). Dynamic auto-tuning on all parameters of the motor is preferred when possible.
Slow torque or speed response and motor vibration at frequencies below 5 Hz	In the case of slow motor torque or speed response, increase the value of F2-00 (speed loop proportional gain) by increments of 10 or decrease the value of F2-01 (speed loop integral time) by decrements of 0.05. In the case of motor vibration, decrease the value of F2-00 and increase the value of F2-01.
Slow torque or speed response and motor vibration at frequencies above 5 Hz	In the case of slow motor torque or speed response, increase the value of F2-03 (speed loop proportional gain) by increments of 10 or decrease the value of F2-04 (speed loop integral time) by decrements of 0.05. In the case of motor vibration, decrease the value of F2-03 and increase the value of F2-04.
Low speed accuracy	In the case of excessive speed deviation during with-load operation, increase the value of F2-06 (vector control slip compensation gain) by increments of 10%.
Large speed fluctuation	In the case of abnormal motor speed fluctuation, increase the value of A9-05 (speed filter time) by increments of 0.001s.
Loud motor noise	Increase the value of F0-15 (carrier frequency) by increments of 1.0 kHz. Note that an increase in the carrier frequency will result in an increase in the leakage current of the motor.
Insufficient motor torque	Check whether the torque upper limit is set too low. If yes, increase the value of F2-10 (torque upper limit) in speed control mode or increase the torque reference in torque control mode.

- FVC mode (F0-01 = 1)

  This mode is applicable to scenarios with an encoder for speed feedback. In this mode, you need to set the encoder pulses per revolution, encoder type, and encoder direction correctly and perform auto-tuning on motor parameters.

Table 3–4 Troubleshooting in FVC mode

Problem	Solution
Overload or overcurrent reported during motor startup	Set the encoder pulses per revolution, encoder type, and encoder direction correctly.
Overload or overcurrent reported during motor rotation	Set motor parameters F1-01 to F1-05 according to the motor nameplate. Perform motor auto-tuning (by setting F1-37). Dynamic auto-tuning on all parameters of the motor is preferred when possible.
Slow torque or speed response and motor vibration at frequencies below 5 Hz	In the case of slow motor torque or speed response, increase the value of F2-00 (speed loop proportional gain) by increments of 10 or decrease the value of F2-01 (speed loop integral time) by decrements of 0.05. In the case of motor vibration, decrease the values of F2-00 and F2-01.
Slow torque or speed response and motor vibration at frequencies above 5 Hz	In the case of slow motor torque or speed response, increase the value of F2-03 (speed loop proportional gain) by increments of 10 or decrease the value of F2-04 (speed loop integral time) by decrements of 0.05. In the case of motor vibration, decrease the values of F2-03 and F2-04.

Problem	Solution
Large speed fluctuation	In the case of abnormal motor speed fluctuation, increase the value of F2-07 (speed filter time) by increments of 0.001s.
Loud motor noise	Increase the value of F0-15 (carrier frequency) by increments of 1.0 kHz. Note that an increase in the carrier frequency will result in an increase in the leakage current of the motor.
Insufficient motor torque	Check whether the torque upper limit is set too low. If yes, increase the value of F2-10 (torque upper limit) in speed control mode or increase the torque reference in torque control mode.

- V/f control mode (F0-01 = 2)
  This mode is applicable to scenarios without an encoder for speed feedback. You only need to set rated motor voltage and rated motor frequency correctly.

Table 3–5 Troubleshooting in V/f control mode

Problem	Solution
Motor oscillation during running	Decrease the value of F3-11 (V/f oscillation suppression gain) by increments of 5. The minimum value is 5.
Overcurrent during high-power startup	Decrease the value of F3-01 (torque boost) by increments of 0.5%.
High current during running	Set F1-02 (rated motor voltage) and F1-04 (rated motor frequency) correctly. Decrease the value of F3-01 (torque boost) by increments of 0.5%.
Loud motor noise	Increase the value of F0-15 (carrier frequency) by increments of 1.0 kHz. Note that an increase in the carrier frequency will result in an increase in the leakage current of the motor.
Overvoltage reported during deceleration or sudden removal of heavy loads	Verify that overvoltage stall suppression (F3-23) is enabled. Increase the value of F3-24/F3-25 (overvoltage stall suppression gain, 30 by default) by increments of 10 (the maximum value is 100). Decrease the value of F3-22 (overvoltage stall suppression action voltage, 770 V by default) by increments of 10 V (the minimum value is 700 V).
Overcurrent reported during acceleration or sudden application of heavy loads	Increase the value of F3-20 (overcurrent stall suppression gain, 20 by default) by increments of 10 (the maximum value is 100). Decrease the value of F3-18 (overcurrent stall suppression action current, 150% by default) by decrements of 10% (the minimum value is 50%).

3.2 List of Fault Codes

The following faults may occur during the use of the AC drive. Troubleshoot the faults according to the solutions described in the following table.

Fault Code	Fault Name	Possible Cause	Countermeasures
E002.1	Hardware overcurrent	The instantaneous output current exceeds 2.5*1.414 times the rated current of the AC drive. For more causes, connect to the AC drive from the mobile App through Wi-Fi to make a self-diagnosis, which can help users quickly locate the fault.	
		Output grounding	Check for output ground points and measure the ground impedance by segment by using a megohmmeter.
		Inter-phase short-circuit	1. Check whether the output side is short circuited. 2. Check whether the power cable is short circuited. 3. Check whether motor resistance is symmetrical.
		No parameter auto-tuning in vector control mode	Set motor parameters correctly and perform auto-tuning again.
		Encoder interference or wire breakage	1. Check whether the encoder cable is connected securely. 2. Check whether the encoder cable is grounded at the AC drive side. 3. Ground the motor enclosure. 4. Replace the encoder and the encoder cable.
		Output phase loss	1. Check whether the cables are properly connected. 2. If there is a contactor at the output side, check whether the contactor opening logic and the contactor contact are normal.
		Current detection exception	Contact after-sales service.
		V/f control acceleration/deceleration time too short	1. Enable the overcurrent suppression function. 2. Increase the acceleration/deceleration time.
		Encoder phase sequence error	If the encoder direction and the motor running direction are opposite, change the encoder direction.
		Model setting error	Set the AC drive model correctly (FF-01).

Fault Code	Fault Name	Possible Cause	Countermeasures
E002.2	Software overcurrent	The software overcurrent threshold is defined by FF-18. The default value is 100%, indicating that the threshold does not take effect. 100% is equivalent to the full range of current sampling (2.2 times the rated current of the AC drive multiplied by 1.414). For more causes, connect to the AC drive from the mobile App through Wi-Fi to make a self-diagnosis, which can help users quickly locate the fault.	
		Output grounding	Check for output short-to-ground and measure the ground impedance by segment by using a megohmmeter.
		Inter-phase short-circuit	1. Check whether the output side is short circuited. 2. Check whether the power cable is short circuited. 3. Check whether motor resistance is symmetrical.
		No parameter auto-tuning in vector control mode	Set motor parameters correctly and perform auto-tuning again.
		Encoder interference or wire breakage	1. Check whether the encoder cable is connected securely. 2. Check whether the encoder cable is grounded at the AC drive side. 3. Ground the motor enclosure. 4. Replace the encoder and the encoder cable.
		Output phase loss	1. Check whether the cables are properly connected. 2. If there is a contactor at the output side, check whether the contactor opening logic and the contactor contact are normal.
		Current detection exception	Contact after-sales service.
		V/f control acceleration/deceleration time too short	1. Enable the overcurrent suppression function. 2. Increase the acceleration/deceleration time.
		Encoder phase sequence error	If the encoder direction and the motor running direction are opposite, change the encoder direction.
		Model setting error	Set the AC drive model correctly (FF-01).

Fault Code	Fault Name	Possible Cause	Countermeasures
E005.1	Bus overvoltage	The overvoltage threshold is defined by A5-09 (unit: V), which only allows slight modification. For more causes, connect to the AC drive from the mobile App through Wi-Fi to make a self-diagnosis, which can help users quickly locate the fault.	
		Output grounding	1. Check whether the output side is short circuited. 2. Check whether the power cable is short circuited. 3. Check whether motor resistance is symmetrical.
		Encoder interference/wire breakage	1. Check whether the encoder cable is connected securely. 2. Check whether the encoder cable is grounded at the AC drive side. 3. Ground the motor enclosure. 4. Replace the encoder and the encoder cable.
		Power generation during motor deceleration	Enable overvoltage suppression if there is no active load (gravity load, tension load, and so on). Connect a braking resistor if possible. Set F3-19 in V/f control mode or bit1 (VdcMax enable) of AB-25 (parameter of motor 1) in vector control mode.
		Fault reaction upon runaway of synchronous motor	Shorten the overspeed protection time by setting F9-67 and F9-68 for the synchronous motor, which can effectively prevent the back EMF from exceeding the overvoltage threshold of the AC drive after runaway.
		Braking resistor selection error	Make sure that the power of the braking module is not lower than the power of the AC drive, that the continuous load is 0.8 times the motor power, and that the short-term overload can reach 1.5 times the motor power.
		Braking resistor phase loss	Check that the braking resistor is properly connected.
		Overshoot upon speed reach in vector control mode	If the speed loop overshoot is severe, configure the RFG with rounding time and acceleration feedforward to improve the speed loop follow-up performance.
		V/f oscillation	Enable the oscillation suppression function and optimize the V/f oscillation suppression coefficient.
		AC drive model setting error	Set the AC drive model correctly.
E008.1	Frequent pre-charge	Pre-charge circuit exception (the action of the pre-charge contactor can be heard frequently)	Contact after-sales service because frequent pre-charge can cause overload of the pre-charge circuit.

Fault Code	Fault Name	Possible Cause	Countermeasures
E009.1	Undervoltage	The undervoltage threshold is defined by A5-06. For more causes, connect to the AC drive from the mobile App through Wi-Fi to make a self-diagnosis, which can help users quickly locate the fault.	
		Instantaneous power failure	Enable overvoltage suppression if there is no active load (gravity load, tension load, and so on). Set F9-59 in V/f control mode or bit0 (VdcMin enable) of AB-25 (parameter of motor 1) in vector control mode.
		AC drive input voltage out of range	Adjust the input voltage to the normal range.
		Input phase loss and large output power	Make sure the input grid is normal.
		High undervoltage threshold	Lower the undervoltage threshold as appropriate.
		AC drive model setting error	Set the AC drive model correctly.
		Rectifier bridge, pre-charge resistor, drive board, or control board exception	Contact the technical support personnel.
E009.3	Pre-charge fault	Failure to power on the bus long after the motor is started in the state of undervoltage	Start the motor after the bus becomes stable after power-on.
E010.1	AC drive overload	For more causes, connect to the AC drive from the mobile App through Wi-Fi to make a self-diagnosis, which can help users quickly locate the fault.	
		Excessive load or locked-rotor	Reduce the load and check the motor and mechanical conditions.
		High carrier frequency	Decrease the carrier frequency.
		Low bus voltage during high speed running with heavy load	1. Increase the input voltage of the grid. 2. Enable the overmodulation function.
		Derating at low frequency due to long-term running below 5 Hz	Avoid running the motor with heavy load at a low speed for a long time, or select an AC drive with higher power.
		Output grounding	Check for output ground points.
		Output phase loss	Check for output phase loss.
		Motor parameter error	Check the motor nameplate parameters and perform auto-tuning correctly.
		Flying start not applied when the motor is started during rotation	Enable flying start by setting F6-00 (parameter of motor 1).
		Encoder direction error	Change the A/B phase sequence of the encoder (F1-30).
		AC drive model setting error	Set the AC drive model correctly.
		Inadequate power rating of the AC drive	Replace the AC drive with one of higher power rating.
E010.3	AC drive pre-overload	AC drive overload ratio reaching 80%	Same as E010.1.
			Change the pre-overload response level by setting parameters in group H1 because pre-overload is not reported by default.

Fault Code	Fault Name	Possible Cause	Countermeasures
E011.1	Motor overload	Inappropriate F9-01 (motor overload protection) setting	Set F9-01 correctly.
		Inadequate power rating of the motor	Select an appropriate motor.
		Brake error	Check that the brake can be opened properly.
		Excessive load or locked-rotor	Reduce the load and check the motor and mechanical conditions.
E011.2	Motor pre-overload	Motor overload ratio reaching the value of F9-02	Same as E011.1.
			Change the motor pre-overload coefficient (F9-02).
			Change the exception response level by setting parameters in group H1 because motor pre-overload is not reported by default.
E012.1	Input phase loss	Three-phase input power input phase loss	Check that the power input is normal.
		Three-phase grid imbalance	An unbalanced grid causes the bus voltage to fluctuate, which might damage the bus capacitors over long-term running. Make sure the input grid is symmetrical.
		Drive board, surge protector, main control board, or rectifier bridge exception	Contact the technical support personnel.
E013.1	Output phase loss	Motor phase loss	Check whether open circuit occurs on the motor.
E013.2		Exception of the cable connecting the AC drive and the motor	Check that the wiring is secure.
E013.3		Unbalanced three-phase output of the AC drive during motor running	Check whether the motor three-phase winding is normal. If not, eliminate the fault.
E013.4		Drive board or IGBT exception	Contact the technical support personnel.
E014.1	IGBT overheat	Over-high ambient temperature	Reduce the ambient temperature.
		Air filter blocked	Clean the air filter.
		Fan damage	Replace the fan.
		IGBT thermistor damage	Replace the thermistor.
		IGBT damage	Replace the IGBT.
E014.2	Module pre-overtemperature	Module temperature exceeding the pre-overtemperature threshold (obtained by subtracting the pre-overtemperature margin defined by BF-14 from the overtemperature threshold)	Same as E014.1.
			Change the exception response level by setting parameters in group H1 because module pre-overtemperature is not reported by default.
E015.1	External device fault	External fault input through the multi-function DI (NO)	Eliminate the external fault, ensure that the mechanical condition allows restart (F8-18), and reset the operation.
E015.2		External fault input through the multi-functional DI (NC)	Eliminate the external fault, ensure that the mechanical condition allows restart (F8-18), and reset the operation.
E017.1	Contactor fault	Drive board and power supply exception	Replace the drive board or power supply board.
		Contactor exception	Replace the contactor.
		Surge protector exception	Replace the surge protector.

Fault Code	Fault Name	Possible Cause	Countermeasures
E018.1	Current detection fault	Hall component exception	Replace the hall component.
		AC drive stopped while synchronous motor is rotating at high speed	Disable zero drift detection by setting bit07 of BF-07.
		Drive board exception	Replace the drive board.
E019.1	Auto-tuning timeout	Motor parameter setting exception or AC drive model setting exception	Set the motor and AC drive parameters correctly.
E019.2	Auto-tuning interruption	Auto-tuning interrupted by a stop command	Wait until auto-tuning is completed. The motor will stop automatically.
E019.3	Overcurrent during auto-tuning	Current out-of-control during auto-tuning	Set the motor parameters and AC drive model correctly.
			Contact the technical support personnel.
E019.4	Auto-tuning back EMF exception	Basic motor parameter setting error	Set the motor nameplate parameters and AC drive model correctly.
		Oscillation suppression failure during auto-tuning of back EMF	Adjust the oscillation suppression parameter.
E019.5	Motor type setting error	Incorrect motor type	Set the motor type correctly.
E019.7	No-load current auto-tuning error	No-load current out-of-range during motor auto-tuning	Set the motor nameplate parameters and AC drive model correctly.
E020.1	Encoder hardware wire breakage detection	Encoder hardware feedback signal exception	1. Check whether the correct PG card is selected. 2. Check whether the wiring is normal. 3. Check whether the encoder is normal. 4. Check whether the encoder DIP switch is appropriate. 5. Check whether the encoder parameters are set correctly.
			Set F1-36 to a non-zero value, and set bit02 of AA-30 to enable PG fault detection. The fault is reported only in FVC mode.
E020.2	Encoder PPR error	Inconsistency between encoder feedback speed and actual motor speed	Check whether the ABZ encoder PPR or number of pole pairs of resolver is incorrect.
E020.3	No encoder feedback	No encoder feedback speed	1. Check whether the correct PG card is selected. 2. Check whether the wiring is normal. 3. Check whether the encoder is normal. 4. Check whether the encoder DIP switch is appropriate. 5. Check whether the encoder parameters are set correctly.
E020.4	Encoder direction fault	Encoder direction opposite to motor rotation direction	Set F1-30 to switch the encoder direction.

Fault Code	Fault Name	Possible Cause	Countermeasures
E020.5	Large encoder feedback speed fluctuation	Sudden change of the encoder feedback speed (which will introduce control fluctuations, and in severe cases, lead to control divergence and overcurrent) (Detection of this fault is disabled by default.)	1. Check whether the correct PG card is selected. 2. Check whether the wiring is normal. 3. Check whether the encoder is normal. 4. Check whether the encoder DIP switch is appropriate. 5. Check whether the encoder parameters are set correctly.
			1. Check whether the encoder shield layer is grounded at the AC drive side. 2. Check whether the motor enclosure is grounded. 3. Check whether the encoder cable is far away from the power cables. 4. Install a magnetic ring on the encoder cable. 5. Use twisted pair cable with dense metal mesh shield layer as the encoder cable. 6. Use as few adapters as possible.
			Set bit01 of A9-09 to enable software detection of wire breakage, set A9-08 to specify the encoder wire breakage software detection coefficient, and set bit02 of A9-09 to remove encoder feedback glitches.
E020.8	ABZ encoder Z signal loss	ABZ encoder Z signal loss	This fault is reported only during self-check when the synchronous motor uses the ABZ encoder in FVC mode.
E020.9	Encoder pulse interference	Encoder feedback speed fluctuation exception	This fault is reported only during self-check of the encoder.
E021.1 E021.2 E021.3 E021.4	EEPROM read-write fault	EEPROM read-write exception	For parameters written through communication, check the RAM addresses and address mapping. For details, see section 1.2 "Parameter Communication Addresses" in the communication guide of the MD520 series general-purpose AC drives. If the EEPROM chip is damaged, contact the manufacturer to replace the main control board.
E021.5		EEPROM internal cache overrun	For parameters written through communication, check for frequent writes.
E023.1	Short-to-ground	Motor short-to-ground	Check the connector adapters and measure the ground impedance by using a megohmmeter. If the problem persists, replace the cable or motor.
		Self-check during motor running (not an issue any more in 20s after the asynchronous motor stops)	Do not run the motor until the cause of the fault is located.
		IGBT short circuit (extremely low probability)	Replace the motor and perform static self-check again.
E026.1	Accumulative running duration reach	Accumulative running duration reaching setpoint	Clear the record through parameter initialization.

Fault Code	Fault Name	Possible Cause	Countermeasures
E027.1 E027.2	User-defined fault	Signal of user-defined fault input through the multi-function DI terminal	Eliminate the external fault, ensure that the mechanical condition allows restart (F8-18), and reset the operation.
		Signal of user-defined fault input through the virtual I/O	
		Signal of user-defined fault input through the connector	
E027.3 E027.4		Signal of user-defined fault input through the connector	Check settings of connector parameters (H2-06 to H2-07). Eliminate the external fault, ensure that the mechanical condition allows restart (F8-18), and reset the operation.
L028.1	User-defined alarm	Signal of user-defined fault input through the connector	Check settings of connector parameters (H2-08 to H2-11).
L 028.2			
L 028.3			
L 028.4			
E029.1	Accumulative power-on duration reach	Accumulative power-on duration reaching the setpoint	Clear the record through parameter initialization.
E031.1	PID feedback loss during running	PID feedback less than the value of FA-26	Check the PID feedback signal or set FA-26 properly.
E032.1	Parameter exception	Parameter reset exception	Reset FP-01. If the fault persists, contact the technical support personnel.
E032.2		Parameter backup exception	Back up all parameters again. If the fault cannot be reset, contact the technical support personnel.
E032.3		Parameter power-off exception	Check whether the power is off and whether the bus capacitor discharges too fast.
E032.4		Parameter setting exception	Check whether the related parameters are set as required, especially parameters with setting limits that are associated with other parameters.
E032.6		Parameter power-on check exception	Check the value of U2-09. If the value is normnal, contact the technical support personnel.

Fault Code	Fault Name	Possible Cause	Countermeasures
E040.1	Pulse-by-pulse current limit fault	This fault is reported only for asynchronous motors in V/f control mode. For more causes, connect to the AC drive from the mobile App through Wi-Fi to make a self-diagnosis, which can help users quickly locate the fault.	
		Excessive load or locked-rotor	Reduce the load and check the motor and mechanical conditions.
		Output short-to-ground	Perform self-check to check for the short-to-ground point.
		Motor turn-to-turn short circuit	Perform self-check, measure whether the resistance of the output terminal is symmetrical with a multimeter, and replace the motor if turn-to-turn short circuit is determined.
		Motor nameplate parameter error	Set the motor parameters correctly.
		Output phase loss	Perform self-check and connect the motor properly.
		V/f oscillation	Enable V/f oscillation suppression and adjust the oscillation suppression coefficient.
		Inadequate power rating of the AC drive	Replace the AC drive with one of higher power rating.
E042.1	Excessive speed deviation	Incorrect setting of encoder parameters	Set encoder parameters correctly.
		Motor auto-tuning not performed	Perform motor auto-tuning.
		Excessive load	Ensure that a proper load is connected.
		Encoder direction fault	Set the encoder direction correctly.
		Inappropriate setting of F9-69 and F9-70	Set the parameters correctly based on actual conditions.
E043.1	Motor overspeed	For more causes, connect to the AC drive from the mobile App through Wi-Fi to make a self-diagnosis, which can help users quickly locate the fault.	
		Incorrect setting of encoder parameters	Set encoder parameters correctly.
		Motor auto-tuning not performed	Perform motor auto-tuning.
		Runaway caused by incorrect encoder zero point angle of synchronous motor	Check whether the encoder zero point angle obtained by auto-tuning is accurate and whether the encoder connection is loose.
		Inappropriate setting of F9-67 and F9-68	Set the parameters correctly based on actual conditions.
E045.1	Motor overtemperature	Loose connection of temperature sensor	Check the wiring of the temperature sensor.
		Overhigh motor temperature	Decrease the carrier frequency or take other measures to cool the motor.
		Excessively low motor overtemperature protection threshold (F9-57 or F9-76)	Raise the motor overtemperature protection threshold to between 90°C to 100°C.
E045.2		Loose connection of temperature sensor	Check the wiring of the temperature sensor.
		Overhigh motor temperature	Decrease the carrier frequency or take other measures to cool the motor.
		Excessively low motor pre-overtemperature protection threshold (F9-58 or F9-77)	Raise the motor pre-overtemperature protection threshold.
E047.2	STO fault	STO1 and STO2 signal disconnection	Check the wiring of STO1 and STO2.
E047.3		STO circuit undervoltage or overvoltage	Contact the technical support personnel.
E047.4		STO circuit input subsystem exception	Contact the technical support personnel.
E047.5		STO blocking output chip exception	Contact the technical support personnel.

Fault Code	Fault Name	Possible Cause	Countermeasures
E051.1	Pole position auto-tuning error	Check the motor for output phase loss.	Connect the motor output correctly and ensure that the output contactor is closed.
E055.1	Slave error in master-slave control	Slave fault	Troubleshoot the problem based on the slave fault code.
E056.2	IGBT U- short circuit	IGBT monitoring VCE signal exception	Contact after-sales service.
E056.3	IGBT U+ short circuit	IGBT monitoring VCE signal exception	Contact after-sales service.
E056.4	IGBT V- short circuit	IGBT monitoring VCE signal exception	Contact after-sales service.
E056.5	IGBT V+ short circuit	IGBT monitoring VCE signal exception	Contact after-sales service.
E056.9	Output phase loss	Motor output phase loss	Make sure the motor is connected properly and the output contactor is normal.
E057.1	U phase upper bridge or V phase lower bridge IGBT continuity failure	IGBT open circuit	Contact after-sales service.
E057.2	U phase lower bridge or V phase upper bridge IGBT continuity failure	IGBT open circuit	Contact after-sales service.
E057.3	V phase upper bridge or W phase lower bridge IGBT continuity failure	IGBT open circuit	Contact after-sales service.
E057.4	V phase lower bridge or W phase upper bridge IGBT continuity failure	IGBT open circuit	Contact after-sales service.

Fault Code	Fault Name	Possible Cause	Countermeasures
E057.5	W phase upper bridge or U phase lower bridge IGBT continuity failure	IGBT open circuit	Contact after-sales service.
E057.6	W phase lower bridge or U phase upper bridge IGBT continuity failure	IGBT open circuit	Contact after-sales service.
E057.7	UV output end short circuit	Inter-phase output short circuit	Check for inter-phase short circuit.
E057.8	VW output end short circuit	Inter-phase output short circuit	Check for inter-phase short circuit.
E057.9	WU output end short circuit	Inter-phase output short circuit	Check for inter-phase short circuit.
E058.1	Module U phase current sensor inversely installed	Current sampling sensor exception	Contact after-sales service.
E058.2	Module V phase current sensor inversely installed	Current sampling sensor exception	Contact after-sales service.
E058.3	Module W phase current sensor inversely installed	Current sampling sensor exception	Contact after-sales service.
E058.4	Module UV phase sensor incorrectly inserted	Current sampling sensor exception	Contact after-sales service.
E058.5	Module VW phase sensor incorrectly inserted	Current sampling sensor exception	Contact after-sales service.

Fault Code	Fault Name	Possible Cause	Countermeasures
E058.6	Module WU phase sensor incorrectly inserted	Current sampling sensor exception	Contact after-sales service.
E059.1	UV phase imbalance	Motor turn-to-turn short circuit	Replace the motor and then perform self-check to confirm the cause.
E059.2	VW phase imbalance	Motor turn-to-turn short circuit	Replace the motor and then perform self-check to confirm the cause.
E059.3	WU phase imbalance	Motor turn-to-turn short circuit	Replace the motor and then perform self-check to confirm the cause.
E061.1	Braking unit overload	Overhigh power of braking resistor (resistance too small)	Use a braking resistor with higher resistance.
E062.2	Braking transistor shoot-through	Braking module exception	Contact the technical support personnel.
		Braking resistor short circuit	Check whether the braking resistor is short circuited or damaged. If yes, replace it.
E062.3	Braking transistor overcurrent	Incorrect connection of braking resistor	Check whether the braking resistor is properly connected and whether the braking unit is normal.
E093.1	Motor rotor locked	The locked-rotor detection threshold and detection time are defined by AA-31 and AA-32 and protection against locked rotor is enabled by setting bit05 of AA-30. For more causes, connect to the AC drive from the mobile App through Wi-Fi to make a self-diagnosis.	
		Excessive load or brake exception	Ensure that the motor load is within a reasonable range.
		Low torque limit/current limit	Set the torque limit as appropriate.
		Auto-tuning not performed	Perform auto-tuning before running.
		AC drive model setting error	Set the AC drive model correctly.
E093.2	Motor stall	The motor stall detection threshold and detection time are defined by AA-33 and AA-34 and protection against motor stall is enabled by setting bit04 of AA-30. For more causes, connect to the AC drive from the mobile App through Wi-Fi to make a self-diagnosis.	
		Encoder interference/wire breakage	Check the encoder for interference.
		Encoder PPR error or loose connection	Check whether the encoder is connected reliably.
		Auto-tuning not performed	Set the rated parameters of the motor correctly, and perform dynamic auto-tuning if possible.
		AC drive model error	Set the AC drive model correctly.
E093.4	Current control exception	The current control exception detection threshold and detection time are defined by AA-35 and AA-36 and protection against current control exception is enabled by setting bit03 of AA-30. For more causes, connect to the AC drive from the mobile App through Wi-Fi to make a self-diagnosis.	
		Output phase loss	Check the motor for phase loss.
		Encoder interference or encoder wire breakage	Check whether the encoder is normal.
		Sudden and large drop in bus voltage	Keep the grid voltage stable.
		Auto-tuning not performed	Input motor parameters correctly and perform auto-tuning.

Fault Code	Fault Name	Possible Cause	Countermeasures
E094.1	Inconsistency between calculated and set numbers of pole pairs	Incorrect setting of the number of motor pole pairs	Set A9-02 only when the number of motor pole pairs exceeds 12.
E094.2	Motor power, voltage, and current matching error	Motor the power, voltage, and current mismatch	Set the motor parameters correctly.
E094.3	No-load current range error	Incorrect motor no-load current range	Check the motor nameplate parameters and ensure correct model setting of the AC drive.
E094.4	Inconsistency between Lm I0 and rated voltage	Inconsistency with rated voltage caused by separate modification of no-load current or mutual inductance	Set motor nameplate parameters correctly and perform auto-tuning.
E094.5	Rotor resistance range exception	Rotor resistance range out-of-range	Check whether the motor is rotating during auto-tuning.
			Check whether the motor nameplate parameters and AC drive model setting are correct.
E094.7	Mismatch between the numbers of pole pairs of the resolver and synchronous motor	Incorrect number of resolver pole pairs of synchronous motor	Ensure that the number of pole pairs of the synchronous motor is divisible by the number of resolver pole pairs.
E159.1	Auto reset failure	Auto reset disabled	Check H2-20 to H2-39 to see whether auto reset is disabled.
E160.1	Modbus communication fault	Modbus communication timeout	Check whether the RS-485 communication cable is correctly connected.
			Check whether the setting of FD-04 and the PLC communication cycle are proper.
E161.1	CANopen communication fault	CANopen communication timeout	Check whether the CAN communication cable is correctly connected.
			Check parameters FD-15 to FD-17 for further action.
E161.2		Inconsistency between PDO mapping configured for CANopen and the actual mapping	Check the PDO mapping of parameters in group AF.
E162.1	CANlink communication fault	CANlink heartbeat timeout	Check whether the CAN communication cable is correctly connected.
			Check parameters FD-15 to FD-17 for further action.
E162.2		CANlink station number conflict	Modify the CAN station numbers by using FD-13.

Fault Code	Fault Name	Possible Cause	Countermeasures
E164.1	Expansion card fault	Expansion card fault	Check communication of the expansion card.
E174.1	Wire breakage	HDI1 wire breakage	Check HDI wiring.
E174.3		AI1 wire breakage	Check AI1 wiring.
E174.4		AI2 wire breakage	Check AI2 wiring.
E174.5		AI3 wire breakage	Check AI3 wiring.

3.3 List of Fault Attributes

The fault attribute table describes the fault name, panel display, default fault protection action, fault action range, whether reset is allowed, and whether attributes are modified when the main fault code is modified by using F9-47 to F9-50.

This series of AC drives allow you to modify the fault protection actions of the main fault codes by using F9-47 to F9-50 or modify the fault protection action of an individual fault by using parameters in group H1.

Default Fault Protection Action indicates the default protection action of a fault for which the fault action is not defined by F9-47 to F9-50 and parameters in group H1.

Fault Action Range indicates available fault actions when a fault is modified by using parameters in group H1.

The fault action range values are described as follows:

0. Coast to stop

1: Decelerate to stop

2: Continue to run (with speed limit)

3: Run with power limit

4: Run with current limit

5: Ignore

Reset Allowed or Not specifies whether a fault allows reset.

The symbols in the Reset Allowed or Not column are described as follows:

☆: The fault allows reset.

★: The fault does not allow reset.

Modified with Main Code or Not specifies whether the fault protection action of the subcode is modified accordingly when the fault protection action of the main fault code is modified by using F9-47 to F9-50.

The symbols in the Modified with Main Code or Not column are described as follows:

○: The fault protection action of the fault is modified accordingly when that of the main fault code is modified.

●: The fault protection action of the fault is not modified accordingly when that of the main fault code is modified.

Table 3–6 List of Fault Attributes

Panel Display	Fault Name	Default Fault Protection Action	Fault Action Range	Reset Allowed or Not	Modified with Main Code or Not
E002.1	Hardware overcurrent	0	0	☆	○
E002.2	Software overcurrent	0	0	☆	○
E005.1	Overvoltage	0	0	☆	○
E008.1	Frequent contactor action	0	0	☆	○
E009.1	Undervoltage	0	0	☆	○
E009.3	Pre-charge exception	0	0	☆	○
E010.1	AC drive overload	0	0	☆	○
E010.3	AC drive pre-overload	5	2 to 5	☆	○
E011.1	Motor overload	0	0 to 5	☆	○
E011.2	Motor pre-overload	Unchangeable by default	2 to 5	☆	●
E012.1	Input phase loss	0	0 to 5	☆	○
E013.1	U phase output phase loss	0	0 to 4	☆	○
E013.2	V phase output phase loss	0	0 to 4	☆	○
E013.3	W phase output phase loss	0	0 to 4	☆	○
E014.1	Module overtemperature	0	0	☆	○
E014.2	Module pre-overtemperature	Unchangeable by default	2 to 5	☆	○
E015.1	External fault 1	0	0 to 4	☆	○
E015.2	External fault 2	0	0 to 4	☆	○
E017.1	Pre-charge circuit exception	0	0 to 5	☆	○
E018.1	Current sampling exception	0	0	☆	○
E019.1	Auto-tuning timeout	0	0	☆	○
E019.2	Auto-tuning interruption	0	0	☆	○
E019.3	Overcurrent during auto-tuning	0	0	☆	○
E019.4	Back EMF auto-tuning exception	0	0	☆	○
E019.5	Motor type error	0	0	☆	○
E019.7	No-load current auto-tuning overlimit	0	0 to 5	☆	○
E020.1	Encoder hardware wire breakage	0	0 to 5	☆	○
E020.2	Encoder PPR error	0	0	☆	●
E020.3	No encoder feedback	0	0	☆	●
E020.5	Large encoder feedback fluctuation	0	0 to 5	☆	○

Panel Display	Fault Name	Default Fault Protection Action	Fault Action Range	Reset Allowed or Not	Modified with Main Code or Not
E020.8	Z signal loss	0	0 to 5	☆	○
E020.9	Encoder pulse interference	0	0 to 5	☆	○
E021.1	E2P fault (uninterrupted operation for more than 30s)	0	0 to 1	☆	○
E021.2	E2P: read fault	0	0 to 1	☆	○
E021.3	E2P: write fault	0	0 to 1	☆	○
E021.4	E2P reads and writes within 1s out-of-limit	2	0 to 4	☆	●
E021.5	E2P internal cache overrun	0	0 to 5	☆	●
E022.1	Encoder card not activated	0	0	☆	○
E023.1	Output short-to-ground	0	0	★	○
E026.1	Accumulative running duration reach	0	0 to 4	☆	○
E027.1	Custom fault 1	0	0 to 4	☆	○
E027.2	Custom fault 2	0	0 to 4	☆	○
E027.3	Custom fault 3	0	0 to 4	☆	○
E027.4	Custom fault 4	0	0 to 4	☆	○
E028.1	Custom warning 1	2	0 to 4	☆	○
E028.2	Custom warning 2	2	0 to 4	☆	○
E028.3	Custom warning 3	2	0 to 4	☆	○
E028.4	Custom warning 4	2	0 to 4	☆	○
E029.1	Accumulative power-on duration reach	2	0 to 4	☆	○
E030.1	Load loss	0	0 to 5	☆	○
E031.1	PID feedback loss	0	0 to 4	☆	○
E032.1	Parameter reset exception	0	0 to 5	☆	○
E032.2	Parameter backup exception	2	0 to 5	☆	○
E032.3	Parameter power-off exception	5	0 to 5	☆	○
E032.4	Parameter setting exception	2	0 to 5	☆	○
E032.6	Parameter power-on check exception	0	0 to 5	☆	○
E040.1	Pulse-by-pulse current limit fault	0	0	☆	○
E042.1	Excessive speed deviation	2	0 to 5	☆	○
E043.1	Motor speed out-of-limit	0	0 to 5	☆	○
E045.1	Motor over-temperature	0	0 to 4	☆	○
E045.2	Motor pre-overtemperature	2	2 to 5	☆	○

Panel Display	Fault Name	Default Fault Protection Action	Fault Action Range	Reset Allowed or Not	Modified with Main Code or Not
E047.2	STO trigger inconsistency fault	0	0	☆	○
E047.3	STO circuit power supply exception	0	0	☆	○
E047.4	STO input subsystem fault	0	0	☆	○
E047.5	STO buffer chip fault	0	0	★	●
E051.1	Pole position auto-tuning error	0	0 to 1	☆	○
E055.1	Slave error in master-slave control	1	0 to 5	☆	○
E056.2	IGBT U+ short circuit during self-check	0	0	☆	○
E056.3	IGBT U- short circuit during self-check	0	0	☆	○
E056.4	IGBT V+ short circuit during self-check	0	0	☆	○
E056.5	IGBT V- short circuit during self-check	0	0	☆	○
E056.9	System output phase loss	0	0	☆	○
E057.1	U phase upper bridge or V phase lower bridge IGBT continuity failure	0	0	☆	○
E057.2	U phase lower bridge or V phase upper bridge IGBT continuity failure	0	0	☆	○
E057.3	V phase upper bridge or W phase lower bridge IGBT continuity failure	0	0	☆	○
E057.4	V phase lower bridge or W phase upper bridge IGBT continuity failure	0	0	☆	○
E057.5	W phase upper bridge or U phase lower bridge IGBT continuity failure	0	0	☆	○
E057.6	W phase lower bridge or U phase upper bridge IGBT continuity failure	0	0	☆	○
E057.7	UV output end short circuit	0	0	☆	○
E057.8	VW output end short circuit	0	0	☆	○
E057.9	WU output end short circuit	0	0	☆	○
E058.1	Module U phase current sensor inversely installed	0	0	☆	○
E058.2	Module V phase current sensor inversely installed	0	0	☆	○

Panel Display	Fault Name	Default Fault Protection Action	Fault Action Range	Reset Allowed or Not	Modified with Main Code or Not
E058.3	Module W phase current sensor inversely installed	0	0	☆	○
E058.4	Module UV phase sensor incorrectly inserted	0	0	☆	○
E058.5	Module VW phase sensor incorrectly inserted	0	0	☆	○
E058.6	Module WU phase sensor incorrectly inserted	0	0	☆	○
E059.1	VW phase imbalance	0	0	☆	○
E059.2	UW phase imbalance	0	0	☆	○
E059.3	UV phase imbalance	0	0	☆	○
E061.1	Braking overload	0	0	☆	○
E062.2	Braking transistor shoot-through	0	0	☆	○
E062.3	Braking transistor overcurrent	0	0	☆	○
E063.1	External alarm 1	2	2 to 4	☆	○
E063.2	External alarm 2	2	2 to 4	☆	○
E082.2	Pre-charge contactor feedback exception	0	0	☆	○
E085.4	Timing fault	2	0 to 4	☆	○
E093.1	Motor rotor locked fault	0	0 to 5	☆	○
E093.2	Motor stall	0	0	☆	○
E093.3	Current control exception	0	0	☆	○
E094.1	Inconsistency between calculated and set number of pole pairs	Unchangeable by default		☆	○
E094.2	Asynchronous motor power, voltage, and current matching error			☆	○
E094.3	No-load current range error			☆	○
E094.4	Inconsistency between Lm I0 and rated voltage			☆	○
E094.5	Rotor resistance setting range exception			☆	○
E094.7	Mismatch between the numbers of pole pairs of the resolver and synchronous motor			☆	○
E159.1	Auto reset failure	0	0	☆	○
E160.1	Modbus communication timeout	1	0 to 5	☆	○
E161.1	CANopen communication timeout	1	0 to 5	☆	○

Panel Display	Fault Name	Default Fault Protection Action	Fault Action Range	Reset Allowed or Not	Modified with Main Code or Not
E161.2	Inconsistency between PDO mapping configured for CANopen and the actual mapping	1	0 to 5	☆	○
E162.1	CANlink heartbeat timeout	1	0 to 5	☆	○
E162.2	CANlink station number conflict	1	0 to 5	☆	○
E164.1	Master-slave control communication fault	1	0 to 5	☆	○
E174.1	HDI1 wire breakage	5	0 to 5	☆	○
E174.3	AI1 wire breakage	5	0 to 5	☆	○
E174.4	AI2 wire breakage	5	0 to 5	☆	○
E174.5	AI3 wire breakage	5	0 to 5	☆	○

4 Parameter Group

4.1 F0: Basic Parameters

F0-00 **Load type display**

Address:	0xF000	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0: Heavy load application

1: Light load application

Description

-

F0-01 **Motor 1 control mode**

Address:	0xF001	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	2	Change:	Changeable only at stop

Value Range:

0: SVC

1: FVC

2: V/f

Description

-

F0-02 **Operation command source**

Address:	0xF002	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Operating panel

1: Terminal

2: Communication

3: Customization

Description

0: Operating panel control

When this command source is selected, control commands are input using keys on the operating panel. It is applicable to initial commissioning.

1: Terminal control

In terminal I/O control mode, control commands are input through the DI terminals of the AC drive. The DI terminal control commands can be set according to different scenarios, such as start/stop, forward/reverse run, jog, two-wire/three-wire mode, multi-speed, and other functions. It is suitable for most applications.

2: Communication control

When this command source is selected, control commands are input through remote communication. The AC drive must be equipped with a communication card to implement communication with the host controller. This mode applies to remote control or centralized control of multiple equipment.

3: Customization

The command source can be selected flexibly. It is used for expansion.

F0-03 Main frequency source X

Address:	0xF003	Effective mode:	-
Min.:	0	Unit:	-
Max.:	9	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Digital setting (non-retentive at power failure)

1: Digital setting (retentive at power failure)

2: AI1

3: AI2

4: AI3

5: Pulse reference (DI5)

6: Multi-reference

7: Simple PLC

8: PID

9: Communication

Others: F connector

Description

0: Digital setting (non-retentive at power failure)

The initial value of the frequency reference is the value of F0-08 (preset frequency), which can be changed by using the ▲ and ▼ keys on the operating panel (or UP and DOWN of the multi-function input terminal). The frequency reference reverts to the value of F0-08 (preset frequency) at next power-on.

1: Digital setting (retentive at power failure)

The initial value of the frequency reference is the value of F0-08 (preset frequency). which can be changed by using the ▲ and ▼ keys on the operating panel (or UP and DOWN of the multi-function input terminal). When the AC drive is powered on again after power failure, the frequency reference is the same as that at the moment of the last power failure. Modifications made by using keys ▲ and ▼ or the terminal UP/DOWN function remain effective.

2: AI1

The frequency reference is input with current or voltage signals through the AI1 terminal. The frequency is calculated according to the preset AI curve.

3: AI2

The frequency reference is input with current or voltage signals through the AI2 terminal. The frequency is calculated according to the preset AI curve.

4: AI3

The frequency reference is input with current or voltage signals through the AI3 terminal. The frequency is calculated according to the preset AI curve.

5: Pulse reference (DI5)
The frequency reference is determined by the pulse frequency through the DI5 terminal. The frequency is calculated according to the correspondence curve between the pulse frequency and frequency reference.
6: Multi-reference
When multi-reference is used as the frequency source, different combinations of DI terminal states correspond to different frequency references. The four multi-reference terminals can provide 16 state combinations, corresponding to 16 reference values.
7: Simple PLC
Simple PLC is a multi-speed running command that can control the running time and acceleration and deceleration time. Parameters FC-00 to FC-15 are used to set the values of each frequency. FC-18 to FC-49 are used to set the running time and acceleration and deceleration time of each frequency. Up to 16 speeds can be set.
8: PID
PID is selected as the main frequency. As a general process control method, PID control is a closed-loop mechanism in which each controlled variable is stabilized at the target level through proportional, integral, and differential calculation of the difference between the feedback signal and the target signal of the controlled variable. PID control is generally used in closed-loop control, such as constant pressure closed-loop control and constant tension closed-loop control.
9: Communication
The main frequency is set through communication. The frequency reference can be input through remote communication. The AC drive must be equipped with a communication card to implement communication with the host controller. This mode applies to remote control or centralized control of multiple equipment.
Others: F connector
A function code is set for a floating-point connector, and the value of the connector is read as the main frequency reference. This mode is used for expansion besides the common sources.

F0-04 **Auxiliary frequency source Y**

Address:	0xF004	Effective mode:	-
Min.:	0	Unit:	-
Max.:	9	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: Digital setting (non-retentive at power failure)
1: Digital setting (retentive at power failure)
2: AI1
3: AI2
4: AI3
5: Pulse reference (DI5)
6: Multi-reference
7: Simple PLC
8: PID
9: Communication
Others: F connector
Description

0: Digital setting (non-retentive at power failure)
The initial value of the frequency reference is the value of F0-08 (preset frequency), which can be changed by using the ▲ and ▼ keys on the operating panel (or UP and DOWN of the multi-function input terminal). The frequency reference reverts to the value of F0-08 (preset frequency) at next power-on.
1: Digital setting (retentive at power failure)
The initial value of the frequency reference is the value of F0-08 (preset frequency). which can be changed by using the ▲ and ▼ keys on the operating panel (or UP and DOWN of the multi-function input terminal). When the AC drive is powered on again after power failure, the frequency reference is the same as that at the moment of the last power failure. Modifications made by using keys ▲ and ▼ or the terminal UP/DOWN function remain effective.
2: AI1
The frequency reference is input with current or voltage signals through the AI1 terminal. The frequency is calculated according to the preset AI curve.
3: AI2
The frequency reference is input with current or voltage signals through the AI2 terminal. The frequency is calculated according to the preset AI curve.
4: AI3
The frequency reference is input with current or voltage signals through the AI3 terminal. The frequency is calculated according to the preset AI curve.
5: Pulse reference (DI5)
The frequency reference is determined by the pulse frequency through the DI5 terminal. The frequency is calculated according to the correspondence curve between the pulse frequency and frequency reference.
6: Multi-reference
When multi-reference is used as the frequency source, different combinations of DI terminal states correspond to different frequency references. The four multi-reference terminals can provide 16 state combinations, corresponding to 16 reference values.
7: Simple PLC
Simple PLC is a multi-speed running command that can control the running time and acceleration and deceleration time. Parameters FC-00 to FC-15 are used to set the values of each frequency. FC-18 to FC-49 are used to set the running time and acceleration and deceleration time of each frequency. Up to 16 speeds can be set.
8: PID
PID is selected as the main frequency. As a general process control method, PID control is a closed-loop mechanism in which each controlled variable is stabilized at the target level through proportional, integral, and differential calculation of the difference between the feedback signal and the target signal of the controlled variable. PID control is generally used in closed-loop control, such as constant pressure closed-loop control and constant tension closed-loop control.
9: Communication
The main frequency is set through communication. The frequency reference can be input through remote communication. The AC drive must be equipped with a communication card to implement communication with the host controller. This mode applies to remote control or centralized control of multiple equipment.
Others: F connector
A function code is set for a floating-point connector, and the value of the connector is read as the auxiliary frequency reference. This mode is used for expansion besides the common sources.

F0-05 **Base value of range of auxiliary frequency source for superposition**

Address:	0xF005	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Relative to maximum frequency

1: Relative to main frequency X

Description

0: Relative to maximum frequency

The auxiliary frequency at superposition is equal to the auxiliary frequency source range (F0-06) multiplied by the maximum frequency (F0-10).

1: Relative to main frequency X

The auxiliary frequency at superposition is equal to the auxiliary frequency source range (F0-06) multiplied by the main frequency X.

F0-06 **Range of auxiliary frequency source Y for superposition**

Address:	0xF006	Effective mode:	-
Min.:	0	Unit:	%
Max.:	150	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:

0% to 150%

Description

0: Relative to maximum frequency

The auxiliary frequency at superposition is equal to the auxiliary frequency source range (F0-06) multiplied by the maximum frequency (F0-10).

1: Relative to main frequency X

The auxiliary frequency at superposition is equal to the auxiliary frequency source range (F0-06) multiplied by the main frequency X.

F0-07 **Frequency source superposition**

Address:	0xF007	Effective mode:	-
Min.:	0	Unit:	-
Max.:	34	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Ones: Frequency reference

0: Main frequency source X

1: Main and auxiliary operation result (based on tens)

2: Switchover between main frequency source X and auxiliary frequency source Y

3: Switchover between main frequency source X and the main and auxiliary operation result

4: Switchover between auxiliary frequency source Y and the main and auxiliary operation result

Tens: Main and auxiliary frequency reference operation

0: Main + Auxiliary

1: Main – Auxiliary

2: Max. (main, auxiliary)

3: Min. (main, auxiliary)

4: Main x Auxiliary

Description

0: Main frequency source X

The running frequency of the AC drive is directly determined by the main frequency source X.

1: Main and auxiliary operation result (based on the tens place)

The running frequency of the AC drive is the calculation result of the main and auxiliary frequencies, and the calculation method is determined by the tens place of F0-07.

2: Switchover between main frequency source X and auxiliary frequency source Y

The running frequency of the AC drive is selected or switched between the main frequency source X and the auxiliary frequency source Y through the DI terminal. In this case, the corresponding DI terminal must be assigned with the frequency source switching function. For example, if the DI2 terminal is used for switchover, set F4-01 to 18.

3: Switchover between main frequency source X and main and auxiliary operation result

The running frequency of the AC drive is selected or switched between the main frequency source X and the main and auxiliary operation result through the DI terminal.

4: Switchover between auxiliary frequency source Y and main and auxiliary operation result

The running frequency of the AC drive is selected or switched between the auxiliary frequency source Y and the main and auxiliary operation result through the DI terminal.

Tens:

0: Main + Auxiliary

The main and auxiliary operation result is the main frequency X plus the auxiliary frequency Y.

1: Main – Auxiliary

The main and auxiliary operation result is the main frequency X minus the auxiliary frequency Y.

2: Maximum value

The main and auxiliary operation result is the larger value between the main frequency X and the auxiliary frequency Y.

3: Minimum value

The main and auxiliary operation result is the smaller value between the main frequency X and the auxiliary frequency Y.

4: Main x Auxiliary

The main and auxiliary operation result is the main frequency X multiplied by the auxiliary frequency Y. -

F0-08 Preset frequency

Address:	0xF008	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	50.00	Change:	Changeable at any time

Value Range:

0.00 Hz to F0-10

Description

This parameter defines the target frequency.

F0-09 Running direction

Address:	0xF009	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

1: Default direction

1: Reverse to the default direction

Description

You can change the rotation direction of the motor by modifying this parameter without changing the motor wiring. Modifying this parameter is equivalent to exchanging any two of the motor's U, V, W wires.

F0-10 Maximum frequency

Address:	0xF00A	Effective mode:	-
Min.:	50.00	Unit:	Hz
Max.:	500.00	Data type:	UInt16
Default:	50.00	Change:	Changeable only at stop

Value Range:

50.00 Hz to 500.00 Hz

Description

This parameter defines the maximum output frequency of the AC drive.

F0-11 Source of frequency upper limit

Address:	0xF00B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	5	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: F0-12

1: AI1

2: AI2

3: AI3

4: Pulse reference

5: Communication

Others: F connector

Description

0: Frequency upper limit reference (F0-12)

The frequency upper limit is set by F0-12.

1: AI1

The frequency upper limit is input with current or voltage signals through the AI1 terminal. The frequency is calculated according to the preset AI curve.

2: AI2

The frequency upper limit is input with current or voltage signals through the AI2 terminal. The frequency is calculated according to the preset AI curve.

3: AI3

The frequency upper limit is input with current or voltage signals through the AI3 terminal. The frequency is calculated according to the preset AI curve.

4: Pulse reference (DI5)

The frequency upper limit is determined by the pulse frequency through the DI5 terminal. The frequency is calculated according to the correspondence curve between the pulse frequency and maximum frequency.

5: Communication

The frequency upper limit is set through communication.

Others: F connector

The frequency upper limit is set through a connector. A function code is set for a floating-point connector, and the value of the connector is read as the frequency upper limit. This mode is used for expansion besides the common sources.

F0-12 **Frequency upper limit**

Address:	0xF00C	Effective mode:	-
Min.:	F0-14	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	50.00	Change:	Changeable at any time

Value Range:
F0 -14 to F0-10
Description
This parameter defines the maximum running frequency allowed for the motor.

F0-13 **Frequency upper limit offset**

Address:	0xF00D	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-10
Description
This parameter defines the offset of the frequency upper limit. It is used to adjust the output frequency value upon minimum frequency reference signal when the frequency is set by an external analog signal (voltage or current).

F0-14 **Frequency lower limit**

Address:	0xF00E	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-12	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-12
Description
This parameter defines the minimum running frequency for the motor.

F0-15 **Carrier frequency**

Address:	0xF00F	Effective mode:	-
Min.:	0.5	Unit:	kHz
Max.:	16.0	Data type:	UInt16
Default:	6.0	Change:	Changeable at any time

Value Range:
0.5 kHz to 16.0 kHz
Description
-

F0-16 **Carrier frequency adjusted with temperature**

Address:	0xF010	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: No
1: Yes

Description
-

F0-17 **Acceleration time 1**

Address:	0xF011	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	6500.0	Data type:	UInt16
Default:	20.0	Change:	Changeable at any time

Value Range:
0.0s to 6500.0s
Description
The acceleration time indicates the time required for the output frequency to rise from 0 to F0-25 (acceleration/deceleration base frequency). It is usually determined by the rise of the frequency reference signal. When the motor accelerates, the rising rate of the frequency reference must be limited to prevent overcurrent.
The AC drive provides four groups of acceleration time, which can be switched by using the parameter or DI terminal. This parameter defines the first acceleration time.

F0-18 **Deceleration time 1**

Address:	0xF012	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	6500.0	Data type:	UInt16
Default:	20.0	Change:	Changeable at any time

Value Range:
0.0s to 6500.0s
Description
The deceleration time indicates the time required for the output frequency to decrease from F0-25 (acceleration/deceleration base frequency) to 0. The deceleration time is usually determined by the fall of the frequency reference signal. When the motor decelerates, the falling rate of the frequency reference must be limited to prevent overvoltage.
The AC drive provides four groups of deceleration time, which can be switched by using the parameter or DI terminal. This parameter defines the first deceleration time.

F0-19 **Acceleration/Deceleration time unit**

Address:	0xF013	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0: 1s
1: 0.1s
2: 0.01s
Description
The AC drive supports three acceleration/deceleration time units. When this parameter is modified, the decimal point of the parameters related to the frequency acceleration and deceleration time will change, and the corresponding acceleration and deceleration time will also change.

F0-20 **Offset frequency source**

Address:	0xF014	Effective mode:	-
Min.:	0	Unit:	-

Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: F0-21

1: AI1

2: AI2

3: AI3

4: Pulse reference

5: Communication

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

1: Digital setting

The initial frequency reference is the value of F0-21.

2: AI1

The frequency reference is input with current or voltage signals through the AI1 terminal. The frequency is calculated according to the preset AI curve.

3: AI2

The frequency reference is input with current or voltage signals through the AI2 terminal. The frequency is calculated according to the preset AI curve.

4: AI3

The frequency reference is input with current or voltage signals through the AI3 terminal. The frequency is calculated according to the preset AI curve.

5: Pulse reference (DI5)

The frequency reference is determined by the pulse frequency through the DI5 terminal. The frequency is calculated according to the correspondence curve between the pulse frequency and frequency reference.

6: Multi-reference

When multi-reference is used as the frequency source, different combinations of DI terminal states correspond to different frequency references. The four multi-reference terminals can provide 16 state combinations, corresponding to 16 reference values.

7: Simple PLC

Simple PLC is a multi-speed running command that can control the running time and acceleration and deceleration time. Parameters FC-00 to FC-15 are used to set the values of each frequency. FC-18 to FC-49 are used to set the running time and acceleration and deceleration time of each frequency. Up to 16 speeds can be set.

8: PID

PID is selected as the main frequency. As a general process control method, PID control is a closed-loop mechanism in which each controlled variable is stabilized at the target level through proportional, integral, and differential calculation of the difference between the feedback signal and the target signal of the controlled variable. PID control is generally used in closed-loop control, such as constant pressure closed-loop control and constant tension closed-loop control.

9: Communication

The main frequency is set through communication. The frequency reference can be input through remote communication. The AC drive must be equipped with a communication card to implement communication with the host controller. This mode applies to remote control or centralized control of multiple equipment.

Others: F connector

A function code is set for a floating-point connector, and the value of the connector is read as the main frequency reference. This mode is used for expansion besides the common sources.

F0-21 Offset frequency

Address:	0xF015	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00 Hz to F0-10

Description

This parameter defines the offset frequency. It is used to adjust the when the frequency reference when the main/auxiliary frequency is set by an external analog signal (voltage or current).

F0-22 Decimal places of frequency reference

Address:	0xF016	Effective mode:	-
Min.:	1	Unit:	-
Max.:	2	Data type:	UInt16
Default:	2	Change:	Changeable only at stop

Value Range:

1: 0.1 Hz

2: 0.01 Hz

Description

This parameter defines the decimal places of the frequency reference.

F0-23 Retention of digital setting

Address:	0xF017	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Non-retentive

1: Retentive

Description

0: Non-retentive

F0-08 (preset frequency) set through the operating panel and frequency modifications made by using the ▲ and ▼ keys or UP and DOWN of terminals are cleared when the AC drive stops.

1: Retentive

F0-08 (preset frequency) set through the operating panel and frequency modifications made by using the ▲ and ▼ keys or UP and DOWN of terminals are retained when the AC drive stops.

F0-24 Motor parameter group

Address:	0xF018	Effective mode:	-
Min.:	0	Unit:	-

Max.: 3 Data type: UInt16
Default: 0 Change: Changeable only at stop

Value Range:

0: Motor parameter group 1

1: Motor parameter group 2

2: Motor parameter group 3

3: Motor parameter group 4

Description

-

F0-25 Acceleration/Deceleration time base frequency

Address: 0xF019 Effective mode: -
Min.: 0 Unit: -
Max.: 3 Data type: UInt16
Default: 0 Change: Changeable only at stop

Value Range:

0: F0-10 (maximum frequency)

1: Frequency reference

2: 100 Hz

3: Rated frequency

Description

This parameter defines the acceleration/deceleration time base frequency.

F0-26 Base frequency for UP/DOWN modification during running

Address: 0xF01A Effective mode: -
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 0 Change: Changeable only at stop

Value Range:

0: Running frequency

1: Frequency reference

Description

This parameter defines whether to adjust on the basis of the running frequency or the frequency reference
when modifying the frequency by using UP/DOWN during running.

F0-27 Frequency reference source bound to command source

Address: 0xF01B Effective mode: -
Min.: 0 Unit: -
Max.: 999 Data type: UInt16
Default: 0 Change: Changeable at any time

Value Range:

Ones: Frequency reference source bound to operating panel control
0: No binding
1: Digital setting
2: AI1
3: AI2
4: AI3
5: Pulse
6: Multi-reference
7: Simple PLC
8: PID
9: Communication
Tens: Frequency reference source bound to terminal control
0: No binding
1: Digital setting
2: AI1
3: AI2
4: AI3
5: Pulse
6: Multi-reference
7: Simple PLC
8: PID
9: Communication
Hundreds: Frequency reference source bound to communication control
0: No binding
1: Digital setting
2: AI1
3: AI2
4: AI3
5: Pulse
6: Multi-reference
7: Simple PLC
8: PID
9: Communication

Description

This parameter defines the binding relationship between the three operation command sources and nine frequency reference sources to facilitate synchronous switchover.
For details about the frequency sources, see the description of F0-03 (main frequency source X).
Different command sources can be bound to the same frequency reference source.
If a command source has a bound frequency source, the frequency sources set in F0-03 to F0-07 no longer take effect when the command source is effective.

F0-28 Communication protocol

Address:	0xF01C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0 Modbus

1: Extended communication protocol

Description

F0-29 **Load type**

Address:	0xF01D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Heavy load application

1: Light load application

Description

-

4.2 F1: Motor 1 Parameters

F1-00 **Motor type**

Address:	0xF100	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Common asynchronous motor

1: Variable frequency asynchronous motor

2: Permanent magnet synchronous motor

Description

-

F1-01 **Rated motor power**

Address:	0xF101	Effective mode:	-
Min.:	0.1	Unit:	kW
Max.:	1000.0	Data type:	UInt16
Default:	3.7	Change:	Changeable only at stop

Value Range:

0.1 kW to 1000.0 kW

Description

-

F1-02 **Rated motor voltage**

Address:	0xF102	Effective mode:	-
Min.:	1	Unit:	V
Max.:	2000	Data type:	UInt16
Default:	380	Change:	Changeable only at stop

Value Range:

1 V to 2000 V

Description

-

F1-03 **Rated motor current**

Address:	0xF103	Effective mode:	-
Min.:	0.01	Unit:	A
Max.:	655.35	Data type:	UInt16
Default:	9.00	Change:	Changeable only at stop

Value Range:
0.01 A to 655.35 A
Description
-

F1-04 **Rated motor frequency**

Address:	0xF104	Effective mode:	-
Min.:	0.01	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	50.00	Change:	Changeable only at stop

Value Range:
0.01 Hz to F0-10
Description
-

F1-05 **Rated motor speed**

Address:	0xF105	Effective mode:	-
Min.:	1	Unit:	RPM
Max.:	65535	Data type:	UInt16
Default:	1460	Change:	Changeable only at stop

Value Range:
1 RPM to 65535 RPM
Description
-

F1-06 **Asynchronous motor stator resistance**

Address:	0xF106	Effective mode:	-
Min.:	0.001	Unit:	Ω
Max.:	65.535	Data type:	UInt16
Default:	1.204	Change:	Changeable only at stop

Value Range:
0.001 Ω to 65.535 Ω
Description
-

F1-07 **Asynchronous motor rotor resistance**

Address:	0xF107	Effective mode:	-
Min.:	0.001	Unit:	Ω
Max.:	65.535	Data type:	UInt16
Default:	0.908	Change:	Changeable only at stop

Value Range:
0.001 Ω to 65.535 Ω
Description
-

F1-08 **Asynchronous motor leakage inductance**

Address:	0xF108	Effective mode:	-

Min.: 0.01 Unit: mH
Max.: 655.35 Data type: UInt16
Default: 5.28 Change: Changeable only at stop
Value Range:
0.01 mH to 655.35 mH
Description
-

F1-09 Asynchronous motor mutual inductance
Address: 0xF109 Effective mode: -
Min.: 0.1 Unit: mH
Max.: 6553.5 Data type: UInt16
Default: 156.8 Change: Changeable only at stop
Value Range:
0.1 mH to 6553.5 mH
Description
-

F1-10 Asynchronous motor no-load current
Address: 0xF10A Effective mode: -
Min.: 0.01 Unit: A
Max.: F1-03 Data type: UInt16
Default: 4.20 Change: Changeable only at stop
Value Range:
0.01 A to F1-03
Description
-

F1-16 Synchronous motor stator resistance
Address: 0xF110 Effective mode: -
Min.: 0.001 Unit: Ω
Max.: 65.535 Data type: UInt16
Default: 1.204 Change: Changeable only at stop
Value Range:
0.001 Ω to 65.535 Ω
Description
-

F1-17 Synchronous motor D axis inductance
Address: 0xF111 Effective mode: -
Min.: 0.01 Unit: mH
Max.: 655.35 Data type: UInt16
Default: 5.28 Change: Changeable only at stop
Value Range:
0.01 mH to 655.35 mH
Description
-

F1-18 Synchronous motor Q axis inductance
Address: 0xF112 Effective mode: -
Min.: 0.01 Unit: mH
Max.: 655.35 Data type: UInt16

Default: 5.28 Change: Changeable only at stop

Value Range:

0.01 mH to 655.35 mH

Description

-

F1-20 Synchronous motor back EMF coefficient

Address: 0xF114 Effective mode: -

Min.: 0.0 Unit: V

Max.: 6553.5 Data type: UInt16

Default: 300.0 Change: Changeable only at stop

Value Range:

0.0 V to 6553.5 V

Description

-

F1-27 Encoder PPR

Address: 0xF11B Effective mode: -

Min.: 1 Unit: -

Max.: 65535 Data type: UInt16

Default: 1024 Change: Changeable only at stop

Value Range:

1 to 65535

Description

This parameter defines the number of pulses per revolution of the ABZ encoder. In FVC mode, the motor cannot run properly if this parameter is set incorrectly.

F1-28 Encoder type

Address: 0xF11C Effective mode: -

Min.: 0 Unit: -

Max.: 3 Data type: UInt16

Default: 0 Change: Changeable only at stop

Value Range:

0: ABZ incremental encoder

1: 23-bit encoder

2: Resolver

3: External input

Description

After the PG card is installed, you need to set this parameter properly to ensure normal running of the AC drive.

F1-29 Speed feedback PG card

Address: 0xF11D Effective mode: -

Min.: 0 Unit: -

Max.: 1 Data type: UInt16

Default: 0 Change: Changeable only at stop

Value Range:

0: Local PG card

1: Extension PG card

Description

The ABZ encoder supports PG card extension. When the extension PG card is used for speed measurement, set this parameter to 1.

F1-30 A/B phase sequence of encoder

Address:	0xF11E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Forward

1: Reverse

Description

This parameter is used to change the phase sequence of the encoder.

F1-31 Encoder installation angle

Address:	0xF11F	Effective mode:	-
Min.:	0.0	Unit:	°
Max.:	359.9	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:

0.0° to 359.9°

Description

-

F1-34 Number of resolver pole pairs

Address:	0xF122	Effective mode:	-
Min.:	1	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

1 to 65535

Description

-

F1-36 Speed feedback PG wire breakage detection time

Address:	0xF124	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	10.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:

0.0s to 10.0s

Description

This parameter defines the detection time of the encoder wire breakage fault. If it is set to 0.0s, the AC drive does not detect the encoder wire breakage fault.

If hardware detection of encoder wire breakage is enabled (bit02 of AA-30 is set to 1), the AC drive reports ERR20 when the AC drive detects a wire breakage fault and the fault lasts for a period longer than the time specified by F1-36.

F1-37 Auto-tuning

Address:	0xF125	Effective mode:	-

Min.:	0	Unit:	-
Max.:	13	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: No operation

1: Static auto-tuning on partial parameters of asynchronous motor

2: Dynamic auto-tuning on asynchronous motor

3: Static auto-tuning on all parameters of asynchronous motor

4: Inertia auto-tuning

5: Deadzone auto-tuning

11: With-load auto-tuning on synchronous motor (excluding back EMF)

12: No-load dynamic auto-tuning on synchronous motor

13: Static auto-tuning on all parameters of synchronous motor (excluding zero point angle)

Description

-

4.3 F2: Motor 1 Vector Control Parameters

F2-00 **Speed loop proportional gain 1**

Address:	0xF200	Effective mode:	-
Min.:	1	Unit:	-
Max.:	300	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:

1 to 100

Description

This parameter defines the low-speed speed loop gain Kp, which affects the response to the motor speed. A larger Kp value indicates higher adjustment sensitivity and adjustment intensity. A smaller Kp value indicates lower adjustment sensitivity and adjustment intensity. The low-speed speed loop Kp is used in the case of low speed.

F2-01 **Speed loop integral time 1**

Address:	0xF201	Effective mode:	-
Min.:	0.01	Unit:	s
Max.:	10.00	Data type:	UInt16
Default:	0.50	Change:	Changeable at any time

Value Range:

0.01s to 10.00s

Description

This parameter defines the low-speed speed loop integral time Ti. The reciprocal of the speed loop integral time constant is the integral gain. The speed loop integral time constant affects the steady-state speed error of the motor and the stability of the speed loop system. Increasing the speed loop integral time constant slows down the response of the speed loop. In this case, increase the speed loop proportional gain to shorten the response time of the speed loop. The low-speed speed loop Ti is used in the case of low speed.

F2-02 **Switchover frequency 1**

Address:	0xF202	Effective mode:	-

Min.:	0.00	Unit:	Hz
Max.:	F2-05	Data type:	UInt16
Default:	5.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-05

Description
The speed loop PI parameters are divided into two groups: low speed and high speed. When the running frequency is lower than switchover frequency 1 (F2-02), the speed loop PI is adjusted by F2-00 and F2-01. When the running frequency is higher than switchover frequency 2 (F2-05), the speed loop PI is adjusted by F2-03 and F3-04. When the running frequency falls between switchover frequency 1 and switchover frequency 2, PI parameters are obtained from linear switchover between the two groups of PI parameters. The value of this parameter must be smaller than F2-05 (switchover frequency 2).

F2-03 Speed loop proportional gain 2

Address:	0xF203	Effective mode:	-
Min.:	1	Unit:	-
Max.:	300	Data type:	UInt16
Default:	20	Change:	Changeable at any time

Value Range:
1 to 300

Description
This parameter defines the high-speed speed loop gain Kp. A larger Kp value indicates higher adjustment sensitivity and adjustment intensity. A smaller Kp value indicates lower adjustment sensitivity and adjustment intensity.

F2-04 Speed loop integral time 2

Address:	0xF204	Effective mode:	-
Min.:	0.01	Unit:	s
Max.:	10.00	Data type:	UInt16
Default:	1.00	Change:	Changeable at any time

Value Range:
0.01s to 10.00s

Description
This parameter defines the high-speed speed loop integral time Ti. The speed loop integral time constant affects the steady-state speed error of the motor and the stability of the speed loop system. Increasing the speed loop integral time constant slows down the response of the speed loop. In this case, increase the speed loop proportional gain to shorten the response time of the speed loop.

F2-05 Switchover frequency 2

Address:	0xF205	Effective mode:	-
Min.:	F2-02	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	10.00	Change:	Changeable at any time

Value Range:
F2-02 to F0-10

Description

The speed loop PI parameters are divided into two groups: low speed and high speed. When the running frequency is lower than switchover frequency 1 (F2-02), the speed loop PI is adjusted by F2-00 and F2-01. When the running frequency is higher than switchover frequency 2 (F2-05), the speed loop PI is adjusted by F2-03 and F3-04. When the running frequency falls between switchover frequency 1 and switchover frequency 2, PI parameters are obtained from linear switchover between the two groups of PI parameters. The value of this parameter must be smaller than F2-05 (switchover frequency 2).

F2-06 Vector control slip gain

Address:	0xF206	Effective mode:	-
Min.:	50	Unit:	%
Max.:	200	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:

50% to 200%

Description

In SVC control mode, this parameter is used to adjust the speed stability accuracy of the motor. For example, when the running frequency of the motor is lower than the output frequency of the AC drive, you can increase the value of this parameter.

In FVC control mode, this parameter is used to adjust the output current of the AC drive with the same load. For example, you can decrease the value of this parameter gradually when a high-rate AC drive is used to control a motor with low load capacity. No adjustment is required under normal circumstances.

F2-07 Speed feedback filter time in SVC mode

Address:	0xF207	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	0.100	Data type:	UInt16
Default:	0.015	Change:	Changeable at any time

Value Range:

0.000s to 0.100s

Description

In FVC control mode (F0-01 = 1), the speed loop feedback filter time is valid. You can improve the stability of the motor by adjusting this parameter. Increasing the speed loop feedback filter time can enhance motor stability but slow down dynamic response. Decreasing it will bring faster dynamic response. An excessively small parameter value may lead to motor oscillation. Generally, the motor stability meets requirements, and no adjustment is required.

F2-09 Torque upper limit source in speed control mode (motoring)

Address:	0xF209	Effective mode:	-
Min.:	0	Unit:	-
Max.:	7	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Digital setting (F2-10)

1: AI1

2: AI2

3: AI3

4: Pulse reference

5: Communication

6: MIN (AI1, AI2)

7: MAX (AI1, AI2)

Others: F connector

Description

0: Digital setting (F2-10)

The torque upper limit in speed control mode is set by F2-10 (digital setting of torque upper limit in speed control).

1: AI1

The torque upper limit is input with the current or voltage signal through the AI1 terminal. The frequency is calculated according to the preset AI curve.

2: AI2

The torque upper limit is input with the current or voltage signal through the AI2 terminal. The frequency is calculated according to the preset AI curve.

3: AI3

The torque upper limit is input with the current or voltage signal through the AI3 terminal. The frequency is calculated according to the preset AI curve.

4: Pulse reference (DI5)

The torque upper limit in speed control is set through DI5. The frequency is calculated based on the curve reflecting the relationship between the pulse frequency and running frequency.

5: Communication

The main frequency is set through communication. The running frequency is input through remote communication. The AC drive must be equipped with a communication card to implement communication with the host controller. This mode applies to remote control or centralized control of multiple equipment.

6: MIN (AI1, AI2)

The torque upper limit in speed control mode is the smaller value between AI1 and AI2 inputs.

7: MAX (AI1, AI2)

The torque upper limit in speed control mode is the larger value between AI1 and AI2 inputs.

Others: F connector

A function code is set for a floating-point connector, and the value of the connector is read as the motoring torque upper limit in speed control mode. This mode is used for expansion besides the common sources.

The full scale of setpoints other than setpoint 0 corresponds to F2-10.

F2-10 Torque upper limit in speed control mode

Address:	0xF20A	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	150.0	Change:	Changeable at any time

Value Range:

0.0% to 200.0%

Description

This parameter defines the torque upper limit in speed control mode.

F2-11 Torque upper limit source in speed control mode (generating)

Address:	0xF20B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Digital setting (F2-10)

1: AI1

2: AI2

3: AI3

4: Pulse reference (DI5)

5: Communication

6: MIN (AI1, AI2)

7: MAX (AI1, AI2)

8: Digital setting (F2-12)

Others: F connector

Description

0: Digital setting (F2-10)

The torque upper limit in speed control mode is set by F2-10 (digital setting of torque upper limit in speed control).

1: AI1

The torque upper limit is input with the current or voltage signal through the AI1 terminal. The frequency is calculated according to the preset AI curve.

2: AI2

The torque upper limit is input with the current or voltage signal through the AI2 terminal. The frequency is calculated according to the preset AI curve.

3: AI3

The torque upper limit is input with the current or voltage signal through the AI3 terminal. The frequency is calculated according to the preset AI curve.

4: Pulse reference (DI5)

The torque upper limit in speed control is set through DI5. The frequency is calculated based on the curve reflecting the relationship between the pulse frequency and running frequency.

5: Communication

The main frequency is set through communication. The running frequency is input through remote communication. The AC drive must be equipped with a communication card to implement communication with the host controller. This mode applies to remote control or centralized control of multiple equipment.

6: MIN (AI1, AI2)

The torque upper limit in speed control mode is the smaller value between AI1 and AI2 inputs.

7: MAX (AI1, AI2)

The torque upper limit in speed control mode is the larger value between AI1 and AI2 inputs.

8: Digital setting (F2-12)

The torque upper limit in speed control mode is set by F2-12 (digital setting of generating torque upper limit in speed control).

Others: F connector

A function code is set for a floating-point connector, and the value of the connector is read as the generating torque upper limit in speed control mode. This mode is used for expansion besides the common sources.

The full scale of setpoints other than setpoints 0 and 8 corresponds to F2-12.

F2-12 Torque upper limit in speed control mode (generating)

Address:	0xF20C	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	150.0	Change:	Changeable at any time

Value Range:

0.0% to 200.0%

Description

This parameter defines the generating torque upper limit in speed control mode.

F2-18 Field weakening mode

Address:	0xF212	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0: No field weakening

1: Auto adjustment

2: Calculation+Auto adjustment

Description

0: No field weakening

Without field weakening control, the maximum motor speed is related to the bus voltage of the AC drive. The output current is smaller under the same load, but the running frequency cannot reach the frequency reference. Do not select this function if a higher speed is required.

1: Auto adjustment

This field weakening mode is simple and reliable. In scenarios requiring quick field weakening, the field weakening coefficient (F2-19) can be increased as appropriate. However, if the coefficient is too large,
the current may be unstable.

2: Calculation+Auto adjustment

In this mode, the field weakening current is adjusted quickly. This mode can be selected in scenarios where the auto adjustment mode cannot
meet requirements.

F2-19 Field weakening gain

Address:	0xF213	Effective mode:	-
Min.:	1	Unit:	-
Max.:	50	Data type:	UInt16
Default:	5	Change:	Changeable at any time

Value Range:

1 to 50

Description

Increasing the setpoint can improve dynamic response. However, an excessively large setpoint may also cause current oscillation.

F2-22 **Generating power limiting**

Address:	0xF216	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: Enabled in the whole process

2: Enabled at constant speed

3: Enabled during deceleration

Description

-

F2-23 **Generating power upper limit**

Address:	0xF217	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	20.0	Change:	Changeable at any time

Value Range:

0.0% to 200.0%

Description

-

F2-24 **Initial position angle detection current of synchronous motor**

Address:	0xF218	Effective mode:	-
Min.:	50	Unit:	-
Max.:	180	Data type:	UInt16
Default:	80	Change:	Changeable only at stop

Value Range:

50 to 180

Description

A smaller current indicates lower noise during detection. However, an excessively small current may lead to position detection inaccuracy. You are advised not to modify this parameter in FVC mode.

F2-25 **Initial position angle detection of synchronous motor**

Address:	0xF219	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Detected upon running

1: Not detected

2: Detected upon initial running after power-on

Description

The initial position angle detection can prevent reverse rotation at startup, but it causes certain noise. For scenarios where reverse rotation is not allowed at startup and the rotor position of the motor will change after stop, F2-25 must be set to 0.

It can be set to 1 or 2 in other scenarios.

F2-27 **Salient pole rate adjustment gain of synchronous motor**

Address:	0xF21B	Effective mode:	-

Min.:	0.20	Unit:	-
Max.:	3.00	Data type:	UInt16
Default:	1.00	Change:	Changeable at any time

Value Range:
0.20 to 3.00
Description
If F2-28 is set to 1, you can adjust F2-27 when the output current does not decrease or even increase under the same load. When the load remains unchanged, adjust F2-27 until the output current is the smallest.

F2-28 Maximum torque-to-current ratio control of synchronous motor

Address:	0xF21C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
Description
When this function is enabled for the salient pole motor, the current will become smaller under the same load.

F2-32 Z signal correction

Address:	0xF220	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
Description
-

F2-37 Low speed carrier frequency

Address:	0xF225	Effective mode:	-
Min.:	0.8	Unit:	kHz
Max.:	F0-15	Data type:	UInt16
Default:	2.0	Change:	Changeable at any time

Value Range:
0.8 kHz to F0-15
Description
-

F2-43 Position lock

Address:	0xF22B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 1
Description
-

F2-44 **Switchover frequency**

Address:	0xF22C	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F2-02	Data type:	UInt16
Default:	0.30	Change:	Changeable at any time

Value Range:
0.00 Hz to F2-02
Description
-

F2-45 **Position lock speed loop proportional gain**

Address:	0xF22D	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

F2-46 **Position lock speed loop integral time**

Address:	0xF22E	Effective mode:	-
Min.:	0.01	Unit:	s
Max.:	10.00	Data type:	UInt16
Default:	0.50	Change:	Changeable at any time

Value Range:
0.01s to 10.00s
Description
-

F2-49 **Auto-tuning free mode**

Address:	0xF231	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Auto-tuning upon initial running after power-on
2: Auto-tuning upon running
Description
-

F2-51 **Initial position compensation angle**

Address:	0xF233	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	359.9	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0 to 359.9
Description
-

4.4 F3: V/f Control Parameters 1

F3-00 **V/f curve**

Address:	0xF300	Effective mode:	-
Min.:	0	Unit:	-
Max.:	11	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Straight-line V/f curve

1: Multi-point V/f curve

2-9: Reserved

10: V/f complete separation mode

11: V/f half separation mode

Description

-

F3-01 **Torque boost**

Address:	0xF301	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	30.0	Data type:	UInt16
Default:	3.0	Change:	Changeable at any time

Value Range:

0.0% to 30.0%

Description

-

F3-02 **Cut-off frequency of torque boost**

Address:	0xF302	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	50.00	Change:	Changeable only at stop

Value Range:

0.00 Hz to F0-10

Description

-

F3-03 **Multi-point V/f frequency 1**

Address:	0xF303	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F3-05	Data type:	UInt16
Default:	0.00	Change:	Changeable only at stop

Value Range:

0.00 Hz to F3-05

Description

-

F3-04 **Multi-point V/f voltage 1**

Address:	0xF304	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0% to +100.0%
Description
-

F3-05 **Multi-point V/f frequency 2**

Address:	0xF305	Effective mode:	-
Min.:	F3-03	Unit:	Hz
Max.:	F3-07	Data type:	UInt16
Default:	0.00	Change:	Changeable only at stop

Value Range:
F3-03 to F3-07
Description
-

F3-06 **Multi-point V/f voltage 2**

Address:	0xF306	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0% to +100.0%
Description
-

F3-07 **Multi-point V/f frequency 3**

Address:	0xF307	Effective mode:	-
Min.:	F3-05	Unit:	Hz
Max.:	F1-04	Data type:	UInt16
Default:	0.00	Change:	Changeable only at stop

Value Range:
F3-05 to F1-04
Description
-

F3-08 **Multi-point V/f voltage 3**

Address:	0xF308	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0% to +100.0%
Description
-

F3-09 **V/F slip compensation gain**

Address:	0xF309	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	200.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0 to 200.0

Description
-

F3-10 V/f overexcitation gain

Address:	0xF30A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	64	Change:	Changeable at any time

Value Range:
0 to 200
Description
-

F3-11 V/f oscillation suppression gain

Address:	0xF30B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	40	Change:	Changeable at any time

Value Range:
0 to 100
Description
-

F3-12 V/f oscillation suppression

Address:	0xF30C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
Description
-

F3-13 Voltage source for V/f separation

Address:	0xF30D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Digital setting (F3-14)
1: AI1
2: AI2
3: AI3
4: Pulse reference (DI5)
5: Multi-reference
6: Simple PLC
7: PID
8: Communication
Others: F connector

Description

This parameter defines the source of the target voltage in V/f separation mode.

0: Digital setting (F3-14)

The V/f separation voltage is set by F3-14 (V/f separation voltage).

1: AI1

The V/f separation voltage is input with current or voltage signals through the AI1 terminal. The frequency is calculated according to the preset AI curve.

2: AI2

The V/f separation voltage is input with current or voltage signals through the AI2 terminal. The frequency is calculated according to the preset AI curve.

3: AI3

The V/f separation voltage is input with current or voltage signals through the AI3 terminal. The frequency is calculated according to the preset AI curve. The AC drive has two AI terminals by default, and the AI3 terminal needs to be provided through the I/O expansion card.

4: Pulse reference (DI5)

The V/f separation voltage is set through DI5. The frequency is calculated based on the curve reflecting the relationship between the pulse frequency and running frequency.

5: Multi-reference

When multi-reference is used as the source of the V/f separation voltage, different combinations of DI terminal states correspond to different reference values. The four multi-reference terminals can provide 16 state combinations, corresponding to 16 reference values (percentage x maximum frequency) of parameters in group FC.

6: Simple PLC

The V/f separation voltage is set by simple PLC. For details, see the function description of simple PLC.

7: PID

The V/f separation voltage is set by PID. For details, see the PID function description.

8: Communication

The V/f separation voltage is set through communication. The running frequency is input through remote communication. The AC drive must be equipped with a communication card to implement communication with the host controller. This mode applies to remote control or centralized control of multiple equipment.

Others: F connector

A function code is set for a floating-point connector, and the value of the connector is read as the V/f separation voltage. This mode is used for expansion besides the common sources.

F3-14 V/f separation voltage

Address:	0xF30E	Effective mode:	-
Min.:	0	Unit:	V
Max.:	F1-02	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 V to F1-02

Description

This parameter defines the V/f separation voltage.

F3-15 Voltage rise time of V/f separation

Address:	0xF30F	Effective mode:	-
Min.:	0.0	Unit:	s

Max.:	1000.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 1000.0s
Description
This parameter defines the time required for the output voltage to rise from 0 to the rated motor voltage.

F3-16 Voltage fall time of V/f separation

Address:	0xF310	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	1000.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 1000.0s
Description
This parameter defines the time required for the output voltage to fall from the rated motor voltage to 0.

F3-17 Stop mode for V/f separation

Address:	0xF311	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Frequency and voltage decline to 0 independently
1: Frequency declines to 0 after voltage declines to 0
2: Coast to stop (new)
Description
0: The frequency and voltage decrease to 0 independently.
1: The frequency decreases to 0 according to the deceleration time after the voltage decreases to 0 according to the deceleration time.
2: The AC drive coasts to stop without following the stop deceleration curve.

F3-18 Overcurrent stall suppression action current

Address:	0xF312	Effective mode:	-
Min.:	50	Unit:	%
Max.:	200	Data type:	UInt16
Default:	150	Change:	Changeable only at stop

Value Range:
50% to 200%
Description
-

F3-19 Overcurrent stall suppression

Address:	0xF313	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0: Disabled

1: Enabled

Description

-

F3-20 Overcurrent stall suppression gain

Address:	0xF314	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	20	Change:	Changeable at any time

Value Range:

1 to 100

Description

-

F3-21 Compensation coefficient of speed multiplying overcurrent stall suppression action current

Address:	0xF315	Effective mode:	-
Min.:	50	Unit:	%
Max.:	200	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:

50% to 200%

Description

-

F3-22 Overvoltage stall suppression action voltage

Address:	0xF316	Effective mode:	-
Min.:	330.0	Unit:	V
Max.:	800.0	Data type:	UInt16
Default:	770.0	Change:	Changeable at any time

Value Range:

330.0 V to 800.0 V

Description

-

F3-23 Overvoltage stall suppression

Address:	0xF317	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0: Disabled

1: Enabled

Description

-

F3-24 Overvoltage stall suppression frequency gain

Address:	0xF318	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:

1 to 100

Description

-

F3-25 Overvoltage stall suppression voltage gain

Address:	0xF319	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:

1 to 100

Description

-

F3-26 Frequency rise threshold for overvoltage stall suppression

Address:	0xF31A	Effective mode:	-
Min.:	0	Unit:	Hz
Max.:	50	Data type:	UInt16
Default:	5	Change:	Changeable only at stop

Value Range:

0 Hz to 50 Hz

Description

-

F3-27 Slip compensation filter time

Address:	0xF31B	Effective mode:	-
Min.:	0.1	Unit:	s
Max.:	10.0	Data type:	UInt16
Default:	0.5	Change:	Changeable only at stop

Value Range:

0.1s to 10.0s

Description

-

F3-28 Multi-point curve source

Address:	0xF31C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: 3-point curve

1: Multi-point curve module A

2: Multi-point curve module B

Description

0: 3-point curve

The 3-point curve is used by default, which is set in F3-03 to F3-08.

1: Multi-point curve module A

The output of free module A is used as the voltage reference of the multi-point curve.

2: Multi-point curve module B

The output of free module B is used as the voltage reference of the multi-point curve.

F3-33 **Online torque compensation gain**

Address:	0xF321	Effective mode:	-
Min.:	80	Unit:	-
Max.:	150	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:
80 to 150
Description
-

F3-34 **ImaxKi coefficient**

Address:	0xF322	Effective mode:	-
Min.:	10	Unit:	%
Max.:	1000	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:
10% to 1000%
Description
-

F3-35 **Overcurrent suppression threshold (relative to rated motor current)**

Address:	0xF323	Effective mode:	-
Min.:	80	Unit:	%
Max.:	300	Data type:	UInt16
Default:	200	Change:	Changeable only at stop

Value Range:
80% to 300%
Description
-

F3-36 **Frequency threshold for overcurrent suppression field weakening**

Address:	0xF324	Effective mode:	-
Min.:	100	Unit:	%
Max.:	500	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:
100% to 500%
Description
-

F3-37 **IT filter time**

Address:	0xF325	Effective mode:	-
Min.:	10	Unit:	ms
Max.:	1000	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:
10 ms to 1000 ms
Description
-

F3-38 **Slip compensation mode**

Address:	0xF326	Effective mode:	-

Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0: Disabled
1: Slip compensation without PG
2: Slip compensation with PG
Description
-

F3-39 VdcMaxCtrl allowed runtime

Address:	0xF327	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0s to 100.0s
Description
-

F3-40 Upper limit of V/f separation voltage

Address:	0xF328	Effective mode:	-
Min.:	50.0	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
50.0% to 200.0%
Description
This parameter defines the upper limit of the V/f separation voltage, which is a percentage relative to the rated motor voltage.

F3-41 RFG time of V/f separation frequency

Address:	0xF329	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: RFG time forced to 0
1: Preset RFG time
Description
This parameter defines the RFG time of the V/f separation frequency. When it is set to 0, the frequency reference acceleration/deceleration time is forced to 0; when it is set to 1, the acceleration/deceleration time is set as normal.

F3-42 Cut-off frequency of V/f oscillation suppression filter

Address:	0xF32A	Effective mode:	-
Min.:	1.0	Unit:	Hz
Max.:	50.0	Data type:	UInt16
Default:	8.0	Change:	Changeable at any time

Value Range:
1.0 Hz to 50.0 Hz

Description
-

F3-43 Cut-off frequency threshold for V/F oscillation suppression

Address:	0xF32B	Effective mode:	-
Min.:	10	Unit:	Hz
Max.:	3000	Data type:	UInt16
Default:	200	Change:	Changeable at any time

Value Range:
10 Hz to 3000 Hz
Description
-

F3-44 VdcMaxCtrl feedforward coefficient

Address:	0xF32C	Effective mode:	-
Min.:	0	Unit:	%
Max.:	500	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0% to 500%
Description
-

F3-50 PMVVC low-speed IF

Address:	0xF332	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0: Disabled
1: Enabled
Description
-

F3-51 PMVVC low-speed IF current

Address:	0xF333	Effective mode:	-
Min.:	30	Unit:	-
Max.:	250	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:
30 to 250
Description
-

F3-52 PMVVC low-speed IF speed switching threshold

Address:	0xF334	Effective mode:	-
Min.:	2.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	10.0	Change:	Changeable only at stop

Value Range:
2.0% to 100.0%

Description
-

F3-53 **PMVVC oscillation suppression gain coefficient**

Address:	0xF335	Effective mode:	-
Min.:	0	Unit:	-
Max.:	500	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
0 to 500
Description
-

F3-54 **PMVVC filter time coefficient**

Address:	0xF336	Effective mode:	-
Min.:	0	Unit:	-
Max.:	500	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
0 to 500
Description
-

F3-55 **PMVVC energy conservation control mode**

Address:	0xF337	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	2	Change:	Changeable only at stop

Value Range:
0: Fixed straight-line V/f curve
1: Fixed 30% reactive current
2: MTPA control
Description
-

4.5 F4: Input Terminal Parameters

F4-00 **DI1 function**

Address:	0xF400	Effective mode:	-
Min.:	0	Unit:	-
Max.:	80	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0: No function
1: Forward RUN (IN1)
2: Reverse RUN (IN2)
3: Three-wire control (IN3)
4: Forward jogging (FJOG)
5: Reverse jogging (RJOG)
6: Terminal UP
7: Terminal DOWN
8: Coast to stop
9: Fault reset (RESET)
10: Running pause
11: External fault NO input
12: Multi-reference terminal 1
13: Multi-reference terminal 2
14: Multi-reference terminal 3
15: Multi-reference terminal 4
16: Acceleration/deceleration selection terminal 1
17: Acceleration/deceleration selection terminal 2
18: Frequency source switchover
19: UP and DOWN setting clear
20: Command source switchover terminal 1
21: Acceleration/Deceleration inhibition
22: PID pause
23: Simple PLC state reset
24: Wobble pause
25: Counter input
26: Counter reset
27: Length count input
28: Length reset
29: Torque control inhibition
31: Reserved
32: Immediate DC braking

(To be continued)

(continued)

33: External fault NC input
34: Frequency modification enable
35: PID action direction reversal
36: External stop terminal 1
37: Command source switchover terminal 2
38: PID integral pause
39: Switchover between main frequency and preset frequency
40: Switchover between auxiliary frequency and preset frequency
41: Motor selection terminal 1
42: Reserved
43: PID parameter switchover
44: User-defined fault 1
45: User-defined fault 2
46: Switchover between speed control and torque control
47: Emergency stop
48: External stop terminal 2
49: Deceleration DC braking
50: Current running duration clear
51: Switchover between two-wire and three-wire control
52: Reverse running inhibition
53–69: Reserved
70: Control channel
71: Reference source (Reserved)
72: Terminal module
73: Startup mode bit0
74: Startup mode bit1
75: Command source switchover terminal 3
76: Motor selection terminal 2
77: Running enable
78: Forward RUN enable
79: Reverse RUN enable
80: RFG input set to 0

Description

0: No function

The DI terminal has no function.

1: Forward RUN (IN1)

The terminal is used to set the operation mode of the AC drive to forward run. (FWD indicates forward.) In two-wire mode 1 (F4-11 = 0), the terminal is used to set the operation mode of the AC drive to forward run. In two-wire mode 2 (F4-11 = 1), the terminal is used to issue a running command.

2: Reverse RUN (IN2)

The terminal is used to set the operation mode of the AC drive to reverse run. (REV indicates reverse.) In two-wire mode 1 (F4-11 = 0), the terminal is used to set the operation mode of the AC drive to reverse run. In two-wire mode 2 (F4-11 = 1), the terminal is used to set the forward/reverse run direction.

3: Three-wire control

The terminal is used to set the AC drive to run in three-wire control mode. To use a terminal as the command source, set F4-11 (terminal control mode) to 2 (three-wire mode 1) or 3 (three-wire mode 2), and set this parameter to 3. The three-wire control modes include three-wire mode 1 and three-wire mode 2.

4: Forward jogging (FJOG)

The terminal is used to set the operation mode of the AC drive to forward jogging. In jogging mode, the AC drive runs at low speed for a short time, which is typically used for maintenance and commissioning of field equipment.

5: Reverse jogging (RJOG)

The terminal is used to set the operation mode of the AC drive to reverse jogging. In jogging mode, the AC drive runs at low speed for a short time, which is typically used for maintenance and commissioning of field equipment.

6: Terminal UP

The terminal is used to increase the frequency when terminal I/O is used as the frequency reference source. When the terminal is active, it works as if the increment key is pressed and held. When the terminal is inactive, it works as if the increment key is released.

7: Terminal DOWN

The terminal is used to decrease the frequency when terminal I/O is used as the frequency reference source. When the terminal is active, it works as if the decrement key is pressed and held. When the terminal is inactive, it works as if the decrement key is released.

8: Coast to stop

When the terminal is active, a coast to stop command is issued, upon receiving which the AC drive stops output immediately, allowing the load to stop following mechanical inertia. The AC drive stops by stopping the output. At this time, the power supply of the motor is cut off and the drive system is in a free braking state. Since the stop time is determined by the inertia of the drive system, it is also called inertia stop.

9: Fault reset (RESET)

The terminal is used to reset faults of the AC drive, which functions the same as the STOP/RES key on the operating panel. Remote fault reset can be implemented by using this function.

10: Running pause

When the terminal is active, the AC drive decelerates to stop with all running parameters memorized (such as PLC, wobble, and PID parameters). When the terminal is inactive, the AC drive resumes its running state as recorded.

11: External fault NO input

When the terminal is active, the AC drive reports Err15 upon receiving an external signal.

12–15: Multi-reference terminals 1–4

Multi-reference is selected as the main frequency source. You can set the 16 states of the four terminals to define 16 speeds or 16 other references. This function is applicable to applications where continuous adjustment of the AC drive running frequency is not required and only several frequency values are required.

16–17: Acceleration/deceleration selection terminals 1–2

The AC drive supports four groups of acceleration/deceleration time, which can be selected through combinations of four states of these two terminals. The acceleration time indicates the time required for the output frequency of the AC drive to rise from 0 to the acceleration/deceleration base frequency (F0-25). The deceleration time indicates the time required for the output frequency of the AC drive to decrease from the acceleration/deceleration base frequency (F0-25) to 0 Hz.

18: Frequency source switchover
The terminal is used to switch between different frequency reference sources. The frequency reference is set in F0-07 (frequency source superposition).
19: UP and DOWN setting clear
When the main frequency is set through the operating panel and this terminal is active, the frequency set by using the increment or decrement key on the operating panel or terminal UP/DOWN can be cleared and the frequency will be reset to the value of F0-08.
20: Command source switchover terminal 1
When the command source is set to terminal control (F0-02 = 1), activating the terminal switches from terminal control to operating panel control. When the command source is set to communication control (F0-02 = 2), activating the terminal switches from communication control to operating panel control.
21: Acceleration/Deceleration inhibition
The terminal is used to keep the AC drive at the current running frequency regardless of changes of the external input frequency (unless a stop command is received).
22: PID pause
The terminal is used to suspend PID control temporarily, so that the AC drive retains the current output frequency with no more PID tuning on the frequency source.
23: Simple PLC state reset
The terminal is used to reset the AC drive to the initial state of the simple PLC.
24: Wobble pause
In the wobble process, when the terminal is active, the wobble function is paused (the AC drive outputs at the center frequency).
25: Counter input
In the counting process, a counting pulse is input when the terminal is active.
26: Counter reset
In the counting process, the counter state is cleared when the terminal is active.
27: Length count input
In the fixed length process, the length count is input when the terminal is active.
28: Length reset
In the fixed length process, the length is cleared when the terminal is active.
29: Torque control inhibition
When the terminal is active, the AC drive switches from the torque control mode to speed control mode. When the terminal is inactive, the AC drive resumes the torque control mode.
30: Pulse input
This function must be selected when DI5 is used for pulse input.
31: Reserved
32: Immediate DC braking
When the terminal is active, the AC drive switches to the DC braking state directly. During DC braking, the AC drive feeds DC into the stator winding of the asynchronous motor to form a static magnetic field to set the motor to braking with energy consumption. In this state, the rotor cuts the static magnetic field to generate braking torque, which stops the motor quickly.
33: External fault NC input
When the terminal is active, the AC drive reports Err15 upon receiving an external signal.
34: Frequency modification enable
When the terminal is active, the frequency can be modified. When the terminal is inactive, the frequency cannot be modified.

35 PID action direction reversal

The terminal is used to reverse the direction set by FA-03 (PID action direction).

36: External stop terminal 1

When the command source is set to operating panel control (F0-02 = 0), the terminal is used to stop the AC drive, functioning the same as the STOP/RES key on the operating panel.

37: Command source switchover terminal 2

The terminal is used for switchover between terminal control and communication control. If the command source is set to terminal control, the system switches to communication control when the terminal is active. If the command source is set to communication control, the system switches to terminal control when the terminal is active.

38: PID integral pause

The integral adjustment function pauses when the terminal is active. However, the proportional and derivative adjustment functions are still valid.

39: Switchover between main frequency and preset frequency

The terminal is used to switch from the main frequency X to the preset frequency (F0-08).

40: Switchover between auxiliary frequency and preset frequency

The terminal is used to switch from the auxiliary frequency Y to the preset frequency (F0-08).

41/76: Motor selection

The terminal is used to select the motor. Assume that DI1 and DI2 are assigned with functions 41 and 76. Motor 1 is selected when both DI1 and DI2 are inactive; motor 2 is selected when DI1 is active and DI2 is inactive; motor 3 is selected when DI1 is inactive and DI2 is active; and motor 4 is selected when both DI1 and DI2 are active.

42: Reserved

43: PID parameter switchover

If the PID parameter switchover condition is set to "switchover by DI" (FA-18 = 1), the PID parameters are FA-05 to FA-07 (proportional gain Kp1, integral time Ti1, and derivative time Td1) when the terminal is inactive, or FA-15 to FA-17 (proportional gain Kp2, integral time Ti2, and derivative time Td2) when the terminal is active.

44: User-defined fault 1

When Err27 is reported, the AC drive will take measures according to the value of F9-49 (fault protection action).

45: User-defined fault 2

When Err28 is reported, the AC drive will take measures according to the value of F9-49 (fault protection action).

46: Switchover between speed control and torque control

The terminal is used to switch between speed control and torque control. When A0-00 (speed/torque control mode) is set to 0, the torque control mode is used when the terminal is active, and the speed control mode is used when the terminal is inactive. When A0-00 (speed/torque control mode) is set to 1, the speed control mode is used when the terminal is active, and the torque control mode is used when the terminal is inactive.

47: Emergency stop

Upon an emergency, the AC drive decelerates according to the deceleration time for emergency stop set in F8-59, or it decelerates according to the minimum unit time when the deceleration time for emergency stop is 0s in V/f mode. The terminal does not need to be kept in the closed state. Even if it stays closed only for an instant, the AC drive will come to an emergency stop. Different from general deceleration, the emergency stop action prevents the AC drive from restarting even if the emergency stop input terminal is opened after the deceleration time for emergency stop expires and the run signal is still valid on the AC drive terminal. To restart the AC drive in this case, disconnect the running terminal and input the run command.

48: External stop terminal 2

The terminal is used to make the AC drive decelerate to stop in any control mode (operating panel, terminal, or communication control). In this case, the deceleration time is fixed to deceleration time 4 (F8-08).

49: Deceleration DC braking

The terminal is used to make the AC drive decelerate to the start frequency of DC braking during stop (F6-11) before entering the DC braking state.

50: Current running duration clear

The terminal is used to clear the current running duration of the AC drive. If the current running duration is less than the setpoint of F8-53 (current running duration threshold, which is greater than 0) and the terminal is active in the process, the current running duration is cleared. If the current running duration is greater than the setpoint of F8-53 (greater than 0) and the terminal is active, the current running duration is not cleared.

51: Switchover between two-wire and three-wire control

The terminal is used to switch between two-wire and three-wire control. If F4-11 is set to 0 (two-wire mode 1), the AC drive switches to three-wire mode 1 when the terminal is active. When the terminal is inactive, two-wire mode 1 is used. If F4-11 is set to 1 (two-wire mode 2), the AC drive switches to three-wire mode 2 when the terminal is active. If F4-11 is set to 2 (three-wire mode 1), the AC drive switches to two-wire mode 1 when the terminal is active. If F4-11 is set to 3 (three-wire mode 2), the AC drive switches to two-wire mode 2 when the terminal is active.

52: Reverse running inhibition

When the terminal is active, even if the reverse frequency is set, the actual frequency reference of the AC drive is fixed to 0. This function is the same as F8-13.

53–69: Reserved

70: Control channel

The terminal is used to select between two custom command channels. The value 0 indicates channel 1, and the value 1 indicates channel 2.

71: Reference source (Reserved)

72: Terminal module

The terminal is used to select between two terminal modules. The value 0 indicates module A, and the value 1 indicates module B.

73–74: Startup mode (bit0 and bit1)

The terminal is used to select a startup mode. Assume that DI1 and DI2 are assigned with functions 73 and 74. When both DI1 and DI2 are inactive, direct start is used. When DI1 is active and DI2 is inactive, flying start is used. When DI1 is inactive and DI2 is active, DC braking start is used. When both DI1 and DI2 are active, the last used startup mode is used.

75: Command source switchover terminal 3

The terminal is used for switchover between terminal/communication control and custom command source.

77: Running enable
If the terminal is assigned with this function, running is allowed when the terminal is active high; otherwise, running is not allowed or the AC drive stops according to the stop mode during running defined by AA-09.
78: Forward RUN enable
If the terminal is assigned with this function, the frequency reference can be a positive value when the terminal is active high; otherwise, the frequency reference is set to 0 if it is a positive value.
79: Reverse RUN enable
If the terminal is assigned with this function, the frequency reference can be a negative value when the terminal is active high; otherwise, the frequency reference is set to 0 if it is a negative value.
80: RFG input set to 0
If the terminal is assigned with this function, the target reference is set to 0 when the terminal is active low, and the original reference is restored when the terminal level is high.

F4-01 **DI2 function**

Address:	0xF401	Effective mode:	-
Min.:	0	Unit:	-
Max.:	80	Data type:	UInt16
Default:	4	Change:	Changeable only at stop

Value Range:
Same as F4-00
Description
Same as F4-00

F4-02 **DI3 function**

Address:	0xF402	Effective mode:	-
Min.:	0	Unit:	-
Max.:	80	Data type:	UInt16
Default:	9	Change:	Changeable only at stop

Value Range:
Same as F4-00
Description
Same as F4-00

F4-03 **DI4 function**

Address:	0xF403	Effective mode:	-
Min.:	0	Unit:	-
Max.:	80	Data type:	UInt16
Default:	12	Change:	Changeable only at stop

Value Range:
Same as F4-00
Description
Same as F4-00

F4-04 **DI5 function**

Address:	0xF404	Effective mode:	-
Min.:	0	Unit:	-
Max.:	80	Data type:	UInt16
Default:	13	Change:	Changeable only at stop

Value Range:

0: No function
1: Forward RUN (IN1)
2: Reverse RUN (IN2)
3: Three-wire control (IN3)
4: Forward jog (FJOG)
5: Reverse jog (RJOG)
6: Terminal UP
7: Terminal DOWN
8: Coast to stop
9: Fault reset (RESET)
10: Running pause
11: External fault NO input
12: Multi-reference terminal 1
13: Multi-reference terminal 2
14: Multi-reference terminal 3
15: Multi-reference terminal 4
16: Acceleration/deceleration selection terminal 1
17: Acceleration/deceleration selection terminal 2
18: Frequency source switchover
19: UP and DOWN setting clear
20: Command source switchover terminal 1
21: Acceleration/Deceleration inhibition
22: PID pause
23: Simple PLC state reset
24: Wobble pause
25: Counter input
26: Counter reset
27: Length count input
28: Length reset
29: Torque control inhibition
30: Pulse frequency input
31: Reserved
32: Immediate DC braking

(To be continued)

(Continued)

33: External fault NC input
34: Frequency modification enable
35: PID action direction reversal
36: External stop terminal 1
37: Command source switchover terminal 2
38: PID integral pause
39: Switchover between main frequency and preset frequency
40: Switchover between auxiliary frequency and preset frequency
41: Motor selection terminal 1
42: Reserved
43: PID parameter switchover
44: User-defined fault 1
45: User-defined fault 2
46: Switchover between speed control and torque control
47: Emergency stop
48: External stop terminal 2
49: Deceleration DC braking
50: Current running duration clear
51: Switchover between two-wire and three-wire control
52: Reverse running inhibition
53–69: Reserved
70: Control channel
71: Reference source (Reserved)
72: Terminal module
73: Startup mode bit0
74: Startup mode bit1
75: Command source switchover terminal 3
76: Motor selection terminal 2
77: Running enable
78: Forward RUN enable
79: Reverse RUN enable
80: RFG input set to 0

Description

Same as F4-00

F4-05 **DI6 function**

Address:	0xF405	Effective mode:	-
Min.:	0	Unit:	-
Max.:	80	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

Same as F4-00

Description

Same as F4-00

F4-06 **DI7 function**

Address: 0xF406 | Effective mode: -
Min.: 0 | Unit: -
Max.: 80 | Data type: UInt16
Default: 0 | Change: Changeable only at stop

Value Range:
Same as F4-00

Description
Same as F4-00

F4-07 **DI8 function**

Address: 0xF407 | Effective mode: -
Min.: 0 | Unit: -
Max.: 80 | Data type: UInt16
Default: 0 | Change: Changeable only at stop

Value Range:
Same as F4-00

Description
Same as F4-00

F4-08 **DI9 function**

Address: 0xF408 | Effective mode: -
Min.: 0 | Unit: -
Max.: 80 | Data type: UInt16
Default: 0 | Change: Changeable only at stop

Value Range:
Same as F4-00

Description
Same as F4-00

F4-09 **DI10 function**

Address: 0xF409 | Effective mode: -
Min.: 0 | Unit: -
Max.: 80 | Data type: UInt16
Default: 0 | Change: Changeable only at stop

Value Range:
Same as F4-00

Description
Same as F4-00

F4-10 **DI filter time**

Address: 0xF40A | Effective mode: -
Min.: 0.000 | Unit: s
Max.: 1.000 | Data type: UInt16
Default: 0.010 | Change: Changeable at any time

Value Range:
0.000s to 1.000s

Description
-

F4-11 **Terminal control mode**

Address: 0xF40B | Effective mode: -

Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Two-wire mode 1

1: Two-wire mode 2

2: Three-wire mode 1

3: Three-wire mode 2

Description

0: Two-wire mode 1

Two DI terminals are connected: one is used to start/stop the AC drive in forward run mode, and the other is used to start/stop the AC drive in reverse run mode.

1: Two-wire mode 2

Two DI terminals are connected: one is used to start/stop the AC drive, and the other is used to control the running direction.

2: Three-wire mode 1

Three DI terminals are connected: one is used to start/stop the AC drive, and the other two are used to control the running direction.

3: Three-wire mode 2

Three DI terminals are connected: one is used to start the AC drive, one is used to stop the AC drive, and the other is used to control the running direction.

F4-12 **Terminal UP/DOWN change rate**

Address:	0xF40C	Effective mode:	-
Min.:	0.001	Unit:	Hz/s
Max.:	65.535	Data type:	UInt16
Default:	1.000	Change:	Changeable at any time

Value Range:

0.001 Hz/s to 65.535 Hz/s

Description

-

F4-13 **Minimum input of AI curve 1**

Address:	0xF40D	Effective mode:	-
Min.:	–10	Unit:	V
Max.:	F4-15	Data type:	Int16
Default:	0.00	Change:	Changeable at any time

Value Range:

–10 V to F4-15

Description

-

F4-14 **Percentage corresponding to minimum input of AI curve 1**

Address:	0xF40E	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:

–100% to +100.0%

Description
-

F4-15 **Maximum input of AI curve 1**

Address:	0xF40F	Effective mode:	-
Min.:	F4-13	Unit:	V
Max.:	10.00	Data type:	Int16
Default:	10.00	Change:	Changeable at any time

Value Range:
F4-13 to 10.00 V
Description
-

F4-16 **Percentage corresponding to maximum input of AI curve 1**

Address:	0xF410	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	100.0	Change:	Changeable at any time

Value Range:
–100% to +100.0%
Description
-

F4-17 **AI1 filter time**

Address:	0xF411	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	10.00	Data type:	UInt16
Default:	0.10	Change:	Changeable at any time

Value Range:
0.00s to 10.00s
Description
-

F4-18 **Minimum input of AI curve 2**

Address:	0xF412	Effective mode:	-
Min.:	–10	Unit:	V
Max.:	F4-20	Data type:	Int16
Default:	0.00	Change:	Changeable at any time

Value Range:
–10 V to F4-20
Description
-

F4-19 **Percentage corresponding to minimum input of AI curve 2**

Address:	0xF413	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–100% to +100.0%
Description
-

F4-20 **Maximum input of AI curve 2**

Address:	0xF414	Effective mode:	-
Min.:	F4-18	Unit:	V
Max.:	10.00	Data type:	Int16
Default:	10.00	Change:	Changeable at any time

Value Range:
F4-18 to 10.00 V
Description
-

F4-21 **Percentage corresponding to maximum input of AI curve 2**

Address:	0xF415	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	100.0	Change:	Changeable at any time

Value Range:
–100% to +100.0%
Description
-

F4-22 **AI2 filter time**

Address:	0xF416	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	10.00	Data type:	UInt16
Default:	0.10	Change:	Changeable at any time

Value Range:
0.00s to 10.00s
Description
-

F4-23 **Minimum input of AI curve 3**

Address:	0xF417	Effective mode:	-
Min.:	–10	Unit:	V
Max.:	F4-25	Data type:	Int16
Default:	–10	Change:	Changeable at any time

Value Range:
–10 V to F4-25
Description
-

F4-24 **Percentage corresponding to minimum input of AI curve 3**

Address:	0xF418	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	–100	Change:	Changeable at any time

Value Range:
–100% to +100.0%
Description
-

F4-25 **Maximum input of AI curve 3**

Address:	0xF419	Effective mode:	-

Min.:	F4-23	Unit:	V
Max.:	10.00	Data type:	Int16
Default:	10.00	Change:	Changeable at any time

Value Range:
F4-23 to 10.00 V
Description
-

F4-26 Percentage corresponding to maximum input of AI curve 3

Address:	0xF41A	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	100.0	Change:	Changeable at any time

Value Range:
–100% to +100.0%
Description
-

F4-27 AI3 fitter time

Address:	0xF41B	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	10.00	Data type:	UInt16
Default:	0.10	Change:	Changeable at any time

Value Range:
0.00s to 10.00s
Description
-

F4-28 Minimum pulse input frequency

Address:	0xF41C	Effective mode:	-
Min.:	0.00	Unit:	kHz
Max.:	F4-30	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 kHz to F4-30
Description
-

F4-29 Percentage corresponding to minimum pulse input frequency

Address:	0xF41D	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–100% to +100.0%
Description
-

F4-30 Maximum pulse input frequency

Address:	0xF41E	Effective mode:	-
Min.:	F4-28	Unit:	kHz
Max.:	100.00	Data type:	UInt16

Default: 50.00 Change: Changeable at any time

Value Range:

F4-28 to 100.00 kHz

Description

-

F4-31 Percentage corresponding to maximum pulse input frequency

Address: 0xF41F Effective mode: -

Min.: –100 Unit: %

Max.: 100.0 Data type: Int16

Default: 100.0 Change: Changeable at any time

Value Range:

–100% to +100.0%

Description

-

F4-32 Pulse filter time

Address: 0xF420 Effective mode: -

Min.: 0.00 Unit: s

Max.: 10.00 Data type: UInt16

Default: 0.10 Change: Changeable at any time

Value Range:

0.00s to 10.00s

Description

-

F4-33 AI curve

Address: 0xF421 Effective mode: -

Min.: 0x111 Unit: -

Max.: 0x555 Data type: UInt16

Default: 0x321 Change: Changeable at any time

Value Range:

Ones: AI1 curve

1: Curve 1 (2 points, F4-13 to F4-16)

2: Curve 2 (2 points, F4-18 to F4-21)

3: Curve 3 (2 points, F4-23 to F4-26)

4: Curve 4 (4 points, A6-00 to A6-07)

5: Curve 5 (4 points, A6-08 to A6-15)

Tens: AI2 curve

1: Curve 1 (2 points, F4-13 to F4-16)

2: Curve 2 (2 points, F4-18 to F4-21)

3: Curve 3 (2 points, F4-23 to F4-26)

4: Curve 4 (4 points, A6-00 to A6-07)

5: Curve 5 (4 points, A6-08 to A6-15)

Hundreds: AI3 curve

1: Curve 1 (2 points, F4-13 to F4-16)

2: Curve 2 (2 points, F4-18 to F4-21)

3: Curve 3 (2 points, F4-23 to F4-26)

4: Curve 4 (4 points, A6-00 to A6-07)

5: Curve 5 (4 points, A6-08 to A6-15)

Description
-

F4-34 **AI lower limit**

Address:	0xF422	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0x111	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
Ones: Setting for AI1 less than minimum input
0: Percentage corresponding to minimum input
1: 0.0%
Tens: Setting for AI2 less than minimum input
0: Percentage corresponding to minimum input
1: 0.0%
Hundreds: Setting for AI3 less than minimum input
0: Percentage corresponding to minimum input
1: 0.0%
Description
-

F4-35 **DI1 delay (invalid)**

Address:	0xF423	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0s to 3600.0s
Description
-

F4-36 **DI2 delay (invalid)**

Address:	0xF424	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0s to 3600.0s
Description
-

F4-37 **DI3 delay (invalid)**

Address:	0xF425	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0s to 3600.0s
Description
-

F4-38 **DI active mode selection 1**

Address:	0xF426	Effective mode:	-
Min.:	0	Unit:	-
Max.:	11111	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

Ones: DI1

0: Active low

1: Active high

Tens: DI2

0: Active low

1: Active high

Hundreds: DI3

0: Active low

1: Active high

Thousands: DI4

0: Active low

1: Active high

Ten thousands: DI5

0: Active low

1: Active high

Description

-

F4-39 **DI active mode selection 2**

Address:	0xF427	Effective mode:	-
Min.:	0	Unit:	-
Max.:	11111	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

Ones: DI6

0: Active low

1: Active high

Tens: DI7

0: Active low

1: Active high

Hundreds: DI8

0: Active low

1: Active high

Thousands: DI9

0: Active low

1: Active high

Ten thousands: DI10

0: Active low

1: Active high

Description

-

F4-41 **DI1 switch-on delay**

Address: 0xF429
Min.: 0.0
Max.: 3600.0
Default: 0.0
Effective mode: -
Unit: s
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.0s to 3600.0s
Description
-

F4-42 **DI1 switch-off delay**

Address: 0xF42A
Min.: 0.0
Max.: 3600.0
Default: 0.0
Effective mode: -
Unit: s
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.0s to 3600.0s
Description
-

F4-43 **DI2 switch-on delay**

Address: 0xF42B
Min.: 0.0
Max.: 3600.0
Default: 0.0
Effective mode: -
Unit: s
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.0s to 3600.0s
Description
-

F4-44 **DI2 switch-off delay**

Address: 0xF42C
Min.: 0.0
Max.: 3600.0
Default: 0.0
Effective mode: -
Unit: s
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.0s to 3600.0s
Description
-

F4-45 **DI3 switch-on delay**

Address: 0xF42D
Min.: 0.0
Max.: 3600.0
Default: 0.0
Effective mode: -
Unit: s
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.0s to 3600.0s
Description
-

F4-46 **DI3 switch-off delay**

Address: 0xF42E
Effective mode: -

Min.: 0.0
Max.: 3600.0
Default: 0.0
Unit: s
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.0s to 3600.0s

Description
-

F4-47 DI4 switch-on delay

Address: 0xF42F
Min.: 0.0
Max.: 3600.0
Default: 0.0
Effective mode: -
Unit: s
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.0s to 3600.0s

Description
-

F4-48 DI4 switch-off delay

Address: 0xF430
Min.: 0.0
Max.: 3600.0
Default: 0.0
Effective mode: -
Unit: s
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.0s to 3600.0s

Description
-

F4-49 DI force data

Address: 0xF431
Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:

Bit00: DI1
0: Inactive
1: Active
Bit01: DI2
0: Inactive
1: Active
Bit02: DI3
0: Inactive
1: Active
Bit03: DI4
0: Inactive
1: Active
Bit04: DI5/HDI
0: Inactive
1: Active
Bit05: DI6
0: Inactive
1: Active
Bit06: DI7
0: Inactive
1: Active
Bit07: DI8
0: Inactive
1: Active
Bit08: DI9
0: Inactive
1: Active
Bit09: DI10
0: Inactive
1: Active
Bit10: Reserved
Bit11: Reserved
Bit12: Reserved
Bit13: Reserved
Bit14: Reserved
Bit15: Reserved

Description

-

F4-50 DI communication data

Address:	0xF432	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:

Bit00: DI1
0: Inactive
1: Active
Bit01: DI2
0: Inactive
1: Active
Bit02: DI3
0: Inactive
1: Active
Bit03: DI4
0: Inactive
1: Active
Bit04: DI5/HDI
0: Inactive
1: Active
Bit05: DI6
0: Inactive
1: Active
Bit06: DI7
0: Inactive
1: Active
Bit07: DI8
0: Inactive
1: Active
Bit08: DI9
0: Inactive
1: Active
Bit09: DI10
0: Inactive
1: Active
Bit10: VDI1
0: Inactive
1: Active

(To be continued)

(Continued)

Bit11: VDI2
0: Inactive
1: Active
Bit12: VDI3
0: Inactive
1: Active
Bit13: VDI4
0: Inactive
1: Active
Bit14: VDI5
0: Inactive
1: Active
Bit15: VDI6
0: Inactive
1: Active

Description

-

F4-51 DI1 hardware source

Address:	0xF433	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Hardware
1: Force value

Description

-

F4-52 DI2 hardware source

Address:	0xF434	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Hardware
1: Force value

Description

-

F4-53 DI3 hardware source

Address:	0xF435	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Hardware
1: Force value

Description
-

F4-54 **DI4 hardware source**

Address:	0xF436	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: Hardware
1: Force value
Description
-

F4-55 **DI5/HDI hardware source**

Address:	0xF437	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: Hardware
1: Force value
Description
-

F4-56 **DI6 hardware source**

Address:	0xF438	Effective mode:	-
Min.:	0	Unit:	-
Max.:	46	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Hardware
1: Force value
2: Communication
4: AI1
5: AI2
6: AI3
11: DI1
12: DI2
13: DI3
14: DI4
15: DI5/HDI
17: DI7
18: DI8
19: DI9
20: DI10
21: VDI1
22: VDI2
23: VDI3
24: VDI4
25: VDI5
26: VDI6
31: Relay 1

(To be continued)
(Continued)

32: Relay 2
33: DO1
34: Expansion card relay
35: Expansion card DO2
36: VDO1
37: VDO2
38: VDO3
39: VDO4
40: VDO5
41: VDO6
42: VDO7
43: VDO8
44: VDO9
45: VDO10
46: VDO11

Description
-

F4-57 **DI7 hardware source**

Address:	0xF439	Effective mode:	-
Min.:	0	Unit:	-
Max.:	46	Data type:	UInt16

Default: 0 Change: Changeable only at stop

Value Range:

Same as F4-56

Description

-

F4-58 DI8 hardware source

Address: 0xF43A Effective mode: -

Min.: 0 Unit: -

Max.: 46 Data type: UInt16

Default: 0 Change: Changeable only at stop

Value Range:

Same as F4-56

Description

-

F4-59 DI9 hardware source

Address: 0xF43B Effective mode: -

Min.: 0 Unit: -

Max.: 46 Data type: UInt16

Default: 0 Change: Changeable only at stop

Value Range:

Same as F4-56

Description

-

F4-60 DI10 hardware source

Address: 0xF43C Effective mode: -

Min.: 0 Unit: -

Max.: 46 Data type: UInt16

Default: 0 Change: Changeable only at stop

Value Range:

Same as F4-56

Description

-

F4-61 DI5/HDI terminal type

Address: 0xF43D Effective mode: -

Min.: 0 Unit: -

Max.: 1 Data type: UInt16

Default: 1 Change: Unchangeable

Value Range:

0: HDI

1: DI

Description

-

F4-62 HDI polarity

Address: 0xF43E Effective mode: -

Min.: 0 Unit: -

Max.: 3 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:
0: Normal
1: Absolute value
2: Negated value
3: Negated absolute value
Description
-

F4-63 HDI input enable

Address:	0xF43F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0: Disabled
1: Enabled
Others: B connector
Description
-

F4-64 HDI hardware source

Address:	0xF440	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Hardware sampling
1: Force setpoint
Description
-

F4-65 HDI force setpoint

Address:	0xF441	Effective mode:	-
Min.:	0.00	Unit:	kHz
Max.:	100.00	Data type:	UInt16
Default:	1.00	Change:	Changeable at any time

Value Range:
0.00 kHz to 100.00 kHz
Description
-

F4-66 Minimum input of 4-point HDI curve

Address:	0xF442	Effective mode:	-
Min.:	0.00	Unit:	kHz
Max.:	F4-68	Data type:	UInt16
Default:	10.00	Change:	Changeable at any time

Value Range:
0.00 kHz to F4-68
Description
-

F4-67 **Percentage corresponding to minimum input of 4-point HDI curve**

Address:	0xF443	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	–100	Change:	Changeable at any time

Value Range:
–100% to +100.0%
Description
-

F4-68 **Inflection 1 input of 4-point HDI curve**

Address:	0xF444	Effective mode:	-
Min.:	F4-66	Unit:	kHz
Max.:	F4-70	Data type:	UInt16
Default:	40.00	Change:	Changeable at any time

Value Range:
F4-66 to F4-70
Description
-

F4-69 **Percentage corresponding to inflection 1 input of 4-point HDI curve**

Address:	0xF445	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	–30	Change:	Changeable at any time

Value Range:
–100% to +100.0%
Description
-

F4-70 **Inflection 2 input of 4-point HDI curve**

Address:	0xF446	Effective mode:	-
Min.:	F4-68	Unit:	kHz
Max.:	F4-72	Data type:	UInt16
Default:	70.00	Change:	Changeable at any time

Value Range:
F4-68 to F4-72
Description
-

F4-71 **Percentage corresponding to inflection 2 input of 4-point HDI curve**

Address:	0xF447	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	30.0	Change:	Changeable at any time

Value Range:
–100% to +100.0%
Description
-

F4-72 **Maximum input of 4-point HDI curve**

Address:	0xF448	Effective mode:	-

Min.:	F4-70	Unit:	kHz
Max.:	100.00	Data type:	UInt16
Default:	100.00	Change:	Changeable at any time

Value Range:
F4-70 to 100.00 kHz
Description
-

F4-73 Percentage corresponding to maximum input of 4-point HDI curve

Address:	0xF449	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	100.0	Change:	Changeable at any time

Value Range:
–100% to +100.0%
Description
-

F4-74 HDI curve setting

Address:	0xF44A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Ones: HDI curve
0: 2-point curve
1: 4-point curve
Description
-

F4-75 HDI denoising threshold

Address:	0xF44B	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	10.0	Data type:	UInt16
Default:	0.5	Change:	Changeable at any time

Value Range:
0.0% to 10.0%
Description
-

4.6 F5: Output Terminal Parameters

F5-00 FM multi-function terminal output

Address:	0xF500	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Pulse output (FMP)
1: Digital output (FMR)

Description
-

F5-01 **FMR output function**

Address:	0xF501	Effective mode:	-
Min.:	0	Unit:	-
Max.:	43	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: No output
1: AC drive in running
2: Fault output
3: Frequency-level detection 1 (FDT1)
4: Frequency reach
5: Zero-speed running (no output at stop)
6: Motor overload pre-warning
7: AC drive overload pre-warning
8: Reference count value reach
9: Designated count value reach
10: Length reach
11: Simple PLC cycle completion
12: Accumulative running duration reach
13: Wobble limit reach
14: Torque limit reach
15: Ready to run
16: AI1 > AI2
17: Frequency upper limit reach
18: Frequency lower limit reach (no output at stop)
19: Undervoltage state
20: Communication setting
21–22: Reserved
23: Running at zero speed 2 (output at stop)
24: Accumulative power-on duration reach
25: Frequency-level detection 2 (FDT2)
26: Frequency 1 reach
27: Frequency 2 reach
28: Current 1 reach
29: Current 2 reach
30: Timing reach
31: AI1 input overlimit

(To be continued)

(Continued)

32: Load loss
33: Reverse running
34: Zero current state
35: IGBT temperature reach
36: Output overcurrent
37: Frequency lower limit reach (output at stop)
38: Alarm (all faults)
39: Motor overtemperature
40: Current running duration reach
41: Fault output (no output at undervoltage)
42: STO output
43: Running with limits
Others: B connector

Description

0: No output
The output terminal has no function.
1: AC drive in running
The terminal outputs an active signal when the AC drive is running with a output frequency (which can be 0).
2: Fault output
The terminal outputs an active signal when the AC drive stops due to a fault.
3: Frequency-level detection 1 (FDT1)
When the running frequency is higher than the detected value, the DO terminal outputs an active signal. When the running frequency is lower than the result of the detected value minus the FDT hysteresis value (F8-19 x F8-20), the active signal is canceled.
4: Frequency reach
The DO terminal outputs an active signal when the running frequency of the AC drive is within a certain range (target frequency±setpoint of F8-21 x Maximum frequency).
5: Zero-speed running (no output at stop)
The DO terminal outputs an active signal when the AC drive is running with the output frequency of 0. When the AC drive stops, the signal becomes inactive.
6: Motor overload pre-warning
The AC drive determines whether the motor load exceeds the overload pre-warning threshold according to the overload pre-warning coefficient (F9-02) before performing the protection action. The terminal outputs an active signal when the overload pre-warning threshold is exceeded. (For the calculation of the pre-warning threshold, see description of the motor overload protection function.)
7: AC drive overload pre-warning
The DO terminal outputs an active signal 10s before the AC drive performs overload protection.
8: Reference count value reach
The DO terminal outputs an active signal when the count value reaches the setpoint of FB-08.
9: Designated count value reach
The DO terminal outputs an active signal when the count value reaches the setpoint of FB-09.
10: Length reach
The DO terminal outputs an active signal when the detected actual length exceeds the setpoint of FB-05.

11: Simple PLC cycle completion

The terminal outputs a pulse signal with a width of 250 ms when the simple PLC completes one cycle.

12: Accumulative running duration reach

The terminal outputs an active signal when the accumulative running duration of the AC drive exceeds the setpoint of F8-17 (accumulative running duration threshold).

13: Wobble limit reach

The DO terminal outputs an active signal when the frequency reference exceeds the frequency upper or lower limit and the output frequency of AC drive reaches the upper or lower limit.

14: Torque limit reach

The DO terminal outputs an active signal when the output torque reaches the torque limit in speed control mode.

15: Ready to run

The DO terminal outputs an active signal when the AC drive is ready for running without any fault after power-on.

16: AI1 > AI2

The DO terminal outputs an active signal when the value of AI1 is greater than that of AI2.

17: Frequency upper limit reach

The DO terminal outputs an active signal when the running frequency reaches the upper limit (F0-12).

18: Frequency lower limit reach (no output at stop)

If F8-14 (running mode when frequency reference lower than lower limit) is set to 1 (stop), the terminal outputs an inactive signal no matter whether the running frequency reaches the frequency lower limit.

If F8-14 (running mode when frequency reference lower than lower limit) is set to 0 (run at frequency lower limit) or 2 (run at zero speed), the terminal outputs an active signal when the running frequency reaches the frequency lower limit.

19: Undervoltage state

The DO terminal outputs an active signal when undervoltage occurs on the AC drive.

20: Communication setting

Whether the terminal is active or inactive is determined by the setpoint in communication address 0x2001.

21: Reserved

22: Reserved

23: Running at zero speed 2 (output at stop)

The DO terminal outputs an active signal when the AC drive is running with the output frequency of 0. The DO terminal also outputs an active signal when the AC drive is stopped.

24: Accumulative power-on duration reach

The DO terminal outputs an active signal when the accumulative power-on duration (F7-13) of the AC drive exceeds the accumulative power-on duration threshold (F8-16).

25: Frequency-level detection FDT2

When the running frequency is higher than the detected value, the DO terminal outputs an active signal. When the running frequency is lower than the result of the detected value minus the frequency detection hysteresis value (F8-28 x F8-29), the active signal is canceled.

26: Frequency 1 reach

The DO terminal outputs an active signal when the running frequency of the AC drive is within the frequency detection range of F8-30 (detection value 1 for frequency reach). The frequency detection range is as follows: (F8-30 – F8-31 x F0-10) to (F8-30 + F8-31 x F0-10).

27: Frequency 2 reach
The DO terminal outputs an active signal when the running frequency of the AC drive is within the frequency detection range of F8-32 (detection value 2 for frequency reach). The frequency detection range is as follows: (F8-32 – F8-33 x F0-10) to (F8-32 + F8-33 x F0-10).
28: Current 1 reach
The DO terminal outputs an active signal when the output current of the AC drive is within the detection range of F8-38 (detection level of current 1). The current detection range is as follows: (F8-38 – F8-39 x F1-03) to (F8-38 + F8-39 x F1-03).
29: Current 2 reach output
The DO terminal outputs an active signal when the output current of the AC drive is within the detection range of F8-40 (detection level of current 2). The current detection range is as follows: (F8-40 – F8-41 x F1-03) to (F8-40 + F8-41 x F1-03).
30: Timing reach
When the timing function (F8-42) is enabled, the DO terminal outputs an active signal when the current running duration of the AC drive reaches the timing duration defined by F8-43 and F8-44.
31: AI1 input overlimit
The DO terminal outputs an active signal when the AI1 input is higher than the setpoint of F8-46 (AI1 input voltage upper limit) or lower than the setpoint of F8-45 (AI1 input voltage lower limit).
32: Load loss
The DO terminal outputs an active signal when load loss occurs.
33: Reverse running
The DO terminal outputs an active signal when the AC drive runs in the reverse direction.
34: Zero current state
The DO terminal outputs an active signal when the output current of the AC drive is within the zero-current range for a period longer than the setpoint of F8-35 (zero current detection delay). The zero current detection range is 0 to (F8-34 x F1-03).
35: IGBT temperature reach
The DO terminal outputs an active signal when the IGBT heatsink temperature (F7-07) reaches the IGBT temperature threshold (F8-47).
36: Output overcurrent
The DO terminal outputs an active signal when the output current of the AC drive remains higher than the setpoint of F8-36 (output overcurrent threshold) for a period longer than the setpoint of F8-37 (output overcurrent detection delay).
37: Frequency lower limit reach (output at stop)
The DO terminal outputs an active signal when the running frequency reaches the frequency lower limit (F0-14). The DO terminal also outputs an active signal when the AC drive is stopped.
38: Alarm (all faults)
The DO terminal outputs an active signal when a fault occurs on the AC drive and the AC drive continues to run upon the fault. For details about fault protection actions, see the description of parameters F9-47 to F9-50.
39: Motor overtemperature
The DO terminal outputs an active signal when the motor temperature reaches the setpoint of F9-58 (motor overtemperature pre-warning threshold). (You can check the motor temperature in U0-34.)
40: Current running duration reach
The DO terminal outputs an active signal when the current running duration of the AC drive exceeds the setpoint of F8-53 (current running duration threshold).

41: Fault (no output at undervoltage)

The DO terminal outputs an active signal when an AC drive fault (except the undervoltage fault) occurs.

42: STO output

The DO terminal outputs an active signal when the AC drive triggers STO.

43: Running with limits

The DO terminal outputs an active signal when the AC drive generates a minor fault of running with limits and the operating panel displays "LXXX.XX".

Others: B connector

F5-02 **Control board relay (DO3) output function**

Address:	0xF502	Effective mode:	-
Min.:	0	Unit:	-
Max.:	43	Data type:	UInt16
Default:	2	Change:	Changeable at any time

Value Range:

Same as F5-01

Description

Same as F5-01

F5-03 **Expansion card relay (DO4) output function**

Address:	0xF503	Effective mode:	-
Min.:	0	Unit:	-
Max.:	43	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as F5-01

Description

Same as F5-01

F5-04 **DO1 function**

Address:	0xF504	Effective mode:	-
Min.:	0	Unit:	-
Max.:	43	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

Same as F5-01

Description

Same as F5-01

F5-05 **Expansion card DO2 function**

Address:	0xF505	Effective mode:	-
Min.:	0	Unit:	-
Max.:	43	Data type:	UInt16
Default:	4	Change:	Changeable at any time

Value Range:

Same as F5-01

Description

Same as F5-01

F5-06 **FMP output function**

Address:	0xF506	Effective mode:	-
Min.:	0	Unit:	-
Max.:	16	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Running frequency

1: Frequency reference

2: Output current

3: Output torque (absolute value)

4: Output power

5: Output voltage

6: Pulse input

7: AI1

8: AI2

9: AI3

10: Length

11: Count value

12: Communication setting

13: Motor speed

14: Output current

15: Bus voltage

16: Output torque (actual value)

Others: F connector

Description

-

F5-07 **AO1 function**

Address:	0xF507	Effective mode:	-
Min.:	0	Unit:	-
Max.:	16	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as F5-06

Description

-

F5-08 **Expansion card AO2 function**

Address:	0xF508	Effective mode:	-
Min.:	0	Unit:	-
Max.:	16	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

Same as F5-06

Description

-

F5-09 **Maximum FMP output frequency**

Address:	0xF509	Effective mode:	-
Min.:	0.01	Unit:	kHz

Max.: 100.00 Data type: UInt16
Default: 50.00 Change: Changeable at any time
Value Range:
0.01 kHz to 100.00 kHz
Description
-

F5-10 AO1 zero offset coefficient
Address: 0xF50A Effective mode: -
Min.: –100 Unit: %
Max.: 100.0 Data type: Int16
Default: 0.0 Change: Changeable at any time
Value Range:
–100% to +100.0%
Description
-

F5-11 AO1 gain
Address: 0xF50B Effective mode: -
Min.: –10 Unit: -
Max.: 10.00 Data type: Int16
Default: 1.00 Change: Changeable at any time
Value Range:
–10 to +10.00
Description
-

F5-12 AO2 zero offset coefficient
Address: 0xF50C Effective mode: -
Min.: –100 Unit: %
Max.: 100.0 Data type: Int16
Default: 0.0 Change: Changeable at any time
Value Range:
–100% to +100.0%
Description
-

F5-13 AO2 gain
Address: 0xF50D Effective mode: -
Min.: –10 Unit: -
Max.: 10.00 Data type: Int16
Default: 1.00 Change: Changeable at any time
Value Range:
–10 to +10.00
Description
-

F5-14 HDO output filter time
Address: 0xF50E Effective mode: -
Min.: 0 Unit: -
Max.: 1000 Data type: UInt16
Default: 0 Change: Changeable at any time

Value Range:
0 to 1000
Description
-

F5-15 **AO1 output filter time**

Address:	0xF50F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1000	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 1000
Description
-

F5-16 **AO2 output filter time**

Address:	0xF510	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1000	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 1000
Description
-

F5-17 **FMR output delay (invalid)**

Address:	0xF511	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 3600.0s
Description
-

F5-18 **Relay 1 (DO3) output delay (invalid)**

Address:	0xF512	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 3600.0s
Description
-

F5-19 **Relay 2 (DO4) output delay (invalid)**

Address:	0xF513	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 3600.0s

Description
-

F5-20 **DO1 output delay (invalid)**

Address:	0xF514	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 3600.0s
Description
-

F5-21 **DO2 output delay (invalid)**

Address:	0xF515	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 3600.0s
Description
-

F5-22 **DO active mode**

Address:	0xF516	Effective mode:	-
Min.:	0	Unit:	-
Max.:	11111	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Ones: FMR
0: Positive logic active
1: Negative logic active
Tens: Relay 1 (DO3)
0: Positive logic active
1: Negative logic active
Hundreds: Relay 2 (DO4)
0: Positive logic active
1: Negative logic active
Thousands: DO1
0: Positive logic active
1: Negative logic active
Ten thousands: DO2
0: Positive logic active
1: Negative logic active
Description
-

F5-24 **Control board relay (DO3) switch-on delay**

Address:	0xF518	Effective mode:	-
Min.:	0.0	Unit:	s

Max.: 3600.0 Data type: UInt16
Default: 0.0 Change: Changeable at any time
Value Range:
0.0s to 3600.0s
Description
-

F5-25 Control board relay (DO3) switch-off delay
Address: 0xF519 Effective mode: -
Min.: 0.0 Unit: s
Max.: 3600.0 Data type: UInt16
Default: 0.0 Change: Changeable at any time
Value Range:
0.0s to 3600.0s
Description
-

F5-26 FMR output switch-on delay
Address: 0xF51A Effective mode: -
Min.: 0.0 Unit: s
Max.: 3600.0 Data type: UInt16
Default: 0.0 Change: Changeable at any time
Value Range:
0.0s to 3600.0s
Description
-

F5-27 FMR output switch-off delay
Address: 0xF51B Effective mode: -
Min.: 0.0 Unit: s
Max.: 3600.0 Data type: UInt16
Default: 0.0 Change: Changeable at any time
Value Range:
0.0s to 3600.0s
Description
-

F5-28 DO1 output switch-on delay
Address: 0xF51C Effective mode: -
Min.: 0.0 Unit: s
Max.: 3600.0 Data type: UInt16
Default: 0.0 Change: Changeable at any time
Value Range:
0.0s to 3600.0s
Description
-

F5-29 DO1 output switch-off delay
Address: 0xF51D Effective mode: -
Min.: 0.0 Unit: s
Max.: 3600.0 Data type: UInt16
Default: 0.0 Change: Changeable at any time

Value Range:
0.0s to 3600.0s
Description
-

F5-30 **Expansion card relay (DO4) switch-on delay**

Address:	0xF51E	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 3600.0s
Description
-

F5-31 **Expansion card relay (DO4) switch-off delay**

Address:	0xF51F	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 3600.0s
Description
-

F5-32 **Expansion card DO2 output switch-on delay**

Address:	0xF520	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 3600.0s
Description
-

F5-33 **Expansion card DO2 output switch-off delay**

Address:	0xF521	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 3600.0s
Description
-

F5-34 **DO/RO source**

Address:	0xF522	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:

Bit00: Relay 1 (DO3) output source
0: Output function
1: Communication
Bit01: FMR output source
0: Output function
1: Communication
Bit02: DO1 output source
0: Output function
1: Communication
Bit03: Relay 2 (DO4) output source
0: Output function
1: Communication
Bit04: DO2 output source
0: Output function
1: Communication
Bit05: VDO1 output source
0: Output function
1: Communication
Bit06: VDO2 output source
0: Output function
1: Communication
Bit07: VDO3 output source
0: Output function
1: Communication
Bit08: VDO4 output source
0: Output function
1: Communication
Bit09: VDO11 output source
0: Output function
1: Communication

(To be continued)

(Continued)

BIT10: VDO6 output source
0: Output function
1: Communication
Bit11: VDO7 output source
0: Output function
1: Communication
Bit12: VDO8 output source
0: Output function
1: Communication
Bit13: VDO9 output source
0: Output function
1: Communication
Bit14: VDO10 output source
0: Output function
1: Communication
Bit15: VDO11 output source
0: Output function
1: Communication

Description

-

F5-35 DO/RO terminal communication control

Address:	0xF523	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:

Bit00: Relay 1 (DO3)
0: Inactive
1: Active
Bit01: FMR
0: Inactive
1: Active
Bit02: DO1
0: Inactive
1: Active
Bit03: Relay 2 (DO4)
0: Inactive
1: Active
Bit04: DO2
0: Inactive
1: Active
Bit05: VDO1
0: Inactive
1: Active
Bit06: VDO2
0: Inactive
1: Active

(To be continued)

(Continued)

Bit07: VDO3

0: Inactive

1: Active

Bit08: VDO4

0: Inactive

1: Active

Bit09: VDO5

0: Inactive

1: Active

Bit10: VDO6

0: Inactive

1: Active

Bit11: VDO7

0: Inactive

1: Active

Bit12: VDO8

0: Inactive

1: Active

Bit13: VDO9

0: Inactive

1: Active

Bit14: VDO10

0: Inactive

1: Active

Bit15: VDO11

0: Inactive

1: Active

Description

-

F5-36 Minimum input of AO1 curve

Address:	0xF524	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	F5-38	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:

–100% to F5-38

Description

-

F5-37 Setpoint corresponding to minimum input of AO1 curve

Address:	0xF525	Effective mode:	-
Min.:	0.00	Unit:	V
Max.:	10.00	Data type:	Int16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00 V to 10.00 V

Description

-

F5-38 Maximum input of AO1 curve

Address:	0xF526	Effective mode:	-
Min.:	F5-36	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	100.0	Change:	Changeable at any time

Value Range:

F5-36 to 100.0%

Description

-

F5-39 Setpoint corresponding to maximum input of AO1 curve

Address:	0xF527	Effective mode:	-
Min.:	0.00	Unit:	V
Max.:	10.00	Data type:	Int16
Default:	10.00	Change:	Changeable at any time

Value Range:

0.00 V to 10.00 V

Description

-

F5-40 AO1 output offset

Address:	0xF528	Effective mode:	-
Min.:	–10	Unit:	V
Max.:	10.00	Data type:	Int16
Default:	0.00	Change:	Changeable at any time

Value Range:

–10 V to +10.00 V

Description

-

F5-41 Minimum input of AO2 curve

Address:	0xF529	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	F5-43	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:

–100% to F5-43

Description

-

F5-42 Setpoint corresponding to minimum input of AO2 curve

Address:	0xF52A	Effective mode:	-
Min.:	0.00	Unit:	V
Max.:	10.00	Data type:	Int16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00 V to 10.00 V

Description
-

F5-43 **Maximum input of AO2 curve**

Address:	0xF52B	Effective mode:	-
Min.:	F5-41	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	100.0	Change:	Changeable at any time

Value Range:
F5-41 to 100.0%
Description
-

F5-44 **Setpoint corresponding to maximum input of AO2 curve**

Address:	0xF52C	Effective mode:	-
Min.:	0.00	Unit:	V
Max.:	10.00	Data type:	Int16
Default:	10.00	Change:	Changeable at any time

Value Range:
0.00 V to 10.00 V
Description
-

F5-45 **AO2 output offset**

Address:	0xF52D	Effective mode:	-
Min.:	–10	Unit:	V
Max.:	10.00	Data type:	Int16
Default:	0.00	Change:	Changeable at any time

Value Range:
–10 V to +10.00 V
Description
-

F5-46 **AO curve**

Address:	0xF52E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	11	Data type:	UInt16
Default:	11	Change:	Changeable at any time

Value Range:
Ones: AO1 curve
0: 2-point curve
1: Gain+Offset
Tens: AO2 curve
0: 2-point curve
1: Gain+Offset
Description
-

F5-47 **AO polarity**

Address:	0xF52F	Effective mode:	-
Min.:	0	Unit:	-

Max.: 33
Default: 0
Data type: UInt16
Change: Changeable at any time

Value Range:
Ones: AO1
0: Normal
1: Absolute value
2: Negated value
3: Negated absolute value
Tens: AO2
0: Normal
1: Absolute value
2: Negated value
3: Negated absolute value

Description
-

F5-48 AO hardware source

Address: 0xF530
Min.: 0
Max.: 11
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Ones: AO1 source
0: Output function
1: Force setpoint
Tens: AO2 source
0: Output function
1: Force setpoint

Description
-

F5-49 AO force setpoint 1

Address: 0xF531
Min.: 0.00
Max.: 10.00
Default: 0.00
Effective mode: -
Unit: V
Data type: UInt16
Change: Changeable at any time

Value Range:
0.00 V to 10.00 V

Description
-

F5-50 AO force setpoint 2

Address: 0xF532
Min.: 0.00
Max.: 10.00
Default: 0.00
Effective mode: -
Unit: V
Data type: UInt16
Change: Changeable at any time

Value Range:
0.00 V to 10.00 V

Description
-

F5-51 **Minimum input of HDO curve**

Address:	0xF533	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	F5-53	Data type:	Int16
Default:	0.00	Change:	Changeable at any time

Value Range:
–100% to F5-53
Description
-

F5-52 **Percentage corresponding to minimum input of HDO curve**

Address:	0xF534	Effective mode:	-
Min.:	0.00	Unit:	%
Max.:	100.00	Data type:	Int16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00% to 100.00%
Description
-

F5-53 **Maximum input of HDO curve**

Address:	0xF535	Effective mode:	-
Min.:	F5-51	Unit:	%
Max.:	100.00	Data type:	Int16
Default:	100.00	Change:	Changeable at any time

Value Range:
F5-51 to 100.00%
Description
-

F5-54 **Percentage corresponding to maximum input of HDO curve**

Address:	0xF536	Effective mode:	-
Min.:	0.00	Unit:	%
Max.:	100.00	Data type:	Int16
Default:	100.00	Change:	Changeable at any time

Value Range:
0.00% to 100.00%
Description
-

F5-55 **HDO polarity**

Address:	0xF537	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Ones: HDO
0: Normal
1: Absolute value
2: Negated value
3: Negated absolute value

Description
-

F5-56 **HDO hardware source**

Address:	0xF538	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Output function
1: Force value
Description
-

F5-57 **HDO force setpoint**

Address:	0xF539	Effective mode:	-
Min.:	0.00	Unit:	%
Max.:	100.00	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00% to 100.00%
Description
-

4.7 F6: Startup/Stop Control Parameters

F6-00 **Startup mode**

Address:	0xF600	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Direct start
1: Flying start
2: Pre-excitation start (AC asynchronous motor)
3: SVC quick start
Description
Flying start is recommended if you need to start a motor that is rotating at a high speed.
Pre-excitation start and SVC quick start apply only to AC asynchronous motors.

F6-01 **Speed tracking mode**

Address:	0xF601	Effective mode:	-
Min.:	0	Unit:	-
Max.:	4	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: From the stop frequency
1: From the power frequency
2: From the maximum frequency
3: Reserved
4: Magnetic field directional speed tracking (MD290)
Description
-

F6-02 **Speed of speed tracking**

Address:	0xF602	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	20	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

F6-03 **Startup frequency**

Address:	0xF603	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	10.00	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to 10.00 Hz
Description
This parameter defines the startup frequency for direct start of the AC drive. When the frequency reference is lower than the startup frequency, the AC drive will not start but stay standby.

F6-04 **Startup frequency hold time**

Address:	0xF604	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0s to 100.0s
Description
This parameter defines the hold time during which the output frequency remains at the startup frequency. After this hold time elapses, the AC drive will accelerate/decelerate to the reference frequency.

F6-05 **DC braking current at startup**

Address:	0xF605	Effective mode:	-
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	50	Change:	Changeable only at stop

Value Range:
0% to 100%
Description
A larger DC braking current indicates stronger braking force. 100% corresponds to the rated motor current (the current upper limit is 80% of the rated current of the AC drive).

F6-06 **DC braking time at startup**

Address:	0xF606	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:

0.0s to 100.0s

Description

This parameter defines the time for DC braking at startup, which is valid only when the startup mode is direct start.

F6-07 **Acceleration/Deceleration mode**

Address:	0xF607	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Straight-line acceleration/deceleration

1: S-curve acceleration/deceleration

Description

0: The output frequency increases or decreases linearly.

1: When the target frequency changes dynamically in real time, the output frequency increases or decreases based on the S-curve. This mode is applicable to applications requiring supreme comfort and quick response in real time.

F6-08 **Time proportion of S-curve start segment**

Address:	0xF608	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	30.0	Change:	Changeable only at stop

Value Range:

0.0% to +100.0%

Description

The value ranges from 0.0 to 100.0% minus the value of F6-09.

F6-09 **Time proportion of S-curve end segment**

Address:	0xF609	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	30.0	Change:	Changeable only at stop

Value Range:

0.0% to +100.0%

Description

The value ranges from 0.0 to 100.0% minus the value of F6-08.

F6-10 **Stop mode**

Address:	0xF60A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Decelerate to stop

1: Coast to stop

2: Stop at maximum capability

Description

F6-11 Start frequency of DC braking at stop

Address:	0xF60B	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00 Hz to F0-10

Description

The AC drive starts DC braking when the running frequency decreases to the value of this parameter during deceleration to stop.

F6-12 DC braking delay at stop

Address:	0xF60C	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:

0.0s to 100.0s

Description

When the running frequency decreases to the start frequency of DC braking at stop, the AC drive stops output and starts DC braking after this waiting time.

F6-13 DC braking current at stop

Address:	0xF60D	Effective mode:	-
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	50	Change:	Changeable at any time

Value Range:

0% to 100%

Description

A larger DC braking current indicates stronger braking force. 100% corresponds to the rated motor current (the current upper limit is 80% of the rated current of the AC drive).

F6-14 DC braking time at stop

Address:	0xF60E	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:

0.0s to 100.0s

Description

If this parameter is set to 0, DC braking is disabled.

F6-15 Braking transistor usage

Address:	0xF60F	Effective mode:	-

Min.: 0 Unit: %
Max.: 100 Data type: UInt16
Default: 100 Change: Changeable at any time

Value Range:
0% to 100%

Description
This parameter determines the duty cycle when the braking transistor is applied. 100% indicates continuous conduction (it applies to models with built-in braking units).

F6-16 Speed tracking sweep current limit closed loop Kp

Address: 0xF610 Effective mode: -
Min.: 0 Unit: -
Max.: 1000 Data type: UInt16
Default: 500 Change: Changeable at any time

Value Range:
0 to 1000

Description
-

F6-17 Speed tracking sweep current limit closed loop Ki

Address: 0xF611 Effective mode: -
Min.: 0 Unit: -
Max.: 1000 Data type: UInt16
Default: 800 Change: Changeable at any time

Value Range:
0 to 1000

Description
-

F6-18 Speed tracking current

Address: 0xF612 Effective mode: -
Min.: 30 Unit: %
Max.: 200 Data type: UInt16
Default: 80 Change: Changeable only at stop

Value Range:
30% to 200%

Description
-

F6-19 Current loop multiple

Address: 0xF613 Effective mode: -
Min.: 10 Unit: %
Max.: 600 Data type: UInt16
Default: 100 Change: Changeable at any time

Value Range:
10% to 600%

Description
-

F6-20 S-curve setting mode

Address: 0xF614 Effective mode: -

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Symmetrical mode

1: Separate setting of acceleration and deceleration arcs

Description

0: Symmetrical mode (inherited from MD500). In this mode, the settings of F6-08 and F6-09 take effect.

1: Separate setting of acceleration and deceleration arcs. In this mode, the settings of A4-67 to A4-70 take effect.

F6-21 Demagnetization time (valid for asynchronous motors)

Address:	0xF615	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	5.00	Data type:	UInt16
Default:	0.50	Change:	Changeable at any time

Value Range:

0.00s to 5.00s

Description

This parameter defines the minimum waiting time for restart after shutdown.

F6-23 Overexcitation active mode

Address:	0xF617	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

2: Enabled during deceleration

3: Enabled always

Description

This parameter defines the active mode of overexcitation in vector control mode for asynchronous motors. When it is set to 2, overexcitation takes effect during acceleration, operation at constant speed, and deceleration.

F6-24 Overexcitation suppression current

Address:	0xF618	Effective mode:	-
Min.:	0	Unit:	%
Max.:	150	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:

0% to 150%

Description

This parameter defines the target current after overexcitation takes effect and is a percentage relative to the rated motor current.

F6-25 Overexcitation gain

Address:	0xF619	Effective mode:	-
Min.:	0.01	Unit:	-
Max.:	2.50	Data type:	UInt16

Default: 1.25 Change: Changeable at any time

Value Range:

0.01 to 2.50

Description

-

F6-26 Forced switch-on of braking transistor

Address: 0xF61A Effective mode: -

Min.: 0 Unit: -

Max.: 1 Data type: UInt16

Default: 0 Change: Changeable only at stop

Value Range:

0: Switch-off

1: Switch-on

Description

-

F6-28 Manual self-check enable

Address: 0xF61C Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xF Data type: UInt16

Default: 0x7 Change: Changeable only at stop

Value Range:

Bit00: IGBT shoot-through self-check upon startup

0: Disabled

1: Enabled

Bit01: Short-to-ground self-check upon startup

0: Disabled

1: Enabled

Bit02: Phase loss self-check upon startup

0: Disabled

1: Enabled

Bit03: Reserved

Description

This parameter defines the sub items of manual self-check. After enabling self-check by setting this parameter, you can select different self-check commands in F6-29.

Self-check on each sub item is enabled separately by using a bit. The value 1 indicates enabled, and 0 indicates disabled.

F6-29 Manual self-check command

Address: 0xF61D Effective mode: -

Min.: 0 Unit: -

Max.: 2 Data type: UInt16

Default: 0 Change: Changeable only at stop

Value Range:

0: None

1: Static self-check

2: Full self-check

Description

This parameter defines the self-check mode. The self-check items are defined by F6-28.
0: Self-check is not performed.
1: Static self-check is performed. In this mode, self-check on the encoder cannot be performed.
2: Full self-check is performed.
After self-check is completed, this parameter will be restored to 0.

4.8 F7: Operating Panel and Display Parameters

F7-00 LED segment missing check

Address:	0xF700	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: Disabled
1: All indicators of the LED operating panel are steady on.
2: All indicators of the LED operating panel are off.
3: All indicators of the LED operating panel blink.
Description
0: No effect.
1: All indicators of the LED operating panel are steady on for 20 seconds.
2: All indicators of the LED operating panel are off for 20 seconds.
3: All indicators of the LED operating panel blink for 20 seconds.

F7-01 MF.K key function

Address:	0xF701	Effective mode:	-
Min.:	0	Unit:	-
Max.:	4	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: MF.K key disabled
1: Forced operating panel control
2: Switchover between forward and reverse run
3: Forward jog
4: Reverse jog
Description
0: The MF.K key has no function.
1: When F0-02 is set to 0 (operating panel), pressing the MF.K key has no effect. When F0-02 is set to 1 (terminal), 2 (communication), or 3 (customization), pressing the MF.K key switches to operating panel control forcibly.
2: Pressing the MF.K key changes the direction of the frequency reference. This function is valid only when the command source is set to operating panel control.
3: Pressing the MF.K key implements forward jog (FJOG). This function is valid only when the command source is set to operating panel control.
4: Pressing the MF.K key implements reverse jog (RJOG). This function is valid only when the command source is set to operating panel control.

F7-02 **STOP/RESET key function**

Address:	0xF702	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: Valid only under operating panel control

1: Valid under any control (OFF1)

2: Valid under any control (OFF2)

3: Valid under any control (OFF3)

Description

0: The STOP/RESET key is valid only in operating panel control mode.

1: The STOP/RESET key is valid in any operation mode and the AC drive stops according to the OFF1 stop mode.

2: The STOP/RESET key is valid in any operation mode and the AC drive stops according to the OFF2 stop mode.

3: The STOP/RESET key is valid in any operation mode and the AC drive stops according to the OFF3 stop mode.

F7-03 **LED display 1 in running state**

Address:	0xF703	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x1F	Change:	Changeable at any time

Value Range:

Bit00: Running frequency (Hz)

Bit01: Reference frequency (Hz)

Bit02: Bus voltage (V)

Bit03: Output voltage (V)

Bit04: Output current (A)

Bit05: Output power (kW)

Bit06: Output torque (%)

Bit07: DI state

Bit08: DO state

Bit09: AI1 voltage (V)

Bit10: AI2 voltage (V)

Bit11: AI3 voltage (V)

Bit12: Count value

Bit13: Length value

Bit14: Load speed

Bit15: PID reference

Description

This parameter defines the parameters displayed on the LED operating panel (switched by using the left and right shift keys) when the AC drive is running A parameter is displayed when the corresponding bit is 1 and not displayed when the corresponding bit is 0.

F7-04 **LED display 2 in running state**

Address:	0xF704	Effective mode:	-

Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:

Bit00: PID feedback
Bit01: PLC stage
Bit02: Input pulse frequency (kHz)
Bit03: Running frequency 2 (Hz)
Bit04: Remaining running time
Bit05: AI1 voltage before correction (V)
Bit06: Free mapping 0
Bit07: Free mapping 1
Bit08: Motor speed
Bit09: Current power-on duration (Hour)
Bit10: Current running duration (min)
Bit11: Input pulse frequency (Hz)
Bit12: Communication setpoint
Bit13: Encoder feedback speed
Bit14: Main frequency X
Bit15: Auxiliary frequency Y

Description

This parameter defines the parameters displayed on the LED operating panel (switched by using the left and right shift keys) when the AC drive is running A parameter is displayed when the corresponding bit is 1 and not displayed when the corresponding bit is 0.

F7-05 LED display in stop state

Address:	0xF705	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x33	Change:	Changeable at any time

Value Range:

Bit00: Reference frequency (Hz)
Bit01: Bus voltage (V)
Bit02: DI state
Bit03: DO state
Bit04: AI1 voltage (V)
Bit05: AI2 voltage (V)
Bit06: AI3 voltage (V)
Bit07: Count value
Bit08: Length value
Bit09: PLC stage
Bit10: Load speed
Bit11: PID reference
Bit12: Input pulse frequency (kHz)
Bit13: Reserved
Bit14: Free mapping 0
Bit15: Free mapping 1

Description

This parameter defines the parameters displayed on the LED operating panel (switched by using the left and right shift keys) when the AC drive is in stop state. A parameter is displayed when the corresponding bit is 1 and not displayed when the corresponding bit is 0.

F7-06 **Load speed display coefficient**

Address:	0xF706	Effective mode:	-
Min.:	1.0E-4	Unit:	-
Max.:	6.5000	Data type:	UInt16
Default:	1.0000	Change:	Changeable at any time

Value Range:

1.0E-4 to 6.5000

Description

-

F7-07 **IGBT heatsink temperature**

Address:	0xF707	Effective mode:	-
Min.:	-20	Unit:	°C
Max.:	120	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:

–20°C to +120°C

Description

-

F7-08 **Product SN**

Address:	0xF708	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

-

F7-09 **Accumulative running duration (hour)**

Address:	0xF709	Effective mode:	-
Min.:	0	Unit:	h
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 h to 65535 h

Description

-

F7-10 **Performance software version**

Address:	0xF70A	Effective mode:	-
Min.:	0.00	Unit:	-
Max.:	655.35	Data type:	UInt16
Default:	0.00	Change:	Unchangeable

Value Range:

0.00 to 655.35

Description

-

F7-11 **Function software version**

Address:	0xF70B	Effective mode:	-
Min.:	0.00	Unit:	-
Max.:	655.35	Data type:	UInt16
Default:	0.00	Change:	Unchangeable

Value Range:

0.00 to 655.35

Description

-

F7-12 **Number of decimal places for load speed display**

Address:	0xF70C	Effective mode:	-
Min.:	110	Unit:	-
Max.:	222	Data type:	UInt16
Default:	220	Change:	Changeable at any time

Value Range:

Ones: Decimal places of U0-14/U0-24

0: No decimal place

1: One decimal place

2: Two decimal places

Tens: Decimal places of U0-19/U0-29

0: No decimal place

1: One decimal place

2: Two decimal places

Hundreds: Decimal places of U0-30/U0-31

0: No decimal place

1: One decimal place

2: Two decimal places

Description

-

F7-13 **Accumulative power-on duration (hour)**

Address:	0xF70D	Effective mode:	-
Min.:	0	Unit:	h
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 h to 65535 h

Description

-

F7-14 **Accumulative power consumption**

Address:	0xF70E	Effective mode:	-
Min.:	0	Unit:	kW·h
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 kW·h to 65535 kW·h
Description
-

F7-15 Temporary performance software version

Address:	0xF70F	Effective mode:	-
Min.:	0.00	Unit:	-
Max.:	655.35	Data type:	UInt16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00 to 655.35
Description
-

F7-16 Temporary function software version

Address:	0xF710	Effective mode:	-
Min.:	0.00	Unit:	-
Max.:	655.35	Data type:	UInt16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00 to 655.35
Description
-

F7-17 Low-order bits of level-0 menu display address

Address:	0xF711	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Invalid address
Others: K connector
Description
This parameter corresponds to the variable displayed in free mapping 0 in F7-04 and F7-05.
After this parameter is specified, you can display the value of the connector set by this parameter by displaying free mapping 0 on the level-0 menu.

F7-18 High-order bits of level-0 menu display address

Address:	0xF712	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Invalid address
Others: K connector
Description
This parameter corresponds to the variable displayed in free mapping 1 in F7-04 and F7-05.
After this parameter is specified, you can display the value of the connector set by this parameter by displaying free mapping 1 on the level-0 menu.

F7-19 **Low-order bits of level-0 menu display format**

Address:	0xF713	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0x014B	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:

Ones: Unit

0: None

1: HZ

2: A

3: RPM

4: V

5: Link

6: %

7: s

8: h

9: kW

10: kW/h

11: ℃

Tens: Decimal places

0: No decimal place

1: One decimal place

2: Two decimal places

3: Three decimal places

4: Four decimal places

Hundreds: Enable

0: Disabled

1: Enabled

Description

If the enable bit is 0, setting this parameter has no effect.

If the enable bit is 1, the value of free mapping 0 is displayed based on the unit set by the ones place and the number of decimal places set by the tens place.

F7-20 **High-order bits of level-0 menu display format**

Address:	0xF714	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0x014B	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:

Ones: Unit
0: None
1: HZ
2: A
3: RPM
4: V
5: Link
6: %
7: s
8: h
9: kW
10: kW/h
11: ℃
Tens: Decimal places
0: No decimal place
1: One decimal place
2: Two decimal places
3: Three decimal places
4: Four decimal places
Hundreds: Enable
0: Disabled
1: Enabled

Description

If the enable bit is 0, setting this parameter has no effect.
If the enable bit is 1, the value of free mapping 1 is displayed based on the unit set by the ones place and the number of decimal places set by the tens place.

F7-21 LED operating panel key test

Address:	0xF715	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: Disabled
1: Enabled

Description

Setting this parameter to 1 enables the LED operating panel key test mode. In this mode, the test value changes each time a key is pressed.
After all keys are pressed, the test is successful and "-PASS" is displayed. Then the system automatically exits the test mode.

F7-22 LED display update cycle

Address:	0xF716	Effective mode:	-
Min.:	10	Unit:	-
Max.:	300	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
10 to 300

Description

The values on the LED operating panel are filtered to prevent the parameters from jumping too fast and causing difficulty in reading the values. The display update cycle is the filter time.

F7-23 LED display of direction

Address:	0xF717	Effective mode:	-
Min.:	0	Unit:	-
Max.:	11	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

Ones: Direction display at stop

0: Not displayed

1: Displayed

Tens: Reserved

0: Reserved

1: Reserved

Description

If the ones place is set to 0, the LED operating panel does not display the reference frequency direction at stop.

If the ones place is set to 1, the LED operating panel displays the reference frequency direction at stop.

F7-24 Decimal places of floating-point connector values after conversion

Address:	0xF718	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: Two decimal places

1: One decimal place

Description

0: The floating-point connector value displayed on the operating panel is a floating-point number with two decimal places.

1: The floating-point connector value displayed on the operating panel is a floating-point number rounded to one decimal place.

F7-25 Fault display

Address:	0xF719	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 1

Description

-

F7-26 Storage of LED display in running state

Address:	0xF71A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	31	Data type:	UInt16

Default: 0 Change: Unchangeable
Value Range:
0 to 31
Description
-

F7-27 Storage of LED display in stop state

Address: 0xF71B Effective mode: -
Min.: 0 Unit: -
Max.: 15 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 15
Description
-

F7-28 Accumulative running duration (second)

Address: 0xF71C Effective mode: -
Min.: 0 Unit: s
Max.: 3599 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0s to 3599s
Description
-

F7-29 Accumulative power-on duration (second)

Address: 0xF71D Effective mode: -
Min.: 0 Unit: s
Max.: 3599 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0s to 3599s
Description
-

F7-30 Auxiliary calculation of accumulative power consumption

Address: 0xF71E Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

F7-31 Auxiliary calculation of accumulative power consumption of group U0

Address: 0xF71F Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:

0 to 65535

Description

-

F7-32 **Low-order bits of accumulative power consumption**

Address:	0xF720	Effective mode:	-
Min.:	0.0	Unit:	kW·h
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0 kW·h to 6553.5 kW·h

Description

-

F7-33 **High-order bits of accumulative power consumption**

Address:	0xF721	Effective mode:	-
Min.:	0	Unit:	kW·h
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 kW·h to 65535 kW·h

Description

-

4.9 F8: Auxiliary Function Parameters

F8-00 **Jog frequency**

Address:	0xF800	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	2.00	Change:	Changeable at any time

Value Range:

0.00 Hz to F0-10

Description

This parameter defines the running frequency of the AC drive in jogging mode.

F8-01 **Jog acceleration time**

Address:	0xF801	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	6500.0	Data type:	UInt16
Default:	20.0	Change:	Changeable at any time

Value Range:

0.0s to 6500.0s

Description

This parameter defines the acceleration time of the AC drive in jogging mode.

F8-02 **Jog deceleration time**

Address:	0xF802	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	6500.0	Data type:	UInt16

Default: 20.0 Change: Changeable at any time

Value Range:

0.0s to 6500.0s

Description

This parameter defines the deceleration time of the AC drive in jogging mode.

F8-03 Acceleration time 2

Address: 0xF803 Effective mode: -

Min.: 0.0 Unit: s

Max.: 6500.0 Data type: UInt16

Default: 0.0 Change: Changeable at any time

Value Range:

0.0s to 6500.0s

Description

The AC drive provides four groups of acceleration time, which can be switched by using the parameter or DI terminal. This parameter defines the second group of acceleration time.

F8-04 Deceleration time 2

Address: 0xF804 Effective mode: -

Min.: 0.0 Unit: s

Max.: 6500.0 Data type: UInt16

Default: 0.0 Change: Changeable at any time

Value Range:

0.0s to 6500.0s

Description

The AC drive provides four groups of deceleration time, which can be switched by using the parameter or DI terminal. This parameter defines the second group of deceleration time.

F8-05 Acceleration time 3

Address: 0xF805 Effective mode: -

Min.: 0.0 Unit: s

Max.: 6500.0 Data type: UInt16

Default: 0.0 Change: Changeable at any time

Value Range:

0.0s to 6500.0s

Description

The AC drive provides four groups of acceleration time, which can be switched by using the parameter or DI terminal. This parameter defines the third group of acceleration time.

F8-06 Deceleration time 3

Address: 0xF806 Effective mode: -

Min.: 0.0 Unit: s

Max.: 6500.0 Data type: UInt16

Default: 0.0 Change: Changeable at any time

Value Range:

0.0s to 6500.0s

Description

The AC drive provides four groups of deceleration time, which can be switched by using the parameter or DI terminal. This parameter defines the third group of deceleration time.

F8-07 **Acceleration time 4**

Address:	0xF807	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	6500.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 6500.0s
Description
The AC drive provides four groups of acceleration time, which can be switched by using the parameter or DI terminal. This parameter defines the fourth group of acceleration time.

F8-08 **Deceleration time 4**

Address:	0xF808	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	6500.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 6500.0s
Description
The AC drive provides four groups of deceleration time, which can be switched by using the parameter or DI terminal. This parameter defines the fourth group of deceleration time.

F8-09 **Skip frequency 1**

Address:	0xF809	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-10
Description
The skip frequency enables the AC drive to avoid any frequency at which a mechanical resonance may occur. This parameter defines the first skip frequency. If it is set to 0, the first skip frequency is canceled.

F8-10 **Skip frequency 2**

Address:	0xF80A	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-10
Description
The skip frequency enables the AC drive to avoid any frequency at which a mechanical resonance may occur. This parameter defines the second skip frequency. If it is set to 0, the second skip frequency is canceled.

F8-11 **Skip frequency band**

Address:	0xF80B	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-10
Description
During acceleration, when the running frequency increases to a value that is close to the skip frequency, the AC drive runs for a period at the current frequency and then skips over the skip frequency. The skip range is twice the value of F8-11 (skip frequency band).
During deceleration, when the running frequency decreases to a value that is close to the skip frequency, the AC drive runs for a period at the current frequency and then skips over the skip frequency. The skip range is twice the value of F8-11 (skip frequency band).

F8-12 FWD/REV switchover deadzone time

Address:	0xF80C	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3000.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 3000.0s
Description
This parameter defines the transition time at 0 Hz output during transition between forward running and reverse running.

F8-13 Reverse frequency inhibition

Address:	0xF80D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
Description
-

F8-14 Running mode when frequency reference below lower limit

Address:	0xF80E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Run at frequency lower limit
1: Stop
2: Run at zero speed
3: Coast to stop
Description
0: Run at frequency lower limit
If the running frequency is lower than the frequency lower limit, the AC drive runs at the frequency lower limit.
1: Stop
If the running frequency is lower than the frequency lower limit, the AC drive stops.

2: Run at zero speed

If the running frequency is lower than the frequency lower limit, the AC drive runs at zero speed.

3: Coast to stop

If the running frequency is lower than the frequency lower limit, the AC drive coasts to stop.

F8-15 Droop rate

Address:	0xF80F	Effective mode:	-
Min.:	0.00	Unit:	%
Max.:	10.00	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00% to 10.00%

Description

-

F8-16 Power-on duration threshold (hour)

Address:	0xF810	Effective mode:	-
Min.:	0	Unit:	h
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 h to 65535 h

Description

-

F8-17 Running duration threshold (hour)

Address:	0xF811	Effective mode:	-
Min.:	0	Unit:	h
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 h to 65535 h

Description

-

F8-18 Startup protection

Address:	0xF812	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: Disabled

1: Enabled

Description

-

F8-19 Frequency detection value (FDT1)

Address:	0xF813	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	50.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-10
Description
When the running frequency is higher than the frequency detection value (FDT1), the DO terminal outputs an active signal; when the running frequency is lower than the result of the frequency detection value (FDT1) minus the frequency detection hysteresis (FDT1), the DO terminal outputs an inactive signal. The valid value range is 0.00 Hz to F0-10 (maximum frequency).

F8-20 Frequency detection hysteresis (FDT1)

Address:	0xF814	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	5.0	Change:	Changeable at any time

Value Range:
0.0% to +100.0%
Description
The frequency detection hysteresis (FDT1) is F8-19 multiplied by F8-20. When the running frequency is higher than F8-19, the DO terminal outputs an active signal. When the running frequency is lower than a specific value (F8-19 – F8-19 x F8-20), the DO terminal outputs an inactive signal.

F8-21 Frequency reach detection range

Address:	0xF815	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0% to +100.0%
Description
The percentage is relative to the maximum frequency.
When the running frequency of the AC drive is within the range of
Reference frequency±Maximum frequency x F8-21,
the DO terminal outputs an active signal.

F8-22 Skip frequency enable during acceleration/deceleration

Address:	0xF816	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
Description
This parameter defines whether the skip frequency function is enabled during acceleration/ deceleration.
0: Disabled
During acceleration/deceleration, when the running frequency reaches the skip frequency boundary, the AC drive continues to run at the running frequency.
0: Enabled
During acceleration/deceleration, when the running frequency reaches the skip frequency boundary, the AC drive skips over the skip frequency. The skip range is twice the value of F8-11 (skip frequency band).

F8-25 **Switchover frequency of acceleration time 1 and acceleration time 2**

Address:	0xF819	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00 Hz to F0-10

Description

This function is used to switch the acceleration/deceleration time based on the running frequency range when the AC drive is running. This function is valid only when the DI terminal is not assigned with function 16 (acceleration/deceleration time selection terminal 1) or 17 (acceleration/deceleration time selection terminal 2).

The valid value range is 0.00 Hz to F0-10 (maximum frequency).

F8-26 **Switchover frequency of deceleration time 1 and deceleration time 2**

Address:	0xF81A	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00 Hz to F0-10

Description

This function is used to switch the acceleration/deceleration time based on the running frequency range when the AC drive is running. This function is valid only when the DI terminal is not assigned with function 16 (acceleration/deceleration time selection terminal 1) or 17 (acceleration/deceleration time selection terminal 2).

The valid value range is 0.00 Hz to F0-10 (maximum frequency).

F8-27 **Jog priority mode**

Address:	0xF81B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: No priority

1: Jog preferred

2: OFF1 preferred

Description

This parameter defines the priority of the jog command and normal operation commands.

0: No priority

The AC drive responds to the operation command that arrives first.

1: Jog preferred

The jog command can interrupt normal running.

2: OFF1 preferred

Normal operation commands can interrupt jogging.

F8-28 **Frequency detection value (FDT2 level)**

Address:	0xF81C	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16

Default: 50.00 Change: Changeable at any time

Value Range:

0.00 Hz to F0-10

Description

When the running frequency is higher than the frequency detection value (FDT2), the DO terminal outputs an active signal; when the running frequency is lower than the result of the frequency detection value (FDT2) minus the frequency detection hysteresis (FDT2), the DO terminal outputs an inactive signal. The valid value range is 0.00 Hz to F0-10 (maximum frequency).

F8-29 Frequency detection hysteresis (FDT2)

Address: 0xF81D Effective mode: -
Min.: 0.0 Unit: %
Max.: 100.0 Data type: UInt16
Default: 5.0 Change: Changeable at any time

Value Range:

0.0% to +100.0%

Description

The frequency detection hysteresis (FDT2) is F8-28 multiplied by F8-29. When the running frequency is higher than F8-28, the DO terminal outputs an active signal. When the running frequency is lower than a specific value (F8-28 – F8-28 x F8-29), the DO terminal outputs an inactive signal.

F8-30 Frequency reach detection value 1

Address: 0xF81E Effective mode: -
Min.: 0.00 Unit: Hz
Max.: F0-10 Data type: UInt16
Default: 50.00 Change: Changeable at any time

Value Range:

0.00 Hz to F0-10

Description

When the running frequency of the AC drive is within the range of Frequency reach detection value 1 (F8-30)±Frequency reach detection range 1 (F8-31), the DO terminal outputs an active signal.

F8-31 Frequency reach detection range 1

Address: 0xF81F Effective mode: -
Min.: 0.1 Unit: %
Max.: 100.0 Data type: UInt16
Default: 0.1 Change: Changeable at any time

Value Range:

0.1% to +100.0%

Description

When the running frequency of the AC drive is within the range of frequency reach detection value 1 (F8-30)±frequency reach detection range 1 (F8-31), the DO terminal outputs an active signal.

F8-32 Frequency reach detection value 2

Address: 0xF820 Effective mode: -
Min.: 0.00 Unit: Hz
Max.: F0-10 Data type: UInt16

Default: 50.00 Change: Changeable at any time

Value Range:

0.00 Hz to F0-10

Description

When the running frequency of the AC drive is within the range of Frequency reach detection value 2 (F8-32)±Frequency reach detection range 2 (F8-33), the DO terminal outputs an active signal.

F8-33 Frequency reach detection range 2

Address: 0xF821 Effective mode: -
Min.: 0.1 Unit: %
Max.: 100.0 Data type: UInt16
Default: 0.1 Change: Changeable at any time

Value Range:

0.1% to +100.0%

Description

When the running frequency of the AC drive is within the range of frequency reach detection value 2 (F8-32)±frequency reach detection range 2 (F8-33), the DO terminal outputs an active signal.

F8-34 Zero current detection level

Address: 0xF822 Effective mode: -
Min.: 0.0 Unit: %
Max.: 300.0 Data type: UInt16
Default: 5.0 Change: Changeable at any time

Value Range:

0.0% to 300.0%

Description

When the output current of the AC drive is lower than or equal to F8-34 (zero current detection level) for a period longer than the time defined by F8-35 (zero current detection delay), the DO terminal outputs an active signal.

F8-35 Zero current detection delay

Address: 0xF823 Effective mode: -
Min.: 0.01 Unit: s
Max.: 600.00 Data type: UInt16
Default: 0.10 Change: Changeable at any time

Value Range:

0.01s to 600.00s

Description

When the output current of the AC drive is lower than or equal to F8-34 (zero current detection level) for a period longer than the time defined by F8-35 (zero current detection delay), the DO terminal outputs an active signal.

F8-36 Output overcurrent threshold

Address: 0xF824 Effective mode: -
Min.: 0.0 Unit: %
Max.: 300.0 Data type: UInt16
Default: 5.0 Change: Changeable at any time

Value Range:

0.0% to 300.0%

Description

When the output current of the AC drive remains higher than the setpoint of F8-36 (output overcurrent threshold) for a period longer than the setpoint of F8-37 (output overcurrent detection delay), the DO terminal outputs an active signal.

F8-37 Output overcurrent detection delay

Address:	0xF825	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	600.00	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00s to 600.00s

Description

When the output current of the AC drive remains higher than the setpoint of F8-36 (output overcurrent threshold) for a period longer than the setpoint of F8-37 (output overcurrent detection delay), the DO terminal outputs an active signal.

F8-38 Detection level of current 1

Address:	0xF826	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	300.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:

0.0% to 300.0%

Description

When the output current of the AC drive is within the range of F8-38 (detection level of current 1)±F8-39 (detection width of current 1) x Rated motor current, the DO terminal outputs an active signal.

F8-39 Detection width of current 1

Address:	0xF827	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	300.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:

0.0% to 300.0%

Description

When the output current of the AC drive is within the range of F8-38 (detection level of current 1)±F8-39 (detection width of current 1) x Rated motor current, the DO terminal outputs an active signal.

F8-40 Detection level of current 2

Address:	0xF828	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	300.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:

0.0% to 300.0%

Description

When the output current of the AC drive is within the range of F8-40 (detection level of current 2)±F8-41 (detection width of current 2) x Rated motor current, the DO terminal outputs an active signal.

F8-41 **Detection width of current 2**

Address:	0xF829	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	300.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:

0.0% to 300.0%

Description

When the output current of the AC drive is within the range of F8-40 (detection level of current 2)±F8-41 (detection width of current 2) x Rated motor current, the DO terminal outputs an active signal.

F8-42 **Timing function**

Address:	0xF82A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Disabled

1: Enabled

Description

-

F8-43 **Timing duration source**

Address:	0xF82B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: F8-44

1: AI1

2: AI2

3: AI3

Others: F connector

Description

The analog input range corresponds to F8-44.

F8-44 **Timing duration**

Address:	0xF82C	Effective mode:	-
Min.:	0.0	Unit:	min
Max.:	6500.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:

0.0 min to 6500.0 min

Description

-

F8-45 **AI1 input voltage lower limit**

Address:	0xF82D	Effective mode:	-
Min.:	0.00	Unit:	V
Max.:	F8-46	Data type:	UInt16
Default:	3.10	Change:	Changeable at any time

Value Range:
0.00 V to F8-46
Description
-

F8-46 **AI1 input voltage upper limit**

Address:	0xF82E	Effective mode:	-
Min.:	F8-45	Unit:	V
Max.:	10.00	Data type:	UInt16
Default:	6.80	Change:	Changeable at any time

Value Range:
F8-45 to 10.00 V
Description
-

F8-47 **IGBT temperature reach (threshold)**

Address:	0xF82F	Effective mode:	-
Min.:	0	Unit:	°C
Max.:	100	Data type:	UInt16
Default:	75	Change:	Changeable at any time

Value Range:
0°C to 100°C
Description
-

F8-48 **Cooling fan control**

Address:	0xF830	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Working during AC drive running
1: Working always
Description
-

F8-49 **Wakeup frequency**

Address:	0xF831	Effective mode:	-
Min.:	F8-51	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
F8-51 to F0-10
Description
In hibernation state, when the frequency reference is greater than or equal to F8-49 (wakeup frequency) and the current running command is valid, the AC drive starts directly after the delay defined by F8-50 (wakeup delay) elapses.

F8-50 **Wakeup delay**

Address:	0xF832	Effective mode:	-
Min.:	0.0	Unit:	s

Max.:	6500.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 6500.0s
Description
In hibernation state, when the frequency reference is greater than or equal to F8-49 (wakeup frequency) and the current running command is valid, the AC drive starts directly after the delay defined by F8-50 (wakeup delay) elapses.

F8-51 Hibernation frequency

Address:	0xF833	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F8-49	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F8-49
Description
When the frequency reference is lower than or equal to F8-51 (hibernation frequency) during running, the AC drive enters the hibernation state and stops after the time defined by F8-52 (hibernation delay) elapses.

F8-52 Hibernation delay

Address:	0xF834	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	6500.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 6500.0s
Description
When the frequency reference is lower than or equal to F8-51 (hibernation frequency) during running, the AC drive enters the hibernation state and stops after the time defined by F8-52 (hibernation delay) elapses.

F8-53 Current running duration threshold

Address:	0xF835	Effective mode:	-
Min.:	0.0	Unit:	min
Max.:	6500.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0 min to 6500.0 min
Description
-

F8-54 Output power correction coefficient

Address:	0xF836	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 200.0%

Description

This parameter defines the correction coefficient of linear correction on the output power when the output power (U0-05) is not equal to expected value.

F8-55 Deceleration time for quick stop

Address:	0xF837	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	6500.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:

0.0s to 6500.0s

Description

This parameter defines the deceleration time for quick stop.

F8-56 Real-time target speed source

Address:	0xF838	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: RFG output (default)

1: AI1

2: AI2

3: AI3

4: Pulse reference

5: Communication

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

F8-57 Undervoltage percentage for storage upon undervoltage

Address:	0xF839	Effective mode:	-
Min.:	70	Unit:	%
Max.:	120	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:

70% to 120%

Description

-

F8-58 Number of E2P operations per unit time

Address:	0xF83A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 100

Description
-

F8-59 DI force function

Address:	0xF83B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0: The DI functions of group F4 are not enforced. (you need to set the corresponding function connection parameter to 2 to activate the DI function)
1: The DI functions of group F4 are enforced.
Description
-

F8-60 Main status word 1

Address:	0xF83C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Invalid
1: Set to 1
Others: B connector
Description
-

F8-61 Main status word 2

Address:	0xF83D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Invalid
1: Set to 1
Others: B connector
Description
-

F8-62 Target speed reach hysteresis

Address:	0xF83E	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	600.0	Data type:	UInt16
Default:	3.0	Change:	Changeable at any time

Value Range:
0.0% to 600.0%
Description
-

F8-63 Target speed reach time

Address:	0xF83F	Effective mode:	-

Min.: 0.00
Max.: 100.00
Default: 3.00
Unit: s
Data type: UInt16
Change: Changeable at any time

Value Range:
0.00s to 100.00s

Description
-

F8-64 Speed comparison reach threshold 1

Address: 0xF840
Min.: 0.0
Max.: 600.0
Default: 100.0
Effective mode: -
Unit: %
Data type: UInt16
Change: Changeable at any time

Value Range:
0.0% to 600.0%

Description
-

F8-65 Speed comparison reach hysteresis 1

Address: 0xF841
Min.: 0.0
Max.: 600.0
Default: 3.0
Effective mode: -
Unit: %
Data type: UInt16
Change: Changeable at any time

Value Range:
0.0% to 600.0%

Description
-

F8-66 Speed comparison reach time 1

Address: 0xF842
Min.: 0.00
Max.: 100.00
Default: 3.00
Effective mode: -
Unit: s
Data type: UInt16
Change: Changeable at any time

Value Range:
0.00s to 100.00s

Description
-

F8-67 Speed comparison reach threshold 2

Address: 0xF843
Min.: 0.0
Max.: 600.0
Default: 100.0
Effective mode: -
Unit: %
Data type: UInt16
Change: Changeable at any time

Value Range:
0.0% to 600.0%

Description
-

F8-68 Speed comparison reach hysteresis 2

Address: 0xF844
Min.: 0.0
Max.: 600.0
Effective mode: -
Unit: %
Data type: UInt16

Default: 3.0 Change: Changeable at any time

Value Range:

0.0% to 600.0%

Description

-

F8-69 Speed comparison reach time 2

Address: 0xF845 Effective mode: -

Min.: 0.00 Unit: s

Max.: 100.00 Data type: UInt16

Default: 3.00 Change: Changeable at any time

Value Range:

0.00s to 100.00s

Description

-

F8-72 Skip frequency 3

Address: 0xF848 Effective mode: -

Min.: 0.00 Unit: Hz

Max.: F0-10 Data type: UInt16

Default: 0.00 Change: Changeable at any time

Value Range:

0.00 Hz to F0-10

Description

The skip frequency enables the AC drive to avoid any frequency at which a mechanical resonance may occur. This parameter defines the third skip frequency. If it is set to 0, the third skip frequency is canceled.

F8-73 Skip frequency 4

Address: 0xF849 Effective mode: -

Min.: 0.00 Unit: Hz

Max.: F0-10 Data type: UInt16

Default: 0.00 Change: Changeable at any time

Value Range:

0.00 Hz to F0-10

Description

The skip frequency enables the AC drive to avoid any frequency at which a mechanical resonance may occur. This parameter defines the fourth skip frequency. If it is set to 0, the fourth skip frequency is canceled.

F8-74 Power-on duration threshold (second)

Address: 0xF84A Effective mode: -

Min.: 0 Unit: s

Max.: 3599 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0s to 3599s

Description

-

F8-75 **Running duration threshold (second)**

Address:	0xF84B	Effective mode:	-
Min.:	0	Unit:	s
Max.:	3599	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0s to 3599s
Description
-

4.10 F9: Fault and Protection Parameters

F9-00 **Motor overload protection**

Address:	0xF900	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
Description
-

F9-01 **Motor overload protection gain**

Address:	0xF901	Effective mode:	-
Min.:	0.20	Unit:	-
Max.:	10.00	Data type:	UInt16
Default:	1.00	Change:	Changeable at any time

Value Range:
0.20 to 10.00
Description
-

F9-02 **Motor overload pre-warning coefficient**

Address:	0xF902	Effective mode:	-
Min.:	50	Unit:	%
Max.:	100	Data type:	UInt16
Default:	80	Change:	Changeable at any time

Value Range:
50% to 100%
Description
-

F9-03 **Overvoltage stall suppression gain**

Address:	0xF903	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:
1 to 100

Description

Increasing F9-03 will improve the control effect of the bus voltage but cause fluctuations in the output frequency. If the output frequency fluctuates greatly, you can decrease F9-03 as appropriate. F9-03 functions the same as F3-24.

F9-04 Overvoltage stall protection voltage

Address:	0xF904	Effective mode:	-
Min.:	330.0	Unit:	V
Max.:	800.0	Data type:	UInt16
Default:	770.0	Change:	Changeable at any time

Value Range:

330.0 V to 800.0 V

Description

This parameter defines the bus voltage upon which the AC drive starts overvoltage stall protection. F9-04 functions the same as F3-22.

F9-07 Short-to-ground detection

Address:	0xF907	Effective mode:	-
Min.:	0	Unit:	-
Max.:	11	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

Ones: Short-to-ground detection upon power-on

0: Disabled

1: Enabled

Tens: Short-to-ground detection before running

0: Disabled

1: Enabled

Description

If short-to-ground self-check upon startup is enabled, self-check before startup is not enforced when flying start is enabled.

F9-08 Braking unit applied voltage

Address:	0xF908	Effective mode:	-
Min.:	330.0	Unit:	V
Max.:	800.0	Data type:	UInt16
Default:	760.0	Change:	Changeable only at stop

Value Range:

330.0 V to 800.0 V

Description

F9-09 Auto reset attempts

Address:	0xF909	Effective mode:	-
Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 100

Description

-

F9-10 **Relay action during auto reset**

Address:	0xF90A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: Enabled

Description

-

F9-11 **Auto reset interval**

Address:	0xF90B	Effective mode:	-
Min.:	0.1	Unit:	s
Max.:	600.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:

0.1s to 600.0s

Description

-

F9-12 **Input phase loss/Contactor pickup protection**

Address:	0xF90C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	13	Data type:	UInt16
Default:	11	Change:	Changeable at any time

Value Range:

Ones: Input phase loss protection

0: Disabled

1: Protection enabled when both software and hardware input phase loss conditions are met

2: Protection enabled when software input phase loss conditions are met

3: Protection enabled when hardware input phase loss conditions are met

Tens: Contactor pickup protection

0: Disabled

1: Enabled

Description

-

F9-13 **Output phase loss protection**

Address:	0xF90D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	11	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

Ones: Output phase loss protection during running

0: Disabled

1: Enabled

Tens: Output phase loss protection before running

0: Disabled

1: Enabled

Description

If output phase loss self-check upon startup is enabled, self-check before startup is not enforced after flying start is enabled.

F9-14 **1st fault type**

Address:	0xF90E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	999	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0: No fault

1: Reserved

2: Overcurrent (Err02)

5: Overvoltage (Err05)

8: Pre-charge resistor overload (Err08)

9: Undervoltage (Err09)

10: AC drive overload (Err10)

11: Motor overload (Err11)

12: Input phase loss (Err12)

13: Output phase loss (Err13)

14: IGBT overheat (Err14)

15: External fault (Err15)

16: Communication exception (Err16)

17: Contactor exception (Err17)

18: Current detection exception (Err18)

19: Motor auto-tuning exception (Err19)

20: Encoder/PG card exception

21: Parameter read/write exception (Err21)

22: Encoder card exception (Err22)

23: Motor short-to-ground (Err23)

26: Accumulative running duration reach (Err26)

(To be continued)

(Continued)

27: User-defined fault
28: User-defined alarm
29: Accumulative power-on duration reach (Err29)
30: Load loss (Err30)
31: PID feedback loss (Err31)
32: Parameter exception (Err32)
40: Pulse-by-pulse current limit fault (Err40)
41: Reserved (Err41)
42: Excessive speed deviation (Err42)
43: Motor overspeed (Err43)
45: Motor overtemperature (Err45)
47: STO fault (Err47)
55: Slave fault under master-slave control (Err55)
56: Self-check fault (Err56)
57: IGBT fault (Err57)
58: Hardware sensor fault (Err58)
59: Two-phase imbalance (Err59)
61: Braking overload (Err61)
62: Braking module exception (Err62)
63: External alarm (Err63)
82: Pre-charge contactor feedback exception (Err82)
85: Timing exception (Err85)
93: Motor control exception (Err93)
94: Motor parameter exception (Err94)
169: Fault reset fault (Err169)
174: Wire breakage (Err174)

Description

-

F9-15 **2nd fault type**

Address:	0xF90F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	999	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

Same as F9-15

Description

-

F9-16 **3rd (latest) fault type**

Address:	0xF910	Effective mode:	-
Min.:	0	Unit:	-
Max.:	999	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

Same as F9-15

Description
-

F9-17 **Frequency upon the 3rd (latest) fault**

Address:	0xF911	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	655.35	Data type:	Int16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00 Hz to 655.35 Hz
Description
-

F9-18 **Current upon the 3rd (latest) fault**

Address:	0xF912	Effective mode:	-
Min.:	0.00	Unit:	A
Max.:	655.35	Data type:	Int16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00 A to 655.35 A
Description
-

F9-19 **Bus voltage upon the 3rd (latest) fault**

Address:	0xF913	Effective mode:	-
Min.:	0.0	Unit:	V
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0 V to 6553.5 V
Description
-

F9-20 **DI state upon the 3rd (latest) fault**

Address:	0xF914	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

F9-21 **DO state upon the 3rd (latest) fault**

Address:	0xF915	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

F9-22 **AC drive state upon the 3rd (latest) fault**

Address:	0xF916	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

F9-23 **Power-on duration upon the 3rd (latest) fault**

Address:	0xF917	Effective mode:	-
Min.:	0	Unit:	min
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 min to 65535 min
Description
-

F9-24 **Running duration upon the 3rd (latest) fault**

Address:	0xF918	Effective mode:	-
Min.:	0.0	Unit:	min
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0 min to 6553.5 min
Description
-

F9-25 **Status word A upon the 3rd (latest) fault**

Address:	0xF919	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

F9-26 **Status word B upon the 3rd (latest) fault**

Address:	0xF91A	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

F9-27 **Frequency upon the 2nd fault**

Address:	0xF91B	Effective mode:	-

Min.: 0.00 Unit: Hz
Max.: 655.35 Data type: Int16
Default: 0.00 Change: Unchangeable

Value Range:
0.00 Hz to 655.35 Hz

Description
-

F9-28 Current upon the 2nd fault

Address: 0xF91C Effective mode: -
Min.: 0.00 Unit: A
Max.: 655.35 Data type: Int16
Default: 0.00 Change: Unchangeable

Value Range:
0.00 A to 655.35 A

Description
-

F9-29 Bus voltage upon the 2nd fault

Address: 0xF91D Effective mode: -
Min.: 0.0 Unit: V
Max.: 6553.5 Data type: UInt16
Default: 0.0 Change: Unchangeable

Value Range:
0.0 V to 6553.5 V

Description
-

F9-30 DI state upon the 2nd fault

Address: 0xF91E Effective mode: -
Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0x0 Change: Unchangeable

Value Range:
0x0 to 0xFFFF

Description
-

F9-31 DO state upon the 2nd fault

Address: 0xF91F Effective mode: -
Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0x0 Change: Unchangeable

Value Range:
0x0 to 0xFFFF

Description
-

F9-32 AC drive state upon the 2nd fault

Address: 0xF920 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

F9-33 Power-on duration upon the 2nd fault

Address: 0xF921 Effective mode: -

Min.: 0 Unit: min

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 min to 65535 min

Description

-

F9-34 Running duration upon the 2nd fault

Address: 0xF922 Effective mode: -

Min.: 0.0 Unit: min

Max.: 6553.5 Data type: UInt16

Default: 0.0 Change: Unchangeable

Value Range:

0.0 min to 6553.5 min

Description

-

F9-35 Status word A upon the 2nd fault

Address: 0xF923 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Unchangeable

Value Range:

0x0 to 0xFFFF

Description

-

F9-36 Status word B upon the 2nd fault

Address: 0xF924 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Unchangeable

Value Range:

0x0 to 0xFFFF

Description

-

F9-37 Frequency upon the 1st fault

Address: 0xF925 Effective mode: -

Min.: 0.00 Unit: Hz

Max.: 655.35 Data type: Int16

Default: 0.00 Change: Unchangeable

Value Range:

0.00 Hz to 655.35 Hz

Description

-

F9-38 Current upon the 1st fault

Address:	0xF926	Effective mode:	-
Min.:	0.00	Unit:	A
Max.:	655.35	Data type:	Int16
Default:	0.00	Change:	Unchangeable

Value Range:

0.00 A to 655.35 A

Description

-

F9-39 Bus voltage upon the 1st fault

Address:	0xF927	Effective mode:	-
Min.:	0.0	Unit:	V
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0 V to 6553.5 V

Description

-

F9-40 DI state upon the 1st fault

Address:	0xF928	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:

0x0 to 0xFFFF

Description

-

F9-41 DO state upon the 1st fault

Address:	0xF929	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:

0x0 to 0xFFFF

Description

-

F9-42 AC drive state upon the 1st fault

Address:	0xF92A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description
-

F9-43 **Power-on duration upon the 1st fault**

Address:	0xF92B	Effective mode:	-
Min.:	0	Unit:	min
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 min to 65535 min
Description
-

F9-44 **Running duration upon the 1st fault**

Address:	0xF92C	Effective mode:	-
Min.:	0.0	Unit:	min
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0 min to 6553.5 min
Description
-

F9-45 **Status word A upon the 1st fault**

Address:	0xF92D	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

F9-46 **Status word B upon the 1st fault**

Address:	0xF92E	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

F9-47 **Fault protection action selection 1**

Address:	0xF92F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	4455	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Ones: Motor overload (Err11)
0: Coast to stop
1: Stop according to the stop mode
2: Continue to run
3: Run with power limit
4: Run with current limit
5: Ignore
Tens: Input phase loss (Err12)
0: Coast to stop
1: Stop according to the stop mode
2: Continue to run
3: Run with power limit
4: Run with current limit
5: Ignore
Hundreds: Output phase loss (Err13)
0: Coast to stop
1: Stop according to the stop mode
2: Continue to run
3: Run with power limit
4: Run with current limit
Thousands: External fault (Err15)
0: Coast to stop
1: Stop according to the stop mode
2: Continue to run
3: Run with power limit
4: Run with current limit
Ten thousands: Reserved

Description

-

F9-48 Fault protection action selection 2

Address:	0xF930	Effective mode:	-
Min.:	0	Unit:	-
Max.:	40015	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Ones: Encoder/PG card exception (Err20)
0: Coast to stop
1: Stop according to the stop mode
2: Continue to run
3: Run with power limit
4: Run with current limit
5: Ignore
Tens: Parameter read/write exception (Err21)
0: Coast to stop
1: Stop according to the stop mode
Hundreds: Reserved (Err24)
0: Coast to stop
Thousands: Reserved (Err25)
0: Coast to stop
Ten thousands: Running duration reach (Err26)
0: Coast to stop
1: Stop according to the stop mode
2: Continue to run
3: Run with power limit
4: Run with current limit

Description

-

F9-49 Fault protection action selection 3

Address:	0xF931	Effective mode:	-
Min.:	0	Unit:	-
Max.:	45444	Data type:	UInt16
Default:	220	Change:	Changeable at any time

Value Range:

Ones: User-defined fault 1 (Err27)
0: Coast to stop
1: Stop according to the stop mode
2: Continue to run
3: Run with power limit
4: Run with current limit
Tens: User-defined fault 2 (Err28)
0: Coast to stop
1: Stop according to the stop mode
2: Continue to run
3: Run with power limit
4: Run with current limit
Hundreds: Power-on duration reach (Err29)
0: Coast to stop
1: Stop according to the stop mode
2: Continue to run
3: Run with power limit
4: Run with current limit
Thousands: Load loss (Err30)
0: Coast to stop
1: Stop according to the stop mode
2: Continue to run
3: Run with power limit
4: Run with current limit
5: Ignore
Ten thousands: PID loss during running (Err31)
0: Coast to stop
1: Stop according to the stop mode
2: Continue to run
3: Run with power limit
4: Run with current limit

Description

-

F9-50 **Fault protection action selection 4**

Address:	0xF932	Effective mode:	-
Min.:	0	Unit:	-
Max.:	55	Data type:	UInt16
Default:	2	Change:	Changeable at any time

Value Range:

Ones: Excessive speed deviation (Err42)
0: Coast to stop
1: Stop according to the stop mode
2: Continue to run
3: Run with power limit
4: Run with current limit
5: Ignore
Tens: Motor overspeed (Err43)
0: Coast to stop
1: Stop according to the stop mode
2: Continue to run
3: Run with power limit
4: Run with current limit
5: Ignore
Thousands: Magnetic pole position auto-tuning error (Err55)
0: Coast to stop
Description
-

F9-51 **Fault protection action selection 5**

Address:	0xF933	Effective mode:	-
Min.:	0	Unit:	-
Max.:	50555	Data type:	UInt16
Default:	10111	Change:	Changeable at any time

Value Range:

Ones: Modbus timeout (Err160)
0: Coast to stop
1: Stop according to the stop mode
2: Continue to run
3: Run with power limit
4: Run with current limit
5: Ignore
Tens: CANOpen fault (Err161)
0: Coast to stop
1: Stop according to the stop mode
2: Continue to run
3: Run with power limit
4: Run with current limit
5: Ignore
Hundreds: CANlink fault (Err162)
0: Coast to stop
1: Stop according to the stop mode
2: Continue to run
3: Run with power limit
4: Run with current limit
5: Ignore
Thousands: Reserved
Ten thousands: Expansion card fault (Err164)
0: Coast to stop
1: Stop according to the stop mode
2: Continue to run
3: Run with power limit
4: Run with current limit
5: Ignore

Description

-

F9-54 Frequency for continuing to run upon fault

Address:	0xF936	Effective mode:	-
Min.:	0	Unit:	-
Max.:	4	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: Current running frequency
1: Frequency reference
2: Frequency upper limit
3: Frequency lower limit
4: Alternative frequency upon exception

Description

-

F9-55 **Alternative frequency upon exception**

Address:	0xF937	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to +100.0%
Description
-

F9-56 **AI3 temperature mode - motor temperature sensor type**

Address:	0xF938	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: No temperature sensor (AI channel used as analog input)
1: PT100
2: PT1000
Description
-

F9-57 **AI3 temperature mode - motor overheat protection threshold**

Address:	0xF939	Effective mode:	-
Min.:	F9-58	Unit:	°C
Max.:	200	Data type:	UInt16
Default:	110	Change:	Changeable at any time

Value Range:
F9-58 to 200°C
Description
-

F9-58 **AI3 temperature mode - motor overheat pre-warning threshold**

Address:	0xF93A	Effective mode:	-
Min.:	0	Unit:	°C
Max.:	F9-57	Data type:	UInt16
Default:	90	Change:	Changeable at any time

Value Range:
0°C to F9-57
Description
-

F9-59 **Power dip ride-through**

Address:	0xF93B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Disabled
1: Decelerate
2: Decelerate to stop
3: Suppress voltage dip

Description

This parameter defines whether the AC drive runs continuously upon instantaneous power failure. When instantaneous power failure occurs, the AC drive keeps the motor in the power generating state to keep the bus voltage around the "voltage threshold for enabling power dip ride-through". This prevents the AC drive from stopping due to undervoltage.

0: Disabled
The power dip ride-through function is disabled.

1: Decelerate and keep bus voltage constant
When power failure occurs, the bus voltage stays around the "voltage threshold for enabling power dip ride-through". In this mode, when the grid resumes power supply, the AC drive accelerates to the target frequency based on the acceleration time.

2: Decelerate to stop
When power failure occurs, the AC drive decelerates to stop. In this mode, if the AC drive has not decelerated to 0 when the grid resumes power supply, it resumes running.

3: Suppress voltage dip
In this mode, the AC drive will not stop due to undervoltage caused by voltage dip. The voltage dip suppression time is set by F9-66.

F9-60 Voltage threshold for disabling power dip ride-through

Address:	0xF93C	Effective mode:	-
Min.:	80	Unit:	%
Max.:	100	Data type:	UInt16
Default:	85	Change:	Changeable only at stop

Value Range:
80% to 100%

Description

This parameter defines the voltage threshold for disabling power dip ride-through. 100% corresponds to 540 V. This value is slightly lower than the bus voltage before power failure.

Upon grid power failure, the bus voltage is maintained around F9-62 (voltage threshold for enabling power dip ride-through). When the power supply recovers, the bus voltage rises from F9-62 (voltage threshold for enabling power dip ride-through) to F9-60 (voltage threshold for disabling power dip ride-through). During this period, the output frequency of the AC drive keeps decreasing until the bus voltage reaches F9-60 (voltage threshold for disabling power dip ride-through).

F9-61 Delay of voltage recovery from power dip

Address:	0xF93D	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.5	Change:	Changeable only at stop

Value Range:

0.0s to 100.0s

Description

This parameter defines the time required for the bus voltage to rise from F9-60 (voltage threshold for disabling power dip ride-through) to the voltage before power failure.

F9-62 Voltage threshold for enabling power dip ride-through

Address:	0xF93E	Effective mode:	-
Min.:	60	Unit:	%
Max.:	100	Data type:	UInt16
Default:	80	Change:	Changeable only at stop

Value Range:

60% to 100%

Description

This parameter defines the voltage level at which the bus voltage is maintained upon power failure. Upon power failure, the bus voltage is maintained around F9-62 (voltage threshold for enabling power dip ride-through).

F9-63 Protection upon load loss

Address:	0xF93F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: Enabled

Description

-

F9-64 Load loss detection level

Address:	0xF940	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	10.0	Change:	Changeable at any time

Value Range:

0.0% to +100.0%

Description

-

F9-65 Load loss detection time

Address:	0xF941	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	60.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:

0.0s to 60.0s

Description

-

F9-67 Overspeed detection level

Address:	0xF943	Effective mode:	-
Min.:	0.0	Unit:	%

Max.: 50.0 Data type: UInt16
Default: 20.0 Change: Changeable at any time
Value Range:
0.0% to 50.0%
Description
-

F9-68 Overspeed detection time
Address: 0xF944 Effective mode: -
Min.: 0.0 Unit: s
Max.: 60.0 Data type: UInt16
Default: 1.0 Change: Changeable at any time
Value Range:
0.0s to 60.0s
Description
-

F9-69 Detection level of excessive speed deviation
Address: 0xF945 Effective mode: -
Min.: 0.0 Unit: %
Max.: 50.0 Data type: UInt16
Default: 20.0 Change: Changeable at any time
Value Range:
0.0% to 50.0%
Description
-

F9-70 Detection time of excessive speed deviation
Address: 0xF946 Effective mode: -
Min.: 0.0 Unit: s
Max.: 60.0 Data type: UInt16
Default: 5.0 Change: Changeable at any time
Value Range:
0.0s to 60.0s
Description
-

F9-71 Power dip ride-through gain Kp
Address: 0xF947 Effective mode: -
Min.: 1 Unit: -
Max.: 100 Data type: UInt16
Default: 40 Change: Changeable at any time
Value Range:
1 to 100
Description
-

F9-72 Power dip ride-through integral coefficient Ki
Address: 0xF948 Effective mode: -
Min.: 1 Unit: -
Max.: 100 Data type: UInt16
Default: 30 Change: Changeable at any time

Value Range:
1 to 100
Description
-

F9-73 Deceleration time of power dip ride-through

Address:	0xF949	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	300.0	Data type:	UInt16
Default:	20.0	Change:	Changeable at any time

Value Range:
0.0s to 300.0s
Description
-

F9-74 Voltage dip suppression time

Address:	0xF94A	Effective mode:	-
Min.:	0.1	Unit:	s
Max.:	600.0	Data type:	UInt16
Default:	0.5	Change:	Changeable at any time

Value Range:
0.1s to 600.0s
Description
-

F9-75 AI2 temperature mode - motor temperature sensor type

Address:	0xF94B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	4	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: No temperature sensor (AI channel used as analog input)
1: PT100
2: PT1000
3: KTY84-130
4: PTC130
Description
-

F9-76 AI2 temperature mode - motor overheat protection threshold

Address:	0xF94C	Effective mode:	-
Min.:	F9-77	Unit:	°C
Max.:	200	Data type:	UInt16
Default:	110	Change:	Changeable at any time

Value Range:
F9-77 to 200°C
Description
-

F9-77 AI2 temperature mode - motor overheat pre-warning threshold

Address:	0xF94D	Effective mode:	-

Min.: 0 Unit: °C
Max.: F9-76 Data type: UInt16
Default: 90 Change: Changeable at any time
Value Range:
0°C to F9-76
Description
-

F9-78 AI2 temperature mode - motor temperature reach
Address: 0xF94E Effective mode: -
Min.: 0 Unit: °C
Max.: 100 Data type: UInt16
Default: 75 Change: Changeable at any time
Value Range:
0°C to 100°C
Description
-

F9-79 Auto reset of STO state
Address: 0xF94F Effective mode: -
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
0: Manual reset
1: Auto reset
Description
-

F9-80 AI3 temperature mode - motor temperature reach
Address: 0xF950 Effective mode: -
Min.: 0 Unit: °C
Max.: 100 Data type: UInt16
Default: 75 Change: Changeable at any time
Value Range:
0°C to 100°C
Description
-

4.11 FA: Process Control PID Parameters

FA-00 PID reference source
Address: 0xFA00 Effective mode: -
Min.: 0 Unit: -
Max.: 6 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:

0: FA-01

1: AI1

2: AI2

3: AI3

4: Pulse input (DI5)

5: Communication

6: Multi-reference

Others: F connector

Description

This parameter specifies the PID reference source. The PID reference is a relative value. The value 100% corresponds to 100% of the feedback signal of the controlled system.

0: FA-01

The PID target reference is the value of FA-01 (PID reference).

1: AI1

The PID reference source is the AI1 input.

2: AI2

The PID reference source is the AI2 input.

3: AI3

The PID reference source is the AI3 input.

4: Pulse reference (DI5)

The PID reference is set by the pulse frequency through the DI5. The frequency is calculated based on the curve reflecting the relationship between the pulse frequency and running frequency.

5: Communication

The PID reference is set by remote communication.

6: Multi-reference

In the multi-reference mode, different combinations of DI terminal states correspond to different frequency references. The four multi-reference terminals can provide 16 state combinations, corresponding to 16 frequency reference values. Note: When FA-00 is set to 6 (multi-reference), FC-51 (multi-reference 0 source) cannot be set to 5 (PID reference).

Others: F connector

A parameter of the floating-point connector is selected as the PID target reference.

FA-01 PID reference

Address:	0xFA01	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	50.0	Change:	Changeable at any time

Value Range:

0.0% to +100.0%

Description

When FA-00 (PID reference source) is set to 0, this parameter must be set. The setpoint 100% corresponds to the maximum feedback value.

FA-02 PID feedback source

Address:	0xFA02	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: AI1

1: AI2

2: AI3

3: AI1-AI2

4: Pulse reference (DIO1)

5: Communication

6: AI1+AI2

7: MAX(|AI1|, |AI2|)

8: Min(|AI1|, |AI2|)

Others: F connector

Description

This parameter defines the PID feedback source.

FA-03 **PID action direction**

Address:	0xFA03	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Forward

1: Reverse

Others: B connector

Description

0: Forward

When the feedback value is lower than the PID reference, the output frequency of the AC drive increases.

1: Reverse

When the feedback value is lower than the PID reference, the output frequency of the AC drive decreases.

Others: B connector

The PID action direction is determined by a parameter in the bit connector. (0 indicates forward and 1 indicates reverse.)

FA-04 **PID reference and feedback range**

Address:	0xFA04	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1000	Change:	Changeable at any time

Value Range:

0 to 65535

Description

This parameter is used for display of the PID reference and feedback, which are dimensionless. For example, if this parameter is set to 1000, the PID reference (0% to 100%) corresponds linearly to the feedback value (0 to 1000).

FA-05 **Proportional gain Kp1**

Address:	0xFA05	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	1000.0	Data type:	UInt16
Default:	20.0	Change:	Changeable at any time

Value Range:
0.0 to 1000.0
Description
This parameter defines the proportional gain Kp in PID control. The deviation reduction speed depends on the proportional coefficient Kp. A larger Kp tends to reduce the deviation faster, but may cause system oscillation, especially at large hysteresis. A smaller Kp indicates lower possibility of oscillation but also slower deviation reduction.

FA-06 **Integral time Ti1**

Address:	0xFA06	Effective mode:	-
Min.:	0.01	Unit:	s
Max.:	10.00	Data type:	UInt16
Default:	2.00	Change:	Changeable at any time

Value Range:
0.01s to 10.00s
Description
This parameter defines the integral time Ti in PID control. It determines the integral adjustment intensity of the PID controller. Shorter integral time indicates greater adjustment intensity.

FA-07 **Derivative time Td1**

Address:	0xFA07	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	10.000	Data type:	UInt16
Default:	0.000	Change:	Changeable at any time

Value Range:
0.000s to 10.000s
Description
This parameter defines the derivative time Td in PID control. It determines the deviation variation adjustment intensity of the PID controller. Longer derivative time indicates greater adjustment intensity.

FA-08 **PID cut-off frequency in reverse direction**

Address:	0xFA08	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	2.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-10
Description
When the frequency source is "PID only", the PID cut-off frequency in reverse direction is the minimum value of the current PID output. When the frequency source is "main + PID", FA-08 takes into account the "main + PID" as a whole and outputs the minimum frequency value calculated through the "main + PID" operation. This parameter does not take effect when set to 0.

FA-09 **PID deviation limit**

Address:	0xFA09	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:

0.0% to +100.0%

Description

When the deviation is within the PID deviation limit, no adjustment is required. This parameter helps balance the accuracy and stability of the system output.

FA-10 PID derivative limit

Address:	0xFA0A	Effective mode:	-
Min.:	0.00	Unit:	%
Max.:	100.00	Data type:	UInt16
Default:	0.10	Change:	Changeable at any time

Value Range:

0.00% to 100.00%

Description

This parameter defines the PID derivative output range. In PID control, the derivative may easily cause system oscillation. Therefore, the PID derivative action is restricted to a small range.

FA-11 PID reference change time

Address:	0xFA0B	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	650.00	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00s to 650.00s

Description

This parameter defines the time required for the PID reference to change from 0.0% to 100.0%.

FA-12 PID feedback filter time

Address:	0xFA0C	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	60.00	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00s to 60.00s

Description

This parameter defines the filter time of PID feedback. The filter helps to reduce interference on the feedback but lowers the responsiveness of the process closed-loop system.

FA-13 PID output filter time

Address:	0xFA0D	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	60.00	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00s to 60.00s

Description

This parameter defines the filter time of PID output. The filter enhances smooth output but lowers the responsiveness of the process closed-loop

FA-15 Proportional gain Kp2

Address:	0xFA0F	Effective mode:	-
Min.:	0.0	Unit:	-

Max.:	1000.0	Data type:	UInt16
Default:	20.0	Change:	Changeable at any time

Value Range:
0.0 to 1000.0
Description
This parameter defines the proportional gain Kp in PID control. The deviation reduction speed depends on the proportional coefficient Kp. A larger Kp tends to reduce the deviation faster, but may cause system oscillation, especially at large hysteresis. A smaller Kp indicates lower possibility of oscillation but also slower deviation reduction.

FA-16 Integral time Ti2

Address:	0xFA10	Effective mode:	-
Min.:	0.01	Unit:	s
Max.:	10.00	Data type:	UInt16
Default:	2.00	Change:	Changeable at any time

Value Range:
0.01s to 10.00s
Description
This parameter defines the integral time Ti in PID control. It determines the integral adjustment intensity of the PID controller. Shorter integral time indicates greater adjustment intensity.

FA-17 Derivative time Td2

Address:	0xFA11	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	10.000	Data type:	UInt16
Default:	0.000	Change:	Changeable at any time

Value Range:
0.000s to 10.000s
Description
This parameter defines the derivative time Td in PID control. It determines the deviation variation adjustment intensity of the PID controller. Longer derivative time indicates greater adjustment intensity.

FA-18 PID parameter switchover condition

Address:	0xFA12	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: No switchover
1: Switchover by DI
2: Automatic switchover based on deviation
3: Automatic switchover based on running frequency
Description
This parameter defines the switchover between two groups of PID parameters.
0: No switchover
No switchover is performed.

1: Switchover by DI
To use this function, the DI terminal must be assigned with function 43 (PID parameter switchover). If the DI is inactive, parameter group 1 (FA-05 to FA-07) is selected. If the DI is active, parameter group 2 (FA-15 to FA-17) is selected.
2: Automatic switchover based on deviation
If the absolute value of the deviation between the reference and the feedback is lower than that set by FA-19 (PID parameter switchover deviation 1), parameter group 1 applies. If the absolute value of the deviation between the reference and the feedback is higher than that set by FA-20 (PID parameter switchover deviation 2), parameter group 2 applies. If this absolute value is between FA-19 (PID parameter switchover deviation 1) and FA-20 (PID parameter switchover deviation 2), the PID parameters are the linear interpolation values of the two groups of parameters.
3: Switchover based on running frequency
PID parameters are switched automatically based on the running frequency of the AC drive.

FA-19 PID parameter switchover deviation 1

Address:	0xFA13	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	FA-20	Data type:	UInt16
Default:	20.0	Change:	Changeable at any time

Value Range:
0.0% to FA-20
Description
The value 100% corresponds to the maximum deviation between the reference and feedback. The value range is 0.0% to FA-20 (PID parameter switchover deviation 2).

FA-20 PID parameter switchover deviation 2

Address:	0xFA14	Effective mode:	-
Min.:	FA-19	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	80.0	Change:	Changeable at any time

Value Range:
FA-19 to 100.0%
Description
The value 100% corresponds to the maximum deviation between the reference and feedback. The value range is FA-19 (PID parameter switchover deviation 1) to 100.0%.

FA-21 PID initial value

Address:	0xFA15	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0% to +100.0%
Description
When the AC drive starts up, the PID starts the closed-loop algorithm only after the PID output is fixed to the PID initial value (FA-21) for longer than the time set by FA-22 (hold time of PID initial value).

FA-22 Hold time of PID initial value

Address:	0xFA16	Effective mode:	-
Min.:	0.00	Unit:	s

Max.:	650.00	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00s to 650.00s
Description
When the AC drive starts up, the PID starts the closed-loop algorithm only after the PID output is fixed to the PID initial value (FA-21) for longer than the time set by FA-22 (hold time of PID initial value).

FA-23 Maximum deviation between two PID outputs

Address:	0xFA17	Effective mode:	-
Min.:	0.00	Unit:	%
Max.:	100.00	Data type:	UInt16
Default:	1.00	Change:	Changeable at any time

Value Range:
0.00% to 100.00%
Description
-

FA-24 Minimum deviation between two PID outputs

Address:	0xFA18	Effective mode:	-
Min.:	0.00	Unit:	%
Max.:	100.00	Data type:	UInt16
Default:	1.00	Change:	Changeable at any time

Value Range:
0.00% to 100.00%
Description
-

FA-25 PID integral property

Address:	0xFA19	Effective mode:	-
Min.:	0	Unit:	-
Max.:	11	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
Ones: Integral separation
0: Disabled
1: Enabled
Tens: Whether to stop integration when the output reaches the limit
0: Continue integration
1: Stop integration
Description
Ones: Integral separation
0: Disabled When integral separation is disabled, it remains inactive no matter whether the multi-functional DI is active.
1: Enabled When integral separation is enabled, PID integration stops when the DI assigned with the PID integral pause function is active (F4-00 = 22 for example). In this case, only PID proportional and derivative actions are active.
Tens: Whether to stop integration when the output reaches the limit
When the PID calculation output reaches the maximum or minimum value, you can choose whether to stop the integration. If you set this bit to 1, PID integration stops, which may help reduce the PID overshoot.

FA-26 **Lower threshold of detection on feedback loss**

Address:	0xFA1A	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:

0.0% to +100.0%

Description

This parameter is used to determine whether the PID feedback is lost. When the PID feedback remains lower than the value of FA-26 (lower threshold of detection on feedback loss) for a period longer than the time set by FA-27 (PID feedback loss detection time), the AC drive reports E31.00.

The setpoint 0 indicates that detection on feedback loss is disabled.

FA-27 **PID feedback loss detection time**

Address:	0xFA1B	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	20.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:

0.0s to 20.0s

Description

This parameter is used to determine whether the PID feedback is lost. When the PID feedback remains lower than the value of FA-26 (lower threshold of detection on feedback loss) or higher than the value of FA-29 (upper threshold of detection on feedback loss) for a period longer than the time set by FA-27 (PID feedback loss detection time), the AC drive reports E31.00.

FA-28 **PID operation at stop**

Address:	0xFA1C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: Enabled

Others: B connector

Description

0: Disabled

When the motor is not running, PID operation is not performed, and the output is cleared.

1: Enabled

When the motor is not running, PID operation is still performed, and the output changes with the feedback and reference

Others: B connector

Whether to perform PID operation at stop is determined by a parameter in the bit connector.

FA-29 **Upper threshold of detection on feedback loss**

Address:	0xFA1D	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:

0.0% to +100.0%

Description

This parameter is used to determine whether the PID feedback is lost. When the PID feedback remains higher than the value of FA-29 (upper threshold of detection on feedback loss) for a period longer than the time set by FA-27 (PID feedback loss detection time), the AC drive reports E31.00.
The setpoint 100.0% indicates that detection on feedback loss is disabled.

FA-30 Source of maximum output

Address:	0xFA1E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: [1]

1: AI1

2: AI2

3: AI3

4: Pulse reference

5: Communication

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

This parameter defines the source of the maximum PID output.
When PID is used as the frequency reference source, the PID output is restricted by frequency limits; otherwise, the PID output range is defined by FA-30 and FA-31.

FA-31 Source of minimum output

Address:	0xFA1F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: [0]

1: AI1

2: AI2

3: AI3

4: Pulse reference

5: Communication

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

This parameter defines the source of the minimum PID output.
When PID is used as the frequency reference source, the PID output is restricted by frequency limits; otherwise, the PID output range is defined by FA-30 and FA-31.

FA-32 **Forced output value**

Address:	0xFA20	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: [0]

1: AI1

2: AI2

3: AI3

4: Pulse reference

5: Communication

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

This parameter defines the source of forced assignment of PID output. When forced output assignment is enabled (FA-33 = 1), FA-32 determines PID output.

FA-33 **Forced output assignment**

Address:	0xFA21	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: Enabled

Others: B connector

Description

0: Disabled

The output is not assigned forcibly, and the PID operation is performed as normal.

1: Enabled

The PID operation stops and the output is forced to be the value defined by FA-32.

Others: B connector

Whether to enable forced output assignment is determined by a parameter in the bit connector.

FA-34 **General PID enable**

Address:	0xFA22	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: Disabled

1: Enabled

Others: B connector

Description

0: Disabled

PID operation is not performed, and the output is cleared.

1: Enabled

PID operation is performed based on parameters in group FA.

Others: B connector

Whether to enable the PID function is determined by a parameter in the bit connector.

4.12 FB: Wobble, Fixed Length, and Counting Parameters

FB-00 **Wobble setting mode**

Address:	0xFB00	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Relative to center frequency

1: Relative to maximum frequency

Description

-

FB-01 **Wobble amplitude**

Address:	0xFB01	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:

0.0% to +100.0%

Description

-

FB-02 **Wobble step**

Address:	0xFB02	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	50.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:

0.0% to 50.0%

Description

-

FB-03 **Wobble cycle**

Address:	0xFB03	Effective mode:	-
Min.:	0.1	Unit:	s
Max.:	3000.0	Data type:	UInt16
Default:	10.0	Change:	Changeable at any time

Value Range:

0.1s to 3000.0s

Description

-

FB-04 **Triangular wave rise time coefficient**

Address:	0xFB04	Effective mode:	-
Min.:	0.1	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	50.0	Change:	Changeable at any time

Value Range:
0.1% to +100.0%
Description
-

FB-05 **Reference length**

Address:	0xFB05	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1000	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

FB-06 **Actual length**

Address:	0xFB06	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

FB-07 **Number of pulses per meter**

Address:	0xFB07	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.1 to 6553.5
Description
-

FB-08 **Reference count value**

Address:	0xFB08	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1000	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

FB-09 **Designated count value**

Address:	0xFB09	Effective mode:	-

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1000	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

FB-20 Motor-driven potentiometer enable

Address:	0xFB14	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector
Description
The motor-driven potentiometer can implement virtual potentiometer output.
0: The motor-driven potentiometer is disabled.
1: The motor-driven potentiometer is enabled.
3–18: The value is determined by the corresponding DI.
Others: The value is determined by the corresponding connector.

FB-21 Memory retention at power failure of motor-driven potentiometer

Address:	0xFB15	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
Description

If memory retention at power failure is enabled and the motor-driven potentiometer is enabled before power failure, the output value of the motor-driven potentiometer after power-on is the last output value before the power failure.
0: Non-retentive upon power failure
1: Retentive upon power failure

FB-22 Initial value of motor-driven potentiometer

Address:	0xFB16	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
This parameter defines the per-unit value of the motor-driven potentiometer in initial state after it is enabled.

FB-23 Value increase time base of motor-driven potentiometer

Address:	0xFB17	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	655.35	Data type:	UInt16
Default:	20.00	Change:	Changeable at any time

Value Range:
0.00s to 655.35s
Description
This parameter defines the increase rate of the motor potentiometer count value, specifically the time required to increase from 0 to the maximum frequency.

FB-24 Value decrease time base of motor-driven potentiometer

Address:	0xFB18	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	655.35	Data type:	UInt16
Default:	20.00	Change:	Changeable at any time

Value Range:
0.00s to 655.35s
Description
This parameter defines the decrease rate of the motor potentiometer count value, specifically the time required to decrease from the maximum frequency to 0.

FB-25 Source of motor-driven potentiometer increase command

Address:	0xFB19	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Inactive
1: Active
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

This parameter defines the source of the output value increase command of the motor-driven potentiometer.

0: The increase command source is invalid.

1: The increase command source is valid.

3–18: The increase command source is the corresponding DI value.

Others: The increase command source is the corresponding connector value.

FB-26 Source of motor-driven potentiometer decrease command

Address:	0xFB1A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Inactive
1: Active
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

This parameter defines the source of the output value decrease command of the motor-driven potentiometer.

0: The decrease command source is invalid.
1: The decrease command source is valid.
3–18: The decrease command source is the corresponding DI value.
Others: The decrease command source is the corresponding connector value.

FB-27 Maximum output value of motor-driven potentiometer

Address:	0xFB1B	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	600.0	Change:	Changeable at any time

Value Range:

–600% to +600.0%

Description

This parameter defines the maximum per-unit value that the motor-driven potentiometer can output.

FB-28 Minimum output value of motor-driven potentiometer

Address:	0xFB1C	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	–600	Change:	Changeable at any time

Value Range:

–600% to +600.0%

Description

This parameter defines the minimum per-unit value that the motor-driven potentiometer can output.

FB-29 Source 1 of motor-driven potentiometer pause command

Address:	0xFB1D	Effective mode:	-

Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Inactive

1: Active

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

When the pause command is 0, the pause is invalid; when the pause command is 1, the motor-driven potentiometer pauses.

0: The pause is invalid.

1: The pause is valid.

3–18: The command is the value input by the corresponding DI.

Others: The command is the value input by the corresponding connector.

FB-30 Source 2 of motor-driven potentiometer pause command

Address:	0xFB1E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Inactive
1: Active
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

When the pause command is 0, the pause is invalid; when the pause command is 1, the motor-driven potentiometer pauses.

0: The pause is invalid.

1: The pause is valid.

3–18: The command is the value input by the corresponding DI.

Others: The command is the value input by the corresponding connector.

FB-31 Source 1 of motor-driven potentiometer reset command

Address:	0xFB1F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Inactive
1: Active
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

When the reset command is 0, the reset is invalid; when the reset command is 1, the output of the motor-driven potentiometer is reset.

0: The reset is invalid.

1: The reset is valid.

3–18: The command is the value input by the corresponding DI.

Others: The command is the value input by the corresponding connector.

FB-32 Source 2 of motor-driven potentiometer reset command

Address:	0xFB20	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Inactive
1: Active
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

When the reset command is 0, the reset is invalid; when the reset command is 1, the output of the motor-driven potentiometer is reset.

0: The reset is invalid.
1: The reset is valid.
3–18: The command is the value input by the corresponding DI.
Others: The command is the value input by the corresponding connector.

FB-33 Source of motor-driven potentiometer reset value

Address:	0xFB21	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Digital setting
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector

Description

This parameter defines the specific per-unit value of reset after the motor-driven potentiometer receives the reset command.
0: Value of FB-34
1–3: Corresponding AI input value
4: Pulse input value
5: Value input through communication
6: Multi-reference output value
7: Motor-driven potentiometer output value
8: General PID output value
Others: Connector value

FB-34 Reset value of motor-driven potentiometer

Address:	0xFB22	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
This parameter specifies the reset value of the motor-driven potentiometer when FB-33 is set to 0.

FB-35 Source of motor-driven potentiometer force command

Address:	0xFB23	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Inactive
1: Active
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector
Description

When the force command is 0, the force is invalid; when the force command is 1, the output of the motor-driven potentiometer is forced to the designated value.
0: The force invalid.
1: The force is valid.
3–18: The command is the value input by the corresponding DI.
Others: The command is the value input by the corresponding connector.

FB-36 Source of motor-driven potentiometer force value

Address:	0xFB24	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Digital setting
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector

Description
This parameter defines the forced per-unit value after the motor-driven potentiometer receives the force command.
0: Value of FB-37
1–3: Corresponding AI input value
4: Pulse input value
5: Value input through communication
6: Multi-reference output value
7: Motor-driven potentiometer output value
8: General PID output value
Others: Connector value

FB-37 Force value of motor-driven potentiometer

Address:	0xFB25	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%

Description
This parameter specifies the force value of the motor-driven potentiometer when FB-36 is set to 0.

FB-38 High-order bits of motor-driven potentiometer storage

Address:	0xFB26	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

-

FB-39 Low-order bits of motor-driven potentiometer storage

Address: 0xFB27 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

-

FB-46 Simple UP/DOWN output

Address: 0xFB2E Effective mode: -

Min.: –32767 Unit: -

Max.: 32767 Data type: Int16

Default: 0 Change: Unchangeable

Value Range:

–32767 to +32767

Description

-

4.13 FC: Multi-reference Parameters

FC-00 Multi-reference 1

Address: 0xFC00 Effective mode: -

Min.: –100 Unit: %

Max.: 100.0 Data type: Int16

Default: 0.0 Change: Changeable at any time

Value Range:

–100% to +100.0%

Description

The unit of the multi-reference value is %. The AC drive provides four multi-reference terminals, which provide 16 state combinations, corresponding to 16 frequency setpoints.

This parameter defines the frequency reference of each speed when the frequency reference source is set to multi-reference. FC-00 to FC-15 correspond to a total of 16 frequency setpoints for 16 segments numbered from 0 to 15. The frequency setpoint is calculated as a percentage to the maximum frequency. The value 100% corresponds to F0-10 (maximum frequency).

The source of multi-reference 1 is selected in FC-51, and the other multi-reference values are set by parameters.

When outputting to a floating-point connector, the multi-reference value can be used not only as the frequency reference, but also torque, voltage, or other reference input. The multi-reference value is a percentage of the rated value.

FC-01 **Multi-reference 2**

Address: 0xFC01 | Effective mode: -
Min.: –100 | Unit: %
Max.: 100.0 | Data type: Int16
Default: 0.0 | Change: Changeable at any time

Value Range:
–100% to +100.0%
Description
Same as FC-00

FC-02 **Multi-reference 3**

Address: 0xFC02 | Effective mode: -
Min.: –100 | Unit: %
Max.: 100.0 | Data type: Int16
Default: 0.0 | Change: Changeable at any time

Value Range:
–100% to +100.0%
Description
Same as FC-00

FC-03 **Multi-reference 4**

Address: 0xFC03 | Effective mode: -
Min.: –100 | Unit: %
Max.: 100.0 | Data type: Int16
Default: 0.0 | Change: Changeable at any time

Value Range:
–100% to +100.0%
Description
Same as FC-00

FC-04 **Multi-reference 5**

Address: 0xFC04 | Effective mode: -
Min.: –100 | Unit: %
Max.: 100.0 | Data type: Int16
Default: 0.0 | Change: Changeable at any time

Value Range:
–100% to +100.0%
Description
Same as FC-00

FC-05 **Multi-reference 6**

Address: 0xFC05 | Effective mode: -
Min.: –100 | Unit: %
Max.: 100.0 | Data type: Int16
Default: 0.0 | Change: Changeable at any time

Value Range:
–100% to +100.0%
Description
Same as FC-00

FC-06 **Multi-reference 7**

Address: 0xFC06 | Effective mode: -

Min.: –100
Max.: 100.0
Default: 0.0
Unit: %
Data type: Int16
Change: Changeable at any time

Value Range:
–100% to +100.0%

Description
Same as FC-00

FC-07 Multi-reference 8

Address: 0xFC07
Min.: –100
Max.: 100.0
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Changeable at any time

Value Range:
–100% to +100.0%

Description
Same as FC-00

FC-08 Multi-reference 9

Address: 0xFC08
Min.: –100
Max.: 100.0
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Changeable at any time

Value Range:
–100% to +100.0%

Description
Same as FC-00

FC-09 Multi-reference 10

Address: 0xFC09
Min.: –100
Max.: 100.0
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Changeable at any time

Value Range:
–100% to +100.0%

Description
Same as FC-00

FC-10 Multi-reference 11

Address: 0xFC0A
Min.: –100
Max.: 100.0
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Changeable at any time

Value Range:
–100% to +100.0%

Description
Same as FC-00

FC-11 Multi-reference 12

Address: 0xFC0B
Min.: –100
Max.: 100.0
Effective mode: -
Unit: %
Data type: Int16

Default: 0.0 Change: Changeable at any time

Value Range:

–100% to +100.0%

Description

Same as FC-00

FC-12 Multi-reference 13

Address: 0xFC0C Effective mode: -

Min.: –100 Unit: %

Max.: 100.0 Data type: Int16

Default: 0.0 Change: Changeable at any time

Value Range:

–100% to +100.0%

Description

Same as FC-00

FC-13 Multi-reference 14

Address: 0xFC0D Effective mode: -

Min.: –100 Unit: %

Max.: 100.0 Data type: Int16

Default: 0.0 Change: Changeable at any time

Value Range:

–100% to +100.0%

Description

Same as FC-00

FC-14 Multi-reference 15

Address: 0xFC0E Effective mode: -

Min.: –100 Unit: %

Max.: 100.0 Data type: Int16

Default: 0.0 Change: Changeable at any time

Value Range:

–100% to +100.0%

Description

Same as FC-00

FC-15 Multi-reference 16

Address: 0xFC0F Effective mode: -

Min.: –100 Unit: %

Max.: 100.0 Data type: Int16

Default: 0.0 Change: Changeable at any time

Value Range:

–100% to +100.0%

Description

Same as FC-00

FC-16 Simple PLC running mode

Address: 0xFC10 Effective mode: -

Min.: 0 Unit: -

Max.: 2 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Stop after running for one cycle

1: Keep final values after running for one cycle

2: Repeat after running for one cycle

Description

-

FC-17 Simple PLC memory retention upon power failure

Address:	0xFC11	Effective mode:	-
Min.:	0	Unit:	-
Max.:	11	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Ones: Retentive upon power failure

0: No

1: Yes

Tens: Retentive upon stop

0: No

1: Yes

Description

-

FC-18 Running time of PLC reference 0

Address:	0xFC12	Effective mode:	-
Min.:	0.0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:

0.0s (h) to 6553.5s (h)

Description

-

FC-19 Acceleration/Deceleration time of PLC reference 0

Address:	0xFC13	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 3

Description

-

FC-20 Running time of PLC reference 1

Address:	0xFC14	Effective mode:	-
Min.:	0.0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:

0.0s (h) to 6553.5s (h)

Description

-

FC-21 **Acceleration/Deceleration time of PLC reference 1**

Address:	0xFC15	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 3
Description
-

FC-22 **Running time of PLC reference 2**

Address:	0xFC16	Effective mode:	-
Min.:	0.0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s (h) to 6553.5s (h)
Description
-

FC-23 **Acceleration/Deceleration time of PLC reference 2**

Address:	0xFC17	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 3
Description
-

FC-24 **Running time of PLC reference 3**

Address:	0xFC18	Effective mode:	-
Min.:	0.0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s (h) to 6553.5s (h)
Description
-

FC-25 **Acceleration/Deceleration time of PLC reference 3**

Address:	0xFC19	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 3
Description
-

FC-26 **Running time of PLC reference 4**

Address:	0xFC1A	Effective mode:	-

Min.: 0.0 Unit: s (h)
Max.: 6553.5 Data type: UInt16
Default: 0.0 Change: Changeable at any time
Value Range:
0.0s (h) to 6553.5s (h)
Description
-

FC-27 Acceleration/Deceleration time of PLC reference 4

Address: 0xFC1B Effective mode: -
Min.: 0 Unit: -
Max.: 3 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
0 to 3
Description
-

FC-28 Running time of PLC reference 5

Address: 0xFC1C Effective mode: -
Min.: 0.0 Unit: s (h)
Max.: 6553.5 Data type: UInt16
Default: 0.0 Change: Changeable at any time
Value Range:
0.0s (h) to 6553.5s (h)
Description
-

FC-29 Acceleration/Deceleration time of PLC reference 5

Address: 0xFC1D Effective mode: -
Min.: 0 Unit: -
Max.: 3 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
0 to 3
Description
-

FC-30 Running time of PLC reference 6

Address: 0xFC1E Effective mode: -
Min.: 0.0 Unit: s (h)
Max.: 6553.5 Data type: UInt16
Default: 0.0 Change: Changeable at any time
Value Range:
0.0s (h) to 6553.5s (h)
Description
-

FC-31 Acceleration/Deceleration time of PLC reference 6

Address: 0xFC1F Effective mode: -
Min.: 0 Unit: -
Max.: 3 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 3

Description

-

FC-32 Running time of PLC reference 7

Address: 0xFC20 Effective mode: -

Min.: 0.0 Unit: s (h)

Max.: 6553.5 Data type: UInt16

Default: 0.0 Change: Changeable at any time

Value Range:

0.0s (h) to 6553.5s (h)

Description

-

FC-33 Acceleration/Deceleration time of PLC reference 7

Address: 0xFC21 Effective mode: -

Min.: 0 Unit: -

Max.: 3 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 3

Description

-

FC-34 Running time of PLC reference 8

Address: 0xFC22 Effective mode: -

Min.: 0.0 Unit: s (h)

Max.: 6553.5 Data type: UInt16

Default: 0.0 Change: Changeable at any time

Value Range:

0.0s (h) to 6553.5s (h)

Description

-

FC-35 Acceleration/Deceleration time of PLC reference 8

Address: 0xFC23 Effective mode: -

Min.: 0 Unit: -

Max.: 3 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 3

Description

-

FC-36 Running time of PLC reference 9

Address: 0xFC24 Effective mode: -

Min.: 0.0 Unit: s (h)

Max.: 6553.5 Data type: UInt16

Default: 0.0 Change: Changeable at any time

Value Range:

0.0s (h) to 6553.5s (h)
Description
-

FC-37 **Acceleration/Deceleration time of PLC reference 9**

Address:	0xFC25	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 3
Description
-

FC-38 **Running time of PLC reference 10**

Address:	0xFC26	Effective mode:	-
Min.:	0.0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s (h) to 6553.5s (h)
Description
-

FC-39 **Acceleration/Deceleration time of PLC reference 10**

Address:	0xFC27	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 3
Description
-

FC-40 **Running time of PLC reference 11**

Address:	0xFC28	Effective mode:	-
Min.:	0.0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s (h) to 6553.5s (h)
Description
-

FC-41 **Acceleration/Deceleration time of PLC reference 11**

Address:	0xFC29	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 3

Description
-

FC-42 **Running time of PLC reference 12**

Address:	0xFC2A	Effective mode:	-
Min.:	0.0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s (h) to 6553.5s (h)
Description
-

FC-43 **Acceleration/Deceleration time of PLC reference 12**

Address:	0xFC2B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 3
Description
-

FC-44 **Running time of PLC reference 13**

Address:	0xFC2C	Effective mode:	-
Min.:	0.0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s (h) to 6553.5s (h)
Description
-

FC-45 **Acceleration/Deceleration time of PLC reference 13**

Address:	0xFC2D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 3
Description
-

FC-46 **Running time of PLC reference 14**

Address:	0xFC2E	Effective mode:	-
Min.:	0.0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s (h) to 6553.5s (h)
Description
-

FC-47 **Acceleration/Deceleration time of PLC reference 14**

Address:	0xFC2F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 3
Description
-

FC-48 **Running time of PLC reference 15**

Address:	0xFC30	Effective mode:	-
Min.:	0.0	Unit:	s (h)
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s (h) to 6553.5s (h)
Description
-

FC-49 **Acceleration/Deceleration time of PLC reference 15**

Address:	0xFC31	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 3
Description
-

FC-50 **PLC running time unit**

Address:	0xFC32	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: s (second)
1: h (hour)
Description
-

FC-51 **Multi-reference 0 source**

Address:	0xFC33	Effective mode:	-
Min.:	0	Unit:	-
Max.:	6	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: FC-00

1: AI1

2: AI2

3: AI3

4: Pulse reference

5: PID

6: Preset frequency (F0-08)

Others: F connector

Description

This parameter defines the source of multi-reference value 1.

FC-52 Current multi-reference

Address:	0xFC34	Effective mode:	-
Min.:	0	Unit:	-
Max.:	15	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0: Multi-reference 1

1: Multi-reference 2

2: Multi-reference 3

3: Multi-reference 4

4: Multi-reference 5

5: Multi-reference 6

6: Multi-reference 7

7: Multi-reference 8

8: Multi-reference 9

9: Multi-reference 10

10: Multi-reference 11

11: Multi-reference 12

12: Multi-reference 13

13: Multi-reference 14

14: Multi-reference 15

15: Multi-reference 16

Description

This parameter shows the current active multi-reference.

FC-53 Current multi-reference value

Address:	0xFC35	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

–600% to +600.0%

Description

This parameter shows the value of the current active multi-reference.

FC-55 Multi-reference value bit0

Address:	0xFC37	Effective mode:	-
Min.:	0	Unit:	-

Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: 1

2: Terminal function input

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

This parameter defines the source of bit0 of the multi-reference value.

FC-56 Multi-reference value bit1

Address:	0xFC38	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0
1: 1
2: Terminal function input
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

This parameter defines the source of bit1 of the multi-reference value.

FC-57 Multi-reference value bit2

Address:	0xFC39	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0
1: 1
2: Terminal function input
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

This parameter defines the source of bit2 of the multi-reference value.

FC-58 Multi-reference value bit3

Address:	0xFC3A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0
1: 1
2: Terminal function input
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

This parameter defines the source of bit3 of the multi-reference value.

FC-59 Current STEP of PLC

Address:	0xFC3B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

-

FC-60 High-order bits of PLC current STEP running time

Address:	0xFC3C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

-

FC-61 Low-order bits of PLC current STEP running time

Address:	0xFC3D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535
Description
-

4.14 FD: Communication Parameters

FD-00 **Baud rate**

Address:	0xFD00	Effective mode:	-
Min.:	0	Unit:	-
Max.:	6009	Data type:	UInt16
Default:	5005	Change:	Changeable only at stop

Value Range:
Ones: Modbus
0: 300 bps
1: 600 bps
2: 1200 bps
3: 2400 bps
4: 4800 bps
5: 9600 bps
6: 19200 bps
7: 38400 bps
8: 57600 bps
9: 115200 bps
Tens: Reserved

Hundreds: Reserved

Thousands: CANLink/CANOpen
0: 20
1: 50
2: 100
3: 125
4: 250
5: 500
6: 1M
Description
-

FD-01 **Modbus data format**

Address:	0xFD01	Effective mode:	-
Min.:	0	Unit:	-
Max.:	7	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: No check (8-N-2)

1: Even parity (8-E-1)

2: Odd parity (8-O-1)

3: No check (8-N-1)

4: No check (7-N-2)

5: Even parity (7-E-1)

6: Odd parity (7-O-1)

7: No check (7-N-1)

Description

This parameter is valid for Modbus.

FD-02 Local address

Address:	0xFD02	Effective mode:	-
Min.:	1	Unit:	-
Max.:	247	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

1 to 247

Description

The value ranges from 1 to 247.

This parameter is valid for Modbus, CANlink, and CANopen.

FD-03 Modbus response delay

Address:	0xFD03	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	20	Data type:	UInt16
Default:	2	Change:	Changeable at any time

Value Range:

0 ms to 20 ms

Description

The value ranges from 0 to 20 ms. This parameter is valid for Modbus.

FD-04 Communication timeout time

Address:	0xFD04	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	60.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:

0.0s to 60.0s

Description

0.0: Timeout disabled

0.1s to 60.0s: Timeout time

FD-06 Current resolution read by communication

Address:	0xFD06	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0.01 A (valid when ⩽ 55 kW)

1: 0.1 A

Description
-

FD-08 **Expansion card communication timeout time**

Address:	0xFD08	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	60.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 60.0s
Description
-

FD-10 **CANopen/CANlink switchover**

Address:	0xFD0A	Effective mode:	-
Min.:	1	Unit:	-
Max.:	2	Data type:	UInt16
Default:	2	Change:	Changeable at any time

Value Range:
1: CANopen
2: CANlink
Description
-

FD-14 **Number of frames received per unit time**

Address:	0xFD0E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

FD-15 **Maximum RX error count**

Address:	0xFD0F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

FD-16 **Maximum TX error count**

Address:	0xFD10	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

FD-17 **Bus-off count per unit time**

Address:	0xFD11	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

FD-19 **CAN communication disconnection coefficient**

Address:	0xFD13	Effective mode:	-
Min.:	1	Unit:	-
Max.:	15	Data type:	UInt16
Default:	3	Change:	Changeable only at stop

Value Range:
1 to 15
Description
-

FD-20 **PROFIBUS DP communication address**

Address:	0xFD14	Effective mode:	-
Min.:	0	Unit:	-
Max.:	125	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0 to 125
Description
-

FD-21 **PROFIBUS DP communication disconnection coefficient**

Address:	0xFD15	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	350	Change:	Changeable only at stop

Value Range:
0 to 65535
Description
-

FD-27 **Storage of parameters written through communication**

Address:	0xFD1B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 1
Description
-

FD-28 **Auto reset upon communication fault**

Address:	0xFD1C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0 to 1
Description
-

FD-29 **Communication state**

Address:	0xFD1D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	999	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 999
Description
-

FD-30 **Number of RPDO mapped bytes**

Address:	0xFD1E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

FD-31 **Number of TPDO mapped bytes**

Address:	0xFD1F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

FD-32 **Group AF mapping mode switchover**

Address:	0xFD20	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: Parameters written through communication are not saved
1: Parameters written through communication are saved
Description
-

FD-37 **DHCP function**

Address: 0xFD25
Min.: 0
Max.: 1
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0: Disabled
1: Enabled
Description
-

FD-38 **MSB of IP address**

Address: 0xFD26
Min.: 0
Max.: 255
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 to 255
Description
-

FD-39 **Second MSB of IP address**

Address: 0xFD27
Min.: 0
Max.: 255
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 to 255
Description
-

FD-40 **Third byte of IP address**

Address: 0xFD28
Min.: 0
Max.: 255
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 to 255
Description
-

FD-41 **LSB of IP address**

Address: 0xFD29
Min.: 0
Max.: 255
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 to 255
Description
-

FD-42 **MSB of subnet mask**

Address: 0xFD2A
Min.: 0
Max.: 255
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 to 255
Description
-

FD-43 **Second MSB of subnet mask**

Address: 0xFD2B
Min.: 0
Max.: 255
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 to 255
Description
-

FD-44 **Third byte of subnet mask**

Address: 0xFD2C
Min.: 0
Max.: 255
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 to 255
Description
-

FD-45 **LSB of subnet mask**

Address: 0xFD2D
Min.: 0
Max.: 255
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 to 255
Description
-

FD-46 **MSB of gateway**

Address: 0xFD2E
Min.: 0
Max.: 255
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 to 255
Description
-

FD-47 **Second MSB of gateway**

Address: 0xFD2F
Effective mode: -

Min.: 0
Max.: 255
Default: 0
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 to 255

Description
-

FD-48 Third byte of gateway

Address: 0xFD30
Min.: 0
Max.: 255
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 to 255

Description
-

FD-49 LSB of gateway

Address: 0xFD31
Min.: 0
Max.: 255
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 to 255

Description
-

FD-58 Ethernet/IP expansion card error code

Address: 0xFD3A
Min.: 0
Max.: 255
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 255

Description
-

FD-61 High-order byte of MAC address

Address: 0xFD3D
Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0x0 to 0xFFFF

Description
-

FD-62 Middle byte of MAC address

Address: 0xFD3E
Min.: 0x0
Max.: 0xFFFF
Effective mode: -
Unit: -
Data type: UInt16

Default: 0x0 Change: Changeable only at stop

Value Range:

0x0 to 0xFFFF

Description

-

FD-63 Low-order byte of MAC address

Address: 0xFD3F Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable only at stop

Value Range:

0x0 to 0xFFFF

Description

-

FD-92 Slave alias backup

Address: 0xFD5C Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

-

FD-93 Null pointer

Address: 0xFD5D Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

-

FD-94 Communication software version

Address: 0xFD5E Effective mode: -

Min.: 0.00 Unit: -

Max.: 655.35 Data type: UInt16

Default: 0.00 Change: Unchangeable

Value Range:

0.00 to 655.35

Description

-

4.15 FE: User-Defined Parameters

FE-00 User-defined parameter 0

Address: 0x2F00 Effective mode: -

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535

Description
-

FE-01 User-defined parameter 1

Address: 0x2F01
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535

Description
-

FE-02 User-defined parameter 2

Address: 0x2F02
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535

Description
-

FE-03 User-defined parameter 3

Address: 0x2F03
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535

Description
-

FE-04 User-defined parameter 4

Address: 0x2F04
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535

Description
-

FE-05 User-defined parameter 5

Address: 0x2F05
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

-

FE-06 User-defined parameter 6

Address: 0x2F06 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

-

FE-07 User-defined parameter 7

Address: 0x2F07 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

-

FE-08 User-defined parameter 8

Address: 0x2F08 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

-

FE-09 User-defined parameter 9

Address: 0x2F09 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

-

FE-10 User-defined parameter 10

Address: 0x2F0A Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535
Description
-

FE-11 **User-defined parameter 11**

Address:	0x2F0B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

FE-12 **User-defined parameter 12**

Address:	0x2F0C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

FE-13 **User-defined parameter 13**

Address:	0x2F0D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

FE-14 **User-defined parameter 14**

Address:	0x2F0E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

FE-15 **User-defined parameter 15**

Address:	0x2F0F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535

Description
-

FE-16 **User-defined parameter 16**

Address:	0x2F10	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

FE-17 **User-defined parameter 17**

Address:	0x2F11	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

FE-18 **User-defined parameter 18**

Address:	0x2F12	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

FE-19 **User-defined parameter 19**

Address:	0x2F13	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

FE-20 **User-defined parameter 20**

Address:	0x2F14	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

FE-21 **User-defined parameter 21**

Address: 0x2F15 | Effective mode: -
Min.: 0 | Unit: -
Max.: 65535 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:
0 to 65535
Description
-

FE-22 **User-defined parameter 22**

Address: 0x2F16 | Effective mode: -
Min.: 0 | Unit: -
Max.: 65535 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:
0 to 65535
Description
-

FE-23 **User-defined parameter 23**

Address: 0x2F17 | Effective mode: -
Min.: 0 | Unit: -
Max.: 65535 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:
0 to 65535
Description
-

FE-24 **User-defined parameter 24**

Address: 0x2F18 | Effective mode: -
Min.: 0 | Unit: -
Max.: 65535 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:
0 to 65535
Description
-

FE-25 **User-defined parameter 25**

Address: 0x2F19 | Effective mode: -
Min.: 0 | Unit: -
Max.: 65535 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:
0 to 65535
Description
-

FE-26 **User-defined parameter 26**

Address: 0x2F1A | Effective mode: -

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535

Description
-

FE-27 User-defined parameter 27

Address: 0x2F1B
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535

Description
-

FE-28 User-defined parameter 28

Address: 0x2F1C
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535

Description
-

FE-29 User-defined parameter 29

Address: 0x2F1D
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535

Description
-

FE-30 User-defined parameter 30

Address: 0x2F1E
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535

Description
-

FE-31 User-defined parameter 31

Address: 0x2F1F
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

-

4.16 FP: Parameter Management

FP-00 User password

Address: 0x1F00 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

If a user password is set, the menu is accessible only when the correct password is entered.

FP-01 Parameter initialization

Address: 0x1F01 Effective mode: -

Min.: 0 Unit: -

Max.: 503 Data type: UInt16

Default: 0 Change: Changeable only at stop

Value Range:

0: No operation

1: Restore default settings (excluding motor parameters)

2: Clear records

4: Back up current user parameters

501: Restore user parameters from backup

503: Restore default settings (including motor parameters)

Description

1: Most of the parameters are restored to factory settings. However, motor parameters, including F0-22 (decimal places of frequency reference), fault records, F7-09 (accumulative running duration), F7-13 (accumulative power-on duration), F7-14 (accumulative power consumption), and F7-07 (IGBT heatsink temperature), are not restored.

2: Fault records, F7-09 (accumulative running duration), F7-13 (accumulative power-on duration), and F7-14 (accumulative power consumption) are cleared.

4: The current parameter settings are backed up.

501: Parameters backed up by setting FP-01 to 4 are restored.

503: All AC drive parameters, excluding manufacturer parameters in group FF, FP-00, and FP-01, are restored to default settings.

FP-02 Parameter display

Address: 0x1F02 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 63 Change: Changeable at any time

Value Range:

Bit00: Group U
0: Hidden
1: Displayed
Bit01: Group A
0: Hidden
1: Displayed
Bit02: Group B
0: Hidden
1: Displayed
Bit03: Group C
0: Hidden
1: Displayed
Bit04: Group H
0: Hidden
1: Displayed
Bit05: Group L
0: Hidden
1: Displayed

Description

This parameter determines whether to display the parameters of groups U, A, B, C, H, and L on the operating panel. Parameters in a group are displayed when the corresponding bit is 1 and not displayed when the corresponding bit is 0.

FP-03 Display of individualized parameters

Address:	0x1F03	Effective mode:	-
Min.:	0	Unit:	-
Max.:	111	Data type:	UInt16
Default:	111	Change:	Changeable at any time

Value Range:

Ones: User mode
0: Hidden
1: Displayed
Tens: Correction mode
0: Hidden
1: Displayed
Hundreds: Error menu
0: Hidden
1: Displayed

Description

This parameter determines whether to display the user-defined parameters, user-modified parameters, and error menus on the operating panel.

FP-04 Parameter modification

Address:	0x1F04	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Modification allowed

1: Modification prohibited

Description

This parameter defines whether the AC drive parameters can be modified.

FP-06 Monitoring password

Address:	0x1F06	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 65535

Description

If the monitoring password is not set, the monitoring permission is obtained automatically.

If the monitoring password is set, you need to enter the monitoring password in FP-09 to obtain the monitoring permission.

FP-07 Expert password

Address:	0x1F07	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 65535

Description

If the expert password is not set, the expert permission is obtained automatically.

If the expert password is set, you need to enter the expert password in FP-09 to obtain the expert permission.

FP-08 Factory password

Address:	0x1F08	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 65535

Description

If the factory password is not set, the factory permission is obtained automatically.

If the factory password is set, you need to enter the factory password in FP-09 to obtain the factory permission.

FP-09 Password input window

Address:	0x1F09	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 65535

Description

This parameter is used to input the monitoring password, expert password, and factory password. You can enter a password to obtain the corresponding permissions.

FP-14 **Parameter clearing**

Address:	0x1F0E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1000	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: No operation

1: Clear all record (faults and time) parameters

2: Clear fault information

500: Clear all backup user parameters

1000: Clear all backup motor parameters

Description

-

FP-15 **Parameter restoration**

Address:	0x1F0F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2204	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: No operation

500: Restore user backup

501: Restore user macro backup 1

502: Restore user macro backup 2

503: Restore user macro backup 3

504: Restore user macro backup 4

505: Restore user macro backup 5

506: Restore user macro backup 6

2011: Restore motor macro backup parameter 1 to motor 1

2012: Restore motor macro backup parameter 1 to motor 2

2013: Restore motor macro backup parameter 1 to motor 3

2014: Restore motor macro backup parameter 1 to motor 4

2021: Restore motor macro backup parameter 2 to motor 1

2022: Restore motor macro backup parameter 2 to motor 2

2023: Restore motor macro backup parameter 2 to motor 3

2024: Restore motor macro backup parameter 2 to motor 4

2031: Restore motor macro backup parameter 3 to motor 1

2032: Restore motor macro backup parameter 3 to motor 2

2033: Restore motor macro backup parameter 3 to motor 3

2034: Restore motor macro backup parameter 3 to motor 4

2041: Restore motor macro backup parameter 4 to motor 1

2042: Restore motor macro backup parameter 4 to motor 2

2043: Restore motor macro backup parameter 4 to motor 3

2044: Restore motor macro backup parameter 4 to motor 4

2051: Restore motor macro backup parameter 5 to motor 1

2052: Restore motor macro backup parameter 5 to motor 2

(To be continued)

(Continued)

2053: Restore motor macro backup parameter 5 to motor 3
2054: Restore motor macro backup parameter 5 to motor 4
2061: Restore motor macro backup parameter 6 to motor 1
2062: Restore motor macro backup parameter 6 to motor 2
2063: Restore motor macro backup parameter 6 to motor 3
2064: Restore motor macro backup parameter 6 to motor 4
2071: Restore motor macro backup parameter 7 to motor 1
2072: Restore motor macro backup parameter 7 to motor 2
2073: Restore motor macro backup parameter 7 to motor 3
2074: Restore motor macro backup parameter 7 to motor 4
2081: Restore motor macro backup parameter 8 to motor 1
2082: Restore motor macro backup parameter 8 to motor 2
2083: Restore motor macro backup parameter 8 to motor 3
2084: Restore motor macro backup parameter 8 to motor 4
2091: Restore motor macro backup parameter 9 to motor 1
2092: Restore motor macro backup parameter 9 to motor 2
2093: Restore motor macro backup parameter 9 to motor 3
2094: Restore motor macro backup parameter 9 to motor 4
2101: Restore motor macro backup parameter 10 to motor 1
2102: Restore motor macro backup parameter 10 to motor 2
2103: Restore motor macro backup parameter 10 to motor 3
2104: Restore motor macro backup parameter 10 to motor 4
2111: Restore motor macro backup parameter 11 to motor 1
2112: Restore motor macro backup parameter 11 to motor 2
2113: Restore motor macro backup parameter 11 to motor 3
2114: Restore motor macro backup parameter 11 to motor 4
2121: Restore motor macro backup parameter 12 to motor 1
2122: Restore motor macro backup parameter 12 to motor 2
2123: Restore motor macro backup parameter 12 to motor 3
2124: Restore motor macro backup parameter 12 to motor 4
2131: Restore motor macro backup parameter 13 to motor 1
2132: Restore motor macro backup parameter 13 to motor 2

(Continued)

2133: Restore motor macro backup parameter 13 to motor 3
2134: Restore motor macro backup parameter 13 to motor 4
2141: Restore motor macro backup parameter 14 to motor 1
2142: Restore motor macro backup parameter 14 to motor 2
2143: Restore motor macro backup parameter 14 to motor 3
2144: Restore motor macro backup parameter 14 to motor 4
2151: Restore motor macro backup parameter 15 to motor 1
2152: Restore motor macro backup parameter 15 to motor 2
2153: Restore motor macro backup parameter 15 to motor 3
2154: Restore motor macro backup parameter 15 to motor 4
2161: Restore motor macro backup parameter 16 to motor 1
2162: Restore motor macro backup parameter 16 to motor 2
2163: Restore motor macro backup parameter 16 to motor 3
2164: Restore motor macro backup parameter 16 to motor 4
2171: Restore motor macro backup parameter 17 to motor 1
2172: Restore motor macro backup parameter 17 to motor 2
2173: Restore motor macro backup parameter 17 to motor 3
2174: Restore motor macro backup parameter 17 to motor 4
2181: Restore motor macro backup parameter 18 to motor 1
2182: Restore motor macro backup parameter 18 to motor 2
2183: Restore motor macro backup parameter 18 to motor 3
2184: Restore motor macro backup parameter 18 to motor 4
2191: Restore motor macro backup parameter 19 to motor 1
2192: Restore motor macro backup parameter 19 to motor 2
2193: Restore motor macro backup parameter 19 to motor 3
2194: Restore motor macro backup parameter 19 to motor 4
2201: Restore motor macro backup parameter 20 to motor 1
2202: Restore motor macro backup parameter 20 to motor 2
2203: Restore motor macro backup parameter 20 to motor 3
2204: Restore motor macro backup parameter 20 to motor 4

Description

-

FP-16 **User backup**

Address:	0x1F10	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1204	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: No operation
400: Back up user parameters
401: Back up user macro parameters to address 1
402: Back up user macro parameters to address 2
403: Back up user macro parameters to address 3
404: Back up user macro parameters to address 4
405: Back up user macro parameters to address 5
406: Back up user macro parameters to address 6
1011: Back up parameters of motor 1 to address 1
1012: Back up parameters of motor 2 to address 1
1013: Back up parameters of motor 3 to address 1
1014: Back up parameters of motor 4 to address 1
1021: Back up parameters of motor 1 to address 2
1022: Back up parameters of motor 2 to address 2
1023: Back up parameters of motor 3 to address 2
1024: Back up parameters of motor 4 to address 2
1031: Back up parameters of motor 1 to address 3
1032: Back up parameters of motor 2 to address 3
1033: Back up parameters of motor 3 to address 3
1034: Back up parameters of motor 4 to address 3
1041: Back up parameters of motor 1 to address 4
1042: Back up parameters of motor 2 to address 4
1043: Back up parameters of motor 3 to address 4
1044: Back up parameters of motor 4 to address 4

(To be continued)

(Continued)

1051: Back up parameters of motor 1 to address 5
1052: Back up parameters of motor 2 to address 5
1053: Back up parameters of motor 3 to address 5
1054: Back up parameters of motor 4 to address 5
1061: Back up parameters of motor 1 to address 6
1062: Back up parameters of motor 2 to address 6
1063: Back up parameters of motor 3 to address 6
1064: Back up parameters of motor 4 to address 6
1071: Back up parameters of motor 1 to address 7
1072: Back up parameters of motor 2 to address 7
1073: Back up parameters of motor 3 to address 7
1074: Back up parameters of motor 4 to address 7
1081: Back up parameters of motor 1 to address 8
1082: Back up parameters of motor 2 to address 8
1083: Back up parameters of motor 3 to address 8
1084: Back up parameters of motor 4 to address 8
1091: Back up parameters of motor 1 to address 9
1092: Back up parameters of motor 2 to address 9
1093: Back up parameters of motor 3 to address 9
1094: Back up parameters of motor 4 to address 9
1101: Back up parameters of motor 1 to address 10
1102: Back up parameters of motor 2 to address 10
1103: Back up parameters of motor 3 to address 10
1104: Back up parameters of motor 4 to address 10
1111: Back up parameters of motor 1 to address 11
1112: Back up parameters of motor 2 to address 11
1113: Back up parameters of motor 3 to address 11
1114: Back up parameters of motor 4 to address 11

(Continued)

1121: Back up parameters of motor 1 to address 12
1122: Back up parameters of motor 2 to address 12
1123: Back up parameters of motor 3 to address 12
1124: Back up parameters of motor 4 to address 12
1131: Back up parameters of motor 1 to address 13
1132: Back up parameters of motor 2 to address 13
1133: Back up parameters of motor 3 to address 13
1134: Back up parameters of motor 4 to address 13
1141: Back up parameters of motor 1 to address 14
1142: Back up parameters of motor 2 to address 14
1143: Back up parameters of motor 3 to address 14
1144: Back up parameters of motor 4 to address 14
1151: Back up parameters of motor 1 to address 15
1152: Back up parameters of motor 2 to address 15
1153: Back up parameters of motor 3 to address 15
1154: Back up parameters of motor 4 to address 15
1161: Back up parameters of motor 1 to address 16
1162: Back up parameters of motor 2 to address 16
1163: Back up parameters of motor 3 to address 16
1164: Back up parameters of motor 4 to address 16
1171: Back up parameters of motor 1 to address 17
1172: Back up parameters of motor 2 to address 17
1173: Back up parameters of motor 3 to address 17
1174: Back up parameters of motor 4 to address 17
1181: Back up parameters of motor 1 to address 18
1182: Back up parameters of motor 2 to address 18
1183: Back up parameters of motor 3 to address 18
1184: Back up parameters of motor 4 to address 18
1191: Back up parameters of motor 1 to address 19
1192: Back up parameters of motor 2 to address 19
1193: Back up parameters of motor 3 to address 19
1194: Back up parameters of motor 4 to address 19
1201: Back up parameters of motor 1 to address 20
1202: Back up parameters of motor 2 to address 20
1203: Back up parameters of motor 3 to address 20
1204: Back up parameters of motor 4 to address 20

Description

-

4.17 A0: Torque Control Parameters

A0-00 **Speed/Torque control mode**

Address:	0xA000	Effective mode:	-
Min.:	0	Unit:	-

Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Speed control

1: Torque control

Description

This parameter specifies the control target: speed control or torque control.

A0-01 Torque reference source in torque control mode (torque upper limit source)

Address:	0xA001	Effective mode:	-
Min.:	0	Unit:	-
Max.:	7	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: A0-03

1: AI1

2: AI2

3: AI3

4: Pulse

5: Communication

6: MIN (AI1, AI2)

7: MAX (AI1, AI2)

Others: F connector

Description

This parameter defines the torque reference source. There are a total of seven torque reference sources.

A0-03 Torque reference in torque control mode

Address:	0xA003	Effective mode:	-
Min.:	–200	Unit:	%
Max.:	200.0	Data type:	Int16
Default:	150.0	Change:	Changeable at any time

Value Range:

–200% to +200.0%

Description

This parameter defines the torque reference in torque control mode. The torque reference is a relative value. The value 100.0% corresponds to the rated torque of the AC drive. The value range is –200.0% to +200.0%, indicating that the maximum torque is twice the rated torque.

When the torque reference is a positive value, the AC drive runs in the forward direction. When it is a negative value, the AC drive runs in the reverse direction.

A0-04 Torque reference filter time (upper limit)

Address:	0xA004	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	10000	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 ms to 10000 ms

Description

This parameter defines the torque reference filter time.

A0-05 **Maximum forward frequency in torque control**

Address:	0xA005	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00 Hz to F0-10

Description

This parameter defines the maximum running frequency of the AC drive in forward direction in torque control mode.

A0-06 **Maximum reverse frequency in torque control**

Address:	0xA006	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00 Hz to F0-10

Description

This parameter defines the maximum running frequency of the AC drive in reverse direction in torque control mode.

A0-07 **Torque rising filter time**

Address:	0xA007	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	650.00	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00s to 650.00s

Description

This parameter defines the torque reference ramp-up time (relative to the rated torque).

A0-08 **Torque falling filter time**

Address:	0xA008	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	650.00	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00s to 650.00s

Description

This parameter defines the torque reference ramp-down time (relative to the rated torque).

A0-10 **Torque mode**

Address:	0xA00A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: MD500 torque mode

1: Vanguard torque mode

Description

This parameter defines the torque mode (MD500 compatible mode or vanguard torque mode).

A0-11 Torque acceleration time gain

Address:	0xA00B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 100%

1: AI1

2: AI2

3: AI3

4: Pulse reference

5: Communication

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

This parameter defines the torque reference ramp-up time adjustment gain in vanguard torque mode.

A0-12 Torque deceleration time gain

Address:	0xA00C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 100%

1: AI1

2: AI2

3: AI3

4: Pulse reference

5: Communication

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

This parameter defines the torque reference ramp-down time adjustment gain in vanguard torque mode.

A0-13 Torque reference source

Address:	0xA00D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Digital setting

1: AI1

2: AI2

3: AI3

4: Pulse reference

5: Communication

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

This parameter defines the torque reference source in vanguard torque mode.

A0-14 Torque reference

Address:	0xA00E	Effective mode:	-
Min.:	–400	Unit:	%
Max.:	400.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:

–400% to +400.0%

Description

This parameter defines the torque reference in vanguard torque mode.

A0-15 Speed limit source in torque control mode

Address:	0xA00F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Digital setting

1: Speed reference channel

Description

This parameter defines the speed limit source in vanguard torque mode.

A0-16 Speed limit in torque control mode

Address:	0xA010	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:

–100% to +100.0%

Description

This parameter defines the speed limit in torque control mode.

A0-17 Speed limit offset mode

Address:	0xA011	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Bidirectional offset

1: Unidirectional offset

2: Compatible solution

Description

This parameter defines the speed limit offset mode in vanguard torque mode.

A0-18 Speed limit offset source

Address:	0xA012	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Digital setting

1: AI1

2: AI2

3: AI3

4: Pulse reference

5: Communication

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

This parameter defines the speed limit offset source in vanguard torque mode.

A0-19 Speed limit offset

Address:	0xA013	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	300.0	Data type:	UInt16
Default:	5.0	Change:	Changeable at any time

Value Range:

0.0% to 300.0%

Description

This parameter defines the speed limit offset in vanguard torque mode.

A0-20 Source of supplementary torque reference 1

Address:	0xA014	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Digital setting

1: AI1

2: AI2

3: AI3

4: Pulse reference

5: Communication

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

This parameter defines the source of supplementary torque 1 in vanguard torque mode.

A0-21 Supplementary torque reference 1

Address:	0xA015	Effective mode:	-
Min.:	–400	Unit:	%
Max.:	400.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:

–400% to +400.0%

Description

This parameter defines supplementary torque reference 1 in vanguard torque mode.

A0-22 Source of supplementary torque reference 2

Address:	0xA016	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: Pulse reference

5: Communication

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

This parameter defines the source of supplementary torque 2 in vanguard torque mode.

A0-23 Supplementary torque reference 2 input enable

Address:	0xA017	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: Disabled
1: Enabled
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

This parameter defines whether to enable input of supplementary torque 2 in vanguard torque mode. When it is disabled, supplementary torque 2 does not take effect.

A0-24 Torque filter time

Address:	0xA018	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	10000	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 ms to 10000 ms

Description

This parameter defines the torque reference filter time in vanguard torque mode.

A0-25 Torque acceleration time

Address:	0xA019	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	60.000	Data type:	UInt16
Default:	0.000	Change:	Changeable at any time

Value Range:

0.000s to 60.000s

Description

This parameter defines the torque reference ramp-up time (relative to the rated torque) in vanguard torque mode.

A0-26 Torque deceleration time

Address:	0xA01A	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	60.000	Data type:	UInt16
Default:	0.000	Change:	Changeable at any time

Value Range:
0.000s to 60.000s
Description
This parameter defines the torque reference ramp-down time (relative to the rated torque) in vanguard torque mode.

A0-27 **Torque reference gain**

Address:	0xA01B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: 100%
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector
Description
This parameter defines the source of the torque reference gain coefficient in vanguard torque mode.

4.18 A1: Virtual I/O Parameters

A1-00 **VDI1 function**

Address:	0xA100	Effective mode:	-
Min.:	0	Unit:	-
Max.:	80	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
Same as F4-00
Description
Same as F4-00

A1-01 **VDI2 function**

Address:	0xA101	Effective mode:	-
Min.:	0	Unit:	-
Max.:	80	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
Same as F4-00
Description
Same as F4-00

A1-02 **VDI3 function**

Address:	0xA102	Effective mode:	-

Min.:	0	Unit:	-
Max.:	80	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
Same as F4-00
Description
Same as F4-00

A1-03 VDI4 function

Address:	0xA103	Effective mode:	-
Min.:	0	Unit:	-
Max.:	80	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
Same as F4-00
Description
Same as F4-00

A1-04 VDI5 function

Address:	0xA104	Effective mode:	-
Min.:	0	Unit:	-
Max.:	80	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
Same as F4-00
Description
Same as F4-00

A1-05 VDI active state source

Address:	0xA105	Effective mode:	-
Min.:	0	Unit:	-
Max.:	55555	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

Tens: VDI1 active state source
0: VDO1
1: A1-06
2: DI1
3: Communication setpoint (bit10 of F4-50)
4: AI1
5: Reserved
Tens: VDI2 active state source
0: VDO2
1: A1-06
2: DI2
3: Communication setpoint (bit11 of F4-50)
4: AI2
5: Reserved
Hundreds: VDI3 active state source
0: VDO3
1: A1-06
2: DI3
3: Communication setpoint (bit12 of F4-50)
4: AI3
5: Reserved
Thousands: VDI4 active state source
0: VDO4
1: A1-06
2: DI4
3: Communication setpoint (bit13 of F4-50)
4–5: Reserved
Ten thousands: VDI5 active state source
0: VDO5
1: A1-06
2: DI5
3: Communication setpoint (bit14 of F4-50)
4–5: Reserved

Description

-

A1-06 VDI state

Address:	0xA106	Effective mode:	-
Min.:	0	Unit:	-
Max.:	11111	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Ones: VDI1
0: Inactive
1: Active
Tens: VDI2
0: Inactive
1: Active
Hundreds: VDI3
0: Inactive
1: Active
Thousands: VDI4
0: Inactive
1: Active
Ten thousands: VDI5
0: Inactive
1: Active
Description
-

A1-07 **AI1 (used as DI) function**

Address:	0xA107	Effective mode:	-
Min.:	0	Unit:	-
Max.:	80	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
Same as F4-00
Description
Same as F4-00

A1-08 **AI2 (used as DI) function**

Address:	0xA108	Effective mode:	-
Min.:	0	Unit:	-
Max.:	80	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
Same as F4-00
Description
Same as F4-00

A1-09 **AI3 (used as DI) function**

Address:	0xA109	Effective mode:	-
Min.:	0	Unit:	-
Max.:	80	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
Same as F4-00
Description
Same as F4-00

A1-10 **AI (used as DI) active mode**

Address:	0xA10A	Effective mode:	-

Min.: 0
Max.: 111
Default: 0
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:

Ones: AI1

0: Active low

1: Active high

Tens: AI2

0: Active low

1: Active high

Hundreds: AI3

0: Active low

1: Active high

Description

-

A1-11 VDO1 function

Address: 0xA10B
Min.: 0
Max.: 43
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:

Same as F5-01

Description

Same as F5-01

A1-12 VDO2 function

Address: 0xA10C
Min.: 0
Max.: 43
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:

Same as F5-01

Description

Same as F5-01

A1-13 VDO3 function

Address: 0xA10D
Min.: 0
Max.: 43
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:

Same as F5-01

Description

Same as F5-01

A1-14 VDO4 function

Address: 0xA10E
Min.: 0
Max.: 43
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as F5-01
Description
Same as F5-01

A1-15 VDO5 function

Address:	0xA10F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	43	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as F5-01
Description
Same as F5-01

A1-16 VDO1 output delay (invalid)

Address:	0xA110	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 3600.0s
Description
-

A1-17 VDO2 output delay (invalid)

Address:	0xA111	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 3600.0s
Description
-

A1-18 VDO3 output delay (invalid)

Address:	0xA112	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 3600.0s
Description
-

A1-19 VDO4 output delay (invalid)

Address:	0xA113	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 3600.0s

Description
-

A1-20 VDO5 output delay (invalid)

Address:	0xA114	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 3600.0s
Description
-

A1-21 VDO active mode

Address:	0xA115	Effective mode:	-
Min.:	0	Unit:	-
Max.:	11111	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Ones: VDO1
0: Positive logic active
1: Negative logic active
Tens: VDO2
0: Positive logic active
1: Negative logic active
Hundreds: VDO3
0: Positive logic active
1: Negative logic active
Thousands: VDO4
0: Positive logic active
1: Negative logic active
Ten thousands: VDO5
0: Positive logic active
1: Negative logic active
Description
-

A1-22 VDO1 output switch-on delay

Address:	0xA116	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 3600.0s
Description
-

A1-23 VDO2 output switch-on delay

Address:	0xA117	Effective mode:	-
Min.:	0.0	Unit:	s

Max.: 3600.0 Data type: UInt16
Default: 0.0 Change: Changeable at any time
Value Range:
0.0s to 3600.0s
Description
-

A1-24 VDO3 output switch-on delay
Address: 0xA118 Effective mode: -
Min.: 0.0 Unit: s
Max.: 3600.0 Data type: UInt16
Default: 0.0 Change: Changeable at any time
Value Range:
0.0s to 3600.0s
Description
-

A1-25 VDO4 output switch-on delay
Address: 0xA119 Effective mode: -
Min.: 0.0 Unit: s
Max.: 3600.0 Data type: UInt16
Default: 0.0 Change: Changeable at any time
Value Range:
0.0s to 3600.0s
Description
-

A1-26 VDO5 output switch-on delay
Address: 0xA11A Effective mode: -
Min.: 0.0 Unit: s
Max.: 3600.0 Data type: UInt16
Default: 0.0 Change: Changeable at any time
Value Range:
0.0s to 3600.0s
Description
-

A1-27 VDO1 output switch-off delay
Address: 0xA11B Effective mode: -
Min.: 0.0 Unit: s
Max.: 3600.0 Data type: UInt16
Default: 0.0 Change: Changeable at any time
Value Range:
0.0s to 3600.0s
Description
-

A1-28 VDO2 output switch-off delay
Address: 0xA11C Effective mode: -
Min.: 0.0 Unit: s
Max.: 3600.0 Data type: UInt16
Default: 0.0 Change: Changeable at any time

Value Range:
0.0s to 3600.0s
Description
-

A1-29 VDO3 output switch-off delay

Address:	0xA11D	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 3600.0s
Description
-

A1-30 VDO4 output switch-off delay

Address:	0xA11E	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 3600.0s
Description
-

A1-31 VDO5 output switch-off delay

Address:	0xA11F	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	3600.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 3600.0s
Description
-

A1-32 VDO6 function

Address:	0xA120	Effective mode:	-
Min.:	0	Unit:	-
Max.:	43	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as F5-01
Description
Same as F5-01

A1-33 VDO7 function

Address:	0xA121	Effective mode:	-
Min.:	0	Unit:	-
Max.:	43	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as F5-01

Description
Same as F5-01

A1-34 VDO8 function

Address:	0xA122	Effective mode:	-
Min.:	0	Unit:	-
Max.:	43	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as F5-01
Description
Same as F5-01

A1-35 VDO9 function

Address:	0xA123	Effective mode:	-
Min.:	0	Unit:	-
Max.:	43	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as F5-01
Description
Same as F5-01

A1-36 VDO10 function

Address:	0xA124	Effective mode:	-
Min.:	0	Unit:	-
Max.:	43	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as F5-01
Description
Same as F5-01

A1-37 VDO11 function

Address:	0xA125	Effective mode:	-
Min.:	0	Unit:	-
Max.:	43	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as F5-01
Description
Same as F5-01

A1-38 VDO6–VDO10 active mode

Address:	0xA126	Effective mode:	-
Min.:	0	Unit:	-
Max.:	11111	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Ones: VDO6
0: Positive logic active
1: Negative logic active
Tens: VDO7
0: Positive logic active
1: Negative logic active
Hundreds: VDO8
0: Positive logic active
1: Negative logic active
Thousands: VDO9
0: Positive logic active
1: Negative logic active
Ten thousands: VDO10
0: Positive logic active
1: Negative logic active
Description
-

A1-39 **VDO11 active mode**

Address:	0xA127	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Positive logic active
1: Negative logic active
Description
-

A1-40 **VDI6 function**

Address:	0xA128	Effective mode:	-
Min.:	0	Unit:	-
Max.:	79	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
Same as A1-00
Description
Same as A1-00

A1-41 **VDI6 hardware source**

Address:	0xA129	Effective mode:	-
Min.:	0	Unit:	-
Max.:	5	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

Ones: VDI6

0: VDO6

1: A1-42

2: DI6

3: Communication setpoint (bit15 of F4-50)

4: Reserved

5: Reserved

Description

-

A1-42 VDI6 state

Address:	0xA12A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Ones: VDI6

0: Inactive

1: Active

Description

-

A1-43 VDI1–VDI5 active mode

Address:	0xA12B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	11111	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

Ones: VDI1

0: Active low

1: Active high

Tens: VDI2

0: Active low

1: Active high

Hundreds: VDI3

0: Active low

1: Active high

Thousands: VDI4

0: Active low

1: Active high

Ten thousands: VDI5

0: Active low

1: Active high

Description

-

A1-44 VDI6 active mode

Address:	0xA12C	Effective mode:	-
Min.:	0	Unit:	-

Max.: 1
Default: 0
Data type: UInt16
Change: Changeable only at stop

Value Range:

Ones: VDI6

0: Active low

1: Active high

Description

-

A1-50 DIO edge count reset

Address: 0xA132
Min.: 0
Max.: 5
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:

0: Not reset

1: Counting module 1

2: Counting module 2

3: Counting module 3

4: Counting module 4

5: All counting modules

Description

-

A1-51 DIO edge counting channel selection 1

Address: 0xA133
Min.: 0
Max.: 32
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:

0: None
1: DI1
2: DI2
3: DI3
4: DI4
5: DI5
6: DI6
7: DI7
8: DI8
9: DI9
10: DI10
11: VDI1
12: VDI2
13: VDI3
14: VDI4
15: VDI5
16: VDI6
17: Relay 1 (DO3)
18: FMR
19: DO1
20: Relay 2 (DO4)
21: DO2
22: VDO1
23: VDO2
24: VDO3
25: VDO4
26: VDO5
27: VDO6
28: VDO7
29: VDO8
30: VDO9
31: VDO10
32: VDO11

Description

-

A1-52 DIO edge counting channel selection 2

Address:	0xA134	Effective mode:	-
Min.:	0	Unit:	-
Max.:	32	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as A1-51

Description

-

A1-53 **DIO edge counting channel selection 3**

Address:	0xA135	Effective mode:	-
Min.:	0	Unit:	-
Max.:	32	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as A1-51
Description
-

A1-54 **DIO edge counting channel selection 4**

Address:	0xA136	Effective mode:	-
Min.:	0	Unit:	-
Max.:	32	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as A1-51
Description
-

A1-55 **DIO edge counting comparison value 1**

Address:	0xA137	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

A1-56 **DIO edge counting comparison value 2**

Address:	0xA138	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

A1-57 **DIO edge counting comparison value 3**

Address:	0xA139	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

A1-58 **DIO edge counting comparison value 4**

Address:	0xA13A	Effective mode:	-

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535

Description
-

A1-59 DIO edge counting module count value 1

Address: 0xA13B
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

A1-60 DIO edge counting module count value 2

Address: 0xA13C
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

A1-61 DIO edge counting module count value 3

Address: 0xA13D
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

A1-62 DIO edge counting module count value 4

Address: 0xA13E
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

4.19 A2: Motor 2 Nameplate and Learning Parameters 1

A2-00 **Motor type**

Address:	0xA200	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Common asynchronous motor

1: Variable frequency asynchronous motor

2: Permanent magnet synchronous motor

Description

-

A2-01 **Rated motor power**

Address:	0xA201	Effective mode:	-
Min.:	0.1	Unit:	kW
Max.:	1000.0	Data type:	UInt16
Default:	3.7	Change:	Changeable only at stop

Value Range:

0.1 kW to 1000.0 kW

Description

-

A2-02 **Rated motor voltage**

Address:	0xA202	Effective mode:	-
Min.:	1	Unit:	V
Max.:	2000	Data type:	UInt16
Default:	380	Change:	Changeable only at stop

Value Range:

1 V to 2000 V

Description

-

A2-03 **Rated motor current**

Address:	0xA203	Effective mode:	-
Min.:	0.01	Unit:	A
Max.:	655.35	Data type:	UInt16
Default:	9.00	Change:	Changeable only at stop

Value Range:

0.01 A to 655.35 A

Description

-

A2-04 **Rated motor frequency**

Address:	0xA204	Effective mode:	-
Min.:	0.01	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	50.00	Change:	Changeable only at stop

Value Range:

0.01 Hz to F0-10

Description
-

A2-05 **Rated motor speed**

Address:	0xA205	Effective mode:	-
Min.:	1	Unit:	RPM
Max.:	65535	Data type:	UInt16
Default:	1460	Change:	Changeable only at stop

Value Range:
1 RPM to 65535 RPM
Description
-

A2-06 **Asynchronous motor stator resistance**

Address:	0xA206	Effective mode:	-
Min.:	0.001	Unit:	Ω
Max.:	65.535	Data type:	UInt16
Default:	1.204	Change:	Changeable only at stop

Value Range:
0.001 Ω to 65.535 Ω
Description
-

A2-07 **Asynchronous motor rotor resistance**

Address:	0xA207	Effective mode:	-
Min.:	0.001	Unit:	Ω
Max.:	65.535	Data type:	UInt16
Default:	0.908	Change:	Changeable only at stop

Value Range:
0.001 Ω to 65.535 Ω
Description
-

A2-08 **Asynchronous motor leakage inductance**

Address:	0xA208	Effective mode:	-
Min.:	0.01	Unit:	mH
Max.:	655.35	Data type:	UInt16
Default:	5.28	Change:	Changeable only at stop

Value Range:
0.01 mH to 655.35 mH
Description
-

A2-09 **Asynchronous motor mutual inductance**

Address:	0xA209	Effective mode:	-
Min.:	0.1	Unit:	mH
Max.:	6553.5	Data type:	UInt16
Default:	156.8	Change:	Changeable only at stop

Value Range:
0.1 mH to 6553.5 mH
Description
-

A2-10 **Asynchronous motor no-load current**

Address:	0xA20A	Effective mode:	-
Min.:	0.01	Unit:	A
Max.:	A2-03	Data type:	UInt16
Default:	4.20	Change:	Changeable only at stop

Value Range:
0.01 A to A2-03
Description
-

A2-16 **Synchronous motor stator resistance**

Address:	0xA210	Effective mode:	-
Min.:	0.001	Unit:	Ω
Max.:	65.535	Data type:	UInt16
Default:	1.204	Change:	Changeable only at stop

Value Range:
0.001 Ω to 65.535 Ω
Description
-

A2-17 **Synchronous motor D axis inductance**

Address:	0xA211	Effective mode:	-
Min.:	0.01	Unit:	mH
Max.:	655.35	Data type:	UInt16
Default:	5.28	Change:	Changeable only at stop

Value Range:
0.01 mH to 655.35 mH
Description
-

A2-18 **Synchronous motor Q axis inductance**

Address:	0xA212	Effective mode:	-
Min.:	0.01	Unit:	mH
Max.:	655.35	Data type:	UInt16
Default:	5.28	Change:	Changeable only at stop

Value Range:
0.01 mH to 655.35 mH
Description
-

A2-20 **Synchronous motor back EMF coefficient**

Address:	0xA214	Effective mode:	-
Min.:	0.0	Unit:	V
Max.:	6553.5	Data type:	UInt16
Default:	300.0	Change:	Changeable only at stop

Value Range:
0.0 V to 6553.5 V
Description
-

A2-27 **Encoder PPR**

Address:	0xA21B	Effective mode:	-

Min.: 1
Max.: 65535
Default: 1024
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
1 to 65535
Description
-

A2-28 Encoder type

Address: 0xA21C
Min.: 0
Max.: 3
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0: ABZ incremental encoder
1: 23-bit encoder
2: Resolver
3: External input
Description
-

A2-29 Speed feedback PG card

Address: 0xA21D
Min.: 0
Max.: 1
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0: Local PG card
1: Extension PG card
Description
-

A2-30 A/B phase sequence of encoder

Address: 0xA21E
Min.: 0
Max.: 1
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0: Forward
1: Reverse
Description
-

A2-31 Encoder installation angle

Address: 0xA21F
Min.: 0.0
Max.: 359.9
Default: 0.0
Effective mode: -
Unit: °
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.0° to 359.9°

Description
-

A2-34 Number of resolver pole pairs

Address:	0xA222	Effective mode:	-
Min.:	1	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
1 to 65535
Description
-

A2-36 Speed feedback PG wire breakage detection time

Address:	0xA224	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	10.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0s to 10.0s
Description
-

A2-37 Auto-tuning

Address:	0xA225	Effective mode:	-
Min.:	0	Unit:	-
Max.:	13	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: No operation
1: Static auto-tuning on partial parameters of asynchronous motor
2: Dynamic auto-tuning on asynchronous motor
3: Static auto-tuning on all parameters of asynchronous motor
4: Inertia auto-tuning
5: Deadzone auto-tuning
11: With-load auto-tuning on synchronous motor (excluding back EMF)
12: No-load dynamic auto-tuning on synchronous motor
13: Static auto-tuning on all parameters of synchronous motor (excluding zero point angle)
Description
-

A2-38 Speed loop proportional gain 1

Address:	0xA226	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

A2-39 **Speed loop integral time 1**

Address:	0xA227	Effective mode:	-
Min.:	0.01	Unit:	s
Max.:	10.00	Data type:	UInt16
Default:	0.50	Change:	Changeable at any time

Value Range:
0.01s to 10.00s
Description
-

A2-40 **Switchover frequency 1**

Address:	0xA228	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	A2-43	Data type:	UInt16
Default:	5.00	Change:	Changeable at any time

Value Range:
0.00 Hz to A2-43
Description
-

A2-41 **Speed loop proportional gain 2**

Address:	0xA229	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	20	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

A2-42 **Speed loop integral time 2**

Address:	0xA22A	Effective mode:	-
Min.:	0.01	Unit:	s
Max.:	10.00	Data type:	UInt16
Default:	1.00	Change:	Changeable at any time

Value Range:
0.01s to 10.00s
Description
-

A2-43 **Switchover frequency 2**

Address:	0xA22B	Effective mode:	-
Min.:	A2-40	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	10.00	Change:	Changeable at any time

Value Range:
A2-40 to F0-10
Description
-

A2-44 **Vector control slip gain**

Address:	0xA22C	Effective mode:	-

Min.:	50	Unit:	%
Max.:	200	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
50% to 200%
Description
-

A2-45 Speed feedback filter time in SVC mode

Address:	0xA22D	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	0.100	Data type:	UInt16
Default:	0.015	Change:	Changeable at any time

Value Range:
0.000s to 0.100s
Description
-

A2-47 Torque upper limit source in speed control mode (motoring)

Address:	0xA22F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	7	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Digital setting (F2-10)
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: MIN (AI1, AI2)
7: MAX (AI1, AI2)
Others: F connector
Description
-

A2-48 Torque upper limit in speed control mode

Address:	0xA230	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	150.0	Change:	Changeable at any time

Value Range:
0.0% to 200.0%
Description
-

A2-49 Torque upper limit source in speed control mode (generating)

Address:	0xA231	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Digital setting (F2-10)
1: AI1
2: AI2
3: AI3
4: Pulse reference (DI5)
5: Communication
6: MIN (AI1, AI2)
7: MAX (AI1, AI2)
8: Digital setting (F2-12)
Others: F connector
Description
-

A2-50 Torque upper limit in speed control mode (generating)

Address:	0xA232	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	150.0	Change:	Changeable at any time

Value Range:
0.0% to 200.0%
Description
-

A2-56 Field weakening mode

Address:	0xA238	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0: No field weakening
1: Auto adjustment
2: Calculation+Auto adjustment
Description
0: No field weakening
Without field weakening control, the maximum motor speed is related to the bus voltage of the AC drive. The output current is smaller under the same load, but the running frequency cannot reach the frequency reference. Do not select this function if a higher speed is required.
1: Auto adjustment
This field weakening mode is simple and reliable. In scenarios requiring quick field weakening, the field weakening coefficient (F2-19) can be increased as appropriate. However, if the coefficient is too large,
the current may be unstable.
2: Calculation+Auto adjustment
In this mode, the field weakening current is adjusted quickly. This mode can be selected in scenarios where the auto adjustment mode cannot
meet requirements.

A2-57 **Field weakening gain**

Address:	0xA239	Effective mode:	-
Min.:	1	Unit:	-
Max.:	50	Data type:	UInt16
Default:	5	Change:	Changeable at any time

Value Range:

1 to 50

Description

Increasing the setpoint can improve dynamic response. However, an excessively large setpoint may also cause current oscillation.

A2-60 **Generating power limiting**

Address:	0xA23C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: Enabled in the whole process

2: Enabled at constant speed

3: Enabled during deceleration

Description

-

A2-61 **Generating power upper limit**

Address:	0xA23D	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	20.0	Change:	Changeable at any time

Value Range:

0.0% to 200.0%

Description

-

A2-62 **Motor 2 control mode**

Address:	0xA23E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	2	Change:	Changeable only at stop

Value Range:

0: SVC

1: FVC

2: V/f

Description

-

A2-64 **Torque boost**

Address:	0xA240	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	30.0	Data type:	UInt16
Default:	3.0	Change:	Changeable at any time

Value Range:
0.0% to 30.0%
Description
-

A2-66 V/f oscillation suppression gain

Address:	0xA242	Effective mode:	-
Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	40	Change:	Changeable at any time

Value Range:
0 to 100
Description
-

A2-67 Initial position angle detection current of synchronous motor

Address:	0xA243	Effective mode:	-
Min.:	50	Unit:	-
Max.:	180	Data type:	UInt16
Default:	80	Change:	Changeable only at stop

Value Range:
50 to 180
Description
A smaller current indicates lower noise during detection. However, an excessively small current may lead to position detection inaccuracy. You are advised not to modify this parameter in FVC mode.

A2-68 Initial position angle detection of synchronous motor

Address:	0xA244	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Detected upon running
1: Not detected
2: Detected upon initial running after power-on
Description
The initial position angle detection can prevent reverse rotation at startup, but it causes certain noise. For scenarios where reverse rotation is not allowed at startup and the rotor position of the motor will change after stop, F2-25 must be set to 0.
It can be set to 1 or 2 in other scenarios.

A2-70 Salient pole rate adjustment gain of synchronous motor

Address:	0xA246	Effective mode:	-
Min.:	0.20	Unit:	-
Max.:	3.00	Data type:	UInt16
Default:	1.00	Change:	Changeable at any time

Value Range:
0.20 to 3.00
Description

If F2-28 is set to 1, you can adjust F2-27 when the output current does not decrease or even increase under the same load. When the load remains unchanged, adjust F2-27 until the output current is the smallest.

A2-71 Maximum torque-to-current ratio control of synchronous motor

Address:	0xA247	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: Disabled

1: Enabled

Description

When this function is enabled for the salient pole motor, the current will become smaller under the same load.

A2-75 Z signal correction

Address:	0xA24B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: Disabled

1: Enabled

Description

-

A2-80 Low speed carrier frequency

Address:	0xA250	Effective mode:	-
Min.:	0.8	Unit:	kHz
Max.:	F0-15	Data type:	UInt16
Default:	2.0	Change:	Changeable at any time

Value Range:

0.8 kHz to F0-15

Description

-

A2-86 Position lock

Address:	0xA256	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 1

Description

-

A2-87 Switchover frequency

Address:	0xA257	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	A2-40	Data type:	UInt16
Default:	0.30	Change:	Changeable at any time

Value Range:
0.00 Hz to A2-40
Description
-

A2-88 Position lock speed loop proportional gain

Address:	0xA258	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

A2-89 Position lock speed loop integral time

Address:	0xA259	Effective mode:	-
Min.:	0.01	Unit:	s
Max.:	10.00	Data type:	UInt16
Default:	0.50	Change:	Changeable at any time

Value Range:
0.01s to 10.00s
Description
-

A2-92 Auto-tuning free mode

Address:	0xA25C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Auto-tuning upon initial running after power-on
2: Auto-tuning upon running
Description
-

A2-94 Initial position compensation angle

Address:	0xA25E	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	359.9	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0 to 359.9
Description
-

4.20 A3: Motor 2 V/f Control Parameters

A3-00 **V/f curve**

Address: 0xA300
Min.: 0
Max.: 11
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:

0: Straight-line V/f curve

1: Multi-point V/f curve

2: Reserved

3: Reserved

4: Reserved

5: Reserved

6: Reserved

7: Reserved

8: Reserved

9: Reserved

10: V/f complete separation mode

11: V/f half separation mode

Description

-

A3-01 **Torque boost**

Address: 0xA301
Min.: 0.0
Max.: 30.0
Default: 3.0
Effective mode: -
Unit: %
Data type: UInt16
Change: Changeable at any time

Value Range:

0.0% to 30.0%

Description

-

A3-02 **Cut-off frequency of torque boost**

Address: 0xA302
Min.: 0.00
Max.: F0-10
Default: 50.00
Effective mode: -
Unit: Hz
Data type: UInt16
Change: Changeable only at stop

Value Range:

0.00 Hz to F0-10

Description

-

A3-03 **Multi-point V/f frequency 1**

Address: 0xA303
Min.: 0.00
Max.: A3-05
Default: 0.00
Effective mode: -
Unit: Hz
Data type: UInt16
Change: Changeable only at stop

Value Range:

0.00 Hz to A3-05

Description
-

A3-04 **Multi-point V/f voltage 1**

Address:	0xA304	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0% to +100.0%
Description
-

A3-05 **Multi-point V/f frequency 2**

Address:	0xA305	Effective mode:	-
Min.:	A3-03	Unit:	Hz
Max.:	A3-07	Data type:	UInt16
Default:	0.00	Change:	Changeable only at stop

Value Range:
A3-03 to A3-07
Description
-

A3-06 **Multi-point V/f voltage 2**

Address:	0xA306	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0% to +100.0%
Description
-

A3-07 **Multi-point V/f frequency 3**

Address:	0xA307	Effective mode:	-
Min.:	A3-05	Unit:	Hz
Max.:	A2-04	Data type:	UInt16
Default:	0.00	Change:	Changeable only at stop

Value Range:
A3-05 to A2-04
Description
-

A3-08 **Multi-point V/f voltage 3**

Address:	0xA308	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0% to +100.0%
Description
-

A3-09 **V/f slip compensation gain**

Address:	0xA309	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	200.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0 to 200.0
Description
-

A3-10 **V/f overexcitation gain**

Address:	0xA30A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	64	Change:	Changeable at any time

Value Range:
0 to 200
Description
-

A3-11 **V/f oscillation suppression gain**

Address:	0xA30B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	40	Change:	Changeable at any time

Value Range:
0 to 100
Description
-

A3-12 **V/f oscillation suppression**

Address:	0xA30C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
Description
-

A3-13 **Voltage source for V/f separation**

Address:	0xA30D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Digital setting (A3-14)

1: AI1

2: AI2

3: AI3

4: Pulse reference (DI5)

5: Multi-reference

6: Simple PLC

7: PID

8: Communication

Others: F connector

Description

This parameter defines the source of the target voltage in V/f separation mode.

0: Digital setting (F3-14)

The V/f separation voltage is set by F3-14 (V/f separation voltage).

1: AI1

The V/f separation voltage is input with current or voltage signals through the AI1 terminal. The frequency is calculated according to the preset AI curve.

2: AI2

The V/f separation voltage is input with current or voltage signals through the AI2 terminal. The frequency is calculated according to the preset AI curve.

3: AI3

The V/f separation voltage is input with current or voltage signals through the AI3 terminal. The frequency is calculated according to the preset AI curve. The AC drive has two AI terminals by default, and the AI3 terminal needs to be provided through the I/O expansion card.

4: Pulse reference (DI5)

The V/f separation voltage is set through DI5. The frequency is calculated based on the curve reflecting the relationship between the pulse frequency and running frequency.

5: Multi-reference

When multi-reference is used as the source of the V/f separation voltage, different combinations of DI terminal states correspond to different reference values. The four multi-reference terminals can provide 16 state combinations, corresponding to 16 reference values (percentage x maximum frequency) of parameters in group FC.

6: Simple PLC

The V/f separation voltage is set by simple PLC. For details, see the function description of simple PLC.

7: PID

The V/f separation voltage is set by PID. For details, see the PID function description.

8: Communication

The main frequency is set through communication. The running frequency is input through remote communication. The AC drive must be equipped with a communication card to implement communication with the host controller. This mode applies to remote control or centralized control of multiple equipment.

Others: F connector

A function code is set for a floating-point connector, and the value of the connector is read as the motoring torque upper limit in speed control mode. This mode is used for expansion besides the common sources.

A3-14 V/f separation voltage

Address:	0xA30E	Effective mode:	-
Min.:	0	Unit:	V
Max.:	A2-02	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 V to A2-02
Description
This parameter defines the V/f separation voltage.

A3-15 Voltage rise time of V/f separation

Address:	0xA30F	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	1000.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 1000.0s
Description
This parameter defines the time required for the output voltage to rise from 0 to the rated motor voltage.

A3-16 Voltage fall time of V/f separation

Address:	0xA310	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	1000.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 1000.0s
Description
This parameter defines the time required for the output voltage to fall from the rated motor voltage to 0.

A3-17 Stop mode for V/f separation

Address:	0xA311	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Frequency and voltage decline to 0 independently
1: Frequency declines to 0 after voltage declines to 0
2: Coast to stop (new)
Description
0: The frequency and voltage decrease to 0 independently.
1: The frequency decreases to 0 according to the deceleration time after the voltage decreases to 0 according to the deceleration time.
2: The AC drive coasts to stop without following the stop deceleration curve.

A3-18 Overcurrent stall suppression action current

Address:	0xA312	Effective mode:	-
Min.:	50	Unit:	%
Max.:	200	Data type:	UInt16

Default: 150 Change: Changeable only at stop

Value Range:

50% to 200%

Description

-

A3-19 Overcurrent stall suppression

Address: 0xA313 Effective mode: -

Min.: 0 Unit: -

Max.: 1 Data type: UInt16

Default: 1 Change: Changeable only at stop

Value Range:

0: Disabled

1: Enabled

Description

-

A3-20 Overcurrent stall suppression gain

Address: 0xA314 Effective mode: -

Min.: 1 Unit: -

Max.: 100 Data type: UInt16

Default: 20 Change: Changeable at any time

Value Range:

1 to 100

Description

-

A3-21 Compensation coefficient of speed multiplying overcurrent stall suppression action current

Address: 0xA315 Effective mode: -

Min.: 50 Unit: %

Max.: 200 Data type: UInt16

Default: 100 Change: Changeable only at stop

Value Range:

50% to 200%

Description

-

A3-22 Overvoltage stall suppression action voltage

Address: 0xA316 Effective mode: -

Min.: 330.0 Unit: V

Max.: 800.0 Data type: UInt16

Default: 770.0 Change: Changeable at any time

Value Range:

330.0 V to 800.0 V

Description

-

A3-23 Overvoltage stall suppression

Address: 0xA317 Effective mode: -

Min.: 0 Unit: -

Max.: 1 Data type: UInt16

Default: 1 Change: Changeable only at stop

Value Range:
0: Disabled
1: Enabled
Description
-

A3-24 Overvoltage stall suppression frequency gain

Address:	0xA318	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

A3-25 Overvoltage stall suppression voltage gain

Address:	0xA319	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

A3-26 Frequency rise threshold for overvoltage stall suppression

Address:	0xA31A	Effective mode:	-
Min.:	0	Unit:	Hz
Max.:	50	Data type:	UInt16
Default:	5	Change:	Changeable only at stop

Value Range:
0 Hz to 50 Hz
Description
-

A3-27 Slip compensation filter time

Address:	0xA31B	Effective mode:	-
Min.:	0.1	Unit:	s
Max.:	10.0	Data type:	UInt16
Default:	0.5	Change:	Changeable only at stop

Value Range:
0.1s to 10.0s
Description
-

A3-28 Multi-point curve source

Address:	0xA31C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: 3-point curve

1: Multi-point curve module A

2: Multi-point curve module B

Description

0: 3-point curve

The 3-point curve is used by default, which is set in F3-03 to F3-08.

1: Multi-point curve module A

The output of free module A is used as the voltage reference of the multi-point curve.

2: Multi-point curve module B

The output of free module B is used as the voltage reference of the multi-point curve.

A3-33 Online torque compensation gain

Address:	0xA321	Effective mode:	-
Min.:	80	Unit:	-
Max.:	150	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:

80 to 150

Description

-

A3-34 ImaxKi coefficient

Address:	0xA322	Effective mode:	-
Min.:	10	Unit:	%
Max.:	1000	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:

10% to 1000%

Description

-

A3-35 Overcurrent suppression threshold (relative to rated motor current)

Address:	0xA323	Effective mode:	-
Min.:	80	Unit:	%
Max.:	300	Data type:	UInt16
Default:	200	Change:	Changeable only at stop

Value Range:

80% to 300%

Description

-

A3-36 Frequency threshold for overcurrent suppression field weakening

Address:	0xA324	Effective mode:	-
Min.:	100	Unit:	%
Max.:	500	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:

100% to 500%

Description

-

A3-37 **IT filter time**

Address:	0xA325	Effective mode:	-
Min.:	10	Unit:	ms
Max.:	1000	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:
10 ms to 1000 ms
Description
-

A3-38 **Slip compensation mode**

Address:	0xA326	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0: Disabled
1: Slip compensation without PG
2: Slip compensation with PG
Description
-

A3-39 **VdcMaxCtrl allowed runtime**

Address:	0xA327	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0s to 100.0s
Description
-

A3-40 **Upper limit of V/f separation voltage**

Address:	0xA328	Effective mode:	-
Min.:	50.0	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
50.0% to 200.0%
Description
This parameter defines the upper limit of the V/f separation voltage, which is a percentage relative to the rated motor voltage.

A3-41 **RFG time of V/f separation frequency**

Address:	0xA329	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: RFG time forced to 0
1: Preset RFG time

Description

This parameter defines the RFG time of the V/f separation frequency. When it is set to 0, the frequency reference acceleration/deceleration time is forced to 0; when it is set to 1, the acceleration/deceleration time is set as normal.

A3-42 Cut-off frequency of V/f oscillation suppression filter

Address:	0xA32A	Effective mode:	-
Min.:	1.0	Unit:	Hz
Max.:	50.0	Data type:	UInt16
Default:	8.0	Change:	Changeable at any time

Value Range:

1.0 Hz to 50.0 Hz

Description

-

A3-43 Cut-off frequency threshold for V/f oscillation suppression

Address:	0xA32B	Effective mode:	-
Min.:	10	Unit:	Hz
Max.:	3000	Data type:	UInt16
Default:	200	Change:	Changeable at any time

Value Range:

10 Hz to 3000 Hz

Description

-

A3-44 VdcMaxCtrl feedforward coefficient

Address:	0xA32C	Effective mode:	-
Min.:	0	Unit:	%
Max.:	500	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0% to 500%

Description

-

A3-50 PMVVC low-speed IF

Address:	0xA332	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0: Disabled

1: Enabled

Description

-

A3-51 PMVVC low-speed IF current

Address:	0xA333	Effective mode:	-
Min.:	30	Unit:	-
Max.:	250	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:
30 to 250
Description
-

A3-52 PMVVC low-speed IF speed switching threshold

Address:	0xA334	Effective mode:	-
Min.:	2.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	10.0	Change:	Changeable only at stop

Value Range:
2.0% to 100.0%
Description
-

A3-53 PMVVC oscillation suppression gain coefficient

Address:	0xA335	Effective mode:	-
Min.:	0	Unit:	-
Max.:	500	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
0 to 500
Description
-

A3-54 PMVVC filter time coefficient

Address:	0xA336	Effective mode:	-
Min.:	0	Unit:	-
Max.:	500	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
0 to 500
Description
-

A3-55 PMVVC energy conservation control mode

Address:	0xA337	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	2	Change:	Changeable only at stop

Value Range:
0: Fixed straight-line V/f curve
1: Fixed 30% reactive current
2: MTPA control
Description
-

4.21 A4: Control Source Parameters

A4-00 Control channel

Address:	0xA400	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Control channel 1

1: Control channel 2

Description

This parameter specifies the control channel between two custom channels.

A4-01 Custom OFF1 source

Address:	0xA401	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Inactive

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

This parameter defines the source of start/stop control OFF1 for custom channel 1.

A4-02 Custom OFF2 source 1

Address:	0xA402	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: Active
1: Inactive
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

This parameter defines source 1 of coast to stop command OFF2 for custom channel 1. The coast to stop command OFF2 is valid if any of the three sources is active low.

A4-03 Custom OFF3 source 1

Address:	0xA403	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

Same as A4-02

Description

This parameter defines source 1 of emergency stop command OFF3 for custom channel 1. The emergency stop command OFF3 is valid if any of the three sources is active low.

A4-04 Custom running permission source

Address:	0xA404	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: Not permitted
1: Permitted
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

This parameter defines the running permission source for custom channel 1.

A4-05 Custom fault reset source 1

Address:	0xA405	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Inactive
1: Active
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

This parameter defines source 1 of the fault reset command for custom channel 1. The fault reset command is valid if any of the three sources is active high.

A4-06 Custom JOG1 source

Address:	0xA406	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as A4-01

Description

This parameter defines the source of the JOG1 command for custom channel 1.

A4-07 Custom JOG2 source

Address:	0xA407	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as A4-01

Description

This parameter defines the source of the JOG2 command for custom channel 1.

A4-08 Custom speed negation source

Address:	0xA408	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as A4-05

Description

This parameter defines the source of the negation command for custom channel 1.

A4-10 OFF2 source 2

Address:	0xA40A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: Active
1: Inactive
2: Terminal function input
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

This parameter defines source 2 of coast to stop command OFF2 for custom channel 1. The coast to stop command OFF2 is valid if any of the three sources is active low.

A4-11 OFF2 source 3

Address:	0xA40B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

Same as A4-02

Description

This parameter defines source 3 of coast to stop command OFF2 for custom channel 1. The coast to stop command OFF2 is valid if any of the three sources is active low.

A4-12 OFF3 source 2

Address:	0xA40C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

Same as A4-10

Description

This parameter defines source 2 of emergency stop command OFF3 for custom channel 1. The emergency stop command OFF3 is valid if any of the three sources is active low.

A4-13 OFF3 source 3

Address:	0xA40D	Effective mode:	-
Min.:	0	Unit:	-

Max.: 18 Data type: UInt16
Default: 1 Change: Changeable at any time

Value Range:
Same as A4-02

Description
This parameter defines source 3 of emergency stop command OFF3 for custom channel 1. The emergency stop command OFF3 is valid if any of the three sources is active low.

A4-14 Fault reset source 2

Address: 0xA40E Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time

Value Range:
Same as A4-10

Description
This parameter defines source 2 of the fault reset command for custom channel 1. The fault reset command is valid if any of the three sources is active high.

A4-15 Fault reset source 3

Address: 0xA40F Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time

Value Range:
0: Inactive
1: Active
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description
This parameter defines source 3 of the fault reset command for custom channel 1. The fault reset command is valid if any of the three sources is active high.

A4-16 **RFG prohibition source**

Address:	0xA410	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

Same as A4-02

Description

This parameter defines the RFG prohibition source for custom channel 1. When it is active low, the RFG output is set to 0.

A4-17 **RFG pause source**

Address:	0xA411	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

Same as A4-10

Description

This parameter defines the RFG pause source for custom channel 1. When it is active low, the RFG calculation is suspended and the current output is maintained.

A4-18 **Source of setting RFG reference to 0**

Address:	0xA412	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

Same as A4-10

Description

This parameter defines the source of setting RFG input to 0 for custom channel 1. When it is active low, the RFG input is set to 0.

A4-21 **Custom OFF1 source**

Address:	0xA415	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as A4-01

Description

This parameter defines the source of start/stop control OFF1 for custom channel 2.

A4-22 **Custom OFF2 source 1**

Address:	0xA416	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

Same as A4-02

Description

This parameter defines source 1 of coast to stop command OFF2 for custom channel 2. The coast to stop command OFF2 is valid if any of the three sources is active low.

A4-23 Custom OFF3 source 1

Address:	0xA417	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

Same as A4-02

Description

This parameter defines source 1 of emergency stop command OFF3 for custom channel 2. The emergency stop command OFF3 is valid if any of the three sources is active low.

A4-24 Custom running permission source

Address:	0xA418	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

A4-04

Description

This parameter defines the running permission source for custom channel 2.

A4-25 Custom fault reset source 1

Address:	0xA419	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as A4-01

Description

This parameter defines source 1 of the fault reset command for custom channel 2. The fault reset command is valid if any of the three sources is active high.

A4-26 Custom JOG1 source

Address:	0xA41A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as A4-01

Description

This parameter defines the source of the JOG1 command for custom channel 2.

A4-27 Custom JOG2 source

Address:	0xA41B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as A4-01
Description
This parameter defines the source of the JOG2 command for custom channel 2.

A4-28 Custom speed negation source

Address:	0xA41C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Inactive
1: Active
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector
Description
This parameter defines the source of the negation command for custom channel 2.

A4-30 OFF2 source 2

Address:	0xA41E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
Same as A4-10
Description
This parameter defines source 2 of coast to stop command OFF2 for custom channel 2. The coast to stop command OFF2 is valid if any of the three sources is active low.

A4-31 OFF2 source 3

Address:	0xA41F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
Same as A4-02
Description
This parameter defines source 3 of coast to stop command OFF2 for custom channel 2. The coast to stop command OFF2 is valid if any of the three sources is active low.

A4-32 OFF3 source 2

Address:	0xA420	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
Same as A4-10
Description
This parameter defines source 2 of emergency stop command OFF3 for custom channel 2. The emergency stop command OFF3 is valid if any of the three sources is active low.

A4-33 OFF3 source 3

Address:	0xA421	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
Same as A4-02
Description
This parameter defines source 3 of emergency stop command OFF3 for custom channel 2. The emergency stop command OFF3 is valid if any of the three sources is active low.

A4-34 Fault reset source 2

Address:	0xA422	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as A4-10
Description
This parameter defines source 2 of the fault reset command for custom channel 2. The fault reset command is valid if any of the three sources is active high.

A4-35 Fault reset source 3

Address:	0xA423	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
A4-15
Description
This parameter defines source 3 of the fault reset command for custom channel 2. The fault reset command is valid if any of the three sources is active high.

A4-36 **RFG prohibition source**

Address:	0xA424	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
Same as A4-02
Description
This parameter defines the RFG prohibition source for custom channel 2. When it is active low, the RFG output is set to 0.

A4-37 **RFG pause source**

Address:	0xA425	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
Same as A4-10
Description
This parameter defines the RFG pause source for custom channel 2. When it is active low, the RFG calculation is suspended and the current output is maintained.

A4-38 **Source of setting RFG reference to 0**

Address:	0xA426	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
Same as A4-10
Description
This parameter defines the source of setting RFG input to 0 for custom channel 2. When it is active low, the RFG input is set to 0.

A4-41 **Terminal start/stop module A/B**

Address:	0xA429	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Module A
1: Module B
Description
-

A4-43 **Input 1 of terminal start/stop module A**

Address:	0xA42B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	2	Change:	Changeable at any time

Value Range:

0: Active
2: Terminal function input
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

A4-44 Input 2 of terminal start/stop command A

Address:	0xA42C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	2	Change:	Changeable at any time

Value Range:

A4-43

Description

-

A4-45 Input 3 of terminal start/stop command A

Address:	0xA42D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	2	Change:	Changeable at any time

Value Range:

A4-43

Description

-

A4-46 Running permission source of terminal start/stop module A

Address:	0xA42E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: Inactive
1: Active
2: Terminal function input
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

A4-47 Fault reset source of terminal start/stop module A

Address:	0xA42F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

A4-46

Description

-

A4-48 JOG1 source of terminal start/stop module A

Address:	0xA430	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	2	Change:	Changeable at any time

Value Range:

A4-43

Description

-

A4-49 JOG2 source of terminal start/stop module A

Address:	0xA431	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	2	Change:	Changeable at any time

Value Range:

A4-43

Description

-

A4-50 Control mode of terminal start/stop module B

Address:	0xA432	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Two-wire mode 1

1: Two-wire mode 2

2: Three-wire mode 1

3: Three-wire mode 2

Description

-

A4-51 Input 1 of terminal start/stop module B

Address:	0xA433	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	2	Change:	Changeable at any time

Value Range:

A4-43

Description

-

A4-52 Input 2 of terminal start/stop command B

Address:	0xA434	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	2	Change:	Changeable at any time

Value Range:

A4-43

Description

-

A4-53 Input 3 of terminal start/stop command B

Address:	0xA435	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	2	Change:	Changeable at any time

Value Range:

A4-43

Description

-

A4-54 Running permission source of terminal start/stop module B

Address:	0xA436	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16

Default: 1 Change: Changeable at any time

Value Range:

A4-46

Description

-

A4-55 Fault reset source of terminal start/stop module B

Address: 0xA437 Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 2 Change: Changeable at any time

Value Range:

A4-46

Description

-

A4-56 JOG1 source of terminal start/stop module B

Address: 0xA438 Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 2 Change: Changeable at any time

Value Range:

A4-43

Description

-

A4-57 JOG2 source of terminal start/stop module B

Address: 0xA439 Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 2 Change: Changeable at any time

Value Range:

A4-43

Description

-

A4-58 Reserved

Address: 0xA43A Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

-

A4-59 Reserved

Address: 0xA43B Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

-

A4-60 Reserved

Address:	0xA43C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 65535

Description

-

A4-61 Source of supplementary speed in speed control

Address:	0xA43D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: Pulse reference

5: Communication

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

A4-62 JOG1 speed source

Address:	0xA43E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Digital setting

1: AI1

2: AI2

3: AI3

4: Pulse reference

5: Communication

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description
-

A4-65 Ramp rounding mode

Address:	0xA441	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Incontinuous smoothing
1: Continuous smoothing
Description
This parameter defines how the curve changes when the acceleration/deceleration trend changes.
0: Incontinuous smoothing
When the acceleration/deceleration trend changes, the curve switches to the new target reference direction immediately.
1: Continuous smoothing
When the acceleration/deceleration trend changes, the curve follows the end arc of the current acceleration/deceleration and then switches to the reference direction.

A4-66 Jog ramp source

Address:	0xA442	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0: Normal running ramp time
1: Jog ramp time
Description
0: Normal running ramp time
The jog ramp time is the same as the normal running ramp time.
1: Jog ramp time
The jog ramp time is set separately (F8-01 and F8-02).

A4-67 Proportion of starting arc in acceleration

Address:	0xA443	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	30.0	Change:	Changeable only at stop

Value Range:
0.0% to +100.0%
Description
This parameter defines the proportion of the starting arc in acceleration.

A4-68 Proportion of end arc in acceleration

Address:	0xA444	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	30.0	Change:	Changeable only at stop

Value Range:

0.0% to +100.0%

Description

This parameter defines the proportion of the end arc in acceleration.

A4-69 Proportion of starting arc in deceleration

Address:	0xA445	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	30.0	Change:	Changeable only at stop

Value Range:

0.0% to +100.0%

Description

This parameter defines the proportion of the starting arc in deceleration.

A4-70 Proportion of end arc in deceleration

Address:	0xA446	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	30.0	Change:	Changeable only at stop

Value Range:

0.0% to +100.0%

Description

This parameter defines the proportion of the end arc in deceleration.

A4-71 Ramp output forcing enable

Address:	0xA447	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: Enabled

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description
-

A4-72 **Ramp output force value**

Address:	0xA448	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: 100%
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector

Description
-

A4-73 **Ramp input ramp shift enable**

Address:	0xA449	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as A4-71

Description
-

A4-74 **Ramp input update interval**

Address:	0xA44A	Effective mode:	-
Min.:	2	Unit:	ms
Max.:	10000	Data type:	UInt16
Default:	50	Change:	Changeable at any time

Value Range:
2 ms to 10000 ms

Description
-

A4-75 **Ramp tracking enable**

Address:	0xA44B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled

Description
-

A4-76 **Ramp tracking error**

Address:	0xA44C	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	10.0	Change:	Changeable at any time

Value Range:
0.0% to +100.0%
Description
-

A4-77 **Frequency acceleration time in torque control**

Address:	0xA44D	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	6500.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 6500.0s
Description
-

A4-78 **Frequency deceleration time in torque control**

Address:	0xA44E	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	6500.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 6500.0s
Description
-

A4-79 **Forced use of the fourth set of time in torque control**

Address:	0xA44F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0 to 1
Description
-

A4-80 **Speed limited running mode**

Address:	0xA450	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0: Run with a maximum speed limit
1: Run at a specified safe speed

Description
-

A4-81 **Forward speed limit in restricted running mode**

Address:	0xA451	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to +100.0%
Description
-

A4-82 **Reverse speed limit in restricted running mode**

Address:	0xA452	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to +100.0%
Description
-

A4-83 **Maximum motoring power in restricted running mode**

Address:	0xA453	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	400.0	Data type:	UInt16
Default:	50.0	Change:	Changeable at any time

Value Range:
0.0% to 400.0%
Description
-

A4-84 **Maximum regenerative power in restricted running mode**

Address:	0xA454	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	400.0	Data type:	UInt16
Default:	50.0	Change:	Changeable at any time

Value Range:
0.0% to 400.0%
Description
-

A4-85 **Forward torque limit in restricted running mode**

Address:	0xA455	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	400.0	Data type:	UInt16
Default:	50.0	Change:	Changeable at any time

Value Range:
0.0% to 400.0%
Description
-

A4-86 **Reverse torque limit in restricted running mode**

Address:	0xA456	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	400.0	Data type:	UInt16
Default:	50.0	Change:	Changeable at any time

Value Range:
0.0% to 400.0%
Description
-

A4-87 **Maximum allowable current in restricted running mode**

Address:	0xA457	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	400.0	Data type:	UInt16
Default:	90.0	Change:	Changeable at any time

Value Range:
0.0% to 400.0%
Description
-

4.22 A5: Control Optimization Parameters

A5-00 **DPWM switchover frequency upper limit**

Address:	0xA500	Effective mode:	-
Min.:	5.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	15.00	Change:	Changeable at any time

Value Range:
5.00 Hz to F0-10
Description
The AC drive supports two PWM modes: CPWM and DPWM. When the running frequency is higher than A5-00 (switchover frequency), the DPWM mode is used. When the running frequency is lower than A5-00 (switchover frequency), the CPWM mode is used. The DPWM mode can improve the AC drive efficiency, whereas the CPWM mode can reduce the motor noise.
Increasing the value of this parameter to the maximum frequency will reduce the motor noise.

A5-01 **PWM modulation mode**

Address:	0xA501	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Asynchronous modulation
1: Synchronous modulation
Description
Output current oscillation or high harmonics can occur if the carrier frequency divided by the running frequency is less than 10. In this case, you can use the synchronous modulation mode to reduce current harmonics.

A5-02 **Deadzone compensation**

Address:	0xA502	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: Disabled

1: Enabled (compensation mode 1)

Description

A deadzone must be reserved for the switch signals of the upper and lower switch transistors on the same bridge arm of the AC drive. Deadzone compensation can improve the current waveform when the motor runs at low frequency.

A5-03 **Random PWM depth**

Address:	0xA503	Effective mode:	-
Min.:	0	Unit:	-
Max.:	10	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 10

Description

If the motor noise is strong, setting A5-03 to a non-zero value can suppress the motor noise. A larger value indicates better noise suppression effect. However, an excessively high value may affect motor control. Therefore, set this parameter to 1 at the beginning of commissioning and then increase it by 1 each time as required.

A5-04 **Pulse-by-pulse current limit protection**

Address:	0xA504	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: Enabled

Description

This function is used to minimize the overcurrent faults, ensuring normal operation of the AC drive. You are advised to disable this function in hoist applications such as cranes.

A5-05 **Voltage overmodulation coefficient**

Address:	0xA505	Effective mode:	-
Min.:	100	Unit:	%
Max.:	110	Data type:	UInt16
Default:	105	Change:	Changeable at any time

Value Range:

100% to 110%

Description

Increasing the voltage overmodulation coefficient can enhance the voltage output capacity and effectively improve the load capacity of the motor in the field weakening region, but will increase output current distortion at the same time.

A5-06 **Undervoltage threshold**

Address:	0xA506	Effective mode:	-
Min.:	140.0	Unit:	V
Max.:	420.0	Data type:	UInt16
Default:	350.0	Change:	Changeable at any time

Value Range:
140.0 V to 420.0 V
Description
When the bus voltage is lower than the setpoint of A5-06, the AC drive reports E09.01.

A5-08 **Low speed carrier frequency upper limit**

Address:	0xA508	Effective mode:	-
Min.:	0.0	Unit:	kHz
Max.:	8.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0 kHz to 8.0 kHz
Description
This parameter defines the upper limit of the carrier frequency when the AC drive is running at a low speed. The limit takes effect when the setpoint is greater than 0.

A5-09 **Overvoltage threshold**

Address:	0xA509	Effective mode:	-
Min.:	330.0	Unit:	V
Max.:	820.0	Data type:	UInt16
Default:	820.0	Change:	Changeable at any time

Value Range:
330.0 V to 820.0 V
Description
When the bus voltage is higher than the setpoint of A5-09, the AC drive reports E05.1.

A5-10 **Energy conservation control**

Address:	0xA50A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
Description
This function is only valid for asynchronous motors in V/f control mode. Enabling energy conservation control can reduce energy consumption of the asynchronous motor when running with no load or light load.

4.23 A6: AI Curve Parameters

A6-00 **Minimum input of AI curve 4**

Address:	0xA600	Effective mode:	-
Min.:	–10	Unit:	V

Max.: A6-02 Data type: Int16
Default: 0.00 Change: Changeable at any time
Value Range:
–10 V to A6-02
Description
-

A6-01 Percentage corresponding to minimum input of AI curve 4
Address: 0xA601 Effective mode: -
Min.: –100 Unit: %
Max.: 100.0 Data type: Int16
Default: 0.0 Change: Changeable at any time
Value Range:
–100% to +100.0%
Description
-

A6-02 Inflection 1 input of AI curve 4
Address: 0xA602 Effective mode: -
Min.: A6-00 Unit: V
Max.: A6-04 Data type: Int16
Default: 3.00 Change: Changeable at any time
Value Range:
A6-00 to A6-04
Description
-

A6-03 Percentage corresponding to inflection 1 input of AI curve 4
Address: 0xA603 Effective mode: -
Min.: –100 Unit: %
Max.: 100.0 Data type: Int16
Default: 30.0 Change: Changeable at any time
Value Range:
–100% to +100.0%
Description
-

A6-04 Inflection 2 input of AI curve 4
Address: 0xA604 Effective mode: -
Min.: A6-02 Unit: V
Max.: A6-06 Data type: Int16
Default: 6.00 Change: Changeable at any time
Value Range:
A6-02 to A6-06
Description
-

A6-05 Percentage corresponding to inflection 2 input of AI curve 4
Address: 0xA605 Effective mode: -
Min.: –100 Unit: %
Max.: 100.0 Data type: Int16
Default: 60.0 Change: Changeable at any time

Value Range:
–100% to +100.0%
Description
-

A6-06 **Maximum input of AI curve 4**

Address:	0xA606	Effective mode:	-
Min.:	A6-04	Unit:	V
Max.:	10.00	Data type:	Int16
Default:	10.00	Change:	Changeable at any time

Value Range:
A6-04 to 10.00 V
Description
-

A6-07 **Percentage corresponding to maximum input of AI curve 4**

Address:	0xA607	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	100.0	Change:	Changeable at any time

Value Range:
–100% to +100.0%
Description
-

A6-08 **Minimum input of AI curve 5**

Address:	0xA608	Effective mode:	-
Min.:	–10	Unit:	V
Max.:	A6-10	Data type:	Int16
Default:	–10	Change:	Changeable at any time

Value Range:
–10 V to A6-10
Description
-

A6-09 **Percentage corresponding to minimum input of AI curve 5**

Address:	0xA609	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	–100	Change:	Changeable at any time

Value Range:
–100% to +100.0%
Description
-

A6-10 **Inflection 1 input of AI curve 5**

Address:	0xA60A	Effective mode:	-
Min.:	A6-08	Unit:	V
Max.:	A6-12	Data type:	Int16
Default:	–3	Change:	Changeable at any time

Value Range:
A6-08 to A6-12

Description
-

A6-11 **Percentage corresponding to inflection 1 input of AI curve 5**

Address:	0xA60B	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	–30	Change:	Changeable at any time

Value Range:
–100% to +100.0%
Description
-

A6-12 **Inflection 2 input of AI curve 5**

Address:	0xA60C	Effective mode:	-
Min.:	A6-10	Unit:	V
Max.:	A6-14	Data type:	Int16
Default:	3.00	Change:	Changeable at any time

Value Range:
A6-10 to A6-14
Description
-

A6-13 **Percentage corresponding to inflection 2 input of AI curve 5**

Address:	0xA60D	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	30.0	Change:	Changeable at any time

Value Range:
–100% to +100.0%
Description
-

A6-14 **Maximum input of AI curve 5**

Address:	0xA60E	Effective mode:	-
Min.:	A6-12	Unit:	V
Max.:	10.00	Data type:	Int16
Default:	10.00	Change:	Changeable at any time

Value Range:
A6-12 to 10.00 V
Description
-

A6-15 **Percentage corresponding to maximum input of AI curve 5**

Address:	0xA60F	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	100.0	Change:	Changeable at any time

Value Range:
–100% to +100.0%
Description
-

A6-24 **AI1 skip point**

Address: 0xA618
Min.: –100
Max.: 100.0
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Changeable at any time

Value Range:
–100% to +100.0%
Description
-

A6-25 **AI1 skip amplitude**

Address: 0xA619
Min.: 0.0
Max.: 100.0
Default: 0.1
Effective mode: -
Unit: %
Data type: UInt16
Change: Changeable at any time

Value Range:
0.0% to +100.0%
Description
-

A6-26 **AI2 skip point**

Address: 0xA61A
Min.: –100
Max.: 100.0
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Changeable at any time

Value Range:
–100% to +100.0%
Description
-

A6-27 **AI2 skip amplitude**

Address: 0xA61B
Min.: 0.0
Max.: 100.0
Default: 0.1
Effective mode: -
Unit: %
Data type: UInt16
Change: Changeable at any time

Value Range:
0.0% to +100.0%
Description
-

A6-28 **AI3 skip point**

Address: 0xA61C
Min.: –100
Max.: 100.0
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Changeable at any time

Value Range:
–100% to +100.0%
Description
-

A6-29 **AI3 skip amplitude**

Address: 0xA61D
Effective mode: -

Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.1	Change:	Changeable at any time

Value Range:
0.0% to +100.0%
Description
-

A6-30 AI automatic curve calibration

Address:	0xA61E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	4134	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Ones: Point selection (for setting)
0: Disabled
1: Point 1
2: Point 2
3: Point 3
4: Point 4
Tens: AI channel selection (for setting)
0: Disabled
1: AI1
2: AI2
3: AI3
Hundreds: Enable control (for setting)
0: Disabled
1: Enabled
Thousands: X-point curve (for display)
0: The function is disabled or the channel is not selected.
2: 2-point curve
4: 4-point curve
Ten thousands: Reserved
Description
-

A6-31 AI1 input enable

Address:	0xA61F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
Others: B connector
Description
-

A6-32 **AI2 input enable**

Address: 0xA620 | Effective mode: -
Min.: 0 | Unit: -
Max.: 1 | Data type: UInt16
Default: 1 | Change: Changeable at any time

Value Range:

0: Disabled

1: Enabled

Others: B connector

Description

-

A6-33 **AI3 input enable**

Address: 0xA621 | Effective mode: -
Min.: 0 | Unit: -
Max.: 1 | Data type: UInt16
Default: 1 | Change: Changeable at any time

Value Range:

0: Disabled

1: Enabled

Others: B connector

Description

-

A6-34 **AI polarity**

Address: 0xA622 | Effective mode: -
Min.: 0 | Unit: -
Max.: 333 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:

Ones: AI1

0: Normal

1: Absolute value

2: Negated value

3: Negated absolute value

Tens: AI2

0: Normal

1: Absolute value

2: Negated value

3: Negated absolute value

Hundreds: AI3

0: Normal

1: Absolute value

2: Negated value

3: Negated absolute value

Description

-

A6-35 **AI hardware source**

Address: 0xA623 | Effective mode: -

Min.: 0
Max.: 111
Default: 0
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
Ones: AI1 source
1: Hardware sampling
1: Force setpoint
Tens: AI2 source
1: Hardware sampling
1: Force setpoint
Hundreds: AI3 source
1: Hardware sampling
1: Force setpoint

Description
-

A6-36 AI1 force setpoint

Address: 0xA624
Min.: –10
Max.: 10.00
Default: 0.00
Effective mode: -
Unit: V
Data type: Int16
Change: Changeable at any time

Value Range:
–10 V to +10.00 V

Description
-

A6-37 AI2 force setpoint

Address: 0xA625
Min.: –10
Max.: 10.00
Default: 0.00
Effective mode: -
Unit: V
Data type: Int16
Change: Changeable at any time

Value Range:
–10 V to +10.00 V

Description
-

A6-38 AI3 force setpoint

Address: 0xA626
Min.: –10
Max.: 10.00
Default: 0.00
Effective mode: -
Unit: V
Data type: Int16
Change: Changeable at any time

Value Range:
–10 V to +10.00 V

Description
-

A6-39 High level for AI used as DI

Address: 0xA627
Min.: 5.5
Max.: 9.0
Default: 7.0
Effective mode: -
Unit: V
Data type: UInt16
Change: Changeable at any time

Value Range:
5.5 V to 9.0 V
Description
-

A6-40 **Low level for AI used as DI**

Address:	0xA628	Effective mode:	-
Min.:	1.0	Unit:	V
Max.:	4.5	Data type:	UInt16
Default:	3.0	Change:	Changeable at any time

Value Range:
1.0 V to 4.5 V
Description
-

A6-41 **AI1 gain**

Address:	0xA629	Effective mode:	-
Min.:	–10	Unit:	-
Max.:	10.00	Data type:	Int16
Default:	1.00	Change:	Changeable at any time

Value Range:
–10 to +10.00
Description
-

A6-42 **AI1 offset**

Address:	0xA62A	Effective mode:	-
Min.:	–10	Unit:	V
Max.:	10.00	Data type:	Int16
Default:	0.00	Change:	Changeable at any time

Value Range:
–10 V to +10.00 V
Description
-

A6-43 **AI1 denoising threshold**

Address:	0xA62B	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.5	Change:	Changeable at any time

Value Range:
0.0% to +100.0%
Description
-

A6-44 **AI1 deadzone width**

Address:	0xA62C	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.5	Change:	Changeable at any time

Value Range:
0.0% to +100.0%

Description
-

A6-45 AI1 input upper limit

Address:	0xA62D	Effective mode:	-
Min.:	A6-46	Unit:	V
Max.:	10.00	Data type:	UInt16
Default:	8.00	Change:	Changeable at any time

Value Range:
A6-46 to 10.00 V
Description
-

A6-46 AI1 input lower limit

Address:	0xA62E	Effective mode:	-
Min.:	0.00	Unit:	V
Max.:	A6-45	Data type:	UInt16
Default:	2.00	Change:	Changeable at any time

Value Range:
0.00 V to A6-45
Description
-

A6-47 AI2 gain

Address:	0xA62F	Effective mode:	-
Min.:	–10	Unit:	-
Max.:	10.00	Data type:	Int16
Default:	1.00	Change:	Changeable at any time

Value Range:
–10 to +10.00
Description
-

A6-48 AI2 offset

Address:	0xA630	Effective mode:	-
Min.:	–10	Unit:	V
Max.:	10.00	Data type:	Int16
Default:	0.00	Change:	Changeable at any time

Value Range:
–10 V to +10.00 V
Description
-

A6-49 AI2 denoising threshold

Address:	0xA631	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.5	Change:	Changeable at any time

Value Range:
0.0% to +100.0%
Description
-

A6-50 **AI2 deadzone width**

Address:	0xA632	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.5	Change:	Changeable at any time

Value Range:
0.0% to +100.0%
Description
-

A6-51 **AI2 input upper limit**

Address:	0xA633	Effective mode:	-
Min.:	A6-52	Unit:	V
Max.:	10.00	Data type:	UInt16
Default:	8.00	Change:	Changeable at any time

Value Range:
A6-52 to 10.00 V
Description
-

A6-52 **AI2 input lower limit**

Address:	0xA634	Effective mode:	-
Min.:	0.00	Unit:	V
Max.:	A6-51	Data type:	UInt16
Default:	2.00	Change:	Changeable at any time

Value Range:
0.00 V to A6-51
Description
-

A6-53 **AI3 gain**

Address:	0xA635	Effective mode:	-
Min.:	–10	Unit:	-
Max.:	10.00	Data type:	Int16
Default:	1.00	Change:	Changeable at any time

Value Range:
–10 to +10.00
Description
-

A6-54 **AI3 offset**

Address:	0xA636	Effective mode:	-
Min.:	–10	Unit:	V
Max.:	10.00	Data type:	Int16
Default:	0.00	Change:	Changeable at any time

Value Range:
–10 V to +10.00 V
Description
-

A6-55 **AI3 denoising threshold**

Address:	0xA637	Effective mode:	-

Min.: 0.0
Max.: 100.0
Default: 0.5
Unit: %
Data type: UInt16
Change: Changeable at any time

Value Range:
0.0% to +100.0%

Description
-

A6-56 AI3 deadzone width

Address: 0xA638
Min.: 0.0
Max.: 100.0
Default: 0.5
Effective mode: -
Unit: %
Data type: UInt16
Change: Changeable at any time

Value Range:
0.0% to +100.0%

Description
-

A6-57 AI3 input upper limit

Address: 0xA639
Min.: A6-58
Max.: 10.00
Default: 8.00
Effective mode: -
Unit: V
Data type: UInt16
Change: Changeable at any time

Value Range:
A6-58 to 10.00 V

Description
-

A6-58 AI3 input lower limit

Address: 0xA63A
Min.: 0.00
Max.: A6-57
Default: 2.00
Effective mode: -
Unit: V
Data type: UInt16
Change: Changeable at any time

Value Range:
0.00 V to A6-57

Description
-

A6-59 AI input protection time

Address: 0xA63B
Min.: 0.00
Max.: 1.00
Default: 0.01
Effective mode: -
Unit: s
Data type: UInt16
Change: Changeable at any time

Value Range:
0.00s to 1.00s

Description
-

4.24 A8: Point-to-Point Communication Parameters

A8-00 **Master/Slave control function**

Address:	0xA800	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: Enabled

Description

-

A8-01 **Master/Slave selection**

Address:	0xA801	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Master

1: Slave

Description

-

A8-02 **Slave following master's command**

Address:	0xA802	Effective mode:	-
Min.:	0	Unit:	-
Max.:	111	Data type:	UInt16
Default:	11	Change:	Changeable only at stop

Value Range:

Ones: Whether the slave follows the operation command of the master

0: No

1: Yes

Tens: Whether the slave fault information is transmitted

0: No

1: Yes

Hundreds: Whether the master reports a fault (ERR-16) upon disconnection of the slave

0: No

1: Yes

Description

-

A8-03 **Function of slave RX data**

Address:	0xA803	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Running frequency

1: Target frequency

Description
-

A8-04 **RX data zero offset**

Address:	0xA804	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.00	Data type:	Int16
Default:	0.00	Change:	Changeable at any time

Value Range:
–100% to +100.00%
Description
-

A8-05 **RX data gain**

Address:	0xA805	Effective mode:	-
Min.:	–10	Unit:	%
Max.:	100.00	Data type:	Int16
Default:	1.00	Change:	Changeable at any time

Value Range:
–10% to +100.00%
Description
-

A8-06 **Master-slave communication heartbeat time**

Address:	0xA806	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.0s to 10.0s
Description
-

A8-07 **Master data TX cycle in point-to-point communication**

Address:	0xA807	Effective mode:	-
Min.:	0.001	Unit:	s
Max.:	10.000	Data type:	UInt16
Default:	0.001	Change:	Changeable at any time

Value Range:
0.001s to 10.000s
Description
-

A8-08 **Zero offset of RX frequency data**

Address:	0xA808	Effective mode:	-
Min.:	–10000	Unit:	-
Max.:	10000	Data type:	Int16
Default:	0	Change:	Changeable at any time

Value Range:
–10000 to +10000
Description
-

A8-09 **Gain of RX frequency data**

Address:	0xA809	Effective mode:	-
Min.:	–1000	Unit:	-
Max.:	1000	Data type:	Int16
Default:	100	Change:	Changeable at any time

Value Range:
–1000 to +1000
Description
-

A8-10 **Maximum forward deviation of slave frequency**

Address:	0xA80A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	10000	Data type:	UInt16
Default:	1000	Change:	Changeable at any time

Value Range:
0 to 10000
Description
-

A8-11 **Maximum reverse deviation of slave frequency**

Address:	0xA80B	Effective mode:	-
Min.:	0.20	Unit:	Hz
Max.:	10.00	Data type:	UInt16
Default:	0.50	Change:	Changeable at any time

Value Range:
0.20 Hz to 10.00 Hz
Description
-

4.25 A9: Motor Parameters 1

A9-00 **Number of parallel motors**

Address:	0xA900	Effective mode:	-
Min.:	1	Unit:	-
Max.:	200	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
1 to 200
Description
-

A9-01 **Motor information command word**

Address:	0xA901	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x3	Change:	Changeable only at stop

Value Range:

Bit00: Mutual inductance curve
0: Disabled
1: Enabled
Bit01: D- and Q-axis inductance curve
0: Disabled
1: Enabled
Bit02: Rotor resistance online auto-tuning
0: Disabled
1: Enabled
Bit03: Rotor resistance online auto-tuning method
0: Amplitude
1: Phase
Bit04: Motor thermal model
0: Disabled
1: Enabled
Bit05: Temperature source of motor thermal model
0: Estimated temperature
1: Temperature detected by sensor
Bit06: Torque coefficient calculation of asynchronous motor
0: Torque formula
1: Current distribution
Bit07: Torque coefficient calculation of synchronous motor
0: Torque formula
1: Torque matching the rated torque
Bit08: Zero speed friction torque calculation
0: Torque linearly decreasing to zero
1: Torque to maintain minimum speed
Bit09: Calculation of model parameters based on nameplate parameters
0: Disabled
1: Enabled
Bit10: Confirmation of calculating model parameters based on nameplate parameters
0: Default
1: Confirm

Description

-

A9-02 Number of motor pole pairs

Address:	0xA902	Effective mode:	-
Min.:	0	Unit:	-
Max.:	64	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0 to 64

Description

-

A9-03 **Motor power factor**

Address:	0xA903	Effective mode:	-
Min.:	0.600	Unit:	-
Max.:	1.000	Data type:	UInt16
Default:	0.860	Change:	Changeable only at stop

Value Range:
0.600 to 1.000
Description
-

A9-05 **Expansion card**

Address:	0xA905	Effective mode:	-
Min.:	1	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
1: Expansion card 1
2: Expansion card 2
Description
-

A9-06 **ABZ encoder speed measurement mode at low speed**

Address:	0xA906	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	2	Change:	Changeable only at stop

Value Range:
0: Maintain
1: Attenuate
2: Optimized solution
Description
When the AC drive runs at a low speed with no pulse, the following three speed measurement modes are available:
0: Maintain
The current speed is maintained when there is no pulse, and the speed is considered 0 when the situation continues for more than 4 ms.
1: Attenuate
The speed is attenuated exponentially by 1/2, and the speed is considered 0 when the situation continues for more than 4 ms.
2: Optimized solution
The speed is maintained for a certain number of beats and then attenuated. When the number of beats with no pulse reaches the threshold, the speed is considered 0.

A9-07 **Encoder speed measurement filter time constant**

Address:	0xA907	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	10.000	Data type:	UInt16
Default:	0.004	Change:	Changeable at any time

Value Range:
0.000s to 10.000s

Description

Adjusting the encoder speed measurement filter time constant can change the encoder signal filtering effect. Longer filter time indicates smoother encoder feedback speed but longer feedback delay. Shorter filter time indicates shorter feedback delay but larger encoder feedback speed fluctuations. In FVC control mode, the filter time constant needs to be adjusted based on the actual working conditions and encoder signal quality. It cannot be too small if the signal quality of the resolver and other encoders is poor.

A9-08 Encoder wire breakage software detection coefficient

Address:	0xA908	Effective mode:	-
Min.:	0.000	Unit:	-
Max.:	8.000	Data type:	UInt16
Default:	1.000	Change:	Changeable at any time

Value Range:

0.000 to 8.000

Description

This parameter defines the speed glitch amplitude for determining speed exceptions. The default value is 100% and does not need not be modified in normal cases.

A9-09 Encoder control word

Address:	0xA909	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

Bit00: Speed measurement

0: Disabled

1: Enabled

Bit01: Software detection of wire breakage

0: Disabled

1: Enabled

Bit02: Glitch removal

0: Disabled

1: Enabled

Bit03: ABZ encoder speed measurement mode

0: Quadruplicated frequency

1: Single pulse

Description

Bit00: Speed measurement

When the FVC control mode is selected, speed measurement is enabled automatically. When another control mode is selected, you can enable or disable the speed measurement function of the encoder as required.

Bit01: Software detection of wire breakage

This function is used to detect encoder wire breakage during running based on speed measurement results of the encoder. It is unavailable in stop state. When this function is enabled, the glitch removal function is enabled automatically. The system reports the encoder wire breakage fault when the number of detected speed measurement exceptions exceeds the value of A9-10 (speed measurement exception count threshold).

Bit02: Glitch removal

This function is used to remove occasional speed measurement glitches. The glitch amplitude is defined by A9-08.
Bit03: ABZ encoder speed measurement mode
0: The quadruplicated frequency speed measurement mode is used.
1: The quadruplicated frequency speed measurement mode is used at low speed, and the single pulse speed measurement mode is used at high speed.

A9-10 Speed measurement exception count threshold

Address:	0xA90A	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	10	Change:	Changeable only at stop

Value Range:
1 to 100
Description
After software detection of encoder wire breakage is enabled, the encoder wire breakage fault is reported when the number of detected speed measurement exceptions exceeds the threshold defined by A9-10.

A9-11 Motor gear ratio (numerator)

Address:	0xA90B	Effective mode:	-
Min.:	1	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
1 to 65535
Description
-

A9-12 Motor gear ratio (denominator)

Address:	0xA90C	Effective mode:	-
Min.:	1	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
1 to 65535
Description
-

A9-13 External input source of encoder

Address:	0xA90D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: 0
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector

Description

-

A9-15 Stator leakage inductance

Address:	0xA90F	Effective mode:	-
Min.:	0.000	Unit:	mH
Max.:	65.535	Data type:	UInt16
Default:	6.540	Change:	Changeable only at stop

Value Range:

0.000 mH to 65.535 mH

Description

-

A9-16 Electromechanical time constant

Address:	0xA910	Effective mode:	-
Min.:	1	Unit:	ms
Max.:	65535	Data type:	UInt16
Default:	100	Change:	Unchangeable

Value Range:

1 ms to 65535 ms

Description

-

A9-17 Inertia ratio

Address:	0xA911	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	120.0	Change:	Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

A9-18 Friction torque

Address:	0xA912	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	2.0	Change:	Changeable only at stop

Value Range:

0.0% to 6553.5%

Description
-

A9-19 **Excitation current coefficient 1 of mutual inductance curve (rated)**

Address:	0xA913	Effective mode:	-
Min.:	5.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	50.0	Change:	Changeable only at stop

Value Range:
5.0% to 100.0%
Description
-

A9-20 **Excitation current coefficient 2 of mutual inductance curve (rated)**

Address:	0xA914	Effective mode:	-
Min.:	5.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	75.0	Change:	Changeable only at stop

Value Range:
5.0% to 100.0%
Description
-

A9-21 **Excitation current coefficient 3 of mutual inductance curve**

Address:	0xA915	Effective mode:	-
Min.:	100.0	Unit:	%
Max.:	800.0	Data type:	UInt16
Default:	150.0	Change:	Changeable only at stop

Value Range:
100.0% to 800.0%
Description
-

A9-22 **Excitation current coefficient 4 of mutual inductance curve**

Address:	0xA916	Effective mode:	-
Min.:	100.0	Unit:	%
Max.:	800.0	Data type:	UInt16
Default:	210.0	Change:	Changeable only at stop

Value Range:
100.0% to 800.0%
Description
-

A9-23 **Flux coefficient 1 of mutual inductance curve (rated)**

Address:	0xA917	Effective mode:	-
Min.:	10.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	50.0	Change:	Changeable only at stop

Value Range:
10.0% to 100.0%
Description
-

A9-24 **Flux coefficient 2 of mutual inductance curve (rated)**

Address:	0xA918	Effective mode:	-
Min.:	10.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	85.0	Change:	Changeable only at stop

Value Range:
10.0% to 100.0%
Description
-

A9-25 **Flux coefficient 3 of mutual inductance curve**

Address:	0xA919	Effective mode:	-
Min.:	100.0	Unit:	%
Max.:	300.0	Data type:	UInt16
Default:	115.0	Change:	Changeable only at stop

Value Range:
100.0% to 300.0%
Description
-

A9-26 **Flux coefficient 4 of mutual inductance curve**

Address:	0xA91A	Effective mode:	-
Min.:	100.0	Unit:	%
Max.:	300.0	Data type:	UInt16
Default:	125.0	Change:	Changeable only at stop

Value Range:
100.0% to 300.0%
Description
-

A9-27 **Speed point 1 of friction curve**

Address:	0xA91B	Effective mode:	-
Min.:	0	Unit:	RPM
Max.:	30000	Data type:	UInt16
Default:	15	Change:	Changeable only at stop

Value Range:
0 RPM to 30000 RPM
Description
-

A9-28 **Speed point 2 of friction curve**

Address:	0xA91C	Effective mode:	-
Min.:	0	Unit:	RPM
Max.:	30000	Data type:	UInt16
Default:	30	Change:	Changeable only at stop

Value Range:
0 RPM to 30000 RPM
Description
-

A9-29 **Speed point 3 of friction curve**

Address:	0xA91D	Effective mode:	-

Min.: 0
Max.: 30000
Default: 60
Unit: RPM
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 RPM to 30000 RPM

Description
-

A9-30 **Speed point 4 of friction curve**

Address: 0xA91E
Min.: 0
Max.: 30000
Default: 120
Effective mode: -
Unit: RPM
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 RPM to 30000 RPM

Description
-

A9-31 **Speed point 5 of friction curve**

Address: 0xA91F
Min.: 0
Max.: 30000
Default: 150
Effective mode: -
Unit: RPM
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 RPM to 30000 RPM

Description
-

A9-32 **Speed point 6 of friction curve**

Address: 0xA920
Min.: 0
Max.: 30000
Default: 300
Effective mode: -
Unit: RPM
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 RPM to 30000 RPM

Description
-

A9-33 **Speed point 7 of friction curve**

Address: 0xA921
Min.: 0
Max.: 30000
Default: 600
Effective mode: -
Unit: RPM
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 RPM to 30000 RPM

Description
-

A9-34 **Speed point 8 of friction curve**

Address: 0xA922
Min.: 0
Max.: 30000
Effective mode: -
Unit: RPM
Data type: UInt16

Default: 1200 Change: Changeable only at stop

Value Range:

0 RPM to 30000 RPM

Description

-

A9-35 Speed point 9 of friction curve

Address: 0xA923 Effective mode: -

Min.: 0 Unit: RPM

Max.: 30000 Data type: UInt16

Default: 1500 Change: Changeable only at stop

Value Range:

0 RPM to 30000 RPM

Description

-

A9-36 Speed point 10 of friction curve

Address: 0xA924 Effective mode: -

Min.: 0 Unit: RPM

Max.: 30000 Data type: UInt16

Default: 3000 Change: Changeable only at stop

Value Range:

0 RPM to 30000 RPM

Description

-

A9-37 Torque point 1 of friction curve

Address: 0xA925 Effective mode: -

Min.: –320 Unit: N·m

Max.: 320.00 Data type: Int16

Default: 0.00 Change: Changeable only at stop

Value Range:

–320 N·m to +320 N·m

Description

-

A9-38 Torque point 2 of friction curve

Address: 0xA926 Effective mode: -

Min.: –320 Unit: N·m

Max.: 320.00 Data type: Int16

Default: 0.00 Change: Changeable only at stop

Value Range:

–320 N·m to +320 N·m

Description

-

A9-39 Torque point 3 of friction curve

Address: 0xA927 Effective mode: -

Min.: –320 Unit: N·m

Max.: 320.00 Data type: Int16

Default: 0.00 Change: Changeable only at stop

Value Range:

–320 N · m to +320 N · m

Description

-

A9-40 **Torque point 4 of friction curve**

Address:	0xA928	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:

–320 N · m to +320 N · m

Description

-

A9-41 **Torque point 5 of friction curve**

Address:	0xA929	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:

–320 N · m to +320 N · m

Description

-

A9-42 **Torque point 6 of friction curve**

Address:	0xA92A	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:

–320 N · m to +320 N · m

Description

-

A9-43 **Torque point 7 of friction curve**

Address:	0xA92B	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:

–320 N · m to +320 N · m

Description

-

A9-44 **Torque point 8 of friction curve**

Address:	0xA92C	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:

–320 N · m to +320 N · m

Description
-

A9-45 **Torque point 9 of friction curve**

Address:	0xA92D	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:
–320 N · m to +320 N · m
Description
-

A9-46 **Torque point 10 of friction curve**

Address:	0xA92E	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:
–320 N · m to +320 N · m
Description
-

A9-47 **Current coefficient starting point of D- and Q-axis inductance curve**

Address:	0xA92F	Effective mode:	-
Min.:	–800	Unit:	%
Max.:	800.0	Data type:	Int16
Default:	–200	Change:	Changeable only at stop

Value Range:
–800% to +800.0%
Description
-

A9-48 **Current coefficient end point of D- and Q-axis inductance curve**

Address:	0xA930	Effective mode:	-
Min.:	–800	Unit:	%
Max.:	800.0	Data type:	Int16
Default:	200.0	Change:	Changeable only at stop

Value Range:
–800% to +800.0%
Description
-

A9-49 **D axis inductance 1 of D- and Q-axis inductance curve**

Address:	0xA931	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

A9-50 **D axis inductance 2 of D- and Q-axis inductance curve**

Address:	0xA932	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

A9-51 **D axis inductance 3 of D- and Q-axis inductance curve**

Address:	0xA933	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

A9-52 **D axis inductance 4 of D- and Q-axis inductance curve**

Address:	0xA934	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

A9-53 **D axis inductance 5 of D- and Q-axis inductance curve**

Address:	0xA935	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

A9-54 **D axis inductance 6 of D- and Q-axis inductance curve**

Address:	0xA936	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

A9-55 **D axis inductance 7 of D- and Q-axis inductance curve**

Address:	0xA937	Effective mode:	-

Min.: 0.0 Unit: %
Max.: 6553.5 Data type: UInt16
Default: 100.0 Change: Changeable only at stop
Value Range:
0.0% to 6553.5%
Description
-

A9-56 D axis inductance 8 of D- and Q-axis inductance curve
Address: 0xA938 Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: UInt16
Default: 100.0 Change: Changeable only at stop
Value Range:
0.0% to 6553.5%
Description
-

A9-57 D axis inductance 9 of D- and Q-axis inductance curve
Address: 0xA939 Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: UInt16
Default: 100.0 Change: Changeable only at stop
Value Range:
0.0% to 6553.5%
Description
-

A9-58 D axis inductance 10 of D- and Q-axis inductance curve
Address: 0xA93A Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: UInt16
Default: 100.0 Change: Changeable only at stop
Value Range:
0.0% to 6553.5%
Description
-

A9-59 D axis inductance 11 of D- and Q-axis inductance curve
Address: 0xA93B Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: UInt16
Default: 100.0 Change: Changeable only at stop
Value Range:
0.0% to 6553.5%
Description
-

A9-60 D axis inductance 12 of D- and Q-axis inductance curve
Address: 0xA93C Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

A9-61 Q axis inductance 1 of D- and Q-axis inductance curve

Address: 0xA93D Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

A9-62 Q axis inductance 2 of D- and Q-axis inductance curve

Address: 0xA93E Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

A9-63 Q axis inductance 3 of D- and Q-axis inductance curve

Address: 0xA93F Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

A9-64 Q axis inductance 4 of D- and Q-axis inductance curve

Address: 0xA940 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

A9-65 Q axis inductance 5 of D- and Q-axis inductance curve

Address: 0xA941 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%
Description
-

A9-66 **Q axis inductance 6 of D- and Q-axis inductance curve**

Address:	0xA942	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

A9-67 **Q axis inductance 7 of D- and Q-axis inductance curve**

Address:	0xA943	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

A9-68 **Q axis inductance 8 of D- and Q-axis inductance curve**

Address:	0xA944	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

A9-69 **Q axis inductance 9 of D- and Q-axis inductance curve**

Address:	0xA945	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

A9-70 **Q axis inductance 10 of D- and Q-axis inductance curve**

Address:	0xA946	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%

Description
-

A9-71 **Q axis inductance 11 of D- and Q-axis inductance curve**

Address:	0xA947	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

A9-72 **Q axis inductance 12 of D- and Q-axis inductance curve**

Address:	0xA948	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

4.26 AA: Reserved

AA-00 **Parameter auto-tuning upon startup**

Address:	0xAA00	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

Bit00: Synchronous motor pole position auto-tuning upon startup
0: Disabled
1: Enabled
Bit01: Quick stator resistance auto-tuning upon startup
0: Disabled
1: Enabled
Bit02–Bit03: HFI pole position auto-tuning
0: Disabled
1: Enabled
2: Adaptive
Bit04: IGBT shoot-through self-check upon startup
0: Disabled
1: Enabled
Bit05: Short-to-ground self-check upon startup (reserved)
0: Disabled
1: Enabled
Bit06: Phase loss self-check upon startup (reserved)
0: Disabled
1: Enabled

Description

-

AA-01 **Auto-tuning direction**

Address:	0xAA01	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0 to 1

Description

-

AA-02 **Oscillation suppression gain of synchronous motor back EMF auto-tuning**

Address:	0xAA02	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	30.0	Data type:	UInt16
Default:	3.2	Change:	Changeable only at stop

Value Range:

0.0 to 30.0

Description

-

AA-03 **Target speed of rotation auto-tuning**

Address:	0xAA03	Effective mode:	-
Min.:	30.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	70.0	Change:	Changeable only at stop

Value Range:

30.0% to 100.0%

Description
-

AA-04 **Target speed 1 of inertia auto-tuning**

Address:	0xAA04	Effective mode:	-
Min.:	10.0	Unit:	%
Max.:	AA-05	Data type:	UInt16
Default:	40.0	Change:	Changeable only at stop

Value Range:
10.0% to AA-05
Description
-

AA-05 **Target speed 2 of inertia auto-tuning**

Address:	0xAA05	Effective mode:	-
Min.:	AA-04	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	60.0	Change:	Changeable only at stop

Value Range:
AA-04 to 100.0%
Description
-

AA-06 **Overcurrent prevention of mutual inductance saturation curve**

Address:	0xAA06	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0 to 1
Description
-

AA-07 **Auto-tuning items**

Address:	0xAA07	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	117	Change:	Changeable only at stop

Value Range:

Bit00: Speed loop parameter adaptation
0: Disabled
1: Enabled
Bit01: Current loop parameter adaptation
0: Disabled
1: Enabled
Bit02: Drive nonlinear auto-tuning
0: Disabled
1: Enabled
Bit03: Inter-phase deviation coefficient auto-tuning
0: Disabled
1: Enabled
Bit04: Auto-tuning of initial pole position of synchronous motor
0: Disabled
1: Enabled
Bit05: Auto-tuning of D- and Q-axis inductance model of synchronous motor
0: Disabled
1: Enabled
Bit06: System inertia auto-tuning
0: Disabled
1: Enabled
Bit07: HFI pole position auto-tuning
0: Disabled
1: Enabled

Description

-

AA-08 **OFF3 stop mode**

Address:	0xAA08	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Quick stop
1: Stop at maximum capability

Description

-

AA-09 **Stop mode during running**

Address:	0xAA09	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0: OFF1 stop mode
1: OFF2 stop mode
2: OFF3 stop mode

Description
-

AA-10 **Stop mode for torque control**

Address:	0xAA0A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0: Coast to stop forcibly
1: Switch to speed control mode and then stop
2: Maintain torque control mode until zero speed and then block
Description
-

AA-12 **Proportional gain adjustment coefficient**

Address:	0xAA0C	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	2.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 2.0
Description
-

AA-13 **Integral gain adjustment coefficient**

Address:	0xAA0D	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	2.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 2.0
Description
-

AA-14 **Zero-speed threshold**

Address:	0xAA0E	Effective mode:	-
Min.:	0.1	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	2.0	Change:	Changeable at any time

Value Range:
0.1% to 200.0%
Description
-

AA-15 **Zero-speed stop delay**

Address:	0xAA0F	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	10.00	Data type:	UInt16
Default:	0.10	Change:	Changeable only at stop

Value Range:

0.00s to 10.00s

Description

-

AA-16 Reference source execution interval

Address:	0xAA10	Effective mode:	-
Min.:	0	Unit:	-
Max.:	20	Data type:	UInt16
Default:	4	Change:	Changeable only at stop

Value Range:

0 to 20

Description

-

AA-17 Trial current for speed tracking of synchronous motor

Address:	0xAA11	Effective mode:	-
Min.:	5.0	Unit:	%
Max.:	50.0	Data type:	UInt16
Default:	10.0	Change:	Changeable only at stop

Value Range:

5.0% to 50.0%

Description

-

AA-18 Minimum frequency for speed tracking of synchronous motor

Address:	0xAA12	Effective mode:	-
Min.:	0.0	Unit:	Hz
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:

0.0 Hz to 100.0 Hz

Description

-

AA-19 Angle compensation for speed tracking of synchronous motor

Address:	0xAA13	Effective mode:	-
Min.:	0	Unit:	-
Max.:	360	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0 to 360

Description

-

AA-20 Parameter auto-tuning of synchronous motor upon startup

Address:	0xAA14	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 1

Description
-

AA-21 **Current motor angle**

Address:	0xAA15	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

AA-22 **Forward torque limit 1**

Address:	0xAA16	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	400.0	Data type:	UInt16
Default:	150.0	Change:	Changeable at any time

Value Range:
0.0 to 400.0
Description
-

AA-23 **Reverse torque limit 1**

Address:	0xAA17	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	400.0	Data type:	UInt16
Default:	150.0	Change:	Changeable at any time

Value Range:
0.0 to 400.0
Description
-

AA-24 **Source of forward torque limit 2**

Address:	0xAA18	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: 400%
Others: F connector
Description
-

AA-25 **Source of reverse torque limit 2**

Address:	0xAA19	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: –400%
Others: F connector

Description
-

AA-26 **Ramp (FRG) selection bit0**

Address:	0xAA1A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: 0
1: 1
2: Terminal function input
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector
Description
-

AA-27 **Ramp (FRG) selection bit1**

Address:	0xAA1B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as A4-26
Description
-

AA-30 **Motor protection**

Address:	0xAA1E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	537	Change:	Changeable at any time

Value Range:

Bit00: Motor overload determination (reserved)
Bit01: Motor overheat detection (reserved)
Bit02: PG fault detection (reserved)
Bit03: Current control error detection
Bit04: Motor stall error detection
Bit05: Locked-rotor detection
Bit06: Synchronous motor demagnetization protection
Bit07: Protection against locked-rotor in SVC speed open-loop control
Bit08: Reserved
Bit09: Parameter setting error

Description

-

AA-31 Locked-rotor time

Address:	0xAA1F	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	65.0	Data type:	UInt16
Default:	2.0	Change:	Changeable at any time

Value Range:

0.0s to 65.0s

Description

-

AA-32 Locked-rotor frequency

Address:	0xAA20	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	600.0	Data type:	UInt16
Default:	6.0	Change:	Changeable at any time

Value Range:

0.0% to 600.0%

Description

-

AA-33 Motor stall detection time

Address:	0xAA21	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	10.0	Data type:	UInt16
Default:	0.5	Change:	Changeable at any time

Value Range:

0.0s to 10.0s

Description

-

AA-34 Stall detection threshold

Address:	0xAA22	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	30.0	Change:	Changeable at any time

Value Range:

0.0% to +100.0%

Description
-

AA-35 Current control exception detection time

Address:	0xAA23	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	1.00	Data type:	UInt16
Default:	0.05	Change:	Changeable at any time

Value Range:
0.00s to 1.00s
Description
-

AA-36 Current control exception detection threshold

Address:	0xAA24	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	25.0	Change:	Changeable at any time

Value Range:
0.0% to 200.0%
Description
-

AA-37 Synchronous motor overcurrent threshold

Address:	0xAA25	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	500.0	Data type:	UInt16
Default:	300.0	Change:	Changeable at any time

Value Range:
0.0% to 500.0%
Description
-

AA-39 Speed deviation detection

Address:	0xAA27	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0 to 1
Description
-

AA-40 Asynchronous motor FVC model switchover frequency

Address:	0xAA28	Effective mode:	-
Min.:	0	Unit:	%
Max.:	1000	Data type:	UInt16
Default:	20	Change:	Changeable only at stop

Value Range:
0% to 1000%
Description
-

AA-41 **Asynchronous motor FVC model switchover hysteresis frequency**

Address:	0xAA29	Effective mode:	-
Min.:	10	Unit:	%
Max.:	50	Data type:	UInt16
Default:	20	Change:	Changeable only at stop

Value Range:
10% to 50%
Description
-

AA-42 **Asynchronous motor FVC observer filter time**

Address:	0xAA2A	Effective mode:	-
Min.:	5	Unit:	ms
Max.:	100	Data type:	UInt16
Default:	15	Change:	Changeable only at stop

Value Range:
5 ms to 100 ms
Description
-

AA-43 **Asynchronous motor FVC current model mode**

Address:	0xAA2B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0 to 1
Description
-

AA-44 **Asynchronous motor FVC pre-excitation output observation angle mode**

Address:	0xAA2C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0 to 1
Description
-

AA-45 **Asynchronous motor SVC model switchover frequency**

Address:	0xAA2D	Effective mode:	-
Min.:	10	Unit:	%
Max.:	20	Data type:	UInt16
Default:	15	Change:	Changeable only at stop

Value Range:
10% to 20%
Description
-

AA-46 **Asynchronous motor SVC observer filter time**

Address:	0xAA2E	Effective mode:	-

Min.: 5 Unit: ms
Max.: 50 Data type: UInt16
Default: 10 Change: Changeable at any time
Value Range:
5 ms to 50 ms
Description
-

AA-47 Asynchronous motor SVC observer gain 1
Address: 0xAA2F Effective mode: -
Min.: 10 Unit: %
Max.: 500 Data type: UInt16
Default: 100 Change: Changeable at any time
Value Range:
10% to 500%
Description
-

AA-48 Asynchronous motor SVC observer gain 2
Address: 0xAA30 Effective mode: -
Min.: 10 Unit: %
Max.: 100 Data type: UInt16
Default: 20 Change: Changeable at any time
Value Range:
10% to 100%
Description
-

AA-49 Asynchronous motor SVC observer mode
Address: 0xAA31 Effective mode: -
Min.: 0 Unit: -
Max.: 3 Data type: UInt16
Default: 0 Change: Changeable only at stop
Value Range:
0 to 3
Description
-

AA-50 Asynchronous motor SVC pre-excitation mode
Address: 0xAA32 Effective mode: -
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 0 Change: Changeable only at stop
Value Range:
0 to 1
Description
-

AA-51 Asynchronous motor SVC speed tracking mode
Address: 0xAA33 Effective mode: -
Min.: 0 Unit: -
Max.: 1 Data type: UInt16

Default: 0 Change: Changeable only at stop

Value Range:

0 to 1

Description

-

AA-54 Synchronous motor 1 model control

Address: 0xAA36 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 5 Change: Changeable at any time

Value Range:

Bit00: Low speed processing

Bit01: Low speed processing 1

Bit02: Online auto-tuning of resistance

Bit03: Online auto-tuning of back EMF

Bit04: KS

Description

-

AA-55 Synchronous motor model K1

Address: 0xAA37 Effective mode: -

Min.: 10 Unit: -

Max.: 3000 Data type: UInt16

Default: 200 Change: Changeable at any time

Value Range:

10 to 3000

Description

-

AA-56 Synchronous motor model K1Max

Address: 0xAA38 Effective mode: -

Min.: 100 Unit: -

Max.: 6000 Data type: UInt16

Default: 3000 Change: Changeable at any time

Value Range:

100 to 6000

Description

-

AA-57 Synchronous motor model KsMin

Address: 0xAA39 Effective mode: -

Min.: 0.0 Unit: -

Max.: 4.0 Data type: UInt16

Default: 0.3 Change: Changeable at any time

Value Range:

0.0 to 4.0

Description

-

AA-58 **Synchronous motor model Kspeed**

Address:	0xAA3A	Effective mode:	-
Min.:	50	Unit:	-
Max.:	2000	Data type:	UInt16
Default:	400	Change:	Changeable at any time

Value Range:
50 to 2000
Description
-

AA-59 **Synchronous motor frequency filter time constant**

Address:	0xAA3B	Effective mode:	-
Min.:	2	Unit:	ms
Max.:	100	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
2 ms to 100 ms
Description
-

AA-60 **Frequency upper limit of synchronous motor Rs online auto-tuning**

Address:	0xAA3C	Effective mode:	-
Min.:	1.0	Unit:	%
Max.:	20.0	Data type:	UInt16
Default:	3.5	Change:	Changeable at any time

Value Range:
1.0% to 20.0%
Description
-

AA-61 **Synchronous motor model Kr**

Address:	0xAA3D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	50	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
0 to 50
Description
-

AA-62 **Synchronous motor model Kr1**

Address:	0xAA3E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	50	Data type:	UInt16
Default:	5	Change:	Changeable at any time

Value Range:
0 to 50
Description
-

AA-63 **Synchronous motor low-speed D axis injection current**

Address:	0xAA3F	Effective mode:	-

Min.: 0 Unit: %
Max.: 100 Data type: UInt16
Default: 20 Change: Changeable at any time
Value Range:
0% to 100%
Description
-

AA-64 Synchronous motor model LowFreqTime1

Address: 0xAA40 Effective mode: -
Min.: 0 Unit: -
Max.: 500 Data type: UInt16
Default: 50 Change: Changeable at any time
Value Range:
0 to 500
Description
-

AA-67 Frequency lower limit of back EMF online auto-tuning

Address: 0xAA43 Effective mode: -
Min.: 10 Unit: %
Max.: 100 Data type: UInt16
Default: 25 Change: Changeable at any time
Value Range:
10% to 100%
Description
-

AA-68 Synchronous motor model LowFreq

Address: 0xAA44 Effective mode: -
Min.: 0.0 Unit: %
Max.: 2.0 Data type: UInt16
Default: 0.3 Change: Changeable at any time
Value Range:
0.0% to 2.0%
Description
-

AA-69 Synchronous motor model LowFreqTime

Address: 0xAA45 Effective mode: -
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 10 Change: Changeable at any time
Value Range:
0 to 100
Description
-

AA-70 Percentage of pole auto-tuning current

Address: 0xAA46 Effective mode: -
Min.: 50 Unit: %
Max.: 200 Data type: UInt16

Default: 100 Change: Changeable at any time

Value Range:

50% to 200%

Description

-

AA-71 Percentage of high frequency response current

Address: 0xAA47 Effective mode: -

Min.: 0 Unit: %

Max.: 100 Data type: UInt16

Default: 25 Change: Changeable at any time

Value Range:

0% to 100%

Description

-

AA-72 Percentage of HFI and SVC switching frequency

Address: 0xAA48 Effective mode: -

Min.: 0 Unit: %

Max.: 30 Data type: UInt16

Default: 10 Change: Changeable at any time

Value Range:

0% to 30%

Description

-

AA-73 Observer parameter

Address: 0xAA49 Effective mode: -

Min.: 10 Unit: -

Max.: 200 Data type: UInt16

Default: 100 Change: Changeable at any time

Value Range:

10 to 200

Description

-

AA-74 Speed filter cut-off frequency

Address: 0xAA4A Effective mode: -

Min.: 1 Unit: Hz

Max.: 200 Data type: UInt16

Default: 10 Change: Changeable at any time

Value Range:

1 Hz to 200 Hz

Description

-

AA-75 Carrier frequency during NS auto-tuning

Address: 0xAA4B Effective mode: -

Min.: 2.00 Unit: Hz

Max.: 16.00 Data type: UInt16

Default: 8.00 Change: Changeable at any time

Value Range:

2.00 Hz to 16.00 Hz

Description

-

AA-76 Automatic calculation of NS auto-tuning voltage

Address:	0xAA4C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0 to 1

Description

-

AA-77 Percentage of NS auto-tuning voltage set manually

Address:	0xAA4D	Effective mode:	-
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:

0% to 100%

Description

-

AA-78 Duration of HFI stage 1

Address:	0xAA4E	Effective mode:	-
Min.:	50	Unit:	ms
Max.:	500	Data type:	UInt16
Default:	150	Change:	Changeable at any time

Value Range:

50 ms to 500 ms

Description

-

AA-80 Speed loop command word

Address:	0xAA50	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	11	Change:	Changeable at any time

Value Range:

Bit00: Speed loop
0: Disabled
1: Enabled
Bit01: Integration mode
0: Conventional integration
1: Position integration
Bit02: Acceleration torque
0: Disabled
1: Enabled
Bit03–Bit04: Acceleration source
0: Function transfer torque
1: Automatic calculation
2: Function transfer acceleration
Bit05: Anti-load disturbance
0: Disabled
1: Enabled

Description

-

AA-81 Locked-rotor fast integral cancel coefficient

Address:	0xAA51	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:

0.0% to +100.0%

Description

-

AA-82 Integral torque

Address:	0xAA52	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:

–100% to +100.0%

Description

-

AA-83 Speed controller frequency window size

Address:	0xAA53	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	10.00	Data type:	UInt16
Default:	0.00	Change:	Changeable only at stop

Value Range:

0.00 Hz to 10.00 Hz

Description

-

AA-84 **Current filter time for torque reference**

Address:	0xAA54	Effective mode:	-
Min.:	0.0	Unit:	ms
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0 ms to 100.0 ms
Description
-

AA-85 **Acceleration torque**

Address:	0xAA55	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Inactive
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector
Description
-

AA-87 **Reference model bandwidth**

Address:	0xAA57	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	300.00	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to 300.00 Hz
Description
-

AA-88 **Torque feedforward coefficient**

Address:	0xAA58	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

AA-89 **Vector control reference frequency filter time**

Address:	0xAA59	Effective mode:	-

Min.: 0.0 Unit: ms
Max.: 100.0 Data type: UInt16
Default: 0.0 Change: Changeable only at stop
Value Range:
0.0 ms to 100.0 ms
Description
-

AA-90 Vector control feedback frequency filter time

Address: 0xAA5A Effective mode: -
Min.: 0.0 Unit: ms
Max.: 100.0 Data type: UInt16
Default: 0.0 Change: Changeable only at stop
Value Range:
0.0 ms to 100.0 ms
Description
-

AA-91 Load observation bandwidth

Address: 0xAA5B Effective mode: -
Min.: 0.00 Unit: Hz
Max.: 300.00 Data type: UInt16
Default: 0.00 Change: Changeable at any time
Value Range:
0.00 Hz to 300.00 Hz
Description
-

AA-92 Load observation coefficient

Address: 0xAA5C Effective mode: -
Min.: 0.0 Unit: %
Max.: 1000.0 Data type: UInt16
Default: 100.0 Change: Changeable at any time
Value Range:
0.0% to 1000.0%
Description
-

AA-93 Pseudo integral coefficient

Address: 0xAA5D Effective mode: -
Min.: 0.000 Unit: -
Max.: 10.000 Data type: UInt16
Default: 1.000 Change: Changeable at any time
Value Range:
0.000 to 10.000
Description
-

AA-94 Torque coefficient enable

Address: 0xAA5E Effective mode: -
Min.: 0 Unit: -
Max.: 1 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Disabled

1: Enabled

Description

-

AA-96 Center frequency of notch filter 1

Address: 0xAA60 Effective mode: -

Min.: 0.0 Unit: -

Max.: 4000.0 Data type: UInt16

Default: 4000.0 Change: Changeable at any time

Value Range:

0.0 to 4000.0

Description

-

AA-97 Center frequency of notch filter 2

Address: 0xAA61 Effective mode: -

Min.: 0.0 Unit: -

Max.: 4000.0 Data type: UInt16

Default: 4000.0 Change: Changeable at any time

Value Range:

0.0 to 4000.0

Description

-

AA-98 Integral setting control word

Address: 0xAA62 Effective mode: -

Min.: 0 Unit: -

Max.: 1 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Disabled

1: Enabled

Others: B connector

Description

-

AA-99 Integral reference source

Address: 0xAA63 Effective mode: -

Min.: 0 Unit: -

Max.: 8 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Digital setting
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector
Description
-

4.27 AB: Motor Control Parameters 1

AB-00 **Externally transferred acceleration**

Address:	0xAB00	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Inactive
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector
Description
-

AB-03 **Overturning torque limiting coefficient**

Address:	0xAB03	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	400.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 400.0%
Description
-

AB-04 **Motoring power limiting coefficient**

Address:	0xAB04	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	400.0	Data type:	UInt16

Default: 400.0 Change: Changeable at any time

Value Range:

0.0% to 400.0%

Description

-

AB-05 Generating power limiting coefficient

Address: 0xAB05 Effective mode: -

Min.: 0.0 Unit: %

Max.: 400.0 Data type: UInt16

Default: 400.0 Change: Changeable at any time

Value Range:

0.0% to 400.0%

Description

-

AB-06 Overspeed limiting enable

Address: 0xAB06 Effective mode: -

Min.: 0 Unit: -

Max.: 1 Data type: UInt16

Default: 1 Change: Changeable at any time

Value Range:

0 to 1

Description

-

AB-07 Sine wave frequency of bandwidth test

Address: 0xAB07 Effective mode: -

Min.: 0 Unit: Hz

Max.: 1000 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 Hz to 1000 Hz

Description

-

AB-08 Sine wave amplitude of bandwidth test

Address: 0xAB08 Effective mode: -

Min.: 0 Unit: %

Max.: 100 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0% to 100%

Description

-

AB-09 Bandwidth test enable

Address: 0xAB09 Effective mode: -

Min.: 0 Unit: -

Max.: 4 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 4

Description

-

AB-11 **Speed loop parameter calculation mode**

Address:	0xAB0B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0: New solution

1: Compatible solution

Description

-

AB-12 **Speed loop proportional gain in FVC mode**

Address:	0xAB0C	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	100.00	Data type:	UInt16
Default:	8.00	Change:	Changeable at any time

Value Range:

0.00 Hz to 100.00 Hz

Description

-

AB-13 **Speed loop integral time in FVC mode**

Address:	0xAB0D	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	20.000	Data type:	UInt16
Default:	0.080	Change:	Changeable at any time

Value Range:

0.000s to 20.000s

Description

-

AB-14 **Speed loop proportional gain in SVC mode**

Address:	0xAB0E	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	100.00	Data type:	UInt16
Default:	5.00	Change:	Changeable at any time

Value Range:

0.00 Hz to 100.00 Hz

Description

-

AB-15 **Speed loop integral time in SVC mode**

Address:	0xAB0F	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	20.000	Data type:	UInt16
Default:	0.127	Change:	Changeable at any time

Value Range:

0.000s to 20.000s

Description

-

AB-16 **Low frequency proportional correction coefficient**

Address:	0xAB10	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:

0.0% to 1000.0%

Description

-

AB-17 **Low frequency integral correction coefficient**

Address:	0xAB11	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:

0.0% to 1000.0%

Description

-

AB-18 **Speed loop adaption factor**

Address:	0xAB12	Effective mode:	-
Min.:	0.000	Unit:	-
Max.:	10.000	Data type:	UInt16
Default:	0.200	Change:	Changeable at any time

Value Range:

0.000 to 10.000

Description

-

AB-19 **Speed loop adaption switchover lower limit**

Address:	0xAB13	Effective mode:	-
Min.:	0.000	Unit:	-
Max.:	10.000	Data type:	UInt16
Default:	0.400	Change:	Changeable at any time

Value Range:

0.000 to 10.000

Description

-

AB-20 **Speed loop adaption switchover upper limit**

Address:	0xAB14	Effective mode:	-
Min.:	0.000	Unit:	-
Max.:	10.000	Data type:	UInt16
Default:	1.000	Change:	Changeable at any time

Value Range:

0.000 to 10.000

Description
-

AB-21 **Speed loop adaption correction upper limit**

Address:	0xAB15	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

AB-22 **Speed loop adaption correction lower limit**

Address:	0xAB16	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

AB-23 **Flux adaptation enable**

Address:	0xAB17	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 1
Description
-

AB-24 **Overspeed controller correction coefficient**

Address:	0xAB18	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

AB-25 **VDC control command word**

Address:	0xAB19	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Bit00: VdcMin

0: Disabled

1: Enabled

Bit01: VdcMax

0: Disabled

1: Enabled

Bit02: Automatic calculation of VDC trigger voltage

0: Disabled

1: Enabled

Bit03: VDC control integral action

0: Disabled

1: Enabled

Description

-

AB-26 **Bus capacitance ratio**

Address:	0xAB1A	Effective mode:	-
Min.:	50.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:

50.0% to 1000.0%

Description

-

AB-27 **Undervoltage suppression exit hysteresis frequency**

Address:	0xAB1B	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	10.00	Data type:	UInt16
Default:	3.00	Change:	Changeable at any time

Value Range:

0.00 Hz to 10.00 Hz

Description

-

AB-28 **Minimum VDC failure speed threshold**

Address:	0xAB1C	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	20.00	Data type:	UInt16
Default:	2.00	Change:	Changeable at any time

Value Range:

0.00 Hz to 20.00 Hz

Description

-

AB-29 **Dynamic adjustment coefficient**

Address:	0xAB1D	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

AB-30 **Minimum VDC activation voltage**

Address:	0xAB1E	Effective mode:	-
Min.:	320.0	Unit:	V
Max.:	540.0	Data type:	UInt16
Default:	430.0	Change:	Changeable at any time

Value Range:
320.0 V to 540.0 V
Description
-

AB-31 **Maximum VDC activation voltage**

Address:	0xAB1F	Effective mode:	-
Min.:	650.0	Unit:	V
Max.:	800.0	Data type:	UInt16
Default:	770.0	Change:	Changeable at any time

Value Range:
650.0 V to 800.0 V
Description
-

AB-32 **Flux linkage control command word**

Address:	0xAB20	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	2357	Change:	Changeable at any time

Value Range:

Bit00: Output voltage limit calculation filtering mode
0: Symmetric filtering
1: Asymmetric filtering
Bit01: Asynchronous motor inverse proportion curve calculation
0: The inverse proportional synchronization frequency decreases.
1: The inverse proportional speed decreases.
Bit02: Flux linkage feedforward calculation by using inverse proportional speed
0: Disabled
1: Enabled
Bit03: Reserved
Bit04: Reserved
Bit05: Field weakening adjustment
0: Disabled
1: Enabled
Bit06: Flux linkage derivative feedforward
0: Disabled
1: Enabled
Bit07: Energy conservation control
0: Disabled
1: Enabled
Bit08: Asynchronous motor flux closed loop
0: Disabled
1: Enabled
Bit09: Reserved
Bit10: Reserved
Bit11: Asynchronous motor pre-excitation mode
0: Pre-excitation based on time
1: Pre-excitation based on current
Bit12: Asynchronous motor pre-excitation current
0: Reference current
1: Maximum current allowed by the drive

Description

Bit00: Output voltage limit calculation filtering mode
0 indicates the usual first-order filtering, and 1 indicates filtering when the bus voltage rises and no filtering when it falls, so as to avoid overmodulation.
Bit01: Asynchronous motor inverse proportion curve calculation
You can select 1 to deliberately lower the break frequency to avoid saturation in the field-weakening range. The setting is valid only when Bit02 is set to 1.
Bit02: Flux linkage feedforward calculation by using inverse proportional speed
If it is set to 1, the inverse proportional speed of flux linkage reference decreases when the output frequency exceeds the break frequency, which can improve dynamic response during acceleration.
Bit05: Field weakening adjustment
When it is set to 1, voltage outer loop adjustment is valid.
Bit07: Energy conservation control
This function is valid for asynchronous motors. It can reduce copper loss at light load in vector control mode.
Bit11: Asynchronous motor pre-excitation mode

0: Pre-excitation is implemented according to the set time. The time will be shorter than the set time if remanence exists.
1: Fixed current is output during the pre-excitation process, and the motor exits the pre-excitation mode when it detects that the flux linkage reaches the setpoint.
Bit12: Asynchronous motor pre-excitation current
0: Pre-excitation is implemented based on the current defined by AB-51.
1: Pre-excitation is implemented based on the maximum current allowed by the drive, which can shorten the pre-excitation time.

AB-33 Output voltage upper limit margin for field weakening adjustment

Address:	0xAB21	Effective mode:	-
Min.:	1	Unit:	%
Max.:	50	Data type:	UInt16
Default:	5	Change:	Changeable at any time

Value Range:
1% to 50%
Description
Decreasing the setpoint can improve voltage utilization. The current is smaller under the same load in the field weakening region. However, an excessively small setpoint will affect dynamic performance.

AB-34 Output voltage upper limit margin for auto adjustment of field weakening

Address:	0xAB22	Effective mode:	-
Min.:	1	Unit:	%
Max.:	20	Data type:	UInt16
Default:	3	Change:	Changeable at any time

Value Range:
1% to 20%
Description
When F2-18 is set to 2 (calculation+auto adjustment), the value of this parameter affects the voltage margin, and the effect is similar to that of AB-33.

AB-35 Filter time for calculating maximum output voltage

Address:	0xAB23	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:
0 ms to 3000 ms
Description
Increasing the filter time allows the maximum output voltage to change slowly but affects voltage utilization.

AB-36 Rated flux adjustment coefficient for calculation

Address:	0xAB24	Effective mode:	-
Min.:	0.5	Unit:	-
Max.:	2.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.5 to 2.0

Description

You can decrease the value of this parameter if underexcitation is required, or increase it if overexcitation is required.

AB-37 Field weakening frequency adjustment coefficient for calculation

Address:	0xAB25	Effective mode:	-
Min.:	0.8	Unit:	-
Max.:	1.2	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:

0.8 to 1.2

Description

This parameter is used to adjust the break frequency calculated automatically by the AC drive. After flux linkage feedforward calculation by using inverse proportional speed is enabled, deceasing the value of this parameter enables the motor to enter the field weakening state in advance, which is applicable to occasions with short acceleration time and high dynamic response requirements.

AB-38 Slip filter time for calculating field weakening frequency

Address:	0xAB26	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	62	Change:	Changeable at any time

Value Range:

0 ms to 3000 ms

Description

When flux linkage feedforward calculation by using inverse proportional speed is enabled, increasing the value of this parameter can reduce the fluctuation range of the calculated reference flux linkage.

AB-39 Feedback speed filtering

Address:	0xAB27	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	8000	Data type:	UInt16
Default:	50	Change:	Changeable at any time

Value Range:

0 ms to 8000 ms

Description

When flux linkage feedforward calculation by using inverse proportional speed is enabled, increasing the value of this parameter can reduce the disturbance to the calculated flux linkage feedforward introduced by speed test.

AB-40 Flux linkage rising filter time

Address:	0xAB28	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	8000	Data type:	UInt16
Default:	20	Change:	Changeable at any time

Value Range:

0 ms to 8000 ms

Description

When flux linkage feedforward calculation by using inverse proportional speed is enabled, this parameter defines the filter time of the asymmetric filter that takes effect only when the reference flux linkage increases.

AB-42 **Feedback voltage filter time**

Address:	0xAB2A	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	5	Change:	Changeable at any time

Value Range:

0 ms to 3000 ms

Description

When field weakening adjustment is enabled, increasing this filter time can reduce the fluctuation of the reference excitation current. To increase the field weakening gain, you need to decrease the filter time to avoid system oscillation.

AB-43 **Maximum demagnetization current of synchronous motor**

Address:	0xAB2B	Effective mode:	-
Min.:	0	Unit:	%
Max.:	500	Data type:	UInt16
Default:	300	Change:	Changeable at any time

Value Range:

0% to 500%

Description

This parameter is used to limit the demagnetization current of synchronous motors to prevent faults such as overload. It is a percentage relative to the rated current.

AB-44 **Voltage outer loop lower limit coefficient**

Address:	0xAB2C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	500	Data type:	UInt16
Default:	50	Change:	Changeable at any time

Value Range:

0 to 500

Description

This parameter is used to limit the lower limit of flux linkage during field weakening for asynchronous motors to avoid limiting torque reduction.

AB-45 **Flux linkage derivative feedforward coefficient**

Address:	0xAB2D	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	1.5	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:

0.0 to 1.5

Description

When flux linkage derivative feedforward of an asynchronous motor is enabled, this parameter can adjust the ratio of effective feedforward. A smaller value indicates smaller feedforward effect.

AB-46 **Flux linkage derivative feedforward filter time**

Address:	0xAB2E	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	6	Change:	Changeable at any time

Value Range:

0 ms to 3000 ms

Description

Increasing the filter time can reduce the fluctuation of the calculated feedforward value.

AB-47 Torque current rising filter time under energy conservation control

Address:	0xAB2F	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	50	Change:	Changeable at any time

Value Range:

0 ms to 3000 ms

Description

When energy conservation control of an asynchronous motor is enabled, decreasing the value of this parameter can improve dynamic response and avoid a large drop in speed when a sudden load is applied. You need to increase this value when the output current fluctuates greatly.

AB-48 Torque current falling filter time under energy conservation control

Address:	0xAB30	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:

0 ms to 3000 ms

Description

When energy conservation control of an asynchronous motor is enabled, decreasing the value of this parameter can make the output current decrease rapidly after the load is reduced. You need to increase this value when the output current fluctuates greatly.

AB-49 Flux linkage lower limit coefficient under energy conservation control

Address:	0xAB31	Effective mode:	-
Min.:	0.00	Unit:	-
Max.:	0.50	Data type:	UInt16
Default:	0.10	Change:	Changeable at any time

Value Range:

0.00 to 0.50

Description

This parameter defines the minimum flux linkage allowed under energy conservation control. A smaller value indicates more significant energy conservation effect when no load is applied, but it will affect dynamic response after the load is added.

AB-51 Pre-excitation current

Address:	0xAB33	Effective mode:	-
Min.:	1	Unit:	%
Max.:	200	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:

1% to 200%

Description

When pre-excitation of an asynchronous motor is implemented based on current, this parameter defines the reference excitation current as a percentage of the rated current.

AB-52 **Pre-excitation time**

Address:	0xAB34	Effective mode:	-
Min.:	1	Unit:	ms
Max.:	30000	Data type:	UInt16
Default:	1000	Change:	Changeable at any time

Value Range:

1 ms to 30000 ms

Description

When pre-excitation of an asynchronous motor is implemented based on time, this parameter defines the total excitation time. The actual excitation time will be shorter than the set time if remanence exists.

AB-53 **Flux linkage closed-loop bandwidth frequency**

Address:	0xAB35	Effective mode:	-
Min.:	0.0	Unit:	Hz
Max.:	100.0	Data type:	UInt16
Default:	2.0	Change:	Changeable at any time

Value Range:

0.0 Hz to 100.0 Hz

Description

When flux closed loop is enabled, increasing the setpoint can reduce the deviation of the flux linkage from the rated value during dynamic processes such as sudden load or acceleration and deceleration of the asynchronous motor.

AB-54 **Feedback flux linkage filter time coefficient**

Address:	0xAB36	Effective mode:	-
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	4	Change:	Changeable at any time

Value Range:

0 to 200

Description

When flux closed loop is enabled, increasing the setpoint can reduce fluctuation of the reference flux linkage. It is a percentage relative to the rotor time constant.

AB-55 **Static output flux linkage filter time**

Address:	0xAB37	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	5000	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:

0 ms to 5000 ms

Description

Increasing the setpoint can reduce fluctuation of the reference flux linkage.

AB-56 **Current loop mode**

Address:	0xAB38	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0: ImCsr2 mode

1: Complex vector mode

2: 880 mode

3: No field weakening

Description

Decreasing the value of this parameter can enhance current loop following but also increase the overshoot and harmonics of the output current.

AB-57 PI regulator proportional gain adaptation with load

Address:	0xAB39	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Disabled

1: Enabled

Description

-

AB-58 Current loop damping

Address:	0xAB3A	Effective mode:	-
Min.:	0.2	Unit:	-
Max.:	5.0	Data type:	UInt16
Default:	0.8	Change:	Changeable at any time

Value Range:

0.2 to 5.0

Description

Decreasing the value of this parameter can enhance current loop following but also increase the overshoot and harmonics of the output current.

AB-59 Low-speed current loop Kp adjustment

Address:	0xAB3B	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:

0.1 to 10.0

Description

The AC drive automatically calculates the current loop gain based on motor parameters. You can decrease the value of this parameter as appropriate when low-speed current oscillation or torque fluctuation is large.

AB-60 High-speed current loop Kp adjustment

Address:	0xAB3C	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:

0.1 to 10.0

Description
The AC drive automatically calculates the current loop gain based on motor parameters. You can decrease the value of this parameter as appropriate when low-speed current oscillation or torque fluctuation is large.

AB-61 Low-speed current loop Ki adjustment

Address:	0xAB3D	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0
Description
The AC drive automatically calculates the current loop gain based on motor parameters. You can decrease the value of this parameter as appropriate when low-speed current oscillation or torque fluctuation is large.

AB-62 High-speed current loop Ki adjustment

Address:	0xAB3E	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	2.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0
Description
The AC drive automatically calculates the current loop gain based on motor parameters. You can decrease the value of this parameter as appropriate when low-speed current oscillation or torque fluctuation is large.

AB-63 D-axis current loop complex vector adjustment

Address:	0xAB3F	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0
Description
-

AB-64 Q-axis current loop complex vector adjustment

Address:	0xAB40	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0
Description
-

AB-65 Complex vector hysteresis frequency lower limit as a percentage of rated frequency

Address:	0xAB41	Effective mode:	-

Min.: 0 Unit: %
Max.: AB-66 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
0% to AB-66
Description
-

AB-66 Complex vector hysteresis frequency upper limit as a percentage of rated frequency
Address: 0xAB42 Effective mode: -
Min.: AB-65 Unit: %
Max.: 150 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
AB-65 to 150%
Description
-

AB-67 ImCsr2 hysteresis switchover voltage upper limit as a percentage of saturation voltage
Address: 0xAB43 Effective mode: -
Min.: AB-68 Unit: %
Max.: 95 Data type: UInt16
Default: 89 Change: Changeable at any time
Value Range:
AB-68 to 95%
Description
-

AB-68 ImCsr2 hysteresis switchover voltage lower limit as a percentage of saturation voltage
Address: 0xAB44 Effective mode: -
Min.: 60 Unit: %
Max.: AB-67 Data type: UInt16
Default: 79 Change: Changeable at any time
Value Range:
60% to AB-67
Description
-

AB-69 ImCsr2 hysteresis switchover frequency hysteresis range as a percentage of rated frequency
Address: 0xAB45 Effective mode: -
Min.: 1 Unit: %
Max.: 30 Data type: UInt16
Default: 10 Change: Changeable at any time
Value Range:
1% to 30%
Description
-

AB-70 ImCsr2 hysteresis switchover frequency lower limit (below which the hysteresis condition does not take effect) as a percentage of the rated frequency
Address: 0xAB46 Effective mode: -

Min.:	40	Unit:	%
Max.:	80	Data type:	UInt16
Default:	60	Change:	Changeable at any time

Value Range:
40% to 80%
Description
-

AB-71 **ImCsr2 current loop Kss adjustment**

Address:	0xAB47	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0
Description
-

AB-72 **Proportional gain adjustment coefficient corresponding to the maximum torque when proportional gain is adjusted with load**

Address:	0xAB48	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	1.0	Data type:	UInt16
Default:	0.5	Change:	Changeable at any time

Value Range:
0.1 to 1.0
Description
-

AB-73 **Torque upper limit setpoint as a percentage of rated torque when proportional gain is adjusted with load**

Address:	0xAB49	Effective mode:	-
Min.:	AB-74	Unit:	%
Max.:	300	Data type:	UInt16
Default:	200	Change:	Changeable at any time

Value Range:
AB-74 to 300%
Description
-

AB-74 **Torque lower limit setpoint as a percentage of rated torque when proportional gain is adjusted with load**

Address:	0xAB4A	Effective mode:	-
Min.:	10	Unit:	%
Max.:	AB-73	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
10% to AB-73
Description
-

AB-75 **Derivative feedforward adjustment**

Address:	0xAB4B	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	1.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0 to 1.0
Description
-

AB-76 **Decoupling control start frequency as a percentage of rated frequency**

Address:	0xAB4C	Effective mode:	-
Min.:	20	Unit:	%
Max.:	150	Data type:	UInt16
Default:	40	Change:	Changeable at any time

Value Range:
20% to 150%
Description
-

AB-77 **Decoupling control filter time adjustment coefficient**

Address:	0xAB4D	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	3.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 3.0
Description
-

AB-78 **Decoupling control output adjustment coefficient**

Address:	0xAB4E	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	1.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.0 to 1.0
Description
-

AB-79 **CPC feedforward enable**

Address:	0xAB4F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
Description
-

AB-80 **Current loop auxiliary command word**

Address:	0xAB50	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Bit00: Complex vector angle limiting

0: Disabled

1: Enabled

Bit01: Voltage angle limiting

0: Program internal limiting

1: Parameter setting

Bit02: 0 by default

0: No lower limit on the excitation current is imposed during the dynamic process.

1: A lower limit on the excitation current is imposed during the dynamic process in ImCsr2 mode.

Bit03–Bit15: Reserved (0 by default)

Description

-

AB-81 **Voltage angle upper limit**

Address:	0xAB51	Effective mode:	-
Min.:	90	Unit:	°
Max.:	180	Data type:	UInt16
Default:	150	Change:	Changeable at any time

Value Range:

90° to 180°

Description

-

AB-82 **Voltage angle lower limit**

Address:	0xAB52	Effective mode:	-
Min.:	0	Unit:	°
Max.:	90	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:

0° to 90°

Description

-

AB-83 **Asynchronous motor D axis integral limit**

Address:	0xAB53	Effective mode:	-
Min.:	0.500	Unit:	-
Max.:	1.000	Data type:	UInt16
Default:	0.707	Change:	Changeable at any time

Value Range:

0.500 to 1.000

Description

-

AB-84 **Current loop carrier frequency upper limit**

Address:	0xAB54	Effective mode:	-
Min.:	5.0	Unit:	-
Max.:	16.0	Data type:	UInt16
Default:	8.0	Change:	Changeable at any time

Value Range:
5.0 to 16.0
Description
-

AB-85 **Droop enable**

Address:	0xAB55	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0 to 1
Description
-

AB-86 **Droop source**

Address:	0xAB56	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0: Line current
1: Torque reference
2: Speed adjustment output
3: Speed adjustment integral component
Description
-

AB-87 **Frequency reference droop coefficient**

Address:	0xAB57	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	50.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0% to 50.0%
Description
-

AB-88 **FVC-SVC switchover mode**

Address:	0xAB58	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: No switchover
1: Active switchover
2: Passive switchover (The AC drive switches to SVC mode upon detection of encoder wire breakage, and it switches back to FVC mode when the encoder recovers during stop and does not switch back to FVC mode when the encoder recovers during running.)
3: Passive switchover (The AC drive switches to SVC mode upon detection of encoder wire breakage, and it switches back to FVC mode when the encoder recovers during running or stop.)

Description

-

AB-89 FVC-SVC switchover frequency

Address:	0xAB59	Effective mode:	-
Min.:	10	Unit:	%
Max.:	500	Data type:	UInt16
Default:	50	Change:	Changeable only at stop

Value Range:

10% to 500%

Description

-

AB-90 FVC-SVC switchover hysteresis

Address:	0xAB5A	Effective mode:	-
Min.:	10	Unit:	%
Max.:	100	Data type:	UInt16
Default:	10	Change:	Changeable only at stop

Value Range:

10% to 100%

Description

-

4.28 AC: AI/AO Correction Parameters

AC-00 AI1 measured voltage 1

Address:	0xAC00	Effective mode:	-
Min.:	–10	Unit:	V
Max.:	10.000	Data type:	Int16
Default:	2.000	Change:	Changeable only at stop

Value Range:

–10 V to +10.000 V

Description

-

AC-01 AI1 displayed voltage 1

Address:	0xAC01	Effective mode:	-
Min.:	–10	Unit:	V
Max.:	10.000	Data type:	Int16
Default:	2.000	Change:	Changeable only at stop

Value Range:

–10 V to +10.000 V

Description
-

AC-02 **AI1 measured voltage 2**

Address:	0xAC02	Effective mode:	-
Min.:	–10	Unit:	V
Max.:	10.000	Data type:	Int16
Default:	8.000	Change:	Changeable only at stop

Value Range:
–10 V to +10.000 V
Description
-

AC-03 **AI1 displayed voltage 2**

Address:	0xAC03	Effective mode:	-
Min.:	–10	Unit:	V
Max.:	10.000	Data type:	Int16
Default:	8.000	Change:	Changeable only at stop

Value Range:
–10 V to +10.000 V
Description
-

AC-04 **AI2 measured voltage 1**

Address:	0xAC04	Effective mode:	-
Min.:	–10	Unit:	V
Max.:	10.000	Data type:	Int16
Default:	2.000	Change:	Changeable only at stop

Value Range:
–10 V to +10.000 V
Description
-

AC-05 **AI2 displayed voltage 1**

Address:	0xAC05	Effective mode:	-
Min.:	–10	Unit:	V
Max.:	10.000	Data type:	Int16
Default:	2.000	Change:	Changeable only at stop

Value Range:
–10 V to +10.000 V
Description
-

AC-06 **AI2 measured voltage 2**

Address:	0xAC06	Effective mode:	-
Min.:	–10	Unit:	V
Max.:	10.000	Data type:	Int16
Default:	8.000	Change:	Changeable only at stop

Value Range:
–10 V to +10.000 V
Description
-

AC-07 **AI2 displayed voltage 2**

Address: 0xAC07
Min.: –10
Max.: 10.000
Default: 8.000
Effective mode: -
Unit: V
Data type: Int16
Change: Changeable only at stop

Value Range:
–10 V to +10.000 V
Description
-

AC-08 **AI3 measured voltage 1**

Address: 0xAC08
Min.: –10
Max.: 10.000
Default: 2.000
Effective mode: -
Unit: V
Data type: Int16
Change: Changeable only at stop

Value Range:
–10 V to +10.000 V
Description
-

AC-09 **AI3 displayed voltage 1**

Address: 0xAC09
Min.: –10
Max.: 10.000
Default: 2.000
Effective mode: -
Unit: V
Data type: Int16
Change: Changeable only at stop

Value Range:
–10 V to +10.000 V
Description
-

AC-10 **AI3 measured voltage 2**

Address: 0xAC0A
Min.: –10
Max.: 10.000
Default: 8.000
Effective mode: -
Unit: V
Data type: Int16
Change: Changeable only at stop

Value Range:
–10 V to +10.000 V
Description
-

AC-11 **AI3 displayed voltage 2**

Address: 0xAC0B
Min.: –10
Max.: 10.000
Default: 8.000
Effective mode: -
Unit: V
Data type: Int16
Change: Changeable only at stop

Value Range:
–10 V to +10.000 V
Description
-

AC-12 **AO1 target voltage 1**

Address: 0xAC0C
Effective mode: -

Min.: –10
Max.: 10.000
Default: 2.000
Unit: V
Data type: Int16
Change: Changeable only at stop

Value Range:
–10 V to +10.000 V

Description
-

AC-13 AO1 measured voltage 1

Address: 0xAC0D
Min.: –10
Max.: 10.000
Default: 2.000
Effective mode: -
Unit: V
Data type: Int16
Change: Changeable only at stop

Value Range:
–10 V to +10.000 V

Description
-

AC-14 AO1 target voltage 2

Address: 0xAC0E
Min.: –10
Max.: 10.000
Default: 8.000
Effective mode: -
Unit: V
Data type: Int16
Change: Changeable only at stop

Value Range:
–10 V to +10.000 V

Description
-

AC-15 AO1 measured voltage 2

Address: 0xAC0F
Min.: –10
Max.: 10.000
Default: 8.000
Effective mode: -
Unit: V
Data type: Int16
Change: Changeable only at stop

Value Range:
–10 V to +10.000 V

Description
-

AC-16 AO2 target voltage 1

Address: 0xAC10
Min.: –10
Max.: 10.000
Default: 2.000
Effective mode: -
Unit: V
Data type: Int16
Change: Changeable only at stop

Value Range:
–10 V to +10.000 V

Description
-

AC-17 AO2 measured voltage 1

Address: 0xAC11
Min.: –10
Max.: 10.000
Effective mode: -
Unit: V
Data type: Int16

Default: 2.000
Change: Changeable only at stop
Value Range:
–10 V to +10.000 V
Description
-

AC-18 AO2 target voltage 2
Address: 0xAC12
Effective mode: -
Min.: –10
Unit: V
Max.: 10.000
Data type: Int16
Default: 8.000
Change: Changeable only at stop
Value Range:
–10 V to +10.000 V
Description
-

AC-19 AO2 measured voltage 2
Address: 0xAC13
Effective mode: -
Min.: –10
Unit: V
Max.: 10.000
Data type: Int16
Default: 8.000
Change: Changeable only at stop
Value Range:
–10 V to +10.000 V
Description
-

4.29 AF: Process Data Address Mapping Parameters

AF-00 RPDO1-SubIndex0-H
Address: 0xAF00
Effective mode: -
Min.: 0x0
Unit: -
Max.: 0xFFFF
Data type: UInt16
Default: 0x0
Change: Changeable at any time
Value Range:
0x0 to 0xFFFF
Description
-

AF-01 RPDO1-SubIndex0-L
Address: 0xAF01
Effective mode: -
Min.: 0x0
Unit: -
Max.: 0xFFFF
Data type: UInt16
Default: 0x0
Change: Changeable at any time
Value Range:
0x0 to 0xFFFF
Description
-

AF-02 RPDO1-SubIndex1-H
Address: 0xAF02
Effective mode: -

Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-03 RPDO1-SubIndex1-L

Address: 0xAF03
Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-04 RPDO1-SubIndex2-H

Address: 0xAF04
Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-05 RPDO1-SubIndex2-L

Address: 0xAF05
Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-06 RPDO1-SubIndex3-H

Address: 0xAF06
Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-07 RPDO1-SubIndex3-L

Address: 0xAF07
Min.: 0x0
Max.: 0xFFFF
Effective mode: -
Unit: -
Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

AF-08 RPDO2-SubIndex0-H

Address: 0xAF08 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

AF-09 RPDO2-SubIndex0-L

Address: 0xAF09 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

AF-10 RPDO2-SubIndex1-H

Address: 0xAF0A Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

AF-11 RPDO2-SubIndex1-L

Address: 0xAF0B Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

AF-12 RPDO2-SubIndex2-H

Address: 0xAF0C Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF
Description
-

AF-13 RPDO2-SubIndex2-L

Address:	0xAF0D	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-14 RPDO2-SubIndex3-H

Address:	0xAF0E	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-15 RPDO2-SubIndex3-L

Address:	0xAF0F	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-16 RPDO3-SubIndex0-H

Address:	0xAF10	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-17 RPDO3-SubIndex0-L

Address:	0xAF11	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-18 **RPDO3-SubIndex1-H**

Address:	0xAF12	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-19 **RPDO3-SubIndex1-L**

Address:	0xAF13	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-20 **RPDO3-SubIndex2-H**

Address:	0xAF14	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-21 **RPDO3-SubIndex2-L**

Address:	0xAF15	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-22 **RPDO3-SubIndex3-H**

Address:	0xAF16	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-23 **RPDO3-SubIndex3-L**

Address: 0xAF17 Effective mode: -
Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0x0 Change: Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-24 **RPDO4-SubIndex0-H**

Address: 0xAF18 Effective mode: -
Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0x0 Change: Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-25 **RPDO4-SubIndex0-L**

Address: 0xAF19 Effective mode: -
Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0x0 Change: Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-26 **RPDO4-SubIndex1-H**

Address: 0xAF1A Effective mode: -
Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0x0 Change: Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-27 **RPDO4-SubIndex1-L**

Address: 0xAF1B Effective mode: -
Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0x0 Change: Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-28 **RPDO4-SubIndex2-H**

Address: 0xAF1C Effective mode: -

Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-29 RPDO4-SubIndex2-L

Address: 0xAF1D
Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-30 RPDO4-SubIndex3-H

Address: 0xAF1E
Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-31 RPDO4-SubIndex3-L

Address: 0xAF1F
Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-32 TPDO1-SubIndexO-H

Address: 0xAF20
Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-33 TPDO1-SubIndexO-L

Address: 0xAF21
Min.: 0x0
Max.: 0xFFFF
Effective mode: -
Unit: -
Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

AF-34 TPDO1-SubIndex1-H

Address: 0xAF22 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

AF-35 TPDO1-SubIndex1-L

Address: 0xAF23 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

AF-36 TPDO1-SubIndex2-H

Address: 0xAF24 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

AF-37 TPDO1-SubIndex2-L

Address: 0xAF25 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

AF-38 TPDO1-SubIndex3-H

Address: 0xAF26 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF
Description
-

AF-39 TPDO1-SubIndex3-L

Address:	0xAF27	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-40 TPDO2-SubIndex0-H

Address:	0xAF28	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-41 TPDO2-SubIndex0-L

Address:	0xAF29	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-42 TPDO2-SubIndex1-H

Address:	0xAF2A	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-43 TPDO2-SubIndex1-L

Address:	0xAF2B	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-44 TPDO2-SubIndex2-H

Address:	0xAF2C	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-45 TPDO2-SubIndex2-L

Address:	0xAF2D	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-46 TPDO2-SubIndex3-H

Address:	0xAF2E	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-47 TPDO2-SubIndex3-L

Address:	0xAF2F	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-48 TPDO3-SubIndex0-H

Address:	0xAF30	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

AF-49 TPDO3-SubIndex0-L

Address: 0xAF31 | Effective mode: -
Min.: 0x0 | Unit: -
Max.: 0xFFFF | Data type: UInt16
Default: 0x0 | Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-50 TPDO3-SubIndex1-H

Address: 0xAF32 | Effective mode: -
Min.: 0x0 | Unit: -
Max.: 0xFFFF | Data type: UInt16
Default: 0x0 | Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-51 TPDO3-SubIndex1-L

Address: 0xAF33 | Effective mode: -
Min.: 0x0 | Unit: -
Max.: 0xFFFF | Data type: UInt16
Default: 0x0 | Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-52 TPDO3-SubIndex2-H

Address: 0xAF34 | Effective mode: -
Min.: 0x0 | Unit: -
Max.: 0xFFFF | Data type: UInt16
Default: 0x0 | Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-53 TPDO3-SubIndex2-L

Address: 0xAF35 | Effective mode: -
Min.: 0x0 | Unit: -
Max.: 0xFFFF | Data type: UInt16
Default: 0x0 | Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-54 TPDO3-SubIndex3-H

Address: 0xAF36 | Effective mode: -

Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-55 TPDO3-SubIndex3-L

Address: 0xAF37
Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-56 TPDO4-SubIndex0-H

Address: 0xAF38
Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-57 TPDO4-SubIndex0-L

Address: 0xAF39
Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-58 TPDO4-SubIndex1-H

Address: 0xAF3A
Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

AF-59 TPDO4-SubIndex1-L

Address: 0xAF3B
Min.: 0x0
Max.: 0xFFFF
Effective mode: -
Unit: -
Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

AF-60 TPDO4-SubIndex2-H

Address: 0xAF3C Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

AF-61 TPDO4-SubIndex2-L

Address: 0xAF3D Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

AF-62 TPDO4-SubIndex3-H

Address: 0xAF3E Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

AF-63 TPDO4-SubIndex3-L

Address: 0xAF3F Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

AF-66 Number of valid RPDOs

Address: 0xAF42 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Unchangeable

Value Range:

0x0 to 0xFFFF

Description

-

AF-67 **Number of valid TPDOs**

Address:	0xAF43	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:

0x0 to 0xFFFF

Description

-

4.30 B6: Motor 2 Startup Control and Protection Parameters

B6-00 **Startup mode**

Address:	0xB600	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Direct start

1: Flying start

2: Pre-excitation start (AC asynchronous motor)

3: SVC quick start

Description

Flying start is recommended if you need to start a motor that is rotating at a high speed. Pre-excitation start and SVC quick start apply only to AC asynchronous motors.

B6-01 **Speed tracking mode**

Address:	0xB601	Effective mode:	-
Min.:	0	Unit:	-
Max.:	4	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: From the stop frequency

1: From the power frequency

2: From the maximum frequency

3: Reserved

4: Magnetic field directional speed tracking (MD290)

Description

-

B6-02 **Speed of speed tracking**

Address:	0xB602	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	20	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

B6-03 **Startup frequency**

Address:	0xB603	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	10.00	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to 10.00 Hz
Description
This parameter defines the startup frequency for direct start of the AC drive. When the frequency reference is lower than the startup frequency, the AC drive will not start but stay standby.

B6-04 **Startup frequency hold time**

Address:	0xB604	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0s to 100.0s
Description
This parameter defines the hold time during which the output frequency remains at the startup frequency. After this hold time elapses, the AC drive will accelerate/decelerate to the reference frequency.

B6-05 **DC braking current at startup**

Address:	0xB605	Effective mode:	-
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	50	Change:	Changeable only at stop

Value Range:
0% to 100%
Description
A larger DC braking current indicates stronger braking force. 100% corresponds to the rated motor current (the current upper limit is 80% of the rated current of the AC drive).

B6-06 **DC braking time at startup**

Address:	0xB606	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0s to 100.0s
Description
This parameter defines the time for DC braking at startup, which is valid only when the startup mode is direct start.

B6-07 **Stop mode**

Address:	0xB607	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Decelerate to stop

1: Coast to stop

2: Stop at maximum capability

Description

-

B6-08 **Start frequency of DC braking at stop**

Address:	0xB608	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00 Hz to F0-10

Description

The AC drive starts DC braking when the running frequency decreases to the value of this parameter during deceleration to stop.

B6-09 **DC braking delay at stop**

Address:	0xB609	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:

0.0s to 100.0s

Description

When the running frequency decreases to the start frequency of DC braking at stop, the AC drive stops output and starts DC braking after this waiting time.

B6-10 **DC braking current at stop**

Address:	0xB60A	Effective mode:	-
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	50	Change:	Changeable at any time

Value Range:

0% to 100%

Description

A larger DC braking current indicates stronger braking force. 100% corresponds to the rated motor current (the current upper limit is 80% of the rated current of the AC drive).

B6-11 **DC braking time at stop**

Address:	0xB60B	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:

0.0s to 100.0s

Description

If this parameter is set to 0, DC braking is disabled.

B6-12 Speed tracking sweep current limit closed loop Kp

Address:	0xB60C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1000	Data type:	UInt16
Default:	500	Change:	Changeable at any time

Value Range:

0 to 1000

Description

-

B6-13 Speed tracking sweep current limit closed loop Ki

Address:	0xB60D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1000	Data type:	UInt16
Default:	800	Change:	Changeable at any time

Value Range:

0 to 1000

Description

-

B6-14 Speed tracking current

Address:	0xB60E	Effective mode:	-
Min.:	30	Unit:	%
Max.:	200	Data type:	UInt16
Default:	80	Change:	Changeable only at stop

Value Range:

30% to 200%

Description

-

B6-15 Current loop multiple

Address:	0xB60F	Effective mode:	-
Min.:	10	Unit:	%
Max.:	600	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:

10% to 600%

Description

-

B6-16 Demagnetization time (valid for asynchronous motors)

Address:	0xB610	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	5.00	Data type:	UInt16
Default:	0.50	Change:	Changeable at any time

Value Range:

0.00s to 5.00s

Description
This parameter defines the minimum waiting time for restart after shutdown.

B6-17 **Overexcitation enable**

Address:	0xB611	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
2: Enabled during deceleration
3: Enabled always
Description
This parameter defines the active mode of overexcitation in vector control mode for asynchronous motors. When it is set to 2, overexcitation takes effect during acceleration, operation at constant speed, and deceleration.

B6-18 **Overexcitation suppression current**

Address:	0xB612	Effective mode:	-
Min.:	0	Unit:	%
Max.:	150	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
0% to 150%
Description
This parameter defines the target current after overexcitation takes effect and is a percentage relative to the rated motor current.

B6-19 **Overexcitation gain**

Address:	0xB613	Effective mode:	-
Min.:	0.01	Unit:	-
Max.:	2.50	Data type:	UInt16
Default:	1.25	Change:	Changeable at any time

Value Range:
0.01 to 2.50
Description
-

B6-25 **Skip frequency 1**

Address:	0xB619	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-10
Description
-

B6-26 **Skip frequency 2**

Address:	0xB61A	Effective mode:	-
Min.:	0.00	Unit:	Hz

Max.: F0-10
Default: 0.00
Data type: UInt16
Change: Changeable at any time

Value Range:
0.00 Hz to F0-10

Description
-

B6-27 Skip frequency 3

Address: 0xB61B
Min.: 0.00
Max.: F0-10
Default: 0.00
Effective mode: -
Unit: Hz
Data type: UInt16
Change: Changeable at any time

Value Range:
0.00 Hz to F0-10

Description
-

B6-28 Skip frequency 4

Address: 0xB61C
Min.: 0.00
Max.: F0-10
Default: 0.00
Effective mode: -
Unit: Hz
Data type: UInt16
Change: Changeable at any time

Value Range:
0.00 Hz to F0-10

Description
-

B6-29 Skip frequency band

Address: 0xB61D
Min.: 0.00
Max.: F0-10
Default: 0.00
Effective mode: -
Unit: Hz
Data type: UInt16
Change: Changeable at any time

Value Range:
0.00 Hz to F0-10

Description
-

B6-30 Source of frequency upper limit

Address: 0xB61E
Min.: 0
Max.: 5
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0: F0-12
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
Others: F connector

Description
-

B6-31 **Frequency upper limit**

Address:	0xB61F	Effective mode:	-
Min.:	B6-33	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	50.00	Change:	Changeable at any time

Value Range:
B6-33 to F0-10
Description
-

B6-32 **Frequency upper limit offset**

Address:	0xB620	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-10 (maximum frequency)
Description
-

B6-33 **Frequency lower limit**

Address:	0xB621	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	B6-31	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to B6-31
Description
-

B6-34 **Speed/Torque control mode**

Address:	0xB622	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Speed control
1: Torque control
Description
-

B6-35 **Motor overload protection**

Address:	0xB623	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled

Description
-

B6-36 **Motor overload protection gain**

Address:	0xB624	Effective mode:	-
Min.:	0.20	Unit:	-
Max.:	10.00	Data type:	UInt16
Default:	1.00	Change:	Changeable at any time

Value Range:
0.20 to 10.00
Description
-

B6-37 **Motor overload pre-warning coefficient**

Address:	0xB625	Effective mode:	-
Min.:	50	Unit:	%
Max.:	100	Data type:	UInt16
Default:	80	Change:	Changeable at any time

Value Range:
50% to 100%
Description
-

B6-38 **Overvoltage stall suppression gain**

Address:	0xB626	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

B6-39 **Overvoltage stall protection voltage**

Address:	0xB627	Effective mode:	-
Min.:	330.0	Unit:	V
Max.:	800.0	Data type:	UInt16
Default:	770.0	Change:	Changeable at any time

Value Range:
330.0 V to 800.0 V
Description
-

B6-40 **Input phase loss/Contactor pickup protection**

Address:	0xB628	Effective mode:	-
Min.:	0	Unit:	-
Max.:	13	Data type:	UInt16
Default:	11	Change:	Changeable at any time

Value Range:

Ones: Input phase loss protection

0: Disabled

1: Protection enabled when both software and hardware input phase loss conditions are met

2: Protection enabled when software input phase loss conditions are met

3: Protection enabled when hardware input phase loss conditions are met

Tens: Contactor pickup protection

0: Disabled

1: Enabled

Description

-

B6-41 **Output phase loss protection**

Address:	0xB629	Effective mode:	-
Min.:	0	Unit:	-
Max.:	11	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

Ones: Output phase loss protection upon power-on

0: Disabled

1: Enabled

Tens: Output phase loss protection before running

0: Disabled

1: Enabled

Description

-

B6-42 **Power dip ride-through**

Address:	0xB62A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Disabled

1: Decelerate

2: Decelerate to stop

3: Suppress voltage dip

Description

-

B6-43 **Voltage threshold for disabling power dip ride-through**

Address:	0xB62B	Effective mode:	-
Min.:	80	Unit:	%
Max.:	100	Data type:	UInt16
Default:	85	Change:	Changeable only at stop

Value Range:

80% to 100%

Description

-

B6-44 **Delay of voltage recovery from power dip**

Address:	0xB62C	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.5	Change:	Changeable only at stop

Value Range:
0.0s to 100.0s
Description
-

B6-45 **Voltage threshold for enabling power dip ride-through**

Address:	0xB62D	Effective mode:	-
Min.:	60	Unit:	%
Max.:	100	Data type:	UInt16
Default:	80	Change:	Changeable only at stop

Value Range:
60% to 100%
Description
-

B6-46 **Protection upon load loss**

Address:	0xB62E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
Description
-

B6-47 **Load loss detection level**

Address:	0xB62F	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	10.0	Change:	Changeable at any time

Value Range:
0.0% to +100.0%
Description
-

B6-48 **Load loss detection time**

Address:	0xB630	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	60.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.0s to 60.0s
Description
-

B6-49 **Overspeed detection level**

Address:	0xB631	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	50.0	Data type:	UInt16
Default:	20.0	Change:	Changeable at any time

Value Range:
0.0% to 50.0%
Description
-

B6-50 **Overspeed detection time**

Address:	0xB632	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	60.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.0s to 60.0s
Description
-

B6-51 **Detection level of excessive speed deviation**

Address:	0xB633	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	50.0	Data type:	UInt16
Default:	20.0	Change:	Changeable at any time

Value Range:
0.0% to 50.0%
Description
-

B6-52 **Detection time of excessive speed deviation**

Address:	0xB634	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	60.0	Data type:	UInt16
Default:	5.0	Change:	Changeable at any time

Value Range:
0.0s to 60.0s
Description
-

B6-53 **Power dip ride-through gain Kp**

Address:	0xB635	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	40	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

B6-54 **Power dip ride-through integral coefficient Ki**

Address:	0xB636	Effective mode:	-

Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

B6-55 Deceleration time of power dip ride-through

Address:	0xB637	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	300.0	Data type:	UInt16
Default:	20.0	Change:	Changeable at any time

Value Range:
0.0s to 300.0s
Description
-

B6-56 Voltage dip suppression time

Address:	0xB638	Effective mode:	-
Min.:	0.1	Unit:	s
Max.:	600.0	Data type:	UInt16
Default:	0.5	Change:	Changeable at any time

Value Range:
0.1s to 600.0s
Description
-

4.31 B7: Motor 2 Nameplate and Learning Parameters 2

B7-00 Number of parallel motors

Address:	0xB700	Effective mode:	-
Min.:	1	Unit:	-
Max.:	200	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
1 to 200
Description
-

B7-01 Motor information command word

Address:	0xB701	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x3	Change:	Changeable only at stop

Value Range:

Bit00: Mutual inductance curve
0: Disabled
1: Enabled
Bit01: D- and Q-axis inductance curve
0: Disabled
1: Enabled
Bit02: Rotor resistance online auto-tuning
0: Disabled
1: Enabled
Bit03: Rotor resistance online auto-tuning method
0: Amplitude
1: Phase
Bit04: Motor thermal model
0: Disabled
1: Enabled
Bit05: Temperature source of motor thermal model
0: Estimated temperature
1: Temperature detected by sensor
Bit06: Torque coefficient calculation of asynchronous motor
0: Torque formula
1: Current distribution
Bit07: Torque coefficient calculation of synchronous motor
0: Torque formula
1: Torque matching the rated torque
Bit08: Zero speed friction torque calculation
0: Torque linearly decreasing to zero
1: Torque to maintain minimum speed
Bit09: Calculation of model parameters based on nameplate parameters
0: Disabled
1: Enabled
Bit10: Confirmation of calculating model parameters based on nameplate parameters
0: Default
1: Confirm

Description

-

B7-02 Number of motor pole pairs

Address:	0xB702	Effective mode:	-
Min.:	0	Unit:	-
Max.:	64	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0 to 64

Description

-

B7-03 **Motor power factor**

Address:	0xB703	Effective mode:	-
Min.:	0.600	Unit:	-
Max.:	1.000	Data type:	UInt16
Default:	0.860	Change:	Changeable only at stop

Value Range:
0.600 to 1.000
Description
-

B7-05 **Expansion card**

Address:	0xB705	Effective mode:	-
Min.:	1	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
1: Expansion card 1
2: Expansion card 2
Description
-

B7-06 **ABZ encoder speed measurement mode at low speed**

Address:	0xB706	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	2	Change:	Changeable only at stop

Value Range:
0: Maintain
1: Attenuate
2: Optimized solution
Description
-

B7-07 **Encoder speed measurement filter time constant**

Address:	0xB707	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	10.000	Data type:	UInt16
Default:	0.004	Change:	Changeable at any time

Value Range:
0.000s to 10.000s
Description
-

B7-08 **Encoder wire breakage software detection coefficient**

Address:	0xB708	Effective mode:	-
Min.:	0.000	Unit:	-
Max.:	8.000	Data type:	UInt16
Default:	1.000	Change:	Changeable at any time

Value Range:
0.000 to 8.000

Description
-

B7-09 **Encoder control word**

Address:	0xB709	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
Bit00: Speed measurement
0: Disabled
1: Enabled
Bit01: Software detection of wire breakage
0: Disabled
1: Enabled
Bit02: Glitch removal
0: Disabled
1: Enabled
Bit03: ABZ encoder speed measurement mode
0: Quadruplicated frequency
1: Single pulse
Description
-

B7-10 **Speed measurement exception count threshold**

Address:	0xB70A	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	10	Change:	Changeable only at stop

Value Range:
1 to 100
Description
-

B7-11 **Motor gear ratio (numerator)**

Address:	0xB70B	Effective mode:	-
Min.:	1	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
1 to 65535
Description
-

B7-12 **Motor gear ratio (denominator)**

Address:	0xB70C	Effective mode:	-
Min.:	1	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

1 to 65535

Description

-

B7-13 **External input source of encoder**

Address:	0xB70D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: Pulse reference

5: Communication

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

B7-15 **Stator leakage inductance**

Address:	0xB70F	Effective mode:	-
Min.:	0.000	Unit:	mH
Max.:	65.535	Data type:	UInt16
Default:	6.540	Change:	Changeable only at stop

Value Range:

0.000 mH to 65.535 mH

Description

-

B7-16 **Electromechanical time constant**

Address:	0xB710	Effective mode:	-
Min.:	1	Unit:	ms
Max.:	65535	Data type:	UInt16
Default:	100	Change:	Unchangeable

Value Range:

1 ms to 65535 ms

Description

-

B7-17 **Inertia ratio**

Address:	0xB711	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	120.0	Change:	Changeable only at stop

Value Range:

0.0% to 6553.5%

Description
-

B7-18 **Friction torque**

Address:	0xB712	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	2.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

B7-19 **Excitation current coefficient 1 of mutual inductance curve (rated)**

Address:	0xB713	Effective mode:	-
Min.:	5.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	50.0	Change:	Changeable only at stop

Value Range:
5.0% to 100.0%
Description
-

B7-20 **Excitation current coefficient 2 of mutual inductance curve (rated)**

Address:	0xB714	Effective mode:	-
Min.:	5.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	75.0	Change:	Changeable only at stop

Value Range:
5.0% to 100.0%
Description
-

B7-21 **Excitation current coefficient 3 of mutual inductance curve**

Address:	0xB715	Effective mode:	-
Min.:	100.0	Unit:	%
Max.:	800.0	Data type:	UInt16
Default:	150.0	Change:	Changeable only at stop

Value Range:
100.0% to 800.0%
Description
-

B7-22 **Excitation current coefficient 4 of mutual inductance curve**

Address:	0xB716	Effective mode:	-
Min.:	100.0	Unit:	%
Max.:	800.0	Data type:	UInt16
Default:	210.0	Change:	Changeable only at stop

Value Range:
100.0% to 800.0%
Description
-

B7-23 **Flux coefficient 1 of mutual inductance curve (rated)**

Address:	0xB717	Effective mode:	-
Min.:	10.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	50.0	Change:	Changeable only at stop

Value Range:
10.0% to 100.0%
Description
-

B7-24 **Flux coefficient 2 of mutual inductance curve (rated)**

Address:	0xB718	Effective mode:	-
Min.:	10.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	85.0	Change:	Changeable only at stop

Value Range:
10.0% to 100.0%
Description
-

B7-25 **Flux coefficient 3 of mutual inductance curve**

Address:	0xB719	Effective mode:	-
Min.:	100.0	Unit:	%
Max.:	300.0	Data type:	UInt16
Default:	115.0	Change:	Changeable only at stop

Value Range:
100.0% to 300.0%
Description
-

B7-26 **Flux coefficient 4 of mutual inductance curve**

Address:	0xB71A	Effective mode:	-
Min.:	100.0	Unit:	%
Max.:	300.0	Data type:	UInt16
Default:	125.0	Change:	Changeable only at stop

Value Range:
100.0% to 300.0%
Description
-

B7-27 **Speed point 1 of friction curve**

Address:	0xB71B	Effective mode:	-
Min.:	0	Unit:	RPM
Max.:	30000	Data type:	UInt16
Default:	15	Change:	Changeable only at stop

Value Range:
0 RPM to 30000 RPM
Description
-

B7-28 **Speed point 2 of friction curve**

Address:	0xB71C	Effective mode:	-

Min.: 0
Max.: 30000
Default: 30
Unit: RPM
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 RPM to 30000 RPM
Description
-

B7-29 **Speed point 3 of friction curve**

Address: 0xB71D
Min.: 0
Max.: 30000
Default: 60
Effective mode: -
Unit: RPM
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 RPM to 30000 RPM
Description
-

B7-30 **Speed point 4 of friction curve**

Address: 0xB71E
Min.: 0
Max.: 30000
Default: 120
Effective mode: -
Unit: RPM
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 RPM to 30000 RPM
Description
-

B7-31 **Speed point 5 of friction curve**

Address: 0xB71F
Min.: 0
Max.: 30000
Default: 150
Effective mode: -
Unit: RPM
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 RPM to 30000 RPM
Description
-

B7-32 **Speed point 6 of friction curve**

Address: 0xB720
Min.: 0
Max.: 30000
Default: 300
Effective mode: -
Unit: RPM
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 RPM to 30000 RPM
Description
-

B7-33 **Speed point 7 of friction curve**

Address: 0xB721
Min.: 0
Max.: 30000
Effective mode: -
Unit: RPM
Data type: UInt16

Default: 600 Change: Changeable only at stop

Value Range:

0 RPM to 30000 RPM

Description

-

B7-34 Speed point 8 of friction curve

Address: 0xB722 Effective mode: -

Min.: 0 Unit: RPM

Max.: 30000 Data type: UInt16

Default: 1200 Change: Changeable only at stop

Value Range:

0 RPM to 30000 RPM

Description

-

B7-35 Speed point 9 of friction curve

Address: 0xB723 Effective mode: -

Min.: 0 Unit: RPM

Max.: 30000 Data type: UInt16

Default: 1500 Change: Changeable only at stop

Value Range:

0 RPM to 30000 RPM

Description

-

B7-36 Speed point 10 of friction curve

Address: 0xB724 Effective mode: -

Min.: 0 Unit: RPM

Max.: 30000 Data type: UInt16

Default: 3000 Change: Changeable only at stop

Value Range:

0 RPM to 30000 RPM

Description

-

B7-37 Torque point 1 of friction curve

Address: 0xB725 Effective mode: -

Min.: –320 Unit: N·m

Max.: 320.00 Data type: Int16

Default: 0.00 Change: Changeable only at stop

Value Range:

–320 N·m to +320 N·m

Description

-

B7-38 Torque point 2 of friction curve

Address: 0xB726 Effective mode: -

Min.: –320 Unit: N·m

Max.: 320.00 Data type: Int16

Default: 0.00 Change: Changeable only at stop

Value Range:

–320 N · m to +320 N · m

Description

-

B7-39 **Torque point 3 of friction curve**

Address:	0xB727	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:

–320 N · m to +320 N · m

Description

-

B7-40 **Torque point 4 of friction curve**

Address:	0xB728	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:

–320 N · m to +320 N · m

Description

-

B7-41 **Torque point 5 of friction curve**

Address:	0xB729	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:

–320 N · m to +320 N · m

Description

-

B7-42 **Torque point 6 of friction curve**

Address:	0xB72A	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:

–320 N · m to +320 N · m

Description

-

B7-43 **Torque point 7 of friction curve**

Address:	0xB72B	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:

–320 N · m to +320 N · m

Description
-

B7-44 **Torque point 8 of friction curve**

Address:	0xB72C	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:
–320 N · m to +320 N · m
Description
-

B7-45 **Torque point 9 of friction curve**

Address:	0xB72D	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:
–320 N · m to +320 N · m
Description
-

B7-46 **Torque point 10 of friction curve**

Address:	0xB72E	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:
–320 N · m to +320 N · m
Description
-

B7-47 **Current coefficient starting point of D- and Q-axis inductance curve**

Address:	0xB72F	Effective mode:	-
Min.:	–800	Unit:	%
Max.:	800.0	Data type:	Int16
Default:	–200	Change:	Changeable only at stop

Value Range:
–800% to +800.0%
Description
-

B7-48 **Current coefficient end point of D- and Q-axis inductance curve**

Address:	0xB730	Effective mode:	-
Min.:	–800	Unit:	%
Max.:	800.0	Data type:	Int16
Default:	200.0	Change:	Changeable only at stop

Value Range:
–800% to +800.0%
Description
-

B7-49 **D axis inductance 1 of D- and Q-axis inductance curve**

Address:	0xB731	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

B7-50 **D axis inductance 2 of D- and Q-axis inductance curve**

Address:	0xB732	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

B7-51 **D axis inductance 3 of D- and Q-axis inductance curve**

Address:	0xB733	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

B7-52 **D axis inductance 4 of D- and Q-axis inductance curve**

Address:	0xB734	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

B7-53 **D axis inductance 5 of D- and Q-axis inductance curve**

Address:	0xB735	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

B7-54 **D axis inductance 6 of D- and Q-axis inductance curve**

Address:	0xB736	Effective mode:	-

Min.: 0.0 Unit: %
Max.: 6553.5 Data type: UInt16
Default: 100.0 Change: Changeable only at stop
Value Range:
0.0% to 6553.5%
Description
-

B7-55 D axis inductance 7 of D- and Q-axis inductance curve
Address: 0xB737 Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: UInt16
Default: 100.0 Change: Changeable only at stop
Value Range:
0.0% to 6553.5%
Description
-

B7-56 D axis inductance 8 of D- and Q-axis inductance curve
Address: 0xB738 Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: UInt16
Default: 100.0 Change: Changeable only at stop
Value Range:
0.0% to 6553.5%
Description
-

B7-57 D axis inductance 9 of D- and Q-axis inductance curve
Address: 0xB739 Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: UInt16
Default: 100.0 Change: Changeable only at stop
Value Range:
0.0% to 6553.5%
Description
-

B7-58 D axis inductance 10 of D- and Q-axis inductance curve
Address: 0xB73A Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: UInt16
Default: 100.0 Change: Changeable only at stop
Value Range:
0.0% to 6553.5%
Description
-

B7-59 D axis inductance 11 of D- and Q-axis inductance curve
Address: 0xB73B Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

B7-60 D axis inductance 12 of D- and Q-axis inductance curve

Address: 0xB73C Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

B7-61 Q axis inductance 1 of D- and Q-axis inductance curve

Address: 0xB73D Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

B7-62 Q axis inductance 2 of D- and Q-axis inductance curve

Address: 0xB73E Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

B7-63 Q axis inductance 3 of D- and Q-axis inductance curve

Address: 0xB73F Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

B7-64 Q axis inductance 4 of D- and Q-axis inductance curve

Address: 0xB740 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

B7-65 **Q axis inductance 5 of D- and Q-axis inductance curve**

Address:	0xB741	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

B7-66 **Q axis inductance 6 of D- and Q-axis inductance curve**

Address:	0xB742	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

B7-67 **Q axis inductance 7 of D- and Q-axis inductance curve**

Address:	0xB743	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

B7-68 **Q axis inductance 8 of D- and Q-axis inductance curve**

Address:	0xB744	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

B7-69 **Q axis inductance 9 of D- and Q-axis inductance curve**

Address:	0xB745	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:

0.0% to 6553.5%

Description
-

B7-70 **Q axis inductance 10 of D- and Q-axis inductance curve**

Address:	0xB746	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

B7-71 **Q axis inductance 11 of D- and Q-axis inductance curve**

Address:	0xB747	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

B7-72 **Q axis inductance 12 of D- and Q-axis inductance curve**

Address:	0xB748	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

4.32 B8: Motor 2 Control, Protection, and Vector Parameters 1

B8-00 **Parameter auto-tuning upon startup**

Address:	0xB800	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

Bit00: Synchronous motor pole position auto-tuning upon startup
0: Disabled
1: Enabled
Bit01: Quick stator resistance auto-tuning upon startup
0: Disabled
1: Enabled
Bit02–Bit03: HFI pole position auto-tuning
0: Disabled
1: Enabled
2: Adaptive
Bit04: IGBT shoot-through self-check upon startup
0: Disabled
1: Enabled
Bit05: Short-to-ground self-check upon startup (reserved)
0: Disabled
1: Enabled
Bit06: Phase loss self-check upon startup (reserved)
0: Disabled
1: Enabled

Description

-

B8-01 **Auto-tuning direction**

Address:	0xB801	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0 to 1

Description

-

B8-02 **Oscillation suppression gain of synchronous motor back EMF auto-tuning**

Address:	0xB802	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	30.0	Data type:	UInt16
Default:	3.2	Change:	Changeable only at stop

Value Range:

0.0 to 30.0

Description

-

B8-03 **Target speed of rotation auto-tuning**

Address:	0xB803	Effective mode:	-
Min.:	30.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	70.0	Change:	Changeable only at stop

Value Range:

30.0% to 100.0%

Description
-

B8-04 **Target speed 1 of inertia auto-tuning**

Address:	0xB804	Effective mode:	-
Min.:	10.0	Unit:	%
Max.:	B8-05	Data type:	UInt16
Default:	40.0	Change:	Changeable only at stop

Value Range:
10.0% to B8-05
Description
-

B8-05 **Target speed 2 of inertia auto-tuning**

Address:	0xB805	Effective mode:	-
Min.:	B8-04	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	60.0	Change:	Changeable only at stop

Value Range:
B8-04 to 100.0%
Description
-

B8-06 **Overcurrent prevention of mutual inductance saturation curve**

Address:	0xB806	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0 to 1
Description
-

B8-07 **Auto-tuning items**

Address:	0xB807	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	117	Change:	Changeable only at stop

Value Range:

Bit00: Speed loop parameter adaptation
0: Disabled
1: Enabled
Bit01: Current loop parameter adaptation
0: Disabled
1: Enabled
Bit02: Drive nonlinear auto-tuning
0: Disabled
1: Enabled
Bit03: Inter-phase deviation coefficient auto-tuning
0: Disabled
1: Enabled
Bit04: Auto-tuning of initial pole position of synchronous motor
0: Disabled
1: Enabled
Bit05: Auto-tuning of D- and Q-axis inductance model of synchronous motor
0: Disabled
1: Enabled
Bit06: System inertia auto-tuning
0: Disabled
1: Enabled
Bit07: HFI pole position auto-tuning
0: Disabled
1: Enabled

Description

-

B8-08 **OFF3 stop mode**

Address:	0xB808	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Quick stop
1: Stop at maximum capability

Description

-

B8-09 **Stop mode during running**

Address:	0xB809	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0: OFF1 stop mode
1: OFF2 stop mode
2: OFF3 stop mode

Description
-

B8-10 **Stop mode for torque control**

Address:	0xB80A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0: Coast to stop forcibly
1: Switch to speed control mode and then stop
2: Maintain torque control mode until zero speed and then block
Description
-

B8-12 **Proportional gain adjustment coefficient**

Address:	0xB80C	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	2.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 2.0
Description
-

B8-13 **Integral gain adjustment coefficient**

Address:	0xB80D	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	2.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 2.0
Description
-

B8-14 **Zero-speed threshold**

Address:	0xB80E	Effective mode:	-
Min.:	0.1	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	2.0	Change:	Changeable at any time

Value Range:
0.1% to 200.0%
Description
-

B8-15 **Zero-speed stop delay**

Address:	0xB80F	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	10.00	Data type:	UInt16
Default:	0.10	Change:	Changeable only at stop

Value Range:

0.00s to 10.00s

Description

-

B8-16 Reference source execution interval

Address:	0xB810	Effective mode:	-
Min.:	0	Unit:	-
Max.:	20	Data type:	UInt16
Default:	4	Change:	Changeable only at stop

Value Range:

0 to 20

Description

-

B8-17 Trial current for speed tracking of synchronous motor

Address:	0xB811	Effective mode:	-
Min.:	5.0	Unit:	%
Max.:	50.0	Data type:	UInt16
Default:	10.0	Change:	Changeable only at stop

Value Range:

5.0% to 50.0%

Description

-

B8-18 Minimum frequency for speed tracking of synchronous motor

Address:	0xB812	Effective mode:	-
Min.:	0.0	Unit:	Hz
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:

0.0 Hz to 100.0 Hz

Description

-

B8-19 Angle compensation for speed tracking of synchronous motor

Address:	0xB813	Effective mode:	-
Min.:	0	Unit:	-
Max.:	360	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0 to 360

Description

-

B8-20 Parameter auto-tuning of synchronous motor upon startup

Address:	0xB814	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 1

Description
-

B8-21 **Current motor angle**

Address:	0xB815	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

B8-22 **Forward torque limit 1**

Address:	0xB816	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	400.0	Data type:	UInt16
Default:	150.0	Change:	Changeable at any time

Value Range:
0.0 to 400.0
Description
-

B8-23 **Reverse torque limit 1**

Address:	0xB817	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	400.0	Data type:	UInt16
Default:	150.0	Change:	Changeable at any time

Value Range:
0.0 to 400.0
Description
-

B8-24 **Source of forward torque limit 2**

Address:	0xB818	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: 400%
Others: F connector
Description
-

B8-25 **Source of reverse torque limit 2**

Address:	0xB819	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: –400%
Others: F connector

Description
-

B8-26 **Ramp (FRG) selection bit0**

Address:	0xB81A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: 0
1: 1
2: Terminal function input
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector
Description
-

B8-27 **Ramp (FRG) selection bit1**

Address:	0xB81B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as B8-26
Description
-

B8-30 **Motor protection**

Address:	0xB81E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	537	Change:	Changeable at any time

Value Range:

Bit00: Motor overload determination (reserved)
Bit01: Motor overheat detection (reserved)
Bit02: PG fault detection (reserved)
Bit03: Current control error detection
Bit04: Motor stall error detection
Bit05: Locked-rotor detection
Bit06: Synchronous motor demagnetization protection
Bit07: Protection against locked-rotor in SVC speed open-loop control
Bit08: Reserved
Bit09: Parameter setting error

Description

-

B8-31 Locked-rotor time

Address:	0xB81F	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	65.0	Data type:	UInt16
Default:	2.0	Change:	Changeable at any time

Value Range:

0.0s to 65.0s

Description

-

B8-32 Locked-rotor frequency

Address:	0xB820	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	600.0	Data type:	UInt16
Default:	6.0	Change:	Changeable at any time

Value Range:

0.0% to 600.0%

Description

-

B8-33 Motor stall detection time

Address:	0xB821	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	10.0	Data type:	UInt16
Default:	0.5	Change:	Changeable at any time

Value Range:

0.0s to 10.0s

Description

-

B8-34 Stall detection threshold

Address:	0xB822	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	30.0	Change:	Changeable at any time

Value Range:

0.0% to +100.0%

Description
-

B8-35 **Current control exception detection time**

Address:	0xB823	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	1.00	Data type:	UInt16
Default:	0.05	Change:	Changeable at any time

Value Range:
0.00s to 1.00s
Description
-

B8-36 **Current control exception detection threshold**

Address:	0xB824	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	25.0	Change:	Changeable at any time

Value Range:
0.0% to 200.0%
Description
-

B8-37 **Synchronous motor overcurrent threshold**

Address:	0xB825	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	500.0	Data type:	UInt16
Default:	300.0	Change:	Changeable at any time

Value Range:
0.0% to 500.0%
Description
-

B8-39 **Speed deviation detection**

Address:	0xB827	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0 to 1
Description
-

B8-40 **Asynchronous motor FVC model switchover frequency**

Address:	0xB828	Effective mode:	-
Min.:	0	Unit:	%
Max.:	1000	Data type:	UInt16
Default:	20	Change:	Changeable only at stop

Value Range:
0% to 1000%
Description
-

B8-41 **Asynchronous motor FVC model switchover hysteresis frequency**

Address:	0xB829	Effective mode:	-
Min.:	10	Unit:	%
Max.:	50	Data type:	UInt16
Default:	20	Change:	Changeable only at stop

Value Range:
10% to 50%
Description
-

B8-42 **Asynchronous motor FVC observer filter time**

Address:	0xB82A	Effective mode:	-
Min.:	5	Unit:	ms
Max.:	100	Data type:	UInt16
Default:	15	Change:	Changeable only at stop

Value Range:
5 ms to 100 ms
Description
-

B8-43 **Asynchronous motor FVC current model mode**

Address:	0xB82B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0 to 1
Description
-

B8-44 **Asynchronous motor FVC pre-excitation output observation angle mode**

Address:	0xB82C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0 to 1
Description
-

B8-45 **Asynchronous motor SVC model switchover frequency**

Address:	0xB82D	Effective mode:	-
Min.:	10	Unit:	%
Max.:	20	Data type:	UInt16
Default:	15	Change:	Changeable only at stop

Value Range:
10% to 20%
Description
-

B8-46 **Asynchronous motor SVC observer filter time**

Address:	0xB82E	Effective mode:	-

Min.:	5	Unit:	ms
Max.:	50	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
5 ms to 50 ms
Description
-

B8-47 Asynchronous motor SVC observer gain 1

Address:	0xB82F	Effective mode:	-
Min.:	10	Unit:	%
Max.:	500	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
10% to 500%
Description
-

B8-48 Asynchronous motor SVC observer gain 2

Address:	0xB830	Effective mode:	-
Min.:	10	Unit:	%
Max.:	100	Data type:	UInt16
Default:	20	Change:	Changeable at any time

Value Range:
10% to 100%
Description
-

B8-49 Asynchronous motor SVC observer mode

Address:	0xB831	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0 to 3
Description
-

B8-50 Asynchronous motor SVC pre-excitation mode

Address:	0xB832	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0 to 1
Description
-

B8-51 Asynchronous motor SVC speed tracking mode

Address:	0xB833	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16

Default: 0 Change: Changeable only at stop

Value Range:

0 to 1

Description

-

B8-54 Synchronous motor 1 model control

Address: 0xB836 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 5 Change: Changeable at any time

Value Range:

Bit00: Low speed processing

Bit01: Low speed processing 1

Bit02: Online auto-tuning of resistance

Bit03: Online auto-tuning of back EMF

Bit04: KS

Description

-

B8-55 Synchronous motor model K1

Address: 0xB837 Effective mode: -

Min.: 10 Unit: -

Max.: 3000 Data type: UInt16

Default: 200 Change: Changeable at any time

Value Range:

10 to 3000

Description

-

B8-56 Synchronous motor model K1Max

Address: 0xB838 Effective mode: -

Min.: 100 Unit: -

Max.: 6000 Data type: UInt16

Default: 3000 Change: Changeable at any time

Value Range:

100 to 6000

Description

-

B8-57 Synchronous motor model KsMin

Address: 0xB839 Effective mode: -

Min.: 0.0 Unit: -

Max.: 4.0 Data type: UInt16

Default: 0.3 Change: Changeable at any time

Value Range:

0.0 to 4.0

Description

-

B8-58 **Synchronous motor model Kspeed**

Address:	0xB83A	Effective mode:	-
Min.:	50	Unit:	-
Max.:	2000	Data type:	UInt16
Default:	400	Change:	Changeable at any time

Value Range:
50 to 2000
Description
-

B8-59 **Synchronous motor frequency filter time constant**

Address:	0xB83B	Effective mode:	-
Min.:	2	Unit:	ms
Max.:	100	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
2 ms to 100 ms
Description
-

B8-60 **Frequency upper limit of synchronous motor Rs online auto-tuning**

Address:	0xB83C	Effective mode:	-
Min.:	1.0	Unit:	%
Max.:	20.0	Data type:	UInt16
Default:	3.5	Change:	Changeable at any time

Value Range:
1.0% to 20.0%
Description
-

B8-61 **Synchronous motor model Kr**

Address:	0xB83D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	50	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
0 to 50
Description
-

B8-62 **Synchronous motor model Kr1**

Address:	0xB83E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	50	Data type:	UInt16
Default:	5	Change:	Changeable at any time

Value Range:
0 to 50
Description
-

B8-63 **Synchronous motor low-speed D axis injection current**

Address:	0xB83F	Effective mode:	-

Min.: 0 Unit: %
Max.: 100 Data type: UInt16
Default: 20 Change: Changeable at any time
Value Range:
0% to 100%
Description
-

B8-64 Synchronous motor model LowFreqTime1

Address: 0xB840 Effective mode: -
Min.: 0 Unit: -
Max.: 500 Data type: UInt16
Default: 50 Change: Changeable at any time
Value Range:
0 to 500
Description
-

B8-67 Frequency lower limit of back EMF online auto-tuning

Address: 0xB843 Effective mode: -
Min.: 10 Unit: %
Max.: 100 Data type: UInt16
Default: 25 Change: Changeable at any time
Value Range:
10% to 100%
Description
-

B8-68 Synchronous motor model LowFreq

Address: 0xB844 Effective mode: -
Min.: 0.0 Unit: %
Max.: 2.0 Data type: UInt16
Default: 0.3 Change: Changeable at any time
Value Range:
0.0% to 2.0%
Description
-

B8-69 Synchronous motor model LowFreqTime

Address: 0xB845 Effective mode: -
Min.: 0 Unit: -
Max.: 100 Data type: UInt16
Default: 10 Change: Changeable at any time
Value Range:
0 to 100
Description
-

B8-70 Percentage of pole auto-tuning current

Address: 0xB846 Effective mode: -
Min.: 50 Unit: %
Max.: 200 Data type: UInt16

Default: 100 Change: Changeable at any time

Value Range:

50% to 200%

Description

-

B8-71 Percentage of high frequency response current

Address: 0xB847 Effective mode: -

Min.: 0 Unit: %

Max.: 100 Data type: UInt16

Default: 25 Change: Changeable at any time

Value Range:

0% to 100%

Description

-

B8-72 Percentage of HFI and SVC switching frequency

Address: 0xB848 Effective mode: -

Min.: 0 Unit: %

Max.: 30 Data type: UInt16

Default: 10 Change: Changeable at any time

Value Range:

0% to 30%

Description

-

B8-73 Observer parameter

Address: 0xB849 Effective mode: -

Min.: 10 Unit: -

Max.: 200 Data type: UInt16

Default: 100 Change: Changeable at any time

Value Range:

10 to 200

Description

-

B8-74 Speed filter cut-off frequency

Address: 0xB84A Effective mode: -

Min.: 1 Unit: Hz

Max.: 200 Data type: UInt16

Default: 10 Change: Changeable at any time

Value Range:

1 Hz to 200 Hz

Description

-

B8-75 Carrier frequency during NS auto-tuning

Address: 0xB84B Effective mode: -

Min.: 2.00 Unit: Hz

Max.: 16.00 Data type: UInt16

Default: 8.00 Change: Changeable at any time

Value Range:

2.00 Hz to 16.00 Hz

Description

-

B8-76 Automatic calculation of NS auto-tuning voltage

Address:	0xB84C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0 to 1

Description

-

B8-77 Percentage of NS auto-tuning voltage set manually

Address:	0xB84D	Effective mode:	-
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:

0% to 100%

Description

-

B8-78 Duration of HFI stage 1

Address:	0xB84E	Effective mode:	-
Min.:	50	Unit:	ms
Max.:	500	Data type:	UInt16
Default:	150	Change:	Changeable at any time

Value Range:

50 ms to 500 ms

Description

-

B8-80 Speed loop command word

Address:	0xB850	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	11	Change:	Changeable at any time

Value Range:

Bit00: Speed loop
0: Disabled
1: Enabled
Bit01: Integration mode
0: Conventional integration
1: Position integration
Bit02: Acceleration torque
0: Disabled
1: Enabled
Bit03–Bit04: Acceleration source
0: Function transfer torque
1: Automatic calculation
2: Function transfer acceleration
Bit05: Anti-load disturbance
0: Disabled
1: Enabled

Description

-

B8-81 Locked-rotor fast integral cancel coefficient

Address:	0xB851	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:

0.0% to +100.0%

Description

-

B8-82 Integral torque

Address:	0xB852	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:

–100% to +100.0%

Description

-

B8-83 Speed controller frequency window size

Address:	0xB853	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	10.00	Data type:	UInt16
Default:	0.00	Change:	Changeable only at stop

Value Range:

0.00 Hz to 10.00 Hz

Description

-

B8-84 **Current filter time for torque reference**

Address:	0xB854	Effective mode:	-
Min.:	0.0	Unit:	ms
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0 ms to 100.0 ms
Description
-

B8-85 **Acceleration torque**

Address:	0xB855	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Inactive
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector
Description
-

B8-87 **Reference model bandwidth**

Address:	0xB857	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	300.00	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to 300.00 Hz
Description
-

B8-88 **Torque feedforward coefficient**

Address:	0xB858	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

B8-89 **Vector control reference frequency filter time**

Address:	0xB859	Effective mode:	-

Min.: 0.0 Unit: ms
Max.: 100.0 Data type: UInt16
Default: 0.0 Change: Changeable only at stop
Value Range:
0.0 ms to 100.0 ms
Description
-

B8-90 Vector control feedback frequency filter time

Address: 0xB85A Effective mode: -
Min.: 0.0 Unit: ms
Max.: 100.0 Data type: UInt16
Default: 0.0 Change: Changeable only at stop
Value Range:
0.0 ms to 100.0 ms
Description
-

B8-91 Load observation bandwidth

Address: 0xB85B Effective mode: -
Min.: 0.00 Unit: Hz
Max.: 300.00 Data type: UInt16
Default: 0.00 Change: Changeable at any time
Value Range:
0.00 Hz to 300.00 Hz
Description
-

B8-92 Load observation coefficient

Address: 0xB85C Effective mode: -
Min.: 0.0 Unit: %
Max.: 1000.0 Data type: UInt16
Default: 100.0 Change: Changeable at any time
Value Range:
0.0% to 1000.0%
Description
-

B8-93 Pseudo integral coefficient

Address: 0xB85D Effective mode: -
Min.: 0.000 Unit: -
Max.: 10.000 Data type: UInt16
Default: 1.000 Change: Changeable at any time
Value Range:
0.000 to 10.000
Description
-

B8-94 Torque coefficient enable

Address: 0xB85E Effective mode: -
Min.: 0 Unit: -
Max.: 1 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Disabled

1: Enabled

Description

-

B8-96 Center frequency of notch filter 1

Address: 0xB860 Effective mode: -

Min.: 0.0 Unit: -

Max.: 4000.0 Data type: UInt16

Default: 4000.0 Change: Changeable at any time

Value Range:

0.0 to 4000.0

Description

-

B8-97 Center frequency of notch filter 2

Address: 0xB861 Effective mode: -

Min.: 0.0 Unit: -

Max.: 4000.0 Data type: UInt16

Default: 4000.0 Change: Changeable at any time

Value Range:

0.0 to 4000.0

Description

-

B8-98 Integral setting control word

Address: 0xB862 Effective mode: -

Min.: 0 Unit: -

Max.: 1 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Disabled

1: Enabled

Others: B connector

Description

-

B8-99 Integral reference source

Address: 0xB863 Effective mode: -

Min.: 0 Unit: -

Max.: 8 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Digital setting
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector
Description
-

4.33 B9: Motor 2 Vector Control Parameters 2

B9-00 **Externally transferred acceleration**

Address:	0xB900	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Inactive
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector
Description
-

B9-03 **Overturning torque limiting coefficient**

Address:	0xB903	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	400.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 400.0%
Description
-

B9-04 **Motoring power limiting coefficient**

Address:	0xB904	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	400.0	Data type:	UInt16

Default: 400.0 Change: Changeable at any time

Value Range:

0.0% to 400.0%

Description

-

B9-05 Generating power limiting coefficient

Address: 0xB905 Effective mode: -

Min.: 0.0 Unit: %

Max.: 400.0 Data type: UInt16

Default: 400.0 Change: Changeable at any time

Value Range:

0.0% to 400.0%

Description

-

B9-06 Overspeed limiting enable

Address: 0xB906 Effective mode: -

Min.: 0 Unit: -

Max.: 1 Data type: UInt16

Default: 1 Change: Changeable at any time

Value Range:

0 to 1

Description

-

B9-07 Sine wave frequency of bandwidth test

Address: 0xB907 Effective mode: -

Min.: 0 Unit: Hz

Max.: 1000 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 Hz to 1000 Hz

Description

-

B9-08 Sine wave amplitude of bandwidth test

Address: 0xB908 Effective mode: -

Min.: 0 Unit: %

Max.: 100 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0% to 100%

Description

-

B9-09 Bandwidth test enable

Address: 0xB909 Effective mode: -

Min.: 0 Unit: -

Max.: 4 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 4

Description

-

B9-11 Speed loop parameter calculation mode

Address:	0xB90B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0: New solution

1: Compatible solution

Description

-

B9-12 Speed loop proportional gain in FVC mode

Address:	0xB90C	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	100.00	Data type:	UInt16
Default:	8.00	Change:	Changeable at any time

Value Range:

0.00 Hz to 100.00 Hz

Description

-

B9-13 Speed loop integral time in FVC mode

Address:	0xB90D	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	20.000	Data type:	UInt16
Default:	0.080	Change:	Changeable at any time

Value Range:

0.000s to 20.000s

Description

-

B9-14 Speed loop proportional gain in SVC mode

Address:	0xB90E	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	100.00	Data type:	UInt16
Default:	5.00	Change:	Changeable at any time

Value Range:

0.00 Hz to 100.00 Hz

Description

-

B9-15 Speed loop integral time in SVC mode

Address:	0xB90F	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	20.000	Data type:	UInt16
Default:	0.127	Change:	Changeable at any time

Value Range:

0.000s to 20.000s

Description

-

B9-16 **Low frequency proportional correction coefficient**

Address:	0xB910	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:

0.0% to 1000.0%

Description

-

B9-17 **Low frequency integral correction coefficient**

Address:	0xB911	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:

0.0% to 1000.0%

Description

-

B9-18 **Speed loop adaption factor**

Address:	0xB912	Effective mode:	-
Min.:	0.000	Unit:	-
Max.:	10.000	Data type:	UInt16
Default:	0.200	Change:	Changeable at any time

Value Range:

0.000 to 10.000

Description

-

B9-19 **Speed loop adaption switchover lower limit**

Address:	0xB913	Effective mode:	-
Min.:	0.000	Unit:	-
Max.:	10.000	Data type:	UInt16
Default:	0.400	Change:	Changeable at any time

Value Range:

0.000 to 10.000

Description

-

B9-20 **Speed loop adaption switchover upper limit**

Address:	0xB914	Effective mode:	-
Min.:	0.000	Unit:	-
Max.:	10.000	Data type:	UInt16
Default:	1.000	Change:	Changeable at any time

Value Range:

0.000 to 10.000

Description
-

B9-21 **Speed loop adaption correction upper limit**

Address:	0xB915	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

B9-22 **Speed loop adaption correction lower limit**

Address:	0xB916	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

B9-23 **Flux adaptation enable**

Address:	0xB917	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 1
Description
-

B9-24 **Overspeed controller correction coefficient**

Address:	0xB918	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

B9-25 **VDC control command word**

Address:	0xB919	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Bit00: VdcMin

0: Disabled

1: Enabled

Bit01: VdcMax

0: Disabled

1: Enabled

Bit02: Automatic calculation of VDC trigger voltage

0: Disabled

1: Enabled

Bit03: VDC control integral action

0: Disabled

1: Enabled

Description

-

B9-26 **Bus capacitance ratio**

Address:	0xB91A	Effective mode:	-
Min.:	50.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:

50.0% to 1000.0%

Description

-

B9-27 **Undervoltage suppression exit hysteresis frequency**

Address:	0xB91B	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	10.00	Data type:	UInt16
Default:	3.00	Change:	Changeable at any time

Value Range:

0.00 Hz to 10.00 Hz

Description

-

B9-28 **Minimum VDC failure speed threshold**

Address:	0xB91C	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	20.00	Data type:	UInt16
Default:	2.00	Change:	Changeable at any time

Value Range:

0.00 Hz to 20.00 Hz

Description

-

B9-29 **Dynamic adjustment coefficient**

Address:	0xB91D	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

B9-30 **Minimum VDC activation voltage**

Address:	0xB91E	Effective mode:	-
Min.:	320.0	Unit:	V
Max.:	540.0	Data type:	UInt16
Default:	430.0	Change:	Changeable at any time

Value Range:
320.0 V to 540.0 V
Description
-

B9-31 **Maximum VDC activation voltage**

Address:	0xB91F	Effective mode:	-
Min.:	650.0	Unit:	V
Max.:	800.0	Data type:	UInt16
Default:	770.0	Change:	Changeable at any time

Value Range:
650.0 V to 800.0 V
Description
-

B9-32 **Flux linkage control command word**

Address:	0xB920	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	2357	Change:	Changeable at any time

Value Range:

Bit00: Output voltage limit calculation filtering mode
0: Symmetric filtering
1: Asymmetric filtering
Bit01: Asynchronous motor inverse proportion curve calculation
0: The inverse proportional synchronization frequency decreases.
1: The inverse proportional speed decreases.
Bit02: Flux linkage feedforward calculation by using inverse proportional speed
0: Disabled
1: Enabled
Bit03: Reserved
Bit04: Reserved
Bit05: Field weakening adjustment
0: Disabled
1: Enabled
Bit06: Flux linkage derivative feedforward
0: Disabled
1: Enabled
Bit07: Energy conservation control
0: Disabled
1: Enabled
Bit08: Asynchronous motor flux closed loop
0: Disabled
1: Enabled
Bit09: Reserved
Bit10: Reserved
Bit11: Asynchronous motor pre-excitation mode
0: Pre-excitation based on time
1: Pre-excitation based on current
Bit12: Asynchronous motor pre-excitation current
0: Reference current
1: Maximum current allowed by the drive

Description

Bit00: Output voltage limit calculation filtering mode
0 indicates the usual first-order filtering, and 1 indicates filtering when the bus voltage rises and no filtering when it falls, so as to avoid overmodulation.
Bit01: Asynchronous motor inverse proportion curve calculation
You can select 1 to deliberately lower the break frequency to avoid saturation in the field-weakening range. The setting is valid only when Bit02 is set to 1.
Bit02: Flux linkage feedforward calculation by using inverse proportional speed
If it is set to 1, the inverse proportional speed of flux linkage reference decreases when the output frequency exceeds the break frequency, which can improve dynamic response during acceleration.
Bit05: Field weakening adjustment
When it is set to 1, voltage outer loop adjustment is valid.
Bit07: Energy conservation control
This function is valid for asynchronous motors. It can reduce copper loss at light load in vector control mode.
Bit11: Asynchronous motor pre-excitation mode

0: Pre-excitation is implemented according to the set time. The time will be shorter than the set time if remanence exists.
1: Fixed current is output during the pre-excitation process, and the motor exits the pre-excitation mode when it detects that the flux linkage reaches the setpoint.
Bit12: Asynchronous motor pre-excitation current
0: Pre-excitation is implemented based on the current defined by AB-51.
1: Pre-excitation is implemented based on the maximum current allowed by the drive, which can shorten the pre-excitation time.

B9-33 Output voltage upper limit margin for field weakening adjustment

Address:	0xB921	Effective mode:	-
Min.:	1	Unit:	%
Max.:	50	Data type:	UInt16
Default:	5	Change:	Changeable at any time

Value Range:
1% to 50%
Description
Decreasing the setpoint can improve voltage utilization. The current is smaller under the same load in the field weakening region. However, an excessively small setpoint will affect dynamic performance.

B9-34 Output voltage upper limit margin for auto adjustment of field weakening

Address:	0xB922	Effective mode:	-
Min.:	1	Unit:	%
Max.:	20	Data type:	UInt16
Default:	3	Change:	Changeable at any time

Value Range:
1% to 20%
Description
When F2-18 is set to 2 (calculation+auto adjustment), the value of this parameter affects the voltage margin, and the effect is similar to that of AB-33.

B9-35 Filter time for calculating maximum output voltage

Address:	0xB923	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:
0 ms to 3000 ms
Description
Increasing the filter time allows the maximum output voltage to change slowly but affects voltage utilization.

B9-36 Rated flux adjustment coefficient for calculation

Address:	0xB924	Effective mode:	-
Min.:	0.5	Unit:	-
Max.:	2.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.5 to 2.0

Description
You can decrease the value of this parameter if underexcitation is required, or increase it if overexcitation is required.

B9-37 Field weakening frequency adjustment coefficient for calculation

Address:	0xB925	Effective mode:	-
Min.:	0.8	Unit:	-
Max.:	1.2	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.8 to 1.2
Description
This parameter is used to adjust the break frequency calculated automatically by the AC drive. After flux linkage feedforward calculation by using inverse proportional speed is enabled, deceasing the value of this parameter enables the motor to enter the field weakening state in advance, which is applicable to occasions with short acceleration time and high dynamic response requirements.

B9-38 Slip filter time for calculating field weakening frequency

Address:	0xB926	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	62	Change:	Changeable at any time

Value Range:
0 ms to 3000 ms
Description
When flux linkage feedforward calculation by using inverse proportional speed is enabled, increasing the value of this parameter can reduce the fluctuation range of the calculated reference flux linkage.

B9-39 Feedback speed filtering

Address:	0xB927	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	8000	Data type:	UInt16
Default:	50	Change:	Changeable at any time

Value Range:
0 ms to 8000 ms
Description
When flux linkage feedforward calculation by using inverse proportional speed is enabled, increasing the value of this parameter can reduce the disturbance to the calculated flux linkage feedforward introduced by speed test.

B9-40 Flux linkage rising filter time

Address:	0xB928	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	8000	Data type:	UInt16
Default:	20	Change:	Changeable at any time

Value Range:
0 ms to 8000 ms
Description
When flux linkage feedforward calculation by using inverse proportional speed is enabled, this parameter defines the filter time of the asymmetric filter that takes effect only when the reference flux linkage increases.

B9-42 **Feedback voltage filter time**

Address:	0xB92A	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	5	Change:	Changeable at any time

Value Range:

0 ms to 3000 ms

Description

When field weakening adjustment is enabled, increasing this filter time can reduce the fluctuation of the reference excitation current. To increase the field weakening gain, you need to decrease the filter time to avoid system oscillation.

B9-43 **Maximum demagnetization current of synchronous motor**

Address:	0xB92B	Effective mode:	-
Min.:	0	Unit:	%
Max.:	500	Data type:	UInt16
Default:	300	Change:	Changeable at any time

Value Range:

0% to 500%

Description

This parameter is used to limit the demagnetization current of synchronous motors to prevent faults such as overload. It is a percentage relative to the rated current.

B9-44 **Voltage outer loop lower limit coefficient**

Address:	0xB92C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	500	Data type:	UInt16
Default:	50	Change:	Changeable at any time

Value Range:

0 to 500

Description

This parameter is used to limit the lower limit of flux linkage during field weakening for asynchronous motors to avoid limiting torque reduction.

B9-45 **Flux linkage derivative feedforward coefficient**

Address:	0xB92D	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	1.5	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:

0.0 to 1.5

Description

When flux linkage derivative feedforward of an asynchronous motor is enabled, this parameter can adjust the ratio of effective feedforward. A smaller value indicates smaller feedforward effect.

B9-46 **Flux linkage derivative feedforward filter time**

Address:	0xB92E	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	6	Change:	Changeable at any time

Value Range:

0 ms to 3000 ms

Description

Increasing the filter time can reduce the fluctuation of the calculated feedforward value.

B9-47 Torque current rising filter time under energy conservation control

Address:	0xB92F	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	50	Change:	Changeable at any time

Value Range:

0 ms to 3000 ms

Description

When energy conservation control of an asynchronous motor is enabled, decreasing the value of this parameter can improve dynamic response and avoid a large drop in speed when a sudden load is applied. You need to increase this value when the output current fluctuates greatly.

B9-48 Torque current falling filter time under energy conservation control

Address:	0xB930	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:

0 ms to 3000 ms

Description

When energy conservation control of an asynchronous motor is enabled, decreasing the value of this parameter can make the output current decrease rapidly after the load is reduced. You need to increase this value when the output current fluctuates greatly.

B9-49 Flux linkage lower limit coefficient under energy conservation control

Address:	0xB931	Effective mode:	-
Min.:	0.00	Unit:	-
Max.:	0.50	Data type:	UInt16
Default:	0.10	Change:	Changeable at any time

Value Range:

0.00 to 0.50

Description

This parameter defines the minimum flux linkage allowed under energy conservation control. A smaller value indicates more significant energy conservation effect when no load is applied, but it will affect dynamic response after the load is added.

B9-51 Pre-excitation current

Address:	0xB933	Effective mode:	-
Min.:	1	Unit:	%
Max.:	200	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:

1% to 200%

Description

When pre-excitation of an asynchronous motor is implemented based on current, this parameter defines the reference excitation current as a percentage of the rated current.

B9-52 **Pre-excitation time**

Address:	0xB934	Effective mode:	-
Min.:	1	Unit:	ms
Max.:	30000	Data type:	UInt16
Default:	1000	Change:	Changeable at any time

Value Range:

1 ms to 30000 ms

Description

When pre-excitation of an asynchronous motor is implemented based on time, this parameter defines the total excitation time. The actual excitation time will be shorter than the set time if remanence exists.

B9-53 **Flux linkage closed-loop bandwidth frequency**

Address:	0xB935	Effective mode:	-
Min.:	0.0	Unit:	Hz
Max.:	100.0	Data type:	UInt16
Default:	2.0	Change:	Changeable at any time

Value Range:

0.0 Hz to 100.0 Hz

Description

When flux closed loop is enabled, increasing the setpoint can reduce the deviation of the flux linkage from the rated value during dynamic processes such as sudden load or acceleration and deceleration of the asynchronous motor.

B9-54 **Feedback flux linkage filter time coefficient**

Address:	0xB936	Effective mode:	-
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	4	Change:	Changeable at any time

Value Range:

0 to 200

Description

When flux closed loop is enabled, increasing the setpoint can reduce fluctuation of the reference flux linkage. It is a percentage relative to the rotor time constant.

B9-55 **Static output flux linkage filter time**

Address:	0xB937	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	5000	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:

0 ms to 5000 ms

Description

Increasing the setpoint can reduce fluctuation of the reference flux linkage.

B9-56 **Current loop mode**

Address:	0xB938	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0: ImCsr2 mode
1: Complex vector mode
2: 880 mode
3: No field weakening

Description

Decreasing the value of this parameter can enhance current loop following but also increase the overshoot and harmonics of the output current.

B9-57 PI regulator proportional gain adaptation with load

Address:	0xB939	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0 to 1

Description

-

B9-58 Current loop damping

Address:	0xB93A	Effective mode:	-
Min.:	0.2	Unit:	-
Max.:	5.0	Data type:	UInt16
Default:	0.8	Change:	Changeable at any time

Value Range:

0.2 to 5.0

Description

Decreasing the value of this parameter can enhance current loop following but also increase the overshoot and harmonics of the output current.

B9-59 Low-speed current loop Kp adjustment

Address:	0xB93B	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:

0.1 to 10.0

Description

The AC drive automatically calculates the current loop gain based on motor parameters. You can decrease the value of this parameter as appropriate when low-speed current oscillation or torque fluctuation is large.

B9-60 High-speed current loop Kp adjustment

Address:	0xB93C	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:

0.1 to 10.0

Description
The AC drive automatically calculates the current loop gain based on motor parameters. You can decrease the value of this parameter as appropriate when low-speed current oscillation or torque fluctuation is large.

B9-61 Low-speed current loop Ki adjustment

Address:	0xB93D	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0
Description
The AC drive automatically calculates the current loop gain based on motor parameters. You can decrease the value of this parameter as appropriate when low-speed current oscillation or torque fluctuation is large.

B9-62 High-speed current loop Ki adjustment

Address:	0xB93E	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	2.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0
Description
The AC drive automatically calculates the current loop gain based on motor parameters. You can decrease the value of this parameter as appropriate when low-speed current oscillation or torque fluctuation is large.

B9-63 D-axis current loop complex vector adjustment

Address:	0xB93F	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0
Description
-

B9-64 Q-axis current loop complex vector adjustment

Address:	0xB940	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0
Description
-

B9-65 Complex vector hysteresis frequency lower limit as a percentage of rated frequency

Address:	0xB941	Effective mode:	-

Min.: 0 Unit: %
Max.: B9-66 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
0% to B9-66
Description
-

B9-66 Complex vector hysteresis frequency upper limit as a percentage of rated frequency
Address: 0xB942 Effective mode: -
Min.: B9-65 Unit: %
Max.: 150 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
B9-65 to 150%
Description
-

B9-67 ImCsr2 hysteresis switchover voltage upper limit as a percentage of saturation voltage
Address: 0xB943 Effective mode: -
Min.: B9-68 Unit: %
Max.: 95 Data type: UInt16
Default: 89 Change: Changeable at any time
Value Range:
B9-68 to 95%
Description
-

B9-68 ImCsr2 hysteresis switchover voltage lower limit as a percentage of saturation voltage
Address: 0xB944 Effective mode: -
Min.: 60 Unit: %
Max.: B9-67 Data type: UInt16
Default: 79 Change: Changeable at any time
Value Range:
60% to B9-67
Description
-

B9-69 ImCsr2 hysteresis switchover frequency hysteresis range as a percentage of rated frequency
Address: 0xB945 Effective mode: -
Min.: 1 Unit: %
Max.: 30 Data type: UInt16
Default: 10 Change: Changeable at any time
Value Range:
1% to 30%
Description
-

B9-70 ImCsr2 hysteresis switchover frequency lower limit (below which the hysteresis condition does not take effect) as a percentage of the rated frequency
Address: 0xB946 Effective mode: -

Min.:	40	Unit:	%
Max.:	80	Data type:	UInt16
Default:	60	Change:	Changeable at any time

Value Range:
40% to 80%
Description
-

B9-71 ImCsr2 current loop Kss adjustment

Address:	0xB947	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0
Description
-

B9-72 Proportional gain adjustment coefficient corresponding to the maximum torque when proportional gain is adjusted with load

Address:	0xB948	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	1.0	Data type:	UInt16
Default:	0.5	Change:	Changeable at any time

Value Range:
0.1 to 1.0
Description
-

B9-73 Torque upper limit setpoint as a percentage of rated torque when proportional gain is adjusted with load

Address:	0xB949	Effective mode:	-
Min.:	B9-74	Unit:	%
Max.:	300	Data type:	UInt16
Default:	200	Change:	Changeable at any time

Value Range:
B9-74 to 300%
Description
-

B9-74 Torque lower limit setpoint as a percentage of rated torque when proportional gain is adjusted with load

Address:	0xB94A	Effective mode:	-
Min.:	10	Unit:	%
Max.:	B9-73	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
10% to B9-73
Description
-

B9-75 **Derivative feedforward adjustment**

Address:	0xB94B	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	1.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0 to 1.0
Description
-

B9-76 **Decoupling control start frequency as a percentage of rated frequency**

Address:	0xB94C	Effective mode:	-
Min.:	20	Unit:	%
Max.:	150	Data type:	UInt16
Default:	40	Change:	Changeable at any time

Value Range:
20% to 150%
Description
-

B9-77 **Decoupling control filter time adjustment coefficient**

Address:	0xB94D	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	3.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 3.0
Description
-

B9-78 **Decoupling control output adjustment coefficient**

Address:	0xB94E	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	1.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.0 to 1.0
Description
-

B9-79 **CPC feedforward enable**

Address:	0xB94F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
Description
-

B9-80 **Current loop auxiliary command word**

Address:	0xB950	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Bit00: Complex vector angle limiting

0: Disabled

1: Enabled

Bit01: Voltage angle limiting

0: Program internal limiting

1: Parameter setting

Bit02: 0 by default

0: No lower limit on the excitation current is imposed during the dynamic process.

1: A lower limit on the excitation current is imposed during the dynamic process in ImCsr2 mode.

Bit03–Bit15: Reserved (0 by default)

Description

-

B9-81 **Voltage angle upper limit**

Address:	0xB951	Effective mode:	-
Min.:	90	Unit:	°
Max.:	180	Data type:	UInt16
Default:	150	Change:	Changeable at any time

Value Range:

90° to 180°

Description

-

B9-82 **Voltage angle lower limit**

Address:	0xB952	Effective mode:	-
Min.:	0	Unit:	°
Max.:	90	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:

0° to 90°

Description

-

B9-83 **Asynchronous motor D axis integral limit**

Address:	0xB953	Effective mode:	-
Min.:	0.500	Unit:	-
Max.:	1.000	Data type:	UInt16
Default:	0.707	Change:	Changeable at any time

Value Range:

0.500 to 1.000

Description

-

B9-84 **Current loop carrier frequency upper limit**

Address:	0xB954	Effective mode:	-
Min.:	5.0	Unit:	-
Max.:	16.0	Data type:	UInt16
Default:	8.0	Change:	Changeable at any time

Value Range:
5.0 to 16.0
Description
-

B9-85 **Droop enable**

Address:	0xB955	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0 to 1
Description
-

B9-86 **Droop source**

Address:	0xB956	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0: Line current
1: Torque reference
2: Speed adjustment output
3: Speed adjustment integral component
Description
-

B9-87 **Frequency reference droop coefficient**

Address:	0xB957	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	50.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0% to 50.0%
Description
-

B9-88 **FVC-SVC switchover mode**

Address:	0xB958	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: No switchover
1: Active switchover
2: Passive switchover (The AC drive switches to SVC mode upon detection of encoder wire breakage, and it switches back to FVC mode when the encoder recovers during stop and does not switch back to FVC mode when the encoder recovers during running.)
3: Passive switchover (The AC drive switches to SVC mode upon detection of encoder wire breakage, and it switches back to FVC mode when the encoder recovers during running or stop.)
Description
-

B9-89 FVC-SVC switchover frequency

Address:	0xB959	Effective mode:	-
Min.:	10	Unit:	%
Max.:	500	Data type:	UInt16
Default:	50	Change:	Changeable only at stop

Value Range:
10% to 500%
Description
-

B9-90 FVC-SVC switchover hysteresis

Address:	0xB95A	Effective mode:	-
Min.:	10	Unit:	%
Max.:	100	Data type:	UInt16
Default:	10	Change:	Changeable only at stop

Value Range:
10% to 100%
Description
-

4.34 BA: Motor 3 Nameplate and Learning Parameters

BA-00 Motor type

Address:	0xBA00	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: Common asynchronous motor
1: Variable frequency asynchronous motor
2: Permanent magnet synchronous motor
Description
-

BA-01 Rated motor power

Address:	0xBA01	Effective mode:	-
Min.:	0.1	Unit:	kW
Max.:	1000.0	Data type:	UInt16
Default:	3.7	Change:	Changeable only at stop

Value Range:
0.1 kW to 1000.0 kW
Description
-

BA-02 **Rated motor voltage**

Address:	0xBA02	Effective mode:	-
Min.:	1	Unit:	V
Max.:	2000	Data type:	UInt16
Default:	380	Change:	Changeable only at stop

Value Range:
1 V to 2000 V
Description
-

BA-03 **Rated motor current**

Address:	0xBA03	Effective mode:	-
Min.:	0.01	Unit:	A
Max.:	655.35	Data type:	UInt16
Default:	9.00	Change:	Changeable only at stop

Value Range:
0.01 A to 655.35 A
Description
-

BA-04 **Rated motor frequency**

Address:	0xBA04	Effective mode:	-
Min.:	0.01	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	50.00	Change:	Changeable only at stop

Value Range:
0.01 Hz to F0-10
Description
-

BA-05 **Rated motor speed**

Address:	0xBA05	Effective mode:	-
Min.:	1	Unit:	RPM
Max.:	65535	Data type:	UInt16
Default:	1460	Change:	Changeable only at stop

Value Range:
1 RPM to 65535 RPM
Description
-

BA-06 **Number of parallel motors**

Address:	0xBA06	Effective mode:	-
Min.:	1	Unit:	-
Max.:	200	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
1 to 200

Description

-

BA-07 **Motor information command word**

Address:	0xBA07	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x3	Change:	Changeable only at stop

Value Range:

Bit00: Mutual inductance curve

0: Disabled

1: Enabled

Bit01: D- and Q-axis inductance curve

0: Disabled

1: Enabled

Bit02: Rotor resistance online auto-tuning

0: Disabled

1: Enabled

Bit03: Rotor resistance online auto-tuning method

0: Amplitude

1: Phase

Bit04: Motor thermal model

0: Disabled

1: Enabled

Bit05: Temperature source of motor thermal model

0: Estimated temperature

1: Temperature detected by sensor

Bit06: Torque coefficient calculation of asynchronous motor

0: Torque formula

1: Current distribution

Bit07: Torque coefficient calculation of synchronous motor

0: Torque formula

1: Torque matching the rated torque

Bit08: Zero speed friction torque calculation

0: Torque linearly decreasing to zero

1: Torque to maintain minimum speed

Bit09: Calculation of model parameters based on nameplate parameters

0: Disabled

1: Enabled

Bit10: Confirmation of calculating model parameters based on nameplate parameters

0: Default

1: Confirm

Description

-

BA-08 **Number of motor pole pairs**

Address:	0xBA08	Effective mode:	-
Min.:	0	Unit:	-

Max.: 64
Default: 0
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 to 64

Description
-

BA-09 **Motor power factor**

Address: 0xBA09
Min.: 0.600
Max.: 1.000
Default: 0.860
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.600 to 1.000

Description
-

BA-10 **Encoder PPR**

Address: 0xBA0A
Min.: 1
Max.: 65535
Default: 1024
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
1 to 65535

Description
-

BA-11 **Encoder type**

Address: 0xBA0B
Min.: 0
Max.: 3
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0: ABZ incremental encoder
1: 23-bit encoder
2: Resolver
3: External input

Description
-

BA-12 **Speed feedback PG card**

Address: 0xBA0C
Min.: 0
Max.: 1
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0: Local PG card
1: Extension PG card

Description
-

BA-13 **Number of resolver pole pairs**

Address:	0xBA0D	Effective mode:	-
Min.:	1	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
1 to 65535
Description
-

BA-15 **Speed feedback PG wire breakage detection time**

Address:	0xBA0F	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	10.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0s to 10.0s
Description
-

BA-16 **A/B phase sequence of encoder**

Address:	0xBA10	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: Forward
1: Reverse
Description
-

BA-17 **Encoder installation angle**

Address:	0xBA11	Effective mode:	-
Min.:	0.0	Unit:	°
Max.:	359.9	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0° to 359.9°
Description
-

BA-18 **Expansion card**

Address:	0xBA12	Effective mode:	-
Min.:	1	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
1: Expansion card 1
2: Expansion card 2
Description
-

BA-19 **ABZ encoder speed measurement mode at low speed**

Address:	0xBA13	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	2	Change:	Changeable only at stop

Value Range:

0: Maintain

1: Attenuate

2: Optimized solution

Description

-

BA-20 **Encoder speed measurement filter time constant**

Address:	0xBA14	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	10.000	Data type:	UInt16
Default:	0.004	Change:	Changeable at any time

Value Range:

0.000s to 10.000s

Description

-

BA-21 **Encoder wire breakage software detection coefficient**

Address:	0xBA15	Effective mode:	-
Min.:	0.000	Unit:	-
Max.:	8.000	Data type:	UInt16
Default:	1.000	Change:	Changeable at any time

Value Range:

0.000 to 8.000

Description

-

BA-22 **Encoder control word**

Address:	0xBA16	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

Bit00: Speed measurement

0: Disabled

1: Enabled

Bit01: Software detection of wire breakage

0: Disabled

1: Enabled

Bit02: Glitch removal

0: Disabled

1: Enabled

Bit03: ABZ encoder speed measurement mode

0: Quadruplicated frequency

1: Single pulse

Description
-

BA-23 **Speed measurement exception count threshold**

Address:	0xBA17	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	10	Change:	Changeable only at stop

Value Range:
1 to 100
Description
-

BA-24 **Motor gear ratio (numerator)**

Address:	0xBA18	Effective mode:	-
Min.:	1	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
1 to 65535
Description
-

BA-25 **Motor gear ratio (denominator)**

Address:	0xBA19	Effective mode:	-
Min.:	1	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
1 to 65535
Description
-

BA-26 **External input source of encoder**

Address:	0xBA1A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0: 0
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector
Description
-

BA-29 **Auto-tuning**

Address:	0xBA1D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	13	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: No operation

1: Static auto-tuning on partial parameters of asynchronous motor

2: Dynamic auto-tuning on asynchronous motor

3: Static auto-tuning on all parameters of asynchronous motor

4: Inertia auto-tuning

5: Deadzone auto-tuning

11: With-load auto-tuning on synchronous motor (excluding back EMF)

12: No-load dynamic auto-tuning on synchronous motor

13: Static auto-tuning on all parameters of synchronous motor (excluding zero point angle)

Description

-

BA-30 **Asynchronous motor stator resistance**

Address:	0xBA1E	Effective mode:	-
Min.:	0.001	Unit:	Ω
Max.:	65.535	Data type:	UInt16
Default:	1.204	Change:	Changeable only at stop

Value Range:

0.001 Ω to 65.535 Ω

Description

-

BA-31 **Asynchronous motor rotor resistance**

Address:	0xBA1F	Effective mode:	-
Min.:	0.001	Unit:	Ω
Max.:	65.535	Data type:	UInt16
Default:	0.908	Change:	Changeable only at stop

Value Range:

0.001 Ω to 65.535 Ω

Description

-

BA-32 **Asynchronous motor leakage inductance**

Address:	0xBA20	Effective mode:	-
Min.:	0.01	Unit:	mH
Max.:	655.35	Data type:	UInt16
Default:	5.28	Change:	Changeable only at stop

Value Range:

0.01 mH to 655.35 mH

Description

-

BA-33 **Asynchronous motor mutual inductance**

Address:	0xBA21	Effective mode:	-
Min.:	0.1	Unit:	mH

Max.: 6553.5
Default: 156.8
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.1 mH to 6553.5 mH

Description
-

BA-34 Asynchronous motor no-load current

Address: 0xBA22
Min.: 0.01
Max.: BA-03
Default: 4.20
Effective mode: -
Unit: A
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.01 A to BA-03

Description
-

BA-35 Synchronous motor stator resistance

Address: 0xBA23
Min.: 0.001
Max.: 65.535
Default: 1.204
Effective mode: -
Unit: Ω
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.001 Ω to 65.535 Ω

Description
-

BA-36 Synchronous motor D axis inductance

Address: 0xBA24
Min.: 0.01
Max.: 655.35
Default: 5.28
Effective mode: -
Unit: mH
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.01 mH to 655.35 mH

Description
-

BA-37 Synchronous motor Q axis inductance

Address: 0xBA25
Min.: 0.01
Max.: 655.35
Default: 5.28
Effective mode: -
Unit: mH
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.01 mH to 655.35 mH

Description
-

BA-39 Synchronous motor back EMF coefficient

Address: 0xBA27
Min.: 0.0
Max.: 6553.5
Default: 300.0
Effective mode: -
Unit: V
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.0 V to 6553.5 V
Description
-

BA-40 **Stator leakage inductance**

Address:	0xBA28	Effective mode:	-
Min.:	0.000	Unit:	mH
Max.:	65.535	Data type:	UInt16
Default:	6.540	Change:	Changeable only at stop

Value Range:
0.000 mH to 65.535 mH
Description
-

BA-41 **Electromechanical time constant**

Address:	0xBA29	Effective mode:	-
Min.:	1	Unit:	ms
Max.:	65535	Data type:	UInt16
Default:	100	Change:	Unchangeable

Value Range:
1 ms to 65535 ms
Description
-

BA-42 **Inertia ratio**

Address:	0xBA2A	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	120.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

BA-43 **Friction torque**

Address:	0xBA2B	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	2.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

BA-44 **Excitation current coefficient 1 of mutual inductance curve (rated)**

Address:	0xBA2C	Effective mode:	-
Min.:	5.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	50.0	Change:	Changeable only at stop

Value Range:
5.0% to 100.0%

Description
-

BA-45 **Excitation current coefficient 2 of mutual inductance curve (rated)**

Address:	0xBA2D	Effective mode:	-
Min.:	5.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	75.0	Change:	Changeable only at stop

Value Range:
5.0% to 100.0%
Description
-

BA-46 **Excitation current coefficient 3 of mutual inductance curve**

Address:	0xBA2E	Effective mode:	-
Min.:	100.0	Unit:	%
Max.:	800.0	Data type:	UInt16
Default:	150.0	Change:	Changeable only at stop

Value Range:
100.0% to 800.0%
Description
-

BA-47 **Excitation current coefficient 4 of mutual inductance curve**

Address:	0xBA2F	Effective mode:	-
Min.:	100.0	Unit:	%
Max.:	800.0	Data type:	UInt16
Default:	210.0	Change:	Changeable only at stop

Value Range:
100.0% to 800.0%
Description
-

BA-48 **Flux coefficient 1 of mutual inductance curve (rated)**

Address:	0xBA30	Effective mode:	-
Min.:	10.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	50.0	Change:	Changeable only at stop

Value Range:
10.0% to 100.0%
Description
-

BA-49 **Flux coefficient 2 of mutual inductance curve (rated)**

Address:	0xBA31	Effective mode:	-
Min.:	10.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	85.0	Change:	Changeable only at stop

Value Range:
10.0% to 100.0%
Description
-

BA-50 **Flux coefficient 3 of mutual inductance curve**

Address:	0xBA32	Effective mode:	-
Min.:	100.0	Unit:	%
Max.:	300.0	Data type:	UInt16
Default:	115.0	Change:	Changeable only at stop

Value Range:
100.0% to 300.0%
Description
-

BA-51 **Flux coefficient 4 of mutual inductance curve**

Address:	0xBA33	Effective mode:	-
Min.:	100.0	Unit:	%
Max.:	300.0	Data type:	UInt16
Default:	125.0	Change:	Changeable only at stop

Value Range:
100.0% to 300.0%
Description
-

BA-52 **Speed point 1 of friction curve**

Address:	0xBA34	Effective mode:	-
Min.:	0	Unit:	RPM
Max.:	30000	Data type:	UInt16
Default:	15	Change:	Changeable only at stop

Value Range:
0 RPM to 30000 RPM
Description
-

BA-53 **Speed point 2 of friction curve**

Address:	0xBA35	Effective mode:	-
Min.:	0	Unit:	RPM
Max.:	30000	Data type:	UInt16
Default:	30	Change:	Changeable only at stop

Value Range:
0 RPM to 30000 RPM
Description
-

BA-54 **Speed point 3 of friction curve**

Address:	0xBA36	Effective mode:	-
Min.:	0	Unit:	RPM
Max.:	30000	Data type:	UInt16
Default:	60	Change:	Changeable only at stop

Value Range:
0 RPM to 30000 RPM
Description
-

BA-55 **Speed point 4 of friction curve**

Address:	0xBA37	Effective mode:	-

Min.: 0
Max.: 30000
Default: 120
Unit: RPM
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 RPM to 30000 RPM

Description
-

BA-56 **Speed point 5 of friction curve**

Address: 0xBA38
Min.: 0
Max.: 30000
Default: 150
Effective mode: -
Unit: RPM
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 RPM to 30000 RPM

Description
-

BA-57 **Speed point 6 of friction curve**

Address: 0xBA39
Min.: 0
Max.: 30000
Default: 300
Effective mode: -
Unit: RPM
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 RPM to 30000 RPM

Description
-

BA-58 **Speed point 7 of friction curve**

Address: 0xBA3A
Min.: 0
Max.: 30000
Default: 600
Effective mode: -
Unit: RPM
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 RPM to 30000 RPM

Description
-

BA-59 **Speed point 8 of friction curve**

Address: 0xBA3B
Min.: 0
Max.: 30000
Default: 1200
Effective mode: -
Unit: RPM
Data type: UInt16
Change: Changeable only at stop

Value Range:
0 RPM to 30000 RPM

Description
-

BA-60 **Speed point 9 of friction curve**

Address: 0xBA3C
Min.: 0
Max.: 30000
Effective mode: -
Unit: RPM
Data type: UInt16

Default: 1500 Change: Changeable only at stop

Value Range:

0 RPM to 30000 RPM

Description

-

BA-61 Speed point 10 of friction curve

Address: 0xBA3D Effective mode: -

Min.: 0 Unit: RPM

Max.: 30000 Data type: UInt16

Default: 3000 Change: Changeable only at stop

Value Range:

0 RPM to 30000 RPM

Description

-

BA-62 Torque point 1 of friction curve

Address: 0xBA3E Effective mode: -

Min.: –320 Unit: N·m

Max.: 320.00 Data type: Int16

Default: 0.00 Change: Changeable only at stop

Value Range:

–320 N·m to +320 N·m

Description

-

BA-63 Torque point 2 of friction curve

Address: 0xBA3F Effective mode: -

Min.: –320 Unit: N·m

Max.: 320.00 Data type: Int16

Default: 0.00 Change: Changeable only at stop

Value Range:

–320 N·m to +320 N·m

Description

-

BA-64 Torque point 3 of friction curve

Address: 0xBA40 Effective mode: -

Min.: –320 Unit: N·m

Max.: 320.00 Data type: Int16

Default: 0.00 Change: Changeable only at stop

Value Range:

–320 N·m to +320 N·m

Description

-

BA-65 Torque point 4 of friction curve

Address: 0xBA41 Effective mode: -

Min.: –320 Unit: N·m

Max.: 320.00 Data type: Int16

Default: 0.00 Change: Changeable only at stop

Value Range:

–320 N · m to +320 N · m

Description

-

BA-66 **Torque point 5 of friction curve**

Address:	0xBA42	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:

–320 N · m to +320 N · m

Description

-

BA-67 **Torque point 6 of friction curve**

Address:	0xBA43	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:

–320 N · m to +320 N · m

Description

-

BA-68 **Torque point 7 of friction curve**

Address:	0xBA44	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:

–320 N · m to +320 N · m

Description

-

BA-69 **Torque point 8 of friction curve**

Address:	0xBA45	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:

–320 N · m to +320 N · m

Description

-

BA-70 **Torque point 9 of friction curve**

Address:	0xBA46	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:

–320 N · m to +320 N · m

Description
-

BA-71 **Torque point 10 of friction curve**

Address:	0xBA47	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:
–320 N · m to +320 N · m
Description
-

BA-72 **Current coefficient starting point of D- and Q-axis inductance curve**

Address:	0xBA48	Effective mode:	-
Min.:	–800	Unit:	%
Max.:	800.0	Data type:	Int16
Default:	–200	Change:	Changeable only at stop

Value Range:
–800% to +800.0%
Description
-

BA-73 **Current coefficient end point of D- and Q-axis inductance curve**

Address:	0xBA49	Effective mode:	-
Min.:	–800	Unit:	%
Max.:	800.0	Data type:	Int16
Default:	200.0	Change:	Changeable only at stop

Value Range:
–800% to +800.0%
Description
-

BA-74 **D axis inductance 1 of D- and Q-axis inductance curve**

Address:	0xBA4A	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

BA-75 **D axis inductance 2 of D- and Q-axis inductance curve**

Address:	0xBA4B	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

BA-76 **D axis inductance 3 of D- and Q-axis inductance curve**

Address:	0xBA4C	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

BA-77 **D axis inductance 4 of D- and Q-axis inductance curve**

Address:	0xBA4D	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

BA-78 **D axis inductance 5 of D- and Q-axis inductance curve**

Address:	0xBA4E	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

BA-79 **D axis inductance 6 of D- and Q-axis inductance curve**

Address:	0xBA4F	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

BA-80 **D axis inductance 7 of D- and Q-axis inductance curve**

Address:	0xBA50	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

BA-81 **D axis inductance 8 of D- and Q-axis inductance curve**

Address:	0xBA51	Effective mode:	-

Min.: 0.0 Unit: %
Max.: 6553.5 Data type: UInt16
Default: 100.0 Change: Changeable only at stop
Value Range:
0.0% to 6553.5%
Description
-

BA-82 D axis inductance 9 of D- and Q-axis inductance curve
Address: 0xBA52 Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: UInt16
Default: 100.0 Change: Changeable only at stop
Value Range:
0.0% to 6553.5%
Description
-

BA-83 D axis inductance 10 of D- and Q-axis inductance curve
Address: 0xBA53 Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: UInt16
Default: 100.0 Change: Changeable only at stop
Value Range:
0.0% to 6553.5%
Description
-

BA-84 D axis inductance 11 of D- and Q-axis inductance curve
Address: 0xBA54 Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: UInt16
Default: 100.0 Change: Changeable only at stop
Value Range:
0.0% to 6553.5%
Description
-

BA-85 D axis inductance 12 of D- and Q-axis inductance curve
Address: 0xBA55 Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: UInt16
Default: 100.0 Change: Changeable only at stop
Value Range:
0.0% to 6553.5%
Description
-

BA-86 Q axis inductance 1 of D- and Q-axis inductance curve
Address: 0xBA56 Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

BA-87 Q axis inductance 2 of D- and Q-axis inductance curve

Address: 0xBA57 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

BA-88 Q axis inductance 3 of D- and Q-axis inductance curve

Address: 0xBA58 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

BA-89 Q axis inductance 4 of D- and Q-axis inductance curve

Address: 0xBA59 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

BA-90 Q axis inductance 5 of D- and Q-axis inductance curve

Address: 0xBA5A Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

BA-91 Q axis inductance 6 of D- and Q-axis inductance curve

Address: 0xBA5B Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%
Description
-

BA-92 **Q axis inductance 7 of D- and Q-axis inductance curve**

Address:	0xBA5C	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

BA-93 **Q axis inductance 8 of D- and Q-axis inductance curve**

Address:	0xBA5D	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

BA-94 **Q axis inductance 9 of D- and Q-axis inductance curve**

Address:	0xBA5E	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

BA-95 **Q axis inductance 10 of D- and Q-axis inductance curve**

Address:	0xBA5F	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

BA-96 **Q axis inductance 11 of D- and Q-axis inductance curve**

Address:	0xBA60	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%

Description
-

BA-97 **Q axis inductance 12 of D- and Q-axis inductance curve**

Address:	0xBA61	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

4.35 BB: Motor 3 V/f Control Parameters

BB-00 **V/f curve**

Address:	0xBB00	Effective mode:	-
Min.:	0	Unit:	-
Max.:	11	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: Straight-line V/f curve
1: Multi-point V/f curve
2: Reserved
3: Reserved
4: Reserved
5: Reserved
6: Reserved
7: Reserved
8: Reserved
9: Reserved
10: V/f complete separation mode
11: V/f half separation mode
Description
-

BB-01 **Torque boost**

Address:	0xBB01	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	30.0	Data type:	UInt16
Default:	3.0	Change:	Changeable at any time

Value Range:
0.0% to 30.0%
Description
-

BB-02 **Cut-off frequency of torque boost**

Address:	0xBB02	Effective mode:	-

Min.: 0.00
Max.: F0-10
Default: 50.00
Unit: Hz
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.00 Hz to F0-10
Description
-

BB-03 Multi-point V/f frequency 1

Address: 0xBB03
Min.: 0.00
Max.: BB-05
Default: 0.00
Effective mode: -
Unit: Hz
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.00 Hz to BB-05
Description
-

BB-04 Multi-point V/f voltage 1

Address: 0xBB04
Min.: 0.0
Max.: 100.0
Default: 0.0
Effective mode: -
Unit: %
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.0% to +100.0%
Description
-

BB-05 Multi-point V/f frequency 2

Address: 0xBB05
Min.: BB-03
Max.: BB-07
Default: 0.00
Effective mode: -
Unit: Hz
Data type: UInt16
Change: Changeable only at stop

Value Range:
BB-03 to BB-07
Description
-

BB-06 Multi-point V/f voltage 2

Address: 0xBB06
Min.: 0.0
Max.: 100.0
Default: 0.0
Effective mode: -
Unit: %
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.0% to +100.0%
Description
-

BB-07 Multi-point V/f frequency 3

Address: 0xBB07
Min.: BB-05
Max.: BA-04
Effective mode: -
Unit: Hz
Data type: UInt16

Default: 0.00 Change: Changeable only at stop

Value Range:

BB-05 to BA-04

Description

-

BB-08 Multi-point V/f voltage 3

Address: 0xBB08 Effective mode: -

Min.: 0.0 Unit: %

Max.: 100.0 Data type: UInt16

Default: 0.0 Change: Changeable only at stop

Value Range:

0.0% to +100.0%

Description

-

BB-09 V/f slip compensation gain

Address: 0xBB09 Effective mode: -

Min.: 0.0 Unit: -

Max.: 200.0 Data type: UInt16

Default: 0.0 Change: Changeable at any time

Value Range:

0.0 to 200.0

Description

-

BB-10 V/f overexcitation gain

Address: 0xBB0A Effective mode: -

Min.: 0 Unit: -

Max.: 200 Data type: UInt16

Default: 64 Change: Changeable at any time

Value Range:

0 to 200

Description

-

BB-11 V/f oscillation suppression gain

Address: 0xBB0B Effective mode: -

Min.: 0 Unit: -

Max.: 100 Data type: UInt16

Default: 40 Change: Changeable at any time

Value Range:

0 to 100

Description

-

BB-12 V/f oscillation suppression

Address: 0xBB0C Effective mode: -

Min.: 0 Unit: -

Max.: 1 Data type: UInt16

Default: 1 Change: Changeable at any time

Value Range:

0: Disabled

1: Enabled

Description

-

BB-13 Voltage source for V/f separation

Address:	0xBB0D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Digital setting (BB-14)

1: AI1

2: AI2

3: AI3

4: Pulse reference (DI5)

5: Multi-reference

6: Simple PLC

7: PID

8: Communication

Others: F connector

Description

This parameter defines the source of the target voltage in V/f separation mode.

0: Digital setting (F3-14)

The V/f separation voltage is set by F3-14 (V/f separation voltage).

1: AI1

The V/f separation voltage is input with current or voltage signals through the AI1 terminal. The frequency is calculated according to the preset AI curve.

2: AI2

The V/f separation voltage is input with current or voltage signals through the AI2 terminal. The frequency is calculated according to the preset AI curve.

3: AI3

The V/f separation voltage is input with current or voltage signals through the AI3 terminal. The frequency is calculated according to the preset AI curve. The AC drive has two AI terminals by default, and the AI3 terminal needs to be provided through the I/O expansion card.

4: Pulse reference (DI5)

The V/f separation voltage is set through DI5. The frequency is calculated based on the curve reflecting the relationship between the pulse frequency and running frequency.

5: Multi-reference

When multi-reference is used as the source of the V/f separation voltage, different combinations of DI terminal states correspond to different reference values. The four multi-reference terminals can provide 16 state combinations, corresponding to 16 reference values (percentage x maximum frequency) of parameters in group FC.

6: Simple PLC

The V/f separation voltage is set by simple PLC. For details, see the function description of simple PLC.

7: PID

The V/f separation voltage is set by PID. For details, see the PID function description.

8: Communication
The main frequency is set through communication. The running frequency is input through remote communication. The AC drive must be equipped with a communication card to implement communication with the host controller. This mode applies to remote control or centralized control of multiple equipment.
Others: F connector
A function code is set for a floating-point connector, and the value of the connector is read as the motoring torque upper limit in speed control mode. This mode is used for expansion besides the common sources.

BB-14 V/f separation voltage

Address:	0xBB0E	Effective mode:	-
Min.:	0	Unit:	V
Max.:	BA-02	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 V to BA-02
Description
This parameter defines the V/f separation voltage.

BB-15 Voltage rise time of V/f separation

Address:	0xBB0F	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	1000.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 1000.0s
Description
This parameter defines the time required for the output voltage to rise from 0 to the rated motor voltage.

BB-16 Voltage fall time of V/f separation

Address:	0xBB10	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	1000.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 1000.0s
Description
This parameter defines the time required for the output voltage to fall from the rated motor voltage to 0.

BB-17 Stop mode for V/f separation

Address:	0xBB11	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Frequency and voltage decline to 0 independently
1: Frequency declines to 0 after voltage declines to 0
2: Coast to stop (new)

Description

0: The frequency and voltage decrease to 0 independently.

1: The frequency decreases to 0 according to the deceleration time after the voltage decreases to 0 according to the deceleration time.

2: The AC drive coasts to stop without following the stop deceleration curve.

BB-18 Overcurrent stall suppression action current

Address:	0xBB12	Effective mode:	-
Min.:	50	Unit:	%
Max.:	200	Data type:	UInt16
Default:	150	Change:	Changeable only at stop

Value Range:

50% to 200%

Description

-

BB-19 Overcurrent stall suppression

Address:	0xBB13	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0: Disabled

1: Enabled

Description

-

BB-20 Overcurrent stall suppression gain

Address:	0xBB14	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	20	Change:	Changeable at any time

Value Range:

1 to 100

Description

-

BB-21 Compensation coefficient of speed multiplying overcurrent stall suppression action current

Address:	0xBB15	Effective mode:	-
Min.:	50	Unit:	%
Max.:	200	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:

50% to 200%

Description

-

BB-22 Overvoltage stall suppression action voltage

Address:	0xBB16	Effective mode:	-
Min.:	330.0	Unit:	V
Max.:	800.0	Data type:	UInt16

Default: 770.0 Change: Changeable at any time

Value Range:

330.0 V to 800.0 V

Description

-

BB-23 Overvoltage stall suppression

Address: 0xBB17 Effective mode: -

Min.: 0 Unit: -

Max.: 1 Data type: UInt16

Default: 1 Change: Changeable only at stop

Value Range:

0: Disabled

1: Enabled

Description

-

BB-24 Overvoltage stall suppression frequency gain

Address: 0xBB18 Effective mode: -

Min.: 1 Unit: -

Max.: 100 Data type: UInt16

Default: 30 Change: Changeable at any time

Value Range:

1 to 100

Description

-

BB-25 Overvoltage stall suppression voltage gain

Address: 0xBB19 Effective mode: -

Min.: 1 Unit: -

Max.: 100 Data type: UInt16

Default: 30 Change: Changeable at any time

Value Range:

1 to 100

Description

-

BB-26 Frequency rise threshold for overvoltage stall suppression

Address: 0xBB1A Effective mode: -

Min.: 0 Unit: Hz

Max.: 50 Data type: UInt16

Default: 5 Change: Changeable only at stop

Value Range:

0 Hz to 50 Hz

Description

-

BB-27 Slip compensation filter time

Address: 0xBB1B Effective mode: -

Min.: 0.1 Unit: s

Max.: 10.0 Data type: UInt16

Default: 0.5 Change: Changeable only at stop

Value Range:
0.1s to 10.0s
Description
-

BB-28 **Multi-point curve source**

Address:	0xBB1C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: 3-point curve
1: Multi-point curve module A
2: Multi-point curve module B
Description
0: 3-point curve
The 3-point curve is used by default, which is set in F3-03 to F3-08.
1: Multi-point curve module A
The output of free module A is used as the voltage reference of the multi-point curve.
2: Multi-point curve module B
The output of free module B is used as the voltage reference of the multi-point curve.

BB-33 **Online torque compensation gain**

Address:	0xBB21	Effective mode:	-
Min.:	80	Unit:	-
Max.:	150	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:
80 to 150
Description
-

BB-34 **ImaxKi coefficient**

Address:	0xBB22	Effective mode:	-
Min.:	10	Unit:	%
Max.:	1000	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:
10% to 1000%
Description
-

BB-35 **Overcurrent suppression threshold (relative to rated motor current)**

Address:	0xBB23	Effective mode:	-
Min.:	80	Unit:	%
Max.:	300	Data type:	UInt16
Default:	200	Change:	Changeable only at stop

Value Range:
80% to 300%
Description
-

BB-36 **Frequency threshold for overcurrent suppression field weakening**

Address:	0xBB24	Effective mode:	-
Min.:	100	Unit:	%
Max.:	500	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:
100% to 500%
Description
-

BB-37 **IT filter time**

Address:	0xBB25	Effective mode:	-
Min.:	10	Unit:	ms
Max.:	1000	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:
10 ms to 1000 ms
Description
-

BB-38 **Slip compensation mode**

Address:	0xBB26	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0: Disabled
1: Slip compensation without PG
2: Slip compensation with PG
Description
-

BB-39 **VdcMaxCtrl allowed runtime**

Address:	0xBB27	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0s to 100.0s
Description
-

BB-40 **Upper limit of V/f separation voltage**

Address:	0xBB28	Effective mode:	-
Min.:	50.0	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
50.0% to 200.0%
Description
This parameter defines the upper limit of the V/f separation voltage, which is a percentage relative to the rated motor voltage.

BB-41 **RFG time of V/f separation frequency**

Address:	0xBB29	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: RFG time forced to 0

1: Preset RFG time

Description

This parameter defines the RFG time of the V/f separation frequency. When it is set to 0, the frequency reference acceleration/deceleration time is forced to 0; when it is set to 1, the acceleration/deceleration time is set as normal.

BB-42 **Cut-off frequency of V/f oscillation suppression filter**

Address:	0xBB2A	Effective mode:	-
Min.:	1.0	Unit:	Hz
Max.:	50.0	Data type:	UInt16
Default:	8.0	Change:	Changeable at any time

Value Range:

1.0 Hz to 50.0 Hz

Description

-

BB-43 **Cut-off frequency threshold for V/f oscillation suppression**

Address:	0xBB2B	Effective mode:	-
Min.:	10	Unit:	Hz
Max.:	3000	Data type:	UInt16
Default:	200	Change:	Changeable at any time

Value Range:

10 Hz to 3000 Hz

Description

-

BB-44 **VdcMaxCtrl feedforward coefficient**

Address:	0xBB2C	Effective mode:	-
Min.:	0	Unit:	%
Max.:	500	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0% to 500%

Description

-

BB-50 **PMVVC low-speed IF**

Address:	0xBB32	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0: Disabled

1: Enabled

Description
-

BB-51 **PMVVC low-speed IF current**

Address:	0xBB33	Effective mode:	-
Min.:	30	Unit:	-
Max.:	250	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:
30 to 250
Description
-

BB-52 **PMVVC low-speed IF speed switching threshold**

Address:	0xBB34	Effective mode:	-
Min.:	2.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	10.0	Change:	Changeable only at stop

Value Range:
2.0% to 100.0%
Description
-

BB-53 **PMVVC oscillation suppression gain coefficient**

Address:	0xBB35	Effective mode:	-
Min.:	0	Unit:	-
Max.:	500	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
0 to 500
Description
-

BB-54 **PMVVC filter time coefficient**

Address:	0xBB36	Effective mode:	-
Min.:	0	Unit:	-
Max.:	500	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
0 to 500
Description
-

BB-55 **PMVVC energy conservation control mode**

Address:	0xBB37	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	2	Change:	Changeable only at stop

Value Range:
0: Fixed straight-line V/f curve
1: Fixed 30% reactive current
2: MTPA control

Description
-

4.36 BC: Motor 3 Control and Protection Parameters

BC-00 **Startup mode**

Address:	0xBC00	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Direct start
1: Flying start
2: Pre-excitation start (AC asynchronous motor)
3: SVC quick start
Description
Flying start is recommended if you need to start a motor that is rotating at a high speed.
Pre-excitation start and SVC quick start apply only to AC asynchronous motors.

BC-01 **Speed tracking mode**

Address:	0xBC01	Effective mode:	-
Min.:	0	Unit:	-
Max.:	4	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: From the stop frequency
1: From the power frequency
2: From the maximum frequency
3: Reserved
4: Magnetic field directional speed tracking (MD290)
Description
-

BC-02 **Speed of speed tracking**

Address:	0xBC02	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	20	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

BC-03 **Startup frequency**

Address:	0xBC03	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	10.00	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00 Hz to 10.00 Hz

Description

This parameter defines the startup frequency for direct start of the AC drive. When the frequency reference is lower than the startup frequency, the AC drive will not start but stay standby.

BC-04 Startup frequency hold time

Address:	0xBC04	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:

0.0s to 100.0s

Description

This parameter defines the hold time during which the output frequency remains at the startup frequency. After this hold time elapses, the AC drive will accelerate/decelerate to the reference frequency.

BC-05 DC braking current at startup

Address:	0xBC05	Effective mode:	-
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	50	Change:	Changeable only at stop

Value Range:

0% to 100%

Description

A larger DC braking current indicates stronger braking force. 100% corresponds to the rated motor current (the current upper limit is 80% of the rated current of the AC drive).

BC-06 DC braking time at startup

Address:	0xBC06	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:

0.0s to 100.0s

Description

This parameter defines the time for DC braking at startup, which is valid only when the startup mode is direct start.

BC-07 Stop mode

Address:	0xBC07	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Decelerate to stop

1: Coast to stop

2: Stop at maximum capability

Description

-

BC-08 **Start frequency of DC braking at stop**

Address:	0xBC08	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-10
Description
The AC drive starts DC braking when the running frequency decreases to the value of this parameter during deceleration to stop.

BC-09 **DC braking delay at stop**

Address:	0xBC09	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 100.0s
Description
When the running frequency decreases to the start frequency of DC braking at stop, the AC drive stops output and starts DC braking after this waiting time.

BC-10 **DC braking current at stop**

Address:	0xBC0A	Effective mode:	-
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	50	Change:	Changeable at any time

Value Range:
0% to 100%
Description
A larger DC braking current indicates stronger braking force. 100% corresponds to the rated motor current (the current upper limit is 80% of the rated current of the AC drive).

BC-11 **DC braking time at stop**

Address:	0xBC0B	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 100.0s
Description
If this parameter is set to 0, DC braking is disabled.

BC-12 **Speed tracking sweep current limit closed loop Kp**

Address:	0xBC0C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1000	Data type:	UInt16
Default:	500	Change:	Changeable at any time

Value Range:
0 to 1000

Description
-

BC-13 **Speed tracking sweep current limit closed loop Ki**

Address:	0xBC0D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1000	Data type:	UInt16
Default:	800	Change:	Changeable at any time

Value Range:
0 to 1000
Description
-

BC-14 **Speed tracking current**

Address:	0xBC0E	Effective mode:	-
Min.:	30	Unit:	%
Max.:	200	Data type:	UInt16
Default:	80	Change:	Changeable only at stop

Value Range:
30% to 200%
Description
-

BC-15 **Current loop multiple**

Address:	0xBC0F	Effective mode:	-
Min.:	10	Unit:	%
Max.:	600	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
10% to 600%
Description
-

BC-16 **Demagnetization time (valid for asynchronous motors)**

Address:	0xBC10	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	5.00	Data type:	UInt16
Default:	0.50	Change:	Changeable at any time

Value Range:
0.00s to 5.00s
Description
This parameter defines the minimum waiting time for restart after shutdown.

BC-17 **Overexcitation enable**

Address:	0xBC11	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
2: Enabled during deceleration
3: Enabled always

Description

This parameter defines the active mode of overexcitation in vector control mode for asynchronous motors. When it is set to 2, overexcitation takes effect during acceleration, operation at constant speed, and deceleration.

BC-18 Overexcitation suppression current

Address:	0xBC12	Effective mode:	-
Min.:	0	Unit:	%
Max.:	150	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:

0% to 150%

Description

This parameter defines the target current after overexcitation takes effect and is a percentage relative to the rated motor current.

BC-19 Overexcitation gain

Address:	0xBC13	Effective mode:	-
Min.:	0.01	Unit:	-
Max.:	2.50	Data type:	UInt16
Default:	1.25	Change:	Changeable at any time

Value Range:

0.01 to 2.50

Description

-

BC-20 Parameter auto-tuning upon startup

Address:	0xBC14	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

Bit00: Synchronous motor pole position auto-tuning upon startup
0: Disabled
1: Enabled
Bit01: Quick stator resistance auto-tuning upon startup
0: Disabled
1: Enabled
Bit02–Bit03: HFI pole position auto-tuning
0: Disabled
1: Enabled
2: Adaptive
Bit04: IGBT shoot-through self-check upon startup
0: Disabled
1: Enabled
Bit05: Short-to-ground self-check upon startup (reserved)
0: Disabled
1: Enabled
Bit06: Phase loss self-check upon startup (reserved)
0: Disabled
1: Enabled

Description

-

BC-21 Auto-tuning direction

Address:	0xBC15	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0 to 1

Description

-

BC-22 Oscillation suppression gain of synchronous motor back EMF auto-tuning

Address:	0xBC16	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	30.0	Data type:	UInt16
Default:	3.2	Change:	Changeable only at stop

Value Range:

0.0 to 30.0

Description

-

BC-23 Target speed of rotation auto-tuning

Address:	0xBC17	Effective mode:	-
Min.:	30.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	70.0	Change:	Changeable only at stop

Value Range:

30.0% to 100.0%

Description
-

BC-24 Target speed 1 of inertia auto-tuning

Address:	0xBC18	Effective mode:	-
Min.:	10.0	Unit:	%
Max.:	BC-25	Data type:	UInt16
Default:	40.0	Change:	Changeable only at stop

Value Range:
10.0% to BC-25
Description
-

BC-25 Target speed 2 of inertia auto-tuning

Address:	0xBC19	Effective mode:	-
Min.:	BC-24	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	60.0	Change:	Changeable only at stop

Value Range:
BC-24 to 100.0%
Description
-

BC-26 Overcurrent prevention of mutual inductance saturation curve

Address:	0xBC1A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0 to 1
Description
-

BC-27 Auto-tuning items

Address:	0xBC1B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	117	Change:	Changeable only at stop

Value Range:

Bit00: Speed loop parameter adaptation
0: Disabled
1: Enabled
Bit01: Current loop parameter adaptation
0: Disabled
1: Enabled
Bit02: Drive nonlinear auto-tuning
0: Disabled
1: Enabled
Bit03: Inter-phase deviation coefficient auto-tuning
0: Disabled
1: Enabled
Bit04: Auto-tuning of initial pole position of synchronous motor
0: Disabled
1: Enabled
Bit05: Auto-tuning of D- and Q-axis inductance model of synchronous motor
0: Disabled
1: Enabled
Bit06: System inertia auto-tuning
0: Disabled
1: Enabled
Bit07: HFI pole position auto-tuning
0: Disabled
1: Enabled

Description

-

BC-28 **OFF3 stop mode**

Address:	0xBC1C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Quick stop
1: Stop at maximum capability

Description

-

BC-29 **Stop mode during running**

Address:	0xBC1D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0: OFF1 stop mode
1: OFF2 stop mode
2: OFF3 stop mode

Description
-

BC-30 Stop mode for torque control

Address:	0xBC1E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0: Coast to stop forcibly
1: Switch to speed control mode and then stop
2: Maintain torque control mode until zero speed and then block
Description
-

BC-32 Proportional gain adjustment coefficient

Address:	0xBC20	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	2.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 2.0
Description
-

BC-33 Integral gain adjustment coefficient

Address:	0xBC21	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	2.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 2.0
Description
-

BC-34 Zero-speed threshold

Address:	0xBC22	Effective mode:	-
Min.:	0.1	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	2.0	Change:	Changeable at any time

Value Range:
0.1% to 200.0%
Description
-

BC-35 Zero-speed stop delay

Address:	0xBC23	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	10.00	Data type:	UInt16
Default:	0.10	Change:	Changeable only at stop

Value Range:

0.00s to 10.00s

Description

-

BC-36 Reference source execution interval

Address:	0xBC24	Effective mode:	-
Min.:	0	Unit:	-
Max.:	20	Data type:	UInt16
Default:	4	Change:	Changeable only at stop

Value Range:

0 to 20

Description

-

BC-37 Trial current for speed tracking of synchronous motor

Address:	0xBC25	Effective mode:	-
Min.:	5.0	Unit:	%
Max.:	50.0	Data type:	UInt16
Default:	10.0	Change:	Changeable only at stop

Value Range:

5.0% to 50.0%

Description

-

BC-38 Minimum frequency for speed tracking of synchronous motor

Address:	0xBC26	Effective mode:	-
Min.:	0.0	Unit:	Hz
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:

0.0 Hz to 100.0 Hz

Description

-

BC-39 Angle compensation for speed tracking of synchronous motor

Address:	0xBC27	Effective mode:	-
Min.:	0	Unit:	-
Max.:	360	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0 to 360

Description

-

BC-40 Parameter auto-tuning of synchronous motor upon startup

Address:	0xBC28	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 1

Description
-

BC-41 **Current motor angle**

Address:	0xBC29	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

BC-42 **Forward torque limit 1**

Address:	0xBC2A	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	400.0	Data type:	UInt16
Default:	150.0	Change:	Changeable at any time

Value Range:
0.0 to 400.0
Description
-

BC-43 **Reverse torque limit 1**

Address:	0xBC2B	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	400.0	Data type:	UInt16
Default:	150.0	Change:	Changeable at any time

Value Range:
0.0 to 400.0
Description
-

BC-44 **Source of forward torque limit 2**

Address:	0xBC2C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: 400%
Others: F connector
Description
-

BC-45 **Source of reverse torque limit 2**

Address:	0xBC2D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: –400%
Others: F connector

Description
-

BC-46 **Ramp (FRG) selection bit0**

Address:	0xBC2E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: 0
1: 1
2: Terminal function input
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector
Description
-

BC-47 **Ramp (FRG) selection bit1**

Address:	0xBC2F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0
1: 1
2: Terminal function input
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

BC-50 **Motor overload protection**

Address:	0xBC32	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: Disabled
1: Enabled

Description

-

BC-51 **Motor overload protection gain**

Address:	0xBC33	Effective mode:	-
Min.:	0.20	Unit:	-
Max.:	10.00	Data type:	UInt16
Default:	1.00	Change:	Changeable at any time

Value Range:

0.20 to 10.00

Description

-

BC-52 **Motor overload pre-warning coefficient**

Address:	0xBC34	Effective mode:	-
Min.:	50	Unit:	%
Max.:	100	Data type:	UInt16
Default:	80	Change:	Changeable at any time

Value Range:
50% to 100%
Description
-

BC-53 Overvoltage stall suppression gain

Address:	0xBC35	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

BC-54 Overvoltage stall protection voltage

Address:	0xBC36	Effective mode:	-
Min.:	330.0	Unit:	V
Max.:	800.0	Data type:	UInt16
Default:	770.0	Change:	Changeable at any time

Value Range:
330.0 V to 800.0 V
Description
-

BC-55 Input phase loss/Contactor pickup protection

Address:	0xBC37	Effective mode:	-
Min.:	0	Unit:	-
Max.:	13	Data type:	UInt16
Default:	11	Change:	Changeable at any time

Value Range:
Ones: Input phase loss protection
0: Disabled
1: Protection enabled when both software and hardware input phase loss conditions are met
2: Protection enabled when software input phase loss conditions are met
3: Protection enabled when hardware input phase loss conditions are met
Tens: Contactor pickup protection
0: Disabled
1: Enabled
Description
-

BC-56 Output phase loss protection

Address:	0xBC38	Effective mode:	-
Min.:	0	Unit:	-
Max.:	11	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

Ones: Output phase loss protection upon power-on

0: Disabled

1: Enabled

Tens: Output phase loss protection before running

0: Disabled

1: Enabled

Description

-

BC-57 **Power dip ride-through**

Address:	0xBC39	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Disabled

1: Decelerate

2: Decelerate to stop

3: Suppress voltage dip

Description

-

BC-58 **Voltage threshold for disabling power dip ride-through**

Address:	0xBC3A	Effective mode:	-
Min.:	80	Unit:	%
Max.:	100	Data type:	UInt16
Default:	85	Change:	Changeable only at stop

Value Range:

80% to 100%

Description

-

BC-59 **Delay of voltage recovery from power dip**

Address:	0xBC3B	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.5	Change:	Changeable only at stop

Value Range:

0.0s to 100.0s

Description

-

BC-60 **Voltage threshold for enabling power dip ride-through**

Address:	0xBC3C	Effective mode:	-
Min.:	60	Unit:	%
Max.:	100	Data type:	UInt16
Default:	80	Change:	Changeable only at stop

Value Range:

60% to 100%

Description

-

BC-61 **Protection upon load loss**

Address:	0xBC3D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
Description
-

BC-62 **Load loss detection level**

Address:	0xBC3E	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	10.0	Change:	Changeable at any time

Value Range:
0.0% to +100.0%
Description
-

BC-63 **Load loss detection time**

Address:	0xBC3F	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	60.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.0s to 60.0s
Description
-

BC-64 **Overspeed detection level**

Address:	0xBC40	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	50.0	Data type:	UInt16
Default:	20.0	Change:	Changeable at any time

Value Range:
0.0% to 50.0%
Description
-

BC-65 **Overspeed detection time**

Address:	0xBC41	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	60.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.0s to 60.0s
Description
-

BC-66 **Detection level of excessive speed deviation**

Address:	0xBC42	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	50.0	Data type:	UInt16
Default:	20.0	Change:	Changeable at any time

Value Range:
0.0% to 50.0%
Description
-

BC-67 **Detection time of excessive speed deviation**

Address:	0xBC43	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	60.0	Data type:	UInt16
Default:	5.0	Change:	Changeable at any time

Value Range:
0.0s to 60.0s
Description
-

BC-68 **Power dip ride-through gain Kp**

Address:	0xBC44	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	40	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

BC-69 **Power dip ride-through integral coefficient Ki**

Address:	0xBC45	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

BC-70 **Deceleration time of power dip ride-through**

Address:	0xBC46	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	300.0	Data type:	UInt16
Default:	20.0	Change:	Changeable at any time

Value Range:
0.0s to 300.0s
Description
-

BC-71 **Voltage dip suppression time**

Address:	0xBC47	Effective mode:	-

Min.:	0.1	Unit:	s
Max.:	600.0	Data type:	UInt16
Default:	0.5	Change:	Changeable at any time

Value Range:
0.1s to 600.0s
Description
-

BC-72 Motor protection

Address:	0xBC48	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	537	Change:	Changeable at any time

Value Range:
Bit00: Motor overload determination (reserved)
Bit01: Motor overheat detection (reserved)
Bit02: PG fault detection (reserved)
Bit03: Current control error detection
Bit04: Motor stall error detection
Bit05: Locked-rotor detection
Bit06: Synchronous motor demagnetization protection
Bit07: Protection against locked-rotor in SVC speed open-loop control
Bit08: Reserved
Bit09: Parameter setting error
Description
-

BC-73 Locked-rotor time

Address:	0xBC49	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	65.0	Data type:	UInt16
Default:	2.0	Change:	Changeable at any time

Value Range:
0.0s to 65.0s
Description
-

BC-74 Locked-rotor frequency

Address:	0xBC4A	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	600.0	Data type:	UInt16
Default:	6.0	Change:	Changeable at any time

Value Range:
0.0% to 600.0%
Description
-

BC-75 Motor stall detection time

Address:	0xBC4B	Effective mode:	-
Min.:	0.0	Unit:	s

Max.: 10.0 Data type: UInt16
Default: 0.5 Change: Changeable at any time
Value Range:
0.0s to 10.0s
Description
-

BC-76 Stall detection threshold
Address: 0xBC4C Effective mode: -
Min.: 0.0 Unit: %
Max.: 100.0 Data type: UInt16
Default: 30.0 Change: Changeable at any time
Value Range:
0.0% to +100.0%
Description
-

BC-77 Current control exception detection time
Address: 0xBC4D Effective mode: -
Min.: 0.00 Unit: s
Max.: 1.00 Data type: UInt16
Default: 0.05 Change: Changeable at any time
Value Range:
0.00s to 1.00s
Description
-

BC-78 Current control exception detection threshold
Address: 0xBC4E Effective mode: -
Min.: 0.0 Unit: %
Max.: 200.0 Data type: UInt16
Default: 25.0 Change: Changeable at any time
Value Range:
0.0% to 200.0%
Description
-

BC-79 Synchronous motor overcurrent threshold
Address: 0xBC4F Effective mode: -
Min.: 0.0 Unit: %
Max.: 500.0 Data type: UInt16
Default: 300.0 Change: Changeable at any time
Value Range:
0.0% to 500.0%
Description
-

BC-81 Speed deviation detection
Address: 0xBC51 Effective mode: -
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 1 Change: Changeable at any time

Value Range:
0 to 1
Description
-

BC-82 **Skip frequency 1**

Address:	0xBC52	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-10
Description
-

BC-83 **Skip frequency 2**

Address:	0xBC53	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-10
Description
-

BC-84 **Skip frequency 3**

Address:	0xBC54	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-10
Description
-

BC-85 **Skip frequency 4**

Address:	0xBC55	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-10
Description
-

BC-86 **Skip frequency band**

Address:	0xBC56	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-10

Description
-

BC-87 **Source of frequency upper limit**

Address:	0xBC57	Effective mode:	-
Min.:	0	Unit:	-
Max.:	5	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: F0-12
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
Others: F connector
Description
-

BC-88 **Frequency upper limit**

Address:	0xBC58	Effective mode:	-
Min.:	BC-90	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	50.00	Change:	Changeable at any time

Value Range:
BC-90 to F0-10
Description
-

BC-89 **Frequency upper limit offset**

Address:	0xBC59	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-10 (maximum frequency)
Description
-

BC-90 **Frequency lower limit**

Address:	0xBC5A	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	BC-88	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to BC-88
Description
-

BC-91 **Speed/Torque control mode**

Address:	0xBC5B	Effective mode:	-

Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Speed control
1: Torque control
Description
-

4.37 BD: Motor 3 Observation and Vector Parameters

BD-00 **Asynchronous motor FVC model switchover frequency**

Address:	0xBD00	Effective mode:	-
Min.:	0	Unit:	%
Max.:	1000	Data type:	UInt16
Default:	20	Change:	Changeable only at stop

Value Range:
0% to 1000%
Description
-

BD-01 **Asynchronous motor FVC model switchover hysteresis frequency**

Address:	0xBD01	Effective mode:	-
Min.:	10	Unit:	%
Max.:	50	Data type:	UInt16
Default:	20	Change:	Changeable only at stop

Value Range:
10% to 50%
Description
-

BD-02 **Asynchronous motor FVC observer filter time**

Address:	0xBD02	Effective mode:	-
Min.:	5	Unit:	ms
Max.:	100	Data type:	UInt16
Default:	15	Change:	Changeable only at stop

Value Range:
5 ms to 100 ms
Description
-

BD-03 **Asynchronous motor FVC current model mode**

Address:	0xBD03	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0 to 1
Description
-

BD-04 **Asynchronous motor FVC pre-excitation output observation angle mode**

Address:	0xBD04	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0 to 1
Description
-

BD-05 **Asynchronous motor SVC model switchover frequency**

Address:	0xBD05	Effective mode:	-
Min.:	10	Unit:	%
Max.:	20	Data type:	UInt16
Default:	15	Change:	Changeable only at stop

Value Range:
10% to 20%
Description
-

BD-06 **Asynchronous motor SVC observer filter time**

Address:	0xBD06	Effective mode:	-
Min.:	5	Unit:	ms
Max.:	50	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
5 ms to 50 ms
Description
-

BD-07 **Asynchronous motor SVC observer gain 1**

Address:	0xBD07	Effective mode:	-
Min.:	10	Unit:	%
Max.:	500	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
10% to 500%
Description
-

BD-08 **Asynchronous motor SVC observer gain 2**

Address:	0xBD08	Effective mode:	-
Min.:	10	Unit:	%
Max.:	100	Data type:	UInt16
Default:	20	Change:	Changeable at any time

Value Range:
10% to 100%
Description
-

BD-09 **Asynchronous motor SVC observer mode**

Address:	0xBD09	Effective mode:	-

Min.: 0 Unit: -
Max.: 3 Data type: UInt16
Default: 0 Change: Changeable only at stop
Value Range:
0 to 3
Description
-

BD-10 Asynchronous motor SVC pre-excitation mode
Address: 0xBD0A Effective mode: -
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 0 Change: Changeable only at stop
Value Range:
0 to 1
Description
-

BD-11 Asynchronous motor SVC speed tracking mode
Address: 0xBD0B Effective mode: -
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 0 Change: Changeable only at stop
Value Range:
0 to 1
Description
-

BD-14 Synchronous motor 1 model control
Address: 0xBD0E Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 5 Change: Changeable at any time
Value Range:
Bit00: Low speed processing
Bit01: Low speed processing 1
Bit02: Online auto-tuning of resistance
Bit03: Online auto-tuning of back EMF
Bit04: KS
Description
-

BD-15 Synchronous motor model K1
Address: 0xBD0F Effective mode: -
Min.: 10 Unit: -
Max.: 3000 Data type: UInt16
Default: 200 Change: Changeable at any time
Value Range:
10 to 3000
Description
-

BD-16 **Synchronous motor model K1Max**

Address:	0xBD10	Effective mode:	-
Min.:	100	Unit:	-
Max.:	6000	Data type:	UInt16
Default:	3000	Change:	Changeable at any time

Value Range:
100 to 6000
Description
-

BD-17 **Synchronous motor model KsMin**

Address:	0xBD11	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	4.0	Data type:	UInt16
Default:	0.3	Change:	Changeable at any time

Value Range:
0.0 to 4.0
Description
-

BD-18 **Synchronous motor model Kspeed**

Address:	0xBD12	Effective mode:	-
Min.:	50	Unit:	-
Max.:	2000	Data type:	UInt16
Default:	400	Change:	Changeable at any time

Value Range:
50 to 2000
Description
-

BD-19 **Synchronous motor frequency filter time constant**

Address:	0xBD13	Effective mode:	-
Min.:	2	Unit:	ms
Max.:	100	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
2 ms to 100 ms
Description
-

BD-20 **Frequency upper limit of synchronous motor Rs online auto-tuning**

Address:	0xBD14	Effective mode:	-
Min.:	1.0	Unit:	%
Max.:	20.0	Data type:	UInt16
Default:	3.5	Change:	Changeable at any time

Value Range:
1.0% to 20.0%
Description
-

BD-21 **Synchronous motor model Kr**

Address:	0xBD15	Effective mode:	-

Min.: 0 Unit: -
Max.: 50 Data type: UInt16
Default: 10 Change: Changeable at any time
Value Range:
0 to 50
Description
-

BD-22 Synchronous motor model Kr1

Address: 0xBD16 Effective mode: -
Min.: 0 Unit: -
Max.: 50 Data type: UInt16
Default: 5 Change: Changeable at any time
Value Range:
0 to 50
Description
-

BD-23 Synchronous motor low-speed D axis injection current

Address: 0xBD17 Effective mode: -
Min.: 0 Unit: %
Max.: 100 Data type: UInt16
Default: 20 Change: Changeable at any time
Value Range:
0% to 100%
Description
-

BD-24 Synchronous motor model LowFreqTime1

Address: 0xBD18 Effective mode: -
Min.: 0 Unit: -
Max.: 500 Data type: UInt16
Default: 50 Change: Changeable at any time
Value Range:
0 to 500
Description
-

BD-27 Frequency lower limit of back EMF online auto-tuning

Address: 0xBD1B Effective mode: -
Min.: 10 Unit: %
Max.: 100 Data type: UInt16
Default: 25 Change: Changeable at any time
Value Range:
10% to 100%
Description
-

BD-28 Synchronous motor model LowFreq

Address: 0xBD1C Effective mode: -
Min.: 0.0 Unit: %
Max.: 2.0 Data type: UInt16

Default: 0.3 Change: Changeable at any time

Value Range:

0.0% to 2.0%

Description

-

BD-29 Synchronous motor model LowFreqTime

Address: 0xBD1D Effective mode: -

Min.: 0 Unit: -

Max.: 100 Data type: UInt16

Default: 10 Change: Changeable at any time

Value Range:

0 to 100

Description

-

BD-30 Percentage of pole auto-tuning current

Address: 0xBD1E Effective mode: -

Min.: 50 Unit: %

Max.: 200 Data type: UInt16

Default: 100 Change: Changeable at any time

Value Range:

50% to 200%

Description

-

BD-31 Percentage of high frequency response current

Address: 0xBD1F Effective mode: -

Min.: 0 Unit: %

Max.: 100 Data type: UInt16

Default: 25 Change: Changeable at any time

Value Range:

0% to 100%

Description

-

BD-32 Percentage of HFI and SVC switching frequency

Address: 0xBD20 Effective mode: -

Min.: 0 Unit: %

Max.: 30 Data type: UInt16

Default: 10 Change: Changeable at any time

Value Range:

0% to 30%

Description

-

BD-33 Observer parameter

Address: 0xBD21 Effective mode: -

Min.: 10 Unit: -

Max.: 200 Data type: UInt16

Default: 100 Change: Changeable at any time

Value Range:

10 to 200
Description
-

BD-34 **Speed filter cut-off frequency**

Address:	0xBD22	Effective mode:	-
Min.:	1	Unit:	Hz
Max.:	200	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
1 Hz to 200 Hz
Description
-

BD-35 **Carrier frequency during NS auto-tuning**

Address:	0xBD23	Effective mode:	-
Min.:	2.00	Unit:	Hz
Max.:	16.00	Data type:	UInt16
Default:	8.00	Change:	Changeable at any time

Value Range:
2.00 Hz to 16.00 Hz
Description
-

BD-36 **Automatic calculation of NS auto-tuning voltage**

Address:	0xBD24	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
Description
-

BD-37 **Percentage of NS auto-tuning voltage set manually**

Address:	0xBD25	Effective mode:	-
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
0% to 100%
Description
-

BD-38 **Duration of HFI stage 1**

Address:	0xBD26	Effective mode:	-
Min.:	50	Unit:	ms
Max.:	500	Data type:	UInt16
Default:	150	Change:	Changeable at any time

Value Range:
50 ms to 500 ms

Description
-

BD-40 **Speed loop proportional gain 1**

Address:	0xBD28	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

BD-41 **Speed loop integral time 1**

Address:	0xBD29	Effective mode:	-
Min.:	0.01	Unit:	s
Max.:	10.00	Data type:	UInt16
Default:	0.50	Change:	Changeable at any time

Value Range:
0.01s to 10.00s
Description
-

BD-42 **Switchover frequency 1**

Address:	0xBD2A	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	BD-45	Data type:	UInt16
Default:	5.00	Change:	Changeable at any time

Value Range:
0.00 Hz to BD-45
Description
-

BD-43 **Speed loop proportional gain 2**

Address:	0xBD2B	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	20	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

BD-44 **Speed loop integral time 2**

Address:	0xBD2C	Effective mode:	-
Min.:	0.01	Unit:	s
Max.:	10.00	Data type:	UInt16
Default:	1.00	Change:	Changeable at any time

Value Range:
0.01s to 10.00s
Description
-

BD-45 **Switchover frequency 2**

Address:	0xBD2D	Effective mode:	-
Min.:	BD-42	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	10.00	Change:	Changeable at any time

Value Range:
BD-42 to F0-10
Description
-

BD-46 **Vector control slip gain**

Address:	0xBD2E	Effective mode:	-
Min.:	50	Unit:	%
Max.:	200	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
50% to 200%
Description
-

BD-47 **Speed feedback filter time in SVC mode**

Address:	0xBD2F	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	0.100	Data type:	UInt16
Default:	0.015	Change:	Changeable at any time

Value Range:
0.000s to 0.100s
Description
-

BD-49 **Torque upper limit source in speed control mode (motoring)**

Address:	0xBD31	Effective mode:	-
Min.:	0	Unit:	-
Max.:	7	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Digital setting (F2-10)
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: MIN (AI1, AI2)
7: MAX (AI1, AI2)
Others: F connector
Description
-

BD-50 **Torque upper limit in speed control mode**

Address:	0xBD32	Effective mode:	-
Min.:	0.0	Unit:	%

Max.: 200.0 Data type: UInt16
Default: 150.0 Change: Changeable at any time

Value Range:
0.0% to 200.0%

Description
-

BD-51 Torque upper limit source in speed control mode (generating)

Address: 0xBD33 Effective mode: -
Min.: 0 Unit: -
Max.: 8 Data type: UInt16
Default: 0 Change: Changeable at any time

Value Range:
0: Digital setting (F2-10)
1: AI1
2: AI2
3: AI3
4: Pulse reference (DI5)
5: Communication
6: MIN (AI1, AI2)
7: MAX (AI1, AI2)
8: Digital setting (F2-12)
Others: F connector

Description
-

BD-52 Torque upper limit in speed control mode (generating)

Address: 0xBD34 Effective mode: -
Min.: 0.0 Unit: %
Max.: 200.0 Data type: UInt16
Default: 150.0 Change: Changeable at any time

Value Range:
0.0% to 200.0%

Description
-

BD-53 Field weakening mode

Address: 0xBD35 Effective mode: -
Min.: 0 Unit: -
Max.: 2 Data type: UInt16
Default: 1 Change: Changeable only at stop

Value Range:
0: No field weakening
1: Auto adjustment
2: Calculation+Auto adjustment

Description
0: No field weakening
Without field weakening control, the maximum motor speed is related to the bus voltage of the AC drive. The output current is smaller under the same load, but the running frequency cannot reach the frequency reference. Do not select this function if a higher speed is required.

1: Auto adjustment
This field weakening mode is simple and reliable. In scenarios requiring quick field weakening, the field weakening coefficient (F2-19) can be increased as appropriate. However, if the coefficient is too large,
the current may be unstable.
2: Calculation+Auto adjustment
In this mode, the field weakening current is adjusted quickly. This mode can be selected in scenarios where the auto adjustment mode cannot
meet requirements.

BD-54 Field weakening gain

Address:	0xBD36	Effective mode:	-
Min.:	1	Unit:	-
Max.:	50	Data type:	UInt16
Default:	5	Change:	Changeable at any time

Value Range:
1 to 50
Description
Increasing the setpoint can improve dynamic response. However, an excessively large setpoint may also cause current oscillation.

BD-57 Generating power limiting

Address:	0xBD39	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled in the whole process
2: Enabled at constant speed
3: Enabled during deceleration
Description
-

BD-58 Generating power upper limit

Address:	0xBD3A	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	20.0	Change:	Changeable at any time

Value Range:
0.0% to 200.0%
Description
-

BD-59 Motor 3 control mode

Address:	0xBD3B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	2	Change:	Changeable only at stop

Value Range:

0: SVC

1: FVC

2: V/f

Description

-

BD-60 Initial position angle detection current of synchronous motor

Address:	0xBD3C	Effective mode:	-
Min.:	50	Unit:	-
Max.:	180	Data type:	UInt16
Default:	80	Change:	Changeable only at stop

Value Range:

50 to 180

Description

A smaller current indicates lower noise during detection. However, an excessively small current may lead to position detection inaccuracy. You are advised not to modify this parameter in FVC mode.

BD-61 Initial position angle detection of synchronous motor

Address:	0xBD3D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Detected upon running

1: Not detected

2: Detected upon initial running after power-on

Description

The initial position angle detection can prevent reverse rotation at startup, but it causes certain noise. For scenarios where reverse rotation is not allowed at startup and the rotor position of the motor will change after stop, F2-25 must be set to 0.

It can be set to 1 or 2 in other scenarios.

BD-63 Salient pole rate adjustment gain of synchronous motor

Address:	0xBD3F	Effective mode:	-
Min.:	0.20	Unit:	-
Max.:	3.00	Data type:	UInt16
Default:	1.00	Change:	Changeable at any time

Value Range:

0.20 to 3.00

Description

If F2-28 is set to 1, you can adjust F2-27 when the output current does not decrease or even increase under the same load. When the load remains unchanged, adjust F2-27 until the output current is the smallest.

BD-64 Maximum torque-to-current ratio control of synchronous motor

Address:	0xBD40	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: Disabled

1: Enabled

Description

When this function is enabled for the salient pole motor, the current will become smaller under the same load.

BD-65 Z signal correction

Address:	0xBD41	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: Disabled

1: Enabled

Description

-

BD-67 Low speed carrier frequency

Address:	0xBD43	Effective mode:	-
Min.:	0.8	Unit:	kHz
Max.:	F0-15	Data type:	UInt16
Default:	2.0	Change:	Changeable at any time

Value Range:

0.8 kHz to F0-15

Description

-

BD-68 Position lock

Address:	0xBD44	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 1

Description

-

BD-69 Switchover frequency

Address:	0xBD45	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	BD-42	Data type:	UInt16
Default:	0.30	Change:	Changeable at any time

Value Range:

0.00 Hz to BD-42

Description

-

BD-70 Position lock speed loop proportional gain

Address:	0xBD46	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

BD-71 **Position lock speed loop integral time**

Address:	0xBD47	Effective mode:	-
Min.:	0.01	Unit:	s
Max.:	10.00	Data type:	UInt16
Default:	0.50	Change:	Changeable at any time

Value Range:
0.01s to 10.00s
Description
-

BD-74 **Auto-tuning free mode**

Address:	0xBD4A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Auto-tuning upon initial running after power-on
2: Auto-tuning upon running
Description
-

BD-76 **Initial position compensation angle**

Address:	0xBD4C	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	359.9	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0 to 359.9
Description
-

BD-80 **Speed loop command word**

Address:	0xBD50	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	11	Change:	Changeable at any time

Value Range:

Bit00: Speed loop
0: Disabled
1: Enabled
Bit01: Integration mode
0: Conventional integration
1: Position integration
Bit02: Acceleration torque
0: Disabled
1: Enabled
Bit03–Bit04: Acceleration source
0: Function transfer torque
1: Automatic calculation
2: Function transfer acceleration
Bit05: Anti-load disturbance
0: Disabled
1: Enabled

Description

-

BD-81 Locked-rotor fast integral cancel coefficient

Address:	0xBD51	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:

0.0% to +100.0%

Description

-

BD-82 Integral torque

Address:	0xBD52	Effective mode:	-
Min.:	–100	Unit:	%
Max.:	100.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:

–100% to +100.0%

Description

-

BD-83 Speed controller frequency window size

Address:	0xBD53	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	10.00	Data type:	UInt16
Default:	0.00	Change:	Changeable only at stop

Value Range:

0.00 Hz to 10.00 Hz

Description

-

BD-84 **Current filter time for torque reference**

Address:	0xBD54	Effective mode:	-
Min.:	0.0	Unit:	ms
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0 ms to 100.0 ms
Description
-

BD-85 **Acceleration torque**

Address:	0xBD55	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Inactive
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector
Description
-

BD-87 **Reference model bandwidth**

Address:	0xBD57	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	300.00	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to 300.00 Hz
Description
-

BD-88 **Torque feedforward coefficient**

Address:	0xBD58	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

BD-89 **Vector control reference frequency filter time**

Address:	0xBD59	Effective mode:	-

Min.: 0.0 Unit: ms
Max.: 100.0 Data type: UInt16
Default: 0.0 Change: Changeable only at stop
Value Range:
0.0 ms to 100.0 ms
Description
-

BD-90 Vector control feedback frequency filter time

Address: 0xBD5A Effective mode: -
Min.: 0.0 Unit: ms
Max.: 100.0 Data type: UInt16
Default: 0.0 Change: Changeable only at stop
Value Range:
0.0 ms to 100.0 ms
Description
-

BD-91 Load observation bandwidth

Address: 0xBD5B Effective mode: -
Min.: 0.00 Unit: Hz
Max.: 300.00 Data type: UInt16
Default: 0.00 Change: Changeable at any time
Value Range:
0.00 Hz to 300.00 Hz
Description
-

BD-92 Load observation coefficient

Address: 0xBD5C Effective mode: -
Min.: 0.0 Unit: %
Max.: 1000.0 Data type: UInt16
Default: 100.0 Change: Changeable at any time
Value Range:
0.0% to 1000.0%
Description
-

BD-93 Pseudo integral coefficient

Address: 0xBD5D Effective mode: -
Min.: 0.000 Unit: -
Max.: 10.000 Data type: UInt16
Default: 1.000 Change: Changeable at any time
Value Range:
0.000 to 10.000
Description
-

BD-94 Torque coefficient enable

Address: 0xBD5E Effective mode: -
Min.: 0 Unit: -
Max.: 1 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Disabled

1: Enabled

Description

-

BD-96 Center frequency of notch filter 1

Address: 0xBD60 Effective mode: -

Min.: 0.0 Unit: -

Max.: 4000.0 Data type: UInt16

Default: 4000.0 Change: Changeable at any time

Value Range:

0.0 to 4000.0

Description

-

BD-97 Center frequency of notch filter 2

Address: 0xBD61 Effective mode: -

Min.: 0.0 Unit: -

Max.: 4000.0 Data type: UInt16

Default: 4000.0 Change: Changeable at any time

Value Range:

0.0 to 4000.0

Description

-

BD-98 Integral setting control word

Address: 0xBD62 Effective mode: -

Min.: 0 Unit: -

Max.: 1 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Disabled

1: Enabled

Others: B connector

Description

-

BD-99 Integral reference source

Address: 0xBD63 Effective mode: -

Min.: 0 Unit: -

Max.: 8 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Digital setting
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector
Description
-

4.38 BE: Motor 3 Vector Parameters

BE-00 **Externally transferred acceleration**

Address:	0xBE00	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Inactive
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector
Description
-

BE-03 **Overturning torque limiting coefficient**

Address:	0xBE03	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	400.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 400.0%
Description
-

BE-04 **Motoring power limiting coefficient**

Address:	0xBE04	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	400.0	Data type:	UInt16

Default: 400.0 Change: Changeable at any time

Value Range:

0.0% to 400.0%

Description

-

BE-05 Generating power limiting coefficient

Address: 0xBE05 Effective mode: -

Min.: 0.0 Unit: %

Max.: 400.0 Data type: UInt16

Default: 400.0 Change: Changeable at any time

Value Range:

0.0% to 400.0%

Description

-

BE-06 Overspeed limiting enable

Address: 0xBE06 Effective mode: -

Min.: 0 Unit: -

Max.: 1 Data type: UInt16

Default: 1 Change: Changeable at any time

Value Range:

0 to 1

Description

-

BE-07 Sine wave frequency of bandwidth test

Address: 0xBE07 Effective mode: -

Min.: 0 Unit: Hz

Max.: 1000 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 Hz to 1000 Hz

Description

-

BE-08 Sine wave amplitude of bandwidth test

Address: 0xBE08 Effective mode: -

Min.: 0 Unit: %

Max.: 100 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0% to 100%

Description

-

BE-09 Bandwidth test enable

Address: 0xBE09 Effective mode: -

Min.: 0 Unit: -

Max.: 4 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 4

Description

-

BE-11 **Speed loop parameter calculation mode**

Address:	0xBE0B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0: New solution

1: Compatible solution

Description

-

BE-12 **Speed loop proportional gain in FVC mode**

Address:	0xBE0C	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	100.00	Data type:	UInt16
Default:	8.00	Change:	Changeable at any time

Value Range:

0.00 Hz to 100.00 Hz

Description

-

BE-13 **Speed loop integral time in FVC mode**

Address:	0xBE0D	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	20.000	Data type:	UInt16
Default:	0.080	Change:	Changeable at any time

Value Range:

0.000s to 20.000s

Description

-

BE-14 **Speed loop proportional gain in SVC mode**

Address:	0xBE0E	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	100.00	Data type:	UInt16
Default:	5.00	Change:	Changeable at any time

Value Range:

0.00 Hz to 100.00 Hz

Description

-

BE-15 **Speed loop integral time in SVC mode**

Address:	0xBE0F	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	20.000	Data type:	UInt16
Default:	0.127	Change:	Changeable at any time

Value Range:

0.000s to 20.000s

Description

-

BE-16 **Low frequency proportional correction coefficient**

Address:	0xBE10	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:

0.0% to 1000.0%

Description

-

BE-17 **Low frequency integral correction coefficient**

Address:	0xBE11	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:

0.0% to 1000.0%

Description

-

BE-18 **Speed loop adaption factor**

Address:	0xBE12	Effective mode:	-
Min.:	0.000	Unit:	-
Max.:	10.000	Data type:	UInt16
Default:	0.200	Change:	Changeable at any time

Value Range:

0.000 to 10.000

Description

-

BE-19 **Speed loop adaption switchover lower limit**

Address:	0xBE13	Effective mode:	-
Min.:	0.000	Unit:	-
Max.:	10.000	Data type:	UInt16
Default:	0.400	Change:	Changeable at any time

Value Range:

0.000 to 10.000

Description

-

BE-20 **Speed loop adaption switchover upper limit**

Address:	0xBE14	Effective mode:	-
Min.:	0.000	Unit:	-
Max.:	10.000	Data type:	UInt16
Default:	1.000	Change:	Changeable at any time

Value Range:

0.000 to 10.000

Description
-

BE-21 **Speed loop adaption correction upper limit**

Address:	0xBE15	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

BE-22 **Speed loop adaption correction lower limit**

Address:	0xBE16	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

BE-23 **Flux adaptation enable**

Address:	0xBE17	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 1
Description
-

BE-24 **Overspeed controller correction coefficient**

Address:	0xBE18	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

BE-25 **VDC control command word**

Address:	0xBE19	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Bit00: VdcMin

0: Disabled

1: Enabled

Bit01: VdcMax

0: Disabled

1: Enabled

Bit02: Automatic calculation of VDC trigger voltage

0: Disabled

1: Enabled

Bit03: VDC control integral action

0: Disabled

1: Enabled

Description

-

BE-26 **Bus capacitance ratio**

Address:	0xBE1A	Effective mode:	-
Min.:	50.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:

50.0% to 1000.0%

Description

-

BE-27 **Undervoltage suppression exit hysteresis frequency**

Address:	0xBE1B	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	10.00	Data type:	UInt16
Default:	3.00	Change:	Changeable at any time

Value Range:

0.00 Hz to 10.00 Hz

Description

-

BE-28 **Minimum VDC failure speed threshold**

Address:	0xBE1C	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	20.00	Data type:	UInt16
Default:	2.00	Change:	Changeable at any time

Value Range:

0.00 Hz to 20.00 Hz

Description

-

BE-29 **Dynamic adjustment coefficient**

Address:	0xBE1D	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

BE-30 **Minimum VDC activation voltage**

Address:	0xBE1E	Effective mode:	-
Min.:	320.0	Unit:	V
Max.:	540.0	Data type:	UInt16
Default:	430.0	Change:	Changeable at any time

Value Range:
320.0 V to 540.0 V
Description
-

BE-31 **Maximum VDC activation voltage**

Address:	0xBE1F	Effective mode:	-
Min.:	650.0	Unit:	V
Max.:	800.0	Data type:	UInt16
Default:	770.0	Change:	Changeable at any time

Value Range:
650.0 V to 800.0 V
Description
-

BE-32 **Flux linkage control command word**

Address:	0xBE20	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	2357	Change:	Changeable at any time

Value Range:

Bit00: Output voltage limit calculation filtering mode
0: Symmetric filtering
1: Asymmetric filtering
Bit01: Asynchronous motor inverse proportion curve calculation
0: The inverse proportional synchronization frequency decreases.
1: The inverse proportional speed decreases.
Bit02: Flux linkage feedforward calculation by using inverse proportional speed
0: Disabled
1: Enabled
Bit03: Reserved
Bit04: Reserved
Bit05: Field weakening adjustment
0: Disabled
1: Enabled
Bit06: Flux linkage derivative feedforward
0: Disabled
1: Enabled
Bit07: Energy conservation control
0: Disabled
1: Enabled
Bit08: Asynchronous motor flux closed loop
0: Disabled
1: Enabled
Bit09: Reserved
Bit10: Reserved
Bit11: Asynchronous motor pre-excitation mode
0: Pre-excitation based on time
1: Pre-excitation based on current
Bit12: Asynchronous motor pre-excitation current
0: Reference current
1: Maximum current allowed by the drive

Description

Bit00: Output voltage limit calculation filtering mode
0 indicates the usual first-order filtering, and 1 indicates filtering when the bus voltage rises and no filtering when it falls, so as to avoid overmodulation.
Bit01: Asynchronous motor inverse proportion curve calculation
You can select 1 to deliberately lower the break frequency to avoid saturation in the field-weakening range. The setting is valid only when Bit02 is set to 1.
Bit02: Flux linkage feedforward calculation by using inverse proportional speed
If it is set to 1, the inverse proportional speed of flux linkage reference decreases when the output frequency exceeds the break frequency, which can improve dynamic response during acceleration.
Bit05: Field weakening adjustment
When it is set to 1, voltage outer loop adjustment is valid.
Bit07: Energy conservation control
This function is valid for asynchronous motors. It can reduce copper loss at light load in vector control mode.
Bit11: Asynchronous motor pre-excitation mode

0: Pre-excitation is implemented according to the set time. The time will be shorter than the set time if remanence exists.
1: Fixed current is output during the pre-excitation process, and the motor exits the pre-excitation mode when it detects that the flux linkage reaches the setpoint.
Bit12: Asynchronous motor pre-excitation current
0: Pre-excitation is implemented based on the current defined by AB-51.
1: Pre-excitation is implemented based on the maximum current allowed by the drive, which can shorten the pre-excitation time.

BE-33 Output voltage upper limit margin for field weakening adjustment

Address:	0xBE21	Effective mode:	-
Min.:	1	Unit:	%
Max.:	50	Data type:	UInt16
Default:	5	Change:	Changeable at any time

Value Range:
1% to 50%
Description
Decreasing the setpoint can improve voltage utilization. The current is smaller under the same load in the field weakening region. However, an excessively small setpoint will affect dynamic performance.

BE-34 Output voltage upper limit margin for auto adjustment of field weakening

Address:	0xBE22	Effective mode:	-
Min.:	1	Unit:	%
Max.:	20	Data type:	UInt16
Default:	3	Change:	Changeable at any time

Value Range:
1% to 20%
Description
When F2-18 is set to 2 (calculation+auto adjustment), the value of this parameter affects the voltage margin, and the effect is similar to that of AB-33.

BE-35 Filter time for calculating maximum output voltage

Address:	0xBE23	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:
0 ms to 3000 ms
Description
Increasing the filter time allows the maximum output voltage to change slowly but affects voltage utilization.

BE-36 Rated flux adjustment coefficient for calculation

Address:	0xBE24	Effective mode:	-
Min.:	0.5	Unit:	-
Max.:	2.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.5 to 2.0

Description
You can decrease the value of this parameter if underexcitation is required, or increase it if overexcitation is required.

BE-37 Field weakening frequency adjustment coefficient for calculation

Address:	0xBE25	Effective mode:	-
Min.:	0.8	Unit:	-
Max.:	1.2	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.8 to 1.2
Description
This parameter is used to adjust the break frequency calculated automatically by the AC drive. After flux linkage feedforward calculation by using inverse proportional speed is enabled, deceasing the value of this parameter enables the motor to enter the field weakening state in advance, which is applicable to occasions with short acceleration time and high dynamic response requirements.

BE-38 Slip filter time for calculating field weakening frequency

Address:	0xBE26	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	62	Change:	Changeable at any time

Value Range:
0 ms to 3000 ms
Description
When flux linkage feedforward calculation by using inverse proportional speed is enabled, increasing the value of this parameter can reduce the fluctuation range of the calculated reference flux linkage.

BE-39 Feedback speed filtering

Address:	0xBE27	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	8000	Data type:	UInt16
Default:	50	Change:	Changeable at any time

Value Range:
0 ms to 8000 ms
Description
When flux linkage feedforward calculation by using inverse proportional speed is enabled, increasing the value of this parameter can reduce the disturbance to the calculated flux linkage feedforward introduced by speed test.

BE-40 Flux linkage rising filter time

Address:	0xBE28	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	8000	Data type:	UInt16
Default:	20	Change:	Changeable at any time

Value Range:
0 ms to 8000 ms
Description
When flux linkage feedforward calculation by using inverse proportional speed is enabled, this parameter defines the filter time of the asymmetric filter that takes effect only when the reference flux linkage increases.

BE-42 **Feedback voltage filter time**

Address:	0xBE2A	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	5	Change:	Changeable at any time

Value Range:

0 ms to 3000 ms

Description

When field weakening adjustment is enabled, increasing this filter time can reduce the fluctuation of the reference excitation current. To increase the field weakening gain, you need to decrease the filter time to avoid system oscillation.

BE-43 **Maximum demagnetization current of synchronous motor**

Address:	0xBE2B	Effective mode:	-
Min.:	0	Unit:	%
Max.:	500	Data type:	UInt16
Default:	300	Change:	Changeable at any time

Value Range:

0% to 500%

Description

This parameter is used to limit the demagnetization current of synchronous motors to prevent faults such as overload. It is a percentage relative to the rated current.

BE-44 **Voltage outer loop lower limit coefficient**

Address:	0xBE2C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	500	Data type:	UInt16
Default:	50	Change:	Changeable at any time

Value Range:

0 to 500

Description

This parameter is used to limit the lower limit of flux linkage during field weakening for asynchronous motors to avoid limiting torque reduction.

BE-45 **Flux linkage derivative feedforward coefficient**

Address:	0xBE2D	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	1.5	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:

0.0 to 1.5

Description

When flux linkage derivative feedforward of an asynchronous motor is enabled, this parameter can adjust the ratio of effective feedforward. A smaller value indicates smaller feedforward effect.

BE-46 **Flux linkage derivative feedforward filter time**

Address:	0xBE2E	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	6	Change:	Changeable at any time

Value Range:

0 ms to 3000 ms

Description

Increasing the filter time can reduce the fluctuation of the calculated feedforward value.

BE-47 Torque current rising filter time under energy conservation control

Address:	0xBE2F	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	50	Change:	Changeable at any time

Value Range:

0 ms to 3000 ms

Description

When energy conservation control of an asynchronous motor is enabled, decreasing the value of this parameter can improve dynamic response and avoid a large drop in speed when a sudden load is applied. You need to increase this value when the output current fluctuates greatly.

BE-48 Torque current falling filter time under energy conservation control

Address:	0xBE30	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:

0 ms to 3000 ms

Description

When energy conservation control of an asynchronous motor is enabled, decreasing the value of this parameter can make the output current decrease rapidly after the load is reduced. You need to increase this value when the output current fluctuates greatly.

BE-49 Flux linkage lower limit coefficient under energy conservation control

Address:	0xBE31	Effective mode:	-
Min.:	0.00	Unit:	-
Max.:	0.50	Data type:	UInt16
Default:	0.10	Change:	Changeable at any time

Value Range:

0.00 to 0.50

Description

This parameter defines the minimum flux linkage allowed under energy conservation control. A smaller value indicates more significant energy conservation effect when no load is applied, but it will affect dynamic response after the load is added.

BE-51 Pre-excitation current

Address:	0xBE33	Effective mode:	-
Min.:	1	Unit:	%
Max.:	200	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:

1% to 200%

Description

When pre-excitation of an asynchronous motor is implemented based on current, this parameter defines the reference excitation current as a percentage of the rated current.

BE-52 **Pre-excitation time**

Address:	0xBE34	Effective mode:	-
Min.:	1	Unit:	ms
Max.:	30000	Data type:	UInt16
Default:	1000	Change:	Changeable at any time

Value Range:

1 ms to 30000 ms

Description

When pre-excitation of an asynchronous motor is implemented based on time, this parameter defines the total excitation time. The actual excitation time will be shorter than the set time if remanence exists.

BE-53 **Flux linkage closed-loop bandwidth frequency**

Address:	0xBE35	Effective mode:	-
Min.:	0.0	Unit:	Hz
Max.:	100.0	Data type:	UInt16
Default:	2.0	Change:	Changeable at any time

Value Range:

0.0 Hz to 100.0 Hz

Description

When flux closed loop is enabled, increasing the setpoint can reduce the deviation of the flux linkage from the rated value during dynamic processes such as sudden load or acceleration and deceleration of the asynchronous motor.

BE-54 **Feedback flux linkage filter time coefficient**

Address:	0xBE36	Effective mode:	-
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	4	Change:	Changeable at any time

Value Range:

0 to 200

Description

When flux closed loop is enabled, increasing the setpoint can reduce fluctuation of the reference flux linkage. It is a percentage relative to the rotor time constant.

BE-55 **Static output flux linkage filter time**

Address:	0xBE37	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	5000	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:

0 ms to 5000 ms

Description

Increasing the setpoint can reduce fluctuation of the reference flux linkage.

BE-56 **Current loop mode**

Address:	0xBE38	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0: ImCsr2 mode

1: Complex vector mode

2: 880 mode

3: No field weakening

Description

Decreasing the value of this parameter can enhance current loop following but also increase the overshoot and harmonics of the output current.

BE-57 PI regulator proportional gain adaptation with load

Address:	0xBE39	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Disabled

1: Enabled

Description

-

BE-58 Current loop damping

Address:	0xBE3A	Effective mode:	-
Min.:	0.2	Unit:	-
Max.:	5.0	Data type:	UInt16
Default:	0.8	Change:	Changeable at any time

Value Range:

0.2 to 5.0

Description

Decreasing the value of this parameter can enhance current loop following but also increase the overshoot and harmonics of the output current.

BE-59 Low-speed current loop Kp adjustment

Address:	0xBE3B	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:

0.1 to 10.0

Description

The AC drive automatically calculates the current loop gain based on motor parameters. You can decrease the value of this parameter as appropriate when low-speed current oscillation or torque fluctuation is large.

BE-60 High-speed current loop Kp adjustment

Address:	0xBE3C	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:

0.1 to 10.0

Description
The AC drive automatically calculates the current loop gain based on motor parameters. You can decrease the value of this parameter as appropriate when low-speed current oscillation or torque fluctuation is large.

BE-61 Low-speed current loop Ki adjustment

Address:	0xBE3D	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0
Description
The AC drive automatically calculates the current loop gain based on motor parameters. You can decrease the value of this parameter as appropriate when low-speed current oscillation or torque fluctuation is large.

BE-62 High-speed current loop Ki adjustment

Address:	0xBE3E	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	2.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0
Description
The AC drive automatically calculates the current loop gain based on motor parameters. You can decrease the value of this parameter as appropriate when low-speed current oscillation or torque fluctuation is large.

BE-63 D-axis current loop complex vector adjustment

Address:	0xBE3F	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0
Description
-

BE-64 Q-axis current loop complex vector adjustment

Address:	0xBE40	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0
Description
-

BE-65 Complex vector hysteresis frequency lower limit as a percentage of rated frequency

Address:	0xBE41	Effective mode:	-

Min.: 0 Unit: %
Max.: BE-66 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
0% to BE-66
Description
-

BE-66 Complex vector hysteresis frequency upper limit as a percentage of rated frequency
Address: 0xBE42 Effective mode: -
Min.: BE-65 Unit: %
Max.: 150 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
BE-65 to 150%
Description
-

BE-67 ImCsr2 hysteresis switchover voltage upper limit as a percentage of saturation voltage
Address: 0xBE43 Effective mode: -
Min.: BE-68 Unit: %
Max.: 95 Data type: UInt16
Default: 89 Change: Changeable at any time
Value Range:
BE-68 to 95%
Description
-

BE-68 ImCsr2 hysteresis switchover voltage lower limit as a percentage of saturation voltage
Address: 0xBE44 Effective mode: -
Min.: 60 Unit: %
Max.: BE-67 Data type: UInt16
Default: 79 Change: Changeable at any time
Value Range:
60% to BE-67
Description
-

BE-69 ImCsr2 hysteresis switchover frequency hysteresis range as a percentage of rated frequency
Address: 0xBE45 Effective mode: -
Min.: 1 Unit: %
Max.: 30 Data type: UInt16
Default: 10 Change: Changeable at any time
Value Range:
1% to 30%
Description
-

BE-70 ImCsr2 hysteresis switchover frequency lower limit (below which the hysteresis condition does not take effect) as a percentage of the rated frequency
Address: 0xBE46 Effective mode: -

Min.:	40	Unit:	%
Max.:	80	Data type:	UInt16
Default:	60	Change:	Changeable at any time

Value Range:
40% to 80%
Description
-

BE-71 **ImCsr2 current loop Kss adjustment**

Address:	0xBE47	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0
Description
-

BE-72 **Proportional gain adjustment coefficient corresponding to the maximum torque when proportional gain is adjusted with load**

Address:	0xBE48	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	1.0	Data type:	UInt16
Default:	0.5	Change:	Changeable at any time

Value Range:
0.1 to 1.0
Description
-

BE-73 **Torque upper limit setpoint as a percentage of rated torque when proportional gain is adjusted with load**

Address:	0xBE49	Effective mode:	-
Min.:	BE-74	Unit:	%
Max.:	300	Data type:	UInt16
Default:	200	Change:	Changeable at any time

Value Range:
BE-74 to 300%
Description
-

BE-74 **Torque lower limit setpoint as a percentage of rated torque when proportional gain is adjusted with load**

Address:	0xBE4A	Effective mode:	-
Min.:	10	Unit:	%
Max.:	BE-73	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
10% to BE-73
Description
-

BE-75 **Derivative feedforward adjustment**

Address:	0xBE4B	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	1.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0 to 1.0
Description
-

BE-76 **Decoupling control start frequency as a percentage of rated frequency**

Address:	0xBE4C	Effective mode:	-
Min.:	20	Unit:	%
Max.:	150	Data type:	UInt16
Default:	40	Change:	Changeable at any time

Value Range:
20% to 150%
Description
-

BE-77 **Decoupling control filter time adjustment coefficient**

Address:	0xBE4D	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	3.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 3.0
Description
-

BE-78 **Decoupling control output adjustment coefficient**

Address:	0xBE4E	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	1.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.0 to 1.0
Description
-

BE-79 **CPC feedforward enable**

Address:	0xBE4F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
Description
-

BE-80 **Current loop auxiliary command word**

Address:	0xBE50	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Bit00: Complex vector angle limiting

0: Disabled

1: Enabled

Bit01: Voltage angle limiting

0: Program internal limiting

1: Parameter setting

Bit02: 0 by default

0: No lower limit on the excitation current is imposed during the dynamic process.

1: A lower limit on the excitation current is imposed during the dynamic process in ImCsr2 mode.

Bit03–Bit15: Reserved (0 by default)

Description

-

BE-81 **Voltage angle upper limit**

Address:	0xBE51	Effective mode:	-
Min.:	90	Unit:	°
Max.:	180	Data type:	UInt16
Default:	150	Change:	Changeable at any time

Value Range:

90° to 180°

Description

-

BE-82 **Voltage angle lower limit**

Address:	0xBE52	Effective mode:	-
Min.:	0	Unit:	°
Max.:	90	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:

0° to 90°

Description

-

BE-83 **Asynchronous motor D axis integral limit**

Address:	0xBE53	Effective mode:	-
Min.:	0.500	Unit:	-
Max.:	1.000	Data type:	UInt16
Default:	0.707	Change:	Changeable at any time

Value Range:

0.500 to 1.000

Description

-

BE-84 **Current loop carrier frequency upper limit**

Address:	0xBE54	Effective mode:	-
Min.:	5.0	Unit:	-
Max.:	16.0	Data type:	UInt16
Default:	8.0	Change:	Changeable at any time

Value Range:
5.0 to 16.0
Description
-

BE-85 **Droop enable**

Address:	0xBE55	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0 to 1
Description
-

BE-86 **Droop source**

Address:	0xBE56	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0: Line current
1: Torque reference
2: Speed adjustment output
3: Speed adjustment integral component
Description
-

BE-87 **Frequency reference droop coefficient**

Address:	0xBE57	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	50.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0% to 50.0%
Description
-

BE-88 **FVC-SVC switchover mode**

Address:	0xBE58	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: No switchover
1: Active switchover
2: Passive switchover (The AC drive switches to SVC mode upon detection of encoder wire breakage, and it switches back to FVC mode when the encoder recovers during stop and does not switch back to FVC mode when the encoder recovers during running.)
3: Passive switchover (The AC drive switches to SVC mode upon detection of encoder wire breakage, and it switches back to FVC mode when the encoder recovers during running or stop.)

Description

-

BE-89 **FVC-SVC switchover frequency**

Address:	0xBE59	Effective mode:	-
Min.:	10	Unit:	%
Max.:	500	Data type:	UInt16
Default:	50	Change:	Changeable only at stop

Value Range:

10% to 500%

Description

-

BE-90 **FVC-SVC switchover hysteresis**

Address:	0xBE5A	Effective mode:	-
Min.:	10	Unit:	%
Max.:	100	Data type:	UInt16
Default:	10	Change:	Changeable only at stop

Value Range:

10% to 100%

Description

-

4.39 BF: AC Drive Parameters

BF-00 **Minimum speed measurement interval of resolver**

Address:	0xBF00	Effective mode:	-
Min.:	0.010	Unit:	s
Max.:	10.000	Data type:	UInt16
Default:	0.450	Change:	Changeable only at stop

Value Range:

0.010s to 10.000s

Description

-

BF-01 **Dynamic parameter adaption factor**

Address:	0xBF01	Effective mode:	-
Min.:	20.0	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:

20.0% to 200.0%

Description
-

BF-02 **Saturation model auto-tuning voltage setting mode**

Address:	0xBF02	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0 to 1
Description
-

BF-03 **Reserved 2 saturation model auto-tuning carrier frequency reference**

Address:	0xBF03	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	6.0	Change:	Changeable at any time

Value Range:
0.0 to 10.0
Description
-

BF-04 **Saturation model auto-tuning target rated current multiple**

Address:	0xBF04	Effective mode:	-
Min.:	0	Unit:	%
Max.:	250	Data type:	UInt16
Default:	200	Change:	Changeable at any time

Value Range:
0% to 250%
Description
-

BF-05 **Saturation model auto-tuning manual voltage setpoint**

Address:	0xBF05	Effective mode:	-
Min.:	0	Unit:	-
Max.:	4096	Data type:	UInt16
Default:	2000	Change:	Changeable at any time

Value Range:
0 to 4096
Description
-

BF-06 **Bus voltage filter time**

Address:	0xBF06	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	10000	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 ms to 10000 ms
Description
-

BF-07 **Inverter protection**

Address:	0xBF07	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	128	Change:	Changeable at any time

Value Range:

Bit00: Pulse-by-pulse current limit protection (reserved)

0: Disabled

1: Enabled

Bit01: Output phase loss (reserved)

0: Disabled

1: Enabled

Bit02: Leakage current protection (reserved)

0: Disabled

1: Enabled

Bit03: PL signal input phase loss detection (reserved)

0: Disabled

1: Enabled

Bit04: Bus input phase loss detection (reserved)

0: Disabled

1: Enabled

Bit05: Derating at low frequency

0: Disabled

1: Enabled

Bit06: Reporting overvoltage upon shutdown

0: Enabled

1: Disabled

Bit07: Zero drift detection fault

0: Disabled

1: Enabled

Bit08: Pre-charge fault detection (reserved)

0: Disabled

1: Enabled

Bit09: Bus voltage collection and analysis

0: Disabled

1: Enabled

Description

-

BF-09 **AC drive pre-overload threshold**

Address:	0xBF09	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	90.0	Change:	Changeable at any time

Value Range:

0.0% to +100.0%

Description

-

BF-12 **Input phase loss detection time**

Address:	0xBF0C	Effective mode:	-
Min.:	1.0	Unit:	s
Max.:	10.0	Data type:	UInt16
Default:	2.0	Change:	Changeable at any time

Value Range:
1.0s to 10.0s
Description
-

BF-13 **Allowable bus fluctuation range**

Address:	0xBF0D	Effective mode:	-
Min.:	10.0	Unit:	V
Max.:	500.0	Data type:	UInt16
Default:	65.0	Change:	Changeable at any time

Value Range:
10.0 V to 500.0 V
Description
-

BF-14 **Module pre-overtemperature to overtemperature margin**

Address:	0xBF0E	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	60.0	Data type:	UInt16
Default:	5.0	Change:	Changeable at any time

Value Range:
0.0% to 60.0%
Description
-

BF-15 **Maximum output current**

Address:	0xBF0F	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	1000.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

BF-16 **PWM setting**

Address:	0xBF10	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	130	Change:	Changeable at any time

Value Range:

Bit00: Carrier frequency adjusted with temperature
0: Disabled
1: Enabled
Bit01: Carrier frequency adjusted with sync frequency
0: Disabled
1: Enabled
Bit02–Bit03:
0: Asynchronous modulation
1: Pseudo synchronous modulation
2: Synchronous modulation (reserved)
Bit04–Bit06:
0: CPWM
1: DPWM0
2: DPWM1
3: DPWM2
4: DPWM3
5: DPWMph
Bit07: Deadzone compensation
0: Disabled
1: Enabled
Bit08: Overmodulation mode
0: Amplitude
1: Phase

Description

-

BF-17 **Hysteresis for adjusting carrier frequency with sync frequency**

Address:	0xBF11	Effective mode:	-
Min.:	0.0	Unit:	Hz
Max.:	100.0	Data type:	UInt16
Default:	3.0	Change:	Changeable at any time

Value Range:

0.0 Hz to 100.0 Hz

Description

-

BF-18 **Cut-off frequency for deadzone compensation**

Address:	0xBF12	Effective mode:	-
Min.:	0.0	Unit:	Hz
Max.:	600.0	Data type:	UInt16
Default:	70.0	Change:	Changeable at any time

Value Range:

0.0 Hz to 600.0 Hz

Description

-

BF-19 **Narrow pulse coefficient**

Address:	0xBF13	Effective mode:	-
Min.:	0.0	Unit:	%

Max.: 100.0 Data type: UInt16
Default: 0.0 Change: Changeable at any time
Value Range:
0.0% to +100.0%
Description
-

BF-20 Start frequency for adjusting carrier frequency with sync frequency
Address: 0xBF14 Effective mode: -
Min.: 0.0 Unit: Hz
Max.: 600.0 Data type: UInt16
Default: 5.0 Change: Changeable at any time
Value Range:
0.0 Hz to 600.0 Hz
Description
-

BF-21 Modulation ratio limit
Address: 0xBF15 Effective mode: -
Min.: A5-05 Unit: %
Max.: 115.5 Data type: UInt16
Default: 105.0 Change: Changeable at any time
Value Range:
A5-05 to 115.5%
Description
-

BF-22 Drive transistor voltage drop voltage
Address: 0xBF16 Effective mode: -
Min.: 0.00 Unit: V
Max.: 5.00 Data type: UInt16
Default: 0.80 Change: Changeable only at stop
Value Range:
0.00 V to 5.00 V
Description
-

BF-23 Current 1 of deadzone time curve
Address: 0xBF17 Effective mode: -
Min.: 0.0 Unit: %
Max.: 150.0 Data type: UInt16
Default: 1.0 Change: Changeable only at stop
Value Range:
0.0% to 150.0%
Description
-

BF-24 Current 2 of deadzone time curve
Address: 0xBF18 Effective mode: -
Min.: 0.0 Unit: %
Max.: 150.0 Data type: UInt16
Default: 2.0 Change: Changeable only at stop

Value Range:
0.0% to 150.0%
Description
-

BF-25 **Current 3 of deadzone time curve**

Address:	0xBF19	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	150.0	Data type:	UInt16
Default:	5.0	Change:	Changeable only at stop

Value Range:
0.0% to 150.0%
Description
-

BF-26 **Current 4 of deadzone time curve**

Address:	0xBF1A	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	150.0	Data type:	UInt16
Default:	10.0	Change:	Changeable only at stop

Value Range:
0.0% to 150.0%
Description
-

BF-27 **Current 5 of deadzone time curve**

Address:	0xBF1B	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	150.0	Data type:	UInt16
Default:	20.0	Change:	Changeable only at stop

Value Range:
0.0% to 150.0%
Description
-

BF-28 **Current 6 of deadzone time curve**

Address:	0xBF1C	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	150.0	Data type:	UInt16
Default:	40.0	Change:	Changeable only at stop

Value Range:
0.0% to 150.0%
Description
-

BF-29 **Current 7 of deadzone time curve**

Address:	0xBF1D	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	150.0	Data type:	UInt16
Default:	60.0	Change:	Changeable only at stop

Value Range:
0.0% to 150.0%

Description
-

BF-30 **Current 8 of deadzone time curve**

Address:	0xBF1E	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	150.0	Data type:	UInt16
Default:	80.0	Change:	Changeable only at stop

Value Range:
0.0% to 150.0%
Description
-

BF-31 **Time 1 of deadzone time curve**

Address:	0xBF1F	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	300.0	Data type:	UInt16
Default:	10.0	Change:	Changeable only at stop

Value Range:
0.0% to 300.0%
Description
-

BF-32 **Time 2 of deadzone time curve**

Address:	0xBF20	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	300.0	Data type:	UInt16
Default:	20.0	Change:	Changeable only at stop

Value Range:
0.0% to 300.0%
Description
-

BF-33 **Time 3 of deadzone time curve**

Address:	0xBF21	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	300.0	Data type:	UInt16
Default:	50.0	Change:	Changeable only at stop

Value Range:
0.0% to 300.0%
Description
-

BF-34 **Time 4 of deadzone time curve**

Address:	0xBF22	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	300.0	Data type:	UInt16
Default:	80.0	Change:	Changeable only at stop

Value Range:
0.0% to 300.0%
Description
-

BF-35 **Time 5 of deadzone time curve**

Address:	0xBF23	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	300.0	Data type:	UInt16
Default:	90.0	Change:	Changeable only at stop

Value Range:
0.0% to 300.0%
Description
-

BF-36 **Time 6 of deadzone time curve**

Address:	0xBF24	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	300.0	Data type:	UInt16
Default:	90.0	Change:	Changeable only at stop

Value Range:
0.0% to 300.0%
Description
-

BF-37 **Time 7 of deadzone time curve**

Address:	0xBF25	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	300.0	Data type:	UInt16
Default:	90.0	Change:	Changeable only at stop

Value Range:
0.0% to 300.0%
Description
-

BF-38 **Time 8 of deadzone time curve**

Address:	0xBF26	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	300.0	Data type:	UInt16
Default:	90.0	Change:	Changeable only at stop

Value Range:
0.0% to 300.0%
Description
-

BF-39 **Detection of excessive leakage current**

Address:	0xBF27	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: Disabled
1: Enabled
Description
-

BF-40 **Excessive leakage current fault threshold protection gain**

Address:	0xBF28	Effective mode:	-
Min.:	50.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
50.0% to 100.0%
Description
-

BF-44 **Start voltage for actuating braking unit**

Address:	0xBF2C	Effective mode:	-
Min.:	200.0	Unit:	V
Max.:	2000.0	Data type:	UInt16
Default:	760.0	Change:	Changeable at any time

Value Range:
200.0 V to 2000.0 V
Description
-

BF-45 **Load loss detection level**

Address:	0xBF2D	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	10.0	Change:	Changeable at any time

Value Range:
0.0% to +100.0%
Description
-

BF-46 **Load loss detection time**

Address:	0xBF2E	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	60.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.0s to 60.0s
Description
-

4.40 C0: Communication Adaptation Parameters

C0-00 **Communication mapping**

Address:	0xC000	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled

Description
-

C0-01 **Automatic address detection**

Address:	0xC001	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Reset detection (overwriting the index)
2: Incremental detection (without overwriting the index)
Description
-

C0-02 **Automatic address detection time**

Address:	0xC002	Effective mode:	-
Min.:	0	Unit:	s
Max.:	65535	Data type:	UInt16
Default:	60	Change:	Changeable at any time

Value Range:
0s to 65535s
Description
-

C0-03 **Confirmation of automatic address detection**

Address:	0xC003	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Cancel
1: Confirm
Description
-

C0-04 **Data transmission endian mode**

Address:	0xC004	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Ones: RX data
0: Low-order bytes before high-order bytes
1: High-order bytes before low-order bytes
Description
-

C0-05 **Read data type selection 1**

Address:	0xC005	Effective mode:	-
Min.:	0	Unit:	-

Max.: 55555
Default: 0
Data type: UInt16
Change: Changeable at any time

Value Range:

Ones: Read index 1
0: UInt16
1: Int16
2: UInt32
3: Int32
4: Unsigned Float32
5: Signed Float32
Tens: Read index 2
0: UInt16
1: Int16
2: UInt32
3: Int32
4: Unsigned Float32
5: Signed Float32
Hundreds: Read index 3
0: UInt16
1: Int16
2: UInt32
3: Int32
4: Unsigned Float32
5: Signed Float32
Thousands: Read index 4
0: UInt16
1: Int16
2: UInt32
3: Int32
4: Unsigned Float32
5: Signed Float32
Ten thousands: Read index 5
0: UInt16
1: Int16
2: UInt32
3: Int32
4: Unsigned Float32
5: Signed Float32

Description

-

C0-06 Read data type selection 2

Address: 0xC006
Min.: 0
Max.: 55555
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:

Ones: Read index 6
0: UInt16
1: Int16
2: UInt32
3: Int32
4: Unsigned Float32
5: Signed Float32
Tens: Read index 7
0: UInt16
1: Int16
2: UInt32
3: Int32
4: Unsigned Float32
5: Signed Float32
Hundreds: Read index 8
0: UInt16
1: Int16
2: UInt32
3: Int32
4: Unsigned Float32
5: Signed Float32
Thousands: Read index 9
0: UInt16
1: Int16
2: UInt32
3: Int32
4: Unsigned Float32
5: Signed Float32
Ten thousands: Read index 10
0: UInt16
1: Int16
2: UInt32
3: Int32
4: Unsigned Float32
5: Signed Float32

Description

-

C0-07 Read data scale factor selection 1

Address:	0xC007	Effective mode:	-
Min.:	0	Unit:	-
Max.:	58888	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Ones: Read index 1
0: x1
1: x0.1
2: x0.01
3: x0.001
4: x10
5: x100
6: x1000
7: x0.0001
8: x10000
Tens: Read index 2
0: x1
1: x0.1
2: x0.01
3: x0.001
4: x10
5: x100
6: x1000
7: x0.0001
8: x10000
Hundreds: Read index 3
0: x1
1: x0.1
2: x0.01
3: x0.001
4: x10
5: x100
6: x1000
7: x0.0001
8: x10000

(To be continued)

(Continued)

Thousands: Read index 4

0: x1

1: x0.1

2: x0.01

3: x0.001

4: x10

5: x100

6: x1000

7: x0.0001

8: x10000

Ten thousands: Read index 5

0: x1

1: x0.1

2: x0.01

3: x0.001

4: x10

5: x100

Description

-

C0-08 Read data scale factor selection 2

Address:	0xC008	Effective mode:	-
Min.:	0	Unit:	-
Max.:	58888	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Ones: Read index 6
0: x1
1: x0.1
2: x0.01
3: x0.001
4: x10
5: x100
6: x1000
7: x0.0001
8: x10000
Tens: Read index 7
0: x1
1: x0.1
2: x0.01
3: x0.001
4: x10
5: x100
6: x1000
7: x0.0001
8: x10000
Hundreds: Read index 8
0: x1
1: x0.1
2: x0.01
3: x0.001
4: x10
5: x100
6: x1000
7: x0.0001
8: x10000

(To be continued)

(Continued)

Thousands: Read index 9

0: x1

1: x0.1

2: x0.01

3: x0.001

4: x10

5: x100

6: x1000

7: x0.0001

8: x10000

Ten thousands: Read index 10

0: x1

1: x0.1

2: x0.01

3: x0.001

4: x10

5: x100

Description

-

C0-09 Write data type

Address:	0xC009	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-10 Address mapping status

Address:	0xC00A	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-18 Number of read mapping addresses

Address:	0xC012	Effective mode:	-
Min.:	0	Unit:	-
Max.:	10	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:

0 to 10

Description
-

C0-19 **Number of write mapping addresses**

Address:	0xC013	Effective mode:	-
Min.:	0	Unit:	-
Max.:	10	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
0 to 10
Description
-

C0-20 **Read index 1**

Address:	0xC014	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-21 **Read subindex 1**

Address:	0xC015	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-22 **Read mapping internal address index 1**

Address:	0xC016	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-23 **Read mapping internal address subindex 1**

Address:	0xC017	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-24 **Read index 2**

Address:	0xC018	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-25 **Read subindex 2**

Address:	0xC019	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-26 **Read mapping internal address index 2**

Address:	0xC01A	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-27 **Read mapping internal address subindex 2**

Address:	0xC01B	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-28 **Read index 3**

Address:	0xC01C	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-29 **Read subindex 3**

Address:	0xC01D	Effective mode:	-

Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0x0 Change: Changeable at any time
Value Range:
0x0 to 0xFFFF
Description
-

C0-30 Read mapping internal address index 3
Address: 0xC01E Effective mode: -
Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0x0 Change: Changeable at any time
Value Range:
0x0 to 0xFFFF
Description
-

C0-31 Read mapping internal address subindex 3
Address: 0xC01F Effective mode: -
Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0x0 Change: Changeable at any time
Value Range:
0x0 to 0xFFFF
Description
-

C0-32 Read index 4
Address: 0xC020 Effective mode: -
Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0x0 Change: Changeable at any time
Value Range:
0x0 to 0xFFFF
Description
-

C0-33 Read subindex 4
Address: 0xC021 Effective mode: -
Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0x0 Change: Changeable at any time
Value Range:
0x0 to 0xFFFF
Description
-

C0-34 Read mapping internal address index 4
Address: 0xC022 Effective mode: -
Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-35 Read mapping internal address subindex 4

Address: 0xC023 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-36 Read index 5

Address: 0xC024 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-37 Read subindex 5

Address: 0xC025 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-38 Read mapping internal address index 5

Address: 0xC026 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-39 Read mapping internal address subindex 5

Address: 0xC027 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF
Description
-

C0-40 **Read index 6**

Address:	0xC028	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-41 **Read subindex 6**

Address:	0xC029	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-42 **Read mapping internal address index 6**

Address:	0xC02A	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-43 **Read mapping internal address subindex 6**

Address:	0xC02B	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-44 **Read index 7**

Address:	0xC02C	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

C0-45 **Read subindex 7**

Address:	0xC02D	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-46 **Read mapping internal address index 7**

Address:	0xC02E	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-47 **Read mapping internal address subindex 7**

Address:	0xC02F	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-48 **Read index 8**

Address:	0xC030	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-49 **Read subindex 8**

Address:	0xC031	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-50 **Read mapping internal address index 8**

Address:	0xC032	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-51 **Read mapping internal address subindex 8**

Address:	0xC033	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-52 **Read index 9**

Address:	0xC034	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-53 **Read subindex 9**

Address:	0xC035	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-54 **Read mapping internal address index 9**

Address:	0xC036	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-55 **Read mapping internal address subindex 9**

Address:	0xC037	Effective mode:	-

Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

C0-56 Read index 10

Address: 0xC038
Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

C0-57 Read subindex 10

Address: 0xC039
Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

C0-58 Read mapping internal address index 10

Address: 0xC03A
Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

C0-59 Read mapping internal address subindex 10

Address: 0xC03B
Min.: 0x0
Max.: 0xFFFF
Default: 0x0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

C0-60 Write index 1

Address: 0xC03C
Min.: 0x0
Max.: 0xFFFF
Effective mode: -
Unit: -
Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-61 Write subindex 1

Address: 0xC03D Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-62 Write mapping internal address index 1

Address: 0xC03E Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-63 Write mapping internal address subindex 1

Address: 0xC03F Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-64 Write index 2

Address: 0xC040 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-65 Write subindex 2

Address: 0xC041 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-66 Write mapping internal address index 2

Address:	0xC042	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-67 Write mapping internal address subindex 2

Address:	0xC043	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-68 Write index 3

Address:	0xC044	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-69 Write subindex 3

Address:	0xC045	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-70 Write mapping internal address index 3

Address:	0xC046	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:

0x0 to 0xFFFF

Description
-

C0-71 **Write mapping internal address subindex 3**

Address:	0xC047	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-72 **Write index 4**

Address:	0xC048	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-73 **Write subindex 4**

Address:	0xC049	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-74 **Write mapping internal address index 4**

Address:	0xC04A	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-75 **Write mapping internal address subindex 4**

Address:	0xC04B	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-76 **Write index 5**

Address:	0xC04C	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-77 **Write subindex 5**

Address:	0xC04D	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-78 **Write mapping internal address index 5**

Address:	0xC04E	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-79 **Write mapping internal address subindex 5**

Address:	0xC04F	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-80 **Write index 6**

Address:	0xC050	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-81 **Write subindex 6**

Address:	0xC051	Effective mode:	-

Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0x0 Change: Changeable at any time
Value Range:
0x0 to 0xFFFF
Description
-

C0-82 Write mapping internal address index 6

Address: 0xC052 Effective mode: -
Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0x0 Change: Changeable at any time
Value Range:
0x0 to 0xFFFF
Description
-

C0-83 Write mapping internal address subindex 6

Address: 0xC053 Effective mode: -
Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0x0 Change: Changeable at any time
Value Range:
0x0 to 0xFFFF
Description
-

C0-84 Write index 7

Address: 0xC054 Effective mode: -
Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0x0 Change: Changeable at any time
Value Range:
0x0 to 0xFFFF
Description
-

C0-85 Write subindex 7

Address: 0xC055 Effective mode: -
Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0x0 Change: Changeable at any time
Value Range:
0x0 to 0xFFFF
Description
-

C0-86 Write mapping internal address index 7

Address: 0xC056 Effective mode: -
Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-87 Write mapping internal address subindex 7

Address: 0xC057 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-88 Write index 8

Address: 0xC058 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-89 Write subindex 8

Address: 0xC059 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-90 Write mapping internal address index 8

Address: 0xC05A Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

-

C0-91 Write mapping internal address subindex 8

Address: 0xC05B Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF
Description
-

C0-92 **Write index 9**

Address:	0xC05C	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-93 **Write subindex 9**

Address:	0xC05D	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-94 **Write mapping internal address index 9**

Address:	0xC05E	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-95 **Write mapping internal address subindex 9**

Address:	0xC05F	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-96 **Write index 10**

Address:	0xC060	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
-

C0-97 **Write subindex 10**

Address:	0xC061	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-98 **Write mapping internal address index 10**

Address:	0xC062	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

C0-99 **Write mapping internal address subindex 10**

Address:	0xC063	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
-

4.41 C1: Word-Bit Conversion Parameters

C1-00 **Input of W2B module A**

Address:	0xC100	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: 0
Others: K connector
Description
0: Disabled. The output is 0.
Others: If the word connector is selected, the value of the word connector is converted to bit output. If the DWord connector is selected, the high-order 16 bits of the value of the DWord connector are converted to bit output.

C1-01 **Input of W2B module B**

Address: 0xC101 | Effective mode: -
Min.: 0 | Unit: -
Max.: 0 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:
Same as C1-00
Description
Same as module A

C1-02 **Input of W2B module C**

Address: 0xC102 | Effective mode: -
Min.: 0 | Unit: -
Max.: 0 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:
Same as C1-00
Description
Same as module A

C1-03 **Input of W2B module D**

Address: 0xC103 | Effective mode: -
Min.: 0 | Unit: -
Max.: 0 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:
Same as C1-00
Description
Same as module A

C1-04 **Input of W2B module E**

Address: 0xC104 | Effective mode: -
Min.: 0 | Unit: -
Max.: 0 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:
Same as C1-00
Description
Same as module A

C1-05 **Input of W2B module F**

Address: 0xC105 | Effective mode: -
Min.: 0 | Unit: -
Max.: 0 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:
Same as C1-00
Description
Same as module A

C1-06 **Input of W2B module G**

Address: 0xC106 | Effective mode: -

Min.: 0 Unit: -
Max.: 0 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C1-00
Description
Same as module A

C1-07 Input of W2B module H
Address: 0xC107 Effective mode: -
Min.: 0 Unit: -
Max.: 0 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C1-00
Description
Same as module A

C1-12 B2W module A enable
Address: 0xC10C Effective mode: -
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
0: Disabled
1: Enabled
Description
0: Disabled. The output is 0.
1: Enabled. The inputs of C1-14 to C1-29 are converted to word output as bit0 to bit15.

C1-13 Bit inversion flag of B2W module A
Address: 0xC10D Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
0 to 65535
Description
Bit0 to Bit5 of the setpoint are used as the inversion flag to invert each input bit of C1-14 to C1-29.

C1-14 B2W module A - Bit00
Address: 0xC10E Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:

0: 0
1: 1
2: 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

0: Input 0
1: Input 1
2: Input 0
3–18: Input of corresponding DI
Others: Input of the connector

C1-15 B2W module A - Bit01

Address:	0xC10F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C1-14

Description

Same as C1-14

C1-16 B2W module A - Bit02

Address:	0xC110	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C1-14

Description

Same as C1-14

C1-17 B2W module A - Bit03

Address:	0xC111	Effective mode:	-

Min.: 0
Max.: 18
Default: 0
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as C1-14

Description
Same as C1-14

C1-18 B2W module A - Bit04

Address: 0xC112
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as C1-14

Description
Same as C1-14

C1-19 B2W module A - Bit05

Address: 0xC113
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as C1-14

Description
Same as C1-14

C1-20 B2W module A - Bit06

Address: 0xC114
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as C1-14

Description
Same as C1-14

C1-21 B2W module A - Bit07

Address: 0xC115
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as C1-14

Description
Same as C1-14

C1-22 B2W module A - Bit08

Address: 0xC116
Min.: 0
Max.: 18
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C1-14

Description

Same as C1-14

C1-23 B2W module A - Bit09

Address: 0xC117 Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C1-14

Description

Same as C1-14

C1-24 B2W module A - Bit10

Address: 0xC118 Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C1-14

Description

Same as C1-14

C1-25 B2W module A - Bit11

Address: 0xC119 Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C1-14

Description

Same as C1-14

C1-26 B2W module A - Bit12

Address: 0xC11A Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C1-14

Description

Same as C1-14

C1-27 B2W module A - Bit13

Address: 0xC11B Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C1-14

Description

Same as C1-14

C1-28 B2W module A - Bit14

Address:	0xC11C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C1-14

Description

Same as C1-14

C1-29 B2W module A - Bit15

Address:	0xC11D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C1-14

Description

Same as C1-14

C1-30 B2W module B enable

Address:	0xC11E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C1-12

Description

Same as module A

C1-31 Bit inversion flag of B2W module B

Address:	0xC11F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 65535

Description

Same as module A

C1-32 B2W module B - Bit00

Address:	0xC120	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C1-14

Description
Same as module A

C1-33 **B2W module B - Bit01**

Address:	0xC121	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-34 **B2W module B - Bit02**

Address:	0xC122	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-35 **B2W module B - Bit03**

Address:	0xC123	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-36 **B2W module B - Bit04**

Address:	0xC124	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-37 **B2W module B - Bit05**

Address:	0xC125	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-38 **B2W module B - Bit06**

Address: 0xC126 | Effective mode: -
Min.: 0 | Unit: -
Max.: 18 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-39 **B2W module B - Bit07**

Address: 0xC127 | Effective mode: -
Min.: 0 | Unit: -
Max.: 18 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-40 **B2W module B - Bit08**

Address: 0xC128 | Effective mode: -
Min.: 0 | Unit: -
Max.: 18 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-41 **B2W module B - Bit09**

Address: 0xC129 | Effective mode: -
Min.: 0 | Unit: -
Max.: 18 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-42 **B2W module B - Bit10**

Address: 0xC12A | Effective mode: -
Min.: 0 | Unit: -
Max.: 18 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-43 **B2W module B - Bit11**

Address: 0xC12B | Effective mode: -

Min.: 0
Max.: 18
Default: 0
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as C1-14

Description
Same as module A

C1-44 B2W module B - Bit12

Address: 0xC12C
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as C1-14

Description
Same as module A

C1-45 B2W module B - Bit13

Address: 0xC12D
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as C1-14

Description
Same as module A

C1-46 B2W module B - Bit14

Address: 0xC12E
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as C1-14

Description
Same as module A

C1-47 B2W module B - Bit15

Address: 0xC12F
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as C1-14

Description
Same as module A

C1-48 B2W module C enable

Address: 0xC130
Min.: 0
Max.: 1
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Disabled

1: Enabled

Description

Same as module A

C1-49 Bit inversion flag of B2W module C

Address: 0xC131 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

Same as module A

C1-50 B2W module C - Bit00

Address: 0xC132 Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C1-14

Description

Same as module A

C1-51 B2W module C - Bit01

Address: 0xC133 Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C1-14

Description

Same as module A

C1-52 B2W module C - Bit02

Address: 0xC134 Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C1-14

Description

Same as module A

C1-53 B2W module C - Bit03

Address: 0xC135 Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-54 **B2W module C - Bit04**

Address:	0xC136	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-55 **B2W module C - Bit05**

Address:	0xC137	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-56 **B2W module C - Bit06**

Address:	0xC138	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-57 **B2W module C - Bit07**

Address:	0xC139	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-58 **B2W module C - Bit08**

Address:	0xC13A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C1-14

Description
Same as module A

C1-59 **B2W module C - Bit09**

Address:	0xC13B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-60 **B2W module C - Bit10**

Address:	0xC13C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-61 **B2W module C - Bit11**

Address:	0xC13D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-62 **B2W module C - Bit12**

Address:	0xC13E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-63 **B2W module C - Bit13**

Address:	0xC13F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-64 **B2W module C - Bit14**

Address: 0xC140 | Effective mode: -
Min.: 0 | Unit: -
Max.: 18 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-65 **B2W module C - Bit15**

Address: 0xC141 | Effective mode: -
Min.: 0 | Unit: -
Max.: 18 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-66 **B2W module D enable**

Address: 0xC142 | Effective mode: -
Min.: 0 | Unit: -
Max.: 1 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:
Same as C1-12
Description
Same as module A

C1-67 **Bit inversion flag of B2W module D**

Address: 0xC143 | Effective mode: -
Min.: 0 | Unit: -
Max.: 65535 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:
0 to 65535
Description
Same as module A

C1-68 **B2W module D - Bit00**

Address: 0xC144 | Effective mode: -
Min.: 0 | Unit: -
Max.: 18 | Data type: UInt16
Default: 0 | Change: Changeable at any time

Value Range:
Same as C1-14
Description
Same as module A

C1-69 **B2W module D - Bit01**

Address: 0xC145 | Effective mode: -

Min.: 0
Max.: 18
Default: 0
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as C1-14

Description
Same as module A

C1-70 B2W module D - Bit02

Address: 0xC146
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as C1-14

Description
Same as module A

C1-71 B2W module D - Bit03

Address: 0xC147
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as C1-14

Description
Same as module A

C1-72 B2W module D - Bit04

Address: 0xC148
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as C1-14

Description
Same as module A

C1-73 B2W module D - Bit05

Address: 0xC149
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as C1-14

Description
Same as module A

C1-74 B2W module D - Bit06

Address: 0xC14A
Min.: 0
Max.: 18
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C1-14

Description

Same as module A

C1-75 B2W module D - Bit07

Address: 0xC14B Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C1-14

Description

Same as module A

C1-76 B2W module D - Bit08

Address: 0xC14C Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C1-14

Description

Same as module A

C1-77 B2W module D - Bit09

Address: 0xC14D Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C1-14

Description

Same as module A

C1-78 B2W module D - Bit10

Address: 0xC14E Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C1-14

Description

Same as module A

C1-79 B2W module D - Bit11

Address: 0xC14F Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C1-14

Description

Same as module A

C1-80 **B2W module D - Bit12**

Address:	0xC150	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C1-14

Description

Same as module A

C1-81 **B2W module D - Bit13**

Address:	0xC151	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C1-14

Description

Same as module A

C1-82 **B2W module D - Bit14**

Address:	0xC152	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C1-14

Description

Same as module A

C1-83 **B2W module D - Bit15**

Address:	0xC153	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C1-14

Description

Same as module A

4.42 C2: W-DW Conversion Parameters

C2-00 **LOWORD of W-DW conversion A**

Address:	0xC200	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: 0

Others: K connector

Description

0: The input is 0.

Others: When the input source is a word connector, the value of the word connector is used. When the input source is a DWord connector, the high-order 16 bits of the connector is used.

C2-01 HIWORD of W-DW conversion A

Address: 0xC201 Effective mode: -

Min.: 0 Unit: -

Max.: 0 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Disabled

Others: K connector

Description

0: Disabled. The output is 0.

Others: When the input source is a word connector, the value of the word connector is used. When the input source is a DWord connector, the high-order 16 bits of the connector is used. Then the value is used as the high-order 16 bits of DWord and combines with the value of C2-00 to generate the DWord output.

C2-02 Low-order bits of base value of W-DW conversion A

Address: 0xC202 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

This parameter defines the low-order 16 bits of the DWord base value. The DWord output by C2-00 and C2-01 is divided by the base value and then output to the floating-point connector.

C2-03 High-order bits of base value of W-DW conversion A

Address: 0xC203 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

This parameter defines the high-order 16 bits of the DWord base value. The DWord output by C2-00 and C2-01 is divided by the base value and then output to the floating-point connector.

C2-04 LOWORD of W-DW conversion B

Address: 0xC204 Effective mode: -

Min.: 0 Unit: -

Max.: 0 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: 0

Others: K connector

Description

Same as module A

C2-05 HIWORD of W-DW conversion B

Address: 0xC205 Effective mode: -

Min.: 0 Unit: -

Max.: 0 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Disabled

Others: K connector

Description

Same as module A

C2-06 Low-order bits of base value of W-DW conversion B

Address: 0xC206 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

Same as module A

C2-07 High-order bits of base value of W-DW conversion B

Address: 0xC207 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

Same as module A

C2-08 LOWORD of W-DW conversion C

Address: 0xC208 Effective mode: -

Min.: 0 Unit: -

Max.: 0 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: 0

Others: K connector

Description

Same as module A

C2-09 HIWORD of W-DW conversion C

Address: 0xC209 Effective mode: -

Min.: 0 Unit: -

Max.: 0 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
0: Disabled
Others: K connector
Description
Same as module A

C2-10 Low-order bits of base value of W-DW conversion C
Address: 0xC20A Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
0 to 65535
Description
Same as module A

C2-11 High-order bits of base value of W-DW conversion C
Address: 0xC20B Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
0 to 65535
Description
Same as module A

C2-12 LOWORD of W-DW conversion D
Address: 0xC20C Effective mode: -
Min.: 0 Unit: -
Max.: 0 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
0: 0
Others: K connector
Description
Same as module A

C2-13 HIWORD of W-DW conversion D
Address: 0xC20D Effective mode: -
Min.: 0 Unit: -
Max.: 0 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
0: Disabled
Others: K connector
Description
Same as module A

C2-14 Low-order bits of base value of W-DW conversion D
Address: 0xC20E Effective mode: -

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
Same as module A

C2-15 High-order bits of base value of W-DW conversion D

Address:	0xC20F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
Same as module A

C2-32 DW-W conversion A

Address:	0xC220	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
Others: K connector
Description
0: Disabled. The output is 0.
Others: When the word connector is selected, the output HIWORD is the value of the word connector, and the output LOWORD is 0. When the DWord connector is selected, the output HIWORD is the high-order 16 bits of the DWord, and the output LOWORD is the low-order 16 bits of the DWord.

C2-33 Low-order bits of base value of DW-W conversion A

Address:	0xC221	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
This parameter defines the low-order 16 bits of the DWord base value. The DWord input by C2-32 is divided by the base value and then output to the floating-point connector.

C2-34 High-order bits of base value of DW-W conversion A

Address:	0xC222	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535

Description

This parameter defines the high-order 16 bits of the DWord base value. The DWord input by C2-32 is divided by the base value and then output to the floating-point connector.

C2-35 DW-W conversion B

Address:	0xC223	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

Others: K connector

Description

Same as module A

C2-36 Low-order bits of base value of DW-W conversion B

Address:	0xC224	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 65535

Description

Same as module A

C2-37 High-order bits of base value of DW-W conversion B

Address:	0xC225	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 65535

Description

Same as module A

C2-38 DW-W conversion C

Address:	0xC226	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

Others: K connector

Description

Same as module A

C2-39 Low-order bits of base value of DW-W conversion C

Address:	0xC227	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
Same as module A

C2-40 **High-order bits of base value of DW-W conversion C**

Address:	0xC228	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
Same as module A

C2-41 **DW-W conversion D**

Address:	0xC229	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
Others: K connector
Description
Same as module A

C2-42 **Low-order bits of base value of DW-W conversion D**

Address:	0xC22A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
Same as module A

C2-43 **High-order bits of base value of DW-W conversion D**

Address:	0xC22B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
Same as module A

4.43 C3: Logical Operation Parameters

C3-00 **Function of logic AND-OR module A**

Address:	0xC300	Effective mode:	-

Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: AND

2: OR

Description

0: Disabled. The output is 0.

1: AND. The inputs 1, 2, 3, and 4 are ANDed and then output.

1: OR. The inputs 1, 2, 3, and 4 are ORed and then output.

C3-01 **Input 1 of logic AND-OR module A**

Address:	0xC301	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Logic 0

1: Logic 1

2: Logic 0

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

0: Input 0

1: Input 1

2: Input 0

3–18: Input of corresponding DI

Others: Input of the connector

C3-02 **Input 2 of logic AND-OR module A**

Address:	0xC302	Effective mode:	-
Min.:	0	Unit:	-

Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-01
Description
Same as C3-01

C3-03 Input 3 of logic AND-OR module A
Address: 0xC303 Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-01
Description
Same as C3-01

C3-04 Input 4 of logic AND-OR module A
Address: 0xC304 Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-01
Description
Same as C3-01

C3-05 Function of logic AND-OR module B
Address: 0xC305 Effective mode: -
Min.: 0 Unit: -
Max.: 2 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
0: Disabled
1: AND
2: OR
Description
Same as module A

C3-06 Input 1 of logic AND-OR module B
Address: 0xC306 Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-01
Description
Same as module A

C3-07 Input 2 of logic AND-OR module B
Address: 0xC307 Effective mode: -

Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-01
Description
Same as module A

C3-08 Input 3 of logic AND-OR module B
Address: 0xC308 Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-01
Description
Same as module A

C3-09 Input 4 of logic AND-OR module B
Address: 0xC309 Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-01
Description
Same as module A

C3-10 Function of logic AND-OR module C
Address: 0xC30A Effective mode: -
Min.: 0 Unit: -
Max.: 2 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-05
Description
Same as module A

C3-11 Input 1 of logic AND-OR module C
Address: 0xC30B Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-01
Description
Same as module A

C3-12 Input 2 of logic AND-OR module C
Address: 0xC30C Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time
Value Range:
Same as C3-01
Description
Same as module A

C3-13 Input 3 of logic AND-OR module C

Address: 0xC30D Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-01
Description
Same as module A

C3-14 Input 4 of logic AND-OR module C

Address: 0xC30E Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-01
Description
Same as module A

C3-15 Function of logic AND-OR module D

Address: 0xC30F Effective mode: -
Min.: 0 Unit: -
Max.: 2 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-05
Description
Same as module A

C3-16 Input 1 of logic AND-OR module D

Address: 0xC310 Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-01
Description
Same as module A

C3-17 Input 2 of logic AND-OR module D

Address: 0xC311 Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:

Same as C3-01

Description

Same as module A

C3-18 Input 3 of logic AND-OR module D

Address:	0xC312	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C3-01

Description

Same as module A

C3-19 Input 4 of logic AND-OR module D

Address:	0xC313	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C3-01

Description

Same as module A

C3-20 Function of logic AND-OR module E

Address:	0xC314	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C3-05

Description

Same as module A

C3-21 Input 1 of logic AND-OR module E

Address:	0xC315	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C3-01

Description

Same as module A

C3-22 Input 2 of logic AND-OR module E

Address:	0xC316	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C3-01

Description
Same as module A

C3-23 **Input 3 of logic AND-OR module E**

Address:	0xC317	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C3-01
Description
Same as module A

C3-24 **Function of logic AND-OR module F**

Address:	0xC318	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C3-05
Description
Same as module A

C3-25 **Input 1 of logic AND-OR module F**

Address:	0xC319	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C3-01
Description
Same as module A

C3-26 **Input 2 of logic AND-OR module F**

Address:	0xC31A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C3-01
Description
Same as module A

C3-27 **Input 3 of logic AND-OR module F**

Address:	0xC31B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C3-01
Description
Same as module A

C3-28 **Function of logic AND-OR module G**

Address: 0xC31C
Min.: 0
Max.: 2
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as C3-05
Description
Same as module A

C3-29 **Input 1 of logic AND-OR module G**

Address: 0xC31D
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as C3-01
Description
Same as module A

C3-30 **Input 2 of logic AND-OR module G**

Address: 0xC31E
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as C3-01
Description
Same as module A

C3-31 **Input 3 of logic AND-OR module G**

Address: 0xC31F
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as C3-01
Description
Same as module A

C3-32 **Function of logic AND-OR module H**

Address: 0xC320
Min.: 0
Max.: 2
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
Same as C3-05
Description
Same as module A

C3-33 **Input 1 of logic AND-OR module H**

Address: 0xC321
Effective mode: -

Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-01
Description
Same as module A

C3-34 Input 2 of logic AND-OR module H
Address: 0xC322 Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-01
Description
Same as module A

C3-35 Input 3 of logic AND-OR module H
Address: 0xC323 Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-01
Description
Same as module A

C3-36 Function of logic AND-OR module I
Address: 0xC324 Effective mode: -
Min.: 0 Unit: -
Max.: 2 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-05
Description
Same as module A

C3-37 Input 1 of logic AND-OR module I
Address: 0xC325 Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-01
Description
Same as module A

C3-38 Input 2 of logic AND-OR module I
Address: 0xC326 Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C3-01

Description

Same as module A

C3-39 Input 3 of logic AND-OR module I

Address: 0xC327 Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C3-01

Description

Same as module A

C3-40 Function of logic AND-OR module J

Address: 0xC328 Effective mode: -

Min.: 0 Unit: -

Max.: 2 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C3-05

Description

Same as module A

C3-41 Input 1 of logic AND-OR module J

Address: 0xC329 Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C3-01

Description

Same as module A

C3-42 Input 2 of logic AND-OR module J

Address: 0xC32A Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C3-01

Description

Same as module A

C3-43 Input 3 of logic AND-OR module J

Address: 0xC32B Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C3-01

Description

Same as module A

C3-44 Function of logic AND-OR module K

Address:	0xC32C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C3-05

Description

Same as module A

C3-45 Input 1 of logic AND-OR module K

Address:	0xC32D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C3-01

Description

Same as module A

C3-46 Input 2 of logic AND-OR module K

Address:	0xC32E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C3-01

Description

Same as module A

C3-47 Input 3 of logic AND-OR module K

Address:	0xC32F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C3-01

Description

Same as module A

C3-48 Function of logic AND-OR module L

Address:	0xC330	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C3-05

Description
Same as module A

C3-49 **Input 1 of logic AND-OR module L**

Address:	0xC331	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C3-01
Description
Same as module A

C3-50 **Input 2 of logic AND-OR module L**

Address:	0xC332	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C3-01
Description
Same as module A

C3-51 **Input 3 of logic AND-OR module L**

Address:	0xC333	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C3-01
Description
Same as module A

C3-56 **Input of logic NOT module A**

Address:	0xC338	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

The input is NOTed and then output.
0: Disabled. The output is 0.
1: Module input 1
2: Module input 0
3–18: Input of corresponding DI
Others: Input of the connector

C3-57 Input of logic NOT module B

Address:	0xC339	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

C3-56

Description

Same as module A

C3-58 Input of logic NOT module C

Address:	0xC33A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

C3-56

Description

Same as module A

C3-59 **Input of logic NOT module D**

Address: 0xC33B
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
C3-56
Description
Same as module A

C3-60 **Input of logic NOT module E**

Address: 0xC33C
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
C3-56
Description
Same as module A

C3-61 **Input of logic NOT module F**

Address: 0xC33D
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
C3-56
Description
Same as module A

C3-62 **Input of logic NOT module G**

Address: 0xC33E
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
C3-56
Description
Same as module A

C3-63 **Input of logic NOT module H**

Address: 0xC33F
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
C3-56
Description
Same as module A

C3-64 **Input of logic NOT module I**

Address: 0xC340
Effective mode: -

Min.: 0
Max.: 18
Default: 0
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
C3-56

Description
Same as module A

C3-65 Input of logic NOT module J

Address: 0xC341
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
C3-56

Description
Same as module A

C3-66 Input of logic NOT module K

Address: 0xC342
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
C3-56

Description
Same as module A

C3-67 Input of logic NOT module L

Address: 0xC343
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
C3-56

Description
Same as module A

C3-68 Input of logic NOT module M

Address: 0xC344
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
C3-56

Description
Same as module A

C3-69 Input of logic NOT module N

Address: 0xC345
Min.: 0
Max.: 18
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

C3-56

Description

Same as module A

C3-70 Input of logic NOT module O

Address: 0xC346 Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

C3-56

Description

Same as module A

C3-71 Input of logic NOT module P

Address: 0xC347 Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

C3-56

Description

Same as module A

C3-72 Function of logic XOR/XNOR module A

Address: 0xC348 Effective mode: -

Min.: 0 Unit: -

Max.: 2 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Disabled

1: XOR

2: XNOR

Description

0: Disabled. The output is 0.

1: XOR. The inputs 1 and 2 are XORed and then output.

2: XNOR. The inputs 1 and 2 are XNORed and then output.

C3-73 Input 1 of logic XOR/XNOR module A

Address: 0xC349 Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as C3-01

Description

Same as C3-01

C3-74 **Input 2 of logic XOR/XNOR module A**

Address:	0xC34A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C3-01
Description
Same as C3-01

C3-75 **Function of logic XOR/XNOR module B**

Address:	0xC34B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: XOR
2: XNOR
Description
Same as module A

C3-76 **Input 1 of logic XOR/XNOR module B**

Address:	0xC34C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C3-01
Description
Same as module A

C3-77 **Input 2 of logic XOR/XNOR module B**

Address:	0xC34D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C3-01
Description
Same as module A

C3-78 **Function of logic XOR/XNOR module C**

Address:	0xC34E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: XOR
2: XNOR

Description
Same as module A

C3-79 **Input 1 of logic XOR/XNOR module C**

Address:	0xC34F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C3-01
Description
Same as module A

C3-80 **Input 2 of logic XOR/XNOR module C**

Address:	0xC350	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C3-01
Description
Same as module A

C3-81 **Function of logic XOR/XNOR module D**

Address:	0xC351	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: XOR
2: XNOR
Description
Same as module A

C3-82 **Input 1 of logic XOR/XNOR module D**

Address:	0xC352	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C3-01
Description
Same as module A

C3-83 **Input 2 of logic XOR/XNOR module D**

Address:	0xC353	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C3-01

Description

Same as module A

C3-84 Function of logic XOR/XNOR module E

Address:	0xC354	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: XOR

2: XNOR

Description

Same as module A

C3-85 Input 1 of logic XOR/XNOR module E

Address:	0xC355	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C3-01

Description

Same as module A

C3-86 Input 2 of logic XOR/XNOR module E

Address:	0xC356	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C3-01

Description

Same as module A

C3-87 Function of logic XOR/XNOR module F

Address:	0xC357	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: XOR

2: XNOR

Description

Same as module A

C3-88 Input 1 of logic XOR/XNOR module F

Address:	0xC358	Effective mode:	-
Min.:	0	Unit:	-

Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-01
Description
Same as module A

C3-89 Input 2 of logic XOR/XNOR module F
Address: 0xC359 Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-01
Description
Same as module A

C3-90 Function of logic XOR/XNOR module G
Address: 0xC35A Effective mode: -
Min.: 0 Unit: -
Max.: 2 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
0: Disabled
1: XOR
2: XNOR
Description
Same as module A

C3-91 Input 1 of logic XOR/XNOR module G
Address: 0xC35B Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-01
Description
Same as module A

C3-92 Input 2 of logic XOR/XNOR module G
Address: 0xC35C Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C3-01
Description
Same as module A

C3-93 Function of logic XOR/XNOR module H
Address: 0xC35D Effective mode: -

Min.: 0 Unit: -
Max.: 2 Data type: UInt16
Default: 0 Change: Changeable at any time

Value Range:

0: Disabled

1: XOR

2: XNOR

Description

Same as module A

C3-94 Input 1 of logic XOR/XNOR module H

Address: 0xC35E Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time

Value Range:

Same as C3-01

Description

Same as module A

C3-95 Input 2 of logic XOR/XNOR module H

Address: 0xC35F Effective mode: -
Min.: 0 Unit: -
Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time

Value Range:

Same as C3-01

Description

Same as module A

4.44 C4: Arithmetic Operation Parameters

C4-00 Input of floating-point absolute value module A

Address: 0xC400 Effective mode: -
Min.: 0 Unit: -
Max.: 8 Data type: UInt16
Default: 0 Change: Changeable at any time

Value Range:

0: Disabled

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description
-

C4-01 **Input of floating-point absolute value module B**

Address:	0xC401	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-00
Description
-

C4-02 **Input of floating-point absolute value module C**

Address:	0xC402	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-00
Description
-

C4-03 **Input of floating-point absolute value module D**

Address:	0xC403	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-00
Description
-

C4-04 **Input of floating-point absolute value module E**

Address:	0xC404	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-00
Description
-

C4-05 **Input of fixed-point absolute value module F**

Address:	0xC405	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
Others: K connector

Description
-

C4-06 **Input of fixed-point absolute value module G**

Address:	0xC406	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
Others: K connector
Description
-

C4-07 **Input of fixed-point absolute value module H**

Address:	0xC407	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
Others: K connector
Description
-

C4-08 **Input 1 of floating-point ADD/SUBTRACT module A**

Address:	0xC408	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: AI1
2: AI2
3: AI3
4: HDI
5: Aim
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector
Description
-

C4-09 **Input 2 of ADD/SUBTRACT module A (ADD)**

Address:	0xC409	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C4-10 **Input 3 of ADD/SUBTRACT module A (ADD)**

Address:	0xC40A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C4-09

Description

-

C4-11 **Input 4 of ADD/SUBTRACT module A (SUBTRACT)**

Address:	0xC40B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C4-09

Description

-

C4-12 **Input 1 of floating-point ADD/SUBTRACT module B**

Address:	0xC40C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C4-09

Description

-

C4-13 **Input 2 of ADD/SUBTRACT module B (ADD)**

Address:	0xC40D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C4-09

Description
-

C4-14 **Input 3 of ADD/SUBTRACT module B (ADD)**

Address:	0xC40E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-09
Description
-

C4-15 **Input 4 of ADD/SUBTRACT module B (SUBTRACT)**

Address:	0xC40F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-09
Description
-

C4-16 **Input 1 of floating-point ADD/SUBTRACT module C**

Address:	0xC410	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-09
Description
-

C4-17 **Input 2 of ADD/SUBTRACT module C (ADD)**

Address:	0xC411	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-09
Description
-

C4-18 **Input 3 of ADD/SUBTRACT module C (ADD)**

Address:	0xC412	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-09
Description
-

C4-19 **Input 4 of ADD/SUBTRACT module C (SUBTRACT)**

Address:	0xC413	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-09
Description
-

C4-20 **Input 1 of floating-point ADD/SUBTRACT module D**

Address:	0xC414	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-09
Description
-

C4-21 **Input 2 of ADD/SUBTRACT module D (ADD)**

Address:	0xC415	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-09
Description
-

C4-22 **Input 3 of ADD/SUBTRACT module D (ADD)**

Address:	0xC416	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-09
Description
-

C4-23 **Input 4 of ADD/SUBTRACT module D (SUBTRACT)**

Address:	0xC417	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-09
Description
-

C4-24 **Input 1 of floating-point ADD/SUBTRACT module E**

Address:	0xC418	Effective mode:	-

Min.: 0 Unit: -
Max.: 8 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C4-09
Description
-

C4-25 Input 2 of ADD/SUBTRACT module E (ADD)
Address: 0xC419 Effective mode: -
Min.: 0 Unit: -
Max.: 8 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C4-09
Description
-

C4-26 Input 3 of ADD/SUBTRACT module E (ADD)
Address: 0xC41A Effective mode: -
Min.: 0 Unit: -
Max.: 8 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C4-09
Description
-

C4-27 Input 4 of ADD/SUBTRACT module E (SUBTRACT)
Address: 0xC41B Effective mode: -
Min.: 0 Unit: -
Max.: 8 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C4-09
Description
-

C4-28 Input 1 of fixed-point ADD/SUBTRACT module F
Address: 0xC41C Effective mode: -
Min.: 0 Unit: -
Max.: 0 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
0: Disabled
Others: K connector
Description
-

C4-29 Input 2 of ADD/SUBTRACT module F (ADD)
Address: 0xC41D Effective mode: -
Min.: 0 Unit: -

Max.: 0 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C4-28
Description
-

C4-30 Input 3 of ADD/SUBTRACT module F (ADD)
Address: 0xC41E Effective mode: -
Min.: 0 Unit: -
Max.: 0 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C4-28
Description
-

C4-31 Input 4 of ADD/SUBTRACT module F (SUBTRACT)
Address: 0xC41F Effective mode: -
Min.: 0 Unit: -
Max.: 0 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C4-28
Description
-

C4-32 Input 1 of fixed-point ADD/SUBTRACT module G
Address: 0xC420 Effective mode: -
Min.: 0 Unit: -
Max.: 0 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C4-28
Description
-

C4-33 Input 2 of ADD/SUBTRACT module G (ADD)
Address: 0xC421 Effective mode: -
Min.: 0 Unit: -
Max.: 0 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
Same as C4-28
Description
-

C4-34 Input 3 of ADD/SUBTRACT module G (ADD)
Address: 0xC422 Effective mode: -
Min.: 0 Unit: -
Max.: 0 Data type: UInt16
Default: 0 Change: Changeable at any time

Value Range:
Same as C4-28
Description
-

C4-35 **Input 4 of ADD/SUBTRACT module G (SUBTRACT)**

Address:	0xC423	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-28
Description
-

C4-36 **Input 1 of fixed-point ADD/SUBTRACT module H**

Address:	0xC424	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-28
Description
-

C4-37 **Input 2 of ADD/SUBTRACT module H (ADD)**

Address:	0xC425	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-28
Description
-

C4-38 **Input 3 of ADD/SUBTRACT module H (ADD)**

Address:	0xC426	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-28
Description
-

C4-39 **Input 4 of ADD/SUBTRACT module H (SUBTRACT)**

Address:	0xC427	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-28

Description
-

C4-40 **Input 1 of floating-point MULTIPLY/DIVIDE module A**

Address:	0xC428	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
C4-08
Description
-

C4-41 **Input 2 of MULTIPLY/DIVIDE module A (MULTIPLY)**

Address:	0xC429	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: 1
1: AI1
2: AI2
3: AI3
4: HDI
5: Aim
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector
Description
-

C4-42 **Input 3 of MULTIPLY/DIVIDE module A (DIVIDE)**

Address:	0xC42A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-41
Description
-

C4-43 **Input 1 of floating-point MULTIPLY/DIVIDE module B**

Address:	0xC42B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C4-44 **Input 2 of MULTIPLY/DIVIDE module B (MULTIPLY)**

Address:	0xC42C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C4-41

Description

-

C4-45 **Input 3 of MULTIPLY/DIVIDE module B (DIVIDE)**

Address:	0xC42D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C4-41

Description

-

C4-46 **Input 1 of floating-point MULTIPLY/DIVIDE module C**

Address:	0xC42E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description
-

C4-47 **Input 2 of MULTIPLY/DIVIDE module C (MULTIPLY)**

Address:	0xC42F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-41
Description
-

C4-48 **Input 3 of MULTIPLY/DIVIDE module C (DIVIDE)**

Address:	0xC430	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-41
Description
-

C4-49 **Input 1 of floating-point MULTIPLY/DIVIDE module D**

Address:	0xC431	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: AI1
2: AI2
3: AI3
4: HDI
5: Aim
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector
Description
-

C4-50 **Input 2 of MULTIPLY/DIVIDE module D (MULTIPLY)**

Address:	0xC432	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-41

Description
-

C4-51 **Input 3 of MULTIPLY/DIVIDE module D (DIVIDE)**

Address:	0xC433	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-41
Description
-

C4-52 **Input 1 of floating-point MULTIPLY/DIVIDE module E**

Address:	0xC434	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: AI1
2: AI2
3: AI3
4: HDI
5: Aim
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector
Description
-

C4-53 **Input 2 of MULTIPLY/DIVIDE module E (MULTIPLY)**

Address:	0xC435	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-41
Description
-

C4-54 **Input 3 of MULTIPLY/DIVIDE module E (DIVIDE)**

Address:	0xC436	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-41

Description
-

C4-55 **Input 1 of fixed-point MULTIPLY/DIVIDE module F**

Address:	0xC437	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
Others: K connector
Description
-

C4-56 **Input 2 of MULTIPLY/DIVIDE module F (MULTIPLY)**

Address:	0xC438	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-55
Description
-

C4-57 **Input 3 of MULTIPLY/DIVIDE module F (DIVIDE)**

Address:	0xC439	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-55
Description
-

C4-58 **Input 1 of fixed-point MULTIPLY/DIVIDE module G**

Address:	0xC43A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-55
Description
-

C4-59 **Input 2 of MULTIPLY/DIVIDE module G (MULTIPLY)**

Address:	0xC43B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-55

Description
-

C4-60 **Input 3 of MULTIPLY/DIVIDE module G (DIVIDE)**

Address:	0xC43C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-55
Description
-

C4-61 **Input 1 of fixed-point MULTIPLY/DIVIDE module H**

Address:	0xC43D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-55
Description
-

C4-62 **Input 2 of MULTIPLY/DIVIDE module H (MULTIPLY)**

Address:	0xC43E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-55
Description
-

C4-63 **Input 3 of MULTIPLY/DIVIDE module H (DIVIDE)**

Address:	0xC43F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as C4-55
Description
-

C4-64 **Function of floating-point comparison module A**

Address:	0xC440	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Module disabled

1: Input 1 > Input 2

2: Input 1 < Input 2

3: Input 1 = Input 2

Description

-

C4-65 Input 1 of floating-point comparison module A

Address:	0xC441	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C4-66 Input 2 of floating-point comparison module A

Address:	0xC442	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C4-67 Hysteresis input of floating-point comparison module A

Address:	0xC443	Effective mode:	-
Min.:	0.00	Unit:	%
Max.:	655.35	Data type:	UInt16

Default: 0.00 Change: Changeable at any time

Value Range:

0.00% to 655.35%

Description

-

C4-68 Function of floating-point comparison module B

Address: 0xC444 Effective mode: -

Min.: 0 Unit: -

Max.: 3 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Module disabled

1: Input 1 > Input 2

2: Input 1 < Input 2

3: Input 1 = Input 2

Description

-

C4-69 Input 1 of floating-point comparison module B

Address: 0xC445 Effective mode: -

Min.: 0 Unit: -

Max.: 8 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C4-70 Input 2 of floating-point comparison module B

Address: 0xC446 Effective mode: -

Min.: 0 Unit: -

Max.: 8 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C4-71 Hysteresis input of floating-point comparison module B

Address:	0xC447	Effective mode:	-
Min.:	0.00	Unit:	%
Max.:	655.35	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00% to 655.35%

Description

-

C4-72 Function of floating-point comparison module C

Address:	0xC448	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Module disabled

1: Input 1 > Input 2

2: Input 1 < Input 2

3: Input 1 = Input 2

Description

-

C4-73 Input 1 of floating-point comparison module C

Address:	0xC449	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C4-74 Input 2 of floating-point comparison module C

Address:	0xC44A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C4-75 Hysteresis input of floating-point comparison module C

Address:	0xC44B	Effective mode:	-
Min.:	0.00	Unit:	%
Max.:	655.35	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00% to 655.35%

Description

-

C4-76 Function of floating-point comparison module D

Address:	0xC44C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Module disabled

1: Input 1 > Input 2

2: Input 1 < Input 2

3: Input 1 = Input 2

Description

-

C4-77 **Input 1 of floating-point comparison module D**

Address:	0xC44D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C4-78 **Input 2 of floating-point comparison module D**

Address:	0xC44E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C4-79 **Hysteresis input of floating-point comparison module D**

Address:	0xC44F	Effective mode:	-
Min.:	0.00	Unit:	%
Max.:	655.35	Data type:	UInt16

Default: 0.00 Change: Changeable at any time

Value Range:

0.00% to 655.35%

Description

-

C4-80 Function of fixed-point comparison module E

Address: 0xC450 Effective mode: -

Min.: 0 Unit: -

Max.: 3 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Module disabled

1: Input 1 > Input 2

2: Input 1 < Input 2

3: Input 1 = Input 2

Description

-

C4-81 Input 1 of fixed-point comparison module E

Address: 0xC451 Effective mode: -

Min.: 0 Unit: -

Max.: 0 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: 0

Others: K connector

Description

-

C4-82 Input 2 of fixed-point comparison module E

Address: 0xC452 Effective mode: -

Min.: 0 Unit: -

Max.: 0 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: 0

Others: K connector

Description

-

C4-83 Hysteresis input of fixed-point comparison module E

Address: 0xC453 Effective mode: -

Min.: 0.00 Unit: %

Max.: 655.35 Data type: UInt16

Default: 0.00 Change: Changeable at any time

Value Range:

0.00% to 655.35%

Description

-

C4-84 **Function of fixed-point comparison module F**

Address:	0xC454	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Module disabled

1: Input 1 > Input 2

2: Input 1 < Input 2

3: Input 1 = Input 2

Description

-

C4-85 **Input 1 of fixed-point comparison module F**

Address:	0xC455	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

Others: K connector

Description

-

C4-86 **Input 2 of fixed-point comparison module F**

Address:	0xC456	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

Others: K connector

Description

-

C4-87 **Hysteresis input of fixed-point comparison module F**

Address:	0xC457	Effective mode:	-
Min.:	0.00	Unit:	%
Max.:	655.35	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00% to 655.35%

Description

-

C4-88 **Function of fixed-point comparison module G**

Address:	0xC458	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Module disabled

1: Input 1 > Input 2

2: Input 1 < Input 2

3: Input 1 = Input 2

Description

-

C4-89 **Input 1 of fixed-point comparison module G**

Address:	0xC459	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

Others: K connector

Description

-

C4-90 **Input 2 of fixed-point comparison module G**

Address:	0xC45A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

Others: K connector

Description

-

C4-91 **Hysteresis input of fixed-point comparison module G**

Address:	0xC45B	Effective mode:	-
Min.:	0.00	Unit:	%
Max.:	655.35	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00% to 655.35%

Description

-

C4-92 **Function of fixed-point comparison module H**

Address:	0xC45C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Module disabled

1: Input 1 > Input 2

2: Input 1 < Input 2

3: Input 1 = Input 2

Description

-

C4-93 **Input 1 of fixed-point comparison module H**

Address:	0xC45D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

Others: K connector

Description

-

C4-94 **Input 2 of fixed-point comparison module H**

Address:	0xC45E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

Others: K connector

Description

-

C4-95 **Hysteresis input of fixed-point comparison module H**

Address:	0xC45F	Effective mode:	-
Min.:	0.00	Unit:	%
Max.:	655.35	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00% to 655.35%

Description

-

4.45 C5: Switch Function Parameters

C5-00 **Input source of binary selector module A**

Address:	0xC500	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C5-01 **Input 1 of binary selector module A**

Address:	0xC501	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Logic 0
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C5-02 Input 2 of binary selector module A

Address:	0xC502	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C5-01

Description

-

C5-03 Input source of binary selector module B

Address:	0xC503	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C5-01

Description

-

C5-04 Input 1 of binary selector module B

Address:	0xC504	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C5-01

Description

-

C5-05 Input 2 of binary selector module B

Address:	0xC505	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C5-01

Description

-

C5-06 Input source of binary selector module C

Address:	0xC506	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: Logic 1

2: Logic 0

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

-

C5-07 Input 1 of binary selector module C

Address:	0xC507	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Logic 0
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C5-08 Input 2 of binary selector module C

Address:	0xC508	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C5-01

Description

-

C5-09 Input source of binary selector module D

Address:	0xC509	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C5-10 Input 1 of binary selector module D

Address:	0xC50A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Logic 0
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C5-11 Input 2 of binary selector module D

Address:	0xC50B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Logic 0
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI21
Others: B connector

Description

-

C5-12 Input source of binary selector module E

Address:	0xC50C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C5-13 **Input 1 of binary selector module E**

Address:	0xC50D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Logic 0
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C5-14 Input 2 of binary selector module E

Address:	0xC50E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as C5-01

Description

-

C5-15 Input source of binary selector module F

Address:	0xC50F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C5-16 **Input 1 of binary selector module F**

Address:	0xC510	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Logic 0
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C5-17 Input 2 of binary selector module F

Address:	0xC511	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Logic 0
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI21
Others: B connector

Description

-

C5-18 Input source of binary selector module G

Address:	0xC512	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C5-19 **Input 1 of binary selector module G**

Address:	0xC513	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Logic 0
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C5-20 Input 2 of binary selector module G

Address:	0xC514	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Logic 0
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI21
Others: B connector

Description

-

C5-21 Input source of binary selector module H

Address:	0xC515	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C5-22 Input 1 of binary selector module H

Address:	0xC516	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Logic 0
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C5-23 Input 2 of binary selector module H

Address:	0xC517	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Logic 0
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI21
Others: B connector

Description

-

C5-24 Input source of word selector module A

Address:	0xC518	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector
Description
-

C5-25 **Input 1 of word selector module A**

Address:	0xC519	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: 0
Others: K connector
Description
-

C5-26 **Input 2 of word selector module A**

Address:	0xC51A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: 0
Others: K connector
Description
-

C5-27 **Input source of word selector module B**

Address:	0xC51B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Disabled

1: Logic 1

2: Logic 0

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

-

C5-28 Input 1 of word selector module B

Address: 0xC51C Effective mode: -

Min.: 0 Unit: -

Max.: 0 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: 0

Others: K connector

Description

-

C5-29 Input 2 of word selector module B

Address: 0xC51D Effective mode: -

Min.: 0 Unit: -

Max.: 0 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: 0

Others: K connector

Description

-

C5-30 Input source of word selector module C

Address: 0xC51E Effective mode: -

Min.: 0
Max.: 18
Default: 0
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:

0: Disabled

1: Logic 1

2: Logic 0

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

-

C5-31 Input 1 of word selector module C

Address: 0xC51F
Min.: 0
Max.: 0
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:

0: 0

Others: K connector

Description

-

C5-32 Input 2 of word selector module C

Address: 0xC520
Min.: 0
Max.: 0
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:

0: 0

Others: K connector

Description

-

C5-33 **Input source of word selector module D**

Address:	0xC521	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: Logic 1

2: Logic 0

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

-

C5-34 **Input 1 of word selector module D**

Address:	0xC522	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

Others: K connector

Description

-

C5-35 **Input 2 of word selector module D**

Address:	0xC523	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

Others: K connector

Description
-

C5-36 **Input source of DWord selector module A**

Address:	0xC524	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector
Description
-

C5-37 **Input 1 of DWord selector module A**

Address:	0xC525	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: 0
Others: K connector
Description
-

C5-38 **Input 2 of DWord selector module A**

Address:	0xC526	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

Others: K connector

Description

-

C5-39 **Input source of DWord selector module B**

Address:	0xC527	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: Logic 1

2: Logic 0

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

-

C5-40 **Input 1 of DWord selector module B**

Address:	0xC528	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

Others: K connector

Description

-

C5-41 **Input 2 of DWord selector module B**

Address:	0xC529	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: 0

Others: K connector

Description

-

C5-42 Input source of DWord selector module C

Address: 0xC52A Effective mode: -

Min.: 0 Unit: -

Max.: 18 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Disabled

1: Logic 1

2: Logic 0

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

-

C5-43 Input 1 of DWord selector module C

Address: 0xC52B Effective mode: -

Min.: 0 Unit: -

Max.: 0 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: 0

Others: K connector

Description

-

C5-44 Input 2 of DWord selector module C

Address: 0xC52C Effective mode: -

Min.: 0
Max.: 0
Default: 0
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:

0: 0

Others: K connector

Description

-

C5-45 Input source of DWord selector module D

Address: 0xC52D
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:

0: Disabled

1: Logic 1

2: Logic 0

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

-

C5-46 Input 1 of DWord selector module D

Address: 0xC52E
Min.: 0
Max.: 0
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:

0: 0

Others: K connector

Description

-

C5-47 **Input 2 of DWord selector module D**

Address:	0xC52F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

Others: K connector

Description

-

C5-48 **Input source of floating-point number selector module A**

Address:	0xC530	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: Logic 1

2: Logic 0

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

-

C5-49 **Input 1 of floating-point number selector module A**

Address:	0xC531	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C5-50 Input 2 of floating-point number selector module A

Address:	0xC532	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C5-51 Input source of floating-point number selector module B

Address:	0xC533	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C5-52 Input 1 of floating-point number selector module B

Address:	0xC534	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0
1: AI1
2: AI2
3: AI3
4: HDI
5: Aim
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector

Description

-

C5-53 Input 2 of floating-point number selector module B

Address:	0xC535	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C5-54 **Input source of floating-point number selector module C**

Address:	0xC536	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: Logic 1

2: Logic 0

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

-

C5-55 **Input 1 of floating-point number selector module C**

Address:	0xC537	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C5-56 **Input 2 of floating-point number selector module C**

Address:	0xC538	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C5-57 **Input source of floating-point number selector module D**

Address:	0xC539	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C5-58 Input 1 of floating-point number selector module D

Address:	0xC53A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0
1: AI1
2: AI2
3: AI3
4: HDI
5: Aim
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector

Description

-

C5-59 Input 2 of floating-point number selector module D

Address:	0xC53B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C5-60 **Input source of floating-point number selector module E**

Address:	0xC53C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: Logic 1

2: Logic 0

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

-

C5-61 **Input 1 of floating-point number selector module E**

Address:	0xC53D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C5-62 Input 2 of floating-point number selector module E

Address:	0xC53E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C5-63 Input source of floating-point number selector module F

Address:	0xC53F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C5-64 Input 1 of floating-point number selector module F

Address:	0xC540	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0
1: AI1
2: AI2
3: AI3
4: HDI
5: Aim
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector

Description

-

C5-65 Input 2 of floating-point number selector module F

Address:	0xC541	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C5-66 **Input source of floating-point number selector module G**

Address:	0xC542	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: Logic 1

2: Logic 0

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

-

C5-67 **Input 1 of floating-point number selector module G**

Address:	0xC543	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C5-68 Input 2 of floating-point number selector module G

Address:	0xC544	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C5-69 Input source of floating-point number selector module H

Address:	0xC545	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C5-70 Input 1 of floating-point number selector module H

Address:	0xC546	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0
1: AI1
2: AI2
3: AI3
4: HDI
5: Aim
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector

Description

-

C5-71 Input 2 of floating-point number selector module H

Address:	0xC547	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

4.46 C6: Control Function Parameters

C6-00 **Floating-point filter module A enable**

Address:	0xC600	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Module disabled

1: Filter disabled

2: Filter enabled

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

-

C6-01 **Input of floating-point filter module A**

Address:	0xC601	Effective mode:	-

Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C6-02 Filter time of filter module A

Address:	0xC602	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	65.535	Data type:	UInt16
Default:	0.000	Change:	Changeable at any time

Value Range:

0.000s to 65.535s

Description

-

C6-03 Floating-point filter module B enable

Address:	0xC603	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Module disabled
1: Filter disabled
2: Filter enabled
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C6-04 Input of floating-point filter module B

Address:	0xC604	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0
1: AI1
2: AI2
3: AI3
4: HDI
5: Aim
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector

Description

-

C6-05 Filter time of filter module B

Address:	0xC605	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	65.535	Data type:	UInt16
Default:	0.000	Change:	Changeable at any time

Value Range:

0.000s to 65.535s

Description

-

C6-06 **Floating-point filter module C enable**

Address:	0xC606	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Module disabled

1: Filter disabled

2: Filter enabled

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

-

C6-07 **Input of floating-point filter module C**

Address:	0xC607	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description
-

C6-08 **Filter time of filter module C**

Address:	0xC608	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	65.535	Data type:	UInt16
Default:	0.000	Change:	Changeable at any time

Value Range:
0.000s to 65.535s
Description
-

C6-09 **Floating-point filter module D enable**

Address:	0xC609	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Module disabled
1: Filter disabled
2: Filter enabled
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector
Description
-

C6-10 **Input of floating-point filter module D**

Address:	0xC60A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 0

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C6-11 Filter time of filter module D

Address:	0xC60B	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	65.535	Data type:	UInt16
Default:	0.000	Change:	Changeable at any time

Value Range:

0.000s to 65.535s

Description

-

C6-12 Fixed-point filter module E enable

Address:	0xC60C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Module disabled

1: Filter disabled

2: Filter enabled

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description
-

C6-13 **Input of fixed-point filter module E**

Address:	0xC60D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: 0
Others: K connector
Description
-

C6-14 **Filter time of fixed-point filter module E**

Address:	0xC60E	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	65.535	Data type:	UInt16
Default:	0.000	Change:	Changeable at any time

Value Range:
0.000s to 65.535s
Description
-

C6-15 **Fixed-point filter module F enable**

Address:	0xC60F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Module disabled
1: Filter disabled
2: Filter enabled
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description
-

C6-16 Input of fixed-point filter module F

Address:	0xC610	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: 0
Others: K connector
Description
-

C6-17 Filter time of fixed-point filter module F

Address:	0xC611	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	65.535	Data type:	UInt16
Default:	0.000	Change:	Changeable at any time

Value Range:
0.000s to 65.535s
Description
-

C6-24 Function of level-to-pulse conversion module A

Address:	0xC618	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Conversion from level to pulse
2: Conversion from pulse to level
Description
-

C6-25 Input of level-to-pulse conversion module A

Address:	0xC619	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Logic 0
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C6-26 Pulse width of level-to-pulse conversion module A

Address:	0xC61A	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	655.35	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00s to 655.35s

Description

-

C6-27 Function of level-to-pulse conversion module B

Address:	0xC61B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled
1: Conversion from level to pulse
2: Conversion from pulse to level

Description

-

C6-28 Input of level-to-pulse conversion module B

Address:	0xC61C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Logic 0

1: Logic 1

2: Logic 0

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

-

C6-29 Pulse width of level-to-pulse conversion module B

Address: 0xC61D Effective mode: -

Min.: 0.00 Unit: s

Max.: 655.35 Data type: UInt16

Default: 0.00 Change: Changeable at any time

Value Range:

0.00s to 655.35s

Description

-

C6-30 Function of level-to-pulse conversion module C

Address: 0xC61E Effective mode: -

Min.: 0 Unit: -

Max.: 2 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Disabled

1: Conversion from level to pulse

2: Conversion from pulse to level

Description

-

C6-31 Input of level-to-pulse conversion module C

Address: 0xC61F Effective mode: -

Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Logic 0

1: Logic 1

2: Logic 0

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

-

C6-32 Pulse width of level-to-pulse conversion module C

Address:	0xC620	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	655.35	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00s to 655.35s

Description

-

C6-33 Function of level-to-pulse conversion module D

Address:	0xC621	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: Conversion from level to pulse

2: Conversion from pulse to level

Description

-

C6-34 **Input of level-to-pulse conversion module D**

Address:	0xC622	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Logic 0

1: Logic 1

2: Logic 0

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

-

C6-35 **Pulse width of level-to-pulse conversion module D**

Address:	0xC623	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	655.35	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00s to 655.35s

Description

-

C6-36 **Input of floating-point limiting module A**

Address:	0xC624	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C6-37 Upper limit of floating-point limiting module A

Address:	0xC625	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Inactive

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C6-38 Lower limit of floating-point limiting module A

Address:	0xC626	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Inactive

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description
-

C6-39 **Input of floating-point limiting module B**

Address:	0xC627	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: AI1
2: AI2
3: AI3
4: HDI
5: Aim
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector

Description
-

C6-40 **Upper limit of floating-point limiting module B**

Address:	0xC628	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Inactive
1: AI1
2: AI2
3: AI3
4: HDI
5: Aim
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector

Description
-

C6-41 **Lower limit of floating-point limiting module B**

Address:	0xC629	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Inactive

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C6-42 Input of floating-point limiting module C

Address:	0xC62A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C6-43 Upper limit of floating-point limiting module C

Address:	0xC62B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Inactive

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description
-

C6-44 **Lower limit of floating-point limiting module C**

Address:	0xC62C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Inactive
1: AI1
2: AI2
3: AI3
4: HDI
5: Aim
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector

Description
-

C6-45 **Input of floating-point limiting module D**

Address:	0xC62D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: AI1
2: AI2
3: AI3
4: HDI
5: Aim
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector

Description
-

C6-46 **Upper limit of floating-point limiting module D**

Address:	0xC62E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Inactive

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C6-47 Lower limit of floating-point limiting module D

Address:	0xC62F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Inactive

1: AI1

2: AI2

3: AI3

4: HDI

5: Aim

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

C6-48 Input of fixed-point limiting module E

Address:	0xC630	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

Others: K connector

Description

-

C6-49 Upper limit of fixed-point limiting module E

Address:	0xC631	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Inactive

Others: K connector

Description

-

C6-50 **Lower limit of fixed-point limiting module E**

Address:	0xC632	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Inactive

Others: K connector

Description

-

C6-51 **Input of fixed-point limiting module F**

Address:	0xC633	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

Others: K connector

Description

-

C6-52 **Upper limit of fixed-point limiting module F**

Address:	0xC634	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Inactive

Others: K connector

Description

-

C6-53 **Lower limit of fixed-point limiting module F**

Address:	0xC635	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Inactive

Others: K connector

Description

-

C6-54 **Input of logic delay module A**

Address:	0xC636	Effective mode:	-
Min.:	0	Unit:	-

Max.: 18 Data type: UInt16
Default: 0 Change: Changeable at any time

Value Range:

0: Disabled
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C6-55 Switch-on delay of logic delay module A

Address: 0xC637 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

-

C6-56 Switch-off delay of logic delay module A

Address: 0xC638 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

-

C6-57 Delay time unit of logic delay module A

Address: 0xC639 Effective mode: -
Min.: 0 Unit: -

Max.: 12000
Default: 1
Data type: UInt16
Change: Changeable at any time

Value Range:

0: No delay

1: 10 ms

10: 100 ms

100: 1s

1000: 10s

6000: 1 min

12000: 2 min

0: Added at the background

Description

-

C6-58 Input of logic delay module B

Address: 0xC63A
Min.: 0
Max.: 18
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:

0: Disabled

1: Logic 1

2: Logic 0

3: DI1

4: DI2

5: DI3

6: DI4

7: DI5

8: DI6

9: DI7

10: DI8

11: DI9

12: DI10

13: DI11

14: DI12

15: DI13

16: DI14

17: DI15

18: DI16

Others: B connector

Description

-

C6-59 Switch-on delay of logic delay module B

Address: 0xC63B
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535
Description
-

C6-60 Switch-off delay of logic delay module B

Address:	0xC63C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

C6-61 Delay time unit of logic delay module B

Address:	0xC63D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	12000	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0: No delay
1: 10 ms
10: 100 ms
100: 1s
1000: 10s
6000: 1 min
12000: 2 min
0: Added at the background
Description
-

C6-62 Input of logic delay module C

Address:	0xC63E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C6-63 Switch-on delay of logic delay module C

Address:	0xC63F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 65535

Description

-

C6-64 Switch-off delay of logic delay module C

Address:	0xC640	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 65535

Description

-

C6-65 Delay time unit of logic delay module C

Address:	0xC641	Effective mode:	-
Min.:	0	Unit:	-
Max.:	12000	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: No delay
1: 10 ms
10: 100 ms
100: 1s
1000: 10s
6000: 1 min
12000: 2 min
0: Added at the background
Description
-

C6-66 Input of logic delay module D

Address:	0xC642	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector
Description
-

C6-67 Switch-on delay of logic delay module D

Address:	0xC643	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535

Description
-

C6-68 Switch-off delay of logic delay module D

Address:	0xC644	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

C6-69 Delay time unit of logic delay module D

Address:	0xC645	Effective mode:	-
Min.:	0	Unit:	-
Max.:	12000	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0: No delay
1: 10 ms
10: 100 ms
100: 1s
1000: 10s
6000: 1 min
12000: 2 min
0: Added at the background
Description
-

C6-70 Input of logic delay module E

Address:	0xC646	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C6-71 Switch-on delay of logic delay module E

Address:	0xC647	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 65535

Description

-

C6-72 Switch-off delay of logic delay module E

Address:	0xC648	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 65535

Description

-

C6-73 Delay time unit of logic delay module E

Address:	0xC649	Effective mode:	-
Min.:	0	Unit:	-
Max.:	12000	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: No delay
1: 10 ms
10: 100 ms
100: 1s
1000: 10s
6000: 1 min
12000: 2 min
0: Added at the background
Description
-

C6-74 **Input of logic delay module F**

Address:	0xC64A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector
Description
-

C6-75 **Switch-on delay of logic delay module F**

Address:	0xC64B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535

Description
-

C6-76 **Switch-off delay of logic delay module F**

Address:	0xC64C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

C6-77 **Delay time unit of logic delay module F**

Address:	0xC64D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	12000	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0: No delay
1: 10 ms
10: 100 ms
100: 1s
1000: 10s
6000: 1 min
12000: 2 min
0: Added at the background
Description
-

C6-78 **Input of logic delay module G**

Address:	0xC64E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector

Description

-

C6-79 Switch-on delay of logic delay module G

Address:	0xC64F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 65535

Description

-

C6-80 Switch-off delay of logic delay module G

Address:	0xC650	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 65535

Description

-

C6-81 Delay time unit of logic delay module G

Address:	0xC651	Effective mode:	-
Min.:	0	Unit:	-
Max.:	12000	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: No delay
1: 10 ms
10: 100 ms
100: 1s
1000: 10s
6000: 1 min
12000: 2 min
0: Added at the background
Description
-

C6-82 **Input of logic delay module H**

Address:	0xC652	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Logic 1
2: Logic 0
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector
Description
-

C6-83 **Switch-on delay of logic delay module H**

Address:	0xC653	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535

Description
-

C6-84 **Switch-off delay of logic delay module H**

Address:	0xC654	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

C6-85 **Delay time unit of logic delay module H**

Address:	0xC655	Effective mode:	-
Min.:	0	Unit:	-
Max.:	12000	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0: No delay
1: 10 ms
10: 100 ms
100: 1s
1000: 10s
6000: 1 min
12000: 2 min
0: Added at the background
Description
-

4.47 C7: Multi-point Curve Parameters

C7-00 **Input of multi-point curve module A**

Address:	0xC700	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
Others: F connector
Description
-

C7-01 **Setpoint X1 of multi-point curve module A**

Address:	0xC701	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:

–600% to +600.0%

Description

-

C7-02 **Setpoint X2 of multi-point curve module A**

Address:	0xC702	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:

–600% to +600.0%

Description

-

C7-03 **Setpoint X3 of multi-point curve module A**

Address:	0xC703	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:

–600% to +600.0%

Description

-

C7-04 **Setpoint X4 of multi-point curve module A**

Address:	0xC704	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:

–600% to +600.0%

Description

-

C7-05 **Setpoint X5 of multi-point curve module A**

Address:	0xC705	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:

–600% to +600.0%

Description

-

C7-06 **Setpoint X6 of multi-point curve module A**

Address:	0xC706	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:

–600% to +600.0%

Description
-

C7-07 **Setpoint X7 of multi-point curve module A**

Address:	0xC707	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-08 **Setpoint X8 of multi-point curve module A**

Address:	0xC708	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-09 **Setpoint X9 of multi-point curve module A**

Address:	0xC709	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-10 **Setpoint X10 of multi-point curve module A**

Address:	0xC70A	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-11 **Setpoint Y1 of multi-point curve module A**

Address:	0xC70B	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-12 **Setpoint Y2 of multi-point curve module A**

Address:	0xC70C	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-13 **Setpoint Y3 of multi-point curve module A**

Address:	0xC70D	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-14 **Setpoint Y4 of multi-point curve module A**

Address:	0xC70E	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-15 **Setpoint Y5 of multi-point curve module A**

Address:	0xC70F	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-16 **Setpoint Y6 of multi-point curve module A**

Address:	0xC710	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-17 **Setpoint Y7 of multi-point curve module A**

Address:	0xC711	Effective mode:	-

Min.: –600 Unit: %
Max.: 600.0 Data type: Int16
Default: 0.0 Change: Changeable at any time
Value Range:
–600% to +600.0%
Description
-

C7-18 Setpoint Y8 of multi-point curve module A
Address: 0xC712 Effective mode: -
Min.: –600 Unit: %
Max.: 600.0 Data type: Int16
Default: 0.0 Change: Changeable at any time
Value Range:
–600% to +600.0%
Description
-

C7-19 Setpoint Y9 of multi-point curve module A
Address: 0xC713 Effective mode: -
Min.: –600 Unit: %
Max.: 600.0 Data type: Int16
Default: 0.0 Change: Changeable at any time
Value Range:
–600% to +600.0%
Description
-

C7-20 Setpoint Y10 of multi-point curve module A
Address: 0xC714 Effective mode: -
Min.: –600 Unit: %
Max.: 600.0 Data type: Int16
Default: 0.0 Change: Changeable at any time
Value Range:
–600% to +600.0%
Description
-

C7-21 Input of multi-point curve module B
Address: 0xC715 Effective mode: -
Min.: 0 Unit: -
Max.: 0 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
0: Disabled
Others: F connector
Description
-

C7-22 Setpoint X1 of multi-point curve module B
Address: 0xC716 Effective mode: -
Min.: –600 Unit: %

Max.: 600.0
Default: 0.0
Data type: Int16
Change: Changeable at any time

Value Range:
–600% to +600.0%

Description
-

C7-23 **Setpoint X2 of multi-point curve module B**

Address: 0xC717
Min.: –600
Max.: 600.0
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Changeable at any time

Value Range:
–600% to +600.0%

Description
-

C7-24 **Setpoint X3 of multi-point curve module B**

Address: 0xC718
Min.: –600
Max.: 600.0
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Changeable at any time

Value Range:
–600% to +600.0%

Description
-

C7-25 **Setpoint X4 of multi-point curve module B**

Address: 0xC719
Min.: –600
Max.: 600.0
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Changeable at any time

Value Range:
–600% to +600.0%

Description
-

C7-26 **Setpoint X5 of multi-point curve module B**

Address: 0xC71A
Min.: –600
Max.: 600.0
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Changeable at any time

Value Range:
–600% to +600.0%

Description
-

C7-27 **Setpoint X6 of multi-point curve module B**

Address: 0xC71B
Min.: –600
Max.: 600.0
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-28 **Setpoint X7 of multi-point curve module B**

Address:	0xC71C	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-29 **Setpoint X8 of multi-point curve module B**

Address:	0xC71D	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-30 **Setpoint X9 of multi-point curve module B**

Address:	0xC71E	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-31 **Setpoint X10 of multi-point curve module B**

Address:	0xC71F	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-32 **Setpoint Y1 of multi-point curve module B**

Address:	0xC720	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%

Description
-

C7-33 **Setpoint Y2 of multi-point curve module B**

Address:	0xC721	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-34 **Setpoint Y3 of multi-point curve module B**

Address:	0xC722	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-35 **Setpoint Y4 of multi-point curve module B**

Address:	0xC723	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-36 **Setpoint Y5 of multi-point curve module B**

Address:	0xC724	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-37 **Setpoint Y6 of multi-point curve module B**

Address:	0xC725	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-38 **Setpoint Y7 of multi-point curve module B**

Address:	0xC726	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-39 **Setpoint Y8 of multi-point curve module B**

Address:	0xC727	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-40 **Setpoint Y9 of multi-point curve module B**

Address:	0xC728	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

C7-41 **Setpoint Y10 of multi-point curve module B**

Address:	0xC729	Effective mode:	-
Min.:	–600	Unit:	%
Max.:	600.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–600% to +600.0%
Description
-

4.48 C8: Constant Parameters

C8-00 **Constant setpoint 1**

Address:	0xC800	Effective mode:	-
Min.:	–300	Unit:	%
Max.:	300.00	Data type:	Int16
Default:	0.00	Change:	Changeable at any time

Value Range:
–300% to +300.00%

Description
-

C8-01 **Constant setpoint 2**

Address:	0xC801	Effective mode:	-
Min.:	–300	Unit:	%
Max.:	300.00	Data type:	Int16
Default:	100.00	Change:	Changeable at any time

Value Range:
–300% to +300.00%
Description
-

C8-02 **Constant setpoint 3**

Address:	0xC802	Effective mode:	-
Min.:	–300	Unit:	%
Max.:	300.00	Data type:	Int16
Default:	–100	Change:	Changeable at any time

Value Range:
–300% to +300.00%
Description
-

C8-03 **Constant setpoint 4**

Address:	0xC803	Effective mode:	-
Min.:	–300	Unit:	%
Max.:	300.00	Data type:	Int16
Default:	200.00	Change:	Changeable at any time

Value Range:
–300% to +300.00%
Description
-

C8-04 **Constant setpoint 5**

Address:	0xC804	Effective mode:	-
Min.:	–300	Unit:	%
Max.:	300.00	Data type:	Int16
Default:	–200	Change:	Changeable at any time

Value Range:
–300% to +300.00%
Description
-

C8-05 **Constant setpoint 6**

Address:	0xC805	Effective mode:	-
Min.:	–3000	Unit:	%
Max.:	3000.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–3000% to +3000.0%
Description
-

C8-06 **Constant setpoint 7**

Address:	0xC806	Effective mode:	-
Min.:	–3000	Unit:	%
Max.:	3000.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–3000% to +3000.0%
Description
-

C8-07 **Constant setpoint 8**

Address:	0xC807	Effective mode:	-
Min.:	–3000	Unit:	%
Max.:	3000.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–3000% to +3000.0%
Description
-

C8-08 **Constant setpoint 9**

Address:	0xC808	Effective mode:	-
Min.:	–3000	Unit:	%
Max.:	3000.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–3000% to +3000.0%
Description
-

C8-09 **Constant setpoint 10**

Address:	0xC809	Effective mode:	-
Min.:	–3000	Unit:	%
Max.:	3000.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–3000% to +3000.0%
Description
-

C8-10 **Constant setpoint 11**

Address:	0xC80A	Effective mode:	-
Min.:	–3000	Unit:	%
Max.:	3000.0	Data type:	Int16
Default:	0.0	Change:	Changeable at any time

Value Range:
–3000% to +3000.0%
Description
-

C8-11 **Constant setpoint 12**

Address:	0xC80B	Effective mode:	-

Min.: –3000
Max.: 3000.0
Default: 0.0
Unit: %
Data type: Int16
Change: Changeable at any time

Value Range:
–3000% to +3000.0%

Description
-

C8-12 Constant setpoint 13

Address: 0xC80C
Min.: –3000
Max.: 3000.0
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Changeable at any time

Value Range:
–3000% to +3000.0%

Description
-

C8-13 Constant setpoint 14

Address: 0xC80D
Min.: –3000
Max.: 3000.0
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Changeable at any time

Value Range:
–3000% to +3000.0%

Description
-

C8-14 Constant setpoint 15

Address: 0xC80E
Min.: –3000
Max.: 3000.0
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Changeable at any time

Value Range:
–3000% to +3000.0%

Description
-

C8-15 Constant setpoint 16

Address: 0xC80F
Min.: –3000
Max.: 3000.0
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Changeable at any time

Value Range:
–3000% to +3000.0%

Description
-

C8-16 Constant setpoint 17

Address: 0xC810
Min.: –3000
Max.: 3000.0
Effective mode: -
Unit: %
Data type: Int16

Default: 0.0 Change: Changeable at any time

Value Range:

–3000% to +3000.0%

Description

-

C8-17 Constant setpoint 18

Address: 0xC811 Effective mode: -

Min.: –3000 Unit: %

Max.: 3000.0 Data type: Int16

Default: 0.0 Change: Changeable at any time

Value Range:

–3000% to +3000.0%

Description

-

C8-18 Constant setpoint 19

Address: 0xC812 Effective mode: -

Min.: –3000 Unit: %

Max.: 3000.0 Data type: Int16

Default: 0.0 Change: Changeable at any time

Value Range:

–3000% to +3000.0%

Description

-

C8-19 Constant setpoint 20

Address: 0xC813 Effective mode: -

Min.: –3000 Unit: %

Max.: 3000.0 Data type: Int16

Default: 0.0 Change: Changeable at any time

Value Range:

–3000% to +3000.0%

Description

-

C8-20 Constant setpoint 21

Address: 0xC814 Effective mode: -

Min.: –3000 Unit: %

Max.: 3000.0 Data type: Int16

Default: 0.0 Change: Changeable at any time

Value Range:

–3000% to +3000.0%

Description

-

C8-21 Constant setpoint 22

Address: 0xC815 Effective mode: -

Min.: –300 Unit: %

Max.: 300.00 Data type: Int16

Default: 0.00 Change: Changeable at any time

Value Range:

–300% to +300.00%

Description

-

C8-22 **Constant setpoint 23**

Address:	0xC816	Effective mode:	-
Min.:	–300	Unit:	%
Max.:	300.00	Data type:	Int16
Default:	100.00	Change:	Changeable at any time

Value Range:

–300% to +300.00%

Description

-

C8-23 **Constant setpoint 24**

Address:	0xC817	Effective mode:	-
Min.:	–300	Unit:	%
Max.:	300.00	Data type:	Int16
Default:	–100	Change:	Changeable at any time

Value Range:

–300% to +300.00%

Description

-

C8-24 **Constant setpoint 25**

Address:	0xC818	Effective mode:	-
Min.:	–300	Unit:	%
Max.:	300.00	Data type:	Int16
Default:	200.00	Change:	Changeable at any time

Value Range:

–300% to +300.00%

Description

-

C8-25 **Constant setpoint 26**

Address:	0xC819	Effective mode:	-
Min.:	–300	Unit:	%
Max.:	300.00	Data type:	Int16
Default:	–200	Change:	Changeable at any time

Value Range:

–300% to +300.00%

Description

-

C8-26 **Constant setpoint 27**

Address:	0xC81A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 65535

Description
-

C8-27 **Constant setpoint 28**

Address:	0xC81B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

C8-28 **Constant setpoint 29**

Address:	0xC81C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

C8-29 **Constant setpoint 30**

Address:	0xC81D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

C8-30 **Constant setpoint 31**

Address:	0xC81E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

C8-31 **Constant setpoint 32**

Address:	0xC81F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 65535
Description
-

C8-32 **Constant setpoint 33**

Address: 0xC820
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535
Description
-

C8-33 **Constant setpoint 34**

Address: 0xC821
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535
Description
-

C8-34 **Constant setpoint 35**

Address: 0xC822
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535
Description
-

C8-35 **Constant setpoint 36**

Address: 0xC823
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535
Description
-

C8-36 **Constant setpoint 37**

Address: 0xC824
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535
Description
-

C8-37 **Constant setpoint 38**

Address: 0xC825
Effective mode: -

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535

Description
-

C8-38 Constant setpoint 39

Address: 0xC826
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535

Description
-

C8-39 Constant setpoint 40

Address: 0xC827
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535

Description
-

C8-40 Constant setpoint 41

Address: 0xC828
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535

Description
-

C8-41 Constant setpoint 42

Address: 0xC829
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535

Description
-

4.49 C9: Any Monitoring Parameters, Monitoring Parameters, and Commissioning Parameters

C9-00 **LOWORD of 16-bit data RAM address 1**

Address:	0xC900	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
This parameter defines the low-order 16 bits of the 32-bit address. You can find the corresponding u16 data output by using this address.

C9-01 **HIWORD of 16-bit data RAM address 1**

Address:	0xC901	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
This parameter defines the high-order 16 bits of the 32-bit address. You can find the corresponding u16 data output by using this address.

C9-02 **LOWORD of 16-bit data RAM address 2**

Address:	0xC902	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
Same as C9-00

C9-03 **HIWORD of 16-bit data RAM address 2**

Address:	0xC903	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
Same as C9-01

C9-04 **LOWORD of 16-bit data RAM address 3**

Address:	0xC904	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
Same as C9-00

C9-05 **HIWORD of 16-bit data RAM address 3**

Address:	0xC905	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
Same as C9-01

C9-06 **LOWORD of 16-bit data RAM address 4**

Address:	0xC906	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
Same as C9-00

C9-07 **HIWORD of 16-bit data RAM address 4**

Address:	0xC907	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
Same as C9-01

C9-08 **LOWORD of 16-bit data RAM address 5**

Address:	0xC908	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
Same as C9-00

C9-09 **HIWORD of 16-bit data RAM address 5**

Address:	0xC909	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
Same as C9-01

C9-10 32-bit data type selection 1

Address:	0xC90A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 1
Description
This parameter defines the type of data to which the 32-bit address is pointed. 0 indicates u32 data, and 1 indicates f32 data.

C9-11 32-bit data amplification coefficient 1

Address:	0xC90B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	10000	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 10000
Description
This parameter defines the data amplification coefficient when the data type is f32. The data is amplified and then output.

C9-12 LOWORD of 32-bit data RAM address 1

Address:	0xC90C	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
This parameter defines the low-order 16 bits of the 32-bit address. You can find the corresponding u32 data output by using this address.

C9-13 HIWORD of 32-bit data RAM address 1

Address:	0xC90D	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
This parameter defines the high-order 16 bits of the 32-bit address. You can find the corresponding u32 data output by using this address.

C9-14 32-bit data type selection 2

Address:	0xC90E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 1

Description

Same as C9-10

C9-15 32-bit data amplification coefficient 2

Address: 0xC90F Effective mode: -

Min.: 0 Unit: -

Max.: 10000 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 10000

Description

Same as C9-11

C9-16 LOWORD of 32-bit data RAM address 2

Address: 0xC910 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

Same as C9-12

C9-17 HIWORD of 32-bit data RAM address 2

Address: 0xC911 Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Changeable at any time

Value Range:

0x0 to 0xFFFF

Description

Same as C9-13

C9-18 32-bit data type selection 3

Address: 0xC912 Effective mode: -

Min.: 0 Unit: -

Max.: 1 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 1

Description

Same as C9-10

C9-19 32-bit data amplification coefficient 3

Address: 0xC913 Effective mode: -

Min.: 0 Unit: -

Max.: 10000 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 10000
Description
Same as C9-11

C9-20 LOWORD of 32-bit data RAM address 3

Address:	0xC914	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
Same as C9-12

C9-21 HIWORD of 32-bit data RAM address 3

Address:	0xC915	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
Same as C9-13

C9-22 32-bit data type selection 4

Address:	0xC916	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 1
Description
Same as C9-10

C9-23 32-bit data amplification coefficient 4

Address:	0xC917	Effective mode:	-
Min.:	0	Unit:	-
Max.:	10000	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 10000
Description
Same as C9-11

C9-24 LOWORD of 32-bit data RAM address 4

Address:	0xC918	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF

Description
Same as C9-12

C9-25 HIWORD of 32-bit data RAM address 4

Address:	0xC919	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
Same as C9-13

C9-26 32-bit data type selection 5

Address:	0xC91A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 1
Description
Same as C9-10

C9-27 32-bit data amplification coefficient 5

Address:	0xC91B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	10000	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 10000
Description
Same as C9-11

C9-28 LOWORD of 32-bit data RAM address 5

Address:	0xC91C	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
Same as C9-12

C9-29 HIWORD of 32-bit data RAM address 5

Address:	0xC91D	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Changeable at any time

Value Range:
0x0 to 0xFFFF
Description
Same as C9-13

C9-30 **Internal parameter monitoring input 1**

Address:	0xC91E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	97	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 97
Description
-

C9-31 **Internal parameter monitoring input 2**

Address:	0xC91F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	97	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 97
Description
-

C9-32 **Internal parameter monitoring input 3**

Address:	0xC920	Effective mode:	-
Min.:	0	Unit:	-
Max.:	97	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 97
Description
-

C9-33 **Internal parameter monitoring input 4**

Address:	0xC921	Effective mode:	-
Min.:	0	Unit:	-
Max.:	97	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 97
Description
-

C9-34 **Internal parameter monitoring input 5**

Address:	0xC922	Effective mode:	-
Min.:	0	Unit:	-
Max.:	97	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 97
Description
-

C9-35 **Internal parameter monitoring input 6**

Address:	0xC923	Effective mode:	-

Min.: 0
Max.: 97
Default: 0
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 97

Description
-

C9-36 Internal parameter monitoring input 7

Address: 0xC924
Min.: 0
Max.: 97
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 97

Description
-

C9-37 Internal parameter monitoring input 8

Address: 0xC925
Min.: 0
Max.: 97
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 97

Description
-

C9-40 Variable connector value viewing input 1

Address: 0xC928
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535

Description
-

C9-41 Variable connector value viewing input 2

Address: 0xC929
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 65535

Description
-

C9-42 Variable connector value viewing input 3

Address: 0xC92A
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

-

C9-43 Variable connector value viewing input 4

Address: 0xC92B Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

-

C9-44 Variable connector value viewing input 5

Address: 0xC92C Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

-

C9-45 Variable connector value viewing input 6

Address: 0xC92D Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

-

C9-46 Variable connector value viewing input 7

Address: 0xC92E Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535

Description

-

C9-47 Variable connector value viewing input 8

Address: 0xC92F Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 65535
Description
-

C9-50 **Monitoring variable 0**

Address:	0xC932	Effective mode:	-
Min.:	–32768	Unit:	-
Max.:	32767	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:
–32768 to +32767
Description
-

C9-51 **Monitoring variable 1**

Address:	0xC933	Effective mode:	-
Min.:	–32768	Unit:	-
Max.:	32767	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:
–32768 to +32767
Description
-

C9-52 **Monitoring variable 2**

Address:	0xC934	Effective mode:	-
Min.:	–32768	Unit:	-
Max.:	32767	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:
–32768 to +32767
Description
-

C9-53 **Monitoring variable 3**

Address:	0xC935	Effective mode:	-
Min.:	–32768	Unit:	-
Max.:	32767	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:
–32768 to +32767
Description
-

C9-54 **Monitoring variable 4**

Address:	0xC936	Effective mode:	-
Min.:	–32768	Unit:	-
Max.:	32767	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:
–32768 to +32767

Description
-

C9-55 **Monitoring variable 5**

Address:	0xC937	Effective mode:	-
Min.:	–32768	Unit:	-
Max.:	32767	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:
–32768 to +32767
Description
-

C9-56 **Monitoring variable 6**

Address:	0xC938	Effective mode:	-
Min.:	–32768	Unit:	-
Max.:	32767	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:
–32768 to +32767
Description
-

C9-57 **Monitoring variable 7**

Address:	0xC939	Effective mode:	-
Min.:	–32768	Unit:	-
Max.:	32767	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:
–32768 to +32767
Description
-

C9-58 **Monitoring variable 8**

Address:	0xC93A	Effective mode:	-
Min.:	–32768	Unit:	-
Max.:	32767	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:
–32768 to +32767
Description
-

C9-59 **Monitoring variable 9**

Address:	0xC93B	Effective mode:	-
Min.:	–32768	Unit:	-
Max.:	32767	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:
–32768 to +32767
Description
-

C9-70 **Commissioning variable 0**

Address: 0xC946
Min.: –32768
Max.: 32767
Default: 0
Effective mode: -
Unit: -
Data type: Int16
Change: Changeable at any time

Value Range:
–32768 to +32767
Description
-

C9-71 **Commissioning variable 1**

Address: 0xC947
Min.: –32768
Max.: 32767
Default: 0
Effective mode: -
Unit: -
Data type: Int16
Change: Changeable at any time

Value Range:
–32768 to +32767
Description
-

C9-72 **Commissioning variable 2**

Address: 0xC948
Min.: –32768
Max.: 32767
Default: 0
Effective mode: -
Unit: -
Data type: Int16
Change: Changeable at any time

Value Range:
–32768 to +32767
Description
-

C9-73 **Commissioning variable 3**

Address: 0xC949
Min.: –32768
Max.: 32767
Default: 0
Effective mode: -
Unit: -
Data type: Int16
Change: Changeable at any time

Value Range:
–32768 to +32767
Description
-

C9-74 **Commissioning variable 4**

Address: 0xC94A
Min.: –32768
Max.: 32767
Default: 0
Effective mode: -
Unit: -
Data type: Int16
Change: Changeable at any time

Value Range:
–32768 to +32767
Description
-

C9-75 **Commissioning variable 5**

Address: 0xC94B
Effective mode: -

Min.: –32768
Max.: 32767
Default: 0
Unit: -
Data type: Int16
Change: Changeable at any time

Value Range:
–32768 to +32767

Description
-

C9-76 Commissioning variable 6

Address: 0xC94C
Min.: –32768
Max.: 32767
Default: 0
Effective mode: -
Unit: -
Data type: Int16
Change: Changeable at any time

Value Range:
–32768 to +32767

Description
-

C9-77 Commissioning variable 7

Address: 0xC94D
Min.: –32768
Max.: 32767
Default: 0
Effective mode: -
Unit: -
Data type: Int16
Change: Changeable at any time

Value Range:
–32768 to +32767

Description
-

C9-78 Commissioning variable 8

Address: 0xC94E
Min.: –32768
Max.: 32767
Default: 0
Effective mode: -
Unit: -
Data type: Int16
Change: Changeable at any time

Value Range:
–32768 to +32767

Description
-

C9-79 Commissioning variable 9

Address: 0xC94F
Min.: –32768
Max.: 32767
Default: 0
Effective mode: -
Unit: -
Data type: Int16
Change: Changeable at any time

Value Range:
–32768 to +32767

Description
-

4.50 CA: Motor 4 Nameplate and Learning Parameters

CA-00 **Motor type**

Address:	0xCA00	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Common asynchronous motor

1: Variable frequency asynchronous motor

2: Permanent magnet synchronous motor

Description

-

CA-01 **Rated motor power**

Address:	0xCA01	Effective mode:	-
Min.:	0.1	Unit:	kW
Max.:	1000.0	Data type:	UInt16
Default:	3.7	Change:	Changeable only at stop

Value Range:

0.1 kW to 1000.0 kW

Description

-

CA-02 **Rated motor voltage**

Address:	0xCA02	Effective mode:	-
Min.:	1	Unit:	V
Max.:	2000	Data type:	UInt16
Default:	380	Change:	Changeable only at stop

Value Range:

1 V to 2000 V

Description

-

CA-03 **Rated motor current**

Address:	0xCA03	Effective mode:	-
Min.:	0.01	Unit:	A
Max.:	655.35	Data type:	UInt16
Default:	9.00	Change:	Changeable only at stop

Value Range:

0.01 A to 655.35 A

Description

-

CA-04 **Rated motor frequency**

Address:	0xCA04	Effective mode:	-
Min.:	0.01	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	50.00	Change:	Changeable only at stop

Value Range:

0.01 Hz to F0-10

Description
-

CA-05 **Rated motor speed**

Address:	0xCA05	Effective mode:	-
Min.:	1	Unit:	RPM
Max.:	65535	Data type:	UInt16
Default:	1460	Change:	Changeable only at stop

Value Range:
1 RPM to 65535 RPM
Description
-

CA-06 **Number of parallel motors**

Address:	0xCA06	Effective mode:	-
Min.:	1	Unit:	-
Max.:	200	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
1 to 200
Description
-

CA-07 **Motor information command word**

Address:	0xCA07	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x3	Change:	Changeable only at stop

Value Range:

Bit00: Mutual inductance curve
0: Disabled
1: Enabled
Bit01: D- and Q-axis inductance curve
0: Disabled
1: Enabled
Bit02: Rotor resistance online auto-tuning
0: Disabled
1: Enabled
Bit03: Rotor resistance online auto-tuning method
0: Amplitude
1: Phase
Bit04: Motor thermal model
0: Disabled
1: Enabled
Bit05: Temperature source of motor thermal model
0: Estimated temperature
1: Temperature detected by sensor
Bit06: Torque coefficient calculation of asynchronous motor
0: Torque formula
1: Current distribution
Bit07: Torque coefficient calculation of synchronous motor
0: Torque formula
1: Torque matching the rated torque
Bit08: Zero speed friction torque calculation
0: Torque linearly decreasing to zero
1: Torque to maintain minimum speed
Bit09: Calculation of model parameters based on nameplate parameters
0: Disabled
1: Enabled
Bit10: Confirmation of calculating model parameters based on nameplate parameters
0: Default
1: Confirm

Description

-

CA-08 Number of motor pole pairs

Address:	0xCA08	Effective mode:	-
Min.:	0	Unit:	-
Max.:	64	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0 to 64

Description

-

CA-09 **Motor power factor**

Address:	0xCA09	Effective mode:	-
Min.:	0.600	Unit:	-
Max.:	1.000	Data type:	UInt16
Default:	0.860	Change:	Changeable only at stop

Value Range:
0.600 to 1.000
Description
-

CA-10 **Encoder PPR**

Address:	0xCA0A	Effective mode:	-
Min.:	1	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1024	Change:	Changeable only at stop

Value Range:
1 to 65535
Description
-

CA-11 **Encoder type**

Address:	0xCA0B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: ABZ incremental encoder
1: 23-bit encoder
2: Resolver
3: External input
Description
-

CA-12 **Speed feedback PG card**

Address:	0xCA0C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: Local PG card
1: Extension PG card
Description
-

CA-13 **Number of resolver pole pairs**

Address:	0xCA0D	Effective mode:	-
Min.:	1	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
1 to 65535

Description
-

CA-15 **Speed feedback PG wire breakage detection time**

Address:	0xCA0F	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	10.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0s to 10.0s
Description
-

CA-16 **A/B phase sequence of encoder**

Address:	0xCA10	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: Forward
1: Reverse
Description
-

CA-17 **Encoder installation angle**

Address:	0xCA11	Effective mode:	-
Min.:	0.0	Unit:	°
Max.:	359.9	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0° to 359.9°
Description
-

CA-18 **Expansion card**

Address:	0xCA12	Effective mode:	-
Min.:	1	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
1: Expansion card 1
2: Expansion card 2
Description
-

CA-19 **ABZ encoder speed measurement mode at low speed**

Address:	0xCA13	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	2	Change:	Changeable only at stop

Value Range:

0: Maintain

1: Attenuate

2: Optimized solution

Description

-

CA-20 **Encoder speed measurement filter time constant**

Address:	0xCA14	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	10.000	Data type:	UInt16
Default:	0.004	Change:	Changeable at any time

Value Range:

0.000s to 10.000s

Description

-

CA-21 **Encoder wire breakage software detection coefficient**

Address:	0xCA15	Effective mode:	-
Min.:	0.000	Unit:	-
Max.:	8.000	Data type:	UInt16
Default:	1.000	Change:	Changeable at any time

Value Range:

0.000 to 8.000

Description

-

CA-22 **Encoder control word**

Address:	0xCA16	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

Bit00: Speed measurement

0: Disabled

1: Enabled

Bit01: Software detection of wire breakage

0: Disabled

1: Enabled

Bit02: Glitch removal

0: Disabled

1: Enabled

Bit03: ABZ encoder speed measurement mode

0: Quadruplicated frequency

1: Single pulse

Description

-

CA-23 **Speed measurement exception count threshold**

Address:	0xCA17	Effective mode:	-
Min.:	1	Unit:	-

Max.: 100 Data type: UInt16
Default: 10 Change: Changeable only at stop
Value Range:
1 to 100
Description
-

CA-24 Motor gear ratio (numerator)
Address: 0xCA18 Effective mode: -
Min.: 1 Unit: -
Max.: 65535 Data type: UInt16
Default: 1 Change: Changeable only at stop
Value Range:
1 to 65535
Description
-

CA-25 Motor gear ratio (denominator)
Address: 0xCA19 Effective mode: -
Min.: 1 Unit: -
Max.: 65535 Data type: UInt16
Default: 1 Change: Changeable only at stop
Value Range:
1 to 65535
Description
-

CA-26 External input source of encoder
Address: 0xCA1A Effective mode: -
Min.: 0 Unit: -
Max.: 8 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0: 0
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector
Description
-

CA-29 Auto-tuning
Address: 0xCA1D Effective mode: -
Min.: 0 Unit: -
Max.: 13 Data type: UInt16
Default: 0 Change: Changeable only at stop

Value Range:
0: No operation
1: Static auto-tuning on partial parameters of asynchronous motor
2: Dynamic auto-tuning on asynchronous motor
3: Static auto-tuning on all parameters of asynchronous motor
4: Inertia auto-tuning
5: Deadzone auto-tuning
11: With-load auto-tuning on synchronous motor (excluding back EMF)
12: No-load dynamic auto-tuning on synchronous motor
13: Static auto-tuning on all parameters of synchronous motor (excluding zero point angle)
Description
-

CA-30 **Asynchronous motor stator resistance**

Address:	0xCA1E	Effective mode:	-
Min.:	0.001	Unit:	Ω
Max.:	65.535	Data type:	UInt16
Default:	1.204	Change:	Changeable only at stop

Value Range:
0.001 Ω to 65.535 Ω
Description
-

CA-31 **Asynchronous motor rotor resistance**

Address:	0xCA1F	Effective mode:	-
Min.:	0.001	Unit:	Ω
Max.:	65.535	Data type:	UInt16
Default:	0.908	Change:	Changeable only at stop

Value Range:
0.001 Ω to 65.535 Ω
Description
-

CA-32 **Asynchronous motor leakage inductance**

Address:	0xCA20	Effective mode:	-
Min.:	0.01	Unit:	mH
Max.:	655.35	Data type:	UInt16
Default:	5.28	Change:	Changeable only at stop

Value Range:
0.01 mH to 655.35 mH
Description
-

CA-33 **Asynchronous motor mutual inductance**

Address:	0xCA21	Effective mode:	-
Min.:	0.1	Unit:	mH
Max.:	6553.5	Data type:	UInt16
Default:	156.8	Change:	Changeable only at stop

Value Range:
0.1 mH to 6553.5 mH

Description
-

CA-34 **Asynchronous motor no-load current**

Address:	0xCA22	Effective mode:	-
Min.:	0.01	Unit:	A
Max.:	CA-03	Data type:	UInt16
Default:	4.20	Change:	Changeable only at stop

Value Range:
0.01 A to CA-03
Description
-

CA-35 **Synchronous motor stator resistance**

Address:	0xCA23	Effective mode:	-
Min.:	0.001	Unit:	Ω
Max.:	65.535	Data type:	UInt16
Default:	1.204	Change:	Changeable only at stop

Value Range:
0.001 Ω to 65.535 Ω
Description
-

CA-36 **Synchronous motor D axis inductance**

Address:	0xCA24	Effective mode:	-
Min.:	0.01	Unit:	mH
Max.:	655.35	Data type:	UInt16
Default:	5.28	Change:	Changeable only at stop

Value Range:
0.01 mH to 655.35 mH
Description
-

CA-37 **Synchronous motor Q axis inductance**

Address:	0xCA25	Effective mode:	-
Min.:	0.01	Unit:	mH
Max.:	655.35	Data type:	UInt16
Default:	5.28	Change:	Changeable only at stop

Value Range:
0.01 mH to 655.35 mH
Description
-

CA-39 **Synchronous motor back EMF coefficient**

Address:	0xCA27	Effective mode:	-
Min.:	0.0	Unit:	V
Max.:	6553.5	Data type:	UInt16
Default:	300.0	Change:	Changeable only at stop

Value Range:
0.0 V to 6553.5 V
Description
-

CA-40 **Stator leakage inductance**

Address:	0xCA28	Effective mode:	-
Min.:	0.000	Unit:	mH
Max.:	65.535	Data type:	UInt16
Default:	6.540	Change:	Changeable only at stop

Value Range:
0.000 mH to 65.535 mH
Description
-

CA-41 **Electromechanical time constant**

Address:	0xCA29	Effective mode:	-
Min.:	1	Unit:	ms
Max.:	65535	Data type:	UInt16
Default:	100	Change:	Unchangeable

Value Range:
1 ms to 65535 ms
Description
-

CA-42 **Inertia ratio**

Address:	0xCA2A	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	120.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

CA-43 **Friction torque**

Address:	0xCA2B	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	2.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

CA-44 **Excitation current coefficient 1 of mutual inductance curve (rated)**

Address:	0xCA2C	Effective mode:	-
Min.:	5.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	50.0	Change:	Changeable only at stop

Value Range:
5.0% to 100.0%
Description
-

CA-45 **Excitation current coefficient 2 of mutual inductance curve (rated)**

Address:	0xCA2D	Effective mode:	-

Min.: 5.0 Unit: %
Max.: 100.0 Data type: UInt16
Default: 75.0 Change: Changeable only at stop
Value Range:
5.0% to 100.0%
Description
-

CA-46 Excitation current coefficient 3 of mutual inductance curve
Address: 0xCA2E Effective mode: -
Min.: 100.0 Unit: %
Max.: 800.0 Data type: UInt16
Default: 150.0 Change: Changeable only at stop
Value Range:
100.0% to 800.0%
Description
-

CA-47 Excitation current coefficient 4 of mutual inductance curve
Address: 0xCA2F Effective mode: -
Min.: 100.0 Unit: %
Max.: 800.0 Data type: UInt16
Default: 210.0 Change: Changeable only at stop
Value Range:
100.0% to 800.0%
Description
-

CA-48 Flux coefficient 1 of mutual inductance curve (rated)
Address: 0xCA30 Effective mode: -
Min.: 10.0 Unit: %
Max.: 100.0 Data type: UInt16
Default: 50.0 Change: Changeable only at stop
Value Range:
10.0% to 100.0%
Description
-

CA-49 Flux coefficient 2 of mutual inductance curve (rated)
Address: 0xCA31 Effective mode: -
Min.: 10.0 Unit: %
Max.: 100.0 Data type: UInt16
Default: 85.0 Change: Changeable only at stop
Value Range:
10.0% to 100.0%
Description
-

CA-50 Flux coefficient 3 of mutual inductance curve
Address: 0xCA32 Effective mode: -
Min.: 100.0 Unit: %
Max.: 300.0 Data type: UInt16

Default: 115.0 Change: Changeable only at stop

Value Range:

100.0% to 300.0%

Description

-

CA-51 Flux coefficient 4 of mutual inductance curve

Address: 0xCA33 Effective mode: -

Min.: 100.0 Unit: %

Max.: 300.0 Data type: UInt16

Default: 125.0 Change: Changeable only at stop

Value Range:

100.0% to 300.0%

Description

-

CA-52 Speed point 1 of friction curve

Address: 0xCA34 Effective mode: -

Min.: 0 Unit: RPM

Max.: 30000 Data type: UInt16

Default: 15 Change: Changeable only at stop

Value Range:

0 RPM to 30000 RPM

Description

-

CA-53 Speed point 2 of friction curve

Address: 0xCA35 Effective mode: -

Min.: 0 Unit: RPM

Max.: 30000 Data type: UInt16

Default: 30 Change: Changeable only at stop

Value Range:

0 RPM to 30000 RPM

Description

-

CA-54 Speed point 3 of friction curve

Address: 0xCA36 Effective mode: -

Min.: 0 Unit: RPM

Max.: 30000 Data type: UInt16

Default: 60 Change: Changeable only at stop

Value Range:

0 RPM to 30000 RPM

Description

-

CA-55 Speed point 4 of friction curve

Address: 0xCA37 Effective mode: -

Min.: 0 Unit: RPM

Max.: 30000 Data type: UInt16

Default: 120 Change: Changeable only at stop

Value Range:

0 RPM to 30000 RPM

Description

-

CA-56 **Speed point 5 of friction curve**

Address:	0xCA38	Effective mode:	-
Min.:	0	Unit:	RPM
Max.:	30000	Data type:	UInt16
Default:	150	Change:	Changeable only at stop

Value Range:

0 RPM to 30000 RPM

Description

-

CA-57 **Speed point 6 of friction curve**

Address:	0xCA39	Effective mode:	-
Min.:	0	Unit:	RPM
Max.:	30000	Data type:	UInt16
Default:	300	Change:	Changeable only at stop

Value Range:

0 RPM to 30000 RPM

Description

-

CA-58 **Speed point 7 of friction curve**

Address:	0xCA3A	Effective mode:	-
Min.:	0	Unit:	RPM
Max.:	30000	Data type:	UInt16
Default:	600	Change:	Changeable only at stop

Value Range:

0 RPM to 30000 RPM

Description

-

CA-59 **Speed point 8 of friction curve**

Address:	0xCA3B	Effective mode:	-
Min.:	0	Unit:	RPM
Max.:	30000	Data type:	UInt16
Default:	1200	Change:	Changeable only at stop

Value Range:

0 RPM to 30000 RPM

Description

-

CA-60 **Speed point 9 of friction curve**

Address:	0xCA3C	Effective mode:	-
Min.:	0	Unit:	RPM
Max.:	30000	Data type:	UInt16
Default:	1500	Change:	Changeable only at stop

Value Range:

0 RPM to 30000 RPM

Description
-

CA-61 **Speed point 10 of friction curve**

Address:	0xCA3D	Effective mode:	-
Min.:	0	Unit:	RPM
Max.:	30000	Data type:	UInt16
Default:	3000	Change:	Changeable only at stop

Value Range:
0 RPM to 30000 RPM
Description
-

CA-62 **Torque point 1 of friction curve**

Address:	0xCA3E	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:
–320 N · m to +320 N · m
Description
-

CA-63 **Torque point 2 of friction curve**

Address:	0xCA3F	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:
–320 N · m to +320 N · m
Description
-

CA-64 **Torque point 3 of friction curve**

Address:	0xCA40	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:
–320 N · m to +320 N · m
Description
-

CA-65 **Torque point 4 of friction curve**

Address:	0xCA41	Effective mode:	-
Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:
–320 N · m to +320 N · m
Description
-

CA-66 **Torque point 5 of friction curve**

Address:	0xCA42	Effective mode:	-
Min.:	–320	Unit:	N·m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:
–320 N·m to +320 N·m
Description
-

CA-67 **Torque point 6 of friction curve**

Address:	0xCA43	Effective mode:	-
Min.:	–320	Unit:	N·m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:
–320 N·m to +320 N·m
Description
-

CA-68 **Torque point 7 of friction curve**

Address:	0xCA44	Effective mode:	-
Min.:	–320	Unit:	N·m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:
–320 N·m to +320 N·m
Description
-

CA-69 **Torque point 8 of friction curve**

Address:	0xCA45	Effective mode:	-
Min.:	–320	Unit:	N·m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:
–320 N·m to +320 N·m
Description
-

CA-70 **Torque point 9 of friction curve**

Address:	0xCA46	Effective mode:	-
Min.:	–320	Unit:	N·m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:
–320 N·m to +320 N·m
Description
-

CA-71 **Torque point 10 of friction curve**

Address:	0xCA47	Effective mode:	-

Min.:	–320	Unit:	N · m
Max.:	320.00	Data type:	Int16
Default:	0.00	Change:	Changeable only at stop

Value Range:
–320 N · m to +320 N · m
Description
-

CA-72 Current coefficient starting point of D- and Q-axis inductance curve

Address:	0xCA48	Effective mode:	-
Min.:	–800	Unit:	%
Max.:	800.0	Data type:	Int16
Default:	–200	Change:	Changeable only at stop

Value Range:
–800% to +800.0%
Description
-

CA-73 Current coefficient end point of D- and Q-axis inductance curve

Address:	0xCA49	Effective mode:	-
Min.:	–800	Unit:	%
Max.:	800.0	Data type:	Int16
Default:	200.0	Change:	Changeable only at stop

Value Range:
–800% to +800.0%
Description
-

CA-74 D axis inductance 1 of D- and Q-axis inductance curve

Address:	0xCA4A	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

CA-75 D axis inductance 2 of D- and Q-axis inductance curve

Address:	0xCA4B	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

CA-76 D axis inductance 3 of D- and Q-axis inductance curve

Address:	0xCA4C	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

CA-77 D axis inductance 4 of D- and Q-axis inductance curve

Address: 0xCA4D Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

CA-78 D axis inductance 5 of D- and Q-axis inductance curve

Address: 0xCA4E Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

CA-79 D axis inductance 6 of D- and Q-axis inductance curve

Address: 0xCA4F Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

CA-80 D axis inductance 7 of D- and Q-axis inductance curve

Address: 0xCA50 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

CA-81 D axis inductance 8 of D- and Q-axis inductance curve

Address: 0xCA51 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

CA-82 **D axis inductance 9 of D- and Q-axis inductance curve**

Address:	0xCA52	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

CA-83 **D axis inductance 10 of D- and Q-axis inductance curve**

Address:	0xCA53	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

CA-84 **D axis inductance 11 of D- and Q-axis inductance curve**

Address:	0xCA54	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

CA-85 **D axis inductance 12 of D- and Q-axis inductance curve**

Address:	0xCA55	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:

0.0% to 6553.5%

Description

-

CA-86 **Q axis inductance 1 of D- and Q-axis inductance curve**

Address:	0xCA56	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:

0.0% to 6553.5%

Description
-

CA-87 **Q axis inductance 2 of D- and Q-axis inductance curve**

Address:	0xCA57	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

CA-88 **Q axis inductance 3 of D- and Q-axis inductance curve**

Address:	0xCA58	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

CA-89 **Q axis inductance 4 of D- and Q-axis inductance curve**

Address:	0xCA59	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

CA-90 **Q axis inductance 5 of D- and Q-axis inductance curve**

Address:	0xCA5A	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

CA-91 **Q axis inductance 6 of D- and Q-axis inductance curve**

Address:	0xCA5B	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

CA-92 **Q axis inductance 7 of D- and Q-axis inductance curve**

Address:	0xCA5C	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

CA-93 **Q axis inductance 8 of D- and Q-axis inductance curve**

Address:	0xCA5D	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

CA-94 **Q axis inductance 9 of D- and Q-axis inductance curve**

Address:	0xCA5E	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

CA-95 **Q axis inductance 10 of D- and Q-axis inductance curve**

Address:	0xCA5F	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

CA-96 **Q axis inductance 11 of D- and Q-axis inductance curve**

Address:	0xCA60	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	100.0	Change:	Changeable only at stop

Value Range:
0.0% to 6553.5%
Description
-

CA-97 **Q axis inductance 12 of D- and Q-axis inductance curve**

Address:	0xCA61	Effective mode:	-

Min.: 0.0
Max.: 6553.5
Default: 100.0
Unit: %
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.0% to 6553.5%

Description
-

4.51 CB: Motor 4 V/f Control Parameters

CB-00 **V/f curve**

Address: 0xCB00
Min.: 0
Max.: 11
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0: Straight-line V/f curve
1: Multi-point V/f curve
2: Reserved
3: Reserved
4: Reserved
5: Reserved
6: Reserved
7: Reserved
8: Reserved
9: Reserved
10: V/f complete separation mode
11: V/f half separation mode

Description
-

CB-01 **Torque boost**

Address: 0xCB01
Min.: 0.0
Max.: 30.0
Default: 3.0
Effective mode: -
Unit: %
Data type: UInt16
Change: Changeable at any time

Value Range:
0.0% to 30.0%

Description
-

CB-02 **Cut-off frequency of torque boost**

Address: 0xCB02
Min.: 0.00
Max.: F0-10
Default: 50.00
Effective mode: -
Unit: Hz
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.00 Hz to F0-10

Description
-

CB-03 **Multi-point V/f frequency 1**

Address:	0xCB03	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	CB-05	Data type:	UInt16
Default:	0.00	Change:	Changeable only at stop

Value Range:
0.00 Hz to CB-05
Description
-

CB-04 **Multi-point V/f voltage 1**

Address:	0xCB04	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0% to +100.0%
Description
-

CB-05 **Multi-point V/f frequency 2**

Address:	0xCB05	Effective mode:	-
Min.:	CB-03	Unit:	Hz
Max.:	CB-07	Data type:	UInt16
Default:	0.00	Change:	Changeable only at stop

Value Range:
CB-03 to CB-07
Description
-

CB-06 **Multi-point V/f voltage 2**

Address:	0xCB06	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0% to +100.0%
Description
-

CB-07 **Multi-point V/f frequency 3**

Address:	0xCB07	Effective mode:	-
Min.:	CB-05	Unit:	Hz
Max.:	CA-04	Data type:	UInt16
Default:	0.00	Change:	Changeable only at stop

Value Range:
CB-05 to CA-04
Description
-

CB-08 **Multi-point V/f voltage 3**

Address:	0xCB08	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0% to +100.0%
Description
-

CB-09 **V/f slip compensation gain**

Address:	0xCB09	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	200.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0 to 200.0
Description
-

CB-10 **V/f overexcitation gain**

Address:	0xCB0A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	64	Change:	Changeable at any time

Value Range:
0 to 200
Description
-

CB-11 **V/f oscillation suppression gain**

Address:	0xCB0B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	40	Change:	Changeable at any time

Value Range:
0 to 100
Description
-

CB-12 **V/f oscillation suppression**

Address:	0xCB0C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
Description
-

CB-13 **Voltage source for V/f separation**

Address:	0xCB0D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Digital setting (CB-14)

1: AI1

2: AI2

3: AI3

4: Pulse reference (DI5)

5: Multi-reference

6: Simple PLC

7: PID

8: Communication

Others: F connector

Description

This parameter defines the source of the target voltage in V/f separation mode.

0: Digital setting (F3-14)

The V/f separation voltage is set by F3-14 (V/f separation voltage).

1: AI1

The V/f separation voltage is input with current or voltage signals through the AI1 terminal. The frequency is calculated according to the preset AI curve.

2: AI2

The V/f separation voltage is input with current or voltage signals through the AI2 terminal. The frequency is calculated according to the preset AI curve.

3: AI3

The V/f separation voltage is input with current or voltage signals through the AI3 terminal. The frequency is calculated according to the preset AI curve. The AC drive has two AI terminals by default, and the AI3 terminal needs to be provided through the I/O expansion card.

4: Pulse reference (DI5)

The V/f separation voltage is set through DI5. The frequency is calculated based on the curve reflecting the relationship between the pulse frequency and running frequency.

5: Multi-reference

When multi-reference is used as the source of the V/f separation voltage, different combinations of DI terminal states correspond to different reference values. The four multi-reference terminals can provide 16 state combinations, corresponding to 16 reference values (percentage x maximum frequency) of parameters in group FC.

6: Simple PLC

The V/f separation voltage is set by simple PLC. For details, see the function description of simple PLC.

7: PID

The V/f separation voltage is set by PID. For details, see the PID function description.

8: Communication

The main frequency is set through communication. The running frequency is input through remote communication. The AC drive must be equipped with a communication card to implement communication with the host controller. This mode applies to remote control or centralized control of multiple equipment.

Others: F connector
A function code is set for a floating-point connector, and the value of the connector is read as the motoring torque upper limit in speed control mode. This mode is used for expansion besides the common sources.

CB-14 V/f separation voltage

Address:	0xCB0E	Effective mode:	-
Min.:	0	Unit:	V
Max.:	CA-02	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 V to CA-02
Description
This parameter defines the V/f separation voltage.

CB-15 Voltage rise time of V/f separation

Address:	0xCB0F	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	1000.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 1000.0s
Description
This parameter defines the time required for the output voltage to rise from 0 to the rated motor voltage.

CB-16 Voltage fall time of V/f separation

Address:	0xCB10	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	1000.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 1000.0s
Description
This parameter defines the time required for the output voltage to fall from the rated motor voltage to 0.

CB-17 Stop mode for V/f separation

Address:	0xCB11	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Frequency and voltage decline to 0 independently
1: Frequency declines to 0 after voltage declines to 0
2: Coast to stop (new)
Description
0: The frequency and voltage decrease to 0 independently.
1: The frequency decreases to 0 according to the deceleration time after the voltage decreases to 0 according to the deceleration time.
2: The AC drive coasts to stop without following the stop deceleration curve.

CB-18 **Overcurrent stall suppression action current**

Address:	0xCB12	Effective mode:	-
Min.:	50	Unit:	%
Max.:	200	Data type:	UInt16
Default:	150	Change:	Changeable only at stop

Value Range:
50% to 200%
Description
-

CB-19 **Overcurrent stall suppression**

Address:	0xCB13	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0: Disabled
1: Enabled
Description
-

CB-20 **Overcurrent stall suppression gain**

Address:	0xCB14	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	20	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

CB-21 **Compensation coefficient of speed multiplying overcurrent stall suppression action current**

Address:	0xCB15	Effective mode:	-
Min.:	50	Unit:	%
Max.:	200	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:
50% to 200%
Description
-

CB-22 **Overvoltage stall suppression action voltage**

Address:	0xCB16	Effective mode:	-
Min.:	330.0	Unit:	V
Max.:	800.0	Data type:	UInt16
Default:	770.0	Change:	Changeable at any time

Value Range:
330.0 V to 800.0 V
Description
-

CB-23 **Overvoltage stall suppression**

Address:	0xCB17	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0: Disabled

1: Enabled

Description

-

CB-24 **Overvoltage stall suppression frequency gain**

Address:	0xCB18	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:

1 to 100

Description

-

CB-25 **Overvoltage stall suppression voltage gain**

Address:	0xCB19	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:

1 to 100

Description

-

CB-26 **Frequency rise threshold for overvoltage stall suppression**

Address:	0xCB1A	Effective mode:	-
Min.:	0	Unit:	Hz
Max.:	50	Data type:	UInt16
Default:	5	Change:	Changeable only at stop

Value Range:

0 Hz to 50 Hz

Description

-

CB-27 **Slip compensation filter time**

Address:	0xCB1B	Effective mode:	-
Min.:	0.1	Unit:	s
Max.:	10.0	Data type:	UInt16
Default:	0.5	Change:	Changeable only at stop

Value Range:

0.1s to 10.0s

Description

-

CB-28 **Multi-point curve source**

Address:	0xCB1C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: 3-point curve

1: Multi-point curve module A

2: Multi-point curve module B

Description

0: 3-point curve

The 3-point curve is used by default, which is set in F3-03 to F3-08.

1: Multi-point curve module A

The output of free module A is used as the voltage reference of the multi-point curve.

2: Multi-point curve module B

The output of free module B is used as the voltage reference of the multi-point curve.

CB-33 **Online torque compensation gain**

Address:	0xCB21	Effective mode:	-
Min.:	80	Unit:	-
Max.:	150	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:

80 to 150

Description

-

CB-34 **ImaxKi coefficient**

Address:	0xCB22	Effective mode:	-
Min.:	10	Unit:	%
Max.:	1000	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:

10% to 1000%

Description

-

CB-35 **Overcurrent suppression threshold (relative to rated motor current)**

Address:	0xCB23	Effective mode:	-
Min.:	80	Unit:	%
Max.:	300	Data type:	UInt16
Default:	200	Change:	Changeable only at stop

Value Range:

80% to 300%

Description

-

CB-36 **Frequency threshold for overcurrent suppression field weakening**

Address:	0xCB24	Effective mode:	-
Min.:	100	Unit:	%
Max.:	500	Data type:	UInt16

Default: 100 Change: Changeable only at stop

Value Range:

100% to 500%

Description

-

CB-37 IT filter time

Address: 0xCB25 Effective mode: -

Min.: 10 Unit: ms

Max.: 1000 Data type: UInt16

Default: 100 Change: Changeable only at stop

Value Range:

10 ms to 1000 ms

Description

-

CB-38 Slip compensation mode

Address: 0xCB26 Effective mode: -

Min.: 0 Unit: -

Max.: 2 Data type: UInt16

Default: 1 Change: Changeable only at stop

Value Range:

0: Disabled

1: Slip compensation without PG

2: Slip compensation with PG

Description

-

CB-39 VdcMaxCtrl allowed runtime

Address: 0xCB27 Effective mode: -

Min.: 0.0 Unit: s

Max.: 100.0 Data type: UInt16

Default: 0.0 Change: Changeable only at stop

Value Range:

0.0s to 100.0s

Description

-

CB-40 Upper limit of V/f separation voltage

Address: 0xCB28 Effective mode: -

Min.: 50.0 Unit: %

Max.: 200.0 Data type: UInt16

Default: 100.0 Change: Changeable only at stop

Value Range:

50.0% to 200.0%

Description

This parameter defines the upper limit of the V/f separation voltage, which is a percentage relative to the rated motor voltage.

CB-41 RFG time of V/f separation frequency

Address: 0xCB29 Effective mode: -

Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 0 Change: Changeable only at stop

Value Range:

0: RFG time forced to 0

1: Preset RFG time

Description

This parameter defines the RFG time of the V/f separation frequency. When it is set to 0, the frequency reference acceleration/deceleration time is forced to 0; when it is set to 1, the acceleration/deceleration time is set as normal.

CB-42 Cut-off frequency of V/f oscillation suppression filter

Address: 0xCB2A Effective mode: -
Min.: 1.0 Unit: Hz
Max.: 50.0 Data type: UInt16
Default: 8.0 Change: Changeable at any time

Value Range:

1.0 Hz to 50.0 Hz

Description

-

CB-43 Cut-off frequency threshold for V/f oscillation suppression

Address: 0xCB2B Effective mode: -
Min.: 10 Unit: Hz
Max.: 3000 Data type: UInt16
Default: 200 Change: Changeable at any time

Value Range:

10 Hz to 3000 Hz

Description

-

CB-44 VdcMaxCtrl feedforward coefficient

Address: 0xCB2C Effective mode: -
Min.: 0 Unit: %
Max.: 500 Data type: UInt16
Default: 0 Change: Changeable at any time

Value Range:

0% to 500%

Description

-

CB-50 PMVVC low-speed IF

Address: 0xCB32 Effective mode: -
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 1 Change: Changeable only at stop

Value Range:

0: Disabled

1: Enabled

Description

-

CB-51 **PMVVC low-speed IF current**

Address:	0xCB33	Effective mode:	-
Min.:	30	Unit:	-
Max.:	250	Data type:	UInt16
Default:	100	Change:	Changeable only at stop

Value Range:
30 to 250
Description
-

CB-52 **PMVVC low-speed IF speed switching threshold**

Address:	0xCB34	Effective mode:	-
Min.:	2.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	10.0	Change:	Changeable only at stop

Value Range:
2.0% to 100.0%
Description
-

CB-53 **PMVVC oscillation suppression gain coefficient**

Address:	0xCB35	Effective mode:	-
Min.:	0	Unit:	-
Max.:	500	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
0 to 500
Description
-

CB-54 **PMVVC filter time coefficient**

Address:	0xCB36	Effective mode:	-
Min.:	0	Unit:	-
Max.:	500	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
0 to 500
Description
-

CB-55 **PMVVC energy conservation control mode**

Address:	0xCB37	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	2	Change:	Changeable only at stop

Value Range:
0: Fixed straight-line V/f curve
1: Fixed 30% reactive current
2: MTPA control
Description
-

4.52 CC: Motor 4 Control and Protection Parameters

CC-00 **Startup mode**

Address:	0xCC00	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Direct start

1: Flying start

2: Pre-excitation start (AC asynchronous motor)

3: SVC quick start

Description

Flying start is recommended if you need to start a motor that is rotating at a high speed. Pre-excitation start and SVC quick start apply only to AC asynchronous motors.

CC-01 **Speed tracking mode**

Address:	0xCC01	Effective mode:	-
Min.:	0	Unit:	-
Max.:	4	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: From the stop frequency

1: From the power frequency

2: From the maximum frequency

3: Reserved

4: Magnetic field directional speed tracking (MD290)

Description

-

CC-02 **Speed of speed tracking**

Address:	0xCC02	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	20	Change:	Changeable at any time

Value Range:

1 to 100

Description

-

CC-03 **Startup frequency**

Address:	0xCC03	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	10.00	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00 Hz to 10.00 Hz

Description

This parameter defines the startup frequency for direct start of the AC drive. When the frequency reference is lower than the startup frequency, the AC drive will not start but stay standby.

CC-04 **Startup frequency hold time**

Address:	0xCC04	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:

0.0s to 100.0s

Description

This parameter defines the hold time during which the output frequency remains at the startup frequency. After this hold time elapses, the AC drive will accelerate/decelerate to the reference frequency.

CC-05 **DC braking current at startup**

Address:	0xCC05	Effective mode:	-
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	50	Change:	Changeable only at stop

Value Range:

0% to 100%

Description

A larger DC braking current indicates stronger braking force. 100% corresponds to the rated motor current (the current upper limit is 80% of the rated current of the AC drive).

CC-06 **DC braking time at startup**

Address:	0xCC06	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:

0.0s to 100.0s

Description

This parameter defines the time for DC braking at startup, which is valid only when the startup mode is direct start.

CC-07 **Stop mode**

Address:	0xCC07	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Decelerate to stop

1: Coast to stop

2: Stop at maximum capability

Description

-

CC-08 **Start frequency of DC braking at stop**

Address:	0xCC08	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-10
Description
The AC drive starts DC braking when the running frequency decreases to the value of this parameter during deceleration to stop.

CC-09 DC braking delay at stop

Address:	0xCC09	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 100.0s
Description
When the running frequency decreases to the start frequency of DC braking at stop, the AC drive stops output and starts DC braking after this waiting time.

CC-10 DC braking current at stop

Address:	0xCC0A	Effective mode:	-
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	50	Change:	Changeable at any time

Value Range:
0% to 100%
Description
A larger DC braking current indicates stronger braking force. 100% corresponds to the rated motor current (the current upper limit is 80% of the rated current of the AC drive).

CC-11 DC braking time at stop

Address:	0xCC0B	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0s to 100.0s
Description
If this parameter is set to 0, DC braking is disabled.

CC-12 Speed tracking sweep current limit closed loop Kp

Address:	0xCC0C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1000	Data type:	UInt16
Default:	500	Change:	Changeable at any time

Value Range:
0 to 1000
Description
-

CC-13 Speed tracking sweep current limit closed loop Ki

Address:	0xCC0D	Effective mode:	-
Min.:	0	Unit:	-

Max.: 1000 Data type: UInt16
Default: 800 Change: Changeable at any time

Value Range:
0 to 1000

Description
-

CC-14 Speed tracking current

Address: 0xCC0E Effective mode: -
Min.: 30 Unit: %
Max.: 200 Data type: UInt16
Default: 80 Change: Changeable only at stop

Value Range:
30% to 200%

Description
-

CC-15 Current loop multiple

Address: 0xCC0F Effective mode: -
Min.: 10 Unit: %
Max.: 600 Data type: UInt16
Default: 100 Change: Changeable at any time

Value Range:
10% to 600%

Description
-

CC-16 Demagnetization time (valid for asynchronous motors)

Address: 0xCC10 Effective mode: -
Min.: 0.00 Unit: s
Max.: 5.00 Data type: UInt16
Default: 0.50 Change: Changeable at any time

Value Range:
0.00s to 5.00s

Description
This parameter defines the minimum waiting time for restart after shutdown.

CC-17 Overexcitation enable

Address: 0xCC11 Effective mode: -
Min.: 0 Unit: -
Max.: 2 Data type: UInt16
Default: 0 Change: Changeable at any time

Value Range:
0: Disabled
2: Enabled during deceleration
3: Enabled always

Description
This parameter defines the active mode of overexcitation in vector control mode for asynchronous motors. When it is set to 2, overexcitation takes effect during acceleration, operation at constant speed, and deceleration.

CC-18 **Overexcitation suppression current**

Address:	0xCC12	Effective mode:	-
Min.:	0	Unit:	%
Max.:	150	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:

0% to 150%

Description

This parameter defines the target current after overexcitation takes effect and is a percentage relative to the rated motor current.

CC-19 **Overexcitation gain**

Address:	0xCC13	Effective mode:	-
Min.:	0.01	Unit:	-
Max.:	2.50	Data type:	UInt16
Default:	1.25	Change:	Changeable at any time

Value Range:

0.01 to 2.50

Description

-

CC-20 **Parameter auto-tuning upon startup**

Address:	0xCC14	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

Bit00: Synchronous motor pole position auto-tuning upon startup

0: Disabled

1: Enabled

Bit01: Quick stator resistance auto-tuning upon startup

0: Disabled

1: Enabled

Bit02–Bit03: HFI pole position auto-tuning

0: Disabled

1: Enabled

2: Adaptive

Bit04: IGBT shoot-through self-check upon startup

0: Disabled

1: Enabled

Bit05: Short-to-ground self-check upon startup (reserved)

0: Disabled

1: Enabled

Bit06: Phase loss self-check upon startup (reserved)

0: Disabled

1: Enabled

Description

-

CC-21 **Auto-tuning direction**

Address:	0xCC15	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0 to 1
Description
-

CC-22 **Oscillation suppression gain of synchronous motor back EMF auto-tuning**

Address:	0xCC16	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	30.0	Data type:	UInt16
Default:	3.2	Change:	Changeable only at stop

Value Range:
0.0 to 30.0
Description
-

CC-23 **Target speed of rotation auto-tuning**

Address:	0xCC17	Effective mode:	-
Min.:	30.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	70.0	Change:	Changeable only at stop

Value Range:
30.0% to 100.0%
Description
-

CC-24 **Target speed 1 of inertia auto-tuning**

Address:	0xCC18	Effective mode:	-
Min.:	10.0	Unit:	%
Max.:	CC-25	Data type:	UInt16
Default:	40.0	Change:	Changeable only at stop

Value Range:
10.0% to CC-25
Description
-

CC-25 **Target speed 2 of inertia auto-tuning**

Address:	0xCC19	Effective mode:	-
Min.:	CC-24	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	60.0	Change:	Changeable only at stop

Value Range:
CC-24 to 100.0%
Description
-

CC-26 **Overcurrent prevention of mutual inductance saturation curve**

Address:	0xCC1A	Effective mode:	-

Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 1 Change: Changeable only at stop

Value Range:

0 to 1

Description

-

CC-27 Auto-tuning items

Address: 0xCC1B Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 117 Change: Changeable only at stop

Value Range:

Bit00: Speed loop parameter adaptation

0: Disabled

1: Enabled

Bit01: Current loop parameter adaptation

0: Disabled

1: Enabled

Bit02: Drive nonlinear auto-tuning

0: Disabled

1: Enabled

Bit03: Inter-phase deviation coefficient auto-tuning

0: Disabled

1: Enabled

Bit04: Auto-tuning of initial pole position of synchronous motor

0: Disabled

1: Enabled

Bit05: Auto-tuning of D- and Q-axis inductance model of synchronous motor

0: Disabled

1: Enabled

Bit06: System inertia auto-tuning

0: Disabled

1: Enabled

Bit07: HFI pole position auto-tuning

0: Disabled

1: Enabled

Description

-

CC-28 OFF3 stop mode

Address: 0xCC1C Effective mode: -
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 0 Change: Changeable only at stop

Value Range:

0: Quick stop

1: Stop at maximum capability

Description
-

CC-29 **Stop mode during running**

Address:	0xCC1D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0: OFF1 stop mode
1: OFF2 stop mode
2: OFF3 stop mode
Description
-

CC-30 **Stop mode for torque control**

Address:	0xCC1E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0: Coast to stop forcibly
1: Switch to speed control mode and then stop
2: Maintain torque control mode until zero speed and then block
Description
-

CC-32 **Proportional gain adjustment coefficient**

Address:	0xCC20	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	2.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 2.0
Description
-

CC-33 **Integral gain adjustment coefficient**

Address:	0xCC21	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	2.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 2.0
Description
-

CC-34 **Zero-speed threshold**

Address:	0xCC22	Effective mode:	-
Min.:	0.1	Unit:	%
Max.:	200.0	Data type:	UInt16

Default: 2.0 Change: Changeable at any time

Value Range:

0.1% to 200.0%

Description

-

CC-35 Zero-speed stop delay

Address: 0xCC23 Effective mode: -

Min.: 0.00 Unit: s

Max.: 10.00 Data type: UInt16

Default: 0.10 Change: Changeable only at stop

Value Range:

0.00s to 10.00s

Description

-

CC-36 Reference source execution interval

Address: 0xCC24 Effective mode: -

Min.: 0 Unit: -

Max.: 20 Data type: UInt16

Default: 4 Change: Changeable only at stop

Value Range:

0 to 20

Description

-

CC-37 Trial current for speed tracking of synchronous motor

Address: 0xCC25 Effective mode: -

Min.: 5.0 Unit: %

Max.: 50.0 Data type: UInt16

Default: 10.0 Change: Changeable only at stop

Value Range:

5.0% to 50.0%

Description

-

CC-38 Minimum frequency for speed tracking of synchronous motor

Address: 0xCC26 Effective mode: -

Min.: 0.0 Unit: Hz

Max.: 100.0 Data type: UInt16

Default: 0.0 Change: Changeable only at stop

Value Range:

0.0 Hz to 100.0 Hz

Description

-

CC-39 Angle compensation for speed tracking of synchronous motor

Address: 0xCC27 Effective mode: -

Min.: 0 Unit: -

Max.: 360 Data type: UInt16

Default: 0 Change: Changeable only at stop

Value Range:

0 to 360

Description

-

CC-40 Parameter auto-tuning of synchronous motor upon startup

Address:	0xCC28	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 1

Description

-

CC-41 Current motor angle

Address:	0xCC29	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

-

CC-42 Forward torque limit 1

Address:	0xCC2A	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	400.0	Data type:	UInt16
Default:	150.0	Change:	Changeable at any time

Value Range:

0.0 to 400.0

Description

-

CC-43 Reverse torque limit 1

Address:	0xCC2B	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	400.0	Data type:	UInt16
Default:	150.0	Change:	Changeable at any time

Value Range:

0.0 to 400.0

Description

-

CC-44 Source of forward torque limit 2

Address:	0xCC2C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: 400%

Others: F connector

Description
-

CC-45 **Source of reverse torque limit 2**

Address:	0xCC2D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: –400%
Others: F connector
Description
-

CC-46 **Ramp (FRG) selection bit0**

Address:	0xCC2E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: 0
1: 1
2: Terminal function input
3: DI1
4: DI2
5: DI3
6: DI4
7: DI5
8: DI6
9: DI7
10: DI8
11: DI9
12: DI10
13: DI11
14: DI12
15: DI13
16: DI14
17: DI15
18: DI16
Others: B connector
Description
-

CC-47 **Ramp (FRG) selection bit1**

Address:	0xCC2F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	18	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

Same as CC-46

Description

-

CC-50 Motor overload protection

Address:	0xCC32	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: Disabled

1: Enabled

Description

-

CC-51 Motor overload protection gain

Address:	0xCC33	Effective mode:	-
Min.:	0.20	Unit:	-
Max.:	10.00	Data type:	UInt16
Default:	1.00	Change:	Changeable at any time

Value Range:

0.20 to 10.00

Description

-

CC-52 Motor overload pre-warning coefficient

Address:	0xCC34	Effective mode:	-
Min.:	50	Unit:	%
Max.:	100	Data type:	UInt16
Default:	80	Change:	Changeable at any time

Value Range:

50% to 100%

Description

-

CC-53 Overvoltage stall suppression gain

Address:	0xCC35	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:

1 to 100

Description

-

CC-54 Overvoltage stall protection voltage

Address:	0xCC36	Effective mode:	-
Min.:	330.0	Unit:	V
Max.:	800.0	Data type:	UInt16
Default:	770.0	Change:	Changeable at any time

Value Range:

330.0 V to 800.0 V

Description
-

CC-55 **Input phase loss/Contactor pickup protection**

Address:	0xCC37	Effective mode:	-
Min.:	0	Unit:	-
Max.:	13	Data type:	UInt16
Default:	11	Change:	Changeable at any time

Value Range:
Ones: Input phase loss protection
0: Disabled
1: Protection enabled when both software and hardware input phase loss conditions are met
2: Protection enabled when software input phase loss conditions are met
3: Protection enabled when hardware input phase loss conditions are met
Tens: Contactor pickup protection
0: Disabled
1: Enabled
Description
-

CC-56 **Output phase loss protection**

Address:	0xCC38	Effective mode:	-
Min.:	0	Unit:	-
Max.:	11	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
Ones: Output phase loss protection upon power-on
0: Disabled
1: Enabled
Tens: Output phase loss protection before running
0: Disabled
1: Enabled
Description
-

CC-57 **Power dip ride-through**

Address:	0xCC39	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: Disabled
1: Decelerate
2: Decelerate to stop
3: Suppress voltage dip
Description
-

CC-58 **Voltage threshold for disabling power dip ride-through**

Address:	0xCC3A	Effective mode:	-

Min.: 80 Unit: %
Max.: 100 Data type: UInt16
Default: 85 Change: Changeable only at stop
Value Range:
80% to 100%
Description
-

CC-59 Delay of voltage recovery from power dip
Address: 0xCC3B Effective mode: -
Min.: 0.0 Unit: s
Max.: 100.0 Data type: UInt16
Default: 0.5 Change: Changeable only at stop
Value Range:
0.0s to 100.0s
Description
-

CC-60 Voltage threshold for enabling power dip ride-through
Address: 0xCC3C Effective mode: -
Min.: 60 Unit: %
Max.: 100 Data type: UInt16
Default: 80 Change: Changeable only at stop
Value Range:
60% to 100%
Description
-

CC-61 Protection upon load loss
Address: 0xCC3D Effective mode: -
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
0: Disabled
1: Enabled
Description
-

CC-62 Load loss detection level
Address: 0xCC3E Effective mode: -
Min.: 0.0 Unit: %
Max.: 100.0 Data type: UInt16
Default: 10.0 Change: Changeable at any time
Value Range:
0.0% to +100.0%
Description
-

CC-63 Load loss detection time
Address: 0xCC3F Effective mode: -
Min.: 0.0 Unit: s

Max.: 60.0 Data type: UInt16
Default: 1.0 Change: Changeable at any time
Value Range:
0.0s to 60.0s
Description
-

CC-64 Overspeed detection level
Address: 0xCC40 Effective mode: -
Min.: 0.0 Unit: %
Max.: 50.0 Data type: UInt16
Default: 20.0 Change: Changeable at any time
Value Range:
0.0% to 50.0%
Description
-

CC-65 Overspeed detection time
Address: 0xCC41 Effective mode: -
Min.: 0.0 Unit: s
Max.: 60.0 Data type: UInt16
Default: 1.0 Change: Changeable at any time
Value Range:
0.0s to 60.0s
Description
-

CC-66 Detection level of excessive speed deviation
Address: 0xCC42 Effective mode: -
Min.: 0.0 Unit: %
Max.: 50.0 Data type: UInt16
Default: 20.0 Change: Changeable at any time
Value Range:
0.0% to 50.0%
Description
-

CC-67 Detection time of excessive speed deviation
Address: 0xCC43 Effective mode: -
Min.: 0.0 Unit: s
Max.: 60.0 Data type: UInt16
Default: 5.0 Change: Changeable at any time
Value Range:
0.0s to 60.0s
Description
-

CC-68 Power dip ride-through gain Kp
Address: 0xCC44 Effective mode: -
Min.: 1 Unit: -
Max.: 100 Data type: UInt16
Default: 40 Change: Changeable at any time

Value Range:
1 to 100
Description
-

CC-69 **Power dip ride-through integral coefficient Ki**

Address:	0xCC45	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

CC-70 **Deceleration time of power dip ride-through**

Address:	0xCC46	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	300.0	Data type:	UInt16
Default:	20.0	Change:	Changeable at any time

Value Range:
0.0s to 300.0s
Description
-

CC-71 **Voltage dip suppression time**

Address:	0xCC47	Effective mode:	-
Min.:	0.1	Unit:	s
Max.:	600.0	Data type:	UInt16
Default:	0.5	Change:	Changeable at any time

Value Range:
0.1s to 600.0s
Description
-

CC-72 **Motor protection**

Address:	0xCC48	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	537	Change:	Changeable at any time

Value Range:
Bit00: Motor overload determination (reserved)
Bit01: Motor overheat detection (reserved)
Bit02: PG fault detection (reserved)
Bit03: Current control error detection
Bit04: Motor stall error detection
Bit05: Locked-rotor detection
Bit06: Synchronous motor demagnetization protection
Bit07: Protection against locked-rotor in SVC speed open-loop control
Bit08: Reserved
Bit09: Parameter setting error

Description
-

CC-73 **Locked-rotor time**

Address:	0xCC49	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	65.0	Data type:	UInt16
Default:	2.0	Change:	Changeable at any time

Value Range:
0.0s to 65.0s
Description
-

CC-74 **Locked-rotor frequency**

Address:	0xCC4A	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	600.0	Data type:	UInt16
Default:	6.0	Change:	Changeable at any time

Value Range:
0.0% to 600.0%
Description
-

CC-75 **Motor stall detection time**

Address:	0xCC4B	Effective mode:	-
Min.:	0.0	Unit:	s
Max.:	10.0	Data type:	UInt16
Default:	0.5	Change:	Changeable at any time

Value Range:
0.0s to 10.0s
Description
-

CC-76 **Stall detection threshold**

Address:	0xCC4C	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	100.0	Data type:	UInt16
Default:	30.0	Change:	Changeable at any time

Value Range:
0.0% to +100.0%
Description
-

CC-77 **Current control exception detection time**

Address:	0xCC4D	Effective mode:	-
Min.:	0.00	Unit:	s
Max.:	1.00	Data type:	UInt16
Default:	0.05	Change:	Changeable at any time

Value Range:
0.00s to 1.00s
Description
-

CC-78 **Current control exception detection threshold**

Address:	0xCC4E	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	25.0	Change:	Changeable at any time

Value Range:
0.0% to 200.0%
Description
-

CC-79 **Synchronous motor overcurrent threshold**

Address:	0xCC4F	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	500.0	Data type:	UInt16
Default:	300.0	Change:	Changeable at any time

Value Range:
0.0% to 500.0%
Description
-

CC-81 **Speed deviation detection**

Address:	0xCC51	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0 to 1
Description
-

CC-82 **Skip frequency 1**

Address:	0xCC52	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-10
Description
-

CC-83 **Skip frequency 2**

Address:	0xCC53	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-10
Description
-

CC-84 **Skip frequency 3**

Address:	0xCC54	Effective mode:	-

Min.: 0.00
Max.: F0-10
Default: 0.00
Unit: Hz
Data type: UInt16
Change: Changeable at any time

Value Range:
0.00 Hz to F0-10

Description
-

CC-85 Skip frequency 4

Address: 0xCC55
Min.: 0.00
Max.: F0-10
Default: 0.00
Effective mode: -
Unit: Hz
Data type: UInt16
Change: Changeable at any time

Value Range:
0.00 Hz to F0-10

Description
-

CC-86 Skip frequency band

Address: 0xCC56
Min.: 0.00
Max.: F0-10
Default: 0.00
Effective mode: -
Unit: Hz
Data type: UInt16
Change: Changeable at any time

Value Range:
0.00 Hz to F0-10

Description
-

CC-87 Source of frequency upper limit

Address: 0xCC57
Min.: 0
Max.: 5
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0: F0-12
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
Others: F connector

Description
-

CC-88 Frequency upper limit

Address: 0xCC58
Min.: CC-90
Max.: F0-10
Default: 50.00
Effective mode: -
Unit: Hz
Data type: UInt16
Change: Changeable at any time

Value Range:
CC-90 to F0-10

Description
-

CC-89 **Frequency upper limit offset**

Address:	0xCC59	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to F0-10 (maximum frequency)
Description
-

CC-90 **Frequency lower limit**

Address:	0xCC5A	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	CC-88	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to CC-88
Description
-

CC-91 **Speed/Torque control mode**

Address:	0xCC5B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Speed control
1: Torque control
Description
-

4.53 CD: Motor 4 Observation and Vector Parameters

CD-00 **Asynchronous motor FVC model switchover frequency**

Address:	0xCD00	Effective mode:	-
Min.:	0	Unit:	%
Max.:	1000	Data type:	UInt16
Default:	20	Change:	Changeable only at stop

Value Range:
0% to 1000%
Description
-

CD-01 **Asynchronous motor FVC model switchover hysteresis frequency**

Address:	0xCD01	Effective mode:	-
Min.:	10	Unit:	%
Max.:	50	Data type:	UInt16

Default: 20 Change: Changeable only at stop

Value Range:

10% to 50%

Description

-

CD-02 Asynchronous motor FVC observer filter time

Address: 0xCD02 Effective mode: -

Min.: 5 Unit: ms

Max.: 100 Data type: UInt16

Default: 15 Change: Changeable only at stop

Value Range:

5 ms to 100 ms

Description

-

CD-03 Asynchronous motor FVC current model mode

Address: 0xCD03 Effective mode: -

Min.: 0 Unit: -

Max.: 1 Data type: UInt16

Default: 0 Change: Changeable only at stop

Value Range:

0 to 1

Description

-

CD-04 Asynchronous motor FVC pre-excitation output observation angle mode

Address: 0xCD04 Effective mode: -

Min.: 0 Unit: -

Max.: 1 Data type: UInt16

Default: 0 Change: Changeable only at stop

Value Range:

0 to 1

Description

-

CD-05 Asynchronous motor SVC model switchover frequency

Address: 0xCD05 Effective mode: -

Min.: 10 Unit: %

Max.: 20 Data type: UInt16

Default: 15 Change: Changeable only at stop

Value Range:

10% to 20%

Description

-

CD-06 Asynchronous motor SVC observer filter time

Address: 0xCD06 Effective mode: -

Min.: 5 Unit: ms

Max.: 50 Data type: UInt16

Default: 10 Change: Changeable at any time

Value Range:

5 ms to 50 ms

Description

-

CD-07 **Asynchronous motor SVC observer gain 1**

Address:	0xCD07	Effective mode:	-
Min.:	10	Unit:	%
Max.:	500	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:

10% to 500%

Description

-

CD-08 **Asynchronous motor SVC observer gain 2**

Address:	0xCD08	Effective mode:	-
Min.:	10	Unit:	%
Max.:	100	Data type:	UInt16
Default:	20	Change:	Changeable at any time

Value Range:

10% to 100%

Description

-

CD-09 **Asynchronous motor SVC observer mode**

Address:	0xCD09	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0 to 3

Description

-

CD-10 **Asynchronous motor SVC pre-excitation mode**

Address:	0xCD0A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0 to 1

Description

-

CD-11 **Asynchronous motor SVC speed tracking mode**

Address:	0xCD0B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0 to 1

Description
-

CD-14 **Synchronous motor 1 model control**

Address:	0xCD0E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	5	Change:	Changeable at any time

Value Range:
Bit00: Low speed processing
Bit01: Low speed processing 1
Bit02: Online auto-tuning of resistance
Bit03: Online auto-tuning of back EMF
Bit04: KS
Description
-

CD-15 **Synchronous motor model K1**

Address:	0xCD0F	Effective mode:	-
Min.:	10	Unit:	-
Max.:	3000	Data type:	UInt16
Default:	200	Change:	Changeable at any time

Value Range:
10 to 3000
Description
-

CD-16 **Synchronous motor model K1Max**

Address:	0xCD10	Effective mode:	-
Min.:	100	Unit:	-
Max.:	6000	Data type:	UInt16
Default:	3000	Change:	Changeable at any time

Value Range:
100 to 6000
Description
-

CD-17 **Synchronous motor model KsMin**

Address:	0xCD11	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	4.0	Data type:	UInt16
Default:	0.3	Change:	Changeable at any time

Value Range:
0.0 to 4.0
Description
-

CD-18 **Synchronous motor model Kspeed**

Address:	0xCD12	Effective mode:	-
Min.:	50	Unit:	-
Max.:	2000	Data type:	UInt16

Default: 400 Change: Changeable at any time

Value Range:

50 to 2000

Description

-

CD-19 Synchronous motor frequency filter time constant

Address: 0xCD13 Effective mode: -

Min.: 2 Unit: ms

Max.: 100 Data type: UInt16

Default: 10 Change: Changeable at any time

Value Range:

2 ms to 100 ms

Description

-

CD-20 Frequency upper limit of synchronous motor Rs online auto-tuning

Address: 0xCD14 Effective mode: -

Min.: 1.0 Unit: %

Max.: 20.0 Data type: UInt16

Default: 3.5 Change: Changeable at any time

Value Range:

1.0% to 20.0%

Description

-

CD-21 Synchronous motor model Kr

Address: 0xCD15 Effective mode: -

Min.: 0 Unit: -

Max.: 50 Data type: UInt16

Default: 10 Change: Changeable at any time

Value Range:

0 to 50

Description

-

CD-22 Synchronous motor model Kr1

Address: 0xCD16 Effective mode: -

Min.: 0 Unit: -

Max.: 50 Data type: UInt16

Default: 5 Change: Changeable at any time

Value Range:

0 to 50

Description

-

CD-23 Synchronous motor low-speed D axis injection current

Address: 0xCD17 Effective mode: -

Min.: 0 Unit: %

Max.: 100 Data type: UInt16

Default: 20 Change: Changeable at any time

Value Range:

0% to 100%

Description

-

CD-24 **Synchronous motor model LowFreqTime1**

Address:	0xCD18	Effective mode:	-
Min.:	0	Unit:	-
Max.:	500	Data type:	UInt16
Default:	50	Change:	Changeable at any time

Value Range:

0 to 500

Description

-

CD-27 **Frequency lower limit of back EMF online auto-tuning**

Address:	0xCD1B	Effective mode:	-
Min.:	10	Unit:	%
Max.:	100	Data type:	UInt16
Default:	25	Change:	Changeable at any time

Value Range:

10% to 100%

Description

-

CD-28 **Synchronous motor model LowFreq**

Address:	0xCD1C	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	2.0	Data type:	UInt16
Default:	0.3	Change:	Changeable at any time

Value Range:

0.0% to 2.0%

Description

-

CD-29 **Synchronous motor model LowFreqTime**

Address:	0xCD1D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	100	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:

0 to 100

Description

-

CD-30 **Percentage of pole auto-tuning current**

Address:	0xCD1E	Effective mode:	-
Min.:	50	Unit:	%
Max.:	200	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:

50% to 200%

Description
-

CD-31 **Percentage of high frequency response current**

Address:	0xCD1F	Effective mode:	-
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	25	Change:	Changeable at any time

Value Range:
0% to 100%
Description
-

CD-32 **Percentage of HFI and SVC switching frequency**

Address:	0xCD20	Effective mode:	-
Min.:	0	Unit:	%
Max.:	30	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
0% to 30%
Description
-

CD-33 **Observer parameter**

Address:	0xCD21	Effective mode:	-
Min.:	10	Unit:	-
Max.:	200	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
10 to 200
Description
-

CD-34 **Speed filter cut-off frequency**

Address:	0xCD22	Effective mode:	-
Min.:	1	Unit:	Hz
Max.:	200	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
1 Hz to 200 Hz
Description
-

CD-35 **Carrier frequency during NS auto-tuning**

Address:	0xCD23	Effective mode:	-
Min.:	2.00	Unit:	Hz
Max.:	16.00	Data type:	UInt16
Default:	8.00	Change:	Changeable at any time

Value Range:
2.00 Hz to 16.00 Hz
Description
-

CD-36 **Automatic calculation of NS auto-tuning voltage**

Address:	0xCD24	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
Description
-

CD-37 **Percentage of NS auto-tuning voltage set manually**

Address:	0xCD25	Effective mode:	-
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
0% to 100%
Description
-

CD-38 **Duration of HFI stage 1**

Address:	0xCD26	Effective mode:	-
Min.:	50	Unit:	ms
Max.:	500	Data type:	UInt16
Default:	150	Change:	Changeable at any time

Value Range:
50 ms to 500 ms
Description
-

CD-40 **Speed loop proportional gain 1**

Address:	0xCD28	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

CD-41 **Speed loop integral time 1**

Address:	0xCD29	Effective mode:	-
Min.:	0.01	Unit:	s
Max.:	10.00	Data type:	UInt16
Default:	0.50	Change:	Changeable at any time

Value Range:
0.01s to 10.00s
Description
-

CD-42 **Switchover frequency 1**

Address:	0xCD2A	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	CD-45	Data type:	UInt16
Default:	5.00	Change:	Changeable at any time

Value Range:
0.00 Hz to CD-45
Description
-

CD-43 **Speed loop proportional gain 2**

Address:	0xCD2B	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	20	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

CD-44 **Speed loop integral time 2**

Address:	0xCD2C	Effective mode:	-
Min.:	0.01	Unit:	s
Max.:	10.00	Data type:	UInt16
Default:	1.00	Change:	Changeable at any time

Value Range:
0.01s to 10.00s
Description
-

CD-45 **Switchover frequency 2**

Address:	0xCD2D	Effective mode:	-
Min.:	CD-42	Unit:	Hz
Max.:	F0-10	Data type:	UInt16
Default:	10.00	Change:	Changeable at any time

Value Range:
CD-42 to F0-10
Description
-

CD-46 **Vector control slip gain**

Address:	0xCD2E	Effective mode:	-
Min.:	50	Unit:	%
Max.:	200	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
50% to 200%
Description
-

CD-47 **Speed feedback filter time in SVC mode**

Address:	0xCD2F	Effective mode:	-

Min.:	0.000	Unit:	s
Max.:	0.100	Data type:	UInt16
Default:	0.015	Change:	Changeable at any time

Value Range:
0.000s to 0.100s
Description
-

CD-49 Torque upper limit source in speed control mode (motoring)

Address:	0xCD31	Effective mode:	-
Min.:	0	Unit:	-
Max.:	7	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Digital setting (F2-10)
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: MIN (AI1, AI2)
7: MAX (AI1, AI2)
Others: F connector
Description
-

CD-50 Torque upper limit in speed control mode

Address:	0xCD32	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	150.0	Change:	Changeable at any time

Value Range:
0.0% to 200.0%
Description
-

CD-51 Torque upper limit source in speed control mode (generating)

Address:	0xCD33	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Digital setting (F2-10)
1: AI1
2: AI2
3: AI3
4: Pulse reference (DI5)
5: Communication
6: MIN (AI1, AI2)
7: MAX (AI1, AI2)
8: Digital setting (F2-12)
Others: F connector

Description

-

CD-52 Torque upper limit in speed control mode (generating)

Address:	0xCD34	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	150.0	Change:	Changeable at any time

Value Range:

0.0% to 200.0%

Description

-

CD-53 Field weakening mode

Address:	0xCD35	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0: No field weakening
1: Auto adjustment
2: Calculation+Auto adjustment

Description

0: No field weakening

Without field weakening control, the maximum motor speed is related to the bus voltage of the AC drive. The output current is smaller under the same load, but the running frequency cannot reach the frequency reference. Do not select this function if a higher speed is required.

1: Auto adjustment

This field weakening mode is simple and reliable. In scenarios requiring quick field weakening, the field weakening coefficient (F2-19) can be increased as appropriate. However, if the coefficient is too large,
the current may be unstable.

2: Calculation+Auto adjustment

In this mode, the field weakening current is adjusted quickly. This mode can be selected in scenarios where the auto adjustment mode cannot
meet requirements.

CD-54 Field weakening gain

Address:	0xCD36	Effective mode:	-

Min.:	1	Unit:	-
Max.:	50	Data type:	UInt16
Default:	5	Change:	Changeable at any time

Value Range:
1 to 50
Description
Increasing the setpoint can improve dynamic response. However, an excessively large setpoint may also cause current oscillation.

CD-57 Generating power limiting

Address:	0xCD39	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled in the whole process
2: Enabled at constant speed
3: Enabled during deceleration
Description
-

CD-58 Generating power upper limit

Address:	0xCD3A	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	200.0	Data type:	UInt16
Default:	20.0	Change:	Changeable at any time

Value Range:
0.0% to 200.0%
Description
-

CD-59 Motor 4 control mode

Address:	0xCD3B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	2	Change:	Changeable only at stop

Value Range:
0: SVC
1: FVC
2: V/f
Description
-

CD-60 Initial position angle detection current of synchronous motor

Address:	0xCD3C	Effective mode:	-
Min.:	50	Unit:	-
Max.:	180	Data type:	UInt16
Default:	80	Change:	Changeable only at stop

Value Range:
50 to 180

Description

A smaller current indicates lower noise during detection. However, an excessively small current may lead to position detection inaccuracy. You are advised not to modify this parameter in FVC mode.

CD-61 Initial position angle detection of synchronous motor

Address:	0xCD3D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Detected upon running

1: Not detected

2: Detected upon initial running after power-on

Description

The initial position angle detection can prevent reverse rotation at startup, but it causes certain noise. For scenarios where reverse rotation is not allowed at startup and the rotor position of the motor will change after stop, F2-25 must be set to 0.

It can be set to 1 or 2 in other scenarios.

CD-63 Salient pole rate adjustment gain of synchronous motor

Address:	0xCD3F	Effective mode:	-
Min.:	0.20	Unit:	-
Max.:	3.00	Data type:	UInt16
Default:	1.00	Change:	Changeable at any time

Value Range:

0.20 to 3.00

Description

If F2-28 is set to 1, you can adjust F2-27 when the output current does not decrease or even increase under the same load. When the load remains unchanged, adjust F2-27 until the output current is the smallest.

CD-64 Maximum torque-to-current ratio control of synchronous motor

Address:	0xCD40	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: Disabled

1: Enabled

Description

When this function is enabled for the salient pole motor, the current will become smaller under the same load.

CD-65 Z signal correction

Address:	0xCD41	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: Disabled

1: Enabled

Description
-

CD-67 **Low speed carrier frequency**

Address:	0xCD43	Effective mode:	-
Min.:	0.8	Unit:	kHz
Max.:	F0-15	Data type:	UInt16
Default:	2.0	Change:	Changeable at any time

Value Range:
0.8 kHz to F0-15
Description
-

CD-68 **Position lock**

Address:	0xCD44	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 1
Description
-

CD-69 **Switchover frequency**

Address:	0xCD45	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	CD-42	Data type:	UInt16
Default:	0.30	Change:	Changeable at any time

Value Range:
0.00 Hz to CD-42
Description
-

CD-70 **Position lock speed loop proportional gain**

Address:	0xCD46	Effective mode:	-
Min.:	1	Unit:	-
Max.:	100	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
1 to 100
Description
-

CD-71 **Position lock speed loop integral time**

Address:	0xCD47	Effective mode:	-
Min.:	0.01	Unit:	s
Max.:	10.00	Data type:	UInt16
Default:	0.50	Change:	Changeable at any time

Value Range:
0.01s to 10.00s
Description
-

CD-74 **Auto-tuning free mode**

Address:	0xCD4A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	2	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0: Disabled

1: Auto-tuning upon initial running after power-on

2: Auto-tuning upon running

Description

-

CD-76 **Initial position compensation angle**

Address:	0xCD4C	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	359.9	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:

0.0 to 359.9

Description

-

CD-80 **Speed loop command word**

Address:	0xCD50	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	11	Change:	Changeable at any time

Value Range:

Bit00: Speed loop

0: Disabled

1: Enabled

Bit01: Integration mode

0: Conventional integration

1: Position integration

Bit02: Acceleration torque

0: Disabled

1: Enabled

Bit03–Bit04: Acceleration source

0: Function transfer torque

1: Automatic calculation

2: Function transfer acceleration

Bit05: Anti-load disturbance

0: Disabled

1: Enabled

Description

-

CD-81 **Locked-rotor fast integral cancel coefficient**

Address:	0xCD51	Effective mode:	-

Min.: 0.0
Max.: 100.0
Default: 0.0
Unit: %
Data type: UInt16
Change: Changeable at any time

Value Range:
0.0% to +100.0%
Description
-

CD-82 **Integral torque**

Address: 0xCD52
Min.: –100
Max.: 100.0
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Changeable at any time

Value Range:
–100% to +100.0%
Description
-

CD-83 **Speed controller frequency window size**

Address: 0xCD53
Min.: 0.00
Max.: 10.00
Default: 0.00
Effective mode: -
Unit: Hz
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.00 Hz to 10.00 Hz
Description
-

CD-84 **Current filter time for torque reference**

Address: 0xCD54
Min.: 0.0
Max.: 100.0
Default: 0.0
Effective mode: -
Unit: ms
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.0 ms to 100.0 ms
Description
-

CD-85 **Acceleration torque**

Address: 0xCD55
Min.: 0
Max.: 8
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:

0: Inactive

1: AI1

2: AI2

3: AI3

4: Pulse reference

5: Communication

6: Multi-reference

7: Motor-driven potentiometer

8: PID

Others: F connector

Description

-

CD-87 **Reference model bandwidth**

Address:	0xCD57	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	300.00	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:

0.00 Hz to 300.00 Hz

Description

-

CD-88 **Torque feedforward coefficient**

Address:	0xCD58	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:

0.0% to 1000.0%

Description

-

CD-89 **Vector control reference frequency filter time**

Address:	0xCD59	Effective mode:	-
Min.:	0.0	Unit:	ms
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:

0.0 ms to 100.0 ms

Description

-

CD-90 **Vector control feedback frequency filter time**

Address:	0xCD5A	Effective mode:	-
Min.:	0.0	Unit:	ms
Max.:	100.0	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:

0.0 ms to 100.0 ms

Description
-

CD-91 **Load observation bandwidth**

Address:	0xCD5B	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	300.00	Data type:	UInt16
Default:	0.00	Change:	Changeable at any time

Value Range:
0.00 Hz to 300.00 Hz
Description
-

CD-92 **Load observation coefficient**

Address:	0xCD5C	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

CD-93 **Pseudo integral coefficient**

Address:	0xCD5D	Effective mode:	-
Min.:	0.000	Unit:	-
Max.:	10.000	Data type:	UInt16
Default:	1.000	Change:	Changeable at any time

Value Range:
0.000 to 10.000
Description
-

CD-94 **Torque coefficient enable**

Address:	0xCD5E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
Description
-

CD-96 **Center frequency of notch filter 1**

Address:	0xCD60	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	4000.0	Data type:	UInt16
Default:	4000.0	Change:	Changeable at any time

Value Range:
0.0 to 4000.0

Description
-

CD-97 **Center frequency of notch filter 2**

Address:	0xCD61	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	4000.0	Data type:	UInt16
Default:	4000.0	Change:	Changeable at any time

Value Range:
0.0 to 4000.0
Description
-

CD-98 **Integral setting control word**

Address:	0xCD62	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled
Others: B connector
Description
-

CD-99 **Integral reference source**

Address:	0xCD63	Effective mode:	-
Min.:	0	Unit:	-
Max.:	8	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Digital setting
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector
Description
-

4.54 CE: Motor 4 Vector Parameters

CE-00 **Externally transferred acceleration**

Address:	0xCE00	Effective mode:	-
Min.:	0	Unit:	-

Max.: 8
Default: 0
Data type: UInt16
Change: Changeable at any time

Value Range:
0: Inactive
1: AI1
2: AI2
3: AI3
4: Pulse reference
5: Communication
6: Multi-reference
7: Motor-driven potentiometer
8: PID
Others: F connector

Description
-

CE-03 Overturning torque limiting coefficient

Address: 0xCE03
Min.: 0.0
Max.: 400.0
Default: 100.0
Effective mode: -
Unit: %
Data type: UInt16
Change: Changeable at any time

Value Range:
0.0% to 400.0%

Description
-

CE-04 Motoring power limiting coefficient

Address: 0xCE04
Min.: 0.0
Max.: 400.0
Default: 400.0
Effective mode: -
Unit: %
Data type: UInt16
Change: Changeable at any time

Value Range:
0.0% to 400.0%

Description
-

CE-05 Generating power limiting coefficient

Address: 0xCE05
Min.: 0.0
Max.: 400.0
Default: 400.0
Effective mode: -
Unit: %
Data type: UInt16
Change: Changeable at any time

Value Range:
0.0% to 400.0%

Description
-

CE-06 Overspeed limiting enable

Address: 0xCE06
Min.: 0
Max.: 1
Default: 1
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 1
Description
-

CE-07 **Sine wave frequency of bandwidth test**

Address:	0xCE07	Effective mode:	-
Min.:	0	Unit:	Hz
Max.:	1000	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 Hz to 1000 Hz
Description
-

CE-08 **Sine wave amplitude of bandwidth test**

Address:	0xCE08	Effective mode:	-
Min.:	0	Unit:	%
Max.:	100	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0% to 100%
Description
-

CE-09 **Bandwidth test enable**

Address:	0xCE09	Effective mode:	-
Min.:	0	Unit:	-
Max.:	4	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 4
Description
-

CE-11 **Speed loop parameter calculation mode**

Address:	0xCE0B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0: New solution
1: Compatible solution
Description
-

CE-12 **Speed loop proportional gain in FVC mode**

Address:	0xCE0C	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	100.00	Data type:	UInt16
Default:	8.00	Change:	Changeable at any time

Value Range:
0.00 Hz to 100.00 Hz
Description
-

CE-13 **Speed loop integral time in FVC mode**

Address:	0xCE0D	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	20.000	Data type:	UInt16
Default:	0.080	Change:	Changeable at any time

Value Range:
0.000s to 20.000s
Description
-

CE-14 **Speed loop proportional gain in SVC mode**

Address:	0xCE0E	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	100.00	Data type:	UInt16
Default:	5.00	Change:	Changeable at any time

Value Range:
0.00 Hz to 100.00 Hz
Description
-

CE-15 **Speed loop integral time in SVC mode**

Address:	0xCE0F	Effective mode:	-
Min.:	0.000	Unit:	s
Max.:	20.000	Data type:	UInt16
Default:	0.127	Change:	Changeable at any time

Value Range:
0.000s to 20.000s
Description
-

CE-16 **Low frequency proportional correction coefficient**

Address:	0xCE10	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

CE-17 **Low frequency integral correction coefficient**

Address:	0xCE11	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%

Description
-

CE-18 **Speed loop adaption factor**

Address:	0xCE12	Effective mode:	-
Min.:	0.000	Unit:	-
Max.:	10.000	Data type:	UInt16
Default:	0.200	Change:	Changeable at any time

Value Range:
0.000 to 10.000
Description
-

CE-19 **Speed loop adaption switchover lower limit**

Address:	0xCE13	Effective mode:	-
Min.:	0.000	Unit:	-
Max.:	10.000	Data type:	UInt16
Default:	0.400	Change:	Changeable at any time

Value Range:
0.000 to 10.000
Description
-

CE-20 **Speed loop adaption switchover upper limit**

Address:	0xCE14	Effective mode:	-
Min.:	0.000	Unit:	-
Max.:	10.000	Data type:	UInt16
Default:	1.000	Change:	Changeable at any time

Value Range:
0.000 to 10.000
Description
-

CE-21 **Speed loop adaption correction upper limit**

Address:	0xCE15	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

CE-22 **Speed loop adaption correction lower limit**

Address:	0xCE16	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

CE-23 **Flux adaptation enable**

Address:	0xCE17	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 1
Description
-

CE-24 **Overspeed controller correction coefficient**

Address:	0xCE18	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

CE-25 **VDC control command word**

Address:	0xCE19	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Bit00: VdcMin
0: Disabled
1: Enabled
Bit01: VdcMax
0: Disabled
1: Enabled
Bit02: Automatic calculation of VDC trigger voltage
0: Disabled
1: Enabled
Bit03: VDC control integral action
0: Disabled
1: Enabled
Description
-

CE-26 **Bus capacitance ratio**

Address:	0xCE1A	Effective mode:	-
Min.:	50.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
50.0% to 1000.0%
Description
-

CE-27 **Undervoltage suppression exit hysteresis frequency**

Address:	0xCE1B	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	10.00	Data type:	UInt16
Default:	3.00	Change:	Changeable at any time

Value Range:
0.00 Hz to 10.00 Hz
Description
-

CE-28 **Minimum VDC failure speed threshold**

Address:	0xCE1C	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	20.00	Data type:	UInt16
Default:	2.00	Change:	Changeable at any time

Value Range:
0.00 Hz to 20.00 Hz
Description
-

CE-29 **Dynamic adjustment coefficient**

Address:	0xCE1D	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	1000.0	Data type:	UInt16
Default:	100.0	Change:	Changeable at any time

Value Range:
0.0% to 1000.0%
Description
-

CE-30 **Minimum VDC activation voltage**

Address:	0xCE1E	Effective mode:	-
Min.:	320.0	Unit:	V
Max.:	540.0	Data type:	UInt16
Default:	430.0	Change:	Changeable at any time

Value Range:
320.0 V to 540.0 V
Description
-

CE-31 **Maximum VDC activation voltage**

Address:	0xCE1F	Effective mode:	-
Min.:	650.0	Unit:	V
Max.:	800.0	Data type:	UInt16
Default:	770.0	Change:	Changeable at any time

Value Range:
650.0 V to 800.0 V
Description
-

CE-32 **Flux linkage control command word**

Address:	0xCE20	Effective mode:	-

Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	2357	Change:	Changeable at any time

Value Range:

Bit00: Output voltage limit calculation filtering mode

0: Symmetric filtering

1: Asymmetric filtering

Bit01: Asynchronous motor inverse proportion curve calculation

0: The inverse proportional synchronization frequency decreases.

1: The inverse proportional speed decreases.

Bit02: Flux linkage feedforward calculation by using inverse proportional speed

0: Disabled

1: Enabled

Bit03: Reserved

Bit04: Reserved

Bit05: Field weakening adjustment

0: Disabled

1: Enabled

Bit06: Flux linkage derivative feedforward

0: Disabled

1: Enabled

Bit07: Energy conservation control

0: Disabled

1: Enabled

Bit08: Asynchronous motor flux closed loop

0: Disabled

1: Enabled

Bit09: Reserved

Bit10: Reserved

Bit11: Asynchronous motor pre-excitation mode

0: Pre-excitation based on time

1: Pre-excitation based on current

Bit12: Asynchronous motor pre-excitation current

0: Reference current

1: Maximum current allowed by the drive

Description

Bit00: Output voltage limit calculation filtering mode

0 indicates the usual first-order filtering, and 1 indicates filtering when the bus voltage rises and no filtering when it falls, so as to avoid overmodulation.

Bit01: Asynchronous motor inverse proportion curve calculation

You can select 1 to deliberately lower the break frequency to avoid saturation in the field-weakening range. The setting is valid only when Bit02 is set to 1.

Bit02: Flux linkage feedforward calculation by using inverse proportional speed

If it is set to 1, the inverse proportional speed of flux linkage reference decreases when the output frequency exceeds the break frequency, which can improve dynamic response during acceleration.

Bit05: Field weakening adjustment

When it is set to 1, voltage outer loop adjustment is valid.

Bit07: Energy conservation control
This function is valid for asynchronous motors. It can reduce copper loss at light load in vector control mode.
Bit11: Asynchronous motor pre-excitation mode
0: Pre-excitation is implemented according to the set time. The time will be shorter than the set time if remanence exists.
1: Fixed current is output during the pre-excitation process, and the motor exits the pre-excitation mode when it detects that the flux linkage reaches the setpoint.
Bit12: Asynchronous motor pre-excitation current
0: Pre-excitation is implemented based on the current defined by AB-51.
1: Pre-excitation is implemented based on the maximum current allowed by the drive, which can shorten the pre-excitation time.

CE-33 Output voltage upper limit margin for field weakening adjustment

Address:	0xCE21	Effective mode:	-
Min.:	1	Unit:	%
Max.:	50	Data type:	UInt16
Default:	5	Change:	Changeable at any time

Value Range:
1% to 50%
Description
Decreasing the setpoint can improve voltage utilization. The current is smaller under the same load in the field weakening region. However, an excessively small setpoint will affect dynamic performance.

CE-34 Output voltage upper limit margin for auto adjustment of field weakening

Address:	0xCE22	Effective mode:	-
Min.:	1	Unit:	%
Max.:	20	Data type:	UInt16
Default:	3	Change:	Changeable at any time

Value Range:
1% to 20%
Description
When F2-18 is set to 2 (calculation+auto adjustment), the value of this parameter affects the voltage margin, and the effect is similar to that of AB-33.

CE-35 Filter time for calculating maximum output voltage

Address:	0xCE23	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:
0 ms to 3000 ms
Description
Increasing the filter time allows the maximum output voltage to change slowly but affects voltage utilization.

CE-36 Rated flux adjustment coefficient for calculation

Address:	0xCE24	Effective mode:	-
Min.:	0.5	Unit:	-
Max.:	2.0	Data type:	UInt16

Default: 1.0 Change: Changeable at any time

Value Range:

0.5 to 2.0

Description

You can decrease the value of this parameter if underexcitation is required, or increase it if overexcitation is required.

CE-37 Field weakening frequency adjustment coefficient for calculation

Address: 0xCE25 Effective mode: -

Min.: 0.8 Unit: -

Max.: 1.2 Data type: UInt16

Default: 1.0 Change: Changeable at any time

Value Range:

0.8 to 1.2

Description

This parameter is used to adjust the break frequency calculated automatically by the AC drive. After flux linkage feedforward calculation by using inverse proportional speed is enabled, deceasing the value of this parameter enables the motor to enter the field weakening state in advance, which is applicable to occasions with short acceleration time and high dynamic response requirements.

CE-38 Slip filter time for calculating field weakening frequency

Address: 0xCE26 Effective mode: -

Min.: 0 Unit: ms

Max.: 3000 Data type: UInt16

Default: 62 Change: Changeable at any time

Value Range:

0 ms to 3000 ms

Description

When flux linkage feedforward calculation by using inverse proportional speed is enabled, increasing the value of this parameter can reduce the fluctuation range of the calculated reference flux linkage.

CE-39 Feedback speed filtering

Address: 0xCE27 Effective mode: -

Min.: 0 Unit: ms

Max.: 8000 Data type: UInt16

Default: 50 Change: Changeable at any time

Value Range:

0 ms to 8000 ms

Description

When flux linkage feedforward calculation by using inverse proportional speed is enabled, increasing the value of this parameter can reduce the disturbance to the calculated flux linkage feedforward introduced by speed test.

CE-40 Flux linkage rising filter time

Address: 0xCE28 Effective mode: -

Min.: 0 Unit: ms

Max.: 8000 Data type: UInt16

Default: 20 Change: Changeable at any time

Value Range:

0 ms to 8000 ms

Description

When flux linkage feedforward calculation by using inverse proportional speed is enabled, this parameter defines the filter time of the asymmetric filter that takes effect only when the reference flux linkage increases.

CE-42 Feedback voltage filter time

Address:	0xCE2A	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	5	Change:	Changeable at any time

Value Range:

0 ms to 3000 ms

Description

When field weakening adjustment is enabled, increasing this filter time can reduce the fluctuation of the reference excitation current. To increase the field weakening gain, you need to decrease the filter time to avoid system oscillation.

CE-43 Maximum demagnetization current of synchronous motor

Address:	0xCE2B	Effective mode:	-
Min.:	0	Unit:	%
Max.:	500	Data type:	UInt16
Default:	300	Change:	Changeable at any time

Value Range:

0% to 500%

Description

This parameter is used to limit the demagnetization current of synchronous motors to prevent faults such as overload. It is a percentage relative to the rated current.

CE-44 Voltage outer loop lower limit coefficient

Address:	0xCE2C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	500	Data type:	UInt16
Default:	50	Change:	Changeable at any time

Value Range:

0 to 500

Description

This parameter is used to limit the lower limit of flux linkage during field weakening for asynchronous motors to avoid limiting torque reduction.

CE-45 Flux linkage derivative feedforward coefficient

Address:	0xCE2D	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	1.5	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:

0.0 to 1.5

Description

When flux linkage derivative feedforward of an asynchronous motor is enabled, this parameter can adjust the ratio of effective feedforward. A smaller value indicates smaller feedforward effect.

CE-46 **Flux linkage derivative feedforward filter time**

Address:	0xCE2E	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	6	Change:	Changeable at any time

Value Range:

0 ms to 3000 ms

Description

Increasing the filter time can reduce the fluctuation of the calculated feedforward value.

CE-47 **Torque current rising filter time under energy conservation control**

Address:	0xCE2F	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	50	Change:	Changeable at any time

Value Range:

0 ms to 3000 ms

Description

When energy conservation control of an asynchronous motor is enabled, decreasing the value of this parameter can improve dynamic response and avoid a large drop in speed when a sudden load is applied. You need to increase this value when the output current fluctuates greatly.

CE-48 **Torque current falling filter time under energy conservation control**

Address:	0xCE30	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	3000	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:

0 ms to 3000 ms

Description

When energy conservation control of an asynchronous motor is enabled, decreasing the value of this parameter can make the output current decrease rapidly after the load is reduced. You need to increase this value when the output current fluctuates greatly.

CE-49 **Flux linkage lower limit coefficient under energy conservation control**

Address:	0xCE31	Effective mode:	-
Min.:	0.00	Unit:	-
Max.:	0.50	Data type:	UInt16
Default:	0.10	Change:	Changeable at any time

Value Range:

0.00 to 0.50

Description

This parameter defines the minimum flux linkage allowed under energy conservation control. A smaller value indicates more significant energy conservation effect when no load is applied, but it will affect dynamic response after the load is added.

CE-51 **Pre-excitation current**

Address:	0xCE33	Effective mode:	-
Min.:	1	Unit:	%
Max.:	200	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
1% to 200%
Description
When pre-excitation of an asynchronous motor is implemented based on current, this parameter defines the reference excitation current as a percentage of the rated current.

CE-52 Pre-excitation time

Address:	0xCE34	Effective mode:	-
Min.:	1	Unit:	ms
Max.:	30000	Data type:	UInt16
Default:	1000	Change:	Changeable at any time

Value Range:
1 ms to 30000 ms
Description
When pre-excitation of an asynchronous motor is implemented based on time, this parameter defines the total excitation time. The actual excitation time will be shorter than the set time if remanence exists.

CE-53 Flux linkage closed-loop bandwidth frequency

Address:	0xCE35	Effective mode:	-
Min.:	0.0	Unit:	Hz
Max.:	100.0	Data type:	UInt16
Default:	2.0	Change:	Changeable at any time

Value Range:
0.0 Hz to 100.0 Hz
Description
When flux closed loop is enabled, increasing the setpoint can reduce the deviation of the flux linkage from the rated value during dynamic processes such as sudden load or acceleration and deceleration of the asynchronous motor.

CE-54 Feedback flux linkage filter time coefficient

Address:	0xCE36	Effective mode:	-
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	4	Change:	Changeable at any time

Value Range:
0 to 200
Description
When flux closed loop is enabled, increasing the setpoint can reduce fluctuation of the reference flux linkage. It is a percentage relative to the rotor time constant.

CE-55 Static output flux linkage filter time

Address:	0xCE37	Effective mode:	-
Min.:	0	Unit:	ms
Max.:	5000	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
0 ms to 5000 ms
Description
Increasing the setpoint can reduce fluctuation of the reference flux linkage.

CE-56 Current loop mode

Address:	0xCE38	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:

0: ImCsr2 mode

1: Complex vector mode

2: 880 mode

3: No field weakening

Description

Decreasing the value of this parameter can enhance current loop following but also increase the overshoot and harmonics of the output current.

CE-57 PI regulator proportional gain adaptation with load

Address:	0xCE39	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:

0: Disabled

1: Enabled

Description

-

CE-58 Current loop damping

Address:	0xCE3A	Effective mode:	-
Min.:	0.2	Unit:	-
Max.:	5.0	Data type:	UInt16
Default:	0.8	Change:	Changeable at any time

Value Range:

0.2 to 5.0

Description

Decreasing the value of this parameter can enhance current loop following but also increase the overshoot and harmonics of the output current.

CE-59 Low-speed current loop Kp adjustment

Address:	0xCE3B	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:

0.1 to 10.0

Description

The AC drive automatically calculates the current loop gain based on motor parameters. You can decrease the value of this parameter as appropriate when low-speed current oscillation or torque fluctuation is large.

CE-60 High-speed current loop Kp adjustment

Address:	0xCE3C	Effective mode:	-
Min.:	0.1	Unit:	-

Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0
Description
The AC drive automatically calculates the current loop gain based on motor parameters. You can decrease the value of this parameter as appropriate when low-speed current oscillation or torque fluctuation is large.

CE-61 Low-speed current loop Ki adjustment

Address:	0xCE3D	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0
Description
The AC drive automatically calculates the current loop gain based on motor parameters. You can decrease the value of this parameter as appropriate when low-speed current oscillation or torque fluctuation is large.

CE-62 High-speed current loop Ki adjustment

Address:	0xCE3E	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	2.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0
Description
The AC drive automatically calculates the current loop gain based on motor parameters. You can decrease the value of this parameter as appropriate when low-speed current oscillation or torque fluctuation is large.

CE-63 D-axis current loop complex vector adjustment

Address:	0xCE3F	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0
Description
-

CE-64 Q-axis current loop complex vector adjustment

Address:	0xCE40	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0

Description
-

CE-65 **Complex vector hysteresis frequency lower limit as a percentage of rated frequency**

Address:	0xCE41	Effective mode:	-
Min.:	0	Unit:	%
Max.:	CE-66	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0% to CE-66
Description
-

CE-66 **Complex vector hysteresis frequency upper limit as a percentage of rated frequency**

Address:	0xCE42	Effective mode:	-
Min.:	CE-65	Unit:	%
Max.:	150	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
CE-65 to 150%
Description
-

CE-67 **ImCsr2 hysteresis switchover voltage upper limit as a percentage of saturation voltage**

Address:	0xCE43	Effective mode:	-
Min.:	CE-68	Unit:	%
Max.:	95	Data type:	UInt16
Default:	89	Change:	Changeable at any time

Value Range:
CE-68 to 95%
Description
-

CE-68 **ImCsr2 hysteresis switchover voltage lower limit as a percentage of saturation voltage**

Address:	0xCE44	Effective mode:	-
Min.:	60	Unit:	%
Max.:	CE-67	Data type:	UInt16
Default:	79	Change:	Changeable at any time

Value Range:
60% to CE-67
Description
-

CE-69 **ImCsr2 hysteresis switchover frequency hysteresis range as a percentage of rated frequency**

Address:	0xCE45	Effective mode:	-
Min.:	1	Unit:	%
Max.:	30	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
1% to 30%
Description
-

CE-70 **ImCsr2 hysteresis switchover frequency lower limit (below which the hysteresis condition does not take effect) as a percentage of the rated frequency**

Address:	0xCE46	Effective mode:	-
Min.:	40	Unit:	%
Max.:	80	Data type:	UInt16
Default:	60	Change:	Changeable at any time

Value Range:
40% to 80%
Description
-

CE-71 **ImCsr2 current loop Kss adjustment**

Address:	0xCE47	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	10.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 10.0
Description
-

CE-72 **Proportional gain adjustment coefficient corresponding to the maximum torque when proportional gain is adjusted with load**

Address:	0xCE48	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	1.0	Data type:	UInt16
Default:	0.5	Change:	Changeable at any time

Value Range:
0.1 to 1.0
Description
-

CE-73 **Torque upper limit setpoint as a percentage of rated torque when proportional gain is adjusted with load**

Address:	0xCE49	Effective mode:	-
Min.:	CE-74	Unit:	%
Max.:	300	Data type:	UInt16
Default:	200	Change:	Changeable at any time

Value Range:
CE-74 to 300%
Description
-

CE-74 **Torque lower limit setpoint as a percentage of rated torque when proportional gain is adjusted with load**

Address:	0xCE4A	Effective mode:	-
Min.:	10	Unit:	%
Max.:	CE-73	Data type:	UInt16
Default:	100	Change:	Changeable at any time

Value Range:
10% to CE-73

Description
-

CE-75 **Derivative feedforward adjustment**

Address:	0xCE4B	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	1.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0 to 1.0
Description
-

CE-76 **Decoupling control start frequency as a percentage of rated frequency**

Address:	0xCE4C	Effective mode:	-
Min.:	20	Unit:	%
Max.:	150	Data type:	UInt16
Default:	40	Change:	Changeable at any time

Value Range:
20% to 150%
Description
-

CE-77 **Decoupling control filter time adjustment coefficient**

Address:	0xCE4D	Effective mode:	-
Min.:	0.1	Unit:	-
Max.:	3.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.1 to 3.0
Description
-

CE-78 **Decoupling control output adjustment coefficient**

Address:	0xCE4E	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	1.0	Data type:	UInt16
Default:	1.0	Change:	Changeable at any time

Value Range:
0.0 to 1.0
Description
-

CE-79 **CPC feedforward enable**

Address:	0xCE4F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Disabled
1: Enabled

Description
-

CE-80 **Current loop auxiliary command word**

Address:	0xCE50	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Bit00: Complex vector angle limiting
0: Disabled
1: Enabled
Bit01: Voltage angle limiting
0: Program internal limiting
1: Parameter setting
Bit02: 0 by default
0: No lower limit on the excitation current is imposed during the dynamic process.
1: A lower limit on the excitation current is imposed during the dynamic process in ImCsr2 mode.
Bit03–Bit15: Reserved (0 by default)
Description
-

CE-81 **Voltage angle upper limit**

Address:	0xCE51	Effective mode:	-
Min.:	90	Unit:	°
Max.:	180	Data type:	UInt16
Default:	150	Change:	Changeable at any time

Value Range:
90° to 180°
Description
-

CE-82 **Voltage angle lower limit**

Address:	0xCE52	Effective mode:	-
Min.:	0	Unit:	°
Max.:	90	Data type:	UInt16
Default:	30	Change:	Changeable at any time

Value Range:
0° to 90°
Description
-

CE-83 **Asynchronous motor D axis integral limit**

Address:	0xCE53	Effective mode:	-
Min.:	0.500	Unit:	-
Max.:	1.000	Data type:	UInt16
Default:	0.707	Change:	Changeable at any time

Value Range:
0.500 to 1.000

Description
-

CE-84 **Current loop carrier frequency upper limit**

Address:	0xCE54	Effective mode:	-
Min.:	5.0	Unit:	-
Max.:	16.0	Data type:	UInt16
Default:	8.0	Change:	Changeable at any time

Value Range:
5.0 to 16.0
Description
-

CE-85 **Droop enable**

Address:	0xCE55	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0 to 1
Description
-

CE-86 **Droop source**

Address:	0xCE56	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	1	Change:	Changeable only at stop

Value Range:
0: Line current
1: Torque reference
2: Speed adjustment output
3: Speed adjustment integral component
Description
-

CE-87 **Frequency reference droop coefficient**

Address:	0xCE57	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	50.0	Data type:	UInt16
Default:	0.0	Change:	Changeable at any time

Value Range:
0.0% to 50.0%
Description
-

CE-88 **FVC-SVC switchover mode**

Address:	0xCE58	Effective mode:	-
Min.:	0	Unit:	-
Max.:	3	Data type:	UInt16
Default:	0	Change:	Changeable only at stop

Value Range:
0: No switchover
1: Active switchover
2: Passive switchover (The AC drive switches to SVC mode upon detection of encoder wire breakage, and it switches back to FVC mode when the encoder recovers during stop and does not switch back to FVC mode when the encoder recovers during running.)
3: Passive switchover (The AC drive switches to SVC mode upon detection of encoder wire breakage, and it switches back to FVC mode when the encoder recovers during running or stop.)
Description
-

CE-89 **FVC-SVC switchover frequency**

Address:	0xCE59	Effective mode:	-
Min.:	10	Unit:	%
Max.:	500	Data type:	UInt16
Default:	50	Change:	Changeable only at stop

Value Range:
10% to 500%
Description
-

CE-90 **FVC-SVC switchover hysteresis**

Address:	0xCE5A	Effective mode:	-
Min.:	10	Unit:	%
Max.:	100	Data type:	UInt16
Default:	10	Change:	Changeable only at stop

Value Range:
10% to 100%
Description
-

4.55 H0: Fault Information Parameters

H0-00 **Code of active fault 1**

Address:	0x8000	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-01 **Subcode of active fault 1**

Address:	0x8001	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535
Description
-

H0-02 **Information of active fault 1**

Address:	0x8002	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-03 **Code of active fault 2**

Address:	0x8003	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-04 **Subcode of active fault 2**

Address:	0x8004	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-05 **Information of active fault 2**

Address:	0x8005	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-06 **Code of active fault 3**

Address:	0x8006	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

H0-07 **Subcode of active fault 3**

Address:	0x8007	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-08 **Information of active fault 3**

Address:	0x8008	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-09 **Code of active fault 4**

Address:	0x8009	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-10 **Subcode of active fault 4**

Address:	0x800A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-11 **Information of active fault 4**

Address:	0x800B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-12 **Code of active fault 5**

Address:	0x800C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-13 **Subcode of active fault 5**

Address:	0x800D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-14 **Information of active fault 5**

Address:	0x800E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-15 **Code of active fault 6**

Address:	0x800F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-16 **Subcode of active fault 6**

Address:	0x8010	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-17 **Information of active fault 6**

Address:	0x8011	Effective mode:	-

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H0-18 Code of active limit 1

Address: 0x8012
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H0-19 Subcode of active limit 1

Address: 0x8013
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H0-20 Information of active limit 1

Address: 0x8014
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H0-21 Code of active limit 2

Address: 0x8015
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H0-22 Subcode of active limit 2

Address: 0x8016
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H0-23 Information of active limit 2

Address: 0x8017 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H0-24 Code of active limit 3

Address: 0x8018 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H0-25 Subcode of active limit 3

Address: 0x8019 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H0-26 Information of active limit 3

Address: 0x801A Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H0-27 Code of active limit 4

Address: 0x801B Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535
Description
-

H0-28 **Subcode of active limit 4**

Address:	0x801C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-29 **Information of active limit 4**

Address:	0x801D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-30 **Code of active limit 5**

Address:	0x801E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-31 **Subcode of active limit 5**

Address:	0x801F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-32 **Information of active limit 5**

Address:	0x8020	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

H0-33 **Code of active limit 6**

Address:	0x8021	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-34 **Subcode of active limit 6**

Address:	0x8022	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-35 **Information of active limit 6**

Address:	0x8023	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-36 **Code of active alarm 1**

Address:	0x8024	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-37 **Subcode of active alarm 1**

Address:	0x8025	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-38 **Information of active alarm 1**

Address:	0x8026	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-39 **Code of active alarm 2**

Address:	0x8027	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-40 **Subcode of active alarm 2**

Address:	0x8028	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-41 **Information of active alarm 2**

Address:	0x8029	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-42 **Code of active alarm 3**

Address:	0x802A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H0-43 **Subcode of active alarm 3**

Address:	0x802B	Effective mode:	-

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H0-44 Information of active alarm 3

Address: 0x802C
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H0-45 Code of active alarm 4

Address: 0x802D
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H0-46 Subcode of active alarm 4

Address: 0x802E
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H0-47 Information of active alarm 4

Address: 0x802F
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H0-48 Code of active alarm 5

Address: 0x8030
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H0-49 Subcode of active alarm 5

Address: 0x8031 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H0-50 Information of active alarm 5

Address: 0x8032 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H0-51 Code of active alarm 6

Address: 0x8033 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H0-52 Subcode of active alarm 6

Address: 0x8034 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H0-53 Information of active alarm 6

Address: 0x8035 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535
Description
-

4.56 H1: Fault Setting Parameters

H1-00 **Fault code of exceptions in group 1**

Address:	0x8100	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	199.9	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0 to 199.9
Description
-

H1-01 **Handling of exceptions in group 1**

Address:	0x8101	Effective mode:	-
Min.:	0	Unit:	-
Max.:	6	Data type:	UInt16
Default:	6	Change:	Changeable only at stop

Value Range:
0: Coast to stop
1: Stop according to the stop mode
2: Continue to run
3: Run with power limit
4: Run with current limit
5: Ignore
6: No action
Description
-

H1-02 **Fault code of exceptions in group 2**

Address:	0x8102	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	199.9	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0 to 199.9
Description
-

H1-03 **Handling of exceptions in group 2**

Address:	0x8103	Effective mode:	-
Min.:	0	Unit:	-
Max.:	6	Data type:	UInt16
Default:	6	Change:	Changeable only at stop

Value Range:
Same as H1-01

Description
-

H1-04 **Fault code of exceptions in group 3**

Address:	0x8104	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	199.9	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0 to 199.9
Description
-

H1-05 **Handling of exceptions in group 3**

Address:	0x8105	Effective mode:	-
Min.:	0	Unit:	-
Max.:	6	Data type:	UInt16
Default:	6	Change:	Changeable only at stop

Value Range:
Same as H1-01
Description
-

H1-06 **Fault code of exceptions in group 4**

Address:	0x8106	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	199.9	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0 to 199.9
Description
-

H1-07 **Handling of exceptions in group 4**

Address:	0x8107	Effective mode:	-
Min.:	0	Unit:	-
Max.:	6	Data type:	UInt16
Default:	6	Change:	Changeable only at stop

Value Range:
Same as H1-01
Description
-

H1-08 **Fault code of exceptions in group 5**

Address:	0x8108	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	199.9	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0 to 199.9
Description
-

H1-09 **Handling of exceptions in group 5**

Address:	0x8109	Effective mode:	-
Min.:	0	Unit:	-
Max.:	6	Data type:	UInt16
Default:	6	Change:	Changeable only at stop

Value Range:
Same as H1-01
Description
-

H1-10 **Fault code of exceptions in group 6**

Address:	0x810A	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	199.9	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0 to 199.9
Description
-

H1-11 **Handling of exceptions in group 6**

Address:	0x810B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	6	Data type:	UInt16
Default:	6	Change:	Changeable only at stop

Value Range:
Same as H1-01
Description
-

H1-12 **Fault code of exceptions in group 7**

Address:	0x810C	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	199.9	Data type:	UInt16
Default:	0.0	Change:	Changeable only at stop

Value Range:
0.0 to 199.9
Description
-

H1-13 **Handling of exceptions in group 7**

Address:	0x810D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	6	Data type:	UInt16
Default:	6	Change:	Changeable only at stop

Value Range:
Same as H1-01
Description
-

H1-14 **Fault code of exceptions in group 8**

Address:	0x810E	Effective mode:	-

Min.: 0.0
Max.: 199.9
Default: 0.0
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.0 to 199.9

Description
-

H1-15 **Handling of exceptions in group 8**

Address: 0x810F
Min.: 0
Max.: 6
Default: 6
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
Same as H1-01

Description
-

H1-16 **Fault code of exceptions in group 9**

Address: 0x8110
Min.: 0.0
Max.: 199.9
Default: 0.0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.0 to 199.9

Description
-

H1-17 **Handling of exceptions in group 9**

Address: 0x8111
Min.: 0
Max.: 6
Default: 6
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
Same as H1-01

Description
-

H1-18 **Fault code of exceptions in group 10**

Address: 0x8112
Min.: 0.0
Max.: 199.9
Default: 0.0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable only at stop

Value Range:
0.0 to 199.9

Description
-

H1-19 **Handling of exceptions in group 10**

Address: 0x8113
Min.: 0
Max.: 6
Effective mode: -
Unit: -
Data type: UInt16

Default: 6 Change: Changeable only at stop

Value Range:

Same as H1-01

Description

-

4.57 H2: Fault Setting Parameters

H2-00 Source of external fault 1 (NO)

Address: 0x8200 Effective mode: -

Min.: 0 Unit: -

Max.: 1 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Inactive

1: Active

Others: B connector

Description

-

H2-01 Source of external fault 2 (NC)

Address: 0x8201 Effective mode: -

Min.: 0 Unit: -

Max.: 1 Data type: UInt16

Default: 1 Change: Changeable at any time

Value Range:

Same as H2-00

Description

-

H2-02 Source of external alarm 1

Address: 0x8202 Effective mode: -

Min.: 0 Unit: -

Max.: 0 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0: Reserved

Others: B connector

Description

-

H2-03 Source of external alarm 2

Address: 0x8203 Effective mode: -

Min.: 0 Unit: -

Max.: 0 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

Same as H2-02

Description

-

H2-04 **Source of custom fault 1**

Address: 0x8204 Effective mode: -
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 0 Change: Changeable at any time

Value Range:

0: Inactive

1: Active

Others: B connector

Description

-

H2-05 **Source of custom fault 2**

Address: 0x8205 Effective mode: -
Min.: 0 Unit: -
Max.: 1 Data type: UInt16
Default: 0 Change: Changeable at any time

Value Range:

Same as H2-04

Description

-

H2-06 **Source of custom fault 3**

Address: 0x8206 Effective mode: -
Min.: 0 Unit: -
Max.: 0 Data type: UInt16
Default: 0 Change: Changeable at any time

Value Range:

0: Reserved

Others: B connector

Description

-

H2-07 **Source of custom fault 4**

Address: 0x8207 Effective mode: -
Min.: 0 Unit: -
Max.: 0 Data type: UInt16
Default: 0 Change: Changeable at any time

Value Range:

0: Reserved

Others: B connector

Description

-

H2-08 **Source of custom alarm 1**

Address: 0x8208 Effective mode: -
Min.: 0 Unit: -
Max.: 0 Data type: UInt16
Default: 0 Change: Changeable at any time

Value Range:

Same as H2-07

Description
-

H2-09 **Source of custom alarm 2**

Address:	0x8209	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as H2-07
Description
-

H2-10 **Source of custom alarm 3**

Address:	0x820A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as H2-07
Description
-

H2-11 **Source of custom alarm 4**

Address:	0x820B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	0	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
Same as H2-07
Description
-

H2-12 **Auto reset enable**

Address:	0x820C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0 to 1
Description
-

H2-15 **Auto reset disabled upon manual reset**

Address:	0x820F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:
0: Yes
1: No

Description
-

H2-16 Interval for clearing auto reset count

Address:	0x8210	Effective mode:	-
Min.:	0	Unit:	min
Max.:	6000	Data type:	UInt16
Default:	10	Change:	Changeable at any time

Value Range:
0 min to 6000 min
Description
-

H2-17 Active fault reset attempt count

Address:	0x8211	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H2-18 Clearing upon fault reset count reach

Address:	0x8212	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0: Cleared
1: Not cleared
Description
-

H2-20 Code of non-resettable exception 1

Address:	0x8214	Effective mode:	-
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 200
Description
-

H2-21 Subcode of non-resettable exception 1

Address:	0x8215	Effective mode:	-
Min.:	0	Unit:	-
Max.:	9	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 9

Description
-

H2-22 Code of non-resettable exception 2

Address:	0x8216	Effective mode:	-
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 200
Description
-

H2-23 Subcode of non-resettable exception 2

Address:	0x8217	Effective mode:	-
Min.:	0	Unit:	-
Max.:	9	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 9
Description
-

H2-24 Code of non-resettable exception 3

Address:	0x8218	Effective mode:	-
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 200
Description
-

H2-25 Subcode of non-resettable exception 3

Address:	0x8219	Effective mode:	-
Min.:	0	Unit:	-
Max.:	9	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 9
Description
-

H2-26 Code of non-resettable exception 4

Address:	0x821A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 200
Description
-

H2-27 **Subcode of non-resettable exception 4**

Address:	0x821B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	9	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 9
Description
-

H2-28 **Code of non-resettable exception 5**

Address:	0x821C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 200
Description
-

H2-29 **Subcode of non-resettable exception 5**

Address:	0x821D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	9	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 9
Description
-

H2-30 **Code of non-resettable exception 6**

Address:	0x821E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 200
Description
-

H2-31 **Subcode of non-resettable exception 6**

Address:	0x821F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	9	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 9
Description
-

H2-32 **Code of non-resettable exception 7**

Address:	0x8220	Effective mode:	-

Min.: 0
Max.: 200
Default: 0
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 200

Description
-

H2-33 Subcode of non-resettable exception 7

Address: 0x8221
Min.: 0
Max.: 9
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 9

Description
-

H2-34 Code of non-resettable exception 8

Address: 0x8222
Min.: 0
Max.: 200
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 200

Description
-

H2-35 Subcode of non-resettable exception 8

Address: 0x8223
Min.: 0
Max.: 9
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 9

Description
-

H2-36 Code of non-resettable exception 9

Address: 0x8224
Min.: 0
Max.: 200
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Changeable at any time

Value Range:
0 to 200

Description
-

H2-37 Subcode of non-resettable exception 9

Address: 0x8225
Min.: 0
Max.: 9
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 9

Description

-

H2-38 Code of non-resettable exception 10

Address: 0x8226 Effective mode: -

Min.: 0 Unit: -

Max.: 200 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 200

Description

-

H2-39 Subcode of non-resettable exception 10

Address: 0x8227 Effective mode: -

Min.: 0 Unit: -

Max.: 9 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 9

Description

-

H2-42 Restart after auto reset

Address: 0x822A Effective mode: -

Min.: 0 Unit: -

Max.: 1 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 1

Description

-

H2-43 Waiting time of restart after auto reset

Address: 0x822B Effective mode: -

Min.: 0.0 Unit: s

Max.: 600.0 Data type: UInt16

Default: 0.5 Change: Changeable at any time

Value Range:

0.0s to 600.0s

Description

-

H2-44 Forced flying start during auto restart

Address: 0x822C Effective mode: -

Min.: 0 Unit: -

Max.: 1 Data type: UInt16

Default: 0 Change: Changeable at any time

Value Range:

0 to 1

Description

-

H2-45 Source of exceptions that allow restart

Address:	0x822D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	1	Data type:	UInt16
Default:	1	Change:	Changeable at any time

Value Range:

0: Whitelist

1: Blacklist

Description

-

H2-46 Code of specified exception 1

Address:	0x822E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 200

Description

-

H2-47 Subcode of specified exception 1

Address:	0x822F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	9	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 9

Description

-

H2-48 Code of specified exception 2

Address:	0x8230	Effective mode:	-
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 200

Description

-

H2-49 Subcode of specified exception 2

Address:	0x8231	Effective mode:	-
Min.:	0	Unit:	-
Max.:	9	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:

0 to 9

Description
-

H2-50 **Code of specified exception 3**

Address:	0x8232	Effective mode:	-
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 200
Description
-

H2-51 **Subcode of specified exception 3**

Address:	0x8233	Effective mode:	-
Min.:	0	Unit:	-
Max.:	9	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 9
Description
-

H2-52 **Code of specified exception 4**

Address:	0x8234	Effective mode:	-
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 200
Description
-

H2-53 **Subcode of specified exception 4**

Address:	0x8235	Effective mode:	-
Min.:	0	Unit:	-
Max.:	9	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 9
Description
-

H2-54 **Code of specified exception 5**

Address:	0x8236	Effective mode:	-
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 200
Description
-

H2-55 **Subcode of specified exception 5**

Address:	0x8237	Effective mode:	-
Min.:	0	Unit:	-
Max.:	9	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 9
Description
-

H2-56 **Code of specified exception 6**

Address:	0x8238	Effective mode:	-
Min.:	0	Unit:	-
Max.:	200	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 200
Description
-

H2-57 **Subcode of specified exception 6**

Address:	0x8239	Effective mode:	-
Min.:	0	Unit:	-
Max.:	9	Data type:	UInt16
Default:	0	Change:	Changeable at any time

Value Range:
0 to 9
Description
-

4.58 H3: Fault Display Parameters

H3-00 **Code of active fault 1**

Address:	0x8300	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H3-01 **Subcode of active fault 1**

Address:	0x8301	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

H3-02 **Information of active fault 1**

Address:	0x8302	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H3-03 **Self diagnosis information 1**

Address:	0x8303	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H3-04 **Self diagnosis information 2**

Address:	0x8304	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H3-05 **Self diagnosis information 3**

Address:	0x8305	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H3-06 **Self diagnosis information 4**

Address:	0x8306	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H3-07 **Code of active fault 2**

Address: 0x8307 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

H3-08 **Subcode of active fault 2**

Address: 0x8308 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

H3-09 **Information of active fault 2**

Address: 0x8309 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

H3-10 **Self diagnosis information 1**

Address: 0x830A Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

H3-11 **Self diagnosis information 2**

Address: 0x830B Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

H3-12 **Self diagnosis information 3**

Address: 0x830C Effective mode: -

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H3-13 Self diagnosis information 4

Address: 0x830D
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H3-14 Code of active fault 3

Address: 0x830E
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H3-15 Subcode of active fault 3

Address: 0x830F
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H3-16 Information of active fault 3

Address: 0x8310
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H3-17 Self diagnosis information 1

Address: 0x8311
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H3-18 Self diagnosis information 2

Address: 0x8312 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H3-19 Self diagnosis information 3

Address: 0x8313 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H3-20 Self diagnosis information 4

Address: 0x8314 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H3-21 Code of active fault 4

Address: 0x8315 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H3-22 Subcode of active fault 4

Address: 0x8316 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:

0 to 65535
Description
-

H3-23 Information of active fault 4

Address:	0x8317	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H3-24 Self diagnosis information 1

Address:	0x8318	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H3-25 Self diagnosis information 2

Address:	0x8319	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H3-26 Self diagnosis information 3

Address:	0x831A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H3-27 Self diagnosis information 4

Address:	0x831B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

H3-28 **Code of active fault 5**

Address:	0x831C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H3-29 **Subcode of active fault 5**

Address:	0x831D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H3-30 **Information of active fault 5**

Address:	0x831E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H3-31 **Self diagnosis information 1**

Address:	0x831F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H3-32 **Self diagnosis information 2**

Address:	0x8320	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H3-33 **Self diagnosis information 3**

Address:	0x8321	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H3-34 **Self diagnosis information 4**

Address:	0x8322	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H3-35 **Code of active fault 6**

Address:	0x8323	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H3-36 **Subcode of active fault 6**

Address:	0x8324	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H3-37 **Information of active fault 6**

Address:	0x8325	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H3-38 **Self diagnosis information 1**

Address:	0x8326	Effective mode:	-

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H3-39 Self diagnosis information 2

Address: 0x8327
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H3-40 Self diagnosis information 3

Address: 0x8328
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H3-41 Self diagnosis information 4

Address: 0x8329
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H3-42 Frequency upon the active fault

Address: 0x832A
Min.: 0.00
Max.: 655.35
Default: 0.00
Effective mode: -
Unit: Hz
Data type: Int16
Change: Unchangeable

Value Range:
0.00 Hz to 655.35 Hz

Description
-

H3-43 Current upon the active fault

Address: 0x832B
Min.: 0.00
Max.: 655.35
Effective mode: -
Unit: A
Data type: Int16

Default: 0.00 Change: Unchangeable

Value Range:

0.00 A to 655.35 A

Description

-

H3-44 Bus voltage upon the active fault

Address: 0x832C Effective mode: -

Min.: 0.0 Unit: V

Max.: 6553.5 Data type: UInt16

Default: 0.0 Change: Unchangeable

Value Range:

0.0 V to 6553.5 V

Description

-

H3-45 Input terminal state upon the active fault

Address: 0x832D Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Unchangeable

Value Range:

0x0 to 0xFFFF

Description

-

H3-46 Output terminal state upon the active fault

Address: 0x832E Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Unchangeable

Value Range:

0x0 to 0xFFFF

Description

-

H3-47 AC drive state upon the active fault

Address: 0x832F Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H3-48 Power-on duration upon the active fault

Address: 0x8330 Effective mode: -

Min.: 0 Unit: min

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 min to 65535 min
Description
-

H3-49 **Running duration upon the active fault**

Address:	0x8331	Effective mode:	-
Min.:	0.0	Unit:	min
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0 min to 6553.5 min
Description
-

H3-50 **Status word A upon the active fault**

Address:	0x8332	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

H3-51 **Status word B upon the active fault**

Address:	0x8333	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

H3-52 **Command word upon the active fault**

Address:	0x8334	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

4.59 H4: Fault Display Parameters

H4-00 **Code of the latest fault 1**

Address:	0x8400	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H4-01 Subcode of the latest fault 1

Address: 0x8401 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H4-02 Information of the latest fault 1

Address: 0x8402 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H4-03 Self diagnosis information 1

Address: 0x8403 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H4-04 Self diagnosis information 2

Address: 0x8404 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H4-05 Self diagnosis information 3

Address: 0x8405 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535
Description
-

H4-06 **Self diagnosis information 4**

Address:	0x8406	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-07 **Code of the latest fault 2**

Address:	0x8407	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-08 **Subcode of the latest fault 2**

Address:	0x8408	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-09 **Information of the latest fault 2**

Address:	0x8409	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-10 **Self diagnosis information 1**

Address:	0x840A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

H4-11 **Self diagnosis information 2**

Address:	0x840B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-12 **Self diagnosis information 3**

Address:	0x840C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-13 **Self diagnosis information 4**

Address:	0x840D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-14 **Code of the latest fault 3**

Address:	0x840E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-15 **Subcode of the latest fault 3**

Address:	0x840F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-16 **Information of the latest fault 3**

Address:	0x8410	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-17 **Self diagnosis information 1**

Address:	0x8411	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-18 **Self diagnosis information 2**

Address:	0x8412	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-19 **Self diagnosis information 3**

Address:	0x8413	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-20 **Self diagnosis information 4**

Address:	0x8414	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-21 **Code of the latest fault 4**

Address:	0x8415	Effective mode:	-

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H4-22 Subcode of the latest fault 4

Address: 0x8416
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H4-23 Information of the latest fault 4

Address: 0x8417
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H4-24 Self diagnosis information 1

Address: 0x8418
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H4-25 Self diagnosis information 2

Address: 0x8419
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H4-26 Self diagnosis information 3

Address: 0x841A
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H4-27 Self diagnosis information 4

Address: 0x841B Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H4-28 Code of the latest fault 5

Address: 0x841C Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H4-29 Subcode of the latest fault 5

Address: 0x841D Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H4-30 Information of the latest fault 5

Address: 0x841E Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H4-31 Self diagnosis information 1

Address: 0x841F Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:

0 to 65535
Description
-

H4-32 **Self diagnosis information 2**

Address:	0x8420	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-33 **Self diagnosis information 3**

Address:	0x8421	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-34 **Self diagnosis information 4**

Address:	0x8422	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-35 **Code of the latest fault 6**

Address:	0x8423	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-36 **Subcode of the latest fault 6**

Address:	0x8424	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

H4-37 **Information of the latest fault 6**

Address:	0x8425	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-38 **Self diagnosis information 1**

Address:	0x8426	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-39 **Self diagnosis information 2**

Address:	0x8427	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-40 **Self diagnosis information 3**

Address:	0x8428	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-41 **Self diagnosis information 4**

Address:	0x8429	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H4-42 **Frequency upon the latest fault**

Address:	0x842A	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	655.35	Data type:	Int16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00 Hz to 655.35 Hz
Description
-

H4-43 **Current upon the latest fault**

Address:	0x842B	Effective mode:	-
Min.:	0.00	Unit:	A
Max.:	655.35	Data type:	Int16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00 A to 655.35 A
Description
-

H4-44 **Bus voltage upon the latest fault**

Address:	0x842C	Effective mode:	-
Min.:	0.0	Unit:	V
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0 V to 6553.5 V
Description
-

H4-45 **Input terminal state upon the latest fault**

Address:	0x842D	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

H4-46 **Output terminal state upon the latest fault**

Address:	0x842E	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

H4-47 **AC drive state upon the latest fault**

Address:	0x842F	Effective mode:	-

Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H4-48 Power-on duration upon the latest fault

Address: 0x8430 Effective mode: -
Min.: 0 Unit: min
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 min to 65535 min
Description
-

H4-49 Running duration upon the latest fault

Address: 0x8431 Effective mode: -
Min.: 0.0 Unit: min
Max.: 6553.5 Data type: UInt16
Default: 0.0 Change: Unchangeable
Value Range:
0.0 min to 6553.5 min
Description
-

H4-50 Status word A upon the latest fault

Address: 0x8432 Effective mode: -
Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0x0 Change: Unchangeable
Value Range:
0x0 to 0xFFFF
Description
-

H4-51 Status word B upon the latest fault

Address: 0x8433 Effective mode: -
Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16
Default: 0x0 Change: Unchangeable
Value Range:
0x0 to 0xFFFF
Description
-

H4-52 Command word upon the latest fault

Address: 0x8434 Effective mode: -
Min.: 0x0 Unit: -
Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Unchangeable
Value Range:
0x0 to 0xFFFF
Description
-

4.60 H5: Fault Display Parameters

H5-00 **Code of the second latest fault 1**
Address: 0x8500 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H5-01 **Subcode of the second latest fault 1**
Address: 0x8501 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H5-02 **Information of the second latest fault 1**
Address: 0x8502 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H5-03 **Self diagnosis information 1**
Address: 0x8503 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H5-04 **Self diagnosis information 2**
Address: 0x8504 Effective mode: -

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H5-05 Self diagnosis information 3

Address: 0x8505
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H5-06 Self diagnosis information 4

Address: 0x8506
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H5-07 Code of the second latest fault 2

Address: 0x8507
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H5-08 Subcode of the second latest fault 2

Address: 0x8508
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H5-09 Information of the second latest fault 2

Address: 0x8509
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H5-10 Self diagnosis information 1

Address: 0x850A Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H5-11 Self diagnosis information 2

Address: 0x850B Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H5-12 Self diagnosis information 3

Address: 0x850C Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H5-13 Self diagnosis information 4

Address: 0x850D Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H5-14 Code of the second latest fault 3

Address: 0x850E Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:

0 to 65535
Description
-

H5-15 **Subcode of the second latest fault 3**

Address:	0x850F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H5-16 **Information of the second latest fault 3**

Address:	0x8510	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H5-17 **Self diagnosis information 1**

Address:	0x8511	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H5-18 **Self diagnosis information 2**

Address:	0x8512	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H5-19 **Self diagnosis information 3**

Address:	0x8513	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

H5-20 **Self diagnosis information 4**

Address:	0x8514	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H5-21 **Code of the second latest fault 4**

Address:	0x8515	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H5-22 **Subcode of the second latest fault 4**

Address:	0x8516	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H5-23 **Information of the second latest fault 4**

Address:	0x8517	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H5-24 **Self diagnosis information 1**

Address:	0x8518	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H5-25 **Self diagnosis information 2**

Address:	0x8519	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H5-26 **Self diagnosis information 3**

Address:	0x851A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H5-27 **Self diagnosis information 4**

Address:	0x851B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H5-28 **Code of the second latest fault 5**

Address:	0x851C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H5-29 **Subcode of the second latest fault 5**

Address:	0x851D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H5-30 **Information of the second latest fault 5**

Address:	0x851E	Effective mode:	-

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H5-31 Self diagnosis information 1

Address: 0x851F
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H5-32 Self diagnosis information 2

Address: 0x8520
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H5-33 Self diagnosis information 3

Address: 0x8521
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H5-34 Self diagnosis information 4

Address: 0x8522
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H5-35 Code of the second latest fault 6

Address: 0x8523
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H5-36 Subcode of the second latest fault 6

Address: 0x8524 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H5-37 Information of the second latest fault 6

Address: 0x8525 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H5-38 Self diagnosis information 1

Address: 0x8526 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H5-39 Self diagnosis information 2

Address: 0x8527 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H5-40 Self diagnosis information 3

Address: 0x8528 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:

0 to 65535
Description
-

H5-41 **Self diagnosis information 4**

Address:	0x8529	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H5-42 **Frequency upon the second latest fault**

Address:	0x852A	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	655.35	Data type:	Int16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00 Hz to 655.35 Hz
Description
-

H5-43 **Current upon the second latest fault**

Address:	0x852B	Effective mode:	-
Min.:	0.00	Unit:	A
Max.:	655.35	Data type:	Int16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00 A to 655.35 A
Description
-

H5-44 **Bus voltage upon the second latest fault**

Address:	0x852C	Effective mode:	-
Min.:	0.0	Unit:	V
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0 V to 6553.5 V
Description
-

H5-45 **Input terminal state upon the second latest fault**

Address:	0x852D	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF

Description
-

H5-46 **Output terminal state upon the second latest fault**

Address:	0x852E	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

H5-47 **AC drive state upon the second latest fault**

Address:	0x852F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H5-48 **Power-on duration upon the second latest fault**

Address:	0x8530	Effective mode:	-
Min.:	0	Unit:	min
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 min to 65535 min
Description
-

H5-49 **Running duration upon the second latest fault**

Address:	0x8531	Effective mode:	-
Min.:	0.0	Unit:	min
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0 min to 6553.5 min
Description
-

H5-50 **Status word A upon the second latest fault**

Address:	0x8532	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

H5-51 **Status word B upon the second latest fault**

Address:	0x8533	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

H5-52 **Command word upon the second latest fault**

Address:	0x8534	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

4.61 H6: Fault Display Parameters

H6-00 **Code of the third latest fault 1**

Address:	0x8600	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-01 **Subcode of the third latest fault 1**

Address:	0x8601	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-02 **Information of the third latest fault 1**

Address:	0x8602	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

H6-03 **Self diagnosis information 1**

Address:	0x8603	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-04 **Self diagnosis information 2**

Address:	0x8604	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-05 **Self diagnosis information 3**

Address:	0x8605	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-06 **Self diagnosis information 4**

Address:	0x8606	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-07 **Code of the third latest fault 2**

Address:	0x8607	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-08 **Subcode of the third latest fault 2**

Address:	0x8608	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-09 **Information of the third latest fault 2**

Address:	0x8609	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-10 **Self diagnosis information 1**

Address:	0x860A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-11 **Self diagnosis information 2**

Address:	0x860B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-12 **Self diagnosis information 3**

Address:	0x860C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-13 **Self diagnosis information 4**

Address:	0x860D	Effective mode:	-

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H6-14 Code of the third latest fault 3

Address: 0x860E
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H6-15 Subcode of the third latest fault 3

Address: 0x860F
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H6-16 Information of the third latest fault 3

Address: 0x8610
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H6-17 Self diagnosis information 1

Address: 0x8611
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H6-18 Self diagnosis information 2

Address: 0x8612
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H6-19 Self diagnosis information 3

Address: 0x8613 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H6-20 Self diagnosis information 4

Address: 0x8614 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H6-21 Code of the third latest fault 4

Address: 0x8615 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H6-22 Subcode of the third latest fault 4

Address: 0x8616 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H6-23 Information of the third latest fault 4

Address: 0x8617 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535
Description
-

H6-24 Self diagnosis information 1

Address:	0x8618	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-25 Self diagnosis information 2

Address:	0x8619	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-26 Self diagnosis information 3

Address:	0x861A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-27 Self diagnosis information 4

Address:	0x861B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-28 Code of the third latest fault 5

Address:	0x861C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

H6-29 **Subcode of the third latest fault 5**

Address:	0x861D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-30 **Information of the third latest fault 5**

Address:	0x861E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-31 **Self diagnosis information 1**

Address:	0x861F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-32 **Self diagnosis information 2**

Address:	0x8620	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-33 **Self diagnosis information 3**

Address:	0x8621	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-34 **Self diagnosis information 4**

Address:	0x8622	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-35 **Code of the third latest fault 6**

Address:	0x8623	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-36 **Subcode of the third latest fault 6**

Address:	0x8624	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-37 **Information of the third latest fault 6**

Address:	0x8625	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-38 **Self diagnosis information 1**

Address:	0x8626	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H6-39 **Self diagnosis information 2**

Address:	0x8627	Effective mode:	-

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H6-40 Self diagnosis information 3

Address: 0x8628
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H6-41 Self diagnosis information 4

Address: 0x8629
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H6-42 Frequency upon the third latest fault

Address: 0x862A
Min.: 0.00
Max.: 655.35
Default: 0.00
Effective mode: -
Unit: Hz
Data type: Int16
Change: Unchangeable

Value Range:
0.00 Hz to 655.35 Hz

Description
-

H6-43 Current upon the third latest fault

Address: 0x862B
Min.: 0.00
Max.: 655.35
Default: 0.00
Effective mode: -
Unit: A
Data type: Int16
Change: Unchangeable

Value Range:
0.00 A to 655.35 A

Description
-

H6-44 Bus voltage upon the third latest fault

Address: 0x862C
Min.: 0.0
Max.: 6553.5
Effective mode: -
Unit: V
Data type: UInt16

Default: 0.0 Change: Unchangeable

Value Range:

0.0 V to 6553.5 V

Description

-

H6-45 Input terminal state upon the third latest fault

Address: 0x862D Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Unchangeable

Value Range:

0x0 to 0xFFFF

Description

-

H6-46 Output terminal state upon the third latest fault

Address: 0x862E Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Unchangeable

Value Range:

0x0 to 0xFFFF

Description

-

H6-47 AC drive state upon the third latest fault

Address: 0x862F Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H6-48 Power-on duration upon the third latest fault

Address: 0x8630 Effective mode: -

Min.: 0 Unit: min

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 min to 65535 min

Description

-

H6-49 Running duration upon the third latest fault

Address: 0x8631 Effective mode: -

Min.: 0.0 Unit: min

Max.: 6553.5 Data type: UInt16

Default: 0.0 Change: Unchangeable

Value Range:

0.0 min to 6553.5 min

Description

-

H6-50 **Status word A upon the third latest fault**

Address:	0x8632	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:

0x0 to 0xFFFF

Description

-

H6-51 **Status word B upon the third latest fault**

Address:	0x8633	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:

0x0 to 0xFFFF

Description

-

H6-52 **Command word upon the third latest fault**

Address:	0x8634	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:

0x0 to 0xFFFF

Description

-

4.62 H7: Fault Display Parameters

H7-00 **Code of the fourth latest fault 1**

Address:	0x8700	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

-

H7-01 **Subcode of the fourth latest fault 1**

Address:	0x8701	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16

Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H7-02 Information of the fourth latest fault 1
Address: 0x8702 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H7-03 Self diagnosis information 1
Address: 0x8703 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H7-04 Self diagnosis information 2
Address: 0x8704 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H7-05 Self diagnosis information 3
Address: 0x8705 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H7-06 Self diagnosis information 4
Address: 0x8706 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:

0 to 65535
Description
-

H7-07 **Code of the fourth latest fault 2**

Address:	0x8707	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-08 **Subcode of the fourth latest fault 2**

Address:	0x8708	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-09 **Information of the fourth latest fault 2**

Address:	0x8709	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-10 **Self diagnosis information 1**

Address:	0x870A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-11 **Self diagnosis information 2**

Address:	0x870B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

H7-12 Self diagnosis information 3

Address:	0x870C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-13 Self diagnosis information 4

Address:	0x870D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-14 Code of the third latest fault 3

Address:	0x870E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-15 Subcode of the third latest fault 3

Address:	0x870F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-16 Information of the third latest fault 3

Address:	0x8710	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-17 **Self diagnosis information 1**

Address:	0x8711	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-18 **Self diagnosis information 2**

Address:	0x8712	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-19 **Self diagnosis information 3**

Address:	0x8713	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-20 **Self diagnosis information 4**

Address:	0x8714	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-21 **Code of the fourth latest fault 4**

Address:	0x8715	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-22 **Subcode of the fourth latest fault 4**

Address:	0x8716	Effective mode:	-

Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H7-23 Information of the fourth latest fault 4

Address: 0x8717 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H7-24 Self diagnosis information 1

Address: 0x8718 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H7-25 Self diagnosis information 2

Address: 0x8719 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H7-26 Self diagnosis information 3

Address: 0x871A Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H7-27 Self diagnosis information 4

Address: 0x871B Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H7-28 Code of the fourth latest fault 5

Address: 0x871C Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H7-29 Subcode of the fourth latest fault 5

Address: 0x871D Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H7-30 Information of the fourth latest fault 5

Address: 0x871E Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H7-31 Self diagnosis information 1

Address: 0x871F Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H7-32 Self diagnosis information 2

Address: 0x8720 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535
Description
-

H7-33 Self diagnosis information 3

Address:	0x8721	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-34 Self diagnosis information 4

Address:	0x8722	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-35 Code of the fourth latest fault 6

Address:	0x8723	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-36 Subcode of the fourth latest fault 6

Address:	0x8724	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-37 Information of the fourth latest fault 6

Address:	0x8725	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

H7-38 **Self diagnosis information 1**

Address:	0x8726	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-39 **Self diagnosis information 2**

Address:	0x8727	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-40 **Self diagnosis information 3**

Address:	0x8728	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-41 **Self diagnosis information 4**

Address:	0x8729	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-42 **Frequency upon the fourth latest fault**

Address:	0x872A	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	655.35	Data type:	Int16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00 Hz to 655.35 Hz
Description
-

H7-43 **Current upon the fourth latest fault**

Address:	0x872B	Effective mode:	-
Min.:	0.00	Unit:	A
Max.:	655.35	Data type:	Int16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00 A to 655.35 A
Description
-

H7-44 **Bus voltage upon the fourth latest fault**

Address:	0x872C	Effective mode:	-
Min.:	0.0	Unit:	V
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0 V to 6553.5 V
Description
-

H7-45 **Input terminal state upon the fourth latest fault**

Address:	0x872D	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

H7-46 **Output terminal state upon the fourth latest fault**

Address:	0x872E	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

H7-47 **AC drive state upon the fourth latest fault**

Address:	0x872F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H7-48 **Power-on duration upon the fourth latest fault**

Address:	0x8730	Effective mode:	-

Min.:	0	Unit:	min
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 min to 65535 min
Description
-

H7-49 Running duration upon the fourth latest fault

Address:	0x8731	Effective mode:	-
Min.:	0.0	Unit:	min
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0 min to 6553.5 min
Description
-

H7-50 Status word A upon the fourth latest fault

Address:	0x8732	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

H7-51 Status word B upon the fourth latest fault

Address:	0x8733	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

H7-52 Command word upon the fourth latest fault

Address:	0x8734	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

4.63 H8: Fault Display Parameters

H8-00 **Code of the fifth latest fault 1**

Address:	0x8800	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-01 **Subcode of the fifth latest fault 1**

Address:	0x8801	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-02 **Information of the fifth latest fault 1**

Address:	0x8802	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-03 **Self diagnosis information 1**

Address:	0x8803	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-04 **Self diagnosis information 2**

Address:	0x8804	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-05 **Self diagnosis information 3**

Address:	0x8805	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-06 **Self diagnosis information 4**

Address:	0x8806	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-07 **Code of the fifth latest fault 2**

Address:	0x8807	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-08 **Subcode of the fifth latest fault 2**

Address:	0x8808	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-09 **Information of the fifth latest fault 2**

Address:	0x8809	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-10 **Self diagnosis information 1**

Address:	0x880A	Effective mode:	-

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H8-11 Self diagnosis information 2

Address: 0x880B
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H8-12 Self diagnosis information 3

Address: 0x880C
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H8-13 Self diagnosis information 4

Address: 0x880D
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H8-14 Code of the fifth latest fault 3

Address: 0x880E
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

H8-15 Subcode of the fifth latest fault 3

Address: 0x880F
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H8-16 Information of the fifth latest fault 3

Address: 0x8810 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H8-17 Self diagnosis information 1

Address: 0x8811 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H8-18 Self diagnosis information 2

Address: 0x8812 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H8-19 Self diagnosis information 3

Address: 0x8813 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H8-20 Self diagnosis information 4

Address: 0x8814 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:

0 to 65535
Description
-

H8-21 Code of the fifth latest fault 4

Address:	0x8815	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-22 Subcode of the fifth latest fault 4

Address:	0x8816	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-23 Information of the fifth latest fault 4

Address:	0x8817	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-24 Self diagnosis information 1

Address:	0x8818	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-25 Self diagnosis information 2

Address:	0x8819	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

H8-26 **Self diagnosis information 3**

Address:	0x881A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-27 **Self diagnosis information 4**

Address:	0x881B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-28 **Code of the fifth latest fault 5**

Address:	0x881C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-29 **Subcode of the fifth latest fault 5**

Address:	0x881D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-30 **Information of the fifth latest fault 5**

Address:	0x881E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-31 **Self diagnosis information 1**

Address:	0x881F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-32 **Self diagnosis information 2**

Address:	0x8820	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-33 **Self diagnosis information 3**

Address:	0x8821	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-34 **Self diagnosis information 4**

Address:	0x8822	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-35 **Code of the fifth latest fault 6**

Address:	0x8823	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

H8-36 **Subcode of the fifth latest fault 6**

Address:	0x8824	Effective mode:	-

Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H8-37 Information of the fifth latest fault 6

Address: 0x8825 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H8-38 Self diagnosis information 1

Address: 0x8826 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H8-39 Self diagnosis information 2

Address: 0x8827 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H8-40 Self diagnosis information 3

Address: 0x8828 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

H8-41 Self diagnosis information 4

Address: 0x8829 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

H8-42 Frequency upon the fifth latest fault

Address: 0x882A Effective mode: -

Min.: 0.00 Unit: Hz

Max.: 655.35 Data type: Int16

Default: 0.00 Change: Unchangeable

Value Range:

0.00 Hz to 655.35 Hz

Description

-

H8-43 Current upon the fifth latest fault

Address: 0x882B Effective mode: -

Min.: 0.00 Unit: A

Max.: 655.35 Data type: Int16

Default: 0.00 Change: Unchangeable

Value Range:

0.00 A to 655.35 A

Description

-

H8-44 Bus voltage upon the fifth latest fault

Address: 0x882C Effective mode: -

Min.: 0.0 Unit: V

Max.: 6553.5 Data type: UInt16

Default: 0.0 Change: Unchangeable

Value Range:

0.0 V to 6553.5 V

Description

-

H8-45 Input terminal state upon the fifth latest fault

Address: 0x882D Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Unchangeable

Value Range:

0x0 to 0xFFFF

Description

-

H8-46 Output terminal state upon the fifth latest fault

Address: 0x882E Effective mode: -

Min.: 0x0 Unit: -

Max.: 0xFFFF Data type: UInt16

Default: 0x0 Change: Unchangeable

Value Range:

0x0 to 0xFFFF

Description

-

H8-47 **AC drive state upon the fifth latest fault**

Address:	0x882F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

-

H8-48 **Power-on duration upon the fifth latest fault**

Address:	0x8830	Effective mode:	-
Min.:	0	Unit:	min
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 min to 65535 min

Description

-

H8-49 **Running duration upon the fifth latest fault**

Address:	0x8831	Effective mode:	-
Min.:	0.0	Unit:	min
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0 min to 6553.5 min

Description

-

H8-50 **Status word A upon the fifth latest fault**

Address:	0x8832	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:

0x0 to 0xFFFF

Description

-

H8-51 **Status word B upon the fifth latest fault**

Address:	0x8833	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:

0x0 to 0xFFFF

Description
-

H8-52 **Command word upon the fifth latest fault**

Address:	0x8834	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

4.64 U0: Monitoring Parameters

U0-00 **Running frequency**

Address:	0x7000	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	500.00	Data type:	UInt16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00 Hz to 500.00 Hz
Description
-

U0-01 **Frequency reference**

Address:	0x7001	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	500.00	Data type:	UInt16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00 Hz to 500.00 Hz
Description
-

U0-02 **Bus voltage**

Address:	0x7002	Effective mode:	-
Min.:	0.0	Unit:	V
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0 V to 6553.5 V
Description
-

U0-03 **Output voltage**

Address:	0x7003	Effective mode:	-
Min.:	0	Unit:	V
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 V to 65535 V
Description
-

U0-04 Output current

Address:	0x7004	Effective mode:	-
Min.:	0.00	Unit:	A
Max.:	655.35	Data type:	UInt16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00 A to 655.35 A
Description
-

U0-05 Output power

Address:	0x7005	Effective mode:	-
Min.:	–3276.8	Unit:	kW
Max.:	3276.7	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
–3276.8 kW to +3276.7 kW
Description
-

U0-06 Output torque

Address:	0x7006	Effective mode:	-
Min.:	–3276.8	Unit:	%
Max.:	3276.7	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
–3276.8% to +3276.7%
Description
-

U0-07 DI state

Address:	0x7007	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0x7FFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0x7FFF
Description
-

U0-08 DO state

Address:	0x7008	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0x7FFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0x7FFF

Description
-

U0-09 **AI1 voltage**

Address:	0x7009	Effective mode:	-
Min.:	–10.57	Unit:	V
Max.:	10.57	Data type:	Int16
Default:	0.00	Change:	Unchangeable

Value Range:
–10.57 V to +10.57 V
Description
-

U0-10 **AI2 voltage**

Address:	0x700A	Effective mode:	-
Min.:	–10.57	Unit:	V
Max.:	10.57	Data type:	Int16
Default:	0.00	Change:	Unchangeable

Value Range:
–10.57 V to +10.57 V
Description
-

U0-11 **AI3 voltage**

Address:	0x700B	Effective mode:	-
Min.:	–10.57	Unit:	V
Max.:	10.57	Data type:	Int16
Default:	0.00	Change:	Unchangeable

Value Range:
–10.57 V to +10.57 V
Description
-

U0-12 **Count value**

Address:	0x700C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U0-13 **Length value**

Address:	0x700D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U0-14 **Load speed**

Address:	0x700E	Effective mode:	-
Min.:	0	Unit:	RPM
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 RPM to 65535 RPM
Description
-

U0-15 **PID reference**

Address:	0x700F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U0-16 **PID feedback**

Address:	0x7010	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U0-17 **PLC stage**

Address:	0x7011	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U0-18 **Pulse input frequency**

Address:	0x7012	Effective mode:	-
Min.:	0.00	Unit:	kHz
Max.:	100.00	Data type:	UInt16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00 kHz to 100.00 kHz
Description
-

U0-19 **Feedback speed**

Address:	0x7013	Effective mode:	-

Min.:	–500	Unit:	Hz
Max.:	500.00	Data type:	Int16
Default:	0.00	Change:	Unchangeable

Value Range:
–500 Hz to +500.00 Hz
Description
-

U0-20 Remaining running duration

Address:	0x7014	Effective mode:	-
Min.:	0.0	Unit:	min
Max.:	65535.0	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0 min to 65535.0 min
Description
-

U0-21 AI1 voltage before correction

Address:	0x7015	Effective mode:	-
Min.:	–10.57	Unit:	V
Max.:	10.570	Data type:	Int16
Default:	0.000	Change:	Unchangeable

Value Range:
–10.57 V to +10.570 V
Description
-

U0-22 AI2 voltage before correction

Address:	0x7016	Effective mode:	-
Min.:	–10.57	Unit:	V
Max.:	10.570	Data type:	Int16
Default:	0.000	Change:	Unchangeable

Value Range:
–10.57 V to +10.570 V
Description
-

U0-23 AI3 voltage before correction

Address:	0x7017	Effective mode:	-
Min.:	–10.57	Unit:	V
Max.:	10.570	Data type:	Int16
Default:	0.000	Change:	Unchangeable

Value Range:
–10.57 V to +10.570 V
Description
-

U0-24 Motor speed

Address:	0x7018	Effective mode:	-
Min.:	0	Unit:	RPM
Max.:	65535	Data type:	UInt16

Default: 0 Change: Unchangeable

Value Range:

0 RPM to 65535 RPM

Description

-

U0-25 Current power-on duration

Address: 0x7019 Effective mode: -

Min.: 0 Unit: min

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 min to 65535 min

Description

-

U0-26 Current running duration

Address: 0x701A Effective mode: -

Min.: 0.0 Unit: min

Max.: 6553.5 Data type: UInt16

Default: 0.0 Change: Unchangeable

Value Range:

0.0 min to 6553.5 min

Description

-

U0-27 Pulse input frequency

Address: 0x701B Effective mode: -

Min.: 0 Unit: Hz

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 Hz to 65535 Hz

Description

-

U0-28 Communication reference

Address: 0x701C Effective mode: -

Min.: –100 Unit: %

Max.: 100.00 Data type: Int16

Default: 0.00 Change: Unchangeable

Value Range:

–100% to +100.00%

Description

-

U0-29 Encoder feedback speed

Address: 0x701D Effective mode: -

Min.: –500 Unit: Hz

Max.: 500.00 Data type: Int16

Default: 0.00 Change: Unchangeable

Value Range:

–500 Hz to +500.00 Hz

Description

-

U0-30 Main frequency X

Address:	0x701E	Effective mode:	-
Min.:	–500	Unit:	Hz
Max.:	500.00	Data type:	Int16
Default:	0.00	Change:	Unchangeable

Value Range:

–500 Hz to +500.00 Hz

Description

-

U0-31 Auxiliary frequency Y

Address:	0x701F	Effective mode:	-
Min.:	–500	Unit:	Hz
Max.:	500.00	Data type:	Int16
Default:	0.00	Change:	Unchangeable

Value Range:

–500 Hz to +500.00 Hz

Description

-

U0-32 Any memory address

Address:	0x7020	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

-

U0-33 Synchronous motor rotor position

Address:	0x7021	Effective mode:	-
Min.:	0.0	Unit:	°
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0° to 6553.5°

Description

-

U0-34 AI3 temperature mode - motor temperature

Address:	0x7022	Effective mode:	-
Min.:	0	Unit:	°C
Max.:	200	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0°C to 200°C

Description
-

U0-35 **Target torque**

Address:	0x7023	Effective mode:	-
Min.:	–200	Unit:	%
Max.:	200.0	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
–200% to +200.0%
Description
-

U0-36 **Resolver position**

Address:	0x7024	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U0-37 **Power factor angle**

Address:	0x7025	Effective mode:	-
Min.:	0.0	Unit:	°
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0° to 6553.5°
Description
-

U0-38 **ABZ position**

Address:	0x7026	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U0-39 **Target voltage upon V/f separation**

Address:	0x7027	Effective mode:	-
Min.:	0	Unit:	V
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 V to 65535 V
Description
-

U0-40 **Output voltage upon V/f separation**

Address:	0x7028	Effective mode:	-
Min.:	0	Unit:	V
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 V to 65535 V
Description
-

U0-45 **Fault subcode**

Address:	0x702D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U0-46 **Limit code**

Address:	0x702E	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0 to 6553.5
Description
-

U0-50 **0.5 ms A hold-up time**

Address:	0x7032	Effective mode:	-
Min.:	0.0	Unit:	ms
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0 ms to 6553.5 ms
Description
-

U0-51 **0.5 ms B hold-up time**

Address:	0x7033	Effective mode:	-
Min.:	0.0	Unit:	ms
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0 ms to 6553.5 ms
Description
-

U0-52 **0.5 ms C hold-up time**

Address:	0x7034	Effective mode:	-

Min.: 0.0
Max.: 6553.5
Default: 0.0
Unit: ms
Data type: UInt16
Change: Unchangeable

Value Range:
0.0 ms to 6553.5 ms

Description
-

U0-53 0.5 ms D hold-up time

Address: 0x7035
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: ms
Data type: UInt16
Change: Unchangeable

Value Range:
0.0 ms to 6553.5 ms

Description
-

U0-54 0.5 ms A execution time

Address: 0x7036
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: ms
Data type: UInt16
Change: Unchangeable

Value Range:
0.0 ms to 6553.5 ms

Description
-

U0-55 0.5 ms B execution time

Address: 0x7037
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: ms
Data type: UInt16
Change: Unchangeable

Value Range:
0.0 ms to 6553.5 ms

Description
-

U0-56 0.5 ms C execution time

Address: 0x7038
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: ms
Data type: UInt16
Change: Unchangeable

Value Range:
0.0 ms to 6553.5 ms

Description
-

U0-57 0.5 ms D execution time

Address: 0x7039
Min.: 0.0
Max.: 6553.5
Effective mode: -
Unit: ms
Data type: UInt16

Default: 0.0 Change: Unchangeable
Value Range:
0.0 ms to 6553.5 ms
Description
-

U0-58 Motor running revolution count

Address: 0x703A Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U0-59 Frequency reference

Address: 0x703B Effective mode: -
Min.: –100 Unit: %
Max.: 100.00 Data type: Int16
Default: 0.00 Change: Unchangeable
Value Range:
–100% to +100.00%
Description
-

U0-60 Running frequency

Address: 0x703C Effective mode: -
Min.: –100 Unit: %
Max.: 100.00 Data type: Int16
Default: 0.00 Change: Unchangeable
Value Range:
–100% to +100.00%
Description
-

U0-61 AC drive state

Address: 0x703D Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U0-62 Code of active fault

Address: 0x703E Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:

0 to 65535
Description
-

U0-63 **Torque sent in point-to-point communication**

Address:	0x703F	Effective mode:	-
Min.:	0.00	Unit:	%
Max.:	6553.50	Data type:	UInt16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00% to 6553.50%
Description
-

U0-64 **Number of slaves in master-slave control**

Address:	0x7040	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U0-65 **Torque upper limit**

Address:	0x7041	Effective mode:	-
Min.:	–2000	Unit:	%
Max.:	2000.0	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
–2000% to +2000.0%
Description
-

U0-66 **Model of communication expansion card**

Address:	0x7042	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U0-67 **Software version of communication expansion card**

Address:	0x7043	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

U0-68 **AC drive state on PROFIBUS DP card**

Address:	0x7044	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U0-69 **Frequency sent to PROFIBUS DP card/0.01 Hz**

Address:	0x7045	Effective mode:	-
Min.:	0.00	Unit:	Hz
Max.:	655.35	Data type:	UInt16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00 Hz to 655.35 Hz
Description
-

U0-70 **Motor speed sent to PROFIBUS DP card/RPM**

Address:	0x7046	Effective mode:	-
Min.:	0	Unit:	RPM
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 RPM to 65535 RPM
Description
-

U0-71 **Communication card-specific current**

Address:	0x7047	Effective mode:	-
Min.:	0.0	Unit:	A
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0 A to 6553.5 A
Description
-

U0-72 **Communication card error state**

Address:	0x7048	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U0-73 **Motor SN**

Address:	0x7049	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U0-74 **AC drive output torque**

Address:	0x704A	Effective mode:	-
Min.:	–200	Unit:	%
Max.:	200.0	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
–200% to +200.0%
Description
-

U0-76 **Low-order bits of accumulative power consumption**

Address:	0x704C	Effective mode:	-
Min.:	0.0	Unit:	kW·h
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0 kW·h to 6553.5 kW·h
Description
-

U0-77 **High-order bits of accumulative power consumption**

Address:	0x704D	Effective mode:	-
Min.:	0	Unit:	kW·h
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 kW·h to 65535 kW·h
Description
-

U0-78 **Linear speed**

Address:	0x704E	Effective mode:	-
Min.:	0	Unit:	m/min
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 m/min to 65535 m/min
Description
-

U0-80 **EtherCAT slave name**

Address:	0x7050	Effective mode:	-

Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U0-81 EtherCAT slave alias
Address: 0x7051 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U0-82 EtherCAT ESM transmission error code
Address: 0x7052 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U0-83 EtherCAT XML file version
Address: 0x7053 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U0-84 EtherCAT synchronization loss count
Address: 0x7054 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U0-85 Maximum errors and invalid frames of EtherCAT port 0 per unit time
Address: 0x7055 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

U0-86 Maximum errors and invalid frames of EtherCAT port 1 per unit time

Address: 0x7056 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

U0-87 Maximum forwarding errors of EtherCAT port per unit time

Address: 0x7057 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

U0-88 Maximum error count of EtherCAT data frame processing unit per unit time

Address: 0x7058 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

U0-89 Maximum link loss of EtherCAT port per unit time

Address: 0x7059 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

U0-90 DI function selection display 1

Address: 0x705A Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535
Description
-

U0-91 **DI function selection display 2**

Address:	0x705B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U0-92 **DI function selection display 3**

Address:	0x705C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U0-93 **DI function selection display 4**

Address:	0x705D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U0-94 **DI function selection display 5**

Address:	0x705E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U0-95 **STO initialization flag**

Address:	0x705F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

U0-96 **STO status word monitoring**

Address:	0x7060	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U0-97 **STO model**

Address:	0x7061	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

U0-98 **STO 1.2 V AD sampling value**

Address:	0x7062	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U0-99 **STO 5 V AD sampling value**

Address:	0x7063	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

4.65 U2: System Parameters

U2-00 **Current motor parameter group**

Address:	0x7200	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-01 **Current control channel**

Address:	0x7201	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-02 **Current reference channel**

Address:	0x7202	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-03 **Skip frequency flag**

Address:	0x7203	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-04 **Local or remote**

Address:	0x7204	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-05 **Current multi-speed reference**

Address:	0x7205	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

U2-06 **Current multi-speed reference effective value**

Address:	0x7206	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-07 **Key value**

Address:	0x7207	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-08 **Power-off time**

Address:	0x7208	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-09 **16-bit parameter error index menu address**

Address:	0x7209	Effective mode:	-
Min.:	0x0	Unit:	-
Max.:	0xFFFF	Data type:	UInt16
Default:	0x0	Change:	Unchangeable

Value Range:
0x0 to 0xFFFF
Description
-

U2-10 **16-bit parameter error type**

Address:	0x720A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-11 **32-bit parameter error internal index address**

Address:	0x720B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-12 **32-bit parameter error internal index address**

Address:	0x720C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-13 **Fault and limit severity**

Address:	0x720D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-14 **Fault auto reset and restart steps**

Address:	0x720E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-23 **Parameter backup exception**

Address:	0x7217	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-24 **Macro parameter backup and restoration exception**

Address:	0x7218	Effective mode:	-

Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U2-25 Remaining running duration during timed running

Address: 0x7219 Effective mode: -
Min.: 0.0 Unit: min
Max.: 6553.5 Data type: UInt16
Default: 0.0 Change: Unchangeable
Value Range:
0.0 min to 6553.5 min
Description
-

U2-26 Parameter record information 0

Address: 0x721A Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U2-27 Parameter record information 1

Address: 0x721B Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U2-28 Parameter record information 2

Address: 0x721C Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U2-29 Parameter record information 3

Address: 0x721D Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U2-30 Parameter record information 4

Address: 0x721E Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U2-31 Parameter record information 5

Address: 0x721F Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U2-32 Parameter record information 6

Address: 0x7220 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U2-33 Parameter record information 7

Address: 0x7221 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U2-34 Parameter record information 8

Address: 0x7222 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:

0 to 65535
Description
-

U2-35 **Parameter record information 9**

Address:	0x7223	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-36 **Parameter record information 10**

Address:	0x7224	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-37 **Parameter record information 11**

Address:	0x7225	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-38 **Parameter record information 12**

Address:	0x7226	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-39 **Parameter record information 13**

Address:	0x7227	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

U2-40 **Parameter record information 14**

Address:	0x7228	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-41 **Parameter record information 15**

Address:	0x7229	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-42 **Parameter record information 16**

Address:	0x722A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-43 **Parameter record information 17**

Address:	0x722B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-44 **Parameter record information 18**

Address:	0x722C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-45 **Parameter record information 19**

Address:	0x722D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-46 **Parameter record information 20**

Address:	0x722E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-47 **Parameter record information 21**

Address:	0x722F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-48 **Parameter record information 22**

Address:	0x7230	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-49 **Parameter record information 23**

Address:	0x7231	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U2-50 **Parameter record information 24**

Address:	0x7232	Effective mode:	-

Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U2-51 Parameter record information 25

Address: 0x7233 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U2-52 Parameter record information 26

Address: 0x7234 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U2-60 Address mapping enable state

Address: 0x723C Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U2-61 Expansion card communication fault state

Address: 0x723D Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U2-62 Communication fault reset command

Address: 0x723E Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U2-63 Communication warning flag
Address: 0x723F Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U2-64 16-bit parameter error internal index address
Address: 0x7240 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U2-65 Power-on initialization completion flag
Address: 0x7241 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U2-66 Model-related parameter update flag
Address: 0x7242 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

4.66 U3: System Parameters

U3-12 Master state
Address: 0x730C Effective mode: -

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

U3-13 Master frequency

Address: 0x730D
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

U3-14 Master torque

Address: 0x730E
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

U3-15 Master phase sequence

Address: 0x730F
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

U3-16 Communication frequency reference

Address: 0x7310
Min.: 0.00
Max.: 655.35
Default: 0.00
Effective mode: -
Unit: Hz
Data type: UInt16
Change: Unchangeable

Value Range:
0.00 Hz to 655.35 Hz

Description
-

U3-17 Communication reference control word

Address: 0x7311
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

U3-18 DO state (terminal function defined by parameters in group F5: communication control)

Address: 0x7312 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

U3-19 AO1 output reference (terminal function defined by parameters in group F5: communication control)

Address: 0x7313 Effective mode: -

Min.: 0 Unit: %

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0% to 65535%

Description

-

U3-20 AO2 output reference (terminal function defined by parameters in group F5: communication control)

Address: 0x7314 Effective mode: -

Min.: 0 Unit: %

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0% to 65535%

Description

-

U3-21 HDO output reference (terminal function defined by parameters in group F5: communication control)

Address: 0x7315 Effective mode: -

Min.: 0 Unit: %

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0% to 65535%

Description

-

U3-22 Command input through communication

Address: 0x7316 Effective mode: -

Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U3-23 Speed reference input through communication

Address: 0x7317 Effective mode: -
Min.: 0 Unit: RPM
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 RPM to 65535 RPM
Description
-

U3-24 Communication card type

Address: 0x7318 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U3-25 Communication card version

Address: 0x7319 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

U3-28 EtherCAT station alias

Address: 0x731C Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Changeable at any time
Value Range:
0 to 65535
Description
-

U3-35 EtherCAT card information 1

Address: 0x7323 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

U3-36 EtherCAT card information 2

Address: 0x7324 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

U3-37 EtherCAT card information 3

Address: 0x7325 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

U3-38 EtherCAT card information 4

Address: 0x7326 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

U3-39 EtherCAT card information 5

Address: 0x7327 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

U3-40 EtherCAT card information 6

Address: 0x7328 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535
Description
-

U3-41 **EtherCAT card information 7**

Address:	0x7329	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U3-42 **EtherCAT card information 8**

Address:	0x732A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U3-43 **EtherCAT card information 9**

Address:	0x732B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U3-44 **EtherNet/IP error**

Address:	0x732C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U3-50 **LED control word**

Address:	0x7332	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

U3-51 **Background control word**

Address:	0x7333	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U3-52 **SOP control word**

Address:	0x7334	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U3-53 **Remote call**

Address:	0x7335	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U3-54 **Control word set through communication**

Address:	0x7336	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U3-55 **Target speed set through communication**

Address:	0x7337	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

U3-56 **MD500 compatible status word**

Address:	0x7338	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U3-57 **MD500 compatible LCD command word**

Address:	0x7339	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U3-58 **MD500 compatible IDS command word**

Address:	0x733A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

U3-59 **MD500 compatible 1000H speed reference**

Address:	0x733B	Effective mode:	-
Min.:	0.00	Unit:	%
Max.:	655.35	Data type:	UInt16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00% to 655.35%
Description
-

4.67 L0: Bit Connector 1 Parameters

L0-00 **DI1 drive sampling state**

Address:	0x9000	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

L0-01 **DI2 drive sampling state**

Address:	0x9001	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-02 **DI3 drive sampling state**

Address:	0x9002	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-03 **DI4 drive sampling state**

Address:	0x9003	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-04 **DI5 drive sampling state**

Address:	0x9004	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-05 **DI6 drive sampling state**

Address:	0x9005	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-06 **DI7 drive sampling state**

Address:	0x9006	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-07 **DI8 drive sampling state**

Address:	0x9007	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-08 **DI9 drive sampling state**

Address:	0x9008	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-09 **DI10 drive sampling state**

Address:	0x9009	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-10 **AI1AsDI final output state**

Address:	0x900A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-11 **AI2AsDI final output state**

Address:	0x900B	Effective mode:	-

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L0-12 AI3AsDI final output state

Address: 0x900C
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L0-13 AI1AsDI inversion state

Address: 0x900D
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L0-14 AI2AsDI inversion state

Address: 0x900E
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L0-15 AI3AsDI inversion state

Address: 0x900F
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L0-16 DI1 drive output state

Address: 0x9010
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L0-17 DI2 drive output state
Address: 0x9011 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L0-18 DI3 drive output state
Address: 0x9012 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L0-19 DI4 drive output state
Address: 0x9013 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L0-20 DI5 drive output state
Address: 0x9014 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L0-21 DI6 drive output state
Address: 0x9015 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:

0 to 65535
Description
-

L0-22 **DI7 drive output state**

Address:	0x9016	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-23 **DI8 drive output state**

Address:	0x9017	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-24 **DI9 drive output state**

Address:	0x9018	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-25 **DI10 drive output state**

Address:	0x9019	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-26 **VDI1 drive output state**

Address:	0x901A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

L0-27 VDI2 drive output state

Address:	0x901B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-28 VDI3 drive output state

Address:	0x901C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-29 VDI4 drive output state

Address:	0x901D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-30 VDI5 drive output state

Address:	0x901E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-31 VDI6 drive output state

Address:	0x901F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-32 **DI1 final output state**

Address: 0x9020 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L0-33 **DI2 final output state**

Address: 0x9021 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L0-34 **DI3 final output state**

Address: 0x9022 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L0-35 **DI4 final output state**

Address: 0x9023 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L0-36 **DI5 final output state**

Address: 0x9024 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L0-37 **DI6 final output state**

Address: 0x9025 Effective mode: -

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L0-38 DI7 final output state

Address: 0x9026
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L0-39 DI8 final output state

Address: 0x9027
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L0-40 DI9 final output state

Address: 0x9028
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L0-41 DI10 final output state

Address: 0x9029
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L0-42 VDI1 final output state

Address: 0x902A
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L0-43 VDI2 final output state

Address: 0x902B Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L0-44 VDI3 final output state

Address: 0x902C Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L0-45 VDI4 final output state

Address: 0x902D Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L0-46 VDI5 final output state

Address: 0x902E Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L0-47 VDI6 final output state

Address: 0x902F Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535
Description
-

L0-48 **DI1 inversion state**

Address:	0x9030	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-49 **DI2 inversion state**

Address:	0x9031	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-50 **DI3 inversion state**

Address:	0x9032	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-51 **DI4 inversion state**

Address:	0x9033	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-52 **DI5 inversion state**

Address:	0x9034	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

L0-53 **DI6 inversion state**

Address:	0x9035	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-54 **DI7 inversion state**

Address:	0x9036	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-55 **DI8 inversion state**

Address:	0x9037	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-56 **DI9 inversion state**

Address:	0x9038	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-57 **DI10 inversion state**

Address:	0x9039	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-58 **VDI1 inversion state**

Address:	0x903A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-59 **VDI2 inversion state**

Address:	0x903B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-60 **VDI3 inversion state**

Address:	0x903C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-61 **VDI4 inversion state**

Address:	0x903D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-62 **VDI5 inversion state**

Address:	0x903E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-63 **VDI6 inversion state**

Address:	0x903F	Effective mode:	-

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L0-64 Relay 1 (DO3) state before filtering

Address: 0x9040
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L0-65 FMR state before filtering

Address: 0x9041
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L0-66 DO1 state before filtering

Address: 0x9042
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L0-67 Relay 2 (DO4) state before filtering

Address: 0x9043
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L0-68 DO2 state before filtering

Address: 0x9044
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L0-69 VDO1 state before filtering
Address: 0x9045 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L0-70 VDO2 state before filtering
Address: 0x9046 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L0-71 VDO3 state before filtering
Address: 0x9047 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L0-72 VDO4 state before filtering
Address: 0x9048 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L0-73 VDO5 state before filtering
Address: 0x9049 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:

0 to 65535
Description
-

L0-74 VDO6 state before filtering

Address:	0x904A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-75 VDO7 state before filtering

Address:	0x904B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-76 VDO8 state before filtering

Address:	0x904C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-77 VDO9 state before filtering

Address:	0x904D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-78 VDO10 state before filtering

Address:	0x904E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

L0-79 **VDO11 state before filtering**

Address:	0x904F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-80 **Relay 1 (DO3) final output state**

Address:	0x9050	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-81 **FMR final output state**

Address:	0x9051	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-82 **DO1 final output state**

Address:	0x9052	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-83 **Relay 2 (DO4) final output state**

Address:	0x9053	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L0-84 **DO2 final output state**

Address: 0x9054 | Effective mode: -
Min.: 0 | Unit: -
Max.: 65535 | Data type: UInt16
Default: 0 | Change: Unchangeable

Value Range:
0 to 65535
Description
-

L0-85 **VDO1 final output state**

Address: 0x9055 | Effective mode: -
Min.: 0 | Unit: -
Max.: 65535 | Data type: UInt16
Default: 0 | Change: Unchangeable

Value Range:
0 to 65535
Description
-

L0-86 **VDO2 final output state**

Address: 0x9056 | Effective mode: -
Min.: 0 | Unit: -
Max.: 65535 | Data type: UInt16
Default: 0 | Change: Unchangeable

Value Range:
0 to 65535
Description
-

L0-87 **VDO3 final output state**

Address: 0x9057 | Effective mode: -
Min.: 0 | Unit: -
Max.: 65535 | Data type: UInt16
Default: 0 | Change: Unchangeable

Value Range:
0 to 65535
Description
-

L0-88 **VDO4 final output state**

Address: 0x9058 | Effective mode: -
Min.: 0 | Unit: -
Max.: 65535 | Data type: UInt16
Default: 0 | Change: Unchangeable

Value Range:
0 to 65535
Description
-

L0-89 **VDO5 final output state**

Address: 0x9059 | Effective mode: -

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L0-90 VDO6 final output state

Address: 0x905A
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L0-91 VDO7 final output state

Address: 0x905B
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L0-92 VDO8 final output state

Address: 0x905C
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L0-93 VDO9 final output state

Address: 0x905D
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L0-94 VDO10 final output state

Address: 0x905E
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L0-95 VDO11 final output state

Address: 0x905F Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L0-96 AI1 input overlimit

Address: 0x9060 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L0-97 AI2 input overlimit

Address: 0x9061 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L0-98 AI3 input overlimit

Address: 0x9062 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L0-99 HDI input wire breakage

Address: 0x9063 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535
Description
-

4.68 L1: Bit Connector 2 Parameters

L1-00 **Reference count value reach**

Address:	0x9100	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-01 **Designated count value reach**

Address:	0x9101	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-02 **Length comparison value reach**

Address:	0x9102	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-03 **Comparison result of DIO edge counting module 1**

Address:	0x9103	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-04 **Comparison result of DIO edge counting module 2**

Address:	0x9104	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16

Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L1-05 Comparison result of DIO edge counting module 3

Address: 0x9105 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L1-06 Comparison result of DIO edge counting module 4

Address: 0x9106 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L1-07 AI2 or AI3 temperature mode - motor temperature reach

Address: 0x9107 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L1-08 AI2 or AI3 temperature mode - motor overtemperature

Address: 0x9108 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L1-09 AI2 temperature mode - motor overtemperature

Address: 0x9109 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:

0 to 65535
Description
-

L1-10 **AI3 temperature mode - motor overtemperature**

Address:	0x910A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-11 **IGBT temperature reach (flag)**

Address:	0x910B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-12 **Ready to switch on**

Address:	0x910C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-13 **Ready to run**

Address:	0x910D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-14 **Running**

Address:	0x910E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

L1-15 **Faulty**

Address:	0x910F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0: Not faulty
1: Faulty
Description
-

L1-16 **OFF2 inactive**

Address:	0x9110	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0: Active (OFF2 = 0)
1: Inactive (OFF2 = 1)
Description
-

L1-17 **OFF3 inactive**

Address:	0x9111	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0: Active (OFF3 = 0)
1: Inactive (OFF3 = 1)
Description
-

L1-18 **Switch-on blocking**

Address:	0x9112	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-19 **Alarm/Limit activation**

Address:	0x9113	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-20 Actual speed following speed reference

Address:	0x9114	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-21 Local or remote

Address:	0x9115	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0: Local
1: Remote
Description
-

L1-22 Target speed reach

Address:	0x9116	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-23 Torque limit reach

Address:	0x9117	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-24 Forward speed

Address:	0x9118	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535
Description
-

L1-25 **Reverse speed**

Address:	0x9119	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-26 **Motor running flag**

Address:	0x911A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0: Stopped
1: Running (pulse output)
Description
-

L1-27 **User setting 0**

Address:	0x911B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-28 **Self-check**

Address:	0x911C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-29 **Auto-tuning**

Address:	0x911D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535
Description
-

L1-30 Limit (running with limits) activation

Address:	0x911E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-31 Alarm activation

Address:	0x911F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-32 Speed mode

Address:	0x9120	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-33 Torque mode

Address:	0x9121	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-34 Position mode

Address:	0x9122	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

L1-35 **RFG enable**

Address:	0x9123	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-36 **RFG running**

Address:	0x9124	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-37 **Stop upon fault**

Address:	0x9125	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-38 **Normal running**

Address:	0x9126	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-39 **Jogging**

Address:	0x9127	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-42 **Terminal control flag**

Address:	0x912A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-43 **User setting 1**

Address:	0x912B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-44 **Control channel**

Address:	0x912C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0: Control channel 1
1: Control channel 2
Description
-

L1-45 **Reference channel**

Address:	0x912D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0: Reference channel 1
1: Reference channel 2
Description
-

L1-60 **Excessive speed deviation**

Address:	0x913C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-61 **Overspeed**

Address: 0x913D
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535
Description
-

L1-62 **Target speed reach**

Address: 0x913E
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535
Description
-

L1-63 **Speed comparison reach 0**

Address: 0x913F
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535
Description
-

L1-64 **Speed comparison reach 1**

Address: 0x9140
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535
Description
-

L1-65 **Motor speed positive**

Address: 0x9141
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535
Description
-

L1-66 **Motor speed negative**

Address: 0x9142
Effective mode: -

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L1-76 Bit0 of W2B module A

Address: 0x914C
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L1-77 Bit1 of W2B module A

Address: 0x914D
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L1-78 Bit2 of W2B module A

Address: 0x914E
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L1-79 Bit3 of W2B module A

Address: 0x914F
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L1-80 Bit4 of W2B module A

Address: 0x9150
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L1-81 Bit5 of W2B module A
Address: 0x9151 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L1-82 Bit6 of W2B module A
Address: 0x9152 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L1-83 Bit7 of W2B module A
Address: 0x9153 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L1-84 Bit8 of W2B module A
Address: 0x9154 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L1-85 Bit9 of W2B module A
Address: 0x9155 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:

0 to 65535
Description
-

L1-86 **Bit10 of W2B module A**

Address:	0x9156	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-87 **Bit11 of W2B module A**

Address:	0x9157	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-88 **Bit12 of W2B module A**

Address:	0x9158	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-89 **Bit13 of W2B module A**

Address:	0x9159	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-90 **Bit14 of W2B module A**

Address:	0x915A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

L1-91 **Bit15 of W2B module A**

Address:	0x915B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-92 **Bit0 of W2B module B**

Address:	0x915C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-93 **Bit1 of W2B module B**

Address:	0x915D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-94 **Bit2 of W2B module B**

Address:	0x915E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-95 **Bit3 of W2B module B**

Address:	0x915F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-96 **Bit4 of W2B module B**

Address:	0x9160	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-97 **Bit5 of W2B module B**

Address:	0x9161	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-98 **Bit6 of W2B module B**

Address:	0x9162	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L1-99 **Bit7 of W2B module B**

Address:	0x9163	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

4.69 L2: Bit Connector 3 Parameters

L2-00 **Bit8 of W2B module B**

Address:	0x9200	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

L2-01 **Bit9 of W2B module B**

Address:	0x9201	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-02 **Bit10 of W2B module B**

Address:	0x9202	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-03 **Bit11 of W2B module B**

Address:	0x9203	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-04 **Bit12 of W2B module B**

Address:	0x9204	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-05 **Bit13 of W2B module B**

Address:	0x9205	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-06 **Bit14 of W2B module B**

Address:	0x9206	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-07 **Bit15 of W2B module B**

Address:	0x9207	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-08 **Bit0 of W2B module C**

Address:	0x9208	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-09 **Bit1 of W2B module C**

Address:	0x9209	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-10 **Bit2 of W2B module C**

Address:	0x920A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-11 **Bit3 of W2B module C**

Address:	0x920B	Effective mode:	-

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L2-12 Bit4 of W2B module C

Address: 0x920C
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L2-13 Bit5 of W2B module C

Address: 0x920D
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L2-14 Bit6 of W2B module C

Address: 0x920E
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L2-15 Bit7 of W2B module C

Address: 0x920F
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L2-16 Bit8 of W2B module C

Address: 0x9210
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L2-17 Bit9 of W2B module C

Address: 0x9211 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L2-18 Bit10 of W2B module C

Address: 0x9212 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L2-19 Bit11 of W2B module C

Address: 0x9213 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L2-20 Bit12 of W2B module C

Address: 0x9214 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L2-21 Bit13 of W2B module C

Address: 0x9215 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535
Description
-

L2-22 **Bit14 of W2B module C**

Address:	0x9216	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-23 **Bit15 of W2B module C**

Address:	0x9217	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-24 **Bit0 of W2B module D**

Address:	0x9218	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-25 **Bit1 of W2B module D**

Address:	0x9219	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-26 **Bit2 of W2B module D**

Address:	0x921A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

L2-27 **Bit3 of W2B module D**

Address:	0x921B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-28 **Bit4 of W2B module D**

Address:	0x921C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-29 **Bit5 of W2B module D**

Address:	0x921D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-30 **Bit6 of W2B module D**

Address:	0x921E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-31 **Bit7 of W2B module D**

Address:	0x921F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-32 **Bit8 of W2B module D**

Address: 0x9220 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L2-33 **Bit9 of W2B module D**

Address: 0x9221 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L2-34 **Bit10 of W2B module D**

Address: 0x9222 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L2-35 **Bit11 of W2B module D**

Address: 0x9223 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L2-36 **Bit12 of W2B module D**

Address: 0x9224 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L2-37 **Bit13 of W2B module D**

Address: 0x9225 Effective mode: -

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L2-38 Bit14 of W2B module D

Address: 0x9226
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L2-39 Bit15 of W2B module D

Address: 0x9227
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L2-40 Bit0 of W2B module E

Address: 0x9228
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L2-41 Bit1 of W2B module E

Address: 0x9229
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L2-42 Bit2 of W2B module E

Address: 0x922A
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L2-43 Bit3 of W2B module E

Address: 0x922B Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L2-44 Bit4 of W2B module E

Address: 0x922C Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L2-45 Bit5 of W2B module E

Address: 0x922D Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L2-46 Bit6 of W2B module E

Address: 0x922E Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L2-47 Bit7 of W2B module E

Address: 0x922F Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535
Description
-

L2-48 **Bit8 of W2B module E**

Address:	0x9230	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-49 **Bit9 of W2B module E**

Address:	0x9231	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-50 **Bit10 of W2B module E**

Address:	0x9232	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-51 **Bit11 of W2B module E**

Address:	0x9233	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-52 **Bit12 of W2B module E**

Address:	0x9234	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

L2-53 **Bit13 of W2B module E**

Address:	0x9235	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-54 **Bit14 of W2B module E**

Address:	0x9236	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-55 **Bit15 of W2B module E**

Address:	0x9237	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-56 **Bit0 of W2B module F**

Address:	0x9238	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-57 **Bit1 of W2B module F**

Address:	0x9239	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-58 **Bit2 of W2B module F**

Address: 0x923A
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535
Description
-

L2-59 **Bit3 of W2B module F**

Address: 0x923B
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535
Description
-

L2-60 **Bit4 of W2B module F**

Address: 0x923C
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535
Description
-

L2-61 **Bit5 of W2B module F**

Address: 0x923D
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535
Description
-

L2-62 **Bit6 of W2B module F**

Address: 0x923E
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535
Description
-

L2-63 **Bit7 of W2B module F**

Address: 0x923F
Effective mode: -

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L2-64 Bit8 of W2B module F

Address: 0x9240
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L2-65 Bit9 of W2B module F

Address: 0x9241
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L2-66 Bit10 of W2B module F

Address: 0x9242
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L2-67 Bit11 of W2B module F

Address: 0x9243
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L2-68 Bit12 of W2B module F

Address: 0x9244
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L2-69 Bit13 of W2B module F

Address: 0x9245 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L2-70 Bit14 of W2B module F

Address: 0x9246 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L2-71 Bit15 of W2B module F

Address: 0x9247 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L2-72 Bit0 of W2B module G

Address: 0x9248 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L2-73 Bit1 of W2B module G

Address: 0x9249 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535
Description
-

L2-74 **Bit2 of W2B module G**

Address:	0x924A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-75 **Bit3 of W2B module G**

Address:	0x924B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-76 **Bit4 of W2B module G**

Address:	0x924C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-77 **Bit5 of W2B module G**

Address:	0x924D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-78 **Bit6 of W2B module G**

Address:	0x924E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

L2-79 **Bit7 of W2B module G**

Address:	0x924F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-80 **Bit8 of W2B module G**

Address:	0x9250	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-81 **Bit9 of W2B module G**

Address:	0x9251	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-82 **Bit10 of W2B module G**

Address:	0x9252	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-83 **Bit11 of W2B module G**

Address:	0x9253	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L2-84 **Bit12 of W2B module G**

Address: 0x9254 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L2-85 **Bit13 of W2B module G**

Address: 0x9255 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L2-86 **Bit14 of W2B module G**

Address: 0x9256 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L2-87 **Bit15 of W2B module G**

Address: 0x9257 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L2-88 **Bit0 of W2B module H**

Address: 0x9258 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L2-89 **Bit1 of W2B module H**

Address: 0x9259 Effective mode: -

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L2-90 Bit2 of W2B module H

Address: 0x925A
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L2-91 Bit3 of W2B module H

Address: 0x925B
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L2-92 Bit4 of W2B module H

Address: 0x925C
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L2-93 Bit5 of W2B module H

Address: 0x925D
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L2-94 Bit6 of W2B module H

Address: 0x925E
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L2-95 Bit7 of W2B module H

Address: 0x925F Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L2-96 Bit8 of W2B module H

Address: 0x9260 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L2-97 Bit9 of W2B module H

Address: 0x9261 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L2-98 Bit10 of W2B module H

Address: 0x9262 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L2-99 Bit11 of W2B module H

Address: 0x9263 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535
Description
-

4.70 L3: Bit Connector 4 Parameters

L3-00 **Bit12 of W2B module H**

Address:	0x9300	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-01 **Bit13 of W2B module H**

Address:	0x9301	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-02 **Bit14 of W2B module H**

Address:	0x9302	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-03 **Bit15 of W2B module H**

Address:	0x9303	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-04 **Output of binary selector module A**

Address:	0x9304	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16

Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L3-05 Output of binary selector module B

Address: 0x9305 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L3-06 Output of binary selector module C

Address: 0x9306 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L3-07 Output of binary selector module D

Address: 0x9307 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L3-08 Output of binary selector module E

Address: 0x9308 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L3-09 Output of binary selector module F

Address: 0x9309 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:

0 to 65535
Description
-

L3-10 **Output of binary selector module G**

Address:	0x930A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-11 **Output of binary selector module H**

Address:	0x930B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-20 **Output of logic delay module A**

Address:	0x9314	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-21 **Output of logic delay module B**

Address:	0x9315	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-22 **Output of logic delay module C**

Address:	0x9316	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

L3-23 **Output of logic delay module D**

Address:	0x9317	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-24 **Output of logic delay module E**

Address:	0x9318	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-25 **Output of logic delay module F**

Address:	0x9319	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-26 **Output of logic delay module G**

Address:	0x931A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-27 **Output of logic delay module H**

Address:	0x931B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-36 **Output of logic AND-OR module A**

Address: 0x9324 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L3-37 **Output of logic AND-OR module B**

Address: 0x9325 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L3-38 **Output of logic AND-OR module C**

Address: 0x9326 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L3-39 **Output of logic AND-OR module D**

Address: 0x9327 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L3-40 **Output of logic AND-OR module E**

Address: 0x9328 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L3-41 **Output of logic AND-OR module F**

Address: 0x9329 Effective mode: -

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L3-42 Output of logic AND-OR module G

Address: 0x932A
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L3-43 Output of logic AND-OR module H

Address: 0x932B
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L3-44 Output of logic AND-OR module I

Address: 0x932C
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L3-45 Output of logic AND-OR module J

Address: 0x932D
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L3-46 Output of logic AND-OR module K

Address: 0x932E
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L3-47 Output of logic AND-OR module L

Address: 0x932F Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L3-52 Output of logic NOT module A

Address: 0x9334 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L3-53 Output of logic NOT module B

Address: 0x9335 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L3-54 Output of logic NOT module C

Address: 0x9336 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L3-55 Output of logic NOT module D

Address: 0x9337 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:

0 to 65535
Description
-

L3-56 **Output of logic NOT module E**

Address:	0x9338	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-57 **Output of logic NOT module F**

Address:	0x9339	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-58 **Output of logic NOT module G**

Address:	0x933A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-59 **Output of logic NOT module H**

Address:	0x933B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-60 **Output of logic NOT module I**

Address:	0x933C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

L3-61 **Output of logic NOT module J**

Address:	0x933D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-62 **Output of logic NOT module K**

Address:	0x933E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-63 **Output of logic NOT module L**

Address:	0x933F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-64 **Output of logic NOT module M**

Address:	0x9340	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-65 **Output of logic NOT module N**

Address:	0x9341	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-66 **Output of logic NOT module O**

Address:	0x9342	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-67 **Output of logic NOT module P**

Address:	0x9343	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-68 **Output of logic XOR/XNOR module A**

Address:	0x9344	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-69 **Output of logic XOR/XNOR module B**

Address:	0x9345	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-70 **Output of logic XOR/XNOR module C**

Address:	0x9346	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L3-71 **Output of logic XOR/XNOR module D**

Address:	0x9347	Effective mode:	-

Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L3-72 Output of logic XOR/XNOR module E

Address: 0x9348 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L3-73 Output of logic XOR/XNOR module F

Address: 0x9349 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L3-74 Output of logic XOR/XNOR module G

Address: 0x934A Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L3-75 Output of logic XOR/XNOR module H

Address: 0x934B Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L3-84 Output of level-to-pulse conversion module A

Address: 0x9354 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L3-85 Output of level-to-pulse conversion module B
Address: 0x9355 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L3-86 Output of level-to-pulse conversion module C
Address: 0x9356 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L3-87 Output of level-to-pulse conversion module D
Address: 0x9357 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

4.71 L4: Bit Connector 5 Parameters

L4-00 Output of floating-point comparison module A
Address: 0x9400 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L4-01 Output of floating-point comparison module B
Address: 0x9401 Effective mode: -

Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L4-02 Output of floating-point comparison module C

Address: 0x9402 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L4-03 Output of floating-point comparison module D

Address: 0x9403 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L4-04 Output of fixed-point comparison module E

Address: 0x9404 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L4-05 Output of fixed-point comparison module F

Address: 0x9405 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L4-06 Output of fixed-point comparison module G

Address: 0x9406 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L4-07 Output of fixed-point comparison module H

Address: 0x9407 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L4-16 Flag indicating whether input of floating-point absolute value module A is negative

Address: 0x9410 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0: Not negative

1: Negative

Description

-

L4-17 Flag indicating whether input of floating-point absolute value module B is negative

Address: 0x9411 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0: Not negative

1: Negative

Description

-

L4-18 Flag indicating whether input of floating-point absolute value module C is negative

Address: 0x9412 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0: Not negative

1: Negative

Description

-

L4-19 Flag indicating whether input of floating-point absolute value module D is negative

Address: 0x9413 Effective mode: -

Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0: Not negative
1: Negative
Description
-

L4-20 Flag indicating whether input of floating-point absolute value module E is negative

Address: 0x9414 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0: Not negative
1: Negative
Description
-

L4-21 Flag indicating whether input of fixed-point absolute value module F is negative

Address: 0x9415 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0: Not negative
1: Negative
Description
-

L4-22 Flag indicating whether input of fixed-point absolute value module G is negative

Address: 0x9416 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0: Not negative
1: Negative
Description
-

L4-23 Flag indicating whether input of fixed-point absolute value module H is negative

Address: 0x9417 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0: Not negative
1: Negative

Description
-

L4-32 Flag indicating whether divisor of MULTIPLY/DIVIDE module A is 0

Address:	0x9420	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0: Not 0
1: 0
Description
-

L4-33 Flag indicating whether divisor of MULTIPLY/DIVIDE module B is 0

Address:	0x9421	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0: Not 0
1: 0
Description
-

L4-34 Flag indicating whether divisor of MULTIPLY/DIVIDE module C is 0

Address:	0x9422	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0: Not 0
1: 0
Description
-

L4-35 Flag indicating whether divisor of MULTIPLY/DIVIDE module D is 0

Address:	0x9423	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0: Not 0
1: 0
Description
-

L4-36 Flag indicating whether divisor of MULTIPLY/DIVIDE module E is 0

Address:	0x9424	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0: Not 0
1: 0
Description
-

L4-37 Flag indicating whether divisor of MULTIPLY/DIVIDE module F is 0

Address:	0x9425	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0: Not 0
1: 0
Description
-

L4-38 Flag indicating whether divisor of MULTIPLY/DIVIDE module G is 0

Address:	0x9426	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0: Not 0
1: 0
Description
-

L4-39 Flag indicating whether divisor of MULTIPLY/DIVIDE module H is 0

Address:	0x9427	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0: Not 0
1: 0
Description
-

L4-48 Upper limit flag of limiting module A

Address:	0x9430	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L4-49 Lower limit flag of limiting module A

Address:	0x9431	Effective mode:	-
Min.:	0	Unit:	-

Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L4-50 Upper limit flag of limiting module B
Address: 0x9432 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L4-51 Lower limit flag of limiting module B
Address: 0x9433 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L4-52 Upper limit flag of limiting module C
Address: 0x9434 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L4-53 Lower limit flag of limiting module C
Address: 0x9435 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L4-54 Upper limit flag of limiting module D
Address: 0x9436 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L4-55 **Lower limit flag of limiting module D**

Address:	0x9437	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L4-56 **Upper limit flag of limiting module E**

Address:	0x9438	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L4-57 **Lower limit flag of limiting module E**

Address:	0x9439	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L4-58 **Upper limit flag of limiting module F**

Address:	0x943A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L4-59 **Lower limit flag of limiting module F**

Address:	0x943B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

L4-64 **Hibernation enable flag**

Address:	0x9440	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L4-66 **Startup frequency RFG forcing**

Address:	0x9442	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L4-67 **Startup frequency stop flag**

Address:	0x9443	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L4-72 **Power-on duration reach**

Address:	0x9448	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L4-73 **Running duration reach**

Address:	0x9449	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L4-74 **Timing duration reach**

Address:	0x944A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L4-75 **Current running duration reach**

Address:	0x944B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

4.72 L5: Word Connector 1 Parameters

L5-00 **System status word 1**

Address:	0x9500	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
Bit00: Ready to switch on
Bit01: Ready to run
Bit02: Running
Bit03: Faulty
Bit04: OFF2
Bit05: OFF3
Bit06: Switch-on blocking
Bit07: Running with limits
Bit08: No speed deviation
Bit09: Local or remote
Bit10: Target speed reach
Bit11: Torque limiting
Bit12: Positive speed
Bit13: Negative speed
Bit14: Running (pulse output)
Bit15: User-defined state 0
Description
-

L5-01 **System status word 2**

Address:	0x9501	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

Bit00: Self-check
Bit01: Auto-tuning
Bit02: Limit state
Bit03: Alarm state
Bit04: Speed mode
Bit05: Torque mode
Bit06: Position mode
Bit07: RFG enable
Bit08: RFG running
Bit09: Stop upon fault
Bit10: Normal running
Bit11: Jogging
Bit12: Decelerate to stop
Bit13: Reserved
Bit14: Terminal control
Bit15: User-defined state 1

Description

-

L5-02 **Main status word of drive**

Address:	0x9502	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

-

L5-03 **Auxiliary status word of drive**

Address:	0x9503	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

-

L5-04 **Main status word of motor**

Address:	0x9504	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-05 **Auxiliary status word of motor**

Address:	0x9505	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-06 **Current state of system state machine**

Address:	0x9506	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0: Initializing
1: Switch-on prohibited
2: Switch-on allowed
3: Running allowed
4: Started
5: Running
6: Stopped
7: Self-check
8: Auto-tuning
Description
-

L5-07 **System state machine switchover command**

Address:	0x9507	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
Bit00: Startup active
Bit01: Stop active
Bit02: OFF2 stop active
Bit03: OFF3 stop active
Bit04: Running permission active
Bit05: Running prohibition active
Bit06: Stop upon fault active
Description
-

L5-08 **System running state**

Address:	0x9508	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-09 **Current stop mode**

Address:	0x9509	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0: Coast to stop
1: Stop at maximum capability
2: Quick stop
3: Decelerate to stop
Description
-

L5-10 **DC braking state during deceleration to stop**

Address:	0x950A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-17 **Bus voltage**

Address:	0x9511	Effective mode:	-
Min.:	0.0	Unit:	V
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0 V to 6553.5 V
Description
-

L5-20 **IGBT temperature**

Address:	0x9514	Effective mode:	-
Min.:	0.0	Unit:	-
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0 to 6553.5

Description
-

L5-21 **LED control word**

Address:	0x9515	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-22 **IDS control word**

Address:	0x9516	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-23 **SOP control word**

Address:	0x9517	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-24 **Command channel system command**

Address:	0x9518	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-25 **LED command clear flag**

Address:	0x9519	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-26 **SOP command clear flag**

Address:	0x951A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-27 **IDS command clear flag**

Address:	0x951B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-28 **Terminal module command**

Address:	0x951C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-29 **Input state of terminal module A**

Address:	0x951D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-30 **Input state of terminal module B**

Address:	0x951E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-31 **Running mode (normal jogging)**

Address:	0x951F	Effective mode:	-

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535
Description
-

L5-32 Jogging source 12

Address: 0x9520
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535
Description
-

L5-33 Control target

Address: 0x9521
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0: Speed control
1: Torque control
1: Position control
Description
-

L5-34 RFG status word

Address: 0x9522
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535
Description
-

L5-35 RFG command word

Address: 0x9523
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535
Description
-

L5-38 **V/f separation time set to 0**

Address:	0x9526	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-40 **AI1 raw sampling value**

Address:	0x9528	Effective mode:	-
Min.:	–32.767	Unit:	V
Max.:	32.767	Data type:	Int16
Default:	0.000	Change:	Unchangeable

Value Range:
–32.767 V to +32.767 V
Description
-

L5-41 **AI2 raw sampling value**

Address:	0x9529	Effective mode:	-
Min.:	–32.767	Unit:	V
Max.:	32.767	Data type:	Int16
Default:	0.000	Change:	Unchangeable

Value Range:
–32.767 V to +32.767 V
Description
-

L5-42 **AI3 raw sampling value**

Address:	0x952A	Effective mode:	-
Min.:	–32.767	Unit:	V
Max.:	32.767	Data type:	Int16
Default:	0.000	Change:	Unchangeable

Value Range:
–32.767 V to +32.767 V
Description
-

L5-43 **AI1 sampling value after correction**

Address:	0x952B	Effective mode:	-
Min.:	–327.67	Unit:	V
Max.:	327.67	Data type:	Int16
Default:	0.00	Change:	Unchangeable

Value Range:
–327.67 V to +327.67 V
Description
-

L5-44 **AI2 sampling value after correction**

Address:	0x952C	Effective mode:	-

Min.: –327.67 Unit: V
Max.: 327.67 Data type: Int16
Default: 0.00 Change: Unchangeable
Value Range:
–327.67 V to +327.67 V
Description
-

L5-45 AI3 sampling value after correction
Address: 0x952D Effective mode: -
Min.: –327.67 Unit: V
Max.: 327.67 Data type: Int16
Default: 0.00 Change: Unchangeable
Value Range:
–327.67 V to +327.67 V
Description
-

L5-46 Input value of AI1 curve
Address: 0x952E Effective mode: -
Min.: –327.67 Unit: V
Max.: 327.67 Data type: Int16
Default: 0.00 Change: Unchangeable
Value Range:
–327.67 V to +327.67 V
Description
-

L5-47 Input value of AI2 curve
Address: 0x952F Effective mode: -
Min.: –327.67 Unit: V
Max.: 327.67 Data type: Int16
Default: 0.00 Change: Unchangeable
Value Range:
–327.67 V to +327.67 V
Description
-

L5-48 Input value of AI3 curve
Address: 0x9530 Effective mode: -
Min.: –327.67 Unit: V
Max.: 327.67 Data type: Int16
Default: 0.00 Change: Unchangeable
Value Range:
–327.67 V to +327.67 V
Description
-

L5-49 AO1 output (before correction)
Address: 0x9531 Effective mode: -
Min.: –327.67 Unit: V
Max.: 327.67 Data type: Int16

Default: 0.00 Change: Unchangeable
Value Range:
–327.67 V to +327.67 V
Description
-

L5-50 AO2 output (before correction)
Address: 0x9532 Effective mode: -
Min.: –327.67 Unit: V
Max.: 327.67 Data type: Int16
Default: 0.00 Change: Unchangeable
Value Range:
–327.67 V to +327.67 V
Description
-

L5-51 AO1 output (after correction)
Address: 0x9533 Effective mode: -
Min.: –32.767 Unit: V
Max.: 32.767 Data type: Int16
Default: 0.000 Change: Unchangeable
Value Range:
–32.767 V to +32.767 V
Description
-

L5-52 AO2 output (after correction)
Address: 0x9534 Effective mode: -
Min.: –32.767 Unit: V
Max.: 32.767 Data type: Int16
Default: 0.000 Change: Unchangeable
Value Range:
–32.767 V to +32.767 V
Description
-

L5-53 HDI input frequency
Address: 0x9535 Effective mode: -
Min.: 0.00 Unit: kHz
Max.: 655.35 Data type: UInt16
Default: 0.00 Change: Unchangeable
Value Range:
0.00 kHz to 655.35 kHz
Description
-

L5-54 Counter output
Address: 0x9536 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:

0 to 65535

Description

-

L5-55 **Length count**

Address:	0x9537	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

-

L5-56 **Command word set through communication**

Address:	0x9538	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

Bit00:OFF1

Bit01: OFF2

Bit02: OFF3

Bit03: Running permission

Bit04: Reset

Bit05: JOG1

Bit06: JOG2

Bit07: Speed negation

Description

-

L5-57 **Communication setpoint**

Address:	0x9539	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

L5-58 **Communication command clear flag**

Address:	0x953A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

-

L5-59 **RFG performance forcing enable**

Address:	0x953B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-60 **Pre-auto-tuning command**

Address:	0x953C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-62 **DI immediate DC braking command**

Address:	0x953E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-63 **Drive sampling DI state**

Address:	0x953F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-64 **Drive output DI state**

Address:	0x9540	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-65 **Final output DI state**

Address:	0x9541	Effective mode:	-

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L5-66 DI state inversion

Address: 0x9542
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L5-67 DO state before filtering

Address: 0x9543
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L5-68 Final output DO state

Address: 0x9544
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L5-69 I/O monitoring state

Address: 0x9545
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L5-70 Main speed

Address: 0x9546
Min.: 0.0
Max.: 6553.5
Effective mode: -
Unit: %
Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

L5-71 Auxiliary speed

Address: 0x9547 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

L5-73 AI2 sampling current 1 after correction (impedance: 500 Ω)

Address: 0x9549 Effective mode: -

Min.: –327.67 Unit: mA

Max.: 327.67 Data type: Int16

Default: 0.00 Change: Unchangeable

Value Range:

–327.67 mA to +327.67 mA

Description

-

L5-75 AO1 output current (before correction)

Address: 0x954B Effective mode: -

Min.: –327.67 Unit: mA

Max.: 327.67 Data type: Int16

Default: 0.00 Change: Unchangeable

Value Range:

–327.67 mA to +327.67 mA

Description

-

L5-76 AO2 output current (before correction)

Address: 0x954C Effective mode: -

Min.: –327.67 Unit: mA

Max.: 327.67 Data type: Int16

Default: 0.00 Change: Unchangeable

Value Range:

–327.67 mA to +327.67 mA

Description

-

L5-77 AI2 sampling current 2 after correction (impedance: 250 Ω)

Address: 0x954D Effective mode: -

Min.: –327.67 Unit: mA

Max.: 327.67 Data type: Int16

Default: 0.00 Change: Unchangeable

Value Range:

–327.67 mA to +327.67 mA

Description

-

L5-78 Flag indicating whether mapping write data is 32-bit

Address:	0x954E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

-

L5-79 External communication data low-order 16 bits 1

Address:	0x954F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

-

L5-80 External communication data low-order 16 bits 2

Address:	0x9550	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

-

L5-81 External communication data low-order 16 bits 3

Address:	0x9551	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

-

L5-82 External communication data low-order 16 bits 4

Address:	0x9552	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description
-

L5-83 **External communication data low-order 16 bits 5**

Address:	0x9553	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-84 **External communication data low-order 16 bits 6**

Address:	0x9554	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-85 **External communication data low-order 16 bits 7**

Address:	0x9555	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-86 **External communication data low-order 16 bits 8**

Address:	0x9556	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-87 **External communication data low-order 16 bits 9**

Address:	0x9557	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-88 **External communication data low-order 16 bits 10**

Address:	0x9558	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-89 **External communication data high-order 16 bits 1**

Address:	0x9559	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-90 **External communication data high-order 16 bits 2**

Address:	0x955A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-91 **External communication data high-order 16 bits 3**

Address:	0x955B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-92 **External communication data high-order 16 bits 4**

Address:	0x955C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L5-93 **External communication data high-order 16 bits 5**

Address:	0x955D	Effective mode:	-

Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L5-94 External communication data high-order 16 bits 6

Address: 0x955E Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L5-95 External communication data high-order 16 bits 7

Address: 0x955F Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L5-96 External communication data high-order 16 bits 8

Address: 0x9560 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L5-97 External communication data high-order 16 bits 9

Address: 0x9561 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L5-98 External communication data high-order 16 bits 10

Address: 0x9562 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

4.73 L6: Word Connector 2 Parameters

L6-00 Rated motor speed

Address: 0x9600 Effective mode: -

Min.: 0 Unit: RPM

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 RPM to 65535 RPM

Description

-

L6-01 Rated motor frequency

Address: 0x9601 Effective mode: -

Min.: 0.0 Unit: Hz

Max.: 6553.5 Data type: UInt16

Default: 0.0 Change: Unchangeable

Value Range:

0.0 Hz to 6553.5 Hz

Description

-

L6-02 Rated voltage

Address: 0x9602 Effective mode: -

Min.: 0.0 Unit: V

Max.: 6553.5 Data type: UInt16

Default: 0.0 Change: Unchangeable

Value Range:

0.0 V to 6553.5 V

Description

-

L6-03 Rated current

Address: 0x9603 Effective mode: -

Min.: 0.0 Unit: A

Max.: 6553.5 Data type: UInt16

Default: 0.0 Change: Unchangeable

Value Range:

0.0 A to 6553.5 A

Description

-

L6-04 Rated power

Address: 0x9604 Effective mode: -

Min.: 0.0
Max.: 6553.5
Default: 0.0
Unit: kW
Data type: UInt16
Change: Unchangeable

Value Range:
0.0 kW to 6553.5 kW

Description
-

L6-05 System main status word C

Address: 0x9605
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
Bit00: Control channel
Bit01: Reference channel
Bit02: Motor selection bit 0
Bit03: Motor selection bit 1
Bit04: Exception (fault and alarm)
Bit05: EEPROM idle

Description
-

L6-06 Motor object auxiliary status word 2

Address: 0x9606
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L6-07 V/f separation stop frequency control

Address: 0x9607
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L6-08 Torque control frequency offset mode

Address: 0x9608
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L6-09 **RFG acceleration/deceleration state**

Address:	0x9609	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L6-10 **RFG rounding state**

Address:	0x960A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L6-11 **Inverter protection state monitoring**

Address:	0x960B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
Bit00: Pulse-by-pulse current limit protection
Bit01: Pulse-by-pulse current limit inhibition
Bit02: Input phase loss Bit03: Output phase loss
Bit04: Pre-charge resistor exception Bit05: Drive overload
Bit06: Drive pre-overload
Bit07: Bus overvoltage
Bit08: Bus undervoltage
Bit09: Output overcurrent
Bit10: Drive overtemperature
Bit11: Drive pre-overtemperature
Bit12: Leakage current protection
Bit13: Current control exception Bit14: Software overcurrent
Bit15: Short-to-ground (reserved)
Description
-

L6-12 **Modulation module status word**

Address:	0x960C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L6-13 **Body sampling status word**

Address:	0x960D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L6-14 **AI2 temperature mode - motor temperature sampling value**

Address:	0x960E	Effective mode:	-
Min.:	–32767	Unit:	°C
Max.:	32767	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:
–32767°C to +32767°C
Description
-

L6-15 **AI3 temperature mode - motor temperature sampling value**

Address:	0x960F	Effective mode:	-
Min.:	0	Unit:	°C
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0°C to 65535°C
Description
-

L6-16 **Motor protection status word**

Address:	0x9610	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

Bit00: Motor overload
Bit01: Motor pre-overload
Bit02: Output load loss (reserved)
Bit03: PG-detected fault (reserved)
Bit04: Current control error
Bit05: Locked-rotor
Bit06: Motor wire breakage, two- or three-phase loss (reserved)
Bit07: Excessive motor load at constant current (reserved)
Bit08:VC out-of-step due to magnetic flux exception
Bit09: Abnormal speed fluctuation (reserved)
Bit10: Motor parameter setting error (reserved)
Bit11: HSVM sampling card wire breakage and misphase (reserved)
Bit12: Synchronous motor overcurrent (reserved)

Description

-

L6-17 Speed controller status word

Address:	0x9611	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

Bit00: Speed loop enable
Bit01: Actual state of integral mode
Bit02: Integral forcing enable Bit03: Feedforward torque enable
Bit04: Positive limit reach Bit05: Negative limit reach
Bit06: Integral hold enable
Bit07: Fast integral cancel enable
Bit08: Anti-load disturbance enable
Bit09: Reserved
Bit10: Reserved
Bit11: Reserved
Bit12: Reserved
Bit13: Reserved
Bit14: Reserved
Bit15: Reserved

Description

-

L6-18 VDC control status word

Address:	0x9612	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

Bit00: Undervoltage suppression enable
Bit01: Overvoltage suppression enable
Bit02: Low frequency lower limit for enabling undervoltage suppression
Bit03: Reserved
Bit04: Reserved
Bit05: Reserved
Bit06: Reserved
Bit07: Reserved
Bit08: Reserved
Bit09: Reserved
Bit10: Reserved
Bit11: Reserved
Bit12: Reserved
Bit13: Reserved
Bit14: Reserved
Bit15: Reserved

Description

-

L6-19 Excitation module status word

Address:	0x9613	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

-

L6-20 Motor model status word

Address:	0x9614	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

-

L6-21 Motor current loop status word

Address:	0x9615	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:

0 to 65535

Description

-

L6-22 **Motor V/f control status word**

Address:	0x9616	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L6-23 **Per-unit frequency after HDO function source selection**

Address:	0x9617	Effective mode:	-
Min.:	0.00	Unit:	%
Max.:	655.35	Data type:	Int16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00% to 655.35%
Description
-

L6-24 **Per-unit frequency before HDO curve correction**

Address:	0x9618	Effective mode:	-
Min.:	0.00	Unit:	%
Max.:	655.35	Data type:	Int16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00% to 655.35%
Description
-

L6-25 **Per-unit value of HDO final output frequency**

Address:	0x9619	Effective mode:	-
Min.:	0.00	Unit:	%
Max.:	655.35	Data type:	Int16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00% to 655.35%
Description
-

L6-26 **Actual value of HDO final output frequency**

Address:	0x961A	Effective mode:	-
Min.:	0.00	Unit:	kHz
Max.:	655.35	Data type:	UInt16
Default:	0.00	Change:	Unchangeable

Value Range:
0.00 kHz to 655.35 kHz
Description
-

L6-35 **System main status word D**

Address:	0x9623	Effective mode:	-

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:

Bit0: Zero-speed running (inactive at stop)
Bit1: Zero-speed running (active at stop)
Bit2: Frequency-level detection 1
Bit3: Frequency-level detection 2
Bit4: AI1 > AI2
Bit5: Simple PLC cycle completion
Bit6: Communication setpoint
Bit7: STO state
Bit8: Current 1 reach
Bit9: Current 2 reach
Bit10: Zero current state
Bit11: Output overcurrent
Bit12: Motor overload pre-warning
Bit13: AC drive overload pre-warning
Bit14: Undervoltage
Bit15: Load loss

Description

-

4.74 L7: Word Connector 3 Parameters

L7-00 Per-unit constant value 22

Address: 0x9700
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:

0 to 65535

Description

-

L7-01 Per-unit constant value 23

Address: 0x9701
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:

0 to 65535

Description

-

L7-02 Per-unit constant value 24

Address: 0x9702
Min.: 0
Effective mode: -
Unit: -

Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L7-03 **Per-unit constant value 25**
Address: 0x9703 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L7-04 **Per-unit constant value 26**
Address: 0x9704 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L7-05 **Per-unit constant value 27**
Address: 0x9705 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L7-06 **Per-unit constant value 28**
Address: 0x9706 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L7-07 **Per-unit constant value 29**
Address: 0x9707 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable

Value Range:
0 to 65535
Description
-

L7-08 **Per-unit constant value 30**

Address:	0x9708	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-09 **Per-unit constant value 31**

Address:	0x9709	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-10 **Per-unit constant value 32**

Address:	0x970A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-11 **Per-unit constant value 33**

Address:	0x970B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-12 **Per-unit constant value 34**

Address:	0x970C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

L7-13 **Per-unit constant value 35**

Address:	0x970D	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-14 **Per-unit constant value 36**

Address:	0x970E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-15 **Per-unit constant value 37**

Address:	0x970F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-16 **Per-unit constant value 38**

Address:	0x9710	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-17 **Per-unit constant value 39**

Address:	0x9711	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-18 **Per-unit constant value 40**

Address:	0x9712	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-19 **Per-unit constant value 41**

Address:	0x9713	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-20 **Per-unit constant value 42**

Address:	0x9714	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-21 **B2W module A**

Address:	0x9715	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-22 **B2W module B**

Address:	0x9716	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-23 **B2W module C**

Address:	0x9717	Effective mode:	-

Min.: 0
Max.: 65535
Default: 0
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L7-24 B2W module D

Address: 0x9718
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L7-25 DW-W HIWORD A

Address: 0x9719
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L7-26 DW-W LOWORD A

Address: 0x971A
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L7-27 DW-W HIWORD B

Address: 0x971B
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L7-28 DW-W LOWORD B

Address: 0x971C
Min.: 0
Max.: 65535
Effective mode: -
Unit: -
Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L7-29 DW-W HIWORD C

Address: 0x971D Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L7-30 DW-W LOWORD C

Address: 0x971E Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L7-31 DW-W HIWORD D

Address: 0x971F Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L7-32 DW-W LOWORD D

Address: 0x9720 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535

Description

-

L7-36 16-bit parameter monitoring 1

Address: 0x9724 Effective mode: -

Min.: 0 Unit: -

Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable

Value Range:

0 to 65535
Description
-

L7-37 **16-bit parameter monitoring 2**

Address:	0x9725	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-38 **16-bit parameter monitoring 3**

Address:	0x9726	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-39 **16-bit parameter monitoring 4**

Address:	0x9727	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-40 **16-bit parameter monitoring 5**

Address:	0x9728	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-41 **Output of word selector A**

Address:	0x9729	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

L7-42 **Output of word selector B**

Address:	0x972A	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-43 **Output of word selector C**

Address:	0x972B	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-44 **Output of word selector D**

Address:	0x972C	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L7-50 **Internal parameter monitoring output 1**

Address:	0x9732	Effective mode:	-
Min.:	–32767	Unit:	-
Max.:	32767	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:
–32767 to +32767
Description
-

L7-51 **Internal parameter monitoring output 2**

Address:	0x9733	Effective mode:	-
Min.:	–32767	Unit:	-
Max.:	32767	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:
–32767 to +32767
Description
-

L7-52 **Internal parameter monitoring output 3**

Address:	0x9734	Effective mode:	-
Min.:	–32767	Unit:	-
Max.:	32767	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:
–32767 to +32767
Description
-

L7-53 **Internal parameter monitoring output 4**

Address:	0x9735	Effective mode:	-
Min.:	–32767	Unit:	-
Max.:	32767	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:
–32767 to +32767
Description
-

L7-54 **Internal parameter monitoring output 5**

Address:	0x9736	Effective mode:	-
Min.:	–32767	Unit:	-
Max.:	32767	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:
–32767 to +32767
Description
-

L7-55 **Internal parameter monitoring output 6**

Address:	0x9737	Effective mode:	-
Min.:	–32767	Unit:	-
Max.:	32767	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:
–32767 to +32767
Description
-

L7-56 **Internal parameter monitoring output 7**

Address:	0x9738	Effective mode:	-
Min.:	–32767	Unit:	-
Max.:	32767	Data type:	Int16
Default:	0	Change:	Unchangeable

Value Range:
–32767 to +32767
Description
-

L7-57 **Internal parameter monitoring output 8**

Address:	0x9739	Effective mode:	-

Min.: –32767
Max.: 32767
Default: 0
Unit: -
Data type: Int16
Change: Unchangeable

Value Range:
–32767 to +32767

Description
-

4.75 L9: DWord Connector 1 Parameters

L9-00 **Output of W-DW module A**

Address: 0x9900
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L9-01 **Output of W-DW module B**

Address: 0x9901
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L9-02 **Output of W-DW module C**

Address: 0x9902
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L9-03 **Output of W-DW module D**

Address: 0x9903
Min.: 0
Max.: 65535
Default: 0
Effective mode: -
Unit: -
Data type: UInt16
Change: Unchangeable

Value Range:
0 to 65535

Description
-

L9-04 **Output of DWord selector module A**

Address:	0x9904	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L9-05 **Output of DWord selector module B**

Address:	0x9905	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L9-06 **Output of DWord selector module C**

Address:	0x9906	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L9-07 **Output of DWord selector module D**

Address:	0x9907	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L9-08 **Output of fixed-point absolute value module F**

Address:	0x9908	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L9-09 **Output of fixed-point absolute value module G**

Address:	0x9909	Effective mode:	-

Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L9-10 Output of fixed-point absolute value module H

Address: 0x990A Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L9-11 Output of fixed-point ADD/SUBTRACT module F

Address: 0x990B Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L9-12 Output of fixed-point ADD/SUBTRACT module G

Address: 0x990C Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L9-13 Output of fixed-point ADD/SUBTRACT module H

Address: 0x990D Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L9-14 Output of fixed-point MULTIPLY/DIVIDE module F

Address: 0x990E Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16

Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L9-15 Output of fixed-point MULTIPLY/DIVIDE module G

Address: 0x990F Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L9-16 Output of fixed-point MULTIPLY/DIVIDE module H

Address: 0x9910 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L9-17 Output of fixed-point filter module E

Address: 0x9911 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L9-18 Output of fixed-point filter module F

Address: 0x9912 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:
0 to 65535
Description
-

L9-19 Output of fixed-point limiting module E

Address: 0x9913 Effective mode: -
Min.: 0 Unit: -
Max.: 65535 Data type: UInt16
Default: 0 Change: Unchangeable
Value Range:

0 to 65535
Description
-

L9-20 **Output of fixed-point limiting module F**

Address:	0x9914	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L9-21 **32-bit parameter monitoring 1**

Address:	0x9915	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L9-22 **32-bit parameter monitoring 2**

Address:	0x9916	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L9-23 **32-bit parameter monitoring 3**

Address:	0x9917	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L9-24 **32-bit parameter monitoring 4**

Address:	0x9918	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535

Description
-

L9-25 **32-bit parameter monitoring 5**

Address:	0x9919	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L9-30 **Variable connector viewing output 1**

Address:	0x991E	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L9-31 **Variable connector viewing output 2**

Address:	0x991F	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L9-32 **Variable connector viewing output 3**

Address:	0x9920	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L9-33 **Variable connector viewing output 4**

Address:	0x9921	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L9-34 **Variable connector viewing output 5**

Address:	0x9922	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L9-35 **Variable connector viewing output 6**

Address:	0x9923	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L9-36 **Variable connector viewing output 7**

Address:	0x9924	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

L9-37 **Variable connector viewing output 8**

Address:	0x9925	Effective mode:	-
Min.:	0	Unit:	-
Max.:	65535	Data type:	UInt16
Default:	0	Change:	Unchangeable

Value Range:
0 to 65535
Description
-

4.76 LB: Floating-point Connector 1 Parameters

LB-00 **AI1 input per-unit value**

Address:	0x9B00	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LB-01 **AI2 input per-unit value**

Address:	0x9B01	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LB-02 **AI3 input per-unit value**

Address:	0x9B02	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LB-03 **HDI input per-unit value**

Address:	0x9B03	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LB-04 **Per-unit value of speed reference set through communication**

Address:	0x9B04	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LB-05 **Main speed reference**

Address:	0x9B05	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LB-06 **Auxiliary speed reference**

Address:	0x9B06	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LB-07 **Channel target speed**

Address:	0x9B07	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LB-08 **Channel supplementary speed**

Address:	0x9B08	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LB-09 **Supplementary speed setpoint**

Address:	0x9B09	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LB-10 **Maximum forward speed**

Address:	0x9B0A	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LB-11 **Minimum forward speed**

Address:	0x9B0B	Effective mode:	-

Min.: 0.0
Max.: 6553.5
Default: 0.0
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LB-12 Maximum reverse speed

Address: 0x9B0C
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LB-13 Minimum reverse speed

Address: 0x9B0D
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LB-14 Forward limit

Address: 0x9B0E
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LB-15 Reverse limit

Address: 0x9B0F
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LB-16 Speed reference - raw

Address: 0x9B10
Min.: 0.0
Max.: 6553.5
Effective mode: -
Unit: %
Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LB-17 Speed reference - direction limit

Address: 0x9B11 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LB-18 Speed reference - after limiting

Address: 0x9B12 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LB-19 Speed reference - after skip frequency

Address: 0x9B13 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LB-20 Speed reference - after ramp shift

Address: 0x9B14 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LB-21 Torque reference

Address: 0x9B15 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LB-22 **Supplementary torque**

Address:	0x9B16	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LB-23 **Torque reference after filtering**

Address:	0x9B17	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LB-24 **Target torque reference**

Address:	0x9B18	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LB-25 **Maximum torque**

Address:	0x9B19	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LB-26 **Minimum torque**

Address:	0x9B1A	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description
-

LB-27 **RFG reference input**

Address:	0x9B1B	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LB-28 **RFG calculation input**

Address:	0x9B1C	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LB-29 **RFG actual target**

Address:	0x9B1D	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LB-30 **RFG calculation output**

Address:	0x9B1E	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LB-31 **RFG final output (maximum per-unit value)**

Address:	0x9B1F	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LB-32 **RFG final output (rated per-unit value)**

Address:	0x9B20	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LB-33 **Updown upper limit**

Address:	0x9B21	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LB-34 **Updown lower limit**

Address:	0x9B22	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LB-35 **RFG acceleration**

Address:	0x9B23	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LB-36 **V/f separation voltage output**

Address:	0x9B24	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LB-37 **RFG force value of startup frequency function**

Address:	0x9B25	Effective mode:	-

Min.: 0.0
Max.: 6553.5
Default: 0.0
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LB-38 Speed limit in torque control mode

Address: 0x9B26
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LB-39 Frequency offset in torque control mode

Address: 0x9B27
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: %
Data type: UInt16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LB-40 Running frequency

Address: 0x9B28
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LB-41 Frequency reference

Address: 0x9B29
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LB-42 Speed reference - after UpDn

Address: 0x9B2A
Min.: 0.0
Max.: 6553.5
Effective mode: -
Unit: %
Data type: Int16

Default: 0.0 Change: Unchangeable
Value Range:
0.0% to 6553.5%
Description
-

4.77 LC: Floating-point Connector 2 Parameters

LC-00 **Final frequency reference**
Address: 0x9C00 Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: Int16
Default: 0.0 Change: Unchangeable
Value Range:
0.0% to 6553.5%
Description
-

LC-01 **Final voltage reference**
Address: 0x9C01 Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: Int16
Default: 0.0 Change: Unchangeable
Value Range:
0.0% to 6553.5%
Description
-

LC-02 **Output voltage without limit**
Address: 0x9C02 Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: Int16
Default: 0.0 Change: Unchangeable
Value Range:
0.0% to 6553.5%
Description
-

LC-03 **Voltage phase angle**
Address: 0x9C03 Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: Int16
Default: 0.0 Change: Unchangeable
Value Range:
0.0% to 6553.5%
Description
-

LC-04 **Maximum output voltage**
Address: 0x9C04 Effective mode: -

Min.: 0.0
Max.: 6553.5
Default: 0.0
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LC-05 **Current loop saturation voltage**

Address: 0x9C05
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LC-06 **Torque reference**

Address: 0x9C06
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LC-07 **Final flux reference**

Address: 0x9C07
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LC-08 **Excitation current reference**

Address: 0x9C08
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LC-09 **Torque current reference**

Address: 0x9C09
Min.: 0.0
Max.: 6553.5
Effective mode: -
Unit: %
Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LC-10 Rotor speed

Address: 0x9C0A Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LC-11 Encoder speed

Address: 0x9C0B Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LC-12 Output torque

Address: 0x9C0C Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LC-13 Flux amplitude

Address: 0x9C0D Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LC-14 Flux angle

Address: 0x9C0E Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LC-15 Synchronization frequency

Address:	0x9C0F	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LC-16 Synchronous rotation angle

Address:	0x9C10	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LC-17 Motor object output power

Address:	0x9C11	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LC-18 Output voltage amplitude

Address:	0x9C12	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LC-19 Output current amplitude

Address:	0x9C13	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description
-

LC-20 **Actual excitation current of motor**

Address:	0x9C14	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LC-21 **Actual torque current of motor**

Address:	0x9C15	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LC-22 **Output power**

Address:	0x9C16	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LC-23 **PWMU**

Address:	0x9C17	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LC-24 **PWMV**

Address:	0x9C18	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LC-25 **PWMW**

Address: 0x9C19 | Effective mode: -
Min.: 0.0 | Unit: %
Max.: 6553.5 | Data type: Int16
Default: 0.0 | Change: Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LC-26 **IU**

Address: 0x9C1A | Effective mode: -
Min.: 0.0 | Unit: %
Max.: 6553.5 | Data type: Int16
Default: 0.0 | Change: Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LC-27 **IV**

Address: 0x9C1B | Effective mode: -
Min.: 0.0 | Unit: %
Max.: 6553.5 | Data type: Int16
Default: 0.0 | Change: Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LC-28 **IW**

Address: 0x9C1C | Effective mode: -
Min.: 0.0 | Unit: %
Max.: 6553.5 | Data type: Int16
Default: 0.0 | Change: Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LC-31 **Drive bus voltage**

Address: 0x9C1F | Effective mode: -
Min.: 0.0 | Unit: %
Max.: 6553.5 | Data type: UInt16
Default: 0.0 | Change: Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LC-32 **Accumulative drive overload**

Address: 0x9C20 | Effective mode: -

Min.: 0.0
Max.: 6553.5
Default: 0.0
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LC-33 Accumulative motor overload

Address: 0x9C21
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LC-34 Output voltage phase

Address: 0x9C22
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LC-35 Output current phase

Address: 0x9C23
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LC-36 General PID output

Address: 0x9C24
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LC-37 General PID error

Address: 0x9C25
Min.: 0.0
Max.: 6553.5
Effective mode: -
Unit: %
Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LC-38 General PID reference

Address: 0x9C26 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LC-39 General PID feedback

Address: 0x9C27 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LC-40 General PID proportional output

Address: 0x9C28 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LC-41 General PID integral output

Address: 0x9C29 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LC-42 General PID derivative output

Address: 0x9C2A Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%
Description
-

LC-92 **Variable connector viewing output 1**

Address:	0x9C5C	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LC-93 **Variable connector viewing output 2**

Address:	0x9C5D	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LC-94 **Variable connector viewing output 3**

Address:	0x9C5E	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LC-95 **Variable connector viewing output 4**

Address:	0x9C5F	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LC-96 **Variable connector viewing output 5**

Address:	0x9C60	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LC-97 **Variable connector viewing output 6**

Address:	0x9C61	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LC-98 **Variable connector viewing output 7**

Address:	0x9C62	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LC-99 **Variable connector viewing output 8**

Address:	0x9C63	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

4.78 LD: Floating-point Connector 3 Parameters

LD-00 **Output of floating-point selector module A**

Address:	0x9D00	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-01 **Output of floating-point selector module B**

Address:	0x9D01	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-02 **Output of floating-point selector module C**

Address:	0x9D02	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-03 **Output of floating-point selector module D**

Address:	0x9D03	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-04 **Output of floating-point selector module E**

Address:	0x9D04	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-05 **Output of floating-point selector module F**

Address:	0x9D05	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-06 **Output of floating-point selector module G**

Address:	0x9D06	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LD-07 **Output of floating-point selector module H**

Address:	0x9D07	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-08 **Output of floating-point absolute value module A**

Address:	0x9D08	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-09 **Output of floating-point absolute value module B**

Address:	0x9D09	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-10 **Output of floating-point absolute value module C**

Address:	0x9D0A	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-11 **Output of floating-point absolute value module D**

Address:	0x9D0B	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-12 **Output of floating-point absolute value module E**

Address:	0x9D0C	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-13 **Output of floating-point ADD/SUBTRACT module A**

Address:	0x9D0D	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-14 **Output of floating-point ADD/SUBTRACT module B**

Address:	0x9D0E	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-15 **Output of floating-point ADD/SUBTRACT module C**

Address:	0x9D0F	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-16 **Output of floating-point ADD/SUBTRACT module D**

Address:	0x9D10	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-17 **Output of floating-point ADD/SUBTRACT module E**

Address:	0x9D11	Effective mode:	-

Min.: 0.0 Unit: %
Max.: 6553.5 Data type: Int16
Default: 0.0 Change: Unchangeable
Value Range:
0.0% to 6553.5%
Description
-

LD-18 Output of floating-point MULTIPLY/DIVIDE module A

Address: 0x9D12 Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: Int16
Default: 0.0 Change: Unchangeable
Value Range:
0.0% to 6553.5%
Description
-

LD-19 Output of floating-point MULTIPLY/DIVIDE module B

Address: 0x9D13 Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: Int16
Default: 0.0 Change: Unchangeable
Value Range:
0.0% to 6553.5%
Description
-

LD-20 Output of floating-point MULTIPLY/DIVIDE module C

Address: 0x9D14 Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: Int16
Default: 0.0 Change: Unchangeable
Value Range:
0.0% to 6553.5%
Description
-

LD-21 Output of floating-point MULTIPLY/DIVIDE module D

Address: 0x9D15 Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: Int16
Default: 0.0 Change: Unchangeable
Value Range:
0.0% to 6553.5%
Description
-

LD-22 Output of floating-point MULTIPLY/DIVIDE module E

Address: 0x9D16 Effective mode: -
Min.: 0.0 Unit: %
Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-23 Output of floating-point filter module A

Address: 0x9D17 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-24 Output of floating-point filter module B

Address: 0x9D18 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-25 Output of floating-point filter module C

Address: 0x9D19 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-26 Output of floating-point filter module D

Address: 0x9D1A Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-27 Output of floating-point limiting module A

Address: 0x9D1B Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-28 **Output of floating-point limiting module B**

Address:	0x9D1C	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-29 **Output of floating-point limiting module C**

Address:	0x9D1D	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-30 **Output of floating-point limiting module D**

Address:	0x9D1E	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-31 **Output of word-to-floating point module A**

Address:	0x9D1F	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-32 **Output of word-to-floating point module B**

Address:	0x9D20	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description
-

LD-33 **Output of word-to-floating point module C**

Address:	0x9D21	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-34 **Output of word-to-floating point module D**

Address:	0x9D22	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-35 **Output of DWord-to-floating point module A**

Address:	0x9D23	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-36 **Output of DWord-to-floating point module B**

Address:	0x9D24	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-37 **Output of DWord-to-floating point module C**

Address:	0x9D25	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-38 **Output of DWord-to-floating point module D**

Address:	0x9D26	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-39 **Force value of motor-driven potentiometer**

Address:	0x9D27	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-40 **Reset value of motor-driven potentiometer**

Address:	0x9D28	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-41 **Maximum value of motor-driven potentiometer**

Address:	0x9D29	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-42 **Minimum value of motor-driven potentiometer**

Address:	0x9D2A	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-43 **Initial value of motor-driven potentiometer**

Address:	0x9D2B	Effective mode:	-

Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-44 **Process operation output value of motor-driven potentiometer**

Address:	0x9D2C	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-45 **Final output value of motor-driven potentiometer**

Address:	0x9D2D	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-46 **Output of multi-point curve module A**

Address:	0x9D2E	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-47 **Output of multi-point curve module B**

Address:	0x9D2F	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-48 **Multi-reference selection output**

Address:	0x9D30	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-49 Multi-reference 1 output

Address: 0x9D31 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-50 Multi-reference 2 output

Address: 0x9D32 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-51 Multi-reference 3 output

Address: 0x9D33 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-52 Multi-reference 4 output

Address: 0x9D34 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-53 Multi-reference 5 output

Address: 0x9D35 Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-54 **Multi-reference 6 output**

Address:	0x9D36	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-55 **Multi-reference 7 output**

Address:	0x9D37	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-56 **Multi-reference 8 output**

Address:	0x9D38	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-57 **Multi-reference 9 output**

Address:	0x9D39	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-58 **Multi-reference 10 output**

Address:	0x9D3A	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description
-

LD-59 **Multi-reference 11 output**

Address:	0x9D3B	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-60 **Multi-reference 12 output**

Address:	0x9D3C	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-61 **Multi-reference 13 output**

Address:	0x9D3D	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-62 **Multi-reference 14 output**

Address:	0x9D3E	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-63 **Multi-reference 15 output**

Address:	0x9D3F	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-64 **Multi-reference 16 output**

Address:	0x9D40	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-65 **Per-unit constant value 1**

Address:	0x9D41	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-66 **Per-unit constant value 2**

Address:	0x9D42	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-67 **Per-unit constant value 3**

Address:	0x9D43	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-68 **Per-unit constant value 4**

Address:	0x9D44	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-69 **Per-unit constant value 5**

Address:	0x9D45	Effective mode:	-

Min.: 0.0
Max.: 6553.5
Default: 0.0
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LD-70 Per-unit constant value 6

Address: 0x9D46
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LD-71 Per-unit constant value 7

Address: 0x9D47
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LD-72 Per-unit constant value 8

Address: 0x9D48
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LD-73 Per-unit constant value 9

Address: 0x9D49
Min.: 0.0
Max.: 6553.5
Default: 0.0
Effective mode: -
Unit: %
Data type: Int16
Change: Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LD-74 Per-unit constant value 10

Address: 0x9D4A
Min.: 0.0
Max.: 6553.5
Effective mode: -
Unit: %
Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-75 Per-unit constant value 11

Address: 0x9D4B Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-76 Per-unit constant value 12

Address: 0x9D4C Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-77 Per-unit constant value 13

Address: 0x9D4D Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-78 Per-unit constant value 14

Address: 0x9D4E Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

LD-79 Per-unit constant value 15

Address: 0x9D4F Effective mode: -

Min.: 0.0 Unit: %

Max.: 6553.5 Data type: Int16

Default: 0.0 Change: Unchangeable

Value Range:

0.0% to 6553.5%
Description
-

LD-80 **Per-unit constant value 16**

Address:	0x9D50	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-81 **Per-unit constant value 17**

Address:	0x9D51	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-82 **Per-unit constant value 18**

Address:	0x9D52	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-83 **Per-unit constant value 19**

Address:	0x9D53	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-84 **Per-unit constant value 20**

Address:	0x9D54	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%

Description
-

LD-85 **Per-unit constant value 21**

Address:	0x9D55	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-86 **Updown offset**

Address:	0x9D56	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-87 **Percentage of current length relative to target length**

Address:	0x9D57	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-88 **Percentage of current count value relative to target count value**

Address:	0x9D58	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-89 **Percentage of AO1 value written through communication**

Address:	0x9D59	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-90 **Percentage of AO2 value written through communication**

Address:	0x9D5A	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-91 **Percentage of HDO value written through communication**

Address:	0x9D5B	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-92 **Current value based on the maximum 1000 A per-unit value**

Address:	0x9D5C	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-93 **Voltage value based on the maximum 1000 V per-unit value**

Address:	0x9D5D	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-94 **AO output torque absolute value output**

Address:	0x9D5E	Effective mode:	-
Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	UInt16
Default:	0.0	Change:	Unchangeable

Value Range:
0.0% to 6553.5%
Description
-

LD-95 **AO output torque (–200.0% to +200.0%)**

Address:	0x9D5F	Effective mode:	-

Min.:	0.0	Unit:	%
Max.:	6553.5	Data type:	Int16
Default:	0.0	Change:	Unchangeable

Value Range:

0.0% to 6553.5%

Description

-

5 List of Parameters

5.1 List of Parameters

If FP-00 is set to a non-zero value (password protection is enabled), the parameter menu is accessible in parameter mode and user-modification mode only after the correct password is entered. To disable password protection, set FP-00 to 0.

If a password is set to lock the operating panel, password authentication is required every time you access the parameter menu for reading or writing parameter values using the operating panel. During communication control, the values of parameters (excluding parameters in groups FP and FF) can be read and written without password authentication.

Password protection is not available for the parameter menu in user-defined mode.

Groups F, A, B, C, and H are standard function parameters, group U is monitoring function parameters, and group L is connector function parameters. The following symbols are used in the parameter table:

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F0-00	0xF000	Load type display	0: Heavy load application 1: Light load application	0	-	Unchangea ble	" F0-00" on page 241
F0-01	0xF001	Motor 1 control mode	0: SVC 1: FVC 2: V/f	2	-	Changeable only at stop	" F0-01" on page 241
F0-02	0xF002	Operation command source	0: Operating panel 1: Terminal 2: Communication 3: Customization	0	-	Changeable only at stop	" F0-02" on page 241
F0-03	0xF003	Main frequency source X	0: Digital setting (non-retentive at power failure) 1: Digital setting (retentive at power failure) 2: AI1 3: AI2 4: AI3 5: Pulse reference (DI5) 6: Multi-reference 7: Simple PLC 8: PID 9: Communication Others: F connector	0	-	Changeable only at stop	" F0-03" on page 242
F0-04	0xF004	Auxiliary frequency source Y	0: Digital setting (non-retentive at power failure) 1: Digital setting (retentive at power failure) 2: AI1 3: AI2 4: AI3 5: Pulse reference (DI5) 6: Multi-reference 7: Simple PLC 8: PID 9: Communication Others: F connector	0	-	Changeable only at stop	" F0-04" on page 243

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F0-05	0xF005	Base value of range of auxiliary frequency source for superposition	0: Relative to maximum frequency 1: Relative to main frequency X	0	-	Changeable at any time	" F0-05" on page 245
F0-06	0xF006	Range of auxiliary frequency source Y for superposition	0% to 150%	100	%	Changeable at any time	" F0-06" on page 245
F0-07	0xF007	Frequency source superposition	Ones: Frequency reference 0: Main frequency source X 1: Main and auxiliary operation result (based on tens) 2: Switchover between main frequency source X and auxiliary frequency source Y 3: Switchover between main frequency source X and the main and auxiliary operation result 4: Switchover between auxiliary frequency source Y and the main and auxiliary operation result Tens: Main and auxiliary frequency reference operation 0: Main + Auxiliary 1: Main – Auxiliary 2: Max. (main, auxiliary) 3: Min. (main, auxiliary) 4: Main x Auxiliary	0	-	Changeable at any time	" F0-07" on page 245
F0-08	0xF008	Preset frequency	0.00 Hz to F0-10	50.00	Hz	Changeable at any time	" F0-08" on page 246
F0-09	0xF009	Running direction	1: Default direction 1: Reverse to the default direction	0	-	Changeable at any time	" F0-09" on page 246
F0-10	0xF00A	Maximum frequency	50.00 Hz to 500.00 Hz	50.00	Hz	Changeable only at stop	" F0-10" on page 247
F0-11	0xF00B	Source of frequency upper limit	0: F0-12 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication Others: F connector	0	-	Changeable only at stop	" F0-11" on page 247
F0-12	0xF00C	Frequency upper limit	F0-14 to F0-10	50.00	Hz	Changeable at any time	" F0-12" on page 248
F0-13	0xF00D	Frequency upper limit offset	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	" F0-13" on page 248
F0-14	0xF00E	Frequency lower limit	0.00 Hz to F0-12	0.00	Hz	Changeable at any time	" F0-14" on page 248
F0-15	0xF00F	Carrier frequency	0.5 kHz to 16.0 kHz	6.0	kHz	Changeable at any time	" F0-15" on page 248

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F0-16	0xF010	Carrier frequency adjusted with temperature	0: No 1: Yes	0	-	Changeable at any time	" F0-16" on page 248
F0-17	0xF011	Acceleration time 1	0.0s to 6500.0s	20.0	s	Changeable at any time	" F0-17" on page 249
F0-18	0xF012	Deceleration time 1	0.0s to 6500.0s	20.0	s	Changeable at any time	" F0-18" on page 249
F0-19	0xF013	Acceleration/ Deceleration time unit	0: 1s 1: 0.1s 2: 0.01s	1	-	Changeable only at stop	" F0-19" on page 249
F0-20	0xF014	Offset frequency source	0: F0-21 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable only at stop	" F0-20" on page 249
F0-21	0xF015	Offset frequency	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	" F0-21" on page 251
F0-22	0xF016	Decimal places of frequency reference	1: 0.1 Hz 2: 0.01 Hz	2	-	Changeable only at stop	" F0-22" on page 251
F0-23	0xF017	Retention of digital setting	0: Non-retentive 1: Retentive	0	-	Changeable at any time	" F0-23" on page 251
F0-24	0xF018	Motor parameter group	0: Motor parameter group 1 1: Motor parameter group 2 2: Motor parameter group 3 3: Motor parameter group 4	0	-	Changeable only at stop	" F0-24" on page 251
F0-25	0xF019	Acceleration/ Deceleration time base frequency	0: F0-10 (maximum frequency) 1: Frequency reference 2: 100 Hz 3: Rated frequency	0	-	Changeable only at stop	" F0-25" on page 252
F0-26	0xF01A	Base frequency for UP/DOWN modification during running	0: Running frequency 1: Frequency reference	0	-	Changeable only at stop	" F0-26" on page 252

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F0-27	0xF01B	Frequency reference source bound to command source	Ones: Frequency reference source bound to operating panel control 0: No binding 1: Digital setting 2: AI1 3: AI2 4: AI3 5: Pulse 6: Multi-reference 7: Simple PLC 8: PID 9: Communication Tens: Frequency reference source bound to terminal control 0: No binding 1: Digital setting 2: AI1 3: AI2 4: AI3 5: Pulse 6: Multi-reference 7: Simple PLC 8: PID 9: Communication Hundreds: Frequency reference source bound to communication control 0: No binding 1: Digital setting 2: AI1 3: AI2 4: AI3 5: Pulse 6: Multi-reference 7: Simple PLC 8: PID 9: Communication	0	-	Changeable at any time	" F0-27" on page 252
F0-28	0xF01C	Communication protocol	0 Modbus 1: Extended communication protocol	0	-	Changeable only at stop	" F0-28" on page 253
F0-29	0xF01D	Load type	0: Heavy load application 1: Light load application	0	-	Changeable only at stop	" F0-29" on page 254
F1-00	0xF100	Motor type	0: Common asynchronous motor 1: Variable frequency asynchronous motor 2: Permanent magnet synchronous motor	0	-	Changeable only at stop	" F1-00" on page 254
F1-01	0xF101	Rated motor power	0.1 kW to 1000.0 kW	3.7	kW	Changeable only at stop	" F1-01" on page 254
F1-02	0xF102	Rated motor voltage	1 V to 2000 V	380	V	Changeable only at stop	" F1-02" on page 254

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F1-03	0xF103	Rated motor current	0.01 A to 655.35 A	9.00	A	Changeable only at stop	"F1-03" on page 255
F1-04	0xF104	Rated motor frequency	0.01 Hz to F0-10	50.00	Hz	Changeable only at stop	"F1-04" on page 255
F1-05	0xF105	Rated motor speed	1 RPM to 65535 RPM	1460	RPM	Changeable only at stop	"F1-05" on page 255
F1-06	0xF106	Asynchronous motor stator resistance	0.001 Ω to 65.535 Ω	1.204	Ω	Changeable only at stop	"F1-06" on page 255
F1-07	0xF107	Asynchronous motor rotor resistance	0.001 Ω to 65.535 Ω	0.908	Ω	Changeable only at stop	"F1-07" on page 255
F1-08	0xF108	Asynchronous motor leakage inductance	0.01 mH to 655.35 mH	5.28	mH	Changeable only at stop	"F1-08" on page 255
F1-09	0xF109	Asynchronous motor mutual inductance	0.1 mH to 6553.5 mH	156.8	mH	Changeable only at stop	"F1-09" on page 256
F1-10	0xF10A	Asynchronous motor no-load current	0.01 A to F1-03	4.20	A	Changeable only at stop	"F1-10" on page 256
F1-16	0xF110	Synchronous motor stator resistance	0.001 Ω to 65.535 Ω	1.204	Ω	Changeable only at stop	"F1-16" on page 256
F1-17	0xF111	Synchronous motor D axis inductance	0.01 mH to 655.35 mH	5.28	mH	Changeable only at stop	"F1-17" on page 256
F1-18	0xF112	Synchronous motor Q axis inductance	0.01 mH to 655.35 mH	5.28	mH	Changeable only at stop	"F1-18" on page 256
F1-20	0xF114	Synchronous motor back EMF coefficient	0.0 V to 6553.5 V	300.0	V	Changeable only at stop	"F1-20" on page 257
F1-27	0xF11B	Encoder PPR	1 to 65535	1024	-	Changeable only at stop	"F1-27" on page 257
F1-28	0xF11C	Encoder type	0: ABZ incremental encoder 1: 23-bit encoder 2: Resolver 3: External input	0	-	Changeable only at stop	"F1-28" on page 257
F1-29	0xF11D	Speed feedback PG card	0: Local PG card 1: Extension PG card	0	-	Changeable only at stop	"F1-29" on page 257
F1-30	0xF11E	A/B phase sequence of encoder	0: Forward 1: Reverse	0	-	Changeable only at stop	"F1-30" on page 258
F1-31	0xF11F	Encoder installation angle	0.0° to 359.9°	0.0	°	Changeable only at stop	"F1-31" on page 258
F1-34	0xF122	Number of resolver pole pairs	1 to 65535	1	-	Changeable only at stop	"F1-34" on page 258

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F1-36	0xF124	Speed feedback PG wire breakage detection time	0.0s to 10.0s	0.0	s	Changeable only at stop	" F1-36" on page 258
F1-37	0xF125	Auto-tuning	0: No operation 1: Static auto-tuning on partial parameters of asynchronous motor 2: Dynamic auto-tuning on asynchronous motor 3: Static auto-tuning on all parameters of asynchronous motor 4: Inertia auto-tuning 5: Deadzone auto-tuning 11: With-load auto-tuning on synchronous motor (excluding back EMF) 12: No-load dynamic auto-tuning on synchronous motor 13: Static auto-tuning on all parameters of synchronous motor (excluding zero point angle)	0	-	Changeable only at stop	" F1-37" on page 258
F2-00	0xF200	Speed loop proportional gain 1	1 to 300	30	-	Changeable at any time	" F2-00" on page 259
F2-01	0xF201	Speed loop integral time 1	0.01s to 10.00s	0.50	s	Changeable at any time	" F2-01" on page 259
F2-02	0xF202	Switchover frequency 1	0.00 Hz to F2-05	5.00	Hz	Changeable at any time	" F2-02" on page 259
F2-03	0xF203	Speed loop proportional gain 2	1 to 300	20	-	Changeable at any time	" F2-03" on page 260
F2-04	0xF204	Speed loop integral time 2	0.01s to 10.00s	1.00	s	Changeable at any time	" F2-04" on page 260
F2-05	0xF205	Switchover frequency 2	F2-02 to F0-10	10.00	Hz	Changeable at any time	" F2-05" on page 260
F2-06	0xF206	Vector control slip gain	50% to 200%	100	%	Changeable at any time	" F2-06" on page 261
F2-07	0xF207	Speed feedback filter time in SVC mode	0.000s to 0.100s	0.015	s	Changeable at any time	" F2-07" on page 261
F2-09	0xF209	Torque upper limit source in speed control mode (motoring)	0: Digital setting (F2-10) 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: MIN (AI1, AI2) 7: MAX (AI1, AI2) Others: F connector	0	-	Changeable at any time	" F2-09" on page 261
F2-10	0xF20A	Torque upper limit in speed control mode	0.0% to 200.0%	150.0	%	Changeable at any time	" F2-10" on page 262

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F2-11	0xF20B	Torque upper limit source in speed control mode (generating)	0: Digital setting (F2-10) 1: AI1 2: AI2 3: AI3 4: Pulse reference (DI5) 5: Communication 6: MIN (AI1, AI2) 7: MAX (AI1, AI2) 8: Digital setting (F2-12) Others: F connector	0	-	Changeable at any time	"F2-11" on page 263
F2-12	0xF20C	Torque upper limit in speed control mode (generating)	0.0% to 200.0%	150.0	%	Changeable at any time	"F2-12" on page 264
F2-18	0xF212	Field weakening mode	0: No field weakening 1: Auto adjustment 2: Calculation+Auto adjustment	1	-	Changeable only at stop	"F2-18" on page 264
F2-19	0xF213	Field weakening gain	1 to 50	5	-	Changeable at any time	"F2-19" on page 264
F2-22	0xF216	Generating power limiting	0: Disabled 1: Enabled in the whole process 2: Enabled at constant speed 3: Enabled during deceleration	0	-	Changeable at any time	"F2-22" on page 265
F2-23	0xF217	Generating power upper limit	0.0% to 200.0%	20.0	%	Changeable at any time	"F2-23" on page 265
F2-24	0xF218	Initial position angle detection current of synchronous motor	50 to 180	80	-	Changeable only at stop	"F2-24" on page 265
F2-25	0xF219	Initial position angle detection of synchronous motor	0: Detected upon running 1: Not detected 2: Detected upon initial running after power-on	0	-	Changeable at any time	"F2-25" on page 265
F2-27	0xF21B	Salient pole rate adjustment gain of synchronous motor	0.20 to 3.00	1.00	-	Changeable at any time	"F2-27" on page 265
F2-28	0xF21C	Maximum torque-to-current ratio control of synchronous motor	0: Disabled 1: Enabled	1	-	Changeable at any time	"F2-28" on page 266
F2-32	0xF220	Z signal correction	0: Disabled 1: Enabled	1	-	Changeable at any time	"F2-32" on page 266
F2-37	0xF225	Low speed carrier frequency	0.8 kHz to F0-15	2.0	kHz	Changeable at any time	"F2-37" on page 266
F2-43	0xF22B	Position lock	0 to 1	0	-	Changeable at any time	"F2-43" on page 266

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F2-44	0xF22C	Switchover frequency	0.00 Hz to F2-02	0.30	Hz	Changeable at any time	"F2-44" on page 267
F2-45	0xF22D	Position lock speed loop proportional gain	1 to 100	10	-	Changeable at any time	"F2-45" on page 267
F2-46	0xF22E	Position lock speed loop integral time	0.01s to 10.00s	0.50	s	Changeable at any time	"F2-46" on page 267
F2-49	0xF231	Auto-tuning free mode	0: Disabled 1: Auto-tuning upon initial running after power-on 2: Auto-tuning upon running	0	-	Changeable at any time	"F2-49" on page 267
F2-51	0xF233	Initial position compensation angle	0.0 to 359.9	0.0	-	Changeable at any time	"F2-51" on page 267
F3-00	0xF300	V/f curve	0: Straight-line V/f curve 1: Multi-point V/f curve 2-9: Reserved 10: V/f complete separation mode 11: V/f half separation mode	0	-	Changeable only at stop	"F3-00" on page 268
F3-01	0xF301	Torque boost	0.0% to 30.0%	3.0	%	Changeable at any time	"F3-01" on page 268
F3-02	0xF302	Cut-off frequency of torque boost	0.00 Hz to F0-10	50.00	Hz	Changeable only at stop	"F3-02" on page 268
F3-03	0xF303	Multi-point V/f frequency 1	0.00 Hz to F3-05	0.00	Hz	Changeable only at stop	"F3-03" on page 268
F3-04	0xF304	Multi-point V/f voltage 1	0.0% to +100.0%	0.0	%	Changeable only at stop	"F3-04" on page 268
F3-05	0xF305	Multi-point V/f frequency 2	F3-03 to F3-07	0.00	Hz	Changeable only at stop	"F3-05" on page 269
F3-06	0xF306	Multi-point V/f voltage 2	0.0% to +100.0%	0.0	%	Changeable only at stop	"F3-06" on page 269
F3-07	0xF307	Multi-point V/f frequency 3	F3-05 to F1-04	0.00	Hz	Changeable only at stop	"F3-07" on page 269
F3-08	0xF308	Multi-point V/f voltage 3	0.0% to +100.0%	0.0	%	Changeable only at stop	"F3-08" on page 269
F3-09	0xF309	V/f slip compensation gain	0.0 to 200.0	0.0	-	Changeable at any time	"F3-09" on page 269
F3-10	0xF30A	V/f overexcitation gain	0 to 200	64	-	Changeable at any time	"F3-10" on page 270
F3-11	0xF30B	V/f oscillation suppression gain	0 to 100	40	-	Changeable at any time	"F3-11" on page 270
F3-12	0xF30C	V/f oscillation suppression	0: Disabled 1: Enabled	1	-	Changeable at any time	"F3-12" on page 270

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F3-13	0xF30D	Voltage source for V/f separation	0: Digital setting (F3-14) 1: AI1 2: AI2 3: AI3 4: Pulse reference (DI5) 5: Multi-reference 6: Simple PLC 7: PID 8: Communication Others: F connector	0	-	Changeable at any time	" F3-13" on page 270
F3-14	0xF30E	V/f separation voltage	0 V to F1-02	0	V	Changeable at any time	" F3-14" on page 271
F3-15	0xF30F	Voltage rise time of V/f separation	0.0s to 1000.0s	0.0	s	Changeable at any time	" F3-15" on page 271
F3-16	0xF310	Voltage fall time of V/f separation	0.0s to 1000.0s	0.0	s	Changeable at any time	" F3-16" on page 272
F3-17	0xF311	Stop mode for V/f separation	0: Frequency and voltage decline to 0 independently 1: Frequency declines to 0 after voltage declines to 0 2: Coast to stop (new)	0	-	Changeable at any time	" F3-17" on page 272
F3-18	0xF312	Overcurrent stall suppression action current	50% to 200%	150	%	Changeable only at stop	" F3-18" on page 272
F3-19	0xF313	Overcurrent stall suppression	0: Disabled 1: Enabled	1	-	Changeable only at stop	" F3-19" on page 272
F3-20	0xF314	Overcurrent stall suppression gain	1 to 100	20	-	Changeable at any time	" F3-20" on page 273
F3-21	0xF315	Compensation coefficient of speed multiplying overcurrent stall suppression action current	50% to 200%	100	%	Changeable only at stop	" F3-21" on page 273
F3-22	0xF316	Overvoltage stall suppression action voltage	330.0 V to 800.0 V	770.0	V	Changeable at any time	" F3-22" on page 273
F3-23	0xF317	Overvoltage stall suppression	0: Disabled 1: Enabled	1	-	Changeable only at stop	" F3-23" on page 273
F3-24	0xF318	Overvoltage stall suppression frequency gain	1 to 100	30	-	Changeable at any time	" F3-24" on page 273
F3-25	0xF319	Overvoltage stall suppression voltage gain	1 to 100	30	-	Changeable at any time	" F3-25" on page 274

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F3-26	0xF31A	Frequency rise threshold for overvoltage stall suppression	0 Hz to 50 Hz	5	Hz	Changeable only at stop	"F3-26" on page 274
F3-27	0xF31B	Slip compensation filter time	0.1s to 10.0s	0.5	s	Changeable only at stop	"F3-27" on page 274
F3-28	0xF31C	Multi-point curve source	0: 3-point curve 1: Multi-point curve module A 2: Multi-point curve module B	0	-	Changeable only at stop	"F3-28" on page 274
F3-33	0xF321	Online torque compensation gain	80 to 150	100	-	Changeable only at stop	"F3-33" on page 275
F3-34	0xF322	ImaxKi coefficient	10% to 1000%	100	%	Changeable only at stop	"F3-34" on page 275
F3-35	0xF323	Overcurrent suppression threshold (relative to rated motor current)	80% to 300%	200	%	Changeable only at stop	"F3-35" on page 275
F3-36	0xF324	Frequency threshold for overcurrent suppression field weakening	100% to 500%	100	%	Changeable only at stop	"F3-36" on page 275
F3-37	0xF325	IT filter time	10 ms to 1000 ms	100	ms	Changeable only at stop	"F3-37" on page 275
F3-38	0xF326	Slip compensation mode	0: Disabled 1: Slip compensation without PG 2: Slip compensation with PG	1	-	Changeable only at stop	"F3-38" on page 275
F3-39	0xF327	VdcMaxCtrl allowed runtime	0.0s to 100.0s	0.0	s	Changeable only at stop	"F3-39" on page 276
F3-40	0xF328	Upper limit of V/f separation voltage	50.0% to 200.0%	100.0	%	Changeable only at stop	"F3-40" on page 276
F3-41	0xF329	RFG time of V/f separation frequency	0: RFG time forced to 0 1: Preset RFG time	0	-	Changeable only at stop	"F3-41" on page 276
F3-42	0xF32A	Cut-off frequency of V/f oscillation suppression filter	1.0 Hz to 50.0 Hz	8.0	Hz	Changeable at any time	"F3-42" on page 276
F3-43	0xF32B	Cut-off frequency threshold for V/f oscillation suppression	10 Hz to 3000 Hz	200	Hz	Changeable at any time	"F3-43" on page 277
F3-44	0xF32C	VdcMaxCtrl feedforward coefficient	0% to 500%	0	%	Changeable at any time	"F3-44" on page 277

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F3-50	0xF332	PMVVC low-speed IF	0: Disabled 1: Enabled	1	-	Changeable only at stop	" F3-50" on page 277
F3-51	0xF333	PMVVC low-speed IF current	30 to 250	100	-	Changeable only at stop	" F3-51" on page 277
F3-52	0xF334	PMVVC low-speed IF speed switching threshold	2.0% to 100.0%	10.0	%	Changeable only at stop	" F3-52" on page 277
F3-53	0xF335	PMVVC oscillation suppression gain coefficient	0 to 500	100	-	Changeable at any time	" F3-53" on page 278
F3-54	0xF336	PMVVC filter time coefficient	0 to 500	100	-	Changeable at any time	" F3-54" on page 278
F3-55	0xF337	PMVVC energy conservation control mode	0: Fixed straight-line V/f curve 1: Fixed 30% reactive current 2: MTPA control	2	-	Changeable only at stop	" F3-55" on page 278

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F4-00	0xF400	DI1 function	0: No function 1: Forward RUN (IN1) 2: Reverse RUN (IN2) 3: Three-wire control (IN3) 4: Forward jog (FJOG) 5: Reverse jog (RJOG) 6: Terminal UP 7:Terminal DOWN 8: Coast to stop 9: Fault reset (RESET) 10: Running pause 11: External fault NO input 12: Multi-reference terminal 1 13: Multi-reference terminal 2 14: Multi-reference terminal 3 15: Multi-reference terminal 4 16: Acceleration/deceleration selection terminal 1 17: Acceleration/deceleration selection terminal 2 18: Frequency source switchover 19: UP and DOWN setting clear 20: Command source switchover terminal 1 21: Acceleration/Deceleration inhibition 22: PID pause 23: Simple PLC state reset 24: Wobble pause 25: Counter input 26: Counter reset 27: Length count input 28: Length reset 29: Torque control inhibition 30: Pulse frequency input 31: Reserved 32: Immediate DC braking 33: External fault NC input 34: Frequency modification enable 35: PID action direction reversal (To be continued)	1	-	Changeable only at stop	" F4-00" on page 278

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
(Continued)	(Continued)	(Continued)	(Continued) 36: External stop terminal 1 37: Command source switchover terminal 2 38: PID integral pause 39: Switchover between main frequency and preset frequency 40: Switchover between auxiliary frequency and preset frequency 41: Motor selection terminal 1 42: Reserved 43: PID parameter switchover 44: User-defined fault 1 45: User-defined fault 2 46: Switchover between speed control and torque control 47: Emergency stop 48: External stop terminal 2 49: Deceleration DC braking 50: Current running duration clear 51: Switchover between two-wire and three-wire control 52: Reverse running inhibition 53–69: Reserved 70: Control channel 71: Reference source (Reserved) 72: Terminal module 73: Startup mode bit0 74: Startup mode bit1 75: Command source switchover terminal 3 76: Motor selection terminal 2 77: Running enable 78: Forward RUN enable 79: Reverse RUN enable 80: RFG input set to 0	1	-	Changeable only at stop	"F4-00" on page 278
F4-01	0xF401	DI2 function	Same as F4-00	4	-	Changeable only at stop	"F4-01" on page 285
F4-02	0xF402	DI3 function	Same as F4-00	9	-	Changeable only at stop	"F4-02" on page 285
F4-03	0xF403	DI4 function	Same as F4-00	12	-	Changeable only at stop	"F4-03" on page 285

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F4-04	0xF404	DI5 function	0: No function 1: Forward RUN (IN1) 2: Reverse RUN (IN2) 3: Three-wire control (IN3) 4: Forward jog (FJOG) 5: Reverse jog (RJOG) 6: Terminal UP 7:Terminal DOWN 8: Coast to stop 9: Fault reset (RESET) 10: Running pause 11: External fault NO input 12: Multi-reference terminal 1 13: Multi-reference terminal 2 14: Multi-reference terminal 3 15: Multi-reference terminal 4 16: Acceleration/deceleration selection terminal 1 17: Acceleration/deceleration selection terminal 2 18: Frequency source switchover 19: UP and DOWN setting clear 20: Command source switchover terminal 1 21: Acceleration/Deceleration inhibition 22: PID pause 23: Simple PLC state reset 24: Wobble pause 25: Counter input 26: Counter reset 27: Length count input 28: Length reset 29: Torque control inhibition 31: Reserved 32: Immediate DC braking 33: External fault NC input 34: Frequency modification enable 35: PID action direction reversal	13	-	Changeable only at stop	" F4-04" on page 285

Para.	Comm. Addr.	Name	Reference	Default	Unit	Change	Page
(Continued)	(Continued)	(Continued)	(Continued) 36: External stop terminal 1 37: Command source switchover terminal 2 38: PID integral pause 39: Switchover between main frequency and preset frequency 40: Switchover between auxiliary frequency and preset frequency 41: Motor selection terminal 1 42: Reserved 43: PID parameter switchover 44: User-defined fault 1 45: User-defined fault 2 46: Switchover between speed control and torque control 47: Emergency stop 48: External stop terminal 2 49: Deceleration DC braking 50: Current running duration clear 51: Switchover between two-wire and three-wire control 52: Reverse running inhibition 53–69: Reserved 70: Control channel 71: Reference source (Reserved) 72: Terminal module 73: Startup mode bit0 74: Startup mode bit1 75: Command source switchover terminal 3 76: Motor selection terminal 2 77: Running enable 78: Forward RUN enable 79: Reverse RUN enable 80: RFG input set to 0 (To be continued)	13	-	Changeable only at stop	"F4-04" on page 285
F4-05	0xF405	DI6 function	Same as F4-00	0	-	Changeable only at stop	"F4-05" on page 287
F4-06	0xF406	DI7 function	Same as F4-00	0	-	Changeable only at stop	"F4-06" on page 288
F4-07	0xF407	DI8 function	Same as F4-00	0	-	Changeable only at stop	"F4-07" on page 288
F4-08	0xF408	DI9 function	Same as F4-00	0	-	Changeable only at stop	"F4-08" on page 288
F4-09	0xF409	DI10 function	Same as F4-00	0	-	Changeable only at stop	"F4-09" on page 288
F4-10	0xF40A	DI filter time	0.000s to 1.000s	0.010	s	Changeable at any time	"F4-10" on page 288

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F4-11	0xF40B	Terminal control mode	0: Two-wire mode 1 1: Two-wire mode 2 2: Three-wire mode 1 3: Three-wire mode 2	0	-	Changeable only at stop	"F4-11" on page 288
F4-12	0xF40C	Terminal UP/DOWN change rate	0.001 Hz/s to 65.535 Hz/s	1.000	Hz/s	Changeable at any time	"F4-12" on page 289
F4-13	0xF40D	Minimum input of AI curve 1	–10 V to F4-15	0.00	V	Changeable at any time	"F4-13" on page 289
F4-14	0xF40E	Percentage corresponding to minimum input of AI curve 1	–100% to +100.0%	0.0	%	Changeable at any time	"F4-14" on page 289
F4-15	0xF40F	Maximum input of AI curve 1	F4-13 to 10.00 V	10.00	V	Changeable at any time	"F4-15" on page 290
F4-16	0xF410	Percentage corresponding to maximum input of AI curve 1	–100% to +100.0%	100.0	%	Changeable at any time	"F4-16" on page 290
F4-17	0xF411	AI1 filter time	0.00s to 10.00s	0.10	s	Changeable at any time	"F4-17" on page 290
F4-18	0xF412	Minimum input of AI curve 2	–10 V to F4-20	0.00	V	Changeable at any time	"F4-18" on page 290
F4-19	0xF413	Percentage corresponding to minimum input of AI curve 2	–100% to +100.0%	0.0	%	Changeable at any time	"F4-19" on page 290
F4-20	0xF414	Maximum input of AI curve 2	F4-18 to 10.00 V	10.00	V	Changeable at any time	"F4-20" on page 291
F4-21	0xF415	Percentage corresponding to maximum input of AI curve 2	–100% to +100.0%	100.0	%	Changeable at any time	"F4-21" on page 291
F4-22	0xF416	AI2 filter time	0.00s to 10.00s	0.10	s	Changeable at any time	"F4-22" on page 291
F4-23	0xF417	Minimum input of AI curve 3	–10 V to F4-25	–10	V	Changeable at any time	"F4-23" on page 291
F4-24	0xF418	Percentage corresponding to minimum input of AI curve 3	–100% to +100.0%	–100	%	Changeable at any time	"F4-24" on page 291
F4-25	0xF419	Maximum input of AI curve 3	F4-23 to 10.00 V	10.00	V	Changeable at any time	"F4-25" on page 291

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F4-26	0xF41A	Percentage corresponding to maximum input of AI curve 3	–100% to +100.0%	100.0	%	Changeable at any time	"F4-26" on page 292
F4-27	0xF41B	AI3 fitter time	0.00s to 10.00s	0.10	s	Changeable at any time	"F4-27" on page 292
F4-28	0xF41C	Minimum pulse input frequency	0.00 kHz to F4-30	0.00	kHz	Changeable at any time	"F4-28" on page 292
F4-29	0xF41D	Percentage corresponding to minimum pulse input frequency	–100% to +100.0%	0.0	%	Changeable at any time	"F4-29" on page 292
F4-30	0xF41E	Maximum pulse input frequency	F4-28 to 100.00 kHz	50.00	kHz	Changeable at any time	"F4-30" on page 292
F4-31	0xF41F	Percentage corresponding to maximum pulse input frequency	–100% to +100.0%	100.0	%	Changeable at any time	"F4-31" on page 293
F4-32	0xF420	Pulse filter time	0.00s to 10.00s	0.10	s	Changeable at any time	"F4-32" on page 293
F4-33	0xF421	AI curve	Ones: AI1 curve 1: Curve 1 (2 points, F4-13 to F4-16) 2: Curve 2 (2 points, F4-18 to F4-21) 3: Curve 3 (2 points, F4-23 to F4-26) 4: Curve 4 (4 points, A6-00 to A6-07) 5: Curve 5 (4 points, A6-08 to A6-15) Tens: AI2 curve 1: Curve 1 (2 points, F4-13 to F4-16) 2: Curve 2 (2 points, F4-18 to F4-21) 3: Curve 3 (2 points, F4-23 to F4-26) 4: Curve 4 (4 points, A6-00 to A6-07) 5: Curve 5 (4 points, A6-08 to A6-15) Hundreds: AI3 curve 1: Curve 1 (2 points, F4-13 to F4-16) 2: Curve 2 (2 points, F4-18 to F4-21) 3: Curve 3 (2 points, F4-23 to F4-26) 4: Curve 4 (4 points, A6-00 to A6-07) 5: Curve 5 (4 points, A6-08 to A6-15)	0x321	-	Changeable at any time	"F4-33" on page 293
F4-34	0xF422	AI lower limit	Ones: Setting for AI1 less than minimum input 0: Percentage corresponding to minimum input 1: 0.0% Tens: Setting for AI2 less than minimum input 0: Percentage corresponding to minimum input 1: 0.0% Hundreds: Setting for AI3 less than minimum input 0: Percentage corresponding to minimum input 1: 0.0%	0x0	-	Changeable at any time	"F4-34" on page 294

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F4-35	0xF423	DI1 delay (invalid)	0.0s to 3600.0s	0.0	s	Changeable only at stop	" F4-35" on page 294
F4-36	0xF424	DI2 delay (invalid)	0.0s to 3600.0s	0.0	s	Changeable only at stop	" F4-36" on page 294
F4-37	0xF425	DI3 delay (invalid)	0.0s to 3600.0s	0.0	s	Changeable only at stop	" F4-37" on page 294
F4-38	0xF426	DI active mode selection 1	Ones: DI1 0: Active low 1: Active high Tens: DI2 0: Active low 1: Active high Hundreds: DI3 0: Active low 1: Active high Thousands: DI4 0: Active low 1: Active high Ten thousands: DI5 0: Active low 1: Active high	0	-	Changeable only at stop	" F4-38" on page 295
F4-39	0xF427	DI active mode selection 2	Ones: DI6 0: Active low 1: Active high Tens: DI7 0: Active low 1: Active high Hundreds: DI8 0: Active low 1: Active high Thousands: DI9 0: Active low 1: Active high Ten thousands: DI10 0: Active low 1: Active high	0	-	Changeable only at stop	" F4-39" on page 295
F4-41	0xF429	DI1 switch-on delay	0.0s to 3600.0s	0.0	s	Changeable only at stop	" F4-41" on page 296
F4-42	0xF42A	DI1 switch-off delay	0.0s to 3600.0s	0.0	s	Changeable only at stop	" F4-42" on page 296
F4-43	0xF42B	DI2 switch-on delay	0.0s to 3600.0s	0.0	s	Changeable only at stop	" F4-43" on page 296
F4-44	0xF42C	DI2 switch-off delay	0.0s to 3600.0s	0.0	s	Changeable only at stop	" F4-44" on page 296
F4-45	0xF42D	DI3 switch-on delay	0.0s to 3600.0s	0.0	s	Changeable only at stop	" F4-45" on page 296

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F4-46	0xF42E	DI3 switch-off delay	0.0s to 3600.0s	0.0	s	Changeable only at stop	" F4-46" on page 296
F4-47	0xF42F	DI4 switch-on delay	0.0s to 3600.0s	0.0	s	Changeable only at stop	" F4-47" on page 297
F4-48	0xF430	DI4 switch-off delay	0.0s to 3600.0s	0.0	s	Changeable only at stop	" F4-48" on page 297
F4-49	0xF431	DI force data	Bit00: DI1 0: Inactive 1: Active Bit01: DI2 0: Inactive 1: Active Bit02: DI3 0: Inactive 1: Active Bit03: DI4 0: Inactive 1: Active Bit04: DI5/HDI 0: Inactive 1: Active Bit05: DI6 0: Inactive 1: Active Bit06: DI7 0: Inactive 1: Active Bit07: DI8 0: Inactive 1: Active Bit08: DI9 0: Inactive 1: Active Bit09: DI10 0: Inactive 1: Active Bit10–15: Reserved	0x0	-	Changeable at any time	" F4-49" on page 297

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F4-50	0xF432	DI communication data	Bit00: DI1 0: Inactive 1: Active Bit01: DI2 0: Inactive 1: Active Bit02: DI3 0: Inactive 1: Active Bit03: DI4 0: Inactive 1: Active Bit04: DI5/HDI 0: Inactive 1: Active Bit05: DI6 0: Inactive 1: Active Bit06: DI7 0: Inactive 1: Active Bit07: DI8 0: Inactive 1: Active Bit08: DI9 0: Inactive 1: Active Bit09: DI10 0: Inactive 1: Active Bit10: VDI1 0: Inactive 1: Active (To be continued)	0x0	-	Changeable at any time	"F4-50" on page 298
(Continued)	(Continued)	(Continued)	(Continued) Bit11: VDI2 0: Inactive 1: Active Bit12: VDI3 0: Inactive 1: Active Bit13: VDI4 0: Inactive 1: Active Bit14: VDI5 0: Inactive 1: Active Bit15: VDI6 0: Inactive 1: Active	0x0	-	Changeable at any time	"F4-50" on page 298

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F4-51	0xF433	DI1 hardware source	0: Hardware 1: Force value	0	-	Changeable only at stop	" F4-51" on page 300
F4-52	0xF434	DI2 hardware source	0: Hardware 1: Force value	0	-	Changeable only at stop	" F4-52" on page 300
F4-53	0xF435	DI3 hardware source	0: Hardware 1: Force value	0	-	Changeable only at stop	" F4-53" on page 300
F4-54	0xF436	DI4 hardware source	0: Hardware 1: Force value	0	-	Changeable only at stop	" F4-54" on page 301
F4-55	0xF437	DI5/HDI hardware source	0: Hardware 1: Force value	0	-	Changeable only at stop	" F4-55" on page 301
F4-56	0xF438	DI6 hardware source	0: Hardware 1: Force value 2: Communication 4: AI1 5: AI2 6: AI3 11: DI1 12: DI2 13: DI3 14: DI4 15: DI5/HDI 17: DI7 18: DI8 19: DI9 20: DI10 21: VDI1 22: VDI2 23: VDI3 24: VDI4 25: VDI5 26: VDI6 31: Relay 1 32: Relay 2 33: DO1 (To be continued)	0	-	Changeable only at stop	" F4-56" on page 301

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
(Continued)	(Continued)	(Continued)	(Continued) 34: Expansion card relay 35: Expansion card DO2 36: VDO1 37: VDO2 38: VDO3 39: VDO4 40: VDO5 41: VDO6 42: VDO7 43: VDO8 44: VDO9 45: VDO10 46: VDO11	0	-	Changeable only at stop	"F4-56" on page 301
F4-57	0xF439	DI7 hardware source	Same as F4-56	0	-	Changeable only at stop	"F4-57" on page 302
F4-58	0xF43A	DI8 hardware source	Same as F4-56	0	-	Changeable only at stop	"F4-58" on page 303
F4-59	0xF43B	DI9 hardware source	Same as F4-56	0	-	Changeable only at stop	"F4-59" on page 303
F4-60	0xF43C	DI10 hardware source	Same as F4-56	0	-	Changeable only at stop	"F4-60" on page 303
F4-61	0xF43D	DI5/HDI terminal type	0: HDI 1: DI	1	-	Unchangeable	"F4-61" on page 303
F4-62	0xF43E	HDI polarity	0: Normal 1: Absolute value 2: Negated value 3: Negated absolute value	0	-	Changeable at any time	"F4-62" on page 303
F4-63	0xF43F	HDI input enable	0: Disabled 1: Enabled Others: B connector	0	-	Unchangeable	"F4-63" on page 304
F4-64	0xF440	HDI hardware source	0: Hardware sampling 1: Force setpoint	0	-	Changeable at any time	"F4-64" on page 304
F4-65	0xF441	HDI force setpoint	0.00 kHz to 100.00 kHz	1.00	kHz	Changeable at any time	"F4-65" on page 304
F4-66	0xF442	Minimum input of 4-point HDI curve	0.00 kHz to F4-68	10.00	kHz	Changeable at any time	"F4-66" on page 304
F4-67	0xF443	Percentage corresponding to minimum input of 4-point HDI curve	–100% to +100.0%	–100	%	Changeable at any time	"F4-67" on page 305
F4-68	0xF444	Inflection 1 input of 4-point HDI curve	F4-66 to F4-70	40.00	kHz	Changeable at any time	"F4-68" on page 305

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F4-69	0xF445	Percentage corresponding to inflection 1 input of 4-point HDI curve	–100% to +100.0%	–30	%	Changeable at any time	"F4-69" on page 305
F4-70	0xF446	Inflection 2 input of 4-point HDI curve	F4-68 to F4-72	70.00	kHz	Changeable at any time	"F4-70" on page 305
F4-71	0xF447	Percentage corresponding to inflection 2 input of 4-point HDI curve	–100% to +100.0%	30.0	%	Changeable at any time	"F4-71" on page 305
F4-72	0xF448	Maximum input of 4-point HDI curve	F4-70 to 100.00 kHz	100.00	kHz	Changeable at any time	"F4-72" on page 305
F4-73	0xF449	Percentage corresponding to maximum input of 4-point HDI curve	–100% to +100.0%	100.0	%	Changeable at any time	"F4-73" on page 306
F4-74	0xF44A	HDI curve setting	Ones: HDI curve 0: 2-point curve 1: 4-point curve	0	-	Changeable at any time	"F4-74" on page 306
F4-75	0xF44B	HDI denoising threshold	0.0% to 10.0%	0.5	%	Changeable at any time	"F4-75" on page 306
F5-00	0xF500	FM multi-function terminal output	0: Pulse output (FMP) 1: Digital output (FMR)	0	-	Changeable at any time	"F5-00" on page 306

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F5-01	0xF501	FMR output function	0: No output 1: AC drive in running 2: Fault output 3: Frequency-level detection 1 (FDT1) 4: Frequency reach 5: Zero-speed running (no output at stop) 6: Motor overload pre-warning 7: AC drive overload pre-warning 8: Reference count value reach 9: Designated count value reach 10: Length reach 11: Simple PLC cycle completion 12: Accumulative running duration reach 13: Wobble limit reach 14: Torque limit reach 15: Ready to run 16: AI1 > AI2 17: Frequency upper limit reach 18: Frequency lower limit reach (no output at stop) 19: Undervoltage state 20: Communication setting 21–22: Reserved 23: Running at zero speed 2 (output at stop) 24: Accumulative power-on duration reach 25: Frequency-level detection 2 (FDT2) 26: Frequency 1 reach 27: Frequency 2 reach 28: Current 1 reach 29: Current 2 reach 30: Timing reach 31: AI1 input overlimit 32: Load loss 33: Reverse running (To be continued)	0	-	Changeable at any time	"F5-01" on page 307
(Continued)	(Continued)	(Continued)	(continued) 34: Zero current state 35: IGBT temperature reach 36: Output overcurrent 37: Frequency lower limit reach (output at stop) 38: Alarm (all faults) 39: Motor overtemperature 40: Current running duration reach 41: Fault output (no output at undervoltage) 42: STO output 43: Running with limits Others: B connector				

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F5-02	0xF502	Control board relay (DO3) output function	Same as F5-01	2	-	Changeable at any time	"F5-02" on page 311
F5-03	0xF503	Expansion card relay (DO4) output function	Same as F5-01	0	-	Changeable at any time	"F5-03" on page 311
F5-04	0xF504	DO1 function	Same as F5-01	1	-	Changeable at any time	"F5-04" on page 311
F5-05	0xF505	Expansion card DO2 function	Same as F5-01	4	-	Changeable at any time	"F5-05" on page 311
F5-06	0xF506	FMP output function	0: Running frequency 1: Frequency reference 2: Output current 3: Output torque (absolute value) 4: Output power 5: Output voltage 6: Pulse input 7: AI1 8: AI2 9: AI3 10: Length 11: Count value 12: Communication setting 13: Motor speed 14: Output current 15: Bus voltage 16: Output torque (actual value) Others: F connector	0	-	Changeable at any time	"F5-06" on page 312
F5-07	0xF507	AO1 function	Same as F5-06	0	-	Changeable at any time	"F5-07" on page 312
F5-08	0xF508	Expansion card AO2 function	Same as F5-06	1	-	Changeable at any time	"F5-08" on page 312
F5-09	0xF509	Maximum FMP output frequency	0.01 kHz to 100.00 kHz	50.00	kHz	Changeable at any time	"F5-09" on page 312
F5-10	0xF50A	AO1 zero offset coefficient	–100% to +100.0%	0.0	%	Changeable at any time	"F5-10" on page 313
F5-11	0xF50B	AO1 gain	–10 to +10.00	1.00	-	Changeable at any time	"F5-11" on page 313
F5-12	0xF50C	AO2 zero offset coefficient	–100% to +100.0%	0.0	%	Changeable at any time	"F5-12" on page 313
F5-13	0xF50D	AO2 gain	–10 to +10.00	1.00	-	Changeable at any time	"F5-13" on page 313
F5-14	0xF50E	HDO output filter time	0 to 1000	0	-	Changeable at any time	"F5-14" on page 313
F5-15	0xF50F	AO1 output filter time	0 to 1000	0	-	Changeable at any time	"F5-15" on page 314

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F5-16	0xF510	AO2 output filter time	0 to 1000	0	-	Changeable at any time	" F5-16" on page 314
F5-17	0xF511	FMR output delay (invalid)	0.0s to 3600.0s	0.0	s	Changeable at any time	" F5-17" on page 314
F5-18	0xF512	Relay 1 (DO3) output delay (invalid)	0.0s to 3600.0s	0.0	s	Changeable at any time	" F5-18" on page 314
F5-19	0xF513	Relay 2 (DO4) output delay (invalid)	0.0s to 3600.0s	0.0	s	Changeable at any time	" F5-19" on page 314
F5-20	0xF514	DO1 output delay (invalid)	0.0s to 3600.0s	0.0	s	Changeable at any time	" F5-20" on page 315
F5-21	0xF515	DO2 output delay (invalid)	0.0s to 3600.0s	0.0	s	Changeable at any time	" F5-21" on page 315
F5-22	0xF516	DO active mode	Ones: FMR 0: Positive logic active 1: Negative logic active Tens: Relay 1 (DO3) 0: Positive logic active 1: Negative logic active Hundreds: Relay 2 (DO4) 0: Positive logic active 1: Negative logic active Thousands: DO1 0: Positive logic active 1: Negative logic active Ten thousands: DO2 0: Positive logic active 1: Negative logic active	0	-	Changeable at any time	" F5-22" on page 315
F5-24	0xF518	Control board relay (DO3) switch-on delay	0.0s to 3600.0s	0.0	s	Changeable at any time	" F5-24" on page 315
F5-25	0xF519	Control board relay (DO3) switch-off delay	0.0s to 3600.0s	0.0	s	Changeable at any time	" F5-25" on page 316
F5-26	0xF51A	FMR output switch-on delay	0.0s to 3600.0s	0.0	s	Changeable at any time	" F5-26" on page 316
F5-27	0xF51B	FMR output switch-off delay	0.0s to 3600.0s	0.0	s	Changeable at any time	" F5-27" on page 316
F5-28	0xF51C	DO1 output switch-on delay	0.0s to 3600.0s	0.0	s	Changeable at any time	" F5-28" on page 316
F5-29	0xF51D	DO1 output switch-off delay	0.0s to 3600.0s	0.0	s	Changeable at any time	" F5-29" on page 316

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F5-30	0xF51E	Expansion card relay (DO4) switch-on delay	0.0s to 3600.0s	0.0	s	Changeable at any time	"F5-30" on page 317
F5-31	0xF51F	Expansion card relay (DO4) switch-off delay	0.0s to 3600.0s	0.0	s	Changeable at any time	"F5-31" on page 317
F5-32	0xF520	Expansion card DO2 output switch-on delay	0.0s to 3600.0s	0.0	s	Changeable at any time	"F5-32" on page 317
F5-33	0xF521	Expansion card DO2 output switch-off delay	0.0s to 3600.0s	0.0	s	Changeable at any time	"F5-33" on page 317
F5-34	0xF522	DO/RO source	Bit00: Relay 1 (DO3) output source 0: Output function 1: Communication Bit01: FMR output source 0: Output function 1: Communication Bit02: DO1 output source 0: Output function 1: Communication Bit03: Relay 2 (DO4) output source 0: Output function 1: Communication Bit04: DO2 output source 0: Output function 1: Communication Bit05: VDO1 output source 0: Output function 1: Communication Bit06: VDO2 output source 0: Output function 1: Communication Bit07: VDO3 output source 0: Output function 1: Communication Bit08: VDO4 output source 0: Output function 1: Communication (To be continued)	0x0	-	Changeable at any time	"F5-34" on page 317

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
(Continued)	(Continued)	(Continued)	(Continued) Bit09: VDO5 output source 0: Output function 1: Communication Bit10: VDO6 output source 0: Output function 1: Communication Bit11: VDO7 output source 0: Output function 1: Communication Bit12: VDO8 output source 0: Output function 1: Communication Bit13: VDO9 output source 0: Output function 1: Communication Bit14: VDO10 output source 0: Output function 1: Communication Bit15: VDO11 output source 0: Output function 1: Communication				
F5-35	0xF523	DO/RO terminal communication control	Same as F5-34	0x0	-	Changeable at any time	"F5-35" on page 319
F5-36	0xF524	Minimum input of AO1 curve	–100.0% to F5-38	0.0	%	Changeable at any time	"F5-36" on page 321
F5-37	0xF525	Setpoint corresponding to minimum input of AO1 curve	0.00 V to 10.00 V	0.00	V	Changeable at any time	"F5-37" on page 321
F5-38	0xF526	Maximum input of AO1 curve	F5-36 to 100.0%	100.0	%	Changeable at any time	"F5-38" on page 322
F5-39	0xF527	Setpoint corresponding to maximum input of AO1 curve	0.00 V to 10.00 V	10.00	V	Changeable at any time	"F5-39" on page 322
F5-40	0xF528	AO1 output offset	–10 V to +10.00 V	0.00	V	Changeable at any time	"F5-40" on page 322
F5-41	0xF529	Minimum input of AO2 curve	–100.0% to F5-43	0.0	%	Changeable at any time	"F5-41" on page 322
F5-42	0xF52A	Setpoint corresponding to minimum input of AO2 curve	0.00 V to 10.00 V	0.00	V	Changeable at any time	"F5-42" on page 322
F5-43	0xF52B	Maximum input of AO2 curve	F5-41 to 100.0%	100.0	%	Changeable at any time	"F5-43" on page 323

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F5-44	0xF52C	Setpoint corresponding to maximum input of AO2 curve	0.00 V to 10.00 V	10.00	V	Changeable at any time	" F5-44" on page 323
F5-45	0xF52D	AO2 output offset	–10 V to +10.00 V	0.00	V	Changeable at any time	" F5-45" on page 323
F5-46	0xF52E	AO curve	Ones: AO1 curve 0: 2-point curve 1: Gain+Offset Tens: AO2 curve 0: 2-point curve 1: Gain+Offset	11	-	Changeable at any time	" F5-46" on page 323
F5-47	0xF52F	AO polarity	Ones: AO1 0: Normal 1: Absolute value 2: Negated value 3: Negated absolute value Tens: AO2 0: Normal 1: Absolute value 2: Negated value 3: Negated absolute value	0	-	Changeable at any time	" F5-47" on page 323
F5-48	0xF530	AO hardware source	Ones: AO1 source 0: Output function 1: Force setpoint Tens: AO2 source 0: Output function 1: Force setpoint	0	-	Changeable at any time	" F5-48" on page 324
F5-49	0xF531	AO force setpoint 1	0.00 V to 10.00 V	0.00	V	Changeable at any time	" F5-49" on page 324
F5-50	0xF532	AO force setpoint 2	0.00 V to 10.00 V	0.00	V	Changeable at any time	" F5-50" on page 324
F5-51	0xF533	Minimum input of HDO curve	–100.0% to F5-53	0.00	%	Changeable at any time	" F5-51" on page 325
F5-52	0xF534	Percentage corresponding to minimum input of HDO curve	0.00% to 100.00%	0.00	%	Changeable at any time	" F5-52" on page 325
F5-53	0xF535	Maximum input of HDO curve	F5-51 to 100.00%	100.00	%	Changeable at any time	" F5-53" on page 325
F5-54	0xF536	Percentage corresponding to maximum input of HDO curve	0.00% to 100.00%	100.00	%	Changeable at any time	" F5-54" on page 325

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F5-55	0xF537	HDO polarity	Ones: HDO 0: Normal 1: Absolute value 2: Negated value 3: Negated absolute value	0	-	Changeable at any time	" F5-55" on page 325
F5-56	0xF538	HDO hardware source	0: Output function 1: Force value	0	-	Changeable at any time	" F5-56" on page 326
F5-57	0xF539	HDO force setpoint	0.00% to 100.00%	0.00	%	Changeable at any time	" F5-57" on page 326
F6-00	0xF600	Startup mode	0: Direct start 1: Flying start 2: Pre-excitation start (AC asynchronous motor) 3: SVC quick start	0	-	Changeable at any time	" F6-00" on page 326
F6-01	0xF601	Speed tracking mode	0: From the stop frequency 1: From the power frequency 2: From the maximum frequency 3: Reserved 4: Magnetic field directional speed tracking (MD290)	0	-	Changeable at any time	" F6-01" on page 326
F6-02	0xF602	Speed of speed tracking	1 to 100	20	-	Changeable at any time	" F6-02" on page 327
F6-03	0xF603	Startup frequency	0.00 Hz to 10.00 Hz	0.00	Hz	Changeable at any time	" F6-03" on page 327
F6-04	0xF604	Startup frequency hold time	0.0s to 100.0s	0.0	s	Changeable only at stop	" F6-04" on page 327
F6-05	0xF605	DC braking current at startup	0% to 100%	50	%	Changeable only at stop	" F6-05" on page 327
F6-06	0xF606	DC braking time at startup	0.0s to 100.0s	0.0	s	Changeable only at stop	" F6-06" on page 328
F6-07	0xF607	Acceleration/ Deceleration mode	0: Straight-line acceleration/deceleration 1: S-curve acceleration/deceleration	0	-	Changeable only at stop	" F6-07" on page 328
F6-08	0xF608	Time proportion of S-curve start segment	0.0% to +100.0%	30.0	%	Changeable only at stop	" F6-08" on page 328
F6-09	0xF609	Time proportion of S-curve end segment	0.0% to +100.0%	30.0	%	Changeable only at stop	" F6-09" on page 328
F6-10	0xF60A	Stop mode	0: Decelerate to stop 1: Coast to stop 2: Stop at maximum capability	0	-	Changeable at any time	" F6-10" on page 328
F6-11	0xF60B	Start frequency of DC braking at stop	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	" F6-11" on page 329
F6-12	0xF60C	DC braking delay at stop	0.0s to 100.0s	0.0	s	Changeable at any time	" F6-12" on page 329

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F6-13	0xF60D	DC braking current at stop	0% to 100%	50	%	Changeable at any time	" F6-13" on page 329
F6-14	0xF60E	DC braking time at stop	0.0s to 100.0s	0.0	s	Changeable at any time	" F6-14" on page 329
F6-15	0xF60F	Braking transistor usage	0% to 100%	100	%	Changeable at any time	" F6-15" on page 329
F6-16	0xF610	Speed tracking sweep current limit closed loop Kp	0 to 1000	500	-	Changeable at any time	" F6-16" on page 330
F6-17	0xF611	Speed tracking sweep current limit closed loop Ki	0 to 1000	800	-	Changeable at any time	" F6-17" on page 330
F6-18	0xF612	Speed tracking current	30% to 200%	80	%	Changeable only at stop	" F6-18" on page 330
F6-19	0xF613	Current loop multiple	10% to 600%	100	%	Changeable at any time	" F6-19" on page 330
F6-20	0xF614	S-curve setting mode	0: Symmetrical mode 1: Separate setting of acceleration and deceleration arcs	0	-	Changeable only at stop	" F6-20" on page 330
F6-21	0xF615	Demagnetization time (valid for asynchronous motors)	0.00s to 5.00s	0.50	s	Changeable at any time	" F6-21" on page 331
F6-23	0xF617	Overexcitation enable	0: Disabled 2: Enabled during deceleration 3: Enabled always	0	-	Changeable at any time	" F6-23" on page 331
F6-24	0xF618	Overexcitation suppression current	0% to 150%	100	%	Changeable at any time	" F6-24" on page 331
F6-25	0xF619	Overexcitation gain	0.01 to 2.50	1.25	-	Changeable at any time	" F6-25" on page 331
F6-26	0xF61A	Forced switch-on of braking transistor	0: Switch-off 1: Switch-on	0	-	Changeable only at stop	" F6-26" on page 332
F6-28	0xF61C	Manual self-check enable	Bit00: IGBT shoot-through self-check upon startup 0: Disabled 1: Enabled Bit01: Short-to-ground self-check upon startup 0: Disabled 1: Enabled Bit02: Phase loss self-check upon startup 0: Disabled 1: Enabled Bit03: Reserved	0x7	-	Changeable only at stop	" F6-28" on page 332

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F6-29	0xF61D	Manual self-check command	0: None 1: Static self-check 2: Full self-check	0	-	Changeable only at stop	"F6-29" on page 332
F7-00	0xF700	LED segment missing check	0: Disabled 1: All indicators of the LED operating panel are steady on. 2: All indicators of the LED operating panel are off. 3: All indicators of the LED operating panel blink.	0	-	Changeable only at stop	"F7-00" on page 333
F7-01	0xF701	MF.K key function	0: MF.K key disabled 1: Forced operating panel control 2: Switchover between forward and reverse run 3: Forward jog 4: Reverse jog	0	-	Changeable only at stop	"F7-01" on page 333
F7-02	0xF702	STOP/RESET key function	0: Valid only under operating panel control 1: Valid under any control (OFF1) 2: Valid under any control (OFF2) 3: Valid under any control (OFF3)	1	-	Changeable at any time	"F7-02" on page 334
F7-03	0xF703	LED display 1 in running state	Bit00: Running frequency (Hz) Bit01: Reference frequency (Hz) Bit02: Bus voltage (V) Bit03: Output voltage (V) Bit04: Output current (A) Bit05: Output power (kW) Bit06: Output torque (%) Bit07: DI state Bit08: DO state Bit09: AI1 voltage (V) Bit10: AI2 voltage (V) Bit11: AI3 voltage (V) Bit12: Count value Bit13: Length value Bit14: Load speed Bit15: PID reference	0x1F	-	Changeable at any time	"F7-03" on page 334

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F7-04	0xF704	LED display 2 in running state	Bit00: PID feedback Bit01: PLC stage Bit02: Input pulse frequency (kHz) Bit03: Running frequency 2 (Hz) Bit04: Remaining running time Bit05: AI1 voltage before correction (V) Bit06: Free mapping 0 Bit07: Free mapping 1 Bit08: Motor speed Bit09: Current power-on duration (Hour) Bit10: Current running duration (min) Bit11: Input pulse frequency (Hz) Bit12: Communication setpoint Bit13: Encoder feedback speed Bit14: Main frequency X Bit15: Auxiliary frequency Y	0x0	-	Changeable at any time	" F7-04" on page 334
F7-05	0xF705	LED display in stop state	Bit00: Reference frequency (Hz) Bit01: Bus voltage (V) Bit02: DI state Bit03: DO state Bit04: AI1 voltage (V) Bit05: AI2 voltage (V) Bit06: AI3 voltage (V) Bit07: Count value Bit08: Length value Bit09: PLC stage Bit10: Load speed Bit11: PID reference Bit12: Input pulse frequency (kHz) Bit13: Reserved Bit14: Free mapping 0 Bit15: Free mapping 1	0x33	-	Changeable at any time	" F7-05" on page 335
F7-06	0xF706	Load speed display coefficient	1.0E-4 to 6.5000	1.0000	-	Changeable at any time	" F7-06" on page 336
F7-07	0xF707	IGBT heatsink temperature	–20°C to +120°C	0	°C	Unchangea ble	" F7-07" on page 336
F7-08	0xF708	Product SN	0 to 65535	0	-	Unchangea ble	" F7-08" on page 336
F7-09	0xF709	Accumulative running duration (hour)	0 h to 65535 h	0	h	Unchangea ble	" F7-09" on page 336
F7-10	0xF70A	Performance software version	0.00 to 655.35	0.00	-	Unchangea ble	" F7-10" on page 336
F7-11	0xF70B	Function software version	0.00 to 655.35	0.00	-	Unchangea ble	" F7-11" on page 337

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F7-12	0xF70C	Number of decimal places for load speed display	Ones: Decimal places of U0-14/U0-24 0: No decimal place 1: One decimal place 2: Two decimal places Tens: Decimal places of U0-19/U0-29 0: No decimal place 1: One decimal place 2: Two decimal places Hundreds: Decimal places of U0-30/U0-31 0: No decimal place 1: One decimal place 2: Two decimal places	220	-	Changeable at any time	"F7-12" on page 337
F7-13	0xF70D	Accumulative power-on duration (hour)	0 h to 65535 h	0	h	Unchangeable	"F7-13" on page 337
F7-14	0xF70E	Accumulative power consumption	0 kW·h to 65535 kW·h	0	kW·h	Unchangeable	"F7-14" on page 337
F7-15	0xF70F	Temporary performance software version	0.00 to 655.35	0.00	-	Unchangeable	"F7-15" on page 338
F7-16	0xF710	Temporary function software version	0.00 to 655.35	0.00	-	Unchangeable	"F7-16" on page 338
F7-17	0xF711	Low-order bits of level-0 menu display address	0: Invalid address Others: K connector	0	-	Changeable at any time	"F7-17" on page 338
F7-18	0xF712	High-order bits of level-0 menu display address	0: Invalid address Others: K connector	0	-	Changeable at any time	"F7-18" on page 338

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F7-19	0xF713	Low-order bits of level-0 menu display format	Ones: Unit 0: None 1: HZ 2: A 3: RPM 4: V 5: Link 6: % 7: s 8: h 9: kW 10: kW/h 11: °C Tens: Decimal places 0: No decimal place 1: One decimal place 2: Two decimal places 3: Three decimal places 4: Four decimal places Hundreds: Enable 0: Disabled 1: Enabled	0x0	-	Changeable at any time	" F7-19" on page 339
F7-20	0xF714	High-order bits of level-0 menu display format	Ones: Unit 0: None 1: HZ 2: A 3: RPM 4: V 5: Link 6: % 7: s 8: h 9: kW 10: kW/h 11: °C Tens: Decimal places 0: No decimal place 1: One decimal place 2: Two decimal places 3: Three decimal places 4: Four decimal places Hundreds: Enable 0: Disabled 1: Enabled	0x0	-	Changeable at any time	" F7-20" on page 339
F7-21	0xF715	LED operating panel key test	0: Disabled 1: Enabled	0	-	Changeable only at stop	" F7-21" on page 340
F7-22	0xF716	LED display update cycle	10 to 300	10	-	Changeable at any time	" F7-22" on page 340

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F7-23	0xF717	LED display of direction	Ones: Direction display at stop 0: Not displayed 1: Displayed Tens: Reserved 0: Reserved 1: Reserved	1	-	Changeable at any time	"F7-23" on page 341
F7-24	0xF718	Decimal places of floating-point connector values after conversion	0: Two decimal places 1: One decimal place	1	-	Changeable at any time	"F7-24" on page 341
F7-25	0xF719	Fault display	0 to 1	0	-	Changeable at any time	"F7-25" on page 341
F7-26	0xF71A	Storage of LED display in running state	0 to 31	0	-	Unchangeable	"F7-26" on page 341
F7-27	0xF71B	Storage of LED display in stop state	0 to 15	0	-	Unchangeable	"F7-27" on page 342
F7-28	0xF71C	Accumulative running duration (second)	0s to 3599s	0	s	Unchangeable	"F7-28" on page 342
F7-29	0xF71D	Accumulative power-on duration (second)	0s to 3599s	0	s	Unchangeable	"F7-29" on page 342
F7-30	0xF71E	Auxiliary calculation of accumulative power consumption	0 to 65535	0	-	Unchangeable	"F7-30" on page 342
F7-31	0xF71F	Auxiliary calculation of accumulative power consumption of group U0	0 to 65535	0	-	Unchangeable	"F7-31" on page 342
F7-32	0xF720	Low-order bits of accumulative power consumption	0.0 kW·h to 6553.5 kW·h	0.0	kW·h	Unchangeable	"F7-32" on page 343
F7-33	0xF721	High-order bits of accumulative power consumption	0 kW·h to 65535 kW·h	0	kW·h	Unchangeable	"F7-33" on page 343
F8-00	0xF800	Jog frequency	0.00 Hz to F0-10	2.00	Hz	Changeable at any time	"F8-00" on page 343
F8-01	0xF801	Jog acceleration time	0.0s to 6500.0s	20.0	s	Changeable at any time	"F8-01" on page 343
F8-02	0xF802	Jog deceleration time	0.0s to 6500.0s	20.0	s	Changeable at any time	"F8-02" on page 343
F8-03	0xF803	Acceleration time 2	0.0s to 6500.0s	0.0	s	Changeable at any time	"F8-03" on page 344

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F8-04	0xF804	Deceleration time 2	0.0s to 6500.0s	0.0	s	Changeable at any time	"F8-04" on page 344
F8-05	0xF805	Acceleration time 3	0.0s to 6500.0s	0.0	s	Changeable at any time	"F8-05" on page 344
F8-06	0xF806	Deceleration time 3	0.0s to 6500.0s	0.0	s	Changeable at any time	"F8-06" on page 344
F8-07	0xF807	Acceleration time 4	0.0s to 6500.0s	0.0	s	Changeable at any time	"F8-07" on page 345
F8-08	0xF808	Deceleration time 4	0.0s to 6500.0s	0.0	s	Changeable at any time	"F8-08" on page 345
F8-09	0xF809	Skip frequency 1	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	"F8-09" on page 345
F8-10	0xF80A	Skip frequency 2	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	"F8-10" on page 345
F8-11	0xF80B	Skip frequency band	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	"F8-11" on page 345
F8-12	0xF80C	FWD/REV switchover deadzone time	0.0s to 3000.0s	0.0	s	Changeable at any time	"F8-12" on page 346
F8-13	0xF80D	Reverse frequency inhibition	0: Disabled 1: Enabled	0	-	Changeable at any time	"F8-13" on page 346
F8-14	0xF80E	Running mode when frequency reference below lower limit	0: Run at frequency lower limit 1: Stop 2: Run at zero speed 3: Coast to stop	0	-	Changeable at any time	"F8-14" on page 346
F8-15	0xF80F	Droop rate	0.00% to 10.00%	0.00	%	Changeable at any time	"F8-15" on page 347
F8-16	0xF810	Power-on duration threshold (hour)	0 h to 65535 h	0	h	Changeable at any time	"F8-16" on page 347
F8-17	0xF811	Running duration threshold (hour)	0 h to 65535 h	0	h	Changeable at any time	"F8-17" on page 347
F8-18	0xF812	Startup protection	0: Disabled 1: Enabled	1	-	Changeable at any time	"F8-18" on page 347
F8-19	0xF813	Frequency detection value (FDT1)	0.00 Hz to F0-10	50.00	Hz	Changeable at any time	"F8-19" on page 347
F8-20	0xF814	Frequency detection hysteresis (FDT1)	0.0% to +100.0%	5.0	%	Changeable at any time	"F8-20" on page 348
F8-21	0xF815	Frequency reach detection range	0.0% to +100.0%	0.0	%	Changeable at any time	"F8-21" on page 348

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F8-22	0xF816	Skip frequency enable during acceleration/ deceleration	0: Disabled 1: Enabled	0	-	Changeable at any time	"F8-22" on page 348
F8-25	0xF819	Switchover frequency of acceleration time 1 and acceleration time 2	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	"F8-25" on page 349
F8-26	0xF81A	Switchover frequency of deceleration time 1 and deceleration time 2	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	"F8-26" on page 349
F8-27	0xF81B	Jog priority mode	0: No priority 1: Jog preferred 2: OFF1 preferred	0	-	Changeable at any time	"F8-27" on page 349
F8-28	0xF81C	Frequency detection value (FDT2 level)	0.00 Hz to F0-10	50.00	Hz	Changeable at any time	"F8-28" on page 349
F8-29	0xF81D	Frequency detection hysteresis (FDT2)	0.0% to +100.0%	5.0	%	Changeable at any time	"F8-29" on page 350
F8-30	0xF81E	Frequency reach detection value 1	0.00 Hz to F0-10	50.00	Hz	Changeable at any time	"F8-30" on page 350
F8-31	0xF81F	Frequency reach detection range 1	0.1% to +100.0%	0.1	%	Changeable at any time	"F8-31" on page 350
F8-32	0xF820	Frequency reach detection value 2	0.00 Hz to F0-10	50.00	Hz	Changeable at any time	"F8-32" on page 350
F8-33	0xF821	Frequency reach detection range 2	0.1% to +100.0%	0.1	%	Changeable at any time	"F8-33" on page 351
F8-34	0xF822	Zero current detection level	0.0% to 300.0%	5.0	%	Changeable at any time	"F8-34" on page 351
F8-35	0xF823	Zero current detection delay	0.01s to 600.00s	0.10	s	Changeable at any time	"F8-35" on page 351
F8-36	0xF824	Output overcurrent threshold	0.0% to 300.0%	5.0	%	Changeable at any time	"F8-36" on page 351
F8-37	0xF825	Output overcurrent detection delay	0.00s to 600.00s	0.00	s	Changeable at any time	"F8-37" on page 352
F8-38	0xF826	Detection level of current 1	0.0% to 300.0%	100.0	%	Changeable at any time	"F8-38" on page 352
F8-39	0xF827	Detection width of current 1	0.0% to 300.0%	0.0	%	Changeable at any time	"F8-39" on page 352

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F8-40	0xF828	Detection level of current 2	0.0% to 300.0%	100.0	%	Changeable at any time	" F8-40" on page 352
F8-41	0xF829	Detection width of current 2	0.0% to 300.0%	0.0	%	Changeable at any time	" F8-41" on page 353
F8-42	0xF82A	Timing function	0: Disabled 1: Enabled	0	-	Changeable only at stop	" F8-42" on page 353
F8-43	0xF82B	Timing duration source	0: F8-44 1: AI1 2: AI2 3: AI3 Others: F connector	0	-	Changeable only at stop	" F8-43" on page 353
F8-44	0xF82C	Timing duration	0.0 min to 6500.0 min	0.0	min	Changeable only at stop	" F8-44" on page 353
F8-45	0xF82D	AI1 input voltage lower limit	0.00 V to F8-46	3.10	V	Changeable at any time	" F8-45" on page 353
F8-46	0xF82E	AI1 input voltage upper limit	F8-45 to 10.00 V	6.80	V	Changeable at any time	" F8-46" on page 354
F8-47	0xF82F	IGBT temperature reach (threshold)	0°C to 100°C	75	°C	Changeable at any time	" F8-47" on page 354
F8-48	0xF830	Cooling fan control	0: Working during AC drive running 1: Working always	0	-	Changeable at any time	" F8-48" on page 354
F8-49	0xF831	Wakeup frequency	F8-51 to F0-10	0.00	Hz	Changeable at any time	" F8-49" on page 354
F8-50	0xF832	Wakeup delay	0.0s to 6500.0s	0.0	s	Changeable at any time	" F8-50" on page 354
F8-51	0xF833	Hibernation frequency	0.00 Hz to F8-49	0.00	Hz	Changeable at any time	" F8-51" on page 355
F8-52	0xF834	Hibernation delay	0.0s to 6500.0s	0.0	s	Changeable at any time	" F8-52" on page 355
F8-53	0xF835	Current running duration threshold	0.0 min to 6500.0 min	0.0	min	Changeable only at stop	" F8-53" on page 355
F8-54	0xF836	Output power correction coefficient	0.0% to 200.0%	100.0	%	Changeable at any time	" F8-54" on page 355
F8-55	0xF837	Deceleration time for quick stop	0.0s to 6500.0s	0.0	s	Changeable at any time	" F8-55" on page 356

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F8-56	0xF838	Real-time target speed source	0: RFG output (default) 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable only at stop	" F8-56" on page 356
F8-57	0xF839	Undervoltage percentage for storage upon undervoltage	70% to 120%	100	%	Changeable at any time	" F8-57" on page 356
F8-58	0xF83A	Number of E2P operations per unit time	0 to 100	0	-	Changeable at any time	" F8-58" on page 356
F8-59	0xF83B	DI force function	0: The DI functions of group F4 are not enforced. (you need to set the corresponding function connection parameter to 2 to activate the DI function) 1: The DI functions of group F4 are enforced.	1	-	Changeable at any time	" F8-59" on page 357
F8-60	0xF83C	Main status word 1	0: Invalid 1: Set to 1 Others: B connector	0	-	Changeable at any time	" F8-60" on page 357
F8-61	0xF83D	Main status word 2	0: Invalid 1: Set to 1 Others: B connector	0	-	Changeable at any time	" F8-61" on page 357
F8-62	0xF83E	Target speed reach hysteresis	0.0% to 600.0%	3.0	%	Changeable at any time	" F8-62" on page 357
F8-63	0xF83F	Target speed reach time	0.00s to 100.00s	3.00	s	Changeable at any time	" F8-63" on page 357
F8-64	0xF840	Speed comparison reach threshold 1	0.0% to 600.0%	100.0	%	Changeable at any time	" F8-64" on page 358
F8-65	0xF841	Speed comparison reach hysteresis 1	0.0% to 600.0%	3.0	%	Changeable at any time	" F8-65" on page 358
F8-66	0xF842	Speed comparison reach time 1	0.00s to 100.00s	3.00	s	Changeable at any time	" F8-66" on page 358
F8-67	0xF843	Speed comparison reach threshold 2	0.0% to 600.0%	100.0	%	Changeable at any time	" F8-67" on page 358
F8-68	0xF844	Speed comparison reach hysteresis 2	0.0% to 600.0%	3.0	%	Changeable at any time	" F8-68" on page 358
F8-69	0xF845	Speed comparison reach time 2	0.00s to 100.00s	3.00	s	Changeable at any time	" F8-69" on page 359

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F8-72	0xF848	Skip frequency 3	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	" F8-72" on page 359
F8-73	0xF849	Skip frequency 4	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	" F8-73" on page 359
F8-74	0xF84A	Power-on duration threshold (second)	0s to 3599s	0	s	Changeable at any time	" F8-74" on page 359
F8-75	0xF84B	Running duration threshold (second)	0s to 3599s	0	s	Changeable at any time	" F8-75" on page 360
F9-00	0xF900	Motor overload protection	0: Disabled 1: Enabled	1	-	Changeable at any time	" F9-00" on page 360
F9-01	0xF901	Motor overload protection gain	0.20 to 10.00	1.00	-	Changeable at any time	" F9-01" on page 360
F9-02	0xF902	Motor overload pre-warning coefficient	50% to 100%	80	%	Changeable at any time	" F9-02" on page 360
F9-03	0xF903	Overvoltage stall suppression gain	1 to 100	30	-	Changeable at any time	" F9-03" on page 360
F9-04	0xF904	Overvoltage stall protection voltage	330.0 V to 800.0 V	770.0	V	Changeable at any time	" F9-04" on page 361
F9-07	0xF907	Short-to-ground detection	Ones: Short-to-ground detection upon power-on 0: Disabled 1: Enabled Tens: Short-to-ground detection before running 0: Disabled 1: Enabled	1	-	Changeable at any time	" F9-07" on page 361
F9-08	0xF908	Braking unit applied voltage	330.0 V to 800.0 V	760.0	V	Changeable only at stop	" F9-08" on page 361
F9-09	0xF909	Auto reset attempts	0 to 100	0	-	Changeable at any time	" F9-09" on page 361
F9-10	0xF90A	Relay action during auto reset	0: Disabled 1: Enabled	0	-	Changeable at any time	" F9-10" on page 362
F9-11	0xF90B	Auto reset interval	0.1s to 600.0s	1.0	s	Changeable at any time	" F9-11" on page 362
F9-12	0xF90C	Input phase loss/ Contactor pickup protection	Ones: Input phase loss protection 0: Disabled 1: Protection enabled when both software and hardware input phase loss conditions are met 2: Protection enabled when software input phase loss conditions are met 3: Protection enabled when hardware input phase loss conditions are met Tens: Contactor pickup protection 0: Disabled 1: Enabled	11	-	Changeable at any time	" F9-12" on page 362

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F9-13	0xF90D	Output phase loss protection	Ones: Output phase loss protection during running 0: Disabled 1: Enabled Tens: Output phase loss protection before running 0: Disabled 1: Enabled	1	-	Changeable at any time	"F9-13" on page 362
F9-14	0xF90E	1st fault type	0: No fault 1: Reserved 2: Overcurrent (Err02) 5: Overvoltage (Err05) 8: Pre-charge resistor overload (Err08) 9: Undervoltage (Err09) 10: AC drive overload (Err10) 11: Motor overload (Err11) 12: Input phase loss (Err12) 13: Output phase loss (Err13) 14: IGBT overheat (Err14) 15: External fault (Err15) 16: Communication exception (Err16) 17: Contactor exception (Err17) 18: Current detection exception (Err18) 19: Motor auto-tuning exception (Err19) 20: Encoder/PG card exception 21: Parameter read/write exception (Err21) 22: Encoder card exception (Err22) 23: Motor short-to-ground (Err23) 26: Accumulative running duration reach (Err26) 27: User-defined fault 28: User-defined alarm 29: Accumulative power-on duration reach (Err29) 30: Load loss (Err30) 31: PID feedback loss (Err31) 32: Parameter exception (Err32)	0	-	Unchangeable	"F9-14" on page 363

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
(Con tinu ed)	(Contin ued)	(Continued)	40: Pulse-by-pulse current limit fault (Err40) 41: Reserved (Err41) 42: Excessive speed deviation (Err42) 43: Motor overspeed (Err43) 45: Motor overtemperature (Err45) 47: STO fault (Err47) 55: Slave fault under master-slave control (Err55) 56: Self-check fault (Err56) 57: IGBT fault (Err57) 58: Hardware sensor fault (Err58) 59: Two-phase imbalance (Err59) 61: Braking overload (Err61) 62: Braking module exception (Err62) 63: External alarm (Err63) 82: Pre-charge contactor feedback exception (Err82) 85: Timing exception (Err85) 93: Motor control exception (Err93) 94: Motor parameter exception (Err94) 169: Fault reset fault (Err169) 174: Wire breakage (Err174)				
F9-15	0xF90F	2nd fault type	Same as F9-15	0	-	Unchangea ble	" F9-15" on page 364
F9-16	0xF910	3rd (latest) fault type	Same as F9-15	0	-	Unchangea ble	" F9-16" on page 364
F9-17	0xF911	Frequency upon the 3rd (latest) fault	0.00 Hz to 655.35 Hz	0.00	Hz	Unchangea ble	" F9-17" on page 365
F9-18	0xF912	Current upon the 3rd (latest) fault	0.00 A to 655.35 A	0.00	A	Unchangea ble	" F9-18" on page 365
F9-19	0xF913	Bus voltage upon the 3rd (latest) fault	0.0 V to 6553.5 V	0.0	V	Unchangea ble	" F9-19" on page 365
F9-20	0xF914	DI state upon the 3rd (latest) fault	0x0 to 0xFFFF	0x0	-	Unchangea ble	" F9-20" on page 365
F9-21	0xF915	DO state upon the 3rd (latest) fault	0x0 to 0xFFFF	0x0	-	Unchangea ble	" F9-21" on page 365
F9-22	0xF916	AC drive state upon the 3rd (latest) fault	0 to 65535	0	-	Unchangea ble	" F9-22" on page 366
F9-23	0xF917	Power-on duration upon the 3rd (latest) fault	0 min to 65535 min	0	min	Unchangea ble	" F9-23" on page 366
F9-24	0xF918	Running duration upon the 3rd (latest) fault	0.0 min to 6553.5 min	0.0	min	Unchangea ble	" F9-24" on page 366
F9-25	0xF919	Status word A upon the 3rd (latest) fault	0x0 to 0xFFFF	0x0	-	Unchangea ble	" F9-25" on page 366

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F9-26	0xF91A	Status word B upon the 3rd (latest) fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"F9-26" on page 366
F9-27	0xF91B	Frequency upon the 2nd fault	0.00 Hz to 655.35 Hz	0.00	Hz	Unchangeable	"F9-27" on page 366
F9-28	0xF91C	Current upon the 2nd fault	0.00 A to 655.35 A	0.00	A	Unchangeable	"F9-28" on page 367
F9-29	0xF91D	Bus voltage upon the 2nd fault	0.0 V to 6553.5 V	0.0	V	Unchangeable	"F9-29" on page 367
F9-30	0xF91E	DI state upon the 2nd fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"F9-30" on page 367
F9-31	0xF91F	DO state upon the 2nd fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"F9-31" on page 367
F9-32	0xF920	AC drive state upon the 2nd fault	0 to 65535	0	-	Unchangeable	"F9-32" on page 367
F9-33	0xF921	Power-on duration upon the 2nd fault	0 min to 65535 min	0	min	Unchangeable	"F9-33" on page 368
F9-34	0xF922	Running duration upon the 2nd fault	0.0 min to 6553.5 min	0.0	min	Unchangeable	"F9-34" on page 368
F9-35	0xF923	Status word A upon the 2nd fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"F9-35" on page 368
F9-36	0xF924	Status word B upon the 2nd fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"F9-36" on page 368
F9-37	0xF925	Frequency upon the 1st fault	0.00 Hz to 655.35 Hz	0.00	Hz	Unchangeable	"F9-37" on page 368
F9-38	0xF926	Current upon the 1st fault	0.00 A to 655.35 A	0.00	A	Unchangeable	"F9-38" on page 369
F9-39	0xF927	Bus voltage upon the 1st fault	0.0 V to 6553.5 V	0.0	V	Unchangeable	"F9-39" on page 369
F9-40	0xF928	DI state upon the 1st fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"F9-40" on page 369
F9-41	0xF929	DO state upon the 1st fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"F9-41" on page 369
F9-42	0xF92A	AC drive state upon the 1st fault	0 to 65535	0	-	Unchangeable	"F9-42" on page 369
F9-43	0xF92B	Power-on duration upon the 1st fault	0 min to 65535 min	0	min	Unchangeable	"F9-43" on page 370
F9-44	0xF92C	Running duration upon the 1st fault	0.0 min to 6553.5 min	0.0	min	Unchangeable	"F9-44" on page 370
F9-45	0xF92D	Status word A upon the 1st fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"F9-45" on page 370
F9-46	0xF92E	Status word B upon the 1st fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"F9-46" on page 370

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F9-47	0xF92F	Fault protection action selection 1	Ones: Motor overload (Err11) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit 5: Ignore Tens: Input phase loss (Err12) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit 5: Ignore Hundreds: Output phase loss (Err13) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit Thousands: External fault (Err15) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit Ten thousands: Reserved	0	-	Changeable at any time	"F9-47" on page 370
F9-48	0xF930	Fault protection action selection 2	Ones: Encoder/PG card exception (Err20) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit 5: Ignore Tens: Parameter read/write exception (Err21) 0: Coast to stop 1: Stop according to the stop mode Hundreds: Reserved (Err24) 0: Coast to stop Thousands: Reserved (Err25) 0: Coast to stop Ten thousands: Running duration reach (Err26) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit	0	-	Changeable at any time	"F9-48" on page 371

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F9-49	0xF931	Fault protection action selection 3	Ones: User-defined fault 1 (Err27) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit Tens: User-defined fault 2 (Err28) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit Hundreds: Power-on duration reach (Err29) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit Thousands: Load loss (Err30) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit 5: Ignore Ten thousands: PID loss during running (Err31) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit	220	-	Changeable at any time	" F9-49" on page 372
F9-50	0xF932	Fault protection action selection 4	Ones: Excessive speed deviation (Err42) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit 5: Ignore Tens: Motor overspeed (Err43) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit 5: Ignore Thousands: Magnetic pole position auto-tuning error (Err55) 0: Coast to stop	2	-	Changeable at any time	" F9-50" on page 373

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F9-51	0xF933	Fault protection action selection 5	Ones: Modbus timeout (Err160) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit 5: Ignore Tens: CANOpen fault (Err161) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit 5: Ignore Hundreds: CANlink fault (Err162) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit 5: Ignore Thousands: Reserved Ten thousands: Expansion card fault (Err164) 0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit 5: Ignore	10111	-	Changeable at any time	" F9-51" on page 374
F9-54	0xF936	Frequency for continuing to run upon fault	0: Current running frequency 1: Frequency reference 2: Frequency upper limit 3: Frequency lower limit 4: Alternative frequency upon exception	1	-	Changeable at any time	" F9-54" on page 375
F9-55	0xF937	Alternative frequency upon exception	0.0% to +100.0%	100.0	%	Changeable at any time	" F9-55" on page 376
F9-56	0xF938	AI3 temperature mode - motor temperature sensor type	0: No temperature sensor (AI channel used as analog input) 1: PT100 2: PT1000	0	-	Changeable at any time	" F9-56" on page 376
F9-57	0xF939	AI3 temperature mode - motor overheat protection threshold	F9-58 to 200°C	110	°C	Changeable at any time	" F9-57" on page 376
F9-58	0xF93A	AI3 temperature mode - motor overheat pre-warning threshold	0°C to F9-57	90	°C	Changeable at any time	" F9-58" on page 376

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F9-59	0xF93B	Power dip ride-through	0: Disabled 1: Decelerate 2: Decelerate to stop 3: Suppress voltage dip	0	-	Changeable only at stop	"F9-59" on page 376
F9-60	0xF93C	Voltage threshold for disabling power dip ride-through	80% to 100%	85	%	Changeable only at stop	"F9-60" on page 377
F9-61	0xF93D	Delay of voltage recovery from power dip	0.0s to 100.0s	0.5	s	Changeable only at stop	"F9-61" on page 377
F9-62	0xF93E	Voltage threshold for enabling power dip ride-through	60% to 100%	80	%	Changeable only at stop	"F9-62" on page 378
F9-63	0xF93F	Protection upon load loss	0: Disabled 1: Enabled	0	-	Changeable at any time	"F9-63" on page 378
F9-64	0xF940	Load loss detection level	0.0% to +100.0%	10.0	%	Changeable at any time	"F9-64" on page 378
F9-65	0xF941	Load loss detection time	0.0s to 60.0s	1.0	s	Changeable at any time	"F9-65" on page 378
F9-67	0xF943	Overspeed detection level	0.0% to 50.0%	20.0	%	Changeable at any time	"F9-67" on page 378
F9-68	0xF944	Overspeed detection time	0.0s to 60.0s	1.0	s	Changeable at any time	"F9-68" on page 379
F9-69	0xF945	Detection level of excessive speed deviation	0.0% to 50.0%	20.0	%	Changeable at any time	"F9-69" on page 379
F9-70	0xF946	Detection time of excessive speed deviation	0.0s to 60.0s	5.0	s	Changeable at any time	"F9-70" on page 379
F9-71	0xF947	Power dip ride-through gain Kp	1 to 100	40	-	Changeable at any time	"F9-71" on page 379
F9-72	0xF948	Power dip ride-through integral coefficient Ki	1 to 100	30	-	Changeable at any time	"F9-72" on page 379
F9-73	0xF949	Deceleration time of power dip ride-through	0.0s to 300.0s	20.0	s	Changeable at any time	"F9-73" on page 380
F9-74	0xF94A	Voltage dip suppression time	0.1s to 600.0s	0.5	s	Changeable at any time	"F9-74" on page 380
F9-75	0xF94B	AI2 temperature mode - motor temperature sensor type	0: No temperature sensor (AI channel used as analog input) 1: PT100 2: PT1000 3: KTY84-130 4: PTC130	0	-	Changeable at any time	"F9-75" on page 380

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
F9-76	0xF94C	AI2 temperature mode - motor overheat protection threshold	F9-77 to 200°C	110	°C	Changeable at any time	"F9-76" on page 380
F9-77	0xF94D	AI2 temperature mode - motor overheat pre-warning threshold	0°C to F9-76	90	°C	Changeable at any time	"F9-77" on page 380
F9-78	0xF94E	AI2 temperature mode - motor temperature reach	0°C to 100°C	75	°C	Changeable at any time	"F9-78" on page 381
F9-79	0xF94F	Auto reset of STO state	0: Manual reset 1: Auto reset	0	-	Changeable at any time	"F9-79" on page 381
F9-80	0xF950	AI3 temperature mode - motor temperature reach	0°C to 100°C	75	°C	Changeable at any time	"F9-80" on page 381
FA-00	0xFA00	PID reference source	0: FA-01 1: AI1 2: AI2 3: AI3 4: Pulse input (DI5) 5: Communication 6: Multi-reference Others: F connector	0	-	Changeable at any time	"FA-00" on page 381
FA-01	0xFA01	PID reference	0.0% to +100.0%	50.0	%	Changeable at any time	"FA-01" on page 382
FA-02	0xFA02	PID feedback source	0: AI1 1: AI2 2: AI3 3: AI1-AI2 4: Pulse reference (DIO1) 5: Communication 6: AI1+AI2 7: MAX(|AI1|, |AI2|) 8: Min(|AI1|, |AI2|) Others: F connector	0	-	Changeable at any time	"FA-02" on page 382
FA-03	0xFA03	PID action direction	0: Forward 1: Reverse Others: B connector	0	-	Changeable at any time	"FA-03" on page 383
FA-04	0xFA04	PID reference and feedback range	0 to 65535	1000	-	Changeable at any time	"FA-04" on page 383
FA-05	0xFA05	Proportional gain Kp1	0.0 to 1000.0	20.0	-	Changeable at any time	"FA-05" on page 383
FA-06	0xFA06	Integral time Ti1	0.01s to 10.00s	2.00	s	Changeable at any time	"FA-06" on page 384

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
FA-07	0xFA07	Derivative time Td1	0.000s to 10.000s	0.000	s	Changeable at any time	" FA-07" on page 384
FA-08	0xFA08	PID cut-off frequency in reverse direction	0.00 Hz to F0-10	2.00	Hz	Changeable at any time	" FA-08" on page 384
FA-09	0xFA09	PID deviation limit	0.0% to +100.0%	0.0	%	Changeable at any time	" FA-09" on page 384
FA-10	0xFA0A	PID derivative limit	0.00% to 100.00%	0.10	%	Changeable at any time	" FA-10" on page 385
FA-11	0xFA0B	PID reference change time	0.00s to 650.00s	0.00	s	Changeable at any time	" FA-11" on page 385
FA-12	0xFA0C	PID feedback filter time	0.00s to 60.00s	0.00	s	Changeable at any time	" FA-12" on page 385
FA-13	0xFA0D	PID output filter time	0.00s to 60.00s	0.00	s	Changeable at any time	" FA-13" on page 385
FA-15	0xFA0F	Proportional gain Kp2	0.0 to 1000.0	20.0	-	Changeable at any time	" FA-15" on page 385
FA-16	0xFA10	Integral time Ti2	0.01s to 10.00s	2.00	s	Changeable at any time	" FA-16" on page 386
FA-17	0xFA11	Derivative time Td2	0.000s to 10.000s	0.000	s	Changeable at any time	" FA-17" on page 386
FA-18	0xFA12	PID parameter switchover condition	0: No switchover 1: Switchover by DI 2: Automatic switchover based on deviation 3: Automatic switchover based on running frequency	0	-	Changeable at any time	" FA-18" on page 386
FA-19	0xFA13	PID parameter switchover deviation 1	0.0% to FA-20	20.0	%	Changeable at any time	" FA-19" on page 387
FA-20	0xFA14	PID parameter switchover deviation 2	FA-19 to 100.0%	80.0	%	Changeable at any time	" FA-20" on page 387
FA-21	0xFA15	PID initial value	0.0% to +100.0%	0.0	%	Changeable at any time	" FA-21" on page 387
FA-22	0xFA16	Hold time of PID initial value	0.00s to 650.00s	0.00	s	Changeable at any time	" FA-22" on page 387
FA-23	0xFA17	Maximum deviation between two PID outputs	0.00% to 100.00%	1.00	%	Changeable at any time	" FA-23" on page 388
FA-24	0xFA18	Minimum deviation between two PID outputs	0.00% to 100.00%	1.00	%	Changeable at any time	" FA-24" on page 388

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
FA-25	0xFA19	PID integral property	Ones: Integral separation 0: Disabled 1: Enabled Tens: Whether to stop integration when the output reaches the limit 0: Continue integration 1: Stop integration	10	-	Changeable at any time	"FA-25" on page 388
FA-26	0xFA1A	Lower threshold of detection on feedback loss	0.0% to +100.0%	0.0	%	Changeable at any time	"FA-26" on page 389
FA-27	0xFA1B	PID feedback loss detection time	0.0s to 20.0s	0.0	s	Changeable at any time	"FA-27" on page 389
FA-28	0xFA1C	PID operation at stop	0: Disabled 1: Enabled Others: B connector	0	-	Changeable at any time	"FA-28" on page 389
FA-29	0xFA1D	Upper threshold of detection on feedback loss	0.0% to +100.0%	100.0	%	Changeable at any time	"FA-29" on page 389
FA-30	0xFA1E	Source of maximum output	0: [1] 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"FA-30" on page 390
FA-31	0xFA1F	Source of minimum output	0: [0] 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"FA-31" on page 390
FA-32	0xFA20	Forced output value	Same as FA-31	0	-	Changeable at any time	"FA-32" on page 391
FA-33	0xFA21	Forced output assignment	0: Disabled 1: Enabled Others: B connector	0	-	Changeable at any time	"FA-33" on page 391
FA-34	0xFA22	General PID enable	0: Disabled 1: Enabled Others: B connector	1	-	Changeable at any time	"FA-34" on page 391

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
FB-00	0xFB00	Wobble setting mode	0: Relative to center frequency 1: Relative to maximum frequency	0	-	Changeable at any time	"FB-00" on page 392
FB-01	0xFB01	Wobble amplitude	0.0% to +100.0%	0.0	%	Changeable at any time	"FB-01" on page 392
FB-02	0xFB02	Wobble step	0.0% to 50.0%	0.0	%	Changeable at any time	"FB-02" on page 392
FB-03	0xFB03	Wobble cycle	0.1s to 3000.0s	10.0	s	Changeable at any time	"FB-03" on page 392
FB-04	0xFB04	Triangular wave rise time coefficient	0.1% to +100.0%	50.0	%	Changeable at any time	"FB-04" on page 393
FB-05	0xFB05	Reference length	0 to 65535	1000	-	Changeable at any time	"FB-05" on page 393
FB-06	0xFB06	Actual length	0 to 65535	0	-	Unchangeable	"FB-06" on page 393
FB-07	0xFB07	Number of pulses per meter	0.1 to 6553.5	100.0	-	Changeable at any time	"FB-07" on page 393
FB-08	0xFB08	Reference count value	0 to 65535	1000	-	Changeable at any time	"FB-08" on page 393
FB-09	0xFB09	Designated count value	0 to 65535	1000	-	Changeable at any time	"FB-09" on page 393
FB-20	0xFB14	Motor-driven potentiometer enable	0: Disabled 1: Enabled 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"FB-20" on page 394
FB-21	0xFB15	Memory retention at power failure of motor-driven potentiometer	0: Disabled 1: Enabled	0	-	Changeable at any time	"FB-21" on page 394
FB-22	0xFB16	Initial value of motor-driven potentiometer	–600% to +600.0%	0.0	%	Changeable at any time	"FB-22" on page 395

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
FB-23	0xFB17	Value increase time base of motor-driven potentiometer	0.00s to 655.35s	20.00	s	Changeable at any time	"FB-23" on page 395
FB-24	0xFB18	Value decrease time base of motor-driven potentiometer	0.00s to 655.35s	20.00	s	Changeable at any time	"FB-24" on page 395
FB-25	0xFB19	Source of motor-driven potentiometer increase command	0: Invalid 1: Valid 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"FB-25" on page 395
FB-26	0xFB1A	Source of motor-driven potentiometer decrease command	Same as FB-25	0	-	Changeable at any time	"FB-26" on page 396
FB-27	0xFB1B	Maximum output value of motor-driven potentiometer	–600% to +600.0%	600.0	%	Changeable at any time	"FB-27" on page 397
FB-28	0xFB1C	Minimum output value of motor-driven potentiometer	–600% to +600.0%	–600	%	Changeable at any time	"FB-28" on page 397
FB-29	0xFB1D	Source 1 of motor-driven potentiometer pause command	Same as FB-25	0	-	Changeable at any time	"FB-29" on page 397
FB-30	0xFB1E	Source 2 of motor-driven potentiometer pause command	Same as FB-25	0	-	Changeable at any time	"FB-30" on page 398

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
FB-31	0xFB1F	Source 1 of motor-driven potentiometer reset command	Same as FB-25	0	-	Changeable at any time	"FB-31" on page 399
FB-32	0xFB20	Source 2 of motor-driven potentiometer reset command	Same as FB-25	0	-	Changeable at any time	"FB-32" on page 400
FB-33	0xFB21	Source of motor-driven potentiometer reset value	0: Digital setting 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"FB-33" on page 401
FB-34	0xFB22	Reset value of motor-driven potentiometer	–600% to +600.0%	0.0	%	Changeable at any time	"FB-34" on page 402
FB-35	0xFB23	Source of motor-driven potentiometer force command	Same as FB-25	0	-	Changeable at any time	"FB-35" on page 402
FB-36	0xFB24	Source of motor-driven potentiometer force value	0: Digital setting 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"FB-36" on page 403
FB-37	0xFB25	Force value of motor-driven potentiometer	–600% to +600.0%	0.0	%	Changeable at any time	"FB-37" on page 403
FB-38	0xFB26	High-order bits of motor-driven potentiometer storage	0 to 65535	0	-	Changeable at any time	"FB-38" on page 403
FB-39	0xFB27	Low-order bits of motor-driven potentiometer storage	0 to 65535	0	-	Changeable at any time	"FB-39" on page 404

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
FB-46	0xFB2E	Simple UP/DOWN output	–32767 to +32767	0	-	Unchangeable	"FB-46" on page 404
FC-00	0xFC00	Multi-reference 1	–100% to +100.0%	0.0	%	Changeable at any time	"FC-00" on page 404
FC-01	0xFC01	Multi-reference 2	–100% to +100.0%	0.0	%	Changeable at any time	"FC-01" on page 405
FC-02	0xFC02	Multi-reference 3	–100% to +100.0%	0.0	%	Changeable at any time	"FC-02" on page 405
FC-03	0xFC03	Multi-reference 4	–100% to +100.0%	0.0	%	Changeable at any time	"FC-03" on page 405
FC-04	0xFC04	Multi-reference 5	–100% to +100.0%	0.0	%	Changeable at any time	"FC-04" on page 405
FC-05	0xFC05	Multi-reference 6	–100% to +100.0%	0.0	%	Changeable at any time	"FC-05" on page 405
FC-06	0xFC06	Multi-reference 7	–100% to +100.0%	0.0	%	Changeable at any time	"FC-06" on page 405
FC-07	0xFC07	Multi-reference 8	–100% to +100.0%	0.0	%	Changeable at any time	"FC-07" on page 406
FC-08	0xFC08	Multi-reference 9	–100% to +100.0%	0.0	%	Changeable at any time	"FC-08" on page 406
FC-09	0xFC09	Multi-reference 10	–100% to +100.0%	0.0	%	Changeable at any time	"FC-09" on page 406
FC-10	0xFC0A	Multi-reference 11	–100% to +100.0%	0.0	%	Changeable at any time	"FC-10" on page 406
FC-11	0xFC0B	Multi-reference 12	–100% to +100.0%	0.0	%	Changeable at any time	"FC-11" on page 406
FC-12	0xFC0C	Multi-reference 13	–100% to +100.0%	0.0	%	Changeable at any time	"FC-12" on page 407
FC-13	0xFC0D	Multi-reference 14	–100% to +100.0%	0.0	%	Changeable at any time	"FC-13" on page 407
FC-14	0xFC0E	Multi-reference 15	–100% to +100.0%	0.0	%	Changeable at any time	"FC-14" on page 407
FC-15	0xFC0F	Multi-reference 16	–100% to +100.0%	0.0	%	Changeable at any time	"FC-15" on page 407
FC-16	0xFC10	Simple PLC running mode	0: Stop after running for one cycle 1: Keep final values after running for one cycle 2: Repeat after running for one cycle	0	-	Changeable at any time	"FC-16" on page 407
FC-17	0xFC11	Simple PLC memory retention upon power failure	Ones: Retentive upon power failure 0: No 1: Yes Tens: Retentive upon stop 0: No 1: Yes	0	-	Changeable at any time	"FC-17" on page 408

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
FC-18	0xFC12	Running time of PLC reference 0	0.0s (h) to 6553.5s (h)	0.0	s (h)	Changeable at any time	"FC-18" on page 408
FC-19	0xFC13	Acceleration/ Deceleration time of PLC reference 0	0 to 3	0	-	Changeable at any time	"FC-19" on page 408
FC-20	0xFC14	Running time of PLC reference 1	0.0s (h) to 6553.5s (h)	0.0	s (h)	Changeable at any time	"FC-20" on page 408
FC-21	0xFC15	Acceleration/ Deceleration time of PLC reference 1	0 to 3	0	-	Changeable at any time	"FC-21" on page 409
FC-22	0xFC16	Running time of PLC reference 2	0.0s (h) to 6553.5s (h)	0.0	s (h)	Changeable at any time	"FC-22" on page 409
FC-23	0xFC17	Acceleration/ Deceleration time of PLC reference 2	0 to 3	0	-	Changeable at any time	"FC-23" on page 409
FC-24	0xFC18	Running time of PLC reference 3	0.0s (h) to 6553.5s (h)	0.0	s (h)	Changeable at any time	"FC-24" on page 409
FC-25	0xFC19	Acceleration/ Deceleration time of PLC reference 3	0 to 3	0	-	Changeable at any time	"FC-25" on page 409
FC-26	0xFC1A	Running time of PLC reference 4	0.0s (h) to 6553.5s (h)	0.0	s (h)	Changeable at any time	"FC-26" on page 409
FC-27	0xFC1B	Acceleration/ Deceleration time of PLC reference 4	0 to 3	0	-	Changeable at any time	"FC-27" on page 410
FC-28	0xFC1C	Running time of PLC reference 5	0.0s (h) to 6553.5s (h)	0.0	s (h)	Changeable at any time	"FC-28" on page 410
FC-29	0xFC1D	Acceleration/ Deceleration time of PLC reference 5	0 to 3	0	-	Changeable at any time	"FC-29" on page 410
FC-30	0xFC1E	Running time of PLC reference 6	0.0s (h) to 6553.5s (h)	0.0	s (h)	Changeable at any time	"FC-30" on page 410
FC-31	0xFC1F	Acceleration/ Deceleration time of PLC reference 6	0 to 3	0	-	Changeable at any time	"FC-31" on page 410
FC-32	0xFC20	Running time of PLC reference 7	0.0s (h) to 6553.5s (h)	0.0	s (h)	Changeable at any time	"FC-32" on page 411
FC-33	0xFC21	Acceleration/ Deceleration time of PLC reference 7	0 to 3	0	-	Changeable at any time	"FC-33" on page 411
FC-34	0xFC22	Running time of PLC reference 8	0.0s (h) to 6553.5s (h)	0.0	s (h)	Changeable at any time	"FC-34" on page 411
FC-35	0xFC23	Acceleration/ Deceleration time of PLC reference 8	0 to 3	0	-	Changeable at any time	"FC-35" on page 411

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
FC-36	0xFC24	Running time of PLC reference 9	0.0s (h) to 6553.5s (h)	0.0	s (h)	Changeable at any time	"FC-36" on page 411
FC-37	0xFC25	Acceleration/ Deceleration time of PLC reference 9	0 to 3	0	-	Changeable at any time	"FC-37" on page 412
FC-38	0xFC26	Running time of PLC reference 10	0.0s (h) to 6553.5s (h)	0.0	s (h)	Changeable at any time	"FC-38" on page 412
FC-39	0xFC27	Acceleration/ Deceleration time of PLC reference 10	0 to 3	0	-	Changeable at any time	"FC-39" on page 412
FC-40	0xFC28	Running time of PLC reference 11	0.0s (h) to 6553.5s (h)	0.0	s (h)	Changeable at any time	"FC-40" on page 412
FC-41	0xFC29	Acceleration/ Deceleration time of PLC reference 11	0 to 3	0	-	Changeable at any time	"FC-41" on page 412
FC-42	0xFC2A	Running time of PLC reference 12	0.0s (h) to 6553.5s (h)	0.0	s (h)	Changeable at any time	"FC-42" on page 413
FC-43	0xFC2B	Acceleration/ Deceleration time of PLC reference 12	0 to 3	0	-	Changeable at any time	"FC-43" on page 413
FC-44	0xFC2C	Running time of PLC reference 13	0.0s (h) to 6553.5s (h)	0.0	s (h)	Changeable at any time	"FC-44" on page 413
FC-45	0xFC2D	Acceleration/ Deceleration time of PLC reference 13	0 to 3	0	-	Changeable at any time	"FC-45" on page 413
FC-46	0xFC2E	Running time of PLC reference 14	0.0s (h) to 6553.5s (h)	0.0	s (h)	Changeable at any time	"FC-46" on page 413
FC-47	0xFC2F	Acceleration/ Deceleration time of PLC reference 14	0 to 3	0	-	Changeable at any time	"FC-47" on page 414
FC-48	0xFC30	Running time of PLC reference 15	0.0s (h) to 6553.5s (h)	0.0	s (h)	Changeable at any time	"FC-48" on page 414
FC-49	0xFC31	Acceleration/ Deceleration time of PLC reference 15	0 to 3	0	-	Changeable at any time	"FC-49" on page 414
FC-50	0xFC32	PLC running time unit	0: s (second) 1: h (hour)	0	-	Changeable at any time	"FC-50" on page 414
FC-51	0xFC33	Multi-reference 0 source	0: FC-00 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: PID 6: Preset frequency (F0-08) Others: F connector	0	-	Changeable at any time	"FC-51" on page 414

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
FC-52	0xFC34	Current multi-reference	0: Multi-reference 1 1: Multi-reference 2 2: Multi-reference 3 3: Multi-reference 4 4: Multi-reference 5 5: Multi-reference 6 6: Multi-reference 7 7: Multi-reference 8 8: Multi-reference 9 9: Multi-reference 10 10: Multi-reference 11 11: Multi-reference 12 12: Multi-reference 13 13: Multi-reference 14 14: Multi-reference 15 15: Multi-reference 16	0	-	Unchangeable	" FC-52" on page 415
FC-53	0xFC35	Current multi-reference value	–600% to +600.0%	0.0	%	Unchangeable	" FC-53" on page 415
FC-55	0xFC37	Multi-reference value bit0	0: 0 1: 1 2: Terminal function input 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	" FC-55" on page 415
FC-56	0xFC38	Multi-reference value bit1	FC-55	0	-	Changeable at any time	" FC-56" on page 416
FC-57	0xFC39	Multi-reference value bit2	FC-55	0	-	Changeable at any time	" FC-57" on page 417
FC-58	0xFC3A	Multi-reference value bit3	FC-55	0	-	Changeable at any time	" FC-58" on page 418
FC-59	0xFC3B	Current STEP of PLC	0 to 65535	0	-	Unchangeable	" FC-59" on page 419

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
FC-60	0xFC3C	High-order bits of PLC current STEP running time	0 to 65535	0	-	Unchangeable	"FC-60" on page 419
FC-61	0xFC3D	Low-order bits of PLC current STEP running time	0 to 65535	0	-	Unchangeable	"FC-61" on page 419
FD-00	0xFD00	Baud rate	Ones: Modbus 0: 300 bps 1: 600 bps 2: 1200 bps 3: 2400 bps 4: 4800 bps 5: 9600 bps 6: 19200 bps 7: 38400 bps 8: 57600 bps 9: 115200 bps Tens: Reserved Hundreds: Reserved Thousands: CANLink/CANOpen 0: 20 1: 50 2: 100 3: 125 4: 250 5: 500 6: 1M	5005	-	Changeable only at stop	"FD-00" on page 420
FD-01	0xFD01	Modbus data format	0: No check (8-N-2) 1: Even parity (8-E-1) 2: Odd parity (8-O-1) 3: No check (8-N-1) 4: No check (7-N-2) 5: Even parity (7-E-1) 6: Odd parity (7-O-1) 7: No check (7-N-1)	0	-	Changeable at any time	"FD-01" on page 420
FD-02	0xFD02	Local address	1 to 247	1	-	Changeable only at stop	"FD-02" on page 421
FD-03	0xFD03	Modbus response delay	0 ms to 20 ms	2	ms	Changeable at any time	"FD-03" on page 421
FD-04	0xFD04	Communication timeout time	0.0s to 60.0s	0.0	s	Changeable at any time	"FD-04" on page 421
FD-06	0xFD06	Current resolution read by communication	0: 0.01 A (valid when ⩽55 kW) 1: 0.1 A	0	-	Changeable at any time	"FD-06" on page 421

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
FD-08	0xFD08	Expansion card communication timeout time	0.0s to 60.0s	0.0	s	Changeable at any time	"FD-08" on page 422
FD-10	0xFD0A	CANopen/CANlink switchover	1: CANopen 2: CANlink	2	-	Changeable at any time	"FD-10" on page 422
FD-14	0xFD0E	Number of frames received per unit time	0 to 65535	0	-	Unchangeable	"FD-14" on page 422
FD-15	0xFD0F	Maximum RX error count	0 to 65535	0	-	Unchangeable	"FD-15" on page 422
FD-16	0xFD10	Maximum TX error count	0 to 65535	0	-	Unchangeable	"FD-16" on page 422
FD-17	0xFD11	Bus-off count per unit time	0 to 65535	0	-	Unchangeable	"FD-17" on page 423
FD-19	0xFD13	CAN communication disconnection coefficient	1 to 15	3	-	Changeable only at stop	"FD-19" on page 423
FD-20	0xFD14	PROFIBUS DP communication address	0 to 125	0	-	Changeable only at stop	"FD-20" on page 423
FD-21	0xFD15	PROFIBUS DP communication disconnection coefficient	0 to 65535	350	-	Changeable only at stop	"FD-21" on page 423
FD-27	0xFD1B	Storage of parameters written through communication	0 to 1	0	-	Changeable at any time	"FD-27" on page 423
FD-28	0xFD1C	Auto reset upon communication fault	0 to 1	1	-	Changeable at any time	"FD-28" on page 424
FD-29	0xFD1D	Communication state	0 to 999	0	-	Unchangeable	"FD-29" on page 424
FD-30	0xFD1E	Number of RPDO mapped bytes	0 to 65535	0	-	Changeable at any time	"FD-30" on page 424
FD-31	0xFD1F	Number of TPDO mapped bytes	0 to 65535	0	-	Changeable at any time	"FD-31" on page 424
FD-32	0xFD20	Group AF mapping mode switchover	0: Parameters written through communication are not saved 1: Parameters written through communication are saved	0	-	Changeable only at stop	"FD-32" on page 424
FD-37	0xFD25	DHCP function	0: Disabled 1: Enabled	0	-	Changeable only at stop	"FD-37" on page 425

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
FD-38	0xFD26	MSB of IP address	0 to 255	0	-	Changeable only at stop	" FD-38" on page 425
FD-39	0xFD27	Second MSB of IP address	0 to 255	0	-	Changeable only at stop	" FD-39" on page 425
FD-40	0xFD28	Third byte of IP address	0 to 255	0	-	Changeable only at stop	" FD-40" on page 425
FD-41	0xFD29	LSB of IP address	0 to 255	0	-	Changeable only at stop	" FD-41" on page 425
FD-42	0xFD2A	MSB of subnet mask	0 to 255	0	-	Changeable only at stop	" FD-42" on page 426
FD-43	0xFD2B	Second MSB of subnet mask	0 to 255	0	-	Changeable only at stop	" FD-43" on page 426
FD-44	0xFD2C	Third byte of subnet mask	0 to 255	0	-	Changeable only at stop	" FD-44" on page 426
FD-45	0xFD2D	LSB of subnet mask	0 to 255	0	-	Changeable only at stop	" FD-45" on page 426
FD-46	0xFD2E	MSB of gateway	0 to 255	0	-	Changeable only at stop	" FD-46" on page 426
FD-47	0xFD2F	Second MSB of gateway	0 to 255	0	-	Changeable only at stop	" FD-47" on page 426
FD-48	0xFD30	Third byte of gateway	0 to 255	0	-	Changeable only at stop	" FD-48" on page 427
FD-49	0xFD31	LSB of gateway	0 to 255	0	-	Changeable only at stop	" FD-49" on page 427
FD-58	0xFD3A	Ethernet/IP expansion card error code	0 to 255	0	-	Unchangea ble	" FD-58" on page 427
FD-61	0xFD3D	High-order byte of MAC address	0x0 to 0xFFFF	0x0	-	Changeable only at stop	" FD-61" on page 427
FD-62	0xFD3E	Middle byte of MAC address	0x0 to 0xFFFF	0x0	-	Changeable only at stop	" FD-62" on page 427
FD-63	0xFD3F	Low-order byte of MAC address	0x0 to 0xFFFF	0x0	-	Changeable only at stop	" FD-63" on page 428
FD-92	0xFD5C	Slave alias backup	0 to 65535	0	-	Changeable at any time	" FD-92" on page 428
FD-93	0xFD5D	Null pointer	0 to 65535	0	-	Changeable at any time	" FD-93" on page 428
FD-94	0xFD5E	Communication software version	0.00 to 655.35	0.00	-	Unchangea ble	" FD-94" on page 428
FE-00	0x2F00	User-defined parameter 0	0 to 65535	0	-	Changeable at any time	" FE-00" on page 428

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
FE-01	0x2F01	User-defined parameter 1	0 to 65535	0	-	Changeable at any time	" FE-01" on page 429
FE-02	0x2F02	User-defined parameter 2	0 to 65535	0	-	Changeable at any time	" FE-02" on page 429
FE-03	0x2F03	User-defined parameter 3	0 to 65535	0	-	Changeable at any time	" FE-03" on page 429
FE-04	0x2F04	User-defined parameter 4	0 to 65535	0	-	Changeable at any time	" FE-04" on page 429
FE-05	0x2F05	User-defined parameter 5	0 to 65535	0	-	Changeable at any time	" FE-05" on page 429
FE-06	0x2F06	User-defined parameter 6	0 to 65535	0	-	Changeable at any time	" FE-06" on page 430
FE-07	0x2F07	User-defined parameter 7	0 to 65535	0	-	Changeable at any time	" FE-07" on page 430
FE-08	0x2F08	User-defined parameter 8	0 to 65535	0	-	Changeable at any time	" FE-08" on page 430
FE-09	0x2F09	User-defined parameter 9	0 to 65535	0	-	Changeable at any time	" FE-09" on page 430
FE-10	0x2F0A	User-defined parameter 10	0 to 65535	0	-	Changeable at any time	" FE-10" on page 430
FE-11	0x2F0B	User-defined parameter 11	0 to 65535	0	-	Changeable at any time	" FE-11" on page 431
FE-12	0x2F0C	User-defined parameter 12	0 to 65535	0	-	Changeable at any time	" FE-12" on page 431
FE-13	0x2F0D	User-defined parameter 13	0 to 65535	0	-	Changeable at any time	" FE-13" on page 431
FE-14	0x2F0E	User-defined parameter 14	0 to 65535	0	-	Changeable at any time	" FE-14" on page 431
FE-15	0x2F0F	User-defined parameter 15	0 to 65535	0	-	Changeable at any time	" FE-15" on page 431
FE-16	0x2F10	User-defined parameter 16	0 to 65535	0	-	Changeable at any time	" FE-16" on page 432
FE-17	0x2F11	User-defined parameter 17	0 to 65535	0	-	Changeable at any time	" FE-17" on page 432
FE-18	0x2F12	User-defined parameter 18	0 to 65535	0	-	Changeable at any time	" FE-18" on page 432
FE-19	0x2F13	User-defined parameter 19	0 to 65535	0	-	Changeable at any time	" FE-19" on page 432
FE-20	0x2F14	User-defined parameter 20	0 to 65535	0	-	Changeable at any time	" FE-20" on page 432
FE-21	0x2F15	User-defined parameter 21	0 to 65535	0	-	Changeable at any time	" FE-21" on page 433

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
FE-22	0x2F16	User-defined parameter 22	0 to 65535	0	-	Changeable at any time	"FE-22" on page 433
FE-23	0x2F17	User-defined parameter 23	0 to 65535	0	-	Changeable at any time	"FE-23" on page 433
FE-24	0x2F18	User-defined parameter 24	0 to 65535	0	-	Changeable at any time	"FE-24" on page 433
FE-25	0x2F19	User-defined parameter 25	0 to 65535	0	-	Changeable at any time	"FE-25" on page 433
FE-26	0x2F1A	User-defined parameter 26	0 to 65535	0	-	Changeable at any time	"FE-26" on page 433
FE-27	0x2F1B	User-defined parameter 27	0 to 65535	0	-	Changeable at any time	"FE-27" on page 434
FE-28	0x2F1C	User-defined parameter 28	0 to 65535	0	-	Changeable at any time	"FE-28" on page 434
FE-29	0x2F1D	User-defined parameter 29	0 to 65535	0	-	Changeable at any time	"FE-29" on page 434
FE-30	0x2F1E	User-defined parameter 30	0 to 65535	0	-	Changeable at any time	"FE-30" on page 434
FE-31	0x2F1F	User-defined parameter 31	0 to 65535	0	-	Changeable at any time	"FE-31" on page 434
FP-00	0x1F00	User password	0 to 65535	0	-	Changeable at any time	"FP-00" on page 435
FP-01	0x1F01	Parameter initialization	0: No operation 1: Restore default settings (excluding motor parameters) 2: Clear records 4: Back up current user parameters 501: Restore user parameters from backup 503: Restore default settings (including motor parameters)	0	-	Changeable only at stop	"FP-01" on page 435

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
FP-02	0x1F02	Parameter display	Bit00: Group U 0: Hidden 1: Displayed Bit01: Group A 0: Hidden 1: Displayed Bit02: Group B 0: Hidden 1: Displayed Bit03: Group C 0: Hidden 1: Displayed Bit04: Group H 0: Hidden 1: Displayed Bit05: Group L 0: Hidden 1: Displayed	63	-	Changeable at any time	"FP-02" on page 435
FP-03	0x1F03	Display of individualized parameters	Ones: User mode 0: Hidden 1: Displayed Tens: Correction mode 0: Hidden 1: Displayed Hundreds: Error menu 0: Hidden 1: Displayed	111	-	Changeable at any time	"FP-03" on page 436
FP-04	0x1F04	Parameter modification	0: Modification allowed 1: Modification prohibited	0	-	Changeable at any time	"FP-04" on page 436
FP-06	0x1F06	Monitoring password	0 to 65535	0	-	Changeable at any time	"FP-06" on page 437
FP-07	0x1F07	Expert password	0 to 65535	0	-	Changeable at any time	"FP-07" on page 437
FP-08	0x1F08	Factory password	0 to 65535	0	-	Changeable at any time	"FP-08" on page 437
FP-09	0x1F09	Password input window	0 to 65535	0	-	Changeable at any time	"FP-09" on page 437
FP-14	0x1F0E	Parameter clearing	0: No operation 1: Clear all record (faults and time) parameters 2: Clear fault information 500: Clear all backup user parameters 1000: Clear all backup motor parameters	0	-	Changeable only at stop	"FP-14" on page 438

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
FP-15	0x1F0F	Parameter restoration	0: No operation 500: Restore user backup 501: Restore user macro backup 1 502: Restore user macro backup 2 503: Restore user macro backup 3 504: Restore user macro backup 4 505: Restore user macro backup 5 506: Restore user macro backup 6 2011: Restore motor macro backup parameter 1 to motor 1 2012: Restore motor macro backup parameter 1 to motor 2 (To be continued)	0	-	Changeable only at stop	"FP-15" on page 438
(Continued)	(Continued)	(Continued)	(Continued) 2013: Restore motor macro backup parameter 1 to motor 3 2014: Restore motor macro backup parameter 1 to motor 4 2021: Restore motor macro backup parameter 2 to motor 1 2022: Restore motor macro backup parameter 2 to motor 2 2023: Restore motor macro backup parameter 2 to motor 3 2024: Restore motor macro backup parameter 2 to motor 4 2031: Restore motor macro backup parameter 3 to motor 1 2032: Restore motor macro backup parameter 3 to motor 2 2033: Restore motor macro backup parameter 3 to motor 3 2034: Restore motor macro backup parameter 3 to motor 4 (To be continued)	0	-	Changeable only at stop	"FP-15" on page 438

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
(Con tinu ed)	(Contin ued)	(Continued)	(Continued) 2041: Restore motor macro backup parameter 4 to motor 1 2042: Restore motor macro backup parameter 4 to motor 2 2043: Restore motor macro backup parameter 4 to motor 3 2044: Restore motor macro backup parameter 4 to motor 4 2051: Restore motor macro backup parameter 5 to motor 1 2052: Restore motor macro backup parameter 5 to motor 2 2053: Restore motor macro backup parameter 5 to motor 3 2054: Restore motor macro backup parameter 5 to motor 4 2061: Restore motor macro backup parameter 6 to motor 1 2062: Restore motor macro backup parameter 6 to motor 2 2063: Restore motor macro backup parameter 6 to motor 3 (To be continued)	(Con tinu ed)	(Con tinu ed)	(Continued)	(Continued)
(Con tinu ed)	(Contin ued)	(Continued)	(Continued) 2064: Restore motor macro backup parameter 6 to motor 4 2071: Restore motor macro backup parameter 7 to motor 1 2072: Restore motor macro backup parameter 7 to motor 2 2073: Restore motor macro backup parameter 7 to motor 3 2074: Restore motor macro backup parameter 7 to motor 4 2081: Restore motor macro backup parameter 8 to motor 1 2082: Restore motor macro backup parameter 8 to motor 2 2083: Restore motor macro backup parameter 8 to motor 3 2084: Restore motor macro backup parameter 8 to motor 4 2091: Restore motor macro backup parameter 9 to motor 1 (To be continued)	(Con tinu ed)	(Con tinu ed)	(Continued)	(Continued)

Para.	Comm. Addr.	Name	Reference	Default	Unit	Change	Page
(Continued)	(Continued)	(Continued)	(Continued) 2092: Restore motor macro backup parameter 9 to motor 2 2093: Restore motor macro backup parameter 9 to motor 3 2094: Restore motor macro backup parameter 9 to motor 4 2101: Restore motor macro backup parameter 10 to motor 1 2102: Restore motor macro backup parameter 10 to motor 2 2103: Restore motor macro backup parameter 10 to motor 3 2104: Restore motor macro backup parameter 10 to motor 4 2111: Restore motor macro backup parameter 11 to motor 1 (To be continued)	(Continued)	(Continued)	(Continued)	(Continued)
(Continued)	(Continued)	(Continued)	(Continued) 2112: Restore motor macro backup parameter 11 to motor 2 2113: Restore motor macro backup parameter 11 to motor 3 2114: Restore motor macro backup parameter 11 to motor 4 2121: Restore motor macro backup parameter 12 to motor 1 2122: Restore motor macro backup parameter 12 to motor 2 2123: Restore motor macro backup parameter 12 to motor 3 2124: Restore motor macro backup parameter 12 to motor 4 2131: Restore motor macro backup parameter 13 to motor 1 2132: Restore motor macro backup parameter 13 to motor 2 (To be continued)	0	-	Changeable only at stop	"FP-15" on page 438

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
(Con tinu ed)	(Contin ued)	(Continued)	(Continued) 2133: Restore motor macro backup parameter 13 to motor 3 2134: Restore motor macro backup parameter 13 to motor 4 2141: Restore motor macro backup parameter 14 to motor 1 2142: Restore motor macro backup parameter 14 to motor 2 2143: Restore motor macro backup parameter 14 to motor 3 2144: Restore motor macro backup parameter 14 to motor 4 2151: Restore motor macro backup parameter 15 to motor 1 2152: Restore motor macro backup parameter 15 to motor 2 2153: Restore motor macro backup parameter 15 to motor 3 2154: Restore motor macro backup parameter 15 to motor 4 2161: Restore motor macro backup parameter 16 to motor 1 2162: Restore motor macro backup parameter 16 to motor 2 2163: Restore motor macro backup parameter 16 to motor 3 (To be continued)	(Con tinu ed)	(Con tinu ed)	(Continued)	(Continued)
(Con tinu ed)	(Contin ued)	(Continued)	(Continued) 2164: Restore motor macro backup parameter 16 to motor 4 2171: Restore motor macro backup parameter 17 to motor 1 2172: Restore motor macro backup parameter 17 to motor 2 2173: Restore motor macro backup parameter 17 to motor 3 2174: Restore motor macro backup parameter 17 to motor 4 2181: Restore motor macro backup parameter 18 to motor 1 2182: Restore motor macro backup parameter 18 to motor 2 2183: Restore motor macro backup parameter 18 to motor 3 (To be continued)	(Con tinu ed)	(Con tinu ed)	(Continued)	(Continued)

Para.	Comm. Addr.	Name	Reference	Default	Unit	Change	Page
(Continued)	(Continued)	(Continued)	(Continued) 2184: Restore motor macro backup parameter 18 to motor 4 2191: Restore motor macro backup parameter 19 to motor 1 2192: Restore motor macro backup parameter 19 to motor 2 2193: Restore motor macro backup parameter 19 to motor 3 2194: Restore motor macro backup parameter 19 to motor 4 2201: Restore motor macro backup parameter 20 to motor 1 2202: Restore motor macro backup parameter 20 to motor 2 2203: Restore motor macro backup parameter 20 to motor 3 2204: Restore motor macro backup parameter 20 to motor 4	(Continued)	(Continued)	(Continued)	(Continued)
FP-16	0x1F10	User backup	0: No operation 400: Back up user parameters 401: Back up user macro parameters to address 1 402: Back up user macro parameters to 2 403: Back up user macro parameters to 3 404: Back up user macro parameters to 4 405: Back up user macro parameters to 5 406: Back up user macro parameters to 6 1011: Back up parameters of motor 1 to address 1 1012: Back up parameters of motor 2 to address 1 1013: Back up parameters of motor 3 to address 1 1014: Back up parameters of motor 4 to address 1 1021: Back up parameters of motor 1 to address 2 1022: Back up parameters of motor 2 to address 2 1023: Back up parameters of motor 3 to address 2 1024: Back up parameters of motor 4 to address 2 1031: Back up parameters of motor 1 to address 3 (To be continued)	0	-	Changeable only at stop	"FP-16" on page 440

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
(Con tinu ed)	(Contin ued)	(Continued)	(Continued) 1032: Back up parameters of motor 2 to address 3 1033: Back up parameters of motor 3 to address 3 1034: Back up parameters of motor 4 to address 3 1041: Back up parameters of motor 1 to address 4 1042: Back up parameters of motor 2 to address 4 1043: Back up parameters of motor 3 to address 4 1044: Back up parameters of motor 4 to address 4 1051: Back up parameters of motor 1 to address 5 1052: Back up parameters of motor 2 to address 5 1053: Back up parameters of motor 3 to address 5 1054: Back up parameters of motor 4 to address 5 1061: Back up parameters of motor 1 to address 6 1062: Back up parameters of motor 2 to address 6 1063: Back up parameters of motor 3 to address 6 1064: Back up parameters of motor 4 to address 6 (To be continued)	(Con tinu ed)	(Con tinu ed)	(Continued)	(Continued)

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
(Con tinu ed)	(Contin ued)	(Continued)	(Continued) 1071: Back up parameters of motor 1 to address 7 1072: Back up parameters of motor 2 to address 7 1073: Back up parameters of motor 3 to address 7 1074: Back up parameters of motor 4 to address 7 1081: Back up parameters of motor 1 to address 8 1082: Back up parameters of motor 2 to address 8 1083: Back up parameters of motor 3 to address 8 1084: Back up parameters of motor 4 to address 8 1091: Back up parameters of motor 1 to address 9 1092: Back up parameters of motor 2 to address 9 1093: Back up parameters of motor 3 to address 9 1094: Back up parameters of motor 4 to address 9 1101: Back up parameters of motor 1 to address 10 (To be continued)	(Con tinu ed)	(Con tinu ed)	(Continued)	(Continued)

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
(Con tinu ed)	(Contin ued)	(Continued)	(Continued) 1102: Back up parameters of motor 2 to address 10 1103: Back up parameters of motor 3 to address 10 1104: Back up parameters of motor 4 to address 10 1111: Back up parameters of motor 1 to address 11 1112: Back up parameters of motor 2 to address 11 1113: Back up parameters of motor 3 to address 11 1114: Back up parameters of motor 4 to address 11 1121: Back up parameters of motor 1 to address 12 1122: Back up parameters of motor 2 to address 12 1123: Back up parameters of motor 3 to address 12 1124: Back up parameters of motor 4 to address 12 1131: Back up parameters of motor 1 to address 13 1132: Back up parameters of motor 2 to address 13 1133: Back up parameters of motor 3 to address 13 1134: Back up parameters of motor 4 to address 13 1141: Back up parameters of motor 1 to address 14 1142: Back up parameters of motor 2 to address 14 1143: Back up parameters of motor 3 to address 14 1144: Back up parameters of motor 4 to address 14 (To be continued)	(Con tinu ed)	(Con tinu ed)	(Continued)	(Continued)

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
(Con tinu ed)	(Contin ued)	(Continued)	(Continued) 1151: Back up parameters of motor 1 to address 15 1152: Back up parameters of motor 2 to address 15 1153: Back up parameters of motor 3 to address 15 1154: Back up parameters of motor 4 to address 15 1161: Back up parameters of motor 1 to address 16 1162: Back up parameters of motor 2 to address 16 1163: Back up parameters of motor 3 to address 16 1164: Back up parameters of motor 4 to address 16 1171: Back up parameters of motor 1 to address 17 1172: Back up parameters of motor 2 to address 17 (To be continued)	(Con tinu ed)	(Con tinu ed)	(Continued)	(Continued)

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
(Con tinu ed)	(Contin ued)	(Continued)	(Continued) 1173: Back up parameters of motor 3 to address 17 1174: Back up parameters of motor 4 to address 17 1181: Back up parameters of motor 1 to address 18 1182: Back up parameters of motor 2 to address 18 1183: Back up parameters of motor 3 to address 18 1184: Back up parameters of motor 4 to address 18 1191: Back up parameters of motor 1 to address 19 1192: Back up parameters of motor 2 to address 19 1193: Back up parameters of motor 3 to address 19 1194: Back up parameters of motor 4 to address 19 1201: Back up parameters of motor 1 to address 20 1202: Back up parameters of motor 2 to address 20 1203: Back up parameters of motor 3 to address 20 1204: Back up parameters of motor 4 to address 20 (To be continued)	(Con tinu ed)	(Con tinu ed)	(Continued)	(Continued)
A0-00	0xA000	Speed/Torque control mode	0: Speed control 1: Torque control	0	-	Changeable at any time	"A0-00" on page 443
A0-01	0xA001	Torque reference source in torque control mode (torque upper limit source)	0: A0-03 1: AI1 2: AI2 3: AI3 4: Pulse 5: Communication 6: MIN (AI1, AI2) 7: MAX (AI1, AI2) Others: F connector	0	-	Changeable only at stop	"A0-01" on page 444
A0-03	0xA003	Torque reference in torque control mode	–200% to +200.0%	150.0	%	Changeable at any time	"A0-03" on page 444
A0-04	0xA004	Torque reference filter time (upper limit)	0 ms to 10000 ms	0	ms	Changeable at any time	"A0-04" on page 444

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A0-05	0xA005	Maximum forward frequency in torque control	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	"A0-05" on page 445
A0-06	0xA006	Maximum reverse frequency in torque control	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	"A0-06" on page 445
A0-07	0xA007	Torque rising filter time	0.00s to 650.00s	0.00	s	Changeable at any time	"A0-07" on page 445
A0-08	0xA008	Torque falling filter time	0.00s to 650.00s	0.00	s	Changeable at any time	"A0-08" on page 445
A0-10	0xA00A	Torque mode	0: MD500 torque mode 1: Vanguard torque mode	0	-	Changeable only at stop	"A0-10" on page 445
A0-11	0xA00B	Torque acceleration time gain	0: 100% 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"A0-11" on page 446
A0-12	0xA00C	Torque deceleration time gain	Same as A0-11	0	-	Changeable at any time	"A0-12" on page 446
A0-13	0xA00D	Torque reference source	0: Digital setting 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"A0-13" on page 446
A0-14	0xA00E	Torque reference	–400% to +400.0%	0.0	%	Changeable at any time	"A0-14" on page 447
A0-15	0xA00F	Speed limit source in torque control mode	0: Digital setting 1: Speed reference channel	0	-	Changeable at any time	"A0-15" on page 447
A0-16	0xA010	Speed limit in torque control mode	–100% to +100.0%	0.0	%	Changeable at any time	"A0-16" on page 447
A0-17	0xA011	Speed limit offset mode	0: Bidirectional offset 1: Unidirectional offset 2: Compatible solution	0	-	Changeable at any time	"A0-17" on page 447

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A0-18	0xA012	Speed limit offset source	Same as A0-13	0	-	Changeable at any time	"A0-18" on page 448
A0-19	0xA013	Speed limit offset	0.0% to 300.0%	5.0	%	Changeable at any time	"A0-19" on page 448
A0-20	0xA014	Source of supplementary torque reference 1	Same as A0-13	0	-	Changeable at any time	"A0-20" on page 448
A0-21	0xA015	Supplementary torque reference 1	–400% to +400.0%	0.0	%	Changeable at any time	"A0-21" on page 449
A0-22	0xA016	Source of supplementary torque reference 2	Same as A0-13	0	-	Changeable at any time	"A0-22" on page 449
A0-23	0xA017	Supplementary torque reference 2 input enable	0: Disabled 1: Enabled 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	1	-	Changeable at any time	"A0-23" on page 449
A0-24	0xA018	Torque filter time	0 ms to 10000 ms	0	ms	Changeable at any time	"A0-24" on page 450
A0-25	0xA019	Torque acceleration time	0.000s to 60.000s	0.000	s	Changeable at any time	"A0-25" on page 450
A0-26	0xA01A	Torque deceleration time	0.000s to 60.000s	0.000	s	Changeable at any time	"A0-26" on page 450
A0-27	0xA01B	Torque reference gain	0: 100% 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"A0-27" on page 451

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A1-00	0xA100	VDI1 function	Same as F4-04	0	-	Changeable only at stop	"A1-00" on page 451
A1-01	0xA101	VDI2 function	Same as F4-04	0	-	Changeable only at stop	"A1-01" on page 451
A1-02	0xA102	VDI3 function	Same as F4-04	0	-	Changeable only at stop	"A1-02" on page 451
A1-03	0xA103	VDI4 function	Same as F4-04	0	-	Changeable only at stop	"A1-03" on page 452
A1-04	0xA104	VDI5 function	Same as F4-04	0	-	Changeable only at stop	"A1-04" on page 452
A1-05	0xA105	VDI active state source	Tens: VDI1 active state source 0: VDO1 1: A1-06 2: DI1 3: Communication setpoint (bit10 of F4-50) 4: AI1 5: Reserved Tens: VDI2 active state source 0: VDO2 1: A1-06 2: DI2 3: Communication setpoint (bit11 of F4-50) 4: AI2 5: Reserved To be continued	0	-	Changeable only at stop	"A1-05" on page 452
Continued	Continued	Continued	Continued Hundreds: VDI3 active state source 0: VDO3 1: A1-06 2: DI3 3: Communication setpoint (bit12 of F4-50) 4: AI3 5: Reserved Thousands: VDI4 active state source 0: VDO4 1: A1-06 2: DI4 3: Communication setpoint (bit13 of F4-50) 4–5: Reserved Ten thousands: VDI5 active state source 0: VDO5 1: A1-06 2: DI5 3: Communication setpoint (bit14 of F4-50) 4–5: Reserved	Continued	Continued	Continued	Continued

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A1-06	0xA106	VDI state	Ones: VDI1 0: Inactive 1: Active Tens: VDI2 0: Inactive 1: Active Hundreds: VDI3 0: Inactive 1: Active Thousands: VDI4 0: Inactive 1: Active Ten thousands: VDI5 0: Inactive 1: Active	0	-	Changeable at any time	"A1-06" on page 453
A1-07	0xA107	AI1 (used as DI) function	Same as A1-00	0	-	Changeable only at stop	"A1-07" on page 454
A1-08	0xA108	AI2 (used as DI) function	Same as A1-00	0	-	Changeable only at stop	"A1-08" on page 454
A1-09	0xA109	AI3 (used as DI) function	Same as A1-00	0	-	Changeable only at stop	"A1-09" on page 454
A1-10	0xA10A	AI (used as DI) active mode	Ones: AI1 0: Active low 1: Active high Tens: AI2 0: Active low 1: Active high Hundreds: AI3 0: Active low 1: Active high	0	-	Changeable only at stop	"A1-10" on page 454
A1-11	0xA10B	VDO1 function	Same as F5-01	0	-	Changeable at any time	"A1-11" on page 455
A1-12	0xA10C	VDO2 function	Same as F5-01	0	-	Changeable at any time	"A1-12" on page 455
A1-13	0xA10D	VDO3 function	Same as F5-01	0	-	Changeable at any time	"A1-13" on page 455
A1-14	0xA10E	VDO4 function	Same as F5-01	0	-	Changeable at any time	"A1-14" on page 455
A1-15	0xA10F	VDO5 function	Same as F5-01	0	-	Changeable at any time	"A1-15" on page 456
A1-16	0xA110	VDO1 output delay (invalid)	0.0s to 3600.0s	0.0	s	Changeable at any time	"A1-16" on page 456
A1-17	0xA111	VDO2 output delay (invalid)	0.0s to 3600.0s	0.0	s	Changeable at any time	"A1-17" on page 456
A1-18	0xA112	VDO3 output delay (invalid)	0.0s to 3600.0s	0.0	s	Changeable at any time	"A1-18" on page 456

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A1-19	0xA113	VDO4 output delay (invalid)	0.0s to 3600.0s	0.0	s	Changeable at any time	"A1-19" on page 456
A1-20	0xA114	VDO5 output delay (invalid)	0.0s to 3600.0s	0.0	s	Changeable at any time	"A1-20" on page 457
A1-21	0xA115	VDO active mode	Ones: VDO1 0: Positive logic active 1: Negative logic active Tens: VDO2 0: Positive logic active 1: Negative logic active Hundreds: VDO3 0: Positive logic active 1: Negative logic active Thousands: VDO4 0: Positive logic active 1: Negative logic active Ten thousands: VDO5 0: Positive logic active 1: Negative logic active	0	-	Changeable at any time	"A1-21" on page 457
A1-22	0xA116	VDO1 output switch-on delay	0.0s to 3600.0s	0.0	s	Changeable at any time	"A1-22" on page 457
A1-23	0xA117	VDO2 output switch-on delay	0.0s to 3600.0s	0.0	s	Changeable at any time	"A1-23" on page 457
A1-24	0xA118	VDO3 output switch-on delay	0.0s to 3600.0s	0.0	s	Changeable at any time	"A1-24" on page 458
A1-25	0xA119	VDO4 output switch-on delay	0.0s to 3600.0s	0.0	s	Changeable at any time	"A1-25" on page 458
A1-26	0xA11A	VDO5 output switch-on delay	0.0s to 3600.0s	0.0	s	Changeable at any time	"A1-26" on page 458
A1-27	0xA11B	VDO1 output switch-off delay	0.0s to 3600.0s	0.0	s	Changeable at any time	"A1-27" on page 458
A1-28	0xA11C	VDO2 output switch-off delay	0.0s to 3600.0s	0.0	s	Changeable at any time	"A1-28" on page 458
A1-29	0xA11D	VDO3 output switch-off delay	0.0s to 3600.0s	0.0	s	Changeable at any time	"A1-29" on page 459
A1-30	0xA11E	VDO4 output switch-off delay	0.0s to 3600.0s	0.0	s	Changeable at any time	"A1-30" on page 459
A1-31	0xA11F	VDO5 output switch-off delay	0.0s to 3600.0s	0.0	s	Changeable at any time	"A1-31" on page 459
A1-32	0xA120	VDO6 function	Same as F5-01	0	-	Changeable at any time	"A1-32" on page 459
A1-33	0xA121	VDO7 function	Same as F5-01	0	-	Changeable at any time	"A1-33" on page 459

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A1-34	0xA122	VDO8 function	Same as F5-01	0	-	Changeable at any time	"A1-34" on page 460
A1-35	0xA123	VDO9 function	Same as F5-01	0	-	Changeable at any time	"A1-35" on page 460
A1-36	0xA124	VDO10 function	Same as F5-01	0	-	Changeable at any time	"A1-36" on page 460
A1-37	0xA125	VDO11 function	Same as F5-01	0	-	Changeable at any time	"A1-37" on page 460
A1-38	0xA126	VDO6–VDO10 active mode	Ones: VDO6 0: Positive logic active 1: Negative logic active Tens: VDO7 0: Positive logic active 1: Negative logic active Hundreds: VDO8 0: Positive logic active 1: Negative logic active Thousands: VDO9 0: Positive logic active 1: Negative logic active Ten thousands: VDO10 0: Positive logic active 1: Negative logic active	0	-	Changeable at any time	"A1-38" on page 460
A1-39	0xA127	VDO11 active mode	0: Positive logic active 1: Negative logic active	0	-	Changeable at any time	"A1-39" on page 461
A1-40	0xA128	VDI6 function	Same as A1-00	0	-	Changeable only at stop	"A1-40" on page 461
A1-41	0xA129	VDI6 hardware source	Ones: VDI6 0: VDO6 1: A1-42 2: DI6 3: Communication setpoint (bit15 of F4-50) 4: Reserved 5: Reserved	0	-	Changeable only at stop	"A1-41" on page 461
A1-42	0xA12A	VDI6 state	Ones: VDI6 0: Inactive 1: Active	0	-	Changeable at any time	"A1-42" on page 462

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A1-43	0xA12B	VDI1–VDI5 active mode	Ones: VDI1 0: Active low 1: Active high Tens: VDI2 0: Active low 1: Active high Hundreds: VDI3 0: Active low 1: Active high Thousands: VDI4 0: Active low 1: Active high Ten thousands: VDI5 0: Active low 1: Active high	0	-	Changeable only at stop	"A1-43" on page 462
A1-44	0xA12C	VDI6 active mode	Ones: VDI6 0: Active low 1: Active high	0	-	Changeable only at stop	"A1-44" on page 462
A1-50	0xA132	DIO edge count reset	0: Not reset 1: Counting module 1 2: Counting module 2 3: Counting module 3 4: Counting module 4 5: All counting modules	0	-	Changeable at any time	"A1-50" on page 463
A1-51	0xA133	DIO edge counting channel selection 1	0: None 1: DI1 2: DI2 3: DI3 4: DI4 5: DI5 6: DI6 7: DI7 8: DI8 9: DI9 10: DI10 11: VDI1 12: VDI2 13: VDI3 14: VDI4 To be continued	0	-	Changeable at any time	"A1-51" on page 463

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
Continued	Continued	Continued	Continued 15: VDI5 16: VDI6 17: Relay 1 (DO3) 18: FMR 19: DO1 20: Relay 2 (DO4) 21: DO2 22: VDO1 23: VDO2 24: VDO3 25: VDO4 26: VDO5 27: VDO6 28: VDO7 29: VDO8 30: VDO9 31: VDO10 32: VDO11	Continued	Continued	Continued	Continued
A1-52	0xA134	DIO edge counting channel selection 2	Same as A1-51	0	-	Changeable at any time	"A1-52" on page 464
A1-53	0xA135	DIO edge counting channel selection 3	Same as A1-51	0	-	Changeable at any time	"A1-53" on page 465
A1-54	0xA136	DIO edge counting channel selection 4	Same as A1-51	0	-	Changeable at any time	"A1-54" on page 465
A1-55	0xA137	DIO edge counting comparison value 1	0 to 65535	0	-	Changeable at any time	"A1-55" on page 465
A1-56	0xA138	DIO edge counting comparison value 2	0 to 65535	0	-	Changeable at any time	"A1-56" on page 465
A1-57	0xA139	DIO edge counting comparison value 3	0 to 65535	0	-	Changeable at any time	"A1-57" on page 465
A1-58	0xA13A	DIO edge counting comparison value 4	0 to 65535	0	-	Changeable at any time	"A1-58" on page 465
A1-59	0xA13B	DIO edge counting module count value 1	0 to 65535	0	-	Unchangeable	"A1-59" on page 466
A1-60	0xA13C	DIO edge counting module count value 2	0 to 65535	0	-	Unchangeable	"A1-60" on page 466
A1-61	0xA13D	DIO edge counting module count value 3	0 to 65535	0	-	Unchangeable	"A1-61" on page 466
A1-62	0xA13E	DIO edge counting module count value 4	0 to 65535	0	-	Unchangeable	"A1-62" on page 466

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A2-00	0xA200	Motor type	0: Common asynchronous motor 1: Variable frequency asynchronous motor 2: Permanent magnet synchronous motor	0	-	Changeable only at stop	"A2-00" on page 467
A2-01	0xA201	Rated motor power	0.1 kW to 1000.0 kW	3.7	kW	Changeable only at stop	"A2-01" on page 467
A2-02	0xA202	Rated motor voltage	1 V to 2000 V	380	V	Changeable only at stop	"A2-02" on page 467
A2-03	0xA203	Rated motor current	0.01 A to 655.35 A	9.00	A	Changeable only at stop	"A2-03" on page 467
A2-04	0xA204	Rated motor frequency	0.01 Hz to F0-10	50.00	Hz	Changeable only at stop	"A2-04" on page 467
A2-05	0xA205	Rated motor speed	1 RPM to 65535 RPM	1460	RPM	Changeable only at stop	"A2-05" on page 468
A2-06	0xA206	Asynchronous motor stator resistance	0.001 Ω to 65.535 Ω	1.204	Ω	Changeable only at stop	"A2-06" on page 468
A2-07	0xA207	Asynchronous motor rotor resistance	0.001 Ω to 65.535 Ω	0.908	Ω	Changeable only at stop	"A2-07" on page 468
A2-08	0xA208	Asynchronous motor leakage inductance	0.01 mH to 655.35 mH	5.28	mH	Changeable only at stop	"A2-08" on page 468
A2-09	0xA209	Asynchronous motor mutual inductance	0.1 mH to 6553.5 mH	156.8	mH	Changeable only at stop	"A2-09" on page 468
A2-10	0xA20A	Asynchronous motor no-load current	0.01 A to A2-03	4.20	A	Changeable only at stop	"A2-10" on page 469
A2-16	0xA210	Synchronous motor stator resistance	0.001 Ω to 65.535 Ω	1.204	Ω	Changeable only at stop	"A2-16" on page 469
A2-17	0xA211	Synchronous motor D axis inductance	0.01 mH to 655.35 mH	5.28	mH	Changeable only at stop	"A2-17" on page 469
A2-18	0xA212	Synchronous motor Q axis inductance	0.01 mH to 655.35 mH	5.28	mH	Changeable only at stop	"A2-18" on page 469
A2-20	0xA214	Synchronous motor back EMF coefficient	0.0 V to 6553.5 V	300.0	V	Changeable only at stop	"A2-20" on page 469
A2-27	0xA21B	Encoder PPR	1 to 65535	1024	-	Changeable only at stop	"A2-27" on page 469
A2-28	0xA21C	Encoder type	0: ABZ incremental encoder 1: 23-bit encoder 2: Resolver 3: External input	0	-	Changeable only at stop	"A2-28" on page 470

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A2-29	0xA21D	Speed feedback PG card	0: Local PG card 1: Extension PG card	0	-	Changeable only at stop	"A2-29" on page 470
A2-30	0xA21E	A/B phase sequence of encoder	0: Forward 1: Reverse	0	-	Changeable only at stop	"A2-30" on page 470
A2-31	0xA21F	Encoder installation angle	0.0° to 359.9°	0.0	°	Changeable only at stop	"A2-31" on page 470
A2-34	0xA222	Number of resolver pole pairs	1 to 65535	1	-	Changeable only at stop	"A2-34" on page 471
A2-36	0xA224	Speed feedback PG wire breakage detection time	0.0s to 10.0s	0.0	s	Changeable only at stop	"A2-36" on page 471
A2-37	0xA225	Auto-tuning	0: No operation 1: Static auto-tuning on partial parameters of asynchronous motor 2: Dynamic auto-tuning on asynchronous motor 3: Static auto-tuning on all parameters of asynchronous motor 4: Inertia auto-tuning 5: Deadzone auto-tuning 11: With-load auto-tuning on synchronous motor (excluding back EMF) 12: No-load dynamic auto-tuning on synchronous motor 13: Static auto-tuning on all parameters of synchronous motor (excluding zero point angle)	0	-	Changeable only at stop	"A2-37" on page 471
A2-38	0xA226	Speed loop proportional gain 1	1 to 100	30	-	Changeable at any time	"A2-38" on page 471
A2-39	0xA227	Speed loop integral time 1	0.01s to 10.00s	0.50	s	Changeable at any time	"A2-39" on page 472
A2-40	0xA228	Switchover frequency 1	0.00 Hz to A2-43	5.00	Hz	Changeable at any time	"A2-40" on page 472
A2-41	0xA229	Speed loop proportional gain 2	1 to 100	20	-	Changeable at any time	"A2-41" on page 472
A2-42	0xA22A	Speed loop integral time 2	0.01s to 10.00s	1.00	s	Changeable at any time	"A2-42" on page 472
A2-43	0xA22B	Switchover frequency 2	A2-40 to F0-10	10.00	Hz	Changeable at any time	"A2-43" on page 472
A2-44	0xA22C	Vector control slip gain	50% to 200%	100	%	Changeable at any time	"A2-44" on page 472
A2-45	0xA22D	Speed feedback filter time in SVC mode	0.000s to 0.100s	0.015	s	Changeable at any time	"A2-45" on page 473

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A2-47	0xA22F	Torque upper limit source in speed control mode (motoring)	0: Digital setting (F2-10) 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: MIN (AI1, AI2) 7: MAX (AI1, AI2) Others: F connector	0	-	Changeable at any time	"A2-47" on page 473
A2-48	0xA230	Torque upper limit in speed control mode	0.0% to 200.0%	150.0	%	Changeable at any time	"A2-48" on page 473
A2-49	0xA231	Torque upper limit source in speed control mode (generating)	0: Digital setting (F2-10) 1: AI1 2: AI2 3: AI3 4: Pulse reference (DI5) 5: Communication 6: MIN (AI1, AI2) 7: MAX (AI1, AI2) 8: Digital setting (F2-12) Others: F connector	0	-	Changeable at any time	"A2-49" on page 473
A2-50	0xA232	Torque upper limit in speed control mode (generating)	0.0% to 200.0%	150.0	%	Changeable at any time	"A2-50" on page 474
A2-56	0xA238	Field weakening mode	0: No field weakening 1: Auto adjustment 2: Calculation+Auto adjustment	1	-	Changeable only at stop	"A2-56" on page 474
A2-57	0xA239	Field weakening gain	1 to 50	5	-	Changeable at any time	"A2-57" on page 475
A2-60	0xA23C	Generating power limiting	0: Disabled 1: Enabled in the whole process 2: Enabled at constant speed 3: Enabled during deceleration	0	-	Changeable at any time	"A2-60" on page 475
A2-61	0xA23D	Generating power upper limit	0.0% to 200.0%	20.0	%	Changeable at any time	"A2-61" on page 475
A2-62	0xA23E	Motor 2 control mode	0: SVC 1: FVC 2: V/f	2	-	Changeable only at stop	"A2-62" on page 475
A2-64	0xA240	Torque boost	0.0% to 30.0%	3.0	%	Changeable at any time	"A2-64" on page 475
A2-66	0xA242	V/f oscillation suppression gain	0 to 100	40	-	Changeable at any time	"A2-66" on page 476

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A2-67	0xA243	Initial position angle detection current of synchronous motor	50 to 180	80	-	Changeable only at stop	"A2-67" on page 476
A2-68	0xA244	Initial position angle detection of synchronous motor	0: Detected upon running 1: Not detected 2: Detected upon initial running after power-on	0	-	Changeable at any time	"A2-68" on page 476
A2-70	0xA246	Salient pole rate adjustment gain of synchronous motor	0.20 to 3.00	1.00	-	Changeable at any time	"A2-70" on page 476
A2-71	0xA247	Maximum torque-to-current ratio control of synchronous motor	0: Disabled 1: Enabled	1	-	Changeable at any time	"A2-71" on page 477
A2-75	0xA24B	Z signal correction	0: Disabled 1: Enabled	1	-	Changeable at any time	"A2-75" on page 477
A2-80	0xA250	Low speed carrier frequency	0.8 kHz to F0-15	2.0	kHz	Changeable at any time	"A2-80" on page 477
A2-86	0xA256	Position lock	0 to 1	0	-	Changeable at any time	"A2-86" on page 477
A2-87	0xA257	Switchover frequency	0.00 Hz to A2-40	0.30	Hz	Changeable at any time	"A2-87" on page 477
A2-88	0xA258	Position lock speed loop proportional gain	1 to 100	10	-	Changeable at any time	"A2-88" on page 478
A2-89	0xA259	Position lock speed loop integral time	0.01s to 10.00s	0.50	s	Changeable at any time	"A2-89" on page 478
A2-92	0xA25C	Auto-tuning free mode	0: Disabled 1: Auto-tuning upon initial running after power-on 2: Auto-tuning upon running	0	-	Changeable at any time	"A2-92" on page 478
A2-94	0xA25E	Initial position compensation angle	0.0 to 359.9	0.0	-	Changeable at any time	"A2-94" on page 478
A3-00	0xA300	V/f curve	0: Straight-line V/f curve 1: Multi-point V/f curve 2: Reserved 3: Reserved 4: Reserved 5: Reserved 6: Reserved 7: Reserved 8: Reserved 9: Reserved 10: V/f complete separation mode 11: V/f half separation mode	0	-	Changeable only at stop	"A3-00" on page 479

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A3-01	0xA301	Torque boost	0.0% to 30.0%	3.0	%	Changeable at any time	"A3-01" on page 479
A3-02	0xA302	Cut-off frequency of torque boost	0.00 Hz to F0-10	50.00	Hz	Changeable only at stop	"A3-02" on page 479
A3-03	0xA303	Multi-point V/f frequency 1	0.00 Hz to A3-05	0.00	Hz	Changeable only at stop	"A3-03" on page 479
A3-04	0xA304	Multi-point V/f voltage 1	0.0% to +100.0%	0.0	%	Changeable only at stop	"A3-04" on page 480
A3-05	0xA305	Multi-point V/f frequency 2	A3-03 to A3-07	0.00	Hz	Changeable only at stop	"A3-05" on page 480
A3-06	0xA306	Multi-point V/f voltage 2	0.0% to +100.0%	0.0	%	Changeable only at stop	"A3-06" on page 480
A3-07	0xA307	Multi-point V/f frequency 3	A3-05 to A2-04	0.00	Hz	Changeable only at stop	"A3-07" on page 480
A3-08	0xA308	Multi-point V/f voltage 3	0.0% to +100.0%	0.0	%	Changeable only at stop	"A3-08" on page 480
A3-09	0xA309	V/f slip compensation gain	0.0 to 200.0	0.0	-	Changeable at any time	"A3-09" on page 481
A3-10	0xA30A	V/f overexcitation gain	0 to 200	64	-	Changeable at any time	"A3-10" on page 481
A3-11	0xA30B	V/f oscillation suppression gain	0 to 100	40	-	Changeable at any time	"A3-11" on page 481
A3-12	0xA30C	V/f oscillation suppression	0: Disabled 1: Enabled	1	-	Changeable at any time	"A3-12" on page 481
A3-13	0xA30D	Voltage source for V/f separation	0: Digital setting (A3-14) 1: AI1 2: AI2 3: AI3 4: Pulse reference (DI5) 5: Multi-reference 6: Simple PLC 7: PID 8: Communication Others: F connector	0	-	Changeable at any time	"A3-13" on page 481
A3-14	0xA30E	V/f separation voltage	0 V to A2-02	0	V	Changeable at any time	"A3-14" on page 483
A3-15	0xA30F	Voltage rise time of V/f separation	0.0s to 1000.0s	0.0	s	Changeable at any time	"A3-15" on page 483
A3-16	0xA310	Voltage fall time of V/f separation	0.0s to 1000.0s	0.0	s	Changeable at any time	"A3-16" on page 483

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A3-17	0xA311	Stop mode for V/f separation	0: Frequency and voltage decline to 0 independently 1: Frequency declines to 0 after voltage declines to 0 2: Coast to stop (new)	0	-	Changeable at any time	"A3-17" on page 483
A3-18	0xA312	Overcurrent stall suppression action current	50% to 200%	150	%	Changeable only at stop	"A3-18" on page 483
A3-19	0xA313	Overcurrent stall suppression	0: Disabled 1: Enabled	1	-	Changeable only at stop	"A3-19" on page 484
A3-20	0xA314	Overcurrent stall suppression gain	1 to 100	20	-	Changeable at any time	"A3-20" on page 484
A3-21	0xA315	Compensation coefficient of speed multiplying overcurrent stall suppression action current	50% to 200%	100	%	Changeable only at stop	"A3-21" on page 484
A3-22	0xA316	Overvoltage stall suppression action voltage	330.0 V to 800.0 V	770.0	V	Changeable at any time	"A3-22" on page 484
A3-23	0xA317	Overvoltage stall suppression	0: Disabled 1: Enabled	1	-	Changeable only at stop	"A3-23" on page 484
A3-24	0xA318	Overvoltage stall suppression frequency gain	1 to 100	30	-	Changeable at any time	"A3-24" on page 485
A3-25	0xA319	Overvoltage stall suppression voltage gain	1 to 100	30	-	Changeable at any time	"A3-25" on page 485
A3-26	0xA31A	Frequency rise threshold for overvoltage stall suppression	0 Hz to 50 Hz	5	Hz	Changeable only at stop	"A3-26" on page 485
A3-27	0xA31B	Slip compensation filter time	0.1s to 10.0s	0.5	s	Changeable only at stop	"A3-27" on page 485
A3-28	0xA31C	Multi-point curve source	0: 3-point curve 1: Multi-point curve module A 2: Multi-point curve module B	0	-	Changeable only at stop	"A3-28" on page 485
A3-33	0xA321	Online torque compensation gain	80 to 150	100	-	Changeable only at stop	"A3-33" on page 486
A3-34	0xA322	ImaxKi coefficient	10% to 1000%	100	%	Changeable only at stop	"A3-34" on page 486

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A3-35	0xA323	Overcurrent suppression threshold (relative to rated motor current)	80% to 300%	200	%	Changeable only at stop	"A3-35" on page 486
A3-36	0xA324	Frequency threshold for overcurrent suppression field weakening	100% to 500%	100	%	Changeable only at stop	"A3-36" on page 486
A3-37	0xA325	IT filter time	10 ms to 1000 ms	100	ms	Changeable only at stop	"A3-37" on page 487
A3-38	0xA326	Slip compensation mode	0: Disabled 1: Slip compensation without PG 2: Slip compensation with PG	1	-	Changeable only at stop	"A3-38" on page 487
A3-39	0xA327	VdcMaxCtrl allowed runtime	0.0s to 100.0s	0.0	s	Changeable only at stop	"A3-39" on page 487
A3-40	0xA328	Upper limit of V/f separation voltage	50.0% to 200.0%	100.0	%	Changeable only at stop	"A3-40" on page 487
A3-41	0xA329	RFG time of V/f separation frequency	0: RFG time forced to 0 1: Preset RFG time	0	-	Changeable only at stop	"A3-41" on page 487
A3-42	0xA32A	Cut-off frequency of V/f oscillation suppression filter	1.0 Hz to 50.0 Hz	8.0	Hz	Changeable at any time	"A3-42" on page 488
A3-43	0xA32B	Cut-off frequency threshold for V/f oscillation suppression	10 Hz to 3000 Hz	200	Hz	Changeable at any time	"A3-43" on page 488
A3-44	0xA32C	VdcMaxCtrl feedforward coefficient	0% to 500%	0	%	Changeable at any time	"A3-44" on page 488
A3-50	0xA332	PMVVC low-speed IF	0: Disabled 1: Enabled	1	-	Changeable only at stop	"A3-50" on page 488
A3-51	0xA333	PMVVC low-speed IF current	30 to 250	100	-	Changeable only at stop	"A3-51" on page 488
A3-52	0xA334	PMVVC low-speed IF speed switching threshold	2.0% to 100.0%	10.0	%	Changeable only at stop	"A3-52" on page 489
A3-53	0xA335	PMVVC oscillation suppression gain coefficient	0 to 500	100	-	Changeable at any time	"A3-53" on page 489
A3-54	0xA336	PMVVC filter time coefficient	0 to 500	100	-	Changeable at any time	"A3-54" on page 489

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A3-55	0xA337	PMVVC energy conservation control mode	0: Fixed straight-line V/f curve 1: Fixed 30% reactive current 2: MTPA control	2	-	Changeable only at stop	"A3-55" on page 489
A4-00	0xA400	Control channel	0: Control channel 1 1: Control channel 2	0	-	Changeable at any time	"A4-00" on page 490
A4-01	0xA401	Custom OFF1 source	0: Inactive 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"A4-01" on page 490
A4-02	0xA402	Custom OFF2 source 1	0: Active 1: Inactive 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	1	-	Changeable at any time	"A4-02" on page 490
A4-03	0xA403	Custom OFF3 source 1	Same as A4-02	1	-	Changeable at any time	"A4-03" on page 491

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A4-04	0xA404	Custom running permission source	0: Not permitted 1: Permitted 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	1	-	Changeable at any time	"A4-04" on page 491
A4-05	0xA405	Custom fault reset source 1	0: Inactive 1: Active 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"A4-05" on page 492
A4-06	0xA406	Custom JOG1 source	Same as A4-01	0	-	Changeable at any time	"A4-06" on page 493
A4-07	0xA407	Custom JOG2 source	Same as A4-01	0	-	Changeable at any time	"A4-07" on page 493
A4-08	0xA408	Custom speed negation source	Same as A4-05	0	-	Changeable at any time	"A4-08" on page 493

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A4-10	0xA40A	OFF2 source 2	0: Active 1: Inactive 2: Terminal function input 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	1	-	Changeable at any time	"A4-10" on page 493
A4-11	0xA40B	OFF2 source 3	Same as A4-02	1	-	Changeable at any time	"A4-11" on page 494
A4-12	0xA40C	OFF3 source 2	Same as A4-10	1	-	Changeable at any time	"A4-12" on page 494
A4-13	0xA40D	OFF3 source 3	Same as A4-02	1	-	Changeable at any time	"A4-13" on page 494
A4-14	0xA40E	Fault reset source 2	Same as A4-10	0	-	Changeable at any time	"A4-14" on page 495
A4-15	0xA40F	Fault reset source 3	0: Inactive 1: Active 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"A4-15" on page 495

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A4-16	0xA410	RFG prohibition source	Same as A4-02	1	-	Changeable at any time	"A4-16" on page 496
A4-17	0xA411	RFG pause source	Same as A4-10	1	-	Changeable at any time	"A4-17" on page 496
A4-18	0xA412	Source of setting RFG reference to 0	Same as A4-10	1	-	Changeable at any time	"A4-18" on page 496
A4-21	0xA415	Custom OFF1 source	Same as A4-01	0	-	Changeable at any time	"A4-21" on page 496
A4-22	0xA416	Custom OFF2 source 1	Same as A4-02	1	-	Changeable at any time	"A4-22" on page 496
A4-23	0xA417	Custom OFF3 source 1	Same as A4-02	1	-	Changeable at any time	"A4-23" on page 497
A4-24	0xA418	Custom running permission source	A4-04	1	-	Changeable at any time	"A4-24" on page 497
A4-25	0xA419	Custom fault reset source 1	Same as A4-01	0	-	Changeable at any time	"A4-25" on page 497
A4-26	0xA41A	Custom JOG1 source	Same as A4-01	0	-	Changeable at any time	"A4-26" on page 497
A4-27	0xA41B	Custom JOG2 source	Same as A4-01	0	-	Changeable at any time	"A4-27" on page 497
A4-28	0xA41C	Custom speed negation source	0: Inactive 1: Active 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"A4-28" on page 498
A4-30	0xA41E	OFF2 source 2	Same as A4-10	1	-	Changeable at any time	"A4-30" on page 498
A4-31	0xA41F	OFF2 source 3	Same as A4-02	1	-	Changeable at any time	"A4-31" on page 498
A4-32	0xA420	OFF3 source 2	Same as A4-10	1	-	Changeable at any time	"A4-32" on page 499

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A4-33	0xA421	OFF3 source 3	Same as A4-02	1	-	Changeable at any time	"A4-33" on page 499
A4-34	0xA422	Fault reset source 2	Same as A4-10	0	-	Changeable at any time	"A4-34" on page 499
A4-35	0xA423	Fault reset source 3	A4-15	0	-	Changeable at any time	"A4-35" on page 499
A4-36	0xA424	RFG prohibition source	Same as A4-02	1	-	Changeable at any time	"A4-36" on page 500
A4-37	0xA425	RFG pause source	Same as A4-10	1	-	Changeable at any time	"A4-37" on page 500
A4-38	0xA426	Source of setting RFG reference to 0	Same as A4-10	1	-	Changeable at any time	"A4-38" on page 500
A4-41	0xA429	Terminal start/stop module A/B	0: Module A 1: Module B	0	-	Changeable at any time	"A4-41" on page 500
A4-43	0xA42B	Input 1 of terminal start/stop module A	0: Active 2: Terminal function input 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	2	-	Changeable at any time	"A4-43" on page 500
A4-44	0xA42C	Input 2 of terminal start/stop command A	A4-43	2	-	Changeable at any time	"A4-44" on page 501
A4-45	0xA42D	Input 3 of terminal start/stop command A	A4-43	2	-	Changeable at any time	"A4-45" on page 501

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A4-46	0xA42E	Running permission source of terminal start/stop module A	0: Inactive 1: Active 2: Terminal function input 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	1	-	Changeable at any time	"A4-46" on page 501
A4-47	0xA42F	Fault reset source of terminal start/stop module A	A4-46	0	-	Changeable at any time	"A4-47" on page 502
A4-48	0xA430	JOG1 source of terminal start/stop module A	A4-43	2	-	Changeable at any time	"A4-48" on page 502
A4-49	0xA431	JOG2 source of terminal start/stop module A	A4-43	2	-	Changeable at any time	"A4-49" on page 502
A4-50	0xA432	Control mode of terminal start/stop module B	0: Two-wire mode 1 1: Two-wire mode 2 2: Three-wire mode 1 3: Three-wire mode 2	0	-	Changeable at any time	"A4-50" on page 503
A4-51	0xA433	Input 1 of terminal start/stop module B	A4-43	2	-	Changeable at any time	"A4-51" on page 503
A4-52	0xA434	Input 2 of terminal start/stop command B	A4-43	2	-	Changeable at any time	"A4-52" on page 503
A4-53	0xA435	Input 3 of terminal start/stop command B	A4-43	2	-	Changeable at any time	"A4-53" on page 503
A4-54	0xA436	Running permission source of terminal start/stop module B	A4-46	1	-	Changeable at any time	"A4-54" on page 503
A4-55	0xA437	Fault reset source of terminal start/stop module B	A4-46	2	-	Changeable at any time	"A4-55" on page 504

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A4-56	0xA438	JOG1 source of terminal start/stop module B	A4-43	2	-	Changeable at any time	"A4-56" on page 504
A4-57	0xA439	JOG2 source of terminal start/stop module B	A4-43	2	-	Changeable at any time	"A4-57" on page 504
A4-58	0xA43A	Reserved	0 to 65535	0	-	Changeable at any time	"A4-58" on page 504
A4-59	0xA43B	Reserved	0 to 65535	0	-	Changeable at any time	"A4-59" on page 504
A4-60	0xA43C	Reserved	0 to 65535	0	-	Changeable at any time	"A4-60" on page 505
A4-61	0xA43D	Source of supplementary speed in speed control	0: 0 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"A4-61" on page 505
A4-62	0xA43E	JOG1 speed source	0: Digital setting 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"A4-62" on page 505
A4-65	0xA441	Ramp rounding mode	0: Incontinuous smoothing 1: Continuous smoothing	0	-	Changeable at any time	"A4-65" on page 506
A4-66	0xA442	Jog ramp source	0: Normal running ramp time 1: Jog ramp time	1	-	Changeable at any time	"A4-66" on page 506
A4-67	0xA443	Proportion of starting arc in acceleration	0.0% to +100.0%	30.0	%	Changeable only at stop	"A4-67" on page 506
A4-68	0xA444	Proportion of end arc in acceleration	0.0% to +100.0%	30.0	%	Changeable only at stop	"A4-68" on page 506
A4-69	0xA445	Proportion of starting arc in deceleration	0.0% to +100.0%	30.0	%	Changeable only at stop	"A4-69" on page 507
A4-70	0xA446	Proportion of end arc in deceleration	0.0% to +100.0%	30.0	%	Changeable only at stop	"A4-70" on page 507

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A4-71	0xA447	Ramp output forcing enable	0: Disabled 1: Enabled 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"A4-71" on page 507
A4-72	0xA448	Ramp output force value	0: 100% 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"A4-72" on page 508
A4-73	0xA449	Ramp input ramp shift enable	Same as A4-71	0	-	Changeable at any time	"A4-73" on page 508
A4-74	0xA44A	Ramp input update interval	2 ms to 10000 ms	50	ms	Changeable at any time	"A4-74" on page 508
A4-75	0xA44B	Ramp tracking enable	0: Disabled 1: Enabled	0	-	Changeable at any time	"A4-75" on page 508
A4-76	0xA44C	Ramp tracking error	0.0% to +100.0%	10.0	%	Changeable at any time	"A4-76" on page 509
A4-77	0xA44D	Frequency acceleration time in torque control	0.0s to 6500.0s	0.0	s	Changeable at any time	"A4-77" on page 509
A4-78	0xA44E	Frequency deceleration time in torque control	0.0s to 6500.0s	0.0	s	Changeable at any time	"A4-78" on page 509
A4-79	0xA44F	Forced use of the fourth set of time in torque control	0 to 1	1	-	Changeable at any time	"A4-79" on page 509

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A4-80	0xA450	Speed limited running mode	0: Run with a maximum speed limit 1: Run at a specified safe speed	1	-	Changeable at any time	"A4-80" on page 509
A4-81	0xA451	Forward speed limit in restricted running mode	0.0% to +100.0%	100.0	%	Changeable at any time	"A4-81" on page 510
A4-82	0xA452	Reverse speed limit in restricted running mode	0.0% to +100.0%	100.0	%	Changeable at any time	"A4-82" on page 510
A4-83	0xA453	Maximum motoring power in restricted running mode	0.0% to 400.0%	50.0	%	Changeable at any time	"A4-83" on page 510
A4-84	0xA454	Maximum regenerative power in restricted running mode	0.0% to 400.0%	50.0	%	Changeable at any time	"A4-84" on page 510
A4-85	0xA455	Forward torque limit in restricted running mode	0.0% to 400.0%	50.0	%	Changeable at any time	"A4-85" on page 510
A4-86	0xA456	Reverse torque limit in restricted running mode	0.0% to 400.0%	50.0	%	Changeable at any time	"A4-86" on page 511
A4-87	0xA457	Maximum allowable current in restricted running mode	0.0% to 400.0%	90.0	%	Changeable at any time	"A4-87" on page 511
A5-00	0xA500	DPWM switchover frequency upper limit	5.00 Hz to F0-10	15.00	Hz	Changeable at any time	"A5-00" on page 511
A5-01	0xA501	PWM modulation mode	0: Asynchronous modulation 1: Synchronous modulation	0	-	Changeable at any time	"A5-01" on page 511
A5-02	0xA502	Deadzone compensation	0: Disabled 1: Enabled (compensation mode 1)	1	-	Changeable at any time	"A5-02" on page 512
A5-03	0xA503	Random PWM depth	0 to 10	0	-	Changeable at any time	"A5-03" on page 512
A5-04	0xA504	Pulse-by-pulse current limit protection	0: Disabled 1: Enabled	0	-	Changeable at any time	"A5-04" on page 512
A5-05	0xA505	Voltage overmodulation coefficient	100% to 110%	105	%	Changeable at any time	"A5-05" on page 512
A5-06	0xA506	Undervoltage threshold	140.0 V to 420.0 V	350.0	V	Changeable at any time	"A5-06" on page 513
A5-08	0xA508	Low speed carrier frequency upper limit	0.0 kHz to 8.0 kHz	0.0	kHz	Changeable at any time	"A5-08" on page 513

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A5-09	0xA509	Overvoltage threshold	330.0 V to 820.0 V	820.0	V	Changeable at any time	"A5-09" on page 513
A5-10	0xA50A	Energy conservation control	0: Disabled 1: Enabled	0	-	Changeable at any time	"A5-10" on page 513
A6-00	0xA600	Minimum input of AI curve 4	–10 V to A6-02	0.00	V	Changeable at any time	"A6-00" on page 513
A6-01	0xA601	Percentage corresponding to minimum input of AI curve 4	–100% to +100.0%	0.0	%	Changeable at any time	"A6-01" on page 514
A6-02	0xA602	Inflection 1 input of AI curve 4	A6-00 to A6-04	3.00	V	Changeable at any time	"A6-02" on page 514
A6-03	0xA603	Percentage corresponding to inflection 1 input of AI curve 4	–100% to +100.0%	30.0	%	Changeable at any time	"A6-03" on page 514
A6-04	0xA604	Inflection 2 input of AI curve 4	A6-02 to A6-06	6.00	V	Changeable at any time	"A6-04" on page 514
A6-05	0xA605	Percentage corresponding to inflection 2 input of AI curve 4	–100% to +100.0%	60.0	%	Changeable at any time	"A6-05" on page 514
A6-06	0xA606	Maximum input of AI curve 4	A6-04 to 10.00 V	10.00	V	Changeable at any time	"A6-06" on page 515
A6-07	0xA607	Percentage corresponding to maximum input of AI curve 4	–100% to +100.0%	100.0	%	Changeable at any time	"A6-07" on page 515
A6-08	0xA608	Minimum input of AI curve 5	–10 V to A6-10	–10	V	Changeable at any time	"A6-08" on page 515
A6-09	0xA609	Percentage corresponding to minimum input of AI curve 5	–100% to +100.0%	–100	%	Changeable at any time	"A6-09" on page 515
A6-10	0xA60A	Inflection 1 input of AI curve 5	A6-08 to A6-12	–3	V	Changeable at any time	"A6-10" on page 515
A6-11	0xA60B	Percentage corresponding to inflection 1 input of AI curve 5	–100% to +100.0%	–30	%	Changeable at any time	"A6-11" on page 516
A6-12	0xA60C	Inflection 2 input of AI curve 5	A6-10 to A6-14	3.00	V	Changeable at any time	"A6-12" on page 516

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A6-13	0xA60D	Percentage corresponding to inflection 2 input of AI curve 5	–100% to +100.0%	30.0	%	Changeable at any time	"A6-13" on page 516
A6-14	0xA60E	Maximum input of AI curve 5	A6-12 to 10.00	10.00	V	Changeable at any time	"A6-14" on page 516
A6-15	0xA60F	Percentage corresponding to maximum input of AI curve 5	–100% to +100.0%	100.0	%	Changeable at any time	"A6-15" on page 516
A6-24	0xA618	AI1 skip point	–100% to +100.0%	0.0	%	Changeable at any time	"A6-24" on page 517
A6-25	0xA619	AI1 skip amplitude	0.0% to +100.0%	0.1	%	Changeable at any time	"A6-25" on page 517
A6-26	0xA61A	AI2 skip point	–100% to +100.0%	0.0	%	Changeable at any time	"A6-26" on page 517
A6-27	0xA61B	AI2 skip amplitude	0.0% to +100.0%	0.1	%	Changeable at any time	"A6-27" on page 517
A6-28	0xA61C	AI3 skip point	–100% to +100.0%	0.0	%	Changeable at any time	"A6-28" on page 517
A6-29	0xA61D	AI3 skip amplitude	0.0% to +100.0%	0.1	%	Changeable at any time	"A6-29" on page 517
A6-30	0xA61E	AI automatic curve calibration	Ones: Point selection (for setting) 0: Disabled 1: Point 1 2: Point 2 3: Point 3 4: Point 4 Tens: AI channel selection (for setting) 0: Disabled 1: AI1 2: AI2 3: AI3 Hundreds: Enable control (for setting) 0: Disabled 1: Enabled Thousands: X-point curve (for display) 0: The function is disabled or the channel is not selected. 2: 2-point curve 4: 4-point curve Ten thousands: Reserved	0	-	Changeable at any time	"A6-30" on page 518
A6-31	0xA61F	AI1 input enable	0: Disabled 1: Enabled Others: B connector	1	-	Changeable at any time	"A6-31" on page 518

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A6-32	0xA620	AI2 input enable	0: Disabled 1: Enabled Others: B connector	1	-	Changeable at any time	"A6-32" on page 519
A6-33	0xA621	AI3 input enable	0: Disabled 1: Enabled Others: B connector	1	-	Changeable at any time	"A6-33" on page 519
A6-34	0xA622	AI polarity	Ones: AI1 0: Normal 1: Absolute value 2: Negated value 3: Negated absolute value Tens: AI2 0: Normal 1: Absolute value 2: Negated value 3: Negated absolute value Hundreds: AI3 0: Normal 1: Absolute value 2: Negated value 3: Negated absolute value	0	-	Changeable at any time	"A6-34" on page 519
A6-35	0xA623	AI hardware source	Ones: AI1 source 1: Hardware sampling 1: Force setpoint Tens: AI2 source 1: Hardware sampling 1: Force setpoint Hundreds: AI3 source 1: Hardware sampling 1: Force setpoint	0	-	Changeable only at stop	"A6-35" on page 519
A6-36	0xA624	AI1 force setpoint	–10 V to +10.00 V	0.00	V	Changeable at any time	"A6-36" on page 520
A6-37	0xA625	AI2 force setpoint	–10 V to +10.00 V	0.00	V	Changeable at any time	"A6-37" on page 520
A6-38	0xA626	AI3 force setpoint	–10 V to +10.00 V	0.00	V	Changeable at any time	"A6-38" on page 520
A6-39	0xA627	High level for AI used as DI	5.5 V to 9.0 V	7.0	V	Changeable at any time	"A6-39" on page 520
A6-40	0xA628	Low level for AI used as DI	1.0 V to 4.5 V	3.0	V	Changeable at any time	"A6-40" on page 521
A6-41	0xA629	AI1 gain	–10 to +10.00	1.00	-	Changeable at any time	"A6-41" on page 521
A6-42	0xA62A	AI1 offset	–10 V to +10.00 V	0.00	V	Changeable at any time	"A6-42" on page 521
A6-43	0xA62B	AI1 denoising threshold	0.0% to +100.0%	0.5	%	Changeable at any time	"A6-43" on page 521

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A6-44	0xA62C	AI1 deadzone width	0.0% to +100.0%	0.5	%	Changeable at any time	"A6-44" on page 521
A6-45	0xA62D	AI1 input upper limit	A6-46 to 10.00 V	8.00	V	Changeable at any time	"A6-45" on page 522
A6-46	0xA62E	AI1 input lower limit	0.00 V to A6-45	2.00	V	Changeable at any time	"A6-46" on page 522
A6-47	0xA62F	AI2 gain	–10 to +10.00	1.00	-	Changeable at any time	"A6-47" on page 522
A6-48	0xA630	AI2 offset	–10 V to +10.00 V	0.00	V	Changeable at any time	"A6-48" on page 522
A6-49	0xA631	AI2 denoising threshold	0.0% to +100.0%	0.5	%	Changeable at any time	"A6-49" on page 522
A6-50	0xA632	AI2 deadzone width	0.0% to +100.0%	0.5	%	Changeable at any time	"A6-50" on page 523
A6-51	0xA633	AI2 input upper limit	A6-52 to 10.00 V	8.00	V	Changeable at any time	"A6-51" on page 523
A6-52	0xA634	AI2 input lower limit	0.00 V to A6-51	2.00	V	Changeable at any time	"A6-52" on page 523
A6-53	0xA635	AI3 gain	–10 to +10.00	1.00	-	Changeable at any time	"A6-53" on page 523
A6-54	0xA636	AI3 offset	–10 V to +10.00 V	0.00	V	Changeable at any time	"A6-54" on page 523
A6-55	0xA637	AI3 denoising threshold	0.0% to +100.0%	0.5	%	Changeable at any time	"A6-55" on page 523
A6-56	0xA638	AI3 deadzone width	0.0% to +100.0%	0.5	%	Changeable at any time	"A6-56" on page 524
A6-57	0xA639	AI3 input upper limit	A6-58 to 10.00 V	8.00	V	Changeable at any time	"A6-57" on page 524
A6-58	0xA63A	AI3 input lower limit	0.00 V to A6-57	2.00	V	Changeable at any time	"A6-58" on page 524
A6-59	0xA63B	AI input protection time	0.00s to 1.00s	0.01	s	Changeable at any time	"A6-59" on page 524
A8-00	0xA800	Master/Slave control function	0: Disabled 1: Enabled	0	-	Changeable at any time	"A8-00" on page 525
A8-01	0xA801	Master/Slave selection	0: Master 1: Slave	0	-	Changeable at any time	"A8-01" on page 525

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A8-02	0xA802	Slave following master's command	Ones: Whether the slave follows the operation command of the master 0: No 1: Yes Tens: Whether the slave fault information is transmitted 0: No 1: Yes Hundreds: Whether the master reports a fault (ERR-16) upon disconnection of the slave 0: No 1: Yes	11	-	Changeable only at stop	"A8-02" on page 525
A8-03	0xA803	Function of slave RX data	0: Running frequency 1: Target frequency	0	-	Changeable at any time	"A8-03" on page 525
A8-04	0xA804	RX data zero offset	–100% to +100.00%	0.00	%	Changeable at any time	"A8-04" on page 526
A8-05	0xA805	RX data gain	–10% to +100.00%	1.00	%	Changeable at any time	"A8-05" on page 526
A8-06	0xA806	Master-slave communication heartbeat time	0.0s to 10.0s	1.0	s	Changeable at any time	"A8-06" on page 526
A8-07	0xA807	Master data TX cycle in point-to-point communication	0.001s to 10.000s	0.001	s	Changeable at any time	"A8-07" on page 526
A8-08	0xA808	Zero offset of RX frequency data	–10000 to +10000	0	-	Changeable at any time	"A8-08" on page 526
A8-09	0xA809	Gain of RX frequency data	–1000 to +1000	100	-	Changeable at any time	"A8-09" on page 527
A8-10	0xA80A	Maximum forward deviation of slave frequency	0 to 10000	1000	-	Changeable at any time	"A8-10" on page 527
A8-11	0xA80B	Maximum reverse deviation of slave frequency	0.20 Hz to 10.00 Hz	0.50	Hz	Changeable at any time	"A8-11" on page 527
A9-00	0xA900	Number of parallel motors	1 to 200	1	-	Changeable only at stop	"A9-00" on page 527

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A9-01	0xA901	Motor information command word	Bit00: Mutual inductance curve 0: Disabled 1: Enabled Bit01: D- and Q-axis inductance curve 0: Disabled 1: Enabled Bit02: Rotor resistance online auto-tuning 0: Disabled 1: Enabled Bit03: Rotor resistance online auto-tuning method 0: Amplitude 1: Phase Bit04: Motor thermal model 0: Disabled 1: Enabled Bit05: Temperature source of motor thermal model 0: Estimated temperature 1: Temperature detected by sensor Bit06: Torque coefficient calculation of asynchronous motor 0: Torque formula 1: Current distribution Bit07: Torque coefficient calculation of synchronous motor 0: Torque formula 1: Torque matching the rated torque Bit08: Zero speed friction torque calculation 0: Torque linearly decreasing to zero 1: Torque to maintain minimum speed Bit09: Calculation of model parameters based on nameplate parameters 0: Disabled 1: Enabled Bit10: Confirmation of calculating model parameters based on nameplate parameters 0: Default 1: Confirm	0x3	-	Changeable only at stop	"A9-01" on page 527
A9-02	0xA902	Number of motor pole pairs	0 to 64	0	-	Changeable only at stop	"A9-02" on page 528
A9-03	0xA903	Motor power factor	0.600 to 1.000	0.860	-	Changeable only at stop	"A9-03" on page 529
A9-05	0xA905	Expansion card	1: Expansion card 1 2: Expansion card 2	1	-	Changeable only at stop	"A9-05" on page 529
A9-06	0xA906	ABZ encoder speed measurement mode at low speed	0: Maintain 1: Attenuate 2: Optimized solution	2	-	Changeable only at stop	"A9-06" on page 529

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A9-07	0xA907	Encoder speed measurement filter time constant	0.000s to 10.000s	0.004	s	Changeable at any time	"A9-07" on page 529
A9-08	0xA908	Encoder wire breakage software detection coefficient	0.000 to 8.000	1.000	-	Changeable at any time	"A9-08" on page 530
A9-09	0xA909	Encoder control word	Bit00: Speed measurement 0: Disabled 1: Enabled Bit01: Software detection of wire breakage 0: Disabled 1: Enabled Bit02: Glitch removal 0: Disabled 1: Enabled Bit03: ABZ encoder speed measurement mode 0: Quadruplicated frequency 1: Single pulse	0	-	Changeable only at stop	"A9-09" on page 530
A9-10	0xA90A	Speed measurement exception count threshold	1 to 100	10	-	Changeable only at stop	"A9-10" on page 531
A9-11	0xA90B	Motor gear ratio (numerator)	1 to 65535	1	-	Changeable only at stop	"A9-11" on page 531
A9-12	0xA90C	Motor gear ratio (denominator)	1 to 65535	1	-	Changeable only at stop	"A9-12" on page 531
A9-13	0xA90D	External input source of encoder	0: 0 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable only at stop	"A9-13" on page 531
A9-15	0xA90F	Stator leakage inductance	0.000 mH to 65.535 mH	6.540	mH	Changeable only at stop	"A9-15" on page 532
A9-16	0xA910	Electromechanical time constant	1 ms to 65535 ms	100	ms	Unchangeable	"A9-16" on page 532
A9-17	0xA911	Inertia ratio	0.0% to 6553.5%	120.0	%	Changeable only at stop	"A9-17" on page 532
A9-18	0xA912	Friction torque	0.0% to 6553.5%	2.0	%	Changeable only at stop	"A9-18" on page 532

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A9-19	0xA913	Excitation current coefficient 1 of mutual inductance curve (rated)	5.0% to 100.0%	50.0	%	Changeable only at stop	"A9-19" on page 533
A9-20	0xA914	Excitation current coefficient 2 of mutual inductance curve (rated)	5.0% to 100.0%	75.0	%	Changeable only at stop	"A9-20" on page 533
A9-21	0xA915	Excitation current coefficient 3 of mutual inductance curve	100.0% to 800.0%	150.0	%	Changeable only at stop	"A9-21" on page 533
A9-22	0xA916	Excitation current coefficient 4 of mutual inductance curve	100.0% to 800.0%	210.0	%	Changeable only at stop	"A9-22" on page 533
A9-23	0xA917	Flux coefficient 1 of mutual inductance curve (rated)	10.0% to 100.0%	50.0	%	Changeable only at stop	"A9-23" on page 533
A9-24	0xA918	Flux coefficient 2 of mutual inductance curve (rated)	10.0% to 100.0%	85.0	%	Changeable only at stop	"A9-24" on page 534
A9-25	0xA919	Flux coefficient 3 of mutual inductance curve	100.0% to 300.0%	115.0	%	Changeable only at stop	"A9-25" on page 534
A9-26	0xA91A	Flux coefficient 4 of mutual inductance curve	100.0% to 300.0%	125.0	%	Changeable only at stop	"A9-26" on page 534
A9-27	0xA91B	Speed point 1 of friction curve	0 RPM to 30000 RPM	15	RPM	Changeable only at stop	"A9-27" on page 534
A9-28	0xA91C	Speed point 2 of friction curve	0 RPM to 30000 RPM	30	RPM	Changeable only at stop	"A9-28" on page 534
A9-29	0xA91D	Speed point 3 of friction curve	0 RPM to 30000 RPM	60	RPM	Changeable only at stop	"A9-29" on page 534
A9-30	0xA91E	Speed point 4 of friction curve	0 RPM to 30000 RPM	120	RPM	Changeable only at stop	"A9-30" on page 535
A9-31	0xA91F	Speed point 5 of friction curve	0 RPM to 30000 RPM	150	RPM	Changeable only at stop	"A9-31" on page 535
A9-32	0xA920	Speed point 6 of friction curve	0 RPM to 30000 RPM	300	RPM	Changeable only at stop	"A9-32" on page 535
A9-33	0xA921	Speed point 7 of friction curve	0 RPM to 30000 RPM	600	RPM	Changeable only at stop	"A9-33" on page 535
A9-34	0xA922	Speed point 8 of friction curve	0 RPM to 30000 RPM	1200	RPM	Changeable only at stop	"A9-34" on page 535

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A9-35	0xA923	Speed point 9 of friction curve	0 RPM to 30000 RPM	1500	RPM	Changeable only at stop	"A9-35" on page 536
A9-36	0xA924	Speed point 10 of friction curve	0 RPM to 30000 RPM	3000	RPM	Changeable only at stop	"A9-36" on page 536
A9-37	0xA925	Torque point 1 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"A9-37" on page 536
A9-38	0xA926	Torque point 2 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"A9-38" on page 536
A9-39	0xA927	Torque point 3 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"A9-39" on page 536
A9-40	0xA928	Torque point 4 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"A9-40" on page 537
A9-41	0xA929	Torque point 5 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"A9-41" on page 537
A9-42	0xA92A	Torque point 6 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"A9-42" on page 537
A9-43	0xA92B	Torque point 7 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"A9-43" on page 537
A9-44	0xA92C	Torque point 8 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"A9-44" on page 537
A9-45	0xA92D	Torque point 9 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"A9-45" on page 538
A9-46	0xA92E	Torque point 10 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"A9-46" on page 538
A9-47	0xA92F	Current coefficient starting point of D- and Q-axis inductance curve	–800% to +800.0%	–200	%	Changeable only at stop	"A9-47" on page 538
A9-48	0xA930	Current coefficient end point of D- and Q-axis inductance curve	–800% to +800.0%	200.0	%	Changeable only at stop	"A9-48" on page 538
A9-49	0xA931	D axis inductance 1 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-49" on page 538
A9-50	0xA932	D axis inductance 2 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-50" on page 539
A9-51	0xA933	D axis inductance 3 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-51" on page 539
A9-52	0xA934	D axis inductance 4 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-52" on page 539

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A9-53	0xA935	D axis inductance 5 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-53" on page 539
A9-54	0xA936	D axis inductance 6 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-54" on page 539
A9-55	0xA937	D axis inductance 7 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-55" on page 539
A9-56	0xA938	D axis inductance 8 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-56" on page 540
A9-57	0xA939	D axis inductance 9 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-57" on page 540
A9-58	0xA93A	D axis inductance 10 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-58" on page 540
A9-59	0xA93B	D axis inductance 11 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-59" on page 540
A9-60	0xA93C	D axis inductance 12 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-60" on page 540
A9-61	0xA93D	Q axis inductance 1 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-61" on page 541
A9-62	0xA93E	Q axis inductance 2 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-62" on page 541
A9-63	0xA93F	Q axis inductance 3 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-63" on page 541
A9-64	0xA940	Q axis inductance 4 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-64" on page 541
A9-65	0xA941	Q axis inductance 5 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-65" on page 541
A9-66	0xA942	Q axis inductance 6 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-66" on page 542
A9-67	0xA943	Q axis inductance 7 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-67" on page 542

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
A9-68	0xA944	Q axis inductance 8 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-68" on page 542
A9-69	0xA945	Q axis inductance 9 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-69" on page 542
A9-70	0xA946	Q axis inductance 10 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-70" on page 542
A9-71	0xA947	Q axis inductance 11 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-71" on page 543
A9-72	0xA948	Q axis inductance 12 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"A9-72" on page 543
AA-00	0xAA00	Parameter auto-tuning upon startup	Bit00: Synchronous motor pole position auto-tuning upon startup 0: Disabled 1: Enabled Bit01: Quick stator resistance auto-tuning upon startup 0: Disabled 1: Enabled Bit02–Bit03: HFI pole position auto-tuning 0: Disabled 1: Enabled 2: Adaptive Bit04: IGBT shoot-through self-check upon startup 0: Disabled 1: Enabled Bit05: Short-to-ground self-check upon startup (reserved) 0: Disabled 1: Enabled Bit06: Phase loss self-check upon startup (reserved) 0: Disabled 1: Enabled	1	-	Changeable only at stop	"AA-00" on page 543
AA-01	0xAA01	Auto-tuning direction	0 to 1	1	-	Changeable only at stop	"AA-01" on page 544
AA-02	0xAA02	Oscillation suppression gain of synchronous motor back EMF auto-tuning	0.0 to 30.0	3.2	-	Changeable only at stop	"AA-02" on page 544

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
AA-03	0xAA03	Target speed of rotation auto-tuning	30.0% to 100.0%	70.0	%	Changeable only at stop	"AA-03" on page 544
AA-04	0xAA04	Target speed 1 of inertia auto-tuning	0.0% to AA-05	40.0	%	Changeable only at stop	"AA-04" on page 545
AA-05	0xAA05	Target speed 2 of inertia auto-tuning	AA-04 to 100.0%	60.0	%	Changeable only at stop	"AA-05" on page 545
AA-06	0xAA06	Overcurrent prevention of mutual inductance saturation curve	0 to 1	1	-	Changeable only at stop	"AA-06" on page 545
AA-07	0xAA07	Auto-tuning items	Bit00: Speed loop parameter adaptation 0: Disabled 1: Enabled Bit01: Current loop parameter adaptation 0: Disabled 1: Enabled Bit02: Drive nonlinear auto-tuning 0: Disabled 1: Enabled Bit03: Inter-phase deviation coefficient auto-tuning 0: Disabled 1: Enabled Bit04: Auto-tuning of initial pole position of synchronous motor 0: Disabled 1: Enabled Bit05: Auto-tuning of D- and Q-axis inductance model of synchronous motor 0: Disabled 1: Enabled Bit06: System inertia auto-tuning 0: Disabled 1: Enabled Bit07: HFI pole position auto-tuning 0: Disabled 1: Enabled	117	-	Changeable only at stop	"AA-07" on page 545
AA-08	0xAA08	OFF3 stop mode	0: Quick stop 1: Stop at maximum capability	0	-	Changeable only at stop	"AA-08" on page 546
AA-09	0xAA09	Stop mode during running	0: OFF1 stop mode 1: OFF2 stop mode 2: OFF3 stop mode	1	-	Changeable only at stop	"AA-09" on page 546
AA-10	0xAA0A	Stop mode for torque control	0: Coast to stop forcibly 1: Switch to speed control mode and then stop 2: Maintain torque control mode until zero speed and then block	1	-	Changeable only at stop	"AA-10" on page 547

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
AA-12	0xAA0C	Proportional gain adjustment coefficient	0.1 to 2.0	1.0	-	Changeable at any time	"AA-12" on page 547
AA-13	0xAA0D	Integral gain adjustment coefficient	0.1 to 2.0	1.0	-	Changeable at any time	"AA-13" on page 547
AA-14	0xAA0E	Zero-speed threshold	0.1% to 200.0%	2.0	%	Changeable at any time	"AA-14" on page 547
AA-15	0xAA0F	Zero-speed stop delay	0.00s to 10.00s	0.10	s	Changeable only at stop	"AA-15" on page 547
AA-16	0xAA10	Reference source execution interval	0 to 20	4	-	Changeable only at stop	"AA-16" on page 548
AA-17	0xAA11	Trial current for speed tracking of synchronous motor	5.0% to 50.0%	10.0	%	Changeable only at stop	"AA-17" on page 548
AA-18	0xAA12	Minimum frequency for speed tracking of synchronous motor	0.0 Hz to 100.0 Hz	0.0	Hz	Changeable only at stop	"AA-18" on page 548
AA-19	0xAA13	Angle compensation for speed tracking of synchronous motor	0 to 360	0	-	Changeable only at stop	"AA-19" on page 548
AA-20	0xAA14	Parameter auto-tuning of synchronous motor upon startup	0 to 1	0	-	Changeable at any time	"AA-20" on page 548
AA-21	0xAA15	Current motor angle	0 to 65535	0	-	Unchangeable	"AA-21" on page 549
AA-22	0xAA16	Forward torque limit 1	0.0 to 400.0	150.0	-	Changeable at any time	"AA-22" on page 549
AA-23	0xAA17	Reverse torque limit 1	0.0 to 400.0	150.0	-	Changeable at any time	"AA-23" on page 549
AA-24	0xAA18	Source of forward torque limit 2	0: 400% Others: F connector	0	-	Changeable at any time	"AA-24" on page 549
AA-25	0xAA19	Source of reverse torque limit 2	0: –400% Others: F connector	0	-	Changeable at any time	"AA-25" on page 549

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
AA-26	0xAA1A	Ramp (FRG) selection bit0	0: 0 1: 1 2: Terminal function input 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"AA-26" on page 550
AA-27	0xAA1B	Ramp (FRG) selection bit1	Same as A4-26	0	-	Changeable at any time	"AA-27" on page 550
AA-30	0xAA1E	Motor protection	Bit00: Motor overload determination (reserved) Bit01: Motor overheat detection (reserved) Bit02: PG fault detection (reserved) Bit03: Current control error detection Bit04: Motor stall error detection Bit05: Locked-rotor detection Bit06: Synchronous motor demagnetization protection Bit07: Protection against locked-rotor in SVC speed open-loop control Bit08: Reserved Bit09: Parameter setting error	537	-	Changeable at any time	"AA-30" on page 550
AA-31	0xAA1F	Locked-rotor time	0.0s to 65.0s	2.0	s	Changeable at any time	"AA-31" on page 551
AA-32	0xAA20	Locked-rotor frequency	0.0% to 600.0%	6.0	%	Changeable at any time	"AA-32" on page 551
AA-33	0xAA21	Motor stall detection time	0.0s to 10.0s	0.5	s	Changeable at any time	"AA-33" on page 551
AA-34	0xAA22	Stall detection threshold	0.0% to +100.0%	30.0	%	Changeable at any time	"AA-34" on page 551
AA-35	0xAA23	Current control exception detection time	0.00s to 1.00s	0.05	s	Changeable at any time	"AA-35" on page 552
AA-36	0xAA24	Current control exception detection threshold	0.0% to 200.0%	25.0	%	Changeable at any time	"AA-36" on page 552

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
AA-37	0xAA25	Synchronous motor overcurrent threshold	0.0% to 500.0%	300.0	%	Changeable at any time	"AA-37" on page 552
AA-39	0xAA27	Speed deviation detection	0 to 1	1	-	Changeable at any time	"AA-39" on page 552
AA-40	0xAA28	Asynchronous motor FVC model switchover frequency	0% to 1000%	20	%	Changeable only at stop	"AA-40" on page 552
AA-41	0xAA29	Asynchronous motor FVC model switchover hysteresis frequency	10% to 50%	20	%	Changeable only at stop	"AA-41" on page 553
AA-42	0xAA2A	Asynchronous motor FVC observer filter time	5 ms to 100 ms	15	ms	Changeable only at stop	"AA-42" on page 553
AA-43	0xAA2B	Asynchronous motor FVC current model mode	0 to 1	0	-	Changeable only at stop	"AA-43" on page 553
AA-44	0xAA2C	Asynchronous motor FVC pre-excitation output observation angle mode	0 to 1	0	-	Changeable only at stop	"AA-44" on page 553
AA-45	0xAA2D	Asynchronous motor SVC model switchover frequency	10% to 20%	15	%	Changeable only at stop	"AA-45" on page 553
AA-46	0xAA2E	Asynchronous motor SVC observer filter time	5 ms to 50 ms	10	ms	Changeable at any time	"AA-46" on page 553
AA-47	0xAA2F	Asynchronous motor SVC observer gain 1	10% to 500%	100	%	Changeable at any time	"AA-47" on page 554
AA-48	0xAA30	Asynchronous motor SVC observer gain 2	10% to 100%	20	%	Changeable at any time	"AA-48" on page 554
AA-49	0xAA31	Asynchronous motor SVC observer mode	0 to 3	0	-	Changeable only at stop	"AA-49" on page 554
AA-50	0xAA32	Asynchronous motor SVC pre-excitation mode	0 to 1	0	-	Changeable only at stop	"AA-50" on page 554

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
AA-51	0xAA33	Asynchronous motor SVC speed tracking mode	0 to 1	0	-	Changeable only at stop	"AA-51" on page 554
AA-54	0xAA36	Synchronous motor 1 model control	Bit00: Low speed processing Bit01: Low speed processing 1 Bit02: Online auto-tuning of resistance Bit03: Online auto-tuning of back EMF Bit04: KS	5	-	Changeable at any time	"AA-54" on page 555
AA-55	0xAA37	Synchronous motor model K1	10 to 3000	200	-	Changeable at any time	"AA-55" on page 555
AA-56	0xAA38	Synchronous motor model K1Max	100 to 6000	3000	-	Changeable at any time	"AA-56" on page 555
AA-57	0xAA39	Synchronous motor model KsMin	0.0 to 4.0	0.3	-	Changeable at any time	"AA-57" on page 555
AA-58	0xAA3A	Synchronous motor model Kspeed	50 to 2000	400	-	Changeable at any time	"AA-58" on page 556
AA-59	0xAA3B	Synchronous motor frequency filter time constant	2 ms to 100 ms	10	ms	Changeable at any time	"AA-59" on page 556
AA-60	0xAA3C	Frequency upper limit of synchronous motor Rs online auto-tuning	1.0% to 20.0%	3.5	%	Changeable at any time	"AA-60" on page 556
AA-61	0xAA3D	Synchronous motor model Kr	0 to 50	10	-	Changeable at any time	"AA-61" on page 556
AA-62	0xAA3E	Synchronous motor model Kr1	0 to 50	5	-	Changeable at any time	"AA-62" on page 556
AA-63	0xAA3F	Synchronous motor low-speed D axis injection current	0% to 100%	20	%	Changeable at any time	"AA-63" on page 556
AA-64	0xAA40	Synchronous motor model LowFreqTime1	0 to 500	50	-	Changeable at any time	"AA-64" on page 557
AA-67	0xAA43	Frequency lower limit of back EMF online auto-tuning	10% to 100%	25	%	Changeable at any time	"AA-67" on page 557
AA-68	0xAA44	Synchronous motor model LowFreq	0.0% to 2.0%	0.3	%	Changeable at any time	"AA-68" on page 557
AA-69	0xAA45	Synchronous motor model LowFreqTime	0 to 100	10	-	Changeable at any time	"AA-69" on page 557
AA-70	0xAA46	Percentage of pole auto-tuning current	50% to 200%	100	%	Changeable at any time	"AA-70" on page 557

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
AA-71	0xAA47	Percentage of high frequency response current	0% to 100%	25	%	Changeable at any time	"AA-71" on page 558
AA-72	0xAA48	Percentage of HFI and SVC switching frequency	0% to 30%	10	%	Changeable at any time	"AA-72" on page 558
AA-73	0xAA49	Observer parameter	10 to 200	100	-	Changeable at any time	"AA-73" on page 558
AA-74	0xAA4A	Speed filter cut-off frequency	1 Hz to 200 Hz	10	Hz	Changeable at any time	"AA-74" on page 558
AA-75	0xAA4B	Carrier frequency during NS auto-tuning	2.00 Hz to 16.00 Hz	8.00	Hz	Changeable at any time	"AA-75" on page 558
AA-76	0xAA4C	Automatic calculation of NS auto-tuning voltage	0 to 1	1	-	Changeable at any time	"AA-76" on page 559
AA-77	0xAA4D	Percentage of NS auto-tuning voltage set manually	0% to 100%	10	%	Changeable at any time	"AA-77" on page 559
AA-78	0xAA4E	Duration of HFI stage 1	50 ms to 500 ms	150	ms	Changeable at any time	"AA-78" on page 559
AA-80	0xAA50	Speed loop command word	Bit00: Speed loop 0: Disabled 1: Enabled Bit01: Integration mode 0: Conventional integration 1: Position integration Bit02: Acceleration torque 0: Disabled 1: Enabled Bit03–Bit04: Acceleration source 0: Function transfer torque 1: Automatic calculation 2: Function transfer acceleration Bit05: Anti-load disturbance 0: Disabled 1: Enabled	11	-	Changeable at any time	"AA-80" on page 559
AA-81	0xAA51	Locked-rotor fast integral cancel coefficient	0.0% to +100.0%	0.0	%	Changeable at any time	"AA-81" on page 560
AA-82	0xAA52	Integral torque	–100% to +100.0%	0.0	%	Changeable at any time	"AA-82" on page 560
AA-83	0xAA53	Speed controller frequency window size	0.00 Hz to 10.00 Hz	0.00	Hz	Changeable only at stop	"AA-83" on page 560

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
AA-84	0xAA54	Current filter time for torque reference	0.0 ms to 100.0 ms	0.0	ms	Changeable only at stop	"AA-84" on page 561
AA-85	0xAA55	Acceleration torque	0: Inactive 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"AA-85" on page 561
AA-87	0xAA57	Reference model bandwidth	0.00 Hz to 300.00 Hz	0.00	Hz	Changeable at any time	"AA-87" on page 561
AA-88	0xAA58	Torque feedforward coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"AA-88" on page 561
AA-89	0xAA59	Vector control reference frequency filter time	0.0 ms to 100.0 ms	0.0	ms	Changeable only at stop	"AA-89" on page 561
AA-90	0xAA5A	Vector control feedback frequency filter time	0.0 ms to 100.0 ms	0.0	ms	Changeable only at stop	"AA-90" on page 562
AA-91	0xAA5B	Load observation bandwidth	0.00 Hz to 300.00 Hz	0.00	Hz	Changeable at any time	"AA-91" on page 562
AA-92	0xAA5C	Load observation coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"AA-92" on page 562
AA-93	0xAA5D	Pseudo integral coefficient	0.000 to 10.000	1.000	-	Changeable at any time	"AA-93" on page 562
AA-94	0xAA5E	Torque coefficient enable	0: Disabled 1: Enabled	0	-	Changeable at any time	"AA-94" on page 562
AA-96	0xAA60	Center frequency of notch filter 1	0.0 to 4000.0	4000.0	-	Changeable at any time	"AA-96" on page 563
AA-97	0xAA61	Center frequency of notch filter 2	0.0 to 4000.0	4000.0	-	Changeable at any time	"AA-97" on page 563
AA-98	0xAA62	Integral setting control word	0: Disabled 1: Enabled Others: B connector	0	-	Changeable at any time	"AA-98" on page 563

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
AA-99	0xAA63	Integral reference source	0: Digital setting 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"AA-99" on page 563
AB-00	0xAB00	Externally transferred acceleration	0: Inactive 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"AB-00" on page 564
AB-03	0xAB03	Overturning torque limiting coefficient	0.0% to 400.0%	100.0	%	Changeable at any time	"AB-03" on page 564
AB-04	0xAB04	Motoring power limiting coefficient	0.0% to 400.0%	400.0	%	Changeable at any time	"AB-04" on page 564
AB-05	0xAB05	Generating power limiting coefficient	0.0% to 400.0%	400.0	%	Changeable at any time	"AB-05" on page 565
AB-06	0xAB06	Overspeed limiting enable	0 to 1	1	-	Changeable at any time	"AB-06" on page 565
AB-07	0xAB07	Sine wave frequency of bandwidth test	0 Hz to 1000 Hz	0	Hz	Changeable at any time	"AB-07" on page 565
AB-08	0xAB08	Sine wave amplitude of bandwidth test	0% to 100%	0	%	Changeable at any time	"AB-08" on page 565
AB-09	0xAB09	Bandwidth test enable	0 to 4	0	-	Changeable at any time	"AB-09" on page 565
AB-11	0xAB0B	Speed loop parameter calculation mode	0: New solution 1: Compatible solution	1	-	Changeable only at stop	"AB-11" on page 566
AB-12	0xAB0C	Speed loop proportional gain in FVC mode	0.00 Hz to 100.00 Hz	8.00	Hz	Changeable at any time	"AB-12" on page 566
AB-13	0xAB0D	Speed loop integral time in FVC mode	0.000s to 20.000s	0.080	s	Changeable at any time	"AB-13" on page 566

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
AB-14	0xAB0E	Speed loop proportional gain in SVC mode	0.00 Hz to 100.00 Hz	5.00	Hz	Changeable at any time	"AB-14" on page 566
AB-15	0xAB0F	Speed loop integral time in SVC mode	0.000s to 20.000s	0.127	s	Changeable at any time	"AB-15" on page 566
AB-16	0xAB10	Low frequency proportional correction coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"AB-16" on page 567
AB-17	0xAB11	Low frequency integral correction coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"AB-17" on page 567
AB-18	0xAB12	Speed loop adaption factor	0.000 to 10.000	0.200	-	Changeable at any time	"AB-18" on page 567
AB-19	0xAB13	Speed loop adaption switchover lower limit	0.000 to 10.000	0.400	-	Changeable at any time	"AB-19" on page 567
AB-20	0xAB14	Speed loop adaption switchover upper limit	0.000 to 10.000	1.000	-	Changeable at any time	"AB-20" on page 567
AB-21	0xAB15	Speed loop adaption correction upper limit	0.0% to 1000.0%	100.0	%	Changeable at any time	"AB-21" on page 568
AB-22	0xAB16	Speed loop adaption correction lower limit	0.0% to 1000.0%	100.0	%	Changeable at any time	"AB-22" on page 568
AB-23	0xAB17	Flux adaptation enable	0 to 1	0	-	Changeable at any time	"AB-23" on page 568
AB-24	0xAB18	Overspeed controller correction coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"AB-24" on page 568
AB-25	0xAB19	VDC control command word	Bit00: VdcMin 0: Disabled 1: Enabled Bit01: VdcMax 0: Disabled 1: Enabled Bit02: Automatic calculation of VDC trigger voltage 0: Disabled 1: Enabled Bit03: VDC control integral action 0: Disabled 1: Enabled	0	-	Changeable at any time	"AB-25" on page 568

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
AB-26	0xAB1A	Bus capacitance ratio	50.0% to 1000.0%	100.0	%	Changeable at any time	"AB-26" on page 569
AB-27	0xAB1B	Undervoltage suppression exit hysteresis frequency	0.00 Hz to 10.00 Hz	3.00	Hz	Changeable at any time	"AB-27" on page 569
AB-28	0xAB1C	Minimum VDC failure speed threshold	0.00 Hz to 20.00 Hz	2.00	Hz	Changeable at any time	"AB-28" on page 569
AB-29	0xAB1D	Dynamic adjustment coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"AB-29" on page 569
AB-30	0xAB1E	Minimum VDC activation voltage	320.0 V to 540.0 V	430.0	V	Changeable at any time	"AB-30" on page 570
AB-31	0xAB1F	Maximum VDC activation voltage	650.0 V to 800.0 V	770.0	V	Changeable at any time	"AB-31" on page 570

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
AB-32	0xAB20	Flux linkage control command word	Bit00: Output voltage limit calculation filtering mode 0: Symmetric filtering 1: Asymmetric filtering Bit01: Asynchronous motor inverse proportion curve calculation 0: The inverse proportional synchronization frequency decreases. 1: The inverse proportional speed decreases. Bit02: Flux linkage feedforward calculation by using inverse proportional speed 0: Disabled 1: Enabled Bit03: Reserved Bit04: Reserved Bit05: Field weakening adjustment 0: Disabled 1: Enabled Bit06: Flux linkage derivative feedforward 0: Disabled 1: Enabled Bit07: Energy conservation control 0: Disabled 1: Enabled Bit08: Asynchronous motor flux closed loop 0: Disabled 1: Enabled Bit09: Reserved Bit10: Reserved Bit11: Asynchronous motor pre-excitation mode 0: Pre-excitation based on time 1: Pre-excitation based on current Bit12: Asynchronous motor pre-excitation current 0: Reference current 1: Maximum current allowed by the drive	2357	-	Changeable at any time	"AB-32" on page 570
AB-33	0xAB21	Output voltage upper limit margin for field weakening adjustment	1% to 50%	5	%	Changeable at any time	"AB-33" on page 572
AB-34	0xAB22	Output voltage upper limit margin for auto adjustment of field weakening	1% to 20%	3	%	Changeable at any time	"AB-34" on page 572
AB-35	0xAB23	Filter time for calculating maximum output voltage	0 ms to 3000 ms	30	ms	Changeable at any time	"AB-35" on page 572

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
AB-36	0xAB24	Rated flux adjustment coefficient for calculation	0.5 to 2.0	1.0	-	Changeable at any time	"AB-36" on page 572
AB-37	0xAB25	Field weakening frequency adjustment coefficient for calculation	0.8 to 1.2	1.0	-	Changeable at any time	"AB-37" on page 573
AB-38	0xAB26	Slip filter time for calculating field weakening frequency	0 ms to 3000 ms	62	ms	Changeable at any time	"AB-38" on page 573
AB-39	0xAB27	Feedback speed filtering	0 ms to 8000 ms	50	ms	Changeable at any time	"AB-39" on page 573
AB-40	0xAB28	Flux linkage rising filter time	0 ms to 8000 ms	20	ms	Changeable at any time	"AB-40" on page 573
AB-42	0xAB2A	Feedback voltage filter time	0 ms to 3000 ms	5	ms	Changeable at any time	"AB-42" on page 574
AB-43	0xAB2B	Maximum demagnetization current of synchronous motor	0% to 500%	300	%	Changeable at any time	"AB-43" on page 574
AB-44	0xAB2C	Voltage outer loop lower limit coefficient	0 to 500	50	-	Changeable at any time	"AB-44" on page 574
AB-45	0xAB2D	Flux linkage derivative feedforward coefficient	0.0 to 1.5	1.0	-	Changeable at any time	"AB-45" on page 574
AB-46	0xAB2E	Flux linkage derivative feedforward filter time	0 ms to 3000 ms	6	ms	Changeable at any time	"AB-46" on page 574
AB-47	0xAB2F	Torque current rising filter time under energy conservation control	0 ms to 3000 ms	50	ms	Changeable at any time	"AB-47" on page 575
AB-48	0xAB30	Torque current falling filter time under energy conservation control	0 ms to 3000 ms	100	ms	Changeable at any time	"AB-48" on page 575

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
AB-49	0xAB31	Flux linkage lower limit coefficient under energy conservation control	0.00 to 0.50	0.10	-	Changeable at any time	"AB-49" on page 575
AB-51	0xAB33	Pre-excitation current	1% to 200%	100	%	Changeable at any time	"AB-51" on page 575
AB-52	0xAB34	Pre-excitation time	1 ms to 30000 ms	1000	ms	Changeable at any time	"AB-52" on page 576
AB-53	0xAB35	Flux linkage closed-loop bandwidth frequency	0.0 Hz to 100.0 Hz	2.0	Hz	Changeable at any time	"AB-53" on page 576
AB-54	0xAB36	Feedback flux linkage filter time coefficient	0 to 200	4	-	Changeable at any time	"AB-54" on page 576
AB-55	0xAB37	Static output flux linkage filter time	0 ms to 5000 ms	10	ms	Changeable at any time	"AB-55" on page 576
AB-56	0xAB38	Current loop mode	0: ImCsr2 mode 1: Complex vector mode 2: 880 mode 3: No field weakening	1	-	Changeable only at stop	"AB-56" on page 576
AB-57	0xAB39	PI regulator proportional gain adaptation with load	0: Disabled 1: Enabled	0	-	Changeable only at stop	"AB-57" on page 577
AB-58	0xAB3A	Current loop damping	0.2 to 5.0	0.8	-	Changeable at any time	"AB-58" on page 577
AB-59	0xAB3B	Low-speed current loop Kp adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"AB-59" on page 577
AB-60	0xAB3C	High-speed current loop Kp adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"AB-60" on page 577
AB-61	0xAB3D	Low-speed current loop Ki adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"AB-61" on page 578
AB-62	0xAB3E	High-speed current loop Ki adjustment	0.1 to 10.0	2.0	-	Changeable at any time	"AB-62" on page 578
AB-63	0xAB3F	D-axis current loop complex vector adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"AB-63" on page 578
AB-64	0xAB40	Q-axis current loop complex vector adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"AB-64" on page 578

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
AB-65	0xAB41	Complex vector hysteresis frequency lower limit as a percentage of rated frequency	0% to AB-66	0	%	Changeable at any time	"AB-65" on page 578
AB-66	0xAB42	Complex vector hysteresis frequency upper limit as a percentage of rated frequency	AB-65 to 150%	0	%	Changeable at any time	"AB-66" on page 579
AB-67	0xAB43	ImCsr2 hysteresis switchover voltage upper limit as a percentage of saturation voltage	AB-68 to 95%	89	%	Changeable at any time	"AB-67" on page 579
AB-68	0xAB44	ImCsr2 hysteresis switchover voltage lower limit as a percentage of saturation voltage	60% to AB-67	79	%	Changeable at any time	"AB-68" on page 579
AB-69	0xAB45	ImCsr2 hysteresis switchover frequency hysteresis range as a percentage of rated frequency	1% to 30%	10	%	Changeable at any time	"AB-69" on page 579
AB-70	0xAB46	ImCsr2 hysteresis switchover frequency lower limit (below which the hysteresis condition does not take effect) as a percentage of the rated frequency	40% to 80%	60	%	Changeable at any time	"AB-70" on page 579
AB-71	0xAB47	ImCsr2 current loop Kss adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"AB-71" on page 580
AB-72	0xAB48	Proportional gain adjustment coefficient corresponding to the maximum torque when proportional gain is adjusted with load	0.1 to 1.0	0.5	-	Changeable at any time	"AB-72" on page 580

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
AB-73	0xAB49	Torque upper limit setpoint as a percentage of rated torque when proportional gain is adjusted with load	AB-74 to 300%	200	%	Changeable at any time	"AB-73" on page 580
AB-74	0xAB4A	Torque lower limit setpoint as a percentage of rated torque when proportional gain is adjusted with load	10% to AB-73	100	%	Changeable at any time	"AB-74" on page 580
AB-75	0xAB4B	Derivative feedforward adjustment	0.0 to 1.0	0.0	-	Changeable at any time	"AB-75" on page 581
AB-76	0xAB4C	Decoupling control start frequency as a percentage of rated frequency	20% to 150%	40	%	Changeable at any time	"AB-76" on page 581
AB-77	0xAB4D	Decoupling control filter time adjustment coefficient	0.1 to 3.0	1.0	-	Changeable at any time	"AB-77" on page 581
AB-78	0xAB4E	Decoupling control output adjustment coefficient	0.0 to 1.0	1.0	-	Changeable at any time	"AB-78" on page 581
AB-79	0xAB4F	CPC feedforward enable	0: Disabled 1: Enabled	0	-	Changeable at any time	"AB-79" on page 581
AB-80	0xAB50	Current loop auxiliary command word	Bit00: Complex vector angle limiting 0: Disabled 1: Enabled Bit01: Voltage angle limiting 0: Program internal limiting 1: Parameter setting Bit02: 0 by default 0: No lower limit on the excitation current is imposed during the dynamic process. 1: A lower limit on the excitation current is imposed during the dynamic process in ImCsr2 mode. Bit03–Bit15: Reserved (0 by default)	0	-	Changeable at any time	"AB-80" on page 582
AB-81	0xAB51	Voltage angle upper limit	90° to 180°	150	°	Changeable at any time	"AB-81" on page 582
AB-82	0xAB52	Voltage angle lower limit	0° to 90°	30	°	Changeable at any time	"AB-82" on page 582

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
AB-83	0xAB53	Asynchronous motor D axis integral limit	0.500 to 1.000	0.707	-	Changeable at any time	"AB-83" on page 582
AB-84	0xAB54	Current loop carrier frequency upper limit	5.0 to 16.0	8.0	-	Changeable at any time	"AB-84" on page 583
AB-85	0xAB55	Droop enable	0 to 1	0	-	Changeable only at stop	"AB-85" on page 583
AB-86	0xAB56	Droop source	0: Line current 1: Torque reference 2: Speed adjustment output 3: Speed adjustment integral component	1	-	Changeable only at stop	"AB-86" on page 583
AB-87	0xAB57	Frequency reference droop coefficient	0.0% to 50.0%	0.0	%	Changeable at any time	"AB-87" on page 583
AB-88	0xAB58	FVC-SVC switchover mode	0: No switchover 1: Active switchover 2: Passive switchover (The AC drive switches to SVC mode upon detection of encoder wire breakage, and it switches back to FVC mode when the encoder recovers during stop and does not switch back to FVC mode when the encoder recovers during running.) 3: Passive switchover (The AC drive switches to SVC mode upon detection of encoder wire breakage, and it switches back to FVC mode when the encoder recovers during running or stop.)	0	-	Changeable only at stop	"AB-88" on page 583
AB-89	0xAB59	FVC-SVC switchover frequency	10% to 500%	50	%	Changeable only at stop	"AB-89" on page 584
AB-90	0xAB5A	FVC-SVC switchover hysteresis	10% to 100%	10	%	Changeable only at stop	"AB-90" on page 584
AC-00	0xAC00	AI1 measured voltage 1	–10 V to +10.000 V	2.000	V	Changeable only at stop	"AC-00" on page 584
AC-01	0xAC01	AI1 displayed voltage 1	–10 V to +10.000 V	2.000	V	Changeable only at stop	"AC-01" on page 584
AC-02	0xAC02	AI1 measured voltage 2	–10 V to +10.000 V	8.000	V	Changeable only at stop	"AC-02" on page 585
AC-03	0xAC03	AI1 displayed voltage 2	–10 V to +10.000 V	8.000	V	Changeable only at stop	"AC-03" on page 585
AC-04	0xAC04	AI2 measured voltage 1	–10 V to +10.000 V	2.000	V	Changeable only at stop	"AC-04" on page 585
AC-05	0xAC05	AI2 displayed voltage 1	–10 V to +10.000 V	2.000	V	Changeable only at stop	"AC-05" on page 585

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
AC-06	0xAC06	AI2 measured voltage 2	–10 V to +10.000 V	8.000	V	Changeable only at stop	"AC-06" on page 585
AC-07	0xAC07	AI2 displayed voltage 2	–10 V to +10.000 V	8.000	V	Changeable only at stop	"AC-07" on page 586
AC-08	0xAC08	AI3 measured voltage 1	–10 V to +10.000 V	2.000	V	Changeable only at stop	"AC-08" on page 586
AC-09	0xAC09	AI3 displayed voltage 1	–10 V to +10.000 V	2.000	V	Changeable only at stop	"AC-09" on page 586
AC-10	0xAC0A	AI3 measured voltage 2	–10 V to +10.000 V	8.000	V	Changeable only at stop	"AC-10" on page 586
AC-11	0xAC0B	AI3 displayed voltage 2	–10 V to +10.000 V	8.000	V	Changeable only at stop	"AC-11" on page 586
AC-12	0xAC0C	AO1 target voltage 1	–10 V to +10.000 V	2.000	V	Changeable only at stop	"AC-12" on page 586
AC-13	0xAC0D	AO1 measured voltage 1	–10 V to +10.000 V	2.000	V	Changeable only at stop	"AC-13" on page 587
AC-14	0xAC0E	AO1 target voltage 2	–10 V to +10.000 V	8.000	V	Changeable only at stop	"AC-14" on page 587
AC-15	0xAC0F	AO1 measured voltage 2	–10 V to +10.000 V	8.000	V	Changeable only at stop	"AC-15" on page 587
AC-16	0xAC10	AO2 target voltage 1	–10 V to +10.000 V	2.000	V	Changeable only at stop	"AC-16" on page 587
AC-17	0xAC11	AO2 measured voltage 1	–10 V to +10.000 V	2.000	V	Changeable only at stop	"AC-17" on page 587
AC-18	0xAC12	AO2 target voltage 2	–10 V to +10.000 V	8.000	V	Changeable only at stop	"AC-18" on page 588
AC-19	0xAC13	AO2 measured voltage 2	–10 V to +10.000 V	8.000	V	Changeable only at stop	"AC-19" on page 588
AF-00	0xAF00	RPDO1-SubIndex0-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-00" on page 588
AF-01	0xAF01	RPDO1-SubIndex0-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-01" on page 588
AF-02	0xAF02	RPDO1-SubIndex1-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-02" on page 588
AF-03	0xAF03	RPDO1-SubIndex1-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-03" on page 589
AF-04	0xAF04	RPDO1-SubIndex2-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-04" on page 589
AF-05	0xAF05	RPDO1-SubIndex2-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-05" on page 589
AF-06	0xAF06	RPDO1-SubIndex3-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-06" on page 589

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
AF-07	0xAF07	RPDO1-SubIndex3-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-07" on page 589
AF-08	0xAF08	RPDO2-SubIndex0-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-08" on page 590
AF-09	0xAF09	RPDO2-SubIndex0-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-09" on page 590
AF-10	0xAF0A	RPDO2-SubIndex1-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-10" on page 590
AF-11	0xAF0B	RPDO2-SubIndex1-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-11" on page 590
AF-12	0xAF0C	RPDO2-SubIndex2-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-12" on page 590
AF-13	0xAF0D	RPDO2-SubIndex2-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-13" on page 591
AF-14	0xAF0E	RPDO2-SubIndex3-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-14" on page 591
AF-15	0xAF0F	RPDO2-SubIndex3-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-15" on page 591
AF-16	0xAF10	RPDO3-SubIndex0-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-16" on page 591
AF-17	0xAF11	RPDO3-SubIndex0-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-17" on page 591
AF-18	0xAF12	RPDO3-SubIndex1-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-18" on page 592
AF-19	0xAF13	RPDO3-SubIndex1-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-19" on page 592
AF-20	0xAF14	RPDO3-SubIndex2-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-20" on page 592
AF-21	0xAF15	RPDO3-SubIndex2-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-21" on page 592
AF-22	0xAF16	RPDO3-SubIndex3-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-22" on page 592
AF-23	0xAF17	RPDO3-SubIndex3-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-23" on page 593
AF-24	0xAF18	RPDO4-SubIndex0-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-24" on page 593
AF-25	0xAF19	RPDO4-SubIndex0-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-25" on page 593
AF-26	0xAF1A	RPDO4-SubIndex1-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-26" on page 593
AF-27	0xAF1B	RPDO4-SubIndex1-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-27" on page 593

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
AF-28	0xAF1C	RPDO4-SubIndex2-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-28" on page 593
AF-29	0xAF1D	RPDO4-SubIndex2-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-29" on page 594
AF-30	0xAF1E	RPDO4-SubIndex3-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-30" on page 594
AF-31	0xAF1F	RPDO4-SubIndex3-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-31" on page 594
AF-32	0xAF20	TPDO1-SubIndexO-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-32" on page 594
AF-33	0xAF21	TPDO1-SubIndexO-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-33" on page 594
AF-34	0xAF22	TPDO1-SubIndex1-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-34" on page 595
AF-35	0xAF23	TPDO1-SubIndex1-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-35" on page 595
AF-36	0xAF24	TPDO1-SubIndex2-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-36" on page 595
AF-37	0xAF25	TPDO1-SubIndex2-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-37" on page 595
AF-38	0xAF26	TPDO1-SubIndex3-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-38" on page 595
AF-39	0xAF27	TPDO1-SubIndex3-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-39" on page 596
AF-40	0xAF28	TPDO2-SubIndex0-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-40" on page 596
AF-41	0xAF29	TPDO2-SubIndex0-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-41" on page 596
AF-42	0xAF2A	TPDO2-SubIndex1-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-42" on page 596
AF-43	0xAF2B	TPDO2-SubIndex1-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-43" on page 596
AF-44	0xAF2C	TPDO2-SubIndex2-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-44" on page 597
AF-45	0xAF2D	TPDO2-SubIndex2-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-45" on page 597
AF-46	0xAF2E	TPDO2-SubIndex3-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-46" on page 597
AF-47	0xAF2F	TPDO2-SubIndex3-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-47" on page 597
AF-48	0xAF30	TPDO3-SubIndex0-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-48" on page 597

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
AF-49	0xAF31	TPDO3-SubIndex0-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-49" on page 598
AF-50	0xAF32	TPDO3-SubIndex1-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-50" on page 598
AF-51	0xAF33	TPDO3-SubIndex1-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-51" on page 598
AF-52	0xAF34	TPDO3-SubIndex2-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-52" on page 598
AF-53	0xAF35	TPDO3-SubIndex2-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-53" on page 598
AF-54	0xAF36	TPDO3-SubIndex3-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-54" on page 598
AF-55	0xAF37	TPDO3-SubIndex3-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-55" on page 599
AF-56	0xAF38	TPDO4-SubIndex0-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-56" on page 599
AF-57	0xAF39	TPDO4-SubIndex0-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-57" on page 599
AF-58	0xAF3A	TPDO4-SubIndex1-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-58" on page 599
AF-59	0xAF3B	TPDO4-SubIndex1-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-59" on page 599
AF-60	0xAF3C	TPDO4-SubIndex2-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-60" on page 600
AF-61	0xAF3D	TPDO4-SubIndex2-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-61" on page 600
AF-62	0xAF3E	TPDO4-SubIndex3-H	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-62" on page 600
AF-63	0xAF3F	TPDO4-SubIndex3-L	0x0 to 0xFFFF	0x0	-	Changeable at any time	"AF-63" on page 600
AF-66	0xAF42	Number of valid RPDOs	0x0 to 0xFFFF	0x0	-	Unchangeable	"AF-66" on page 600
AF-67	0xAF43	Number of valid TPDOs	0x0 to 0xFFFF	0x0	-	Unchangeable	"AF-67" on page 601
B6-00	0xB600	Startup mode	0: Direct start 1: Flying start 2: Pre-excitation start (AC asynchronous motor) 3: SVC quick start	0	-	Changeable at any time	"B6-00" on page 601

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B6-01	0xB601	Speed tracking mode	0: From the stop frequency 1: From the power frequency 2: From the maximum frequency 3: Reserved 4: Magnetic field directional speed tracking (MD290)	0	-	Changeable at any time	"B6-01" on page 601
B6-02	0xB602	Speed of speed tracking	1 to 100	20	-	Changeable at any time	"B6-02" on page 601
B6-03	0xB603	Startup frequency	0.00 Hz to 10.00 Hz	0.00	Hz	Changeable at any time	"B6-03" on page 602
B6-04	0xB604	Startup frequency hold time	0.0s to 100.0s	0.0	s	Changeable only at stop	"B6-04" on page 602
B6-05	0xB605	DC braking current at startup	0% to 100%	50	%	Changeable only at stop	"B6-05" on page 602
B6-06	0xB606	DC braking time at startup	0.0s to 100.0s	0.0	s	Changeable only at stop	"B6-06" on page 602
B6-07	0xB607	Stop mode	0: Decelerate to stop 1: Coast to stop 2: Stop at maximum capability	0	-	Changeable at any time	"B6-07" on page 603
B6-08	0xB608	Start frequency of DC braking at stop	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	"B6-08" on page 603
B6-09	0xB609	DC braking delay at stop	0.0s to 100.0s	0.0	s	Changeable at any time	"B6-09" on page 603
B6-10	0xB60A	DC braking current at stop	0% to 100%	50	%	Changeable at any time	"B6-10" on page 603
B6-11	0xB60B	DC braking time at stop	0.0s to 100.0s	0.0	s	Changeable at any time	"B6-11" on page 603
B6-12	0xB60C	Speed tracking sweep current limit closed loop Kp	0 to 1000	500	-	Changeable at any time	"B6-12" on page 604
B6-13	0xB60D	Speed tracking sweep current limit closed loop Ki	0 to 1000	800	-	Changeable at any time	"B6-13" on page 604
B6-14	0xB60E	Speed tracking current	30% to 200%	80	%	Changeable only at stop	"B6-14" on page 604
B6-15	0xB60F	Current loop multiple	10% to 600%	100	%	Changeable at any time	"B6-15" on page 604
B6-16	0xB610	Demagnetization time (valid for asynchronous motors)	0.00s to 5.00s	0.50	s	Changeable at any time	"B6-16" on page 604
B6-17	0xB611	Overexcitation enable	0: Disabled 2: Enabled during deceleration 3: Enabled always	0	-	Changeable at any time	"B6-17" on page 605

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B6-18	0xB612	Overexcitation suppression current	0% to 150%	100	%	Changeable at any time	" B6-18" on page 605
B6-19	0xB613	Overexcitation gain	0.01 to 2.50	1.25	-	Changeable at any time	" B6-19" on page 605
B6-25	0xB619	Skip frequency 1	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	" B6-25" on page 605
B6-26	0xB61A	Skip frequency 2	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	" B6-26" on page 605
B6-27	0xB61B	Skip frequency 3	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	" B6-27" on page 606
B6-28	0xB61C	Skip frequency 4	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	" B6-28" on page 606
B6-29	0xB61D	Skip frequency band	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	" B6-29" on page 606
B6-30	0xB61E	Source of frequency upper limit	0: F0-12 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication Others: F connector	0	-	Changeable only at stop	" B6-30" on page 606
B6-31	0xB61F	Frequency upper limit	B6-33 to F0-10	50.00	Hz	Changeable at any time	" B6-31" on page 607
B6-32	0xB620	Frequency upper limit offset	0.00 Hz to F0-10 (maximum frequency)	0.00	Hz	Changeable at any time	" B6-32" on page 607
B6-33	0xB621	Frequency lower limit	0.00 Hz to B6-31	0.00	Hz	Changeable at any time	" B6-33" on page 607
B6-34	0xB622	Speed/Torque control mode	0: Speed control 1: Torque control	0	-	Changeable at any time	" B6-34" on page 607
B6-35	0xB623	Motor overload protection	0: Disabled 1: Enabled	1	-	Changeable at any time	" B6-35" on page 607
B6-36	0xB624	Motor overload protection gain	0.20 to 10.00	1.00	-	Changeable at any time	" B6-36" on page 608
B6-37	0xB625	Motor overload pre-warning coefficient	50% to 100%	80	%	Changeable at any time	" B6-37" on page 608
B6-38	0xB626	Overvoltage stall suppression gain	1 to 100	30	-	Changeable at any time	" B6-38" on page 608
B6-39	0xB627	Overvoltage stall protection voltage	330.0 V to 800.0 V	770.0	V	Changeable at any time	" B6-39" on page 608

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B6-40	0xB628	Input phase loss/ Contactor pickup protection	Ones: Input phase loss protection 0: Disabled 1: Protection enabled when both software and hardware input phase loss conditions are met 2: Protection enabled when software input phase loss conditions are met 3: Protection enabled when hardware input phase loss conditions are met Tens: Contactor pickup protection 0: Disabled 1: Enabled	11	-	Changeable at any time	"B6-40" on page 608
B6-41	0xB629	Output phase loss protection	Ones: Output phase loss protection upon power-on 0: Disabled 1: Enabled Tens: Output phase loss protection before running 0: Disabled 1: Enabled	1	-	Changeable at any time	"B6-41" on page 609
B6-42	0xB62A	Power dip ride-through	0: Disabled 1: Decelerate 2: Decelerate to stop 3: Suppress voltage dip	0	-	Changeable only at stop	"B6-42" on page 609
B6-43	0xB62B	Voltage threshold for disabling power dip ride-through	80% to 100%	85	%	Changeable only at stop	"B6-43" on page 609
B6-44	0xB62C	Delay of voltage recovery from power dip	0.0s to 100.0s	0.5	s	Changeable only at stop	"B6-44" on page 610
B6-45	0xB62D	Voltage threshold for enabling power dip ride-through	60% to 100%	80	%	Changeable only at stop	"B6-45" on page 610
B6-46	0xB62E	Protection upon load loss	0: Disabled 1: Enabled	0	-	Changeable at any time	"B6-46" on page 610
B6-47	0xB62F	Load loss detection level	0.0% to +100.0%	10.0	%	Changeable at any time	"B6-47" on page 610
B6-48	0xB630	Load loss detection time	0.0s to 60.0s	1.0	s	Changeable at any time	"B6-48" on page 610
B6-49	0xB631	Overspeed detection level	0.0% to 50.0%	20.0	%	Changeable at any time	"B6-49" on page 611
B6-50	0xB632	Overspeed detection time	0.0s to 60.0s	1.0	s	Changeable at any time	"B6-50" on page 611
B6-51	0xB633	Detection level of excessive speed deviation	0.0% to 50.0%	20.0	%	Changeable at any time	"B6-51" on page 611

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B6-52	0xB634	Detection time of excessive speed deviation	0.0s to 60.0s	5.0	s	Changeable at any time	"B6-52" on page 611
B6-53	0xB635	Power dip ride-through gain Kp	1 to 100	40	-	Changeable at any time	"B6-53" on page 611
B6-54	0xB636	Power dip ride-through integral coefficient Ki	1 to 100	30	-	Changeable at any time	"B6-54" on page 611
B6-55	0xB637	Deceleration time of power dip ride-through	0.0s to 300.0s	20.0	s	Changeable at any time	"B6-55" on page 612
B6-56	0xB638	Voltage dip suppression time	0.1s to 600.0s	0.5	s	Changeable at any time	"B6-56" on page 612
B7-00	0xB700	Number of parallel motors	1 to 200	1	-	Changeable only at stop	"B7-00" on page 612

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B7-01	0xB701	Motor information command word	Bit00: Mutual inductance curve 0: Disabled 1: Enabled Bit01: D- and Q-axis inductance curve 0: Disabled 1: Enabled Bit02: Rotor resistance online auto-tuning 0: Disabled 1: Enabled Bit03: Rotor resistance online auto-tuning method 0: Amplitude 1: Phase Bit04: Motor thermal model 0: Disabled 1: Enabled Bit05: Temperature source of motor thermal model 0: Estimated temperature 1: Temperature detected by sensor Bit06: Torque coefficient calculation of asynchronous motor 0: Torque formula 1: Current distribution Bit07: Torque coefficient calculation of synchronous motor 0: Torque formula 1: Torque matching the rated torque Bit08: Zero speed friction torque calculation 0: Torque linearly decreasing to zero 1: Torque to maintain minimum speed Bit09: Calculation of model parameters based on nameplate parameters 0: Disabled 1: Enabled Bit10: Confirmation of calculating model parameters based on nameplate parameters 0: Default 1: Confirm	0x3	-	Changeable only at stop	"B7-01" on page 612
B7-02	0xB702	Number of motor pole pairs	0 to 64	0	-	Changeable only at stop	"B7-02" on page 613
B7-03	0xB703	Motor power factor	0.600 to 1.000	0.860	-	Changeable only at stop	"B7-03" on page 614
B7-05	0xB705	Expansion card	1: Expansion card 1 2: Expansion card 2	1	-	Changeable only at stop	"B7-05" on page 614
B7-06	0xB706	ABZ encoder speed measurement mode at low speed	0: Maintain 1: Attenuate 2: Optimized solution	2	-	Changeable only at stop	"B7-06" on page 614

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B7-07	0xB707	Encoder speed measurement filter time constant	0.000s to 10.000s	0.004	s	Changeable at any time	"B7-07" on page 614
B7-08	0xB708	Encoder wire breakage software detection coefficient	0.000 to 8.000	1.000	-	Changeable at any time	"B7-08" on page 614
B7-09	0xB709	Encoder control word	Bit00: Speed measurement 0: Disabled 1: Enabled Bit01: Software detection of wire breakage 0: Disabled 1: Enabled Bit02: Glitch removal 0: Disabled 1: Enabled Bit03: ABZ encoder speed measurement mode 0: Quadruplicated frequency 1: Single pulse	0	-	Changeable only at stop	"B7-09" on page 615
B7-10	0xB70A	Speed measurement exception count threshold	1 to 100	10	-	Changeable only at stop	"B7-10" on page 615
B7-11	0xB70B	Motor gear ratio (numerator)	1 to 65535	1	-	Changeable only at stop	"B7-11" on page 615
B7-12	0xB70C	Motor gear ratio (denominator)	1 to 65535	1	-	Changeable only at stop	"B7-12" on page 615
B7-13	0xB70D	External input source of encoder	0: 0 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable only at stop	"B7-13" on page 616
B7-15	0xB70F	Stator leakage inductance	0.000 mH to 65.535 mH	6.540	mH	Changeable only at stop	"B7-15" on page 616
B7-16	0xB710	Electromechanical time constant	1 ms to 65535 ms	100	ms	Unchangeable	"B7-16" on page 616
B7-17	0xB711	Inertia ratio	0.0% to 6553.5%	120.0	%	Changeable only at stop	"B7-17" on page 616
B7-18	0xB712	Friction torque	0.0% to 6553.5%	2.0	%	Changeable only at stop	"B7-18" on page 617

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B7-19	0xB713	Excitation current coefficient 1 of mutual inductance curve (rated)	5.0% to 100.0%	50.0	%	Changeable only at stop	"B7-19" on page 617
B7-20	0xB714	Excitation current coefficient 2 of mutual inductance curve (rated)	5.0% to 100.0%	75.0	%	Changeable only at stop	"B7-20" on page 617
B7-21	0xB715	Excitation current coefficient 3 of mutual inductance curve	100.0% to 800.0%	150.0	%	Changeable only at stop	"B7-21" on page 617
B7-22	0xB716	Excitation current coefficient 4 of mutual inductance curve	100.0% to 800.0%	210.0	%	Changeable only at stop	"B7-22" on page 617
B7-23	0xB717	Flux coefficient 1 of mutual inductance curve (rated)	10.0% to 100.0%	50.0	%	Changeable only at stop	"B7-23" on page 618
B7-24	0xB718	Flux coefficient 2 of mutual inductance curve (rated)	10.0% to 100.0%	85.0	%	Changeable only at stop	"B7-24" on page 618
B7-25	0xB719	Flux coefficient 3 of mutual inductance curve	100.0% to 300.0%	115.0	%	Changeable only at stop	"B7-25" on page 618
B7-26	0xB71A	Flux coefficient 4 of mutual inductance curve	100.0% to 300.0%	125.0	%	Changeable only at stop	"B7-26" on page 618
B7-27	0xB71B	Speed point 1 of friction curve	0 RPM to 30000 RPM	15	RPM	Changeable only at stop	"B7-27" on page 618
B7-28	0xB71C	Speed point 2 of friction curve	0 RPM to 30000 RPM	30	RPM	Changeable only at stop	"B7-28" on page 618
B7-29	0xB71D	Speed point 3 of friction curve	0 RPM to 30000 RPM	60	RPM	Changeable only at stop	"B7-29" on page 619
B7-30	0xB71E	Speed point 4 of friction curve	0 RPM to 30000 RPM	120	RPM	Changeable only at stop	"B7-30" on page 619
B7-31	0xB71F	Speed point 5 of friction curve	0 RPM to 30000 RPM	150	RPM	Changeable only at stop	"B7-31" on page 619
B7-32	0xB720	Speed point 6 of friction curve	0 RPM to 30000 RPM	300	RPM	Changeable only at stop	"B7-32" on page 619
B7-33	0xB721	Speed point 7 of friction curve	0 RPM to 30000 RPM	600	RPM	Changeable only at stop	"B7-33" on page 619
B7-34	0xB722	Speed point 8 of friction curve	0 RPM to 30000 RPM	1200	RPM	Changeable only at stop	"B7-34" on page 620

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B7-35	0xB723	Speed point 9 of friction curve	0 RPM to 30000 RPM	1500	RPM	Changeable only at stop	"B7-35" on page 620
B7-36	0xB724	Speed point 10 of friction curve	0 RPM to 30000 RPM	3000	RPM	Changeable only at stop	"B7-36" on page 620
B7-37	0xB725	Torque point 1 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"B7-37" on page 620
B7-38	0xB726	Torque point 2 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"B7-38" on page 620
B7-39	0xB727	Torque point 3 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"B7-39" on page 621
B7-40	0xB728	Torque point 4 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"B7-40" on page 621
B7-41	0xB729	Torque point 5 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"B7-41" on page 621
B7-42	0xB72A	Torque point 6 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"B7-42" on page 621
B7-43	0xB72B	Torque point 7 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"B7-43" on page 621
B7-44	0xB72C	Torque point 8 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"B7-44" on page 622
B7-45	0xB72D	Torque point 9 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"B7-45" on page 622
B7-46	0xB72E	Torque point 10 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"B7-46" on page 622
B7-47	0xB72F	Current coefficient starting point of D- and Q-axis inductance curve	–800% to +800.0%	–200	%	Changeable only at stop	"B7-47" on page 622
B7-48	0xB730	Current coefficient end point of D- and Q-axis inductance curve	–800% to +800.0%	200.0	%	Changeable only at stop	"B7-48" on page 622
B7-49	0xB731	D axis inductance 1 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-49" on page 623
B7-50	0xB732	D axis inductance 2 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-50" on page 623
B7-51	0xB733	D axis inductance 3 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-51" on page 623
B7-52	0xB734	D axis inductance 4 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-52" on page 623

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B7-53	0xB735	D axis inductance 5 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-53" on page 623
B7-54	0xB736	D axis inductance 6 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-54" on page 623
B7-55	0xB737	D axis inductance 7 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-55" on page 624
B7-56	0xB738	D axis inductance 8 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-56" on page 624
B7-57	0xB739	D axis inductance 9 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-57" on page 624
B7-58	0xB73A	D axis inductance 10 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-58" on page 624
B7-59	0xB73B	D axis inductance 11 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-59" on page 624
B7-60	0xB73C	D axis inductance 12 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-60" on page 625
B7-61	0xB73D	Q axis inductance 1 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-61" on page 625
B7-62	0xB73E	Q axis inductance 2 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-62" on page 625
B7-63	0xB73F	Q axis inductance 3 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-63" on page 625
B7-64	0xB740	Q axis inductance 4 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-64" on page 625
B7-65	0xB741	Q axis inductance 5 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-65" on page 626
B7-66	0xB742	Q axis inductance 6 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-66" on page 626
B7-67	0xB743	Q axis inductance 7 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-67" on page 626

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B7-68	0xB744	Q axis inductance 8 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-68" on page 626
B7-69	0xB745	Q axis inductance 9 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-69" on page 626
B7-70	0xB746	Q axis inductance 10 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-70" on page 627
B7-71	0xB747	Q axis inductance 11 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-71" on page 627
B7-72	0xB748	Q axis inductance 12 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"B7-72" on page 627
B8-00	0xB800	Parameter auto-tuning upon startup	Bit00: Synchronous motor pole position auto-tuning upon startup 0: Disabled 1: Enabled Bit01: Quick stator resistance auto-tuning upon startup 0: Disabled 1: Enabled Bit02–Bit03: HFI pole position auto-tuning 0: Disabled 1: Enabled 2: Adaptive Bit04: IGBT shoot-through self-check upon startup 0: Disabled 1: Enabled Bit05: Short-to-ground self-check upon startup (reserved) 0: Disabled 1: Enabled Bit06: Phase loss self-check upon startup (reserved) 0: Disabled 1: Enabled	1	-	Changeable only at stop	"B8-00" on page 627
B8-01	0xB801	Auto-tuning direction	0 to 1	1	-	Changeable only at stop	"B8-01" on page 628
B8-02	0xB802	Oscillation suppression gain of synchronous motor back EMF auto-tuning	0.0 to 30.0	3.2	-	Changeable only at stop	"B8-02" on page 628

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B8-03	0xB803	Target speed of rotation auto-tuning	30.0% to 100.0%	70.0	%	Changeable only at stop	"B8-03" on page 628
B8-04	0xB804	Target speed 1 of inertia auto-tuning	10.0% to B8-05	40.0	%	Changeable only at stop	"B8-04" on page 629
B8-05	0xB805	Target speed 2 of inertia auto-tuning	B8-04 to 100.0%	60.0	%	Changeable only at stop	"B8-05" on page 629
B8-06	0xB806	Overcurrent prevention of mutual inductance saturation curve	0 to 1	1	-	Changeable only at stop	"B8-06" on page 629
B8-07	0xB807	Auto-tuning items	Bit00: Speed loop parameter adaptation 0: Disabled 1: Enabled Bit01: Current loop parameter adaptation 0: Disabled 1: Enabled Bit02: Drive nonlinear auto-tuning 0: Disabled 1: Enabled Bit03: Inter-phase deviation coefficient auto-tuning 0: Disabled 1: Enabled Bit04: Auto-tuning of initial pole position of synchronous motor 0: Disabled 1: Enabled Bit05: Auto-tuning of D- and Q-axis inductance model of synchronous motor 0: Disabled 1: Enabled Bit06: System inertia auto-tuning 0: Disabled 1: Enabled Bit07: HFI pole position auto-tuning 0: Disabled 1: Enabled	117	-	Changeable only at stop	"B8-07" on page 629
B8-08	0xB808	OFF3 stop mode	0: Quick stop 1: Stop at maximum capability	0	-	Changeable only at stop	"B8-08" on page 630
B8-09	0xB809	Stop mode during running	0: OFF1 stop mode 1: OFF2 stop mode 2: OFF3 stop mode	1	-	Changeable only at stop	"B8-09" on page 630
B8-10	0xB80A	Stop mode for torque control	0: Coast to stop forcibly 1: Switch to speed control mode and then stop 2: Maintain torque control mode until zero speed and then block	1	-	Changeable only at stop	"B8-10" on page 631

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B8-12	0xB80C	Proportional gain adjustment coefficient	0.1 to 2.0	1.0	-	Changeable at any time	"B8-12" on page 631
B8-13	0xB80D	Integral gain adjustment coefficient	0.1 to 2.0	1.0	-	Changeable at any time	"B8-13" on page 631
B8-14	0xB80E	Zero-speed threshold	0.1% to 200.0%	2.0	%	Changeable at any time	"B8-14" on page 631
B8-15	0xB80F	Zero-speed stop delay	0.00s to 10.00s	0.10	s	Changeable only at stop	"B8-15" on page 631
B8-16	0xB810	Reference source execution interval	0 to 20	4	-	Changeable only at stop	"B8-16" on page 632
B8-17	0xB811	Trial current for speed tracking of synchronous motor	5.0% to 50.0%	10.0	%	Changeable only at stop	"B8-17" on page 632
B8-18	0xB812	Minimum frequency for speed tracking of synchronous motor	0.0 Hz to 100.0 Hz	0.0	Hz	Changeable only at stop	"B8-18" on page 632
B8-19	0xB813	Angle compensation for speed tracking of synchronous motor	0 to 360	0	-	Changeable only at stop	"B8-19" on page 632
B8-20	0xB814	Parameter auto-tuning of synchronous motor upon startup	0 to 1	0	-	Changeable at any time	"B8-20" on page 632
B8-21	0xB815	Current motor angle	0 to 65535	0	-	Unchangeable	"B8-21" on page 633
B8-22	0xB816	Forward torque limit 1	0.0 to 400.0	150.0	-	Changeable at any time	"B8-22" on page 633
B8-23	0xB817	Reverse torque limit 1	0.0 to 400.0	150.0	-	Changeable at any time	"B8-23" on page 633
B8-24	0xB818	Source of forward torque limit 2	0: 400% Others: F connector	0	-	Changeable at any time	"B8-24" on page 633
B8-25	0xB819	Source of reverse torque limit 2	0: –400% Others: F connector	0	-	Changeable at any time	"B8-25" on page 633

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B8-26	0xB81A	Ramp (FRG) selection bit0	0: 0 1: 1 2: Terminal function input 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	" B8-26" on page 634
B8-27	0xB81B	Ramp (FRG) selection bit1	Same as B8-26	0	-	Changeable at any time	" B8-27" on page 634
B8-30	0xB81E	Motor protection	Bit00: Motor overload determination (reserved) Bit01: Motor overheat detection (reserved) Bit02: PG fault detection (reserved) Bit03: Current control error detection Bit04: Motor stall error detection Bit05: Locked-rotor detection Bit06: Synchronous motor demagnetization protection Bit07: Protection against locked-rotor in SVC speed open-loop control Bit08: Reserved Bit09: Parameter setting error	537	-	Changeable at any time	" B8-30" on page 634
B8-31	0xB81F	Locked-rotor time	0.0s to 65.0s	2.0	s	Changeable at any time	" B8-31" on page 635
B8-32	0xB820	Locked-rotor frequency	0.0% to 600.0%	6.0	%	Changeable at any time	" B8-32" on page 635
B8-33	0xB821	Motor stall detection time	0.0s to 10.0s	0.5	s	Changeable at any time	" B8-33" on page 635
B8-34	0xB822	Stall detection threshold	0.0% to +100.0%	30.0	%	Changeable at any time	" B8-34" on page 635
B8-35	0xB823	Current control exception detection time	0.00s to 1.00s	0.05	s	Changeable at any time	" B8-35" on page 636
B8-36	0xB824	Current control exception detection threshold	0.0% to 200.0%	25.0	%	Changeable at any time	" B8-36" on page 636

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B8-37	0xB825	Synchronous motor overcurrent threshold	0.0% to 500.0%	300.0	%	Changeable at any time	"B8-37" on page 636
B8-39	0xB827	Speed deviation detection	0 to 1	1	-	Changeable at any time	"B8-39" on page 636
B8-40	0xB828	Asynchronous motor FVC model switchover frequency	0% to 1000%	20	%	Changeable only at stop	"B8-40" on page 636
B8-41	0xB829	Asynchronous motor FVC model switchover hysteresis frequency	10% to 50%	20	%	Changeable only at stop	"B8-41" on page 637
B8-42	0xB82A	Asynchronous motor FVC observer filter time	5 ms to 100 ms	15	ms	Changeable only at stop	"B8-42" on page 637
B8-43	0xB82B	Asynchronous motor FVC current model mode	0 to 1	0	-	Changeable only at stop	"B8-43" on page 637
B8-44	0xB82C	Asynchronous motor FVC pre-excitation output observation angle mode	0 to 1	0	-	Changeable only at stop	"B8-44" on page 637
B8-45	0xB82D	Asynchronous motor SVC model switchover frequency	10% to 20%	15	%	Changeable only at stop	"B8-45" on page 637
B8-46	0xB82E	Asynchronous motor SVC observer filter time	5 ms to 50 ms	10	ms	Changeable at any time	"B8-46" on page 637
B8-47	0xB82F	Asynchronous motor SVC observer gain 1	10% to 500%	100	%	Changeable at any time	"B8-47" on page 638
B8-48	0xB830	Asynchronous motor SVC observer gain 2	10% to 100%	20	%	Changeable at any time	"B8-48" on page 638
B8-49	0xB831	Asynchronous motor SVC observer mode	0 to 3	0	-	Changeable only at stop	"B8-49" on page 638
B8-50	0xB832	Asynchronous motor SVC pre-excitation mode	0 to 1	0	-	Changeable only at stop	"B8-50" on page 638

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B8-51	0xB833	Asynchronous motor SVC speed tracking mode	0 to 1	0	-	Changeable only at stop	"B8-51" on page 638
B8-54	0xB836	Synchronous motor 1 model control	Bit00: Low speed processing Bit01: Low speed processing 1 Bit02: Online auto-tuning of resistance Bit03: Online auto-tuning of back EMF Bit04: KS	5	-	Changeable at any time	"B8-54" on page 639
B8-55	0xB837	Synchronous motor model K1	10 to 3000	200	-	Changeable at any time	"B8-55" on page 639
B8-56	0xB838	Synchronous motor model K1Max	100 to 6000	3000	-	Changeable at any time	"B8-56" on page 639
B8-57	0xB839	Synchronous motor model KsMin	0.0 to 4.0	0.3	-	Changeable at any time	"B8-57" on page 639
B8-58	0xB83A	Synchronous motor model Kspeed	50 to 2000	400	-	Changeable at any time	"B8-58" on page 640
B8-59	0xB83B	Synchronous motor frequency filter time constant	2 ms to 100 ms	10	ms	Changeable at any time	"B8-59" on page 640
B8-60	0xB83C	Frequency upper limit of synchronous motor Rs online auto-tuning	1.0% to 20.0%	3.5	%	Changeable at any time	"B8-60" on page 640
B8-61	0xB83D	Synchronous motor model Kr	0 to 50	10	-	Changeable at any time	"B8-61" on page 640
B8-62	0xB83E	Synchronous motor model Kr1	0 to 50	5	-	Changeable at any time	"B8-62" on page 640
B8-63	0xB83F	Synchronous motor low-speed D axis injection current	0% to 100%	20	%	Changeable at any time	"B8-63" on page 640
B8-64	0xB840	Synchronous motor model LowFreqTime1	0 to 500	50	-	Changeable at any time	"B8-64" on page 641
B8-67	0xB843	Frequency lower limit of back EMF online auto-tuning	10% to 100%	25	%	Changeable at any time	"B8-67" on page 641
B8-68	0xB844	Synchronous motor model LowFreq	0.0% to 2.0%	0.3	%	Changeable at any time	"B8-68" on page 641
B8-69	0xB845	Synchronous motor model LowFreqTime	0 to 100	10	-	Changeable at any time	"B8-69" on page 641
B8-70	0xB846	Percentage of pole auto-tuning current	50% to 200%	100	%	Changeable at any time	"B8-70" on page 641

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B8-71	0xB847	Percentage of high frequency response current	0% to 100%	25	%	Changeable at any time	"B8-71" on page 642
B8-72	0xB848	Percentage of HFI and SVC switching frequency	0% to 30%	10	%	Changeable at any time	"B8-72" on page 642
B8-73	0xB849	Observer parameter	10 to 200	100	-	Changeable at any time	"B8-73" on page 642
B8-74	0xB84A	Speed filter cut-off frequency	1 Hz to 200 Hz	10	Hz	Changeable at any time	"B8-74" on page 642
B8-75	0xB84B	Carrier frequency during NS auto-tuning	2.00 Hz to 16.00 Hz	8.00	Hz	Changeable at any time	"B8-75" on page 642
B8-76	0xB84C	Automatic calculation of NS auto-tuning voltage	0 to 1	1	-	Changeable at any time	"B8-76" on page 643
B8-77	0xB84D	Percentage of NS auto-tuning voltage set manually	0% to 100%	10	%	Changeable at any time	"B8-77" on page 643
B8-78	0xB84E	Duration of HFI stage 1	50 ms to 500 ms	150	ms	Changeable at any time	"B8-78" on page 643
B8-80	0xB850	Speed loop command word	Bit00: Speed loop 0: Disabled 1: Enabled Bit01: Integration mode 0: Conventional integration 1: Position integration Bit02: Acceleration torque 0: Disabled 1: Enabled Bit03–Bit04: Acceleration source 0: Function transfer torque 1: Automatic calculation 2: Function transfer acceleration Bit05: Anti-load disturbance 0: Disabled 1: Enabled	11	-	Changeable at any time	"B8-80" on page 643
B8-81	0xB851	Locked-rotor fast integral cancel coefficient	0.0% to +100.0%	0.0	%	Changeable at any time	"B8-81" on page 644
B8-82	0xB852	Integral torque	–100% to +100.0%	0.0	%	Changeable at any time	"B8-82" on page 644
B8-83	0xB853	Speed controller frequency window size	0.00 Hz to 10.00 Hz	0.00	Hz	Changeable only at stop	"B8-83" on page 644

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B8-84	0xB854	Current filter time for torque reference	0.0 ms to 100.0 ms	0.0	ms	Changeable only at stop	"B8-84" on page 645
B8-85	0xB855	Acceleration torque	0: Inactive 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"B8-85" on page 645
B8-87	0xB857	Reference model bandwidth	0.00 Hz to 300.00 Hz	0.00	Hz	Changeable at any time	"B8-87" on page 645
B8-88	0xB858	Torque feedforward coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"B8-88" on page 645
B8-89	0xB859	Vector control reference frequency filter time	0.0 ms to 100.0 ms	0.0	ms	Changeable only at stop	"B8-89" on page 645
B8-90	0xB85A	Vector control feedback frequency filter time	0.0 ms to 100.0 ms	0.0	ms	Changeable only at stop	"B8-90" on page 646
B8-91	0xB85B	Load observation bandwidth	0.00 Hz to 300.00 Hz	0.00	Hz	Changeable at any time	"B8-91" on page 646
B8-92	0xB85C	Load observation coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"B8-92" on page 646
B8-93	0xB85D	Pseudo integral coefficient	0.000 to 10.000	1.000	-	Changeable at any time	"B8-93" on page 646
B8-94	0xB85E	Torque coefficient enable	0: Disabled 1: Enabled	0	-	Changeable at any time	"B8-94" on page 646
B8-96	0xB860	Center frequency of notch filter 1	0.0 to 4000.0	4000.0	-	Changeable at any time	"B8-96" on page 647
B8-97	0xB861	Center frequency of notch filter 2	0.0 to 4000.0	4000.0	-	Changeable at any time	"B8-97" on page 647
B8-98	0xB862	Integral setting control word	0: Disabled 1: Enabled Others: B connector	0	-	Changeable at any time	"B8-98" on page 647

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B8-99	0xB863	Integral reference source	0: Digital setting 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"B8-99" on page 647
B9-00	0xB900	Externally transferred acceleration	0: Inactive 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"B9-00" on page 648
B9-03	0xB903	Overturning torque limiting coefficient	0.0% to 400.0%	100.0	%	Changeable at any time	"B9-03" on page 648
B9-04	0xB904	Motoring power limiting coefficient	0.0% to 400.0%	400.0	%	Changeable at any time	"B9-04" on page 648
B9-05	0xB905	Generating power limiting coefficient	0.0% to 400.0%	400.0	%	Changeable at any time	"B9-05" on page 649
B9-06	0xB906	Overspeed limiting enable	0 to 1	1	-	Changeable at any time	"B9-06" on page 649
B9-07	0xB907	Sine wave frequency of bandwidth test	0 Hz to 1000 Hz	0	Hz	Changeable at any time	"B9-07" on page 649
B9-08	0xB908	Sine wave amplitude of bandwidth test	0% to 100%	0	%	Changeable at any time	"B9-08" on page 649
B9-09	0xB909	Bandwidth test enable	0 to 4	0	-	Changeable at any time	"B9-09" on page 649
B9-11	0xB90B	Speed loop parameter calculation mode	0: New solution 1: Compatible solution	1	-	Changeable only at stop	"B9-11" on page 650
B9-12	0xB90C	Speed loop proportional gain in FVC mode	0.00 Hz to 100.00 Hz	8.00	Hz	Changeable at any time	"B9-12" on page 650
B9-13	0xB90D	Speed loop integral time in FVC mode	0.000s to 20.000s	0.080	s	Changeable at any time	"B9-13" on page 650

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B9-14	0xB90E	Speed loop proportional gain in SVC mode	0.00 Hz to 100.00 Hz	5.00	Hz	Changeable at any time	"B9-14" on page 650
B9-15	0xB90F	Speed loop integral time in SVC mode	0.000s to 20.000s	0.127	s	Changeable at any time	"B9-15" on page 650
B9-16	0xB910	Low frequency proportional correction coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"B9-16" on page 651
B9-17	0xB911	Low frequency integral correction coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"B9-17" on page 651
B9-18	0xB912	Speed loop adaption factor	0.000 to 10.000	0.200	-	Changeable at any time	"B9-18" on page 651
B9-19	0xB913	Speed loop adaption switchover lower limit	0.000 to 10.000	0.400	-	Changeable at any time	"B9-19" on page 651
B9-20	0xB914	Speed loop adaption switchover upper limit	0.000 to 10.000	1.000	-	Changeable at any time	"B9-20" on page 651
B9-21	0xB915	Speed loop adaption correction upper limit	0.0% to 1000.0%	100.0	%	Changeable at any time	"B9-21" on page 652
B9-22	0xB916	Speed loop adaption correction lower limit	0.0% to 1000.0%	100.0	%	Changeable at any time	"B9-22" on page 652
B9-23	0xB917	Flux adaptation enable	0 to 1	0	-	Changeable at any time	"B9-23" on page 652
B9-24	0xB918	Overspeed controller correction coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"B9-24" on page 652
B9-25	0xB919	VDC control command word	Bit00: VdcMin 0: Disabled 1: Enabled Bit01: VdcMax 0: Disabled 1: Enabled Bit02: Automatic calculation of VDC trigger voltage 0: Disabled 1: Enabled Bit03: VDC control integral action 0: Disabled 1: Enabled	0	-	Changeable at any time	"B9-25" on page 652

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B9-26	0xB91A	Bus capacitance ratio	50.0% to 1000.0%	100.0	%	Changeable at any time	"B9-26" on page 653
B9-27	0xB91B	Undervoltage suppression exit hysteresis frequency	0.00 Hz to 10.00 Hz	3.00	Hz	Changeable at any time	"B9-27" on page 653
B9-28	0xB91C	Minimum VDC failure speed threshold	0.00 Hz to 20.00 Hz	2.00	Hz	Changeable at any time	"B9-28" on page 653
B9-29	0xB91D	Dynamic adjustment coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"B9-29" on page 653
B9-30	0xB91E	Minimum VDC activation voltage	320.0 V to 540.0 V	430.0	V	Changeable at any time	"B9-30" on page 654
B9-31	0xB91F	Maximum VDC activation voltage	650.0 V to 800.0 V	770.0	V	Changeable at any time	"B9-31" on page 654

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B9-32	0xB920	Flux linkage control command word	Bit00: Output voltage limit calculation filtering mode 0: Symmetric filtering 1: Asymmetric filtering Bit01: Asynchronous motor inverse proportion curve calculation 0: The inverse proportional synchronization frequency decreases. 1: The inverse proportional speed decreases. Bit02: Flux linkage feedforward calculation by using inverse proportional speed 0: Disabled 1: Enabled Bit03: Reserved Bit04: Reserved Bit05: Field weakening adjustment 0: Disabled 1: Enabled Bit06: Flux linkage derivative feedforward 0: Disabled 1: Enabled Bit07: Energy conservation control 0: Disabled 1: Enabled Bit08: Asynchronous motor flux closed loop 0: Disabled 1: Enabled Bit09: Reserved Bit10: Reserved Bit11: Asynchronous motor pre-excitation mode 0: Pre-excitation based on time 1: Pre-excitation based on current Bit12: Asynchronous motor pre-excitation current 0: Reference current 1: Maximum current allowed by the drive	2357	-	Changeable at any time	" B9-32" on page 654
B9-33	0xB921	Output voltage upper limit margin for field weakening adjustment	1% to 50%	5	%	Changeable at any time	" B9-33" on page 656
B9-34	0xB922	Output voltage upper limit margin for auto adjustment of field weakening	1% to 20%	3	%	Changeable at any time	" B9-34" on page 656
B9-35	0xB923	Filter time for calculating maximum output voltage	0 ms to 3000 ms	30	ms	Changeable at any time	" B9-35" on page 656

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B9-36	0xB924	Rated flux adjustment coefficient for calculation	0.5 to 2.0	1.0	-	Changeable at any time	"B9-36" on page 656
B9-37	0xB925	Field weakening frequency adjustment coefficient for calculation	0.8 to 1.2	1.0	-	Changeable at any time	"B9-37" on page 657
B9-38	0xB926	Slip filter time for calculating field weakening frequency	0 ms to 3000 ms	62	ms	Changeable at any time	"B9-38" on page 657
B9-39	0xB927	Feedback speed filtering	0 ms to 8000 ms	50	ms	Changeable at any time	"B9-39" on page 657
B9-40	0xB928	Flux linkage rising filter time	0 ms to 8000 ms	20	ms	Changeable at any time	"B9-40" on page 657
B9-42	0xB92A	Feedback voltage filter time	0 ms to 3000 ms	5	ms	Changeable at any time	"B9-42" on page 658
B9-43	0xB92B	Maximum demagnetization current of synchronous motor	0% to 500%	300	%	Changeable at any time	"B9-43" on page 658
B9-44	0xB92C	Voltage outer loop lower limit coefficient	0 to 500	50	-	Changeable at any time	"B9-44" on page 658
B9-45	0xB92D	Flux linkage derivative feedforward coefficient	0.0 to 1.5	1.0	-	Changeable at any time	"B9-45" on page 658
B9-46	0xB92E	Flux linkage derivative feedforward filter time	0 ms to 3000 ms	6	ms	Changeable at any time	"B9-46" on page 658
B9-47	0xB92F	Torque current rising filter time under energy conservation control	0 ms to 3000 ms	50	ms	Changeable at any time	"B9-47" on page 659
B9-48	0xB930	Torque current falling filter time under energy conservation control	0 ms to 3000 ms	100	ms	Changeable at any time	"B9-48" on page 659

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B9-49	0xB931	Flux linkage lower limit coefficient under energy conservation control	0.00 to 0.50	0.10	-	Changeable at any time	"B9-49" on page 659
B9-51	0xB933	Pre-excitation current	1% to 200%	100	%	Changeable at any time	"B9-51" on page 659
B9-52	0xB934	Pre-excitation time	1 ms to 30000 ms	1000	ms	Changeable at any time	"B9-52" on page 660
B9-53	0xB935	Flux linkage closed-loop bandwidth frequency	0.0 Hz to 100.0 Hz	2.0	Hz	Changeable at any time	"B9-53" on page 660
B9-54	0xB936	Feedback flux linkage filter time coefficient	0 to 200	4	-	Changeable at any time	"B9-54" on page 660
B9-55	0xB937	Static output flux linkage filter time	0 ms to 5000 ms	10	ms	Changeable at any time	"B9-55" on page 660
B9-56	0xB938	Current loop mode	0: ImCsr2 mode 1: Complex vector mode 2: 880 mode 3: No field weakening	1	-	Changeable only at stop	"B9-56" on page 660
B9-57	0xB939	PI regulator proportional gain adaptation with load	0 to 1	0	-	Changeable only at stop	"B9-57" on page 661
B9-58	0xB93A	Current loop damping	0.2 to 5.0	0.8	-	Changeable at any time	"B9-58" on page 661
B9-59	0xB93B	Low-speed current loop Kp adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"B9-59" on page 661
B9-60	0xB93C	High-speed current loop Kp adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"B9-60" on page 661
B9-61	0xB93D	Low-speed current loop Ki adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"B9-61" on page 662
B9-62	0xB93E	High-speed current loop Ki adjustment	0.1 to 10.0	2.0	-	Changeable at any time	"B9-62" on page 662
B9-63	0xB93F	D-axis current loop complex vector adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"B9-63" on page 662
B9-64	0xB940	Q-axis current loop complex vector adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"B9-64" on page 662

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B9-65	0xB941	Complex vector hysteresis frequency lower limit as a percentage of rated frequency	0% to B9-66	0	%	Changeable at any time	"B9-65" on page 662
B9-66	0xB942	Complex vector hysteresis frequency upper limit as a percentage of rated frequency	B9-65 to 150%	0	%	Changeable at any time	"B9-66" on page 663
B9-67	0xB943	ImCsr2 hysteresis switchover voltage upper limit as a percentage of saturation voltage	B9-68 to 95%	89	%	Changeable at any time	"B9-67" on page 663
B9-68	0xB944	ImCsr2 hysteresis switchover voltage lower limit as a percentage of saturation voltage	60% to B9-67	79	%	Changeable at any time	"B9-68" on page 663
B9-69	0xB945	ImCsr2 hysteresis switchover frequency hysteresis range as a percentage of rated frequency	1% to 30%	10	%	Changeable at any time	"B9-69" on page 663
B9-70	0xB946	ImCsr2 hysteresis switchover frequency lower limit (below which the hysteresis condition does not take effect) as a percentage of the rated frequency	40% to 80%	60	%	Changeable at any time	"B9-70" on page 663
B9-71	0xB947	ImCsr2 current loop Kss adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"B9-71" on page 664
B9-72	0xB948	Proportional gain adjustment coefficient corresponding to the maximum torque when proportional gain is adjusted with load	0.1 to 1.0	0.5	-	Changeable at any time	"B9-72" on page 664

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B9-73	0xB949	Torque upper limit setpoint as a percentage of rated torque when proportional gain is adjusted with load	B9-74 to 300%	200	%	Changeable at any time	"B9-73" on page 664
B9-74	0xB94A	Torque lower limit setpoint as a percentage of rated torque when proportional gain is adjusted with load	10% to B9-73	100	%	Changeable at any time	"B9-74" on page 664
B9-75	0xB94B	Derivative feedforward adjustment	0.0 to 1.0	0.0	-	Changeable at any time	"B9-75" on page 665
B9-76	0xB94C	Decoupling control start frequency as a percentage of rated frequency	20% to 150%	40	%	Changeable at any time	"B9-76" on page 665
B9-77	0xB94D	Decoupling control filter time adjustment coefficient	0.1 to 3.0	1.0	-	Changeable at any time	"B9-77" on page 665
B9-78	0xB94E	Decoupling control output adjustment coefficient	0.0 to 1.0	1.0	-	Changeable at any time	"B9-78" on page 665
B9-79	0xB94F	CPC feedforward enable	0: Disabled 1: Enabled	0	-	Changeable at any time	"B9-79" on page 665
B9-80	0xB950	Current loop auxiliary command word	Bit00: Complex vector angle limiting 0: Disabled 1: Enabled Bit01: Voltage angle limiting 0: Program internal limiting 1: Parameter setting Bit02: 0 by default 0: No lower limit on the excitation current is imposed during the dynamic process. 1: A lower limit on the excitation current is imposed during the dynamic process in ImCsr2 mode. Bit03–Bit15: Reserved (0 by default)	0	-	Changeable at any time	"B9-80" on page 666
B9-81	0xB951	Voltage angle upper limit	90° to 180°	150	°	Changeable at any time	"B9-81" on page 666
B9-82	0xB952	Voltage angle lower limit	0° to 90°	30	°	Changeable at any time	"B9-82" on page 666

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
B9-83	0xB953	Asynchronous motor D axis integral limit	0.500 to 1.000	0.707	-	Changeable at any time	"B9-83" on page 666
B9-84	0xB954	Current loop carrier frequency upper limit	5.0 to 16.0	8.0	-	Changeable at any time	"B9-84" on page 667
B9-85	0xB955	Droop enable	0 to 1	0	-	Changeable only at stop	"B9-85" on page 667
B9-86	0xB956	Droop source	0: Line current 1: Torque reference 2: Speed adjustment output 3: Speed adjustment integral component	1	-	Changeable only at stop	"B9-86" on page 667
B9-87	0xB957	Frequency reference droop coefficient	0.0% to 50.0%	0.0	%	Changeable at any time	"B9-87" on page 667
B9-88	0xB958	FVC-SVC switchover mode	0: No switchover 1: Active switchover 2: Passive switchover (The AC drive switches to SVC mode upon detection of encoder wire breakage, and it switches back to FVC mode when the encoder recovers during stop and does not switch back to FVC mode when the encoder recovers during running.) 3: Passive switchover (The AC drive switches to SVC mode upon detection of encoder wire breakage, and it switches back to FVC mode when the encoder recovers during running or stop.)	0	-	Changeable only at stop	"B9-88" on page 667
B9-89	0xB959	FVC-SVC switchover frequency	10% to 500%	50	%	Changeable only at stop	"B9-89" on page 668
B9-90	0xB95A	FVC-SVC switchover hysteresis	10% to 100%	10	%	Changeable only at stop	"B9-90" on page 668
BA-00	0xBA00	Motor type	0: Common asynchronous motor 1: Variable frequency asynchronous motor 2: Permanent magnet synchronous motor	0	-	Changeable only at stop	"BA-00" on page 668
BA-01	0xBA01	Rated motor power	0.1 kW to 1000.0 kW	3.7	kW	Changeable only at stop	"BA-01" on page 668
BA-02	0xBA02	Rated motor voltage	1 V to 2000 V	380	V	Changeable only at stop	"BA-02" on page 669
BA-03	0xBA03	Rated motor current	0.01 A to 655.35 A	9.00	A	Changeable only at stop	"BA-03" on page 669
BA-04	0xBA04	Rated motor frequency	0.01 Hz to F0-10	50.00	Hz	Changeable only at stop	"BA-04" on page 669
BA-05	0xBA05	Rated motor speed	1 RPM to 65535 RPM	1460	RPM	Changeable only at stop	"BA-05" on page 669

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BA-06	0xBA06	Number of parallel motors	1 to 200	1	-	Changeable only at stop	"BA-06" on page 669
BA-07	0xBA07	Motor information command word	Bit00: Mutual inductance curve 0: Disabled 1: Enabled Bit01: D- and Q-axis inductance curve 0: Disabled 1: Enabled Bit02: Rotor resistance online auto-tuning 0: Disabled 1: Enabled Bit03: Rotor resistance online auto-tuning method 0: Amplitude 1: Phase Bit04: Motor thermal model 0: Disabled 1: Enabled Bit05: Temperature source of motor thermal model 0: Estimated temperature 1: Temperature detected by sensor Bit06: Torque coefficient calculation of asynchronous motor 0: Torque formula 1: Current distribution Bit07: Torque coefficient calculation of synchronous motor 0: Torque formula 1: Torque matching the rated torque Bit08: Zero speed friction torque calculation 0: Torque linearly decreasing to zero 1: Torque to maintain minimum speed Bit09: Calculation of model parameters based on nameplate parameters 0: Disabled 1: Enabled Bit10: Confirmation of calculating model parameters based on nameplate parameters 0: Default 1: Confirm	0x3	-	Changeable only at stop	"BA-07" on page 670
BA-08	0xBA08	Number of motor pole pairs	0 to 64	0	-	Changeable only at stop	"BA-08" on page 670
BA-09	0xBA09	Motor power factor	0.600 to 1.000	0.860	-	Changeable only at stop	"BA-09" on page 671
BA-10	0xBA0A	Encoder PPR	1 to 65535	1024	-	Changeable only at stop	"BA-10" on page 671

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BA-11	0xBA0B	Encoder type	0: ABZ incremental encoder 1: 23-bit encoder 2: Resolver 3: External input	0	-	Changeable only at stop	"BA-11" on page 671
BA-12	0xBA0C	Speed feedback PG card	0: Local PG card 1: Extension PG card	0	-	Changeable only at stop	"BA-12" on page 671
BA-13	0xBA0D	Number of resolver pole pairs	1 to 65535	1	-	Changeable only at stop	"BA-13" on page 672
BA-15	0xBA0F	Speed feedback PG wire breakage detection time	0.0s to 10.0s	0.0	s	Changeable only at stop	"BA-15" on page 672
BA-16	0xBA10	A/B phase sequence of encoder	0: Forward 1: Reverse	0	-	Changeable only at stop	"BA-16" on page 672
BA-17	0xBA11	Encoder installation angle	0.0° to 359.9°	0.0	°	Changeable only at stop	"BA-17" on page 672
BA-18	0xBA12	Expansion card	1: Expansion card 1 2: Expansion card 2	1	-	Changeable only at stop	"BA-18" on page 672
BA-19	0xBA13	ABZ encoder speed measurement mode at low speed	0: Maintain 1: Attenuate 2: Optimized solution	2	-	Changeable only at stop	"BA-19" on page 673
BA-20	0xBA14	Encoder speed measurement filter time constant	0.000s to 10.000s	0.004	s	Changeable at any time	"BA-20" on page 673
BA-21	0xBA15	Encoder wire breakage software detection coefficient	0.000 to 8.000	1.000	-	Changeable at any time	"BA-21" on page 673
BA-22	0xBA16	Encoder control word	Bit00: Speed measurement 0: Disabled 1: Enabled Bit01: Software detection of wire breakage 0: Disabled 1: Enabled Bit02: Glitch removal 0: Disabled 1: Enabled Bit03: ABZ encoder speed measurement mode 0: Quadruplicated frequency 1: Single pulse	0	-	Changeable only at stop	"BA-22" on page 673
BA-23	0xBA17	Speed measurement exception count threshold	1 to 100	10	-	Changeable only at stop	"BA-23" on page 674
BA-24	0xBA18	Motor gear ratio (numerator)	1 to 65535	1	-	Changeable only at stop	"BA-24" on page 674

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BA-25	0xBA19	Motor gear ratio (denominator)	1 to 65535	1	-	Changeable only at stop	"BA-25" on page 674
BA-26	0xBA1A	External input source of encoder	0: 0 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Unchangeable	"BA-26" on page 674
BA-29	0xBA1D	Auto-tuning	0: No operation 1: Static auto-tuning on partial parameters of asynchronous motor 2: Dynamic auto-tuning on asynchronous motor 3: Static auto-tuning on all parameters of asynchronous motor 4: Inertia auto-tuning 5: Deadzone auto-tuning 11: With-load auto-tuning on synchronous motor (excluding back EMF) 12: No-load dynamic auto-tuning on synchronous motor 13: Static auto-tuning on all parameters of synchronous motor (excluding zero point angle)	0	-	Changeable only at stop	"BA-29" on page 675
BA-30	0xBA1E	Asynchronous motor stator resistance	0.001 Ω to 65.535 Ω	1.204	Ω	Changeable only at stop	"BA-30" on page 675
BA-31	0xBA1F	Asynchronous motor rotor resistance	0.001 Ω to 65.535 Ω	0.908	Ω	Changeable only at stop	"BA-31" on page 675
BA-32	0xBA20	Asynchronous motor leakage inductance	0.01 mH to 655.35 mH	5.28	mH	Changeable only at stop	"BA-32" on page 675
BA-33	0xBA21	Asynchronous motor mutual inductance	0.1 mH to 6553.5 mH	156.8	mH	Changeable only at stop	"BA-33" on page 675
BA-34	0xBA22	Asynchronous motor no-load current	0.01 A to BA-03	4.20	A	Changeable only at stop	"BA-34" on page 676
BA-35	0xBA23	Synchronous motor stator resistance	0.001 Ω to 65.535 Ω	1.204	Ω	Changeable only at stop	"BA-35" on page 676
BA-36	0xBA24	Synchronous motor D axis inductance	0.01 mH to 655.35 mH	5.28	mH	Changeable only at stop	"BA-36" on page 676
BA-37	0xBA25	Synchronous motor Q axis inductance	0.01 mH to 655.35 mH	5.28	mH	Changeable only at stop	"BA-37" on page 676

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BA-39	0xBA27	Synchronous motor back EMF coefficient	0.0 V to 6553.5 V	300.0	V	Changeable only at stop	"BA-39" on page 676
BA-40	0xBA28	Stator leakage inductance	0.000 mH to 65.535 mH	6.540	mH	Changeable only at stop	"BA-40" on page 677
BA-41	0xBA29	Electromechanical time constant	1 ms to 65535 ms	100	ms	Unchangeable	"BA-41" on page 677
BA-42	0xBA2A	Inertia ratio	0.0% to 6553.5%	120.0	%	Changeable only at stop	"BA-42" on page 677
BA-43	0xBA2B	Friction torque	0.0% to 6553.5%	2.0	%	Changeable only at stop	"BA-43" on page 677
BA-44	0xBA2C	Excitation current coefficient 1 of mutual inductance curve (rated)	5.0% to 100.0%	50.0	%	Changeable only at stop	"BA-44" on page 677
BA-45	0xBA2D	Excitation current coefficient 2 of mutual inductance curve (rated)	5.0% to 100.0%	75.0	%	Changeable only at stop	"BA-45" on page 678
BA-46	0xBA2E	Excitation current coefficient 3 of mutual inductance curve	100.0% to 800.0%	150.0	%	Changeable only at stop	"BA-46" on page 678
BA-47	0xBA2F	Excitation current coefficient 4 of mutual inductance curve	100.0% to 800.0%	210.0	%	Changeable only at stop	"BA-47" on page 678
BA-48	0xBA30	Flux coefficient 1 of mutual inductance curve (rated)	10.0% to 100.0%	50.0	%	Changeable only at stop	"BA-48" on page 678
BA-49	0xBA31	Flux coefficient 2 of mutual inductance curve (rated)	10.0% to 100.0%	85.0	%	Changeable only at stop	"BA-49" on page 678
BA-50	0xBA32	Flux coefficient 3 of mutual inductance curve	100.0% to 300.0%	115.0	%	Changeable only at stop	"BA-50" on page 679
BA-51	0xBA33	Flux coefficient 4 of mutual inductance curve	100.0% to 300.0%	125.0	%	Changeable only at stop	"BA-51" on page 679
BA-52	0xBA34	Speed point 1 of friction curve	0 RPM to 30000 RPM	15	RPM	Changeable only at stop	"BA-52" on page 679
BA-53	0xBA35	Speed point 2 of friction curve	0 RPM to 30000 RPM	30	RPM	Changeable only at stop	"BA-53" on page 679
BA-54	0xBA36	Speed point 3 of friction curve	0 RPM to 30000 RPM	60	RPM	Changeable only at stop	"BA-54" on page 679

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BA-55	0xBA37	Speed point 4 of friction curve	0 RPM to 30000 RPM	120	RPM	Changeable only at stop	"BA-55" on page 679
BA-56	0xBA38	Speed point 5 of friction curve	0 RPM to 30000 RPM	150	RPM	Changeable only at stop	"BA-56" on page 680
BA-57	0xBA39	Speed point 6 of friction curve	0 RPM to 30000 RPM	300	RPM	Changeable only at stop	"BA-57" on page 680
BA-58	0xBA3A	Speed point 7 of friction curve	0 RPM to 30000 RPM	600	RPM	Changeable only at stop	"BA-58" on page 680
BA-59	0xBA3B	Speed point 8 of friction curve	0 RPM to 30000 RPM	1200	RPM	Changeable only at stop	"BA-59" on page 680
BA-60	0xBA3C	Speed point 9 of friction curve	0 RPM to 30000 RPM	1500	RPM	Changeable only at stop	"BA-60" on page 680
BA-61	0xBA3D	Speed point 10 of friction curve	0 RPM to 30000 RPM	3000	RPM	Changeable only at stop	"BA-61" on page 681
BA-62	0xBA3E	Torque point 1 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"BA-62" on page 681
BA-63	0xBA3F	Torque point 2 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"BA-63" on page 681
BA-64	0xBA40	Torque point 3 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"BA-64" on page 681
BA-65	0xBA41	Torque point 4 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"BA-65" on page 681
BA-66	0xBA42	Torque point 5 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"BA-66" on page 682
BA-67	0xBA43	Torque point 6 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"BA-67" on page 682
BA-68	0xBA44	Torque point 7 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"BA-68" on page 682
BA-69	0xBA45	Torque point 8 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"BA-69" on page 682
BA-70	0xBA46	Torque point 9 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"BA-70" on page 682
BA-71	0xBA47	Torque point 10 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"BA-71" on page 683
BA-72	0xBA48	Current coefficient starting point of D- and Q-axis inductance curve	–800% to +800.0%	–200	%	Changeable only at stop	"BA-72" on page 683
BA-73	0xBA49	Current coefficient end point of D- and Q-axis inductance curve	–800% to +800.0%	200.0	%	Changeable only at stop	"BA-73" on page 683

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BA-74	0xBA4A	D axis inductance 1 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-74" on page 683
BA-75	0xBA4B	D axis inductance 2 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-75" on page 683
BA-76	0xBA4C	D axis inductance 3 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-76" on page 684
BA-77	0xBA4D	D axis inductance 4 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-77" on page 684
BA-78	0xBA4E	D axis inductance 5 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-78" on page 684
BA-79	0xBA4F	D axis inductance 6 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-79" on page 684
BA-80	0xBA50	D axis inductance 7 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-80" on page 684
BA-81	0xBA51	D axis inductance 8 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-81" on page 684
BA-82	0xBA52	D axis inductance 9 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-82" on page 685
BA-83	0xBA53	D axis inductance 10 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-83" on page 685
BA-84	0xBA54	D axis inductance 11 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-84" on page 685
BA-85	0xBA55	D axis inductance 12 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-85" on page 685
BA-86	0xBA56	Q axis inductance 1 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-86" on page 685
BA-87	0xBA57	Q axis inductance 2 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-87" on page 686
BA-88	0xBA58	Q axis inductance 3 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-88" on page 686

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BA-89	0xBA59	Q axis inductance 4 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-89" on page 686
BA-90	0xBA5A	Q axis inductance 5 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-90" on page 686
BA-91	0xBA5B	Q axis inductance 6 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-91" on page 686
BA-92	0xBA5C	Q axis inductance 7 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-92" on page 687
BA-93	0xBA5D	Q axis inductance 8 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-93" on page 687
BA-94	0xBA5E	Q axis inductance 9 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-94" on page 687
BA-95	0xBA5F	Q axis inductance 10 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-95" on page 687
BA-96	0xBA60	Q axis inductance 11 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-96" on page 687
BA-97	0xBA61	Q axis inductance 12 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"BA-97" on page 688
BB-00	0xBB00	V/f curve	0: Straight-line V/f curve 1: Multi-point V/f curve 2: Reserved 3: Reserved 4: Reserved 5: Reserved 6: Reserved 7: Reserved 8: Reserved 9: Reserved 10: V/f complete separation mode 11: V/f half separation mode	0	-	Changeable only at stop	"BB-00" on page 688
BB-01	0xBB01	Torque boost	0.0% to 30.0%	3.0	%	Changeable at any time	"BB-01" on page 688
BB-02	0xBB02	Cut-off frequency of torque boost	0.00 Hz to F0-10	50.00	Hz	Changeable only at stop	"BB-02" on page 688
BB-03	0xBB03	Multi-point V/f frequency 1	0.00 Hz to BB-05	0.00	Hz	Changeable only at stop	"BB-03" on page 689

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BB-04	0xBB04	Multi-point V/f voltage 1	0.0% to +100.0%	0.0	%	Changeable only at stop	"BB-04" on page 689
BB-05	0xBB05	Multi-point V/f frequency 2	BB-03 to BB-07	0.00	Hz	Changeable only at stop	"BB-05" on page 689
BB-06	0xBB06	Multi-point V/f voltage 2	0.0% to +100.0%	0.0	%	Changeable only at stop	"BB-06" on page 689
BB-07	0xBB07	Multi-point V/f frequency 3	BB-05 to BA-04	0.00	Hz	Changeable only at stop	"BB-07" on page 689
BB-08	0xBB08	Multi-point V/f voltage 3	0.0% to +100.0%	0.0	%	Changeable only at stop	"BB-08" on page 690
BB-09	0xBB09	V/f slip compensation gain	0.0 to 200.0	0.0	-	Changeable at any time	"BB-09" on page 690
BB-10	0xBB0A	V/f overexcitation gain	0 to 200	64	-	Changeable at any time	"BB-10" on page 690
BB-11	0xBB0B	V/f oscillation suppression gain	0 to 100	40	-	Changeable at any time	"BB-11" on page 690
BB-12	0xBB0C	V/f oscillation suppression	0: Disabled 1: Enabled	1	-	Changeable at any time	"BB-12" on page 690
BB-13	0xBB0D	Voltage source for V/f separation	0: Digital setting (BB-14) 1: AI1 2: AI2 3: AI3 4: Pulse reference (DI5) 5: Multi-reference 6: Simple PLC 7: PID 8: Communication Others: F connector	0	-	Changeable at any time	"BB-13" on page 691
BB-14	0xBB0E	V/f separation voltage	0 V to BA-02	0	V	Changeable at any time	"BB-14" on page 692
BB-15	0xBB0F	Voltage rise time of V/f separation	0.0s to 1000.0s	0.0	s	Changeable at any time	"BB-15" on page 692
BB-16	0xBB10	Voltage fall time of V/f separation	0.0s to 1000.0s	0.0	s	Changeable at any time	"BB-16" on page 692
BB-17	0xBB11	Stop mode for V/f separation	0: Frequency and voltage decline to 0 independently 1: Frequency declines to 0 after voltage declines to 0 2: Coast to stop (new)	0	-	Changeable at any time	"BB-17" on page 692
BB-18	0xBB12	Overcurrent stall suppression action current	50% to 200%	150	%	Changeable only at stop	"BB-18" on page 693
BB-19	0xBB13	Overcurrent stall suppression	0: Disabled 1: Enabled	1	-	Changeable only at stop	"BB-19" on page 693

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BB-20	0xBB14	Overcurrent stall suppression gain	1 to 100	20	-	Changeable at any time	" BB-20" on page 693
BB-21	0xBB15	Compensation coefficient of speed multiplying overcurrent stall suppression action current	50% to 200%	100	%	Changeable only at stop	" BB-21" on page 693
BB-22	0xBB16	Overvoltage stall suppression action voltage	330.0 V to 800.0 V	770.0	V	Changeable at any time	" BB-22" on page 693
BB-23	0xBB17	Overvoltage stall suppression	0: Disabled 1: Enabled	1	-	Changeable only at stop	" BB-23" on page 694
BB-24	0xBB18	Overvoltage stall suppression frequency gain	1 to 100	30	-	Changeable at any time	" BB-24" on page 694
BB-25	0xBB19	Overvoltage stall suppression voltage gain	1 to 100	30	-	Changeable at any time	" BB-25" on page 694
BB-26	0xBB1A	Frequency rise threshold for overvoltage stall suppression	0 Hz to 50 Hz	5	Hz	Changeable only at stop	" BB-26" on page 694
BB-27	0xBB1B	Slip compensation filter time	0.1s to 10.0s	0.5	s	Changeable only at stop	" BB-27" on page 694
BB-28	0xBB1C	Multi-point curve source	0: 3-point curve 1: Multi-point curve module A 2: Multi-point curve module B	0	-	Changeable only at stop	" BB-28" on page 695
BB-33	0xBB21	Online torque compensation gain	80 to 150	100	-	Changeable only at stop	" BB-33" on page 695
BB-34	0xBB22	ImaxKi coefficient	10% to 1000%	100	%	Changeable only at stop	" BB-34" on page 695
BB-35	0xBB23	Overcurrent suppression threshold (relative to rated motor current)	80% to 300%	200	%	Changeable only at stop	" BB-35" on page 695
BB-36	0xBB24	Frequency threshold for overcurrent suppression field weakening	100% to 500%	100	%	Changeable only at stop	" BB-36" on page 696
BB-37	0xBB25	IT filter time	10 ms to 1000 ms	100	ms	Changeable only at stop	" BB-37" on page 696

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BB-38	0xBB26	Slip compensation mode	0: Disabled 1: Slip compensation without PG 2: Slip compensation with PG	1	-	Changeable only at stop	"BB-38" on page 696
BB-39	0xBB27	VdcMaxCtrl allowed runtime	0.0s to 100.0s	0.0	s	Changeable only at stop	"BB-39" on page 696
BB-40	0xBB28	Upper limit of V/f separation voltage	50.0% to 200.0%	100.0	%	Changeable only at stop	"BB-40" on page 696
BB-41	0xBB29	RFG time of V/f separation frequency	0: RFG time forced to 0 1: Preset RFG time	0	-	Changeable only at stop	"BB-41" on page 697
BB-42	0xBB2A	Cut-off frequency of V/f oscillation suppression filter	1.0 Hz to 50.0 Hz	8.0	Hz	Changeable at any time	"BB-42" on page 697
BB-43	0xBB2B	Cut-off frequency threshold for V/f oscillation suppression	10 Hz to 3000 Hz	200	Hz	Changeable at any time	"BB-43" on page 697
BB-44	0xBB2C	VdcMaxCtrl feedforward coefficient	0% to 500%	0	%	Changeable at any time	"BB-44" on page 697
BB-50	0xBB32	PMVVC low-speed IF	0: Disabled 1: Enabled	1	-	Changeable only at stop	"BB-50" on page 697
BB-51	0xBB33	PMVVC low-speed IF current	30 to 250	100	-	Changeable only at stop	"BB-51" on page 698
BB-52	0xBB34	PMVVC low-speed IF speed switching threshold	2.0% to 100.0%	10.0	%	Changeable only at stop	"BB-52" on page 698
BB-53	0xBB35	PMVVC oscillation suppression gain coefficient	0 to 500	100	-	Changeable at any time	"BB-53" on page 698
BB-54	0xBB36	PMVVC filter time coefficient	0 to 500	100	-	Changeable at any time	"BB-54" on page 698
BB-55	0xBB37	PMVVC energy conservation control mode	0: Fixed straight-line V/f curve 1: Fixed 30% reactive current 2: MTPA control	2	-	Changeable only at stop	"BB-55" on page 698
BC-00	0xBC00	Startup mode	0: Direct start 1: Flying start 2: Pre-excitation start (AC asynchronous motor) 3: SVC quick start	0	-	Changeable at any time	"BC-00" on page 699
BC-01	0xBC01	Speed tracking mode	0: From the stop frequency 1: From the power frequency 2: From the maximum frequency 3: Reserved 4: Magnetic field directional speed tracking (MD290)	0	-	Changeable at any time	"BC-01" on page 699

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BC-02	0xBC02	Speed of speed tracking	1 to 100	20	-	Changeable at any time	"BC-02" on page 699
BC-03	0xBC03	Startup frequency	0.00 Hz to 10.00 Hz	0.00	Hz	Changeable at any time	"BC-03" on page 699
BC-04	0xBC04	Startup frequency hold time	0.0s to 100.0s	0.0	s	Changeable only at stop	"BC-04" on page 700
BC-05	0xBC05	DC braking current at startup	0% to 100%	50	%	Changeable only at stop	"BC-05" on page 700
BC-06	0xBC06	DC braking time at startup	0.0s to 100.0s	0.0	s	Changeable only at stop	"BC-06" on page 700
BC-07	0xBC07	Stop mode	0: Decelerate to stop 1: Coast to stop 2: Stop at maximum capability	0	-	Changeable at any time	"BC-07" on page 700
BC-08	0xBC08	Start frequency of DC braking at stop	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	"BC-08" on page 701
BC-09	0xBC09	DC braking delay at stop	0.0s to 100.0s	0.0	s	Changeable at any time	"BC-09" on page 701
BC-10	0xBC0A	DC braking current at stop	0% to 100%	50	%	Changeable at any time	"BC-10" on page 701
BC-11	0xBC0B	DC braking time at stop	0.0s to 100.0s	0.0	s	Changeable at any time	"BC-11" on page 701
BC-12	0xBC0C	Speed tracking sweep current limit closed loop Kp	0 to 1000	500	-	Changeable at any time	"BC-12" on page 701
BC-13	0xBC0D	Speed tracking sweep current limit closed loop Ki	0 to 1000	800	-	Changeable at any time	"BC-13" on page 702
BC-14	0xBC0E	Speed tracking current	30% to 200%	80	%	Changeable only at stop	"BC-14" on page 702
BC-15	0xBC0F	Current loop multiple	10% to 600%	100	%	Changeable at any time	"BC-15" on page 702
BC-16	0xBC10	Demagnetization time (valid for asynchronous motors)	0.00s to 5.00s	0.50	s	Changeable at any time	"BC-16" on page 702
BC-17	0xBC11	Overexcitation enable	0: Disabled 2: Enabled during deceleration 3: Enabled always	0	-	Changeable at any time	"BC-17" on page 702
BC-18	0xBC12	Overexcitation suppression current	0% to 150%	100	%	Changeable at any time	"BC-18" on page 703
BC-19	0xBC13	Overexcitation gain	0.01 to 2.50	1.25	-	Changeable at any time	"BC-19" on page 703

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BC-20	0xBC14	Parameter auto-tuning upon startup	Bit00: Synchronous motor pole position auto-tuning upon startup 0: Disabled 1: Enabled Bit01: Quick stator resistance auto-tuning upon startup 0: Disabled 1: Enabled Bit02–Bit03: HFI pole position auto-tuning 0: Disabled 1: Enabled 2: Adaptive Bit04: IGBT shoot-through self-check upon startup 0: Disabled 1: Enabled Bit05: Short-to-ground self-check upon startup (reserved) 0: Disabled 1: Enabled Bit06: Phase loss self-check upon startup (reserved) 0: Disabled 1: Enabled	1	-	Changeable only at stop	"BC-20" on page 703
BC-21	0xBC15	Auto-tuning direction	0 to 1	1	-	Changeable only at stop	"BC-21" on page 704
BC-22	0xBC16	Oscillation suppression gain of synchronous motor back EMF auto-tuning	0.0 to 30.0	3.2	-	Changeable only at stop	"BC-22" on page 704
BC-23	0xBC17	Target speed of rotation auto-tuning	30.0% to 100.0%	70.0	%	Changeable only at stop	"BC-23" on page 704
BC-24	0xBC18	Target speed 1 of inertia auto-tuning	10.0% to BC-25	40.0	%	Changeable only at stop	"BC-24" on page 705
BC-25	0xBC19	Target speed 2 of inertia auto-tuning	BC-24 to 100.0%	60.0	%	Changeable only at stop	"BC-25" on page 705
BC-26	0xBC1A	Overcurrent prevention of mutual inductance saturation curve	0 to 1	1	-	Changeable only at stop	"BC-26" on page 705

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BC-27	0xBC1B	Auto-tuning items	Bit00: Speed loop parameter adaptation 0: Disabled 1: Enabled Bit01: Current loop parameter adaptation 0: Disabled 1: Enabled Bit02: Drive nonlinear auto-tuning 0: Disabled 1: Enabled Bit03: Inter-phase deviation coefficient auto-tuning 0: Disabled 1: Enabled Bit04: Auto-tuning of initial pole position of synchronous motor 0: Disabled 1: Enabled Bit05: Auto-tuning of D- and Q-axis inductance model of synchronous motor 0: Disabled 1: Enabled Bit06: System inertia auto-tuning 0: Disabled 1: Enabled Bit07: HFI pole position auto-tuning 0: Disabled 1: Enabled	117	-	Changeable only at stop	"BC-27" on page 705
BC-28	0xBC1C	OFF3 stop mode	0: Quick stop 1: Stop at maximum capability	0	-	Changeable only at stop	"BC-28" on page 706
BC-29	0xBC1D	Stop mode during running	0: OFF1 stop mode 1: OFF2 stop mode 2: OFF3 stop mode	1	-	Changeable only at stop	"BC-29" on page 706
BC-30	0xBC1E	Stop mode for torque control	0: Coast to stop forcibly 1: Switch to speed control mode and then stop 2: Maintain torque control mode until zero speed and then block	1	-	Changeable only at stop	"BC-30" on page 707
BC-32	0xBC20	Proportional gain adjustment coefficient	0.1 to 2.0	1.0	-	Changeable at any time	"BC-32" on page 707
BC-33	0xBC21	Integral gain adjustment coefficient	0.1 to 2.0	1.0	-	Changeable at any time	"BC-33" on page 707
BC-34	0xBC22	Zero-speed threshold	0.1% to 200.0%	2.0	%	Changeable at any time	"BC-34" on page 707
BC-35	0xBC23	Zero-speed stop delay	0.00s to 10.00s	0.10	s	Changeable only at stop	"BC-35" on page 707
BC-36	0xBC24	Reference source execution interval	0 to 20	4	-	Changeable only at stop	"BC-36" on page 708

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BC-37	0xBC25	Trial current for speed tracking of synchronous motor	5.0% to 50.0%	10.0	%	Changeable only at stop	"BC-37" on page 708
BC-38	0xBC26	Minimum frequency for speed tracking of synchronous motor	0.0 Hz to 100.0 Hz	0.0	Hz	Changeable only at stop	"BC-38" on page 708
BC-39	0xBC27	Angle compensation for speed tracking of synchronous motor	0 to 360	0	-	Changeable only at stop	"BC-39" on page 708
BC-40	0xBC28	Parameter auto-tuning of synchronous motor upon startup	0 to 1	0	-	Changeable at any time	"BC-40" on page 708
BC-41	0xBC29	Current motor angle	0 to 65535	0	-	Unchangeable	"BC-41" on page 709
BC-42	0xBC2A	Forward torque limit 1	0.0 to 400.0	150.0	-	Changeable at any time	"BC-42" on page 709
BC-43	0xBC2B	Reverse torque limit 1	0.0 to 400.0	150.0	-	Changeable at any time	"BC-43" on page 709
BC-44	0xBC2C	Source of forward torque limit 2	0: 400% Others: F connector	0	-	Changeable at any time	"BC-44" on page 709
BC-45	0xBC2D	Source of reverse torque limit 2	0: –400% Others: F connector	0	-	Changeable at any time	"BC-45" on page 709
BC-46	0xBC2E	Ramp (FRG) selection bit0	0: 0 1: 1 2: Terminal function input 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"BC-46" on page 710
BC-47	0xBC2F	Ramp (FRG) selection bit1	Same as BC-46	0	-	Changeable at any time	"BC-47" on page 710

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BC-50	0xBC32	Motor overload protection	0: Disabled 1: Enabled	1	-	Changeable at any time	"BC-50" on page 711
BC-51	0xBC33	Motor overload protection gain	0.20 to 10.00	1.00	-	Changeable at any time	"BC-51" on page 711
BC-52	0xBC34	Motor overload pre-warning coefficient	50% to 100%	80	%	Changeable at any time	"BC-52" on page 711
BC-53	0xBC35	Overvoltage stall suppression gain	1 to 100	30	-	Changeable at any time	"BC-53" on page 712
BC-54	0xBC36	Overvoltage stall protection voltage	330.0 V to 800.0 V	770.0	V	Changeable at any time	"BC-54" on page 712
BC-55	0xBC37	Input phase loss/ Contactor pickup protection	Ones: Input phase loss protection 0: Disabled 1: Protection enabled when both software and hardware input phase loss conditions are met 2: Protection enabled when software input phase loss conditions are met 3: Protection enabled when hardware input phase loss conditions are met Tens: Contactor pickup protection 0: Disabled 1: Enabled	11	-	Changeable at any time	"BC-55" on page 712
BC-56	0xBC38	Output phase loss protection	Ones: Output phase loss protection upon power-on 0: Disabled 1: Enabled Tens: Output phase loss protection before running 0: Disabled 1: Enabled	1	-	Changeable at any time	"BC-56" on page 712
BC-57	0xBC39	Power dip ride-through	0: Disabled 1: Decelerate 2: Decelerate to stop 3: Suppress voltage dip	0	-	Changeable only at stop	"BC-57" on page 713
BC-58	0xBC3A	Voltage threshold for disabling power dip ride-through	80% to 100%	85	%	Changeable only at stop	"BC-58" on page 713
BC-59	0xBC3B	Delay of voltage recovery from power dip	0.0s to 100.0s	0.5	s	Changeable only at stop	"BC-59" on page 713
BC-60	0xBC3C	Voltage threshold for enabling power dip ride-through	60% to 100%	80	%	Changeable only at stop	"BC-60" on page 713
BC-61	0xBC3D	Protection upon load loss	0: Disabled 1: Enabled	0	-	Changeable at any time	"BC-61" on page 714
BC-62	0xBC3E	Load loss detection level	0.0% to +100.0%	10.0	%	Changeable at any time	"BC-62" on page 714

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BC-63	0xBC3F	Load loss detection time	0.0s to 60.0s	1.0	s	Changeable at any time	"BC-63" on page 714
BC-64	0xBC40	Overspeed detection level	0.0% to 50.0%	20.0	%	Changeable at any time	"BC-64" on page 714
BC-65	0xBC41	Overspeed detection time	0.0s to 60.0s	1.0	s	Changeable at any time	"BC-65" on page 714
BC-66	0xBC42	Detection level of excessive speed deviation	0.0% to 50.0%	20.0	%	Changeable at any time	"BC-66" on page 715
BC-67	0xBC43	Detection time of excessive speed deviation	0.0s to 60.0s	5.0	s	Changeable at any time	"BC-67" on page 715
BC-68	0xBC44	Power dip ride-through gain Kp	1 to 100	40	-	Changeable at any time	"BC-68" on page 715
BC-69	0xBC45	Power dip ride-through integral coefficient Ki	1 to 100	30	-	Changeable at any time	"BC-69" on page 715
BC-70	0xBC46	Deceleration time of power dip ride-through	0.0s to 300.0s	20.0	s	Changeable at any time	"BC-70" on page 715
BC-71	0xBC47	Voltage dip suppression time	0.1s to 600.0s	0.5	s	Changeable at any time	"BC-71" on page 715
BC-72	0xBC48	Motor protection	Bit00: Motor overload determination (reserved) Bit01: Motor overheat detection (reserved) Bit02: PG fault detection (reserved) Bit03: Current control error detection Bit04: Motor stall error detection Bit05: Locked-rotor detection Bit06: Synchronous motor demagnetization protection Bit07: Protection against locked-rotor in SVC speed open-loop control Bit08: Reserved Bit09: Parameter setting error	537	-	Changeable at any time	"BC-72" on page 716
BC-73	0xBC49	Locked-rotor time	0.0s to 65.0s	2.0	s	Changeable at any time	"BC-73" on page 716
BC-74	0xBC4A	Locked-rotor frequency	0.0% to 600.0%	6.0	%	Changeable at any time	"BC-74" on page 716
BC-75	0xBC4B	Motor stall detection time	0.0s to 10.0s	0.5	s	Changeable at any time	"BC-75" on page 716
BC-76	0xBC4C	Stall detection threshold	0.0% to +100.0%	30.0	%	Changeable at any time	"BC-76" on page 717
BC-77	0xBC4D	Current control exception detection time	0.00s to 1.00s	0.05	s	Changeable at any time	"BC-77" on page 717

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BC-78	0xBC4E	Current control exception detection threshold	0.0% to 200.0%	25.0	%	Changeable at any time	"BC-78" on page 717
BC-79	0xBC4F	Synchronous motor overcurrent threshold	0.0% to 500.0%	300.0	%	Changeable at any time	"BC-79" on page 717
BC-81	0xBC51	Speed deviation detection	0 to 1	1	-	Changeable at any time	"BC-81" on page 717
BC-82	0xBC52	Skip frequency 1	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	"BC-82" on page 718
BC-83	0xBC53	Skip frequency 2	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	"BC-83" on page 718
BC-84	0xBC54	Skip frequency 3	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	"BC-84" on page 718
BC-85	0xBC55	Skip frequency 4	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	"BC-85" on page 718
BC-86	0xBC56	Skip frequency band	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	"BC-86" on page 718
BC-87	0xBC57	Source of frequency upper limit	0: F0-12 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication Others: F connector	0	-	Changeable only at stop	"BC-87" on page 719
BC-88	0xBC58	Frequency upper limit	BC-90 to F0-10	50.00	Hz	Changeable at any time	"BC-88" on page 719
BC-89	0xBC59	Frequency upper limit offset	0.00 Hz to F0-10 (maximum frequency)	0.00	Hz	Changeable at any time	"BC-89" on page 719
BC-90	0xBC5A	Frequency lower limit	0.00 Hz to BC-88	0.00	Hz	Changeable at any time	"BC-90" on page 719
BC-91	0xBC5B	Speed/Torque control mode	0: Speed control 1: Torque control	0	-	Changeable at any time	"BC-91" on page 719
BD-00	0xBD00	Asynchronous motor FVC model switchover frequency	0% to 1000%	20	%	Changeable only at stop	"BD-00" on page 720
BD-01	0xBD01	Asynchronous motor FVC model switchover hysteresis frequency	10% to 50%	20	%	Changeable only at stop	"BD-01" on page 720
BD-02	0xBD02	Asynchronous motor FVC observer filter time	5 ms to 100 ms	15	ms	Changeable only at stop	"BD-02" on page 720

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BD-03	0xBD03	Asynchronous motor FVC current model mode	0 to 1	0	-	Changeable only at stop	"BD-03" on page 720
BD-04	0xBD04	Asynchronous motor FVC pre-excitation output observation angle mode	0 to 1	0	-	Changeable only at stop	"BD-04" on page 721
BD-05	0xBD05	Asynchronous motor SVC model switchover frequency	10% to 20%	15	%	Changeable only at stop	"BD-05" on page 721
BD-06	0xBD06	Asynchronous motor SVC observer filter time	5 ms to 50 ms	10	ms	Changeable at any time	"BD-06" on page 721
BD-07	0xBD07	Asynchronous motor SVC observer gain 1	10% to 500%	100	%	Changeable at any time	"BD-07" on page 721
BD-08	0xBD08	Asynchronous motor SVC observer gain 2	10% to 100%	20	%	Changeable at any time	"BD-08" on page 721
BD-09	0xBD09	Asynchronous motor SVC observer mode	0 to 3	0	-	Changeable only at stop	"BD-09" on page 721
BD-10	0xBD0A	Asynchronous motor SVC pre-excitation mode	0 to 1	0	-	Changeable only at stop	"BD-10" on page 722
BD-11	0xBD0B	Asynchronous motor SVC speed tracking mode	0 to 1	0	-	Changeable only at stop	"BD-11" on page 722
BD-14	0xBD0E	Synchronous motor 1 model control	Bit00: Low speed processing Bit01: Low speed processing 1 Bit02: Online auto-tuning of resistance Bit03: Online auto-tuning of back EMF Bit04: KS	5	-	Changeable at any time	"BD-14" on page 722
BD-15	0xBD0F	Synchronous motor model K1	10 to 3000	200	-	Changeable at any time	"BD-15" on page 722
BD-16	0xBD10	Synchronous motor model K1Max	100 to 6000	3000	-	Changeable at any time	"BD-16" on page 723
BD-17	0xBD11	Synchronous motor model KsMin	0.0 to 4.0	0.3	-	Changeable at any time	"BD-17" on page 723
BD-18	0xBD12	Synchronous motor model Kspeed	50 to 2000	400	-	Changeable at any time	"BD-18" on page 723
BD-19	0xBD13	Synchronous motor frequency filter time constant	2 ms to 100 ms	10	ms	Changeable at any time	"BD-19" on page 723

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BD-20	0xBD14	Frequency upper limit of synchronous motor Rs online auto-tuning	1.0% to 20.0%	3.5	%	Changeable at any time	"BD-20" on page 723
BD-21	0xBD15	Synchronous motor model Kr	0 to 50	10	-	Changeable at any time	"BD-21" on page 723
BD-22	0xBD16	Synchronous motor model Kr1	0 to 50	5	-	Changeable at any time	"BD-22" on page 724
BD-23	0xBD17	Synchronous motor low-speed D axis injection current	0% to 100%	20	%	Changeable at any time	"BD-23" on page 724
BD-24	0xBD18	Synchronous motor model LowFreqTime1	0 to 500	50	-	Changeable at any time	"BD-24" on page 724
BD-27	0xBD1B	Frequency lower limit of back EMF online auto-tuning	10% to 100%	25	%	Changeable at any time	"BD-27" on page 724
BD-28	0xBD1C	Synchronous motor model LowFreq	0.0% to 2.0%	0.3	%	Changeable at any time	"BD-28" on page 724
BD-29	0xBD1D	Synchronous motor model LowFreqTime	0 to 100	10	-	Changeable at any time	"BD-29" on page 725
BD-30	0xBD1E	Percentage of pole auto-tuning current	50% to 200%	100	%	Changeable at any time	"BD-30" on page 725
BD-31	0xBD1F	Percentage of high frequency response current	0% to 100%	25	%	Changeable at any time	"BD-31" on page 725
BD-32	0xBD20	Percentage of HFI and SVC switching frequency	0% to 30%	10	%	Changeable at any time	"BD-32" on page 725
BD-33	0xBD21	Observer parameter	10 to 200	100	-	Changeable at any time	"BD-33" on page 725
BD-34	0xBD22	Speed filter cut-off frequency	1 Hz to 200 Hz	10	Hz	Changeable at any time	"BD-34" on page 726
BD-35	0xBD23	Carrier frequency during NS auto-tuning	2.00 Hz to 16.00 Hz	8.00	Hz	Changeable at any time	"BD-35" on page 726
BD-36	0xBD24	Automatic calculation of NS auto-tuning voltage	0: Disabled 1: Enabled	1	-	Changeable at any time	"BD-36" on page 726
BD-37	0xBD25	Percentage of NS auto-tuning voltage set manually	0% to 100%	10	%	Changeable at any time	"BD-37" on page 726

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BD-38	0xBD26	Duration of HFI stage 1	50 ms to 500 ms	150	ms	Changeable at any time	"BD-38" on page 726
BD-40	0xBD28	Speed loop proportional gain 1	1 to 100	30	-	Changeable at any time	"BD-40" on page 727
BD-41	0xBD29	Speed loop integral time 1	0.01s to 10.00s	0.50	s	Changeable at any time	"BD-41" on page 727
BD-42	0xBD2A	Switchover frequency 1	0.00 Hz to BD-45	5.00	Hz	Changeable at any time	"BD-42" on page 727
BD-43	0xBD2B	Speed loop proportional gain 2	1 to 100	20	-	Changeable at any time	"BD-43" on page 727
BD-44	0xBD2C	Speed loop integral time 2	0.01s to 10.00s	1.00	s	Changeable at any time	"BD-44" on page 727
BD-45	0xBD2D	Switchover frequency 2	BD-42 to F0-10	10.00	Hz	Changeable at any time	"BD-45" on page 728
BD-46	0xBD2E	Vector control slip gain	50% to 200%	100	%	Changeable at any time	"BD-46" on page 728
BD-47	0xBD2F	Speed feedback filter time in SVC mode	0.000s to 0.100s	0.015	s	Changeable at any time	"BD-47" on page 728
BD-49	0xBD31	Torque upper limit source in speed control mode (motoring)	0: Digital setting (F2-10) 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: MIN (AI1, AI2) 7: MAX (AI1, AI2) Others: F connector	0	-	Changeable at any time	"BD-49" on page 728
BD-50	0xBD32	Torque upper limit in speed control mode	0.0% to 200.0%	150.0	%	Changeable at any time	"BD-50" on page 728
BD-51	0xBD33	Torque upper limit source in speed control mode (generating)	0: Digital setting (F2-10) 1: AI1 2: AI2 3: AI3 4: Pulse reference (DI5) 5: Communication 6: MIN (AI1, AI2) 7: MAX (AI1, AI2) 8: Digital setting (F2-12) Others: F connector	0	-	Changeable at any time	"BD-51" on page 729
BD-52	0xBD34	Torque upper limit in speed control mode (generating)	0.0% to 200.0%	150.0	%	Changeable at any time	"BD-52" on page 729

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BD-53	0xBD35	Field weakening mode	0: No field weakening 1: Auto adjustment 2: Calculation+Auto adjustment	1	-	Changeable only at stop	"BD-53" on page 729
BD-54	0xBD36	Field weakening gain	1 to 50	5	-	Changeable at any time	"BD-54" on page 730
BD-57	0xBD39	Generating power limiting	0: Disabled 1: Enabled in the whole process 2: Enabled at constant speed 3: Enabled during deceleration	0	-	Changeable at any time	"BD-57" on page 730
BD-58	0xBD3A	Generating power upper limit	0.0% to 200.0%	20.0	%	Changeable at any time	"BD-58" on page 730
BD-59	0xBD3B	Motor 3 control mode	0: SVC 1: FVC 2: V/f	2	-	Changeable only at stop	"BD-59" on page 730
BD-60	0xBD3C	Initial position angle detection current of synchronous motor	50 to 180	80	-	Changeable only at stop	"BD-60" on page 731
BD-61	0xBD3D	Initial position angle detection of synchronous motor	0: Detected upon running 1: Not detected 2: Detected upon initial running after power-on	0	-	Changeable at any time	"BD-61" on page 731
BD-63	0xBD3F	Salient pole rate adjustment gain of synchronous motor	0.20 to 3.00	1.00	-	Changeable at any time	"BD-63" on page 731
BD-64	0xBD40	Maximum torque-to-current ratio control of synchronous motor	0: Disabled 1: Enabled	1	-	Changeable at any time	"BD-64" on page 731
BD-65	0xBD41	Z signal correction	0: Disabled 1: Enabled	1	-	Changeable at any time	"BD-65" on page 732
BD-67	0xBD43	Low speed carrier frequency	0.8 kHz to F0-15	2.0	kHz	Changeable at any time	"BD-67" on page 732
BD-68	0xBD44	Position lock	0 to 1	0	-	Changeable at any time	"BD-68" on page 732
BD-69	0xBD45	Switchover frequency	0.00 Hz to BD-42	0.30	Hz	Changeable at any time	"BD-69" on page 732
BD-70	0xBD46	Position lock speed loop proportional gain	1 to 100	10	-	Changeable at any time	"BD-70" on page 732
BD-71	0xBD47	Position lock speed loop integral time	0.01s to 10.00s	0.50	s	Changeable at any time	"BD-71" on page 733

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BD-74	0xBD4A	Auto-tuning free mode	0: Disabled 1: Auto-tuning upon initial running after power-on 2: Auto-tuning upon running	0	-	Changeable at any time	"BD-74" on page 733
BD-76	0xBD4C	Initial position compensation angle	0.0 to 359.9	0.0	-	Changeable at any time	"BD-76" on page 733
BD-80	0xBD50	Speed loop command word	Bit00: Speed loop 0: Disabled 1: Enabled Bit01: Integration mode 0: Conventional integration 1: Position integration Bit02: Acceleration torque 0: Disabled 1: Enabled Bit03–Bit04: Acceleration source 0: Function transfer torque 1: Automatic calculation 2: Function transfer acceleration Bit05: Anti-load disturbance 0: Disabled 1: Enabled	11	-	Changeable at any time	"BD-80" on page 733
BD-81	0xBD51	Locked-rotor fast integral cancel coefficient	0.0% to +100.0%	0.0	%	Changeable at any time	"BD-81" on page 734
BD-82	0xBD52	Integral torque	–100% to +100.0%	0.0	%	Changeable at any time	"BD-82" on page 734
BD-83	0xBD53	Speed controller frequency window size	0.00 Hz to 10.00 Hz	0.00	Hz	Changeable only at stop	"BD-83" on page 734
BD-84	0xBD54	Current filter time for torque reference	0.0 ms to 100.0 ms	0.0	ms	Changeable only at stop	"BD-84" on page 735
BD-85	0xBD55	Acceleration torque	0: Inactive 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"BD-85" on page 735
BD-87	0xBD57	Reference model bandwidth	0.00 Hz to 300.00 Hz	0.00	Hz	Changeable at any time	"BD-87" on page 735
BD-88	0xBD58	Torque feedforward coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"BD-88" on page 735

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BD-89	0xBD59	Vector control reference frequency filter time	0.0 ms to 100.0 ms	0.0	ms	Changeable only at stop	"BD-89" on page 735
BD-90	0xBD5A	Vector control feedback frequency filter time	0.0 ms to 100.0 ms	0.0	ms	Changeable only at stop	"BD-90" on page 736
BD-91	0xBD5B	Load observation bandwidth	0.00 Hz to 300.00 Hz	0.00	Hz	Changeable at any time	"BD-91" on page 736
BD-92	0xBD5C	Load observation coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"BD-92" on page 736
BD-93	0xBD5D	Pseudo integral coefficient	0.000 to 10.000	1.000	-	Changeable at any time	"BD-93" on page 736
BD-94	0xBD5E	Torque coefficient enable	0: Disabled 1: Enabled	0	-	Changeable at any time	"BD-94" on page 736
BD-96	0xBD60	Center frequency of notch filter 1	0.0 to 4000.0	4000.0	-	Changeable at any time	"BD-96" on page 737
BD-97	0xBD61	Center frequency of notch filter 2	0.0 to 4000.0	4000.0	-	Changeable at any time	"BD-97" on page 737
BD-98	0xBD62	Integral setting control word	0: Disabled 1: Enabled Others: B connector	0	-	Changeable at any time	"BD-98" on page 737
BD-99	0xBD63	Integral reference source	0: Digital setting 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"BD-99" on page 737
BE-00	0xBE00	Externally transferred acceleration	0: Inactive 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"BE-00" on page 738
BE-03	0xBE03	Overturning torque limiting coefficient	0.0% to 400.0%	100.0	%	Changeable at any time	"BE-03" on page 738
BE-04	0xBE04	Motoring power limiting coefficient	0.0% to 400.0%	400.0	%	Changeable at any time	"BE-04" on page 738

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BE-05	0xBE05	Generating power limiting coefficient	0.0% to 400.0%	400.0	%	Changeable at any time	"BE-05" on page 739
BE-06	0xBE06	Overspeed limiting enable	0 to 1	1	-	Changeable at any time	"BE-06" on page 739
BE-07	0xBE07	Sine wave frequency of bandwidth test	0 Hz to 1000 Hz	0	Hz	Changeable at any time	"BE-07" on page 739
BE-08	0xBE08	Sine wave amplitude of bandwidth test	0% to 100%	0	%	Changeable at any time	"BE-08" on page 739
BE-09	0xBE09	Bandwidth test enable	0 to 4	0	-	Changeable at any time	"BE-09" on page 739
BE-11	0xBE0B	Speed loop parameter calculation mode	0: New solution 1: Compatible solution	1	-	Changeable only at stop	"BE-11" on page 740
BE-12	0xBE0C	Speed loop proportional gain in FVC mode	0.00 Hz to 100.00 Hz	8.00	Hz	Changeable at any time	"BE-12" on page 740
BE-13	0xBE0D	Speed loop integral time in FVC mode	0.000s to 20.000s	0.080	s	Changeable at any time	"BE-13" on page 740
BE-14	0xBE0E	Speed loop proportional gain in SVC mode	0.00 Hz to 100.00 Hz	5.00	Hz	Changeable at any time	"BE-14" on page 740
BE-15	0xBE0F	Speed loop integral time in SVC mode	0.000s to 20.000s	0.127	s	Changeable at any time	"BE-15" on page 740
BE-16	0xBE10	Low frequency proportional correction coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"BE-16" on page 741
BE-17	0xBE11	Low frequency integral correction coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"BE-17" on page 741
BE-18	0xBE12	Speed loop adaption factor	0.000 to 10.000	0.200	-	Changeable at any time	"BE-18" on page 741
BE-19	0xBE13	Speed loop adaption switchover lower limit	0.000 to 10.000	0.400	-	Changeable at any time	"BE-19" on page 741
BE-20	0xBE14	Speed loop adaption switchover upper limit	0.000 to 10.000	1.000	-	Changeable at any time	"BE-20" on page 741
BE-21	0xBE15	Speed loop adaption correction upper limit	0.0% to 1000.0%	100.0	%	Changeable at any time	"BE-21" on page 742

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BE-22	0xBE16	Speed loop adaption correction lower limit	0.0% to 1000.0%	100.0	%	Changeable at any time	"BE-22" on page 742
BE-23	0xBE17	Flux adaptation enable	0 to 1	0	-	Changeable at any time	"BE-23" on page 742
BE-24	0xBE18	Overspeed controller correction coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"BE-24" on page 742
BE-25	0xBE19	VDC control command word	Bit00: VdcMin 0: Disabled 1: Enabled Bit01: VdcMax 0: Disabled 1: Enabled Bit02: Automatic calculation of VDC trigger voltage 0: Disabled 1: Enabled Bit03: VDC control integral action 0: Disabled 1: Enabled	0	-	Changeable at any time	"BE-25" on page 742
BE-26	0xBE1A	Bus capacitance ratio	50.0% to 1000.0%	100.0	%	Changeable at any time	"BE-26" on page 743
BE-27	0xBE1B	Undervoltage suppression exit hysteresis frequency	0.00 Hz to 10.00 Hz	3.00	Hz	Changeable at any time	"BE-27" on page 743
BE-28	0xBE1C	Minimum VDC failure speed threshold	0.00 Hz to 20.00 Hz	2.00	Hz	Changeable at any time	"BE-28" on page 743
BE-29	0xBE1D	Dynamic adjustment coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"BE-29" on page 743
BE-30	0xBE1E	Minimum VDC activation voltage	320.0 V to 540.0 V	430.0	V	Changeable at any time	"BE-30" on page 744
BE-31	0xBE1F	Maximum VDC activation voltage	650.0 V to 800.0 V	770.0	V	Changeable at any time	"BE-31" on page 744

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BE-32	0xBE20	Flux linkage control command word	Bit00: Output voltage limit calculation filtering mode 0: Symmetric filtering 1: Asymmetric filtering Bit01: Asynchronous motor inverse proportion curve calculation 0: The inverse proportional synchronization frequency decreases. 1: The inverse proportional speed decreases. Bit02: Flux linkage feedforward calculation by using inverse proportional speed 0: Disabled 1: Enabled Bit03: Reserved Bit04: Reserved Bit05: Field weakening adjustment 0: Disabled 1: Enabled Bit06: Flux linkage derivative feedforward 0: Disabled 1: Enabled Bit07: Energy conservation control 0: Disabled 1: Enabled Bit08: Asynchronous motor flux closed loop 0: Disabled 1: Enabled Bit09: Reserved Bit10: Reserved Bit11: Asynchronous motor pre-excitation mode 0: Pre-excitation based on time 1: Pre-excitation based on current Bit12: Asynchronous motor pre-excitation current 0: Reference current 1: Maximum current allowed by the drive	2357	-	Changeable at any time	" BE-32" on page 744
BE-33	0xBE21	Output voltage upper limit margin for field weakening adjustment	1% to 50%	5	%	Changeable at any time	" BE-33" on page 746
BE-34	0xBE22	Output voltage upper limit margin for auto adjustment of field weakening	1% to 20%	3	%	Changeable at any time	" BE-34" on page 746
BE-35	0xBE23	Filter time for calculating maximum output voltage	0 ms to 3000 ms	30	ms	Changeable at any time	" BE-35" on page 746

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BE-36	0xBE24	Rated flux adjustment coefficient for calculation	0.5 to 2.0	1.0	-	Changeable at any time	"BE-36" on page 746
BE-37	0xBE25	Field weakening frequency adjustment coefficient for calculation	0.8 to 1.2	1.0	-	Changeable at any time	"BE-37" on page 747
BE-38	0xBE26	Slip filter time for calculating field weakening frequency	0 ms to 3000 ms	62	ms	Changeable at any time	"BE-38" on page 747
BE-39	0xBE27	Feedback speed filtering	0 ms to 8000 ms	50	ms	Changeable at any time	"BE-39" on page 747
BE-40	0xBE28	Flux linkage rising filter time	0 ms to 8000 ms	20	ms	Changeable at any time	"BE-40" on page 747
BE-42	0xBE2A	Feedback voltage filter time	0 ms to 3000 ms	5	ms	Changeable at any time	"BE-42" on page 748
BE-43	0xBE2B	Maximum demagnetization current of synchronous motor	0% to 500%	300	%	Changeable at any time	"BE-43" on page 748
BE-44	0xBE2C	Voltage outer loop lower limit coefficient	0 to 500	50	-	Changeable at any time	"BE-44" on page 748
BE-45	0xBE2D	Flux linkage derivative feedforward coefficient	0.0 to 1.5	1.0	-	Changeable at any time	"BE-45" on page 748
BE-46	0xBE2E	Flux linkage derivative feedforward filter time	0 ms to 3000 ms	6	ms	Changeable at any time	"BE-46" on page 748
BE-47	0xBE2F	Torque current rising filter time under energy conservation control	0 ms to 3000 ms	50	ms	Changeable at any time	"BE-47" on page 749
BE-48	0xBE30	Torque current falling filter time under energy conservation control	0 ms to 3000 ms	100	ms	Changeable at any time	"BE-48" on page 749

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BE-49	0xBE31	Flux linkage lower limit coefficient under energy conservation control	0.00 to 0.50	0.10	-	Changeable at any time	"BE-49" on page 749
BE-51	0xBE33	Pre-excitation current	1% to 200%	100	%	Changeable at any time	"BE-51" on page 749
BE-52	0xBE34	Pre-excitation time	1 ms to 30000 ms	1000	ms	Changeable at any time	"BE-52" on page 750
BE-53	0xBE35	Flux linkage closed-loop bandwidth frequency	0.0 Hz to 100.0 Hz	2.0	Hz	Changeable at any time	"BE-53" on page 750
BE-54	0xBE36	Feedback flux linkage filter time coefficient	0 to 200	4	-	Changeable at any time	"BE-54" on page 750
BE-55	0xBE37	Static output flux linkage filter time	0 ms to 5000 ms	10	ms	Changeable at any time	"BE-55" on page 750
BE-56	0xBE38	Current loop mode	0: ImCsr2 mode 1: Complex vector mode 2: 880 mode 3: No field weakening	1	-	Changeable only at stop	"BE-56" on page 750
BE-57	0xBE39	PI regulator proportional gain adaptation with load	0: Disabled 1: Enabled	0	-	Changeable only at stop	"BE-57" on page 751
BE-58	0xBE3A	Current loop damping	0.2 to 5.0	0.8	-	Changeable at any time	"BE-58" on page 751
BE-59	0xBE3B	Low-speed current loop Kp adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"BE-59" on page 751
BE-60	0xBE3C	High-speed current loop Kp adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"BE-60" on page 751
BE-61	0xBE3D	Low-speed current loop Ki adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"BE-61" on page 752
BE-62	0xBE3E	High-speed current loop Ki adjustment	0.1 to 10.0	2.0	-	Changeable at any time	"BE-62" on page 752
BE-63	0xBE3F	D-axis current loop complex vector adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"BE-63" on page 752
BE-64	0xBE40	Q-axis current loop complex vector adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"BE-64" on page 752

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BE-65	0xBE41	Complex vector hysteresis frequency lower limit as a percentage of rated frequency	0% to BE-66	0	%	Changeable at any time	"BE-65" on page 752
BE-66	0xBE42	Complex vector hysteresis frequency upper limit as a percentage of rated frequency	BE-65 to 150%	0	%	Changeable at any time	"BE-66" on page 753
BE-67	0xBE43	ImCsr2 hysteresis switchover voltage upper limit as a percentage of saturation voltage	BE-68 to 95%	89	%	Changeable at any time	"BE-67" on page 753
BE-68	0xBE44	ImCsr2 hysteresis switchover voltage lower limit as a percentage of saturation voltage	60% to BE-67	79	%	Changeable at any time	"BE-68" on page 753
BE-69	0xBE45	ImCsr2 hysteresis switchover frequency hysteresis range as a percentage of rated frequency	1% to 30%	10	%	Changeable at any time	"BE-69" on page 753
BE-70	0xBE46	ImCsr2 hysteresis switchover frequency lower limit (below which the hysteresis condition does not take effect) as a percentage of the rated frequency	40% to 80%	60	%	Changeable at any time	"BE-70" on page 753
BE-71	0xBE47	ImCsr2 current loop Kss adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"BE-71" on page 754
BE-72	0xBE48	Proportional gain adjustment coefficient corresponding to the maximum torque when proportional gain is adjusted with load	0.1 to 1.0	0.5	-	Changeable at any time	"BE-72" on page 754

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BE-73	0xBE49	Torque upper limit setpoint as a percentage of rated torque when proportional gain is adjusted with load	BE-74 to 300%	200	%	Changeable at any time	"BE-73" on page 754
BE-74	0xBE4A	Torque lower limit setpoint as a percentage of rated torque when proportional gain is adjusted with load	0.0% to BE-73	100	%	Changeable at any time	"BE-74" on page 754
BE-75	0xBE4B	Derivative feedforward adjustment	0.0 to 1.0	0.0	-	Changeable at any time	"BE-75" on page 755
BE-76	0xBE4C	Decoupling control start frequency as a percentage of rated frequency	20% to 150%	40	%	Changeable at any time	"BE-76" on page 755
BE-77	0xBE4D	Decoupling control filter time adjustment coefficient	0.1 to 3.0	1.0	-	Changeable at any time	"BE-77" on page 755
BE-78	0xBE4E	Decoupling control output adjustment coefficient	0.0 to 1.0	1.0	-	Changeable at any time	"BE-78" on page 755
BE-79	0xBE4F	CPC feedforward enable	0: Disabled 1: Enabled	0	-	Changeable at any time	"BE-79" on page 755
BE-80	0xBE50	Current loop auxiliary command word	Bit00: Complex vector angle limiting 0: Disabled 1: Enabled Bit01: Voltage angle limiting 0: Program internal limiting 1: Parameter setting Bit02: 0 by default 0: No lower limit on the excitation current is imposed during the dynamic process. 1: A lower limit on the excitation current is imposed during the dynamic process in ImCsr2 mode. Bit03–Bit15: Reserved (0 by default)	0	-	Changeable at any time	"BE-80" on page 756
BE-81	0xBE51	Voltage angle upper limit	90° to 180°	150	°	Changeable at any time	"BE-81" on page 756
BE-82	0xBE52	Voltage angle lower limit	0° to 90°	30	°	Changeable at any time	"BE-82" on page 756

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BE-83	0xBE53	Asynchronous motor D axis integral limit	0.500 to 1.000	0.707	-	Changeable at any time	"BE-83" on page 756
BE-84	0xBE54	Current loop carrier frequency upper limit	5.0 to 16.0	8.0	-	Changeable at any time	"BE-84" on page 757
BE-85	0xBE55	Droop enable	0 to 1	0	-	Changeable only at stop	"BE-85" on page 757
BE-86	0xBE56	Droop source	0: Line current 1: Torque reference 2: Speed adjustment output 3: Speed adjustment integral component	1	-	Changeable only at stop	"BE-86" on page 757
BE-87	0xBE57	Frequency reference droop coefficient	0.0% to 50.0%	0.0	%	Changeable at any time	"BE-87" on page 757
BE-88	0xBE58	FVC-SVC switchover mode	0: No switchover 1: Active switchover 2: Passive switchover (The AC drive switches to SVC mode upon detection of encoder wire breakage, and it switches back to FVC mode when the encoder recovers during stop and does not switch back to FVC mode when the encoder recovers during running.) 3: Passive switchover (The AC drive switches to SVC mode upon detection of encoder wire breakage, and it switches back to FVC mode when the encoder recovers during running or stop.)	0	-	Changeable only at stop	"BE-88" on page 757
BE-89	0xBE59	FVC-SVC switchover frequency	10% to 500%	50	%	Changeable only at stop	"BE-89" on page 758
BE-90	0xBE5A	FVC-SVC switchover hysteresis	10% to 100%	10	%	Changeable only at stop	"BE-90" on page 758
BF-00	0xBF00	Minimum speed measurement interval of resolver	0.010s to 10.000s	0.450	s	Changeable only at stop	"BF-00" on page 758
BF-01	0xBF01	Dynamic parameter adaption factor	20.0% to 200.0%	100.0	%	Changeable only at stop	"BF-01" on page 758
BF-02	0xBF02	Saturation model auto-tuning voltage setting mode	0 to 1	1	-	Changeable at any time	"BF-02" on page 759
BF-03	0xBF03	Reserved 2 saturation model auto-tuning carrier frequency reference	0.0 to 10.0	6.0	-	Changeable at any time	"BF-03" on page 759

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BF-04	0xBF04	Saturation model auto-tuning target rated current multiple	0% to 250%	200	%	Changeable at any time	"BF-04" on page 759
BF-05	0xBF05	Saturation model auto-tuning manual voltage setpoint	0 to 4096	2000	-	Changeable at any time	"BF-05" on page 759
BF-06	0xBF06	Bus voltage filter time	0 ms to 10000 ms	0	ms	Changeable at any time	"BF-06" on page 759
BF-07	0xBF07	Inverter protection	Bit00: Pulse-by-pulse current limit protection (reserved) 0: Disabled 1: Enabled Bit01: Output phase loss (reserved) 0: Disabled 1: Enabled Bit02: Leakage current protection (reserved) 0: Disabled 1: Enabled Bit03: PL signal input phase loss detection (reserved) 0: Disabled 1: Enabled Bit04: Bus input phase loss detection (reserved) 0: Disabled 1: Enabled Bit05: Derating at low frequency 0: Disabled 1: Enabled Bit06: Reporting overvoltage upon shutdown 0: Enabled 1: Disabled Bit07: Zero drift detection fault 0: Disabled 1: Enabled Bit08: Pre-charge fault detection (reserved) 0: Disabled 1: Enabled Bit09: Bus voltage collection and analysis 0: Disabled 1: Enabled	128	-	Changeable at any time	"BF-07" on page 760
BF-09	0xBF09	AC drive pre-overload threshold	0.0% to +100.0%	90.0	%	Changeable at any time	"BF-09" on page 760
BF-12	0xBF0C	Input phase loss detection time	1.0s to 10.0s	2.0	s	Changeable at any time	"BF-12" on page 761
BF-13	0xBF0D	Allowable bus fluctuation range	10.0 V to 500.0 V	65.0	V	Changeable at any time	"BF-13" on page 761

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BF-14	0xBF0E	Module pre-overtemperature to overtemperature margin	0.0% to 60.0%	5.0	%	Changeable at any time	"BF-14" on page 761
BF-15	0xBF0F	Maximum output current	0.0% to 1000.0%	1000.0	%	Changeable at any time	"BF-15" on page 761
BF-16	0xBF10	PWM setting	Bit00: Carrier frequency adjusted with temperature 0: Disabled 1: Enabled Bit01: Carrier frequency adjusted with sync frequency 0: Disabled 1: Enabled Bit02–Bit03: 0: Asynchronous modulation 1: Pseudo synchronous modulation 2: Synchronous modulation (reserved) Bit04–Bit06: 0: CPWM 1: DPWM0 2: DPWM1 3: DPWM2 4: DPWM3 5: DPWMph Bit07: Deadzone compensation 0: Disabled 1: Enabled Bit08: Overmodulation mode 0: Amplitude 1: Phase	130	-	Changeable at any time	"BF-16" on page 761
BF-17	0xBF11	Hysteresis for adjusting carrier frequency with sync frequency	0.0 Hz to 100.0 Hz	3.0	Hz	Changeable at any time	"BF-17" on page 762
BF-18	0xBF12	Cut-off frequency for deadzone compensation	0.0 Hz to 600.0 Hz	70.0	Hz	Changeable at any time	"BF-18" on page 762
BF-19	0xBF13	Narrow pulse coefficient	0.0% to +100.0%	0.0	%	Changeable at any time	"BF-19" on page 762
BF-20	0xBF14	Start frequency for adjusting carrier frequency with sync frequency	0.0 Hz to 600.0 Hz	5.0	Hz	Changeable at any time	"BF-20" on page 763
BF-21	0xBF15	Modulation ratio limit	A5-05 to 115.5%	105.0	%	Changeable at any time	"BF-21" on page 763

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BF-22	0xBF16	Drive transistor voltage drop voltage	0.00 V to 5.00 V	0.80	V	Changeable only at stop	"BF-22" on page 763
BF-23	0xBF17	Current 1 of deadzone time curve	0.0% to 150.0%	1.0	%	Changeable only at stop	"BF-23" on page 763
BF-24	0xBF18	Current 2 of deadzone time curve	0.0% to 150.0%	2.0	%	Changeable only at stop	"BF-24" on page 763
BF-25	0xBF19	Current 3 of deadzone time curve	0.0% to 150.0%	5.0	%	Changeable only at stop	"BF-25" on page 764
BF-26	0xBF1A	Current 4 of deadzone time curve	0.0% to 150.0%	10.0	%	Changeable only at stop	"BF-26" on page 764
BF-27	0xBF1B	Current 5 of deadzone time curve	0.0% to 150.0%	20.0	%	Changeable only at stop	"BF-27" on page 764
BF-28	0xBF1C	Current 6 of deadzone time curve	0.0% to 150.0%	40.0	%	Changeable only at stop	"BF-28" on page 764
BF-29	0xBF1D	Current 7 of deadzone time curve	0.0% to 150.0%	60.0	%	Changeable only at stop	"BF-29" on page 764
BF-30	0xBF1E	Current 8 of deadzone time curve	0.0% to 150.0%	80.0	%	Changeable only at stop	"BF-30" on page 765
BF-31	0xBF1F	Time 1 of deadzone time curve	0.0% to 300.0%	10.0	%	Changeable only at stop	"BF-31" on page 765
BF-32	0xBF20	Time 2 of deadzone time curve	0.0% to 300.0%	20.0	%	Changeable only at stop	"BF-32" on page 765
BF-33	0xBF21	Time 3 of deadzone time curve	0.0% to 300.0%	50.0	%	Changeable only at stop	"BF-33" on page 765
BF-34	0xBF22	Time 4 of deadzone time curve	0.0% to 300.0%	80.0	%	Changeable only at stop	"BF-34" on page 765
BF-35	0xBF23	Time 5 of deadzone time curve	0.0% to 300.0%	90.0	%	Changeable only at stop	"BF-35" on page 766
BF-36	0xBF24	Time 6 of deadzone time curve	0.0% to 300.0%	90.0	%	Changeable only at stop	"BF-36" on page 766
BF-37	0xBF25	Time 7 of deadzone time curve	0.0% to 300.0%	90.0	%	Changeable only at stop	"BF-37" on page 766
BF-38	0xBF26	Time 8 of deadzone time curve	0.0% to 300.0%	90.0	%	Changeable only at stop	"BF-38" on page 766

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
BF-39	0xBF27	Detection of excessive leakage current	0: Disabled 1: Enabled	0	-	Changeable only at stop	"BF-39" on page 766
BF-40	0xBF28	Excessive leakage current fault threshold protection gain	50.0% to 100.0%	100.0	%	Changeable at any time	"BF-40" on page 767
BF-44	0xBF2C	Start voltage for actuating braking unit	200.0 V to 2000.0 V	760.0	V	Changeable at any time	"BF-44" on page 767
BF-45	0xBF2D	Load loss detection level	0.0% to +100.0%	10.0	%	Changeable at any time	"BF-45" on page 767
BF-46	0xBF2E	Load loss detection time	0.0s to 60.0s	1.0	s	Changeable at any time	"BF-46" on page 767
C0-00	0xC000	Communication mapping	0: Disabled 1: Enabled	0	-	Changeable at any time	"C0-00" on page 767
C0-01	0xC001	Automatic address detection	0: Disabled 1: Reset detection (overwriting the index) 2: Incremental detection (without overwriting the index)	0	-	Changeable at any time	"C0-01" on page 768
C0-02	0xC002	Automatic address detection time	0s to 65535s	60	s	Changeable at any time	"C0-02" on page 768
C0-03	0xC003	Confirmation of automatic address detection	0: Cancel 1: Confirm	0	-	Changeable at any time	"C0-03" on page 768
C0-04	0xC004	Data transmission endian mode	Ones: RX data 0: Low-order bytes before high-order bytes 1: High-order bytes before low-order bytes	0	-	Changeable at any time	"C0-04" on page 768

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C0-05	0xC005	Read data type selection 1	Ones: Read index 1 0: UInt16 1: Int16 2: UInt32 3: Int32 4: Unsigned Float32 5: Signed Float32 Tens: Read index 2 0: UInt16 1: Int16 2: UInt32 3: Int32 4: Unsigned Float32 5: Signed Float32 Hundreds: Read index 3 0: UInt16 1: Int16 2: UInt32 3: Int32 4: Unsigned Float32 5: Signed Float32 Thousands: Read index 4 0: UInt16 1: Int16 2: UInt32 3: Int32 4: Unsigned Float32 5: Signed Float32 Ten thousands: Read index 5 0: UInt16 1: Int16 2: UInt32 3: Int32 4: Unsigned Float32 5: Signed Float32	0	-	Changeable at any time	"C0-05" on page 768

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C0-06	0xC006	Read data type selection 2	Ones: Read index 6 0: UInt16 1: Int16 2: UInt32 3: Int32 4: Unsigned Float32 5: Signed Float32 Tens: Read index 7 0: UInt16 1: Int16 2: UInt32 3: Int32 4: Unsigned Float32 5: Signed Float32 Hundreds: Read index 8 0: UInt16 1: Int16 2: UInt32 3: Int32 4: Unsigned Float32 5: Signed Float32 Thousands: Read index 9 0: UInt16 1: Int16 2: UInt32 3: Int32 4: Unsigned Float32 5: Signed Float32 Ten thousands: Read index 10 0: UInt16 1: Int16 2: UInt32 3: Int32 4: Unsigned Float32 5: Signed Float32	0	-	Changeable at any time	"C0-06" on page 769

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C0-07	0xC007	Read data scale factor selection 1	Ones: Read index 1 0: x1 1: x0.1 2: x0.01 3: x0.001 4: x10 5: x100 6: x1000 7: x0.0001 8: x10000 Tens: Read index 2 0: x1 1: x0.1 2: x0.01 3: x0.001 4: x10 5: x100 6: x1000 7: x0.0001 8: x10000 Hundreds: Read index 3 0: x1 1: x0.1 2: x0.01 3: x0.001 4: x10 5: x100 6: x1000 7: x0.0001 8: x10000 Thousands: Read index 4 0: x1 1: x0.1 2: x0.01 3: x0.001 4: x10 5: x100 6: x1000 7: x0.0001 8: x10000 Ten thousands: Read index 5 0: x1 1: x0.1 2: x0.01 3: x0.001 4: x10 5: x100	0	-	Changeable at any time	"C0-07" on page 770

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C0-08	0xC008	Read data scale factor selection 2	Ones: Read index 6 0: x1 1: x0.1 2: x0.01 3: x0.001 4: x10 5: x100 6: x1000 7: x0.0001 8: x10000 Tens: Read index 7 0: x1 1: x0.1 2: x0.01 3: x0.001 4: x10 5: x100 6: x1000 7: x0.0001 8: x10000 Hundreds: Read index 8 0: x1 1: x0.1 2: x0.01 3: x0.001 4: x10 5: x100 6: x1000 7: x0.0001 8: x10000 Thousands: Read index 9 0: x1 1: x0.1 2: x0.01 3: x0.001 4: x10 5: x100 6: x1000 7: x0.0001 8: x10000 Ten thousands: Read index 10 0: x1 1: x0.1 2: x0.01 3: x0.001 4: x10 5: x100	0	-	Changeable at any time	"C0-08" on page 772
C0-09	0xC009	Write data type	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-09" on page 774

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C0-10	0xC00A	Address mapping status	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-10" on page 774
C0-18	0xC012	Number of read mapping addresses	0 to 10	10	-	Changeable at any time	"C0-18" on page 774
C0-19	0xC013	Number of write mapping addresses	0 to 10	10	-	Changeable at any time	"C0-19" on page 775
C0-20	0xC014	Read index 1	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-20" on page 775
C0-21	0xC015	Read subindex 1	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-21" on page 775
C0-22	0xC016	Read mapping internal address index 1	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-22" on page 775
C0-23	0xC017	Read mapping internal address subindex 1	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-23" on page 775
C0-24	0xC018	Read index 2	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-24" on page 776
C0-25	0xC019	Read subindex 2	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-25" on page 776
C0-26	0xC01A	Read mapping internal address index 2	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-26" on page 776
C0-27	0xC01B	Read mapping internal address subindex 2	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-27" on page 776
C0-28	0xC01C	Read index 3	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-28" on page 776
C0-29	0xC01D	Read subindex 3	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-29" on page 776
C0-30	0xC01E	Read mapping internal address index 3	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-30" on page 777
C0-31	0xC01F	Read mapping internal address subindex 3	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-31" on page 777
C0-32	0xC020	Read index 4	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-32" on page 777
C0-33	0xC021	Read subindex 4	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-33" on page 777
C0-34	0xC022	Read mapping internal address index 4	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-34" on page 777

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C0-35	0xC023	Read mapping internal address subindex 4	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-35" on page 778
C0-36	0xC024	Read index 5	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-36" on page 778
C0-37	0xC025	Read subindex 5	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-37" on page 778
C0-38	0xC026	Read mapping internal address index 5	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-38" on page 778
C0-39	0xC027	Read mapping internal address subindex 5	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-39" on page 778
C0-40	0xC028	Read index 6	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-40" on page 779
C0-41	0xC029	Read subindex 6	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-41" on page 779
C0-42	0xC02A	Read mapping internal address index 6	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-42" on page 779
C0-43	0xC02B	Read mapping internal address subindex 6	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-43" on page 779
C0-44	0xC02C	Read index 7	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-44" on page 779
C0-45	0xC02D	Read subindex 7	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-45" on page 780
C0-46	0xC02E	Read mapping internal address index 7	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-46" on page 780
C0-47	0xC02F	Read mapping internal address subindex 7	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-47" on page 780
C0-48	0xC030	Read index 8	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-48" on page 780
C0-49	0xC031	Read subindex 8	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-49" on page 780
C0-50	0xC032	Read mapping internal address index 8	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-50" on page 781
C0-51	0xC033	Read mapping internal address subindex 8	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-51" on page 781
C0-52	0xC034	Read index 9	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-52" on page 781

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C0-53	0xC035	Read subindex 9	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-53" on page 781
C0-54	0xC036	Read mapping internal address index 9	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-54" on page 781
C0-55	0xC037	Read mapping internal address subindex 9	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-55" on page 781
C0-56	0xC038	Read index 10	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-56" on page 782
C0-57	0xC039	Read subindex 10	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-57" on page 782
C0-58	0xC03A	Read mapping internal address index 10	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-58" on page 782
C0-59	0xC03B	Read mapping internal address subindex 10	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-59" on page 782
C0-60	0xC03C	Write index 1	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-60" on page 782
C0-61	0xC03D	Write subindex 1	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-61" on page 783
C0-62	0xC03E	Write mapping internal address index 1	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-62" on page 783
C0-63	0xC03F	Write mapping internal address subindex 1	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-63" on page 783
C0-64	0xC040	Write index 2	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-64" on page 783
C0-65	0xC041	Write subindex 2	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-65" on page 783
C0-66	0xC042	Write mapping internal address index 2	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-66" on page 784
C0-67	0xC043	Write mapping internal address subindex 2	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-67" on page 784
C0-68	0xC044	Write index 3	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-68" on page 784
C0-69	0xC045	Write subindex 3	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-69" on page 784
C0-70	0xC046	Write mapping internal address index 3	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-70" on page 784

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C0-71	0xC047	Write mapping internal address subindex 3	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-71" on page 785
C0-72	0xC048	Write index 4	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-72" on page 785
C0-73	0xC049	Write subindex 4	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-73" on page 785
C0-74	0xC04A	Write mapping internal address index 4	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-74" on page 785
C0-75	0xC04B	Write mapping internal address subindex 4	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-75" on page 785
C0-76	0xC04C	Write index 5	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-76" on page 786
C0-77	0xC04D	Write subindex 5	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-77" on page 786
C0-78	0xC04E	Write mapping internal address index 5	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-78" on page 786
C0-79	0xC04F	Write mapping internal address subindex 5	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-79" on page 786
C0-80	0xC050	Write index 6	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-80" on page 786
C0-81	0xC051	Write subindex 6	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-81" on page 786
C0-82	0xC052	Write mapping internal address index 6	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-82" on page 787
C0-83	0xC053	Write mapping internal address subindex 6	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-83" on page 787
C0-84	0xC054	Write index 7	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-84" on page 787
C0-85	0xC055	Write subindex 7	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-85" on page 787
C0-86	0xC056	Write mapping internal address index 7	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-86" on page 787
C0-87	0xC057	Write mapping internal address subindex 7	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-87" on page 788
C0-88	0xC058	Write index 8	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-88" on page 788

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C0-89	0xC059	Write subindex 8	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-89" on page 788
C0-90	0xC05A	Write mapping internal address index 8	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-90" on page 788
C0-91	0xC05B	Write mapping internal address subindex 8	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-91" on page 788
C0-92	0xC05C	Write index 9	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-92" on page 789
C0-93	0xC05D	Write subindex 9	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-93" on page 789
C0-94	0xC05E	Write mapping internal address index 9	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-94" on page 789
C0-95	0xC05F	Write mapping internal address subindex 9	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-95" on page 789
C0-96	0xC060	Write index 10	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-96" on page 789
C0-97	0xC061	Write subindex 10	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-97" on page 790
C0-98	0xC062	Write mapping internal address index 10	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-98" on page 790
C0-99	0xC063	Write mapping internal address subindex 10	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C0-99" on page 790
C1-00	0xC100	Input of W2B module A	0: 0 Others: K connector	0	-	Changeable at any time	"C1-00" on page 790
C1-01	0xC101	Input of W2B module B	Same as C1-00	0	-	Changeable at any time	"C1-01" on page 791
C1-02	0xC102	Input of W2B module C	Same as C1-00	0	-	Changeable at any time	"C1-02" on page 791
C1-03	0xC103	Input of W2B module D	Same as C1-00	0	-	Changeable at any time	"C1-03" on page 791
C1-04	0xC104	Input of W2B module E	Same as C1-00	0	-	Changeable at any time	"C1-04" on page 791
C1-05	0xC105	Input of W2B module F	Same as C1-00	0	-	Changeable at any time	"C1-05" on page 791
C1-06	0xC106	Input of W2B module G	Same as C1-00	0	-	Changeable at any time	"C1-06" on page 791
C1-07	0xC107	Input of W2B module H	Same as C1-00	0	-	Changeable at any time	"C1-07" on page 792

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C1-12	0xC10C	B2W module A enable	0: Disabled 1: Enabled	0	-	Changeable at any time	"C1-12" on page 792
C1-13	0xC10D	Bit inversion flag of B2W module A	0 to 65535	0	-	Changeable at any time	"C1-13" on page 792
C1-14	0xC10E	B2W module A - Bit00	0: 0 1: 1 2: 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C1-14" on page 792
C1-15	0xC10F	B2W module A - Bit01	Same as C1-14	0	-	Changeable at any time	"C1-15" on page 793
C1-16	0xC110	B2W module A - Bit02	Same as C1-14	0	-	Changeable at any time	"C1-16" on page 793
C1-17	0xC111	B2W module A - Bit03	Same as C1-14	0	-	Changeable at any time	"C1-17" on page 793
C1-18	0xC112	B2W module A - Bit04	Same as C1-14	0	-	Changeable at any time	"C1-18" on page 794
C1-19	0xC113	B2W module A - Bit05	Same as C1-14	0	-	Changeable at any time	"C1-19" on page 794
C1-20	0xC114	B2W module A - Bit06	Same as C1-14	0	-	Changeable at any time	"C1-20" on page 794
C1-21	0xC115	B2W module A - Bit07	Same as C1-14	0	-	Changeable at any time	"C1-21" on page 794
C1-22	0xC116	B2W module A - Bit08	Same as C1-14	0	-	Changeable at any time	"C1-22" on page 794
C1-23	0xC117	B2W module A - Bit09	Same as C1-14	0	-	Changeable at any time	"C1-23" on page 795
C1-24	0xC118	B2W module A - Bit10	Same as C1-14	0	-	Changeable at any time	"C1-24" on page 795

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C1-25	0xC119	B2W module A - Bit11	Same as C1-14	0	-	Changeable at any time	"C1-25" on page 795
C1-26	0xC11A	B2W module A - Bit12	Same as C1-14	0	-	Changeable at any time	"C1-26" on page 795
C1-27	0xC11B	B2W module A - Bit13	Same as C1-14	0	-	Changeable at any time	"C1-27" on page 795
C1-28	0xC11C	B2W module A - Bit14	Same as C1-14	0	-	Changeable at any time	"C1-28" on page 796
C1-29	0xC11D	B2W module A - Bit15	Same as C1-14	0	-	Changeable at any time	"C1-29" on page 796
C1-30	0xC11E	B2W module B enable	Same as C1-12	0	-	Changeable at any time	"C1-30" on page 796
C1-31	0xC11F	Bit inversion flag of B2W module B	0 to 65535	0	-	Changeable at any time	"C1-31" on page 796
C1-32	0xC120	B2W module B - Bit00	Same as C1-14	0	-	Changeable at any time	"C1-32" on page 796
C1-33	0xC121	B2W module B - Bit01	Same as C1-14	0	-	Changeable at any time	"C1-33" on page 797
C1-34	0xC122	B2W module B - Bit02	Same as C1-14	0	-	Changeable at any time	"C1-34" on page 797
C1-35	0xC123	B2W module B - Bit03	Same as C1-14	0	-	Changeable at any time	"C1-35" on page 797
C1-36	0xC124	B2W module B - Bit04	Same as C1-14	0	-	Changeable at any time	"C1-36" on page 797
C1-37	0xC125	B2W module B - Bit05	Same as C1-14	0	-	Changeable at any time	"C1-37" on page 797
C1-38	0xC126	B2W module B - Bit06	Same as C1-14	0	-	Changeable at any time	"C1-38" on page 798
C1-39	0xC127	B2W module B - Bit07	Same as C1-14	0	-	Changeable at any time	"C1-39" on page 798
C1-40	0xC128	B2W module B - Bit08	Same as C1-14	0	-	Changeable at any time	"C1-40" on page 798
C1-41	0xC129	B2W module B - Bit09	Same as C1-14	0	-	Changeable at any time	"C1-41" on page 798
C1-42	0xC12A	B2W module B - Bit10	Same as C1-14	0	-	Changeable at any time	"C1-42" on page 798
C1-43	0xC12B	B2W module B - Bit11	Same as C1-14	0	-	Changeable at any time	"C1-43" on page 798
C1-44	0xC12C	B2W module B - Bit12	Same as C1-14	0	-	Changeable at any time	"C1-44" on page 799
C1-45	0xC12D	B2W module B - Bit13	Same as C1-14	0	-	Changeable at any time	"C1-45" on page 799

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C1-46	0xC12E	B2W module B - Bit14	Same as C1-14	0	-	Changeable at any time	"C1-46" on page 799
C1-47	0xC12F	B2W module B - Bit15	Same as C1-14	0	-	Changeable at any time	"C1-47" on page 799
C1-48	0xC130	B2W module C enable	0: Disabled 1: Enabled	0	-	Changeable at any time	"C1-48" on page 799
C1-49	0xC131	Bit inversion flag of B2W module C	0 to 65535	0	-	Changeable at any time	"C1-49" on page 800
C1-50	0xC132	B2W module C - Bit00	Same as C1-14	0	-	Changeable at any time	"C1-50" on page 800
C1-51	0xC133	B2W module C - Bit01	Same as C1-14	0	-	Changeable at any time	"C1-51" on page 800
C1-52	0xC134	B2W module C - Bit02	Same as C1-14	0	-	Changeable at any time	"C1-52" on page 800
C1-53	0xC135	B2W module C - Bit03	Same as C1-14	0	-	Changeable at any time	"C1-53" on page 800
C1-54	0xC136	B2W module C - Bit04	Same as C1-14	0	-	Changeable at any time	"C1-54" on page 801
C1-55	0xC137	B2W module C - Bit05	Same as C1-14	0	-	Changeable at any time	"C1-55" on page 801
C1-56	0xC138	B2W module C - Bit06	Same as C1-14	0	-	Changeable at any time	"C1-56" on page 801
C1-57	0xC139	B2W module C - Bit07	Same as C1-14	0	-	Changeable at any time	"C1-57" on page 801
C1-58	0xC13A	B2W module C - Bit08	Same as C1-14	0	-	Changeable at any time	"C1-58" on page 801
C1-59	0xC13B	B2W module C - Bit09	Same as C1-14	0	-	Changeable at any time	"C1-59" on page 802
C1-60	0xC13C	B2W module C - Bit10	Same as C1-14	0	-	Changeable at any time	"C1-60" on page 802
C1-61	0xC13D	B2W module C - Bit11	Same as C1-14	0	-	Changeable at any time	"C1-61" on page 802
C1-62	0xC13E	B2W module C - Bit12	Same as C1-14	0	-	Changeable at any time	"C1-62" on page 802
C1-63	0xC13F	B2W module C - Bit13	Same as C1-14	0	-	Changeable at any time	"C1-63" on page 802
C1-64	0xC140	B2W module C - Bit14	Same as C1-14	0	-	Changeable at any time	"C1-64" on page 803
C1-65	0xC141	B2W module C - Bit15	Same as C1-14	0	-	Changeable at any time	"C1-65" on page 803
C1-66	0xC142	B2W module D enable	Same as C1-12	0	-	Changeable at any time	"C1-66" on page 803

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C1-67	0xC143	Bit inversion flag of B2W module D	0 to 65535	0	-	Changeable at any time	"C1-67" on page 803
C1-68	0xC144	B2W module D - Bit00	Same as C1-14	0	-	Changeable at any time	"C1-68" on page 803
C1-69	0xC145	B2W module D - Bit01	Same as C1-14	0	-	Changeable at any time	"C1-69" on page 803
C1-70	0xC146	B2W module D - Bit02	Same as C1-14	0	-	Changeable at any time	"C1-70" on page 804
C1-71	0xC147	B2W module D - Bit03	Same as C1-14	0	-	Changeable at any time	"C1-71" on page 804
C1-72	0xC148	B2W module D - Bit04	Same as C1-14	0	-	Changeable at any time	"C1-72" on page 804
C1-73	0xC149	B2W module D - Bit05	Same as C1-14	0	-	Changeable at any time	"C1-73" on page 804
C1-74	0xC14A	B2W module D - Bit06	Same as C1-14	0	-	Changeable at any time	"C1-74" on page 804
C1-75	0xC14B	B2W module D - Bit07	Same as C1-14	0	-	Changeable at any time	"C1-75" on page 805
C1-76	0xC14C	B2W module D - Bit08	Same as C1-14	0	-	Changeable at any time	"C1-76" on page 805
C1-77	0xC14D	B2W module D - Bit09	Same as C1-14	0	-	Changeable at any time	"C1-77" on page 805
C1-78	0xC14E	B2W module D - Bit10	Same as C1-14	0	-	Changeable at any time	"C1-78" on page 805
C1-79	0xC14F	B2W module D - Bit11	Same as C1-14	0	-	Changeable at any time	"C1-79" on page 805
C1-80	0xC150	B2W module D - Bit12	Same as C1-14	0	-	Changeable at any time	"C1-80" on page 806
C1-81	0xC151	B2W module D - Bit13	Same as C1-14	0	-	Changeable at any time	"C1-81" on page 806
C1-82	0xC152	B2W module D - Bit14	Same as C1-14	0	-	Changeable at any time	"C1-82" on page 806
C1-83	0xC153	B2W module D - Bit15	Same as C1-14	0	-	Changeable at any time	"C1-83" on page 806
C2-00	0xC200	LOWORD of W-DW conversion A	0: 0 Others: K connector	0	-	Changeable at any time	"C2-00" on page 806
C2-01	0xC201	HIWORD of W-DW conversion A	0: Disabled Others: K connector	0	-	Changeable at any time	"C2-01" on page 807
C2-02	0xC202	Low-order bits of base value of W-DW conversion A	0 to 65535	0	-	Changeable at any time	"C2-02" on page 807

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C2-03	0xC203	High-order bits of base value of W-DW conversion A	0 to 65535	0	-	Changeable at any time	"C2-03" on page 807
C2-04	0xC204	LOWORD of W-DW conversion B	0: 0 Others: K connector	0	-	Changeable at any time	"C2-04" on page 807
C2-05	0xC205	HIWORD of W-DW conversion B	0: Disabled Others: K connector	0	-	Changeable at any time	"C2-05" on page 808
C2-06	0xC206	Low-order bits of base value of W-DW conversion B	0 to 65535	0	-	Changeable at any time	"C2-06" on page 808
C2-07	0xC207	High-order bits of base value of W-DW conversion B	0 to 65535	0	-	Changeable at any time	"C2-07" on page 808
C2-08	0xC208	LOWORD of W-DW conversion C	0: 0 Others: K connector	0	-	Changeable at any time	"C2-08" on page 808
C2-09	0xC209	HIWORD of W-DW conversion C	0: Disabled Others: K connector	0	-	Changeable at any time	"C2-09" on page 808
C2-10	0xC20A	Low-order bits of base value of W-DW conversion C	0 to 65535	0	-	Changeable at any time	"C2-10" on page 809
C2-11	0xC20B	High-order bits of base value of W-DW conversion C	0 to 65535	0	-	Changeable at any time	"C2-11" on page 809
C2-12	0xC20C	LOWORD of W-DW conversion D	0: 0 Others: K connector	0	-	Changeable at any time	"C2-12" on page 809
C2-13	0xC20D	HIWORD of W-DW conversion D	0: Disabled Others: K connector	0	-	Changeable at any time	"C2-13" on page 809
C2-14	0xC20E	Low-order bits of base value of W-DW conversion D	0 to 65535	0	-	Changeable at any time	"C2-14" on page 809
C2-15	0xC20F	High-order bits of base value of W-DW conversion D	0 to 65535	0	-	Changeable at any time	"C2-15" on page 810
C2-32	0xC220	DW-W conversion A	0: Disabled Others: K connector	0	-	Changeable at any time	"C2-32" on page 810
C2-33	0xC221	Low-order bits of base value of DW-W conversion A	0 to 65535	0	-	Changeable at any time	"C2-33" on page 810
C2-34	0xC222	High-order bits of base value of DW-W conversion A	0 to 65535	0	-	Changeable at any time	"C2-34" on page 810
C2-35	0xC223	DW-W conversion B	0: Disabled Others: K connector	0	-	Changeable at any time	"C2-35" on page 811

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C2-36	0xC224	Low-order bits of base value of DW-W conversion B	0 to 65535	0	-	Changeable at any time	"C2-36" on page 811
C2-37	0xC225	High-order bits of base value of DW-W conversion B	0 to 65535	0	-	Changeable at any time	"C2-37" on page 811
C2-38	0xC226	DW-W conversion C	0: Disabled Others: K connector	0	-	Changeable at any time	"C2-38" on page 811
C2-39	0xC227	Low-order bits of base value of DW-W conversion C	0 to 65535	0	-	Changeable at any time	"C2-39" on page 811
C2-40	0xC228	High-order bits of base value of DW-W conversion C	0 to 65535	0	-	Changeable at any time	"C2-40" on page 812
C2-41	0xC229	DW-W conversion D	0: Disabled Others: K connector	0	-	Changeable at any time	"C2-41" on page 812
C2-42	0xC22A	Low-order bits of base value of DW-W conversion D	0 to 65535	0	-	Changeable at any time	"C2-42" on page 812
C2-43	0xC22B	High-order bits of base value of DW-W conversion D	0 to 65535	0	-	Changeable at any time	"C2-43" on page 812
C3-00	0xC300	Function of logic AND-OR module A	0: Disabled 1: AND 2: OR	0	-	Changeable at any time	"C3-00" on page 812
C3-01	0xC301	Input 1 of logic AND-OR module A	0: Logic 0 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C3-01" on page 813
C3-02	0xC302	Input 2 of logic AND-OR module A	Same as C3-01	0	-	Changeable at any time	"C3-02" on page 813

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C3-03	0xC303	Input 3 of logic AND-OR module A	Same as C3-01	0	-	Changeable at any time	"C3-03" on page 814
C3-04	0xC304	Input 4 of logic AND-OR module A	Same as C3-01	0	-	Changeable at any time	"C3-04" on page 814
C3-05	0xC305	Function of logic AND-OR module B	0: Disabled 1: AND 2: OR	0	-	Changeable at any time	"C3-05" on page 814
C3-06	0xC306	Input 1 of logic AND-OR module B	Same as C3-01	0	-	Changeable at any time	"C3-06" on page 814
C3-07	0xC307	Input 2 of logic AND-OR module B	Same as C3-01	0	-	Changeable at any time	"C3-07" on page 814
C3-08	0xC308	Input 3 of logic AND-OR module B	Same as C3-01	0	-	Changeable at any time	"C3-08" on page 815
C3-09	0xC309	Input 4 of logic AND-OR module B	Same as C3-01	0	-	Changeable at any time	"C3-09" on page 815
C3-10	0xC30A	Function of logic AND-OR module C	Same as C3-05	0	-	Changeable at any time	"C3-10" on page 815
C3-11	0xC30B	Input 1 of logic AND-OR module C	Same as C3-01	0	-	Changeable at any time	"C3-11" on page 815
C3-12	0xC30C	Input 2 of logic AND-OR module C	Same as C3-01	0	-	Changeable at any time	"C3-12" on page 815
C3-13	0xC30D	Input 3 of logic AND-OR module C	Same as C3-01	0	-	Changeable at any time	"C3-13" on page 816
C3-14	0xC30E	Input 4 of logic AND-OR module C	Same as C3-01	0	-	Changeable at any time	"C3-14" on page 816
C3-15	0xC30F	Function of logic AND-OR module D	Same as C3-05	0	-	Changeable at any time	"C3-15" on page 816
C3-16	0xC310	Input 1 of logic AND-OR module D	Same as C3-01	0	-	Changeable at any time	"C3-16" on page 816
C3-17	0xC311	Input 2 of logic AND-OR module D	Same as C3-01	0	-	Changeable at any time	"C3-17" on page 816
C3-18	0xC312	Input 3 of logic AND-OR module D	Same as C3-01	0	-	Changeable at any time	"C3-18" on page 817
C3-19	0xC313	Input 4 of logic AND-OR module D	Same as C3-01	0	-	Changeable at any time	"C3-19" on page 817
C3-20	0xC314	Function of logic AND-OR module E	Same as C3-05	0	-	Changeable at any time	"C3-20" on page 817
C3-21	0xC315	Input 1 of logic AND-OR module E	Same as C3-01	0	-	Changeable at any time	"C3-21" on page 817
C3-22	0xC316	Input 2 of logic AND-OR module E	Same as C3-01	0	-	Changeable at any time	"C3-22" on page 817

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C3-23	0xC317	Input 3 of logic AND-OR module E	Same as C3-01	0	-	Changeable at any time	"C3-23" on page 818
C3-24	0xC318	Function of logic AND-OR module F	Same as C3-05	0	-	Changeable at any time	"C3-24" on page 818
C3-25	0xC319	Input 1 of logic AND-OR module F	Same as C3-01	0	-	Changeable at any time	"C3-25" on page 818
C3-26	0xC31A	Input 2 of logic AND-OR module F	Same as C3-01	0	-	Changeable at any time	"C3-26" on page 818
C3-27	0xC31B	Input 3 of logic AND-OR module F	Same as C3-01	0	-	Changeable at any time	"C3-27" on page 818
C3-28	0xC31C	Function of logic AND-OR module G	Same as C3-05	0	-	Changeable at any time	"C3-28" on page 819
C3-29	0xC31D	Input 1 of logic AND-OR module G	Same as C3-01	0	-	Changeable at any time	"C3-29" on page 819
C3-30	0xC31E	Input 2 of logic AND-OR module G	Same as C3-01	0	-	Changeable at any time	"C3-30" on page 819
C3-31	0xC31F	Input 3 of logic AND-OR module G	Same as C3-01	0	-	Changeable at any time	"C3-31" on page 819
C3-32	0xC320	Function of logic AND-OR module H	Same as C3-05	0	-	Changeable at any time	"C3-32" on page 819
C3-33	0xC321	Input 1 of logic AND-OR module H	Same as C3-01	0	-	Changeable at any time	"C3-33" on page 819
C3-34	0xC322	Input 2 of logic AND-OR module H	Same as C3-01	0	-	Changeable at any time	"C3-34" on page 820
C3-35	0xC323	Input 3 of logic AND-OR module H	Same as C3-01	0	-	Changeable at any time	"C3-35" on page 820
C3-36	0xC324	Function of logic AND-OR module I	Same as C3-05	0	-	Changeable at any time	"C3-36" on page 820
C3-37	0xC325	Input 1 of logic AND-OR module I	Same as C3-01	0	-	Changeable at any time	"C3-37" on page 820
C3-38	0xC326	Input 2 of logic AND-OR module I	Same as C3-01	0	-	Changeable at any time	"C3-38" on page 820
C3-39	0xC327	Input 3 of logic AND-OR module I	Same as C3-01	0	-	Changeable at any time	"C3-39" on page 821
C3-40	0xC328	Function of logic AND-OR module J	Same as C3-05	0	-	Changeable at any time	"C3-40" on page 821
C3-41	0xC329	Input 1 of logic AND-OR module J	Same as C3-01	0	-	Changeable at any time	"C3-41" on page 821
C3-42	0xC32A	Input 2 of logic AND-OR module J	Same as C3-01	0	-	Changeable at any time	"C3-42" on page 821
C3-43	0xC32B	Input 3 of logic AND-OR module J	Same as C3-01	0	-	Changeable at any time	"C3-43" on page 821

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C3-44	0xC32C	Function of logic AND-OR module K	Same as C3-05	0	-	Changeable at any time	"C3-44" on page 822
C3-45	0xC32D	Input 1 of logic AND-OR module K	Same as C3-01	0	-	Changeable at any time	"C3-45" on page 822
C3-46	0xC32E	Input 2 of logic AND-OR module K	Same as C3-01	0	-	Changeable at any time	"C3-46" on page 822
C3-47	0xC32F	Input 3 of logic AND-OR module K	Same as C3-01	0	-	Changeable at any time	"C3-47" on page 822
C3-48	0xC330	Function of logic AND-OR module L	Same as C3-05	0	-	Changeable at any time	"C3-48" on page 822
C3-49	0xC331	Input 1 of logic AND-OR module L	Same as C3-01	0	-	Changeable at any time	"C3-49" on page 823
C3-50	0xC332	Input 2 of logic AND-OR module L	Same as C3-01	0	-	Changeable at any time	"C3-50" on page 823
C3-51	0xC333	Input 3 of logic AND-OR module L	Same as C3-01	0	-	Changeable at any time	"C3-51" on page 823
C3-56	0xC338	Input of logic NOT module A	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C3-56" on page 823
C3-57	0xC339	Input of logic NOT module B	C3-56	0	-	Changeable at any time	"C3-57" on page 824
C3-58	0xC33A	Input of logic NOT module C	C3-56	0	-	Changeable at any time	"C3-58" on page 824
C3-59	0xC33B	Input of logic NOT module D	C3-56	0	-	Changeable at any time	"C3-59" on page 825
C3-60	0xC33C	Input of logic NOT module E	C3-56	0	-	Changeable at any time	"C3-60" on page 825

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C3-61	0xC33D	Input of logic NOT module F	C3-56	0	-	Changeable at any time	"C3-61" on page 825
C3-62	0xC33E	Input of logic NOT module G	C3-56	0	-	Changeable at any time	"C3-62" on page 825
C3-63	0xC33F	Input of logic NOT module H	C3-56	0	-	Changeable at any time	"C3-63" on page 825
C3-64	0xC340	Input of logic NOT module I	C3-56	0	-	Changeable at any time	"C3-64" on page 825
C3-65	0xC341	Input of logic NOT module J	C3-56	0	-	Changeable at any time	"C3-65" on page 826
C3-66	0xC342	Input of logic NOT module K	C3-56	0	-	Changeable at any time	"C3-66" on page 826
C3-67	0xC343	Input of logic NOT module L	C3-56	0	-	Changeable at any time	"C3-67" on page 826
C3-68	0xC344	Input of logic NOT module M	C3-56	0	-	Changeable at any time	"C3-68" on page 826
C3-69	0xC345	Input of logic NOT module N	C3-56	0	-	Changeable at any time	"C3-69" on page 826
C3-70	0xC346	Input of logic NOT module O	C3-56	0	-	Changeable at any time	"C3-70" on page 827
C3-71	0xC347	Input of logic NOT module P	C3-56	0	-	Changeable at any time	"C3-71" on page 827
C3-72	0xC348	Function of logic XOR/XNOR module A	0: Disabled 1: XOR 2: XNOR	0	-	Changeable at any time	"C3-72" on page 827
C3-73	0xC349	Input 1 of logic XOR/XNOR module A	Same as C3-01	0	-	Changeable at any time	"C3-73" on page 827
C3-74	0xC34A	Input 2 of logic XOR/XNOR module A	Same as C3-01	0	-	Changeable at any time	"C3-74" on page 828
C3-75	0xC34B	Function of logic XOR/XNOR module B	0: Disabled 1: XOR 2: XNOR	0	-	Changeable at any time	"C3-75" on page 828
C3-76	0xC34C	Input 1 of logic XOR/XNOR module B	Same as C3-01	0	-	Changeable at any time	"C3-76" on page 828
C3-77	0xC34D	Input 2 of logic XOR/XNOR module B	Same as C3-01	0	-	Changeable at any time	"C3-77" on page 828
C3-78	0xC34E	Function of logic XOR/XNOR module C	0: Disabled 1: XOR 2: XNOR	0	-	Changeable at any time	"C3-78" on page 828

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C3-79	0xC34F	Input 1 of logic XOR/XNOR module C	Same as C3-01	0	-	Changeable at any time	"C3-79" on page 829
C3-80	0xC350	Input 2 of logic XOR/XNOR module C	Same as C3-01	0	-	Changeable at any time	"C3-80" on page 829
C3-81	0xC351	Function of logic XOR/XNOR module D	0: Disabled 1: XOR 2: XNOR	0	-	Changeable at any time	"C3-81" on page 829
C3-82	0xC352	Input 1 of logic XOR/XNOR module D	Same as C3-01	0	-	Changeable at any time	"C3-82" on page 829
C3-83	0xC353	Input 2 of logic XOR/XNOR module D	Same as C3-01	0	-	Changeable at any time	"C3-83" on page 829
C3-84	0xC354	Function of logic XOR/XNOR module E	0: Disabled 1: XOR 2: XNOR	0	-	Changeable at any time	"C3-84" on page 830
C3-85	0xC355	Input 1 of logic XOR/XNOR module E	Same as C3-01	0	-	Changeable at any time	"C3-85" on page 830
C3-86	0xC356	Input 2 of logic XOR/XNOR module E	Same as C3-01	0	-	Changeable at any time	"C3-86" on page 830
C3-87	0xC357	Function of logic XOR/XNOR module F	0: Disabled 1: XOR 2: XNOR	0	-	Changeable at any time	"C3-87" on page 830
C3-88	0xC358	Input 1 of logic XOR/XNOR module F	Same as C3-01	0	-	Changeable at any time	"C3-88" on page 830
C3-89	0xC359	Input 2 of logic XOR/XNOR module F	Same as C3-01	0	-	Changeable at any time	"C3-89" on page 831
C3-90	0xC35A	Function of logic XOR/XNOR module G	0: Disabled 1: XOR 2: XNOR	0	-	Changeable at any time	"C3-90" on page 831
C3-91	0xC35B	Input 1 of logic XOR/XNOR module G	Same as C3-01	0	-	Changeable at any time	"C3-91" on page 831
C3-92	0xC35C	Input 2 of logic XOR/XNOR module G	Same as C3-01	0	-	Changeable at any time	"C3-92" on page 831
C3-93	0xC35D	Function of logic XOR/XNOR module H	0: Disabled 1: XOR 2: XNOR	0	-	Changeable at any time	"C3-93" on page 831

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C3-94	0xC35E	Input 1 of logic XOR/XNOR module H	Same as C3-01	0	-	Changeable at any time	"C3-94" on page 832
C3-95	0xC35F	Input 2 of logic XOR/XNOR module H	Same as C3-01	0	-	Changeable at any time	"C3-95" on page 832
C4-00	0xC400	Input of floating-point absolute value module A	0: Disabled 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C4-00" on page 832
C4-01	0xC401	Input of floating-point absolute value module B	Same as C4-00	0	-	Changeable at any time	"C4-01" on page 833
C4-02	0xC402	Input of floating-point absolute value module C	Same as C4-00	0	-	Changeable at any time	"C4-02" on page 833
C4-03	0xC403	Input of floating-point absolute value module D	Same as C4-00	0	-	Changeable at any time	"C4-03" on page 833
C4-04	0xC404	Input of floating-point absolute value module E	Same as C4-00	0	-	Changeable at any time	"C4-04" on page 833
C4-05	0xC405	Input of fixed-point absolute value module F	0: Disabled Others: K connector	0	-	Changeable at any time	"C4-05" on page 833
C4-06	0xC406	Input of fixed-point absolute value module G	0: Disabled Others: K connector	0	-	Changeable at any time	"C4-06" on page 834
C4-07	0xC407	Input of fixed-point absolute value module H	0: Disabled Others: K connector	0	-	Changeable at any time	"C4-07" on page 834
C4-08	0xC408	Input 1 of floating-point ADD/ SUBTRACT module A	0: Disabled 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C4-08" on page 834

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C4-09	0xC409	Input 2 of ADD/ SUBTRACT module A (ADD)	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C4-09" on page 834
C4-10	0xC40A	Input 3 of ADD/ SUBTRACT module A (ADD)	Same as C4-09	0	-	Changeable at any time	"C4-10" on page 835
C4-11	0xC40B	Input 4 of ADD/ SUBTRACT module A (SUBTRACT)	Same as C4-09	0	-	Changeable at any time	"C4-11" on page 835
C4-12	0xC40C	Input 1 of floating-point ADD/ SUBTRACT module B	Same as C4-09	0	-	Changeable at any time	"C4-12" on page 835
C4-13	0xC40D	Input 2 of ADD/ SUBTRACT module B (ADD)	Same as C4-09	0	-	Changeable at any time	"C4-13" on page 835
C4-14	0xC40E	Input 3 of ADD/ SUBTRACT module B (ADD)	Same as C4-09	0	-	Changeable at any time	"C4-14" on page 836
C4-15	0xC40F	Input 4 of ADD/ SUBTRACT module B (SUBTRACT)	Same as C4-09	0	-	Changeable at any time	"C4-15" on page 836
C4-16	0xC410	Input 1 of floating-point ADD/ SUBTRACT module C	Same as C4-09	0	-	Changeable at any time	"C4-16" on page 836
C4-17	0xC411	Input 2 of ADD/ SUBTRACT module C (ADD)	Same as C4-09	0	-	Changeable at any time	"C4-17" on page 836
C4-18	0xC412	Input 3 of ADD/ SUBTRACT module C (ADD)	Same as C4-09	0	-	Changeable at any time	"C4-18" on page 836
C4-19	0xC413	Input 4 of ADD/ SUBTRACT module C (SUBTRACT)	Same as C4-09	0	-	Changeable at any time	"C4-19" on page 837
C4-20	0xC414	Input 1 of floating-point ADD/ SUBTRACT module D	Same as C4-09	0	-	Changeable at any time	"C4-20" on page 837

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C4-21	0xC415	Input 2 of ADD/ SUBTRACT module D (ADD)	Same as C4-09	0	-	Changeable at any time	"C4-21" on page 837
C4-22	0xC416	Input 3 of ADD/ SUBTRACT module D (ADD)	Same as C4-09	0	-	Changeable at any time	"C4-22" on page 837
C4-23	0xC417	Input 4 of ADD/ SUBTRACT module D (SUBTRACT)	Same as C4-09	0	-	Changeable at any time	"C4-23" on page 837
C4-24	0xC418	Input 1 of floating-point ADD/ SUBTRACT module E	Same as C4-09	0	-	Changeable at any time	"C4-24" on page 837
C4-25	0xC419	Input 2 of ADD/ SUBTRACT module E (ADD)	Same as C4-09	0	-	Changeable at any time	"C4-25" on page 838
C4-26	0xC41A	Input 3 of ADD/ SUBTRACT module E (ADD)	Same as C4-09	0	-	Changeable at any time	"C4-26" on page 838
C4-27	0xC41B	Input 4 of ADD/ SUBTRACT module E (SUBTRACT)	Same as C4-09	0	-	Changeable at any time	"C4-27" on page 838
C4-28	0xC41C	Input 1 of fixed-point ADD/ SUBTRACT module F	0: Disabled Others: K connector	0	-	Changeable at any time	"C4-28" on page 838
C4-29	0xC41D	Input 2 of ADD/ SUBTRACT module F (ADD)	Same as C4-28	0	-	Changeable at any time	"C4-29" on page 838
C4-30	0xC41E	Input 3 of ADD/ SUBTRACT module F (ADD)	Same as C4-28	0	-	Changeable at any time	"C4-30" on page 839
C4-31	0xC41F	Input 4 of ADD/ SUBTRACT module F (SUBTRACT)	Same as C4-28	0	-	Changeable at any time	"C4-31" on page 839
C4-32	0xC420	Input 1 of fixed-point ADD/ SUBTRACT module G	Same as C4-28	0	-	Changeable at any time	"C4-32" on page 839
C4-33	0xC421	Input 2 of ADD/ SUBTRACT module G (ADD)	Same as C4-28	0	-	Changeable at any time	"C4-33" on page 839
C4-34	0xC422	Input 3 of ADD/ SUBTRACT module G (ADD)	Same as C4-28	0	-	Changeable at any time	"C4-34" on page 839

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C4-35	0xC423	Input 4 of ADD/ SUBTRACT module G (SUBTRACT)	Same as C4-28	0	-	Changeable at any time	"C4-35" on page 840
C4-36	0xC424	Input 1 of fixed-point ADD/ SUBTRACT module H	Same as C4-28	0	-	Changeable at any time	"C4-36" on page 840
C4-37	0xC425	Input 2 of ADD/ SUBTRACT module H (ADD)	Same as C4-28	0	-	Changeable at any time	"C4-37" on page 840
C4-38	0xC426	Input 3 of ADD/ SUBTRACT module H (ADD)	Same as C4-28	0	-	Changeable at any time	"C4-38" on page 840
C4-39	0xC427	Input 4 of ADD/ SUBTRACT module H (SUBTRACT)	Same as C4-28	0	-	Changeable at any time	"C4-39" on page 840
C4-40	0xC428	Input 1 of floating-point MULTIPLY/ DIVIDE module A	C4-08	0	-	Changeable at any time	"C4-40" on page 841
C4-41	0xC429	Input 2 of MULTIPLY/DIVIDE module A (MULTIPLY)	0: 1 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C4-41" on page 841
C4-42	0xC42A	Input 3 of MULTIPLY/DIVIDE module A (DIVIDE)	Same as C4-41	0	-	Changeable at any time	"C4-42" on page 841
C4-43	0xC42B	Input 1 of floating-point MULTIPLY/ DIVIDE module B	0: Disabled 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C4-43" on page 841
C4-44	0xC42C	Input 2 of MULTIPLY/DIVIDE module B (MULTIPLY)	Same as C4-41	0	-	Changeable at any time	"C4-44" on page 842

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C4-45	0xC42D	Input 3 of MULTIPLY/DIVIDE module B (DIVIDE)	Same as C4-41	0	-	Changeable at any time	"C4-45" on page 842
C4-46	0xC42E	Input 1 of floating-point MULTIPLY/ DIVIDE module C	0: Disabled 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C4-46" on page 842
C4-47	0xC42F	Input 2 of MULTIPLY/DIVIDE module C (MULTIPLY)	Same as C4-41	0	-	Changeable at any time	"C4-47" on page 843
C4-48	0xC430	Input 3 of MULTIPLY/DIVIDE module C (DIVIDE)	Same as C4-41	0	-	Changeable at any time	"C4-48" on page 843
C4-49	0xC431	Input 1 of floating-point MULTIPLY/ DIVIDE module D	0: Disabled 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C4-49" on page 843
C4-50	0xC432	Input 2 of MULTIPLY/DIVIDE module D (MULTIPLY)	Same as C4-41	0	-	Changeable at any time	"C4-50" on page 843
C4-51	0xC433	Input 3 of MULTIPLY/DIVIDE module D (DIVIDE)	Same as C4-41	0	-	Changeable at any time	"C4-51" on page 844
C4-52	0xC434	Input 1 of floating-point MULTIPLY/ DIVIDE module E	0: Disabled 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C4-52" on page 844

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C4-53	0xC435	Input 2 of MULTIPLY/DIVIDE module E (MULTIPLY)	Same as C4-41	0	-	Changeable at any time	"C4-53" on page 844
C4-54	0xC436	Input 3 of MULTIPLY/DIVIDE module E (DIVIDE)	Same as C4-41	0	-	Changeable at any time	"C4-54" on page 844
C4-55	0xC437	Input 1 of fixed-point MULTIPLY/ DIVIDE module F	0: Disabled Others: K connector	0	-	Changeable at any time	"C4-55" on page 845
C4-56	0xC438	Input 2 of MULTIPLY/DIVIDE module F (MULTIPLY)	Same as C4-55	0	-	Changeable at any time	"C4-56" on page 845
C4-57	0xC439	Input 3 of MULTIPLY/DIVIDE module F (DIVIDE)	Same as C4-55	0	-	Changeable at any time	"C4-57" on page 845
C4-58	0xC43A	Input 1 of fixed-point MULTIPLY/ DIVIDE module G	Same as C4-55	0	-	Changeable at any time	"C4-58" on page 845
C4-59	0xC43B	Input 2 of MULTIPLY/DIVIDE module G (MULTIPLY)	Same as C4-55	0	-	Changeable at any time	"C4-59" on page 845
C4-60	0xC43C	Input 3 of MULTIPLY/DIVIDE module G (DIVIDE)	Same as C4-55	0	-	Changeable at any time	"C4-60" on page 846
C4-61	0xC43D	Input 1 of fixed-point MULTIPLY/ DIVIDE module H	Same as C4-55	0	-	Changeable at any time	"C4-61" on page 846
C4-62	0xC43E	Input 2 of MULTIPLY/DIVIDE module H (MULTIPLY)	Same as C4-55	0	-	Changeable at any time	"C4-62" on page 846
C4-63	0xC43F	Input 3 of MULTIPLY/DIVIDE module H (DIVIDE)	Same as C4-55	0	-	Changeable at any time	"C4-63" on page 846
C4-64	0xC440	Function of floating-point comparison module A	0: Module disabled 1: Input 1 > Input 2 2: Input 1 < Input 2 3: Input 1 = Input 2	0	-	Changeable at any time	"C4-64" on page 846

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C4-65	0xC441	Input 1 of floating-point comparison module A	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C4-65" on page 847
C4-66	0xC442	Input 2 of floating-point comparison module A	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C4-66" on page 847
C4-67	0xC443	Hysteresis input of floating-point comparison module A	0.00% to 655.35%	0.00	%	Changeable at any time	"C4-67" on page 847
C4-68	0xC444	Function of floating-point comparison module B	0: Module disabled 1: Input 1 > Input 2 2: Input 1 < Input 2 3: Input 1 = Input 2	0	-	Changeable at any time	"C4-68" on page 848
C4-69	0xC445	Input 1 of floating-point comparison module B	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C4-69" on page 848
C4-70	0xC446	Input 2 of floating-point comparison module B	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C4-70" on page 848

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C4-71	0xC447	Hysteresis input of floating-point comparison module B	0.00% to 655.35%	0.00	%	Changeable at any time	"C4-71" on page 849
C4-72	0xC448	Function of floating-point comparison module C	0: Module disabled 1: Input 1 > Input 2 2: Input 1 < Input 2 3: Input 1 = Input 2	0	-	Changeable at any time	"C4-72" on page 849
C4-73	0xC449	Input 1 of floating-point comparison module C	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C4-73" on page 849
C4-74	0xC44A	Input 2 of floating-point comparison module C	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C4-74" on page 850
C4-75	0xC44B	Hysteresis input of floating-point comparison module C	0.00% to 655.35%	0.00	%	Changeable at any time	"C4-75" on page 850
C4-76	0xC44C	Function of floating-point comparison module D	0: Module disabled 1: Input 1 > Input 2 2: Input 1 < Input 2 3: Input 1 = Input 2	0	-	Changeable at any time	"C4-76" on page 850
C4-77	0xC44D	Input 1 of floating-point comparison module D	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C4-77" on page 851

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C4-78	0xC44E	Input 2 of floating-point comparison module D	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C4-78" on page 851
C4-79	0xC44F	Hysteresis input of floating-point comparison module D	0.00% to 655.35%	0.00	%	Changeable at any time	"C4-79" on page 851
C4-80	0xC450	Function of fixed-point comparison module E	0: Module disabled 1: Input 1 > Input 2 2: Input 1 < Input 2 3: Input 1 = Input 2	0	-	Changeable at any time	"C4-80" on page 852
C4-81	0xC451	Input 1 of fixed-point comparison module E	0: 0 Others: K connector	0	-	Changeable at any time	"C4-81" on page 852
C4-82	0xC452	Input 2 of fixed-point comparison module E	0: 0 Others: K connector	0	-	Changeable at any time	"C4-82" on page 852
C4-83	0xC453	Hysteresis input of fixed-point comparison module E	0.00% to 655.35%	0.00	%	Changeable at any time	"C4-83" on page 852
C4-84	0xC454	Function of fixed-point comparison module F	0: Module disabled 1: Input 1 > Input 2 2: Input 1 < Input 2 3: Input 1 = Input 2	0	-	Changeable at any time	"C4-84" on page 853
C4-85	0xC455	Input 1 of fixed-point comparison module F	0: 0 Others: K connector	0	-	Changeable at any time	"C4-85" on page 853
C4-86	0xC456	Input 2 of fixed-point comparison module F	0: 0 Others: K connector	0	-	Changeable at any time	"C4-86" on page 853
C4-87	0xC457	Hysteresis input of fixed-point comparison module F	0.00% to 655.35%	0.00	%	Changeable at any time	"C4-87" on page 853
C4-88	0xC458	Function of fixed-point comparison module G	0: Module disabled 1: Input 1 > Input 2 2: Input 1 < Input 2 3: Input 1 = Input 2	0	-	Changeable at any time	"C4-88" on page 853

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C4-89	0xC459	Input 1 of fixed-point comparison module G	0: 0 Others: K connector	0	-	Changeable at any time	"C4-89" on page 854
C4-90	0xC45A	Input 2 of fixed-point comparison module G	0: 0 Others: K connector	0	-	Changeable at any time	"C4-90" on page 854
C4-91	0xC45B	Hysteresis input of fixed-point comparison module G	0.00% to 655.35%	0.00	%	Changeable at any time	"C4-91" on page 854
C4-92	0xC45C	Function of fixed-point comparison module H	0: Module disabled 1: Input 1 > Input 2 2: Input 1 < Input 2 3: Input 1 = Input 2	0	-	Changeable at any time	"C4-92" on page 854
C4-93	0xC45D	Input 1 of fixed-point comparison module H	0: 0 Others: K connector	0	-	Changeable at any time	"C4-93" on page 855
C4-94	0xC45E	Input 2 of fixed-point comparison module H	0: 0 Others: K connector	0	-	Changeable at any time	"C4-94" on page 855
C4-95	0xC45F	Hysteresis input of fixed-point comparison module H	0.00% to 655.35%	0.00	%	Changeable at any time	"C4-95" on page 855
C5-00	0xC500	Input source of binary selector module A	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-00" on page 855

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C5-01	0xC501	Input 1 of binary selector module A	0: Logic 0 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-01" on page 856
C5-02	0xC502	Input 2 of binary selector module A	Same as C5-01	0	-	Changeable at any time	"C5-02" on page 857
C5-03	0xC503	Input source of binary selector module B	Same as C5-01	0	-	Changeable at any time	"C5-03" on page 857
C5-04	0xC504	Input 1 of binary selector module B	Same as C5-01	0	-	Changeable at any time	"C5-04" on page 857
C5-05	0xC505	Input 2 of binary selector module B	Same as C5-01	0	-	Changeable at any time	"C5-05" on page 858
C5-06	0xC506	Input source of binary selector module C	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-06" on page 858

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C5-07	0xC507	Input 1 of binary selector module C	0: Logic 0 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-07" on page 858
C5-08	0xC508	Input 2 of binary selector module C	Same as C5-01	0	-	Changeable at any time	"C5-08" on page 859
C5-09	0xC509	Input source of binary selector module D	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-09" on page 859

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C5-10	0xC50A	Input 1 of binary selector module D	0: Logic 0 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-10" on page 860
C5-11	0xC50B	Input 2 of binary selector module D	0: Logic 0 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI21 Others: B connector	0	-	Changeable at any time	"C5-11" on page 861

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C5-12	0xC50C	Input source of binary selector module E	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-12" on page 862
C5-13	0xC50D	Input 1 of binary selector module E	0: Logic 0 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-13" on page 863
C5-14	0xC50E	Input 2 of binary selector module E	Same as C5-01	0	-	Changeable at any time	"C5-14" on page 864

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C5-15	0xC50F	Input source of binary selector module F	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-15" on page 864
C5-16	0xC510	Input 1 of binary selector module F	0: Logic 0 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-16" on page 865

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C5-17	0xC511	Input 2 of binary selector module F	0: Logic 0 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI21 Others: B connector	0	-	Changeable at any time	"C5-17" on page 866
C5-18	0xC512	Input source of binary selector module G	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-18" on page 867

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C5-19	0xC513	Input 1 of binary selector module G	0: Logic 0 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-19" on page 868
C5-20	0xC514	Input 2 of binary selector module G	0: Logic 0 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI21 Others: B connector	0	-	Changeable at any time	"C5-20" on page 869

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C5-21	0xC515	Input source of binary selector module H	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-21" on page 870
C5-22	0xC516	Input 1 of binary selector module H	0: Logic 0 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-22" on page 871

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C5-23	0xC517	Input 2 of binary selector module H	0: Logic 0 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI21 Others: B connector	0	-	Changeable at any time	"C5-23" on page 872
C5-24	0xC518	Input source of word selector module A	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-24" on page 873
C5-25	0xC519	Input 1 of word selector module A	0: 0 Others: K connector	0	-	Changeable at any time	"C5-25" on page 874
C5-26	0xC51A	Input 2 of word selector module A	0: 0 Others: K connector	0	-	Changeable at any time	"C5-26" on page 874

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C5-27	0xC51B	Input source of word selector module B	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-27" on page 874
C5-28	0xC51C	Input 1 of word selector module B	0: 0 Others: K connector	0	-	Changeable at any time	"C5-28" on page 875
C5-29	0xC51D	Input 2 of word selector module B	0: 0 Others: K connector	0	-	Changeable at any time	"C5-29" on page 875
C5-30	0xC51E	Input source of word selector module C	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-30" on page 875
C5-31	0xC51F	Input 1 of word selector module C	0: 0 Others: K connector	0	-	Changeable at any time	"C5-31" on page 876
C5-32	0xC520	Input 2 of word selector module C	0: 0 Others: K connector	0	-	Changeable at any time	"C5-32" on page 876

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C5-33	0xC521	Input source of word selector module D	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-33" on page 877
C5-34	0xC522	Input 1 of word selector module D	0: 0 Others: K connector	0	-	Changeable at any time	"C5-34" on page 877
C5-35	0xC523	Input 2 of word selector module D	0: 0 Others: K connector	0	-	Changeable at any time	"C5-35" on page 877
C5-36	0xC524	Input source of DWord selector module A	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-36" on page 878
C5-37	0xC525	Input 1 of DWord selector module A	0: 0 Others: K connector	0	-	Changeable at any time	"C5-37" on page 878
C5-38	0xC526	Input 2 of DWord selector module A	0: 0 Others: K connector	0	-	Changeable at any time	"C5-38" on page 878

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C5-39	0xC527	Input source of DWord selector module B	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-39" on page 879
C5-40	0xC528	Input 1 of DWord selector module B	0: 0 Others: K connector	0	-	Changeable at any time	"C5-40" on page 879
C5-41	0xC529	Input 2 of DWord selector module B	0: 0 Others: K connector	0	-	Changeable at any time	"C5-41" on page 879
C5-42	0xC52A	Input source of DWord selector module C	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-42" on page 880
C5-43	0xC52B	Input 1 of DWord selector module C	0: 0 Others: K connector	0	-	Changeable at any time	"C5-43" on page 880
C5-44	0xC52C	Input 2 of DWord selector module C	0: 0 Others: K connector	0	-	Changeable at any time	"C5-44" on page 880

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C5-45	0xC52D	Input source of DWord selector module D	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-45" on page 881
C5-46	0xC52E	Input 1 of DWord selector module D	0: 0 Others: K connector	0	-	Changeable at any time	"C5-46" on page 881
C5-47	0xC52F	Input 2 of DWord selector module D	0: 0 Others: K connector	0	-	Changeable at any time	"C5-47" on page 882
C5-48	0xC530	Input source of floating-point number selector module A	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-48" on page 882

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C5-49	0xC531	Input 1 of floating-point number selector module A	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C5-49" on page 882
C5-50	0xC532	Input 2 of floating-point number selector module A	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C5-50" on page 883
C5-51	0xC533	Input source of floating-point number selector module B	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-51" on page 883
C5-52	0xC534	Input 1 of floating-point number selector module B	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C5-52" on page 884

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C5-53	0xC535	Input 2 of floating-point number selector module B	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C5-53" on page 884
C5-54	0xC536	Input source of floating-point number selector module C	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-54" on page 885
C5-55	0xC537	Input 1 of floating-point number selector module C	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C5-55" on page 885
C5-56	0xC538	Input 2 of floating-point number selector module C	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C5-56" on page 886

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C5-57	0xC539	Input source of floating-point number selector module D	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-57" on page 886
C5-58	0xC53A	Input 1 of floating-point number selector module D	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C5-58" on page 887
C5-59	0xC53B	Input 2 of floating-point number selector module D	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C5-59" on page 887

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C5-60	0xC53C	Input source of floating-point number selector module E	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-60" on page 888
C5-61	0xC53D	Input 1 of floating-point number selector module E	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C5-61" on page 888
C5-62	0xC53E	Input 2 of floating-point number selector module E	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C5-62" on page 889

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C5-63	0xC53F	Input source of floating-point number selector module F	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-63" on page 889
C5-64	0xC540	Input 1 of floating-point number selector module F	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C5-64" on page 890
C5-65	0xC541	Input 2 of floating-point number selector module F	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C5-65" on page 890

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C5-66	0xC542	Input source of floating-point number selector module G	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-66" on page 891
C5-67	0xC543	Input 1 of floating-point number selector module G	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C5-67" on page 891
C5-68	0xC544	Input 2 of floating-point number selector module G	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C5-68" on page 892

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C5-69	0xC545	Input source of floating-point number selector module H	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C5-69" on page 892
C5-70	0xC546	Input 1 of floating-point number selector module H	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C5-70" on page 893
C5-71	0xC547	Input 2 of floating-point number selector module H	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C5-71" on page 893

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C6-00	0xC600	Floating-point filter module A enable	0: Module disabled 1: Filter disabled 2: Filter enabled 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C6-00" on page 894
C6-01	0xC601	Input of floating-point filter module A	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C6-01" on page 894
C6-02	0xC602	Filter time of filter module A	0.000s to 65.535s	0.000	s	Changeable at any time	"C6-02" on page 895

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C6-03	0xC603	Floating-point filter module B enable	0: Module disabled 1: Filter disabled 2: Filter enabled 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C6-03" on page 895
C6-04	0xC604	Input of floating-point filter module B	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C6-04" on page 896
C6-05	0xC605	Filter time of filter module B	0.000s to 65.535s	0.000	s	Changeable at any time	"C6-05" on page 896

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C6-06	0xC606	Floating-point filter module C enable	0: Module disabled 1: Filter disabled 2: Filter enabled 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C6-06" on page 897
C6-07	0xC607	Input of floating-point filter module C	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C6-07" on page 897
C6-08	0xC608	Filter time of filter module C	0.000s to 65.535s	0.000	s	Changeable at any time	"C6-08" on page 898

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C6-09	0xC609	Floating-point filter module D enable	0: Module disabled 1: Filter disabled 2: Filter enabled 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C6-09" on page 898
C6-10	0xC60A	Input of floating-point filter module D	0: 0 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C6-10" on page 898
C6-11	0xC60B	Filter time of filter module D	0.000s to 65.535s	0.000	s	Changeable at any time	"C6-11" on page 899

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C6-12	0xC60C	Fixed-point filter module E enable	0: Module disabled 1: Filter disabled 2: Filter enabled 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C6-12" on page 899
C6-13	0xC60D	Input of fixed-point filter module E	0: 0 Others: K connector	0	-	Changeable at any time	"C6-13" on page 900
C6-14	0xC60E	Filter time of fixed-point filter module E	0.000s to 65.535s	0.000	s	Changeable at any time	"C6-14" on page 900
C6-15	0xC60F	Fixed-point filter module F enable	0: Module disabled 1: Filter disabled 2: Filter enabled 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C6-15" on page 900
C6-16	0xC610	Input of fixed-point filter module F	0: 0 Others: K connector	0	-	Changeable at any time	"C6-16" on page 901

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C6-17	0xC611	Filter time of fixed-point filter module F	0.000s to 65.535s	0.000	s	Changeable at any time	"C6-17" on page 901
C6-24	0xC618	Function of level-to-pulse conversion module A	0: Disabled 1: Conversion from level to pulse 2: Conversion from pulse to level	0	-	Changeable at any time	"C6-24" on page 901
C6-25	0xC619	Input of level-to-pulse conversion module A	0: Logic 0 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C6-25" on page 901
C6-26	0xC61A	Pulse width of level-to-pulse conversion module A	0.00s to 655.35s	0.00	s	Changeable at any time	"C6-26" on page 902
C6-27	0xC61B	Function of level-to-pulse conversion module B	0: Disabled 1: Conversion from level to pulse 2: Conversion from pulse to level	0	-	Changeable at any time	"C6-27" on page 902

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C6-28	0xC61C	Input of level-to-pulse conversion module B	0: Logic 0 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C6-28" on page 902
C6-29	0xC61D	Pulse width of level-to-pulse conversion module B	0.00s to 655.35s	0.00	s	Changeable at any time	"C6-29" on page 903
C6-30	0xC61E	Function of level-to-pulse conversion module C	0: Disabled 1: Conversion from level to pulse 2: Conversion from pulse to level	0	-	Changeable at any time	"C6-30" on page 903
C6-31	0xC61F	Input of level-to-pulse conversion module C	0: Logic 0 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C6-31" on page 903
C6-32	0xC620	Pulse width of level-to-pulse conversion module C	0.00s to 655.35s	0.00	s	Changeable at any time	"C6-32" on page 904

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C6-33	0xC621	Function of level-to-pulse conversion module D	0: Disabled 1: Conversion from level to pulse 2: Conversion from pulse to level	0	-	Changeable at any time	"C6-33" on page 904
C6-34	0xC622	Input of level-to-pulse conversion module D	0: Logic 0 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C6-34" on page 905
C6-35	0xC623	Pulse width of level-to-pulse conversion module D	0.00s to 655.35s	0.00	s	Changeable at any time	"C6-35" on page 905
C6-36	0xC624	Input of floating-point limiting module A	0: Disabled 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C6-36" on page 905
C6-37	0xC625	Upper limit of floating-point limiting module A	0: Inactive 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C6-37" on page 906

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C6-38	0xC626	Lower limit of floating-point limiting module A	0: Inactive 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C6-38" on page 906
C6-39	0xC627	Input of floating-point limiting module B	0: Disabled 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C6-39" on page 907
C6-40	0xC628	Upper limit of floating-point limiting module B	0: Inactive 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C6-40" on page 907
C6-41	0xC629	Lower limit of floating-point limiting module B	0: Inactive 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C6-41" on page 907
C6-42	0xC62A	Input of floating-point limiting module C	0: Disabled 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C6-42" on page 908

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C6-43	0xC62B	Upper limit of floating-point limiting module C	0: Inactive 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C6-43" on page 908
C6-44	0xC62C	Lower limit of floating-point limiting module C	0: Inactive 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C6-44" on page 909
C6-45	0xC62D	Input of floating-point limiting module D	0: Disabled 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C6-45" on page 909
C6-46	0xC62E	Upper limit of floating-point limiting module D	0: Inactive 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C6-46" on page 909
C6-47	0xC62F	Lower limit of floating-point limiting module D	0: Inactive 1: AI1 2: AI2 3: AI3 4: HDI 5: Aim 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"C6-47" on page 910

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C6-48	0xC630	Input of fixed-point limiting module E	0: Disabled Others: K connector	0	-	Changeable at any time	"C6-48" on page 910
C6-49	0xC631	Upper limit of fixed-point limiting module E	0: Inactive Others: K connector	0	-	Changeable at any time	"C6-49" on page 910
C6-50	0xC632	Lower limit of fixed-point limiting module E	0: Inactive Others: K connector	0	-	Changeable at any time	"C6-50" on page 911
C6-51	0xC633	Input of fixed-point limiting module F	0: Disabled Others: K connector	0	-	Changeable at any time	"C6-51" on page 911
C6-52	0xC634	Upper limit of fixed-point limiting module F	0: Inactive Others: K connector	0	-	Changeable at any time	"C6-52" on page 911
C6-53	0xC635	Lower limit of fixed-point limiting module F	0: Inactive Others: K connector	0	-	Changeable at any time	"C6-53" on page 911
C6-54	0xC636	Input of logic delay module A	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C6-54" on page 911
C6-55	0xC637	Switch-on delay of logic delay module A	0 to 65535	0	-	Changeable at any time	"C6-55" on page 912
C6-56	0xC638	Switch-off delay of logic delay module A	0 to 65535	0	-	Changeable at any time	"C6-56" on page 912

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C6-57	0xC639	Delay time unit of logic delay module A	0: No delay 1: 10 ms 10: 100 ms 100: 1s 1000: 10s 6000: 1 min 12000: 2 min 0: Added at the background	1	-	Changeable at any time	"C6-57" on page 912
C6-58	0xC63A	Input of logic delay module B	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C6-58" on page 913
C6-59	0xC63B	Switch-on delay of logic delay module B	0 to 65535	0	-	Changeable at any time	"C6-59" on page 913
C6-60	0xC63C	Switch-off delay of logic delay module B	0 to 65535	0	-	Changeable at any time	"C6-60" on page 914
C6-61	0xC63D	Delay time unit of logic delay module B	0: No delay 1: 10 ms 10: 100 ms 100: 1s 1000: 10s 6000: 1 min 12000: 2 min 0: Added at the background	1	-	Changeable at any time	"C6-61" on page 914

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C6-62	0xC63E	Input of logic delay module C	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C6-62" on page 914
C6-63	0xC63F	Switch-on delay of logic delay module C	0 to 65535	0	-	Changeable at any time	"C6-63" on page 915
C6-64	0xC640	Switch-off delay of logic delay module C	0 to 65535	0	-	Changeable at any time	"C6-64" on page 915
C6-65	0xC641	Delay time unit of logic delay module C	0: No delay 1: 10 ms 10: 100 ms 100: 1s 1000: 10s 6000: 1 min 12000: 2 min 0: Added at the background	1	-	Changeable at any time	"C6-65" on page 915

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C6-66	0xC642	Input of logic delay module D	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C6-66" on page 916
C6-67	0xC643	Switch-on delay of logic delay module D	0 to 65535	0	-	Changeable at any time	"C6-67" on page 916
C6-68	0xC644	Switch-off delay of logic delay module D	0 to 65535	0	-	Changeable at any time	"C6-68" on page 917
C6-69	0xC645	Delay time unit of logic delay module D	0: No delay 1: 10 ms 10: 100 ms 100: 1s 1000: 10s 6000: 1 min 12000: 2 min 0: Added at the background	1	-	Changeable at any time	"C6-69" on page 917

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C6-70	0xC646	Input of logic delay module E	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C6-70" on page 917
C6-71	0xC647	Switch-on delay of logic delay module E	0 to 65535	0	-	Changeable at any time	"C6-71" on page 918
C6-72	0xC648	Switch-off delay of logic delay module E	0 to 65535	0	-	Changeable at any time	"C6-72" on page 918
C6-73	0xC649	Delay time unit of logic delay module E	0: No delay 1: 10 ms 10: 100 ms 100: 1s 1000: 10s 6000: 1 min 12000: 2 min 0: Added at the background	1	-	Changeable at any time	"C6-73" on page 918

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C6-74	0xC64A	Input of logic delay module F	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C6-74" on page 919
C6-75	0xC64B	Switch-on delay of logic delay module F	0 to 65535	0	-	Changeable at any time	"C6-75" on page 919
C6-76	0xC64C	Switch-off delay of logic delay module F	0 to 65535	0	-	Changeable at any time	"C6-76" on page 920
C6-77	0xC64D	Delay time unit of logic delay module F	0: No delay 1: 10 ms 10: 100 ms 100: 1s 1000: 10s 6000: 1 min 12000: 2 min 0: Added at the background	1	-	Changeable at any time	"C6-77" on page 920

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C6-78	0xC64E	Input of logic delay module G	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C6-78" on page 920
C6-79	0xC64F	Switch-on delay of logic delay module G	0 to 65535	0	-	Changeable at any time	"C6-79" on page 921
C6-80	0xC650	Switch-off delay of logic delay module G	0 to 65535	0	-	Changeable at any time	"C6-80" on page 921
C6-81	0xC651	Delay time unit of logic delay module G	0: No delay 1: 10 ms 10: 100 ms 100: 1s 1000: 10s 6000: 1 min 12000: 2 min 0: Added at the background	1	-	Changeable at any time	"C6-81" on page 921

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C6-82	0xC652	Input of logic delay module H	0: Disabled 1: Logic 1 2: Logic 0 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"C6-82" on page 922
C6-83	0xC653	Switch-on delay of logic delay module H	0 to 65535	0	-	Changeable at any time	"C6-83" on page 922
C6-84	0xC654	Switch-off delay of logic delay module H	0 to 65535	0	-	Changeable at any time	"C6-84" on page 923
C6-85	0xC655	Delay time unit of logic delay module H	0: No delay 1: 10 ms 10: 100 ms 100: 1s 1000: 10s 6000: 1 min 12000: 2 min 0: Added at the background	1	-	Changeable at any time	"C6-85" on page 923
C7-00	0xC700	Input of multi-point curve module A	0: Disabled Others: F connector	0	-	Changeable at any time	"C7-00" on page 923
C7-01	0xC701	Setpoint X1 of multi-point curve module A	–600% to +600.0%	0.0	%	Changeable at any time	"C7-01" on page 923
C7-02	0xC702	Setpoint X2 of multi-point curve module A	–600% to +600.0%	0.0	%	Changeable at any time	"C7-02" on page 924
C7-03	0xC703	Setpoint X3 of multi-point curve module A	–600% to +600.0%	0.0	%	Changeable at any time	"C7-03" on page 924
C7-04	0xC704	Setpoint X4 of multi-point curve module A	–600% to +600.0%	0.0	%	Changeable at any time	"C7-04" on page 924

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C7-05	0xC705	Setpoint X5 of multi-point curve module A	–600% to +600.0%	0.0	%	Changeable at any time	"C7-05" on page 924
C7-06	0xC706	Setpoint X6 of multi-point curve module A	–600% to +600.0%	0.0	%	Changeable at any time	"C7-06" on page 924
C7-07	0xC707	Setpoint X7 of multi-point curve module A	–600% to +600.0%	0.0	%	Changeable at any time	"C7-07" on page 925
C7-08	0xC708	Setpoint X8 of multi-point curve module A	–600% to +600.0%	0.0	%	Changeable at any time	"C7-08" on page 925
C7-09	0xC709	Setpoint X9 of multi-point curve module A	–600% to +600.0%	0.0	%	Changeable at any time	"C7-09" on page 925
C7-10	0xC70A	Setpoint X10 of multi-point curve module A	–600% to +600.0%	0.0	%	Changeable at any time	"C7-10" on page 925
C7-11	0xC70B	Setpoint Y1 of multi-point curve module A	–600% to +600.0%	0.0	%	Changeable at any time	"C7-11" on page 925
C7-12	0xC70C	Setpoint Y2 of multi-point curve module A	–600% to +600.0%	0.0	%	Changeable at any time	"C7-12" on page 926
C7-13	0xC70D	Setpoint Y3 of multi-point curve module A	–600% to +600.0%	0.0	%	Changeable at any time	"C7-13" on page 926
C7-14	0xC70E	Setpoint Y4 of multi-point curve module A	–600% to +600.0%	0.0	%	Changeable at any time	"C7-14" on page 926
C7-15	0xC70F	Setpoint Y5 of multi-point curve module A	–600% to +600.0%	0.0	%	Changeable at any time	"C7-15" on page 926
C7-16	0xC710	Setpoint Y6 of multi-point curve module A	–600% to +600.0%	0.0	%	Changeable at any time	"C7-16" on page 926
C7-17	0xC711	Setpoint Y7 of multi-point curve module A	–600% to +600.0%	0.0	%	Changeable at any time	"C7-17" on page 926
C7-18	0xC712	Setpoint Y8 of multi-point curve module A	–600% to +600.0%	0.0	%	Changeable at any time	"C7-18" on page 927
C7-19	0xC713	Setpoint Y9 of multi-point curve module A	–600% to +600.0%	0.0	%	Changeable at any time	"C7-19" on page 927

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C7-20	0xC714	Setpoint Y10 of multi-point curve module A	–600% to +600.0%	0.0	%	Changeable at any time	"C7-20" on page 927
C7-21	0xC715	Input of multi-point curve module B	0: Disabled Others: F connector	0	-	Changeable at any time	"C7-21" on page 927
C7-22	0xC716	Setpoint X1 of multi-point curve module B	–600% to +600.0%	0.0	%	Changeable at any time	"C7-22" on page 927
C7-23	0xC717	Setpoint X2 of multi-point curve module B	–600% to +600.0%	0.0	%	Changeable at any time	"C7-23" on page 928
C7-24	0xC718	Setpoint X3 of multi-point curve module B	–600% to +600.0%	0.0	%	Changeable at any time	"C7-24" on page 928
C7-25	0xC719	Setpoint X4 of multi-point curve module B	–600% to +600.0%	0.0	%	Changeable at any time	"C7-25" on page 928
C7-26	0xC71A	Setpoint X5 of multi-point curve module B	–600% to +600.0%	0.0	%	Changeable at any time	"C7-26" on page 928
C7-27	0xC71B	Setpoint X6 of multi-point curve module B	–600% to +600.0%	0.0	%	Changeable at any time	"C7-27" on page 928
C7-28	0xC71C	Setpoint X7 of multi-point curve module B	–600% to +600.0%	0.0	%	Changeable at any time	"C7-28" on page 929
C7-29	0xC71D	Setpoint X8 of multi-point curve module B	–600% to +600.0%	0.0	%	Changeable at any time	"C7-29" on page 929
C7-30	0xC71E	Setpoint X9 of multi-point curve module B	–600% to +600.0%	0.0	%	Changeable at any time	"C7-30" on page 929
C7-31	0xC71F	Setpoint X10 of multi-point curve module B	–600% to +600.0%	0.0	%	Changeable at any time	"C7-31" on page 929
C7-32	0xC720	Setpoint Y1 of multi-point curve module B	–600% to +600.0%	0.0	%	Changeable at any time	"C7-32" on page 929
C7-33	0xC721	Setpoint Y2 of multi-point curve module B	–600% to +600.0%	0.0	%	Changeable at any time	"C7-33" on page 930
C7-34	0xC722	Setpoint Y3 of multi-point curve module B	–600% to +600.0%	0.0	%	Changeable at any time	"C7-34" on page 930

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C7-35	0xC723	Setpoint Y4 of multi-point curve module B	–600% to +600.0%	0.0	%	Changeable at any time	"C7-35" on page 930
C7-36	0xC724	Setpoint Y5 of multi-point curve module B	–600% to +600.0%	0.0	%	Changeable at any time	"C7-36" on page 930
C7-37	0xC725	Setpoint Y6 of multi-point curve module B	–600% to +600.0%	0.0	%	Changeable at any time	"C7-37" on page 930
C7-38	0xC726	Setpoint Y7 of multi-point curve module B	–600% to +600.0%	0.0	%	Changeable at any time	"C7-38" on page 931
C7-39	0xC727	Setpoint Y8 of multi-point curve module B	–600% to +600.0%	0.0	%	Changeable at any time	"C7-39" on page 931
C7-40	0xC728	Setpoint Y9 of multi-point curve module B	–600% to +600.0%	0.0	%	Changeable at any time	"C7-40" on page 931
C7-41	0xC729	Setpoint Y10 of multi-point curve module B	–600% to +600.0%	0.0	%	Changeable at any time	"C7-41" on page 931
C8-00	0xC800	Constant setpoint 1	–300% to +300.00%	0.00	%	Changeable at any time	"C8-00" on page 931
C8-01	0xC801	Constant setpoint 2	–300% to +300.00%	100.00	%	Changeable at any time	"C8-01" on page 932
C8-02	0xC802	Constant setpoint 3	–300% to +300.00%	–100	%	Changeable at any time	"C8-02" on page 932
C8-03	0xC803	Constant setpoint 4	–300% to +300.00%	200.00	%	Changeable at any time	"C8-03" on page 932
C8-04	0xC804	Constant setpoint 5	–300% to +300.00%	–200	%	Changeable at any time	"C8-04" on page 932
C8-05	0xC805	Constant setpoint 6	–3000% to +3000.0%	0.0	%	Changeable at any time	"C8-05" on page 932
C8-06	0xC806	Constant setpoint 7	–3000% to +3000.0%	0.0	%	Changeable at any time	"C8-06" on page 933
C8-07	0xC807	Constant setpoint 8	–3000% to +3000.0%	0.0	%	Changeable at any time	"C8-07" on page 933
C8-08	0xC808	Constant setpoint 9	–3000% to +3000.0%	0.0	%	Changeable at any time	"C8-08" on page 933
C8-09	0xC809	Constant setpoint 10	–3000% to +3000.0%	0.0	%	Changeable at any time	"C8-09" on page 933
C8-10	0xC80A	Constant setpoint 11	–3000% to +3000.0%	0.0	%	Changeable at any time	"C8-10" on page 933

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C8-11	0xC80B	Constant setpoint 12	–3000% to +3000.0%	0.0	%	Changeable at any time	"C8-11" on page 933
C8-12	0xC80C	Constant setpoint 13	–3000% to +3000.0%	0.0	%	Changeable at any time	"C8-12" on page 934
C8-13	0xC80D	Constant setpoint 14	–3000% to +3000.0%	0.0	%	Changeable at any time	"C8-13" on page 934
C8-14	0xC80E	Constant setpoint 15	–3000% to +3000.0%	0.0	%	Changeable at any time	"C8-14" on page 934
C8-15	0xC80F	Constant setpoint 16	–3000% to +3000.0%	0.0	%	Changeable at any time	"C8-15" on page 934
C8-16	0xC810	Constant setpoint 17	–3000% to +3000.0%	0.0	%	Changeable at any time	"C8-16" on page 934
C8-17	0xC811	Constant setpoint 18	–3000% to +3000.0%	0.0	%	Changeable at any time	"C8-17" on page 935
C8-18	0xC812	Constant setpoint 19	–3000% to +3000.0%	0.0	%	Changeable at any time	"C8-18" on page 935
C8-19	0xC813	Constant setpoint 20	–3000% to +3000.0%	0.0	%	Changeable at any time	"C8-19" on page 935
C8-20	0xC814	Constant setpoint 21	–3000% to +3000.0%	0.0	%	Changeable at any time	"C8-20" on page 935
C8-21	0xC815	Constant setpoint 22	–300% to +300.00%	0.00	%	Changeable at any time	"C8-21" on page 935
C8-22	0xC816	Constant setpoint 23	–300% to +300.00%	100.00	%	Changeable at any time	"C8-22" on page 936
C8-23	0xC817	Constant setpoint 24	–300% to +300.00%	–100	%	Changeable at any time	"C8-23" on page 936
C8-24	0xC818	Constant setpoint 25	–300% to +300.00%	200.00	%	Changeable at any time	"C8-24" on page 936
C8-25	0xC819	Constant setpoint 26	–300% to +300.00%	–200	%	Changeable at any time	"C8-25" on page 936
C8-26	0xC81A	Constant setpoint 27	0 to 65535	0	-	Changeable at any time	"C8-26" on page 936
C8-27	0xC81B	Constant setpoint 28	0 to 65535	0	-	Changeable at any time	"C8-27" on page 937
C8-28	0xC81C	Constant setpoint 29	0 to 65535	0	-	Changeable at any time	"C8-28" on page 937
C8-29	0xC81D	Constant setpoint 30	0 to 65535	0	-	Changeable at any time	"C8-29" on page 937
C8-30	0xC81E	Constant setpoint 31	0 to 65535	0	-	Changeable at any time	"C8-30" on page 937
C8-31	0xC81F	Constant setpoint 32	0 to 65535	0	-	Changeable at any time	"C8-31" on page 937

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C8-32	0xC820	Constant setpoint 33	0 to 65535	0	-	Changeable at any time	"C8-32" on page 938
C8-33	0xC821	Constant setpoint 34	0 to 65535	0	-	Changeable at any time	"C8-33" on page 938
C8-34	0xC822	Constant setpoint 35	0 to 65535	0	-	Changeable at any time	"C8-34" on page 938
C8-35	0xC823	Constant setpoint 36	0 to 65535	0	-	Changeable at any time	"C8-35" on page 938
C8-36	0xC824	Constant setpoint 37	0 to 65535	0	-	Changeable at any time	"C8-36" on page 938
C8-37	0xC825	Constant setpoint 38	0 to 65535	0	-	Changeable at any time	"C8-37" on page 938
C8-38	0xC826	Constant setpoint 39	0 to 65535	0	-	Changeable at any time	"C8-38" on page 939
C8-39	0xC827	Constant setpoint 40	0 to 65535	0	-	Changeable at any time	"C8-39" on page 939
C8-40	0xC828	Constant setpoint 41	0 to 65535	0	-	Changeable at any time	"C8-40" on page 939
C8-41	0xC829	Constant setpoint 42	0 to 65535	0	-	Changeable at any time	"C8-41" on page 939
C9-00	0xC900	LOWORD of 16-bit data RAM address 1	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C9-00" on page 940
C9-01	0xC901	HIWORD of 16-bit data RAM address 1	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C9-01" on page 940
C9-02	0xC902	LOWORD of 16-bit data RAM address 2	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C9-02" on page 940
C9-03	0xC903	HIWORD of 16-bit data RAM address 2	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C9-03" on page 940
C9-04	0xC904	LOWORD of 16-bit data RAM address 3	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C9-04" on page 940
C9-05	0xC905	HIWORD of 16-bit data RAM address 3	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C9-05" on page 941
C9-06	0xC906	LOWORD of 16-bit data RAM address 4	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C9-06" on page 941
C9-07	0xC907	HIWORD of 16-bit data RAM address 4	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C9-07" on page 941
C9-08	0xC908	LOWORD of 16-bit data RAM address 5	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C9-08" on page 941
C9-09	0xC909	HIWORD of 16-bit data RAM address 5	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C9-09" on page 941
C9-10	0xC90A	32-bit data type selection 1	0 to 1	0	-	Changeable at any time	"C9-10" on page 942

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C9-11	0xC90B	32-bit data amplification coefficient 1	0 to 10000	0	-	Changeable at any time	"C9-11" on page 942
C9-12	0xC90C	LOWORD of 32-bit data RAM address 1	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C9-12" on page 942
C9-13	0xC90D	HIWORD of 32-bit data RAM address 1	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C9-13" on page 942
C9-14	0xC90E	32-bit data type selection 2	0 to 1	0	-	Changeable at any time	"C9-14" on page 942
C9-15	0xC90F	32-bit data amplification coefficient 2	0 to 10000	0	-	Changeable at any time	"C9-15" on page 943
C9-16	0xC910	LOWORD of 32-bit data RAM address 2	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C9-16" on page 943
C9-17	0xC911	HIWORD of 32-bit data RAM address 2	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C9-17" on page 943
C9-18	0xC912	32-bit data type selection 3	0 to 1	0	-	Changeable at any time	"C9-18" on page 943
C9-19	0xC913	32-bit data amplification coefficient 3	0 to 10000	0	-	Changeable at any time	"C9-19" on page 943
C9-20	0xC914	LOWORD of 32-bit data RAM address 3	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C9-20" on page 944
C9-21	0xC915	HIWORD of 32-bit data RAM address 3	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C9-21" on page 944
C9-22	0xC916	32-bit data type selection 4	0 to 1	0	-	Changeable at any time	"C9-22" on page 944
C9-23	0xC917	32-bit data amplification coefficient 4	0 to 10000	0	-	Changeable at any time	"C9-23" on page 944
C9-24	0xC918	LOWORD of 32-bit data RAM address 4	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C9-24" on page 944
C9-25	0xC919	HIWORD of 32-bit data RAM address 4	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C9-25" on page 945
C9-26	0xC91A	32-bit data type selection 5	0 to 1	0	-	Changeable at any time	"C9-26" on page 945
C9-27	0xC91B	32-bit data amplification coefficient 5	0 to 10000	0	-	Changeable at any time	"C9-27" on page 945
C9-28	0xC91C	LOWORD of 32-bit data RAM address 5	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C9-28" on page 945
C9-29	0xC91D	HIWORD of 32-bit data RAM address 5	0x0 to 0xFFFF	0x0	-	Changeable at any time	"C9-29" on page 945

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C9-30	0xC91E	Internal parameter monitoring input 1	0 to 97	0	-	Changeable at any time	"C9-30" on page 946
C9-31	0xC91F	Internal parameter monitoring input 2	0 to 97	0	-	Changeable at any time	"C9-31" on page 946
C9-32	0xC920	Internal parameter monitoring input 3	0 to 97	0	-	Changeable at any time	"C9-32" on page 946
C9-33	0xC921	Internal parameter monitoring input 4	0 to 97	0	-	Changeable at any time	"C9-33" on page 946
C9-34	0xC922	Internal parameter monitoring input 5	0 to 97	0	-	Changeable at any time	"C9-34" on page 946
C9-35	0xC923	Internal parameter monitoring input 6	0 to 97	0	-	Changeable at any time	"C9-35" on page 946
C9-36	0xC924	Internal parameter monitoring input 7	0 to 97	0	-	Changeable at any time	"C9-36" on page 947
C9-37	0xC925	Internal parameter monitoring input 8	0 to 97	0	-	Changeable at any time	"C9-37" on page 947
C9-40	0xC928	Variable connector value viewing input 1	0 to 65535	0	-	Changeable at any time	"C9-40" on page 947
C9-41	0xC929	Variable connector value viewing input 2	0 to 65535	0	-	Changeable at any time	"C9-41" on page 947
C9-42	0xC92A	Variable connector value viewing input 3	0 to 65535	0	-	Changeable at any time	"C9-42" on page 947
C9-43	0xC92B	Variable connector value viewing input 4	0 to 65535	0	-	Changeable at any time	"C9-43" on page 948
C9-44	0xC92C	Variable connector value viewing input 5	0 to 65535	0	-	Changeable at any time	"C9-44" on page 948
C9-45	0xC92D	Variable connector value viewing input 6	0 to 65535	0	-	Changeable at any time	"C9-45" on page 948
C9-46	0xC92E	Variable connector value viewing input 7	0 to 65535	0	-	Changeable at any time	"C9-46" on page 948
C9-47	0xC92F	Variable connector value viewing input 8	0 to 65535	0	-	Changeable at any time	"C9-47" on page 948
C9-50	0xC932	Monitoring variable 0	–32768 to +32767	0	-	Unchangeable	"C9-50" on page 949
C9-51	0xC933	Monitoring variable 1	–32768 to +32767	0	-	Unchangeable	"C9-51" on page 949

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
C9-52	0xC934	Monitoring variable 2	–32768 to +32767	0	-	Unchangeable	"C9-52" on page 949
C9-53	0xC935	Monitoring variable 3	–32768 to +32767	0	-	Unchangeable	"C9-53" on page 949
C9-54	0xC936	Monitoring variable 4	–32768 to +32767	0	-	Unchangeable	"C9-54" on page 949
C9-55	0xC937	Monitoring variable 5	–32768 to +32767	0	-	Unchangeable	"C9-55" on page 950
C9-56	0xC938	Monitoring variable 6	–32768 to +32767	0	-	Unchangeable	"C9-56" on page 950
C9-57	0xC939	Monitoring variable 7	–32768 to +32767	0	-	Unchangeable	"C9-57" on page 950
C9-58	0xC93A	Monitoring variable 8	–32768 to +32767	0	-	Unchangeable	"C9-58" on page 950
C9-59	0xC93B	Monitoring variable 9	–32768 to +32767	0	-	Unchangeable	"C9-59" on page 950
C9-70	0xC946	Commissioning variable 0	–32768 to +32767	0	-	Changeable at any time	"C9-70" on page 951
C9-71	0xC947	Commissioning variable 1	–32768 to +32767	0	-	Changeable at any time	"C9-71" on page 951
C9-72	0xC948	Commissioning variable 2	–32768 to +32767	0	-	Changeable at any time	"C9-72" on page 951
C9-73	0xC949	Commissioning variable 3	–32768 to +32767	0	-	Changeable at any time	"C9-73" on page 951
C9-74	0xC94A	Commissioning variable 4	–32768 to +32767	0	-	Changeable at any time	"C9-74" on page 951
C9-75	0xC94B	Commissioning variable 5	–32768 to +32767	0	-	Changeable at any time	"C9-75" on page 951
C9-76	0xC94C	Commissioning variable 6	–32768 to +32767	0	-	Changeable at any time	"C9-76" on page 952
C9-77	0xC94D	Commissioning variable 7	–32768 to +32767	0	-	Changeable at any time	"C9-77" on page 952
C9-78	0xC94E	Commissioning variable 8	–32768 to +32767	0	-	Changeable at any time	"C9-78" on page 952
C9-79	0xC94F	Commissioning variable 9	–32768 to +32767	0	-	Changeable at any time	"C9-79" on page 952
CA-00	0xCA00	Motor type	0: Common asynchronous motor 1: Variable frequency asynchronous motor 2: Permanent magnet synchronous motor	0	-	Changeable only at stop	"CA-00" on page 953
CA-01	0xCA01	Rated motor power	0.1 kW to 1000.0 kW	3.7	kW	Changeable only at stop	"CA-01" on page 953
CA-02	0xCA02	Rated motor voltage	1 V to 2000 V	380	V	Changeable only at stop	"CA-02" on page 953

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CA-03	0xCA03	Rated motor current	0.01 A to 655.35 A	9.00	A	Changeable only at stop	" CA-03" on page 953
CA-04	0xCA04	Rated motor frequency	0.01 Hz to F0-10	50.00	Hz	Changeable only at stop	" CA-04" on page 953
CA-05	0xCA05	Rated motor speed	1 RPM to 65535 RPM	1460	RPM	Changeable only at stop	" CA-05" on page 954
CA-06	0xCA06	Number of parallel motors	1 to 200	1	-	Changeable only at stop	" CA-06" on page 954
CA-07	0xCA07	Motor information command word	Bit00: Mutual inductance curve 0: Disabled 1: Enabled Bit01: D- and Q-axis inductance curve 0: Disabled 1: Enabled Bit02: Rotor resistance online auto-tuning 0: Disabled 1: Enabled Bit03: Rotor resistance online auto-tuning method 0: Amplitude 1: Phase Bit04: Motor thermal model 0: Disabled 1: Enabled Bit05: Temperature source of motor thermal model 0: Estimated temperature 1: Temperature detected by sensor Bit06: Torque coefficient calculation of asynchronous motor 0: Torque formula 1: Current distribution Bit07: Torque coefficient calculation of synchronous motor 0: Torque formula 1: Torque matching the rated torque Bit08: Zero speed friction torque calculation 0: Torque linearly decreasing to zero 1: Torque to maintain minimum speed Bit09: Calculation of model parameters based on nameplate parameters 0: Disabled 1: Enabled Bit10: Confirmation of calculating model parameters based on nameplate parameters 0: Default 1: Confirm	0x3	-	Changeable only at stop	" CA-07" on page 954
CA-08	0xCA08	Number of motor pole pairs	0 to 64	0	-	Changeable only at stop	" CA-08" on page 955

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CA-09	0xCA09	Motor power factor	0.600 to 1.000	0.860	-	Changeable only at stop	"CA-09" on page 956
CA-10	0xCA0A	Encoder PPR	1 to 65535	1024	-	Changeable only at stop	"CA-10" on page 956
CA-11	0xCA0B	Encoder type	0: ABZ incremental encoder 1: 23-bit encoder 2: Resolver 3: External input	0	-	Changeable only at stop	"CA-11" on page 956
CA-12	0xCA0C	Speed feedback PG card	0: Local PG card 1: Extension PG card	0	-	Changeable only at stop	"CA-12" on page 956
CA-13	0xCA0D	Number of resolver pole pairs	1 to 65535	1	-	Changeable only at stop	"CA-13" on page 956
CA-15	0xCA0F	Speed feedback PG wire breakage detection time	0.0s to 10.0s	0.0	s	Changeable only at stop	"CA-15" on page 957
CA-16	0xCA10	A/B phase sequence of encoder	0: Forward 1: Reverse	0	-	Changeable only at stop	"CA-16" on page 957
CA-17	0xCA11	Encoder installation angle	0.0° to 359.9°	0.0	°	Changeable only at stop	"CA-17" on page 957
CA-18	0xCA12	Expansion card	1: Expansion card 1 2: Expansion card 2	1	-	Changeable only at stop	"CA-18" on page 957
CA-19	0xCA13	ABZ encoder speed measurement mode at low speed	0: Maintain 1: Attenuate 2: Optimized solution	2	-	Changeable only at stop	"CA-19" on page 957
CA-20	0xCA14	Encoder speed measurement filter time constant	0.000s to 10.000s	0.004	s	Changeable at any time	"CA-20" on page 958
CA-21	0xCA15	Encoder wire breakage software detection coefficient	0.000 to 8.000	1.000	-	Changeable at any time	"CA-21" on page 958
CA-22	0xCA16	Encoder control word	Bit00: Speed measurement 0: Disabled 1: Enabled Bit01: Software detection of wire breakage 0: Disabled 1: Enabled Bit02: Glitch removal 0: Disabled 1: Enabled Bit03: ABZ encoder speed measurement mode 0: Quadruplicated frequency 1: Single pulse	0	-	Changeable only at stop	"CA-22" on page 958

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CA-23	0xCA17	Speed measurement exception count threshold	1 to 100	10	-	Changeable only at stop	"CA-23" on page 958
CA-24	0xCA18	Motor gear ratio (numerator)	1 to 65535	1	-	Changeable only at stop	"CA-24" on page 959
CA-25	0xCA19	Motor gear ratio (denominator)	1 to 65535	1	-	Changeable only at stop	"CA-25" on page 959
CA-26	0xCA1A	External input source of encoder	0: 0 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Unchangeable	"CA-26" on page 959
CA-29	0xCA1D	Auto-tuning	0: No operation 1: Static auto-tuning on partial parameters of asynchronous motor 2: Dynamic auto-tuning on asynchronous motor 3: Static auto-tuning on all parameters of asynchronous motor 4: Inertia auto-tuning 5: Deadzone auto-tuning 11: With-load auto-tuning on synchronous motor (excluding back EMF) 12: No-load dynamic auto-tuning on synchronous motor 13: Static auto-tuning on all parameters of synchronous motor (excluding zero point angle)	0	-	Changeable only at stop	"CA-29" on page 959
CA-30	0xCA1E	Asynchronous motor stator resistance	0.001 Ω to 65.535 Ω	1.204	Ω	Changeable only at stop	"CA-30" on page 960
CA-31	0xCA1F	Asynchronous motor rotor resistance	0.001 Ω to 65.535 Ω	0.908	Ω	Changeable only at stop	"CA-31" on page 960
CA-32	0xCA20	Asynchronous motor leakage inductance	0.01 mH to 655.35 mH	5.28	mH	Changeable only at stop	"CA-32" on page 960
CA-33	0xCA21	Asynchronous motor mutual inductance	0.1 mH to 6553.5 mH	156.8	mH	Changeable only at stop	"CA-33" on page 960
CA-34	0xCA22	Asynchronous motor no-load current	0.01 A to CA-03	4.20	A	Changeable only at stop	"CA-34" on page 961

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CA-35	0xCA23	Synchronous motor stator resistance	0.001 Ω to 65.535 Ω	1.204	Ω	Changeable only at stop	" CA-35" on page 961
CA-36	0xCA24	Synchronous motor D axis inductance	0.01 mH to 655.35 mH	5.28	mH	Changeable only at stop	" CA-36" on page 961
CA-37	0xCA25	Synchronous motor Q axis inductance	0.01 mH to 655.35 mH	5.28	mH	Changeable only at stop	" CA-37" on page 961
CA-39	0xCA27	Synchronous motor back EMF coefficient	0.0 V to 6553.5 V	300.0	V	Changeable only at stop	" CA-39" on page 961
CA-40	0xCA28	Stator leakage inductance	0.000 mH to 65.535 mH	6.540	mH	Changeable only at stop	" CA-40" on page 962
CA-41	0xCA29	Electromechanical time constant	1 ms to 65535 ms	100	ms	Unchangea ble	" CA-41" on page 962
CA-42	0xCA2A	Inertia ratio	0.0% to 6553.5%	120.0	%	Changeable only at stop	" CA-42" on page 962
CA-43	0xCA2B	Friction torque	0.0% to 6553.5%	2.0	%	Changeable only at stop	" CA-43" on page 962
CA-44	0xCA2C	Excitation current coefficient 1 of mutual inductance curve (rated)	5.0% to 100.0%	50.0	%	Changeable only at stop	" CA-44" on page 962
CA-45	0xCA2D	Excitation current coefficient 2 of mutual inductance curve (rated)	5.0% to 100.0%	75.0	%	Changeable only at stop	" CA-45" on page 962
CA-46	0xCA2E	Excitation current coefficient 3 of mutual inductance curve	100.0% to 800.0%	150.0	%	Changeable only at stop	" CA-46" on page 963
CA-47	0xCA2F	Excitation current coefficient 4 of mutual inductance curve	100.0% to 800.0%	210.0	%	Changeable only at stop	" CA-47" on page 963
CA-48	0xCA30	Flux coefficient 1 of mutual inductance curve (rated)	10.0% to 100.0%	50.0	%	Changeable only at stop	" CA-48" on page 963
CA-49	0xCA31	Flux coefficient 2 of mutual inductance curve (rated)	10.0% to 100.0%	85.0	%	Changeable only at stop	" CA-49" on page 963
CA-50	0xCA32	Flux coefficient 3 of mutual inductance curve	100.0% to 300.0%	115.0	%	Changeable only at stop	" CA-50" on page 963
CA-51	0xCA33	Flux coefficient 4 of mutual inductance curve	100.0% to 300.0%	125.0	%	Changeable only at stop	" CA-51" on page 964

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CA-52	0xCA34	Speed point 1 of friction curve	0 RPM to 30000 RPM	15	RPM	Changeable only at stop	"CA-52" on page 964
CA-53	0xCA35	Speed point 2 of friction curve	0 RPM to 30000 RPM	30	RPM	Changeable only at stop	"CA-53" on page 964
CA-54	0xCA36	Speed point 3 of friction curve	0 RPM to 30000 RPM	60	RPM	Changeable only at stop	"CA-54" on page 964
CA-55	0xCA37	Speed point 4 of friction curve	0 RPM to 30000 RPM	120	RPM	Changeable only at stop	"CA-55" on page 964
CA-56	0xCA38	Speed point 5 of friction curve	0 RPM to 30000 RPM	150	RPM	Changeable only at stop	"CA-56" on page 965
CA-57	0xCA39	Speed point 6 of friction curve	0 RPM to 30000 RPM	300	RPM	Changeable only at stop	"CA-57" on page 965
CA-58	0xCA3A	Speed point 7 of friction curve	0 RPM to 30000 RPM	600	RPM	Changeable only at stop	"CA-58" on page 965
CA-59	0xCA3B	Speed point 8 of friction curve	0 RPM to 30000 RPM	1200	RPM	Changeable only at stop	"CA-59" on page 965
CA-60	0xCA3C	Speed point 9 of friction curve	0 RPM to 30000 RPM	1500	RPM	Changeable only at stop	"CA-60" on page 965
CA-61	0xCA3D	Speed point 10 of friction curve	0 RPM to 30000 RPM	3000	RPM	Changeable only at stop	"CA-61" on page 966
CA-62	0xCA3E	Torque point 1 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"CA-62" on page 966
CA-63	0xCA3F	Torque point 2 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"CA-63" on page 966
CA-64	0xCA40	Torque point 3 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"CA-64" on page 966
CA-65	0xCA41	Torque point 4 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"CA-65" on page 966
CA-66	0xCA42	Torque point 5 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"CA-66" on page 967
CA-67	0xCA43	Torque point 6 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"CA-67" on page 967
CA-68	0xCA44	Torque point 7 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"CA-68" on page 967
CA-69	0xCA45	Torque point 8 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"CA-69" on page 967
CA-70	0xCA46	Torque point 9 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"CA-70" on page 967
CA-71	0xCA47	Torque point 10 of friction curve	–320 N·m to +320 N·m	0.00	N·m	Changeable only at stop	"CA-71" on page 967

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CA-72	0xCA48	Current coefficient starting point of D- and Q-axis inductance curve	–800% to +800.0%	–200	%	Changeable only at stop	"CA-72" on page 968
CA-73	0xCA49	Current coefficient end point of D- and Q-axis inductance curve	–800% to +800.0%	200.0	%	Changeable only at stop	"CA-73" on page 968
CA-74	0xCA4A	D axis inductance 1 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-74" on page 968
CA-75	0xCA4B	D axis inductance 2 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-75" on page 968
CA-76	0xCA4C	D axis inductance 3 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-76" on page 968
CA-77	0xCA4D	D axis inductance 4 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-77" on page 969
CA-78	0xCA4E	D axis inductance 5 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-78" on page 969
CA-79	0xCA4F	D axis inductance 6 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-79" on page 969
CA-80	0xCA50	D axis inductance 7 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-80" on page 969
CA-81	0xCA51	D axis inductance 8 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-81" on page 969
CA-82	0xCA52	D axis inductance 9 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-82" on page 970
CA-83	0xCA53	D axis inductance 10 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-83" on page 970
CA-84	0xCA54	D axis inductance 11 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-84" on page 970
CA-85	0xCA55	D axis inductance 12 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-85" on page 970
CA-86	0xCA56	Q axis inductance 1 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-86" on page 970

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CA-87	0xCA57	Q axis inductance 2 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-87" on page 971
CA-88	0xCA58	Q axis inductance 3 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-88" on page 971
CA-89	0xCA59	Q axis inductance 4 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-89" on page 971
CA-90	0xCA5A	Q axis inductance 5 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-90" on page 971
CA-91	0xCA5B	Q axis inductance 6 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-91" on page 971
CA-92	0xCA5C	Q axis inductance 7 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-92" on page 972
CA-93	0xCA5D	Q axis inductance 8 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-93" on page 972
CA-94	0xCA5E	Q axis inductance 9 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-94" on page 972
CA-95	0xCA5F	Q axis inductance 10 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-95" on page 972
CA-96	0xCA60	Q axis inductance 11 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-96" on page 972
CA-97	0xCA61	Q axis inductance 12 of D- and Q-axis inductance curve	0.0% to 6553.5%	100.0	%	Changeable only at stop	"CA-97" on page 972
CB-00	0xCB00	V/f curve	0: Straight-line V/f curve 1: Multi-point V/f curve 2: Reserved 3: Reserved 4: Reserved 5: Reserved 6: Reserved 7: Reserved 8: Reserved 9: Reserved 10: V/f complete separation mode 11: V/f half separation mode	0	-	Changeable only at stop	"CB-00" on page 973
CB-01	0xCB01	Torque boost	0.0% to 30.0%	3.0	%	Changeable at any time	"CB-01" on page 973

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CB-02	0xCB02	Cut-off frequency of torque boost	0.00 Hz to F0-10	50.00	Hz	Changeable only at stop	"CB-02" on page 973
CB-03	0xCB03	Multi-point V/f frequency 1	0.00 Hz to CB-05	0.00	Hz	Changeable only at stop	"CB-03" on page 974
CB-04	0xCB04	Multi-point V/f voltage 1	0.0% to +100.0%	0.0	%	Changeable only at stop	"CB-04" on page 974
CB-05	0xCB05	Multi-point V/f frequency 2	CB-03 to CB-07	0.00	Hz	Changeable only at stop	"CB-05" on page 974
CB-06	0xCB06	Multi-point V/f voltage 2	0.0% to +100.0%	0.0	%	Changeable only at stop	"CB-06" on page 974
CB-07	0xCB07	Multi-point V/f frequency 3	CB-05 to CA-04	0.00	Hz	Changeable only at stop	"CB-07" on page 974
CB-08	0xCB08	Multi-point V/f voltage 3	0.0% to +100.0%	0.0	%	Changeable only at stop	"CB-08" on page 975
CB-09	0xCB09	V/f slip compensation gain	0.0 to 200.0	0.0	-	Changeable at any time	"CB-09" on page 975
CB-10	0xCB0A	V/f overexcitation gain	0 to 200	64	-	Changeable at any time	"CB-10" on page 975
CB-11	0xCB0B	V/f oscillation suppression gain	0 to 100	40	-	Changeable at any time	"CB-11" on page 975
CB-12	0xCB0C	V/f oscillation suppression	0: Disabled 1: Enabled	1	-	Changeable at any time	"CB-12" on page 975
CB-13	0xCB0D	Voltage source for V/f separation	0: Digital setting (CB-14) 1: AI1 2: AI2 3: AI3 4: Pulse reference (DI5) 5: Multi-reference 6: Simple PLC 7: PID 8: Communication Others: F connector	0	-	Changeable at any time	"CB-13" on page 976
CB-14	0xCB0E	V/f separation voltage	0 V to CA-02	0	V	Changeable at any time	"CB-14" on page 977
CB-15	0xCB0F	Voltage rise time of V/f separation	0.0s to 1000.0s	0.0	s	Changeable at any time	"CB-15" on page 977
CB-16	0xCB10	Voltage fall time of V/f separation	0.0s to 1000.0s	0.0	s	Changeable at any time	"CB-16" on page 977
CB-17	0xCB11	Stop mode for V/f separation	0: Frequency and voltage decline to 0 independently 1: Frequency declines to 0 after voltage declines to 0 2: Coast to stop (new)	0	-	Changeable at any time	"CB-17" on page 977

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CB-18	0xCB12	Overcurrent stall suppression action current	50% to 200%	150	%	Changeable only at stop	"CB-18" on page 978
CB-19	0xCB13	Overcurrent stall suppression	0: Disabled 1: Enabled	1	-	Changeable only at stop	"CB-19" on page 978
CB-20	0xCB14	Overcurrent stall suppression gain	1 to 100	20	-	Changeable at any time	"CB-20" on page 978
CB-21	0xCB15	Compensation coefficient of speed multiplying overcurrent stall suppression action current	50% to 200%	100	%	Changeable only at stop	"CB-21" on page 978
CB-22	0xCB16	Overvoltage stall suppression action voltage	330.0 V to 800.0 V	770.0	V	Changeable at any time	"CB-22" on page 978
CB-23	0xCB17	Overvoltage stall suppression	0: Disabled 1: Enabled	1	-	Changeable only at stop	"CB-23" on page 979
CB-24	0xCB18	Overvoltage stall suppression frequency gain	1 to 100	30	-	Changeable at any time	"CB-24" on page 979
CB-25	0xCB19	Overvoltage stall suppression voltage gain	1 to 100	30	-	Changeable at any time	"CB-25" on page 979
CB-26	0xCB1A	Frequency rise threshold for overvoltage stall suppression	0 Hz to 50 Hz	5	Hz	Changeable only at stop	"CB-26" on page 979
CB-27	0xCB1B	Slip compensation filter time	0.1s to 10.0s	0.5	s	Changeable only at stop	"CB-27" on page 979
CB-28	0xCB1C	Multi-point curve source	0: 3-point curve 1: Multi-point curve module A 2: Multi-point curve module B	0	-	Changeable only at stop	"CB-28" on page 980
CB-33	0xCB21	Online torque compensation gain	80 to 150	100	-	Changeable only at stop	"CB-33" on page 980
CB-34	0xCB22	ImaxKi coefficient	10% to 1000%	100	%	Changeable only at stop	"CB-34" on page 980
CB-35	0xCB23	Overcurrent suppression threshold (relative to rated motor current)	80% to 300%	200	%	Changeable only at stop	"CB-35" on page 980

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CB-36	0xCB24	Frequency threshold for overcurrent suppression field weakening	100% to 500%	100	%	Changeable only at stop	"CB-36" on page 980
CB-37	0xCB25	IT filter time	10 ms to 1000 ms	100	ms	Changeable only at stop	"CB-37" on page 981
CB-38	0xCB26	Slip compensation mode	0: Disabled 1: Slip compensation without PG 2: Slip compensation with PG	1	-	Changeable only at stop	"CB-38" on page 981
CB-39	0xCB27	VdcMaxCtrl allowed runtime	0.0s to 100.0s	0.0	s	Changeable only at stop	"CB-39" on page 981
CB-40	0xCB28	Upper limit of V/f separation voltage	50.0% to 200.0%	100.0	%	Changeable only at stop	"CB-40" on page 981
CB-41	0xCB29	RFG time of V/f separation frequency	0: RFG time forced to 0 1: Preset RFG time	0	-	Changeable only at stop	"CB-41" on page 981
CB-42	0xCB2A	Cut-off frequency of V/f oscillation suppression filter	1.0 Hz to 50.0 Hz	8.0	Hz	Changeable at any time	"CB-42" on page 982
CB-43	0xCB2B	Cut-off frequency threshold for V/f oscillation suppression	10 Hz to 3000 Hz	200	Hz	Changeable at any time	"CB-43" on page 982
CB-44	0xCB2C	VdcMaxCtrl feedforward coefficient	0% to 500%	0	%	Changeable at any time	"CB-44" on page 982
CB-50	0xCB32	PMVVC low-speed IF	0: Disabled 1: Enabled	1	-	Changeable only at stop	"CB-50" on page 982
CB-51	0xCB33	PMVVC low-speed IF current	30 to 250	100	-	Changeable only at stop	"CB-51" on page 983
CB-52	0xCB34	PMVVC low-speed IF speed switching threshold	2.0% to 100.0%	10.0	%	Changeable only at stop	"CB-52" on page 983
CB-53	0xCB35	PMVVC oscillation suppression gain coefficient	0 to 500	100	-	Changeable at any time	"CB-53" on page 983
CB-54	0xCB36	PMVVC filter time coefficient	0 to 500	100	-	Changeable at any time	"CB-54" on page 983
CB-55	0xCB37	PMVVC energy conservation control mode	0: Fixed straight-line V/f curve 1: Fixed 30% reactive current 2: MTPA control	2	-	Changeable only at stop	"CB-55" on page 983

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CC-00	0xCC00	Startup mode	0: Direct start 1: Flying start 2: Pre-excitation start (AC asynchronous motor) 3: SVC quick start	0	-	Changeable at any time	"CC-00" on page 984
CC-01	0xCC01	Speed tracking mode	0: From the stop frequency 1: From the power frequency 2: From the maximum frequency 3: Reserved 4: Magnetic field directional speed tracking (MD290)	0	-	Changeable at any time	"CC-01" on page 984
CC-02	0xCC02	Speed of speed tracking	1 to 100	20	-	Changeable at any time	"CC-02" on page 984
CC-03	0xCC03	Startup frequency	0.00 Hz to 10.00 Hz	0.00	Hz	Changeable at any time	"CC-03" on page 984
CC-04	0xCC04	Startup frequency hold time	0.0s to 100.0s	0.0	s	Changeable only at stop	"CC-04" on page 985
CC-05	0xCC05	DC braking current at startup	0% to 100%	50	%	Changeable only at stop	"CC-05" on page 985
CC-06	0xCC06	DC braking time at startup	0.0s to 100.0s	0.0	s	Changeable only at stop	"CC-06" on page 985
CC-07	0xCC07	Stop mode	0: Decelerate to stop 1: Coast to stop 2: Stop at maximum capability	0	-	Changeable at any time	"CC-07" on page 985
CC-08	0xCC08	Start frequency of DC braking at stop	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	"CC-08" on page 985
CC-09	0xCC09	DC braking delay at stop	0.0s to 100.0s	0.0	s	Changeable at any time	"CC-09" on page 986
CC-10	0xCC0A	DC braking current at stop	0% to 100%	50	%	Changeable at any time	"CC-10" on page 986
CC-11	0xCC0B	DC braking time at stop	0.0s to 100.0s	0.0	s	Changeable at any time	"CC-11" on page 986
CC-12	0xCC0C	Speed tracking sweep current limit closed loop Kp	0 to 1000	500	-	Changeable at any time	"CC-12" on page 986
CC-13	0xCC0D	Speed tracking sweep current limit closed loop Ki	0 to 1000	800	-	Changeable at any time	"CC-13" on page 986
CC-14	0xCC0E	Speed tracking current	30% to 200%	80	%	Changeable only at stop	"CC-14" on page 987
CC-15	0xCC0F	Current loop multiple	10% to 600%	100	%	Changeable at any time	"CC-15" on page 987

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CC-16	0xCC10	Demagnetization time (valid for asynchronous motors)	0.00s to 5.00s	0.50	s	Changeable at any time	"CC-16" on page 987
CC-17	0xCC11	Overexcitation enable	0: Disabled 2: Enabled during deceleration 3: Enabled always	0	-	Changeable at any time	"CC-17" on page 987
CC-18	0xCC12	Overexcitation suppression current	0% to 150%	100	%	Changeable at any time	"CC-18" on page 988
CC-19	0xCC13	Overexcitation gain	0.01 to 2.50	1.25	-	Changeable at any time	"CC-19" on page 988
CC-20	0xCC14	Parameter auto-tuning upon startup	Bit00: Synchronous motor pole position auto-tuning upon startup 0: Disabled 1: Enabled Bit01: Quick stator resistance auto-tuning upon startup 0: Disabled 1: Enabled Bit02–Bit03: HFI pole position auto-tuning 0: Disabled 1: Enabled 2: Adaptive Bit04: IGBT shoot-through self-check upon startup 0: Disabled 1: Enabled Bit05: Short-to-ground self-check upon startup (reserved) 0: Disabled 1: Enabled Bit06: Phase loss self-check upon startup (reserved) 0: Disabled 1: Enabled	1	-	Changeable only at stop	"CC-20" on page 988
CC-21	0xCC15	Auto-tuning direction	0 to 1	1	-	Changeable only at stop	"CC-21" on page 989
CC-22	0xCC16	Oscillation suppression gain of synchronous motor back EMF auto-tuning	0.0 to 30.0	3.2	-	Changeable only at stop	"CC-22" on page 989
CC-23	0xCC17	Target speed of rotation auto-tuning	30.0% to 100.0%	70.0	%	Changeable only at stop	"CC-23" on page 989
CC-24	0xCC18	Target speed 1 of inertia auto-tuning	10.0% to CC-25	40.0	%	Changeable only at stop	"CC-24" on page 989

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CC-25	0xCC19	Target speed 2 of inertia auto-tuning	CC-24 to 100.0%	60.0	%	Changeable only at stop	"CC-25" on page 989
CC-26	0xCC1A	Overcurrent prevention of mutual inductance saturation curve	0 to 1	1	-	Changeable only at stop	"CC-26" on page 989
CC-27	0xCC1B	Auto-tuning items	Bit00: Speed loop parameter adaptation 0: Disabled 1: Enabled Bit01: Current loop parameter adaptation 0: Disabled 1: Enabled Bit02: Drive nonlinear auto-tuning 0: Disabled 1: Enabled Bit03: Inter-phase deviation coefficient auto-tuning 0: Disabled 1: Enabled Bit04: Auto-tuning of initial pole position of synchronous motor 0: Disabled 1: Enabled Bit05: Auto-tuning of D- and Q-axis inductance model of synchronous motor 0: Disabled 1: Enabled Bit06: System inertia auto-tuning 0: Disabled 1: Enabled Bit07: HFI pole position auto-tuning 0: Disabled 1: Enabled	117	-	Changeable only at stop	"CC-27" on page 990
CC-28	0xCC1C	OFF3 stop mode	0: Quick stop 1: Stop at maximum capability	0	-	Changeable only at stop	"CC-28" on page 990
CC-29	0xCC1D	Stop mode during running	0: OFF1 stop mode 1: OFF2 stop mode 2: OFF3 stop mode	1	-	Changeable only at stop	"CC-29" on page 991
CC-30	0xCC1E	Stop mode for torque control	0: Coast to stop forcibly 1: Switch to speed control mode and then stop 2: Maintain torque control mode until zero speed and then block	1	-	Changeable only at stop	"CC-30" on page 991
CC-32	0xCC20	Proportional gain adjustment coefficient	0.1 to 2.0	1.0	-	Changeable at any time	"CC-32" on page 991
CC-33	0xCC21	Integral gain adjustment coefficient	0.1 to 2.0	1.0	-	Changeable at any time	"CC-33" on page 991

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CC-34	0xCC22	Zero-speed threshold	0.1% to 200.0%	2.0	%	Changeable at any time	"CC-34" on page 991
CC-35	0xCC23	Zero-speed stop delay	0.00s to 10.00s	0.10	s	Changeable only at stop	"CC-35" on page 992
CC-36	0xCC24	Reference source execution interval	0 to 20	4	-	Changeable only at stop	"CC-36" on page 992
CC-37	0xCC25	Trial current for speed tracking of synchronous motor	5.0% to 50.0%	10.0	%	Changeable only at stop	"CC-37" on page 992
CC-38	0xCC26	Minimum frequency for speed tracking of synchronous motor	0.0 Hz to 100.0 Hz	0.0	Hz	Changeable only at stop	"CC-38" on page 992
CC-39	0xCC27	Angle compensation for speed tracking of synchronous motor	0 to 360	0	-	Changeable only at stop	"CC-39" on page 992
CC-40	0xCC28	Parameter auto-tuning of synchronous motor upon startup	0 to 1	0	-	Changeable at any time	"CC-40" on page 993
CC-41	0xCC29	Current motor angle	0 to 65535	0	-	Unchangeable	"CC-41" on page 993
CC-42	0xCC2A	Forward torque limit 1	0.0 to 400.0	150.0	-	Changeable at any time	"CC-42" on page 993
CC-43	0xCC2B	Reverse torque limit 1	0.0 to 400.0	150.0	-	Changeable at any time	"CC-43" on page 993
CC-44	0xCC2C	Source of forward torque limit 2	0: 400% Others: F connector	0	-	Changeable at any time	"CC-44" on page 993
CC-45	0xCC2D	Source of reverse torque limit 2	0: –400% Others: F connector	0	-	Changeable at any time	"CC-45" on page 994

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CC-46	0xCC2E	Ramp (FRG) selection bit0	0: 0 1: 1 2: Terminal function input 3: DI1 4: DI2 5: DI3 6: DI4 7: DI5 8: DI6 9: DI7 10: DI8 11: DI9 12: DI10 13: DI11 14: DI12 15: DI13 16: DI14 17: DI15 18: DI16 Others: B connector	0	-	Changeable at any time	"CC-46" on page 994
CC-47	0xCC2F	Ramp (FRG) selection bit1	Same as CC-46	0	-	Changeable at any time	"CC-47" on page 994
CC-50	0xCC32	Motor overload protection	0: Disabled 1: Enabled	1	-	Changeable at any time	"CC-50" on page 995
CC-51	0xCC33	Motor overload protection gain	0.20 to 10.00	1.00	-	Changeable at any time	"CC-51" on page 995
CC-52	0xCC34	Motor overload pre-warning coefficient	50% to 100%	80	%	Changeable at any time	"CC-52" on page 995
CC-53	0xCC35	Overvoltage stall suppression gain	1 to 100	30	-	Changeable at any time	"CC-53" on page 995
CC-54	0xCC36	Overvoltage stall protection voltage	330.0 V to 800.0 V	770.0	V	Changeable at any time	"CC-54" on page 995
CC-55	0xCC37	Input phase loss/ Contactor pickup protection	Ones: Input phase loss protection 0: Disabled 1: Protection enabled when both software and hardware input phase loss conditions are met 2: Protection enabled when software input phase loss conditions are met 3: Protection enabled when hardware input phase loss conditions are met Tens: Contactor pickup protection 0: Disabled 1: Enabled	11	-	Changeable at any time	"CC-55" on page 996

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CC-56	0xCC38	Output phase loss protection	Ones: Output phase loss protection upon power-on 0: Disabled 1: Enabled Tens: Output phase loss protection before running 0: Disabled 1: Enabled	1	-	Changeable at any time	"CC-56" on page 996
CC-57	0xCC39	Power dip ride-through	0: Disabled 1: Decelerate 2: Decelerate to stop 3: Suppress voltage dip	0	-	Changeable only at stop	"CC-57" on page 996
CC-58	0xCC3A	Voltage threshold for disabling power dip ride-through	80% to 100%	85	%	Changeable only at stop	"CC-58" on page 996
CC-59	0xCC3B	Delay of voltage recovery from power dip	0.0s to 100.0s	0.5	s	Changeable only at stop	"CC-59" on page 997
CC-60	0xCC3C	Voltage threshold for enabling power dip ride-through	60% to 100%	80	%	Changeable only at stop	"CC-60" on page 997
CC-61	0xCC3D	Protection upon load loss	0: Disabled 1: Enabled	0	-	Changeable at any time	"CC-61" on page 997
CC-62	0xCC3E	Load loss detection level	0.0% to +100.0%	10.0	%	Changeable at any time	"CC-62" on page 997
CC-63	0xCC3F	Load loss detection time	0.0s to 60.0s	1.0	s	Changeable at any time	"CC-63" on page 997
CC-64	0xCC40	Overspeed detection level	0.0% to 50.0%	20.0	%	Changeable at any time	"CC-64" on page 998
CC-65	0xCC41	Overspeed detection time	0.0s to 60.0s	1.0	s	Changeable at any time	"CC-65" on page 998
CC-66	0xCC42	Detection level of excessive speed deviation	0.0% to 50.0%	20.0	%	Changeable at any time	"CC-66" on page 998
CC-67	0xCC43	Detection time of excessive speed deviation	0.0s to 60.0s	5.0	s	Changeable at any time	"CC-67" on page 998
CC-68	0xCC44	Power dip ride-through gain Kp	1 to 100	40	-	Changeable at any time	"CC-68" on page 998
CC-69	0xCC45	Power dip ride-through integral coefficient Ki	1 to 100	30	-	Changeable at any time	"CC-69" on page 999
CC-70	0xCC46	Deceleration time of power dip ride-through	0.0s to 300.0s	20.0	s	Changeable at any time	"CC-70" on page 999

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CC-71	0xCC47	Voltage dip suppression time	0.1s to 600.0s	0.5	s	Changeable at any time	"CC-71" on page 999
CC-72	0xCC48	Motor protection	Bit00: Motor overload determination (reserved) Bit01: Motor overheat detection (reserved) Bit02: PG fault detection (reserved) Bit03: Current control error detection Bit04: Motor stall error detection Bit05: Locked-rotor detection Bit06: Synchronous motor demagnetization protection Bit07: Protection against locked-rotor in SVC speed open-loop control Bit08: Reserved Bit09: Parameter setting error	537	-	Changeable at any time	"CC-72" on page 999
CC-73	0xCC49	Locked-rotor time	0.0s to 65.0s	2.0	s	Changeable at any time	"CC-73" on page 1000
CC-74	0xCC4A	Locked-rotor frequency	0.0% to 600.0%	6.0	%	Changeable at any time	"CC-74" on page 1000
CC-75	0xCC4B	Motor stall detection time	0.0s to 10.0s	0.5	s	Changeable at any time	"CC-75" on page 1000
CC-76	0xCC4C	Stall detection threshold	0.0% to +100.0%	30.0	%	Changeable at any time	"CC-76" on page 1000
CC-77	0xCC4D	Current control exception detection time	0.00s to 1.00s	0.05	s	Changeable at any time	"CC-77" on page 1000
CC-78	0xCC4E	Current control exception detection threshold	0.0% to 200.0%	25.0	%	Changeable at any time	"CC-78" on page 1001
CC-79	0xCC4F	Synchronous motor overcurrent threshold	0.0% to 500.0%	300.0	%	Changeable at any time	"CC-79" on page 1001
CC-81	0xCC51	Speed deviation detection	0 to 1	1	-	Changeable at any time	"CC-81" on page 1001
CC-82	0xCC52	Skip frequency 1	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	"CC-82" on page 1001
CC-83	0xCC53	Skip frequency 2	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	"CC-83" on page 1001
CC-84	0xCC54	Skip frequency 3	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	"CC-84" on page 1001
CC-85	0xCC55	Skip frequency 4	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	"CC-85" on page 1002
CC-86	0xCC56	Skip frequency band	0.00 Hz to F0-10	0.00	Hz	Changeable at any time	"CC-86" on page 1002

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CC-87	0xCC57	Source of frequency upper limit	0: F0-12 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication Others: F connector	0	-	Changeable only at stop	"CC-87" on page 1002
CC-88	0xCC58	Frequency upper limit	CC-90 to F0-10	50.00	Hz	Changeable at any time	"CC-88" on page 1002
CC-89	0xCC59	Frequency upper limit offset	0.00 Hz to F0-10 (maximum frequency)	0.00	Hz	Changeable at any time	"CC-89" on page 1003
CC-90	0xCC5A	Frequency lower limit	0.00 Hz to CC-88	0.00	Hz	Changeable at any time	"CC-90" on page 1003
CC-91	0xCC5B	Speed/Torque control mode	0: Speed control 1: Torque control	0	-	Changeable at any time	"CC-91" on page 1003
CD-00	0xCD00	Asynchronous motor FVC model switchover frequency	0% to 1000%	20	%	Changeable only at stop	"CD-00" on page 1003
CD-01	0xCD01	Asynchronous motor FVC model switchover hysteresis frequency	10% to 50%	20	%	Changeable only at stop	"CD-01" on page 1003
CD-02	0xCD02	Asynchronous motor FVC observer filter time	5 ms to 100 ms	15	ms	Changeable only at stop	"CD-02" on page 1004
CD-03	0xCD03	Asynchronous motor FVC current model mode	0 to 1	0	-	Changeable only at stop	"CD-03" on page 1004
CD-04	0xCD04	Asynchronous motor FVC pre-excitation output observation angle mode	0 to 1	0	-	Changeable only at stop	"CD-04" on page 1004
CD-05	0xCD05	Asynchronous motor SVC model switchover frequency	10% to 20%	15	%	Changeable only at stop	"CD-05" on page 1004
CD-06	0xCD06	Asynchronous motor SVC observer filter time	5 ms to 50 ms	10	ms	Changeable at any time	"CD-06" on page 1004
CD-07	0xCD07	Asynchronous motor SVC observer gain 1	10% to 500%	100	%	Changeable at any time	"CD-07" on page 1005

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CD-08	0xCD08	Asynchronous motor SVC observer gain 2	10% to 100%	20	%	Changeable at any time	"CD-08" on page 1005
CD-09	0xCD09	Asynchronous motor SVC observer mode	0 to 3	0	-	Changeable only at stop	"CD-09" on page 1005
CD-10	0xCD0A	Asynchronous motor SVC pre-excitation mode	0 to 1	0	-	Changeable only at stop	"CD-10" on page 1005
CD-11	0xCD0B	Asynchronous motor SVC speed tracking mode	0 to 1	0	-	Changeable only at stop	"CD-11" on page 1005
CD-14	0xCD0E	Synchronous motor 1 model control	Bit00: Low speed processing Bit01: Low speed processing 1 Bit02: Online auto-tuning of resistance Bit03: Online auto-tuning of back EMF Bit04: KS	5	-	Changeable at any time	"CD-14" on page 1006
CD-15	0xCD0F	Synchronous motor model K1	10 to 3000	200	-	Changeable at any time	"CD-15" on page 1006
CD-16	0xCD10	Synchronous motor model K1Max	100 to 6000	3000	-	Changeable at any time	"CD-16" on page 1006
CD-17	0xCD11	Synchronous motor model KsMin	0.0 to 4.0	0.3	-	Changeable at any time	"CD-17" on page 1006
CD-18	0xCD12	Synchronous motor model Kspeed	50 to 2000	400	-	Changeable at any time	"CD-18" on page 1006
CD-19	0xCD13	Synchronous motor frequency filter time constant	2 ms to 100 ms	10	ms	Changeable at any time	"CD-19" on page 1007
CD-20	0xCD14	Frequency upper limit of synchronous motor Rs online auto-tuning	1.0% to 20.0%	3.5	%	Changeable at any time	"CD-20" on page 1007
CD-21	0xCD15	Synchronous motor model Kr	0 to 50	10	-	Changeable at any time	"CD-21" on page 1007
CD-22	0xCD16	Synchronous motor model Kr1	0 to 50	5	-	Changeable at any time	"CD-22" on page 1007
CD-23	0xCD17	Synchronous motor low-speed D axis injection current	0% to 100%	20	%	Changeable at any time	"CD-23" on page 1007
CD-24	0xCD18	Synchronous motor model LowFreqTime1	0 to 500	50	-	Changeable at any time	"CD-24" on page 1008

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CD-27	0xCD1B	Frequency lower limit of back EMF online auto-tuning	10% to 100%	25	%	Changeable at any time	"CD-27" on page 1008
CD-28	0xCD1C	Synchronous motor model LowFreq	0.0% to 2.0%	0.3	%	Changeable at any time	"CD-28" on page 1008
CD-29	0xCD1D	Synchronous motor model LowFreqTime	0 to 100	10	-	Changeable at any time	"CD-29" on page 1008
CD-30	0xCD1E	Percentage of pole auto-tuning current	50% to 200%	100	%	Changeable at any time	"CD-30" on page 1008
CD-31	0xCD1F	Percentage of high frequency response current	0% to 100%	25	%	Changeable at any time	"CD-31" on page 1009
CD-32	0xCD20	Percentage of HFI and SVC switching frequency	0% to 30%	10	%	Changeable at any time	"CD-32" on page 1009
CD-33	0xCD21	Observer parameter	10 to 200	100	-	Changeable at any time	"CD-33" on page 1009
CD-34	0xCD22	Speed filter cut-off frequency	1 Hz to 200 Hz	10	Hz	Changeable at any time	"CD-34" on page 1009
CD-35	0xCD23	Carrier frequency during NS auto-tuning	2.00 Hz to 16.00 Hz	8.00	Hz	Changeable at any time	"CD-35" on page 1009
CD-36	0xCD24	Automatic calculation of NS auto-tuning voltage	0: Disabled 1: Enabled	1	-	Changeable at any time	"CD-36" on page 1010
CD-37	0xCD25	Percentage of NS auto-tuning voltage set manually	0% to 100%	10	%	Changeable at any time	"CD-37" on page 1010
CD-38	0xCD26	Duration of HFI stage 1	50 ms to 500 ms	150	ms	Changeable at any time	"CD-38" on page 1010
CD-40	0xCD28	Speed loop proportional gain 1	1 to 100	30	-	Changeable at any time	"CD-40" on page 1010
CD-41	0xCD29	Speed loop integral time 1	0.01s to 10.00s	0.50	s	Changeable at any time	"CD-41" on page 1010
CD-42	0xCD2A	Switchover frequency 1	0.00 Hz to CD-45	5.00	Hz	Changeable at any time	"CD-42" on page 1011
CD-43	0xCD2B	Speed loop proportional gain 2	1 to 100	20	-	Changeable at any time	"CD-43" on page 1011
CD-44	0xCD2C	Speed loop integral time 2	0.01s to 10.00s	1.00	s	Changeable at any time	"CD-44" on page 1011
CD-45	0xCD2D	Switchover frequency 2	CD-42 to F0-10	10.00	Hz	Changeable at any time	"CD-45" on page 1011

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CD-46	0xCD2E	Vector control slip gain	50% to 200%	100	%	Changeable at any time	"CD-46" on page 1011
CD-47	0xCD2F	Speed feedback filter time in SVC mode	0.000s to 0.100s	0.015	s	Changeable at any time	"CD-47" on page 1011
CD-49	0xCD31	Torque upper limit source in speed control mode (motoring)	0: Digital setting (F2-10) 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: MIN (AI1, AI2) 7: MAX (AI1, AI2) Others: F connector	0	-	Changeable at any time	"CD-49" on page 1012
CD-50	0xCD32	Torque upper limit in speed control mode	0.0% to 200.0%	150.0	%	Changeable at any time	"CD-50" on page 1012
CD-51	0xCD33	Torque upper limit source in speed control mode (generating)	0: Digital setting (F2-10) 1: AI1 2: AI2 3: AI3 4: Pulse reference (DI5) 5: Communication 6: MIN (AI1, AI2) 7: MAX (AI1, AI2) 8: Digital setting (F2-12) Others: F connector	0	-	Changeable at any time	"CD-51" on page 1012
CD-52	0xCD34	Torque upper limit in speed control mode (generating)	0.0% to 200.0%	150.0	%	Changeable at any time	"CD-52" on page 1013
CD-53	0xCD35	Field weakening mode	0: No field weakening 1: Auto adjustment 2: Calculation+Auto adjustment	1	-	Changeable only at stop	"CD-53" on page 1013
CD-54	0xCD36	Field weakening gain	1 to 50	5	-	Changeable at any time	"CD-54" on page 1013
CD-57	0xCD39	Generating power limiting	0: Disabled 1: Enabled in the whole process 2: Enabled at constant speed 3: Enabled during deceleration	0	-	Changeable at any time	"CD-57" on page 1014
CD-58	0xCD3A	Generating power upper limit	0.0% to 200.0%	20.0	%	Changeable at any time	"CD-58" on page 1014
CD-59	0xCD3B	Motor 4 control mode	0: SVC 1: FVC 2: V/f	2	-	Changeable only at stop	"CD-59" on page 1014

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CD-60	0xCD3C	Initial position angle detection current of synchronous motor	50 to 180	80	-	Changeable only at stop	"CD-60" on page 1014
CD-61	0xCD3D	Initial position angle detection of synchronous motor	0: Detected upon running 1: Not detected 2: Detected upon initial running after power-on	0	-	Changeable at any time	"CD-61" on page 1015
CD-63	0xCD3F	Salient pole rate adjustment gain of synchronous motor	0.20 to 3.00	1.00	-	Changeable at any time	"CD-63" on page 1015
CD-64	0xCD40	Maximum torque-to-current ratio control of synchronous motor	0: Disabled 1: Enabled	1	-	Changeable at any time	"CD-64" on page 1015
CD-65	0xCD41	Z signal correction	0: Disabled 1: Enabled	1	-	Changeable at any time	"CD-65" on page 1015
CD-67	0xCD43	Low speed carrier frequency	0.8 kHz to F0-15	2.0	kHz	Changeable at any time	"CD-67" on page 1016
CD-68	0xCD44	Position lock	0 to 1	0	-	Changeable at any time	"CD-68" on page 1016
CD-69	0xCD45	Switchover frequency	0.00 Hz to CD-42	0.30	Hz	Changeable at any time	"CD-69" on page 1016
CD-70	0xCD46	Position lock speed loop proportional gain	1 to 100	10	-	Changeable at any time	"CD-70" on page 1016
CD-71	0xCD47	Position lock speed loop integral time	0.01s to 10.00s	0.50	s	Changeable at any time	"CD-71" on page 1016
CD-74	0xCD4A	Auto-tuning free mode	0: Disabled 1: Auto-tuning upon initial running after power-on 2: Auto-tuning upon running	0	-	Changeable at any time	"CD-74" on page 1017
CD-76	0xCD4C	Initial position compensation angle	0.0 to 359.9	0.0	-	Changeable at any time	"CD-76" on page 1017

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CD-80	0xCD50	Speed loop command word	Bit00: Speed loop 0: Disabled 1: Enabled Bit01: Integration mode 0: Conventional integration 1: Position integration Bit02: Acceleration torque 0: Disabled 1: Enabled Bit03–Bit04: Acceleration source 0: Function transfer torque 1: Automatic calculation 2: Function transfer acceleration Bit05: Anti-load disturbance 0: Disabled 1: Enabled	11	-	Changeable at any time	"CD-80" on page 1017
CD-81	0xCD51	Locked-rotor fast integral cancel coefficient	0.0% to +100.0%	0.0	%	Changeable at any time	"CD-81" on page 1017
CD-82	0xCD52	Integral torque	–100% to +100.0%	0.0	%	Changeable at any time	"CD-82" on page 1018
CD-83	0xCD53	Speed controller frequency window size	0.00 Hz to 10.00 Hz	0.00	Hz	Changeable only at stop	"CD-83" on page 1018
CD-84	0xCD54	Current filter time for torque reference	0.0 ms to 100.0 ms	0.0	ms	Changeable only at stop	"CD-84" on page 1018
CD-85	0xCD55	Acceleration torque	0: Inactive 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"CD-85" on page 1018
CD-87	0xCD57	Reference model bandwidth	0.00 Hz to 300.00 Hz	0.00	Hz	Changeable at any time	"CD-87" on page 1019
CD-88	0xCD58	Torque feedforward coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"CD-88" on page 1019
CD-89	0xCD59	Vector control reference frequency filter time	0.0 ms to 100.0 ms	0.0	ms	Changeable only at stop	"CD-89" on page 1019
CD-90	0xCD5A	Vector control feedback frequency filter time	0.0 ms to 100.0 ms	0.0	ms	Changeable only at stop	"CD-90" on page 1019

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CD-91	0xCD5B	Load observation bandwidth	0.00 Hz to 300.00 Hz	0.00	Hz	Changeable at any time	"CD-91" on page 1020
CD-92	0xCD5C	Load observation coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"CD-92" on page 1020
CD-93	0xCD5D	Pseudo integral coefficient	0.000 to 10.000	1.000	-	Changeable at any time	"CD-93" on page 1020
CD-94	0xCD5E	Torque coefficient enable	0: Disabled 1: Enabled	0	-	Changeable at any time	"CD-94" on page 1020
CD-96	0xCD60	Center frequency of notch filter 1	0.0 to 4000.0	4000.0	-	Changeable at any time	"CD-96" on page 1020
CD-97	0xCD61	Center frequency of notch filter 2	0.0 to 4000.0	4000.0	-	Changeable at any time	"CD-97" on page 1021
CD-98	0xCD62	Integral setting control word	0: Disabled 1: Enabled Others: B connector	0	-	Changeable at any time	"CD-98" on page 1021
CD-99	0xCD63	Integral reference source	0: Digital setting 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"CD-99" on page 1021
CE-00	0xCE00	Externally transferred acceleration	0: Inactive 1: AI1 2: AI2 3: AI3 4: Pulse reference 5: Communication 6: Multi-reference 7: Motor-driven potentiometer 8: PID Others: F connector	0	-	Changeable at any time	"CE-00" on page 1021
CE-03	0xCE03	Overturning torque limiting coefficient	0.0% to 400.0%	100.0	%	Changeable at any time	"CE-03" on page 1022
CE-04	0xCE04	Motoring power limiting coefficient	0.0% to 400.0%	400.0	%	Changeable at any time	"CE-04" on page 1022
CE-05	0xCE05	Generating power limiting coefficient	0.0% to 400.0%	400.0	%	Changeable at any time	"CE-05" on page 1022
CE-06	0xCE06	Overspeed limiting enable	0 to 1	1	-	Changeable at any time	"CE-06" on page 1022
CE-07	0xCE07	Sine wave frequency of bandwidth test	0 Hz to 1000 Hz	0	Hz	Changeable at any time	"CE-07" on page 1023

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CE-08	0xCE08	Sine wave amplitude of bandwidth test	0% to 100%	0	%	Changeable at any time	"CE-08" on page 1023
CE-09	0xCE09	Bandwidth test enable	0 to 4	0	-	Changeable at any time	"CE-09" on page 1023
CE-11	0xCE0B	Speed loop parameter calculation mode	0: New solution 1: Compatible solution	1	-	Changeable only at stop	"CE-11" on page 1023
CE-12	0xCE0C	Speed loop proportional gain in FVC mode	0.00 Hz to 100.00 Hz	8.00	Hz	Changeable at any time	"CE-12" on page 1023
CE-13	0xCE0D	Speed loop integral time in FVC mode	0.000s to 20.000s	0.080	s	Changeable at any time	"CE-13" on page 1024
CE-14	0xCE0E	Speed loop proportional gain in SVC mode	0.00 Hz to 100.00 Hz	5.00	Hz	Changeable at any time	"CE-14" on page 1024
CE-15	0xCE0F	Speed loop integral time in SVC mode	0.000s to 20.000s	0.127	s	Changeable at any time	"CE-15" on page 1024
CE-16	0xCE10	Low frequency proportional correction coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"CE-16" on page 1024
CE-17	0xCE11	Low frequency integral correction coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"CE-17" on page 1024
CE-18	0xCE12	Speed loop adaption factor	0.000 to 10.000	0.200	-	Changeable at any time	"CE-18" on page 1025
CE-19	0xCE13	Speed loop adaption switchover lower limit	0.000 to 10.000	0.400	-	Changeable at any time	"CE-19" on page 1025
CE-20	0xCE14	Speed loop adaption switchover upper limit	0.000 to 10.000	1.000	-	Changeable at any time	"CE-20" on page 1025
CE-21	0xCE15	Speed loop adaption correction upper limit	0.0% to 1000.0%	100.0	%	Changeable at any time	"CE-21" on page 1025
CE-22	0xCE16	Speed loop adaption correction lower limit	0.0% to 1000.0%	100.0	%	Changeable at any time	"CE-22" on page 1025
CE-23	0xCE17	Flux adaptation enable	0 to 1	0	-	Changeable at any time	"CE-23" on page 1026

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CE-24	0xCE18	Overspeed controller correction coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"CE-24" on page 1026
CE-25	0xCE19	VDC control command word	Bit00: VdcMin 0: Disabled 1: Enabled Bit01: VdcMax 0: Disabled 1: Enabled Bit02: Automatic calculation of VDC trigger voltage 0: Disabled 1: Enabled Bit03: VDC control integral action 0: Disabled 1: Enabled	0	-	Changeable at any time	"CE-25" on page 1026
CE-26	0xCE1A	Bus capacitance ratio	50.0% to 1000.0%	100.0	%	Changeable at any time	"CE-26" on page 1026
CE-27	0xCE1B	Undervoltage suppression exit hysteresis frequency	0.00 Hz to 10.00 Hz	3.00	Hz	Changeable at any time	"CE-27" on page 1027
CE-28	0xCE1C	Minimum VDC failure speed threshold	0.00 Hz to 20.00 Hz	2.00	Hz	Changeable at any time	"CE-28" on page 1027
CE-29	0xCE1D	Dynamic adjustment coefficient	0.0% to 1000.0%	100.0	%	Changeable at any time	"CE-29" on page 1027
CE-30	0xCE1E	Minimum VDC activation voltage	320.0 V to 540.0 V	430.0	V	Changeable at any time	"CE-30" on page 1027
CE-31	0xCE1F	Maximum VDC activation voltage	650.0 V to 800.0 V	770.0	V	Changeable at any time	"CE-31" on page 1027

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CE-32	0xCE20	Flux linkage control command word	Bit00: Output voltage limit calculation filtering mode 0: Symmetric filtering 1: Asymmetric filtering Bit01: Asynchronous motor inverse proportion curve calculation 0: The inverse proportional synchronization frequency decreases. 1: The inverse proportional speed decreases. Bit02: Flux linkage feedforward calculation by using inverse proportional speed 0: Disabled 1: Enabled Bit03: Reserved Bit04: Reserved Bit05: Field weakening adjustment 0: Disabled 1: Enabled Bit06: Flux linkage derivative feedforward 0: Disabled 1: Enabled Bit07: Energy conservation control 0: Disabled 1: Enabled Bit08: Asynchronous motor flux closed loop 0: Disabled 1: Enabled Bit09: Reserved Bit10: Reserved Bit11: Asynchronous motor pre-excitation mode 0: Pre-excitation based on time 1: Pre-excitation based on current Bit12: Asynchronous motor pre-excitation current 0: Reference current 1: Maximum current allowed by the drive	2357	-	Changeable at any time	"CE-32" on page 1027
CE-33	0xCE21	Output voltage upper limit margin for field weakening adjustment	1% to 50%	5	%	Changeable at any time	"CE-33" on page 1029
CE-34	0xCE22	Output voltage upper limit margin for auto adjustment of field weakening	1% to 20%	3	%	Changeable at any time	"CE-34" on page 1029
CE-35	0xCE23	Filter time for calculating maximum output voltage	0 ms to 3000 ms	30	ms	Changeable at any time	"CE-35" on page 1029

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CE-36	0xCE24	Rated flux adjustment coefficient for calculation	0.5 to 2.0	1.0	-	Changeable at any time	"CE-36" on page 1029
CE-37	0xCE25	Field weakening frequency adjustment coefficient for calculation	0.8 to 1.2	1.0	-	Changeable at any time	"CE-37" on page 1030
CE-38	0xCE26	Slip filter time for calculating field weakening frequency	0 ms to 3000 ms	62	ms	Changeable at any time	"CE-38" on page 1030
CE-39	0xCE27	Feedback speed filtering	0 ms to 8000 ms	50	ms	Changeable at any time	"CE-39" on page 1030
CE-40	0xCE28	Flux linkage rising filter time	0 ms to 8000 ms	20	ms	Changeable at any time	"CE-40" on page 1030
CE-42	0xCE2A	Feedback voltage filter time	0 ms to 3000 ms	5	ms	Changeable at any time	"CE-42" on page 1031
CE-43	0xCE2B	Maximum demagnetization current of synchronous motor	0% to 500%	300	%	Changeable at any time	"CE-43" on page 1031
CE-44	0xCE2C	Voltage outer loop lower limit coefficient	0 to 500	50	-	Changeable at any time	"CE-44" on page 1031
CE-45	0xCE2D	Flux linkage derivative feedforward coefficient	0.0 to 1.5	1.0	-	Changeable at any time	"CE-45" on page 1031
CE-46	0xCE2E	Flux linkage derivative feedforward filter time	0 ms to 3000 ms	6	ms	Changeable at any time	"CE-46" on page 1032
CE-47	0xCE2F	Torque current rising filter time under energy conservation control	0 ms to 3000 ms	50	ms	Changeable at any time	"CE-47" on page 1032
CE-48	0xCE30	Torque current falling filter time under energy conservation control	0 ms to 3000 ms	100	ms	Changeable at any time	"CE-48" on page 1032

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CE-49	0xCE31	Flux linkage lower limit coefficient under energy conservation control	0.00 to 0.50	0.10	-	Changeable at any time	"CE-49" on page 1032
CE-51	0xCE33	Pre-excitation current	1% to 200%	100	%	Changeable at any time	"CE-51" on page 1032
CE-52	0xCE34	Pre-excitation time	1 ms to 30000 ms	1000	ms	Changeable at any time	"CE-52" on page 1033
CE-53	0xCE35	Flux linkage closed-loop bandwidth frequency	0.0 Hz to 100.0 Hz	2.0	Hz	Changeable at any time	"CE-53" on page 1033
CE-54	0xCE36	Feedback flux linkage filter time coefficient	0 to 200	4	-	Changeable at any time	"CE-54" on page 1033
CE-55	0xCE37	Static output flux linkage filter time	0 ms to 5000 ms	10	ms	Changeable at any time	"CE-55" on page 1033
CE-56	0xCE38	Current loop mode	0: ImCsr2 mode 1: Complex vector mode 2: 880 mode 3: No field weakening	1	-	Changeable only at stop	"CE-56" on page 1034
CE-57	0xCE39	PI regulator proportional gain adaptation with load	0: Disabled 1: Enabled	0	-	Changeable only at stop	"CE-57" on page 1034
CE-58	0xCE3A	Current loop damping	0.2 to 5.0	0.8	-	Changeable at any time	"CE-58" on page 1034
CE-59	0xCE3B	Low-speed current loop Kp adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"CE-59" on page 1034
CE-60	0xCE3C	High-speed current loop Kp adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"CE-60" on page 1034
CE-61	0xCE3D	Low-speed current loop Ki adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"CE-61" on page 1035
CE-62	0xCE3E	High-speed current loop Ki adjustment	0.1 to 10.0	2.0	-	Changeable at any time	"CE-62" on page 1035
CE-63	0xCE3F	D-axis current loop complex vector adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"CE-63" on page 1035
CE-64	0xCE40	Q-axis current loop complex vector adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"CE-64" on page 1035

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CE-65	0xCE41	Complex vector hysteresis frequency lower limit as a percentage of rated frequency	0% to CE-66	0	%	Changeable at any time	"CE-65" on page 1036
CE-66	0xCE42	Complex vector hysteresis frequency upper limit as a percentage of rated frequency	CE-65 to 150%	0	%	Changeable at any time	"CE-66" on page 1036
CE-67	0xCE43	ImCsr2 hysteresis switchover voltage upper limit as a percentage of saturation voltage	CE-68 to 95%	89	%	Changeable at any time	"CE-67" on page 1036
CE-68	0xCE44	ImCsr2 hysteresis switchover voltage lower limit as a percentage of saturation voltage	60% to CE-67	79	%	Changeable at any time	"CE-68" on page 1036
CE-69	0xCE45	ImCsr2 hysteresis switchover frequency hysteresis range as a percentage of rated frequency	1% to 30%	10	%	Changeable at any time	"CE-69" on page 1036
CE-70	0xCE46	ImCsr2 hysteresis switchover frequency lower limit (below which the hysteresis condition does not take effect) as a percentage of the rated frequency	40% to 80%	60	%	Changeable at any time	"CE-70" on page 1037
CE-71	0xCE47	ImCsr2 current loop Kss adjustment	0.1 to 10.0	1.0	-	Changeable at any time	"CE-71" on page 1037
CE-72	0xCE48	Proportional gain adjustment coefficient corresponding to the maximum torque when proportional gain is adjusted with load	0.1 to 1.0	0.5	-	Changeable at any time	"CE-72" on page 1037

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CE-73	0xCE49	Torque upper limit setpoint as a percentage of rated torque when proportional gain is adjusted with load	CE-74 to 300%	200	%	Changeable at any time	"CE-73" on page 1037
CE-74	0xCE4A	Torque lower limit setpoint as a percentage of rated torque when proportional gain is adjusted with load	10% to CE-73	100	%	Changeable at any time	"CE-74" on page 1037
CE-75	0xCE4B	Derivative feedforward adjustment	0.0 to 1.0	0.0	-	Changeable at any time	"CE-75" on page 1038
CE-76	0xCE4C	Decoupling control start frequency as a percentage of rated frequency	20% to 150%	40	%	Changeable at any time	"CE-76" on page 1038
CE-77	0xCE4D	Decoupling control filter time adjustment coefficient	0.1 to 3.0	1.0	-	Changeable at any time	"CE-77" on page 1038
CE-78	0xCE4E	Decoupling control output adjustment coefficient	0.0 to 1.0	1.0	-	Changeable at any time	"CE-78" on page 1038
CE-79	0xCE4F	CPC feedforward enable	0: Disabled 1: Enabled	0	-	Changeable at any time	"CE-79" on page 1038
CE-80	0xCE50	Current loop auxiliary command word	Bit00: Complex vector angle limiting 0: Disabled 1: Enabled Bit01: Voltage angle limiting 0: Program internal limiting 1: Parameter setting Bit02: 0 by default 0: No lower limit on the excitation current is imposed during the dynamic process. 1: A lower limit on the excitation current is imposed during the dynamic process in ImCsr2 mode. Bit03–Bit15: Reserved (0 by default)	0	-	Changeable at any time	"CE-80" on page 1039
CE-81	0xCE51	Voltage angle upper limit	90° to 180°	150	°	Changeable at any time	"CE-81" on page 1039
CE-82	0xCE52	Voltage angle lower limit	0° to 90°	30	°	Changeable at any time	"CE-82" on page 1039

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
CE-83	0xCE53	Asynchronous motor D axis integral limit	0.500 to 1.000	0.707	-	Changeable at any time	"CE-83" on page 1039
CE-84	0xCE54	Current loop carrier frequency upper limit	5.0 to 16.0	8.0	-	Changeable at any time	"CE-84" on page 1040
CE-85	0xCE55	Droop enable	0 to 1	0	-	Changeable only at stop	"CE-85" on page 1040
CE-86	0xCE56	Droop source	0: Line current 1: Torque reference 2: Speed adjustment output 3: Speed adjustment integral component	1	-	Changeable only at stop	"CE-86" on page 1040
CE-87	0xCE57	Frequency reference droop coefficient	0.0% to 50.0%	0.0	%	Changeable at any time	"CE-87" on page 1040
CE-88	0xCE58	FVC-SVC switchover mode	0: No switchover 1: Active switchover 2: Passive switchover (The AC drive switches to SVC mode upon detection of encoder wire breakage, and it switches back to FVC mode when the encoder recovers during stop and does not switch back to FVC mode when the encoder recovers during running.) 3: Passive switchover (The AC drive switches to SVC mode upon detection of encoder wire breakage, and it switches back to FVC mode when the encoder recovers during running or stop.)	0	-	Changeable only at stop	"CE-88" on page 1040
CE-89	0xCE59	FVC-SVC switchover frequency	10% to 500%	50	%	Changeable only at stop	"CE-89" on page 1041
CE-90	0xCE5A	FVC-SVC switchover hysteresis	10% to 100%	10	%	Changeable only at stop	"CE-90" on page 1041
H0-00	0x8000	Code of active fault 1	0 to 65535	0	-	Unchangeable	"H0-00" on page 1041
H0-01	0x8001	Subcode of active fault 1	0 to 65535	0	-	Unchangeable	"H0-01" on page 1041
H0-02	0x8002	Information of active fault 1	0 to 65535	0	-	Unchangeable	"H0-02" on page 1042
H0-03	0x8003	Code of active fault 2	0 to 65535	0	-	Unchangeable	"H0-03" on page 1042
H0-04	0x8004	Subcode of active fault 2	0 to 65535	0	-	Unchangeable	"H0-04" on page 1042
H0-05	0x8005	Information of active fault 2	0 to 65535	0	-	Unchangeable	"H0-05" on page 1042

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H0-06	0x8006	Code of active fault 3	0 to 65535	0	-	Unchangeable	"H0-06" on page 1042
H0-07	0x8007	Subcode of active fault 3	0 to 65535	0	-	Unchangeable	"H0-07" on page 1043
H0-08	0x8008	Information of active fault 3	0 to 65535	0	-	Unchangeable	"H0-08" on page 1043
H0-09	0x8009	Code of active fault 4	0 to 65535	0	-	Unchangeable	"H0-09" on page 1043
H0-10	0x800A	Subcode of active fault 4	0 to 65535	0	-	Unchangeable	"H0-10" on page 1043
H0-11	0x800B	Information of active fault 4	0 to 65535	0	-	Unchangeable	"H0-11" on page 1043
H0-12	0x800C	Code of active fault 5	0 to 65535	0	-	Unchangeable	"H0-12" on page 1044
H0-13	0x800D	Subcode of active fault 5	0 to 65535	0	-	Unchangeable	"H0-13" on page 1044
H0-14	0x800E	Information of active fault 5	0 to 65535	0	-	Unchangeable	"H0-14" on page 1044
H0-15	0x800F	Code of active fault 6	0 to 65535	0	-	Unchangeable	"H0-15" on page 1044
H0-16	0x8010	Subcode of active fault 6	0 to 65535	0	-	Unchangeable	"H0-16" on page 1044
H0-17	0x8011	Information of active fault 6	0 to 65535	0	-	Unchangeable	"H0-17" on page 1044
H0-18	0x8012	Code of active limit 1	0 to 65535	0	-	Unchangeable	"H0-18" on page 1045
H0-19	0x8013	Subcode of active limit 1	0 to 65535	0	-	Unchangeable	"H0-19" on page 1045
H0-20	0x8014	Information of active limit 1	0 to 65535	0	-	Unchangeable	"H0-20" on page 1045
H0-21	0x8015	Code of active limit 2	0 to 65535	0	-	Unchangeable	"H0-21" on page 1045
H0-22	0x8016	Subcode of active limit 2	0 to 65535	0	-	Unchangeable	"H0-22" on page 1045
H0-23	0x8017	Information of active limit 2	0 to 65535	0	-	Unchangeable	"H0-23" on page 1046
H0-24	0x8018	Code of active limit 3	0 to 65535	0	-	Unchangeable	"H0-24" on page 1046
H0-25	0x8019	Subcode of active limit 3	0 to 65535	0	-	Unchangeable	"H0-25" on page 1046
H0-26	0x801A	Information of active limit 3	0 to 65535	0	-	Unchangeable	"H0-26" on page 1046

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H0-27	0x801B	Code of active limit 4	0 to 65535	0	-	Unchangeable	"H0-27" on page 1046
H0-28	0x801C	Subcode of active limit 4	0 to 65535	0	-	Unchangeable	"H0-28" on page 1047
H0-29	0x801D	Information of active limit 4	0 to 65535	0	-	Unchangeable	"H0-29" on page 1047
H0-30	0x801E	Code of active limit 5	0 to 65535	0	-	Unchangeable	"H0-30" on page 1047
H0-31	0x801F	Subcode of active limit 5	0 to 65535	0	-	Unchangeable	"H0-31" on page 1047
H0-32	0x8020	Information of active limit 5	0 to 65535	0	-	Unchangeable	"H0-32" on page 1047
H0-33	0x8021	Code of active limit 6	0 to 65535	0	-	Unchangeable	"H0-33" on page 1048
H0-34	0x8022	Subcode of active limit 6	0 to 65535	0	-	Unchangeable	"H0-34" on page 1048
H0-35	0x8023	Information of active limit 6	0 to 65535	0	-	Unchangeable	"H0-35" on page 1048
H0-36	0x8024	Code of active alarm 1	0 to 65535	0	-	Unchangeable	"H0-36" on page 1048
H0-37	0x8025	Subcode of active alarm 1	0 to 65535	0	-	Unchangeable	"H0-37" on page 1048
H0-38	0x8026	Information of active alarm 1	0 to 65535	0	-	Unchangeable	"H0-38" on page 1049
H0-39	0x8027	Code of active alarm 2	0 to 65535	0	-	Unchangeable	"H0-39" on page 1049
H0-40	0x8028	Subcode of active alarm 2	0 to 65535	0	-	Unchangeable	"H0-40" on page 1049
H0-41	0x8029	Information of active alarm 2	0 to 65535	0	-	Unchangeable	"H0-41" on page 1049
H0-42	0x802A	Code of active alarm 3	0 to 65535	0	-	Unchangeable	"H0-42" on page 1049
H0-43	0x802B	Subcode of active alarm 3	0 to 65535	0	-	Unchangeable	"H0-43" on page 1049
H0-44	0x802C	Information of active alarm 3	0 to 65535	0	-	Unchangeable	"H0-44" on page 1050
H0-45	0x802D	Code of active alarm 4	0 to 65535	0	-	Unchangeable	"H0-45" on page 1050
H0-46	0x802E	Subcode of active alarm 4	0 to 65535	0	-	Unchangeable	"H0-46" on page 1050
H0-47	0x802F	Information of active alarm 4	0 to 65535	0	-	Unchangeable	"H0-47" on page 1050

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H0-48	0x8030	Code of active alarm 5	0 to 65535	0	-	Unchangeable	"H0-48" on page 1050
H0-49	0x8031	Subcode of active alarm 5	0 to 65535	0	-	Unchangeable	"H0-49" on page 1051
H0-50	0x8032	Information of active alarm 5	0 to 65535	0	-	Unchangeable	"H0-50" on page 1051
H0-51	0x8033	Code of active alarm 6	0 to 65535	0	-	Unchangeable	"H0-51" on page 1051
H0-52	0x8034	Subcode of active alarm 6	0 to 65535	0	-	Unchangeable	"H0-52" on page 1051
H0-53	0x8035	Information of active alarm 6	0 to 65535	0	-	Unchangeable	"H0-53" on page 1051
H1-00	0x8100	Fault code of exceptions in group 1	0.0 to 199.9	0.0	-	Changeable only at stop	"H1-00" on page 1052
H1-01	0x8101	Handling of exceptions in group 1	0: Coast to stop 1: Stop according to the stop mode 2: Continue to run 3: Run with power limit 4: Run with current limit 5: Ignore 6: No action	6	-	Changeable only at stop	"H1-01" on page 1052
H1-02	0x8102	Fault code of exceptions in group 2	0.0 to 199.9	0.0	-	Changeable only at stop	"H1-02" on page 1052
H1-03	0x8103	Handling of exceptions in group 2	Same as H1-01	6	-	Changeable only at stop	"H1-03" on page 1052
H1-04	0x8104	Fault code of exceptions in group 3	0.0 to 199.9	0.0	-	Changeable only at stop	"H1-04" on page 1053
H1-05	0x8105	Handling of exceptions in group 3	Same as H1-01	6	-	Changeable only at stop	"H1-05" on page 1053
H1-06	0x8106	Fault code of exceptions in group 4	0.0 to 199.9	0.0	-	Changeable only at stop	"H1-06" on page 1053
H1-07	0x8107	Handling of exceptions in group 4	Same as H1-01	6	-	Changeable only at stop	"H1-07" on page 1053
H1-08	0x8108	Fault code of exceptions in group 5	0.0 to 199.9	0.0	-	Changeable only at stop	"H1-08" on page 1053
H1-09	0x8109	Handling of exceptions in group 5	Same as H1-01	6	-	Changeable only at stop	"H1-09" on page 1054

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H1-10	0x810A	Fault code of exceptions in group 6	0.0 to 199.9	0.0	-	Changeable only at stop	"H1-10" on page 1054
H1-11	0x810B	Handling of exceptions in group 6	Same as H1-01	6	-	Changeable only at stop	"H1-11" on page 1054
H1-12	0x810C	Fault code of exceptions in group 7	0.0 to 199.9	0.0	-	Changeable only at stop	"H1-12" on page 1054
H1-13	0x810D	Handling of exceptions in group 7	Same as H1-01	6	-	Changeable only at stop	"H1-13" on page 1054
H1-14	0x810E	Fault code of exceptions in group 8	0.0 to 199.9	0.0	-	Changeable only at stop	"H1-14" on page 1054
H1-15	0x810F	Handling of exceptions in group 8	Same as H1-01	6	-	Changeable only at stop	"H1-15" on page 1055
H1-16	0x8110	Fault code of exceptions in group 9	0.0 to 199.9	0.0	-	Changeable only at stop	"H1-16" on page 1055
H1-17	0x8111	Handling of exceptions in group 9	Same as H1-01	6	-	Changeable only at stop	"H1-17" on page 1055
H1-18	0x8112	Fault code of exceptions in group 10	0.0 to 199.9	0.0	-	Changeable only at stop	"H1-18" on page 1055
H1-19	0x8113	Handling of exceptions in group 10	Same as H1-01	6	-	Changeable only at stop	"H1-19" on page 1055
H2-00	0x8200	Source of external fault 1 (NO)	0: Inactive 1: Active Others: B connector	0	-	Changeable at any time	"H2-00" on page 1056
H2-01	0x8201	Source of external fault 2 (NC)	Same as H2-00	1	-	Changeable at any time	"H2-01" on page 1056
H2-02	0x8202	Source of external alarm 1	0: Reserved Others: B connector	0	-	Changeable at any time	"H2-02" on page 1056
H2-03	0x8203	Source of external alarm 2	Same as H2-02	0	-	Changeable at any time	"H2-03" on page 1056
H2-04	0x8204	Source of custom fault 1	0: Inactive 1: Active Others: B connector	0	-	Changeable at any time	"H2-04" on page 1057
H2-05	0x8205	Source of custom fault 2	Same as H2-04	0	-	Changeable at any time	"H2-05" on page 1057

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H2-06	0x8206	Source of custom fault 3	0: Reserved Others: B connector	0	-	Changeable at any time	"H2-06" on page 1057
H2-07	0x8207	Source of custom fault 4	0: Reserved Others: B connector	0	-	Changeable at any time	"H2-07" on page 1057
H2-08	0x8208	Source of custom alarm 1	Same as H2-07	0	-	Changeable at any time	"H2-08" on page 1057
H2-09	0x8209	Source of custom alarm 2	Same as H2-07	0	-	Changeable at any time	"H2-09" on page 1058
H2-10	0x820A	Source of custom alarm 3	Same as H2-07	0	-	Changeable at any time	"H2-10" on page 1058
H2-11	0x820B	Source of custom alarm 4	Same as H2-07	0	-	Changeable at any time	"H2-11" on page 1058
H2-12	0x820C	Auto reset enable	0 to 1	1	-	Changeable at any time	"H2-12" on page 1058
H2-15	0x820F	Auto reset disabled upon manual reset	0: Yes 1: No	1	-	Changeable at any time	"H2-15" on page 1058
H2-16	0x8210	Interval for clearing auto reset count	0 min to 6000 min	10	min	Changeable at any time	"H2-16" on page 1059
H2-17	0x8211	Active fault reset attempt count	0 to 65535	0	-	Unchangeable	"H2-17" on page 1059
H2-18	0x8212	Clearing upon fault reset count reach	0: Cleared 1: Not cleared	0	-	Changeable at any time	"H2-18" on page 1059
H2-20	0x8214	Code of non-resettable exception 1	0 to 200	0	-	Changeable at any time	"H2-20" on page 1059
H2-21	0x8215	Subcode of non-resettable exception 1	0 to 9	0	-	Changeable at any time	"H2-21" on page 1059
H2-22	0x8216	Code of non-resettable exception 2	0 to 200	0	-	Changeable at any time	"H2-22" on page 1060
H2-23	0x8217	Subcode of non-resettable exception 2	0 to 9	0	-	Changeable at any time	"H2-23" on page 1060
H2-24	0x8218	Code of non-resettable exception 3	0 to 200	0	-	Changeable at any time	"H2-24" on page 1060
H2-25	0x8219	Subcode of non-resettable exception 3	0 to 9	0	-	Changeable at any time	"H2-25" on page 1060
H2-26	0x821A	Code of non-resettable exception 4	0 to 200	0	-	Changeable at any time	"H2-26" on page 1060

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H2-27	0x821B	Subcode of non-resettable exception 4	0 to 9	0	-	Changeable at any time	"H2-27" on page 1061
H2-28	0x821C	Code of non-resettable exception 5	0 to 200	0	-	Changeable at any time	"H2-28" on page 1061
H2-29	0x821D	Subcode of non-resettable exception 5	0 to 9	0	-	Changeable at any time	"H2-29" on page 1061
H2-30	0x821E	Code of non-resettable exception 6	0 to 200	0	-	Changeable at any time	"H2-30" on page 1061
H2-31	0x821F	Subcode of non-resettable exception 6	0 to 9	0	-	Changeable at any time	"H2-31" on page 1061
H2-32	0x8220	Code of non-resettable exception 7	0 to 200	0	-	Changeable at any time	"H2-32" on page 1061
H2-33	0x8221	Subcode of non-resettable exception 7	0 to 9	0	-	Changeable at any time	"H2-33" on page 1062
H2-34	0x8222	Code of non-resettable exception 8	0 to 200	0	-	Changeable at any time	"H2-34" on page 1062
H2-35	0x8223	Subcode of non-resettable exception 8	0 to 9	0	-	Changeable at any time	"H2-35" on page 1062
H2-36	0x8224	Code of non-resettable exception 9	0 to 200	0	-	Changeable at any time	"H2-36" on page 1062
H2-37	0x8225	Subcode of non-resettable exception 9	0 to 9	0	-	Changeable at any time	"H2-37" on page 1062
H2-38	0x8226	Code of non-resettable exception 10	0 to 200	0	-	Changeable at any time	"H2-38" on page 1063
H2-39	0x8227	Subcode of non-resettable exception 10	0 to 9	0	-	Changeable at any time	"H2-39" on page 1063
H2-42	0x822A	Restart after auto reset	0 to 1	0	-	Changeable at any time	"H2-42" on page 1063
H2-43	0x822B	Waiting time of restart after auto reset	0.0s to 600.0s	0.5	s	Changeable at any time	"H2-43" on page 1063

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H2-44	0x822C	Forced flying start during auto restart	0 to 1	0	-	Changeable at any time	"H2-44" on page 1063
H2-45	0x822D	Source of exceptions that allow restart	0: Whitelist 1: Blacklist	1	-	Changeable at any time	"H2-45" on page 1064
H2-46	0x822E	Code of specified exception 1	0 to 200	0	-	Changeable at any time	"H2-46" on page 1064
H2-47	0x822F	Subcode of specified exception 1	0 to 9	0	-	Changeable at any time	"H2-47" on page 1064
H2-48	0x8230	Code of specified exception 2	0 to 200	0	-	Changeable at any time	"H2-48" on page 1064
H2-49	0x8231	Subcode of specified exception 2	0 to 9	0	-	Changeable at any time	"H2-49" on page 1064
H2-50	0x8232	Code of specified exception 3	0 to 200	0	-	Changeable at any time	"H2-50" on page 1065
H2-51	0x8233	Subcode of specified exception 3	0 to 9	0	-	Changeable at any time	"H2-51" on page 1065
H2-52	0x8234	Code of specified exception 4	0 to 200	0	-	Changeable at any time	"H2-52" on page 1065
H2-53	0x8235	Subcode of specified exception 4	0 to 9	0	-	Changeable at any time	"H2-53" on page 1065
H2-54	0x8236	Code of specified exception 5	0 to 200	0	-	Changeable at any time	"H2-54" on page 1065
H2-55	0x8237	Subcode of specified exception 5	0 to 9	0	-	Changeable at any time	"H2-55" on page 1066
H2-56	0x8238	Code of specified exception 6	0 to 200	0	-	Changeable at any time	"H2-56" on page 1066
H2-57	0x8239	Subcode of specified exception 6	0 to 9	0	-	Changeable at any time	"H2-57" on page 1066
H3-00	0x8300	Code of active fault 1	0 to 65535	0	-	Unchangeable	"H3-00" on page 1066
H3-01	0x8301	Subcode of active fault 1	0 to 65535	0	-	Unchangeable	"H3-01" on page 1066
H3-02	0x8302	Information of active fault 1	0 to 65535	0	-	Unchangeable	"H3-02" on page 1067
H3-03	0x8303	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H3-03" on page 1067

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H3-04	0x8304	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H3-04" on page 1067
H3-05	0x8305	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H3-05" on page 1067
H3-06	0x8306	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H3-06" on page 1067
H3-07	0x8307	Code of active fault 2	0 to 65535	0	-	Unchangeable	"H3-07" on page 1068
H3-08	0x8308	Subcode of active fault 2	0 to 65535	0	-	Unchangeable	"H3-08" on page 1068
H3-09	0x8309	Information of active fault 2	0 to 65535	0	-	Unchangeable	"H3-09" on page 1068
H3-10	0x830A	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H3-10" on page 1068
H3-11	0x830B	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H3-11" on page 1068
H3-12	0x830C	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H3-12" on page 1068
H3-13	0x830D	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H3-13" on page 1069
H3-14	0x830E	Code of active fault 3	0 to 65535	0	-	Unchangeable	"H3-14" on page 1069
H3-15	0x830F	Subcode of active fault 3	0 to 65535	0	-	Unchangeable	"H3-15" on page 1069
H3-16	0x8310	Information of active fault 3	0 to 65535	0	-	Unchangeable	"H3-16" on page 1069
H3-17	0x8311	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H3-17" on page 1069
H3-18	0x8312	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H3-18" on page 1070
H3-19	0x8313	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H3-19" on page 1070
H3-20	0x8314	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H3-20" on page 1070
H3-21	0x8315	Code of active fault 4	0 to 65535	0	-	Unchangeable	"H3-21" on page 1070
H3-22	0x8316	Subcode of active fault 4	0 to 65535	0	-	Unchangeable	"H3-22" on page 1070
H3-23	0x8317	Information of active fault 4	0 to 65535	0	-	Unchangeable	"H3-23" on page 1071
H3-24	0x8318	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H3-24" on page 1071

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H3-25	0x8319	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H3-25" on page 1071
H3-26	0x831A	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H3-26" on page 1071
H3-27	0x831B	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H3-27" on page 1071
H3-28	0x831C	Code of active fault 5	0 to 65535	0	-	Unchangeable	"H3-28" on page 1072
H3-29	0x831D	Subcode of active fault 5	0 to 65535	0	-	Unchangeable	"H3-29" on page 1072
H3-30	0x831E	Information of active fault 5	0 to 65535	0	-	Unchangeable	"H3-30" on page 1072
H3-31	0x831F	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H3-31" on page 1072
H3-32	0x8320	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H3-32" on page 1072
H3-33	0x8321	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H3-33" on page 1073
H3-34	0x8322	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H3-34" on page 1073
H3-35	0x8323	Code of active fault 6	0 to 65535	0	-	Unchangeable	"H3-35" on page 1073
H3-36	0x8324	Subcode of active fault 6	0 to 65535	0	-	Unchangeable	"H3-36" on page 1073
H3-37	0x8325	Information of active fault 6	0 to 65535	0	-	Unchangeable	"H3-37" on page 1073
H3-38	0x8326	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H3-38" on page 1073
H3-39	0x8327	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H3-39" on page 1074
H3-40	0x8328	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H3-40" on page 1074
H3-41	0x8329	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H3-41" on page 1074
H3-42	0x832A	Frequency upon the active fault	0.00 Hz to 655.35 Hz	0.00	Hz	Unchangeable	"H3-42" on page 1074
H3-43	0x832B	Current upon the active fault	0.00 A to 655.35 A	0.00	A	Unchangeable	"H3-43" on page 1074
H3-44	0x832C	Bus voltage upon the active fault	0.0 V to 6553.5 V	0.0	V	Unchangeable	"H3-44" on page 1075
H3-45	0x832D	Input terminal state upon the active fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H3-45" on page 1075

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H3-46	0x832E	Output terminal state upon the active fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H3-46" on page 1075
H3-47	0x832F	AC drive state upon the active fault	0 to 65535	0	-	Unchangeable	"H3-47" on page 1075
H3-48	0x8330	Power-on duration upon the active fault	0 min to 65535 min	0	min	Unchangeable	"H3-48" on page 1075
H3-49	0x8331	Running duration upon the active fault	0.0 min to 6553.5 min	0.0	min	Unchangeable	"H3-49" on page 1076
H3-50	0x8332	Status word A upon the active fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H3-50" on page 1076
H3-51	0x8333	Status word B upon the active fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H3-51" on page 1076
H3-52	0x8334	Command word upon the active fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H3-52" on page 1076
H4-00	0x8400	Code of the latest fault 1	0 to 65535	0	-	Unchangeable	"H4-00" on page 1076
H4-01	0x8401	Subcode of the latest fault 1	0 to 65535	0	-	Unchangeable	"H4-01" on page 1077
H4-02	0x8402	Information of the latest fault 1	0 to 65535	0	-	Unchangeable	"H4-02" on page 1077
H4-03	0x8403	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H4-03" on page 1077
H4-04	0x8404	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H4-04" on page 1077
H4-05	0x8405	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H4-05" on page 1077
H4-06	0x8406	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H4-06" on page 1078
H4-07	0x8407	Code of the latest fault 2	0 to 65535	0	-	Unchangeable	"H4-07" on page 1078
H4-08	0x8408	Subcode of the latest fault 2	0 to 65535	0	-	Unchangeable	"H4-08" on page 1078
H4-09	0x8409	Information of the latest fault 2	0 to 65535	0	-	Unchangeable	"H4-09" on page 1078
H4-10	0x840A	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H4-10" on page 1078
H4-11	0x840B	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H4-11" on page 1079
H4-12	0x840C	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H4-12" on page 1079

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H4-13	0x840D	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H4-13" on page 1079
H4-14	0x840E	Code of the latest fault 3	0 to 65535	0	-	Unchangeable	"H4-14" on page 1079
H4-15	0x840F	Subcode of the latest fault 3	0 to 65535	0	-	Unchangeable	"H4-15" on page 1079
H4-16	0x8410	Information of the latest fault 3	0 to 65535	0	-	Unchangeable	"H4-16" on page 1080
H4-17	0x8411	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H4-17" on page 1080
H4-18	0x8412	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H4-18" on page 1080
H4-19	0x8413	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H4-19" on page 1080
H4-20	0x8414	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H4-20" on page 1080
H4-21	0x8415	Code of the latest fault 4	0 to 65535	0	-	Unchangeable	"H4-21" on page 1080
H4-22	0x8416	Subcode of the latest fault 4	0 to 65535	0	-	Unchangeable	"H4-22" on page 1081
H4-23	0x8417	Information of the latest fault 4	0 to 65535	0	-	Unchangeable	"H4-23" on page 1081
H4-24	0x8418	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H4-24" on page 1081
H4-25	0x8419	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H4-25" on page 1081
H4-26	0x841A	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H4-26" on page 1081
H4-27	0x841B	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H4-27" on page 1082
H4-28	0x841C	Code of the latest fault 5	0 to 65535	0	-	Unchangeable	"H4-28" on page 1082
H4-29	0x841D	Subcode of the latest fault 5	0 to 65535	0	-	Unchangeable	"H4-29" on page 1082
H4-30	0x841E	Information of the latest fault 5	0 to 65535	0	-	Unchangeable	"H4-30" on page 1082
H4-31	0x841F	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H4-31" on page 1082
H4-32	0x8420	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H4-32" on page 1083
H4-33	0x8421	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H4-33" on page 1083

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H4-34	0x8422	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H4-34" on page 1083
H4-35	0x8423	Code of the latest fault 6	0 to 65535	0	-	Unchangeable	"H4-35" on page 1083
H4-36	0x8424	Subcode of the latest fault 6	0 to 65535	0	-	Unchangeable	"H4-36" on page 1083
H4-37	0x8425	Information of the latest fault 6	0 to 65535	0	-	Unchangeable	"H4-37" on page 1084
H4-38	0x8426	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H4-38" on page 1084
H4-39	0x8427	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H4-39" on page 1084
H4-40	0x8428	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H4-40" on page 1084
H4-41	0x8429	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H4-41" on page 1084
H4-42	0x842A	Frequency upon the latest fault	0.00 Hz to 655.35 Hz	0.00	Hz	Unchangeable	"H4-42" on page 1085
H4-43	0x842B	Current upon the latest fault	0.00 A to 655.35 A	0.00	A	Unchangeable	"H4-43" on page 1085
H4-44	0x842C	Bus voltage upon the latest fault	0.0 V to 6553.5 V	0.0	V	Unchangeable	"H4-44" on page 1085
H4-45	0x842D	Input terminal state upon the latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H4-45" on page 1085
H4-46	0x842E	Output terminal state upon the latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H4-46" on page 1085
H4-47	0x842F	AC drive state upon the latest fault	0 to 65535	0	-	Unchangeable	"H4-47" on page 1085
H4-48	0x8430	Power-on duration upon the latest fault	0 min to 65535 min	0	min	Unchangeable	"H4-48" on page 1086
H4-49	0x8431	Running duration upon the latest fault	0.0 min to 6553.5 min	0.0	min	Unchangeable	"H4-49" on page 1086
H4-50	0x8432	Status word A upon the latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H4-50" on page 1086
H4-51	0x8433	Status word B upon the latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H4-51" on page 1086
H4-52	0x8434	Command word upon the latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H4-52" on page 1086
H5-00	0x8500	Code of the second latest fault 1	0 to 65535	0	-	Unchangeable	"H5-00" on page 1087
H5-01	0x8501	Subcode of the second latest fault 1	0 to 65535	0	-	Unchangeable	"H5-01" on page 1087

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H5-02	0x8502	Information of the second latest fault 1	0 to 65535	0	-	Unchangeable	"H5-02" on page 1087
H5-03	0x8503	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H5-03" on page 1087
H5-04	0x8504	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H5-04" on page 1087
H5-05	0x8505	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H5-05" on page 1088
H5-06	0x8506	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H5-06" on page 1088
H5-07	0x8507	Code of the second latest fault 2	0 to 65535	0	-	Unchangeable	"H5-07" on page 1088
H5-08	0x8508	Subcode of the second latest fault 2	0 to 65535	0	-	Unchangeable	"H5-08" on page 1088
H5-09	0x8509	Information of the second latest fault 2	0 to 65535	0	-	Unchangeable	"H5-09" on page 1088
H5-10	0x850A	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H5-10" on page 1089
H5-11	0x850B	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H5-11" on page 1089
H5-12	0x850C	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H5-12" on page 1089
H5-13	0x850D	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H5-13" on page 1089
H5-14	0x850E	Code of the second latest fault 3	0 to 65535	0	-	Unchangeable	"H5-14" on page 1089
H5-15	0x850F	Subcode of the second latest fault 3	0 to 65535	0	-	Unchangeable	"H5-15" on page 1090
H5-16	0x8510	Information of the second latest fault 3	0 to 65535	0	-	Unchangeable	"H5-16" on page 1090
H5-17	0x8511	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H5-17" on page 1090
H5-18	0x8512	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H5-18" on page 1090
H5-19	0x8513	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H5-19" on page 1090
H5-20	0x8514	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H5-20" on page 1091
H5-21	0x8515	Code of the second latest fault 4	0 to 65535	0	-	Unchangeable	"H5-21" on page 1091
H5-22	0x8516	Subcode of the second latest fault 4	0 to 65535	0	-	Unchangeable	"H5-22" on page 1091

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H5-23	0x8517	Information of the second latest fault 4	0 to 65535	0	-	Unchangeable	"H5-23" on page 1091
H5-24	0x8518	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H5-24" on page 1091
H5-25	0x8519	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H5-25" on page 1092
H5-26	0x851A	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H5-26" on page 1092
H5-27	0x851B	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H5-27" on page 1092
H5-28	0x851C	Code of the second latest fault 5	0 to 65535	0	-	Unchangeable	"H5-28" on page 1092
H5-29	0x851D	Subcode of the second latest fault 5	0 to 65535	0	-	Unchangeable	"H5-29" on page 1092
H5-30	0x851E	Information of the second latest fault 5	0 to 65535	0	-	Unchangeable	"H5-30" on page 1092
H5-31	0x851F	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H5-31" on page 1093
H5-32	0x8520	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H5-32" on page 1093
H5-33	0x8521	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H5-33" on page 1093
H5-34	0x8522	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H5-34" on page 1093
H5-35	0x8523	Code of the second latest fault 6	0 to 65535	0	-	Unchangeable	"H5-35" on page 1093
H5-36	0x8524	Subcode of the second latest fault 6	0 to 65535	0	-	Unchangeable	"H5-36" on page 1094
H5-37	0x8525	Information of the second latest fault 6	0 to 65535	0	-	Unchangeable	"H5-37" on page 1094
H5-38	0x8526	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H5-38" on page 1094
H5-39	0x8527	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H5-39" on page 1094
H5-40	0x8528	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H5-40" on page 1094
H5-41	0x8529	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H5-41" on page 1095
H5-42	0x852A	Frequency upon the second latest fault	0.00 Hz to 655.35 Hz	0.00	Hz	Unchangeable	"H5-42" on page 1095
H5-43	0x852B	Current upon the second latest fault	0.00 A to 655.35 A	0.00	A	Unchangeable	"H5-43" on page 1095

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H5-44	0x852C	Bus voltage upon the second latest fault	0.0 V to 6553.5 V	0.0	V	Unchangeable	"H5-44" on page 1095
H5-45	0x852D	Input terminal state upon the second latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H5-45" on page 1095
H5-46	0x852E	Output terminal state upon the second latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H5-46" on page 1096
H5-47	0x852F	AC drive state upon the second latest fault	0 to 65535	0	-	Unchangeable	"H5-47" on page 1096
H5-48	0x8530	Power-on duration upon the second latest fault	0 min to 65535 min	0	min	Unchangeable	"H5-48" on page 1096
H5-49	0x8531	Running duration upon the second latest fault	0.0 min to 6553.5 min	0.0	min	Unchangeable	"H5-49" on page 1096
H5-50	0x8532	Status word A upon the second latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H5-50" on page 1096
H5-51	0x8533	Status word B upon the second latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H5-51" on page 1097
H5-52	0x8534	Command word upon the second latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H5-52" on page 1097
H6-00	0x8600	Code of the third latest fault 1	0 to 65535	0	-	Unchangeable	"H6-00" on page 1097
H6-01	0x8601	Subcode of the third latest fault 1	0 to 65535	0	-	Unchangeable	"H6-01" on page 1097
H6-02	0x8602	Information of the third latest fault 1	0 to 65535	0	-	Unchangeable	"H6-02" on page 1097
H6-03	0x8603	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H6-03" on page 1098
H6-04	0x8604	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H6-04" on page 1098
H6-05	0x8605	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H6-05" on page 1098
H6-06	0x8606	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H6-06" on page 1098
H6-07	0x8607	Code of the third latest fault 2	0 to 65535	0	-	Unchangeable	"H6-07" on page 1098
H6-08	0x8608	Subcode of the third latest fault 2	0 to 65535	0	-	Unchangeable	"H6-08" on page 1099

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H6-09	0x8609	Information of the third latest fault 2	0 to 65535	0	-	Unchangeable	"H6-09" on page 1099
H6-10	0x860A	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H6-10" on page 1099
H6-11	0x860B	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H6-11" on page 1099
H6-12	0x860C	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H6-12" on page 1099
H6-13	0x860D	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H6-13" on page 1099
H6-14	0x860E	Code of the third latest fault 3	0 to 65535	0	-	Unchangeable	"H6-14" on page 1100
H6-15	0x860F	Subcode of the third latest fault 3	0 to 65535	0	-	Unchangeable	"H6-15" on page 1100
H6-16	0x8610	Information of the third latest fault 3	0 to 65535	0	-	Unchangeable	"H6-16" on page 1100
H6-17	0x8611	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H6-17" on page 1100
H6-18	0x8612	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H6-18" on page 1100
H6-19	0x8613	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H6-19" on page 1101
H6-20	0x8614	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H6-20" on page 1101
H6-21	0x8615	Code of the third latest fault 4	0 to 65535	0	-	Unchangeable	"H6-21" on page 1101
H6-22	0x8616	Subcode of the third latest fault 4	0 to 65535	0	-	Unchangeable	"H6-22" on page 1101
H6-23	0x8617	Information of the third latest fault 4	0 to 65535	0	-	Unchangeable	"H6-23" on page 1101
H6-24	0x8618	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H6-24" on page 1102
H6-25	0x8619	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H6-25" on page 1102
H6-26	0x861A	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H6-26" on page 1102
H6-27	0x861B	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H6-27" on page 1102
H6-28	0x861C	Code of the third latest fault 5	0 to 65535	0	-	Unchangeable	"H6-28" on page 1102
H6-29	0x861D	Subcode of the third latest fault 5	0 to 65535	0	-	Unchangeable	"H6-29" on page 1103

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H6-30	0x861E	Information of the third latest fault 5	0 to 65535	0	-	Unchangeable	"H6-30" on page 1103
H6-31	0x861F	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H6-31" on page 1103
H6-32	0x8620	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H6-32" on page 1103
H6-33	0x8621	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H6-33" on page 1103
H6-34	0x8622	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H6-34" on page 1104
H6-35	0x8623	Code of the third latest fault 6	0 to 65535	0	-	Unchangeable	"H6-35" on page 1104
H6-36	0x8624	Subcode of the third latest fault 6	0 to 65535	0	-	Unchangeable	"H6-36" on page 1104
H6-37	0x8625	Information of the third latest fault 6	0 to 65535	0	-	Unchangeable	"H6-37" on page 1104
H6-38	0x8626	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H6-38" on page 1104
H6-39	0x8627	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H6-39" on page 1104
H6-40	0x8628	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H6-40" on page 1105
H6-41	0x8629	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H6-41" on page 1105
H6-42	0x862A	Frequency upon the third latest fault	0.00 Hz to 655.35 Hz	0.00	Hz	Unchangeable	"H6-42" on page 1105
H6-43	0x862B	Current upon the third latest fault	0.00 A to 655.35 A	0.00	A	Unchangeable	"H6-43" on page 1105
H6-44	0x862C	Bus voltage upon the third latest fault	0.0 V to 6553.5 V	0.0	V	Unchangeable	"H6-44" on page 1105
H6-45	0x862D	Input terminal state upon the third latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H6-45" on page 1106
H6-46	0x862E	Output terminal state upon the third latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H6-46" on page 1106
H6-47	0x862F	AC drive state upon the third latest fault	0 to 65535	0	-	Unchangeable	"H6-47" on page 1106
H6-48	0x8630	Power-on duration upon the third latest fault	0 min to 65535 min	0	min	Unchangeable	"H6-48" on page 1106
H6-49	0x8631	Running duration upon the third latest fault	0.0 min to 6553.5 min	0.0	min	Unchangeable	"H6-49" on page 1106

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H6-50	0x8632	Status word A upon the third latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H6-50" on page 1107
H6-51	0x8633	Status word B upon the third latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H6-51" on page 1107
H6-52	0x8634	Command word upon the third latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H6-52" on page 1107
H7-00	0x8700	Code of the fourth latest fault 1	0 to 65535	0	-	Unchangeable	"H7-00" on page 1107
H7-01	0x8701	Subcode of the fourth latest fault 1	0 to 65535	0	-	Unchangeable	"H7-01" on page 1107
H7-02	0x8702	Information of the fourth latest fault 1	0 to 65535	0	-	Unchangeable	"H7-02" on page 1108
H7-03	0x8703	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H7-03" on page 1108
H7-04	0x8704	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H7-04" on page 1108
H7-05	0x8705	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H7-05" on page 1108
H7-06	0x8706	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H7-06" on page 1108
H7-07	0x8707	Code of the fourth latest fault 2	0 to 65535	0	-	Unchangeable	"H7-07" on page 1109
H7-08	0x8708	Subcode of the fourth latest fault 2	0 to 65535	0	-	Unchangeable	"H7-08" on page 1109
H7-09	0x8709	Information of the fourth latest fault 2	0 to 65535	0	-	Unchangeable	"H7-09" on page 1109
H7-10	0x870A	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H7-10" on page 1109
H7-11	0x870B	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H7-11" on page 1109
H7-12	0x870C	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H7-12" on page 1110
H7-13	0x870D	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H7-13" on page 1110
H7-14	0x870E	Code of the third latest fault 3	0 to 65535	0	-	Unchangeable	"H7-14" on page 1110
H7-15	0x870F	Subcode of the third latest fault 3	0 to 65535	0	-	Unchangeable	"H7-15" on page 1110
H7-16	0x8710	Information of the third latest fault 3	0 to 65535	0	-	Unchangeable	"H7-16" on page 1110
H7-17	0x8711	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H7-17" on page 1111

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H7-18	0x8712	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H7-18" on page 1111
H7-19	0x8713	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H7-19" on page 1111
H7-20	0x8714	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H7-20" on page 1111
H7-21	0x8715	Code of the fourth latest fault 4	0 to 65535	0	-	Unchangeable	"H7-21" on page 1111
H7-22	0x8716	Subcode of the fourth latest fault 4	0 to 65535	0	-	Unchangeable	"H7-22" on page 1111
H7-23	0x8717	Information of the fourth latest fault 4	0 to 65535	0	-	Unchangeable	"H7-23" on page 1112
H7-24	0x8718	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H7-24" on page 1112
H7-25	0x8719	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H7-25" on page 1112
H7-26	0x871A	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H7-26" on page 1112
H7-27	0x871B	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H7-27" on page 1112
H7-28	0x871C	Code of the fourth latest fault 5	0 to 65535	0	-	Unchangeable	"H7-28" on page 1113
H7-29	0x871D	Subcode of the fourth latest fault 5	0 to 65535	0	-	Unchangeable	"H7-29" on page 1113
H7-30	0x871E	Information of the fourth latest fault 5	0 to 65535	0	-	Unchangeable	"H7-30" on page 1113
H7-31	0x871F	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H7-31" on page 1113
H7-32	0x8720	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H7-32" on page 1113
H7-33	0x8721	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H7-33" on page 1114
H7-34	0x8722	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H7-34" on page 1114
H7-35	0x8723	Code of the fourth latest fault 6	0 to 65535	0	-	Unchangeable	"H7-35" on page 1114
H7-36	0x8724	Subcode of the fourth latest fault 6	0 to 65535	0	-	Unchangeable	"H7-36" on page 1114
H7-37	0x8725	Information of the fourth latest fault 6	0 to 65535	0	-	Unchangeable	"H7-37" on page 1114
H7-38	0x8726	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H7-38" on page 1115

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H7-39	0x8727	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H7-39" on page 1115
H7-40	0x8728	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H7-40" on page 1115
H7-41	0x8729	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H7-41" on page 1115
H7-42	0x872A	Frequency upon the fourth latest fault	0.00 Hz to 655.35 Hz	0.00	Hz	Unchangeable	"H7-42" on page 1115
H7-43	0x872B	Current upon the fourth latest fault	0.00 A to 655.35 A	0.00	A	Unchangeable	"H7-43" on page 1116
H7-44	0x872C	Bus voltage upon the fourth latest fault	0.0 V to 6553.5 V	0.0	V	Unchangeable	"H7-44" on page 1116
H7-45	0x872D	Input terminal state upon the fourth latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H7-45" on page 1116
H7-46	0x872E	Output terminal state upon the fourth latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H7-46" on page 1116
H7-47	0x872F	AC drive state upon the fourth latest fault	0 to 65535	0	-	Unchangeable	"H7-47" on page 1116
H7-48	0x8730	Power-on duration upon the fourth latest fault	0 min to 65535 min	0	min	Unchangeable	"H7-48" on page 1116
H7-49	0x8731	Running duration upon the fourth latest fault	0.0 min to 6553.5 min	0.0	min	Unchangeable	"H7-49" on page 1117
H7-50	0x8732	Status word A upon the fourth latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H7-50" on page 1117
H7-51	0x8733	Status word B upon the fourth latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H7-51" on page 1117
H7-52	0x8734	Command word upon the fourth latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H7-52" on page 1117
H8-00	0x8800	Code of the fifth latest fault 1	0 to 65535	0	-	Unchangeable	"H8-00" on page 1118
H8-01	0x8801	Subcode of the fifth latest fault 1	0 to 65535	0	-	Unchangeable	"H8-01" on page 1118
H8-02	0x8802	Information of the fifth latest fault 1	0 to 65535	0	-	Unchangeable	"H8-02" on page 1118
H8-03	0x8803	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H8-03" on page 1118

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H8-04	0x8804	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H8-04" on page 1118
H8-05	0x8805	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H8-05" on page 1119
H8-06	0x8806	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H8-06" on page 1119
H8-07	0x8807	Code of the fifth latest fault 2	0 to 65535	0	-	Unchangeable	"H8-07" on page 1119
H8-08	0x8808	Subcode of the fifth latest fault 2	0 to 65535	0	-	Unchangeable	"H8-08" on page 1119
H8-09	0x8809	Information of the fifth latest fault 2	0 to 65535	0	-	Unchangeable	"H8-09" on page 1119
H8-10	0x880A	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H8-10" on page 1119
H8-11	0x880B	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H8-11" on page 1120
H8-12	0x880C	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H8-12" on page 1120
H8-13	0x880D	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H8-13" on page 1120
H8-14	0x880E	Code of the fifth latest fault 3	0 to 65535	0	-	Unchangeable	"H8-14" on page 1120
H8-15	0x880F	Subcode of the fifth latest fault 3	0 to 65535	0	-	Unchangeable	"H8-15" on page 1120
H8-16	0x8810	Information of the fifth latest fault 3	0 to 65535	0	-	Unchangeable	"H8-16" on page 1121
H8-17	0x8811	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H8-17" on page 1121
H8-18	0x8812	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H8-18" on page 1121
H8-19	0x8813	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H8-19" on page 1121
H8-20	0x8814	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H8-20" on page 1121
H8-21	0x8815	Code of the fifth latest fault 4	0 to 65535	0	-	Unchangeable	"H8-21" on page 1122
H8-22	0x8816	Subcode of the fifth latest fault 4	0 to 65535	0	-	Unchangeable	"H8-22" on page 1122
H8-23	0x8817	Information of the fifth latest fault 4	0 to 65535	0	-	Unchangeable	"H8-23" on page 1122
H8-24	0x8818	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H8-24" on page 1122

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H8-25	0x8819	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H8-25" on page 1122
H8-26	0x881A	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H8-26" on page 1123
H8-27	0x881B	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H8-27" on page 1123
H8-28	0x881C	Code of the fifth latest fault 5	0 to 65535	0	-	Unchangeable	"H8-28" on page 1123
H8-29	0x881D	Subcode of the fifth latest fault 5	0 to 65535	0	-	Unchangeable	"H8-29" on page 1123
H8-30	0x881E	Information of the fifth latest fault 5	0 to 65535	0	-	Unchangeable	"H8-30" on page 1123
H8-31	0x881F	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H8-31" on page 1124
H8-32	0x8820	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H8-32" on page 1124
H8-33	0x8821	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H8-33" on page 1124
H8-34	0x8822	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H8-34" on page 1124
H8-35	0x8823	Code of the fifth latest fault 6	0 to 65535	0	-	Unchangeable	"H8-35" on page 1124
H8-36	0x8824	Subcode of the fifth latest fault 6	0 to 65535	0	-	Unchangeable	"H8-36" on page 1124
H8-37	0x8825	Information of the fifth latest fault 6	0 to 65535	0	-	Unchangeable	"H8-37" on page 1125
H8-38	0x8826	Self diagnosis information 1	0 to 65535	0	-	Unchangeable	"H8-38" on page 1125
H8-39	0x8827	Self diagnosis information 2	0 to 65535	0	-	Unchangeable	"H8-39" on page 1125
H8-40	0x8828	Self diagnosis information 3	0 to 65535	0	-	Unchangeable	"H8-40" on page 1125
H8-41	0x8829	Self diagnosis information 4	0 to 65535	0	-	Unchangeable	"H8-41" on page 1125
H8-42	0x882A	Frequency upon the fifth latest fault	0.00 Hz to 655.35 Hz	0.00	Hz	Unchangeable	"H8-42" on page 1126
H8-43	0x882B	Current upon the fifth latest fault	0.00 A to 655.35 A	0.00	A	Unchangeable	"H8-43" on page 1126
H8-44	0x882C	Bus voltage upon the fifth latest fault	0.0 V to 6553.5 V	0.0	V	Unchangeable	"H8-44" on page 1126
H8-45	0x882D	Input terminal state upon the fifth latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H8-45" on page 1126

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
H8-46	0x882E	Output terminal state upon the fifth latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H8-46" on page 1126
H8-47	0x882F	AC drive state upon the fifth latest fault	0 to 65535	0	-	Unchangeable	"H8-47" on page 1127
H8-48	0x8830	Power-on duration upon the fifth latest fault	0 min to 65535 min	0	min	Unchangeable	"H8-48" on page 1127
H8-49	0x8831	Running duration upon the fifth latest fault	0.0 min to 6553.5 min	0.0	min	Unchangeable	"H8-49" on page 1127
H8-50	0x8832	Status word A upon the fifth latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H8-50" on page 1127
H8-51	0x8833	Status word B upon the fifth latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H8-51" on page 1127
H8-52	0x8834	Command word upon the fifth latest fault	0x0 to 0xFFFF	0x0	-	Unchangeable	"H8-52" on page 1128
U0-00	0x7000	Running frequency	0.00 Hz to 500.00 Hz	0.00	Hz	Unchangeable	"U0-00" on page 1128
U0-01	0x7001	Frequency reference	0.00 Hz to 500.00 Hz	0.00	Hz	Unchangeable	"U0-01" on page 1128
U0-02	0x7002	Bus voltage	0.0 V to 6553.5 V	0.0	V	Unchangeable	"U0-02" on page 1128
U0-03	0x7003	Output voltage	0 V to 65535 V	0	V	Unchangeable	"U0-03" on page 1128
U0-04	0x7004	Output current	0.00 A to 655.35 A	0.00	A	Unchangeable	"U0-04" on page 1129
U0-05	0x7005	Output power	–3276.8 kW to +3276.7 kW	0.0	kW	Unchangeable	"U0-05" on page 1129
U0-06	0x7006	Output torque	–3276.8% to +3276.7%	0.0	%	Unchangeable	"U0-06" on page 1129
U0-07	0x7007	DI state	0x0 to 0x7FFF	0x0	-	Unchangeable	"U0-07" on page 1129
U0-08	0x7008	DO state	0x0 to 0x7FFF	0x0	-	Unchangeable	"U0-08" on page 1129
U0-09	0x7009	AI1 voltage	–10.57 V to +10.57 V	0.00	V	Unchangeable	"U0-09" on page 1130
U0-10	0x700A	AI2 voltage	–10.57 V to +10.57 V	0.00	V	Unchangeable	"U0-10" on page 1130
U0-11	0x700B	AI3 voltage	–10.57 V to +10.57 V	0.00	V	Unchangeable	"U0-11" on page 1130
U0-12	0x700C	Count value	0 to 65535	0	-	Unchangeable	"U0-12" on page 1130

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
U0-13	0x700D	Length value	0 to 65535	0	-	Unchangeable	"U0-13" on page 1130
U0-14	0x700E	Load speed	0 RPM to 65535 RPM	0	RPM	Unchangeable	"U0-14" on page 1131
U0-15	0x700F	PID reference	0 to 65535	0	-	Unchangeable	"U0-15" on page 1131
U0-16	0x7010	PID feedback	0 to 65535	0	-	Unchangeable	"U0-16" on page 1131
U0-17	0x7011	PLC stage	0 to 65535	0	-	Unchangeable	"U0-17" on page 1131
U0-18	0x7012	Pulse input frequency	0.00 kHz to 100.00 kHz	0.00	kHz	Unchangeable	"U0-18" on page 1131
U0-19	0x7013	Feedback speed	–500 Hz to +500.00 Hz	0.00	Hz	Unchangeable	"U0-19" on page 1131
U0-20	0x7014	Remaining running duration	0.0 min to 65535.0 min	0.0	min	Unchangeable	"U0-20" on page 1132
U0-21	0x7015	AI1 voltage before correction	–10.57 V to +10.570 V	0.000	V	Unchangeable	"U0-21" on page 1132
U0-22	0x7016	AI2 voltage before correction	–10.57 V to +10.570 V	0.000	V	Unchangeable	"U0-22" on page 1132
U0-23	0x7017	AI3 voltage before correction	–10.57 V to +10.570 V	0.000	V	Unchangeable	"U0-23" on page 1132
U0-24	0x7018	Motor speed	0 RPM to 65535 RPM	0	RPM	Unchangeable	"U0-24" on page 1132
U0-25	0x7019	Current power-on duration	0 min to 65535 min	0	min	Unchangeable	"U0-25" on page 1133
U0-26	0x701A	Current running duration	0.0 min to 6553.5 min	0.0	min	Unchangeable	"U0-26" on page 1133
U0-27	0x701B	Pulse input frequency	0 Hz to 65535 Hz	0	Hz	Unchangeable	"U0-27" on page 1133
U0-28	0x701C	Communication reference	–100% to +100.00%	0.00	%	Unchangeable	"U0-28" on page 1133
U0-29	0x701D	Encoder feedback speed	–500 Hz to +500.00 Hz	0.00	Hz	Unchangeable	"U0-29" on page 1133
U0-30	0x701E	Main frequency X	–500 Hz to +500.00 Hz	0.00	Hz	Unchangeable	"U0-30" on page 1134
U0-31	0x701F	Auxiliary frequency Y	–500 Hz to +500.00 Hz	0.00	Hz	Unchangeable	"U0-31" on page 1134
U0-32	0x7020	Any memory address	0 to 65535	0	-	Unchangeable	"U0-32" on page 1134
U0-33	0x7021	Synchronous motor rotor position	0.0° to 6553.5°	0.0	°	Unchangeable	"U0-33" on page 1134

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
U0-34	0x7022	AI3 temperature mode - motor temperature	0°C to 200°C	0	°C	Unchangeable	"U0-34" on page 1134
U0-35	0x7023	Target torque	–200% to +200.0%	0.0	%	Unchangeable	"U0-35" on page 1135
U0-36	0x7024	Resolver position	0 to 65535	0	-	Unchangeable	"U0-36" on page 1135
U0-37	0x7025	Power factor angle	0.0° to 6553.5°	0.0	°	Unchangeable	"U0-37" on page 1135
U0-38	0x7026	ABZ position	0 to 65535	0	-	Unchangeable	"U0-38" on page 1135
U0-39	0x7027	Target voltage upon V/f separation	0 V to 65535 V	0	V	Unchangeable	"U0-39" on page 1135
U0-40	0x7028	Output voltage upon V/f separation	0 V to 65535 V	0	V	Unchangeable	"U0-40" on page 1136
U0-45	0x702D	Fault subcode	0 to 65535	0	-	Unchangeable	"U0-45" on page 1136
U0-46	0x702E	Limit code	0.0 to 6553.5	0.0	-	Unchangeable	"U0-46" on page 1136
U0-50	0x7032	0.5 ms A hold-up time	0.0 ms to 6553.5 ms	0.0	ms	Unchangeable	"U0-50" on page 1136
U0-51	0x7033	0.5 ms B hold-up time	0.0 ms to 6553.5 ms	0.0	ms	Unchangeable	"U0-51" on page 1136
U0-52	0x7034	0.5 ms C hold-up time	0.0 ms to 6553.5 ms	0.0	ms	Unchangeable	"U0-52" on page 1136
U0-53	0x7035	0.5 ms D hold-up time	0.0 ms to 6553.5 ms	0.0	ms	Unchangeable	"U0-53" on page 1137
U0-54	0x7036	0.5 ms A execution time	0.0 ms to 6553.5 ms	0.0	ms	Unchangeable	"U0-54" on page 1137
U0-55	0x7037	0.5 ms B execution time	0.0 ms to 6553.5 ms	0.0	ms	Unchangeable	"U0-55" on page 1137
U0-56	0x7038	0.5 ms C execution time	0.0 ms to 6553.5 ms	0.0	ms	Unchangeable	"U0-56" on page 1137
U0-57	0x7039	0.5 ms D execution time	0.0 ms to 6553.5 ms	0.0	ms	Unchangeable	"U0-57" on page 1137
U0-58	0x703A	Motor running revolution count	0 to 65535	0	-	Unchangeable	"U0-58" on page 1138
U0-59	0x703B	Frequency reference	–100% to +100.00%	0.00	%	Unchangeable	"U0-59" on page 1138
U0-60	0x703C	Running frequency	–100% to +100.00%	0.00	%	Unchangeable	"U0-60" on page 1138
U0-61	0x703D	AC drive state	0 to 65535	0	-	Unchangeable	"U0-61" on page 1138

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
U0-62	0x703E	Code of active fault	0 to 65535	0	-	Unchangeable	"U0-62" on page 1138
U0-63	0x703F	Torque sent in point-to-point communication	0.00% to 6553.50%	0.00	%	Unchangeable	"U0-63" on page 1139
U0-64	0x7040	Number of slaves in master-slave control	0 to 65535	0	-	Unchangeable	"U0-64" on page 1139
U0-65	0x7041	Torque upper limit	–2000% to +2000.0%	0.0	%	Unchangeable	"U0-65" on page 1139
U0-66	0x7042	Model of communication expansion card	0 to 65535	0	-	Unchangeable	"U0-66" on page 1139
U0-67	0x7043	Software version of communication expansion card	0 to 65535	0	-	Unchangeable	"U0-67" on page 1139
U0-68	0x7044	AC drive state on PROFIBUS DP card	0 to 65535	0	-	Unchangeable	"U0-68" on page 1140
U0-69	0x7045	Frequency sent to PROFIBUS DP card/ 0.01 Hz	0.00 Hz to 655.35 Hz	0.00	Hz	Unchangeable	"U0-69" on page 1140
U0-70	0x7046	Motor speed sent to PROFIBUS DP card/ RPM	0 RPM to 65535 RPM	0	RPM	Unchangeable	"U0-70" on page 1140
U0-71	0x7047	Communication card-specific current	0.0 A to 6553.5 A	0.0	A	Unchangeable	"U0-71" on page 1140
U0-72	0x7048	Communication card error state	0 to 65535	0	-	Unchangeable	"U0-72" on page 1140
U0-73	0x7049	Motor SN	0 to 65535	0	-	Unchangeable	"U0-73" on page 1141
U0-74	0x704A	AC drive output torque	–200% to +200.0%	0.0	%	Unchangeable	"U0-74" on page 1141
U0-76	0x704C	Low-order bits of accumulative power consumption	0.0 kW·h to 6553.5 kW·h	0.0	kW·h	Unchangeable	"U0-76" on page 1141
U0-77	0x704D	High-order bits of accumulative power consumption	0 kW·h to 65535 kW·h	0	kW·h	Unchangeable	"U0-77" on page 1141
U0-78	0x704E	Linear speed	0 m/min to 65535 m/min	0	m/min	Unchangeable	"U0-78" on page 1141
U0-80	0x7050	EtherCAT slave name	0 to 65535	0	-	Unchangeable	"U0-80" on page 1141

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
U0-81	0x7051	EtherCAT slave alias	0 to 65535	0	-	Unchangeable	"U0-81" on page 1142
U0-82	0x7052	EtherCAT ESM transmission error code	0 to 65535	0	-	Unchangeable	"U0-82" on page 1142
U0-83	0x7053	EtherCAT XML file version	0 to 65535	0	-	Unchangeable	"U0-83" on page 1142
U0-84	0x7054	EtherCAT synchronization loss count	0 to 65535	0	-	Unchangeable	"U0-84" on page 1142
U0-85	0x7055	Maximum errors and invalid frames of EtherCAT port 0 per unit time	0 to 65535	0	-	Unchangeable	"U0-85" on page 1142
U0-86	0x7056	Maximum errors and invalid frames of EtherCAT port 1 per unit time	0 to 65535	0	-	Unchangeable	"U0-86" on page 1143
U0-87	0x7057	Maximum forwarding errors of EtherCAT port per unit time	0 to 65535	0	-	Unchangeable	"U0-87" on page 1143
U0-88	0x7058	Maximum error count of EtherCAT data frame processing unit per unit time	0 to 65535	0	-	Unchangeable	"U0-88" on page 1143
U0-89	0x7059	Maximum link loss of EtherCAT port per unit time	0 to 65535	0	-	Unchangeable	"U0-89" on page 1143
U0-90	0x705A	DI function selection display 1	0 to 65535	0	-	Unchangeable	"U0-90" on page 1143
U0-91	0x705B	DI function selection display 2	0 to 65535	0	-	Unchangeable	"U0-91" on page 1144
U0-92	0x705C	DI function selection display 3	0 to 65535	0	-	Unchangeable	"U0-92" on page 1144
U0-93	0x705D	DI function selection display 4	0 to 65535	0	-	Unchangeable	"U0-93" on page 1144
U0-94	0x705E	DI function selection display 5	0 to 65535	0	-	Unchangeable	"U0-94" on page 1144
U0-95	0x705F	STO initialization flag	0 to 65535	0	-	Unchangeable	"U0-95" on page 1144
U0-96	0x7060	STO status word monitoring	0 to 65535	0	-	Unchangeable	"U0-96" on page 1145

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
U0-97	0x7061	STO model	0x0 to 0xFFFF	0x0	-	Unchangeable	"U0-97" on page 1145
U0-98	0x7062	STO 1.2 V AD sampling value	0 to 65535	0	-	Unchangeable	"U0-98" on page 1145
U0-99	0x7063	STO 5 V AD sampling value	0 to 65535	0	-	Unchangeable	"U0-99" on page 1145
U2-00	0x7200	Current motor parameter group	0 to 65535	0	-	Unchangeable	"U2-00" on page 1145
U2-01	0x7201	Current control channel	0 to 65535	0	-	Unchangeable	"U2-01" on page 1146
U2-02	0x7202	Current reference channel	0 to 65535	0	-	Unchangeable	"U2-02" on page 1146
U2-03	0x7203	Skip frequency flag	0 to 65535	0	-	Unchangeable	"U2-03" on page 1146
U2-04	0x7204	Local or remote	0 to 65535	0	-	Unchangeable	"U2-04" on page 1146
U2-05	0x7205	Current multi-speed reference	0 to 65535	0	-	Unchangeable	"U2-05" on page 1146
U2-06	0x7206	Current multi-speed reference effective value	0 to 65535	0	-	Unchangeable	"U2-06" on page 1147
U2-07	0x7207	Key value	0 to 65535	0	-	Unchangeable	"U2-07" on page 1147
U2-08	0x7208	Power-off time	0 to 65535	0	-	Unchangeable	"U2-08" on page 1147
U2-09	0x7209	16-bit parameter error index menu address	0x0 to 0xFFFF	0x0	-	Unchangeable	"U2-09" on page 1147
U2-10	0x720A	16-bit parameter error type	0 to 65535	0	-	Unchangeable	"U2-10" on page 1147
U2-11	0x720B	32-bit parameter error internal index address	0 to 65535	0	-	Unchangeable	"U2-11" on page 1148
U2-12	0x720C	32-bit parameter error internal index address	0 to 65535	0	-	Unchangeable	"U2-12" on page 1148
U2-13	0x720D	Fault and limit severity	0 to 65535	0	-	Unchangeable	"U2-13" on page 1148
U2-14	0x720E	Fault auto reset and restart steps	0 to 65535	0	-	Unchangeable	"U2-14" on page 1148
U2-23	0x7217	Parameter backup exception	0 to 65535	0	-	Unchangeable	"U2-23" on page 1148

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
U2-24	0x7218	Macro parameter backup and restoration exception	0 to 65535	0	-	Unchangeable	"U2-24" on page 1148
U2-25	0x7219	Remaining running duration during timed running	0.0 min to 6553.5 min	0.0	min	Unchangeable	"U2-25" on page 1149
U2-26	0x721A	Parameter record information 0	0 to 65535	0	-	Unchangeable	"U2-26" on page 1149
U2-27	0x721B	Parameter record information 1	0 to 65535	0	-	Unchangeable	"U2-27" on page 1149
U2-28	0x721C	Parameter record information 2	0 to 65535	0	-	Unchangeable	"U2-28" on page 1149
U2-29	0x721D	Parameter record information 3	0 to 65535	0	-	Unchangeable	"U2-29" on page 1149
U2-30	0x721E	Parameter record information 4	0 to 65535	0	-	Unchangeable	"U2-30" on page 1150
U2-31	0x721F	Parameter record information 5	0 to 65535	0	-	Unchangeable	"U2-31" on page 1150
U2-32	0x7220	Parameter record information 6	0 to 65535	0	-	Unchangeable	"U2-32" on page 1150
U2-33	0x7221	Parameter record information 7	0 to 65535	0	-	Unchangeable	"U2-33" on page 1150
U2-34	0x7222	Parameter record information 8	0 to 65535	0	-	Unchangeable	"U2-34" on page 1150
U2-35	0x7223	Parameter record information 9	0 to 65535	0	-	Unchangeable	"U2-35" on page 1151
U2-36	0x7224	Parameter record information 10	0 to 65535	0	-	Unchangeable	"U2-36" on page 1151
U2-37	0x7225	Parameter record information 11	0 to 65535	0	-	Unchangeable	"U2-37" on page 1151
U2-38	0x7226	Parameter record information 12	0 to 65535	0	-	Unchangeable	"U2-38" on page 1151
U2-39	0x7227	Parameter record information 13	0 to 65535	0	-	Unchangeable	"U2-39" on page 1151
U2-40	0x7228	Parameter record information 14	0 to 65535	0	-	Unchangeable	"U2-40" on page 1152
U2-41	0x7229	Parameter record information 15	0 to 65535	0	-	Unchangeable	"U2-41" on page 1152
U2-42	0x722A	Parameter record information 16	0 to 65535	0	-	Unchangeable	"U2-42" on page 1152
U2-43	0x722B	Parameter record information 17	0 to 65535	0	-	Unchangeable	"U2-43" on page 1152

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
U2-44	0x722C	Parameter record information 18	0 to 65535	0	-	Unchangeable	"U2-44" on page 1152
U2-45	0x722D	Parameter record information 19	0 to 65535	0	-	Unchangeable	"U2-45" on page 1153
U2-46	0x722E	Parameter record information 20	0 to 65535	0	-	Unchangeable	"U2-46" on page 1153
U2-47	0x722F	Parameter record information 21	0 to 65535	0	-	Unchangeable	"U2-47" on page 1153
U2-48	0x7230	Parameter record information 22	0 to 65535	0	-	Unchangeable	"U2-48" on page 1153
U2-49	0x7231	Parameter record information 23	0 to 65535	0	-	Unchangeable	"U2-49" on page 1153
U2-50	0x7232	Parameter record information 24	0 to 65535	0	-	Unchangeable	"U2-50" on page 1153
U2-51	0x7233	Parameter record information 25	0 to 65535	0	-	Unchangeable	"U2-51" on page 1154
U2-52	0x7234	Parameter record information 26	0 to 65535	0	-	Unchangeable	"U2-52" on page 1154
U2-60	0x723C	Address mapping enable state	0 to 65535	0	-	Unchangeable	"U2-60" on page 1154
U2-61	0x723D	Expansion card communication fault state	0 to 65535	0	-	Unchangeable	"U2-61" on page 1154
U2-62	0x723E	Communication fault reset command	0 to 65535	0	-	Unchangeable	"U2-62" on page 1154
U2-63	0x723F	Communication warning flag	0 to 65535	0	-	Unchangeable	"U2-63" on page 1155
U2-64	0x7240	16-bit parameter error internal index address	0 to 65535	0	-	Unchangeable	"U2-64" on page 1155
U2-65	0x7241	Power-on initialization completion flag	0 to 65535	0	-	Unchangeable	"U2-65" on page 1155
U2-66	0x7242	Model-related parameter update flag	0 to 65535	0	-	Unchangeable	"U2-66" on page 1155
U3-12	0x730C	Master state	0 to 65535	0	-	Unchangeable	"U3-12" on page 1155
U3-13	0x730D	Master frequency	0 to 65535	0	-	Unchangeable	"U3-13" on page 1156
U3-14	0x730E	Master torque	0 to 65535	0	-	Unchangeable	"U3-14" on page 1156

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
U3-15	0x730F	Master phase sequence	0 to 65535	0	-	Unchangeable	"U3-15" on page 1156
U3-16	0x7310	Communication frequency reference	0.00 Hz to 655.35 Hz	0.00	Hz	Unchangeable	"U3-16" on page 1156
U3-17	0x7311	Communication reference control word	0 to 65535	0	-	Unchangeable	"U3-17" on page 1156
U3-18	0x7312	DO state (terminal function defined by parameters in group F5: communication control)	0 to 65535	0	-	Unchangeable	"U3-18" on page 1157
U3-19	0x7313	AO1 output reference (terminal function defined by parameters in group F5: communication control)	0% to 65535%	0	%	Unchangeable	"U3-19" on page 1157
U3-20	0x7314	AO2 output reference (terminal function defined by parameters in group F5: communication control)	0% to 65535%	0	%	Unchangeable	"U3-20" on page 1157
U3-21	0x7315	HDO output reference (terminal function defined by parameters in group F5: communication control)	0% to 65535%	0	%	Unchangeable	"U3-21" on page 1157
U3-22	0x7316	Command input through communication	0 to 65535	0	-	Unchangeable	"U3-22" on page 1157
U3-23	0x7317	Speed reference input through communication	0 RPM to 65535 RPM	0	RPM	Unchangeable	"U3-23" on page 1158
U3-24	0x7318	Communication card type	0 to 65535	0	-	Unchangeable	"U3-24" on page 1158
U3-25	0x7319	Communication card version	0 to 65535	0	-	Unchangeable	"U3-25" on page 1158
U3-28	0x731C	EtherCAT station alias	0 to 65535	0	-	Changeable at any time	"U3-28" on page 1158

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
U3-35	0x7323	EtherCAT card information 1	0 to 65535	0	-	Unchangeable	"U3-35" on page 1158
U3-36	0x7324	EtherCAT card information 2	0 to 65535	0	-	Unchangeable	"U3-36" on page 1159
U3-37	0x7325	EtherCAT card information 3	0 to 65535	0	-	Unchangeable	"U3-37" on page 1159
U3-38	0x7326	EtherCAT card information 4	0 to 65535	0	-	Unchangeable	"U3-38" on page 1159
U3-39	0x7327	EtherCAT card information 5	0 to 65535	0	-	Unchangeable	"U3-39" on page 1159
U3-40	0x7328	EtherCAT card information 6	0 to 65535	0	-	Unchangeable	"U3-40" on page 1159
U3-41	0x7329	EtherCAT card information 7	0 to 65535	0	-	Unchangeable	"U3-41" on page 1160
U3-42	0x732A	EtherCAT card information 8	0 to 65535	0	-	Unchangeable	"U3-42" on page 1160
U3-43	0x732B	EtherCAT card information 9	0 to 65535	0	-	Unchangeable	"U3-43" on page 1160
U3-44	0x732C	EtherNet/IP error	0 to 65535	0	-	Unchangeable	"U3-44" on page 1160
U3-50	0x7332	LED control word	0 to 65535	0	-	Unchangeable	"U3-50" on page 1160
U3-51	0x7333	Background control word	0 to 65535	0	-	Unchangeable	"U3-51" on page 1161
U3-52	0x7334	SOP control word	0 to 65535	0	-	Unchangeable	"U3-52" on page 1161
U3-53	0x7335	Remote call	0 to 65535	0	-	Unchangeable	"U3-53" on page 1161
U3-54	0x7336	Control word set through communication	0 to 65535	0	-	Unchangeable	"U3-54" on page 1161
U3-55	0x7337	Target speed set through communication	0.0% to 6553.5%	0.0	%	Unchangeable	"U3-55" on page 1161
U3-56	0x7338	MD500 compatible status word	0 to 65535	0	-	Unchangeable	"U3-56" on page 1162
U3-57	0x7339	MD500 compatible LCD command word	0 to 65535	0	-	Unchangeable	"U3-57" on page 1162
U3-58	0x733A	MD500 compatible IDS command word	0 to 65535	0	-	Unchangeable	"U3-58" on page 1162
U3-59	0x733B	MD500 compatible 1000H speed reference	0.00% to 655.35%	0.00	%	Unchangeable	"U3-59" on page 1162

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L0-00	0x9000	DI1 drive sampling state	0 to 65535	0	-	Unchangeable	"L0-00" on page 1162
L0-01	0x9001	DI2 drive sampling state	0 to 65535	0	-	Unchangeable	"L0-01" on page 1163
L0-02	0x9002	DI3 drive sampling state	0 to 65535	0	-	Unchangeable	"L0-02" on page 1163
L0-03	0x9003	DI4 drive sampling state	0 to 65535	0	-	Unchangeable	"L0-03" on page 1163
L0-04	0x9004	DI5 drive sampling state	0 to 65535	0	-	Unchangeable	"L0-04" on page 1163
L0-05	0x9005	DI6 drive sampling state	0 to 65535	0	-	Unchangeable	"L0-05" on page 1163
L0-06	0x9006	DI7 drive sampling state	0 to 65535	0	-	Unchangeable	"L0-06" on page 1164
L0-07	0x9007	DI8 drive sampling state	0 to 65535	0	-	Unchangeable	"L0-07" on page 1164
L0-08	0x9008	DI9 drive sampling state	0 to 65535	0	-	Unchangeable	"L0-08" on page 1164
L0-09	0x9009	DI10 drive sampling state	0 to 65535	0	-	Unchangeable	"L0-09" on page 1164
L0-10	0x900A	AI1AsDI final output state	0 to 65535	0	-	Unchangeable	"L0-10" on page 1164
L0-11	0x900B	AI2AsDI final output state	0 to 65535	0	-	Unchangeable	"L0-11" on page 1164
L0-12	0x900C	AI3AsDI final output state	0 to 65535	0	-	Unchangeable	"L0-12" on page 1165
L0-13	0x900D	AI1AsDI inversion state	0 to 65535	0	-	Unchangeable	"L0-13" on page 1165
L0-14	0x900E	AI2AsDI inversion state	0 to 65535	0	-	Unchangeable	"L0-14" on page 1165
L0-15	0x900F	AI3AsDI inversion state	0 to 65535	0	-	Unchangeable	"L0-15" on page 1165
L0-16	0x9010	DI1 drive output state	0 to 65535	0	-	Unchangeable	"L0-16" on page 1165
L0-17	0x9011	DI2 drive output state	0 to 65535	0	-	Unchangeable	"L0-17" on page 1166
L0-18	0x9012	DI3 drive output state	0 to 65535	0	-	Unchangeable	"L0-18" on page 1166
L0-19	0x9013	DI4 drive output state	0 to 65535	0	-	Unchangeable	"L0-19" on page 1166
L0-20	0x9014	DI5 drive output state	0 to 65535	0	-	Unchangeable	"L0-20" on page 1166

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L0-21	0x9015	DI6 drive output state	0 to 65535	0	-	Unchangeable	"L0-21" on page 1166
L0-22	0x9016	DI7 drive output state	0 to 65535	0	-	Unchangeable	"L0-22" on page 1167
L0-23	0x9017	DI8 drive output state	0 to 65535	0	-	Unchangeable	"L0-23" on page 1167
L0-24	0x9018	DI9 drive output state	0 to 65535	0	-	Unchangeable	"L0-24" on page 1167
L0-25	0x9019	DI10 drive output state	0 to 65535	0	-	Unchangeable	"L0-25" on page 1167
L0-26	0x901A	VDI1 drive output state	0 to 65535	0	-	Unchangeable	"L0-26" on page 1167
L0-27	0x901B	VDI2 drive output state	0 to 65535	0	-	Unchangeable	"L0-27" on page 1168
L0-28	0x901C	VDI3 drive output state	0 to 65535	0	-	Unchangeable	"L0-28" on page 1168
L0-29	0x901D	VDI4 drive output state	0 to 65535	0	-	Unchangeable	"L0-29" on page 1168
L0-30	0x901E	VDI5 drive output state	0 to 65535	0	-	Unchangeable	"L0-30" on page 1168
L0-31	0x901F	VDI6 drive output state	0 to 65535	0	-	Unchangeable	"L0-31" on page 1168
L0-32	0x9020	DI1 final output state	0 to 65535	0	-	Unchangeable	"L0-32" on page 1169
L0-33	0x9021	DI2 final output state	0 to 65535	0	-	Unchangeable	"L0-33" on page 1169
L0-34	0x9022	DI3 final output state	0 to 65535	0	-	Unchangeable	"L0-34" on page 1169
L0-35	0x9023	DI4 final output state	0 to 65535	0	-	Unchangeable	"L0-35" on page 1169
L0-36	0x9024	DI5 final output state	0 to 65535	0	-	Unchangeable	"L0-36" on page 1169
L0-37	0x9025	DI6 final output state	0 to 65535	0	-	Unchangeable	"L0-37" on page 1169
L0-38	0x9026	DI7 final output state	0 to 65535	0	-	Unchangeable	"L0-38" on page 1170
L0-39	0x9027	DI8 final output state	0 to 65535	0	-	Unchangeable	"L0-39" on page 1170
L0-40	0x9028	DI9 final output state	0 to 65535	0	-	Unchangeable	"L0-40" on page 1170
L0-41	0x9029	DI10 final output state	0 to 65535	0	-	Unchangeable	"L0-41" on page 1170

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L0-42	0x902A	VDI1 final output state	0 to 65535	0	-	Unchangeable	"L0-42" on page 1170
L0-43	0x902B	VDI2 final output state	0 to 65535	0	-	Unchangeable	"L0-43" on page 1171
L0-44	0x902C	VDI3 final output state	0 to 65535	0	-	Unchangeable	"L0-44" on page 1171
L0-45	0x902D	VDI4 final output state	0 to 65535	0	-	Unchangeable	"L0-45" on page 1171
L0-46	0x902E	VDI5 final output state	0 to 65535	0	-	Unchangeable	"L0-46" on page 1171
L0-47	0x902F	VDI6 final output state	0 to 65535	0	-	Unchangeable	"L0-47" on page 1171
L0-48	0x9030	DI1 inversion state	0 to 65535	0	-	Unchangeable	"L0-48" on page 1172
L0-49	0x9031	DI2 inversion state	0 to 65535	0	-	Unchangeable	"L0-49" on page 1172
L0-50	0x9032	DI3 inversion state	0 to 65535	0	-	Unchangeable	"L0-50" on page 1172
L0-51	0x9033	DI4 inversion state	0 to 65535	0	-	Unchangeable	"L0-51" on page 1172
L0-52	0x9034	DI5 inversion state	0 to 65535	0	-	Unchangeable	"L0-52" on page 1172
L0-53	0x9035	DI6 inversion state	0 to 65535	0	-	Unchangeable	"L0-53" on page 1173
L0-54	0x9036	DI7 inversion state	0 to 65535	0	-	Unchangeable	"L0-54" on page 1173
L0-55	0x9037	DI8 inversion state	0 to 65535	0	-	Unchangeable	"L0-55" on page 1173
L0-56	0x9038	DI9 inversion state	0 to 65535	0	-	Unchangeable	"L0-56" on page 1173
L0-57	0x9039	DI10 inversion state	0 to 65535	0	-	Unchangeable	"L0-57" on page 1173
L0-58	0x903A	VDI1 inversion state	0 to 65535	0	-	Unchangeable	"L0-58" on page 1174
L0-59	0x903B	VDI2 inversion state	0 to 65535	0	-	Unchangeable	"L0-59" on page 1174
L0-60	0x903C	VDI3 inversion state	0 to 65535	0	-	Unchangeable	"L0-60" on page 1174
L0-61	0x903D	VDI4 inversion state	0 to 65535	0	-	Unchangeable	"L0-61" on page 1174
L0-62	0x903E	VDI5 inversion state	0 to 65535	0	-	Unchangeable	"L0-62" on page 1174

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L0-63	0x903F	VDI6 inversion state	0 to 65535	0	-	Unchangeable	"L0-63" on page 1174
L0-64	0x9040	Relay 1 (DO3) state before filtering	0 to 65535	0	-	Unchangeable	"L0-64" on page 1175
L0-65	0x9041	FMR state before filtering	0 to 65535	0	-	Unchangeable	"L0-65" on page 1175
L0-66	0x9042	DO1 state before filtering	0 to 65535	0	-	Unchangeable	"L0-66" on page 1175
L0-67	0x9043	Relay 2 (DO4) state before filtering	0 to 65535	0	-	Unchangeable	"L0-67" on page 1175
L0-68	0x9044	DO2 state before filtering	0 to 65535	0	-	Unchangeable	"L0-68" on page 1175
L0-69	0x9045	VDO1 state before filtering	0 to 65535	0	-	Unchangeable	"L0-69" on page 1176
L0-70	0x9046	VDO2 state before filtering	0 to 65535	0	-	Unchangeable	"L0-70" on page 1176
L0-71	0x9047	VDO3 state before filtering	0 to 65535	0	-	Unchangeable	"L0-71" on page 1176
L0-72	0x9048	VDO4 state before filtering	0 to 65535	0	-	Unchangeable	"L0-72" on page 1176
L0-73	0x9049	VDO5 state before filtering	0 to 65535	0	-	Unchangeable	"L0-73" on page 1176
L0-74	0x904A	VDO6 state before filtering	0 to 65535	0	-	Unchangeable	"L0-74" on page 1177
L0-75	0x904B	VDO7 state before filtering	0 to 65535	0	-	Unchangeable	"L0-75" on page 1177
L0-76	0x904C	VDO8 state before filtering	0 to 65535	0	-	Unchangeable	"L0-76" on page 1177
L0-77	0x904D	VDO9 state before filtering	0 to 65535	0	-	Unchangeable	"L0-77" on page 1177
L0-78	0x904E	VDO10 state before filtering	0 to 65535	0	-	Unchangeable	"L0-78" on page 1177
L0-79	0x904F	VDO11 state before filtering	0 to 65535	0	-	Unchangeable	"L0-79" on page 1178
L0-80	0x9050	Relay 1 (DO3) final output state	0 to 65535	0	-	Unchangeable	"L0-80" on page 1178
L0-81	0x9051	FMR final output state	0 to 65535	0	-	Unchangeable	"L0-81" on page 1178
L0-82	0x9052	DO1 final output state	0 to 65535	0	-	Unchangeable	"L0-82" on page 1178
L0-83	0x9053	Relay 2 (DO4) final output state	0 to 65535	0	-	Unchangeable	"L0-83" on page 1178

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L0-84	0x9054	DO2 final output state	0 to 65535	0	-	Unchangeable	"L0-84" on page 1179
L0-85	0x9055	VDO1 final output state	0 to 65535	0	-	Unchangeable	"L0-85" on page 1179
L0-86	0x9056	VDO2 final output state	0 to 65535	0	-	Unchangeable	"L0-86" on page 1179
L0-87	0x9057	VDO3 final output state	0 to 65535	0	-	Unchangeable	"L0-87" on page 1179
L0-88	0x9058	VDO4 final output state	0 to 65535	0	-	Unchangeable	"L0-88" on page 1179
L0-89	0x9059	VDO5 final output state	0 to 65535	0	-	Unchangeable	"L0-89" on page 1179
L0-90	0x905A	VDO6 final output state	0 to 65535	0	-	Unchangeable	"L0-90" on page 1180
L0-91	0x905B	VDO7 final output state	0 to 65535	0	-	Unchangeable	"L0-91" on page 1180
L0-92	0x905C	VDO8 final output state	0 to 65535	0	-	Unchangeable	"L0-92" on page 1180
L0-93	0x905D	VDO9 final output state	0 to 65535	0	-	Unchangeable	"L0-93" on page 1180
L0-94	0x905E	VDO10 final output state	0 to 65535	0	-	Unchangeable	"L0-94" on page 1180
L0-95	0x905F	VDO11 final output state	0 to 65535	0	-	Unchangeable	"L0-95" on page 1181
L0-96	0x9060	AI1 input overlimit	0 to 65535	0	-	Unchangeable	"L0-96" on page 1181
L0-97	0x9061	AI2 input overlimit	0 to 65535	0	-	Unchangeable	"L0-97" on page 1181
L0-98	0x9062	AI3 input overlimit	0 to 65535	0	-	Unchangeable	"L0-98" on page 1181
L0-99	0x9063	HDI input wire breakage	0 to 65535	0	-	Unchangeable	"L0-99" on page 1181
L1-00	0x9100	Reference count value reach	0 to 65535	0	-	Unchangeable	"L1-00" on page 1182
L1-01	0x9101	Designated count value reach	0 to 65535	0	-	Unchangeable	"L1-01" on page 1182
L1-02	0x9102	Length comparison value reach	0 to 65535	0	-	Unchangeable	"L1-02" on page 1182
L1-03	0x9103	Comparison result of DIO edge counting module 1	0 to 65535	0	-	Unchangeable	"L1-03" on page 1182

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L1-04	0x9104	Comparison result of DIO edge counting module 2	0 to 65535	0	-	Unchangeable	"L1-04" on page 1182
L1-05	0x9105	Comparison result of DIO edge counting module 3	0 to 65535	0	-	Unchangeable	"L1-05" on page 1183
L1-06	0x9106	Comparison result of DIO edge counting module 4	0 to 65535	0	-	Unchangeable	"L1-06" on page 1183
L1-07	0x9107	AI2 or AI3 temperature mode - motor temperature reach	0 to 65535	0	-	Unchangeable	"L1-07" on page 1183
L1-08	0x9108	AI2 or AI3 temperature mode - motor overtemperature	0 to 65535	0	-	Unchangeable	"L1-08" on page 1183
L1-09	0x9109	AI2 temperature mode - motor overtemperature	0 to 65535	0	-	Unchangeable	"L1-09" on page 1183
L1-10	0x910A	AI3 temperature mode - motor overtemperature	0 to 65535	0	-	Unchangeable	"L1-10" on page 1184
L1-11	0x910B	IGBT temperature reach (flag)	0 to 65535	0	-	Unchangeable	"L1-11" on page 1184
L1-12	0x910C	Ready to switch on	0 to 65535	0	-	Unchangeable	"L1-12" on page 1184
L1-13	0x910D	Ready to run	0 to 65535	0	-	Unchangeable	"L1-13" on page 1184
L1-14	0x910E	Running	0 to 65535	0	-	Unchangeable	"L1-14" on page 1184
L1-15	0x910F	Faulty	0: Not faulty 1: Faulty	0	-	Unchangeable	"L1-15" on page 1185
L1-16	0x9110	OFF2 inactive	0: Active (OFF2 = 0) 1: Inactive (OFF2 = 1)	0	-	Unchangeable	"L1-16" on page 1185
L1-17	0x9111	OFF3 inactive	0: Active (OFF3 = 0) 1: Inactive (OFF3 = 1)	0	-	Unchangeable	"L1-17" on page 1185
L1-18	0x9112	Switch-on blocking	0 to 65535	0	-	Unchangeable	"L1-18" on page 1185
L1-19	0x9113	Alarm/Limit activation	0 to 65535	0	-	Unchangeable	"L1-19" on page 1185
L1-20	0x9114	Actual speed following speed reference	0 to 65535	0	-	Unchangeable	"L1-20" on page 1186

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L1-21	0x9115	Local or remote	0: Local 1: Remote	0	-	Unchangeable	"L1-21" on page 1186
L1-22	0x9116	Target speed reach	0 to 65535	0	-	Unchangeable	"L1-22" on page 1186
L1-23	0x9117	Torque limit reach	0 to 65535	0	-	Unchangeable	"L1-23" on page 1186
L1-24	0x9118	Forward speed	0 to 65535	0	-	Unchangeable	"L1-24" on page 1186
L1-25	0x9119	Reverse speed	0 to 65535	0	-	Unchangeable	"L1-25" on page 1187
L1-26	0x911A	Motor running flag	0: Stopped 1: Running (pulse output)	0	-	Unchangeable	"L1-26" on page 1187
L1-27	0x911B	User setting 0	0 to 65535	0	-	Unchangeable	"L1-27" on page 1187
L1-28	0x911C	Self-check	0 to 65535	0	-	Unchangeable	"L1-28" on page 1187
L1-29	0x911D	Auto-tuning	0 to 65535	0	-	Unchangeable	"L1-29" on page 1187
L1-30	0x911E	Limit (running with limits) activation	0 to 65535	0	-	Unchangeable	"L1-30" on page 1188
L1-31	0x911F	Alarm activation	0 to 65535	0	-	Unchangeable	"L1-31" on page 1188
L1-32	0x9120	Speed mode	0 to 65535	0	-	Unchangeable	"L1-32" on page 1188
L1-33	0x9121	Torque mode	0 to 65535	0	-	Unchangeable	"L1-33" on page 1188
L1-34	0x9122	Position mode	0 to 65535	0	-	Unchangeable	"L1-34" on page 1188
L1-35	0x9123	RFG enable	0 to 65535	0	-	Unchangeable	"L1-35" on page 1189
L1-36	0x9124	RFG running	0 to 65535	0	-	Unchangeable	"L1-36" on page 1189
L1-37	0x9125	Stop upon fault	0 to 65535	0	-	Unchangeable	"L1-37" on page 1189
L1-38	0x9126	Normal running	0 to 65535	0	-	Unchangeable	"L1-38" on page 1189
L1-39	0x9127	Jogging	0 to 65535	0	-	Unchangeable	"L1-39" on page 1189
L1-42	0x912A	Terminal control flag	0 to 65535	0	-	Unchangeable	"L1-42" on page 1190
L1-43	0x912B	User setting 1	0 to 65535	0	-	Unchangeable	"L1-43" on page 1190

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L1-44	0x912C	Control channel	0: Control channel 1 1: Control channel 2	0	-	Unchangeable	"L1-44" on page 1190
L1-45	0x912D	Reference channel	0: Reference channel 1 1: Reference channel 2	0	-	Unchangeable	"L1-45" on page 1190
L1-60	0x913C	Excessive speed deviation	0 to 65535	0	-	Unchangeable	"L1-60" on page 1190
L1-61	0x913D	Overspeed	0 to 65535	0	-	Unchangeable	"L1-61" on page 1191
L1-62	0x913E	Target speed reach	0 to 65535	0	-	Unchangeable	"L1-62" on page 1191
L1-63	0x913F	Speed comparison reach 0	0 to 65535	0	-	Unchangeable	"L1-63" on page 1191
L1-64	0x9140	Speed comparison reach 1	0 to 65535	0	-	Unchangeable	"L1-64" on page 1191
L1-65	0x9141	Motor speed positive	0 to 65535	0	-	Unchangeable	"L1-65" on page 1191
L1-66	0x9142	Motor speed negative	0 to 65535	0	-	Unchangeable	"L1-66" on page 1191
L1-76	0x914C	Bit0 of W2B module A	0 to 65535	0	-	Unchangeable	"L1-76" on page 1192
L1-77	0x914D	Bit1 of W2B module A	0 to 65535	0	-	Unchangeable	"L1-77" on page 1192
L1-78	0x914E	Bit2 of W2B module A	0 to 65535	0	-	Unchangeable	"L1-78" on page 1192
L1-79	0x914F	Bit3 of W2B module A	0 to 65535	0	-	Unchangeable	"L1-79" on page 1192
L1-80	0x9150	Bit4 of W2B module A	0 to 65535	0	-	Unchangeable	"L1-80" on page 1192
L1-81	0x9151	Bit5 of W2B module A	0 to 65535	0	-	Unchangeable	"L1-81" on page 1193
L1-82	0x9152	Bit6 of W2B module A	0 to 65535	0	-	Unchangeable	"L1-82" on page 1193
L1-83	0x9153	Bit7 of W2B module A	0 to 65535	0	-	Unchangeable	"L1-83" on page 1193
L1-84	0x9154	Bit8 of W2B module A	0 to 65535	0	-	Unchangeable	"L1-84" on page 1193
L1-85	0x9155	Bit9 of W2B module A	0 to 65535	0	-	Unchangeable	"L1-85" on page 1193
L1-86	0x9156	Bit10 of W2B module A	0 to 65535	0	-	Unchangeable	"L1-86" on page 1194
L1-87	0x9157	Bit11 of W2B module A	0 to 65535	0	-	Unchangeable	"L1-87" on page 1194

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L1-88	0x9158	Bit12 of W2B module A	0 to 65535	0	-	Unchangeable	"L1-88" on page 1194
L1-89	0x9159	Bit13 of W2B module A	0 to 65535	0	-	Unchangeable	"L1-89" on page 1194
L1-90	0x915A	Bit14 of W2B module A	0 to 65535	0	-	Unchangeable	"L1-90" on page 1194
L1-91	0x915B	Bit15 of W2B module A	0 to 65535	0	-	Unchangeable	"L1-91" on page 1195
L1-92	0x915C	Bit0 of W2B module B	0 to 65535	0	-	Unchangeable	"L1-92" on page 1195
L1-93	0x915D	Bit1 of W2B module B	0 to 65535	0	-	Unchangeable	"L1-93" on page 1195
L1-94	0x915E	Bit2 of W2B module B	0 to 65535	0	-	Unchangeable	"L1-94" on page 1195
L1-95	0x915F	Bit3 of W2B module B	0 to 65535	0	-	Unchangeable	"L1-95" on page 1195
L1-96	0x9160	Bit4 of W2B module B	0 to 65535	0	-	Unchangeable	"L1-96" on page 1196
L1-97	0x9161	Bit5 of W2B module B	0 to 65535	0	-	Unchangeable	"L1-97" on page 1196
L1-98	0x9162	Bit6 of W2B module B	0 to 65535	0	-	Unchangeable	"L1-98" on page 1196
L1-99	0x9163	Bit7 of W2B module B	0 to 65535	0	-	Unchangeable	"L1-99" on page 1196
L2-00	0x9200	Bit8 of W2B module B	0 to 65535	0	-	Unchangeable	"L2-00" on page 1196
L2-01	0x9201	Bit9 of W2B module B	0 to 65535	0	-	Unchangeable	"L2-01" on page 1197
L2-02	0x9202	Bit10 of W2B module B	0 to 65535	0	-	Unchangeable	"L2-02" on page 1197
L2-03	0x9203	Bit11 of W2B module B	0 to 65535	0	-	Unchangeable	"L2-03" on page 1197
L2-04	0x9204	Bit12 of W2B module B	0 to 65535	0	-	Unchangeable	"L2-04" on page 1197
L2-05	0x9205	Bit13 of W2B module B	0 to 65535	0	-	Unchangeable	"L2-05" on page 1197
L2-06	0x9206	Bit14 of W2B module B	0 to 65535	0	-	Unchangeable	"L2-06" on page 1198
L2-07	0x9207	Bit15 of W2B module B	0 to 65535	0	-	Unchangeable	"L2-07" on page 1198
L2-08	0x9208	Bit0 of W2B module C	0 to 65535	0	-	Unchangeable	"L2-08" on page 1198

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L2-09	0x9209	Bit1 of W2B module C	0 to 65535	0	-	Unchangeable	"L2-09" on page 1198
L2-10	0x920A	Bit2 of W2B module C	0 to 65535	0	-	Unchangeable	"L2-10" on page 1198
L2-11	0x920B	Bit3 of W2B module C	0 to 65535	0	-	Unchangeable	"L2-11" on page 1198
L2-12	0x920C	Bit4 of W2B module C	0 to 65535	0	-	Unchangeable	"L2-12" on page 1199
L2-13	0x920D	Bit5 of W2B module C	0 to 65535	0	-	Unchangeable	"L2-13" on page 1199
L2-14	0x920E	Bit6 of W2B module C	0 to 65535	0	-	Unchangeable	"L2-14" on page 1199
L2-15	0x920F	Bit7 of W2B module C	0 to 65535	0	-	Unchangeable	"L2-15" on page 1199
L2-16	0x9210	Bit8 of W2B module C	0 to 65535	0	-	Unchangeable	"L2-16" on page 1199
L2-17	0x9211	Bit9 of W2B module C	0 to 65535	0	-	Unchangeable	"L2-17" on page 1200
L2-18	0x9212	Bit10 of W2B module C	0 to 65535	0	-	Unchangeable	"L2-18" on page 1200
L2-19	0x9213	Bit11 of W2B module C	0 to 65535	0	-	Unchangeable	"L2-19" on page 1200
L2-20	0x9214	Bit12 of W2B module C	0 to 65535	0	-	Unchangeable	"L2-20" on page 1200
L2-21	0x9215	Bit13 of W2B module C	0 to 65535	0	-	Unchangeable	"L2-21" on page 1200
L2-22	0x9216	Bit14 of W2B module C	0 to 65535	0	-	Unchangeable	"L2-22" on page 1201
L2-23	0x9217	Bit15 of W2B module C	0 to 65535	0	-	Unchangeable	"L2-23" on page 1201
L2-24	0x9218	Bit0 of W2B module D	0 to 65535	0	-	Unchangeable	"L2-24" on page 1201
L2-25	0x9219	Bit1 of W2B module D	0 to 65535	0	-	Unchangeable	"L2-25" on page 1201
L2-26	0x921A	Bit2 of W2B module D	0 to 65535	0	-	Unchangeable	"L2-26" on page 1201
L2-27	0x921B	Bit3 of W2B module D	0 to 65535	0	-	Unchangeable	"L2-27" on page 1202
L2-28	0x921C	Bit4 of W2B module D	0 to 65535	0	-	Unchangeable	"L2-28" on page 1202
L2-29	0x921D	Bit5 of W2B module D	0 to 65535	0	-	Unchangeable	"L2-29" on page 1202

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L2-30	0x921E	Bit6 of W2B module D	0 to 65535	0	-	Unchangeable	"L2-30" on page 1202
L2-31	0x921F	Bit7 of W2B module D	0 to 65535	0	-	Unchangeable	"L2-31" on page 1202
L2-32	0x9220	Bit8 of W2B module D	0 to 65535	0	-	Unchangeable	"L2-32" on page 1203
L2-33	0x9221	Bit9 of W2B module D	0 to 65535	0	-	Unchangeable	"L2-33" on page 1203
L2-34	0x9222	Bit10 of W2B module D	0 to 65535	0	-	Unchangeable	"L2-34" on page 1203
L2-35	0x9223	Bit11 of W2B module D	0 to 65535	0	-	Unchangeable	"L2-35" on page 1203
L2-36	0x9224	Bit12 of W2B module D	0 to 65535	0	-	Unchangeable	"L2-36" on page 1203
L2-37	0x9225	Bit13 of W2B module D	0 to 65535	0	-	Unchangeable	"L2-37" on page 1203
L2-38	0x9226	Bit14 of W2B module D	0 to 65535	0	-	Unchangeable	"L2-38" on page 1204
L2-39	0x9227	Bit15 of W2B module D	0 to 65535	0	-	Unchangeable	"L2-39" on page 1204
L2-40	0x9228	Bit0 of W2B module E	0 to 65535	0	-	Unchangeable	"L2-40" on page 1204
L2-41	0x9229	Bit1 of W2B module E	0 to 65535	0	-	Unchangeable	"L2-41" on page 1204
L2-42	0x922A	Bit2 of W2B module E	0 to 65535	0	-	Unchangeable	"L2-42" on page 1204
L2-43	0x922B	Bit3 of W2B module E	0 to 65535	0	-	Unchangeable	"L2-43" on page 1205
L2-44	0x922C	Bit4 of W2B module E	0 to 65535	0	-	Unchangeable	"L2-44" on page 1205
L2-45	0x922D	Bit5 of W2B module E	0 to 65535	0	-	Unchangeable	"L2-45" on page 1205
L2-46	0x922E	Bit6 of W2B module E	0 to 65535	0	-	Unchangeable	"L2-46" on page 1205
L2-47	0x922F	Bit7 of W2B module E	0 to 65535	0	-	Unchangeable	"L2-47" on page 1205
L2-48	0x9230	Bit8 of W2B module E	0 to 65535	0	-	Unchangeable	"L2-48" on page 1206
L2-49	0x9231	Bit9 of W2B module E	0 to 65535	0	-	Unchangeable	"L2-49" on page 1206
L2-50	0x9232	Bit10 of W2B module E	0 to 65535	0	-	Unchangeable	"L2-50" on page 1206

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L2-51	0x9233	Bit11 of W2B module E	0 to 65535	0	-	Unchangeable	"L2-51" on page 1206
L2-52	0x9234	Bit12 of W2B module E	0 to 65535	0	-	Unchangeable	"L2-52" on page 1206
L2-53	0x9235	Bit13 of W2B module E	0 to 65535	0	-	Unchangeable	"L2-53" on page 1207
L2-54	0x9236	Bit14 of W2B module E	0 to 65535	0	-	Unchangeable	"L2-54" on page 1207
L2-55	0x9237	Bit15 of W2B module E	0 to 65535	0	-	Unchangeable	"L2-55" on page 1207
L2-56	0x9238	Bit0 of W2B module F	0 to 65535	0	-	Unchangeable	"L2-56" on page 1207
L2-57	0x9239	Bit1 of W2B module F	0 to 65535	0	-	Unchangeable	"L2-57" on page 1207
L2-58	0x923A	Bit2 of W2B module F	0 to 65535	0	-	Unchangeable	"L2-58" on page 1208
L2-59	0x923B	Bit3 of W2B module F	0 to 65535	0	-	Unchangeable	"L2-59" on page 1208
L2-60	0x923C	Bit4 of W2B module F	0 to 65535	0	-	Unchangeable	"L2-60" on page 1208
L2-61	0x923D	Bit5 of W2B module F	0 to 65535	0	-	Unchangeable	"L2-61" on page 1208
L2-62	0x923E	Bit6 of W2B module F	0 to 65535	0	-	Unchangeable	"L2-62" on page 1208
L2-63	0x923F	Bit7 of W2B module F	0 to 65535	0	-	Unchangeable	"L2-63" on page 1208
L2-64	0x9240	Bit8 of W2B module F	0 to 65535	0	-	Unchangeable	"L2-64" on page 1209
L2-65	0x9241	Bit9 of W2B module F	0 to 65535	0	-	Unchangeable	"L2-65" on page 1209
L2-66	0x9242	Bit10 of W2B module F	0 to 65535	0	-	Unchangeable	"L2-66" on page 1209
L2-67	0x9243	Bit11 of W2B module F	0 to 65535	0	-	Unchangeable	"L2-67" on page 1209
L2-68	0x9244	Bit12 of W2B module F	0 to 65535	0	-	Unchangeable	"L2-68" on page 1209
L2-69	0x9245	Bit13 of W2B module F	0 to 65535	0	-	Unchangeable	"L2-69" on page 1210
L2-70	0x9246	Bit14 of W2B module F	0 to 65535	0	-	Unchangeable	"L2-70" on page 1210
L2-71	0x9247	Bit15 of W2B module F	0 to 65535	0	-	Unchangeable	"L2-71" on page 1210

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L2-72	0x9248	Bit0 of W2B module G	0 to 65535	0	-	Unchangeable	"L2-72" on page 1210
L2-73	0x9249	Bit1 of W2B module G	0 to 65535	0	-	Unchangeable	"L2-73" on page 1210
L2-74	0x924A	Bit2 of W2B module G	0 to 65535	0	-	Unchangeable	"L2-74" on page 1211
L2-75	0x924B	Bit3 of W2B module G	0 to 65535	0	-	Unchangeable	"L2-75" on page 1211
L2-76	0x924C	Bit4 of W2B module G	0 to 65535	0	-	Unchangeable	"L2-76" on page 1211
L2-77	0x924D	Bit5 of W2B module G	0 to 65535	0	-	Unchangeable	"L2-77" on page 1211
L2-78	0x924E	Bit6 of W2B module G	0 to 65535	0	-	Unchangeable	"L2-78" on page 1211
L2-79	0x924F	Bit7 of W2B module G	0 to 65535	0	-	Unchangeable	"L2-79" on page 1212
L2-80	0x9250	Bit8 of W2B module G	0 to 65535	0	-	Unchangeable	"L2-80" on page 1212
L2-81	0x9251	Bit9 of W2B module G	0 to 65535	0	-	Unchangeable	"L2-81" on page 1212
L2-82	0x9252	Bit10 of W2B module G	0 to 65535	0	-	Unchangeable	"L2-82" on page 1212
L2-83	0x9253	Bit11 of W2B module G	0 to 65535	0	-	Unchangeable	"L2-83" on page 1212
L2-84	0x9254	Bit12 of W2B module G	0 to 65535	0	-	Unchangeable	"L2-84" on page 1213
L2-85	0x9255	Bit13 of W2B module G	0 to 65535	0	-	Unchangeable	"L2-85" on page 1213
L2-86	0x9256	Bit14 of W2B module G	0 to 65535	0	-	Unchangeable	"L2-86" on page 1213
L2-87	0x9257	Bit15 of W2B module G	0 to 65535	0	-	Unchangeable	"L2-87" on page 1213
L2-88	0x9258	Bit0 of W2B module H	0 to 65535	0	-	Unchangeable	"L2-88" on page 1213
L2-89	0x9259	Bit1 of W2B module H	0 to 65535	0	-	Unchangeable	"L2-89" on page 1213
L2-90	0x925A	Bit2 of W2B module H	0 to 65535	0	-	Unchangeable	"L2-90" on page 1214
L2-91	0x925B	Bit3 of W2B module H	0 to 65535	0	-	Unchangeable	"L2-91" on page 1214
L2-92	0x925C	Bit4 of W2B module H	0 to 65535	0	-	Unchangeable	"L2-92" on page 1214

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L2-93	0x925D	Bit5 of W2B module H	0 to 65535	0	-	Unchangeable	"L2-93" on page 1214
L2-94	0x925E	Bit6 of W2B module H	0 to 65535	0	-	Unchangeable	"L2-94" on page 1214
L2-95	0x925F	Bit7 of W2B module H	0 to 65535	0	-	Unchangeable	"L2-95" on page 1215
L2-96	0x9260	Bit8 of W2B module H	0 to 65535	0	-	Unchangeable	"L2-96" on page 1215
L2-97	0x9261	Bit9 of W2B module H	0 to 65535	0	-	Unchangeable	"L2-97" on page 1215
L2-98	0x9262	Bit10 of W2B module H	0 to 65535	0	-	Unchangeable	"L2-98" on page 1215
L2-99	0x9263	Bit11 of W2B module H	0 to 65535	0	-	Unchangeable	"L2-99" on page 1215
L3-00	0x9300	Bit12 of W2B module H	0 to 65535	0	-	Unchangeable	"L3-00" on page 1216
L3-01	0x9301	Bit13 of W2B module H	0 to 65535	0	-	Unchangeable	"L3-01" on page 1216
L3-02	0x9302	Bit14 of W2B module H	0 to 65535	0	-	Unchangeable	"L3-02" on page 1216
L3-03	0x9303	Bit15 of W2B module H	0 to 65535	0	-	Unchangeable	"L3-03" on page 1216
L3-04	0x9304	Output of binary selector module A	0 to 65535	0	-	Unchangeable	"L3-04" on page 1216
L3-05	0x9305	Output of binary selector module B	0 to 65535	0	-	Unchangeable	"L3-05" on page 1217
L3-06	0x9306	Output of binary selector module C	0 to 65535	0	-	Unchangeable	"L3-06" on page 1217
L3-07	0x9307	Output of binary selector module D	0 to 65535	0	-	Unchangeable	"L3-07" on page 1217
L3-08	0x9308	Output of binary selector module E	0 to 65535	0	-	Unchangeable	"L3-08" on page 1217
L3-09	0x9309	Output of binary selector module F	0 to 65535	0	-	Unchangeable	"L3-09" on page 1217
L3-10	0x930A	Output of binary selector module G	0 to 65535	0	-	Unchangeable	"L3-10" on page 1218
L3-11	0x930B	Output of binary selector module H	0 to 65535	0	-	Unchangeable	"L3-11" on page 1218
L3-20	0x9314	Output of logic delay module A	0 to 65535	0	-	Unchangeable	"L3-20" on page 1218
L3-21	0x9315	Output of logic delay module B	0 to 65535	0	-	Unchangeable	"L3-21" on page 1218

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L3-22	0x9316	Output of logic delay module C	0 to 65535	0	-	Unchangeable	"L3-22" on page 1218
L3-23	0x9317	Output of logic delay module D	0 to 65535	0	-	Unchangeable	"L3-23" on page 1219
L3-24	0x9318	Output of logic delay module E	0 to 65535	0	-	Unchangeable	"L3-24" on page 1219
L3-25	0x9319	Output of logic delay module F	0 to 65535	0	-	Unchangeable	"L3-25" on page 1219
L3-26	0x931A	Output of logic delay module G	0 to 65535	0	-	Unchangeable	"L3-26" on page 1219
L3-27	0x931B	Output of logic delay module H	0 to 65535	0	-	Unchangeable	"L3-27" on page 1219
L3-36	0x9324	Output of logic AND-OR module A	0 to 65535	0	-	Unchangeable	"L3-36" on page 1220
L3-37	0x9325	Output of logic AND-OR module B	0 to 65535	0	-	Unchangeable	"L3-37" on page 1220
L3-38	0x9326	Output of logic AND-OR module C	0 to 65535	0	-	Unchangeable	"L3-38" on page 1220
L3-39	0x9327	Output of logic AND-OR module D	0 to 65535	0	-	Unchangeable	"L3-39" on page 1220
L3-40	0x9328	Output of logic AND-OR module E	0 to 65535	0	-	Unchangeable	"L3-40" on page 1220
L3-41	0x9329	Output of logic AND-OR module F	0 to 65535	0	-	Unchangeable	"L3-41" on page 1220
L3-42	0x932A	Output of logic AND-OR module G	0 to 65535	0	-	Unchangeable	"L3-42" on page 1221
L3-43	0x932B	Output of logic AND-OR module H	0 to 65535	0	-	Unchangeable	"L3-43" on page 1221
L3-44	0x932C	Output of logic AND-OR module I	0 to 65535	0	-	Unchangeable	"L3-44" on page 1221
L3-45	0x932D	Output of logic AND-OR module J	0 to 65535	0	-	Unchangeable	"L3-45" on page 1221
L3-46	0x932E	Output of logic AND-OR module K	0 to 65535	0	-	Unchangeable	"L3-46" on page 1221
L3-47	0x932F	Output of logic AND-OR module L	0 to 65535	0	-	Unchangeable	"L3-47" on page 1222
L3-52	0x9334	Output of logic NOT module A	0 to 65535	0	-	Unchangeable	"L3-52" on page 1222
L3-53	0x9335	Output of logic NOT module B	0 to 65535	0	-	Unchangeable	"L3-53" on page 1222
L3-54	0x9336	Output of logic NOT module C	0 to 65535	0	-	Unchangeable	"L3-54" on page 1222

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L3-55	0x9337	Output of logic NOT module D	0 to 65535	0	-	Unchangeable	"L3-55" on page 1222
L3-56	0x9338	Output of logic NOT module E	0 to 65535	0	-	Unchangeable	"L3-56" on page 1223
L3-57	0x9339	Output of logic NOT module F	0 to 65535	0	-	Unchangeable	"L3-57" on page 1223
L3-58	0x933A	Output of logic NOT module G	0 to 65535	0	-	Unchangeable	"L3-58" on page 1223
L3-59	0x933B	Output of logic NOT module H	0 to 65535	0	-	Unchangeable	"L3-59" on page 1223
L3-60	0x933C	Output of logic NOT module I	0 to 65535	0	-	Unchangeable	"L3-60" on page 1223
L3-61	0x933D	Output of logic NOT module J	0 to 65535	0	-	Unchangeable	"L3-61" on page 1224
L3-62	0x933E	Output of logic NOT module K	0 to 65535	0	-	Unchangeable	"L3-62" on page 1224
L3-63	0x933F	Output of logic NOT module L	0 to 65535	0	-	Unchangeable	"L3-63" on page 1224
L3-64	0x9340	Output of logic NOT module M	0 to 65535	0	-	Unchangeable	"L3-64" on page 1224
L3-65	0x9341	Output of logic NOT module N	0 to 65535	0	-	Unchangeable	"L3-65" on page 1224
L3-66	0x9342	Output of logic NOT module O	0 to 65535	0	-	Unchangeable	"L3-66" on page 1225
L3-67	0x9343	Output of logic NOT module P	0 to 65535	0	-	Unchangeable	"L3-67" on page 1225
L3-68	0x9344	Output of logic XOR/XNOR module A	0 to 65535	0	-	Unchangeable	"L3-68" on page 1225
L3-69	0x9345	Output of logic XOR/XNOR module B	0 to 65535	0	-	Unchangeable	"L3-69" on page 1225
L3-70	0x9346	Output of logic XOR/XNOR module C	0 to 65535	0	-	Unchangeable	"L3-70" on page 1225
L3-71	0x9347	Output of logic XOR/XNOR module D	0 to 65535	0	-	Unchangeable	"L3-71" on page 1225
L3-72	0x9348	Output of logic XOR/XNOR module E	0 to 65535	0	-	Unchangeable	"L3-72" on page 1226
L3-73	0x9349	Output of logic XOR/XNOR module F	0 to 65535	0	-	Unchangeable	"L3-73" on page 1226

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L3-74	0x934A	Output of logic XOR/XNOR module G	0 to 65535	0	-	Unchangeable	"L3-74" on page 1226
L3-75	0x934B	Output of logic XOR/XNOR module H	0 to 65535	0	-	Unchangeable	"L3-75" on page 1226
L3-84	0x9354	Output of level-to-pulse conversion module A	0 to 65535	0	-	Unchangeable	"L3-84" on page 1226
L3-85	0x9355	Output of level-to-pulse conversion module B	0 to 65535	0	-	Unchangeable	"L3-85" on page 1227
L3-86	0x9356	Output of level-to-pulse conversion module C	0 to 65535	0	-	Unchangeable	"L3-86" on page 1227
L3-87	0x9357	Output of level-to-pulse conversion module D	0 to 65535	0	-	Unchangeable	"L3-87" on page 1227
L4-00	0x9400	Output of floating-point comparison module A	0 to 65535	0	-	Unchangeable	"L4-00" on page 1227
L4-01	0x9401	Output of floating-point comparison module B	0 to 65535	0	-	Unchangeable	"L4-01" on page 1227
L4-02	0x9402	Output of floating-point comparison module C	0 to 65535	0	-	Unchangeable	"L4-02" on page 1228
L4-03	0x9403	Output of floating-point comparison module D	0 to 65535	0	-	Unchangeable	"L4-03" on page 1228
L4-04	0x9404	Output of fixed-point comparison module E	0 to 65535	0	-	Unchangeable	"L4-04" on page 1228
L4-05	0x9405	Output of fixed-point comparison module F	0 to 65535	0	-	Unchangeable	"L4-05" on page 1228
L4-06	0x9406	Output of fixed-point comparison module G	0 to 65535	0	-	Unchangeable	"L4-06" on page 1228
L4-07	0x9407	Output of fixed-point comparison module H	0 to 65535	0	-	Unchangeable	"L4-07" on page 1229

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L4-16	0x9410	Flag indicating whether input of floating-point absolute value module A is negative	0: Not negative 1: Negative	0	-	Unchangeable	"L4-16" on page 1229
L4-17	0x9411	Flag indicating whether input of floating-point absolute value module B is negative	0: Not negative 1: Negative	0	-	Unchangeable	"L4-17" on page 1229
L4-18	0x9412	Flag indicating whether input of floating-point absolute value module C is negative	0: Not negative 1: Negative	0	-	Unchangeable	"L4-18" on page 1229
L4-19	0x9413	Flag indicating whether input of floating-point absolute value module D is negative	0: Not negative 1: Negative	0	-	Unchangeable	"L4-19" on page 1229
L4-20	0x9414	Flag indicating whether input of floating-point absolute value module E is negative	0: Not negative 1: Negative	0	-	Unchangeable	"L4-20" on page 1230
L4-21	0x9415	Flag indicating whether input of fixed-point absolute value module F is negative	0: Not negative 1: Negative	0	-	Unchangeable	"L4-21" on page 1230
L4-22	0x9416	Flag indicating whether input of fixed-point absolute value module G is negative	0: Not negative 1: Negative	0	-	Unchangeable	"L4-22" on page 1230
L4-23	0x9417	Flag indicating whether input of fixed-point absolute value module H is negative	0: Not negative 1: Negative	0	-	Unchangeable	"L4-23" on page 1230

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L4-32	0x9420	Flag indicating whether divisor of MULTIPLY/DIVIDE module A is 0	0: Not 0 1: 0	0	-	Unchangeable	"L4-32" on page 1231
L4-33	0x9421	Flag indicating whether divisor of MULTIPLY/DIVIDE module B is 0	0: Not 0 1: 0	0	-	Unchangeable	"L4-33" on page 1231
L4-34	0x9422	Flag indicating whether divisor of MULTIPLY/DIVIDE module C is 0	0: Not 0 1: 0	0	-	Unchangeable	"L4-34" on page 1231
L4-35	0x9423	Flag indicating whether divisor of MULTIPLY/DIVIDE module D is 0	0: Not 0 1: 0	0	-	Unchangeable	"L4-35" on page 1231
L4-36	0x9424	Flag indicating whether divisor of MULTIPLY/DIVIDE module E is 0	0: Not 0 1: 0	0	-	Unchangeable	"L4-36" on page 1231
L4-37	0x9425	Flag indicating whether divisor of MULTIPLY/DIVIDE module F is 0	0: Not 0 1: 0	0	-	Unchangeable	"L4-37" on page 1232
L4-38	0x9426	Flag indicating whether divisor of MULTIPLY/DIVIDE module G is 0	0: Not 0 1: 0	0	-	Unchangeable	"L4-38" on page 1232
L4-39	0x9427	Flag indicating whether divisor of MULTIPLY/DIVIDE module H is 0	0: Not 0 1: 0	0	-	Unchangeable	"L4-39" on page 1232
L4-48	0x9430	Upper limit flag of limiting module A	0 to 65535	0	-	Unchangeable	"L4-48" on page 1232
L4-49	0x9431	Lower limit flag of limiting module A	0 to 65535	0	-	Unchangeable	"L4-49" on page 1232
L4-50	0x9432	Upper limit flag of limiting module B	0 to 65535	0	-	Unchangeable	"L4-50" on page 1233
L4-51	0x9433	Lower limit flag of limiting module B	0 to 65535	0	-	Unchangeable	"L4-51" on page 1233
L4-52	0x9434	Upper limit flag of limiting module C	0 to 65535	0	-	Unchangeable	"L4-52" on page 1233
L4-53	0x9435	Lower limit flag of limiting module C	0 to 65535	0	-	Unchangeable	"L4-53" on page 1233
L4-54	0x9436	Upper limit flag of limiting module D	0 to 65535	0	-	Unchangeable	"L4-54" on page 1233

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L4-55	0x9437	Lower limit flag of limiting module D	0 to 65535	0	-	Unchangeable	"L4-55" on page 1234
L4-56	0x9438	Upper limit flag of limiting module E	0 to 65535	0	-	Unchangeable	"L4-56" on page 1234
L4-57	0x9439	Lower limit flag of limiting module E	0 to 65535	0	-	Unchangeable	"L4-57" on page 1234
L4-58	0x943A	Upper limit flag of limiting module F	0 to 65535	0	-	Unchangeable	"L4-58" on page 1234
L4-59	0x943B	Lower limit flag of limiting module F	0 to 65535	0	-	Unchangeable	"L4-59" on page 1234
L4-64	0x9440	Hibernation enable flag	0 to 65535	0	-	Unchangeable	"L4-64" on page 1235
L4-66	0x9442	Startup frequency RFG forcing	0 to 65535	0	-	Unchangeable	"L4-66" on page 1235
L4-67	0x9443	Startup frequency stop flag	0 to 65535	0	-	Unchangeable	"L4-67" on page 1235
L4-72	0x9448	Power-on duration reach	0 to 65535	0	-	Unchangeable	"L4-72" on page 1235
L4-73	0x9449	Running duration reach	0 to 65535	0	-	Unchangeable	"L4-73" on page 1235
L4-74	0x944A	Timing duration reach	0 to 65535	0	-	Unchangeable	"L4-74" on page 1236
L4-75	0x944B	Current running duration reach	0 to 65535	0	-	Unchangeable	"L4-75" on page 1236
L5-00	0x9500	System status word 1	Bit00: Ready to switch on Bit01: Ready to run Bit02: Running Bit03: Faulty Bit04: OFF2 Bit05: OFF3 Bit06: Switch-on blocking Bit07: Running with limits Bit08: No speed deviation Bit09: Local or remote Bit10: Target speed reach Bit11: Torque limiting Bit12: Positive speed Bit13: Negative speed Bit14: Running (pulse output) Bit15: User-defined state 0	0	-	Unchangeable	"L5-00" on page 1236

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L5-01	0x9501	System status word 2	Bit00: Self-check Bit01: Auto-tuning Bit02: Limit state Bit03: Alarm state Bit04: Speed mode Bit05: Torque mode Bit06: Position mode Bit07: RFG enable Bit08: RFG running Bit09: Stop upon fault Bit10: Normal running Bit11: Jogging Bit12: Decelerate to stop Bit13: Reserved Bit14: Terminal control Bit15: User-defined state 1	0	-	Unchangeable	"L5-01" on page 1237
L5-02	0x9502	Main status word of drive	0 to 65535	0	-	Unchangeable	"L5-02" on page 1237
L5-03	0x9503	Auxiliary status word of drive	0 to 65535	0	-	Unchangeable	"L5-03" on page 1237
L5-04	0x9504	Main status word of motor	0 to 65535	0	-	Unchangeable	"L5-04" on page 1237
L5-05	0x9505	Auxiliary status word of motor	0 to 65535	0	-	Unchangeable	"L5-05" on page 1238
L5-06	0x9506	Current state of system state machine	0: Initializing 1: Switch-on prohibited 2: Switch-on allowed 3: Running allowed 4: Started 5: Running 6: Stopped 7: Self-check 8: Auto-tuning	0	-	Unchangeable	"L5-06" on page 1238
L5-07	0x9507	System state machine switchover command	Bit00: Startup active Bit01: Stop active Bit02: OFF2 stop active Bit03: OFF3 stop active Bit04: Running permission active Bit05: Running prohibition active Bit06: Stop upon fault active	0	-	Unchangeable	"L5-07" on page 1238
L5-08	0x9508	System running state	0 to 65535	0	-	Unchangeable	"L5-08" on page 1239
L5-09	0x9509	Current stop mode	0: Coast to stop 1: Stop at maximum capability 2: Quick stop 3: Decelerate to stop	0	-	Unchangeable	"L5-09" on page 1239

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L5-10	0x950A	DC braking state during deceleration to stop	0 to 65535	0	-	Unchangeable	"L5-10" on page 1239
L5-17	0x9511	Bus voltage	0.0 V to 6553.5 V	0.0	V	Unchangeable	"L5-17" on page 1239
L5-20	0x9514	IGBT temperature	0.0 to 6553.5	0.0	-	Unchangeable	"L5-20" on page 1239
L5-21	0x9515	LED control word	0 to 65535	0	-	Unchangeable	"L5-21" on page 1240
L5-22	0x9516	IDS control word	0 to 65535	0	-	Unchangeable	"L5-22" on page 1240
L5-23	0x9517	SOP control word	0 to 65535	0	-	Unchangeable	"L5-23" on page 1240
L5-24	0x9518	Command channel system command	0 to 65535	0	-	Unchangeable	"L5-24" on page 1240
L5-25	0x9519	LED command clear flag	0 to 65535	0	-	Unchangeable	"L5-25" on page 1240
L5-26	0x951A	SOP command clear flag	0 to 65535	0	-	Unchangeable	"L5-26" on page 1241
L5-27	0x951B	IDS command clear flag	0 to 65535	0	-	Unchangeable	"L5-27" on page 1241
L5-28	0x951C	Terminal module command	0 to 65535	0	-	Unchangeable	"L5-28" on page 1241
L5-29	0x951D	Input state of terminal module A	0 to 65535	0	-	Unchangeable	"L5-29" on page 1241
L5-30	0x951E	Input state of terminal module B	0 to 65535	0	-	Unchangeable	"L5-30" on page 1241
L5-31	0x951F	Running mode (normal jogging)	0 to 65535	0	-	Unchangeable	"L5-31" on page 1241
L5-32	0x9520	Jogging source 12	0 to 65535	0	-	Unchangeable	"L5-32" on page 1242
L5-33	0x9521	Control target	0: Speed control 1: Torque control 1: Position control	0	-	Unchangeable	"L5-33" on page 1242
L5-34	0x9522	RFG status word	0 to 65535	0	-	Unchangeable	"L5-34" on page 1242
L5-35	0x9523	RFG command word	0 to 65535	0	-	Unchangeable	"L5-35" on page 1242
L5-38	0x9526	V/f separation time set to 0	0 to 65535	0	-	Unchangeable	"L5-38" on page 1243
L5-40	0x9528	AI1 raw sampling value	–32.767 V to +32.767 V	0.000	V	Unchangeable	"L5-40" on page 1243

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L5-41	0x9529	AI2 raw sampling value	–32.767 V to +32.767 V	0.000	V	Unchangeable	"L5-41" on page 1243
L5-42	0x952A	AI3 raw sampling value	–32.767 V to +32.767 V	0.000	V	Unchangeable	"L5-42" on page 1243
L5-43	0x952B	AI1 sampling value after correction	–327.67 V to +327.67 V	0.00	V	Unchangeable	"L5-43" on page 1243
L5-44	0x952C	AI2 sampling value after correction	–327.67 V to +327.67 V	0.00	V	Unchangeable	"L5-44" on page 1243
L5-45	0x952D	AI3 sampling value after correction	–327.67 V to +327.67 V	0.00	V	Unchangeable	"L5-45" on page 1244
L5-46	0x952E	Input value of AI1 curve	–327.67 V to +327.67 V	0.00	V	Unchangeable	"L5-46" on page 1244
L5-47	0x952F	Input value of AI2 curve	–327.67 V to +327.67 V	0.00	V	Unchangeable	"L5-47" on page 1244
L5-48	0x9530	Input value of AI3 curve	–327.67 V to +327.67 V	0.00	V	Unchangeable	"L5-48" on page 1244
L5-49	0x9531	AO1 output (before correction)	–327.67 V to +327.67 V	0.00	V	Unchangeable	"L5-49" on page 1244
L5-50	0x9532	AO2 output (before correction)	–327.67 V to +327.67 V	0.00	V	Unchangeable	"L5-50" on page 1245
L5-51	0x9533	AO1 output (after correction)	–32.767 V to +32.767 V	0.000	V	Unchangeable	"L5-51" on page 1245
L5-52	0x9534	AO2 output (after correction)	–32.767 V to +32.767 V	0.000	V	Unchangeable	"L5-52" on page 1245
L5-53	0x9535	HDI input frequency	0.00 kHz to 655.35 kHz	0.00	kHz	Unchangeable	"L5-53" on page 1245
L5-54	0x9536	Counter output	0 to 65535	0	-	Unchangeable	"L5-54" on page 1245
L5-55	0x9537	Length count	0 to 65535	0	-	Unchangeable	"L5-55" on page 1246
L5-56	0x9538	Command word set through communication	Bit00:OFF1 Bit01: OFF2 Bit02: OFF3 Bit03: Running permission Bit04: Reset Bit05: JOG1 Bit06: JOG2 Bit07: Speed negation	0	-	Unchangeable	"L5-56" on page 1246
L5-57	0x9539	Communication setpoint	0.0% to 6553.5%	0.0	%	Unchangeable	"L5-57" on page 1246
L5-58	0x953A	Communication command clear flag	0 to 65535	0	-	Unchangeable	"L5-58" on page 1246
L5-59	0x953B	RFG performance forcing enable	0 to 65535	0	-	Unchangeable	"L5-59" on page 1247

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L5-60	0x953C	Pre-auto-tuning command	0 to 65535	0	-	Unchangeable	"L5-60" on page 1247
L5-62	0x953E	DI immediate DC braking command	0 to 65535	0	-	Unchangeable	"L5-62" on page 1247
L5-63	0x953F	Drive sampling DI state	0 to 65535	0	-	Unchangeable	"L5-63" on page 1247
L5-64	0x9540	Drive output DI state	0 to 65535	0	-	Unchangeable	"L5-64" on page 1247
L5-65	0x9541	Final output DI state	0 to 65535	0	-	Unchangeable	"L5-65" on page 1247
L5-66	0x9542	DI state inversion	0 to 65535	0	-	Unchangeable	"L5-66" on page 1248
L5-67	0x9543	DO state before filtering	0 to 65535	0	-	Unchangeable	"L5-67" on page 1248
L5-68	0x9544	Final output DO state	0 to 65535	0	-	Unchangeable	"L5-68" on page 1248
L5-69	0x9545	I/O monitoring state	0 to 65535	0	-	Unchangeable	"L5-69" on page 1248
L5-70	0x9546	Main speed	0.0% to 6553.5%	0.0	%	Unchangeable	"L5-70" on page 1248
L5-71	0x9547	Auxiliary speed	0.0% to 6553.5%	0.0	%	Unchangeable	"L5-71" on page 1249
L5-73	0x9549	AI2 sampling current 1 after correction (impedance: 500 Ω)	–327.67 mA to +327.67 mA	0.00	mA	Unchangeable	"L5-73" on page 1249
L5-75	0x954B	AO1 output current (before correction)	–327.67 mA to +327.67 mA	0.00	mA	Unchangeable	"L5-75" on page 1249
L5-76	0x954C	AO2 output current (before correction)	–327.67 mA to +327.67 mA	0.00	mA	Unchangeable	"L5-76" on page 1249
L5-77	0x954D	AI2 sampling current 2 after correction (impedance: 250 Ω)	–327.67 mA to +327.67 mA	0.00	mA	Unchangeable	"L5-77" on page 1249
L5-78	0x954E	Flag indicating whether mapping write data is 32-bit	0 to 65535	0	-	Unchangeable	"L5-78" on page 1250
L5-79	0x954F	External communication data low-order 16 bits 1	0 to 65535	0	-	Unchangeable	"L5-79" on page 1250

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L5-80	0x9550	External communication data low-order 16 bits 2	0 to 65535	0	-	Unchangeable	"L5-80" on page 1250
L5-81	0x9551	External communication data low-order 16 bits 3	0 to 65535	0	-	Unchangeable	"L5-81" on page 1250
L5-82	0x9552	External communication data low-order 16 bits 4	0 to 65535	0	-	Unchangeable	"L5-82" on page 1250
L5-83	0x9553	External communication data low-order 16 bits 5	0 to 65535	0	-	Unchangeable	"L5-83" on page 1251
L5-84	0x9554	External communication data low-order 16 bits 6	0 to 65535	0	-	Unchangeable	"L5-84" on page 1251
L5-85	0x9555	External communication data low-order 16 bits 7	0 to 65535	0	-	Unchangeable	"L5-85" on page 1251
L5-86	0x9556	External communication data low-order 16 bits 8	0 to 65535	0	-	Unchangeable	"L5-86" on page 1251
L5-87	0x9557	External communication data low-order 16 bits 9	0 to 65535	0	-	Unchangeable	"L5-87" on page 1251
L5-88	0x9558	External communication data low-order 16 bits 10	0 to 65535	0	-	Unchangeable	"L5-88" on page 1252
L5-89	0x9559	External communication data high-order 16 bits 1	0 to 65535	0	-	Unchangeable	"L5-89" on page 1252
L5-90	0x955A	External communication data high-order 16 bits 2	0 to 65535	0	-	Unchangeable	"L5-90" on page 1252

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L5-91	0x955B	External communication data high-order 16 bits 3	0 to 65535	0	-	Unchangeable	"L5-91" on page 1252
L5-92	0x955C	External communication data high-order 16 bits 4	0 to 65535	0	-	Unchangeable	"L5-92" on page 1252
L5-93	0x955D	External communication data high-order 16 bits 5	0 to 65535	0	-	Unchangeable	"L5-93" on page 1252
L5-94	0x955E	External communication data high-order 16 bits 6	0 to 65535	0	-	Unchangeable	"L5-94" on page 1253
L5-95	0x955F	External communication data high-order 16 bits 7	0 to 65535	0	-	Unchangeable	"L5-95" on page 1253
L5-96	0x9560	External communication data high-order 16 bits 8	0 to 65535	0	-	Unchangeable	"L5-96" on page 1253
L5-97	0x9561	External communication data high-order 16 bits 9	0 to 65535	0	-	Unchangeable	"L5-97" on page 1253
L5-98	0x9562	External communication data high-order 16 bits 10	0 to 65535	0	-	Unchangeable	"L5-98" on page 1253
L6-00	0x9600	Rated motor speed	0 RPM to 65535 RPM	0	RPM	Unchangeable	"L6-00" on page 1254
L6-01	0x9601	Rated motor frequency	0.0 Hz to 6553.5 Hz	0.0	Hz	Unchangeable	"L6-01" on page 1254
L6-02	0x9602	Rated voltage	0.0 V to 6553.5 V	0.0	V	Unchangeable	"L6-02" on page 1254
L6-03	0x9603	Rated current	0.0 A to 6553.5 A	0.0	A	Unchangeable	"L6-03" on page 1254
L6-04	0x9604	Rated power	0.0 kW to 6553.5 kW	0.0	kW	Unchangeable	"L6-04" on page 1254

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L6-05	0x9605	System main status word C	Bit00: Control channel Bit01: Reference channel Bit02: Motor selection bit 0 Bit03: Motor selection bit 1 Bit04: Exception (fault and alarm) Bit05: EEPROM idle	0	-	Unchangeable	"L6-05" on page 1255
L6-06	0x9606	Motor object auxiliary status word 2	0 to 65535	0	-	Unchangeable	"L6-06" on page 1255
L6-07	0x9607	V/f separation stop frequency control	0 to 65535	0	-	Unchangeable	"L6-07" on page 1255
L6-08	0x9608	Torque control frequency offset mode	0 to 65535	0	-	Unchangeable	"L6-08" on page 1255
L6-09	0x9609	RFG acceleration/ deceleration state	0 to 65535	0	-	Unchangeable	"L6-09" on page 1256
L6-10	0x960A	RFG rounding state	0 to 65535	0	-	Unchangeable	"L6-10" on page 1256
L6-11	0x960B	Inverter protection state monitoring	Bit00: Pulse-by-pulse current limit protection Bit01: Pulse-by-pulse current limit inhibition Bit02: Input phase loss Bit03: Output phase loss Bit04: Pre-charge resistor exception Bit05: Drive overload Bit06: Drive pre-overload Bit07: Bus overvoltage Bit08: Bus undervoltage Bit09: Output overcurrent Bit10: Drive overtemperature Bit11: Drive pre-overtemperature Bit12: Leakage current protection Bit13: Current control exception Bit14: Software overcurrent Bit15: Short-to-ground (reserved)	0	-	Unchangeable	"L6-11" on page 1256
L6-12	0x960C	Modulation module status word	0 to 65535	0	-	Unchangeable	"L6-12" on page 1256
L6-13	0x960D	Body sampling status word	0 to 65535	0	-	Unchangeable	"L6-13" on page 1257
L6-14	0x960E	AI2 temperature mode - motor temperature sampling value	–32767°C to +32767°C	0	°C	Unchangeable	"L6-14" on page 1257
L6-15	0x960F	AI3 temperature mode - motor temperature sampling value	0°C to 65535°C	0	°C	Unchangeable	"L6-15" on page 1257

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L6-16	0x9610	Motor protection status word	Bit00: Motor overload Bit01: Motor pre-overload Bit02: Output load loss (reserved) Bit03: PG-detected fault (reserved) Bit04: Current control error Bit05: Locked-rotor Bit06: Motor wire breakage, two- or three-phase loss (reserved) Bit07: Excessive motor load at constant current (reserved) Bit08:VC out-of-step due to magnetic flux exception Bit09: Abnormal speed fluctuation (reserved) Bit10: Motor parameter setting error (reserved) Bit11: HSVM sampling card wire breakage and misphase (reserved) Bit12: Synchronous motor overcurrent (reserved)	0	-	Unchangeable	"L6-16" on page 1257
L6-17	0x9611	Speed controller status word	Bit00: Speed loop enable Bit01: Actual state of integral mode Bit02: Integral forcing enable Bit03: Feedforward torque enable Bit04: Positive limit reach Bit05: Negative limit reach Bit06: Integral hold enable Bit07: Fast integral cancel enable Bit08: Anti-load disturbance enable Bit09: Reserved Bit10: Reserved Bit11: Reserved Bit12: Reserved Bit13: Reserved Bit14: Reserved Bit15: Reserved	0	-	Unchangeable	"L6-17" on page 1258

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L6-18	0x9612	VDC control status word	Bit00: Undervoltage suppression enable Bit01: Overvoltage suppression enable Bit02: Low frequency lower limit for enabling undervoltage suppression Bit03: Reserved Bit04: Reserved Bit05: Reserved Bit06: Reserved Bit07: Reserved Bit08: Reserved Bit09: Reserved Bit10: Reserved Bit11: Reserved Bit12: Reserved Bit13: Reserved Bit14: Reserved Bit15: Reserved	0	-	Unchangeable	"L6-18" on page 1258
L6-19	0x9613	Excitation module status word	0 to 65535	0	-	Unchangeable	"L6-19" on page 1259
L6-20	0x9614	Motor model status word	0 to 65535	0	-	Unchangeable	"L6-20" on page 1259
L6-21	0x9615	Motor current loop status word	0 to 65535	0	-	Unchangeable	"L6-21" on page 1259
L6-22	0x9616	Motor V/f control status word	0 to 65535	0	-	Unchangeable	"L6-22" on page 1260
L6-23	0x9617	Per-unit frequency after HDO function source selection	0.00% to 655.35%	0.00	%	Unchangeable	"L6-23" on page 1260
L6-24	0x9618	Per-unit frequency before HDO curve correction	0.00% to 655.35%	0.00	%	Unchangeable	"L6-24" on page 1260
L6-25	0x9619	Per-unit value of HDO final output frequency	0.00% to 655.35%	0.00	%	Unchangeable	"L6-25" on page 1260
L6-26	0x961A	Actual value of HDO final output frequency	0.00 kHz to 655.35 kHz	0.00	kHz	Unchangeable	"L6-26" on page 1260

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L6-35	0x9623	System main status word D	Bit0: Zero-speed running (inactive at stop) Bit1: Zero-speed running (active at stop) Bit2: Frequency-level detection 1 Bit3: Frequency-level detection 2 Bit4: AI1 > AI2 Bit5: Simple PLC cycle completion Bit6: Communication setpoint Bit7: STO state Bit8: Current 1 reach Bit9: Current 2 reach Bit10: Zero current state Bit11: Output overcurrent Bit12: Motor overload pre-warning Bit13: AC drive overload pre-warning Bit14: Undervoltage Bit15: Load loss	0	-	Unchangeable	"L6-35" on page 1260
L7-00	0x9700	Per-unit constant value 22	0 to 65535	0	-	Unchangeable	"L7-00" on page 1261
L7-01	0x9701	Per-unit constant value 23	0 to 65535	0	-	Unchangeable	"L7-01" on page 1261
L7-02	0x9702	Per-unit constant value 24	0 to 65535	0	-	Unchangeable	"L7-02" on page 1261
L7-03	0x9703	Per-unit constant value 25	0 to 65535	0	-	Unchangeable	"L7-03" on page 1262
L7-04	0x9704	Per-unit constant value 26	0 to 65535	0	-	Unchangeable	"L7-04" on page 1262
L7-05	0x9705	Per-unit constant value 27	0 to 65535	0	-	Unchangeable	"L7-05" on page 1262
L7-06	0x9706	Per-unit constant value 28	0 to 65535	0	-	Unchangeable	"L7-06" on page 1262
L7-07	0x9707	Per-unit constant value 29	0 to 65535	0	-	Unchangeable	"L7-07" on page 1262
L7-08	0x9708	Per-unit constant value 30	0 to 65535	0	-	Unchangeable	"L7-08" on page 1263
L7-09	0x9709	Per-unit constant value 31	0 to 65535	0	-	Unchangeable	"L7-09" on page 1263
L7-10	0x970A	Per-unit constant value 32	0 to 65535	0	-	Unchangeable	"L7-10" on page 1263
L7-11	0x970B	Per-unit constant value 33	0 to 65535	0	-	Unchangeable	"L7-11" on page 1263
L7-12	0x970C	Per-unit constant value 34	0 to 65535	0	-	Unchangeable	"L7-12" on page 1263
L7-13	0x970D	Per-unit constant value 35	0 to 65535	0	-	Unchangeable	"L7-13" on page 1264

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L7-14	0x970E	Per-unit constant value 36	0 to 65535	0	-	Unchangeable	"L7-14" on page 1264
L7-15	0x970F	Per-unit constant value 37	0 to 65535	0	-	Unchangeable	"L7-15" on page 1264
L7-16	0x9710	Per-unit constant value 38	0 to 65535	0	-	Unchangeable	"L7-16" on page 1264
L7-17	0x9711	Per-unit constant value 39	0 to 65535	0	-	Unchangeable	"L7-17" on page 1264
L7-18	0x9712	Per-unit constant value 40	0 to 65535	0	-	Unchangeable	"L7-18" on page 1265
L7-19	0x9713	Per-unit constant value 41	0 to 65535	0	-	Unchangeable	"L7-19" on page 1265
L7-20	0x9714	Per-unit constant value 42	0 to 65535	0	-	Unchangeable	"L7-20" on page 1265
L7-21	0x9715	B2W module A	0 to 65535	0	-	Unchangeable	"L7-21" on page 1265
L7-22	0x9716	B2W module B	0 to 65535	0	-	Unchangeable	"L7-22" on page 1265
L7-23	0x9717	B2W module C	0 to 65535	0	-	Unchangeable	"L7-23" on page 1265
L7-24	0x9718	B2W module D	0 to 65535	0	-	Unchangeable	"L7-24" on page 1266
L7-25	0x9719	DW-W HIWORD A	0 to 65535	0	-	Unchangeable	"L7-25" on page 1266
L7-26	0x971A	DW-W LOWORD A	0 to 65535	0	-	Unchangeable	"L7-26" on page 1266
L7-27	0x971B	DW-W HIWORD B	0 to 65535	0	-	Unchangeable	"L7-27" on page 1266
L7-28	0x971C	DW-W LOWORD B	0 to 65535	0	-	Unchangeable	"L7-28" on page 1266
L7-29	0x971D	DW-W HIWORD C	0 to 65535	0	-	Unchangeable	"L7-29" on page 1267
L7-30	0x971E	DW-W LOWORD C	0 to 65535	0	-	Unchangeable	"L7-30" on page 1267
L7-31	0x971F	DW-W HIWORD D	0 to 65535	0	-	Unchangeable	"L7-31" on page 1267
L7-32	0x9720	DW-W LOWORD D	0 to 65535	0	-	Unchangeable	"L7-32" on page 1267
L7-36	0x9724	16-bit parameter monitoring 1	0 to 65535	0	-	Unchangeable	"L7-36" on page 1267
L7-37	0x9725	16-bit parameter monitoring 2	0 to 65535	0	-	Unchangeable	"L7-37" on page 1268

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L7-38	0x9726	16-bit parameter monitoring 3	0 to 65535	0	-	Unchangeable	"L7-38" on page 1268
L7-39	0x9727	16-bit parameter monitoring 4	0 to 65535	0	-	Unchangeable	"L7-39" on page 1268
L7-40	0x9728	16-bit parameter monitoring 5	0 to 65535	0	-	Unchangeable	"L7-40" on page 1268
L7-41	0x9729	Output of word selector A	0 to 65535	0	-	Unchangeable	"L7-41" on page 1268
L7-42	0x972A	Output of word selector B	0 to 65535	0	-	Unchangeable	"L7-42" on page 1269
L7-43	0x972B	Output of word selector C	0 to 65535	0	-	Unchangeable	"L7-43" on page 1269
L7-44	0x972C	Output of word selector D	0 to 65535	0	-	Unchangeable	"L7-44" on page 1269
L7-50	0x9732	Internal parameter monitoring output 1	–32767 to +32767	0	-	Unchangeable	"L7-50" on page 1269
L7-51	0x9733	Internal parameter monitoring output 2	–32767 to +32767	0	-	Unchangeable	"L7-51" on page 1269
L7-52	0x9734	Internal parameter monitoring output 3	–32767 to +32767	0	-	Unchangeable	"L7-52" on page 1270
L7-53	0x9735	Internal parameter monitoring output 4	–32767 to +32767	0	-	Unchangeable	"L7-53" on page 1270
L7-54	0x9736	Internal parameter monitoring output 5	–32767 to +32767	0	-	Unchangeable	"L7-54" on page 1270
L7-55	0x9737	Internal parameter monitoring output 6	–32767 to +32767	0	-	Unchangeable	"L7-55" on page 1270
L7-56	0x9738	Internal parameter monitoring output 7	–32767 to +32767	0	-	Unchangeable	"L7-56" on page 1270
L7-57	0x9739	Internal parameter monitoring output 8	–32767 to +32767	0	-	Unchangeable	"L7-57" on page 1270
L9-00	0x9900	Output of W-DW module A	0 to 65535	0	-	Unchangeable	"L9-00" on page 1271
L9-01	0x9901	Output of W-DW module B	0 to 65535	0	-	Unchangeable	"L9-01" on page 1271
L9-02	0x9902	Output of W-DW module C	0 to 65535	0	-	Unchangeable	"L9-02" on page 1271
L9-03	0x9903	Output of W-DW module D	0 to 65535	0	-	Unchangeable	"L9-03" on page 1271
L9-04	0x9904	Output of DWord selector module A	0 to 65535	0	-	Unchangeable	"L9-04" on page 1272
L9-05	0x9905	Output of DWord selector module B	0 to 65535	0	-	Unchangeable	"L9-05" on page 1272

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L9-06	0x9906	Output of DWord selector module C	0 to 65535	0	-	Unchangeable	"L9-06" on page 1272
L9-07	0x9907	Output of DWord selector module D	0 to 65535	0	-	Unchangeable	"L9-07" on page 1272
L9-08	0x9908	Output of fixed-point absolute value module F	0 to 65535	0	-	Unchangeable	"L9-08" on page 1272
L9-09	0x9909	Output of fixed-point absolute value module G	0 to 65535	0	-	Unchangeable	"L9-09" on page 1272
L9-10	0x990A	Output of fixed-point absolute value module H	0 to 65535	0	-	Unchangeable	"L9-10" on page 1273
L9-11	0x990B	Output of fixed-point ADD/ SUBTRACT module F	0 to 65535	0	-	Unchangeable	"L9-11" on page 1273
L9-12	0x990C	Output of fixed-point ADD/ SUBTRACT module G	0 to 65535	0	-	Unchangeable	"L9-12" on page 1273
L9-13	0x990D	Output of fixed-point ADD/ SUBTRACT module H	0 to 65535	0	-	Unchangeable	"L9-13" on page 1273
L9-14	0x990E	Output of fixed-point MULTIPLY/ DIVIDE module F	0 to 65535	0	-	Unchangeable	"L9-14" on page 1273
L9-15	0x990F	Output of fixed-point MULTIPLY/ DIVIDE module G	0 to 65535	0	-	Unchangeable	"L9-15" on page 1274
L9-16	0x9910	Output of fixed-point MULTIPLY/ DIVIDE module H	0 to 65535	0	-	Unchangeable	"L9-16" on page 1274
L9-17	0x9911	Output of fixed-point filter module E	0 to 65535	0	-	Unchangeable	"L9-17" on page 1274
L9-18	0x9912	Output of fixed-point filter module F	0 to 65535	0	-	Unchangeable	"L9-18" on page 1274
L9-19	0x9913	Output of fixed-point limiting module E	0 to 65535	0	-	Unchangeable	"L9-19" on page 1274
L9-20	0x9914	Output of fixed-point limiting module F	0 to 65535	0	-	Unchangeable	"L9-20" on page 1275

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
L9-21	0x9915	32-bit parameter monitoring 1	0 to 65535	0	-	Unchangeable	"L9-21" on page 1275
L9-22	0x9916	32-bit parameter monitoring 2	0 to 65535	0	-	Unchangeable	"L9-22" on page 1275
L9-23	0x9917	32-bit parameter monitoring 3	0 to 65535	0	-	Unchangeable	"L9-23" on page 1275
L9-24	0x9918	32-bit parameter monitoring 4	0 to 65535	0	-	Unchangeable	"L9-24" on page 1275
L9-25	0x9919	32-bit parameter monitoring 5	0 to 65535	0	-	Unchangeable	"L9-25" on page 1276
L9-30	0x991E	Variable connector viewing output 1	0 to 65535	0	-	Unchangeable	"L9-30" on page 1276
L9-31	0x991F	Variable connector viewing output 2	0 to 65535	0	-	Unchangeable	"L9-31" on page 1276
L9-32	0x9920	Variable connector viewing output 3	0 to 65535	0	-	Unchangeable	"L9-32" on page 1276
L9-33	0x9921	Variable connector viewing output 4	0 to 65535	0	-	Unchangeable	"L9-33" on page 1276
L9-34	0x9922	Variable connector viewing output 5	0 to 65535	0	-	Unchangeable	"L9-34" on page 1277
L9-35	0x9923	Variable connector viewing output 6	0 to 65535	0	-	Unchangeable	"L9-35" on page 1277
L9-36	0x9924	Variable connector viewing output 7	0 to 65535	0	-	Unchangeable	"L9-36" on page 1277
L9-37	0x9925	Variable connector viewing output 8	0 to 65535	0	-	Unchangeable	"L9-37" on page 1277
LB-00	0x9B00	AI1 input per-unit value	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-00" on page 1277
LB-01	0x9B01	AI2 input per-unit value	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-01" on page 1278
LB-02	0x9B02	AI3 input per-unit value	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-02" on page 1278
LB-03	0x9B03	HDI input per-unit value	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-03" on page 1278
LB-04	0x9B04	Per-unit value of speed reference set through communication	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-04" on page 1278
LB-05	0x9B05	Main speed reference	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-05" on page 1278
LB-06	0x9B06	Auxiliary speed reference	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-06" on page 1279

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
LB-07	0x9B07	Channel target speed	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-07" on page 1279
LB-08	0x9B08	Channel supplementary speed	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-08" on page 1279
LB-09	0x9B09	Supplementary speed setpoint	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-09" on page 1279
LB-10	0x9B0A	Maximum forward speed	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-10" on page 1279
LB-11	0x9B0B	Minimum forward speed	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-11" on page 1279
LB-12	0x9B0C	Maximum reverse speed	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-12" on page 1280
LB-13	0x9B0D	Minimum reverse speed	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-13" on page 1280
LB-14	0x9B0E	Forward limit	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-14" on page 1280
LB-15	0x9B0F	Reverse limit	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-15" on page 1280
LB-16	0x9B10	Speed reference - raw	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-16" on page 1280
LB-17	0x9B11	Speed reference - direction limit	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-17" on page 1281
LB-18	0x9B12	Speed reference - after limiting	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-18" on page 1281
LB-19	0x9B13	Speed reference - after skip frequency	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-19" on page 1281
LB-20	0x9B14	Speed reference - after ramp shift	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-20" on page 1281
LB-21	0x9B15	Torque reference	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-21" on page 1281
LB-22	0x9B16	Supplementary torque	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-22" on page 1282
LB-23	0x9B17	Torque reference after filtering	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-23" on page 1282
LB-24	0x9B18	Target torque reference	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-24" on page 1282
LB-25	0x9B19	Maximum torque	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-25" on page 1282
LB-26	0x9B1A	Minimum torque	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-26" on page 1282
LB-27	0x9B1B	RFG reference input	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-27" on page 1283

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
LB-28	0x9B1C	RFG calculation input	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-28" on page 1283
LB-29	0x9B1D	RFG actual target	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-29" on page 1283
LB-30	0x9B1E	RFG calculation output	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-30" on page 1283
LB-31	0x9B1F	RFG final output (maximum per-unit value)	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-31" on page 1283
LB-32	0x9B20	RFG final output (rated per-unit value)	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-32" on page 1284
LB-33	0x9B21	Updown upper limit	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-33" on page 1284
LB-34	0x9B22	Updown lower limit	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-34" on page 1284
LB-35	0x9B23	RFG acceleration	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-35" on page 1284
LB-36	0x9B24	V/f separation voltage output	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-36" on page 1284
LB-37	0x9B25	RFG force value of startup frequency function	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-37" on page 1284
LB-38	0x9B26	Speed limit in torque control mode	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-38" on page 1285
LB-39	0x9B27	Frequency offset in torque control mode	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-39" on page 1285
LB-40	0x9B28	Running frequency	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-40" on page 1285
LB-41	0x9B29	Frequency reference	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-41" on page 1285
LB-42	0x9B2A	Speed reference - after UpDn	0.0% to 6553.5%	0.0	%	Unchangeable	"LB-42" on page 1285
LC-00	0x9C00	Final frequency reference	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-00" on page 1286
LC-01	0x9C01	Final voltage reference	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-01" on page 1286
LC-02	0x9C02	Output voltage without limit	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-02" on page 1286
LC-03	0x9C03	Voltage phase angle	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-03" on page 1286

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
LC-04	0x9C04	Maximum output voltage	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-04" on page 1286
LC-05	0x9C05	Current loop saturation voltage	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-05" on page 1287
LC-06	0x9C06	Torque reference	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-06" on page 1287
LC-07	0x9C07	Final flux reference	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-07" on page 1287
LC-08	0x9C08	Excitation current reference	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-08" on page 1287
LC-09	0x9C09	Torque current reference	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-09" on page 1287
LC-10	0x9C0A	Rotor speed	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-10" on page 1288
LC-11	0x9C0B	Encoder speed	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-11" on page 1288
LC-12	0x9C0C	Output torque	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-12" on page 1288
LC-13	0x9C0D	Flux amplitude	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-13" on page 1288
LC-14	0x9C0E	Flux angle	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-14" on page 1288
LC-15	0x9C0F	Synchronization frequency	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-15" on page 1289
LC-16	0x9C10	Synchronous rotation angle	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-16" on page 1289
LC-17	0x9C11	Motor object output power	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-17" on page 1289
LC-18	0x9C12	Output voltage amplitude	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-18" on page 1289
LC-19	0x9C13	Output current amplitude	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-19" on page 1289
LC-20	0x9C14	Actual excitation current of motor	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-20" on page 1290
LC-21	0x9C15	Actual torque current of motor	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-21" on page 1290
LC-22	0x9C16	Output power	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-22" on page 1290
LC-23	0x9C17	PWMU	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-23" on page 1290
LC-24	0x9C18	PWMV	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-24" on page 1290

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
LC-25	0x9C19	PWMW	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-25" on page 1291
LC-26	0x9C1A	IU	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-26" on page 1291
LC-27	0x9C1B	IV	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-27" on page 1291
LC-28	0x9C1C	IW	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-28" on page 1291
LC-31	0x9C1F	Drive bus voltage	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-31" on page 1291
LC-32	0x9C20	Accumulative drive overload	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-32" on page 1291
LC-33	0x9C21	Accumulative motor overload	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-33" on page 1292
LC-34	0x9C22	Output voltage phase	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-34" on page 1292
LC-35	0x9C23	Output current phase	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-35" on page 1292
LC-36	0x9C24	General PID output	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-36" on page 1292
LC-37	0x9C25	General PID error	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-37" on page 1292
LC-38	0x9C26	General PID reference	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-38" on page 1293
LC-39	0x9C27	General PID feedback	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-39" on page 1293
LC-40	0x9C28	General PID proportional output	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-40" on page 1293
LC-41	0x9C29	General PID integral output	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-41" on page 1293
LC-42	0x9C2A	General PID derivative output	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-42" on page 1293
LC-92	0x9C5C	Variable connector viewing output 1	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-92" on page 1294
LC-93	0x9C5D	Variable connector viewing output 2	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-93" on page 1294
LC-94	0x9C5E	Variable connector viewing output 3	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-94" on page 1294
LC-95	0x9C5F	Variable connector viewing output 4	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-00" on page 1295
LC-96	0x9C60	Variable connector viewing output 5	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-96" on page 1294

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
LC-97	0x9C61	Variable connector viewing output 6	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-97" on page 1295
LC-98	0x9C62	Variable connector viewing output 7	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-98" on page 1295
LC-99	0x9C63	Variable connector viewing output 8	0.0% to 6553.5%	0.0	%	Unchangeable	"LC-99" on page 1295
LD-00	0x9D00	Output of floating-point selector module A	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-00" on page 1295
LD-01	0x9D01	Output of floating-point selector module B	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-01" on page 1295
LD-02	0x9D02	Output of floating-point selector module C	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-02" on page 1296
LD-03	0x9D03	Output of floating-point selector module D	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-03" on page 1296
LD-04	0x9D04	Output of floating-point selector module E	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-04" on page 1296
LD-05	0x9D05	Output of floating-point selector module F	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-05" on page 1296
LD-06	0x9D06	Output of floating-point selector module G	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-06" on page 1296
LD-07	0x9D07	Output of floating-point selector module H	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-07" on page 1297
LD-08	0x9D08	Output of floating-point absolute value module A	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-08" on page 1297
LD-09	0x9D09	Output of floating-point absolute value module B	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-09" on page 1297
LD-10	0x9D0A	Output of floating-point absolute value module C	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-10" on page 1297
LD-11	0x9D0B	Output of floating-point absolute value module D	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-11" on page 1297
LD-12	0x9D0C	Output of floating-point absolute value module E	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-12" on page 1298

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
LD-13	0x9D0D	Output of floating-point ADD/ SUBTRACT module A	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-13" on page 1298
LD-14	0x9D0E	Output of floating-point ADD/ SUBTRACT module B	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-14" on page 1298
LD-15	0x9D0F	Output of floating-point ADD/ SUBTRACT module C	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-15" on page 1298
LD-16	0x9D10	Output of floating-point ADD/ SUBTRACT module D	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-16" on page 1298
LD-17	0x9D11	Output of floating-point ADD/ SUBTRACT module E	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-17" on page 1298
LD-18	0x9D12	Output of floating-point MULTIPLY/ DIVIDE module A	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-18" on page 1299
LD-19	0x9D13	Output of floating-point MULTIPLY/ DIVIDE module B	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-19" on page 1299
LD-20	0x9D14	Output of floating-point MULTIPLY/ DIVIDE module C	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-20" on page 1299
LD-21	0x9D15	Output of floating-point MULTIPLY/ DIVIDE module D	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-21" on page 1299
LD-22	0x9D16	Output of floating-point MULTIPLY/ DIVIDE module E	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-22" on page 1299
LD-23	0x9D17	Output of floating-point filter module A	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-23" on page 1300
LD-24	0x9D18	Output of floating-point filter module B	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-24" on page 1300
LD-25	0x9D19	Output of floating-point filter module C	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-25" on page 1300
LD-26	0x9D1A	Output of floating-point filter module D	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-26" on page 1300

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
LD-27	0x9D1B	Output of floating-point limiting module A	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-27" on page 1300
LD-28	0x9D1C	Output of floating-point limiting module B	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-28" on page 1301
LD-29	0x9D1D	Output of floating-point limiting module C	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-29" on page 1301
LD-30	0x9D1E	Output of floating-point limiting module D	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-30" on page 1301
LD-31	0x9D1F	Output of word-to-floating point module A	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-31" on page 1301
LD-32	0x9D20	Output of word-to-floating point module B	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-32" on page 1301
LD-33	0x9D21	Output of word-to-floating point module C	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-33" on page 1302
LD-34	0x9D22	Output of word-to-floating point module D	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-34" on page 1302
LD-35	0x9D23	Output of DWord-to-floating point module A	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-35" on page 1302
LD-36	0x9D24	Output of DWord-to-floating point module B	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-36" on page 1302
LD-37	0x9D25	Output of DWord-to-floating point module C	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-37" on page 1302
LD-38	0x9D26	Output of DWord-to-floating point module D	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-38" on page 1303
LD-39	0x9D27	Force value of motor-driven potentiometer	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-39" on page 1303
LD-40	0x9D28	Reset value of motor-driven potentiometer	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-40" on page 1303
LD-41	0x9D29	Maximum value of motor-driven potentiometer	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-41" on page 1303

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
LD-42	0x9D2A	Minimum value of motor-driven potentiometer	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-42" on page 1303
LD-43	0x9D2B	Initial value of motor-driven potentiometer	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-43" on page 1303
LD-44	0x9D2C	Process operation output value of motor-driven potentiometer	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-44" on page 1304
LD-45	0x9D2D	Final output value of motor-driven potentiometer	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-45" on page 1304
LD-46	0x9D2E	Output of multi-point curve module A	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-46" on page 1304
LD-47	0x9D2F	Output of multi-point curve module B	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-47" on page 1304
LD-48	0x9D30	Multi-reference selection output	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-48" on page 1304
LD-49	0x9D31	Multi-reference 1 output	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-49" on page 1305
LD-50	0x9D32	Multi-reference 2 output	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-50" on page 1305
LD-51	0x9D33	Multi-reference 3 output	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-51" on page 1305
LD-52	0x9D34	Multi-reference 4 output	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-52" on page 1305
LD-53	0x9D35	Multi-reference 5 output	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-53" on page 1305
LD-54	0x9D36	Multi-reference 6 output	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-54" on page 1306
LD-55	0x9D37	Multi-reference 7 output	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-55" on page 1306
LD-56	0x9D38	Multi-reference 8 output	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-56" on page 1306
LD-57	0x9D39	Multi-reference 9 output	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-57" on page 1306
LD-58	0x9D3A	Multi-reference 10 output	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-58" on page 1306
LD-59	0x9D3B	Multi-reference 11 output	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-59" on page 1307

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
LD-60	0x9D3C	Multi-reference 12 output	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-60" on page 1307
LD-61	0x9D3D	Multi-reference 13 output	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-61" on page 1307
LD-62	0x9D3E	Multi-reference 14 output	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-62" on page 1307
LD-63	0x9D3F	Multi-reference 15 output	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-63" on page 1307
LD-64	0x9D40	Multi-reference 16 output	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-64" on page 1308
LD-65	0x9D41	Per-unit constant value 1	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-65" on page 1308
LD-66	0x9D42	Per-unit constant value 2	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-66" on page 1308
LD-67	0x9D43	Per-unit constant value 3	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-67" on page 1308
LD-68	0x9D44	Per-unit constant value 4	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-68" on page 1308
LD-69	0x9D45	Per-unit constant value 5	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-69" on page 1308
LD-70	0x9D46	Per-unit constant value 6	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-70" on page 1309
LD-71	0x9D47	Per-unit constant value 7	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-71" on page 1309
LD-72	0x9D48	Per-unit constant value 8	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-72" on page 1309
LD-73	0x9D49	Per-unit constant value 9	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-73" on page 1309
LD-74	0x9D4A	Per-unit constant value 10	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-74" on page 1309
LD-75	0x9D4B	Per-unit constant value 11	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-75" on page 1310
LD-76	0x9D4C	Per-unit constant value 12	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-76" on page 1310
LD-77	0x9D4D	Per-unit constant value 13	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-77" on page 1310
LD-78	0x9D4E	Per-unit constant value 14	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-78" on page 1310
LD-79	0x9D4F	Per-unit constant value 15	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-79" on page 1310
LD-80	0x9D50	Per-unit constant value 16	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-80" on page 1311

Para.	Comm. Addr.	Name	Reference	De fault	Unit	Change	Page
LD-81	0x9D51	Per-unit constant value 17	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-81" on page 1311
LD-82	0x9D52	Per-unit constant value 18	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-82" on page 1311
LD-83	0x9D53	Per-unit constant value 19	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-83" on page 1311
LD-84	0x9D54	Per-unit constant value 20	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-84" on page 1311
LD-85	0x9D55	Per-unit constant value 21	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-85" on page 1312
LD-86	0x9D56	Updown offset	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-86" on page 1312
LD-87	0x9D57	Percentage of current length relative to target length	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-87" on page 1312
LD-88	0x9D58	Percentage of current count value relative to target count value	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-88" on page 1312
LD-89	0x9D59	Percentage of AO1 value written through communication	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-89" on page 1312
LD-90	0x9D5A	Percentage of AO2 value written through communication	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-90" on page 1313
LD-91	0x9D5B	Percentage of HDO value written through communication	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-91" on page 1313
LD-92	0x9D5C	Current value based on the maximum 1000 A per-unit value	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-92" on page 1313
LD-93	0x9D5D	Voltage value based on the maximum 1000 V per-unit value	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-93" on page 1313
LD-94	0x9D5E	AO output torque absolute value output	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-94" on page 1313
LD-95	0x9D5F	AO output torque (–200.0% to +200.0%)	0.0% to 6553.5%	0.0	%	Unchangeable	"LD-95" on page 1313

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