azbil

No. CP-SP-1345E

Network Instrumentation Modules

NX-DY1/2
Digital Output Module
User's Manual
for Functions

Thank you for purchasing this product. This manual contains information for ensuring the correct use of this product. This manual should be read by those who design and maintain equipment that uses this product. It also provides necessary information for installation, maintenance, and troubleshooting. Be sure to keep this manual nearby for handy reference.

Azbil Corporation

NOTICE

Be sure that the user receives this manual before the product is used.

Copying or duplicating this user's manual in part or in whole is forbidden. The information and specifications in this manual are subject to change without notice.

Considerable effort has been made to ensure that this manual is free from inaccuracies and omissions. If you should find an error or omission, please contact the azbil Group.

In no event is Azbil Corporation liable to anyone for any indirect, special or consequential damages as a result of using this product.

Conventions Used in This Manual

■ To prevent injury to the operator and others, and to prevent property damage, the following types of safety precautions are indicated:

⚠ **WARNING**	Warnings are indicated when mishandling this product might result in death or serious injury.
⚠ **CAUTION**	Cautions are indicated when mishandling this product might result in minor injury to the user, or only physical damage to the product.

■ In describing the product, this manual uses the icons and conventions listed below.

⚠	Use caution when handling the product.
⃠	The indicated action is prohibited.
❗	Be sure to follow the indicated instructions.
Handling precautions	Handling Precautions indicate items that the user should pay attention to when handling this module.
Note	Notes indicate information that might benefit the user.
☞	This indicates the item or page that the user is requested to refer to.
(1) (2) (3)	Numbers within parentheses indicate steps in a sequence or parts of an explanation.
[XXX] button	Indicates a selectable button on a personal computer screen.
[XX], [XXX]	Indicates messages and menus displayed on the personal computer.
[XX] → [XXX]	Indicates menu selection on a personal computer.
[XXX] key	Indicates keys on the keyboard.
[XX]+[XXX] key	Indicates the operation of pressing the [XXX] key on the keyboard while the [XX] key is pressed.
>>	Indicates the result of an operation, details displayed on the personal computer or other devices, or the state of the device after operation.

■ Abbreviations

In this manual, some product names are abbreviated as shown below.

- CA: Communication adapter
- CB: Communication box
- DX: Digital/pulse input module
- DY: Digital output module
- Loader: SLP-NX Smart Loader Package
- SV: Supervisor module
- TA: Terminal adapter
- TC: Controller module

Safety Precautions

Safety precautions are intended to ensure the safe and correct use of this product, to prevent injury to the operator and others, and to prevent damage to property. Be sure to observe these safety precautions. Please make sure you understand the safety guidelines before reading the rest of this manual.

If this product is used in a manner not specified by the manufacturer, the protection provided by this product must be impaired.

⚠WARNING

!	Before removing, mounting, or wiring the NX-DY1/2, be sure to turn off the power to the module and all connected devices. Failure to do so might cause electric shock.
!	Be sure to check that the NX-DY1/2 has been correctly wired before turning on the power. Incorrect wiring of this device can damage it or lead to hazardous conditions.

⚠CAUTION

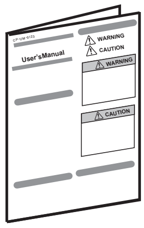
!	Use a tool such as a screwdriver to lock or unlock the DIN rail locking tab.
⊘	Do not disassemble the NX-DY1/2. It may cause device failure.
⊘	Do not block ventilation holes. It may cause fire or faulty operation.
!	Do not allow wire clippings, metal shavings, water, etc. to enter the case of the NX-DY1/2. It may cause fire or faulty operation.
⊘	Do not touch electrically charged parts such as the power supply terminals. It may result in an electric shock.
!	Be sure to disconnect the power before wiring the NX-DY1/2. It may cause device failure.
!	Wire this device in compliance with the established standards, using the specified power source and recognized installation methods. It may cause electric shock, fire, or malfunction.
!	Make sure that there are no loose connections. It may cause overheating or device failure.
⊘	Do not connect modules whose total power consumption exceeds 70 W. It may cause fire or faulty operation.
⊘	Do not supply power to the linked modules from multiple power sources. It may cause fire or faulty operation.
⊘	Do not use the unused terminals on this device as relay terminals. It may cause electric shock, fire, or malfunction.

⚠CAUTION

	Do not short out the output section. It may cause device failure.
	Firmly tighten the terminal screws to the torque listed in the specifications. Insufficient tightening might cause fire.
	Use a surge protector if there is a risk of a power surge caused by lightning. It may cause fire or faulty operation.
	Use the NX-DY1/2 within the operating condition recommended in the specification (temperature, humidity, vibration, shock, installation direction, atmosphere, etc.). It may cause fire or faulty operation.
	The NX-DY1/2 does not operate for approximately 10 seconds after the power has been turned ON. Be careful if the output from this device is used as an interlock signal.
	When discarding the NX-DY1/2, dispose of it as an industrial waste, following local regulations.

The Role of This Manual

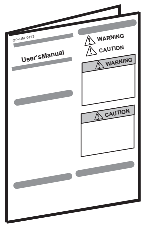
A total of 12 different manuals are available for the Network Instrumentation Module. Read the manual according to your specific requirements.
If a manual you require is not available, contact the azbil Group or its dealer.
Additionally, you can download necessary manuals from http://www.compoclub.com.



Network Instrumentation Module NX-D15/25/35 Controller Module User's Manual for Installation

Manual No. CP-UM-5561JE

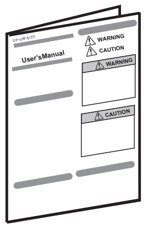
This manual is supplied with the NX-D15/25/35.
Personnel in charge of design and/or manufacture of a system using the NX-D15/25/35 should thoroughly read this manual. It describes safety precautions, installation, wiring, and primary specifications when using the NX-D15/25/35.



Network Instrumentation Module NX-CB1 Communication Box User’s Manual for Installation

Manual No. CP-UM-5558JE

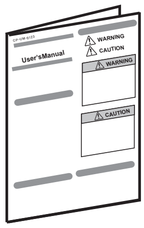
This manual is supplied with the NX-CB1.
Personnel in charge of design and/or manufacture of a system using the NX-CB1 should read this manual thoroughly. It describes safety precautions, installation, wiring, and primary specifications when using the NX-CB1.



Network Instrumentation Module NX-DX1/DX2 Digital Input/Pulse Input Module User’s Manual for Installation

Manual No. CP-UM-5560JE

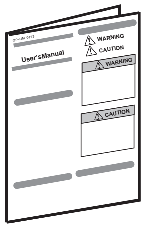
This manual is supplied with the NX-DX1/DX2.
Personnel in charge of design and/or manufacture of a system using the NX-DX1/DX2 should read this manual thoroughly. It describes safety precautions, installation, wiring, and primary specifications when using the NX-DX1/DX2.



Network Instrumentation Module NX-S11/12/21 Supervisor Module User’s Manual for Installation

Manual No. CP-UM-5557JE

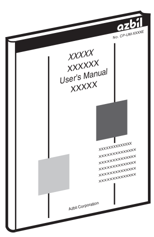
This manual is supplied with the NX-S11/12/21.
Personnel in charge of design and/or manufacture of a system using the NX-S11/12/21 should thoroughly read this manual. It describes safety precautions, installation, wiring, and primary specifications when using the NX-S11/12/21.



Network Instrument Module NX-DY1/2 Digital Output Module User’s Manual for Installation

Manual No. CP-UM-5564JE

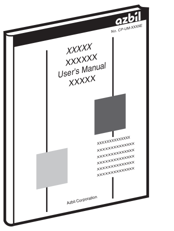
This manual is supplied with the NX-DY1/2.
Personnel in charge of design and/or manufacture of a system using the NX-DY1/2 must thoroughly read this manual. It describes safety precautions, installation, wiring, and primary specifications when using the NX-DY1/2.



Network Instrumentation Module NX-D15/25/35 Controller Module User's Manual for Function

Manual No. CP-SP-1308E

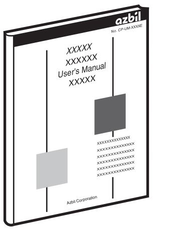
Personnel who are using the NX-D15/25/35 for the first time or who are in charge of hardware design and/or maintenance of a control panel containing the NX-D15/25/35 should read this manual thoroughly.
This manual describes the hardware, surveys the NX-D15/25/35 and other products used with it, explains installation, wiring, and troubleshooting, and gives hardware specifications.



Network Instrumentation Module NX-DX1/DX2 Digital Input/Pulse Input Module User's Manual for Function

Manual No. CP-SP-1323E

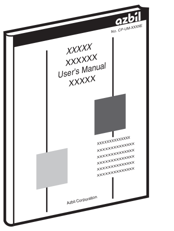
Personnel who are using the NX-DX1/DX2 for the first time or who are in charge of hardware design and/or maintenance of a control panel containing the NX-DX1/DX2 should read this manual thoroughly.
This manual describes the hardware, surveys the NX-DX1/DX2 and other products used with it, explains installation, wiring, and troubleshooting, and gives hardware specifications.



Network Instrumentation Module NX-S11/12/21 Supervisor Module User's Manual for Function

Manual No. CP-SP-1324E

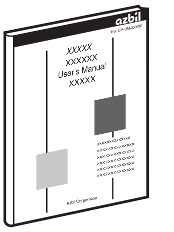
Personnel who are using the NX-S11/12/21 for the first time or who are in charge of hardware design and/or maintenance of a control panel containing the NX-S11/12/21 should read this manual thoroughly.
This manual describes the hardware, surveys the NX-S11/12/21 and other products used with it, explains installation, wiring, and troubleshooting, and gives hardware specifications.



Network Instrument Module NX-DY1/2 Digital Output Module User's Manual for Function

Manual No. CP-SP-1345E

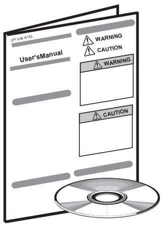
This manual.
Personnel who are using the NX-DY1/2 for the first time or who are in charge of hardware design and/or maintenance of a control panel containing the NX-DY1/2 should read this manual thoroughly.
This manual describes the hardware, surveys the NX-DY1/2 and other products used with it, explains installation, wiring, and troubleshooting, and gives hardware specifications.



Network Instrumentation Module User's Manual Network Design Version

Manual No. CP-SP-1313E

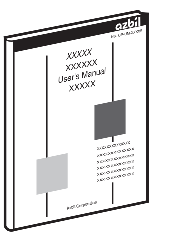
Personnel who are in charge of design of a network using the Network Instrumentation Module NX should read this manual thoroughly.
It describes how to design a network and gives examples.



Network Instrumentation Module Smart Loader Package SLP-NX Installation Guide

Manual No. CP-UM-5559JE

This manual is supplied with the Smart Loader Package SLP-NX.
It describes installation of the software on a personal computer.



Network Instrumentation Module SLP-NX Smart Loader Package User's Manual

Manual No. CP-UM-5636E

This manual is included in the Smart Loader Package SLP-NX as a PDF file.
Personnel in charge of design or configuration of a system using Network Instrumentation Modules NX should read this manual thoroughly.
The manual describes the software that is used to configure Network Instrumentation Modules NX with a computer.
The manual describes installation of the software into a personal computer, operation of the personal computer, various functions, and setup procedures.

Organization of This User's Manual

This User's Manual is organized as follows:

Chapter 1. Overview

Describes the overview, features, model selection guide, and part names and functions of the NX-DY1/2.

Chapter 2. Installation

Describes the operating environment and installation procedures of the NX-DY1/2.

Chapter 3. Wiring

Describes the wiring procedures and precautions, and connection examples of the NX-DY1/2.

Chapter 4. Setting of the Output Function

Describes the setting of the output function of the NX-DY1/2.

Chapter 5. Setting of the Calculation Function

Describes the setting of the calculation function of the NX-DY1/2.

Chapter 6. Other Function Settings

Describes the setup for the functions to conveniently using the NX-DY1/2.

Chapter 7. Operation

Describes the methods to operate the function of the NX-DY1/2.

Chapter 8. CPL Communication Function

Describes the method of communication with the host units such as personal computer or PLC with the CPL communication using the RS-485, which is standard with Azbil.

Chapter 9. MODBUS Communication Function

Describes the method of communication with the host units such as personal computer or PLC with the MODBUS communication using the RS-485.

Chapter 10. CPL/TCP Communication Function

Describes the method of communication with the host units such as personal computer or PLC with the CPL/TCP communication using the Ethernet.

Chapter 11. MODBUS/TCP Communication Function

Describes the method of communication with the host units such as personal computer or PLC with the MODBUS/TCP communication using the Ethernet.

Chapter 12. List of Communication Data

Shows the list of communication data held in the memory of the NX-DY1/2.

Chapter 13. List of Parameter Settings

Shows the list of parameter setting to set the NX-DY1/2.

Chapter 14. Troubleshooting

Describes the cause and measures at the time of trouble with the NX-DY1/2.

Chapter 15. Maintenance, Inspection, and Disposal

Describes the method to maintain, inspect and dispose the NX-DY1/2.

Chapter 16. Specifications

Describes the general specifications, performance specifications, and external dimensions of the NX-DY1/2.

Appendix

Describes the functional block diagrams, standard bit codes, standard numerical bit codes, ROM version history, and explanations of characters and terms used in the manual.

Contents

Chapter 4. OUTPUT FUNCTION SETTINGS

Chapter 5. CALCULATION SETTINGS

Chapter 6. OTHER FUNCTION SETTINGS

Chapter 7. OPERATION

Chapter 8. CPL COMMUNICATIONS FUNCTION

Chapter 9. MODBUS COMMUNICATIONS FUNCTION

Chapter 10. CPL/TCP COMMUNICATIONS FUNCTION

Chapter 11. MODBUS/TCP COMMUNICATIONS FUNCTION

Appendix

Chapter 1. OVERVIEW

1 - 1 Overview and Features

■ Overview

The Instrumentation Network Module uses Ethernet as standard to achieve distributed instrumentation and high-speed communication, and reduce the required wiring and engineering. This gives customers the value of improved environments, quality and productivity.

The Digital Output Module NX-DY1/2 is a module that can have 16 points of digital output.

■ Features

● High-speed communication capabilities

- Standard Ethernet hardware
  Each module is equipped for Ethernet communication.
  When Network Instrumentation Modules are not only linked but also distributed, greatly reduced wiring is possible by using a daisy chain configuration.
  Each module also has an RS-485 communications function.
  Network Instrumentation Modules provide high-speed communication with host systems, programmable logic controllers (PLCs), display devices, etc.
  A network equipped with Network Instrumentation Modules can be upgraded to use Azbil Corporation's monitoring/control system.

- Full-scale distributed configuration
  With Ethernet connections, there is no difference in function between distributed and contiguous layouts.

- Redundant communications
  Either ring or non-ring connection is possible on an Ethernet network.

● Hardware

- Small but mighty
  Compact body (30 × 100 × 104 mm)

- Easy assembly
  A module consists of a base, a body, and a terminal block. Modules can be easily installed and removed without tools.

- Contiguous modules or distributed layout
  Input/output signals can be shared between modules, whether they are physically contiguous or in a distributed layout.

- Stand-alone modules
  Each module contains its own power supply, control, and communication functions. So module use is efficient even if not many channels are used.
  Moreover, this module design saves space.

● Digital output function

Functions such as the data transfer function allow operation input/output between modules.

● Engineering Tool

The SLP-NX Smart Loader Package (sold separately) is available.

The SLP-NX allows a PC to access multiple modules simultaneously via Ethernet. Consequently, control, setup, and monitoring can be executed for multiple modules at the same time, reducing engineering time.

1 - 2 Model Selection Table

■ Digital output module

Basic model No.	Type	Ring connection	Wiring method	Channels	Option	Additional	Description
NX-							Network Instrumentation Module
	DY1						Transistor output (sink type)
	DY2						Transistor output (source type)
		N					Non-ring communications
		R					Ring communications
			T				Screw terminal block
				16			16 channels
					0		None
						0	None
						D	With inspection report
						T	Tropicalization treatment
						K	Anti-sulfuration treatment
						B	Tropicalization treatment + inspection report
						L	Anti-sulfuration treatment + inspection report

■ Communication box

Basic model No.	Type	Ring connection 1	Ring connection 2	Ports	Option	Additional	Description
NX-							Network Instrumentation Module
	CB1						4-port switching hub
		N					Chain non-ring connection (using side connector)
		R					Chain ring connection (using side connector)
			N				Non-ring connection between chains (using front port)
			R				Ring connection between chains (using front port)
				04			4 ports
					0		RJ-45
						0	None
						D	With inspection report
						T	Tropicalization treatment
						K	Anti-sulfuration treatment
						B	Tropicalization treatment + inspection report
						L	Anti-sulfuration treatment + inspection report

■ Communication adapter, terminal adapter

Basic model No.	Type	Option 1	Option 2	Option 3	Option 4	Additional	Description
NX-							Network Instrumentation Module
*1	CL1						Communication adapter for left side
*1	CR1						Communication adapter for right side
*1	TL1						Terminal adapter for left side
*1	TR1						Terminal adapter for right side
		0					None
			0				None
				00			None
					0		None
						0	None
						D	With inspection report
						T	Tropicalization treatment
						K	Anti-sulfuration treatment
						B	Tropicalization treatment + inspection report
						L	Anti-sulfuration treatment + inspection report

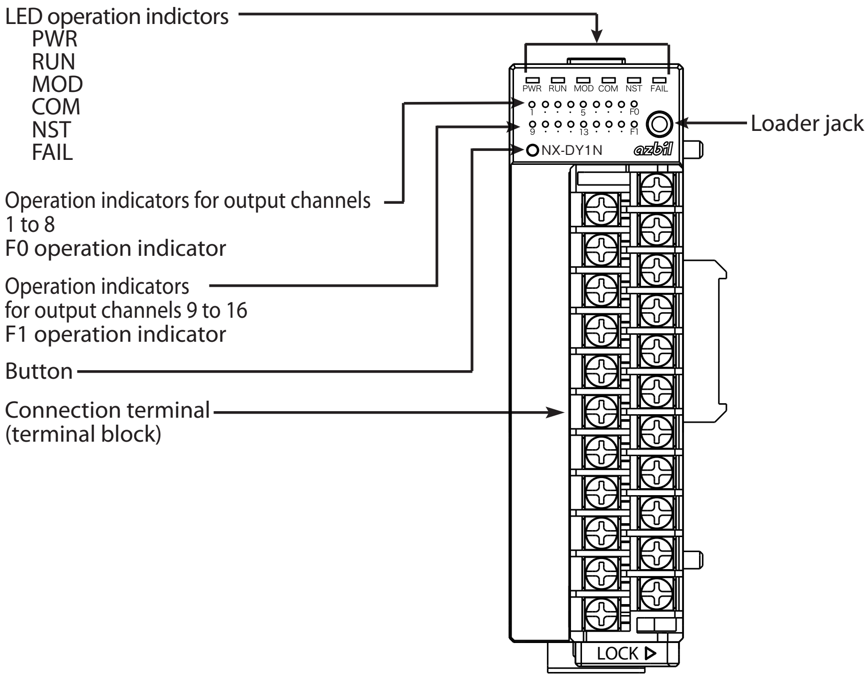
*1. Left and right are defined as seen when viewing the front of the module after mounting.

1 - 3 Names and Functions of Parts

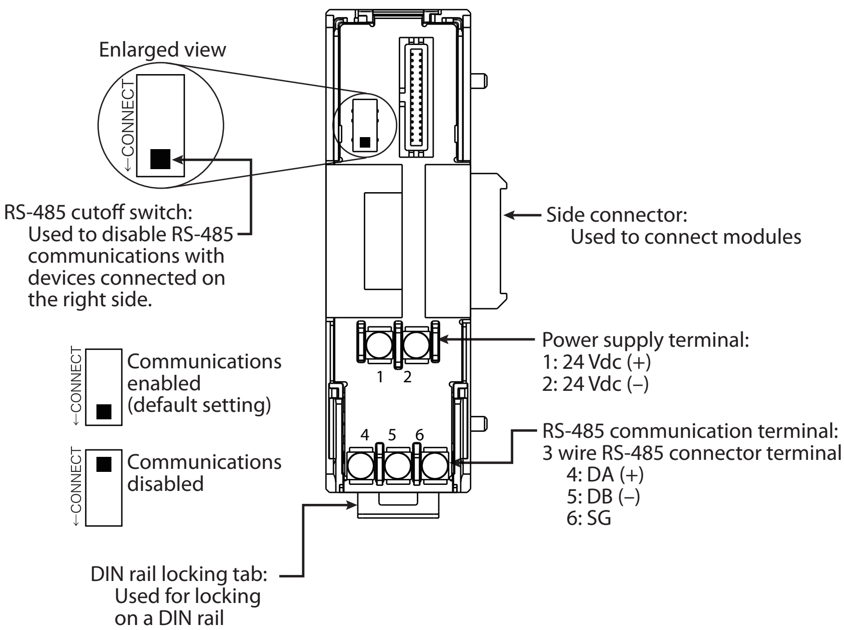
■ Digital output module

● Body

Indicators on the module vary depending on the model No. (functions).

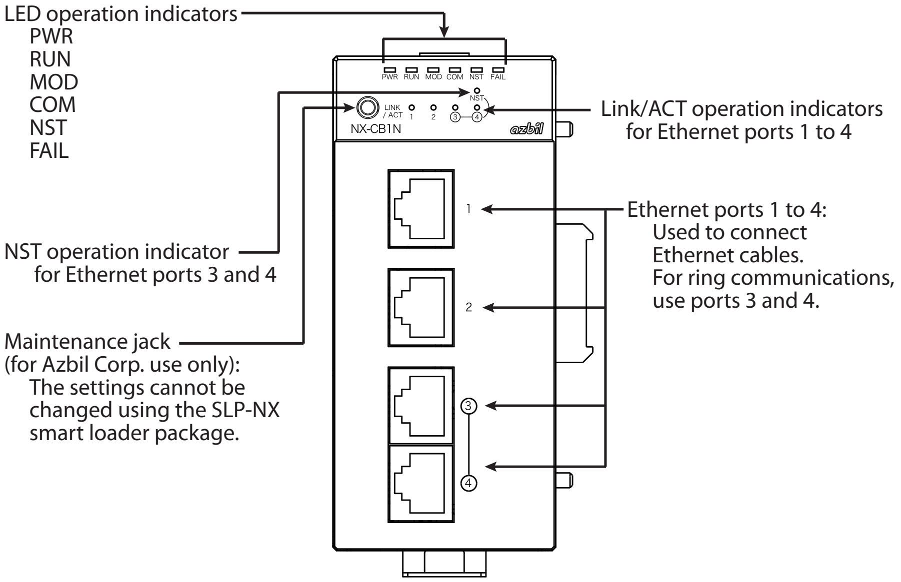


● Base

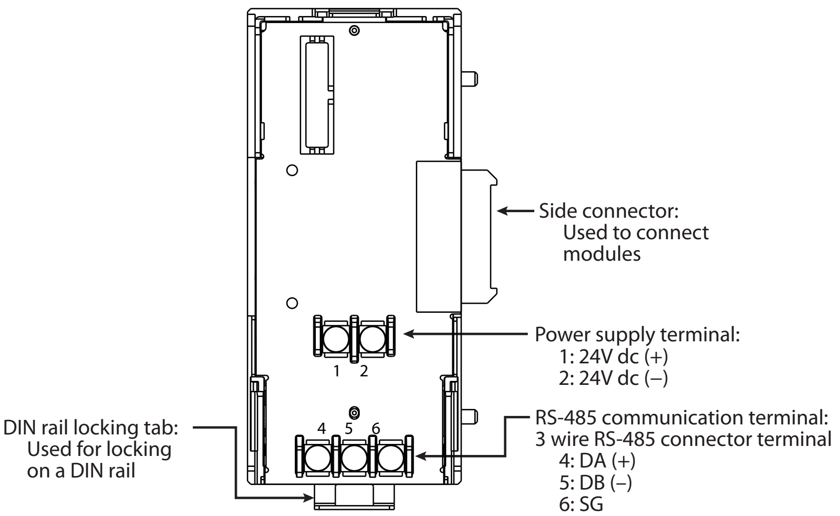


■ Communication box

● Body



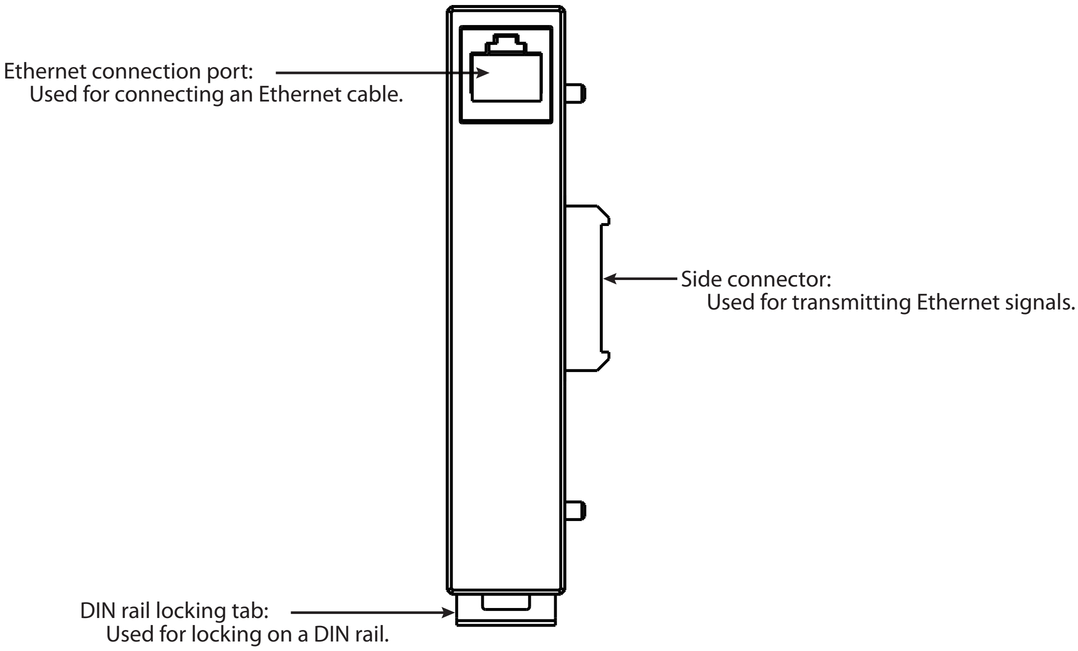
● Base



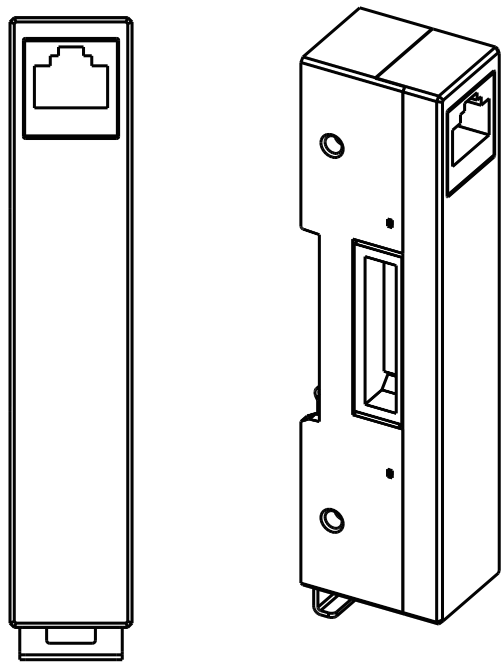
* Connect to the module on the right side.

■ Communication adapter

● For left side

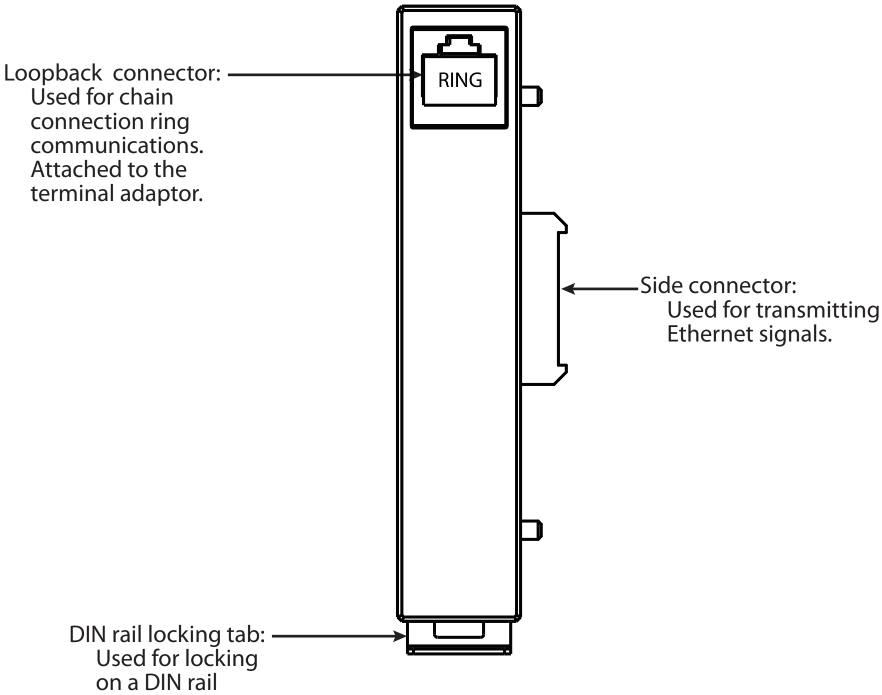


● For right side

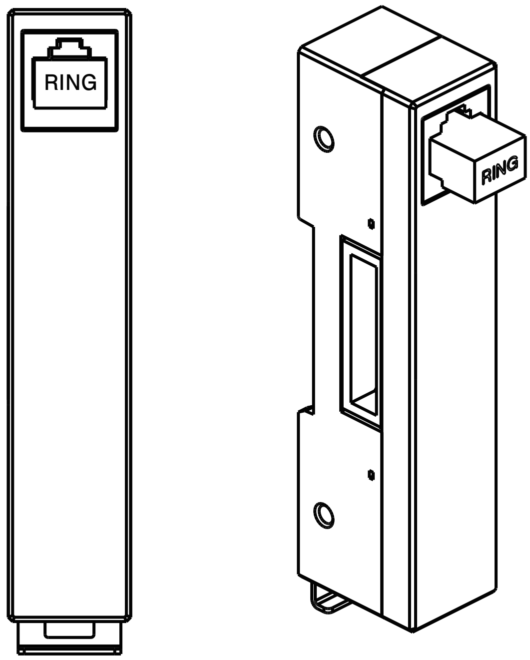


■ Terminal adapter

● For left side



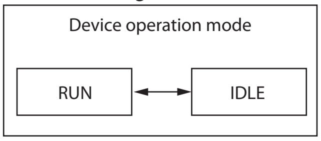
● For right side



1 - 4 Operation Modes

■ Operation modes

The following shows the state transitions in operation mode.



RUN : Module operation status (all functions)
IDLE: Module output, control action, etc. are stopped
HARD: Hard failure of module. Module control has stopped.

■ Output of each device operation mode

The output of each device operation mode is shown below.

	RUN	IDLE	HARD
DO (ON/OFF)	Operation Status	IDLE or SV comm. err. op. (default=OFF)	OFF
DO (time proportional)		IDLE or SV comm. err. op. (default=0.0 %)	0.0 %
DO (one-shot pulse)		IDLE or SV comm. err. op. (default=OFF)	OFF
EV output (ON/OFF)		IDLE or SV comm. err. op. (default=OFF)	OFF

Note

- If the supervisor module is in IDLE mode, digital output modules under its control are also in IDLE mode in conjunction with the SV module.
- The mode changes to IDLE in the following cases: hard failure, AL88 (base EEPROM error), AL53 (base-body communication settings mismatch), AL54(base-body model No. mismatch).
- The mode is IDLE while parameters from the loader are being written.
  * However, the module is rebooted in the following cases.
    • If a module is added or removed from the supervisor module's control.
- ☞ Chapter 16, Communication Availability (on page 16-3).
- Desired output types can be set in the "IDLE/SV com error op" bank.
  ☞ Section 6-5, "Action for IDLE / SV Module Reception Timeout" (on page 6-9).
- Output may differ from that described depending on the details of the hard failure. For types of hard failure,
  ☞ Chapter 14, "TROUBLESHOOTING" (page 14-1)

Chapter 2. INSTALLATION

⚠WARNING

!	Before removing, mounting, or wiring the NX-DY1/2, be sure to turn off the power to the module and all connected devices. Failure to do so might cause electric shock.

⚠CAUTION

!	Use the module within the operating ranges recommended in the specifications (temperature, humidity, vibration, shock, installation direction, atmosphere, etc.). Failure to do so might cause fire or device failure.
⃠	Do not block ventilation holes. Doing so might cause fire or faulty operation.
!	Do not allow wire clippings, metal shavings, water, etc. to enter the case. Failure to do so might cause fire or faulty operation.

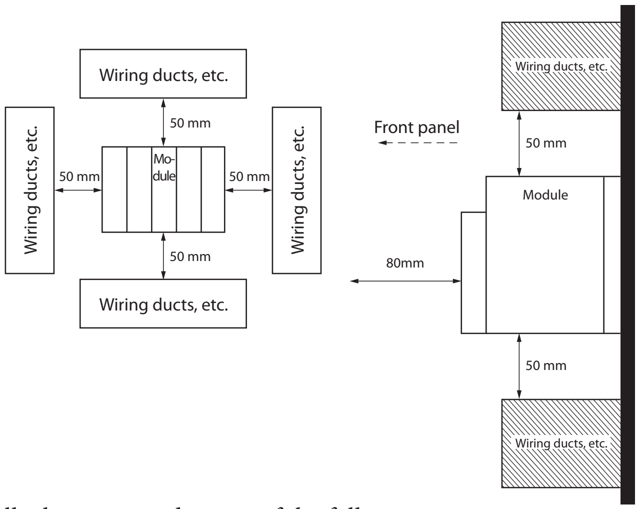
■ Installation location

During installation, leave clearance of at least 50 mm above and below, 50 mm on the right and left, and 80 mm from the front for air intake, removal, wiring, and maintenance.

When mounted, the module should be at least 100 mm away from another module or other device.

When using the module with a device other than a Network Instrumentation Module, check the clearance specification for the device, and if the specification differs, install according to the larger of the specified clearances.

Do not mount the module above heat-generating equipment like a power generator.



Do not install where exposed to any of the following:

- High or low temperature or high or low humidity outside the specified ranges
- Sulfide gas or other corrosive gases
- Dust or oily smoke
- Direct sunlight, wind or rain
- Mechanical vibration or shock outside the specified range
- High voltage lines, welding machines or other sources of electrical noise
- A high voltage ignition device like a boiler within 15 m
- Strong magnetic fields
- Flammable liquid or gas
- Outdoors
- I/O common mode voltage to the ground greater than 30 Vrms, 42.4 V peak, 60 Vdc

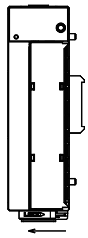
■ Terminal block installation and removal

[!] Handling precautions

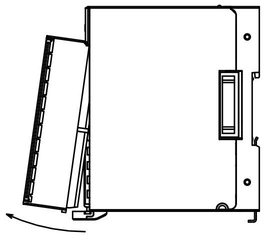
- Do not remove the terminal block except during wiring before the module is installed, or during maintenance.

● Removal method

(1) Slide the lock lever of the terminal block to the left to unlock the terminal block.

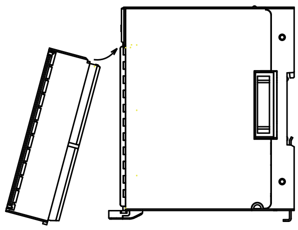


(2) Remove the terminal block by pulling it out towards you from the bottom.

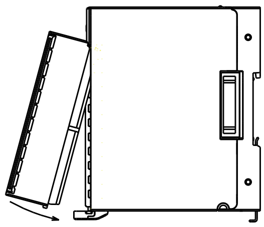


● Mounting method

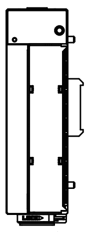
(1) Tilt the terminal block and insert the upper side of the terminal block into the groove in the case.



(2) Push in the bottom of the terminal block to install.



(3) Lock the terminal block by sliding its lock lever to the right.



■ Module linkage

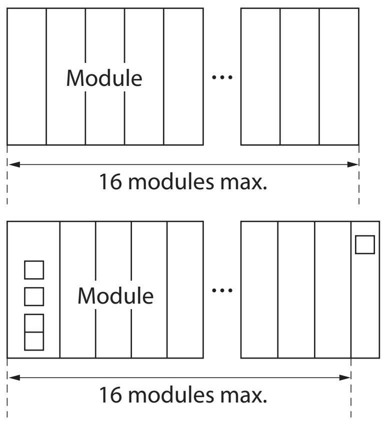
This module can be connected to other modules with the left and right connectors on the base.
Wiring can be kept to a minimum because connected modules share power and communications. The connection with the module on the right can be disabled using the RS-485 cutoff switch on the base.

Up to 16 modules can be linked.

In a distributed layout, if the horizontal length is too long, or if more than 16 modules are connected, divide the modules into two or more groups.

Handling precautions

- In counting the number of linked modules, the following are not included.
  - Communication adapter
  - Terminal adapter



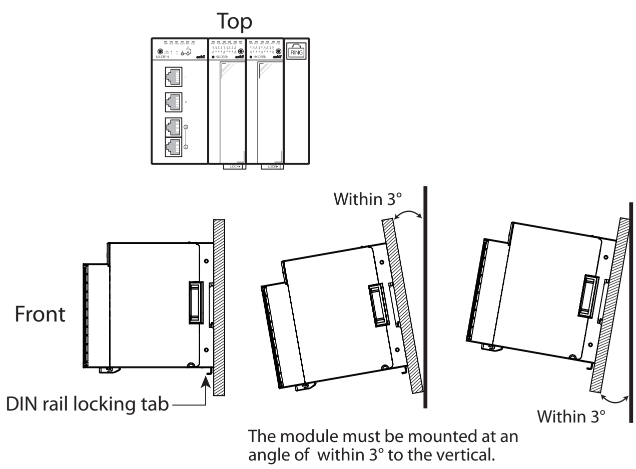
■ Mounting method

Modules must be installed on a DIN rail.

After attaching the DIN rail, pull the locking tab out sufficiently and hook the base onto the DIN rail. Next, push the locking tab upwards until it clicks into place.

Handling precautions

- Link the NX-DY1/2 to the other modules before mounting it on the DIN rail.
- Mount the module on a vertical surface with the DIN locking tab facing downward.



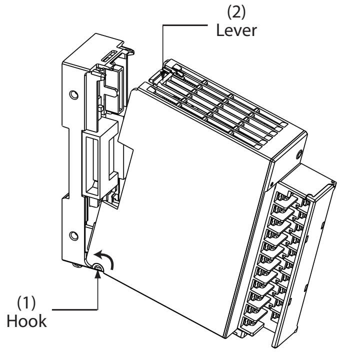
■ Installing the body on the base

Handling precautions

- The included base and body must be used as a pair.
- Fit the hook on the main body into the base first. Failure to do so can damage the hook.

(1) Fit the hook on the main body into the base.

(2) Push the body onto the base until it clicks into place.



To remove the main body from the base, pull it toward you while pressing the lever located near the top.

Chapter 3. WIRING

3 - 1 Wiring Precautions

⚠ WARNING
Before removing, mounting, or wiring the NX-DY1/2, be sure to turn off the power to the module and all connected devices. Failure to do so might cause electric shock.
Be sure to check that the NX-DY1/2 has been correctly wired before turning on the power. Incorrect wiring of the module can damage it or lead to hazardous conditions.

⚠ CAUTION
Do not disassemble the NX-DY1/2. Doing so might cause device failure.
Do not allow wire clippings, metal shavings, water, etc. to enter the case of this device. Failure to do so might cause fire or faulty operation.
Do not touch electrically charged parts such as the power supply terminals. Doing so might result in an electric shock.
Before wiring the NX-DY1/2, be sure to disconnect the power. Failure to do so might cause device failure.
Wire the NX-DY1/2 in compliance with established standards, using the specified power source and recognized installation methods. Failure to do so might cause electric shock, fire or malfunction.
Make sure that there are no loose connections. Loose connections might cause overheating or device failure.
Do not use unused terminals on the NX-DY1/2 as relay terminals. Doing so might cause electric shock, fire or malfunction.
Do not short out the output section. Doing so might cause device failure.
Firmly tighten the terminal screws to the torque listed in the specifications. Insufficient tightening might cause fire.
If there is a risk of a power surge caused by lightning, use a surge protector to prevent possible fire or failure of the device. Failure to do so might cause fire or faulty operation.

■ Wiring precautions

- Make sure that the wiring follows regulations for indoor wiring and technical standards for electrical equipment.
- Do not run wires outside. The equipment could be damaged in the event of lightning.
- If connecting wires to the power terminals, use crimp terminals with insulating sleeves.
- Before wiring the module, check the module's model number and terminal numbers from the label on the side of the body.
- For screw terminal connections, use crimp terminals that are the correct size for M3 screws
- Be careful not to allow any crimp terminals to touch adjacent terminals.
- The signal wires and power wires of the module should be at least 60 cm away from other power wires or power sources. Also, do not pass them through the same conduit or wiring duct.
- If connecting the module to another device in parallel, check the requirements of the device before instrumentation.
- To ensure stable operation, this device does not operate for up to 10 seconds after the power has been turned on.
- After wiring, be sure to check that there are no mistakes before turning the power ON.

3 - 2 Recommended Cables

Use a JCS 4364 low power instrument cable or equivalent for inputs and outputs. (Twisted shielded instrument cable)

Recommended cables

Function	Cable	Dimensions	Cable length *1	Remarks
Power supply	CVV, IV	1.25 mm^2	30 m max.	
DO	CVV, IV, KPEV, IPEV, IPEV-S, KPEV-S, MVVS	0.9 to 1.25 mm^2	100 m max.	*2
EV	CVV, IV, KPEV, IPEV, IPEV-S, KPEV-S, MVVS	0.9 to 1.25 mm^2	100 m max.	*2
Ethernet	UPT cable (4P) Category 5e min. (straight) (both ends ANSI/TIA/EIA-568-B)	–	*3	
RS-485	IPEV-S 2P*, KPEV-S 2P*, CVV-S 3C, MVVS 3C	0.9 mm^2 1.25 mm^2	500 m max.	* One twisted pair must be connected to terminals DA and DB. One or both wires of the other pair must be connected to terminal SG.

*1. The effect of external electrical noise is not considered.

*2. Use shielded cables in an environment where there is a large amount of electrical noise.

*3. ☞ Chapter 2, "Configuration of Ethernet Communications" in Network Instrumentation Module User's Manual Network Design Version (CP-SP-1313E).

3 - 3 Terminal Connections

⚠CAUTION

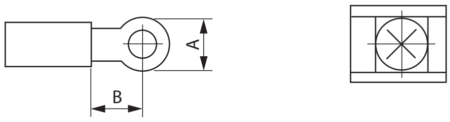
Firmly tighten the terminal screws to the torque listed in the specifications.
Insufficient tightening might cause electric shock or fire.

Do not use unused terminals on the NX-DY1/2 as relay terminals.
Doing so might cause electric shock, fire or malfunction.

Do not short out the output section.
Doing so might cause device failure.

NX-DY1/2 terminal connections

For module connections, use crimp type terminals that fit M3 screws.

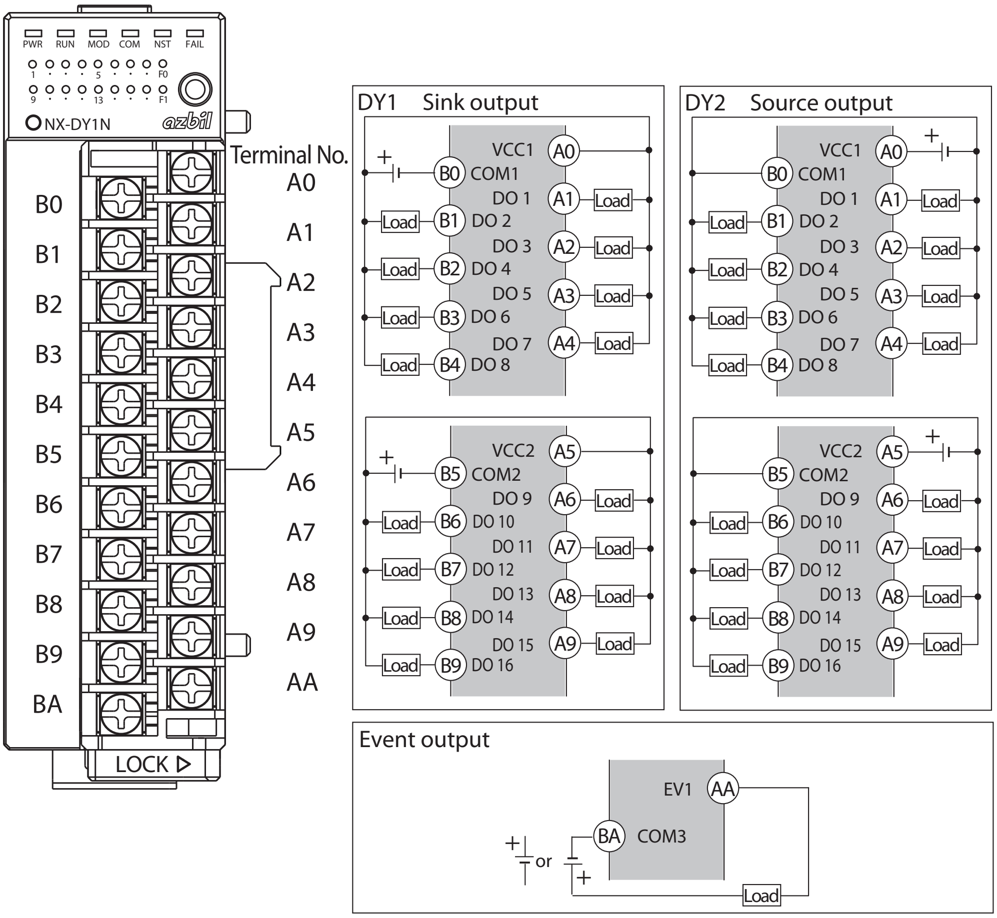


Applicable screw size	A	B	Recommended crimp terminal
M3	5.8 mm max.	5.5 mm min.	JST Mfg. Co., Ltd. Ring tongue terminal (vinyl-insulated) V1.25-MS3

Handling precautions

- If the module is installed where there is considerable vibration or shock, be sure to use round crimp terminals to prevent wires from coming off the terminals.
- Be careful not to allow crimp terminals to touch adjacent terminals.
- The terminal screw tightening torque is 0.5 to 0.7 N•m.
- If 2 crimp terminals are put back-to-back they can be connected to the same terminal screw.

3 - 4 Terminal Wiring Diagram



3 - 5 Terminal Connections

■ Power supply wiring

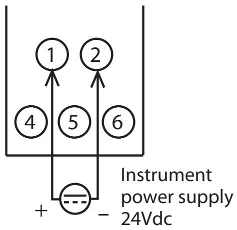
⚠ WARNING

Before removing, mounting, or wiring the NX-DY1/2, be sure to turn off the power to the module and all connected devices.
Failure to do so might cause electric shock.

⚠ CAUTION

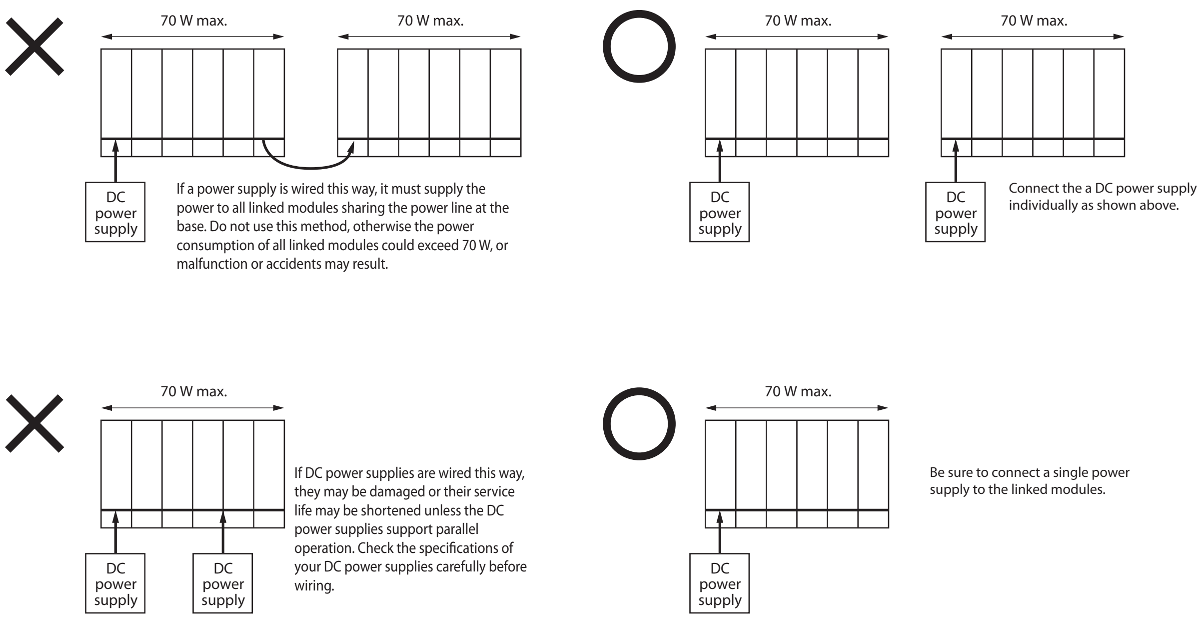
Do not allow the total power consumption of all linked modules to exceed 70 W.
Doing so might cause fire or device failure.

Wire the power terminal as shown below.



Handling precautions

- Supply power to one of the linked modules only, because they are connected to each other electrically.
- I/O wiring to the terminal block or elsewhere should be connected directly to the power supply for I/O, not connected via the base.
- Select a power supply that can cover the total power consumption of all linked modules.
- To comply with UL standards, connect the module to a UL class 2 power supply.



■ Noise countermeasures

Supply the power from a single-phase power supply to limit the effects of noise.

If there is too much electrical noise from the power supply, add an appropriate isolation transformer to the power supply and use an appropriate line filter.

(Azbil Corporation Line Filter Model No.: 81442557-001)

Use a CR filter for quick-rising noises such as impulse noise.

(Azbil Corporation CR Filter Model No.: 81446365-001)

! Handling precautions

- After anti-noise measures have been taken, do not bundle primary and secondary power lines of the isolation transformer together, and do not put them in the same conduit or duct.

■ Power supply design

The required power supply capacity for a module varies depending on the module configuration.

For this reason, the required power supply capacity must be calculated and checked.

The procedure for power supply design is shown below.

(1) Calculate the total consumption current of the modules that will be used.

(2) Determine the power supply capacity required, considering inrush current and derating

The design of the power supply is described below.

● How to calculate the power consumption

Modules are connected to the instrument power supply (24 Vdc) via side connector.

The power consumption for each module is shown in the table below.

Calculate the total power consumption from the number of modules used.

Module	Type (model No.)	Power consumption (W)	Power ON inrush current	Remarks
Controller module	D15, D25, D35	4 W max.	20 A max.	(under operating conditions)
Digital pulse input module	DX1, DX2	4 W max.	20 A max.	(under operating conditions)
Digital output module	DY1, DY2	4 W max.	20 A max.	(under operating conditions)
Supervisor Module	S11, S12, S21	4 W max.	12 A max.	(under operating conditions)
Communication box	CB1	4 W max.	10 A max.	(under operating conditions)
Communication adapter	CL1, CR1	-	-	Power supply not required
Terminal adapter	TL1, TR1	-	-	Power supply not required

● How to select the required power supply capacity

Calculate the required power from the table above, derate the calculation according to the ambient temperature and the load factor, and select the power supply.

! Handling precautions

- Select a power supply that is sufficient for the power ON inrush current (under operating conditions).
  Without derating according to the load reduction factor and the ambient temperature, the service life of the power supply may be shortened.
  For details, contact the manufacturer of your power supply device.

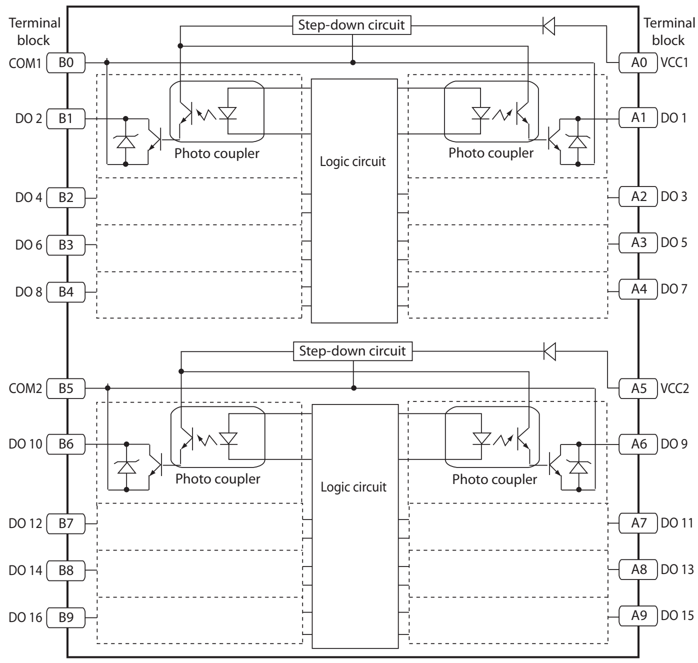
3 - 6 Digital Output Connections

Handling precautions

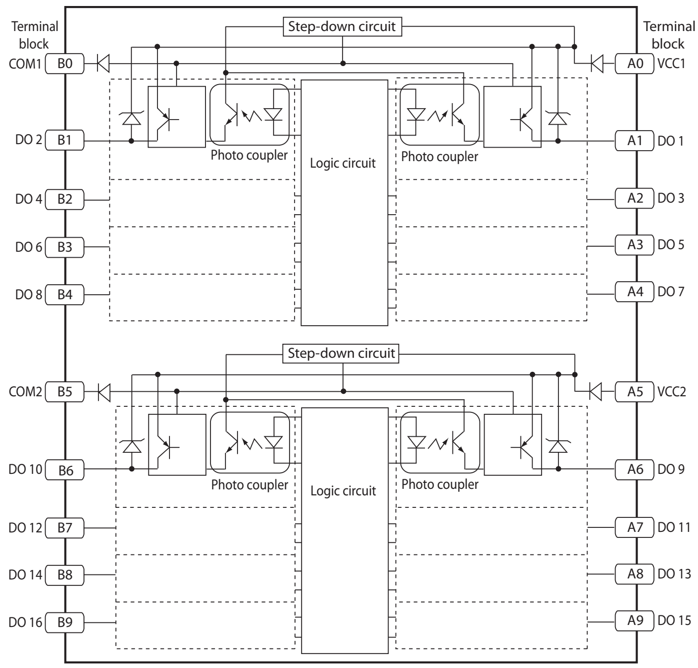
- If an inductive load (such as a motor or solenoid valve) is used, consider methods for absorbing surges, such as parallel connection of the diode.
- Pay attention to the external power supply polarity when wiring.
- Do not connect or disconnect a load while the power is being supplied to the module.
  Doing so might cause the module or load to be faulty.

Digital output

NX-DY1 (sink type)



NX-DY2 (source type)



■ Connection with a Solid-State Relay (SSR)

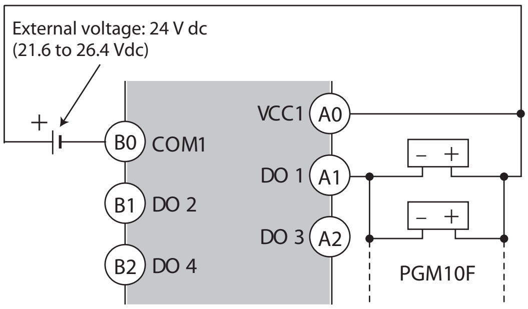
Connect relays to the module's digital output.
Use a constant-current SSR.
Use an external power source that has enough amperage to fully drive the SSR.

Check the following concerning the module to be used.

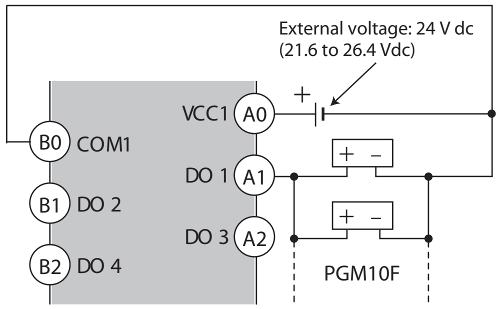
1. The amperage of the external power source is greater than the SSR input currents (max. and total) of the modules connected in parallel.
   Also, the total current is within the allowable output current of the module.
2. For the external power source, the SSR input voltage and transistor output of the module are within the range of the external power source allowable voltage.

● Connection with Azbil Corporation PGM10F series

• DY1 sink output



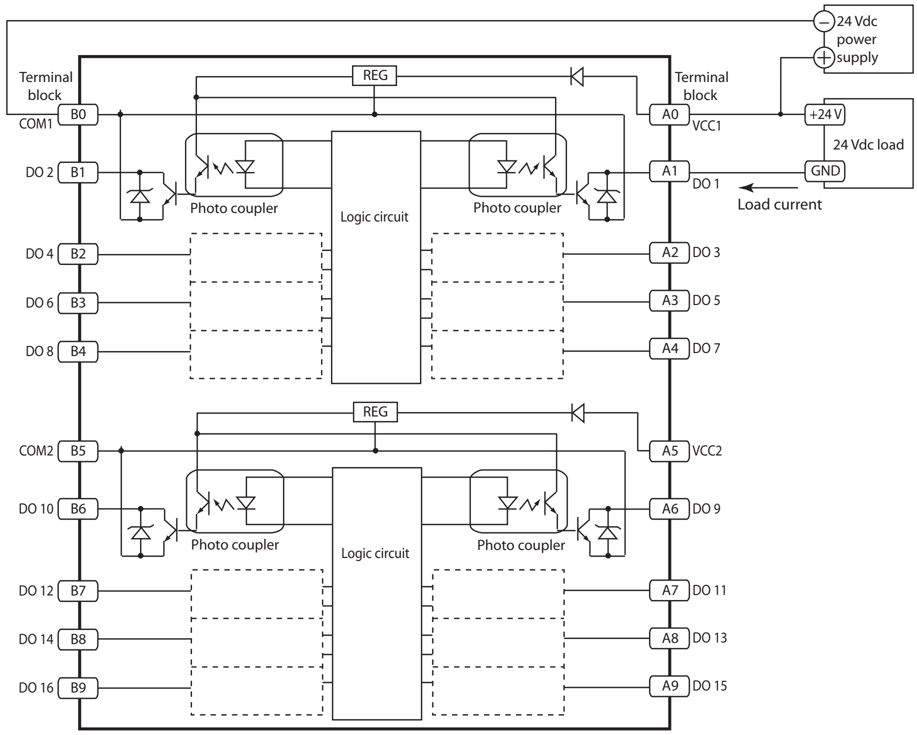
• DY2 source output



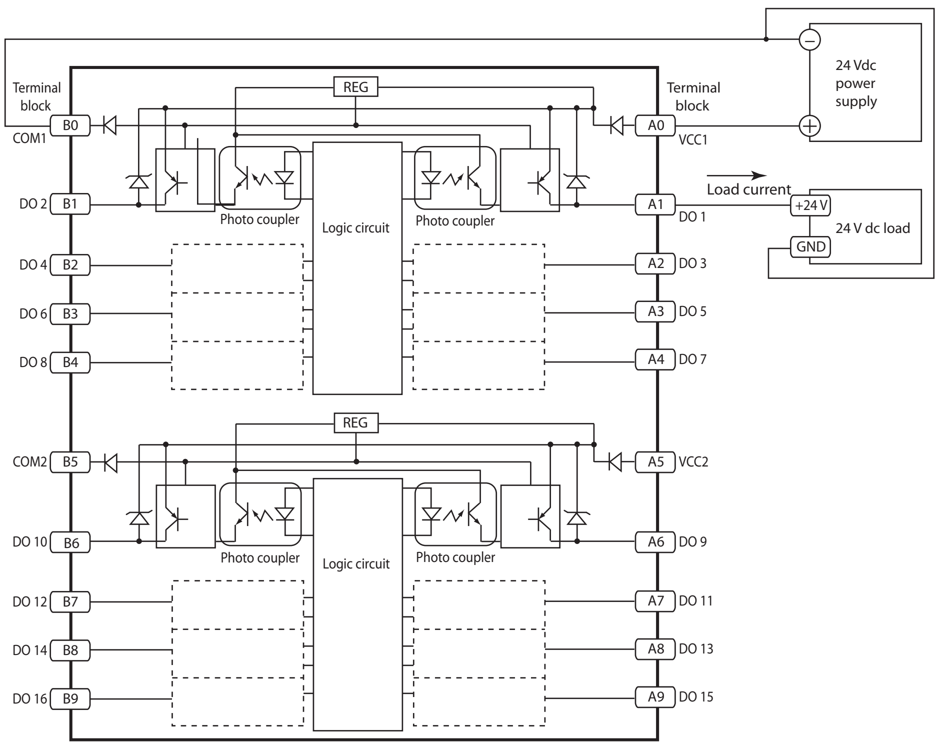
SSR	Connection	No. of devices per output	Remarks
Azbil PGM10F	Parallel	8 max.	When the input current is 12 mA max.
Azbil PGM10N	Parallel	10 max.	When the input current is 10 mA max.
Omron G3PA	Parallel	14 max.	When the input current is 7 mA max.
Omron G3PE	Parallel	14 max.	When the input current is 7 mA max.

■ Connection with a 24 V dc load

● NX-DY1 (sink type)

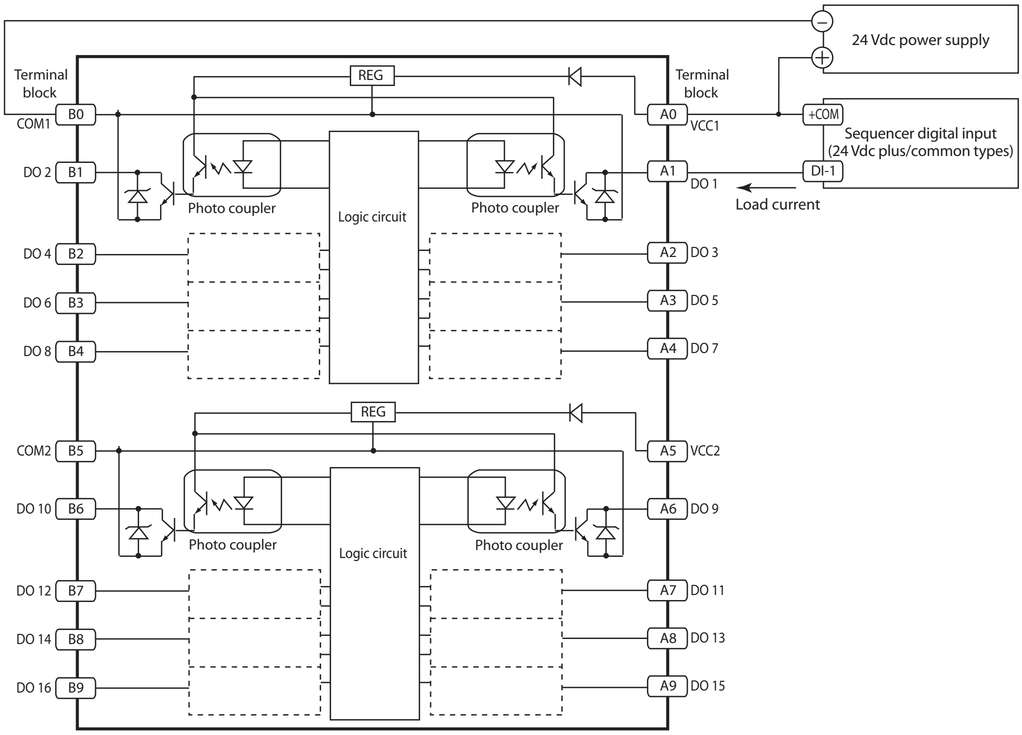


● NX-DY2 (source type)

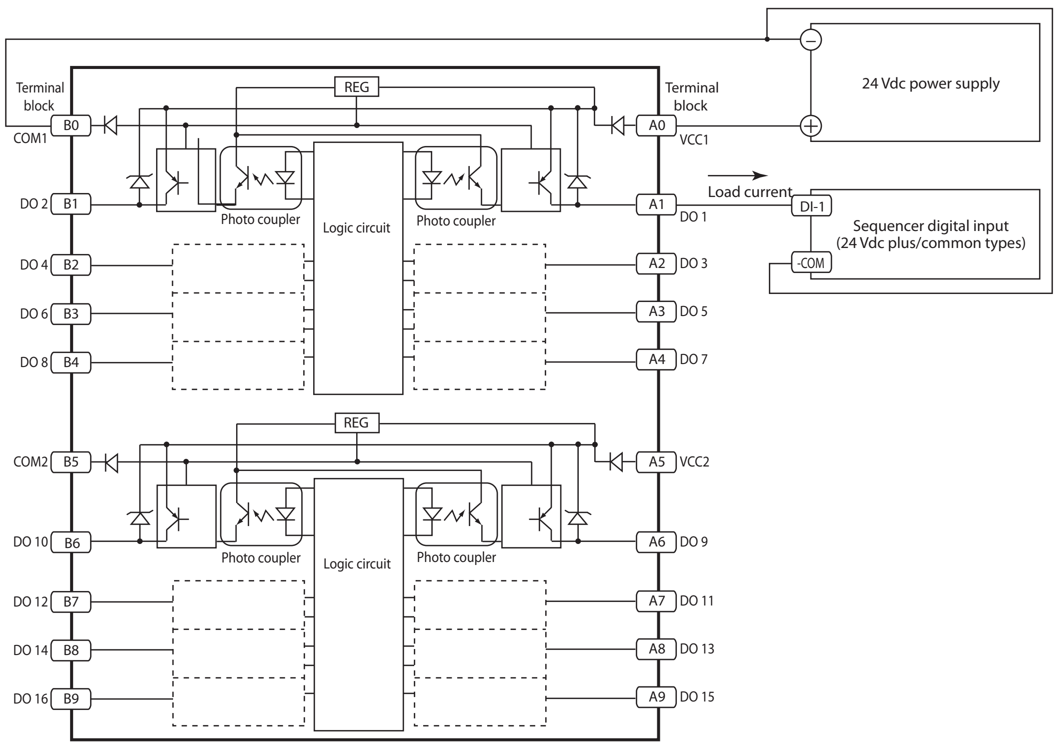


■ Connection with the digital input of a general sequencer

● NX-DY1 (sink type)

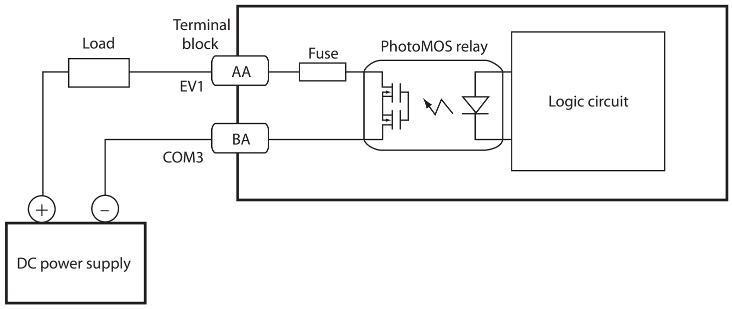


● NX-DY2 (source type)

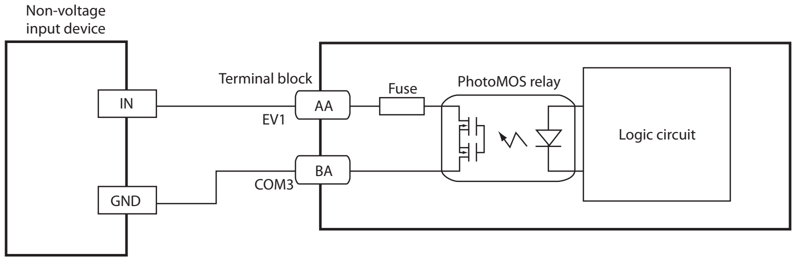


■ Event output

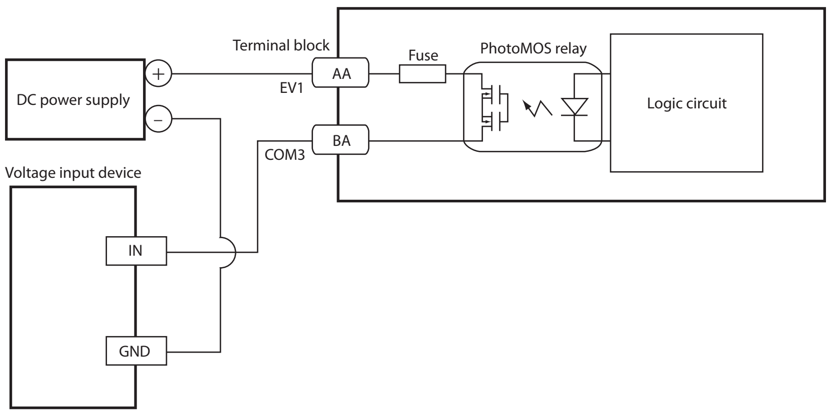
● Wiring for an event output (for a general load)



● Wiring for an event output (for a non-voltage input device: an open collector)



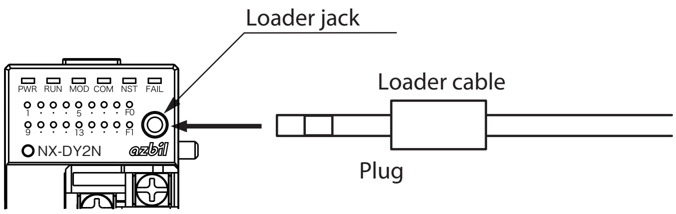
● Wiring for an event output (for a voltage input device)



3 - 7 Ethernet Connections

☞ Section 1-3, "Explanation of Module Features" (on page 1-3) and chapter 2, "Configuration of Ethernet Communications" in Network Instrumentation Module User's Manual: Network Design Version (CP-SP-1313E).

3 - 8 Loader Cable Connections



Handling precautions

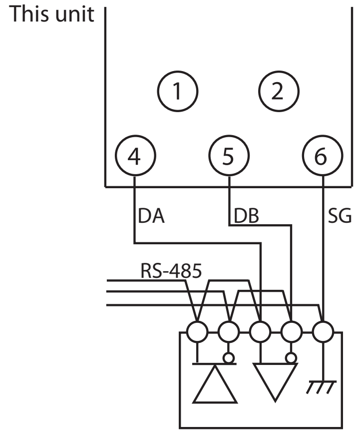
- Use the USB loader cable only.
- Firmly insert the plug into the loader jack.
- When removing or inserting the loader cable, hold the plug. Do not pull the cable.
- Do not apply force to the loader cable or plug in any direction while the cable is connected.
  Doing so might damage the loader cable or loader jack, or affect the functions or performance.

Note

- ☞ Section 2-5, "Configuration With Other Devices" (on page 2-21) in Network Instrumentation Module: User's Manual Network Design Version (CP-SP-1313E).

3 - 9 RS-485 Communication Connections

Do wiring for MODBUS CPL RS-485 as shown below.



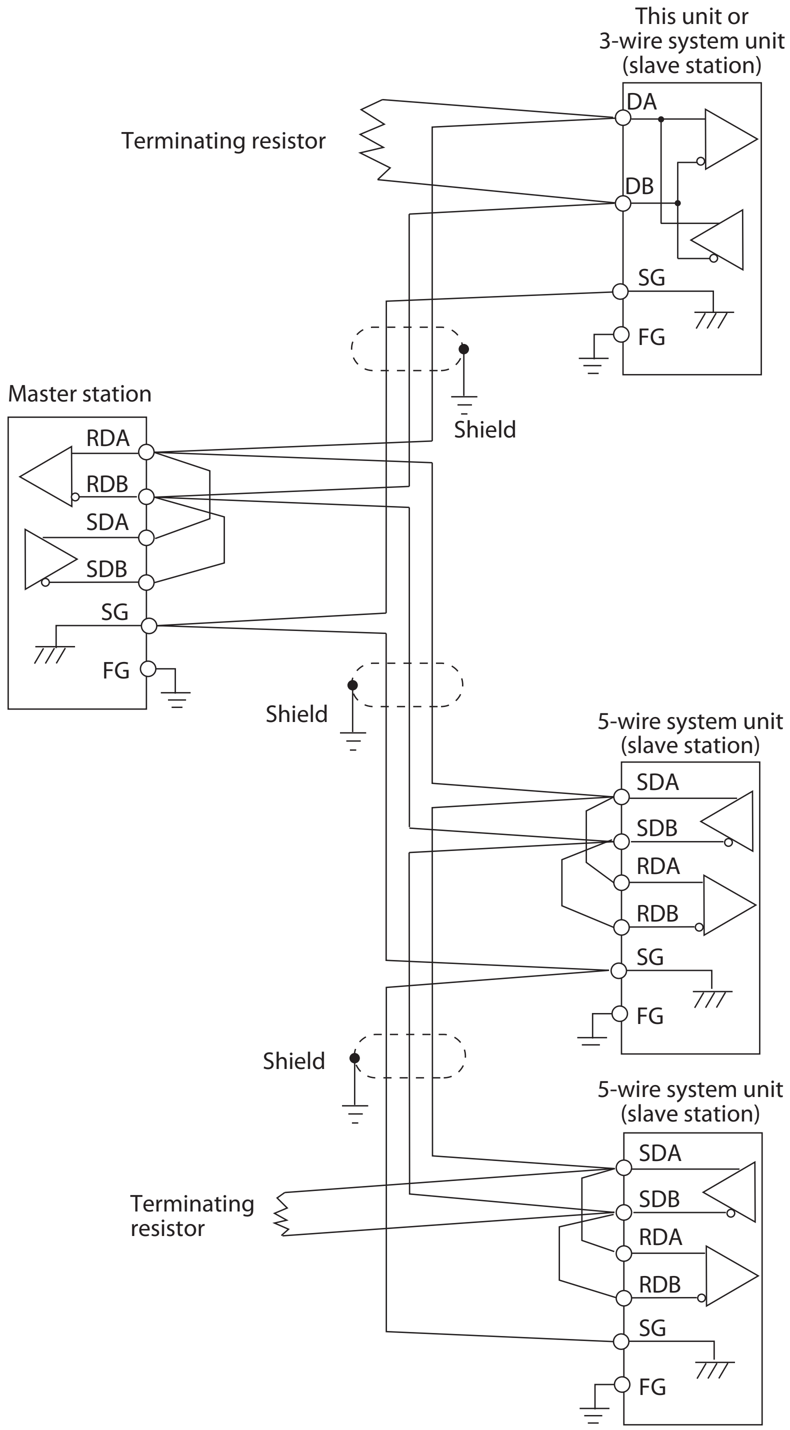
Handling precautions

- Connect a terminating resistor (150 Ω ±5 %, 1/2 W min.) to both ends of the communication path.
  However, if any device that does not allow a terminating resistor is connected to the same communications line, follow the instructions on that device.
- Be sure to connect the SG terminals to each other. Failure to do so might cause unreliable communications.
- Use twisted pair cable for communications wiring.

Note

- ☞ Chapter 3 "Configuration of Serial Communications" in the Network Instrumentation Module User's Manual Network Design Version, (CP-SP-1313E).

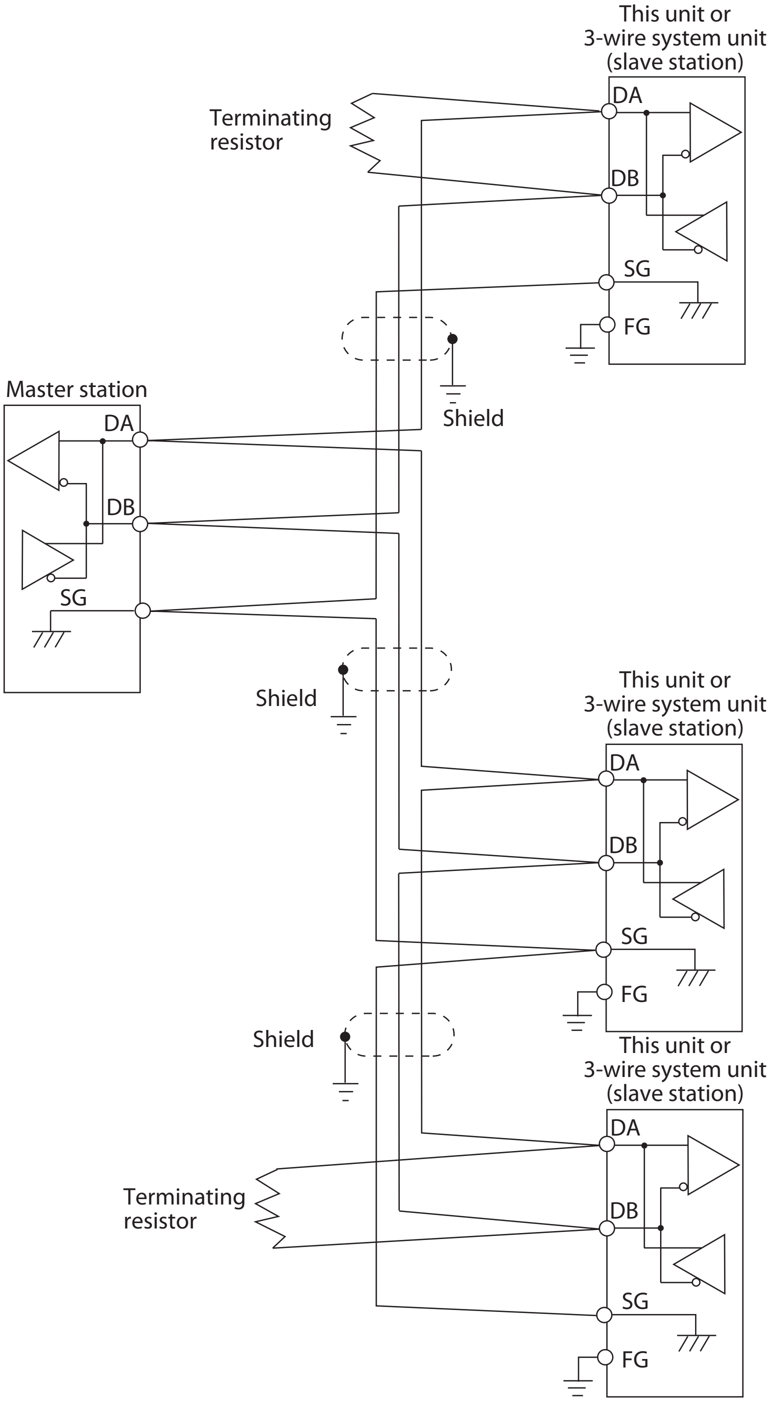
● **Combining with 5-wire system modules**



Handling precautions

- If the transmission line includes any module that does not accept a terminating resistor (Azbil Corporation's SDC15/25/26/35/36 or DMC10), do not connect any terminating resistor to the external or communication lines of the NX-DY1/2.
- FG is not available for the module.

● **3-wire system**



Handling precautions

- If the transmission line includes any module that does no accept a terminating resistor (Azbil Corporation's SDC15/25/26/35/36 or DMC10), do not connect any terminating resistor to the external or communication lines of the NX-DY1/2.
- FG is not available for the module.

3 - 10 Noise Generation Sources and Noise Suppression Measures

The following are typical noise generation sources:

1. Relays and contacts
2. Solenoid coils and solenoid valves
3. Power lines (especially AC 90 V or higher)
4. Inductive loads
5. Motor commutators
6. Phase angle control SCR
7. Radio communication equipment
8. Welding machinery
9. High-voltage ignition devices

Effective measures for noise suppression are shown below.

1. A CR filter is effective for quick-rising noises such as impulse noise.
   Recommended CR filter: Azbil Corporation's model No. 81446365-001
2. A varistor is effective for noises with high crest values.
   Recommended varistor : Azbil Corporation's model No. 81446366-001 (for 100 V)
   81446367-001 (for 200 V)

Handling precautions

- Take great care when using a varistor because it causes a short circuit when faulty.

3 - 11 I/O Isolation

The solid line indicates isolation from the rest of the circuit.

Power supply (including side connectors)*	Digital output channels 1 to 8
Logic circuit Loader jack RS-485 communication, side connector Ethernet communication * Displayed portions (LED, switch, etc.)	Digital output channels 1 to 8 Digital output channels 9 to 16
Side connector ring communication *	Event output 1

* Power, side-connector ring communications, and RS-485/side-connector Ethernet communications are isolated from each other when connected to the side connector.

Chapter 4. OUTPUT FUNCTION SETTINGS

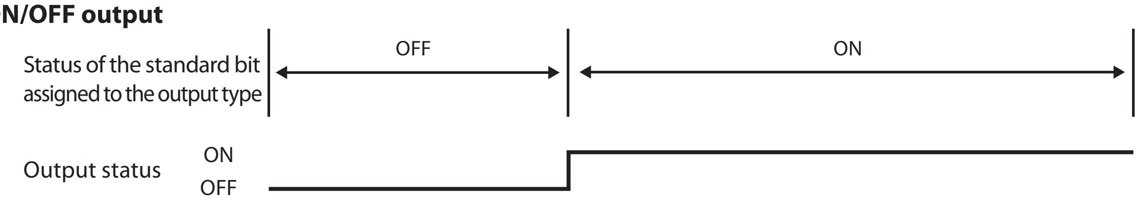
4 - 1 Overview of Outputs

The NX-DY1/2 has 16 digital output channels and 1 event output channel.

Digital outputs are capable of ON/OFF output, time proportional output, or one-shot pulse output, depending on the output settings. Event outputs are capable of ON/OFF output.

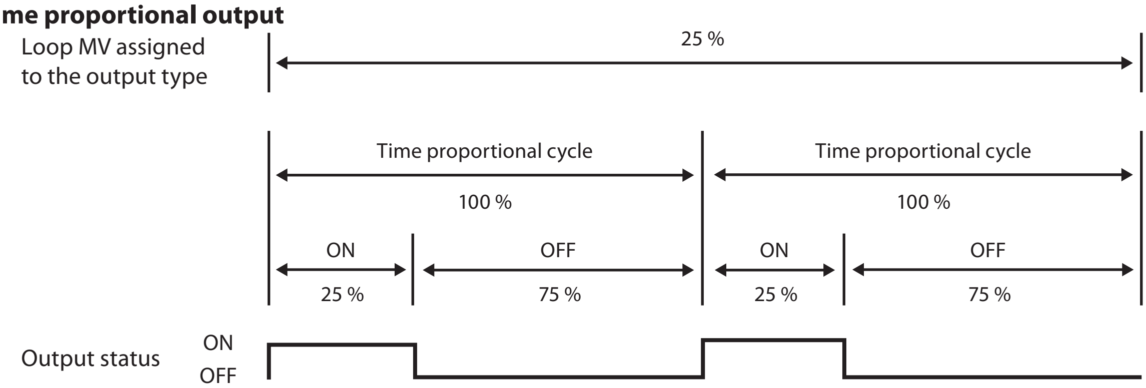
Bank name	Output type	Output type
DO output, EV output	1024 to 2047: Standard bit ☞ Standard Bits (on page App-9)	ON/OFF output
DO output	1 to 16: Loop 1 to 16 MV ☞ Standard Numbers (on page App-11)	Time proportional output
DO output	17 to 32: Communication PT 1 to 16 (latch) 33 to 48: Communication PT 1 to 16 (countdown)	One-shot pulse output

● **ON/OFF output**



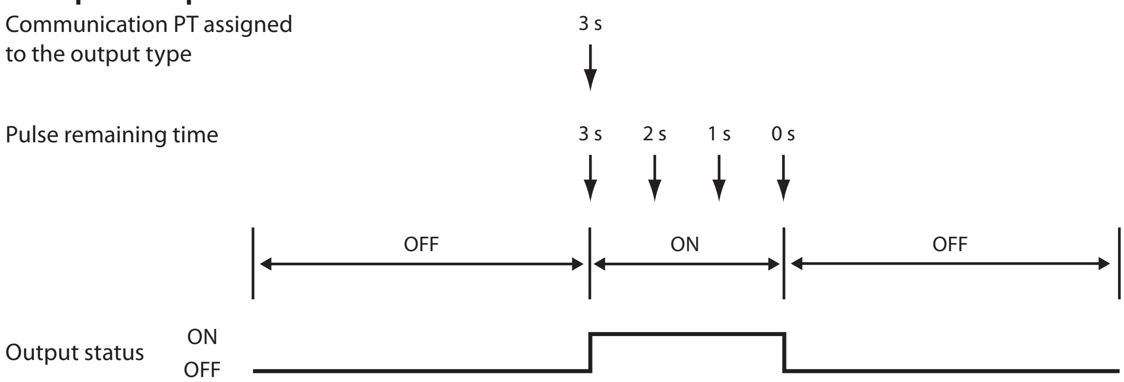
☞ 4-2 DO Outputs (ON/OFF output) on page 4-2.

● **Time proportional output**



☞ 4-3 DO Outputs (time proportional output) on page 4-4.

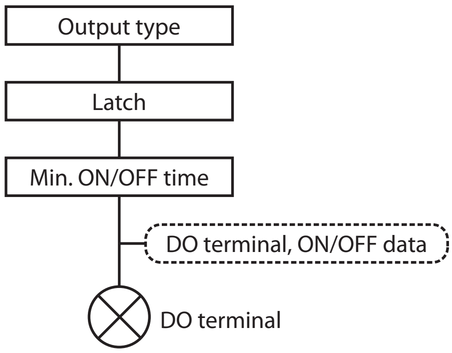
● **One-shot pulse output**



☞ 4-4 DO Outputs (one-shot pulse output) on page 4-7.

4 - 2 DO Outputs (ON/OFF output)

In the DO output setting bank, ON/OFF output can be set.



■ Banks and settings

Folder name	Bank name	Item name	Settings	User level
Input-output	DO output	Output type	0: OFF 1024 to 2047: Standard bit ☞ Standard Bits (on page App-9)	Simple Standard Multi-function
		Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	Standard Multi-function
		Time proportional operation	(Invalid setting)	Simple Standard Multi-function
		Min. ON/OFF time	0 to 300 ms	
		Time proportional cycle	(Invalid setting)	
		Linearization table group definition	(Invalid setting)	Standard Multi-function
		Phase shift	(Invalid setting)	Multi-function
		ON delay time	(Invalid setting)	Standard Multi-function

■ Associated parameters

Folder name	Bank name	Item name	Displayed information	User level
Monitor	DO terminal ON/OFF	DO terminal ON/OFF data	0: OFF 1: ON	Simple Standard Multi-function

■ Output type

If any of the standard bit Nos. 1024 to 2047 is set in the output type, the ON/OFF status of this standard bit is output.

■ Latch

Select the latch operation for DO output from the following.

0: No latch

1: Latch when ON

2: Latch when OFF (except OFF before power ON)

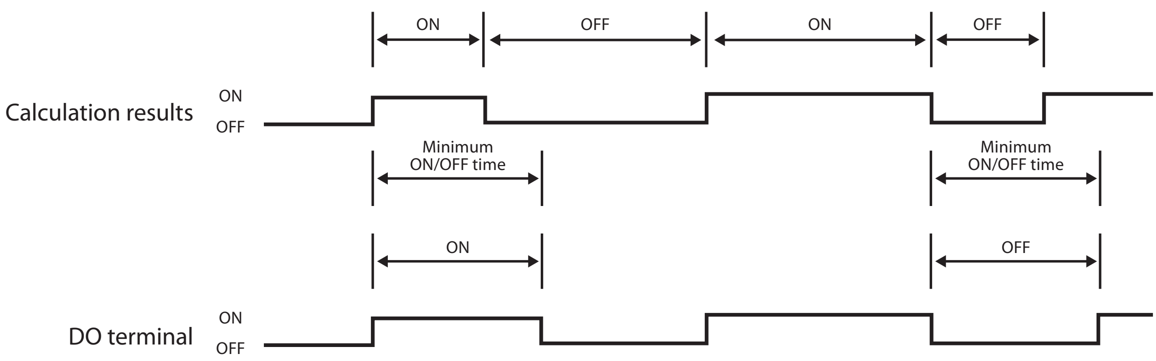
To release the latch, use one of the following methods.

- In “Setup,” set “Release all latches” to 1 (Release latch).
  Note: This can be done only through the loader or host communications.
- In “Internal contact IN,” set "47 (Release all latches)."
- In “DO output,” set “Latch” to 0 (No latch).
- Turn off the module and then turn it on.

■ Min. ON/OFF time

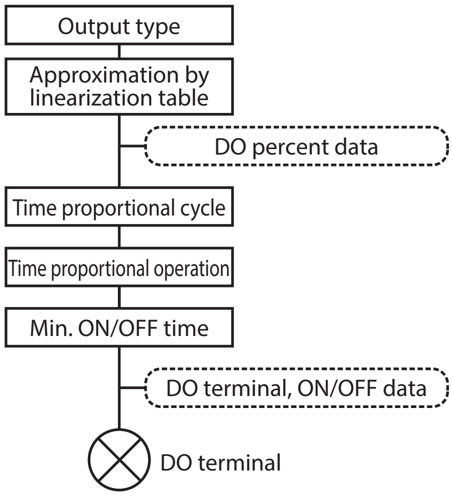
This function retains the status when the ON/OFF status of the standard bit specified for the output type changes from OFF to ON or vice versa.

The diagram below shows the state transitions of the ON/OFF status of the standard bit specified as the output type and the ON/OFF status of the DO terminal after the minimum ON/OFF time has passed.



4 - 3 DO Output (Time Proportional Output)

In the DO output setting bank, time proportional ON/OFF output can be set.



■ Banks and settings

Folder name	Bank name	Item name	Settings	User level
Input-output	DO output	Output type	0: OFF 1: Loop 1 MV 2: Loop 2 MV 3: Loop 3 MV 4: Loop 4 MV 5: Loop 5 MV 6: Loop 6 MV 7: Loop 7 MV 8: Loop 8 MV 9: Loop 9 MV 10: Loop 10 MV 11: Loop 11 MV 12: Loop 12 MV 13: Loop 13 MV 14: Loop 14 MV 15: Loop 15 MV 16: Loop 16 MV 2048 to 3071: Standard number ☞ Standard Numbers (on page App-11)	Simple Standard Multi-function
		Latch	(Invalid setting)	Standard Multi-function
		Time proportional operation	0: Control oriented 1: Actuator-life oriented	Simple Standard Multi-function
		Min. ON/OFF time	0 to 300 ms	
		Time proportional cycle	0.1 to 120.0 s	
		Linearization table group definition	0: Disabled 1: Group 1 2: Group 2 3: Group 3 4: Group 4 5: Group 5 6: Group 6 7: Group 7 8: Group 8	Standard Multi-function
		Phase shift	(Invalid setting. Leave at initial value 0)	Multi-function
		ON delay time	(Invalid setting)	Standard Multi-function

Associated parameters

Folder name	Bank name	Item name	Displayed information	User level
Monitor	Basic	MV	0.0 to 100.0	Simple Standard Multi-function
	Monitor (DO %)	DO % data	0.0 to 100.0	
	Mntr: DO trml ON/OFF	DO terminal ON/OFF data	0: OFF 1: ON	

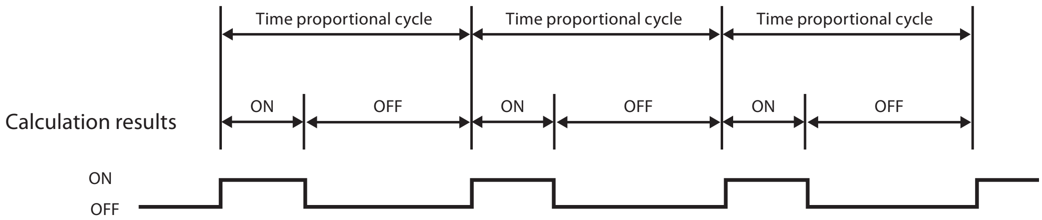
Output type

To set the time proportional output, specify the output type from 1 to 16 or standard numbers 2048 to 3071.

Time proportional cycle

The time proportional cycle is the ON-OFF cycle of the time proportional output.

(The diagram below shows the cycle when "Actuator-life oriented" is set)

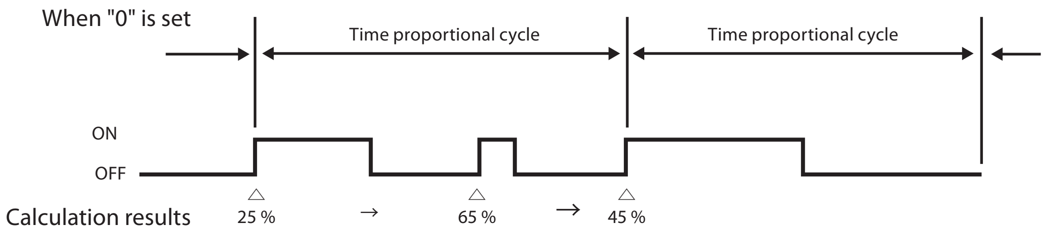


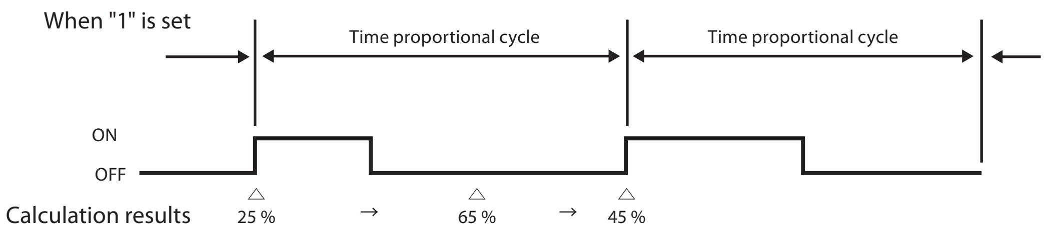
Time proportional operation

Depending on the time proportional operation type, the time proportional output varies as follows.

If "0: Control oriented" is set, the output may be generated twice or more within the time proportional cycle.

If "1: Actuator-life oriented" is set, there is no output or output is generated only once within the time proportional cycle.





■ Linearization table group definition

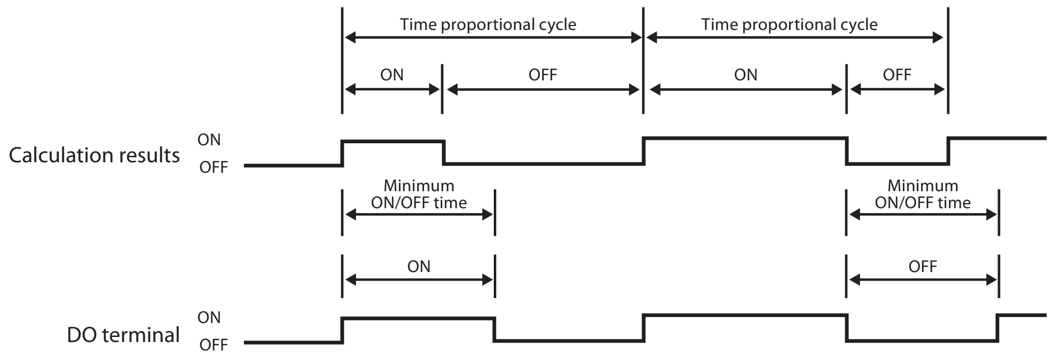
Specify the linearization table groups if using the approximation by linearization table.

☞ 5-7 Approximation by Linearization Table (on page 5-20).

■ Min. ON/OFF time

This function retains the status when the ON/OFF status resulting from time proportional calculations changes from OFF to ON or vice versa.

The diagram below shows the state transitions of the ON/OFF status of the calculation results (DO % data) and the ON/OFF status of the DO terminal after the minimum ON/OFF time has passed.



Handling precautions

- When the power is turned on, and also when the time proportional cycle is changed, one output cycle only is shortened in order to synchronize the beginning of the time proportional cycles.
- If the settings for the output type are changed in order to use time proportional output, turn the power off and then on. The beginning of the time proportional cycles are synchronized.

Chapter 4. OUTPUT FUNCTION SETTINGS

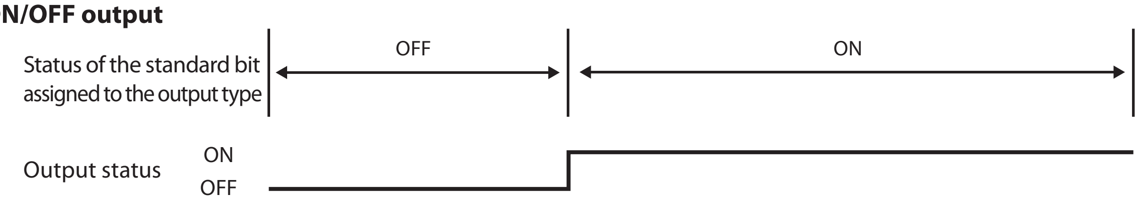
4 - 1 Overview of Outputs

The NX-DY1/2 has 16 digital output channels and 1 event output channel.

Digital outputs are capable of ON/OFF output, time proportional output, or one-shot pulse output, depending on the output settings. Event outputs are capable of ON/OFF output.

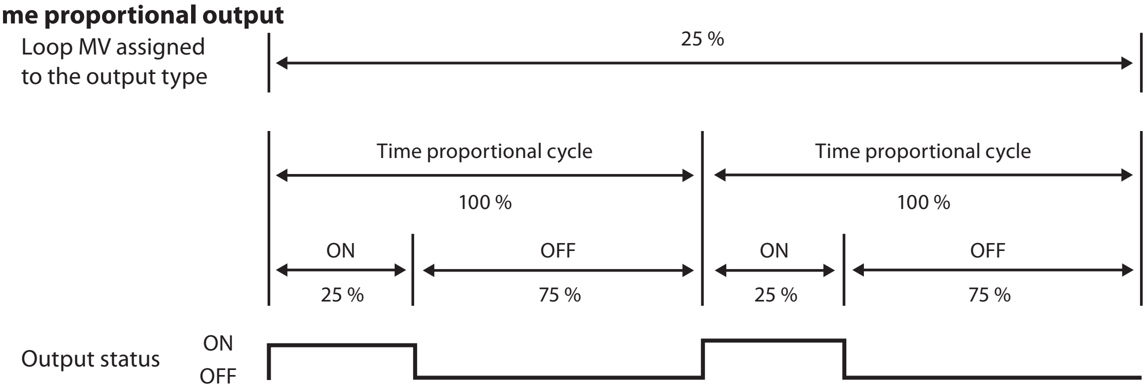
Bank name	Output type	Output type
DO output, EV output	1024 to 2047: Standard bit ☞ Standard Bits (on page App-9)	ON/OFF output
DO output	1 to 16: Loop 1 to 16 MV ☞ Standard Numbers (on page App-11)	Time proportional output
DO output	17 to 32: Communication PT 1 to 16 (latch) 33 to 48: Communication PT 1 to 16 (countdown)	One-shot pulse output

● ON/OFF output



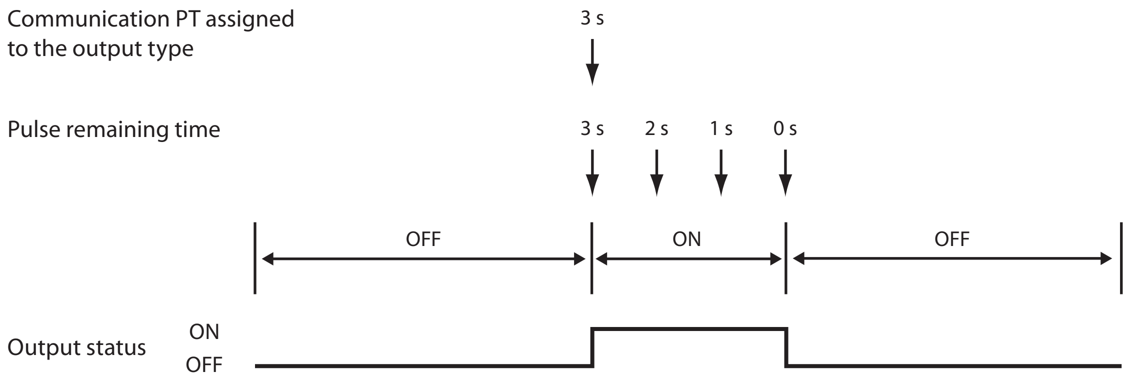
☞ 4-2 DO Outputs (ON/OFF output) on page 4-2.

● Time proportional output



☞ 4-3 DO Outputs (time proportional output) on page 4-4.

● One-shot pulse output



☞ 4-4 DO Outputs (one-shot pulse output) on page 4-7.

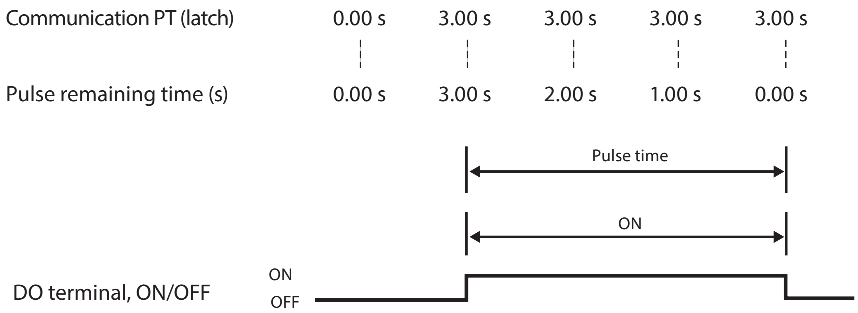
■ Associated parameters

Folder name	Bank name	Item name	Displayed information	User level
Monitor	DO pulse time left	DO pulse remaining time	0.00 to 320.00 s	Simple Standard Multi- function
	Mntr: DO trml ON/OFF	DO terminal ON/OFF data	0: OFF 1: ON	

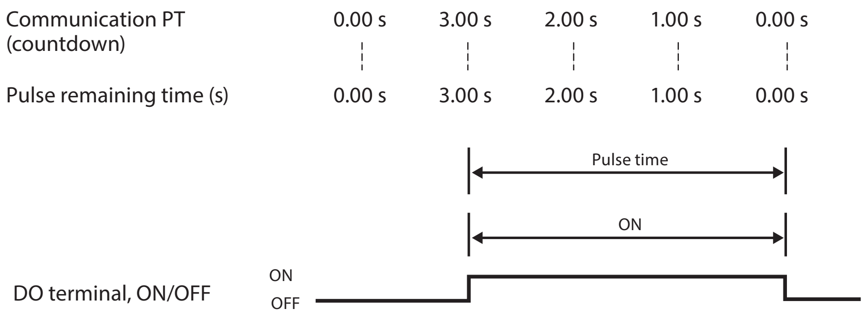
■ Output type

If pulse times are received with a constant period using one-shot pulse output, specify a communication PT (latch). If pulse times are received as an event, specify a communication PT (countdown).

A communication PT (latch) retains the pulse time. (To generate one-shot pulses using the same pulse time, reset the pulse time to 0.00 and then write the pulse time.)



The communication PT (countdown) counts the pulse time down to 0.00 seconds. The communication PT is updated in a cycle period.



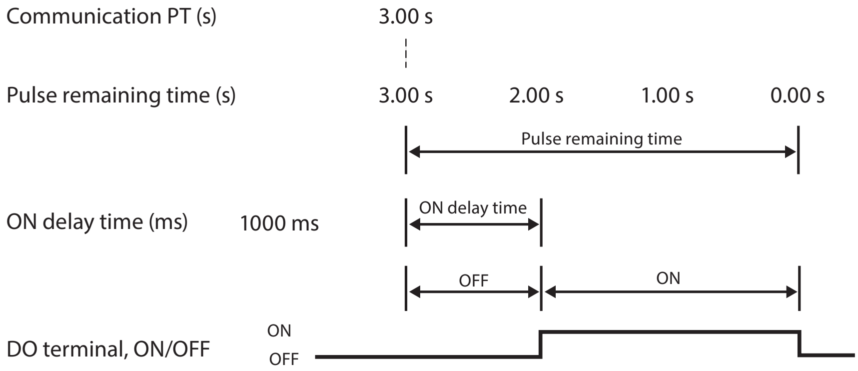
To turn OFF the output within the pulse time while it is ON, set the pulse time to 0, regardless of whether it is the latch type or countdown type.

■ ON delay time

This is a time from when the pulse time is written to when the output status changes from OFF to ON. If the pulse time is written while the output is ON, the ON delay function does not work.

The output ON time refers to the amount of the pulse time minus the ON delay time.

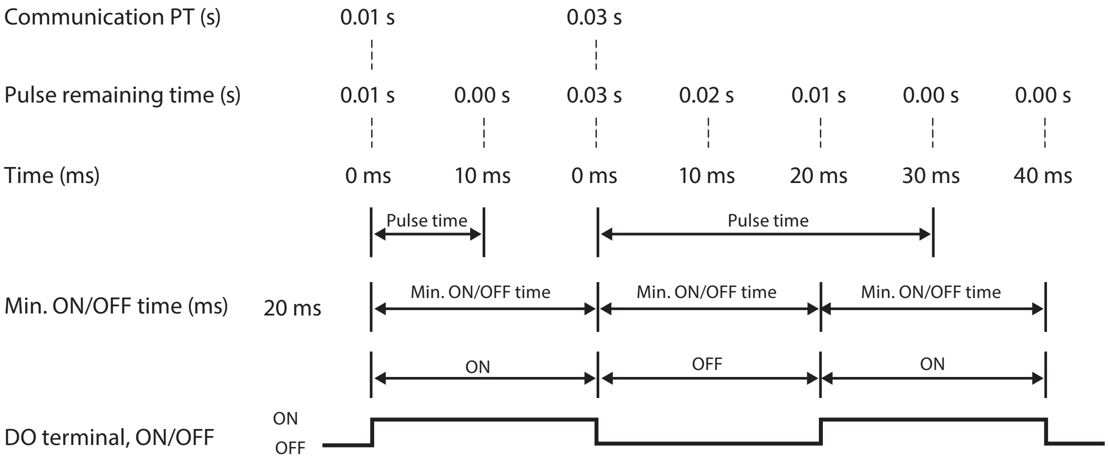
(Make sure that the ON delay time is smaller than the pulse time)



■ Min. ON/OFF time

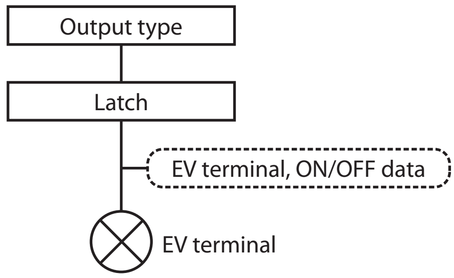
This function retains the status when the ON/OFF status resulting from the one-shot pulse computation changes from OFFON or ONOFF.

The ON/OFF status from the computation results and the status of the DO terminal after min. ON/OFF time processing is as follows.



4 - 5 EV Outputs (ON/OFF output)

In the EV output setting bank, ON/OFF output can be set.



■ Banks and settings

Folder name	Bank name	Item name	Settings	User level
Input-output	EV Output	Output type	0: OFF 1024 to 2047: Standard bit ☞ Standard Bits (on page App-9)	Simple Standard Multi-function
		Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	

■ Associated parameters

Folder name	Bank name	Item name	Displayed information	User level
Monitor	EV terminal ON/OFF	EV terminal ON/OFF data	0: OFF 1: ON	Simple Standard Multi-function

■ Output type

To set ON/OFF output, specify the standard bit number from 1024 to 2047 as the output type.

■ Latch

Select the latch operation for EV output from the following.

0: No latch

1: Latch when ON

2: Latch when OFF (except OFF before power ON)

To release the latch, use one of the following methods.

- In the “Setup” bank, set “Release all latches” to 1 (Release latch).
  Note: This can be done only through the loader or host communications.
- In the “Internal contact IN” bank, set "47 (Release all latches)."
- In the “EV output” bank, set “Latch” to 0 (No latch).
- Turn the module off and on.

Chapter 5. CALCULATION SETTINGS

5 - 1 Events

The ON/OFF status of an event is determined according to the conditions for each operation type.

The ON/OFF result of an event can be output from the ON/OFF output terminals.

Additionally, the ON/OFF result status of an event can be used as internal contact input.

■ Banks and settings

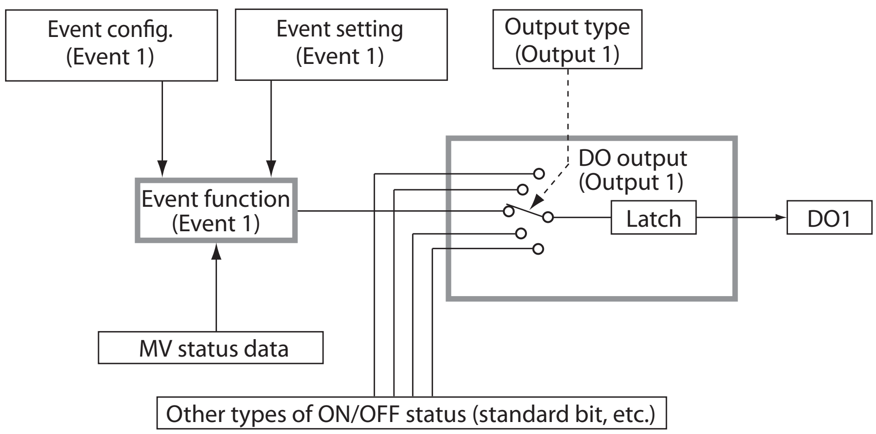
Folder name	Bank name	Item name	Details	User level
Event	Event config.	Operation type	0 to 255	Simple Standard Multi-function
		Loop/channel definition	1 to 3071	
		Direct/Reverse	0: Direct 1: Reverse	
		Standby	0: No standby 1: Standby	
		EVENT state at READY	0: Continuation 1: Forced OFF	
		Decimal point position	0 to 4	
		Hysteresis	0 to 32000	
		ON delay	0.0 to 3200.0 s	
		OFF delay	0.0 to 3200.0 s	

Folder name	Bank name	Item name	Details	User level
Event	Operating point	Event main setting	−19999 to +32000 U	Simple Standard Multi-function
		Event sub-setting	−19999 to +32000 U	

■ Example: MV high limit alarm (activated if an error occurs)

The following is an example where the output of DO1 is turned ON if loop 1 MV exceeds 80 %.

In this example, the event function and output function are used.



(1) Set Event config. for Event 1.
In the event configuration bank, set as follows.

Folder name	Bank name	Item name	Details	User level
Event	Event config.	(Event 1) Operation type	13: MV high limit	Simple Standard Multi-function
		(Event 1) Loop/channel definition	1: Loop 1 / Channel 1	
		(Event 1) Direct/Reverse	0: Direct	
		(Event 1) Standby	0: No standby	
		(Event 1) EVENT state at READY	0: Continuation	
		(Event 1) Decimal point position	0: No decimal point	
		(Event 1) Hysteresis	5	
		(Event 1) ON delay	0.0 s	
		(Event 1) OFF delay	0.0 s	

(2) Set the operating point for event 1.
Configure the settings as shown below in the operating point bank.

Folder name	Bank name	Item name	Details	User level
Event	Operating point	(Event 1) Main setting	80	Simple Standard Multi-function
		(Event 1) Sub-setting	(Invalid setting)	

(3) Assign the ON/OFF status of event 1 to output 1.
In the DO output bank, configure the following settings.

Folder name	Bank name	Item name	Details	User level
Input-output	DO output	Output type	1088: Event 1	Simple Standard Multi-function
		Latch	0: No latch	Standard Multi-function
		Time proportional operation type	(Invalid setting)	Simple Standard Multi-function
		Min. ON/OFF time	10 ms	
		Time proportional cycle	(Invalid setting)	
		Linearization table group definition	(Invalid setting)	Standard Multi-function
		Phase shift	(Invalid setting)	Multi-function
		ON delay time	(Invalid setting)	Standard Multi-function

■ Operation types and valid setting items

Availability of settings for each operation type.

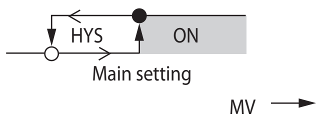
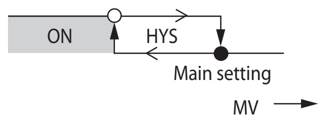
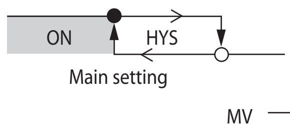
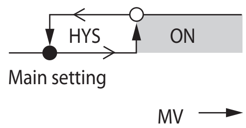
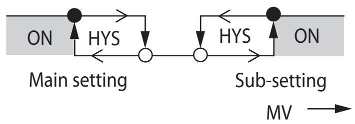
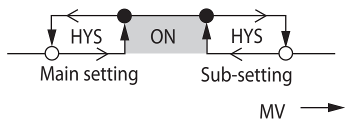
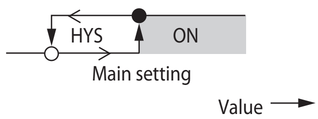
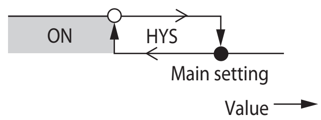
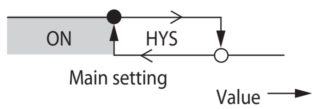
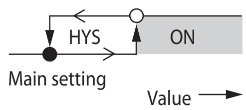
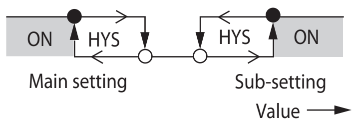
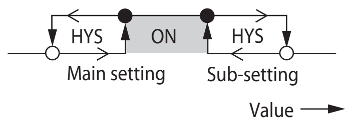
Operation type	Main setting	Sub-setting	Loop/channel definition	Direct/Reverse	Standby	EVENT state at READY	Decimal point position	Hysteresis	ON delay	OFF delay
No event	–	–	–	–	–	–	–	–	–	–
MV high limit	○	–	○	○	○	○	○	○	○	○
MV low limit	○	–	○	○	○	○	○	○	○	○
MV high and low limits	○	○	○	○	○	○	○	○	○	○
High limit for standard numbers	○	–	○	○	–	–	○	○	○	○
Low limit for standard numbers	○	–	○	○	–	–	○	○	○	○
High and low limits for standard numbers	○	○	○	○	–	–	○	○	○	○
Alarm (status)	–	–	–	○	–	○	–	–	○	○
READY (status)	–	–	○	○	–	○	–	–	○	○
MANUAL (status)	–	–	○	○	–	○	–	–	○	○
Timer (status)	–	–	○	–	–	○	–	–	○	○

○ : Valid

– : Invalid

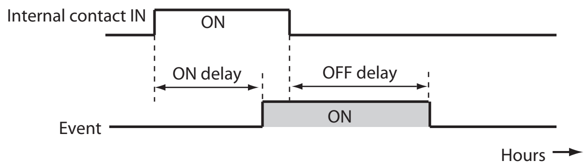
■ Operation type, direct/reverse, hysteresis, main setting, and sub-setting

As shown below, the event operation varies depending on the operation type, direct/reverse, main setting, sub-setting, hysteresis, or other settings.

Operation type	Operation type setting	At ●, the ON/OFF status of the operation switches to the opposite state. After ○, hysteresis begins/ends, affecting the operation.	At ●, the ON/OFF status of the operation switches to the opposite state. After ○, hysteresis begins/ends, affecting the operation.
No event	0	Always OFF	Always OFF
MV high limit	13		
MV low limit	14		
MV high and low limits	15		
Standard number high limit	26		
Standard number low limit	27		
Standard number high and low limits	28		
Alarm (status)	61	Alarm (alarm code AL01 to 99) ON when activated, OFF at other times	Alarm (alarm code AL01 to 99) OFF when activated, ON at other times
READY (status)	62	ON in READY mode OFF in RUN mode	OFF in READY mode ON in RUN mode
MANUAL (status)	63	ON in MANUAL mode OFF in AUTO mode	OFF in MANUAL mode ON in AUTO mode

<table>
<tr><th>Operation type</th><th>Operation type setting</th><th>At ●, the ON/OFF status of the operation switches to the opposite state.
After ○, hysteresis begins/ends, affecting the operation.</th><th>At ●, the ON/OFF status of the operation switches to the opposite state.
After ○, hysteresis begins/ends, affecting the operation.</th></tr>
<tr><td>Timer (status)</td><td>70</td><td colspan="2">The direct and reverse action settings are disabled for the timer event.
To use the timer event, it is necessary to set the operation type of the internal contact input to "Timer stop/start selection".
Additionally, multiple timer events can be controlled from an individual internal contact input by setting an event No. in the loop/channel definition of the internal contact input.

◆ Setting items
• On delay time : A period of time necessary for the event to change from OFF to ON after the internal contact input has been changed from OFF to ON.
• OFF delay time : A period of time necessary for the event to change from ON to OFF after the internal contact input has been changed from ON to OFF.

◆ Operation specifications
• The event is turned ON when the internal contact input ON continues for the ON delay time or longer.
• The event is turned OFF when the internal contact input OFF continues for the OFF delay time or longer.
• In other cases, the current status is continued.


◆ CAUTION
The default settings for the ON delay and OFF delay are 0.0 s.
The default setting for the loop/channel definition of the internal contact input is 0. In this case, all timer events can be stopped or started through an internal contact input.
Additionally, if the loop/channel definition is set to 1 or more, one specified timer event can be stopped or started through an internal contact input.</td></tr>
</table>

■ Loop/channel definition

The definition varies depending on the operation type.

Loop/channel definition	Numbers corresponding to operation types	EVENT state at READY *1	Standby *2
Define the loop number (1 to 16) of the operation type	13 to 15, 26 to 28	○	○
	62, 63	○	×
Specify the loop number (1 to 16) for standby or READY mode	61, 70	○	×
Specify the standard number (2048 to 3071).	26 to 28	×	×

*1. ○ : Continuation/Forced OFF can be selected, × : Always Continuation

*2. ○ : Standby/No standby can be selected, × : Always No standby

■ Standby and Operation in READY mode

"Standby" is a function that does not turn ON the event even though the event satisfies the ON conditions when the module is turned ON or when READY mode is changed to RUN mode.
The event is turned ON when the ON conditions are satisfied again once the OFF conditions have been satisfied.

	READY		Changing from READY to RUN	
Event status when set to READY / Standby setting	0: Continuation	1: Forced OFF	0: Continuation	1: Forced OFF
0: No standby	Usual operation	OFF	Usual operation	Usual operation
1: Standby	OFF	OFF	OFF (standby state)	OFF (standby state)

■ Decimal point position

The decimal point position of the main setting and sub-setting of the Operating point bank and the hysteresis setting of the Event config. bank can be changed.

■ ON delay and OFF delay

ON delay is a function that delays the timing at which the event status is changed from OFF to ON. OFF delay is a function that delays the timing at which the event status is changed from ON to OFF. However, note that the operation when the operation type is set to the timer event is described on the previous page.

5 - 2 Internal Contact IN

If the internal contact input is configured, it is possible to retrieve ON/OFF data, such as the user-defined bit that is specified for the input type, as the internal contact input of the module.

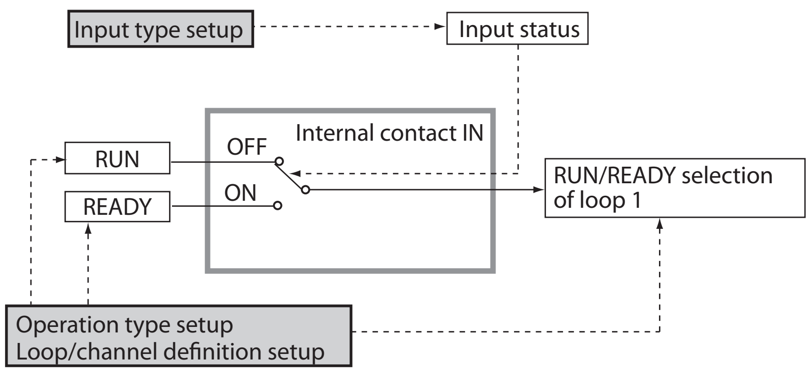
The mode selection operation specified in the operation type can be performed with the ON/OFF data in the specified input type.

■ Banks and settings

Folder name	Bank name	Item name	Settings	User level
Function	Internal contact IN	Operation type	0: No function 5: Linearization table group 21: RUN/READY mode selection 22: AUTO/MANUAL mode selection 46: Timer stop/start selection 47: Release all latches	Simple Standard Multi-function
		Input type	1024 to 2047: Standard bit ☞ Standard Bits (on page App-9)	
		Loop/channel definition	0 to 127	
		Weighting	0 to 127	

■ Example 1: RUN/READY mode selection from the user-defined bit

As shown below, if the status of user defined bit 1 is ON or OFF, the Run/Ready mode selection switches the mode of loop 1 to READY or RUN, respectively.



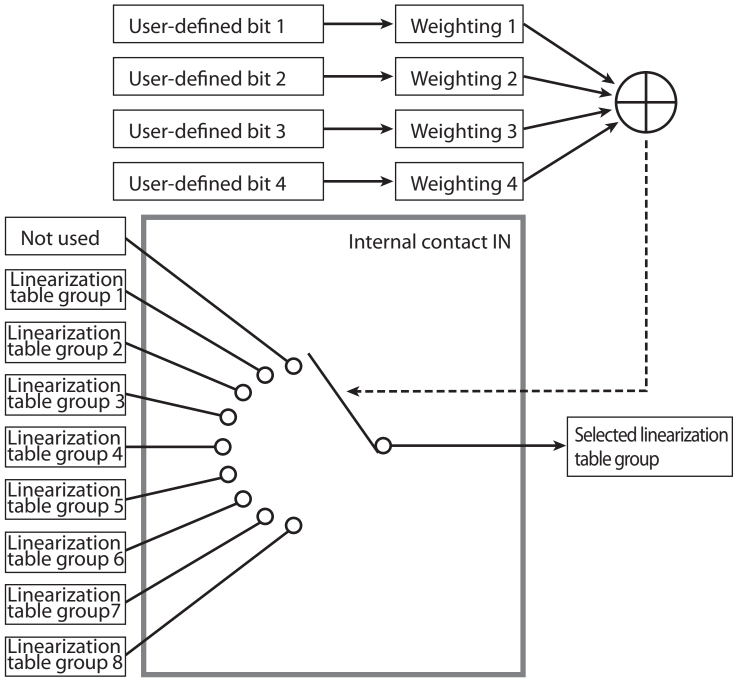
Set the RUN/READY mode selection to internal contact Group 1.

Configure the settings as shown below in the Internal contact IN bank.

Folder name	Bank name	Item name	Settings	User level
Function	Internal contact IN	(Internal contact IN Group 1) Operation type	21: RUN/READY mode selection	Simple Standard Multi-function
		(Internal contact IN Group 1) Input type	1408: User-defined bit 1	
		(Internal contact IN Group 1) Loop/channel definition	1: Loop 1	
		(Internal contact IN Group 1) Weighting	(Invalid setting)	

■ Example 2: Selecting linearization table groups from user-defined bits

The example below shows that a linearization table group (1 to 8) is selected for channel 1 using user-defined bits 1 to 4 as the input types.



User-defined bit 1	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
User-defined bit 2	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF
User-defined bit 3	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF
User-defined bit 4	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
Sum of weights	0	1	2	3	4	5	6	7	8
Selected linearization table group	Disabled	1	2	3	4	5	6	7	8

Set the linearization table group for internal contact inputs 1 to 4.

In the internal contact input bank, configure 4 internal contact input groups as follows.

Folder name	Bank name	Item name	Settings	User level
Function	Internal contact IN	(Internal contact IN Group 1) Operation type	5: Linearization table group selection	Simple Standard Multi-function
		(Internal contact IN Group 1) Input type	1408: User-defined bit 1	
		(Internal contact IN Group 1) Loop/channel definition	1: Channel 1	
		(Internal contact IN Group 1) Weighting	1	
		(Internal contact IN Group 2) Operation type	5: Linearization table group selection	
		(Internal contact IN Group 2) Input type	1409: User-defined bit 2	
		(Internal contact IN Group 2) Loop/channel definition	1: Channel 1	
		(Internal contact IN Group 2) Weighting	2	
		(Internal contact IN Group 3) Operation type	5: Linearization table group selection	
		(Internal contact IN Group 3) Input type	1410: User-defined bit 3	
		(Internal contact IN Group 3) Loop/channel definition	1: Channel 1	
		(Internal contact IN Group 3) Weighting	4	
		(Internal contact IN Group 4) Operation type	5: Linearization table group selection	
		(Internal contact IN Group 4) Input type	1411: User-defined bit 4	
		(Internal contact IN Group 4) Loop/channel definition	1: Channel 1	
		(Internal contact IN Group 4) Weighting	8	

■ Operation type

Select the operation type to be switched by the internal contact input from the table below.

Operation type	Loop/channel definition
0: No function	0 to 127: Invalid
5: Linearization table group	0: Invalid 1: Channel 1 2: Channel 2 3: Channel 3 4: Channel 4 5: Channel 5 6: Channel 6 7: Channel 7 8: Channel 8 9 to 127: Invalid
21: RUN/READY mode selection	0: All loops 1: Loop 1 2: Loop 2 3: Loop 3 4: Loop 4 5: Loop 5 6: Loop 6 7: Loop 7 8: Loop 8 9: Loop 9 10: Loop 10 11: Loop 11 12: Loop 12 13: Loop 13 14: Loop 14 15: Loop 15 16: Loop 16 17 to 127: Invalid
22: AUTO/MANUAL mode selection	0: All loops 1: Loop 1 2: Loop 2 3: Loop 3 4: Loop 4 5: Loop 5 6: Loop 6 7: Loop 7 8: Loop 8 9: Loop 9 10: Loop 10 11: Loop 11 12: Loop 12 13: Loop 13 14: Loop 14 15: Loop 15 16: Loop 16 17 to 127: Invalid
46: Timer stop/start selection	0: All timer events 1: Timer event 1 2: Timer event 2 3: Timer event 3 4: Timer event 4 5: Timer event 5 6: Timer event 6 7: Timer event 7 8: Timer event 8 9: Timer event 9 10: Timer event 10 11: Timer event 11 12: Timer event 12 13: Timer event 13 14: Timer event 14 15: Timer event 15 16: Timer event 16 17: Timer event 17 18: Timer event 18 19: Timer event 19 20: Timer event 20 21: Timer event 21 22: Timer event 22 23: Timer event 23 24: Timer event 24 25 to 127: Invalid
47: Release all latches	0 to 127: Invalid

■ Input type

Specifies the ON/OFF data that the internal contact input uses as input. ON/OFF data shows a variety of states of the module and is called "standard bit".

■ Loop/channel definition

Specifies the target loop or channel for the internal contact input operation. The meaning of the loop/channel definition varies depending on the operation type.

Refer to the operation type table above.

■ Weighting

Used to select a group whose operation type is "Linearization table group."

If the input is OFF, the value is "0." If the input is ON, the value is the setting.

When the operation type and loop/channel definition use the same internal contact input, the selection is determined by the sum of weighting values as shown in the table below.

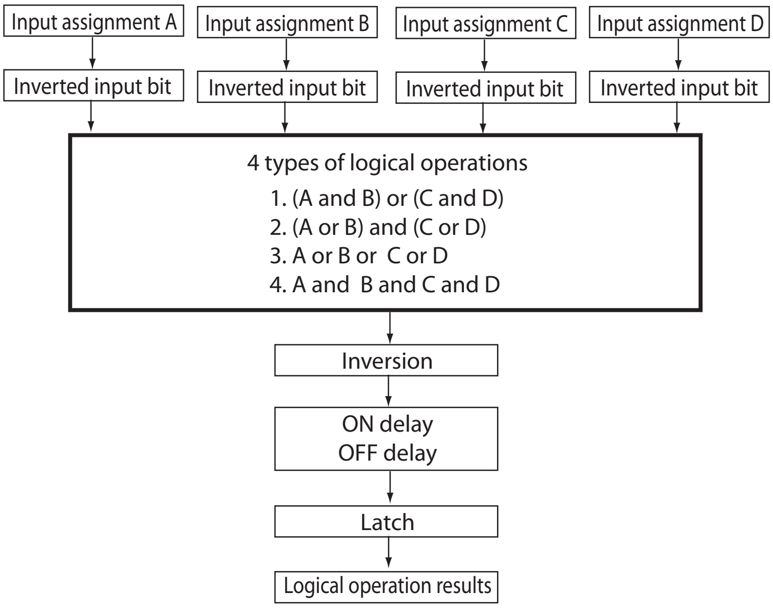
Sum of weights / Operation type	0	1 or more
Linearization table group	No linearization	The same number of groups as the sum of the weights is selected.

5 - 3 Logical Operations

The module is capable of logical operation (Boolean operation consisting of "0" and "1") corresponding to various module states and the logical operation results can be used as ON/OFF outputs or internal contact inputs.

32 groups of logical operations are provided. One operation group consists of four inputs and one output.

Four types of logical operations are available. Furthermore, the input or output logic can be inverted.



■ Processing order for logical operations

Logical operation results can be used as inputs for logical operations in the same group or a different group. Logical operations are executed at intervals of the cycle period in the group No. order.

Therefore, the logical operation results of a smaller group No. can be used in the same cycle period. The logical operation results in the same group No. or a larger group No. are used in the next cycle period.

Note

- Logical operations 1 to 16 are executed before Internal contact IN and 17 to 32 are executed afterwards.

  ☞ ■ Processing Order (on page App-2).

■ Banks and settings

Folder name	Bank name	Item name	Details	User level
Function	Logical operation	Computation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	Standard Multi-function
		Input assignment A	Standard bit code (1024 to 2047)	
		Input assignment B	Standard bit code (1024 to 2047)	
		Input assignment C	Standard bit code (1024 to 2047)	
		Input assignment D	Standard bit code (1024 to 2047)	
		Inverted input bit A	0: Direct 1: Reverse	
		Inverted input bit B	0: Direct 1: Reverse	
		Inverted input bit C	0: Direct 1: Reverse	
		Inverted input bit D	0: Direct 1: Reverse	
		ON delay time	0.0 to 3200.0 s	
		OFF delay time	0.0 to 3200.0 s	
		Inversion	0: Direct 1: Reverse	
		Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	

■ Example

The following is an example where if any of event 1, event 2, or representative of all alarms is turned ON using logical operation Group 1, digital output 1 is turned ON.

(1) Configure logical operation Group 1.
In the logical operation bank, set as follows.

Folder name	Bank name	Item name	Details	User level
Function	Logical operation	(Logical operation Group 1) Computation type	3: Computation 3: (A or B or C or D)	Standard Multi-function
		(Logical operation Group 1) Input assignment A	1088: Event 1	
		(Logical operation Group 1) Input assignment B	1089: Event 2	
		(Logical operation Group 1) Input assignment C	1792: Representative of all alarms	
		(Logical operation Group 1) Input assignment D	1024: OFF	
		(Logical operation Group 1) Inverted input bit A	0: Direct	
		(Logical operation Group 1) Inverted input bit B	0: Direct	
		(Logical operation Group 1) Inverted input bit C	0: Direct	
		(Logical operation Group 1) Inverted input bit D	0: Direct	
		(Logical operation Group 1) ON delay time	0.0 s	
		(Logical operation Group 1) OFF delay time	0.0 s	
		Result of logical operation 1	0: Direct	
		(Logical operation Group 1) Latch	0: No latch	

(2) Apply the results of logical operation 1 to digital output 1.
In the DO output bank, set as follows.

Folder name	Bank name	Item name	Details	User level
Input-output	DO output	(DO output 1) Output type	1440: Logical Operation 1	Simple Standard Multi-function
		(DO output 1) Latch	0: No latch	Standard Multi-function
		(DO output 1) Time proportional operation type	(Invalid setting)	Simple Standard Multi-function
		(DO output 1) Min. ON/OFF time	10 ms	
		(DO output 1) Time proportional cycle	(Invalid setting)	
		(DO output 1) Linearization table group definition	(Invalid setting)	Standard Multi-function
		(DO output 1) Phase shift	(Invalid setting)	Multi-function
		(DO output 1) ON delay time	(Invalid setting)	Standard Multi-function

■ Input assignments A to D

Specify a standard bit code in input assignments A to D.

■ Inverted input bit A to D

Specify whether to reverse the status of the standard bit specified in input assignments A to D.

0: Direct

1: Reverse

■ Calculation type

The calculation selected from the 4 options is executed. (The results from inverted input bits A to D are used.)

1: Calculation 1 (A and B) or (C and D)

2: Calculation 2 (A or B) and (C or D)

3: Calculation 3: (A or B or C or D)

4: Calculation 4 (A and B and C and D)

■ Inversion

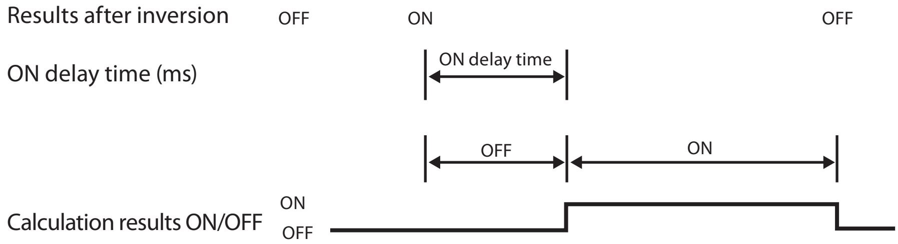
Specify whether to reverse the calculation results specified in the calculation type.

0: Direct

1: Reverse

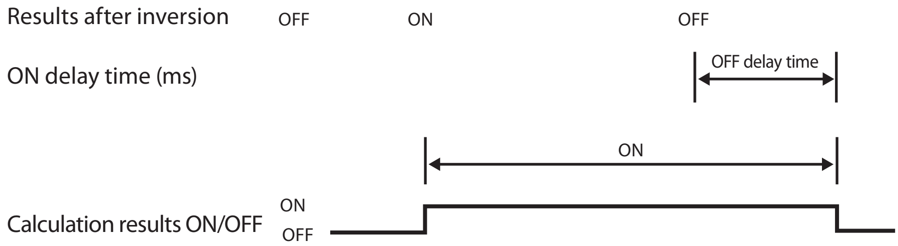
■ ON delay time

Specify whether to use ON delay for the calculation results. (The inverted results are used.)



■ OFF delay time

Specify whether to use OFF delay for the calculation results. (The inverted results are used.)



■ Latch

Select the latch operation for logical operations from the following.

0: No latch

1: Latch when ON

2: Latch when OFF (except OFF before power ON)

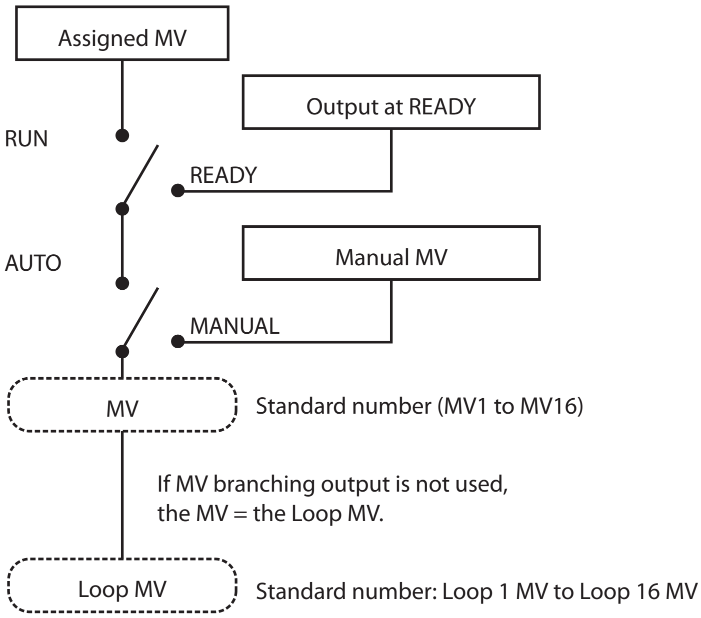
To release the latch, use one of the following methods.

- In “Setup,” set “Release all latches” to 1 (Release latch).
  Note: This can be done only through the loader or host communications.
- In “Internal contact IN,” set "47 (Release all latches)."
- In “Logical operation,” set “Latch” to 0 (No latch).
- Turn the module off and on.

5 - 4 Loop (Time Proportioning)

By changing the loop mode (RUN/READY or AUTO/MANUAL), the MV can be changed to the desired value.

■ Diagram of the relationship between loop mode and the MV



Loop mode		MV
RUN	AUTO	MV for the MV assignment
	MANUAL	Manual MV
READY	AUTO	Output at READY
	MANUAL	Manual MV

■ Banks and settings

Folder name	Bank name	Item name	Details	User level
Basic	Loop (Time propor.)	Output operation at changing Auto/Manual	0: Bumpless 1: Preset	Simple Standard Multi-function
		Preset MANUAL value	0.0 to 100.0	
		Output at READY	0.0 to 100.0	
		MV assignment	0: OFF/Disabled 2048 to 3071: Standard number ☞ Standard Numbers (on page App-11)	

■ MV assignment

The MV assignment is the MV setting if the loop mode is RUN and AUTO.

■ Output at READY

The Output at READY is the MV setting if the loop mode is RUN and AUTO.

■ Output operation at changing Auto/Manual

The Output operation at changing Auto/Manual is the manual MV setting if the loop mode is changed from AUTO to MANUAL.

If "0: Bumpless" is set, manual MV will retain the MV status.

If "1: Preset" is set, manual MV will be the preset MANUAL value.

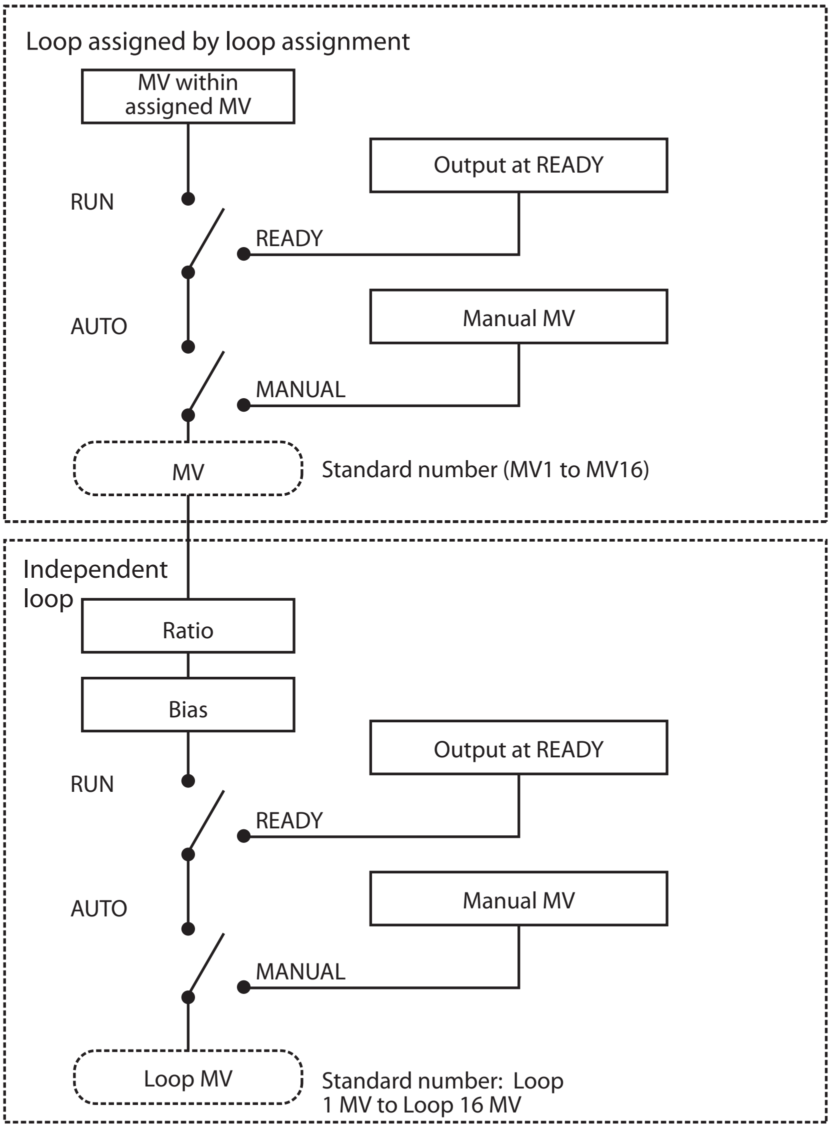
■ Preset MANUAL value

Preset MANUAL value is the MV setting if the loop mode is changed from AUTO to MANUAL, when Output operation at changing Auto/Manual is set to Preset.

5 - 5 MV Branching Output

MV branching outputs (up to 16) with ratios or biases can be executed using the MV of any loop.

■ Diagram of the relationship between loop mode and the MV

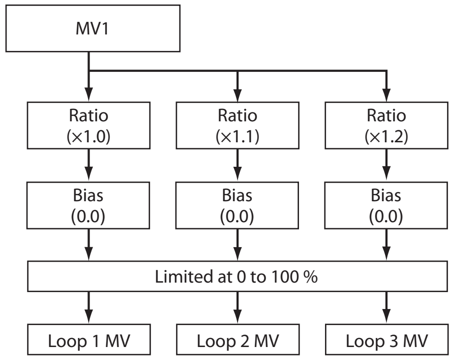


■ Banks and settings

Folder name	Bank name	Item name	Settings	User level
Function	MV Branching Output	Loop assignment	0: Disabled 1: Loop 1 2: Loop 2 3: Loop 3 4: Loop 4 5: Loop 5 6: Loop 6 7: Loop 7 8: Loop 8 9: Loop 9 10: Loop 10 11: Loop 11 12: Loop 12 13: Loop 13 14: Loop 14 15: Loop 15 16: Loop 16 2048 to 3071: Standard number ☞ Standard Numbers (on page App-11)	Simple Standard Multi-function
		Ratio	0.01 to 320.00	
		Bias	-199.00 to +320.00	

■ Example

This section describes how to assign ratios of 1.0, 1.1, and 1.2 to MV1 so that the calculation results are applied to Loop 1 MV to Loop 3 MV, respectively.



(1) Configure MV1.
In the MV branching output bank, set as follows.

Folder name	Bank name	Item name	Settings	User level
Function	MV Branching Output	(MV branching output 1) Loop assignment	1: Loop 1	Multi-function
		(MV branching output 1) Ratio	1.00	
		(MV branching output 1) Loop Bias	0.00	

(2) Configure MV2.
In the MV branching output bank, set as follows.

Folder name	Bank name	Item name	Settings	User level
Function	MV Branching Output	(MV branching output 2) Loop assignment	1: Loop 1	Multi-function
		(MV branching output 2) Ratio	1.10	
		(MV branching output 2) Loop Bias	0.00	

(3) Configure MV3.
In the MV branching output bank, set as follows.

Folder name	Bank name	Item name	Settings	User level
Function	MV Branching Output	(MV branching output 3) Loop assignment	1: Loop 1	Multi-function
		(MV branching output 3) Ratio	1.20	
		(MV branching output 3) Bias	0.00	

Handling precautions

- Ratio and bias do not operate if the loop mode is set to "MANUAL and READY" in "Loop No./Standard number assignment."
- The loop MV is limited to 0 to 100 %.

■ Loop assignment

Specify the MV if the loop mode is RUN and AUTO.

For the loop assignment, select one from Loop 1 to Loop 16 and a standard number.

■ Ratio and bias

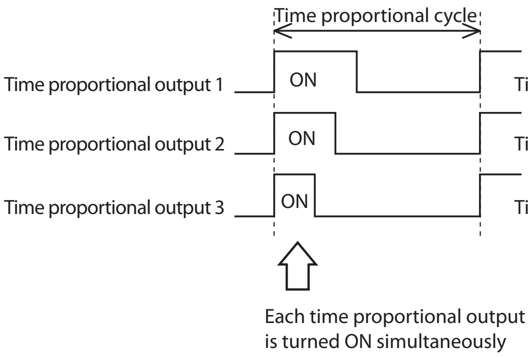
If the loop mode is RUN and AUTO, the ratio and bias work for the MV specified in the loop assignment. The calculation results will be the loop MV (standard number: Loop 1 MV to Loop 16 MV)

MV for the loop assignment x Ratio + Bias = Loop MV

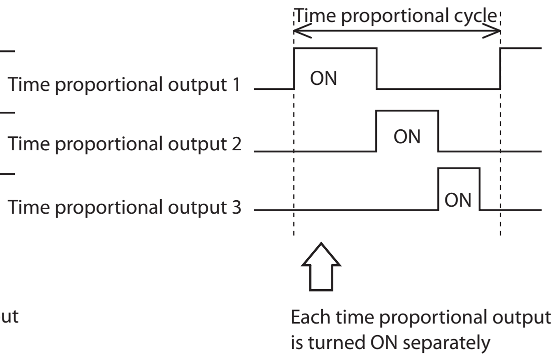
5 - 6 Energy Conservation Time Proportioning

The energy conservation time proportional function can prevent multiple time proportional outputs from being generated at the same time.

Example of operation if energy conservation time proportioning not used.



Example of operation if energy conservation time proportioning is used.



Time proportional outputs (DO1 to DO16) can be put together in an energy conservation time proportional group. An energy conservation time proportional group consists of one master output and one or more slave outputs. The master output is time proportional output 1 in the figure shown above.

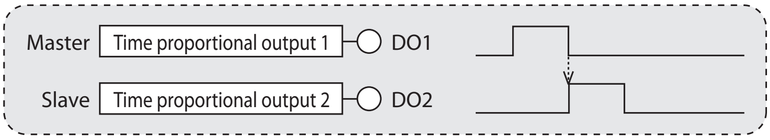
- The master output turns on from the beginning of the time proportional cycle.
- The first slave output turns on after the master output turns off.
- The second slave output turns on after the first slave output turns off.
- The subsequent slave outputs operate in the same way. In other words, they turns on after the previous one turns off.

■ Banks and settings

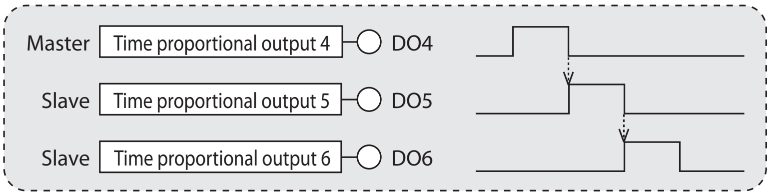
Folder name	Bank name	Item name	Settings	User level
Function	Energy conservation	Energy conservation time proportional operation	0: Disabled 1: Used	Multi-function
		Energy conservation delay time	0 to 1,000 ms	
		Master/slave selection	0: Master 1: Not master	
		Time proportional slave channel	1: Time proportioning 1 2: Time proportioning 2 3: Time proportioning 3 4: Time proportioning 4 5: Time proportioning 5 6: Time proportioning 6 7: Time proportioning 7 8: Time proportioning 8 9: Time proportioning 9 10: Time proportioning 10 11: Time proportioning 11 12: Time proportioning 12 13: Time proportioning 13 14: Time proportioning 14 15: Time proportioning 15 16: Time proportioning 16	

■ Example

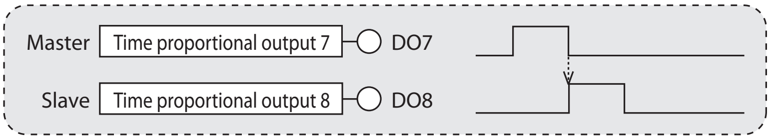
This section describes how to create three energy conservation time proportional groups and assign outputs 1 to 2, 4 to 6, and 7 to 8 to group 1, 2, and 3 respectively.



	1	2
Energy conservation time proportional operation	1 : Used	1 : Used
Energy conservation delay time	10	10
Master/slave selection	0 : Master	1 : Other than master
Time proportional slave channel	2 : Time proportioning 2	2 : Time proportioning 2



	4	5	6
Energy conservation time proportional operation	1 : Used	1 : Used	1 : Used
Energy conservation delay time	10	10	10
Master/slave selection	0 : Master	1 : Other than master	1 : Other than master
Time proportional slave channel	5 : Time proportioning 5	6 : Time proportioning 6	6 : Time proportioning 6



	7	8
Energy conservation time proportional operation	1 : Used	1 : Used
Energy conservation delay time	10	10
Master/slave selection	0 : Master	1 : Other than master
Time proportional slave channel	8 : Time proportioning 8	8 : Time proportioning 8

Note

- For the last time proportional slave channel in the group, assign its own number as its slave output.

■ Master/slave selection

The output whose master/slave selection is set to "0: Master" turns on first in that group’s time proportional cycle.

■ Time proportional slave channels

Specify the slave outputs (the following output channels) for each group.

For the last time proportional slave channel in the group, assign its own number as its slave output.

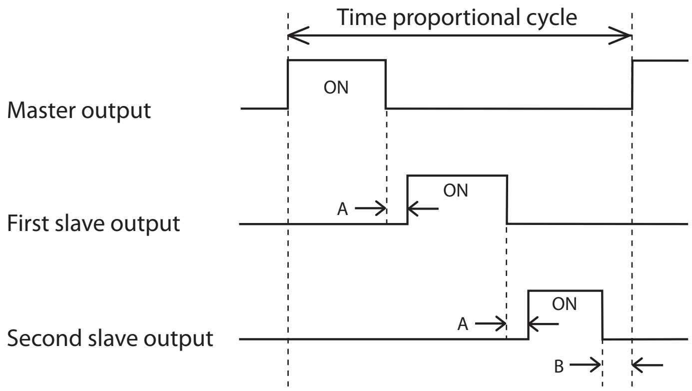
■ Energy conservation delay time

This is configured on the slave outputs.

When the energy conservation delay time has elapsed after the previous output turned OFF, the next output is generated so that overlapping of actuator operations can be avoided. This is to prevent overlapping of time proportional outputs that can occur due to the delay in actuator operation. (See A in the chart below.)

Additionally, before the end of the time proportional cycle, an energy conservation delay time OFF is inserted. This is to prevent overlapping of outputs when the master output turns ON.

(See B in the chart below.)



Handling precautions

◎Before use, make sure to do the following.

- Set the same time proportional cycle for each output in the group.
- Be sure to set "Actuator-life-oriented."
- For slave channels, be sure to set the energy conservation delay time to cover up the delay in actuator operation.
- When selecting the master channel and slave channel within a group, select them in the same order as in the example (master channel < slave channel).

◎Observe the following restrictions on use.

- If the master channel output is so large that a slave channel output time cannot fall within the time proportional cycle, the slave time proportional output is aborted at the end of the time proportional cycle. As a result, the control operation results might not be fully output.
- The energy conservation time proportional output results are prioritized even in MANUAL and READY modes. Therefore, the set MV may not be output depending on the master channel MV .
- The total amount of control outputs and energy conservation delay times must be 100 % of or less than the cycle time. If the total time exceeds the cycle time, the slave channels cannot be controlled by the settings.
- Controllability may vary significantly depending on whether energy conservation time proportioning is used or not.

5 - 7 Approximation by Linearization Table

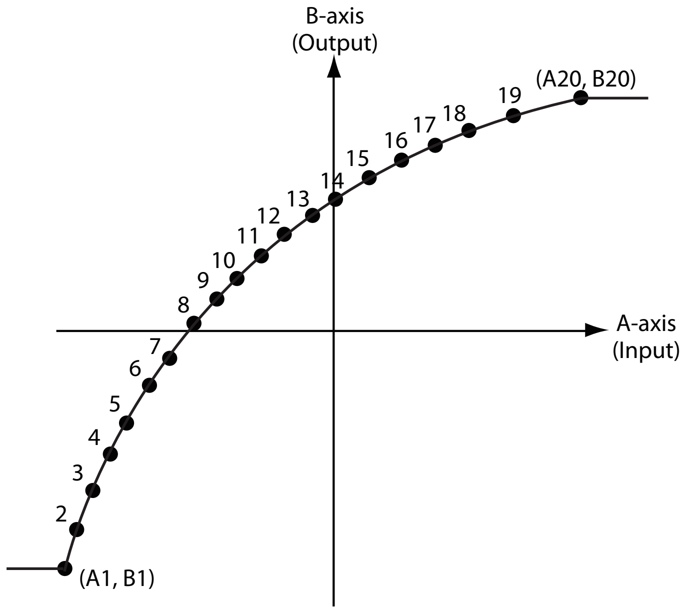
Approximation by linearization can be used for DO outputs. There are eight linearization groups. Each linearization group has 20 points.

☞ DO output (time proportional output) process block diagram (on page App-5).

Settings A1 to A20 are input values for the approximation by linearization table while settings B1 to B20 are output values for the approximation by linearization table. They are shown in the graph below.

If the input is A1 or less, the output is B1.

If the input is A20 or more, the output is B20.



■ Approximation by linearization table

To use the approximation by linearization table, when setting the linearization table group definition for DO output, configure the use of the settings or the internal contact input to select the linearization table group.

■ Banks and settings

Folder name	Bank name	Item name	Settings	User level
Function	Linearization table	Breakpoint decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point 5: 5 digits after the decimal point	Standard Multi-function
		Breakpoint A1	-19999 to +32000 U	
		Breakpoint A2	-19999 to +32000 U	
		Breakpoint A3	-19999 to +32000 U	
		Breakpoint A4	-19999 to +32000 U	
		Breakpoint A5	-19999 to +32000 U	
		Breakpoint A6	-19999 to +32000 U	
		Breakpoint A7	-19999 to +32000 U	
		Breakpoint A8	-19999 to +32000 U	
		Breakpoint A9	-19999 to +32000 U	
		Breakpoint A10	-19999 to +32000 U	
		Breakpoint A11	-19999 to +32000 U	
		Breakpoint A12	-19999 to +32000 U	
		Breakpoint A13	-19999 to +32000 U	
		Breakpoint A14	-19999 to +32000 U	
		Breakpoint A15	-19999 to +32000 U	
		Breakpoint A16	-19999 to +32000 U	
		Breakpoint A17	-19999 to +32000 U	
		Breakpoint A18	-19999 to +32000 U	
		Breakpoint A19	-19999 to +32000 U	
		Breakpoint A20	-19999 to +32000 U	
		Breakpoint B1	-19999 to +32000 U	
		Breakpoint B2	-19999 to +32000 U	
		Breakpoint B3	-19999 to +32000 U	
		Breakpoint B4	-19999 to +32000 U	
		Breakpoint B5	-19999 to +32000 U	
		Breakpoint B6	-19999 to +32000 U	
		Breakpoint B7	-19999 to +32000 U	
		Breakpoint B8	-19999 to +32000 U	
		Breakpoint B9	-19999 to +32000 U	
		Breakpoint B10	-19999 to +32000 U	
		Breakpoint B11	-19999 to +32000 U	
		Breakpoint B12	-19999 to +32000 U	
		Breakpoint B13	-19999 to +32000 U	
		Breakpoint B14	-19999 to +32000 U	
		Breakpoint B15	-19999 to +32000 U	
		Breakpoint B16	-19999 to +32000 U	
		Breakpoint B17	-19999 to +32000 U	
		Breakpoint B18	-19999 to +32000 U	
		Breakpoint B19	-19999 to +32000 U	
		Breakpoint B20	-19999 to +32000 U	

■ Example

This section shows an example of use of the approximation by linearization table of the linearization table group 1 for DO1 output.
An output of 0.0 to 100.0 is converted to other characteristics of 0.0 to 100.0.

(1) Specify the linearization table group.
In the DO output bank, set as follows.

Folder name	Bank name	Item name	Settings	User level
Input-output	DO output	(DO1 output) Linearization table group definition	1: 1 group	Standard Multi-function

(2) Set the linearization table.
Configure the settings in the linearization table bank as shown below.

Folder name	Bank name	Item name	Details	User level
Function	Linearization table	(Linearization table Group 1) Breakpoint decimal point position	1: 1 digit after the decimal point	Standard Multi-function
		(Linearization table Group 1) Breakpoint A1	0.0	
		(Linearization table Group 1) Breakpoint A2	17.4	
		(Linearization table Group 1) Breakpoint A3	25.0	
		(Omitted)		
		(Linearization table Group 1) Breakpoint A18	75.0	
		(Linearization table Group 1) Breakpoint A19	82.6	
		(Linearization table Group 1) Breakpoint A20	100.0	
		(Linearization table Group 1) Breakpoint B1	0.0	
		(Linearization table Group 1) Breakpoint B2	10.0	
		(Linearization table Group 1) Breakpoint B3	15.0	
		(Omitted)		
		(Linearization table Group 1) Breakpoint B18	85.0	
		(Linearization table Group 1) Breakpoint B19	90.0	
		(Linearization table Group 1) Breakpoint B20	100.0	

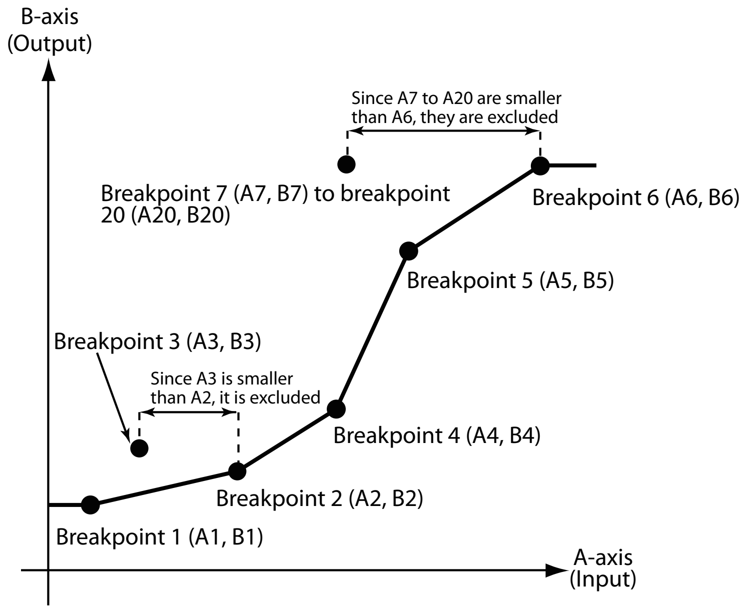
By setting the breakpoint decimal point position, the decimal point position for breakpoints A1 to A20 and breakpoints B1 to B20 is specified.

■ If the increase in magnitude of the breakpoints on the A-axis is not in numerical order

Linearization is made excluding deviation points.

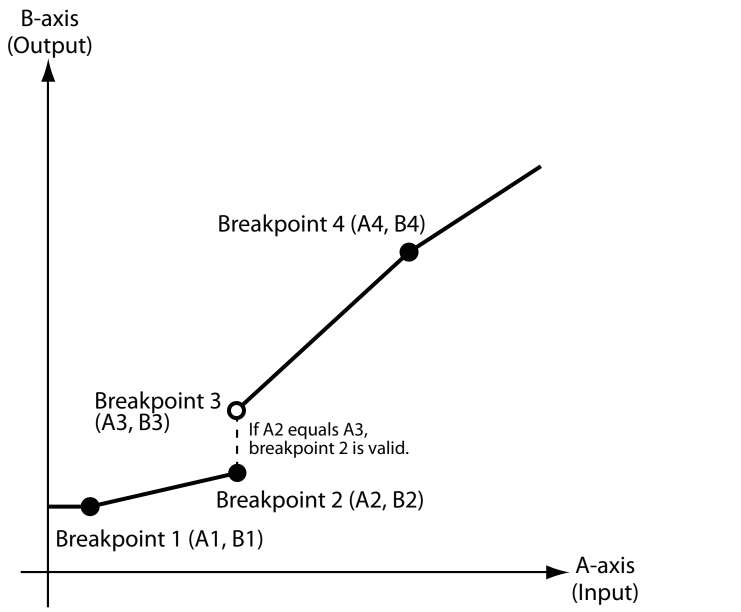
It is possible not to use breakpoints in the middle. (breakpoint 3 shown in the figure below.)

It is possible not to use excess breakpoints. (Breakpoints 7 to 20 shown in the figure below.)



■ If two breakpoints have the same value on the A-axis

The breakpoint with the smaller value on the B-axis is valid. In addition, the two points cannot be connected by a straight line.



Chapter 6. OTHER FUNCTION SETTINGS

6 - 1 UFLED

The UFLED function assigns LED conditions (off, lit, flash) to 2 LED indicators (F0 to F1).

When the bit condition selected for the lighting condition becomes 1, the LED indicator is lit or flashes as selected for the lighting status.

■ Banks and settings

The following settings can be applied to the LED operation lamps (F0 to F1).

LED name	Color	Folder name	Bank name	Item name	Settings	User level
F0	Red	Other	UFLED settings	Lighting condition	1024 to 2047: Standard bit code	Standard Multi-function
			UFLED settings	Lighting status	0: Off 1: Lit 2: Lit (reverse condition) 3: Fast blink 4: Fast blink (reverse condition) 5: Slow blink 6: Slow blink (reverse condition)	
F1	Green	Other	UFLED settings	Lighting condition	1024 to 2047 (Same as F0)	
		Other	UFLED settings	Lighting status	0 to 6 (Same as F0)	

■ Lighting status

0: Off	Always off
1: Lit	When conditions for lighting are ON
2: Lit (Reverse)	When conditions for lighting are OFF
3: Fast blink	When conditions for lighting are ON
4: Fast blink (reverse condition)	When conditions for lighting are OFF
5: Slow blink	When conditions for lighting are ON
6: Slow blink (reverse condition)	When conditions for lighting are to OFF

! Handling precautions

- If time proportional output, etc. are assigned to the lighting conditions, the LEDs may not be lit if the ON time is 100 ms or less.

6 - 2 Start Delay at Power ON

The time between turning the power on and the start of operation can be extended to up to 60 s.

Once the total amount of the startup time specified for the module (9 s) and this setting has elapsed, operation starts.

The startup time required for the module cannot be shortened.

The initial setting is 0 s.

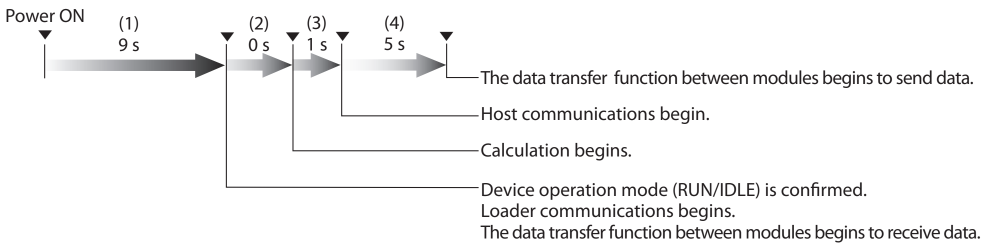
■ Banks and settings

Folder name	Bank name	Item name	Settings	User level
Basic	Setup	Start delay at power ON	0 to 60 s	Standard Multi-function

Note

The startup process is shown below.

During the start delay after the power is turned on, the middle and bottom LED operation indicators blink slowly.



(1) Startup:	9 seconds (fixed)
(2) Start delay at power ON:	0 seconds (initial value) This setting can be changed.
(3) Waiting time for host communications to begin data reception:	1 second (fixed)
(4) Waiting time for data transfer between modules:	5 seconds (fixed)

Handling precautions

- Use "Start Delay at Power On" so that the module waits for partner modules to start when establishing communications.

6 - 3 Data Transfer Function between Modules

Handling precautions

- The data transfer function between modules is configured from the loader. The settings for the data transfer function between modules cannot be written or read through host communications.

This function transfers data between modules setting module parameters.

■ Banks and settings

The following data can be transmitted by the function.

Folder name	Bank name	Parameter name	Numerical value	Bit
Basic	Loop (Time propor.)	MV assignment	○	–
Input-output	DO output	Output type	○	○
	EV Output	Output type	–	○
Event	Event config.	Loop/channel definition * Operation type (standard number)	○	–
Function	Internal contact IN	Input type	–	○
	Logical operation	Input assignment	–	○
	MV Branching Output	Loop assignment	○	–
Other	UFLED settings	Lighting condition	–	○

Handling precautions

- Caution when using the module that has executed the data transfer function between modules on other instrumentation
  - Initialize the module using the SLP-NX to cancel the function completely.
- If a loader is used to configure the function, both transmission and reception modules have the settings. If using a module that has been configured for data transfer between modules for other purposes, clear all related settings to disable the data transfer function.

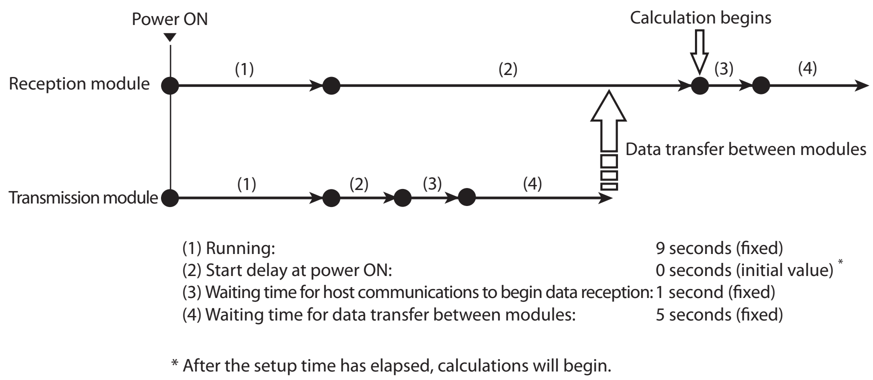
  The following problems could occur if the settings remain.
  * If there is a partner module: The module unintentionally executes the data transfer function between modules and may write data to the other module.
  * If there is no partner module: The module executes connection checks for non-existent partner modules and its normal communication performance may decline.
- Do not apply a project file that contains the data transfer function between modules to other projects which do not need the function. Otherwise, the function settings, which are not visible on the loader's setup screen, will be written and unintended operation due to the data transfer function could result.
- While the data transfer function between modules is working, even if the module does not operate normally due to the status of a partner module, the module status is continuation.
- This function cannot be used under control by a supervisor module.

Handling precautions

- If you want to start calculation after the reception module has received the data when turning on the power, configure the the reception module's parameter for "Start delay at power ON" so that it is over 7 seconds longer than the transmission module's parameter for "Start delay at power ON." Otherwise, calculation will begin before data reception is complete.

  * For example, be careful if 2 modules send and receive data to and from each other.

  Be sure to fully consider the design for power supply and start-up before use.



■ Transmission timeout between modules

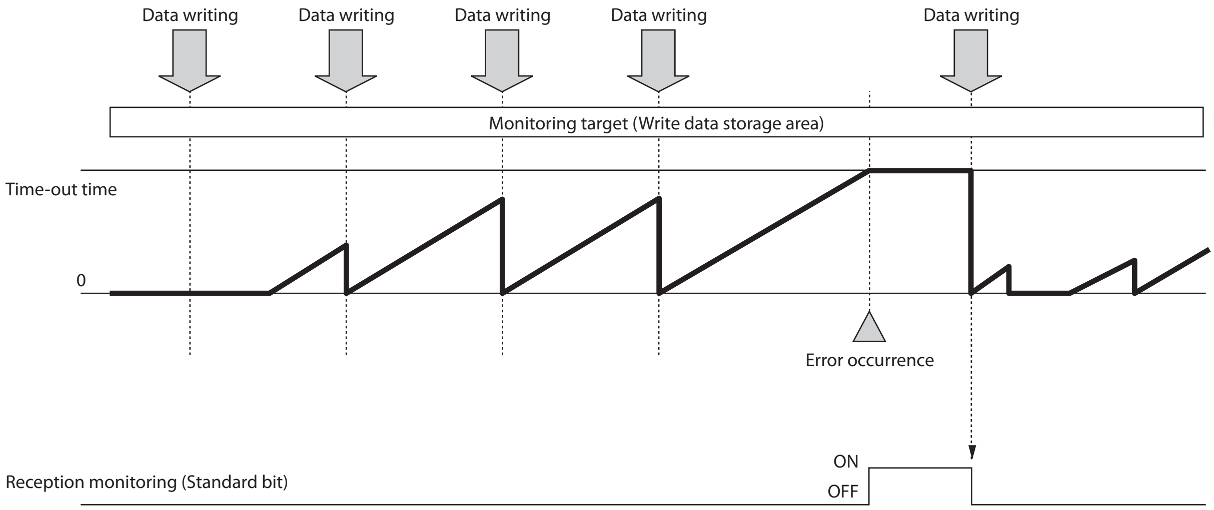
Alarm (AL32) will be activated if there is no response from the other module during communication.

Note

- Chapter 5 “Function for Transmitting Data Between Modules” in Network Instrumentation Module User's Manual Network Design Version, CP-SP-1313E.
- "Setting Up the Data Transfer Function between Modules" (on page 6-21) in section 6-3, "Editing Parameters" in Network Instrumentation Module Smart Loader Package SLP-NX User's Manual, CP-UM-5636E

6 - 4 Reception Monitoring

This function monitors whether user-defined bits and user-defined numbers have been written normally through communications.



■ Banks and settings

The following settings are possible for reception monitoring 1 to 16

Folder name	Bank name	Item name	Settings	User level
Function	Reception monitoring	Address	0: Not used 10081 to 10113: Address of user-defined bits 1 to 32 12224 to 12239: Address of user-defined numbers 1 to 16	Standard Multi-function
		Timeout	0 to 65,535 s	
		Mode	0: Without reception monitoring 1: With reception monitoring	

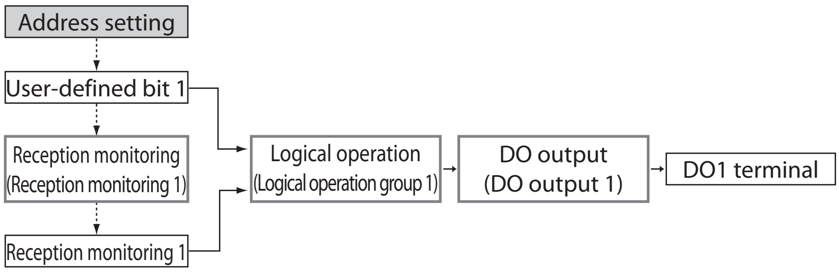
- Set the user-defined bit or user-defined number to monitor for writing, then set the time until an alarm occurs.
  * The address to monitor is any one of the user-defined numbers 1 to 16, or any one of the user-defined bits 1 to 32.
- If a reception error occurs, the corresponding standard bit (1920 to 1935) and the representative standard bit (1979) are activated.

Note

- ☞ Chapter 5 "Function for Transmitting Data Between Modules" in Network Instrumentation Module User's Manual Network Design Version, CP-SP-1313E.

■ Example 1: Turning OFF the output when there is a user-defined bit reception error

If user-defined bit 1 is monitored in Reception monitoring 1 and the ON/OFF status of User-defined bit 1 is output from the DO1 terminal, DO1 terminal output is turned OFF when there is a reception error (ON).



User-defined bit 1	Reception monitoring 1	Logical operation result 1	DO1 terminal
ON	OFF	ON	ON
OFF	OFF	OFF	OFF
ON	ON	OFF	OFF
OFF	ON	OFF	OFF

(1) Set Reception monitoring 1.
In the reception monitoring bank, set as follows.

Folder name	Bank name	Item name	Settings	User level
Function	Reception monitoring	(Reception monitoring 1) Address	10081: User-defined bit 1	Standard Multi-function
		(Reception monitoring 1) Time-out	2 s	
		(Reception monitoring 1) mode	1: With reception monitoring	

(2) In the input assignment for Logical operation group 1, set User-defined bit 1 and Reception monitoring 1. In the logical operation bank, set as follows.

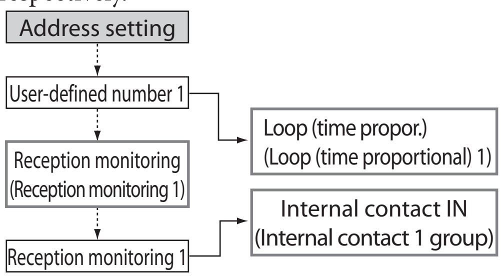
Folder name	Bank name	Item name	Settings	User level
Function	Logical operation	(Logical operation group 1) Calculation type	4: Calculation 1 (A and B and C and D)	Standard Multi-function
		(Logical operation group 1) Input assignment A	1408: User-defined bit 1	
		(Logical operation group 1) Input assignment B	1920: Reception monitoring 1	
		(Logical operation group 1) Input assignment C	1025: Always 1 (ON)	
		(Logical operation group 1) Input assignment D	1025: Always 1 (ON)	
		(Logical operation group 1) Inverted input bit A	0: Direct	
		(Logical operation group 1) Inverted input bit B	1: Reverse	
		(Logical operation group 1) Inverted input bit C	0: Direct	
		(Logical operation group 1) Inverted input bit D	0: Direct	
		(Logical operation group 1) ON delay time	0.0 s	
		(Logical operation group 1) OFF delay time	0.0 s	
		Result of logical operation 1	0: Direct	
		(Logical operation group 1) ON delay time	0: No latch	

(3) For the output type of DO output 1, configure the result of logical operation 1.
In the DO output bank, set as follows.

Folder name	Bank name	Item name	Settings	User level
Input-output	DO output	(DO output 1) Output type	1440: Result of logical operation 1	Simple Standard Multi-function
		(DO output 1) Latch	0: No latch	Standard Multi-function
		(DO output 1) Time proportional operation	(Invalid setting)	Simple Standard Multi-function
		(DO output 1) Min. ON/OFF time	10 ms	
		(DO output 1) Time proportional cycle	(Invalid setting)	
		(DO output 1) Linearization table group definition	(Invalid setting)	Standard Multi-function
		(DO output 1) Phase shift	(Invalid setting)	Multi-function
		(DO output 1) ON delay time	(Invalid setting)	Standard Multi-function

■ Example 2: RUN/READY mode selection when there is a user-defined number reception error

If user-defined number 1 is monitored in Reception monitoring 1 and "RUN/READY mode selection" is configured for Internal contact IN Group 1, the mode switches to READY or RUN when reception monitoring 1 is ON, or OFF, respectively.



Reception monitoring 1	RUN/READY	AUTO/MANUAL	Loop 1 MV
OFF	RUN	AUTO	User-defined number 1
OFF	RUN	MANUAL	MANUAL value
ON	READY	AUTO	Output at READY
ON	READY	MANUAL	Output at READY

(1) Set Reception monitoring 1.
In the reception monitoring bank, set as follows.

Folder name	Bank name	Item name	Settings	User level
Function	Reception monitoring	(Reception monitoring 1) Address	12224: User defined number 1	Standard Multi-function
		(Reception monitoring 1) Time-out	2 s	
		(Reception monitoring 1) mode	1: With reception monitoring	

(2) For the input type of Internal contact IN Group 1, set Reception monitoring 1. Configure the settings as shown below in the Internal contact IN bank.

Folder name	Bank name	Item name	Settings	User level
Function	Internal contact IN	(Internal contact IN group 1) Operation type	21: RUN/READY mode selection	Simple Standard Multi-function
		(Internal contact IN group 1) Input type	1920: Reception monitoring 1	
		(Internal contact IN group 1) Loop/channel definition	1: Loop 1	
		(Internal contact IN group 1) Weighting	(Invalid setting)	

(3) For the MV assignment of Loop (time propor.), set User-defined number 1. In the Loop (time propor.) bank, set as follows.

Folder name	Bank name	Item name	Settings	User level
Basic	Loop (Time propor.)	(Loop (time propor.) 1) Output operation at changing Auto/Manual	0: Bumpless	Simple Standard Multi-function
		(Loop (time propor.) 1) Preset MANUAL value	50.0	
		(Loop (time propor.) 1) Output at READY	0.0	
		(Loop (time propor.) 1) MV assignment	2111: User defined number 1	

6 - 5 Action for IDLE / SV Module Reception Timeout

Configure the action for IDLE / SV Module reception timeout.

If a communication error occurs during either IDLE or SV communications, output terminals execute the set operation.

■ Banks and settings

Folder name	Bank name	Item name	Setting range	User level
Basic	IDLE/SV com error op (DO)	Output type	0 to 5 (See ■ Output types)	Multi-function
		Output (%)	0.0 % to 100.0 %	
		Output (ON/OFF)	0: OFF 1: ON	
	IDLE/SV com error op (EV)	Output type	0 to 5 (See ■ Output types)	
		Output (ON/OFF)	0: OFF 1: ON	

■ Output type

The output type can be set independently for each output terminal (16 DO output terminals and 1 EV output terminal).

Output type	Operation during IDLE	During SV communication error
0: IDLE: Preset/SV com. error: Preset.	Preset	Preset
1: IDLE: Preset/SV com. error: Through.	Preset	Through
2: IDLE: Preset/SV com. error: Bumpless.	Preset	Bumpless
3: IDLE: Bumpless/SV com. error: Preset.	Bumpless	Preset
4: IDLE: Bumpless/SV com. error: Through.	Bumpless	Through
5: IDLE: Bumpless/SV com. error: Bumpless.	Bumpless	Bumpless

■ Output (%)

This setting is valid when the output type is set to "IDLE: Preset/SV com. error: Preset" and "Time proportional output" is assigned to the DO output.

■ Output (ON/OFF)

This setting is valid for EV output when the output type is set to "IDLE: Preset/SV com. error: Preset" and "ON/OFF output" or "One-shot pulse output" is assigned to DO output.

■ Output operation

- If "Preset" is set for the output operation:
  The module generates the output that is set for "IDLE/SV com error op" when the device operation mode changes to IDLE or a supervisor communication error occurs.
- If "Through" is set for the output operation:
  The module generates the output result for the DO and EV.
- If "Bumpless" is set for the output operation:
  The module generates the output result for the DO and EV before the device operation mode changes to IDLE or a supervisor communication error occurs.

Output type	Output operation	During IDLE/SV com error
Time proportioning	Preset	ON/OFF at the output value (%)
	Through	ON/OFF at the output result (%)
	Bumpless	Retains ON/OFF status at the output result (%) before the mode changes to IDLE or a SV communication error occurs
ON/OFF	Preset	ON or OFF at the output value
	Through	ON or OFF at the output result
	Bumpless	Retains ON or OFF status at the output result before the mode changes to IDLE or a SV communication error occurs
One-shot pulse	Preset	ON or OFF at the output value
	Through	ON or OFF at the output result
	Bumpless	If pulse output is in progress before the mode changes to IDLE or a SV communication error occurs, the status changes to OFF after the pulse time has lapsed.

Handling precautions

- While parameters are being written from the loader, the output type is the previously set operation.
- An SV communication error means a supervisor module reception timeout, which occurs when the module is combined with a supervisor module. If no supervisor module is used, no SV communication error occurs.
- ☞ 1-4 Operation Modes (on page 1-7)

Note

- ☞ DO output (ON/OFF output) process block diagram (on page App-4), DO output (Time proportional output) process block diagram (on page App-5), DO output (one-shot pulse output) process block diagram (on page App-6), and EV output (ON/OFF output) process block diagram (on page App-7).

■ Supervisor module reception timeout

When modules are under control by a supervisor module, if there is no transmission from the supervisor module for the specified time, the supervisor module reception timeout (standard bit 1982) occurs.

6 - 6 User-Defined Bit

User-defined bits are 32 ON/OFF variables that can be read and written using host or loader communications.

Folder name	Bank name	Item name	Settings	User level
Monitor	User-defined bit	User-defined bit 1	0: OFF 1: ON	Simple Standard Multi-function
		User-defined bit 2	0: OFF 1: ON	
		User-defined bit 3	0: OFF 1: ON	
		User-defined bit 4	0: OFF 1: ON	
		User-defined bit 5	0: OFF 1: ON	
		User-defined bit 6	0: OFF 1: ON	
		User-defined bit 7	0: OFF 1: ON	
		User-defined bit 8	0: OFF 1: ON	
		User-defined bit 9	0: OFF 1: ON	
		User-defined bit 10	0: OFF 1: ON	
		User-defined bit 11	0: OFF 1: ON	
		User-defined bit 12	0: OFF 1: ON	
		User-defined bit 13	0: OFF 1: ON	
		User-defined bit 14	0: OFF 1: ON	
		User-defined bit 15	0: OFF 1: ON	
		User-defined bit 16	0: OFF 1: ON	
		User-defined bit 17	0: OFF 1: ON	
		User-defined bit 18	0: OFF 1: ON	
		User-defined bit 19	0: OFF 1: ON	
		User-defined bit 20	0: OFF 1: ON	
		User-defined bit 21	0: OFF 1: ON	
		User-defined bit 22	0: OFF 1: ON	
		User-defined bit 23	0: OFF 1: ON	
		User-defined bit 24	0: OFF 1: ON	
		User-defined bit 25	0: OFF 1: ON	
		User-defined bit 26	0: OFF 1: ON	
		User-defined bit 27	0: OFF 1: ON	
		User-defined bit 28	0: OFF 1: ON	
		User-defined bit 29	0: OFF 1: ON	
		User-defined bit 30	0: OFF 1: ON	
		User-defined bit 31	0: OFF 1: ON	
		User-defined bit 32	0: OFF 1: ON	

■ Bank items

User-defined bits can be assigned to the following bank items

Folder name	Bank name	Item name	User level
Input-output	DO output	Output type	Simple Standard Multi-function
	EV Output	Output type	
Function	Internal contact IN	Input type	
	Logical operation	Input assignment A	Standard Multi-function
		Input assignment B	
		Input assignment C	
		Input assignment D	
Other	UFLED settings	Lighting condition	Standard Multi-function

■ Example

The following is an example where the module can receive ON/OFF data from a host device through communications and change the mode to RUN/READY.

When user-defined bit 1 is turned ON or OFF, the mode of loop 1 is switched to READY or RUN respectively.

(1) Set the RUN/READY mode selection to internal contact 1.
Configure the settings as shown below in the Internal settings IN bank.

Folder name	Bank name	Item name	Settings	User level
Function	Internal contact IN	(Internal contact group 1) Operation type	21: RUN/READY mode selection	Simple Standard Multi-function
		(Internal contact group 1) Input type	1408: User-defined bit 1	
		(Internal contact group 1) Loop/channel definition	1: Loop 1	
		(Internal contact group 1) Weighting	(Invalid setting)	

(2) Change the value of user-defined bit 1 using host communications.
Write 0 (OFF) or 1 (ON) in the data address for user-defined bit 1.

Note

- User-defined bits are also used for data transfer between modules.

6 - 7 User-Defined Numbers

User-defined numbers are 16 numerical variables that can be read and written using host or loader communications.

Folder name	Bank name	Item name	Settings	User level
Monitor	User-defined number	User-defined number 1	Single-precision floating-point range	Simple Standard Multi-function
		User-defined number 2	Single-precision floating-point range	
		User-defined number 3	Single-precision floating-point range	
		User-defined number 4	Single-precision floating-point range	
		User-defined number 5	Single-precision floating-point range	
		User-defined number 6	Single-precision floating-point range	
		User-defined number 7	Single-precision floating-point range	
		User-defined number 8	Single-precision floating-point range	
		User-defined number 9	Single-precision floating-point range	
		User-defined number 10	Single-precision floating-point range	
		User-defined number 11	Single-precision floating-point range	
		User-defined number 12	Single-precision floating-point range	
		User-defined number 13	Single-precision floating-point range	
		User-defined number 14	Single-precision floating-point range	
		User-defined number 15	Single-precision floating-point range	
		User-defined number 16	Single-precision floating-point range	

■ Bank items

User-defined numbers can be assigned to the following bank items

Folder name	Bank name	Item name	User level
Basic	Loop (Time propor.)	MV assignment	Simple Standard Multi-function
Input-output	DO output	Output type	
Event	Event config.	Loop/channel definition	

■ Example

The following is an example where the module receives numeric data from the host device through host communications, and then outputs it.

User-defined number 1 is used for time proportional output from DO output 1.

(1) Assign user-defined number 1 to DO output 1.
In the DO output bank, set as follows.

Folder name	Bank name	Item name	Settings	User level
Input-output	DO output	(DO output 1) Output type	1408: User defined number 1	Simple Standard Multi-function
		(DO output 1) Latch	(Invalid setting)	Standard Multi-function
		(DO output 1) Time proportional operation	0: Control oriented	Simple Standard Multi-function
		(DO output 1) Min. ON/OFF time	10 ms	
		(DO output 1) Time proportional cycle	2.0 s	
		(DO output 1) Linearization table group definition	0: Disabled	Standard Multi-function
		(DO output 1) Phase shift	(Invalid setting. Leave at initial value 0)	Multi-function
		(DO output 1) ON delay time	(Invalid setting)	Standard Multi-function

(2) Change the value of user-defined number 1 using host communications. Multiply the numeric value from the host device by 10 and input the result into the data address of user-defined number 1 in the user-defined number bank. (If the numeric value from the host device is 50.0 %, input 500 in user-defined number 1.)

Note

- User-defined numbers are also used for data transfer between modules.

6 - 8 Communication FL

Handling precautions

- There is no EEPROM area.

Communication FLs are 16 ON/OFF variables that can be read and written using host or loader communications.

Folder name	Bank name	Item name	Settings	User level
Monitor	Comm. input data	Communication FL1	0: OFF 1: ON	Simple Standard Multi-function
		Communication FL2	0: OFF 1: ON	
		Communication FL3	0: OFF 1: ON	
		Communication FL4	0: OFF 1: ON	
		Communication FL5	0: OFF 1: ON	
		Communication FL6	0: OFF 1: ON	
		Communication FL7	0: OFF 1: ON	
		Communication FL8	0: OFF 1: ON	
		Communication FL9	0: OFF 1: ON	
		Communication FL10	0: OFF 1: ON	
		Communication FL11	0: OFF 1: ON	
		Communication FL12	0: OFF 1: ON	
		Communication FL13	0: OFF 1: ON	
		Communication FL14	0: OFF 1: ON	
		Communication FL15	0: OFF 1: ON	
		Communication FL16	0: OFF 1: ON	

■ Bank items

Communication FLs can be assigned to the following bank items

Folder name	Bank name	Item name	User level
Input-output	DO output	Output type	Simple Standard Multi-function
	EV Output	Output type	
Function	Internal contact IN	Input type	
	Logical operation	Input assignment A	Standard Multi-function
		Input assignment B	
		Input assignment C	
		Input assignment D	
Other	UFLED settings	Lighting condition	Standard Multi-function

■ Example

The following is an example where the module receives ON/OFF data from the host device through host communications, and then outputs it.

Communication FL1 is used to output the host device ON/OFF data from DO output 1.

(1) Assign Communication FL1 to DO output 1.
In the DO output bank, set as follows.

Folder name	Bank name	Item name	Settings	User level
Input-output	DO output	(DO output 1) Output type	1728: Communication FL1	Simple Standard Multi-function
		(DO output 1) Latch	0: No latch	Standard Multi-function
		(DO output 1) Time proportional operation	(Invalid setting)	Simple Standard Multi-function
		(DO output 1) Min. ON/OFF time	10 ms	
		(DO output 1) Time proportional cycle	(Invalid setting)	
		(DO output 1) Linearization table group definition	(Invalid setting)	Standard Multi-function
		(DO output 1) Phase shift	(Invalid setting)	Multi-function
		(DO output 1) ON delay time	(Invalid setting)	Standard Multi-function

(2) Change the value of Communication FL1 using host communications. Write 0 (OFF) or 1 (ON) into the data address for Communication FL1 in the Comm. input data bank.

6 - 9 Communications MV

Handling precautions

- There is no EEPROM area.

Communication MVs are 16 numerical variables that can be read and written using host or loader communications.

Folder name	Bank name	Item name	Setting range	User level
Monitor	Comm. input data	Communications MV 1	0.0 to 100.0	Simple Standard Multi-function
		Communications MV 2	0.0 to 100.0	
		Communications MV 3	0.0 to 100.0	
		Communications MV 4	0.0 to 100.0	
		Communications MV 5	0.0 to 100.0	
		Communications MV 6	0.0 to 100.0	
		Communications MV 7	0.0 to 100.0	
		Communications MV 8	0.0 to 100.0	
		Communications MV 9	0.0 to 100.0	
		Communications MV 10	0.0 to 100.0	
		Communications MV 11	0.0 to 100.0	
		Communications MV 12	0.0 to 100.0	
		Communications MV 13	0.0 to 100.0	
		Communications MV 14	0.0 to 100.0	
		Communications MV 15	0.0 to 100.0	
		Communications MV 16	0.0 to 100.0	

■ Bank items

Communications MVs can be assigned to the following bank items

Folder name	Bank name	Item name	User level
Basic	Loop (Time propor.)	MV assignment	Simple Standard Multi-function
Input-output	DO output	Output type	
Event	Event config.	Loop/channel definition	

■ Example

The following is an example where the module receives numeric data from the host device through host communications, and then outputs it.

Communications MV 1 is used for time proportional output from DO output 1.

(1) Assign Communication MV1 to DO output 1.
In the DO output bank, set as follows.

Folder name	Bank name	Item name	Settings	User level
Input-output	DO output	(DO output 1) Output type	2400: Communications MV 1	Simple Standard Multi-function
		(DO output 1) Latch	(Invalid setting)	Standard Multi-function
		(DO output 1) Time proportional operation	0: Control oriented	Simple Standard Multi-function
		(DO output 1) Min. ON/OFF time	10 ms	
		(DO output 1) Time proportional cycle	2.0 s	
		(DO output 1) Linearization table group definition	0: Disabled	Standard Multi-function
		(DO output 1) Phase shift	(Invalid setting. Leave at initial value 0)	Multi-function
		(DO output 1) ON delay time	(Invalid setting)	Standard Multi-function

(2) Change the value of Communication MV1 using host communications. Multiply the numeric value from the host device by 10 and input the result into the data address of Communications MV 1 in the Comm. input data bank (If the numeric value from the host device is 50.0 %, input 500 in Communications MV 1.)

6 - 10 Communication PT (latch)

Communication PTs (latch) are 16 numerical variables that can be read and written using host or loader communications. Unkike Communication PTs (countdown), Communication PTs (latch) retains written values even if time has passed. Specify communication PT as the output type when DO output (one-shot pulse output) is used.

Folder name	Bank name	Item name	Setting range	User level
Monitor	Comm. input data	Communication PT 1 (latch)	0.00 to 320.00 s	Simple Standard Multi-function
		Communication PT 2 (latch)	0.00 to 320.00 s	
		Communication PT 3 (latch)	0.00 to 320.00 s	
		Communication PT 4 (latch)	0.00 to 320.00 s	
		Communication PT 5 (latch)	0.00 to 320.00 s	
		Communication PT 6 (latch)	0.00 to 320.00 s	
		Communication PT 7 (latch)	0.00 to 320.00 s	
		Communication PT 8 (latch)	0.00 to 320.00 s	
		Communication PT 9 (latch)	0.00 to 320.00 s	
		Communication PT 10 (latch)	0.00 to 320.00 s	
		Communication PT 11 (latch)	0.00 to 320.00 s	
		Communication PT 12 (latch)	0.00 to 320.00 s	
		Communication PT 13 (latch)	0.00 to 320.00 s	
		Communication PT 14 (latch)	0.00 to 320.00 s	
		Communication PT 15 (latch)	0.00 to 320.00 s	
		Communication PT 16 (latch)	0.00 to 320.00 s	

■ Bank items

Communication PTs (latch) can be assigned to the following bank items

Folder name	Bank name	Item name	User level
Input-output	DO output	Output type	Simple Standard Multi-function

■ Example

The following is an example where the module receives numeric data from the host device through host communications, and then outputs it.

Communication PT1 (latch) is used to output the host device numeric data from DO output 1.

(1) Assign Communication PT1 (latch) to DO output 1.
In the DO output bank, set as follows.

Folder name	Bank name	Item name	Settings	User level
Input-output	DO output	(DO output 1) Output type	17: Communication PT 1 (latch)	Simple Standard Multi-function
		(DO output 1) Latch	(Invalid setting)	Standard Multi-function
		(DO output 1) Time proportional operation	(Invalid setting)	Simple Standard Multi-function
		(DO output 1) Min. ON/OFF time	10 ms	
		(DO output 1) Time proportional cycle	(Invalid setting)	
		(DO output 1) Linearization table group definition	(Invalid setting)	Standard Multi-function
		(DO output 1) Phase shift	(Invalid setting)	Multi-function
		(DO output 1) ON delay time	0 ms	Standard Multi-function

(2) Change the value of communication PT1 (latch) using host communications. Multiply the pulse time from the host device by 100 and input the result into the data address of communication PT1 (latch) in the Comm. input data bank. (If the pulse time from the host device is 0.10 seconds, input 10 in communication PT1 (latch).)

6 - 11 Communication PT (countdown)

Communication PTs (countdown) are 16 numerical variables that can be read and written using host or loader communications. Unlike Communication PTs (latch), Communication PTs (countdown) count the written values down to 0.00 seconds as time passes. Specify communication PT as the output type when DO output (one-shot pulse output) is used.

Folder name	Bank name	Item name	Setting range	User level
Monitor	Comm. input data	Communication PT 1 (countdown)	0.00 to 320.00 s	Simple Standard Multi- function
		Communication PT 2 (countdown)	0.00 to 320.00 s	
		Communication PT 3 (countdown)	0.00 to 320.00 s	
		Communication PT 4 (countdown)	0.00 to 320.00 s	
		Communication PT 5 (countdown)	0.00 to 320.00 s	
		Communication PT 6 (countdown)	0.00 to 320.00 s	
		Communication PT 7 (countdown)	0.00 to 320.00 s	
		Communication PT 8 (countdown)	0.00 to 320.00 s	
		Communication PT 9 (countdown)	0.00 to 320.00 s	
		Communication PT 10 (countdown)	0.00 to 320.00 s	
		Communication PT 11 (countdown)	0.00 to 320.00 s	
		Communication PT 12 (countdown)	0.00 to 320.00 s	
		Communication PT 13 (countdown)	0.00 to 320.00 s	
		Communication PT 14 (countdown)	0.00 to 320.00 s	
		Communication PT 15 (countdown)	0.00 to 320.00 s	
		Communication PT 16 (countdown)	0.00 to 320.00 s	

■ Bank items

Communication PTs (countdown) can be assigned to the following bank items

Folder name	Bank name	Item name	User level
Input-output	DO output	Output type	Simple Standard Multi-function

■ Example

The following is an example where the module receives numeric data from the host device through host communications, and then outputs it.
Communication PT1 (countdown) is used to output the host device numeric data from DO output 1.

(1) Assign Communication PT1 (countdown) to DO output 1.
In the DO output bank, set as follows.

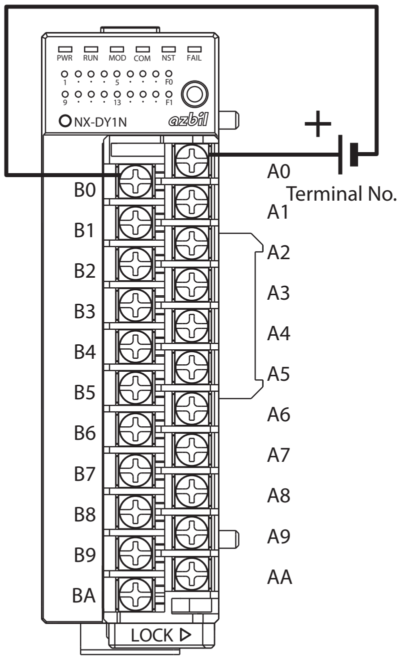
Folder name	Bank name	Item name	Settings	User level
Input-output	DO output	(DO output 1) Output type	33: Communication PT1 (countdown)	Simple Standard Multi-function
		(DO output 1) Latch	(Invalid setting)	Standard Multi-function
		(DO output 1) Time proportional operation	(Invalid setting)	Simple Standard Multi-function
		(DO output 1) Min. ON/OFF time	10 ms	
		(DO output 1) Time proportional cycle	(Invalid setting)	
		(DO output 1) Linearization table group definition	(Invalid setting)	Standard Multi-function
		(DO output 1) Phase shift	(Invalid setting)	Multi-function
		(DO output 1) ON delay time	0 ms	Standard Multi-function

(2) Change the value of Communication PT1 (countdown) using host communications. Multiply the pulse time from the host device by 100 and input the result into the data address of Communication PT1 (countdown) in the Comm. input data bank. (If the pulse time from the host device is 0.10 seconds, input 10 in Communication PT1 (countdown).)

6 - 12 External Power Supply Voltage Monitoring for Digital Output

This function monitors the voltage of the operational external power supply that is connected to the digital output. The target are voltages between A0 (VCC1) and B0 (COM1), which are used for DO1 to DO8 operations.

External power supply voltage monitoring for digital output (standard bit code: 2000) is activated when the power supply voltage to terminal A0 (VCC1) is 20.4 Vdc or less. If the power is normally supplied to terminal A0 (VCC1), DO terminals 1 to 8 (terminals A1 to A4 and B1 to B4) are capable of output.



Folder name	Bank name	Item name	Displayed information
Standard bit	Standard bit code (1920 to 2047)	External power supply voltage monitoring	0: OFF 1: ON (20.4 Vdc or less)

Handling precautions

- External power supply voltage monitoring for digital output monitors DO1 to DO8 (power supply voltage to terminal A0 (VCC1)).
  It does not monitor DO9 to DO16 (power supply voltage to terminal A5).

Chapter 7. OPERATION

7 - 1 Operation Displays

There are LED indicators and a button on the front of the body.
There are 2 types of LED blinking: fast blink (0.2 s cycle) and slow blink (1.4 s cycle).

■ PWR, RUN, MOD, COM, NST, FAIL

Lighting patterns of the LEDs on the top are shown and described in the table.

LED name	Color	Lighting status	Description
PWR	Green	Lit	Power-on
		OFF	Power is off
RUN	Green	Lit	RUN mode (normal operation mode)
		Fast blink	Operation mode is RUN , and loop mode is READY for 1 loop or more
		Slow blink	IDLE mode (operation mode)
		OFF	Modes other than the above
MOD	Orange	Fast blink	Parameters from the loader is being written.
		OFF	Normal operation mode
COM	Green	Lit	The module's own Ethernet packets are being received.
		OFF	No module's own Ethernet packets is received.
NST*	Orange	Lit	Chain connection with non-ring communications.
		Fast blink	Chain ring connection disconnected (ring disconnected somewhere)
		Slow blink	Chain ring connection disconnected (ring disconnected between the node and an adjacent node)
		OFF	Ring communications in chain connection is normal.
FAIL	Red	Lit	Hard failure
		Slow blink	Soft failure
		OFF	No errors

*Note. The status of ring communications can also be checked from host communications.
☞ Appendix-3 Status of the Ring Communication (Net Status) (page App-12).

■ 1 to 16

The lighting patterns of LEDs 1 to 8 on the middle row and 9 to 16 on the bottom row are shown and described in the table below.

LED name	Color	Lighting status	Description
1	Green	Lit	DO output ch1 ON
		OFF	DO output ch1 OFF
2	Green	Lit	DO output ch2 ON
		OFF	DO output ch2 OFF
3	Green	Lit	DO output ch3 ON
		OFF	DO output ch3 OFF
4	Green	Lit	DO output ch4 ON
		OFF	DO output ch4 OFF
5	Green	Lit	DO output ch5 ON
		OFF	DO output ch5 OFF
6	Green	Lit	DO output ch6 ON
		OFF	DO output ch6 OFF
7	Green	Lit	DO output ch7 ON
		OFF	DO output ch7 OFF
8	Green	Lit	DO output ch8 ON
		OFF	DO output ch8 OFF
9	Green	Lit	DO output ch9 ON
		OFF	DO output ch9 OFF
10	Green	Lit	DO output ch10 ON
		OFF	DO output ch10 OFF
11	Green	Lit	DO output ch11 ON
		OFF	DO output ch11 OFF
12	Green	Lit	DO output ch12 ON
		OFF	DO output ch12 OFF
13	Green	Lit	DO output ch13 ON
		OFF	DO output ch13 OFF
14	Green	Lit	DO output ch14 ON
		OFF	DO output ch14 OFF
15	Green	Lit	DO output ch15 ON
		OFF	DO output ch15 OFF
16	Green	Lit	DO output ch16 ON
		OFF	DO output ch16 OFF

■ F0, F1

It is possible to set the lighting condition and pattern for the normal lighting of LED (F0) on the right end of the middle row and LED (F1) on the bottom row.

LED name	Color	Folder name	Bank name	Item name	Settings
F0	Red	Other	UFLED settings	Lighting condition	1024 to 2047: Standard bit code
				Lighting status	0: OFF 1: Lit 2: Lit (reverse condition) 3: Fast blink 4: Fast blink (reverse condition) 5: Slow blink 6: Slow blink (reverse condition)
F1	Green	Other	UFLED settings	Lighting condition	1024 to 2047: Standard bit code
				Lighting status	0: OFF 1: Lit 2: Lit (reverse condition) 3: Fast blink 4: Fast blink (reverse condition) 5: Slow blink 6: Slow blink (reverse condition)

■ Display when power is turned ON

When the power is turned on, LEDs are lit as shown in the table below. This is different to the operation display.

The LEDs then transition to the operation display.

Order	LED lighting status (○: Lit, –: Off, ◇: Flashing, *: Depends on the status)								Status or process
	Top LEDs						Middle LEDs	Bottom LEDs	
	PWR	RUN	MOD	COM	NST	FAIL	1-8 F0	9-16 F1	
1	–	–	–	–	–	–	–	–	Power OFF
2	○	○	○	○	○	○	–	–	Shortly after power-on
3	○	–	–	–	–	–	○	–	LED lighting test (0.5 s)
4	○	–	–	–	–	–	–	○	LED lighting test (0.5 s)
5	○	–	–	–	–	–	–	–	EEPROM read stability
6	○	*	*	*	*	*	◇	◇	Start of operation
7	○	*	*	*	*	*	*	*	Operation display

■ LED lighting pattern under special conditions

LED lighting status (○: Lit, –: Off, ◇: Slow blink, ◆: Fast blink, *: Depends on the status)								Status or process
Top LEDs						Middle LEDs	Bottom LEDs	
PWR	RUN	MOD	COM	NST	FAIL	1-8 F0	9-16 F1	
○	◇	◇	◇	◇	◇	*	*	Module LED lighting function Wink function If specified with the SLP-NX.
○	◇	◇	*	*	○	*	*	When one of the following alarms is activated*1 AL83: EEPROM not initialized AL84: MAC address error AL85: RAM R/W error AL86: EEPROM R/W error AL87: Base EEPROM R/W error AL99: ROM error
○	◇	◇	*	*	◇	*	*	When one of the following alarms is activated*1 AL88: Base EEPROM error AL94: RAM error (parameter area)
○	◆	◆	◆	◆	◆	*	*	When one of the following alarms is activated*1 AL 54: Base-body/model No. mismatch or Ethernet congestion occurring Ethernet congestion occurs in the network. If the congestion continues, check for wrong connections in the network.
○	◇	◇	*	*	–	*	*	When the following alarm is activated*1 AL 54: Base-body communication settings mismatch

*1. ☞ Chapter 14 Troubleshooting.

■ Base EEPROM recovery using the button

Button operation can recover the base EEPROM and can eliminate the mismatch between the body and base. At this time, the RS-485 and Ethernet communication settings stored on the base (except for the MAC address) are also set for the body. Accordingly, if the EEPROM is recovered by button operation after only the body is replaced, not the base, the system will operate using the same RS-485 and Ethernet communication settings as before replacement.

Order	LED lighting status (○: Lit, –: Off, ◇: Slow blink, ◆: Fast blink, *: Depends on the status)								Status or process
	Top LEDs						Middle LEDs	Bottom LEDs	
	PWR	RUN	MOD	COM	NST	FAIL	1-8 F0	9-16 F1	
1	○	*	*	*	*	*	*	*	Normal operation
									↓ (Press the button)
2	○	–	–	–	–	–	*	*	All top LEDs are off.
									↓ (2 seconds elapsed)
3	○	○	○	○	○	○	*	*	All top LEDs are lit.
									↓ (Release the button)
4	○	*	*	*	*	*	*	*	Normal operation

7 - 2 Loop Mode

The data settings related to the loop modes are shown in the table.

☞ 1-4, "Operation Modes" (on page 1-7).

■ Bank and settings (loop mode switchover)

Folder name	Bank name	Item name	Details	User level
Monitor	Comm. (device) Comm. (operation) Loop modes	RUN/READY	0: RUN 1: READY	Simple Standard Multi-function
		AUTO/MANUAL	0: AUTO 1: MANUAL	

■ Banks and settings

Folder name	Bank name	Item name	Details	User level
Basic	Loop (time propor.)	MV assignment	0: OFF 2048 to 3071: Standard number	Standard Multi-function
		Output operation at changing Auto/Manual	0: Bumpless 1: Preset	Simple Standard Multi-function
		Preset MANUAL value	0.0 to 100.0 (%)	
		Output at READY	0.0 to 100.0 (%)	

7 - 3 How to Change Loop Modes and Parameters

To change loop modes or parameters, use the SLP-NX (sold separately) or host communications.
This section describes how to change loop modes or parameters using the loader.

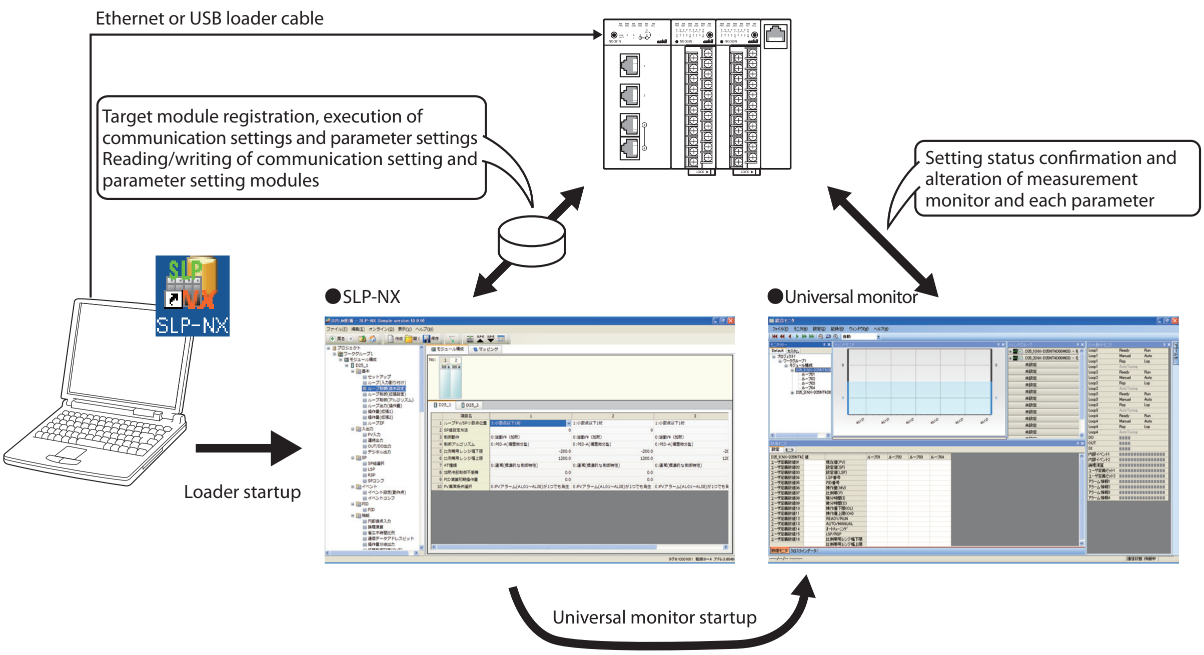
■ Capability architecture of the loader

The loader has the following capability architecture.

Function name	Application
SLP-NX	Module registration, communication setting and parameter setting for modules. Also, functions are available for reading and writing the module information from each module, communication settings, and parameter settings.
Universal monitor	It is possible to connect communication for each module, and individually check and change the status monitoring for each measurement value and the settings for each parameter.

■ How to change parameters

The following shows how to use the universal monitor for changing parameters.



● How to change settings

The following shows how to switch the loop mode from RUN to READY.

Note

- The following is an example. It is not the only way to make the change.

(1) Activate the SLP-NX.

(2) Open the project stored in the PC as backup.

(3) Connect the PC to the module. (Ethernet)

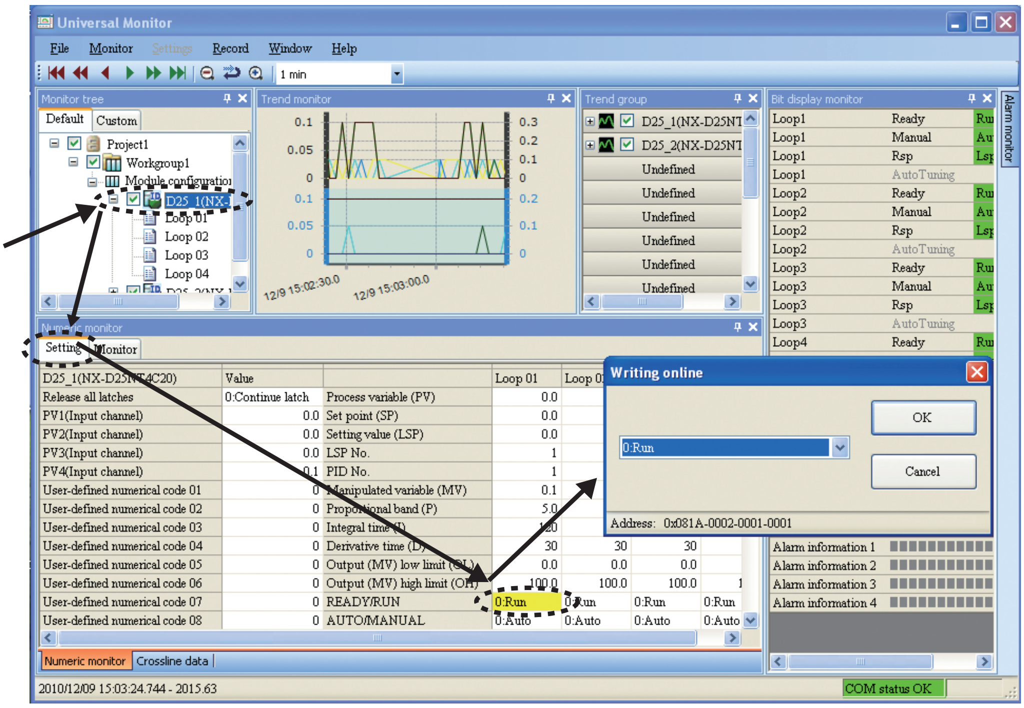
(4) To activate the universal monitor, click [Online] → [Monitor].

(5) Click the module to be modified on the directory tree of the universal monitor.

(6) To activate communications, click [Monitor] → [Start].

(7) To display the [Online Writing] dialog box, in the [Numeric monitor [Settings]] tab on the universal monitor screen, double-click the [READY/RUN] cell for the desired loop.

(8) In the list box, change [0:RUN] to [1:READY] and then click the [OK] key.



7 - 4 How to Manually Output the MV (AUTO/MANUAL)

The MV can be manually output to each loop using the universal monitor.

The procedure is as follows.

(1) Display the desired loop using the universal monitor screen.

(2) Switch AUTO to MANUAL in the [Settings] tab of the numeric monitor.

(3) Change the MV in the [Settings] tab of the numeric monitor.

7 - 5 How to Switch to READY

It is possible to switch RUN to READY, or the reverse, using the universal monitor.

The procedure is as follows.

(1) Display the desired loop using the universal monitor screen.

(2) In the [Settings] tab of the numeric monitor,switch RUN to READY.
Or switch READY to RUN.

7 - 6 How to Change the Event Action Point

The event action point is changed by using the loader.
There are two event setting types: event main setting and event sub-setting. Some events only have the event main setting and some have both types.

☞ 5-1 Events (on page 5-1).

The procedure is as follows.

(1) Display the event setting (operating point) bank using the loader.

(2) Change event main setting or event sub-setting.

Chapter 8. CPL COMMUNICATIONS FUNCTION

8 - 1 Outline of Communication

Communication with a PC, PLC or other host devices is available using a user-configured program that uses RS-485 communication.

CPL communication (Controller Peripheral Link: Azbil Corporation's host communication protocol) or MODBUS communication can be selected as the communication protocol.

This chapter describes the CPL communications.

■ Features

The features of the module's communication function are as follows:

- Up to 31 modules can be connected to a single master station as a host device.
- When the communication specifications of the host device conform to the RS- 232C interface, the communication converter CMC10L (sold separately) is required.
  The CMC10L allows conversion between RS-232C and RS-485.
- Almost all of the module parameters can be communicated.
  ☞ Chapter 12 List of Communication Data.
- Random access commands are available.
  Two or more parameters at separated addresses can be read or written by a single command.

■ Settings

To activate CPL communications with the module, set as follows.

Item name	Details	Default
Communications type	0: CPL 1: MODBUS/ASCII 2: MODBUS/RTU	0
Station address setting	0: No communication 1 to 127	127
Transmission speed	0: 4800 bps 1: 9600 bps 2: 19200 bps 3: 38400 bps 4: 57600 bps 5: 115200 bps	2
Data format (Data length)	0: 7 bits 1: 8 bits	1
Data format (parity)	0: Even parity 1: Odd parity 2: No parity	0
Data format Stop bits	0: 1 bit 1: 2 bits	0
Minimum response time	1 to 250 ms	3

Handling precautions

- If you use the Azbil Corporation CMC10L as an RS-485 converter, set the minimum response time to 3 ms or longer.
  The supported transmission speed of the CMC10L is up to 38400 bps.
- If there is an error in the settings for RS-485 communication conditions (transmission speed or data format (data length, parity, or stop bits)) an AL33 is generated.
  In that case, either repeat writing or restart the system.

Communication procedures

The communication procedure is as follows:

(1) The instruction message is sent from the host device (master station) to one unit (slave station).

(2) The slave station receives the instruction message, and performs read or write processing according to the content of the message.

(3) The slave station sends a message corresponding to the processing content as a response message.

(4) The master station receives the response message.

Handling precautions

- Multiple protocols such as CPL, MODBUS/ASCII, and MODBUS/RTU protocols cannot be used together on the same RS-485 line.

8 - 2 Message Structure

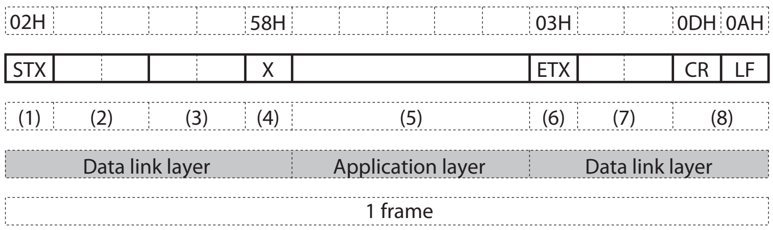
■ Message Structure

The following shows the message structure.
Messages are broadly classified into two layers: the data link layer and the application layer.

- Data link layer
  This layer contains the basic information required for communication.
  For example, the destination of the communication message and the check information of the message.
- Application layer
  Data is read and written in this layer. The content of the layer varies according to the purpose of the message.

Messages comprise parts (1) to (8) as shown in the figure below.

The command (details sent from the master station) and the response (details returned from the slave station) are stored in the application layer.



(1) STX (Start of message)
(2) Station address
(3) Sub-address
(4) Device code
(5) Command message = command Response message = response
(6) ETX (end of command/response)
(7) Checksum
(8) Delimiter (end of message)

■ Data link layer

● Outline

The data link layer is of a fixed length. The position of each data item and the number of its characters are already decided. Note, however, that the data positions of the data link layer from ETX onwards shift according to the number of characters in the application layer.

● Response start conditions

- The device sends the response message only when all the message components in the data link layer of the instruction message are correct. If even one of these is incorrect, no response message is sent, and the device stands by for reception of STX.

● List of data link layer data definitions

The following list shows the definitions for data in the data link layer:

Data name	Character code	Number of characters	Meaning of data
STX	02H	1	Start of message
Station address setting	0 to 7FH are expressed as hexadecimal character codes.	2	Identification of device to communicate with Sub-address
Sub address	"00" (30H, 30H)	2	No function
Device code	"X" (58H) or "x" (78H)	1	Device type
ETX	03H	1	End position of the application layer
Checksum	00H to FFH are expressed as 2-digit hexadecimal character codes.	2	Checksum of message
Delimiter	CR (0DH), LF (0AH)	2	End of message

● Description of data items

- STX (02H)
  When STX is received, the unit judges this to be the start of the send message. It follows that if a delimiter has not been received previously, the module judges that a message start STX has been received. The purpose of this is to enable recovery of the module's response at the next message from the master station in the event that noise, for example, causes a message error.

- Station address
  Of the messages received, the unit creates response messages only when station addresses are the same. Station addresses in the messages are expressed as two hexadecimal characters.

  The module returns the same sub-address as that of the received message. However, when the station address is set to "00" (30H 30H), the unit does not respond even if the station addresses match.

- Sub-address
  Two hexadecimal characters can be used, from “00” (30H 30H) to “FF” (46H 46H). The module returns the same sub-address as that of the received message.

- Device code
  “X” (58H) or “x” (78H) can be used. This code is determined for each device series, and other codes cannot be selected. The module returns the same device code as that of the received message. These can be used to identify the messages, for example by using “X” (58H) as the initial value and “x” (78H) in resend messages.

- ETX (03H)
  ETX indicates the end of the application layer.

- Checksum
  This value is for checking whether or not some abnormality (e.g. noise) causes the message content to change during communications.
  The checksum is expressed as two hexadecimal characters.

- How to calculate a checksum

  (1) Add the character codes in the message from STX through ETX in single byte modules.

  (2) Take two's complement of the low-order one byte of the addition result.

  (3) Convert the obtained two's complement to a two-byte ASCII code.

  The following is a sample checksum calculation for a sample message:

  [Message example]

STX:	02H
'0':	30H (first byte of the station address)
'1':	31H (second byte of the station address)
'0':	30H (first byte of the sub-address)
'0':	30H (second byte of the sub-address)
'X':	58H (device code)
'R':	52H (first byte of the command)
'D':	44H (second byte of the command)
(Omitted)	
ETX:	03H

(1) Add the character codes in the message from STX through ETX in single byte modules. The adding calculation in single byte units is as follows:
02H + 30H + 31H + 30H + 30H + 58H + 52H + 44H +... + 03H
The result of this calculation is 376H.

(2) The low-order one byte of the addition result 376H is 76H. The two's complement of 76H is 8AH.

(3) Convert the obtained 8AH to a two-byte ASCII code. The result is:

'8': 38H
'A': 41H
The two bytes '8' (38H) and 'A' (41H) are the checksum.

- Delimiter (CR/LF)
  This indicates the end of the message. Immediately after LF is received, the device enters a state allowed to process the received message.

■ Application layer

The table below shows the configuration of the application layer.

Item	Description
Command	"RS" (decimal format continuous address data read)
	"WS" (decimal format continuous address data write)
	"RD" (hexadecimal format continuous address data read)
	"WD" (hexadecimal format continuous address data write)
	“RU”(hexadecimal format random address data read)
	“WU”(hexadecimal format random address data write)
Data delimiter	RS, WS command : " , " (comma) Other commands : None
Word address	RS, WS command : Numeric value in decimal notation and "W", such as "501W". Other commands : Numeric value in hexadecimal notation, such as "01F5".
Read count	RS, WS command : Numeric value in decimal notation, such as "1". Other commands : Numeric value in hexadecimal notation, such as "0001".
Write values	RS, WS command : Numeric value in decimal notation, such as "100". Other commands : Numeric value in hexadecimal notation, such as "0064".

The number of data records accessible by a single instruction message and response message cycle is as follows:

Command	RAM	EEPROM
RD	28	28
WD	28	28
RU	28	28
WU	16	16
RS	16	16
WS	16	16

! Handling precautions

- 4 characters are used for numeric representation of RD, WD, RU, or WU commands.
- If the numeric representation consists of less than 4 characters, add "0" to the left end so that the No. of characters is 4.

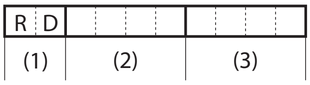
8 - 3 Description of Commands

■ Fixed length continuous data read command (RD command)

Data in continuous data addresses is read in a hexadecimal format.

● Instruction message

Specifies the start data address and the number of data recordsThe structure of the application layer in the instruction message is as follows:

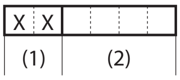


(1) Command
(2) Start data address
(3) Number of read data

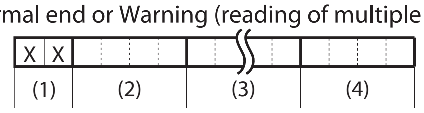
● Response message

The structure of the application layer in the response message is as follows:

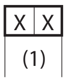
- Normal end or Warning (reading of single data item)



- Normal end or Warning (reading of multiple data items)



- Abnormal end



(1) End code
(2) Data (1st item)
(3) Data (2nd and following items)
(4) Data (final item)

The end code is entered at XX.
8-6 List of End Codes (page 8-15).

Note

- Hexadecimal (on page 8-13).
- When a warning occurs, the corresponding data address is read as 0.

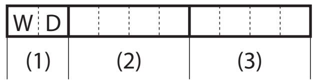
■ Fixed length continuous data write command (WD command)

Writing is performed in a hexadecimal format to data in continuous data addresses.

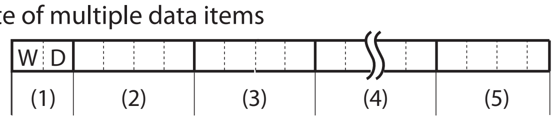
● Instruction message

Specifies the start data address and at least one data record. The structure of the application layer in the instruction message is as follows:

- Write of 1 data item



- Write of multiple data items

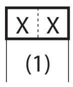


(1) Command
(2) Start data address
(3) Data (1st item)
(4) Data (2nd and following items)
(5) Data (final item)

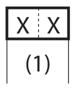
● Response message

The structure of the application layer in the response message is as follows:

- Normal end or Warning



- Abnormal end



(1) End code

The end code is entered at XX.
☞ 8-6 List of End Codes (page 8-15).

Note

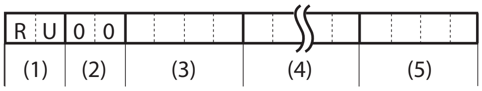
- ☞ Hexadecimal (on page 8-13).
- If a warning occurs, data is not written to that data address.

■ Fixed length random data read command (RU command)

Data in continuous data addresses is read in a hexadecimal format.

● Instruction message

Specifies at least one data record. The structure of the application layer in the instruction message is as follows:

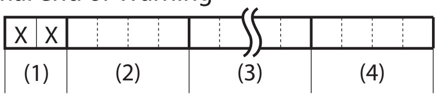


(1) Command
(2) Sub-command, fixed to “00”
(3) Data address (1st item)
(4) Data address (2nd and following items)
(5) Data address (final item)

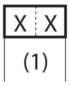
● Response message

The structure of the application layer in the response message is as follows:

- Normal end or Warning



- Abnormal end



(1) End code
(2) Data (1st item)
(3) Data (2nd and following items)
(4) Data (final item)

The end code is entered at XX.
☞ 8-6 List of End Codes (page 8-15).

Note

- ☞ Hexadecimal (on page 8-13).
- When a warning occurs, the corresponding data address is read as 0.

Fixed length random data write command (WU command)

Writing is performed in a hexadecimal format to data in continuous data addresses.

Instruction message

Groups data addresses and data, and specifies at least one group. The structure of the application layer in the instruction message is as follows:

W U	0 0					
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) Command
(2) Sub-command, fixed to "00"
(3) Data address (1st group)
(4) Write data (1st group)
(5) Data address, write data (2nd and following groups)
(6) Data address (final group)
(7) Write data (final group)

Response message

The structure of the application layer in the response message is as follows:

- Normal end or Warning

X X
(1)

- Abnormal end

X X
(1)

(1) End code

The end code is entered at XX.
8-6 List of End Codes (page 8-15).

Note

- Hexadecimal (on page 8-13).
- If a warning occurs, data is not written to that data address.

■ Continuous data read command (RS command)

Data in continuous data addresses is read in a decimal format.

● Instruction message

Specifies the start data address and the number of data records. The structure of the application layer in the instruction message is as follows:

R	S	,	4	0	9	6	W	,	1
(1)		(2)	(3)					(2)	(4)

(1) Command
(2) Data delimiter
(3) Start data address ("W" is required)
(4) No. of data records

● Response message

The structure of the application layer in the response message is as follows:

● Normal end or Warning (reading of single data item)

X	X	,	
(1)		(2)	(3)

● Normal end or Warning (reading of multiple data items)

X	X	,		,		,	
(1)		(2)	(3)	(2)	(4)	(2)	(5)

● Abnormal end

X	X
(1)	

(1) End code
(2) Data delimiter
(3) Data (1st item)
(4) Data (2nd and following items)
(5) Data (final item)

The end code is entered at XX.
☞ 8-6 List of End Codes (page 8-15).

Note

- ☞ Decimal (on page 8-14).
- When a warning occurs, the corresponding data address is read as 0.

■ Continuous data write command (WS command)

Writing is performed in a decimal format to data in continuous data addresses.

● Instruction message

Specifies the start address and at least one data record. The structure of the application layer in the instruction message is as follows:

W	S	,	4	0	9	6	W	,	1	,	6	5
(1)		(2)	(3)					(2)	(4)	(2)	(5)	

(1) Command
(2) Data delimiter
(3) Start data address ("W" is required)
(4) Data (1st item)
(5) Data (2nd item)

● Response message

The structure of the application layer in the response message is as follows:

● Normal end or Warning

X	X
(1)	

● Abnormal end

X	X
(1)	

(1) End code

The end code is entered at XX.
☞ 8-6 List of End Codes (page 8-15).

Note

- ☞ Decimal (on page 8-14).
- If a warning occurs, data is not written to that data address.

8 - 4 Definition of Data Addresses

● RAM and EEPROM areas of data addresses

Data addresses are categorized as follows:

Data address Hexadecimal	Data address Decimal	Name	Remarks
100 to FFF	256 to 4095	EEPROM access data address	Write accesses both the RAM area and EEPROM area, but read accesses only the RAM area. Since writing is also performed to EEPROM, the value does not change even after restarting.
1000 to 4FFF	4096 to 20479	RAM access data address	Read and write both access the RAM area data Since writing is not performed to EEPROM, the value returns to that stored in EEPROM after restarting.
5000 to 8FFF	20480 to 36863	EEPROM access data	Write accesses both the RAM area and EEPROM area, but read accesses only the RAM area. Since writing is also performed to EEPROM, the value does not change even after restarting.

! Handling precautions

- The number of EEPROM erase/write cycles is limited.
  Accordingly, it is recommended that very frequently written parameters be written to RAM, which does not have a limitation on cycles.
  However, note that the data written to the RAM area is overwritten with the EEPROM area data when the power is turned ON.

● Write data range

If the write value exceeds the range determined by parameters, writing is not performed and an abnormal end code is returned.

● Write conditions

An abnormal end code is also returned when the writing is not possible due to the conditions.

● Reading an undefined address

If an undefined address is read, the end code does not indicate an error or alarm because there is no data.

● Undefined address write

Do not write data to an undefined address.

8 - 5 Numeric Representation in the Application Layer

The numeric values in the application layer include the data address, number of data records and data values, and use hexadecimal or decimal notation depending on the command. This notation methods is shared by both the instruction message and the response message.

■ Hexadecimal

The hexadecimal specifications are shown in the table below.

If the message does not match the specifications, the module does not process the instruction message and instead returns an error response.

Item	Specifications	Example of specification mismatch
Supported Command	RD WD RU WU	RS command (hexadecimal is not allowed) WS command (hexadecimal is not allowed)
Available characters	0 (30H) to 9 (39H) A (41H) to F (46H)	1 2 3 a (a is not allowed) - 1 2 3 (- is not allowed) 1 2 3 (space is not allowed)
Number of characters	4	1 2 3 (3 characters) 0 1 2 3 4 (5 characters)
Expressible numeric values	8000H to 7FFFH (data with symbols) 0000H to FFFFH (data without symbols)	
Examples of normal character strings	0 0 0 0 1 2 A B 0 1 2 3 F F F F	

Handling precautions

- 4 characters are used for numeric representation of RD, WD, RU, or WU commands.
- If the numeric representation consists of less than 4 characters, add "0" to the left end so that the No. of characters is 4.

■ Decimal

The decimal specifications are shown in the table below.

In the data address, a capital letter "W" (57H) is added immediately after the decimal.

If the message does not match the specifications, the module does not process the instruction message and instead returns an error response.

Item	Specifications	Example of specification mismatch
Supported commands	RS WS	RD command (decimal is not allowed) WD command (decimal is not allowed)
Available characters	0 (30H) to 9 (39H) - (2DH)	1 2 3 A (A is not allowed) + 0 0 0 (+ is not allowed) 0 0 0 (space is not allowed)
Delimiter characters	, (2CH) Delimiter characters are used between two numeric values	
Number of characters	1 to 5 (positive numbers) 2 to 6 (negative numbers) 1 (Numeric value 0)	0 characters (Nothing between delimiter characters) 1 2 3 4 5 6 (6 positive numbers)
Expressible numeric values	–32768 to +32767 (data with symbols) 0 to 65535 (data without symbols)	
Positive number notation	Starts with 1 (31H) to 9 (39H)	0 1 (Not allowed to start with 0)
Negative number notation	Starts with - (2DH), the second character is 1 (31H) to 9 (39H)	- 0 1 (0 is not allowed for the second character)
Numeric value 0 notation	0	- 0 (- is not allowed) 0 0 (Anything other than 1 character is not allowed)
Examples of normal character strings	1 3 2 7 6 7 - 1 2 - 3 2 7 6 8	

8 - 6 List of End Codes

The result of the application layer process for the instruction message can be understood from the end code of the response message.

Results other than "normal" are in two levels. An "error" occurs when nothing is processed, and a "warning" occurs when there is a possibility that some kind of processing will be performed.

■ End code of the read command

End code	Description	Module processing
00 (Normal)	Normal end	Returns a read value
99 (Error)	Undefined command	Returns a end code (Does not write any data)
10 (Error)	Parameter error *	Returns a end code (Does not write any data)
40 (Error)	No. of data records error	Returns a end code (Does not write any data)
21 (Warning)	Data address error	Returns a 0 for the corresponding data address
22 (Warning)	Data range error	Returns the read value of the corresponding data address as 8000 or 7FFF in hexadecimal format, or -32768 or +32767 in decimal format.
23 (Warning)	Not allowed depending on the instrument conditions	Returns a 0 for the corresponding data address

* The parameter errors are the following errors.
- Violation of the numeric representation
- Violation of the instruction message format

■ End code of the write command

End code	Description	Module processing
00 (Normal)	Normal end	Writes all data
99 (Error)	Undefined command	Does not write any data
10 (Error)	Parameter error *	Does not write any data
40 (Error)	No. of data records error	Does not write any data
21 (Warning)	Data address error	Does not write the corresponding data address
22 (Warning)	Data range error	Does not write the corresponding data address
23 (Warning)	Not allowed depending on the instrument conditions	Does not write the corresponding data address

* The parameter errors are the following errors.
- Violation of the numeric representation
- Violation of the instruction message format
- Addition of excess data to the end of the frame

8 - 7 Reception and Transmission Timing

■ Timing specifications for instruction and response message

The cautions below are required with regard to the timing to transmit an instruction message from the master station and a response message from the slave station.

● Response monitor time

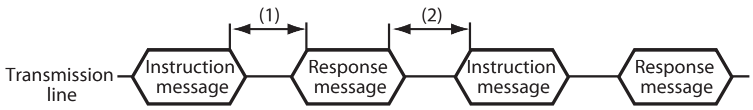
The maximum response ti me from the end of the instruction message transmission by the master station until when the master station receives a response message from the slave station is two seconds. (Part (1))

For this reason, set the response monitoring time to a minimum of two seconds.

Generally, when a response time-out occurs, the instruction message is resent.

● Transmission start time

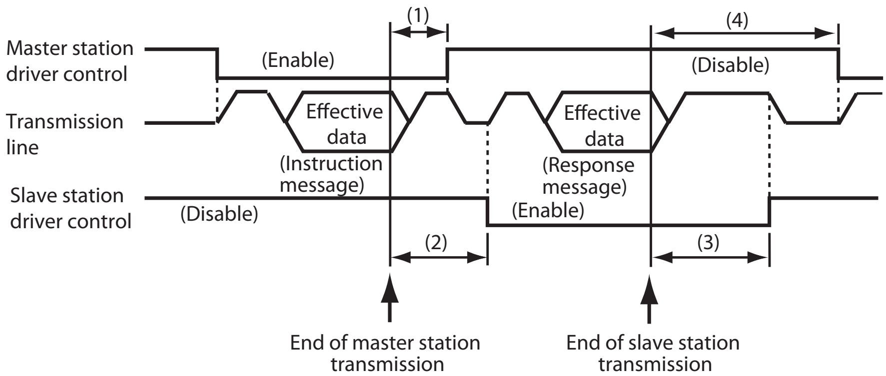
A wait time of 10 ms is required before the master station starts to transmit the next instruction message (to the same slave station or a different slave station) after the end of receiving the response message. (Part (2))



(1) End of master station transmission – Transmission start time of slave station = Max. 2000 ms
(2) End of slave station transmission – Transmission start time of master station = Min. 10 ms

■ RS-485 driver control timing specifications

When the transmission/reception on the RS-485 3-wire system is directly controlled by the master station, care should be paid to the following timing:



(1) End of master station transmission - Driver disable time = Max. 500 μs
(2) End of slave station reception – Driver enable time = Minimum response time
(3) End of slave station transmission - Driver disable time = Max. 10 ms
(4) End of master station reception - Driver enable time = Min. 10 ms

Chapter 9. MODBUS COMMUNICATIONS FUNCTION

9 - 1 Outline of Communication

Communication with a PC, PLC or other host devices is available using a user-configured program that uses RS-485 communication.

CPL communication (Controller Peripheral Link: Azbil Corporation's host communication protocol) or MODBUS communication can be selected as the communication protocol. This chapter describes the MODBUS communications.

■ Features

The features of the module's communication function are as follows:

- Up to 31 modules can be connected to a single master station as a host device.
- When the communication specifications of the host device conform to the RS- 232C interface, the communication converter CMC10L (sold separately) is required.
  The CMC10L allows conversion between RS-232C and RS-485.
- Almost all of the module parameters can be communicated.
  ☞ Chapter 12 List of Communication Data.

! Handling precautions

- In MODBUS communications, the communication address (parameter) for the module that is set in the host device may be reduced by 1 in a communication message during transmission.
  Example: If the communication address (parameter) is set to 1001 in the host device, it will be 1000 in a communication message during transmission.
- This module bases sending and receiving on the communication address (parameter) that is specified in the communication message.
  Be sure to understand the specifications of the host device before using the module.

■ Settings

To activate MODBUS communications with the module, set as follows.

Item name	Details	Default
Communications type	0: CPL 1: MODBUS/ASCII 2: MODBUS/RTU	0
Station address setting	0: No communication 1 to 127	127
Transmission speed	0: 4800 bps 1: 9600 bps 2: 19200 bps 3: 38400 bps 4: 57600 bps 5: 115200 bps	2
Data format (Data length)	0: 7 bits 1: 8 bits	1
Data format (parity)	0: Even parity 1: Odd parity 2: No parity	0
Data format Stop bits	0: 1 bit 1: 2 bits	0
Minimum response time	1 to 250 ms	3

- When the communications type is set to MODBUS/RTU, the operation is fixed to 8-bit data regardless of the data format (data length) setting.

! Handling precautions

- The setup cannot be performed via RS-232C/RS-485 communications.
- If you use the Azbil CMC10L as an RS-485 converter, set the minimum response time to 3 ms or longer.
  The maximum transmission speed supported by the CMC10L is 38400 bps.

■ Communication procedures

The communication procedure is as follows:

(1) The instruction message is sent from the host device (master station) to one module (slave station).

(2) The slave station receives the instruction message, and performs read or write processing according to the content of the message.

(3) The slave station sends a message corresponding to the processing content as a response message.

(4) The master station receives the response message.

! Handling precautions

- Multiple protocols such as CPL, MODBUS/ASCII, and MODBUS/RTU protocols cannot be used together on the same RS-485 line.

9 - 2 Message Structure

■ Message Structure

The following shows the message structure.

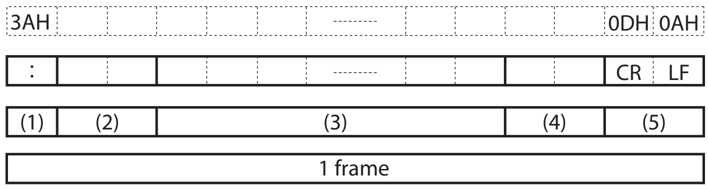
● MODBUS / ASCII

Messages other than the start code and end code all use hexadecimal ASCII codes.

MODBUS ASCII messages comprise parts (1) to (5) as shown below.

The command (details sent from the master station) and the response (details returned from the slave station) are stored in the application layer.

One box below represents one character.



(1) Start code (1 byte)
(2) Station address (2 bytes)
(3) Send message, response message
(4) Check code (LRC) (2 bytes)
(5) End code (2 bytes)

- Start code
  The start code is a colon (3AH).
  When the start code is received, the module judges this to be the start of the send message. It follows that if a delimiter has not been received previously, the module judges that a message start STX has been received. The purpose of this is to enable recovery of the module's response at the next message from the master station in the event that noise, for example, causes a message error.

- Station address
  Of the messages received, the unit creates response messages only when station addresses are the same. Station addresses in the messages are expressed as two hexadecimal characters.
  However, when the station address is set to "00" (30H 30H), the unit does not respond even if the station addresses match.
  The unit returns the same station address as that of the received message.

- Check code (LRC)
  This value is for checking whether or not some abnormality (e.g. noise) causes the message content to change during communications. The checksum is expressed as two hexadecimal characters. The procedure for calculating the check code is as follows.
  (1) Add from the start of the station address to immediately before the check code. Be sure that the added value is not the ASCII character value of the send message, but rather the one-byte binary data that is converted from the two ASCII characters.
  (2) Take the two's complement of the addition result.
  (3) Convert the low-order one byte of the addition result to the two characters that express the hexadecimal.

- End code (CR/LF)
  This indicates the end of the message. Immediately after LF is received, the device enters a state allowed to process the received message.

Note

- The following is an example of the check code (LRC) calculation.
  [Message example]
  : : 3AH (start of message)
  '0' : 30H (first byte of the station address)
  'A': 41H (second byte of the station address)
  '0' : 30H (first byte of the read command)
  '3' : 33H (second byte of the read command)
  '0' : 30H (first byte of the start data address)
  '3' : 33H (second byte of the start data address)
  'E' : 45H (third byte of the start data address)
  '9' : 39H (fourth byte of the start data address)
  '0' : 30H (first byte of the read count)
  '0' : 30H (second byte of the read count)
  '0' : 30H (third byte of the read count)
  '2' : 32H (fourth byte of the read count)

  (1) Add from the first byte of the station address to immediately before the check code. The adding calculation is as follows:
  0AH + 03H + 03H + E9H + 00H + 02H
  The result of this calculation is FBH.

  (2) The low-order one byte of the addition result FBH is unchanged at FBH. The two's complement of FBH is 05H.

  (3) Convert the obtained two's complement to a two-byte ASCII code.
  '0' : 30H
  '5' : 35H

  The two bytes '0' (30H) and '5' (35H) are the two-byte check code.

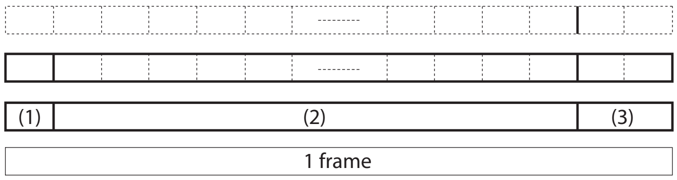
● MODBUS/RTU

All messages use binary data.

Messages are comprised of parts (1) to (3) as shown in the figure below.

The command (details sent from the master station) and the response (details returned from the slave station) are stored in the application layer.

All messages use binary data. (One box below represents one byte.)



(1) Station address (1 byte)
(2) Send message, response message
(3) Check code (2 bytes)

- Station address
  Of the messages received, the unit creates response messages only when station addresses are the same. Station addresses in the messages are one byte. However, when the station address is set to "0", the unit does not respond even if the station addresses match. The module returns the same sub-address as that of the received message.
- Check code (CRC)
  This value is for checking whether or not some abnormality (e.g. noise) causes the message content to change during communications. The check code is two bytes.

  The procedure for calculating the check code (CRC) is as follows.
  The part from the start of the station address in the message to immediately before the check code is the subject of the calculation. The binary data of the message is used unchanged in the calculation. The check code is 16-bit data, and can be calculated with the C language function get_crc16 ( ) as shown below. In the message, the low-order one byte is first, and the high-order one byte is last. This order is the reverse of the other 16-bit data.

[Explanation]	Calculate the CRC 16 bits
[Argument 1]	Character string length (number of bytes)
[Argument 2]	Pointer for start of character string
[Function value]	Calculation result

```
unsigned short get_crc16(signed int len, const unsigned char *p)
{
 unsigned short crc16;
 unsigned short next;
 unsigned short carry;
 signed int i;
 crc16 = 0xffff;
 while (len > 0)
 {
  next = (unsigned short)*p;
  crc16 ^= next;
  for (i = 0; i < 8; i++)
  {
   carry = crc16 & 0x0001;
   crc16 >>= 1;
   if (carry != 0)
   {
    crc16 ^= 0xa001;
   }
  }
  p++;
  len--;
 }
 return crc16;
}
```

- One frame end judgment
  The message end (one frame end) is judged when the time in which a character has not been received exceeds the time specified for the transmission speed. One frame end is judged when the next character is not received before the time-outs shown below. However, note that there is a variation of ±1 ms in the time-outs shown in the table below.

Set transmission speed (bps)	Time-out time Transmission speed (bps)
4800	9 ms min.
9600	5 ms min.
19200	3 ms min.
38400	2 ms min.
57600	2 ms min.
115200	2 ms min.

■ Command type

The command (send message) types supported by this module are as follows:

Command type	Description		Conformance class
	ASCII	RTU	
Multiple data item read	"03" (2 bytes)	03H (1 byte)	class 0
Multiple data item write	"10" (2 bytes)	10H (1 byte)	class 0
Write of 1 data record	"06" (2 bytes)	06H (1 byte)	class 1*

* This module does not support class 1 commands other than one data item write.

■ Exception code

When a response message error occurs, the following exception codes are added after the function code.

Error types	Exception code		Description
	ASCII	RTU	
Illegal function codes	"01" (2 bytes)	01H (1 byte)	Function code not supported
Illegal data address	"02" (2 bytes)	02H (1 byte)	Including data addresses that cannot be read or written
Invalid data	"03" (2 bytes)	03H (1 byte)	Errors other than the above
Busy	"06" (2 bytes)	06H (1 byte)	Cannot process data. Please send again.

■ No. of data records

The number of data records that can be read or written in a one frame message is as follows:

Command type (Function codes)	No. of data records			
	ASCII		RTU	
	RAM	EEPROM	RAM	EEPROM
Multiple data item read (03)	1 to 16 records	1 to 16 records	1 to 32 records	1 to 32 records
Write of 1 data record (10)	1 to 16 records	1 to 16 records	1 to 32 records	1 to 32 records
Write of 1 data record (06)	1 record	1 record	1 record	1 record

Note

- ☞ "Modicon Modbus Protocol Reference Guide (PI-MBUS-300 Rev.J)" MODICON, Inc.
- ☞ "OPEN MODBUS/TCP SPECIFICATION (Release 1.0)" Schneider Electric

9 - 3 Description of Commands

■ Multiple data record read command (03H)

Data in continuous data addresses is read in a hexadecimal format.

● Instruction message

Specifies the start data address and the number of data records. The structure of this document is as follows.

MODBUS/ASCII

3AH	30H	41H	30H	33H	30H	33H	45H	39H	30H	30H	30H	32H	30H	35H	0DH	0AH
:	0	A	0	3	0	3	E	9	0	0	0	2	0	5	CR	LF
(1)	(2)		(3)		(4)				(5)				(6)		(7)	

(1) Start code
(2) Station address
(3) Function codes
(4) Start data address
(5) No. of data records
(6) Check code (LRC)
(7) End code

MODBUS RTU

0AH	03H	03H	E9H	00H	02H	14H	C0H
(1)	(2)	(3)		(4)		(5)	

(1) Station address
(2) Function codes
(3) Start data address
(4) No. of data records
(5) Check code (CRC)

● Response message

The structure of response messages is as follows.

MODBUS/ASCII

• Normal example

3AH	30H	41H	30H	33H	30H	34H	30H	33H	30H	31H	30H	30H	30H	33H	45H	38H	0DH	0AH
:	0	A	0	3	0	4	0	3	0	1	0	0	0	3	E	8	CR	LF
(1)	(2)		(3)		(4)		(5)				(6)				(7)		(8)	

(1) Start code
(2) Station address
(3) Function codes
(4) No. of data records × 2
(5) Read data 1
(6) Read data 2
(7) Check code (LRC)
(8) End code

• Error example

3AH	30H	41H	38H	34H	30H	31H	37H	31H	0DH	0AH
:	0	A	8	4	0	1	7	1	CR	LF
(1)	(2)		(3)		(4)		(5)		(6)	

(1) Start code
(2) Station address
(3) Function code (When an error occurs, 1 is set for the MSB of the send message's function code. In this example, a response of 84 is given for the undefined 04.)
(4) Exception code (on page 9-6)
(5) Check code (LRC)
(6) End code

MODBUS/RTU

• Normal example

0AH	03H	04H	03H	01H	00H	03H	51H	76H
(1)	(2)	(3)	(4)		(5)		(6)	

(1) Station address
(2) Function codes
(3) Read count × 2 (number of bytes)
(4) Read data 1
(5) Read data 2
(6) Check code (CRC)

• Error example

0AH	84H	01H	F3H	02H
(1)	(2)	(3)	(4)	

(1) Station address
(2) Function code (When an error occurs, 1 is set for the MSB of the send message's function code. In this example, a response of 84 is given for the undefined 04.)
(3) Exception code (on page 9-6)
(4) Check code (CRC)

■ Multiple data record write command (10H)

Writing is performed in a hexadecimal format to data in continuous data addresses.

● Instruction message

Specifies the start data address and at least one data record. The structure of this document is as follows.

Example: The 01A0H and 0E53H values are written in two continuous data addresses from 05DDH.

MODBUS/ASCII

3AH	30H	31H	31H	30H	30H	35H	44H	44H	30H	30H	30H	32H	30H	34H
:	0	1	1	0	0	5	D	D	0	0	0	2	0	4
(1)	(2)		(3)		(4)				(5)				(6)	

30H	31H	41H	30H	30H	45H	35H	33H	30H	35H	0DH	0AH
0	1	A	0	0	E	5	3	0	5	CR	LF
(7)				(8)				(9)		(10)	

(1) Start code
(2) Station address
(3) Function codes
(4) Write start data address 1
(5) No. of write data records
(6) No. of write data records × 2
(7) Write data 1
(8) Write data 2
(9) Check code (LRC)
(10) End code

MODBUS RTU

01H	10H	05H	DDH	00H	02H	04H	01H	A0H	0EH	53H	45H	B9H
(1)	(2)	(3)		(4)		(5)	(6)		(7)		(8)	

(1) Station address
(2) Function codes
(3) Write start data address
(4) No. of write data records
(5) No. of write data records × 2
(6) Write data 1
(7) Write data 2
(8) Check code (CRC)

● Response message

The structure of this document is as follows.

MODBUS/ASCII

3AH	30H	31H	31H	30H	30H	35H	44H	44H	30H	30H	30H	32H	30H	42H	0DH	0AH
:	0	1	1	0	0	5	D	D	0	0	0	2	0	B	CR	LF
(1)	(2)		(3)		(4)				(5)				(6)		(7)	

(1) Start code

(2) Station address

(3) Function codes

(4) Write start data address 1

(5) No. of write data records

(6) Check code (LRC)

(7) End code

MODBUS RTU

01H	10H	05H	DDH	00H	02H	D1H	3EH
(1)	(2)	(3)		(4)		(5)	

(1) Station address

(2) Function codes

(3) Write start data address

(4) No. of write data records

(5) Check code (CRC)

Note

- The response message when an error occurs is the same as when an error occurs for the multiple data item read command.

■ One data item write command (06H)

Data is written to an data address in hexadecimal notation.

● Send message

Specifies the start data address and the number of data records. The structure of this document is as follows.

Example: The 01A0H value is written in the 05DDH data address.

MODBUS/ASCII

3AH	30H	31H	30H	36H	30H	35H	44H	44H	30H	31H	41H	30H	37H	36H	0DH	0AH
:	0	1	0	6	0	5	D	D	0	1	A	0	7	6	CR	LF
(1)	(2)		(3)		(4)				(5)				(6)		(7)	

(1) Start code

(2) Station address

(3) Function codes

(4) Data address

(5) Write data

(6) Check code (LRC)

(7) End code

MODBUS/RTU

01H	06H	05H	DDH	01H	A0H	18H	D4H
(1)	(2)	(3)		(4)		(5)	

(1) Station address

(2) Function codes

(3) Data address

(4) Write data

(5) Check code (CRC)

● Response message

The normal response message is the same as the send message.

Note

- The response message when an error occurs is the same as when an error occurs for the multiple data item read command.

9 - 4 Numeric Representation

The numeric values include the data address and number of data records and data values. All use the hexadecimal notation. The numeric representation varies depending on whether the communications type is MODBUS/ASCII or MODBUS/RTU. This notation methods is shared by both the instruction message and the response message.

■ ASCII hexadecimals

The hexadecimal specifications are shown in the table below.

If the message does not match the specifications, the module does not process the instruction message and instead returns an error response.

Item	Specifications	Example of specification mismatch
Available characters	0 (30H) to 9 (39H) A (41H) to F (46H)	1 2 3 a (a is not allowed) - 1 2 3 (- is not allowed) 1 2 3 (space is not allowed)
Number of characters	4 or 2	1 2 3 (3 characters) 0 1 2 3 4 (5 characters)
Expressible numeric values (4 characters)	8000H to 7FFFH (data with symbols) 0000H to FFFFH (data without symbols)	
Expressible numeric values (2 characters)	00H to FFH (data without symbols)	
Examples of normal character strings	0 0 0 0 1 2 A B 0 1 2 3 F F F F 0 1 1 0	

■ RTU hexadecimals

The RTU hexadecimal specifications are shown in the table below.

If the message does not match the specifications, the module does not process the instruction message and instead returns an error response.

Item	Specifications	Example of specification mismatch
Available characters	00H to FFH (all)	
Number of characters	2 or 1	00H 01H 02H (3 characters)
Expressible numeric values (2 characters)	8000H to 7FFFH (data with symbols) 0000H to FFFFH (data without symbols)	
Expressible numeric values (1 characters)	00H to FFH (data without symbols)	
Examples of normal character strings	00H 00H 12H ABH 01H 23H FFH FFH 10H 04H	

! Handling precautions

- Assign numeric values with the most significant byte first for MODBUS communications.

9 - 5 Specifications Shared with CPL Communications Function

■ Definition of data addresses

☞ 8-4 Definition of Data Addresses (on page 8-12).

■ RS-485 driver control timing specifications

☞ Reception and Transmission Timing (on page 8-16).

Chapter 10. CPL/TCP COMMUNICATIONS FUNCTION

10 - 1 Outline of Communication

The module can communicate with the host device using the CPL/TCP protocol, which is compliant with Ethernet TCP/IP.

■ Features

The features of the module's communication function are as follows:

- The module can access all modules in the linked block when a communication adapter (1 port) with Ethernet interface or a communication box (4 ports) is attached to the right side (left side only for a communication box) or the left side of the linked module, and connected with an Ethernet cable.
- Host devices can communicate with the module via Ethernet using the IP address of the module.
- Almost all of the module parameters can be communicated.
  ☞ Chapter 12 List of Communication Data.

Handling precautions

- This module sends and receives based on the communication address (parameter) that is specified in the communication message.
  Be sure to understand the specifications of the host device before using the module.

■ Settings

The following setup is required for performing the CPL/TCP communications with the module.

Item	Default
IP address	192.168.255.254
Netmask	255.255.255.0
Default gateway	None

- The net mask and default gateway can be set for each chain by selecting “All” in the actual module configuration screen of the SLP-NX (sold separately).
- The port No. for CPL/TCP is 1252. However, it can be changed if necessary.

■ Communication procedures

With CPL/TCP, the TCP/IP socket interface is used for communications.

The TCP/IP socket interface is used in different ways depending on the host device, but this section will explain the usage method for an ordinary computer.

(1) A TCP/IP socket connection is established from the host device (master station) to one module (slave station).

(2) The master station sends an instruction message to a slave station.

(3) The slave station receives the instruction message, and performs read or write processing according to the content of the message.

(4) The slave station sends a message corresponding to the processing content as a response message.

(5) The master station receives the response message.

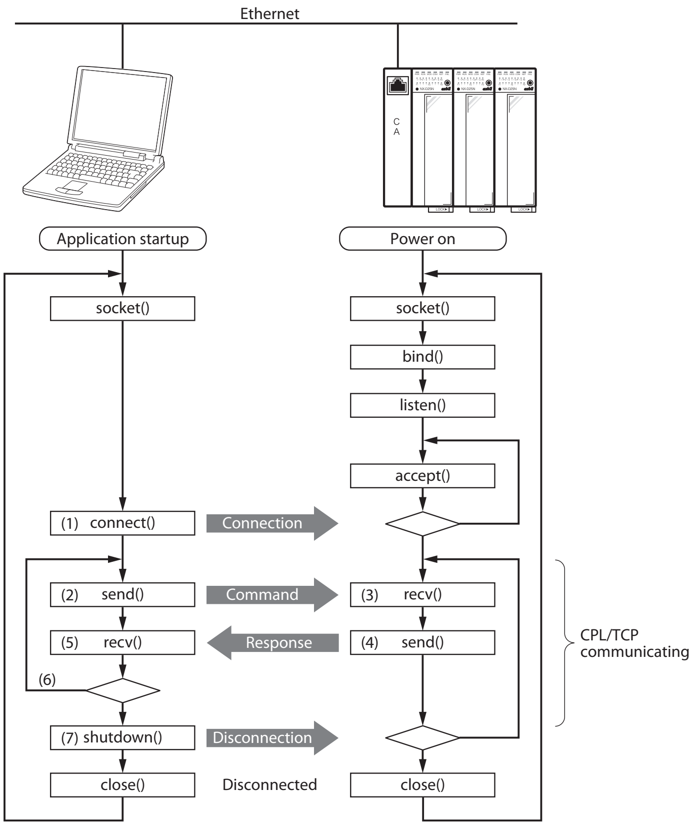
(6) To continue CPL/TCP communications, go back to (2).

(7) To end CPL/TCP communications, the master station performs a TCP/IP socket connection cutoff request process on the slave station.

Handling precautions

- This device can support up to two (one when using RS-485 communication)TCP connections for CPL/TCP.
  Chapter 4 "Network Function Design" in Network Instrumentation Module User's Manual Network Design Version, CP-SP-1313E.

■ Communication procedure for standard TCP/IP sockets



10 - 2 Message Structure

■ Message Structure

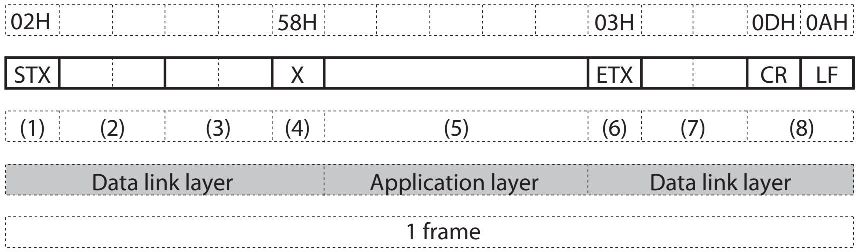
The following shows the message structure.

Messages are broadly classified into two layers: the data link layer and the application layer.

- Data link layer
  This layer contains the basic information required for communication.
  For example, the destination of the communication message and the check information of the message.
- Application layer
  Data is read and written in this layer. The content of the layer varies according to the purpose of the message.

Messages comprise parts (1) to (8) as shown in the figure below.

The command (details sent from the master station) and the response (details returned from the slave station) are stored in the application layer.



(1) STX (Start of message)
(2) Station address
(3) Sub-address
(4) Device code
(5) Command message = command Response message =
(6) ETX (end of command/response)
(7) Checksum
(8) Delimiter (end of message)

■ Data link layer

● Outline

The data link layer is of a fixed length. The position of each data item and the number of its characters are already decided.Note, however, that the data positions of the data link layer from ETX onwards shift according to the number of characters in the application layer.

● Response start conditions

- The device sends the response message only when all the message components in the data link layer of the instruction message are correct. If even one of these is incorrect, no response message is sent, and the device stands by for reception of STX.

● List of data link layer data definitions

The following list shows the definitions for data in the data link layer:

Data name	Character code	Number of characters	Meaning of data
STX	02H	1	Start of message
Station address setting	0 to 7FH are expressed as hexadecimal character codes.	2	Identification of device to communicate with Sub-address
Sub address	"00" (30H, 30H)	2	No function
Device code	"X" (58H) or "x" (78H)	1	Device type
ETX	03H	1	Application layer end position
Checksum of message	00H to FFH are expressed as two-digit hexadecimal character codes	2	Checksum of message
Delimiter	CR (0DH), LF (0AH)	2	End of message

● Description of data items

- STX (02H)

  When STX is received, the unit judges this to be the start of the send message. It follows that if a delimiter has not been received previously, the module judges that a message start STX has been received. The purpose of this is to enable recovery of the module's response at the next message from the master stationin the event that noise, for example, causes a message error.

- Station address

  Two hexadecimal characters can be used, from “00” (30H 30H) to “FF” (46H 46H). The module returns the same sub-address as that of the received message.

- Sub-address

  Two hexadecimal characters can be used, from “00” (30H 30H) to “FF” (46H 46H). The module returns the same sub-address as that of the received message.

- Device code

  “X” (58H) or “x” (78H) can be used. This code is determined for each device series, and other codes cannot be selected. The module returns the same device code as that of the received message. These can be used to identify the messages, for example by using “X” (58H) as the initial value and “x” (78H) in resend messages.

- ETX (03H)

  ETX indicates the end of the application layer.

- Checksum

  This value is for checking whether or not some abnormality (e.g. noise) causes the message content to change during communications.

  The checksum is expressed as two hexadecimal characters.

- How to calculate a checksum

  (1) Add the character codes in the message from STX through ETX in single byte modules.

  (2) Take two's complement of the low-order one byte of the addition result.

  (3) Convert the obtained two's complement to a two-byte ASCII code.

  The following is a sample checksum calculation for a sample message:

  [Message example]

STX:	02H
'0':	30H (first byte of the station address)
'1':	31H (second byte of the station address)
'0':	30H (first byte of the sub-address)
'0':	30H (second byte of the sub-address)
'X':	58H (device code)
'R':	52H (first byte of the command)
'D':	44H (second byte of the command)
(Omitted)	
ETX:	03H

(1) Add the character codes in the message from STX through ETX in single byte modules. The adding calculation in single byte units is as follows:
02H + 30H + 31H + 30H + 30H + 58H + 52H + 44H +... + 03H
The result of this calculation is 376H.

(2) The low-order one byte of the addition result 376H is 76H. The two's complement of 76H is 8AH.

(3) Convert the obtained 8AH to a two-byte ASCII code. The result is:
'8': 38H
'A': 41H
The two bytes '8' (38H) and 'A' (41H) are the checksum.

- Delimiter (CR/LF)
This indicates the end of the message. Immediately after LF is received, the device enters a state allowed to process the received message.

■ Application layer

The table below shows the configuration of the application layer.

Item	Description
Command	"RS" (decimal format continuous address data read)
	"WS" (decimal format continuous address data write)
	"RD" (hexadecimal format continuous address data read)
	"WD" (hexadecimal format continuous address data write)
	“RU”(hexadecimal format random address data read)
	“WU”(hexadecimal format random address data write)
Data delimiter	RS, WS command :" , " (comma) Other commands : None
Word address	RS, WS command : Numeric value in decimal notation and "W", such as "501W". Other commands : Numeric value in hexadecimal notation, such as "01F5".
Read count	RS, WS command : Numeric value in decimal notation, such as "1". Other commands : Numeric value in hexadecimal notation, such as "0001".
Write conditions	RS, WS command : Numeric value in decimal notation, such as "100". Other commands : Numeric value in hexadecimal notation, such as "0064".

The number of data records accessible by a single instruction message and response message cycle is as follows:

Command	RAM	EEPROM
RD	28	28
WD	28	28
RU	28	28
WU	16	16
RS	16	16
WS	16	16

! Handling precautions

- 4 characters are used for numeric representation of RD, WD, RU, or WU command.
- It the numeric representation consists of less than 4 characters, add "0" to the left end so that the No. of characters is 4.

10 - 3 Description of Commands

■ Fixed length continuous data read command (RD command)

Data in continuous data addresses is read in a hexadecimal format.

● Instruction message

Specifies the start data address and the number of data records. The structure of the application layer in the instruction message is as follows:

R D		
(1)	(2)	(3)

(1) Command
(2) Start data address
(3) Number of read data

● Response message

The structure of the application layer in the response message is as follows:

● Normal end or Warning (reading of single data item)

X X	
(1)	(2)

● Normal end or Warning (reading of multiple data items)

X X			
(1)	(2)	(3)	(4)

● Abnormal end

X X
(1)

(1) End code
(2) Data (1st item)
(3) Data (2nd and following items)
(4) Data (final item)

The end code is entered at XX.
☞ 10-6 List of End Codes (page 10-15).

Note

- ☞ Hexadecimal (on page 10-13).
- When a warning occurs, the corresponding data address is read as 0000H.

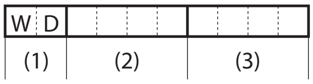
■ Fixed length continuous data write command (WD command)

Writing is performed in a hexadecimal format to data in continuous data addresses.

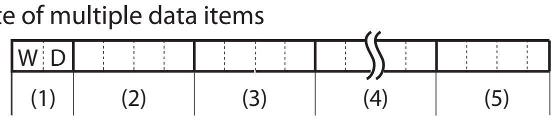
● Instruction message

Specifies the start data address and at least one data record. The structure of the application layer in the instruction message is as follows:

- Write of 1 data item



- Write of multiple data items

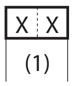


(1) Command
(2) Start data address
(3) Data (1st item)
(4) Data (2nd and following items)
(5) Data (final item)

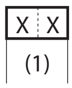
● Response message

The structure of the application layer in the response message is as follows:

- Normal end or Warning



- Abnormal end



(1) End code

The end code is entered at XX.
10-6 List of End Codes (page 10-15).

Note

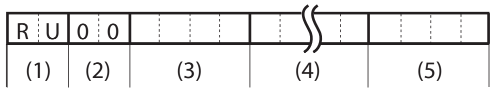
- Hexadecimal (on page 10-13).
- If a warning occurs, data is not written to that data address.

■ Fixed length random data read command (RU command)

Data in continuous data addresses is read in a hexadecimal format.

● Instruction message

Specifies at least one data record. The structure of the application layer in the instruction message is as follows:

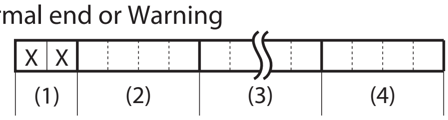


(1) Command
(2) Sub-command, fixed to "00"
(3) Data address (1st item)
(4) Data address (2nd and following items)
(5) Data address (final item)

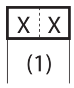
● Response message

The structure of the application layer in the response message is as follows:

● Normal end or Warning



● Abnormal end



(1) End code
(2) Data (1st item)
(3) Data (2nd and following items)
(4) Data (final item)

The end code is entered at XX.
10-6 List of End Codes (page 10-15).

Note

- Hexadecimal (on page 10-13).
- When a warning occurs, the corresponding data address is read as 0000H.

Fixed length random data write command (WU command)

Writing is performed in a hexadecimal format to data in continuous data addresses.

Instruction message

Groups data addresses and data, and specifies at least one group. The structure of the application layer in the instruction message is as follows:

W U	0 0					
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) Command
(2) Sub-command, fixed to "00"
(3) Data address (1st group)
(4) Write data (1st group)
(5) Data address, write data (2nd and following groups)
(6) Data address (final group)
(7) Write data (final group)

Response message

The structure of the application layer in the response message is as follows:

- Normal end or Warning

X X
(1)

- Abnormal end

X X
(1)

(1) End code

The end code is entered at XX.
10-6 List of End Codes (page 10-15).

Note

- Hexadecimal (on page 10-13).
- If a warning occurs, data is not written to that data address.

■ Continuous data read command (RS command)

Data in continuous data addresses is read in a decimal format.

● Instruction message

Specifies the start data address and the number of data records. The structure of the application layer in the instruction message is as follows:

R S	,	4 0 9 6 W	,	1
(1)	(2)	(3)	(2)	(4)

(1) Command
(2) Data delimiter
(3) Start data address (“W” is required)
(4) No. of data records

● Response message

The structure of the application layer in the response message is as follows:

● Normal end or Warning (reading of single data item)

X X	,	
(1)	(2)	(3)

● Normal end or Warning (reading of multiple data items)

X X	,		,		,	
(1)	(2)	(3)	(2)	(4)	(2)	(5)

● Abnormal end

X X
(1)

(1) End code
(2) Data delimiter
(3) Data (1st item)
(4) Data (2nd and following items)
(5) Data (final item)

The end code is entered at XX.
10-6 List of End Codes (page 10-15).

Note

- Decimal (on page 10-14).
- When a warning occurs, the corresponding data address is read as 0.

■ Continuous data write command (WS command)

Writing is performed in a decimal format to data in continuous data addresses.

● Instruction message

Specifies the start address and at least one data record. The structure of the application layer in the instruction message is as follows:

W	S	,	4	0	9	6	W	,	1	,	6	5
(1)		(2)	(3)					(2)	(4)	(2)	(5)	

(1) Command
(2) Data delimiter
(3) Start data address ("W" is required)
(4) Data (1st item)
(5) Data (2nd item)

● Response message

The structure of the application layer in the response message is as follows:

- Normal end or Warning

X	X
(1)	

- Abnormal end

X	X
(1)	

(1) End code

The end code is entered at XX.
☞ 10-6 List of End Codes (page 10-15).

Note

- ☞ Decimal (on page 10-14).
- If a warning occurs, data is not written to that data address.

10 - 4 Definition of Data Addresses

● RAM and EEPROM areas of data addresses

Data addresses are categorized as follows:

Data address Hexadecimal	Data address Decimal	Name	Remarks
100 to FFF	256 to 4095	EEPROM access data address	Write accesses both the RAM area and EEPROM area, but read accesses only the RAM area. Since writing is also performed to EEPROM, the value does not change even after restarting.
1000 to 4FFF	4096 to 20479	RAM access data address	Read and write both access the RAM area data Since writing is not performed to EEPROM, the value returns to that stored in EEPROM after restarting.
5000 to 8FFF	20480 to 36863	EEPROM access data address	Write accesses both the RAM area and EEPROM area, but read accesses only the RAM area. Since writing is also performed to EEPROM, the value does not change even after restarting.

! Handling precautions

- The number of EEPROM erase/write cycles is limited.
  Accordingly, it is recommended that very frequently written parameters be written to RAM, which does not have a limitation on cycles.
  However, note that the data written to the RAM area is overwritten with the EEPROM area data when the power is turned ON.

● Write data range

If the write value exceeds the range determined by parameters, writing is not performed and an abnormal end code is returned.

● Write conditions

An abnormal end code is also returned when the writing is not possible due to the conditions.

● Reading an undefined address

If an undefined address is read, the end code does not indicate an error or alarm because there is no data.

● Writing an undefined address

An undefined address must not be written.

10 - 5 Numeric Representation in the Application Layer

The numeric values in the application layer include the data address and the number of data records and data values. They use hexadecimal or decimal notation depending on the command. This notation methods is shared by both the instruction message and the response message.

■ Hexadecimal

The hexadecimal specifications are shown in the table below.

If the message does not match the specifications, the module does not process the instruction message and instead returns an error response.

Item	Specifications	Example of specification mismatch
Supported commands	RD WD RU WU	RS command (hexadecimal is not allowed) WS command (hexadecimal is not allowed)
Available characters	0 (30H) to 9 (39H) A (41H) to F (46H)	1 2 3 a (a is not allowed) - 1 2 3 (- is not allowed) 1 2 3 (space is not allowed)
Number of characters	4	1 2 3 (3 characters) 0 1 2 3 4 (5 characters)
Expressible numeric values	8000H to 7FFFH (data with symbols) 0000H to FFFFH (data without symbols)	
Examples of normal character strings	0 0 0 0 1 2 A B 0 1 2 3 F F F F	

Handling precautions

- 4 characters are used for numeric representation of RD,WD, RU, or WU command.
- It the numeric representation consists of less than 4 characters, add ”0" to the left end so that the No. of characters is 4.

■ Decimal

The decimal specifications are shown in the table below.

In the data address, a capital letter "W" (57H) is added immediately after the decimal.

If the message does not match the specifications, the module does not process the instruction message and instead returns an error response.

Item	Specifications	Example of specification mismatch
Supported commands	RS WS	RD command (decimal is not allowed) WD command (decimal is not allowed)
Available characters	0 (30H) to 9 (39H) - (2DH)	1 2 3 A (A is not allowed) + 1 2 3 (+ is not allowed) 1 2 3 (space is not allowed)
Delimiter characters	, (2CH) Delimiter characters are used between two numeric values	
Number of characters	1 to 5 (positive numbers) 2 to 6 (negative numbers) 1 (Numeric value 0)	0 characters (Nothing between delimiter characters) 1 2 3 4 5 6 (6 positive numbers)
Expressible numeric values	–32768 to +32767 (data with symbols) 0 to 65535 (data without symbols)	
Positive number notation	Starts with 1 (31H) to 9 (39H)	0 1 (Not allowed to start with 0)
Negative number notation	Starts with - (2DH), the second character is 1 (31H) to 9 (39H)	- 0 1 (0 is not allowed for the second character)
Numeric value 0 notation	0	- 0 (- is not allowed) 0 0 (Not allowed for anything other than the first character)
Examples of normal character strings	1 3 2 7 6 7 - 1 2 - 3 2 7 6 8	

10 - 6 List of End Codes

The result of the application layer process for the instruction message can be understood from the end code of the response message.

Results other than "normal" are in two levels. An "error" occurs when nothing is processed, and a "warning" occurs when there is a possibility that some kind of processing will be performed.

■ End code of the read command

End code	Description	Module processing
00 (Normal)	Normal end	Returns a read value
99 (Error)	Undefined command	Returns a end code (Does not write any data)
10 (Error)	Parameter error *	Returns a end code (Does not write any data)
40 (Error)	No. of data records error	Returns a end code (Does not write any data)
21 (Warning)	Data address error	Does not write the corresponding data address
22 (Warning)	Data range error	Returns the read value of the corresponding data address as 8000 or 7FFF in hexadecimal format, or -32768 or +32767 in decimal format.
23 (Warning)	Not allowed depending on the instrument conditions	Returns a 0 for the corresponding data address

* The parameter errors are the following errors.
- Violation of the numeric representation
- Violation of the instruction message format

■ End code of the write command

End code	Description	Module processing
00 (Normal)	Normal end	Writes all data
99 (Error)	Undefined command	Does not write any data
10 (Error)	Parameter error *	Does not write any data
40 (Error)	No. of data records error	Does not write any data
21 (Warning)	Data address error	Does not write the corresponding data address
22 (Warning)	Data range error	Does not write the corresponding data address
23 (Warning)	Not allowed depending on the instrument conditions	Does not write the corresponding data address

* The parameter errors are the following errors.
- Violation of the numeric representation
- Violation of the instruction message format
- Addition of excess data to the end of the frame

Chapter 11. MODBUS/TCP COMMUNICATIONS FUNCTION

11 - 1 Outline of Communication

The module can communicate with the host device using the MODBUS/TCP protocol, which is compliant with Ethernet TCP/IP.

■ Features

The features of the module's communication function are as follows:

- The module can access all modules in the linked block when a communication adapter (1 port) with Ethernet interface or a communication box (4 ports) is attached to the right side (left side only for a communication box) or the leftside of the linked module, and connected with an Ethernet cable.
- Host devices can communicate with the module via Ethernet using the IP address of the module.
- Almost all of the module parameters can be communicated.
  ☞ Chapter 12 List of Communication Data.

Handling precautions

- In MODBUS communications, the communication address (parameter) for the module that is set in the host device may be reduced by 1 in a communication message during transmission.
  Example: If the communication address (parameter) is set to 1001 in the host device, it will be 1000 in a communication message during transmission.
  This module bases sending and receiving on the communication address (parameter) that is specified in the communication message.
  Be sure to understand the specifications of the host device before using the module.

■ Settings

To activate MODBUS/TCP communications with the module, set as follows.

Item	Default
IP address	192.168.255.254
Net mask	255.255.255.0
Default gateway	None

- The net mask and default gateway can be set for each chain by selecting “All” in the actual module configuration screen of the SLP-NX (sold separately).
- The port No. for MODBUS/TCP is 502. However, it can be changed if necessary.

■ Communication procedures

With MODBUS/TCP, the TCP/IP socket interface is used for communications.

The TCP/IP socket interface is used in different ways depending on the host device, but this section will explain the usage method for an ordinary computer.

(1) A TCP/IP socket connection is established from the host device (master station) to one module (slave station).

(2) The master station sends an instruction message to a slave station.

(3) The slave station receives the instruction message, and performs read or write processing according to the content of the message.

(4) The slave station sends a message corresponding to the processing content as a response message.

(5) The master station receives the response message.

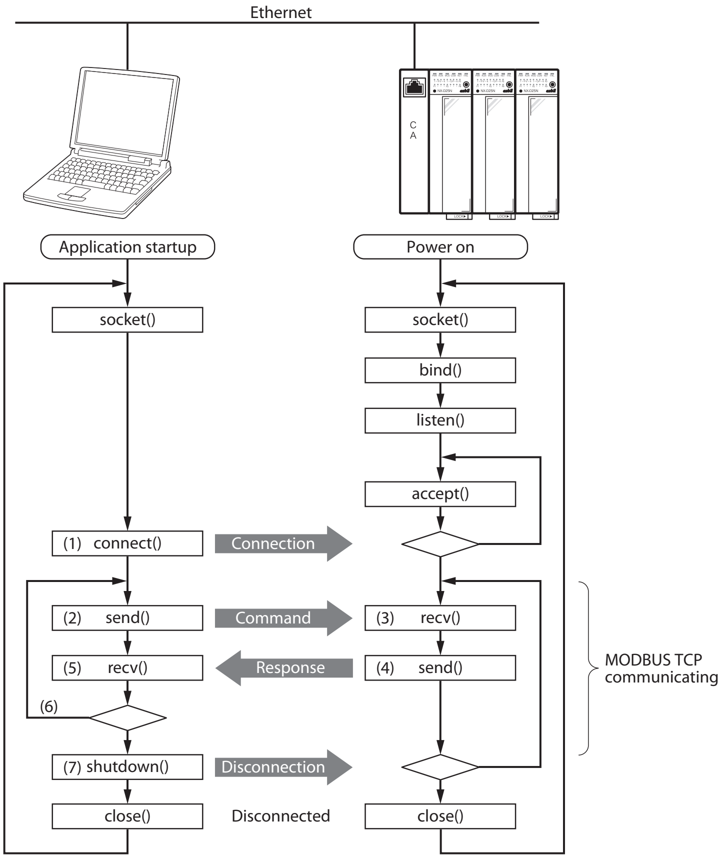
(6) To continue MODBUS/TCP communications, go back to (2).

(7) To end MODBUS/TCP communications, the master station performs a TCP/IP socket connection cutoff request process on the slave station.

Handling precautions

- This device can support up to two (one when using RS-485 communication)TCP connections for MODBUS/TCP.
  ☞ Chapter 4 “Network Function Design” in Network Instrumentation Module User's Manual Network Design Version, CP-SP-1313E.

■ Communication procedure for standard TCP/IP sockets

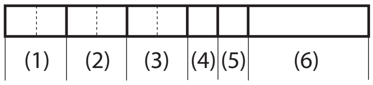


11 - 2 Message Structure

■ Message Structure

A TCP/IP frame is used. The MODBUS/TCP message is expressed in the TCP data section.

● MODBUS/TCP



(1) Transaction Identifier (2 bytes)	No particular definition.
(2) Protocol Identifier (2 bytes)	0000H when the protocol is MODBUS.
(3) Length (2 bytes)	Expresses the number of bytes in (4) to (6).
(4) Unit Identifier (1 byte)	Specify FF or 00H.
(5) Function (1 byte)	Specify a function code.
(6) Data (n bytes)	Data column that is dependent on the function code

● Data details

- Transaction Identifier
  Contains the same value in a request - response pair.
  The host station can use the Transaction Identifier to confirm that the data is the response to the request.
- Protocol Identifier
  For MODBUS protocol, specify 0000H.
- Length
  Expresses the data length from Unit Identifier to Data as the number of bytes.
- Unit Identifier
  Specify FFH or 00H.
- Function
  Specify a function code.
- Data
  The communication data.

● Frame detection method

A TCP frame is equivalent to a MODBUS/TCP frame.

● Port

The TCP port number used by MODBUS/TCP is No. 502. (Can be changed.)

● Function codes

Supports Function Code 3 (03H), 16 (10H), (06H).

■ Exception code

When a response message error occurs, the following exception codes are added after the function code.

Error types	Exception code	Description
Illegal function codes	"01" (2 bytes)	Function code not supported
Illegal data address	"02" (2 bytes)	Including data addresses that cannot be read or written
Invalid data	"03" (2 bytes)	Errors other than the above
Busy	"06" (2 bytes)	Status where the unit cannot process. Resend.

■ No. of data records

The number of data records that can be read or written in a one frame message is as follows:

Command type (Function code)	No. of data records	
	RAM	EEPROM
Multiple data record read (03H)	1 to 64 records	1 to 64 records
Multiple data record write (10H)	1 to 32 records	1 to 32 records
1 data record write (06H)	1 record	1 record

Note

- ☞ "Modicon Modbus Protocol Reference Guide (PI-MBUS-300 Rev.J)" MODICON, Inc.
  ☞ "OPEN MODBUS/TCP SPECIFICATION (Release 1.0)" Schneider Electric

11 - 3 Description of Commands

■ Application section

The following data descriptions

X X
(1)

are single byte hex descriptions (left side is the upper nibble)

■ Multiple data record read command (03H)

● One data item

● Request

0 3		
(1)	(2)	(3)

(1) Function code (Read Holding Registers)
(2) Start data address
(3) Number of data records (=1)

● Normal response

0 3		
(1)	(2)	(3)

(1) Function code (Read Holding Registers)
(2) Number of bytes (=2)
(3) Read data

● Abnormal response

8 3	
(1)	(2)

(1) Error code (Read Holding Registers)
(2) Exception code (=01H/02H/03H/06H)

● Multiple data items

● Request

0 3		
(1)	(2)	(3)

(1) Function code (Read Holding Registers)
(2) Start data address
(3) Number of data records

● Normal response

0 3				
(1)	(2)	(3)		(3)

(1) Function code (Read Holding Registers)
(2) Number of bytes
(3) Read data (data items continue for the number of read items)

● Abnormal response

8 3	
(1)	(2)

(1) Error code (Read Holding Registers)
(2) Exception code (=01/02/03/06)

Multiple data record write command (10H)

One data item

- Request

1 0				
(1)	(2)	(3)	(4)	(5)

(1) Function code (Write Multiple Registers)
(2) Start data address
(3) Number of data records (=1)
(4) Number of bytes (= number of data records x 2)
(5) Write data

- Normal response

1 0		
(1)	(2)	(3)

(1) Function code (Write Multiple Registers)
(2) Start data address
(3) Number of data records (=1)

- Abnormal response

9 0	
(1)	(2)

(1) Error code (Write Multiple Registers)
(2) Exception code (=01H/02H/03H/06H)

Multiple data items

- Request

1 0						
(1)	(2)	(3)	(4)	(5)		(5)

(1) Function code (Write Multiple Registers)
(2) Start data address
(3) Number of data records
(4) Number of bytes (= number of data records x 2)
(5) Write data

- Normal response

1 0		
(1)	(2)	(3)

① Function code (Write Multiple Registers)
② Start data address
③ Number of data records

- Abnormal response

9 0	
(1)	(2)

(1) Error code (Write Multiple Registers)
(2) Exception code (=01H/02H/03H/06H)

■ One data item write command (06H)

● Request

0 6		
(1)	(2)	(3)

(1) Function code (Write Single Register)
(2) Write address
(3) Write data

● Normal response

0 6		
(1)	(2)	(3)

(1) Function code (Write Single Register)
(2) Write address
(3) Write data (echo back)

● Abnormal response

8 6	
(1)	(2)

(1) Error code (Write Single Register)
(2) Exception code (=01H/02H/03H/06H)

Chapter 12. LIST OF COMMUNICATION DATA

Comments on the table

RAMEEPROM Read Write

No symbol:	Possible
×:	Not possible

Handling precautions

- When reading the EEPROM address, data in the RAM is read in the same manner as the reading of the RAM address.
- Even if there is no symbol, reading or writing might not be possible depending on the conditions.

Decimal point information

–:	No decimal point
1 to 3:	Decimal point position (original value of communication data is multiplied by 10, 100, or 1000)
EV:	Determined by the settings for event Nos. 1 to 24 in the event configuration bank (decimal point position).
TBL:	Determined by the settings for Linearizations 1 through 8 in the Linearization table bank ("breakpoint decimal point position").

MODBUS communications

Handling precautions

- In MODBUS communications, the communication address (parameter) for the module that is set in the host device may be reduced by 1 in a communication message during transmission.
  Example: If the communication address (parameter) is set to 1001 in the host device, it will be 1000 in a communication message during transmission.

  This module bases sending and receiving on the communication address (parameter) that is specified in the communication message. Be sure to understand the specifications of the host device before using the module.

Monitor/Communications Profile

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Monitor	Comm. (device)	1	RUN/READY	14352	3810	30736	7810		×		×	–	
Monitor	Comm. (device)	1	AUTO/MANUAL	14353	3811	30737	7811		×		×	–	
Monitor	Comm. (device)	1	MV	14358	3816	30742	7816		×		×	1	
Monitor	Comm. (device)	2	RUN/READY	14360	3818	30744	7818		×		×	–	
Monitor	Comm. (device)	2	AUTO/MANUAL	14361	3819	30745	7819		×		×	–	
Monitor	Comm. (device)	2	MV	14366	381E	30750	781E		×		×	1	
Monitor	Comm. (device)	3	RUN/READY	14368	3820	30752	7820		×		×	–	
Monitor	Comm. (device)	3	AUTO/MANUAL	14369	3821	30753	7821		×		×	–	
Monitor	Comm. (device)	3	MV	14374	3826	30758	7826		×		×	1	
Monitor	Comm. (device)	4	RUN/READY	14376	3828	30760	7828		×		×	–	
Monitor	Comm. (device)	4	AUTO/MANUAL	14377	3829	30761	7829		×		×	–	
Monitor	Comm. (device)	4	MV	14382	382E	30766	782E		×		×	1	
Monitor	Comm. (device)	5	RUN/READY	14384	3830	30768	7830		×		×	–	
Monitor	Comm. (device)	5	AUTO/MANUAL	14385	3831	30769	7831		×		×	–	
Monitor	Comm. (device)	5	MV	14390	3836	30774	7836		×		×	1	
Monitor	Comm. (device)	6	RUN/READY	14392	3838	30776	7838		×		×	–	
Monitor	Comm. (device)	6	AUTO/MANUAL	14393	3839	30777	7839		×		×	–	
Monitor	Comm. (device)	6	MV	14398	383E	30782	783E		×		×	1	
Monitor	Comm. (device)	7	RUN/READY	14400	3840	30784	7840		×		×	–	
Monitor	Comm. (device)	7	AUTO/MANUAL	14401	3841	30785	7841		×		×	–	
Monitor	Comm. (device)	7	MV	14406	3846	30790	7846		×		×	1	
Monitor	Comm. (device)	8	RUN/READY	14408	3848	30792	7848		×		×	–	
Monitor	Comm. (device)	8	AUTO/MANUAL	14409	3849	30793	7849		×		×	–	
Monitor	Comm. (device)	8	MV	14414	384E	30798	784E		×		×	1	
Monitor	Comm. (device)	9	RUN/READY	14416	3850	30800	7850		×		×	–	
Monitor	Comm. (device)	9	AUTO/MANUAL	14417	3851	30801	7851		×		×	–	
Monitor	Comm. (device)	9	MV	14422	3856	30806	7856		×		×	1	
Monitor	Comm. (device)	10	RUN/READY	14424	3858	30808	7858		×		×	–	
Monitor	Comm. (device)	10	AUTO/MANUAL	14425	3859	30809	7859		×		×	–	
Monitor	Comm. (device)	10	MV	14430	385E	30814	785E		×		×	1	
Monitor	Comm. (device)	11	RUN/READY	14432	3860	30816	7860		×		×	–	
Monitor	Comm. (device)	11	AUTO/MANUAL	14433	3861	30817	7861		×		×	–	
Monitor	Comm. (device)	11	MV	14438	3866	30822	7866		×		×	1	
Monitor	Comm. (device)	12	RUN/READY	14440	3868	30824	7868		×		×	–	
Monitor	Comm. (device)	12	AUTO/MANUAL	14441	3869	30825	7869		×		×	–	
Monitor	Comm. (device)	12	MV	14446	386E	30830	786E		×		×	1	
Monitor	Comm. (device)	13	RUN/READY	14448	3870	30832	7870		×		×	–	
Monitor	Comm. (device)	13	AUTO/MANUAL	14449	3871	30833	7871		×		×	–	
Monitor	Comm. (device)	13	MV	14454	3876	30838	7876		×		×	1	
Monitor	Comm. (device)	14	RUN/READY	14456	3878	30840	7878		×		×	–	
Monitor	Comm. (device)	14	AUTO/MANUAL	14457	3879	30841	7879		×		×	–	
Monitor	Comm. (device)	14	MV	14462	387E	30846	787E		×		×	1	
Monitor	Comm. (device)	15	RUN/READY	14464	3880	30848	7880		×		×	–	
Monitor	Comm. (device)	15	AUTO/MANUAL	14465	3881	30849	7881		×		×	–	
Monitor	Comm. (device)	15	MV	14470	3886	30854	7886		×		×	1	
Monitor	Comm. (device)	16	RUN/READY	14472	3888	30856	7888		×		×	–	
Monitor	Comm. (device)	16	AUTO/MANUAL	14473	3889	30857	7889		×		×	–	
Monitor	Comm. (device)	16	MV	14478	388E	30862	788E		×		×	1	

Monitor/Communications Profile

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Monitor	Comm. (operation)	1	Manual MV	14594	3902	30978	7902					1	*1
Monitor	Comm. (operation)	1	READY/RUN	14595	3903	30979	7903					–	
Monitor	Comm. (operation)	1	AUTO/MANUAL	14596	3904	30980	7904					–	
Monitor	Comm. (operation)	2	Manual MV	14602	390A	30986	790A					1	*1
Monitor	Comm. (operation)	2	READY/RUN	14603	390B	30987	790B					–	
Monitor	Comm. (operation)	2	AUTO/MANUAL	14604	390C	30988	790C					–	
Monitor	Comm. (operation)	3	Manual MV	14610	3912	30994	7912					1	*1
Monitor	Comm. (operation)	3	READY/RUN	14611	3913	30995	7913					–	
Monitor	Comm. (operation)	3	AUTO/MANUAL	14612	3914	30996	7914					–	
Monitor	Comm. (operation)	4	Manual MV	14618	391A	31002	791A					1	*1
Monitor	Comm. (operation)	4	READY/RUN	14619	391B	31003	791B					–	
Monitor	Comm. (operation)	4	AUTO/MANUAL	14620	391C	31004	791C					–	
Monitor	Comm. (operation)	5	Manual MV	14626	3922	31010	7922					1	*1
Monitor	Comm. (operation)	5	READY/RUN	14627	3923	31011	7923					–	
Monitor	Comm. (operation)	5	AUTO/MANUAL	14628	3924	31012	7924					–	
Monitor	Comm. (operation)	6	Manual MV	14634	392A	31018	792A					1	*1
Monitor	Comm. (operation)	6	READY/RUN	14635	392B	31019	792B					–	
Monitor	Comm. (operation)	6	AUTO/MANUAL	14636	392C	31020	792C					–	
Monitor	Comm. (operation)	7	Manual MV	14642	3932	31026	7932					1	*1
Monitor	Comm. (operation)	7	READY/RUN	14643	3933	31027	7933					–	
Monitor	Comm. (operation)	7	AUTO/MANUAL	14644	3934	31028	7934					–	
Monitor	Comm. (operation)	8	Manual MV	14650	393A	31034	793A					1	*1
Monitor	Comm. (operation)	8	READY/RUN	14651	393B	31035	793B					–	
Monitor	Comm. (operation)	8	AUTO/MANUAL	14652	393C	31036	793C					–	
Monitor	Comm. (operation)	9	Manual MV	14658	3942	31042	7942					1	*1
Monitor	Comm. (operation)	9	READY/RUN	14659	3943	31043	7943					–	
Monitor	Comm. (operation)	9	AUTO/MANUAL	14660	3944	31044	7944					–	
Monitor	Comm. (operation)	10	Manual MV	14666	394A	31050	794A					1	*1
Monitor	Comm. (operation)	10	READY/RUN	14667	394B	31051	794B					–	
Monitor	Comm. (operation)	10	AUTO/MANUAL	14668	394C	31052	794C					–	
Monitor	Comm. (operation)	11	Manual MV	14674	3952	31058	7952					1	*1
Monitor	Comm. (operation)	11	READY/RUN	14675	3953	31059	7953					–	
Monitor	Comm. (operation)	11	AUTO/MANUAL	14676	3954	31060	7954					–	
Monitor	Comm. (operation)	12	Manual MV	14682	395A	31066	795A					1	*1
Monitor	Comm. (operation)	12	READY/RUN	14683	395B	31067	795B					–	
Monitor	Comm. (operation)	12	AUTO/MANUAL	14684	395C	31068	795C					–	
Monitor	Comm. (operation)	13	Manual MV	14690	3962	31074	7962					1	*1
Monitor	Comm. (operation)	13	READY/RUN	14691	3963	31075	7963					–	
Monitor	Comm. (operation)	13	AUTO/MANUAL	14692	3964	31076	7964					–	
Monitor	Comm. (operation)	14	Manual MV	14698	396A	31082	796A					1	*1
Monitor	Comm. (operation)	14	READY/RUN	14699	396B	31083	796B					–	
Monitor	Comm. (operation)	14	AUTO/MANUAL	14700	396C	31084	796C					–	
Monitor	Comm. (operation)	15	Manual MV	14706	3972	31090	7972					1	*1
Monitor	Comm. (operation)	15	READY/RUN	14707	3973	31091	7973					–	
Monitor	Comm. (operation)	15	AUTO/MANUAL	14708	3974	31092	7974					–	
Monitor	Comm. (operation)	16	Manual MV	14714	397A	31098	797A					1	*1
Monitor	Comm. (operation)	16	READY/RUN	14715	397B	31099	797B					–	
Monitor	Comm. (operation)	16	AUTO/MANUAL	14716	397C	31100	797C					–	

*1 Writing is prohibited in AUTO. The current MV is read.

Monitor/Loop Mode

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Monitor	Loop mode	1	RUN/READY	8048	1F70	24432	5F70					–	
Monitor	Loop mode	1	AUTO/MANUAL	8049	1F71	24433	5F71					–	
Monitor	Loop mode	2	RUN/READY	8056	1F78	24440	5F78					–	
Monitor	Loop mode	2	AUTO/MANUAL	8057	1F79	24441	5F79					–	
Monitor	Loop mode	3	RUN/READY	8064	1F80	24448	5F80					–	
Monitor	Loop mode	3	AUTO/MANUAL	8065	1F81	24449	5F81					–	
Monitor	Loop mode	4	RUN/READY	8072	1F88	24456	5F88					–	
Monitor	Loop mode	4	AUTO/MANUAL	8073	1F89	24457	5F89					–	
Monitor	Loop mode	5	RUN/READY	8080	1F90	24464	5F90					–	
Monitor	Loop mode	5	AUTO/MANUAL	8081	1F91	24465	5F91					–	
Monitor	Loop mode	6	RUN/READY	8088	1F98	24472	5F98					–	
Monitor	Loop mode	6	AUTO/MANUAL	8089	1F99	24473	5F99					–	
Monitor	Loop mode	7	RUN/READY	8096	1FA0	24480	5FA0					–	
Monitor	Loop mode	7	AUTO/MANUAL	8097	1FA1	24481	5FA1					–	
Monitor	Loop mode	8	RUN/READY	8104	1FA8	24488	5FA8					–	
Monitor	Loop mode	8	AUTO/MANUAL	8105	1FA9	24489	5FA9					–	
Monitor	Loop mode	9	RUN/READY	8112	1FB0	24496	5FB0					–	
Monitor	Loop mode	9	AUTO/MANUAL	8113	1FB1	24497	5FB1					–	
Monitor	Loop mode	10	RUN/READY	8120	1FB8	24504	5FB8					–	
Monitor	Loop mode	10	AUTO/MANUAL	8121	1FB9	24505	5FB9					–	
Monitor	Loop mode	11	RUN/READY	8128	1FC0	24512	5FC0					–	
Monitor	Loop mode	11	AUTO/MANUAL	8129	1FC1	24513	5FC1					–	
Monitor	Loop mode	12	RUN/READY	8136	1FC8	24520	5FC8					–	
Monitor	Loop mode	12	AUTO/MANUAL	8137	1FC9	24521	5FC9					–	
Monitor	Loop mode	13	RUN/READY	8144	1FDO	24528	5FDO					–	
Monitor	Loop mode	13	AUTO/MANUAL	8145	1FD1	24529	5FD1					–	
Monitor	Loop mode	14	RUN/READY	8152	1FD8	24536	5FD8					–	
Monitor	Loop mode	14	AUTO/MANUAL	8153	1FD9	24537	5FD9					–	
Monitor	Loop mode	15	RUN/READY	8160	1FE0	24544	5FE0					–	
Monitor	Loop mode	15	AUTO/MANUAL	8161	1FE1	24545	5FE1					–	
Monitor	Loop mode	16	RUN/READY	8168	1FE8	24552	5FE8					–	
Monitor	Loop mode	16	AUTO/MANUAL	8169	1FE9	24553	5FE9					–	

Monitor/Monitor

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Monitor	Alarm	1	Alarm information 1	10288	2830	26672	6830		×		×	–	●Alarm information 1 (See P. 12-73)
Monitor	Alarm	1	Alarm information 2	10289	2831	26673	6831		×		×	–	●Alarm information 2 (See P. 12-73)
Monitor	Alarm	1	Alarm information 3	10290	2832	26674	6832		×		×	–	●Alarm information 3 (See P. 12-73)
Monitor	Alarm	1	Alarm information 4	10291	2833	26675	6833		×		×	–	●Alarm information 4 (See P. 12-74)
Monitor	Basic	1	MV	10304	2840	26688	6840		×		×	1	
Monitor	Basic	2	MV	10312	2848	26696	6848		×		×	1	
Monitor	Basic	3	MV	10320	2850	26704	6850		×		×	1	
Monitor	Basic	4	MV	10328	2858	26712	6858		×		×	1	
Monitor	Basic	5	MV	10336	2860	26720	6860		×		×	1	
Monitor	Basic	6	MV	10344	2868	26728	6868		×		×	1	
Monitor	Basic	7	MV	10352	2870	26736	6870		×		×	1	
Monitor	Basic	8	MV	10360	2878	26744	6878		×		×	1	
Monitor	Basic	9	MV	10368	2880	26752	6880		×		×	1	
Monitor	Basic	10	MV	10376	2888	26760	6888		×		×	1	
Monitor	Basic	11	MV	10384	2890	26768	6890		×		×	1	
Monitor	Basic	12	MV	10392	2898	26776	6898		×		×	1	
Monitor	Basic	13	MV	10400	28A0	26784	68A0		×		×	1	
Monitor	Basic	14	MV	10408	28A8	26792	68A8		×		×	1	
Monitor	Basic	15	MV	10416	28B0	26800	68B0		×		×	1	
Monitor	Basic	16	MV	10424	28B8	26808	68B8		×		×	1	
Monitor	DO pulse time left	1	DO pulse remaining time	10432	28C0	26816	68C0		×		×	2	
Monitor	DO pulse time left	2	DO pulse remaining time	10433	28C1	26817	68C1		×		×	2	
Monitor	DO pulse time left	3	DO pulse remaining time	10434	28C2	26818	68C2		×		×	2	
Monitor	DO pulse time left	4	DO pulse remaining time	10435	28C3	26819	68C3		×		×	2	
Monitor	DO pulse time left	5	DO pulse remaining time	10436	28C4	26820	68C4		×		×	2	
Monitor	DO pulse time left	6	DO pulse remaining time	10437	28C5	26821	68C5		×		×	2	
Monitor	DO pulse time left	7	DO pulse remaining time	10438	28C6	26822	68C6		×		×	2	
Monitor	DO pulse time left	8	DO pulse remaining time	10439	28C7	26823	68C7		×		×	2	
Monitor	DO pulse time left	9	DO pulse remaining time	10440	28C8	26824	68C8		×		×	2	
Monitor	DO pulse time left	10	DO pulse remaining time	10441	28C9	26825	68C9		×		×	2	
Monitor	DO pulse time left	11	DO pulse remaining time	10442	28CA	26826	68CA		×		×	2	
Monitor	DO pulse time left	12	DO pulse remaining time	10443	28CB	26827	68CB		×		×	2	
Monitor	DO pulse time left	13	DO pulse remaining time	10444	28CC	26828	68CC		×		×	2	
Monitor	DO pulse time left	14	DO pulse remaining time	10445	28CD	26829	68CD		×		×	2	
Monitor	DO pulse time left	15	DO pulse remaining time	10446	28CE	26830	68CE		×		×	2	
Monitor	DO pulse time left	16	DO pulse remaining time	10447	28CF	26831	68CF		×		×	2	
Monitor	Monitor (DO %)	1	DO % data	10448	28DO	26832	68DO		×		×	1	
Monitor	Monitor (DO %)	2	DO % data	10449	28D1	26833	68D1		×		×	1	
Monitor	Monitor (DO %)	3	DO % data	10450	28D2	26834	68D2		×		×	1	
Monitor	Monitor (DO %)	4	DO % data	10451	28D3	26835	68D3		×		×	1	
Monitor	Monitor (DO %)	5	DO % data	10452	28D4	26836	68D4		×		×	1	
Monitor	Monitor (DO %)	6	DO % data	10453	28D5	26837	68D5		×		×	1	
Monitor	Monitor (DO %)	7	DO % data	10454	28D6	26838	68D6		×		×	1	

Monitor/Monitor

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Monitor	Monitor (DO %)	8	DO % data	10455	28D7	26839	68D7		×		×	1	
Monitor	Monitor (DO %)	9	DO % data	10456	28D8	26840	68D8		×		×	1	
Monitor	Monitor (DO %)	10	DO % data	10457	28D9	26841	68D9		×		×	1	
Monitor	Monitor (DO %)	11	DO % data	10458	28DA	26842	68DA		×		×	1	
Monitor	Monitor (DO %)	12	DO % data	10459	28DB	26843	68DB		×		×	1	
Monitor	Monitor (DO %)	13	DO % data	10460	28DC	26844	68DC		×		×	1	
Monitor	Monitor (DO %)	14	DO % data	10461	28DD	26845	68DD		×		×	1	
Monitor	Monitor (DO %)	15	DO % data	10462	28DE	26846	68DE		×		×	1	
Monitor	Monitor (DO %)	16	DO % data	10463	28DF	26847	68DF		×		×	1	
Monitor	Mntr: DO trml ON/OFF	1	DO terminal ON/OFF data	10464	28E0	26848	68E0		×		×	–	
Monitor	Mntr: DO trml ON/OFF	2	DO terminal ON/OFF data	10465	28E1	26849	68E1		×		×	–	
Monitor	Mntr: DO trml ON/OFF	3	DO terminal ON/OFF data	10466	28E2	26850	68E2		×		×	–	
Monitor	Mntr: DO trml ON/OFF	4	DO terminal ON/OFF data	10467	28E3	26851	68E3		×		×	–	
Monitor	Mntr: DO trml ON/OFF	5	DO terminal ON/OFF data	10468	28E4	26852	68E4		×		×	–	
Monitor	Mntr: DO trml ON/OFF	6	DO terminal ON/OFF data	10469	28E5	26853	68E5		×		×	–	
Monitor	Mntr: DO trml ON/OFF	7	DO terminal ON/OFF data	10470	28E6	26854	68E6		×		×	–	
Monitor	Mntr: DO trml ON/OFF	8	DO terminal ON/OFF data	10471	28E7	26855	68E7		×		×	–	
Monitor	Mntr: DO trml ON/OFF	9	DO terminal ON/OFF data	10472	28E8	26856	68E8		×		×	–	
Monitor	Mntr: DO trml ON/OFF	10	DO terminal ON/OFF data	10473	28E9	26857	68E9		×		×	–	
Monitor	Mntr: DO trml ON/OFF	11	DO terminal ON/OFF data	10474	28EA	26858	68EA		×		×	–	
Monitor	Mntr: DO trml ON/OFF	12	DO terminal ON/OFF data	10475	28EB	26859	68EB		×		×	–	
Monitor	Mntr: DO trml ON/OFF	13	DO terminal ON/OFF data	10476	28EC	26860	68EC		×		×	–	
Monitor	Mntr: DO trml ON/OFF	14	DO terminal ON/OFF data	10477	28ED	26861	68ED		×		×	–	
Monitor	Mntr: DO trml ON/OFF	15	DO terminal ON/OFF data	10478	28EE	26862	68EE		×		×	–	
Monitor	Mntr: DO trml ON/OFF	16	DO terminal ON/OFF data	10479	28EF	26863	68EF		×		×	–	
Monitor	Mntr: EV trml ON/OFF	1	EV terminal ON/OFF data	10496	2900	26880	6900		×		×	–	
Monitor	Mntr delay time left	1	Remaining delay time	10512	2910	26896	6910		×		×	1	
Monitor	Mntr delay time left	2	Remaining delay time	10513	2911	26897	6911		×		×	1	
Monitor	Mntr delay time left	3	Remaining delay time	10514	2912	26898	6912		×		×	1	
Monitor	Mntr delay time left	4	Remaining delay time	10515	2913	26899	6913		×		×	1	
Monitor	Mntr delay time left	5	Remaining delay time	10516	2914	26900	6914		×		×	1	
Monitor	Mntr delay time left	6	Remaining delay time	10517	2915	26901	6915		×		×	1	
Monitor	Mntr delay time left	7	Remaining delay time	10518	2916	26902	6916		×		×	1	
Monitor	Mntr delay time left	8	Remaining delay time	10519	2917	26903	6917		×		×	1	
Monitor	Mntr delay time left	9	Remaining delay time	10520	2918	26904	6918		×		×	1	
Monitor	Mntr delay time left	10	Remaining delay time	10521	2919	26905	6919		×		×	1	
Monitor	Mntr delay time left	11	Remaining delay time	10522	291A	26906	691A		×		×	1	
Monitor	Mntr delay time left	12	Remaining delay time	10523	291B	26907	691B		×		×	1	
Monitor	Mntr delay time left	13	Remaining delay time	10524	291C	26908	691C		×		×	1	

Monitor/Monitor

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Monitor	Mntr delay time left	14	Remaining delay time	10525	291D	26909	691D		×		×	1	
Monitor	Mntr delay time left	15	Remaining delay time	10526	291E	26910	691E		×		×	1	
Monitor	Mntr delay time left	16	Remaining delay time	10527	291F	26911	691F		×		×	1	
Monitor	Mntr delay time left	17	Remaining delay time	10528	2920	26912	6920		×		×	1	
Monitor	Mntr delay time left	18	Remaining delay time	10529	2921	26913	6921		×		×	1	
Monitor	Mntr delay time left	19	Remaining delay time	10530	2922	26914	6922		×		×	1	
Monitor	Mntr delay time left	20	Remaining delay time	10531	2923	26915	6923		×		×	1	
Monitor	Mntr delay time left	21	Remaining delay time	10532	2924	26916	6924		×		×	1	
Monitor	Mntr delay time left	22	Remaining delay time	10533	2925	26917	6925		×		×	1	
Monitor	Mntr delay time left	23	Remaining delay time	10534	2926	26918	6926		×		×	1	
Monitor	Mntr delay time left	24	Remaining delay time	10535	2927	26919	6927		×		×	1	
Monitor	Mntr: calc. result	1	Instrument internal computation result 1 (bitmap)	10608	2970	26992	6970		×		×	–	●Internal computation result 1 (See P. 12-74)
Monitor	Mntr: calc. result	1	Instrument internal computation result 2 (bitmap)	10609	2971	26993	6971		×		×	–	●Internal computation result 2 (See P. 12-75)
Monitor	Mntr: calc. result	1	Instrument internal computation result 13 (bitmap)	10620	297C	27004	697C		×		×	–	●Internal computation result 13 (See P. 12-75)
Monitor	Mntr: calc. result	1	Instrument internal computation result 21 (bitmap)	10628	2984	27012	6984		×		×	–	●Internal computation result 21 (See P. 12-76)
Monitor	Mntr: calc. result	1	Instrument internal computation result 22 (bitmap)	10629	2985	27013	6985		×		×	–	●Internal computation result 22 (See P. 12-76)
Monitor	Mntr: calc. result	1	Instrument internal computation result 45 (bitmap)	10652	299C	27036	699C		×		×	–	●Internal computation result 45 (See P. 12-77)
Monitor	Mntr: calc. result	1	Instrument internal computation result 54 (bitmap)	10661	29A5	27045	69A5		×		×	–	●Internal computation result 54 (See P. 12-77)
Monitor	Mntr: calc. result	1	Instrument internal computation result 55 (bitmap)	10662	29A6	27046	69A6		×		×	–	●Internal computation result 55 (See P. 12-78)

Monitor/User-defined Bit

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Monitor	User-defined bit	1	User-defined bits 1-16	10080	2760	26464	6760					–	●User-defined bits 1-16 (P. 12-79)
Monitor	User-defined bit	1	User-defined bit 1	10081	2761	26465	6761					–	
Monitor	User-defined bit	1	User-defined bit 2	10082	2762	26466	6762					–	
Monitor	User-defined bit	1	User-defined bit 3	10083	2763	26467	6763					–	
Monitor	User-defined bit	1	User-defined bit 4	10084	2764	26468	6764					–	
Monitor	User-defined bit	1	User-defined bit 5	10085	2765	26469	6765					–	
Monitor	User-defined bit	1	User-defined bit 6	10086	2766	26470	6766					–	
Monitor	User-defined bit	1	User-defined bit 7	10087	2767	26471	6767					–	
Monitor	User-defined bit	1	User-defined bit 8	10088	2768	26472	6768					–	
Monitor	User-defined bit	1	User-defined bit 9	10089	2769	26473	6769					–	
Monitor	User-defined bit	1	User-defined bit 10	10090	276A	26474	676A					–	
Monitor	User-defined bit	1	User-defined bit 11	10091	276B	26475	676B					–	
Monitor	User-defined bit	1	User-defined bit 12	10092	276C	26476	676C					–	
Monitor	User-defined bit	1	User-defined bit 13	10093	276D	26477	676D					–	
Monitor	User-defined bit	1	User-defined bit 14	10094	276E	26478	676E					–	
Monitor	User-defined bit	1	User-defined bit 15	10095	276F	26479	676F					–	
Monitor	User-defined bit	1	User-defined bit 16	10096	2770	26480	6770					–	
Monitor	User-defined bit	1	User-defined bits 17-32	10097	2771	26481	6771					–	●User-defined bits 17-32 (P. 12-79)
Monitor	User-defined bit	1	User-defined bit 17	10098	2772	26482	6772					–	
Monitor	User-defined bit	1	User-defined bit 18	10099	2773	26483	6773					–	
Monitor	User-defined bit	1	User-defined bit 19	10100	2774	26484	6774					–	
Monitor	User-defined bit	1	User-defined bit 20	10101	2775	26485	6775					–	
Monitor	User-defined bit	1	User-defined bit 21	10102	2776	26486	6776					–	
Monitor	User-defined bit	1	User-defined bit 22	10103	2777	26487	6777					–	
Monitor	User-defined bit	1	User-defined bit 23	10104	2778	26488	6778					–	
Monitor	User-defined bit	1	User-defined bit 24	10105	2779	26489	6779					–	
Monitor	User-defined bit	1	User-defined bit 25	10106	277A	26490	677A					–	
Monitor	User-defined bit	1	User-defined bit 26	10107	277B	26491	677B					–	
Monitor	User-defined bit	1	User-defined bit 27	10108	277C	26492	677C					–	
Monitor	User-defined bit	1	User-defined bit 28	10109	277D	26493	677D					–	
Monitor	User-defined bit	1	User-defined bit 29	10110	277E	26494	677E					–	
Monitor	User-defined bit	1	User-defined bit 30	10111	277F	26495	677F					–	
Monitor	User-defined bit	1	User-defined bit 31	10112	2780	26496	6780					–	
Monitor	User-defined bit	1	User-defined bit 32	10113	2781	26497	6781					–	

Monitor/User-defined Number

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Monitor	User-defined number	1	User-defined number 1	12224	2FC0	28608	6FC0					–	
Monitor	User-defined number	1	User-defined number 2	12225	2FC1	28609	6FC1					–	
Monitor	User-defined number	1	User-defined number 3	12226	2FC2	28610	6FC2					–	
Monitor	User-defined number	1	User-defined number 4	12227	2FC3	28611	6FC3					–	
Monitor	User-defined number	1	User-defined number 5	12228	2FC4	28612	6FC4					–	
Monitor	User-defined number	1	User-defined number 6	12229	2FC5	28613	6FC5					–	
Monitor	User-defined number	1	User-defined number 7	12230	2FC6	28614	6FC6					–	
Monitor	User-defined number	1	User-defined number 8	12231	2FC7	28615	6FC7					–	
Monitor	User-defined number	1	User-defined number 9	12232	2FC8	28616	6FC8					–	
Monitor	User-defined number	1	User-defined number 10	12233	2FC9	28617	6FC9					–	
Monitor	User-defined number	1	User-defined number 11	12234	2FCA	28618	6FCA					–	
Monitor	User-defined number	1	User-defined number 12	12235	2FCB	28619	6FCB					–	
Monitor	User-defined number	1	User-defined number 13	12236	2FCC	28620	6FCC					–	
Monitor	User-defined number	1	User-defined number 14	12237	2FCD	28621	6FCD					–	
Monitor	User-defined number	1	User-defined number 15	12238	2FCE	28622	6FCE					–	
Monitor	User-defined number	1	User-defined number 16	12239	2FCF	28623	6FCF					–	

Monitor/Communication Input Data

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Monitor	Comm. input data	1	Communication FL1	4096	1000	–	–			×	×	–	
Monitor	Comm. input data	1	Communication FL2	4097	1001	–	–			×	×	–	
Monitor	Comm. input data	1	Communication FL3	4098	1002	–	–			×	×	–	
Monitor	Comm. input data	1	Communication FL4	4099	1003	–	–			×	×	–	
Monitor	Comm. input data	1	Communication FL5	4100	1004	–	–			×	×	–	
Monitor	Comm. input data	1	Communication FL6	4101	1005	–	–			×	×	–	
Monitor	Comm. input data	1	Communication FL7	4102	1006	–	–			×	×	–	
Monitor	Comm. input data	1	Communication FL8	4103	1007	–	–			×	×	–	
Monitor	Comm. input data	1	Communication FL9	4104	1008	–	–			×	×	–	
Monitor	Comm. input data	1	Communication FL10	4105	1009	–	–			×	×	–	
Monitor	Comm. input data	1	Communication FL11	4106	100A	–	–			×	×	–	
Monitor	Comm. input data	1	Communication FL12	4107	100B	–	–			×	×	–	
Monitor	Comm. input data	1	Communication FL13	4108	100C	–	–			×	×	–	
Monitor	Comm. input data	1	Communication FL14	4109	100D	–	–			×	×	–	
Monitor	Comm. input data	1	Communication FL15	4110	100E	–	–			×	×	–	
Monitor	Comm. input data	1	Communication FL16	4111	100F	–	–			×	×	–	
Monitor	Comm. input data	1	Communications MV 1	4112	1010	–	–			×	×	1	
Monitor	Comm. input data	1	Communications MV 2	4113	1011	–	–			×	×	1	
Monitor	Comm. input data	1	Communications MV 3	4114	1012	–	–			×	×	1	
Monitor	Comm. input data	1	Communications MV 4	4115	1013	–	–			×	×	1	
Monitor	Comm. input data	1	Communications MV 5	4116	1014	–	–			×	×	1	
Monitor	Comm. input data	1	Communications MV 6	4117	1015	–	–			×	×	1	
Monitor	Comm. input data	1	Communications MV 7	4118	1016	–	–			×	×	1	
Monitor	Comm. input data	1	Communications MV 8	4119	1017	–	–			×	×	1	
Monitor	Comm. input data	1	Communications MV 9	4120	1018	–	–			×	×	1	
Monitor	Comm. input data	1	Communications MV 10	4121	1019	–	–			×	×	1	
Monitor	Comm. input data	1	Communications MV 11	4122	101A	–	–			×	×	1	
Monitor	Comm. input data	1	Communications MV 12	4123	101B	–	–			×	×	1	
Monitor	Comm. input data	1	Communications MV 13	4124	101C	–	–			×	×	1	
Monitor	Comm. input data	1	Communications MV 14	4125	101D	–	–			×	×	1	
Monitor	Comm. input data	1	Communications MV 15	4126	101E	–	–			×	×	1	
Monitor	Comm. input data	1	Communications MV 16	4127	101F	–	–			×	×	1	
Monitor	Comm. input data	1	DO Output 1 time proportional cycle	4128	1020	–	–			×	×	1	
Monitor	Comm. input data	1	DO Output 2 time proportional cycle	4129	1021	–	–			×	×	1	
Monitor	Comm. input data	1	DO Output 3 time proportional cycle	4130	1022	–	–			×	×	1	
Monitor	Comm. input data	1	DO Output 4 time proportional cycle	4131	1023	–	–			×	×	1	
Monitor	Comm. input data	1	DO Output 5 time proportional cycle	4132	1024	–	–			×	×	1	

Monitor/Communication Input Data

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Monitor	Comm. input data	1	DO Output 6 time proportional cycle	4133	1025	–	–			×	×	1	
Monitor	Comm. input data	1	DO Output 7 time proportional cycle	4134	1026	–	–			×	×	1	
Monitor	Comm. input data	1	DO Output 8 time proportional cycle	4135	1027	–	–			×	×	1	
Monitor	Comm. input data	1	DO Output 9 time proportional cycle	4136	1028	–	–			×	×	1	
Monitor	Comm. input data	1	DO Output 10 time proportional cycle	4137	1029	–	–			×	×	1	
Monitor	Comm. input data	1	DO Output 11 time proportional cycle	4138	102A	–	–			×	×	1	
Monitor	Comm. input data	1	DO Output 12 time proportional cycle	4139	102B	–	–			×	×	1	
Monitor	Comm. input data	1	DO Output 13 time proportional cycle	4140	102C	–	–			×	×	1	
Monitor	Comm. input data	1	DO Output 14 time proportional cycle	4141	102D	–	–			×	×	1	
Monitor	Comm. input data	1	DO Output 15 time proportional cycle	4142	102E	–	–			×	×	1	
Monitor	Comm. input data	1	DO Output 16 time proportional cycle	4143	102F	–	–			×	×	1	
Monitor	Comm. input data	1	Communication PT 1 (latch)	4144	1030	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT 2 (latch)	4145	1031	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT 3 (latch)	4146	1032	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT 4 (latch)	4147	1033	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT 5 (latch)	4148	1034	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT 6 (latch)	4149	1035	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT 7 (latch)	4150	1036	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT 8 (latch)	4151	1037	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT 9 (latch)	4152	1038	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT 10 (latch)	4153	1039	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT 11 (latch)	4154	103A	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT 12 (latch)	4155	103B	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT 13 (latch)	4156	103C	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT 14 (latch)	4157	103D	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT 15 (latch)	4158	103E	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT 16 (latch)	4159	103F	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT1 (countdown)	4160	1040	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT2 (countdown)	4161	1041	–	–			×	×	2	

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Monitor	Comm. input data	1	Communication PT3 (countdown)	4162	1042	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT4 (countdown)	4163	1043	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT5 (countdown)	4164	1044	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT6 (countdown)	4165	1045	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT7 (countdown)	4166	1046	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT8 (countdown)	4167	1047	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT9 (countdown)	4168	1048	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT10 (countdown)	4169	1049	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT11 (countdown)	4170	104A	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT12 (countdown)	4171	104B	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT13 (countdown)	4172	104C	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT14 (countdown)	4173	104D	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT15 (countdown)	4174	104E	–	–			×	×	2	
Monitor	Comm. input data	1	Communication PT16 (countdown)	4175	104F	–	–			×	×	2	

Standard Bit/Bits

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Standard bit	Standard bits: (1024 to 1151)	1	Always 0 (Off)	17664	4500	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Always 1 (On)	17665	4501	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 1	17728	4540	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 2	17729	4541	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 3	17730	4542	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 4	17731	4543	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 5	17732	4544	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 6	17733	4545	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 7	17734	4546	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 8	17735	4547	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 9	17736	4548	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 10	17737	4549	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 11	17738	454A	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 12	17739	454B	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 13	17740	454C	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 14	17741	454D	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 15	17742	454E	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 16	17743	454F	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 17	17744	4550	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 18	17745	4551	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 19	17746	4552	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 20	17747	4553	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 21	17748	4554	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 22	17749	4555	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 23	17750	4556	–	–		×	×	×	–	
Standard bit	Standard bits: (1024 to 1151)	1	Event 24	17751	4557	–	–		×	×	×	–	
Standard bit	Standard bits: (1280 to 1407)	1	DO1 terminal status	17920	4600	–	–		×	×	×	–	
Standard bit	Standard bits: (1280 to 1407)	1	DO2 terminal status	17921	4601	–	–		×	×	×	–	
Standard bit	Standard bits: (1280 to 1407)	1	DO3 terminal status	17922	4602	–	–		×	×	×	–	
Standard bit	Standard bits: (1280 to 1407)	1	DO4 terminal status	17923	4603	–	–		×	×	×	–	
Standard bit	Standard bits: (1280 to 1407)	1	DO5 terminal status	17924	4604	–	–		×	×	×	–	
Standard bit	Standard bits: (1280 to 1407)	1	DO6 terminal status	17925	4605	–	–		×	×	×	–	
Standard bit	Standard bits: (1280 to 1407)	1	DO7 terminal status	17926	4606	–	–		×	×	×	–	

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Standard bit	Standard bits: (1280 to 1407)	1	DO8 terminal status	17927	4607	–	–		×	×	×	–	
Standard bit	Standard bits: (1280 to 1407)	1	DO9 terminal status	17928	4608	–	–		×	×	×	–	
Standard bit	Standard bits: (1280 to 1407)	1	DO10 terminal status	17929	4609	–	–		×	×	×	–	
Standard bit	Standard bits: (1280 to 1407)	1	DO11 terminal status	17930	460A	–	–		×	×	×	–	
Standard bit	Standard bits: (1280 to 1407)	1	DO12 terminal status	17931	460B	–	–		×	×	×	–	
Standard bit	Standard bits: (1280 to 1407)	1	DO13 terminal status	17932	460C	–	–		×	×	×	–	
Standard bit	Standard bits: (1280 to 1407)	1	DO14 terminal status	17933	460D	–	–		×	×	×	–	
Standard bit	Standard bits: (1280 to 1407)	1	DO15 terminal status	17934	460E	–	–		×	×	×	–	
Standard bit	Standard bits: (1280 to 1407)	1	DO16 terminal status	17935	460F	–	–		×	×	×	–	
Standard bit	Standard bits: (1280 to 1407)	1	EV1 terminal status	18024	4668	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 1	18048	4680	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 2	18049	4681	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 3	18050	4682	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 4	18051	4683	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 5	18052	4684	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 6	18053	4685	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 7	18054	4686	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 8	18055	4687	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 9	18056	4688	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 10	18057	4689	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 11	18058	468A	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 12	18059	468B	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 13	18060	468C	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 14	18061	468D	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 15	18062	468E	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 16	18063	468F	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 17	18064	4690	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 18	18065	4691	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 19	18066	4692	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 20	18067	4693	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 21	18068	4694	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 22	18069	4695	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 23	18070	4696	–	–		×	×	×	–	

Standard Bit/Bits

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 24	18071	4697	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 25	18072	4698	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 26	18073	4699	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 27	18074	469A	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 28	18075	469B	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 29	18076	469C	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 30	18077	469D	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 31	18078	469E	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	User-defined bit 32	18079	469F	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 1	18080	46A0	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 2	18081	46A1	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 3	18082	46A2	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 4	18083	46A3	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 5	18084	46A4	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 6	18085	46A5	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 7	18086	46A6	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 8	18087	46A7	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 9	18088	46A8	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 10	18089	46A9	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 11	18090	46AA	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 12	18091	46AB	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 13	18092	46AC	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 14	18093	46AD	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 15	18094	46AE	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 16	18095	46AF	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 17	18096	46B0	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 18	18097	46B1	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 19	18098	46B2	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 20	18099	46B3	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 21	18100	46B4	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 22	18101	46B5	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 23	18102	46B6	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 24	18103	46B7	–	–		×	×	×	–	

Standard Bit/Bits

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 25	18104	46B8	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 26	18105	46B9	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 27	18106	46BA	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 28	18107	46BB	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 29	18108	46BC	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 30	18109	46BD	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 31	18110	46BE	–	–		×	×	×	–	
Standard bit	Standard bits: (1408 to 1535)	1	Result of logical operation 32	18111	46BF	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	RS-485 status (normal reception of 1 frame)	18185	4709	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 1 RUN/ READY status	18208	4720	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 2 RUN/ READY status	18209	4721	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 3 RUN/ READY status	18210	4722	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 4 RUN/ READY status	18211	4723	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 5 RUN/ READY status	18212	4724	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 6 RUN/ READY status	18213	4725	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 7 RUN/ READY status	18214	4726	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 8 RUN/ READY status	18215	4727	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 9 RUN/ READY status	18216	4728	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 10 RUN/ READY status	18217	4729	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 11 RUN/ READY status	18218	472A	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 12 RUN/ READY status	18219	472B	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 13 RUN/ READY status	18220	472C	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 14 RUN/ READY status	18221	472D	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 15 RUN/ READY status	18222	472E	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 16 RUN/ READY status	18223	472F	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 1 Auto/ Manual status	18224	4730	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 2 Auto/ Manual status	18225	4731	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 3 Auto/ Manual status	18226	4732	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 4 Auto/ Manual status	18227	4733	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 5 Auto/ Manual status	18228	4734	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 6 Auto/ Manual status	18229	4735	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 7 Auto/ Manual status	18230	4736	–	–		×	×	×	–	

Standard Bit/Bits

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Standard bit	Standard bits: (1536 to 1663)	1	Loop 8 Auto/ Manual status	18231	4737	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 9 Auto/ Manual status	18232	4738	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 10 Auto/ Manual status	18233	4739	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 11 Auto/ Manual status	18234	473A	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 12 Auto/ Manual status	18235	473B	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 13 Auto/ Manual status	18236	473C	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 14 Auto/ Manual status	18237	473D	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 15 Auto/ Manual status	18238	473E	–	–		×	×	×	–	
Standard bit	Standard bits: (1536 to 1663)	1	Loop 16 Auto/ Manual status	18239	473F	–	–		×	×	×	–	
Standard bit	Standard bits: (1664 to 1791)	1	Communication FL1	18368	47C0	–	–		×	×	×	–	
Standard bit	Standard bits: (1664 to 1791)	1	Communication FL2	18369	47C1	–	–		×	×	×	–	
Standard bit	Standard bits: (1664 to 1791)	1	Communication FL3	18370	47C2	–	–		×	×	×	–	
Standard bit	Standard bits: (1664 to 1791)	1	Communication FL4	18371	47C3	–	–		×	×	×	–	
Standard bit	Standard bits: (1664 to 1791)	1	Communication FL5	18372	47C4	–	–		×	×	×	–	
Standard bit	Standard bits: (1664 to 1791)	1	Communication FL6	18373	47C5	–	–		×	×	×	–	
Standard bit	Standard bits: (1664 to 1791)	1	Communication FL7	18374	47C6	–	–		×	×	×	–	
Standard bit	Standard bits: (1664 to 1791)	1	Communication FL8	18375	47C7	–	–		×	×	×	–	
Standard bit	Standard bits: (1664 to 1791)	1	Communication FL9	18376	47C8	–	–		×	×	×	–	
Standard bit	Standard bits: (1664 to 1791)	1	Communication FL10	18377	47C9	–	–		×	×	×	–	
Standard bit	Standard bits: (1664 to 1791)	1	Communication FL11	18378	47CA	–	–		×	×	×	–	
Standard bit	Standard bits: (1664 to 1791)	1	Communication FL12	18379	47CB	–	–		×	×	×	–	
Standard bit	Standard bits: (1664 to 1791)	1	Communication FL13	18380	47CC	–	–		×	×	×	–	
Standard bit	Standard bits: (1664 to 1791)	1	Communication FL14	18381	47CD	–	–		×	×	×	–	
Standard bit	Standard bits: (1664 to 1791)	1	Communication FL15	18382	47CE	–	–		×	×	×	–	
Standard bit	Standard bits: (1664 to 1791)	1	Communication FL16	18383	47CF	–	–		×	×	×	–	
Standard bit	Standard bits: (1792 to 1919)	1	Representative of all alarms	18432	4800	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Reception monitoring 1	18560	4880	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Reception monitoring 2	18561	4881	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Reception monitoring 3	18562	4882	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Reception monitoring 4	18563	4883	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Reception monitoring 5	18564	4884	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Reception monitoring 6	18565	4885	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Reception monitoring 7	18566	4886	–	–		×	×	×	–	

Standard Bit/Bits

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Standard bit	Standard bits: (1920 to 2047)	1	Reception monitoring 8	18567	4887	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Reception monitoring 9	18568	4888	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Reception monitoring 10	18569	4889	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Reception monitoring 11	18570	488A	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Reception monitoring 12	18571	488B	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Reception monitoring 13	18572	488C	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Reception monitoring 14	18573	488D	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Reception monitoring 15	18574	488E	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Reception monitoring 16	18575	488F	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Parameter error (AL94/AL97)	18608	48B0	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Adjustment data error (AL95/AL98)	18609	48B1	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	EEPROM not initialized (AL83)	18610	48B2	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	ROM error (AL99)	18612	48B4	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	RAM R/W error (AL85)	18613	48B5	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	EEPROM R/W error (AL86)	18614	48B6	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Reception monitors 1-16 (AL31)	18619	48BB	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Transmission timeout between modules(AL32)	18620	48BC	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Writing to EEPROM	18621	48BD	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Signal to SV timeout	18622	48BE	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	RS-485 setting error (AL33)	18623	48BF	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Adjacent ring disconnected (AL38)	18624	48C0	–	–		×	×	×	–	Refer to Appendix-3 Status of the Ring Communication (Net Status) (on page App-12).
Standard bit	Standard bits: (1920 to 2047)	1	Non-adjacent ring disconnected	18625	48C1	–	–		×	×	×	–	Refer to Appendix-3 Status of the Ring Communication (Net Status) (on page App-12).
Standard bit	Standard bits: (1920 to 2047)	1	Base/body communication setting mismatch (AL53)	18626	48C2	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Base/body model No. mismatch (AL54)	18627	48C3	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	Base verification error (AL55)	18628	48C4	–	–		×	×	×	–	
Standard bit	Standard bits: (1920 to 2047)	1	External power supply voltage monitoring	18640	48DO	–	–		×	×	×	–	

Standard Number/Standard Number

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Standard number	Standard number (2048 to 2175)	1	Always 0.0	18688	4900	–	–		×	×	×	–	
Standard number	Standard number (2048 to 2175)	1	User-defined number 1	18751	493F	–	–		×	×	×	–	
Standard number	Standard number (2048 to 2175)	1	User-defined number 2	18752	4940	–	–		×	×	×	–	
Standard number	Standard number (2048 to 2175)	1	User-defined number 3	18753	4941	–	–		×	×	×	–	
Standard number	Standard number (2048 to 2175)	1	User-defined number 4	18754	4942	–	–		×	×	×	–	
Standard number	Standard number (2048 to 2175)	1	User-defined number 5	18755	4943	–	–		×	×	×	–	
Standard number	Standard number (2048 to 2175)	1	User-defined number 6	18756	4944	–	–		×	×	×	–	
Standard number	Standard number (2048 to 2175)	1	User-defined number 7	18757	4945	–	–		×	×	×	–	
Standard number	Standard number (2048 to 2175)	1	User-defined number 8	18758	4946	–	–		×	×	×	–	
Standard number	Standard number (2048 to 2175)	1	User-defined number 9	18759	4947	–	–		×	×	×	–	
Standard number	Standard number (2048 to 2175)	1	User-defined number 10	18760	4948	–	–		×	×	×	–	
Standard number	Standard number (2048 to 2175)	1	User-defined number 11	18761	4949	–	–		×	×	×	–	
Standard number	Standard number (2048 to 2175)	1	User-defined number 12	18762	494A	–	–		×	×	×	–	
Standard number	Standard number (2048 to 2175)	1	User-defined number 13	18763	494B	–	–		×	×	×	–	
Standard number	Standard number (2048 to 2175)	1	User-defined number 14	18764	494C	–	–		×	×	×	–	
Standard number	Standard number (2048 to 2175)	1	User-defined number 15	18765	494D	–	–		×	×	×	–	
Standard number	Standard number (2048 to 2175)	1	User-defined number 16	18766	494E	–	–		×	×	×	–	
Standard number	Standard number (2176 to 2303)	1	MV1	18928	49F0	–	–		×	×	×	1	
Standard number	Standard number (2176 to 2303)	1	MV2	18929	49F1	–	–		×	×	×	1	
Standard number	Standard number (2176 to 2303)	1	MV3	18930	49F2	–	–		×	×	×	1	
Standard number	Standard number (2176 to 2303)	1	MV4	18931	49F3	–	–		×	×	×	1	
Standard number	Standard number (2176 to 2303)	1	MV5	18932	49F4	–	–		×	×	×	1	
Standard number	Standard number (2176 to 2303)	1	MV6	18933	49F5	–	–		×	×	×	1	
Standard number	Standard number (2176 to 2303)	1	MV7	18934	49F6	–	–		×	×	×	1	
Standard number	Standard number (2176 to 2303)	1	MV8	18935	49F7	–	–		×	×	×	1	
Standard number	Standard number (2176 to 2303)	1	MV9	18936	49F8	–	–		×	×	×	1	
Standard number	Standard number (2176 to 2303)	1	MV10	18937	49F9	–	–		×	×	×	1	
Standard number	Standard number (2176 to 2303)	1	MV11	18938	49FA	–	–		×	×	×	1	
Standard number	Standard number (2176 to 2303)	1	MV12	18939	49FB	–	–		×	×	×	1	
Standard number	Standard number (2176 to 2303)	1	MV13	18940	49FC	–	–		×	×	×	1	
Standard number	Standard number (2176 to 2303)	1	MV14	18941	49FD	–	–		×	×	×	1	
Standard number	Standard number (2176 to 2303)	1	MV15	18942	49FE	–	–		×	×	×	1	

Standard Number/Standard Number

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Standard number	Standard number (2176 to 2303)	1	MV16	18943	49FF	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Communications MV 1	19040	4A60	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Communications MV 2	19041	4A61	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Communications MV 3	19042	4A62	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Communications MV 4	19043	4A63	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Communications MV 5	19044	4A64	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Communications MV 6	19045	4A65	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Communications MV 7	19046	4A66	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Communications MV 8	19047	4A67	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Communications MV 9	19048	4A68	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Communications MV 10	19049	4A69	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Communications MV 11	19050	4A6A	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Communications MV 12	19051	4A6B	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Communications MV 13	19052	4A6C	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Communications MV 14	19053	4A6D	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Communications MV 15	19054	4A6E	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Communications MV 16	19055	4A6F	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Loop 1 MV	19056	4A70	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Loop 2 MV	19057	4A71	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Loop 3 MV	19058	4A72	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Loop 4 MV	19059	4A73	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Loop 5 MV	19060	4A74	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Loop 6 MV	19061	4A75	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Loop 7 MV	19062	4A76	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Loop 8 MV	19063	4A77	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Loop 9 MV	19064	4A78	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Loop 10 MV	19065	4A79	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Loop 11 MV	19066	4A7A	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Loop 12 MV	19067	4A7B	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Loop 13 MV	19068	4A7C	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Loop 14 MV	19069	4A7D	–	–		×	×	×	1	
Standard number	Standard number (2304 to 2431)	1	Loop 15 MV	19070	4A7E	–	–		×	×	×	1	

Standard Number/Standard Number

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Standard number	Standard number (2304 to 2431)	1	Loop 16 MV	19071	4A7F	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 1 timer remaining time	19296	4B60	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 2 timer remaining time	19297	4B61	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 3 timer remaining time	19298	4B62	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 4 timer remaining time	19299	4B63	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 5 timer remaining time	19300	4B64	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 6 timer remaining time	19301	4B65	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 7 timer remaining time	19302	4B66	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 8 timer remaining time	19303	4B67	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 9 timer remaining time	19304	4B68	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 10 timer remaining time	19305	4B69	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 11 timer remaining time	19306	4B6A	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 12 timer remaining time	19307	4B6B	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 13 timer remaining time	19308	4B6C	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 14 timer remaining time	19309	4B6D	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 15 timer remaining time	19310	4B6E	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 16 timer remaining time	19311	4B6F	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 17 timer remaining time	19312	4B70	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 18 timer remaining time	19313	4B71	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 19 timer remaining time	19314	4B72	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 20 timer remaining time	19315	4B73	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 21 timer remaining time	19316	4B74	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 22 timer remaining time	19317	4B75	–	–		×	×	×	1	

Standard Number/Standard Number

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Standard number	Standard number (2560 to 2687)	1	Event 23 timer remaining time	19318	4B76	–	–		×	×	×	1	
Standard number	Standard number (2560 to 2687)	1	Event 24 timer remaining time	19319	4B77	–	–		×	×	×	1	

Communications/Ethernet Communications

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Communications	Ethernet comm.	1	MAC address 1	–	–	800	0320	×	×		×	–	
Communications	Ethernet comm.	1	MAC address 2	–	–	801	0321	×	×		×	–	
Communications	Ethernet comm.	1	MAC address 3	–	–	802	0322	×	×		×	–	
Communications	Ethernet comm.	1	MAC address 4	–	–	803	0323	×	×		×	–	
Communications	Ethernet comm.	1	MAC address 5	–	–	804	0324	×	×		×	–	
Communications	Ethernet comm.	1	MAC address 6	–	–	805	0325	×	×		×	–	
Communications	Ethernet comm.	1	IPv4 address 1	–	–	817	0331	×	×			–	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 address 2	–	–	818	0332	×	×			–	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 address 3	–	–	819	0333	×	×			–	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 address 4	–	–	820	0334	×	×			–	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 address net mask 1	–	–	821	0335	×	×			–	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 address net mask 2	–	–	822	0336	×	×			–	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 address net mask 3	–	–	823	0337	×	×			–	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 address net mask 4	–	–	824	0338	×	×			–	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 default gateway 1	–	–	825	0339	×	×			–	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 default gateway 2	–	–	826	033A	×	×			–	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 default gateway 3	–	–	827	033B	×	×			–	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 default gateway 4	–	–	828	033C	×	×			–	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	CPL/TCP port No.	–	–	829	033D	×	×			–	Changes in settings take effect after powering off and back on

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Communications	Ethernet comm.	1	MODBUS/TCP port No.	–	–	830	033E	×	×			–	Changes in settings take effect after powering off and back on

Communications/RS-485 Communication

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Communications	RS-485 comm.	1	Communications type	–	–	26624	6800	×	×			–	
Communications	RS-485 comm.	1	Station address	–	–	26625	6801	×	×			–	
Communications	RS-485 comm.	1	Transmission speed	–	–	26626	6802	×	×			–	
Communications	RS-485 comm.	1	Data format (data length)	–	–	26627	6803	×	×			–	
Communications	RS-485 comm.	1	Data format (parity)	–	–	26628	6804	×	×			–	
Communications	RS-485 comm.	1	Data format (stop bit)	–	–	26629	6805	×	×			–	
Communications	RS-485 comm.	1	Minimum response time	–	–	26630	6806	×	×			–	

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Basic	Setup	1	Start delay at power ON	8820	2274	25204	6274					–	
Basic	Setup	1	Release all latches	8882	22B2	25266	62B2					–	

Basic/Loop (time propor.)

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Basic	Loop (time propor.)	1	Output operation at changing Auto/ Manual	8176	1FF0	24560	5FF0					–	
Basic	Loop (time propor.)	1	Preset MANUAL value	8177	1FF1	24561	5FF1					1	
Basic	Loop (time propor.)	2	Output operation at changing Auto/ Manual	8184	1FF8	24568	5FF8					–	
Basic	Loop (time propor.)	2	Preset MANUAL value	8185	1FF9	24569	5FF9					1	
Basic	Loop (time propor.)	3	Output operation at changing Auto/ Manual	8192	2000	24576	6000					–	
Basic	Loop (time propor.)	3	Preset MANUAL value	8193	2001	24577	6001					1	
Basic	Loop (time propor.)	4	Output operation at changing Auto/ Manual	8200	2008	24584	6008					–	
Basic	Loop (time propor.)	4	Preset MANUAL value	8201	2009	24585	6009					1	
Basic	Loop (time propor.)	5	Output operation at changing Auto/ Manual	8208	2010	24592	6010					–	
Basic	Loop (time propor.)	5	Preset MANUAL value	8209	2011	24593	6011					1	
Basic	Loop (time propor.)	6	Output operation at changing Auto/ Manual	8216	2018	24600	6018					–	
Basic	Loop (time propor.)	6	Preset MANUAL value	8217	2019	24601	6019					1	
Basic	Loop (time propor.)	7	Output operation at changing Auto/ Manual	8224	2020	24608	6020					–	
Basic	Loop (time propor.)	7	Preset MANUAL value	8225	2021	24609	6021					1	
Basic	Loop (time propor.)	8	Output operation at changing Auto/ Manual	8232	2028	24616	6028					–	
Basic	Loop (time propor.)	8	Preset MANUAL value	8233	2029	24617	6029					1	
Basic	Loop (time propor.)	9	Output operation at changing Auto/ Manual	8240	2030	24624	6030					–	
Basic	Loop (time propor.)	9	Preset MANUAL value	8241	2031	24625	6031					1	
Basic	Loop (time propor.)	10	Output operation at changing Auto/ Manual	8248	2038	24632	6038					–	
Basic	Loop (time propor.)	10	Preset MANUAL value	8249	2039	24633	6039					1	
Basic	Loop (time propor.)	11	Output operation at changing Auto/ Manual	8256	2040	24640	6040					–	
Basic	Loop (time propor.)	11	Preset MANUAL value	8257	2041	24641	6041					1	
Basic	Loop (time propor.)	12	Output operation at changing Auto/ Manual	8264	2048	24648	6048					–	
Basic	Loop (time propor.)	12	Preset MANUAL value	8265	2049	24649	6049					1	
Basic	Loop (time propor.)	13	Output operation at changing Auto/ Manual	8272	2050	24656	6050					–	
Basic	Loop (time propor.)	13	Preset MANUAL value	8273	2051	24657	6051					1	
Basic	Loop (time propor.)	14	Output operation at changing Auto/ Manual	8280	2058	24664	6058					–	

Basic/Loop (time propor.)

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Basic	Loop (time propor.)	14	Preset MANUAL value	8281	2059	24665	6059					1	
Basic	Loop (time propor.)	15	Output operation at changing Auto/ Manual	8288	2060	24672	6060					–	
Basic	Loop (time propor.)	15	Preset MANUAL value	8289	2061	24673	6061					1	
Basic	Loop (time propor.)	16	Output operation at changing Auto/ Manual	8296	2068	24680	6068					–	
Basic	Loop (time propor.)	16	Preset MANUAL value	8297	2069	24681	6069					1	
Basic	Loop (time propor.)	1	Output at READY	8304	2070	24688	6070					1	
Basic	Loop (time propor.)	2	Output at READY	8312	2078	24696	6078					1	
Basic	Loop (time propor.)	3	Output at READY	8320	2080	24704	6080					1	
Basic	Loop (time propor.)	4	Output at READY	8328	2088	24712	6088					1	
Basic	Loop (time propor.)	5	Output at READY	8336	2090	24720	6090					1	
Basic	Loop (time propor.)	6	Output at READY	8344	2098	24728	6098					1	
Basic	Loop (time propor.)	7	Output at READY	8352	20A0	24736	60A0					1	
Basic	Loop (time propor.)	8	Output at READY	8360	20A8	24744	60A8					1	
Basic	Loop (time propor.)	9	Output at READY	8368	20B0	24752	60B0					1	
Basic	Loop (time propor.)	10	Output at READY	8376	20B8	24760	60B8					1	
Basic	Loop (time propor.)	11	Output at READY	8384	20C0	24768	60C0					1	
Basic	Loop (time propor.)	12	Output at READY	8392	20C8	24776	60C8					1	
Basic	Loop (time propor.)	13	Output at READY	8400	20DO	24784	60DO					1	
Basic	Loop (time propor.)	14	Output at READY	8408	20D8	24792	60D8					1	
Basic	Loop (time propor.)	15	Output at READY	8416	20E0	24800	60E0					1	
Basic	Loop (time propor.)	16	Output at READY	8424	20E8	24808	60E8					1	
Basic	Loop (time propor.)	1	MV assignment	4224	1080	20608	5080					–	
Basic	Loop (time propor.)	2	MV assignment	4225	1081	20609	5081					–	
Basic	Loop (time propor.)	3	MV assignment	4226	1082	20610	5082					–	
Basic	Loop (time propor.)	4	MV assignment	4227	1083	20611	5083					–	
Basic	Loop (time propor.)	5	MV assignment	4228	1084	20612	5084					–	
Basic	Loop (time propor.)	6	MV assignment	4229	1085	20613	5085					–	
Basic	Loop (time propor.)	7	MV assignment	4230	1086	20614	5086					–	
Basic	Loop (time propor.)	8	MV assignment	4231	1087	20615	5087					–	
Basic	Loop (time propor.)	9	MV assignment	4232	1088	20616	5088					–	
Basic	Loop (time propor.)	10	MV assignment	4233	1089	20617	5089					–	
Basic	Loop (time propor.)	11	MV assignment	4234	108A	20618	508A					–	
Basic	Loop (time propor.)	12	MV assignment	4235	108B	20619	508B					–	
Basic	Loop (time propor.)	13	MV assignment	4236	108C	20620	508C					–	
Basic	Loop (time propor.)	14	MV assignment	4237	108D	20621	508D					–	
Basic	Loop (time propor.)	15	MV assignment	4238	108E	20622	508E					–	
Basic	Loop (time propor.)	16	MV assignment	4239	108F	20623	508F					–	

Basic/IDLE/SV err. (DO) op

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Basic	IDLE/SV err. (DO) op	1	Output type	12000	2EE0	28384	6EE0					–	
Basic	IDLE/SV err. (DO) op	1	Output (%)	12001	2EE1	28385	6EE1					1	
Basic	IDLE/SV err. (DO) op	1	Output (ON/OFF)	12002	2EE2	28386	6EE2					–	
Basic	IDLE/SV err. (DO) op	2	Output type	12004	2EE4	28388	6EE4					–	
Basic	IDLE/SV err. (DO) op	2	Output (%)	12005	2EE5	28389	6EE5					1	
Basic	IDLE/SV err. (DO) op	2	Output (ON/OFF)	12006	2EE6	28390	6EE6					–	
Basic	IDLE/SV err. (DO) op	3	Output type	12008	2EE8	28392	6EE8					–	
Basic	IDLE/SV err. (DO) op	3	Output (%)	12009	2EE9	28393	6EE9					1	
Basic	IDLE/SV err. (DO) op	3	Output (ON/OFF)	12010	2EEA	28394	6EEA					–	
Basic	IDLE/SV err. (DO) op	4	Output type	12012	2EEC	28396	6EEC					–	
Basic	IDLE/SV err. (DO) op	4	Output (%)	12013	2EED	28397	6EED					1	
Basic	IDLE/SV err. (DO) op	4	Output (ON/OFF)	12014	2EEE	28398	6EEE					–	
Basic	IDLE/SV err. (DO) op	5	Output type	12016	2EF0	28400	6EF0					–	
Basic	IDLE/SV err. (DO) op	5	Output (%)	12017	2EF1	28401	6EF1					1	
Basic	IDLE/SV err. (DO) op	5	Output (ON/OFF)	12018	2EF2	28402	6EF2					–	
Basic	IDLE/SV err. (DO) op	6	Output type	12020	2EF4	28404	6EF4					–	
Basic	IDLE/SV err. (DO) op	6	Output (%)	12021	2EF5	28405	6EF5					1	
Basic	IDLE/SV err. (DO) op	6	Output (ON/OFF)	12022	2EF6	28406	6EF6					–	
Basic	IDLE/SV err. (DO) op	7	Output type	12024	2EF8	28408	6EF8					–	
Basic	IDLE/SV err. (DO) op	7	Output (%)	12025	2EF9	28409	6EF9					1	
Basic	IDLE/SV err. (DO) op	7	Output (ON/OFF)	12026	2EFA	28410	6EFA					–	
Basic	IDLE/SV err. (DO) op	8	Output type	12028	2EFC	28412	6EFC					–	
Basic	IDLE/SV err. (DO) op	8	Output (%)	12029	2EFD	28413	6EFD					1	
Basic	IDLE/SV err. (DO) op	8	Output (ON/OFF)	12030	2EFE	28414	6EFE					–	
Basic	IDLE/SV err. (DO) op	9	Output type	12032	2F00	28416	6F00					–	
Basic	IDLE/SV err. (DO) op	9	Output (%)	12033	2F01	28417	6F01					1	
Basic	IDLE/SV err. (DO) op	9	Output (ON/OFF)	12034	2F02	28418	6F02					–	
Basic	IDLE/SV err. (DO) op	10	Output type	12036	2F04	28420	6F04					–	
Basic	IDLE/SV err. (DO) op	10	Output (%)	12037	2F05	28421	6F05					1	
Basic	IDLE/SV err. (DO) op	10	Output (ON/OFF)	12038	2F06	28422	6F06					–	
Basic	IDLE/SV err. (DO) op	11	Output type	12040	2F08	28424	6F08					–	
Basic	IDLE/SV err. (DO) op	11	Output (%)	12041	2F09	28425	6F09					1	
Basic	IDLE/SV err. (DO) op	11	Output (ON/OFF)	12042	2F0A	28426	6F0A					–	
Basic	IDLE/SV err. (DO) op	12	Output type	12044	2F0C	28428	6F0C					–	
Basic	IDLE/SV err. (DO) op	12	Output (%)	12045	2F0D	28429	6F0D					1	
Basic	IDLE/SV err. (DO) op	12	Output (ON/OFF)	12046	2F0E	28430	6F0E					–	
Basic	IDLE/SV err. (DO) op	13	Output type	12048	2F10	28432	6F10					–	
Basic	IDLE/SV err. (DO) op	13	Output (%)	12049	2F11	28433	6F11					1	
Basic	IDLE/SV err. (DO) op	13	Output (ON/OFF)	12050	2F12	28434	6F12					–	
Basic	IDLE/SV err. (DO) op	14	Output type	12052	2F14	28436	6F14					–	
Basic	IDLE/SV err. (DO) op	14	Output (%)	12053	2F15	28437	6F15					1	
Basic	IDLE/SV err. (DO) op	14	Output (ON/OFF)	12054	2F16	28438	6F16					–	
Basic	IDLE/SV err. (DO) op	15	Output type	12056	2F18	28440	6F18					–	
Basic	IDLE/SV err. (DO) op	15	Output (%)	12057	2F19	28441	6F19					1	
Basic	IDLE/SV err. (DO) op	15	Output (ON/OFF)	12058	2F1A	28442	6F1A					–	
Basic	IDLE/SV err. (DO) op	16	Output type	12060	2F1C	28444	6F1C					–	
Basic	IDLE/SV err. (DO) op	16	Output (%)	12061	2F1D	28445	6F1D					1	
Basic	IDLE/SV err. (DO) op	16	Output (ON/OFF)	12062	2F1E	28446	6F1E					–	
Basic	IDLE/SV err (EV) op	1	Output type	12064	2F20	28448	6F20					–	
Basic	IDLE/SV err (EV) op	1	Output (ON/OFF)	12065	2F21	28449	6F21					–	

Input-output/DO Output

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Input-output	DO output	1	Output type	9216	2400	25600	6400					–	
Input-output	DO output	1	Latch	9217	2401	25601	6401					–	
Input-output	DO output	1	Time proportional operation type	9218	2402	25602	6402					–	
Input-output	DO output	1	Min. ON/OFF time	9219	2403	25603	6403					–	
Input-output	DO output	1	Time proportional cycle	9220	2404	25604	6404					1	
Input-output	DO output	1	Linearization table group definition	9221	2405	25605	6405					–	
Input-output	DO output	1	Phase shift	9224	2408	25608	6408					–	(Invalid setting)
Input-output	DO output	2	Output type	9232	2410	25616	6410					–	
Input-output	DO output	2	Latch	9233	2411	25617	6411					–	
Input-output	DO output	2	Time proportional operation type	9234	2412	25618	6412					–	
Input-output	DO output	2	Min. ON/OFF time	9235	2413	25619	6413					–	
Input-output	DO output	2	Time proportional cycle	9236	2414	25620	6414					1	
Input-output	DO output	2	Linearization table group definition	9237	2415	25621	6415					–	
Input-output	DO output	2	Phase shift	9240	2418	25624	6418					–	(Invalid setting)
Input-output	DO output	3	Output type	9248	2420	25632	6420					–	
Input-output	DO output	3	Latch	9249	2421	25633	6421					–	
Input-output	DO output	3	Time proportional operation type	9250	2422	25634	6422					–	
Input-output	DO output	3	Min. ON/OFF time	9251	2423	25635	6423					–	
Input-output	DO output	3	Time proportional cycle	9252	2424	25636	6424					1	
Input-output	DO output	3	Linearization table group definition	9253	2425	25637	6425					–	
Input-output	DO output	3	Phase shift	9256	2428	25640	6428					–	(Invalid setting)
Input-output	DO output	4	Output type	9264	2430	25648	6430					–	
Input-output	DO output	4	Latch	9265	2431	25649	6431					–	
Input-output	DO output	4	Time proportional operation type	9266	2432	25650	6432					–	
Input-output	DO output	4	Min. ON/OFF time	9267	2433	25651	6433					–	
Input-output	DO output	4	Time proportional cycle	9268	2434	25652	6434					1	
Input-output	DO output	4	Linearization table group definition	9269	2435	25653	6435					–	
Input-output	DO output	4	Phase shift	9272	2438	25656	6438					–	(Invalid setting)
Input-output	DO output	5	Output type	9280	2440	25664	6440					–	
Input-output	DO output	5	Latch	9281	2441	25665	6441					–	
Input-output	DO output	5	Time proportional operation type	9282	2442	25666	6442					–	
Input-output	DO output	5	Min. ON/OFF time	9283	2443	25667	6443					–	
Input-output	DO output	5	Time proportional cycle	9284	2444	25668	6444					1	

Input-output/DO Output

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Input-output	DO output	5	Linearization table group definition	9285	2445	25669	6445					–	
Input-output	DO output	5	Phase shift	9288	2448	25672	6448					–	(Invalid setting)
Input-output	DO output	6	Output type	9296	2450	25680	6450					–	
Input-output	DO output	6	Latch	9297	2451	25681	6451					–	
Input-output	DO output	6	Time proportional operation type	9298	2452	25682	6452					–	
Input-output	DO output	6	Min. ON/OFF time	9299	2453	25683	6453					–	
Input-output	DO output	6	Time proportional cycle	9300	2454	25684	6454					1	
Input-output	DO output	6	Linearization table group definition	9301	2455	25685	6455					–	
Input-output	DO output	6	Phase shift	9304	2458	25688	6458					–	(Invalid setting)
Input-output	DO output	7	Output type	9312	2460	25696	6460					–	
Input-output	DO output	7	Latch	9313	2461	25697	6461					–	
Input-output	DO output	7	Time proportional operation type	9314	2462	25698	6462					–	
Input-output	DO output	7	Min. ON/OFF time	9315	2463	25699	6463					–	
Input-output	DO output	7	Time proportional cycle	9316	2464	25700	6464					1	
Input-output	DO output	7	Linearization table group definition	9317	2465	25701	6465					–	
Input-output	DO output	7	Phase shift	9320	2468	25704	6468					–	(Invalid setting)
Input-output	DO output	8	Output type	9328	2470	25712	6470					–	
Input-output	DO output	8	Latch	9329	2471	25713	6471					–	
Input-output	DO output	8	Time proportional operation type	9330	2472	25714	6472					–	
Input-output	DO output	8	Min. ON/OFF time	9331	2473	25715	6473					–	
Input-output	DO output	8	Time proportional cycle	9332	2474	25716	6474					1	
Input-output	DO output	8	Linearization table group definition	9333	2475	25717	6475					–	
Input-output	DO output	8	Phase shift	9336	2478	25720	6478					–	(Invalid setting)
Input-output	DO output	9	Output type	9344	2480	25728	6480					–	
Input-output	DO output	9	Latch	9345	2481	25729	6481					–	
Input-output	DO output	9	Time proportional operation type	9346	2482	25730	6482					–	
Input-output	DO output	9	Min. ON/OFF time	9347	2483	25731	6483					–	
Input-output	DO output	9	Time proportional cycle	9348	2484	25732	6484					1	
Input-output	DO output	9	Linearization table group definition	9349	2485	25733	6485					–	
Input-output	DO output	9	Phase shift	9352	2488	25736	6488					–	(Invalid setting)
Input-output	DO output	10	Output type	9360	2490	25744	6490					–	
Input-output	DO output	10	Latch	9361	2491	25745	6491					–	
Input-output	DO output	10	Time proportional operation type	9362	2492	25746	6492					–	

Input-output/DO Output

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Input-output	DO output	10	Min. ON/OFF time	9363	2493	25747	6493					–	
Input-output	DO output	10	Time proportional cycle	9364	2494	25748	6494					1	
Input-output	DO output	10	Linearization table group definition	9365	2495	25749	6495					–	
Input-output	DO output	10	Phase shift	9368	2498	25752	6498					–	(Invalid setting)
Input-output	DO output	11	Output type	9376	24A0	25760	64A0					–	
Input-output	DO output	11	Latch	9377	24A1	25761	64A1					–	
Input-output	DO output	11	Time proportional operation type	9378	24A2	25762	64A2					–	
Input-output	DO output	11	Min. ON/OFF time	9379	24A3	25763	64A3					–	
Input-output	DO output	11	Time proportional cycle	9380	24A4	25764	64A4					1	
Input-output	DO output	11	Linearization table group definition	9381	24A5	25765	64A5					–	
Input-output	DO output	11	Phase shift	9384	24A8	25768	64A8					–	(Invalid setting)
Input-output	DO output	12	Output type	9392	24B0	25776	64B0					–	
Input-output	DO output	12	Latch	9393	24B1	25777	64B1					–	
Input-output	DO output	12	Time proportional operation type	9394	24B2	25778	64B2					–	
Input-output	DO output	12	Min. ON/OFF time	9395	24B3	25779	64B3					–	
Input-output	DO output	12	Time proportional cycle	9396	24B4	25780	64B4					1	
Input-output	DO output	12	Linearization table group definition	9397	24B5	25781	64B5					–	
Input-output	DO output	12	Phase shift	9400	24B8	25784	64B8					–	(Invalid setting)
Input-output	DO output	13	Output type	9408	24C0	25792	64C0					–	
Input-output	DO output	13	Latch	9409	24C1	25793	64C1					–	
Input-output	DO output	13	Time proportional operation type	9410	24C2	25794	64C2					–	
Input-output	DO output	13	Min. ON/OFF time	9411	24C3	25795	64C3					–	
Input-output	DO output	13	Time proportional cycle	9412	24C4	25796	64C4					1	
Input-output	DO output	13	Linearization table group definition	9413	24C5	25797	64C5					–	
Input-output	DO output	13	Phase shift	9416	24C8	25800	64C8					–	(Invalid setting)
Input-output	DO output	14	Output type	9424	24DO	25808	64DO					–	
Input-output	DO output	14	Latch	9425	24D1	25809	64D1					–	
Input-output	DO output	14	Time proportional operation type	9426	24D2	25810	64D2					–	
Input-output	DO output	14	Min. ON/OFF time	9427	24D3	25811	64D3					–	
Input-output	DO output	14	Time proportional cycle	9428	24D4	25812	64D4					1	
Input-output	DO output	14	Linearization table group definition	9429	24D5	25813	64D5					–	
Input-output	DO output	14	Phase shift	9432	24D8	25816	64D8					–	(Invalid setting)
Input-output	DO output	15	Output type	9440	24E0	25824	64E0					–	

Input-output/DO Output

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Input-output	DO output	15	Latch	9441	24E1	25825	64E1					–	
Input-output	DO output	15	Time proportional operation type	9442	24E2	25826	64E2					–	
Input-output	DO output	15	Min. ON/OFF time	9443	24E3	25827	64E3					–	
Input-output	DO output	15	Time proportional cycle	9444	24E4	25828	64E4					1	
Input-output	DO output	15	Linearization table group definition	9445	24E5	25829	64E5					–	
Input-output	DO output	15	Phase shift	9448	24E8	25832	64E8					–	(Invalid setting)
Input-output	DO output	16	Output type	9456	24F0	25840	64F0					–	
Input-output	DO output	16	Latch	9457	24F1	25841	64F1					–	
Input-output	DO output	16	Time proportional operation type	9458	24F2	25842	64F2					–	
Input-output	DO output	16	Min. ON/OFF time	9459	24F3	25843	64F3					–	
Input-output	DO output	16	Time proportional cycle	9460	24F4	25844	64F4					1	
Input-output	DO output	16	Linearization table group definition	9461	24F5	25845	64F5					–	
Input-output	DO output	16	Phase shift	9464	24F8	25848	64F8					–	(Invalid setting)
Input-output	DO output	1	ON delay time	9760	2620	26144	6620					–	
Input-output	DO output	2	ON delay time	9764	2624	26148	6624					–	
Input-output	DO output	3	ON delay time	9768	2628	26152	6628					–	
Input-output	DO output	4	ON delay time	9772	262C	26156	662C					–	
Input-output	DO output	5	ON delay time	9776	2630	26160	6630					–	
Input-output	DO output	6	ON delay time	9780	2634	26164	6634					–	
Input-output	DO output	7	ON delay time	9784	2638	26168	6638					–	
Input-output	DO output	8	ON delay time	9788	263C	26172	663C					–	
Input-output	DO output	9	ON delay time	9792	2640	26176	6640					–	
Input-output	DO output	10	ON delay time	9796	2644	26180	6644					–	
Input-output	DO output	11	ON delay time	9800	2648	26184	6648					–	
Input-output	DO output	12	ON delay time	9804	264C	26188	664C					–	
Input-output	DO output	13	ON delay time	9808	2650	26192	6650					–	
Input-output	DO output	14	ON delay time	9812	2654	26196	6654					–	
Input-output	DO output	15	ON delay time	9816	2658	26200	6658					–	
Input-output	DO output	16	ON delay time	9820	265C	26204	665C					–	

Input-output/EV Output

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Input-output	EV Output	1	Output type	9728	2600	26112	6600					–	
Input-output	EV Output	1	Latch	9729	2601	26113	6601					–	

Event/Operating point

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Event	Operating point	1	Event main setting	4336	10F0	20720	50F0					EV	
Event	Operating point	1	Event sub-setting	4337	10F1	20721	50F1					EV	
Event	Operating point	2	Event main setting	4338	10F2	20722	50F2					EV	
Event	Operating point	2	Event sub-setting	4339	10F3	20723	50F3					EV	
Event	Operating point	3	Event main setting	4340	10F4	20724	50F4					EV	
Event	Operating point	3	Event sub-setting	4341	10F5	20725	50F5					EV	
Event	Operating point	4	Event main setting	4342	10F6	20726	50F6					EV	
Event	Operating point	4	Event sub-setting	4343	10F7	20727	50F7					EV	
Event	Operating point	5	Event main setting	4344	10F8	20728	50F8					EV	
Event	Operating point	5	Event sub-setting	4345	10F9	20729	50F9					EV	
Event	Operating point	6	Event main setting	4346	10FA	20730	50FA					EV	
Event	Operating point	6	Event sub-setting	4347	10FB	20731	50FB					EV	
Event	Operating point	7	Event main setting	4348	10FC	20732	50FC					EV	
Event	Operating point	7	Event sub-setting	4349	10FD	20733	50FD					EV	
Event	Operating point	8	Event main setting	4350	10FE	20734	50FE					EV	
Event	Operating point	8	Event sub-setting	4351	10FF	20735	50FF					EV	
Event	Operating point	9	Event main setting	4352	1100	20736	5100					EV	
Event	Operating point	9	Event sub-setting	4353	1101	20737	5101					EV	
Event	Operating point	10	Event main setting	4354	1102	20738	5102					EV	
Event	Operating point	10	Event sub-setting	4355	1103	20739	5103					EV	
Event	Operating point	11	Event main setting	4356	1104	20740	5104					EV	
Event	Operating point	11	Event sub-setting	4357	1105	20741	5105					EV	
Event	Operating point	12	Event main setting	4358	1106	20742	5106					EV	
Event	Operating point	12	Event sub-setting	4359	1107	20743	5107					EV	
Event	Operating point	13	Event main setting	4360	1108	20744	5108					EV	
Event	Operating point	13	Event sub-setting	4361	1109	20745	5109					EV	
Event	Operating point	14	Event main setting	4362	110A	20746	510A					EV	
Event	Operating point	14	Event sub-setting	4363	110B	20747	510B					EV	
Event	Operating point	15	Event main setting	4364	110C	20748	510C					EV	
Event	Operating point	15	Event sub-setting	4365	110D	20749	510D					EV	
Event	Operating point	16	Event main setting	4366	110E	20750	510E					EV	
Event	Operating point	16	Event sub-setting	4367	110F	20751	510F					EV	
Event	Operating point	17	Event main setting	4368	1110	20752	5110					EV	
Event	Operating point	17	Event sub-setting	4369	1111	20753	5111					EV	
Event	Operating point	18	Event main setting	4370	1112	20754	5112					EV	
Event	Operating point	18	Event sub-setting	4371	1113	20755	5113					EV	
Event	Operating point	19	Event main setting	4372	1114	20756	5114					EV	
Event	Operating point	19	Event sub-setting	4373	1115	20757	5115					EV	
Event	Operating point	20	Event main setting	4374	1116	20758	5116					EV	
Event	Operating point	20	Event sub-setting	4375	1117	20759	5117					EV	
Event	Operating point	21	Event main setting	4376	1118	20760	5118					EV	
Event	Operating point	21	Event sub-setting	4377	1119	20761	5119					EV	
Event	Operating point	22	Event main setting	4378	111A	20762	511A					EV	
Event	Operating point	22	Event sub-setting	4379	111B	20763	511B					EV	
Event	Operating point	23	Event main setting	4380	111C	20764	511C					EV	
Event	Operating point	23	Event sub-setting	4381	111D	20765	511D					EV	
Event	Operating point	24	Event main setting	4382	111E	20766	511E					EV	
Event	Operating point	24	Event sub-setting	4383	111F	20767	511F					EV	

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Event	Event config.	1	Operation type	4400	1130	20784	5130					–	
Event	Event config.	1	Loop/channel definition	4401	1131	20785	5131					–	
Event	Event config.	1	Direct/Reverse	4402	1132	20786	5132					–	
Event	Event config.	1	Standby	4403	1133	20787	5133					–	
Event	Event config.	1	EVENT state at READY	4404	1134	20788	5134					–	
Event	Event config.	1	Decimal point position	4405	1135	20789	5135					–	
Event	Event config.	1	Hysteresis	4406	1136	20790	5136					EV	
Event	Event config.	1	ON delay	4407	1137	20791	5137					1	
Event	Event config.	1	OFF delay	4408	1138	20792	5138					1	
Event	Event config.	2	Operation type	4416	1140	20800	5140					–	
Event	Event config.	2	Loop/channel definition	4417	1141	20801	5141					–	
Event	Event config.	2	Direct/Reverse	4418	1142	20802	5142					–	
Event	Event config.	2	Standby	4419	1143	20803	5143					–	
Event	Event config.	2	EVENT state at READY	4420	1144	20804	5144					–	
Event	Event config.	2	Decimal point position	4421	1145	20805	5145					–	
Event	Event config.	2	Hysteresis	4422	1146	20806	5146					EV	
Event	Event config.	2	ON delay	4423	1147	20807	5147					1	
Event	Event config.	2	OFF delay	4424	1148	20808	5148					1	
Event	Event config.	3	Operation type	4432	1150	20816	5150					–	
Event	Event config.	3	Loop/channel definition	4433	1151	20817	5151					–	
Event	Event config.	3	Direct/Reverse	4434	1152	20818	5152					–	
Event	Event config.	3	Standby	4435	1153	20819	5153					–	
Event	Event config.	3	EVENT state at READY	4436	1154	20820	5154					–	
Event	Event config.	3	Decimal point position	4437	1155	20821	5155					–	
Event	Event config.	3	Hysteresis	4438	1156	20822	5156					EV	
Event	Event config.	3	ON delay	4439	1157	20823	5157					1	
Event	Event config.	3	OFF delay	4440	1158	20824	5158					1	
Event	Event config.	4	Operation type	4448	1160	20832	5160					–	
Event	Event config.	4	Loop/channel definition	4449	1161	20833	5161					–	
Event	Event config.	4	Direct/Reverse	4450	1162	20834	5162					–	
Event	Event config.	4	Standby	4451	1163	20835	5163					–	
Event	Event config.	4	EVENT state at READY	4452	1164	20836	5164					–	
Event	Event config.	4	Decimal point position	4453	1165	20837	5165					–	
Event	Event config.	4	Hysteresis	4454	1166	20838	5166					EV	
Event	Event config.	4	ON delay	4455	1167	20839	5167					1	
Event	Event config.	4	OFF delay	4456	1168	20840	5168					1	
Event	Event config.	5	Operation type	4464	1170	20848	5170					–	
Event	Event config.	5	Loop/channel definition	4465	1171	20849	5171					–	
Event	Event config.	5	Direct/Reverse	4466	1172	20850	5172					–	
Event	Event config.	5	Standby	4467	1173	20851	5173					–	
Event	Event config.	5	EVENT state at READY	4468	1174	20852	5174					–	
Event	Event config.	5	Decimal point position	4469	1175	20853	5175					–	
Event	Event config.	5	Hysteresis	4470	1176	20854	5176					EV	
Event	Event config.	5	ON delay	4471	1177	20855	5177					1	
Event	Event config.	5	OFF delay	4472	1178	20856	5178					1	
Event	Event config.	6	Operation type	4480	1180	20864	5180					–	

Event/Event Configuration

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Event	Event config.	6	Loop/channel definition	4481	1181	20865	5181					–	
Event	Event config.	6	Direct/Reverse	4482	1182	20866	5182					–	
Event	Event config.	6	Standby	4483	1183	20867	5183					–	
Event	Event config.	6	EVENT state at READY	4484	1184	20868	5184					–	
Event	Event config.	6	Decimal point position	4485	1185	20869	5185					–	
Event	Event config.	6	Hysteresis	4486	1186	20870	5186					EV	
Event	Event config.	6	ON delay	4487	1187	20871	5187					1	
Event	Event config.	6	OFF delay	4488	1188	20872	5188					1	
Event	Event config.	7	Operation type	4496	1190	20880	5190					–	
Event	Event config.	7	Loop/channel definition	4497	1191	20881	5191					–	
Event	Event config.	7	Direct/Reverse	4498	1192	20882	5192					–	
Event	Event config.	7	Standby	4499	1193	20883	5193					–	
Event	Event config.	7	EVENT state at READY	4500	1194	20884	5194					–	
Event	Event config.	7	Decimal point position	4501	1195	20885	5195					–	
Event	Event config.	7	Hysteresis	4502	1196	20886	5196					EV	
Event	Event config.	7	ON delay	4503	1197	20887	5197					1	
Event	Event config.	7	OFF delay	4504	1198	20888	5198					1	
Event	Event config.	8	Operation type	4512	11A0	20896	51A0					–	
Event	Event config.	8	Loop/channel definition	4513	11A1	20897	51A1					–	
Event	Event config.	8	Direct/Reverse	4514	11A2	20898	51A2					–	
Event	Event config.	8	Standby	4515	11A3	20899	51A3					–	
Event	Event config.	8	EVENT state at READY	4516	11A4	20900	51A4					–	
Event	Event config.	8	Decimal point position	4517	11A5	20901	51A5					–	
Event	Event config.	8	Hysteresis	4518	11A6	20902	51A6					EV	
Event	Event config.	8	ON delay	4519	11A7	20903	51A7					1	
Event	Event config.	8	OFF delay	4520	11A8	20904	51A8					1	
Event	Event config.	9	Operation type	4528	11B0	20912	51B0					–	
Event	Event config.	9	Loop/channel definition	4529	11B1	20913	51B1					–	
Event	Event config.	9	Direct/Reverse	4530	11B2	20914	51B2					–	
Event	Event config.	9	Standby	4531	11B3	20915	51B3					–	
Event	Event config.	9	EVENT state at READY	4532	11B4	20916	51B4					–	
Event	Event config.	9	Decimal point position	4533	11B5	20917	51B5					–	
Event	Event config.	9	Hysteresis	4534	11B6	20918	51B6					EV	
Event	Event config.	9	ON delay	4535	11B7	20919	51B7					1	
Event	Event config.	9	OFF delay	4536	11B8	20920	51B8					1	
Event	Event config.	10	Operation type	4544	11C0	20928	51C0					–	
Event	Event config.	10	Loop/channel definition	4545	11C1	20929	51C1					–	
Event	Event config.	10	Direct/Reverse	4546	11C2	20930	51C2					–	
Event	Event config.	10	Standby	4547	11C3	20931	51C3					–	
Event	Event config.	10	EVENT state at READY	4548	11C4	20932	51C4					–	
Event	Event config.	10	Decimal point position	4549	11C5	20933	51C5					–	
Event	Event config.	10	Hysteresis	4550	11C6	20934	51C6					EV	
Event	Event config.	10	ON delay	4551	11C7	20935	51C7					1	
Event	Event config.	10	OFF delay	4552	11C8	20936	51C8					1	
Event	Event config.	11	Operation type	4560	11DO	20944	51DO					–	
Event	Event config.	11	Loop/channel definition	4561	11D1	20945	51D1					–	

Event/Event Configuration

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Event	Event config.	11	Direct/Reverse	4562	11D2	20946	51D2					–	
Event	Event config.	11	Standby	4563	11D3	20947	51D3					–	
Event	Event config.	11	EVENT state at READY	4564	11D4	20948	51D4					–	
Event	Event config.	11	Decimal point position	4565	11D5	20949	51D5					–	
Event	Event config.	11	Hysteresis	4566	11D6	20950	51D6					EV	
Event	Event config.	11	ON delay	4567	11D7	20951	51D7					1	
Event	Event config.	11	OFF delay	4568	11D8	20952	51D8					1	
Event	Event config.	12	Operation type	4576	11E0	20960	51E0					–	
Event	Event config.	12	Loop/channel definition	4577	11E1	20961	51E1					–	
Event	Event config.	12	Direct/Reverse	4578	11E2	20962	51E2					–	
Event	Event config.	12	Standby	4579	11E3	20963	51E3					–	
Event	Event config.	12	EVENT state at READY	4580	11E4	20964	51E4					–	
Event	Event config.	12	Decimal point position	4581	11E5	20965	51E5					–	
Event	Event config.	12	Hysteresis	4582	11E6	20966	51E6					EV	
Event	Event config.	12	ON delay	4583	11E7	20967	51E7					1	
Event	Event config.	12	OFF delay	4584	11E8	20968	51E8					1	
Event	Event config.	13	Operation type	4592	11F0	20976	51F0					–	
Event	Event config.	13	Loop/channel definition	4593	11F1	20977	51F1					–	
Event	Event config.	13	Direct/Reverse	4594	11F2	20978	51F2					–	
Event	Event config.	13	Standby	4595	11F3	20979	51F3					–	
Event	Event config.	13	EVENT state at READY	4596	11F4	20980	51F4					–	
Event	Event config.	13	Decimal point position	4597	11F5	20981	51F5					–	
Event	Event config.	13	Hysteresis	4598	11F6	20982	51F6					EV	
Event	Event config.	13	ON delay	4599	11F7	20983	51F7					1	
Event	Event config.	13	OFF delay	4600	11F8	20984	51F8					1	
Event	Event config.	14	Operation type	4608	1200	20992	5200					–	
Event	Event config.	14	Loop/channel definition	4609	1201	20993	5201					–	
Event	Event config.	14	Direct/Reverse	4610	1202	20994	5202					–	
Event	Event config.	14	Standby	4611	1203	20995	5203					–	
Event	Event config.	14	EVENT state at READY	4612	1204	20996	5204					–	
Event	Event config.	14	Decimal point position	4613	1205	20997	5205					–	
Event	Event config.	14	Hysteresis	4614	1206	20998	5206					EV	
Event	Event config.	14	ON delay	4615	1207	20999	5207					1	
Event	Event config.	14	OFF delay	4616	1208	21000	5208					1	
Event	Event config.	15	Operation type	4624	1210	21008	5210					–	
Event	Event config.	15	Loop/channel definition	4625	1211	21009	5211					–	
Event	Event config.	15	Direct/Reverse	4626	1212	21010	5212					–	
Event	Event config.	15	Standby	4627	1213	21011	5213					–	
Event	Event config.	15	EVENT state at READY	4628	1214	21012	5214					–	
Event	Event config.	15	Decimal point position	4629	1215	21013	5215					–	
Event	Event config.	15	Hysteresis	4630	1216	21014	5216					EV	
Event	Event config.	15	ON delay	4631	1217	21015	5217					1	
Event	Event config.	15	OFF delay	4632	1218	21016	5218					1	
Event	Event config.	16	Operation type	4640	1220	21024	5220					–	
Event	Event config.	16	Loop/channel definition	4641	1221	21025	5221					–	
Event	Event config.	16	Direct/Reverse	4642	1222	21026	5222					–	
Event	Event config.	16	Standby	4643	1223	21027	5223					–	

Event/Event Configuration

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Event	Event config.	16	EVENT state at READY	4644	1224	21028	5224					–	
Event	Event config.	16	Decimal point position	4645	1225	21029	5225					–	
Event	Event config.	16	Hysteresis	4646	1226	21030	5226					EV	
Event	Event config.	16	ON delay	4647	1227	21031	5227					1	
Event	Event config.	16	OFF delay	4648	1228	21032	5228					1	
Event	Event config.	17	Operation type	4656	1230	21040	5230					–	
Event	Event config.	17	Loop/channel definition	4657	1231	21041	5231					–	
Event	Event config.	17	Direct/Reverse	4658	1232	21042	5232					–	
Event	Event config.	17	Standby	4659	1233	21043	5233					–	
Event	Event config.	17	EVENT state at READY	4660	1234	21044	5234					–	
Event	Event config.	17	Decimal point position	4661	1235	21045	5235					–	
Event	Event config.	17	Hysteresis	4662	1236	21046	5236					EV	
Event	Event config.	17	ON delay	4663	1237	21047	5237					1	
Event	Event config.	17	OFF delay	4664	1238	21048	5238					1	
Event	Event config.	18	Operation type	4672	1240	21056	5240					–	
Event	Event config.	18	Loop/channel definition	4673	1241	21057	5241					–	
Event	Event config.	18	Direct/Reverse	4674	1242	21058	5242					–	
Event	Event config.	18	Standby	4675	1243	21059	5243					–	
Event	Event config.	18	EVENT state at READY	4676	1244	21060	5244					–	
Event	Event config.	18	Decimal point position	4677	1245	21061	5245					–	
Event	Event config.	18	Hysteresis	4678	1246	21062	5246					EV	
Event	Event config.	18	ON delay	4679	1247	21063	5247					1	
Event	Event config.	18	OFF delay	4680	1248	21064	5248					1	
Event	Event config.	19	Operation type	4688	1250	21072	5250					–	
Event	Event config.	19	Loop/channel definition	4689	1251	21073	5251					–	
Event	Event config.	19	Direct/Reverse	4690	1252	21074	5252					–	
Event	Event config.	19	Standby	4691	1253	21075	5253					–	
Event	Event config.	19	EVENT state at READY	4692	1254	21076	5254					–	
Event	Event config.	19	Decimal point position	4693	1255	21077	5255					–	
Event	Event config.	19	Hysteresis	4694	1256	21078	5256					EV	
Event	Event config.	19	ON delay	4695	1257	21079	5257					1	
Event	Event config.	19	OFF delay	4696	1258	21080	5258					1	
Event	Event config.	20	Operation type	4704	1260	21088	5260					–	
Event	Event config.	20	Loop/channel definition	4705	1261	21089	5261					–	
Event	Event config.	20	Direct/Reverse	4706	1262	21090	5262					–	
Event	Event config.	20	Standby	4707	1263	21091	5263					–	
Event	Event config.	20	EVENT state at READY	4708	1264	21092	5264					–	
Event	Event config.	20	Decimal point position	4709	1265	21093	5265					–	
Event	Event config.	20	Hysteresis	4710	1266	21094	5266					EV	
Event	Event config.	20	ON delay	4711	1267	21095	5267					1	
Event	Event config.	20	OFF delay	4712	1268	21096	5268					1	
Event	Event config.	21	Operation type	4720	1270	21104	5270					–	
Event	Event config.	21	Loop/channel definition	4721	1271	21105	5271					–	
Event	Event config.	21	Direct/Reverse	4722	1272	21106	5272					–	
Event	Event config.	21	Standby	4723	1273	21107	5273					–	
Event	Event config.	21	EVENT state at READY	4724	1274	21108	5274					–	

Event/Event Configuration

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Event	Event config.	21	Decimal point position	4725	1275	21109	5275					–	
Event	Event config.	21	Hysteresis	4726	1276	21110	5276					EV	
Event	Event config.	21	ON delay	4727	1277	21111	5277					1	
Event	Event config.	21	OFF delay	4728	1278	21112	5278					1	
Event	Event config.	22	Operation type	4736	1280	21120	5280					–	
Event	Event config.	22	Loop/channel definition	4737	1281	21121	5281					–	
Event	Event config.	22	Direct/Reverse	4738	1282	21122	5282					–	
Event	Event config.	22	Standby	4739	1283	21123	5283					–	
Event	Event config.	22	EVENT state at READY	4740	1284	21124	5284					–	
Event	Event config.	22	Decimal point position	4741	1285	21125	5285					–	
Event	Event config.	22	Hysteresis	4742	1286	21126	5286					EV	
Event	Event config.	22	ON delay	4743	1287	21127	5287					1	
Event	Event config.	22	OFF delay	4744	1288	21128	5288					1	
Event	Event config.	23	Operation type	4752	1290	21136	5290					–	
Event	Event config.	23	Loop/channel definition	4753	1291	21137	5291					–	
Event	Event config.	23	Direct/Reverse	4754	1292	21138	5292					–	
Event	Event config.	23	Standby	4755	1293	21139	5293					–	
Event	Event config.	23	EVENT state at READY	4756	1294	21140	5294					–	
Event	Event config.	23	Decimal point position	4757	1295	21141	5295					–	
Event	Event config.	23	Hysteresis	4758	1296	21142	5296					EV	
Event	Event config.	23	ON delay	4759	1297	21143	5297					1	
Event	Event config.	23	OFF delay	4760	1298	21144	5298					1	
Event	Event config.	24	Operation type	4768	12A0	21152	52A0					–	
Event	Event config.	24	Loop/channel definition	4769	12A1	21153	52A1					–	
Event	Event config.	24	Direct/Reverse	4770	12A2	21154	52A2					–	
Event	Event config.	24	Standby	4771	12A3	21155	52A3					–	
Event	Event config.	24	EVENT state at READY	4772	12A4	21156	52A4					–	
Event	Event config.	24	Decimal point position	4773	12A5	21157	52A5					–	
Event	Event config.	24	Hysteresis	4774	12A6	21158	52A6					EV	
Event	Event config.	24	ON delay	4775	12A7	21159	52A7					1	
Event	Event config.	24	OFF delay	4776	12A8	21160	52A8					1	

Function/Linearization Table

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Linearization table	1	Breakpoint decimal point position	8432	20F0	24816	60F0					–	
Function	Linearization table	1	Breakpoint A1	8433	20F1	24817	60F1					TBL	
Function	Linearization table	1	Breakpoint A2	8434	20F2	24818	60F0					TBL	
Function	Linearization table	1	Breakpoint A3	8435	20F3	24819	60F3					TBL	
Function	Linearization table	1	Breakpoint A4	8436	20F4	24820	60F4					TBL	
Function	Linearization table	1	Breakpoint A5	8437	20F5	24821	60F5					TBL	
Function	Linearization table	1	Breakpoint A6	8438	20F6	24822	60F6					TBL	
Function	Linearization table	1	Breakpoint A7	8439	20F7	24823	60F7					TBL	
Function	Linearization table	1	Breakpoint A8	8440	20F8	24824	60F8					TBL	
Function	Linearization table	1	Breakpoint A9	8441	20F9	24825	60F9					TBL	
Function	Linearization table	1	Breakpoint A10	8442	20FA	24826	60FA					TBL	
Function	Linearization table	1	Breakpoint A11	8443	20FB	24827	60FB					TBL	
Function	Linearization table	1	Breakpoint A12	8444	20FC	24828	60FC					TBL	
Function	Linearization table	1	Breakpoint A13	8445	20FD	24829	60FD					TBL	
Function	Linearization table	1	Breakpoint A14	8446	20FE	24830	60FE					TBL	
Function	Linearization table	1	Breakpoint A15	8447	20FF	24831	60FF					TBL	
Function	Linearization table	1	Breakpoint A16	8448	2100	24832	6100					TBL	
Function	Linearization table	1	Breakpoint A17	8449	2101	24833	6101					TBL	
Function	Linearization table	1	Breakpoint A18	8450	2102	24834	6102					TBL	
Function	Linearization table	1	Breakpoint A19	8451	2103	24835	6103					TBL	
Function	Linearization table	1	Breakpoint A20	8452	2104	24836	6104					TBL	
Function	Linearization table	1	Breakpoint B1	8453	2105	24837	6105					TBL	
Function	Linearization table	1	Breakpoint B2	8454	2106	24838	6106					TBL	
Function	Linearization table	1	Breakpoint B3	8455	2107	24839	6107					TBL	
Function	Linearization table	1	Breakpoint B4	8456	2108	24840	6108					TBL	
Function	Linearization table	1	Breakpoint B5	8457	2109	24841	6109					TBL	
Function	Linearization table	1	Breakpoint B6	8458	210A	24842	610A					TBL	
Function	Linearization table	1	Breakpoint B7	8459	210B	24843	610B					TBL	
Function	Linearization table	1	Breakpoint B8	8460	210C	24844	610C					TBL	
Function	Linearization table	1	Breakpoint B9	8461	210D	24845	610D					TBL	
Function	Linearization table	1	Breakpoint B10	8462	210E	24846	610E					TBL	
Function	Linearization table	1	Breakpoint B11	8463	210F	24847	610F					TBL	
Function	Linearization table	1	Breakpoint B12	8464	2110	24848	6110					TBL	
Function	Linearization table	1	Breakpoint B13	8465	2111	24849	6111					TBL	
Function	Linearization table	1	Breakpoint B14	8466	2112	24850	6112					TBL	
Function	Linearization table	1	Breakpoint B15	8467	2113	24851	6113					TBL	
Function	Linearization table	1	Breakpoint B16	8468	2114	24852	6114					TBL	
Function	Linearization table	1	Breakpoint B17	8469	2115	24853	6115					TBL	
Function	Linearization table	1	Breakpoint B18	8470	2116	24854	6116					TBL	
Function	Linearization table	1	Breakpoint B19	8471	2117	24855	6117					TBL	
Function	Linearization table	1	Breakpoint B20	8472	2118	24856	6118					TBL	
Function	Linearization table	2	Breakpoint decimal point position	8480	2120	24864	6120					–	
Function	Linearization table	2	Breakpoint A1	8481	2121	24865	6121					TBL	
Function	Linearization table	2	Breakpoint A2	8482	2122	24866	6122					TBL	
Function	Linearization table	2	Breakpoint A3	8483	2123	24867	6123					TBL	
Function	Linearization table	2	Breakpoint A4	8484	2124	24868	6124					TBL	
Function	Linearization table	2	Breakpoint A5	8485	2125	24869	6125					TBL	
Function	Linearization table	2	Breakpoint A6	8486	2126	24870	6126					TBL	
Function	Linearization table	2	Breakpoint A7	8487	2127	24871	6127					TBL	
Function	Linearization table	2	Breakpoint A8	8488	2128	24872	6128					TBL	
Function	Linearization table	2	Breakpoint A9	8489	2129	24873	6129					TBL	
Function	Linearization table	2	Breakpoint A10	8490	212A	24874	612A					TBL	
Function	Linearization table	2	Breakpoint A11	8491	212B	24875	612B					TBL	
Function	Linearization table	2	Breakpoint A12	8492	212C	24876	612C					TBL	
Function	Linearization table	2	Breakpoint A13	8493	212D	24877	612D					TBL	
Function	Linearization table	2	Breakpoint A14	8494	212E	24878	612E					TBL	

Function/Linearization Table

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Linearization table	2	Breakpoint A15	8495	212F	24879	612F					TBL	
Function	Linearization table	2	Breakpoint A16	8496	2130	24880	6130					TBL	
Function	Linearization table	2	Breakpoint A17	8497	2131	24881	6131					TBL	
Function	Linearization table	2	Breakpoint A18	8498	2132	24882	6132					TBL	
Function	Linearization table	2	Breakpoint A19	8499	2133	24883	6133					TBL	
Function	Linearization table	2	Breakpoint A20	8500	2134	24884	6134					TBL	
Function	Linearization table	2	Breakpoint B1	8501	2135	24885	6135					TBL	
Function	Linearization table	2	Breakpoint B2	8502	2136	24886	6136					TBL	
Function	Linearization table	2	Breakpoint B3	8503	2137	24887	6137					TBL	
Function	Linearization table	2	Breakpoint B4	8504	2138	24888	6138					TBL	
Function	Linearization table	2	Breakpoint B5	8505	2139	24889	6139					TBL	
Function	Linearization table	2	Breakpoint B6	8506	213A	24890	613A					TBL	
Function	Linearization table	2	Breakpoint B7	8507	213B	24891	613B					TBL	
Function	Linearization table	2	Breakpoint B8	8508	213C	24892	613C					TBL	
Function	Linearization table	2	Breakpoint B9	8509	213D	24893	613D					TBL	
Function	Linearization table	2	Breakpoint B10	8510	213E	24894	613E					TBL	
Function	Linearization table	2	Breakpoint B11	8511	213F	24895	613F					TBL	
Function	Linearization table	2	Breakpoint B12	8512	2140	24896	6140					TBL	
Function	Linearization table	2	Breakpoint B13	8513	2141	24897	6141					TBL	
Function	Linearization table	2	Breakpoint B14	8514	2142	24898	6142					TBL	
Function	Linearization table	2	Breakpoint B15	8515	2143	24899	6143					TBL	
Function	Linearization table	2	Breakpoint B16	8516	2144	24900	6144					TBL	
Function	Linearization table	2	Breakpoint B17	8517	2145	24901	6145					TBL	
Function	Linearization table	2	Breakpoint B18	8518	2146	24902	6146					TBL	
Function	Linearization table	2	Breakpoint B19	8519	2147	24903	6147					TBL	
Function	Linearization table	2	Breakpoint B20	8520	2148	24904	6148					TBL	
Function	Linearization table	3	Breakpoint decimal point position	8528	2150	24912	6150					–	
Function	Linearization table	3	Breakpoint A1	8529	2151	24913	6151					TBL	
Function	Linearization table	3	Breakpoint A2	8530	2152	24914	6152					TBL	
Function	Linearization table	3	Breakpoint A3	8531	2153	24915	6153					TBL	
Function	Linearization table	3	Breakpoint A4	8532	2154	24916	6154					TBL	
Function	Linearization table	3	Breakpoint A5	8533	2155	24917	6155					TBL	
Function	Linearization table	3	Breakpoint A6	8534	2156	24918	6156					TBL	
Function	Linearization table	3	Breakpoint A7	8535	2157	24919	6157					TBL	
Function	Linearization table	3	Breakpoint A8	8536	2158	24920	6158					TBL	
Function	Linearization table	3	Breakpoint A9	8537	2159	24921	6159					TBL	
Function	Linearization table	3	Breakpoint A10	8538	215A	24922	615A					TBL	
Function	Linearization table	3	Breakpoint A11	8539	215B	24923	615B					TBL	
Function	Linearization table	3	Breakpoint A12	8540	215C	24924	615C					TBL	
Function	Linearization table	3	Breakpoint A13	8541	215D	24925	615D					TBL	
Function	Linearization table	3	Breakpoint A14	8542	215E	24926	615E					TBL	
Function	Linearization table	3	Breakpoint A15	8543	215F	24927	615F					TBL	
Function	Linearization table	3	Breakpoint A16	8544	2160	24928	6160					TBL	
Function	Linearization table	3	Breakpoint A17	8545	2161	24929	6161					TBL	
Function	Linearization table	3	Breakpoint A18	8546	2162	24930	6162					TBL	
Function	Linearization table	3	Breakpoint A19	8547	2163	24931	6163					TBL	
Function	Linearization table	3	Breakpoint A20	8548	2164	24932	6164					TBL	
Function	Linearization table	3	Breakpoint B1	8549	2165	24933	6165					TBL	
Function	Linearization table	3	Breakpoint B2	8550	2166	24934	6166					TBL	
Function	Linearization table	3	Breakpoint B3	8551	2167	24935	6167					TBL	
Function	Linearization table	3	Breakpoint B4	8552	2168	24936	6168					TBL	
Function	Linearization table	3	Breakpoint B5	8553	2169	24937	6169					TBL	
Function	Linearization table	3	Breakpoint B6	8554	216A	24938	616A					TBL	
Function	Linearization table	3	Breakpoint B7	8555	216B	24939	616B					TBL	
Function	Linearization table	3	Breakpoint B8	8556	216C	24940	616C					TBL	
Function	Linearization table	3	Breakpoint B9	8557	216D	24941	616D					TBL	
Function	Linearization table	3	Breakpoint B10	8558	216E	24942	616E					TBL	

Function/Linearization Table

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Linearization table	3	Breakpoint B11	8559	216F	24943	616F					TBL	
Function	Linearization table	3	Breakpoint B12	8560	2170	24944	6170					TBL	
Function	Linearization table	3	Breakpoint B13	8561	2171	24945	6171					TBL	
Function	Linearization table	3	Breakpoint B14	8562	2172	24946	6172					TBL	
Function	Linearization table	3	Breakpoint B15	8563	2173	24947	6173					TBL	
Function	Linearization table	3	Breakpoint B16	8564	2174	24948	6174					TBL	
Function	Linearization table	3	Breakpoint B17	8565	2175	24949	6175					TBL	
Function	Linearization table	3	Breakpoint B18	8566	2176	24950	6176					TBL	
Function	Linearization table	3	Breakpoint B19	8567	2177	24951	6177					TBL	
Function	Linearization table	3	Breakpoint B20	8568	2178	24952	6178					TBL	
Function	Linearization table	4	Breakpoint decimal point position	8576	2180	24960	6180					–	
Function	Linearization table	4	Breakpoint A1	8577	2181	24961	6181					TBL	
Function	Linearization table	4	Breakpoint A2	8578	2182	24962	6182					TBL	
Function	Linearization table	4	Breakpoint A3	8579	2183	24963	6183					TBL	
Function	Linearization table	4	Breakpoint A4	8580	2184	24964	6184					TBL	
Function	Linearization table	4	Breakpoint A5	8581	2185	24965	6185					TBL	
Function	Linearization table	4	Breakpoint A6	8582	2186	24966	6186					TBL	
Function	Linearization table	4	Breakpoint A7	8583	2187	24967	6187					TBL	
Function	Linearization table	4	Breakpoint A8	8584	2188	24968	6188					TBL	
Function	Linearization table	4	Breakpoint A9	8585	2189	24969	6189					TBL	
Function	Linearization table	4	Breakpoint A10	8586	218A	24970	618A					TBL	
Function	Linearization table	4	Breakpoint A11	8587	218B	24971	618B					TBL	
Function	Linearization table	4	Breakpoint A12	8588	218C	24972	618C					TBL	
Function	Linearization table	4	Breakpoint A13	8589	218D	24973	618D					TBL	
Function	Linearization table	4	Breakpoint A14	8590	218E	24974	618E					TBL	
Function	Linearization table	4	Breakpoint A15	8591	218F	24975	618F					TBL	
Function	Linearization table	4	Breakpoint A16	8592	2190	24976	6190					TBL	
Function	Linearization table	4	Breakpoint A17	8593	2191	24977	6191					TBL	
Function	Linearization table	4	Breakpoint A18	8594	2192	24978	6192					TBL	
Function	Linearization table	4	Breakpoint A19	8595	2193	24979	6193					TBL	
Function	Linearization table	4	Breakpoint A20	8596	2194	24980	6194					TBL	
Function	Linearization table	4	Breakpoint B1	8597	2195	24981	6195					TBL	
Function	Linearization table	4	Breakpoint B2	8598	2196	24982	6196					TBL	
Function	Linearization table	4	Breakpoint B3	8599	2197	24983	6197					TBL	
Function	Linearization table	4	Breakpoint B4	8600	2198	24984	6198					TBL	
Function	Linearization table	4	Breakpoint B5	8601	2199	24985	6199					TBL	
Function	Linearization table	4	Breakpoint B6	8602	219A	24986	619A					TBL	
Function	Linearization table	4	Breakpoint B7	8603	219B	24987	619B					TBL	
Function	Linearization table	4	Breakpoint B8	8604	219C	24988	619C					TBL	
Function	Linearization table	4	Breakpoint B9	8605	219D	24989	619D					TBL	
Function	Linearization table	4	Breakpoint B10	8606	219E	24990	619E					TBL	
Function	Linearization table	4	Breakpoint B11	8607	219F	24991	619F					TBL	
Function	Linearization table	4	Breakpoint B12	8608	21A0	24992	61A0					TBL	
Function	Linearization table	4	Breakpoint B13	8609	21A1	24993	61A1					TBL	
Function	Linearization table	4	Breakpoint B14	8610	21A2	24994	61A2					TBL	
Function	Linearization table	4	Breakpoint B15	8611	21A3	24995	61A3					TBL	
Function	Linearization table	4	Breakpoint B16	8612	21A4	24996	61A4					TBL	
Function	Linearization table	4	Breakpoint B17	8613	21A5	24997	61A5					TBL	
Function	Linearization table	4	Breakpoint B18	8614	21A6	24998	61A6					TBL	
Function	Linearization table	4	Breakpoint B19	8615	21A7	24999	61A7					TBL	
Function	Linearization table	4	Breakpoint B20	8616	21A8	25000	61A8					TBL	
Function	Linearization table	5	Breakpoint decimal point position	8624	21B0	25008	61B0					–	
Function	Linearization table	5	Breakpoint A1	8625	21B1	25009	61B1					TBL	
Function	Linearization table	5	Breakpoint A2	8626	21B2	25010	61B2					TBL	
Function	Linearization table	5	Breakpoint A3	8627	21B3	25011	61B3					TBL	
Function	Linearization table	5	Breakpoint A4	8628	21B4	25012	61B4					TBL	

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Linearization table	5	Breakpoint A5	8629	21B5	25013	61B5					TBL	
Function	Linearization table	5	Breakpoint A6	8630	21B6	25014	61B6					TBL	
Function	Linearization table	5	Breakpoint A7	8631	21B7	25015	61B7					TBL	
Function	Linearization table	5	Breakpoint A8	8632	21B8	25016	61B8					TBL	
Function	Linearization table	5	Breakpoint A9	8633	21B9	25017	61B9					TBL	
Function	Linearization table	5	Breakpoint A10	8634	21BA	25018	61BA					TBL	
Function	Linearization table	5	Breakpoint A11	8635	21BB	25019	61BB					TBL	
Function	Linearization table	5	Breakpoint A12	8636	21BC	25020	61BC					TBL	
Function	Linearization table	5	Breakpoint A13	8637	21BD	25021	61BD					TBL	
Function	Linearization table	5	Breakpoint A14	8638	21BE	25022	61BE					TBL	
Function	Linearization table	5	Breakpoint A15	8639	21BF	25023	61BF					TBL	
Function	Linearization table	5	Breakpoint A16	8640	21C0	25024	61C0					TBL	
Function	Linearization table	5	Breakpoint A17	8641	21C1	25025	61C1					TBL	
Function	Linearization table	5	Breakpoint A18	8642	21C2	25026	61C2					TBL	
Function	Linearization table	5	Breakpoint A19	8643	21C3	25027	61C3					TBL	
Function	Linearization table	5	Breakpoint A20	8644	21C4	25028	61C4					TBL	
Function	Linearization table	5	Breakpoint B1	8645	21C5	25029	61C5					TBL	
Function	Linearization table	5	Breakpoint B2	8646	21C6	25030	61C6					TBL	
Function	Linearization table	5	Breakpoint B3	8647	21C7	25031	61C7					TBL	
Function	Linearization table	5	Breakpoint B4	8648	21C8	25032	61C8					TBL	
Function	Linearization table	5	Breakpoint B5	8649	21C9	25033	61C9					TBL	
Function	Linearization table	5	Breakpoint B6	8650	21CA	25034	61CA					TBL	
Function	Linearization table	5	Breakpoint B7	8651	21CB	25035	61CB					TBL	
Function	Linearization table	5	Breakpoint B8	8652	21CC	25036	61CC					TBL	
Function	Linearization table	5	Breakpoint B9	8653	21CD	25037	61CD					TBL	
Function	Linearization table	5	Breakpoint B10	8654	21CE	25038	61CE					TBL	
Function	Linearization table	5	Breakpoint B11	8655	21CF	25039	61CF					TBL	
Function	Linearization table	5	Breakpoint B12	8656	21DO	25040	61DO					TBL	
Function	Linearization table	5	Breakpoint B13	8657	21D1	25041	61D1					TBL	
Function	Linearization table	5	Breakpoint B14	8658	21D2	25042	61D2					TBL	
Function	Linearization table	5	Breakpoint B15	8659	21D3	25043	61D3					TBL	
Function	Linearization table	5	Breakpoint B16	8660	21D4	25044	61D4					TBL	
Function	Linearization table	5	Breakpoint B17	8661	21D5	25045	61D5					TBL	
Function	Linearization table	5	Breakpoint B18	8662	21D6	25046	61D6					TBL	
Function	Linearization table	5	Breakpoint B19	8663	21D7	25047	61D7					TBL	
Function	Linearization table	5	Breakpoint B20	8664	21D8	25048	61D8					TBL	
Function	Linearization table	6	Breakpoint decimal point position	8672	21E0	25056	61E0					–	
Function	Linearization table	6	Breakpoint A1	8673	21E1	25057	61E1					TBL	
Function	Linearization table	6	Breakpoint A2	8674	21E2	25058	61E2					TBL	
Function	Linearization table	6	Breakpoint A3	8675	21E3	25059	61E3					TBL	
Function	Linearization table	6	Breakpoint A4	8676	21E4	25060	61E4					TBL	
Function	Linearization table	6	Breakpoint A5	8677	21E5	25061	61E5					TBL	
Function	Linearization table	6	Breakpoint A6	8678	21E6	25062	61E6					TBL	
Function	Linearization table	6	Breakpoint A7	8679	21E7	25063	61E7					TBL	
Function	Linearization table	6	Breakpoint A8	8680	21E8	25064	61E8					TBL	
Function	Linearization table	6	Breakpoint A9	8681	21E9	25065	61E9					TBL	
Function	Linearization table	6	Breakpoint A10	8682	21EA	25066	61EA					TBL	
Function	Linearization table	6	Breakpoint A11	8683	21EB	25067	61EB					TBL	
Function	Linearization table	6	Breakpoint A12	8684	21EC	25068	61EC					TBL	
Function	Linearization table	6	Breakpoint A13	8685	21ED	25069	61ED					TBL	
Function	Linearization table	6	Breakpoint A14	8686	21EE	25070	61EE					TBL	
Function	Linearization table	6	Breakpoint A15	8687	21EF	25071	61EF					TBL	
Function	Linearization table	6	Breakpoint A16	8688	21F0	25072	61F0					TBL	
Function	Linearization table	6	Breakpoint A17	8689	21F1	25073	61F1					TBL	
Function	Linearization table	6	Breakpoint A18	8690	21F2	25074	61F2					TBL	
Function	Linearization table	6	Breakpoint A19	8691	21F3	25075	61F3					TBL	
Function	Linearization table	6	Breakpoint A20	8692	21F4	25076	61F4					TBL	

Function/Linearization Table

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Linearization table	6	Breakpoint B1	8693	21F5	25077	61F5					TBL	
Function	Linearization table	6	Breakpoint B2	8694	21F6	25078	61F6					TBL	
Function	Linearization table	6	Breakpoint B3	8695	21F7	25079	61F7					TBL	
Function	Linearization table	6	Breakpoint B4	8696	21F8	25080	61F8					TBL	
Function	Linearization table	6	Breakpoint B5	8697	21F9	25081	61F9					TBL	
Function	Linearization table	6	Breakpoint B6	8698	21FA	25082	61FA					TBL	
Function	Linearization table	6	Breakpoint B7	8699	21FB	25083	61FB					TBL	
Function	Linearization table	6	Breakpoint B8	8700	21FC	25084	61FC					TBL	
Function	Linearization table	6	Breakpoint B9	8701	21FD	25085	61FD					TBL	
Function	Linearization table	6	Breakpoint B10	8702	21FE	25086	61FE					TBL	
Function	Linearization table	6	Breakpoint B11	8703	21FF	25087	61FF					TBL	
Function	Linearization table	6	Breakpoint B12	8704	2200	25088	6200					TBL	
Function	Linearization table	6	Breakpoint B13	8705	2201	25089	6201					TBL	
Function	Linearization table	6	Breakpoint B14	8706	2202	25090	6202					TBL	
Function	Linearization table	6	Breakpoint B15	8707	2203	25091	6203					TBL	
Function	Linearization table	6	Breakpoint B16	8708	2204	25092	6204					TBL	
Function	Linearization table	6	Breakpoint B17	8709	2205	25093	6205					TBL	
Function	Linearization table	6	Breakpoint B18	8710	2206	25094	6206					TBL	
Function	Linearization table	6	Breakpoint B19	8711	2207	25095	6207					TBL	
Function	Linearization table	6	Breakpoint B20	8712	2208	25096	6208					TBL	
Function	Linearization table	7	Breakpoint decimal point position	8720	2210	25104	6210					–	
Function	Linearization table	7	Breakpoint A1	8721	2211	25105	6211					TBL	
Function	Linearization table	7	Breakpoint A2	8722	2212	25106	6212					TBL	
Function	Linearization table	7	Breakpoint A3	8723	2213	25107	6213					TBL	
Function	Linearization table	7	Breakpoint A4	8724	2214	25108	6214					TBL	
Function	Linearization table	7	Breakpoint A5	8725	2215	25109	6215					TBL	
Function	Linearization table	7	Breakpoint A6	8726	2216	25110	6216					TBL	
Function	Linearization table	7	Breakpoint A7	8727	2217	25111	6217					TBL	
Function	Linearization table	7	Breakpoint A8	8728	2218	25112	6218					TBL	
Function	Linearization table	7	Breakpoint A9	8729	2219	25113	6219					TBL	
Function	Linearization table	7	Breakpoint A10	8730	221A	25114	621A					TBL	
Function	Linearization table	7	Breakpoint A11	8731	221B	25115	621B					TBL	
Function	Linearization table	7	Breakpoint A12	8732	221C	25116	621C					TBL	
Function	Linearization table	7	Breakpoint A13	8733	221D	25117	621D					TBL	
Function	Linearization table	7	Breakpoint A14	8734	221E	25118	621E					TBL	
Function	Linearization table	7	Breakpoint A15	8735	221F	25119	621F					TBL	
Function	Linearization table	7	Breakpoint A16	8736	2220	25120	6220					TBL	
Function	Linearization table	7	Breakpoint A17	8737	2221	25121	6221					TBL	
Function	Linearization table	7	Breakpoint A18	8738	2222	25122	6222					TBL	
Function	Linearization table	7	Breakpoint A19	8739	2223	25123	6223					TBL	
Function	Linearization table	7	Breakpoint A20	8740	2224	25124	6224					TBL	
Function	Linearization table	7	Breakpoint B1	8741	2225	25125	6225					TBL	
Function	Linearization table	7	Breakpoint B2	8742	2226	25126	6226					TBL	
Function	Linearization table	7	Breakpoint B3	8743	2227	25127	6227					TBL	
Function	Linearization table	7	Breakpoint B4	8744	2228	25128	6228					TBL	
Function	Linearization table	7	Breakpoint B5	8745	2229	25129	6229					TBL	
Function	Linearization table	7	Breakpoint B6	8746	222A	25130	622A					TBL	
Function	Linearization table	7	Breakpoint B7	8747	222B	25131	622B					TBL	
Function	Linearization table	7	Breakpoint B8	8748	222C	25132	622C					TBL	
Function	Linearization table	7	Breakpoint B9	8749	222D	25133	622D					TBL	
Function	Linearization table	7	Breakpoint B10	8750	601E	25134	622E					TBL	
Function	Linearization table	7	Breakpoint B11	8751	222F	25135	622F					TBL	
Function	Linearization table	7	Breakpoint B12	8752	2230	25136	6230					TBL	
Function	Linearization table	7	Breakpoint B13	8753	2231	25137	6231					TBL	
Function	Linearization table	7	Breakpoint B14	8754	2232	25138	6232					TBL	
Function	Linearization table	7	Breakpoint B15	8755	2233	25139	6233					TBL	
Function	Linearization table	7	Breakpoint B16	8756	2234	25140	6234					TBL	

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Linearization table	7	Breakpoint B17	8757	2235	25141	6235					TBL	
Function	Linearization table	7	Breakpoint B18	8758	2236	25142	6236					TBL	
Function	Linearization table	7	Breakpoint B19	8759	2237	25143	6237					TBL	
Function	Linearization table	7	Breakpoint B20	8760	2238	25144	6238					TBL	
Function	Linearization table	8	Breakpoint decimal point position	8768	2240	25152	6240					–	
Function	Linearization table	8	Breakpoint A1	8769	2241	25153	6241					TBL	
Function	Linearization table	8	Breakpoint A2	8770	2242	25154	6242					TBL	
Function	Linearization table	8	Breakpoint A3	8771	2243	25155	6243					TBL	
Function	Linearization table	8	Breakpoint A4	8772	2244	25156	6244					TBL	
Function	Linearization table	8	Breakpoint A5	8773	2245	25157	6245					TBL	
Function	Linearization table	8	Breakpoint A6	8774	2246	25158	6246					TBL	
Function	Linearization table	8	Breakpoint A7	8775	2247	25159	6247					TBL	
Function	Linearization table	8	Breakpoint A8	8776	2248	25160	6248					TBL	
Function	Linearization table	8	Breakpoint A9	8777	2249	25161	6249					TBL	
Function	Linearization table	8	Breakpoint A10	8778	224A	25162	624A					TBL	
Function	Linearization table	8	Breakpoint A11	8779	224B	25163	624B					TBL	
Function	Linearization table	8	Breakpoint A12	8780	224C	25164	624C					TBL	
Function	Linearization table	8	Breakpoint A13	8781	224D	25165	624D					TBL	
Function	Linearization table	8	Breakpoint A14	8782	224E	25166	624E					TBL	
Function	Linearization table	8	Breakpoint A15	8783	224F	25167	624F					TBL	
Function	Linearization table	8	Breakpoint A16	8784	2250	25168	6250					TBL	
Function	Linearization table	8	Breakpoint A17	8785	2251	25169	6251					TBL	
Function	Linearization table	8	Breakpoint A18	8786	2252	25170	6252					TBL	
Function	Linearization table	8	Breakpoint A19	8787	2253	25171	6253					TBL	
Function	Linearization table	8	Breakpoint A20	8788	2254	25172	6254					TBL	
Function	Linearization table	8	Breakpoint B1	8789	2255	25173	6255					TBL	
Function	Linearization table	8	Breakpoint B2	8790	2256	25174	6256					TBL	
Function	Linearization table	8	Breakpoint B3	8791	2257	25175	6257					TBL	
Function	Linearization table	8	Breakpoint B4	8792	2258	25176	6258					TBL	
Function	Linearization table	8	Breakpoint B5	8793	2259	25177	6259					TBL	
Function	Linearization table	8	Breakpoint B6	8794	225A	25178	625A					TBL	
Function	Linearization table	8	Breakpoint B7	8795	225B	25179	625B					TBL	
Function	Linearization table	8	Breakpoint B8	8796	225C	25180	625C					TBL	
Function	Linearization table	8	Breakpoint B9	8797	225D	25181	625D					TBL	
Function	Linearization table	8	Breakpoint B10	8798	225E	25182	625E					TBL	
Function	Linearization table	8	Breakpoint B11	8799	225F	25183	625F					TBL	
Function	Linearization table	8	Breakpoint B12	8800	2260	25184	6260					TBL	
Function	Linearization table	8	Breakpoint B13	8801	2261	25185	6261					TBL	
Function	Linearization table	8	Breakpoint B14	8802	2262	25186	6262					TBL	
Function	Linearization table	8	Breakpoint B15	8803	2263	25187	6263					TBL	
Function	Linearization table	8	Breakpoint B16	8804	2264	25188	6264					TBL	
Function	Linearization table	8	Breakpoint B17	8805	2265	25189	6265					TBL	
Function	Linearization table	8	Breakpoint B18	8806	2266	25190	6266					TBL	
Function	Linearization table	8	Breakpoint B19	8807	2267	25191	6267					TBL	
Function	Linearization table	8	Breakpoint B20	8808	2268	25192	6268					TBL	

Function/Internal Contact IN

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Internal contact IN	1	Operation type	9472	2500	25856	6500					–	
Function	Internal contact IN	1	Input type	9473	2501	25857	6501					–	
Function	Internal contact IN	1	Loop/channel definition	9474	2502	25858	6502					–	
Function	Internal contact IN	1	Weighting	9475	2503	25859	6503					–	
Function	Internal contact IN	2	Operation type	9480	2508	25864	6508					–	
Function	Internal contact IN	2	Input type	9481	2509	25865	6509					–	
Function	Internal contact IN	2	Loop/channel definition	9482	250A	25866	650A					–	
Function	Internal contact IN	2	Weighting	9483	250B	25867	650B					–	
Function	Internal contact IN	3	Operation type	9488	2510	25872	6510					–	
Function	Internal contact IN	3	Input type	9489	2511	25873	6511					–	
Function	Internal contact IN	3	Loop/channel definition	9490	2512	25874	6512					–	
Function	Internal contact IN	3	Weighting	9491	2513	25875	6513					–	
Function	Internal contact IN	4	Operation type	9496	2518	25880	6518					–	
Function	Internal contact IN	4	Input type	9497	2519	25881	6519					–	
Function	Internal contact IN	4	Loop/channel definition	9498	251A	25882	651A					–	
Function	Internal contact IN	4	Weighting	9499	251B	25883	651B					–	
Function	Internal contact IN	5	Operation type	9504	2520	25888	6520					–	
Function	Internal contact IN	5	Input type	9505	2521	25889	6521					–	
Function	Internal contact IN	5	Loop/channel definition	9506	2522	25890	6522					–	
Function	Internal contact IN	5	Weighting	9507	2523	25891	6523					–	
Function	Internal contact IN	6	Operation type	9512	2528	25896	6528					–	
Function	Internal contact IN	6	Input type	9513	2529	25897	6529					–	
Function	Internal contact IN	6	Loop/channel definition	9514	252A	25898	652A					–	
Function	Internal contact IN	6	Weighting	9515	252B	25899	652B					–	
Function	Internal contact IN	7	Operation type	9520	2530	25904	6530					–	
Function	Internal contact IN	7	Input type	9521	2531	25905	6531					–	
Function	Internal contact IN	7	Loop/channel definition	9522	2532	25906	6532					–	
Function	Internal contact IN	7	Weighting	9523	2533	25907	6533					–	
Function	Internal contact IN	8	Operation type	9528	2538	25912	6538					–	
Function	Internal contact IN	8	Input type	9529	2539	25913	6539					–	
Function	Internal contact IN	8	Loop/channel definition	9530	253A	25914	653A					–	
Function	Internal contact IN	8	Weighting	9531	253B	25915	653B					–	
Function	Internal contact IN	9	Operation type	9536	2540	25920	6540					–	
Function	Internal contact IN	9	Input type	9537	2541	25921	6541					–	
Function	Internal contact IN	9	Loop/channel definition	9538	2542	25922	6542					–	
Function	Internal contact IN	9	Weighting	9539	2543	25923	6543					–	
Function	Internal contact IN	10	Operation type	9544	2548	25928	6548					–	
Function	Internal contact IN	10	Input type	9545	2549	25929	6549					–	
Function	Internal contact IN	10	Loop/channel definition	9546	254A	25930	654A					–	
Function	Internal contact IN	10	Weighting	9547	254B	25931	654B					–	
Function	Internal contact IN	11	Operation type	9552	2550	25936	6550					–	
Function	Internal contact IN	11	Input type	9553	2551	25937	6551					–	
Function	Internal contact IN	11	Loop/channel definition	9554	2552	25938	6552					–	
Function	Internal contact IN	11	Weighting	9555	2553	25939	6553					–	
Function	Internal contact IN	12	Operation type	9560	2558	25944	6558					–	
Function	Internal contact IN	12	Input type	9561	2559	25945	6559					–	
Function	Internal contact IN	12	Loop/channel definition	9562	255A	25946	655A					–	
Function	Internal contact IN	12	Weighting	9563	255B	25947	655B					–	
Function	Internal contact IN	13	Operation type	9568	2560	25952	6560					–	

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Internal contact IN	13	Input type	9569	2561	25953	6561					–	
Function	Internal contact IN	13	Loop/channel definition	9570	2562	25954	6562					–	
Function	Internal contact IN	13	Weighting	9571	2563	25955	6563					–	
Function	Internal contact IN	14	Operation type	9576	2568	25960	6568					–	
Function	Internal contact IN	14	Input type	9577	2569	25961	6569					–	
Function	Internal contact IN	14	Loop/channel definition	9578	256A	25962	656A					–	
Function	Internal contact IN	14	Weighting	9579	256B	25963	656B					–	
Function	Internal contact IN	15	Operation type	9584	2570	25968	6570					–	
Function	Internal contact IN	15	Input type	9585	2571	25969	6571					–	
Function	Internal contact IN	15	Loop/channel definition	9586	2572	25970	6572					–	
Function	Internal contact IN	15	Weighting	9587	2573	25971	6573					–	
Function	Internal contact IN	16	Operation type	9592	2578	25976	6578					–	
Function	Internal contact IN	16	Input type	9593	2579	25977	6579					–	
Function	Internal contact IN	16	Loop/channel definition	9594	257A	25978	657A					–	
Function	Internal contact IN	16	Weighting	9595	257B	25979	657B					–	

Function/Logical Operation

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Logical op, preproc.	1	Calculation type	9824	2660	26208	6660					–	
Function	Logical op, preproc.	1	Input assignment A	9825	2661	26209	6661					–	
Function	Logical op, preproc.	1	Input assignment B	9826	2662	26210	6662					–	
Function	Logical op, preproc.	1	Input assignment C	9827	2663	26211	6663					–	
Function	Logical op, preproc.	1	Input assignment D	9828	2664	26212	6664					–	
Function	Logical op, preproc.	1	Inverted input bit A	9829	2665	26213	6665					–	
Function	Logical op, preproc.	1	Inverted input bit B	9830	2666	26214	6666					–	
Function	Logical op, preproc.	1	Inverted input bit C	9831	2667	26215	6667					–	
Function	Logical op, preproc.	1	Inverted input bit D	9832	2668	26216	6668					–	
Function	Logical op, preproc.	1	ON delay time	9833	2669	26217	6669					1	
Function	Logical op, preproc.	1	OFF delay time	9834	266A	26218	666A					1	
Function	Logical op, preproc.	1	Inversion	9835	266B	26219	666B					–	
Function	Logical op, preproc.	1	Latch	9836	266C	26220	666C					–	
Function	Logical op, preproc.	2	Calculation type	9840	2670	26224	6670					–	
Function	Logical op, preproc.	2	Input assignment A	9841	2671	26225	6671					–	
Function	Logical op, preproc.	2	Input assignment B	9842	2672	26226	6672					–	
Function	Logical op, preproc.	2	Input assignment C	9843	2673	26227	6673					–	
Function	Logical op, preproc.	2	Input assignment D	9844	2674	26228	6674					–	
Function	Logical op, preproc.	2	Inverted input bit A	9845	2675	26229	6675					–	
Function	Logical op, preproc.	2	Inverted input bit B	9846	2676	26230	6676					–	
Function	Logical op, preproc.	2	Inverted input bit C	9847	2677	26231	6677					–	
Function	Logical op, preproc.	2	Inverted input bit D	9848	2678	26232	6678					–	
Function	Logical op, preproc.	2	ON delay time	9849	2679	26233	6679					1	
Function	Logical op, preproc.	2	OFF delay time	9850	267A	26234	667A					1	
Function	Logical op, preproc.	2	Inversion	9851	267B	26235	667B					–	
Function	Logical op, preproc.	2	Latch	9852	267C	26236	667C					–	
Function	Logical op, preproc.	3	Calculation type	9856	2680	26240	6680					–	
Function	Logical op, preproc.	3	Input assignment A	9857	2681	26241	6681					–	
Function	Logical op, preproc.	3	Input assignment B	9858	2682	26242	6682					–	
Function	Logical op, preproc.	3	Input assignment C	9859	2683	26243	6683					–	
Function	Logical op, preproc.	3	Input assignment D	9860	2684	26244	6684					–	
Function	Logical op, preproc.	3	Inverted input bit A	9861	2685	26245	6685					–	
Function	Logical op, preproc.	3	Inverted input bit B	9862	2686	26246	6686					–	
Function	Logical op, preproc.	3	Inverted input bit C	9863	2687	26247	6687					–	
Function	Logical op, preproc.	3	Inverted input bit D	9864	2688	26248	6688					–	
Function	Logical op, preproc.	3	ON delay time	9865	2689	26249	6689					1	
Function	Logical op, preproc.	3	OFF delay time	9866	268A	26250	668A					1	
Function	Logical op, preproc.	3	Inversion	9867	268B	26251	668B					–	
Function	Logical op, preproc.	3	Latch	9868	268C	26252	668C					–	
Function	Logical op, preproc.	4	Calculation type	9872	2690	26256	6690					–	
Function	Logical op, preproc.	4	Input assignment A	9873	2691	26257	6691					–	
Function	Logical op, preproc.	4	Input assignment B	9874	2692	26258	6692					–	
Function	Logical op, preproc.	4	Input assignment C	9875	2693	26259	6693					–	
Function	Logical op, preproc.	4	Input assignment D	9876	2694	26260	6694					–	
Function	Logical op, preproc.	4	Inverted input bit A	9877	2695	26261	6695					–	
Function	Logical op, preproc.	4	Inverted input bit B	9878	2696	26262	6696					–	
Function	Logical op, preproc.	4	Inverted input bit C	9879	2697	26263	6697					–	
Function	Logical op, preproc.	4	Inverted input bit D	9880	2698	26264	6698					–	
Function	Logical op, preproc.	4	ON delay time	9881	2699	26265	6699					1	
Function	Logical op, preproc.	4	OFF delay time	9882	269A	26266	669A					1	
Function	Logical op, preproc.	4	Inversion	9883	269B	26267	669B					–	
Function	Logical op, preproc.	4	Latch	9884	269C	26268	669C					–	
Function	Logical op, preproc.	5	Calculation type	9888	26A0	26272	66A0					–	
Function	Logical op, preproc.	5	Input assignment A	9889	26A1	26273	66A1					–	
Function	Logical op, preproc.	5	Input assignment B	9890	26A2	26274	66A2					–	
Function	Logical op, preproc.	5	Input assignment C	9891	26A3	26275	66A3					–	
Function	Logical op, preproc.	5	Input assignment D	9892	26A4	26276	66A4					–	
Function	Logical op, preproc.	5	Inverted input bit A	9893	26A5	26277	66A5					–	
Function	Logical op, preproc.	5	Inverted input bit B	9894	26A6	26278	66A6					–	
Function	Logical op, preproc.	5	Inverted input bit C	9895	26A7	26279	66A7					–	

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Logical op, preproc.	5	Inverted input bit D	9896	26A8	26280	66A8					–	
Function	Logical op, preproc.	5	ON delay time	9897	26A9	26281	66A9					1	
Function	Logical op, preproc.	5	OFF delay time	9898	26AA	26282	66AA					1	
Function	Logical op, preproc.	5	Inversion	9899	26AB	26283	66AB					–	
Function	Logical op, preproc.	5	Latch	9900	26AC	26284	66AC					–	
Function	Logical op, preproc.	6	Calculation type	9904	26B0	26288	66B0					–	
Function	Logical op, preproc.	6	Input assignment A	9905	26B1	26289	66B1					–	
Function	Logical op, preproc.	6	Input assignment B	9906	26B2	26290	66B2					–	
Function	Logical op, preproc.	6	Input assignment C	9907	26B3	26291	66B3					–	
Function	Logical op, preproc.	6	Input assignment D	9908	26B4	26292	66B4					–	
Function	Logical op, preproc.	6	Inverted input bit A	9909	26B5	26293	66B5					–	
Function	Logical op, preproc.	6	Inverted input bit B	9910	26B6	26294	66B6					–	
Function	Logical op, preproc.	6	Inverted input bit C	9911	26B7	26295	66B7					–	
Function	Logical op, preproc.	6	Inverted input bit D	9912	26B8	26296	66B8					–	
Function	Logical op, preproc.	6	ON delay time	9913	26B9	26297	66B9					1	
Function	Logical op, preproc.	6	OFF delay time	9914	26BA	26298	66BA					1	
Function	Logical op, preproc.	6	Inversion	9915	26BB	26299	66BB					–	
Function	Logical op, preproc.	6	Latch	9916	26BC	26300	66BC					–	
Function	Logical op, preproc.	7	Calculation type	9920	26C0	26304	66C0					–	
Function	Logical op, preproc.	7	Input assignment A	9921	26C1	26305	66C1					–	
Function	Logical op, preproc.	7	Input assignment B	9922	26C2	26306	66C2					–	
Function	Logical op, preproc.	7	Input assignment C	9923	26C3	26307	66C3					–	
Function	Logical op, preproc.	7	Input assignment D	9924	26C4	26308	66C4					–	
Function	Logical op, preproc.	7	Inverted input bit A	9925	26C5	26309	66C5					–	
Function	Logical op, preproc.	7	Inverted input bit B	9926	26C6	26310	66C6					–	
Function	Logical op, preproc.	7	Inverted input bit C	9927	26C7	26311	66C7					–	
Function	Logical op, preproc.	7	Inverted input bit D	9928	26C8	26312	66C8					–	
Function	Logical op, preproc.	7	ON delay time	9929	26C9	26313	66C9					1	
Function	Logical op, preproc.	7	OFF delay time	9930	26CA	26314	66CA					1	
Function	Logical op, preproc.	7	Inversion	9931	26CB	26315	66CB					–	
Function	Logical op, preproc.	7	Latch	9932	26CC	26316	66CC					–	
Function	Logical op, preproc.	8	Calculation type	9936	26DO	26320	66DO					–	
Function	Logical op, preproc.	8	Input assignment A	9937	26D1	26321	66D1					–	
Function	Logical op, preproc.	8	Input assignment B	9938	26D2	26322	66D2					–	
Function	Logical op, preproc.	8	Input assignment C	9939	26D3	26323	66D3					–	
Function	Logical op, preproc.	8	Input assignment D	9940	26D4	26324	66D4					–	
Function	Logical op, preproc.	8	Inverted input bit A	9941	26D5	26325	66D5					–	
Function	Logical op, preproc.	8	Inverted input bit B	9942	26D6	26326	66D6					–	
Function	Logical op, preproc.	8	Inverted input bit C	9943	26D7	26327	66D7					–	
Function	Logical op, preproc.	8	Inverted input bit D	9944	26D8	26328	66D8					–	
Function	Logical op, preproc.	8	ON delay time	9945	26D9	26329	66D9					1	
Function	Logical op, preproc.	8	OFF delay time	9946	26DA	26330	66DA					1	
Function	Logical op, preproc.	8	Inversion	9947	26DB	26331	66DB					–	
Function	Logical op, preproc.	8	Latch	9948	26DC	26332	66DC					–	
Function	Logical op, preproc.	9	Calculation type	9952	26E0	26336	66E0					–	
Function	Logical op, preproc.	9	Input assignment A	9953	26E1	26337	66E1					–	
Function	Logical op, preproc.	9	Input assignment B	9954	26E2	26338	66E2					–	
Function	Logical op, preproc.	9	Input assignment C	9955	26E3	26339	66E3					–	
Function	Logical op, preproc.	9	Input assignment D	9956	26E4	26340	66E4					–	
Function	Logical op, preproc.	9	Inverted input bit A	9957	26E5	26341	66E5					–	
Function	Logical op, preproc.	9	Inverted input bit B	9958	26E6	26342	66E6					–	
Function	Logical op, preproc.	9	Inverted input bit C	9959	26E7	26343	66E7					–	
Function	Logical op, preproc.	9	Inverted input bit D	9960	26E8	26344	66E8					–	
Function	Logical op, preproc.	9	ON delay time	9961	26E9	26345	66E9					1	
Function	Logical op, preproc.	9	OFF delay time	9962	26EA	26346	66EA					1	
Function	Logical op, preproc.	9	Inversion	9963	26EB	26347	66EB					–	
Function	Logical op, preproc.	9	Latch	9964	26EC	26348	66EC					–	
Function	Logical op, preproc.	10	Calculation type	9968	26F0	26352	66F0					–	
Function	Logical op, preproc.	10	Input assignment A	9969	26F1	26353	66F1					–	
Function	Logical op, preproc.	10	Input assignment B	9970	26F2	26354	66F2					–	
Function	Logical op, preproc.	10	Input assignment C	9971	26F3	26355	66F3					–	

Function/Logical Operation

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Logical op, preproc.	10	Input assignment D	9972	26F4	26356	66F4					–	
Function	Logical op, preproc.	10	Inverted input bit A	9973	26F5	26357	66F5					–	
Function	Logical op, preproc.	10	Inverted input bit B	9974	26F6	26358	66F6					–	
Function	Logical op, preproc.	10	Inverted input bit C	9975	26F7	26359	66F7					–	
Function	Logical op, preproc.	10	Inverted input bit D	9976	26F8	26360	66F8					–	
Function	Logical op, preproc.	10	ON delay time	9977	26F9	26361	66F9					1	
Function	Logical op, preproc.	10	OFF delay time	9978	26FA	26362	66FA					1	
Function	Logical op, preproc.	10	Inversion	9979	26FB	26363	66FB					–	
Function	Logical op, preproc.	10	Latch	9980	26FC	26364	66FC					–	
Function	Logical op, preproc.	11	Calculation type	9984	2700	26368	6700					–	
Function	Logical op, preproc.	11	Input assignment A	9985	2701	26369	6701					–	
Function	Logical op, preproc.	11	Input assignment B	9986	2702	26370	6702					–	
Function	Logical op, preproc.	11	Input assignment C	9987	2703	26371	6703					–	
Function	Logical op, preproc.	11	Input assignment D	9988	2704	26372	6704					–	
Function	Logical op, preproc.	11	Inverted input bit A	9989	2705	26373	6705					–	
Function	Logical op, preproc.	11	Inverted input bit B	9990	2706	26374	6706					–	
Function	Logical op, preproc.	11	Inverted input bit C	9991	2707	26375	6707					–	
Function	Logical op, preproc.	11	Inverted input bit D	9992	2708	26376	6708					–	
Function	Logical op, preproc.	11	ON delay time	9993	2709	26377	6709					1	
Function	Logical op, preproc.	11	OFF delay time	9994	270A	26378	670A					1	
Function	Logical op, preproc.	11	Inversion	9995	270B	26379	670B					–	
Function	Logical op, preproc.	11	Latch	9996	270C	26380	670C					–	
Function	Logical op, preproc.	12	Calculation type	10000	2710	26384	6710					–	
Function	Logical op, preproc.	12	Input assignment A	10001	2711	26385	6711					–	
Function	Logical op, preproc.	12	Input assignment B	10002	2712	26386	6712					–	
Function	Logical op, preproc.	12	Input assignment C	10003	2713	26387	6713					–	
Function	Logical op, preproc.	12	Input assignment D	10004	2714	26388	6714					–	
Function	Logical op, preproc.	12	Inverted input bit A	10005	2715	26389	6715					–	
Function	Logical op, preproc.	12	Inverted input bit B	10006	2716	26390	6716					–	
Function	Logical op, preproc.	12	Inverted input bit C	10007	2717	26391	6717					–	
Function	Logical op, preproc.	12	Inverted input bit D	10008	2718	26392	6718					–	
Function	Logical op, preproc.	12	ON delay time	10009	2719	26393	6719					1	
Function	Logical op, preproc.	12	OFF delay time	10010	271A	26394	671A					1	
Function	Logical op, preproc.	12	Inversion	10011	271B	26395	671B					–	
Function	Logical op, preproc.	12	Latch	10012	271C	26396	671C					–	
Function	Logical op, preproc.	13	Calculation type	10016	2720	26400	6720					–	
Function	Logical op, preproc.	13	Input assignment A	10017	2721	26401	6721					–	
Function	Logical op, preproc.	13	Input assignment B	10018	2722	26402	6722					–	
Function	Logical op, preproc.	13	Input assignment C	10019	2723	26403	6723					–	
Function	Logical op, preproc.	13	Input assignment D	10020	2724	26404	6724					–	
Function	Logical op, preproc.	13	Inverted input bit A	10021	2725	26405	6725					–	
Function	Logical op, preproc.	13	Inverted input bit B	10022	2726	26406	6726					–	
Function	Logical op, preproc.	13	Inverted input bit C	10023	2727	26407	6727					–	
Function	Logical op, preproc.	13	Inverted input bit D	10024	2728	26408	6728					–	
Function	Logical op, preproc.	13	ON delay time	10025	2729	26409	6729					1	
Function	Logical op, preproc.	13	OFF delay time	10026	272A	26410	672A					1	
Function	Logical op, preproc.	13	Inversion	10027	272B	26411	672B					–	
Function	Logical op, preproc.	13	Latch	10028	272C	26412	672C					–	
Function	Logical op, preproc.	14	Calculation type	10032	2730	26416	6730					–	
Function	Logical op, preproc.	14	Input assignment A	10033	2731	26417	6731					–	
Function	Logical op, preproc.	14	Input assignment B	10034	2732	26418	6732					–	
Function	Logical op, preproc.	14	Input assignment C	10035	2733	26419	6733					–	
Function	Logical op, preproc.	14	Input assignment D	10036	2734	26420	6734					–	
Function	Logical op, preproc.	14	Inverted input bit A	10037	2735	26421	6735					–	
Function	Logical op, preproc.	14	Inverted input bit B	10038	2736	26422	6736					–	
Function	Logical op, preproc.	14	Inverted input bit C	10039	2737	26423	6737					–	
Function	Logical op, preproc.	14	Inverted input bit D	10040	2738	26424	6738					–	
Function	Logical op, preproc.	14	ON delay time	10041	2739	26425	6739					1	
Function	Logical op, preproc.	14	OFF delay time	10042	273A	26426	673A					1	
Function	Logical op, preproc.	14	Inversion	10043	273B	26427	673B					–	
Function	Logical op, preproc.	14	Latch	10044	273C	26428	673C					–	

Function/Logical Operation

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Logical op, preproc.	15	Calculation type	10048	2740	26432	6740					–	
Function	Logical op, preproc.	15	Input assignment A	10049	2741	26433	6741					–	
Function	Logical op, preproc.	15	Input assignment B	10050	2742	26434	6742					–	
Function	Logical op, preproc.	15	Input assignment C	10051	2743	26435	6743					–	
Function	Logical op, preproc.	15	Input assignment D	10052	2744	26436	6744					–	
Function	Logical op, preproc.	15	Inverted input bit A	10053	2745	26437	6745					–	
Function	Logical op, preproc.	15	Inverted input bit B	10054	2746	26438	6746					–	
Function	Logical op, preproc.	15	Inverted input bit C	10055	2747	26439	6747					–	
Function	Logical op, preproc.	15	Inverted input bit D	10056	2748	26440	6748					–	
Function	Logical op, preproc.	15	ON delay time	10057	2749	26441	6749					1	
Function	Logical op, preproc.	15	OFF delay time	10058	274A	26442	674A					1	
Function	Logical op, preproc.	15	Inversion	10059	274B	26443	674B					–	
Function	Logical op, preproc.	15	Latch	10060	274C	26444	674C					–	
Function	Logical op, preproc.	16	Calculation type	10064	2750	26448	6750					–	
Function	Logical op, preproc.	16	Input assignment A	10065	2751	26449	6751					–	
Function	Logical op, preproc.	16	Input assignment B	10066	2752	26450	6752					–	
Function	Logical op, preproc.	16	Input assignment C	10067	2753	26451	6753					–	
Function	Logical op, preproc.	16	Input assignment D	10068	2754	26452	6754					–	
Function	Logical op, preproc.	16	Inverted input bit A	10069	2755	26453	6755					–	
Function	Logical op, preproc.	16	Inverted input bit B	10070	2756	26454	6756					–	
Function	Logical op, preproc.	16	Inverted input bit C	10071	2757	26455	6757					–	
Function	Logical op, preproc.	16	Inverted input bit D	10072	2758	26456	6758					–	
Function	Logical op, preproc.	16	ON delay time	10073	2759	26457	6759					1	
Function	Logical op, preproc.	16	OFF delay time	10074	275A	26458	675A					1	
Function	Logical op, preproc.	16	Inversion	10075	275B	26459	675B					–	
Function	Logical op, preproc.	16	Latch	10076	275C	26460	675C					–	
Function	Logical op, postproc	17	Calculation type	8960	2300	25344	6300					–	
Function	Logical op, postproc	17	Input assignment A	8961	2301	25345	6301					–	
Function	Logical op, postproc	17	Input assignment B	8962	2302	25346	6302					–	
Function	Logical op, postproc	17	Input assignment C	8963	2303	25347	6303					–	
Function	Logical op, postproc	17	Input assignment D	8964	2304	25348	6304					–	
Function	Logical op, postproc	17	Inverted input bit A	8965	2305	25349	6305					–	
Function	Logical op, postproc	17	Inverted input bit B	8966	2306	25350	6306					–	
Function	Logical op, postproc	17	Inverted input bit C	8967	2307	25351	6307					–	
Function	Logical op, postproc	17	Inverted input bit D	8968	2308	25352	6308					–	
Function	Logical op, postproc	17	ON delay time	8969	2309	25353	6309					1	
Function	Logical op, postproc	17	OFF delay time	8970	230A	25354	630A					1	
Function	Logical op, postproc	17	Inversion	8971	230B	25355	630B					–	
Function	Logical op, postproc	17	Latch	8972	230C	25356	630C					–	
Function	Logical op, postproc	18	Calculation type	8976	2310	25360	6310					–	
Function	Logical op, postproc	18	Input assignment A	8977	2311	25361	6311					–	
Function	Logical op, postproc	18	Input assignment B	8978	2312	25362	6312					–	
Function	Logical op, postproc	18	Input assignment C	8979	2313	25363	6313					–	
Function	Logical op, postproc	18	Input assignment D	8980	2314	25364	6314					–	
Function	Logical op, postproc	18	Inverted input bit A	8981	2315	25365	6315					–	
Function	Logical op, postproc	18	Inverted input bit B	8982	2316	25366	6316					–	
Function	Logical op, postproc	18	Inverted input bit C	8983	2317	25367	6317					–	
Function	Logical op, postproc	18	Inverted input bit D	8984	2318	25368	6318					–	
Function	Logical op, postproc	18	ON delay time	8985	2319	25369	6319					1	
Function	Logical op, postproc	18	OFF delay time	8986	231A	25370	631A					1	
Function	Logical op, postproc	18	Inversion	8987	231B	25371	631B					–	
Function	Logical op, postproc	18	Latch	8988	231C	25372	631C					–	
Function	Logical op, postproc	19	Calculation type	8992	2320	25376	6320					–	
Function	Logical op, postproc	19	Input assignment A	8993	2321	25377	6321					–	
Function	Logical op, postproc	19	Input assignment B	8994	2322	25378	6322					–	
Function	Logical op, postproc	19	Input assignment C	8995	2323	25379	6323					–	
Function	Logical op, postproc	19	Input assignment D	8996	2324	25380	6324					–	
Function	Logical op, postproc	19	Inverted input bit A	8997	2325	25381	6325					–	
Function	Logical op, postproc	19	Inverted input bit B	8998	2326	25382	6326					–	
Function	Logical op, postproc	19	Inverted input bit C	8999	2327	25383	6327					–	
Function	Logical op, postproc	19	Inverted input bit D	9000	2328	25384	6328					–	

Function/Logical Operation

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Logical op, postproc	19	ON delay time	9001	2329	25385	6329					1	
Function	Logical op, postproc	19	OFF delay time	9002	232A	25386	632A					1	
Function	Logical op, postproc	19	Inversion	9003	232B	25387	632B					–	
Function	Logical op, postproc	19	Latch	9004	232C	25388	632C					–	
Function	Logical op, postproc	20	Calculation type	9008	2330	25392	6330					–	
Function	Logical op, postproc	20	Input assignment A	9009	2331	25393	6331					–	
Function	Logical op, postproc	20	Input assignment B	9010	2332	25394	6332					–	
Function	Logical op, postproc	20	Input assignment C	9011	2333	25395	6333					–	
Function	Logical op, postproc	20	Input assignment D	9012	2334	25396	6334					–	
Function	Logical op, postproc	20	Inverted input bit A	9013	2335	25397	6335					–	
Function	Logical op, postproc	20	Inverted input bit B	9014	2336	25398	6336					–	
Function	Logical op, postproc	20	Inverted input bit C	9015	2337	25399	6337					–	
Function	Logical op, postproc	20	Inverted input bit D	9016	2338	25400	6338					–	
Function	Logical op, postproc	20	ON delay time	9017	2339	25401	6339					1	
Function	Logical op, postproc	20	OFF delay time	9018	233A	25402	633A					1	
Function	Logical op, postproc	20	Inversion	9019	233B	25403	633B					–	
Function	Logical op, postproc	20	Latch	9020	233C	25404	633C					–	
Function	Logical op, postproc	21	Calculation type	9024	2340	25408	6340					–	
Function	Logical op, postproc	21	Input assignment A	9025	2341	25409	6341					–	
Function	Logical op, postproc	21	Input assignment B	9026	2342	25410	6342					–	
Function	Logical op, postproc	21	Input assignment C	9027	2343	25411	6343					–	
Function	Logical op, postproc	21	Input assignment D	9028	2344	25412	6344					–	
Function	Logical op, postproc	21	Inverted input bit A	9029	2345	25413	6345					–	
Function	Logical op, postproc	21	Inverted input bit B	9030	2346	25414	6346					–	
Function	Logical op, postproc	21	Inverted input bit C	9031	2347	25415	6347					–	
Function	Logical op, postproc	21	Inverted input bit D	9032	2348	25416	6348					–	
Function	Logical op, postproc	21	ON delay time	9033	2349	25417	6349					1	
Function	Logical op, postproc	21	OFF delay time	9034	234A	25418	634A					1	
Function	Logical op, postproc	21	Inversion	9035	234B	25419	634B					–	
Function	Logical op, postproc	21	Latch	9036	234C	25420	634C					–	
Function	Logical op, postproc	22	Calculation type	9040	2350	25424	6350					–	
Function	Logical op, postproc	22	Input assignment A	9041	2351	25425	6351					–	
Function	Logical op, postproc	22	Input assignment B	9042	2352	25426	6352					–	
Function	Logical op, postproc	22	Input assignment C	9043	2353	25427	6353					–	
Function	Logical op, postproc	22	Input assignment D	9044	2354	25428	6354					–	
Function	Logical op, postproc	22	Inverted input bit A	9045	2355	25429	6355					–	
Function	Logical op, postproc	22	Inverted input bit B	9046	2356	25430	6356					–	
Function	Logical op, postproc	22	Inverted input bit C	9047	2357	25431	6357					–	
Function	Logical op, postproc	22	Inverted input bit D	9048	2358	25432	6358					–	
Function	Logical op, postproc	22	ON delay time	9049	2359	25433	6359					1	
Function	Logical op, postproc	22	OFF delay time	9050	235A	25434	635A					1	
Function	Logical op, postproc	22	Inversion	9051	235B	25435	635B					–	
Function	Logical op, postproc	22	Latch	9052	235C	25436	635C					–	
Function	Logical op, postproc	23	Calculation type	9056	2360	25440	6360					–	
Function	Logical op, postproc	23	Input assignment A	9057	2361	25441	6361					–	
Function	Logical op, postproc	23	Input assignment B	9058	2362	25442	6362					–	
Function	Logical op, postproc	23	Input assignment C	9059	2363	25443	6363					–	
Function	Logical op, postproc	23	Input assignment D	9060	2364	25444	6364					–	
Function	Logical op, postproc	23	Inverted input bit A	9061	2365	25445	6365					–	
Function	Logical op, postproc	23	Inverted input bit B	9062	2366	25446	6366					–	
Function	Logical op, postproc	23	Inverted input bit C	9063	2367	25447	6367					–	
Function	Logical op, postproc	23	Inverted input bit D	9064	2368	25448	6368					–	
Function	Logical op, postproc	23	ON delay time	9065	2369	25449	6369					1	
Function	Logical op, postproc	23	OFF delay time	9066	236A	25450	636A					1	
Function	Logical op, postproc	23	Inversion	9067	236B	25451	636B					–	
Function	Logical op, postproc	23	Latch	9068	236C	25452	636C					–	
Function	Logical op, postproc	24	Calculation type	9072	2370	25456	6370					–	
Function	Logical op, postproc	24	Input assignment A	9073	2371	25457	6371					–	
Function	Logical op, postproc	24	Input assignment B	9074	2372	25458	6372					–	
Function	Logical op, postproc	24	Input assignment C	9075	2373	25459	6373					–	
Function	Logical op, postproc	24	Input assignment D	9076	2374	25460	6374					–	

Function/Logical Operation

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Logical op, postproc	24	Inverted input bit A	9077	2375	25461	6375					–	
Function	Logical op, postproc	24	Inverted input bit B	9078	2376	25462	6376					–	
Function	Logical op, postproc	24	Inverted input bit C	9079	2377	25463	6377					–	
Function	Logical op, postproc	24	Inverted input bit D	9080	2378	25464	6378					–	
Function	Logical op, postproc	24	ON delay time	9081	2379	25465	6379					1	
Function	Logical op, postproc	24	OFF delay time	9082	237A	25466	637A					1	
Function	Logical op, postproc	24	Inversion	9083	237B	25467	637B					–	
Function	Logical op, postproc	24	Latch	9084	237C	25468	637C					–	
Function	Logical op, postproc	25	Calculation type	9088	2380	25472	6380					–	
Function	Logical op, postproc	25	Input assignment A	9089	2381	25473	6381					–	
Function	Logical op, postproc	25	Input assignment B	9090	2382	25474	6382					–	
Function	Logical op, postproc	25	Input assignment C	9091	2383	25475	6383					–	
Function	Logical op, postproc	25	Input assignment D	9092	2384	25476	6384					–	
Function	Logical op, postproc	25	Inverted input bit A	9093	2385	25477	6385					–	
Function	Logical op, postproc	25	Inverted input bit B	9094	2386	25478	6386					–	
Function	Logical op, postproc	25	Inverted input bit C	9095	2387	25479	6387					–	
Function	Logical op, postproc	25	Inverted input bit D	9096	2388	25480	6388					–	
Function	Logical op, postproc	25	ON delay time	9097	2389	25481	6389					1	
Function	Logical op, postproc	25	OFF delay time	9098	238A	25482	638A					1	
Function	Logical op, postproc	25	Inversion	9099	238B	25483	638B					–	
Function	Logical op, postproc	25	Latch	9100	238C	25484	638C					–	
Function	Logical op, postproc	26	Calculation type	9104	2390	25488	6390					–	
Function	Logical op, postproc	26	Input assignment A	9105	2391	25489	6391					–	
Function	Logical op, postproc	26	Input assignment B	9106	2392	25490	6392					–	
Function	Logical op, postproc	26	Input assignment C	9107	2393	25491	6393					–	
Function	Logical op, postproc	26	Input assignment D	9108	2394	25492	6394					–	
Function	Logical op, postproc	26	Inverted input bit A	9109	2395	25493	6395					–	
Function	Logical op, postproc	26	Inverted input bit B	9110	2396	25494	6396					–	
Function	Logical op, postproc	26	Inverted input bit C	9111	2397	25495	6397					–	
Function	Logical op, postproc	26	Inverted input bit D	9112	2398	25496	6398					–	
Function	Logical op, postproc	26	ON delay time	9113	2399	25497	6399					1	
Function	Logical op, postproc	26	OFF delay time	9114	239A	25498	639A					1	
Function	Logical op, postproc	26	Inversion	9115	239B	25499	639B					–	
Function	Logical op, postproc	26	Latch	9116	239C	25500	639C					–	
Function	Logical op, postproc	27	Calculation type	9120	23A0	25504	63A0					–	
Function	Logical op, postproc	27	Input assignment A	9121	23A1	25505	63A1					–	
Function	Logical op, postproc	27	Input assignment B	9122	23A2	25506	63A2					–	
Function	Logical op, postproc	27	Input assignment C	9123	23A3	25507	63A3					–	
Function	Logical op, postproc	27	Input assignment D	9124	23A4	25508	63A4					–	
Function	Logical op, postproc	27	Inverted input bit A	9125	23A5	25509	63A5					–	
Function	Logical op, postproc	27	Inverted input bit B	9126	23A6	25510	63A6					–	
Function	Logical op, postproc	27	Inverted input bit C	9127	23A7	25511	63A7					–	
Function	Logical op, postproc	27	Inverted input bit D	9128	23A8	25512	63A8					–	
Function	Logical op, postproc	27	ON delay time	9129	23A9	25513	63A9					1	
Function	Logical op, postproc	27	OFF delay time	9130	23AA	25514	63AA					1	
Function	Logical op, postproc	27	Inversion	9131	23AB	25515	63AB					–	
Function	Logical op, postproc	27	Latch	9132	23AC	25516	63AC					–	
Function	Logical op, postproc	28	Calculation type	9136	23B0	25520	63B0					–	
Function	Logical op, postproc	28	Input assignment A	9137	23B1	25521	63B1					–	
Function	Logical op, postproc	28	Input assignment B	9138	23B2	25522	63B2					–	
Function	Logical op, postproc	28	Input assignment C	9139	23B3	25523	63B3					–	
Function	Logical op, postproc	28	Input assignment D	9140	23B4	25524	63B4					–	
Function	Logical op, postproc	28	Inverted input bit A	9141	23B5	25525	63B5					–	
Function	Logical op, postproc	28	Inverted input bit B	9142	23B6	25526	63B6					–	
Function	Logical op, postproc	28	Inverted input bit C	9143	23B7	25527	63B7					–	
Function	Logical op, postproc	28	Inverted input bit D	9144	23B8	25528	63B8					–	
Function	Logical op, postproc	28	ON delay time	9145	23B9	25529	63B9					1	
Function	Logical op, postproc	28	OFF delay time	9146	23BA	25530	63BA					1	
Function	Logical op, postproc	28	Inversion	9147	23BB	25531	63BB					–	
Function	Logical op, postproc	28	Latch	9148	23BC	25532	63BC					–	
Function	Logical op, postproc	29	Calculation type	9152	23C0	25536	63C0					–	

Function/Logical Operation

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Logical op, postproc	29	Input assignment A	9153	23C1	25537	63C1					–	
Function	Logical op, postproc	29	Input assignment B	9154	23C2	25538	63C2					–	
Function	Logical op, postproc	29	Input assignment C	9155	23C3	25539	63C3					–	
Function	Logical op, postproc	29	Input assignment D	9156	23C4	25540	63C4					–	
Function	Logical op, postproc	29	Inverted input bit A	9157	23C5	25541	63C5					–	
Function	Logical op, postproc	29	Inverted input bit B	9158	23C6	25542	63C6					–	
Function	Logical op, postproc	29	Inverted input bit C	9159	23C7	25543	63C7					–	
Function	Logical op, postproc	29	Inverted input bit D	9160	23C8	25544	63C8					–	
Function	Logical op, postproc	29	ON delay time	9161	23C9	25545	63C9					1	
Function	Logical op, postproc	29	OFF delay time	9162	23CA	25546	63CA					1	
Function	Logical op, postproc	29	Inversion	9163	23CB	25547	63CB					–	
Function	Logical op, postproc	29	Latch	9164	23CC	25548	63CC					–	
Function	Logical op, postproc	30	Calculation type	9168	23DO	25552	63DO					–	
Function	Logical op, postproc	30	Input assignment A	9169	23D1	25553	63D1					–	
Function	Logical op, postproc	30	Input assignment B	9170	23D2	25554	63D2					–	
Function	Logical op, postproc	30	Input assignment C	9171	23D3	25555	63D3					–	
Function	Logical op, postproc	30	Input assignment D	9172	23D4	25556	63D4					–	
Function	Logical op, postproc	30	Inverted input bit A	9173	23D5	25557	63D5					–	
Function	Logical op, postproc	30	Inverted input bit B	9174	23D6	25558	63D6					–	
Function	Logical op, postproc	30	Inverted input bit C	9175	23D7	25559	63D7					–	
Function	Logical op, postproc	30	Inverted input bit D	9176	23D8	25560	63D8					–	
Function	Logical op, postproc	30	ON delay time	9177	23D9	25561	63D9					1	
Function	Logical op, postproc	30	OFF delay time	9178	23DA	25562	63DA					1	
Function	Logical op, postproc	30	Inversion	9179	23DB	25563	63DB					–	
Function	Logical op, postproc	30	Latch	9180	23DC	25564	63DC					–	
Function	Logical op, postproc	31	Calculation type	9184	23E0	25568	63E0					–	
Function	Logical op, postproc	31	Input assignment A	9185	23E1	25569	63E1					–	
Function	Logical op, postproc	31	Input assignment B	9186	23E2	25570	63E2					–	
Function	Logical op, postproc	31	Input assignment C	9187	23E3	25571	63E3					–	
Function	Logical op, postproc	31	Input assignment D	9188	23E4	25572	63E4					–	
Function	Logical op, postproc	31	Inverted input bit A	9189	23E5	25573	63E5					–	
Function	Logical op, postproc	31	Inverted input bit B	9190	23E6	25574	63E6					–	
Function	Logical op, postproc	31	Inverted input bit C	9191	23E7	25575	63E7					–	
Function	Logical op, postproc	31	Inverted input bit D	9192	23E8	25576	63E8					–	
Function	Logical op, postproc	31	ON delay time	9193	23E9	25577	63E9					1	
Function	Logical op, postproc	31	OFF delay time	9194	23EA	25578	63EA					1	
Function	Logical op, postproc	31	Inversion	9195	23EB	25579	63EB					–	
Function	Logical op, postproc	31	Latch	9196	23EC	25580	63EC					–	
Function	Logical op, postproc	32	Calculation type	9200	23F0	25584	63F0					–	
Function	Logical op, postproc	32	Input assignment A	9201	23F1	25585	63F1					–	
Function	Logical op, postproc	32	Input assignment B	9202	23F2	25586	63F2					–	
Function	Logical op, postproc	32	Input assignment C	9203	23F3	25587	63F3					–	
Function	Logical op, postproc	32	Input assignment D	9204	23F4	25588	63F4					–	
Function	Logical op, postproc	32	Inverted input bit A	9205	23F5	25589	63F5					–	
Function	Logical op, postproc	32	Inverted input bit B	9206	23F6	25590	63F6					–	
Function	Logical op, postproc	32	Inverted input bit C	9207	23F7	25591	63F7					–	
Function	Logical op, postproc	32	Inverted input bit D	9208	23F8	25592	63F8					–	
Function	Logical op, postproc	32	ON delay time	9209	23F9	25593	63F9					1	
Function	Logical op, postproc	32	OFF delay time	9210	23FA	25594	63FA					1	
Function	Logical op, postproc	32	Inversion	9211	23FB	25595	63FB					–	
Function	Logical op, postproc	32	Latch	9212	23FC	25596	63FC					–	

Function/Energy Conservation

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Energy conservation	1	Energy conservation time proportional operation	11536	2D10	27920	6D10					–	
Function	Energy conservation	1	Energy conservation delay time	11537	2D11	27921	6D11					–	
Function	Energy conservation	1	Master/slave selection	11538	2D12	27922	6D12					–	
Function	Energy conservation	1	Time proportional slave channel	11540	2D14	27924	6D14					–	
Function	Energy conservation	2	Energy conservation time proportional operation	11544	2D18	27928	6D18					–	
Function	Energy conservation	2	Energy conservation delay time	11545	2D19	27929	6D19					–	
Function	Energy conservation	2	Master/slave selection	11546	2D1A	27930	6D1A					–	
Function	Energy conservation	2	Time proportional slave channel	11548	2D1C	27932	6D1C					–	
Function	Energy conservation	3	Energy conservation time proportional operation	11552	2D20	27936	6D20					–	
Function	Energy conservation	3	Energy conservation delay time	11553	2D21	27937	6D21					–	
Function	Energy conservation	3	Master/slave selection	11554	2D22	27938	6D22					–	
Function	Energy conservation	3	Time proportional slave channel	11556	2D24	27940	6D24					–	
Function	Energy conservation	4	Energy conservation time proportional operation	11560	2D28	27944	6D28					–	
Function	Energy conservation	4	Energy conservation delay time	11561	2D29	27945	6D29					–	
Function	Energy conservation	4	Master/slave selection	11562	2D2A	27946	6D2A					–	
Function	Energy conservation	4	Time proportional slave channel	11564	2D2C	27948	6D2C					–	
Function	Energy conservation	5	Energy conservation time proportional operation	11568	2D30	27952	6D30					–	
Function	Energy conservation	5	Energy conservation delay time	11569	2D31	27953	6D31					–	
Function	Energy conservation	5	Master/slave selection	11570	2D32	27954	6D32					–	
Function	Energy conservation	5	Time proportional slave channel	11572	2D34	27956	6D34					–	
Function	Energy conservation	6	Energy conservation time proportional operation	11576	2D38	27960	6D38					–	
Function	Energy conservation	6	Energy conservation delay time	11577	2D39	27961	6D39					–	
Function	Energy conservation	6	Master/slave selection	11578	2D3A	27962	6D3A					–	
Function	Energy conservation	6	Time proportional slave channel	11580	2D3C	27964	6D3C					–	
Function	Energy conservation	7	Energy conservation time proportional operation	11584	2D40	27968	6D40					–	
Function	Energy conservation	7	Energy conservation delay time	11585	2D41	27969	6D41					–	
Function	Energy conservation	7	Master/slave selection	11586	2D42	27970	6D42					–	

Function/Energy Conservation

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Energy conservation	7	Time proportional slave channel	11588	2D44	27972	6D44					–	
Function	Energy conservation	8	Energy conservation time proportional operation	11592	2D48	27976	6D48					–	
Function	Energy conservation	8	Energy conservation delay time	11593	2D49	27977	6D49					–	
Function	Energy conservation	8	Master/slave selection	11594	2D4A	27978	6D4A					–	
Function	Energy conservation	8	Time proportional slave channel	11596	2D4C	27980	6D4C					–	
Function	Energy conservation	9	Energy conservation time proportional operation	11600	2D50	27984	6D50					–	
Function	Energy conservation	9	Energy conservation delay time	11601	2D51	27985	6D51					–	
Function	Energy conservation	9	Master/slave selection	11602	2D52	27986	6D52					–	
Function	Energy conservation	9	Time proportional slave channel	11604	2D54	27988	6D54					–	
Function	Energy conservation	10	Energy conservation time proportional operation	11608	2D58	27992	6D58					–	
Function	Energy conservation	10	Energy conservation delay time	11609	2D59	27993	6D59					–	
Function	Energy conservation	10	Master/slave selection	11610	2D5A	27994	6D5A					–	
Function	Energy conservation	10	Time proportional slave channel	11612	2D5C	27996	6D5C					–	
Function	Energy conservation	11	Energy conservation time proportional operation	11616	2D60	28000	6D60					–	
Function	Energy conservation	11	Energy conservation delay time	11617	2D61	28001	6D61					–	
Function	Energy conservation	11	Master/slave selection	11618	2D62	28002	6D62					–	
Function	Energy conservation	11	Time proportional slave channel	11620	2D64	28004	6D64					–	
Function	Energy conservation	12	Energy conservation time proportional operation	11624	2D68	28008	6D68					–	
Function	Energy conservation	12	Energy conservation delay time	11625	2D69	28009	6D69					–	
Function	Energy conservation	12	Master/slave selection	11626	2D6A	28010	6D6A					–	
Function	Energy conservation	12	Time proportional slave channel	11628	2D6C	28012	6D6C					–	
Function	Energy conservation	13	Energy conservation time proportional operation	11632	2D70	28016	6D70					–	
Function	Energy conservation	13	Energy conservation delay time	11633	2D71	28017	6D71					–	
Function	Energy conservation	13	Master/slave selection	11634	2D72	28018	6D72					–	
Function	Energy conservation	13	Time proportional slave channel	11636	2D74	28020	6D74					–	
Function	Energy conservation	14	Energy conservation time proportional operation	11640	2D78	28024	6D78					–	
Function	Energy conservation	14	Energy conservation delay time	11641	2D79	28025	6D79					–	

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Energy conservation	14	Master/slave selection	11642	2D7A	28026	6D7A					–	
Function	Energy conservation	14	Time proportional slave channel	11644	2D7C	28028	6D7C					–	
Function	Energy conservation	15	Energy conservation time proportional operation	11648	2D80	28032	6D80					–	
Function	Energy conservation	15	Energy conservation delay time	11649	2D81	28033	6D81					–	
Function	Energy conservation	15	Master/slave selection	11650	2D82	28034	6D82					–	
Function	Energy conservation	15	Time proportional slave channel	11652	2D84	28036	6D84					–	
Function	Energy conservation	16	Energy conservation time proportional operation	11656	2D88	28040	6D88					–	
Function	Energy conservation	16	Energy conservation delay time	11657	2D89	28041	6D89					–	
Function	Energy conservation	16	Master/slave selection	11658	2D8A	28042	6D8A					–	
Function	Energy conservation	16	Time proportional slave channel	11660	2D8C	28044	6D8C					–	

Function/MV Branching Output

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	MV branching output	1	Loop assignment	7920	1EF0	24304	5EF0					–	
Function	MV branching output	1	Ratio	7921	1EF1	24305	5EF1					2	
Function	MV branching output	1	Bias	7922	1EF2	24306	5EF2					2	
Function	MV branching output	2	Loop assignment	7928	1EF8	24312	5EF8					–	
Function	MV branching output	2	Ratio	7929	1EF9	24313	5EF9					2	
Function	MV branching output	2	Bias	7930	1EFA	24314	5EFA					2	
Function	MV branching output	3	Loop assignment	7936	1F00	24320	5F00					–	
Function	MV branching output	3	Ratio	7937	1F01	24321	5F01					2	
Function	MV branching output	3	Bias	7938	1F02	24322	5F02					2	
Function	MV branching output	4	Loop assignment	7944	1F08	24328	5F08					–	
Function	MV branching output	4	Ratio	7945	1F09	24329	5F09					2	
Function	MV branching output	4	Bias	7946	1F0A	24330	5F0A					2	
Function	MV branching output	5	Loop assignment	7952	1F10	24336	5F10					–	
Function	MV branching output	5	Ratio	7953	1F11	24337	5F11					2	
Function	MV branching output	5	Bias	7954	1F12	24338	5F12					2	
Function	MV branching output	6	Loop assignment	7960	1F18	24344	5F18					–	
Function	MV branching output	6	Ratio	7961	1F19	24345	5F19					2	
Function	MV branching output	6	Bias	7962	1F1A	24346	5F1A					2	
Function	MV branching output	7	Loop assignment	7968	1F20	24352	5F20					–	
Function	MV branching output	7	Ratio	7969	1F21	24353	5F21					2	
Function	MV branching output	7	Bias	7970	1F22	24354	5F22					2	
Function	MV branching output	8	Loop assignment	7976	1F28	24360	5F28					–	
Function	MV branching output	8	Ratio	7977	1F29	24361	5F29					2	
Function	MV branching output	8	Bias	7978	1F2A	24362	5F2A					2	
Function	MV branching output	9	Loop assignment	7984	1F30	24368	5F30					–	
Function	MV branching output	9	Ratio	7985	1F31	24369	5F31					2	
Function	MV branching output	9	Bias	7986	1F32	24370	5F32					2	
Function	MV branching output	10	Loop assignment	7992	1F38	24376	5F38					–	
Function	MV branching output	10	Ratio	7993	1F39	24377	5F39					2	
Function	MV branching output	10	Bias	7994	1F3A	24378	5F3A					2	
Function	MV branching output	11	Loop assignment	8000	1F40	24384	5F40					–	
Function	MV branching output	11	Ratio	8001	1F41	24385	5F41					2	
Function	MV branching output	11	Bias	8002	1F42	24386	5F42					2	

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	MV branching output	12	Loop assignment	8008	1F48	24392	5F48					–	
Function	MV branching output	12	Ratio	8009	1F49	24393	5F49					2	
Function	MV branching output	12	Bias	8010	1F4A	24394	5F4A					2	
Function	MV branching output	13	Loop assignment	8016	1F50	24400	5F50					–	
Function	MV branching output	13	Ratio	8017	1F51	24401	5F51					2	
Function	MV branching output	13	Bias	8018	1F52	24402	5F52					2	
Function	MV branching output	14	Loop assignment	8024	1F58	24408	5F58					–	
Function	MV branching output	14	Ratio	8025	1F59	24409	5F59					2	
Function	MV branching output	14	Bias	8026	1F5A	24410	5F5A					2	
Function	MV branching output	15	Loop assignment	8032	1F60	24416	5F60					–	
Function	MV branching output	15	Ratio	8033	1F61	24417	5F61					2	
Function	MV branching output	15	Bias	8034	1F62	24418	5F62					2	
Function	MV branching output	16	Loop assignment	8040	1F68	24424	5F68					–	
Function	MV branching output	16	Ratio	8041	1F69	24425	5F69					2	
Function	MV branching output	16	Bias	8042	1F6A	24426	5F6A					2	

Function/Reception Monitoring

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Reception monitoring	1	Address (L)	–	–	3840	0F00	×	×			–	
Function	Reception monitoring	1	Address (H)	–	–	3841	0F01	×	×			–	When writing, write 0
Function	Reception monitoring	1	Time-out (L)	–	–	3842	0F02	×	×			–	
Function	Reception monitoring	1	Time-out (H)	–	–	3843	0F03	×	×			–	When writing, write 0
Function	Reception monitoring	1	Mode	–	–	3844	0F04	×	×			–	
Function	Reception monitoring	2	Address (L)	–	–	3848	0F08	×	×			–	
Function	Reception monitoring	2	Address (H)	–	–	3849	0F09	×	×			–	When writing, write 0
Function	Reception monitoring	2	Time-out (L)	–	–	3850	0F0A	×	×			–	
Function	Reception monitoring	2	Time-out (H)	–	–	3851	0F0B	×	×			–	When writing, write 0
Function	Reception monitoring	2	Mode	–	–	3852	0F0C	×	×			–	
Function	Reception monitoring	3	Address (L)	–	–	3856	0F10	×	×			–	
Function	Reception monitoring	3	Address (H)	–	–	3857	0F11	×	×			–	When writing, write 0
Function	Reception monitoring	3	Time-out (L)	–	–	3858	0F12	×	×			–	
Function	Reception monitoring	3	Time-out (H)	–	–	3859	0F13	×	×			–	When writing, write 0
Function	Reception monitoring	3	Mode	–	–	3860	0F14	×	×			–	
Function	Reception monitoring	4	Address (L)	–	–	3864	0F18	×	×			–	
Function	Reception monitoring	4	Address (H)	–	–	3865	0F19	×	×			–	When writing, write 0
Function	Reception monitoring	4	Time-out (L)	–	–	3866	0F1A	×	×			–	
Function	Reception monitoring	4	Time-out (H)	–	–	3867	0F1B	×	×			–	When writing, write 0
Function	Reception monitoring	4	Mode	–	–	3868	0F1C	×	×			–	
Function	Reception monitoring	5	Address (L)	–	–	3872	0F20	×	×			–	
Function	Reception monitoring	5	Address (H)	–	–	3873	0F21	×	×			–	When writing, write 0
Function	Reception monitoring	5	Time-out (L)	–	–	3874	0F22	×	×			–	
Function	Reception monitoring	5	Time-out (H)	–	–	3875	0F23	×	×			–	When writing, write 0
Function	Reception monitoring	5	Mode	–	–	3876	0F24	×	×			–	
Function	Reception monitoring	6	Address (L)	–	–	3880	0F28	×	×			–	
Function	Reception monitoring	6	Address (H)	–	–	3881	0F29	×	×			–	When writing, write 0
Function	Reception monitoring	6	Time-out (L)	–	–	3882	0F2A	×	×			–	
Function	Reception monitoring	6	Time-out (H)	–	–	3883	0F2B	×	×			–	When writing, write 0
Function	Reception monitoring	6	Mode	–	–	3884	0F2C	×	×			–	
Function	Reception monitoring	7	Address (L)	–	–	3888	0F30	×	×			–	
Function	Reception monitoring	7	Address (H)	–	–	3889	0F31	×	×			–	When writing, write 0
Function	Reception monitoring	7	Time-out (L)	–	–	3890	0F32	×	×			–	

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Reception monitoring	7	Time-out (H)	–	–	3891	0F33	×	×			–	When writing, write 0
Function	Reception monitoring	7	Mode	–	–	3892	0F34	×	×			–	
Function	Reception monitoring	8	Address (L)	–	–	3896	0F38	×	×			–	
Function	Reception monitoring	8	Address (H)	–	–	3897	0F39	×	×			–	When writing, write 0
Function	Reception monitoring	8	Time-out (L)	–	–	3898	0F3A	×	×			–	
Function	Reception monitoring	8	Time-out (H)	–	–	3899	0F3B	×	×			–	When writing, write 0
Function	Reception monitoring	8	Mode	–	–	3900	0F3C	×	×			–	
Function	Reception monitoring	9	Address (L)	–	–	3904	0F40	×	×			–	
Function	Reception monitoring	9	Address (H)	–	–	3905	0F41	×	×			–	When writing, write 0
Function	Reception monitoring	9	Time-out (L)	–	–	3906	0F42	×	×			–	
Function	Reception monitoring	9	Time-out (H)	–	–	3907	0F43	×	×			–	When writing, write 0
Function	Reception monitoring	9	Mode	–	–	3908	0F44	×	×			–	
Function	Reception monitoring	10	Address (L)	–	–	3912	0F48	×	×			–	
Function	Reception monitoring	10	Address (H)	–	–	3913	0F49	×	×			–	When writing, write 0
Function	Reception monitoring	10	Time-out (L)	–	–	3914	0F4A	×	×			–	
Function	Reception monitoring	10	Time-out (H)	–	–	3915	0F4B	×	×			–	When writing, write 0
Function	Reception monitoring	10	Mode	–	–	3916	0F4C	×	×			–	
Function	Reception monitoring	11	Address (L)	–	–	3920	0F50	×	×			–	
Function	Reception monitoring	11	Address (H)	–	–	3921	0F51	×	×			–	When writing, write 0
Function	Reception monitoring	11	Time-out (L)	–	–	3922	0F52	×	×			–	
Function	Reception monitoring	11	Time-out (H)	–	–	3923	0F53	×	×			–	When writing, write 0
Function	Reception monitoring	11	Mode	–	–	3924	0F54	×	×			–	
Function	Reception monitoring	12	Address (L)	–	–	3928	0F58	×	×			–	
Function	Reception monitoring	12	Address (H)	–	–	3929	0F59	×	×			–	When writing, write 0
Function	Reception monitoring	12	Time-out (L)	–	–	3930	0F5A	×	×			–	
Function	Reception monitoring	12	Time-out (H)	–	–	3931	0F5B	×	×			–	When writing, write 0
Function	Reception monitoring	12	Mode	–	–	3932	0F5C	×	×			–	
Function	Reception monitoring	13	Address (L)	–	–	3936	0F60	×	×			–	
Function	Reception monitoring	13	Address (H)	–	–	3937	0F61	×	×			–	When writing, write 0
Function	Reception monitoring	13	Time-out (L)	–	–	3938	0F62	×	×			–	
Function	Reception monitoring	13	Time-out (H)	–	–	3939	0F63	×	×			–	When writing, write 0
Function	Reception monitoring	13	Mode	–	–	3940	0F64	×	×			–	
Function	Reception monitoring	14	Address (L)	–	–	3944	0F68	×	×			–	

Function/Reception Monitoring

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Function	Reception monitoring	14	Address (H)	–	–	3945	0F69	×	×			–	When writing, write 0
Function	Reception monitoring	14	Time-out (L)	–	–	3946	0F6A	×	×			–	
Function	Reception monitoring	14	Time-out (H)	–	–	3947	0F6B	×	×			–	When writing, write 0
Function	Reception monitoring	14	Mode	–	–	3948	0F6C	×	×			–	
Function	Reception monitoring	15	Address (L)	–	–	3952	0F70	×	×			–	
Function	Reception monitoring	15	Address (H)	–	–	3953	0F71	×	×			–	When writing, write 0
Function	Reception monitoring	15	Time-out (L)	–	–	3954	0F72	×	×			–	
Function	Reception monitoring	15	Time-out (H)	–	–	3955	0F73	×	×			–	When writing, write 0
Function	Reception monitoring	15	Mode	–	–	3956	0F74	×	×			–	
Function	Reception monitoring	16	Address (L)	–	–	3960	0F78	×	×			–	
Function	Reception monitoring	16	Address (H)	–	–	3961	0F79	×	×			–	When writing, write 0
Function	Reception monitoring	16	Time-out (L)	–	–	3962	0F7A	×	×			–	
Function	Reception monitoring	16	Time-out (H)	–	–	3963	0F7B	×	×			–	When writing, write 0
Function	Reception monitoring	16	Mode	–	–	3964	0F7C	×	×			–	

Others/UFLED Settings

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Others	UFLED settings	1	Conditions for lighting	10160	27B0	26544	67B0					–	F0 LED
Others	UFLED settings	1	Lighting status	10161	27B1	26545	67B1					–	F0 LED
Others	UFLED settings	2	Conditions for lighting	10164	27B4	26548	67B4					–	F1 LED
Others	UFLED settings	2	Lighting status	10165	27B5	26549	67B5					–	F1 LED

Others/Instrument Information

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Others	Instrument info.	1	F/W ROM ID	10768	2A10	27152	6A10		×		×	–	
Others	Instrument info.	1	F/W ROM Version 1	10769	2A11	27153	6A11		×		×	–	
Others	Instrument info.	1	F/W ROM Version 2	10770	2A12	27154	6A12		×		×	–	
Others	Instrument info.	1	Compatible module version	10771	2A13	27155	6A13		×		×	–	
Others	Instrument info.	1	Module version (major, minor)	10773	2A15	27157	6A15		×		×	–	

Others/DO Tag Name

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Others	DO tag name	1	Tag name 1	6640	19F0	23024	59F0					–	
Others	DO tag name	1	Tag name 2	6641	19F1	23025	59F1					–	
Others	DO tag name	1	Tag name 3	6642	19F2	23026	59F2					–	
Others	DO tag name	1	Tag name 4	6643	19F3	23027	59F3					–	
Others	DO tag name	1	Tag name 5	6644	19F4	23028	59F4					–	
Others	DO tag name	1	Tag name 6	6645	19F5	23029	59F5					–	
Others	DO tag name	1	Tag name 7	6646	19F6	23030	59F6					–	
Others	DO tag name	1	Tag name 8	6647	19F7	23031	59F7					–	
Others	DO tag name	2	Tag name 1	6656	1A00	23040	5A00					–	
Others	DO tag name	2	Tag name 2	6657	1A01	23041	5A01					–	
Others	DO tag name	2	Tag name 3	6658	1A02	23042	5A02					–	
Others	DO tag name	2	Tag name 4	6659	1A03	23043	5A03					–	
Others	DO tag name	2	Tag name 5	6660	1A04	23044	5A04					–	
Others	DO tag name	2	Tag name 6	6661	1A05	23045	5A05					–	
Others	DO tag name	2	Tag name 7	6662	1A06	23046	5A06					–	
Others	DO tag name	2	Tag name 8	6663	1A07	23047	5A07					–	
Others	DO tag name	3	Tag name 1	6672	1A10	23056	5A10					–	
Others	DO tag name	3	Tag name 2	6673	1A11	23057	5A11					–	
Others	DO tag name	3	Tag name 3	6674	1A12	23058	5A12					–	
Others	DO tag name	3	Tag name 4	6675	1A13	23059	5A13					–	
Others	DO tag name	3	Tag name 5	6676	1A14	23060	5A14					–	
Others	DO tag name	3	Tag name 6	6677	1A15	23061	5A15					–	
Others	DO tag name	3	Tag name 7	6678	1A16	23062	5A16					–	
Others	DO tag name	3	Tag name 8	6679	1A17	23063	5A17					–	
Others	DO tag name	4	Tag name 1	6688	1A20	23072	5A20					–	
Others	DO tag name	4	Tag name 2	6689	1A21	23073	5A21					–	
Others	DO tag name	4	Tag name 3	6690	1A22	23074	5A22					–	
Others	DO tag name	4	Tag name 4	6691	1A23	23075	5A23					–	
Others	DO tag name	4	Tag name 5	6692	1A24	23076	5A24					–	
Others	DO tag name	4	Tag name 6	6693	1A25	23077	5A25					–	
Others	DO tag name	4	Tag name 7	6694	1A26	23078	5A26					–	
Others	DO tag name	4	Tag name 8	6695	1A27	23079	5A27					–	
Others	DO tag name	5	Tag name 1	6704	1A30	23088	5A30					–	
Others	DO tag name	5	Tag name 2	6705	1A31	23089	5A31					–	
Others	DO tag name	5	Tag name 3	6706	1A32	23090	5A32					–	
Others	DO tag name	5	Tag name 4	6707	1A33	23091	5A33					–	
Others	DO tag name	5	Tag name 5	6708	1A34	23092	5A34					–	
Others	DO tag name	5	Tag name 6	6709	1A35	23093	5A35					–	
Others	DO tag name	5	Tag name 7	6710	1A36	23094	5A36					–	
Others	DO tag name	5	Tag name 8	6711	1A37	23095	5A37					–	
Others	DO tag name	6	Tag name 1	6720	1A40	23104	5A40					–	
Others	DO tag name	6	Tag name 2	6721	1A41	23105	5A41					–	
Others	DO tag name	6	Tag name 3	6722	1A42	23106	5A42					–	
Others	DO tag name	6	Tag name 4	6723	1A43	23107	5A43					–	
Others	DO tag name	6	Tag name 5	6724	1A44	23108	5A44					–	
Others	DO tag name	6	Tag name 6	6725	1A45	23109	5A45					–	
Others	DO tag name	6	Tag name 7	6726	1A46	23110	5A46					–	
Others	DO tag name	6	Tag name 8	6727	1A47	23111	5A47					–	
Others	DO tag name	7	Tag name 1	6736	1A50	23120	5A50					–	
Others	DO tag name	7	Tag name 2	6737	1A51	23121	5A51					–	
Others	DO tag name	7	Tag name 3	6738	1A52	23122	5A52					–	
Others	DO tag name	7	Tag name 4	6739	1A53	23123	5A53					–	
Others	DO tag name	7	Tag name 5	6740	1A54	23124	5A54					–	
Others	DO tag name	7	Tag name 6	6741	1A55	23125	5A55					–	
Others	DO tag name	7	Tag name 7	6742	1A56	23126	5A56					–	
Others	DO tag name	7	Tag name 8	6743	1A57	23127	5A57					–	
Others	DO tag name	8	Tag name 1	6752	1A60	23136	5A60					–	
Others	DO tag name	8	Tag name 2	6753	1A61	23137	5A61					–	

Others/DO Tag Name

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Others	DO tag name	8	Tag name 3	6754	1A62	23138	5A62					–	
Others	DO tag name	8	Tag name 4	6755	1A63	23139	5A63					–	
Others	DO tag name	8	Tag name 5	6756	1A64	23140	5A64					–	
Others	DO tag name	8	Tag name 6	6757	1A65	23141	5A65					–	
Others	DO tag name	8	Tag name 7	6758	1A66	23142	5A66					–	
Others	DO tag name	8	Tag name 8	6759	1A67	23143	5A67					–	
Others	DO tag name	9	Tag name 1	6768	1A70	23152	5A70					–	
Others	DO tag name	9	Tag name 2	6769	1A71	23153	5A71					–	
Others	DO tag name	9	Tag name 3	6770	1A72	23154	5A72					–	
Others	DO tag name	9	Tag name 4	6771	1A73	23155	5A73					–	
Others	DO tag name	9	Tag name 5	6772	1A74	23156	5A74					–	
Others	DO tag name	9	Tag name 6	6773	1A75	23157	5A75					–	
Others	DO tag name	9	Tag name 7	6774	1A76	23158	5A76					–	
Others	DO tag name	9	Tag name 8	6775	1A77	23159	5A77					–	
Others	DO tag name	10	Tag name 1	6784	1A80	23168	5A80					–	
Others	DO tag name	10	Tag name 2	6785	1A81	23169	5A81					–	
Others	DO tag name	10	Tag name 3	6786	1A82	23170	5A82					–	
Others	DO tag name	10	Tag name 4	6787	1A83	23171	5A83					–	
Others	DO tag name	10	Tag name 5	6788	1A84	23172	5A84					–	
Others	DO tag name	10	Tag name 6	6789	1A85	23173	5A85					–	
Others	DO tag name	10	Tag name 7	6790	1A86	23174	5A86					–	
Others	DO tag name	10	Tag name 8	6791	1A87	23175	5A87					–	
Others	DO tag name	11	Tag name 1	6800	1A90	23184	5A90					–	
Others	DO tag name	11	Tag name 2	6801	1A91	23185	5A91					–	
Others	DO tag name	11	Tag name 3	6802	1A92	23186	5A92					–	
Others	DO tag name	11	Tag name 4	6803	1A93	23187	5A93					–	
Others	DO tag name	11	Tag name 5	6804	1A94	23188	5A94					–	
Others	DO tag name	11	Tag name 6	6805	1A95	23189	5A95					–	
Others	DO tag name	11	Tag name 7	6806	1A96	23190	5A96					–	
Others	DO tag name	11	Tag name 8	6807	1A97	23191	5A97					–	
Others	DO tag name	12	Tag name 1	6816	1AA0	23200	5AA0					–	
Others	DO tag name	12	Tag name 2	6817	1AA1	23201	5AA1					–	
Others	DO tag name	12	Tag name 3	6818	1AA2	23202	5AA2					–	
Others	DO tag name	12	Tag name 4	6819	1AA3	23203	5AA3					–	
Others	DO tag name	12	Tag name 5	6820	1AA4	23204	5AA4					–	
Others	DO tag name	12	Tag name 6	6821	1AA5	23205	5AA5					–	
Others	DO tag name	12	Tag name 7	6822	1AA6	23206	5AA6					–	
Others	DO tag name	12	Tag name 8	6823	1AA7	23207	5AA7					–	
Others	DO tag name	13	Tag name 1	6832	1AB0	23216	5AB0					–	
Others	DO tag name	13	Tag name 2	6833	1AB1	23217	5AB1					–	
Others	DO tag name	13	Tag name 3	6834	1AB2	23218	5AB2					–	
Others	DO tag name	13	Tag name 4	6835	1AB3	23219	5AB3					–	
Others	DO tag name	13	Tag name 5	6836	1AB4	23220	5AB4					–	
Others	DO tag name	13	Tag name 6	6837	1AB5	23221	5AB5					–	
Others	DO tag name	13	Tag name 7	6838	1AB6	23222	5AB6					–	
Others	DO tag name	13	Tag name 8	6839	1AB7	23223	5AB7					–	
Others	DO tag name	14	Tag name 1	6848	1AC0	23232	5AC0					–	
Others	DO tag name	14	Tag name 2	6849	1AC1	23233	5AC1					–	
Others	DO tag name	14	Tag name 3	6850	1AC2	23234	5AC2					–	
Others	DO tag name	14	Tag name 4	6851	1AC3	23235	5AC3					–	
Others	DO tag name	14	Tag name 5	6852	1AC4	23236	5AC4					–	
Others	DO tag name	14	Tag name 6	6853	1AC5	23237	5AC5					–	
Others	DO tag name	14	Tag name 7	6854	1AC6	23238	5AC6					–	
Others	DO tag name	14	Tag name 8	6855	1AC7	23239	5AC7					–	
Others	DO tag name	15	Tag name 1	6864	1ADO	23248	5ADO					–	
Others	DO tag name	15	Tag name 2	6865	1AD1	23249	5AD1					–	
Others	DO tag name	15	Tag name 3	6866	1AD2	23250	5AD2					–	
Others	DO tag name	15	Tag name 4	6867	1AD3	23251	5AD3					–	

Others/DO Tag Name

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Others	DO tag name	15	Tag name 5	6868	1AD4	23252	5AD4					–	
Others	DO tag name	15	Tag name 6	6869	1AD5	23253	5AD5					–	
Others	DO tag name	15	Tag name 7	6870	1AD6	23254	5AD6					–	
Others	DO tag name	15	Tag name 8	6871	1AD7	23255	5AD7					–	
Others	DO tag name	16	Tag name 1	6880	1AE0	23264	5AE0					–	
Others	DO tag name	16	Tag name 2	6881	1AE1	23265	5AE1					–	
Others	DO tag name	16	Tag name 3	6882	1AE2	23266	5AE2					–	
Others	DO tag name	16	Tag name 4	6883	1AE3	23267	5AE3					–	
Others	DO tag name	16	Tag name 5	6884	1AE4	23268	5AE4					–	
Others	DO tag name	16	Tag name 6	6885	1AE5	23269	5AE5					–	
Others	DO tag name	16	Tag name 7	6886	1AE6	23270	5AE6					–	
Others	DO tag name	16	Tag name 8	6887	1AE7	23271	5AE7					–	

Others/EV Tag Name

Folder name	Bank name	Code	Item name	RAM address		EEPROM address		RAM		EEPROM		Decimal point Information	Remarks
				Decimal	Hexadecimal	Decimal	Hexadecimal	Read	Write	Read	Write		
Others	EV tag name	1	Tag name 1	6912	1B00	23296	5B00					–	
Others	EV tag name	1	Tag name 2	6913	1B01	23297	5B01					–	
Others	EV tag name	1	Tag name 3	6914	1B02	23298	5B02					–	
Others	EV tag name	1	Tag name 4	6915	1B03	23299	5B03					–	
Others	EV tag name	1	Tag name 5	6916	1B04	23300	5B04					–	
Others	EV tag name	1	Tag name 6	6917	1B05	23301	5B05					–	
Others	EV tag name	1	Tag name 7	6918	1B06	23302	5B06					–	
Others	EV tag name	1	Tag name 8	6919	1B07	23303	5B07					–	

Bitmap assignment

■ Alarm information

● Alarm information 1

RAM address: 10288 (2830H)

EEPROM address: 26672 (6830H)

MSB															LSB
b^{15}	b^{14}	b^{13}	b^{12}	b^{11}	b^{10}	b^{9}	b^{8}	b^{7}	b^{6}	b^{5}	b^{4}	b^{3}	b^{2}	b^{1}	b^{0}
16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

1 to 16: Undefined

● Alarm information 2

RAM address: 10289 (2831H)

EEPROM address: 26673 (6831H)

MSB															LSB
b^{15}	b^{14}	b^{13}	b^{12}	b^{11}	b^{10}	b^{9}	b^{8}	b^{7}	b^{6}	b^{5}	b^{4}	b^{3}	b^{2}	b^{1}	b^{0}
16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

1 to 8: Undefined
9: Reception status summary 1-16 (soft failure) AL31
10: Transmission timeout between modules (soft failure) AL32
11: RS-485 setting error (soft failure) AL33
12: Communication setting error between modules (soft failure) AL34
13 to 15: Undefined
16: Adjacent ring disconnected (soft failure) AL38

● Alarm information 3

RAM address: 10290 (2832H)

EEPROM address: 26674 (6832H)

MSB															LSB
b^{15}	b^{14}	b^{13}	b^{12}	b^{11}	b^{10}	b^{9}	b^{8}	b^{7}	b^{6}	b^{5}	b^{4}	b^{3}	b^{2}	b^{1}	b^{0}
16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

1: Base EEPROM R/W error (hard failure) AL87
2: Base EEPROM error (soft failure) AL88
3: Base/body communication setting mismatch (soft failure) AL53
4: Base/body model No. mismatch (soft failure) AL54
5: Base verification error (hard failure) AL55
6 to 16: Undefined

● **Alarm information 4**

RAM address: 10291 (2833H)

EEPROM address: 26675 (6833H)

MSB … LSB

b^{15}	b^{14}	b^{13}	b^{12}	b^{11}	b^{10}	b^{9}	b^{8}	b^{7}	b^{6}	b^{5}	b^{4}	b^{3}	b^{2}	b^{1}	b^{0}
16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

1 to 6: Undefined
7: EEPROM not initialized (hard failure) AL83
8: MAC address error (hard failure) AL84
9: RAM RW error (hard failure) AL85
10: EEPROM R/W error (hard failure) AL86
11: RAM error (parameter area) (soft failure) AL94
12: RAM error (adjustment area) (soft failure) AL95
13: Undefined
14: EEPROM error (parameter area) (soft failure) AL97
15: EEPROM error (adjustment area) (soft failure) AL98
16: ROM error (hard failure) AL99

■ Instrument internal computation result

● **Internal computation result 1**

RAM address: 10608 (2970H)

EEPROM address: 26992 (6970H)

MSB … LSB

b^{15}	b^{14}	b^{13}	b^{12}	b^{11}	b^{10}	b^{9}	b^{8}	b^{7}	b^{6}	b^{5}	b^{4}	b^{3}	b^{2}	b^{1}	b^{0}
16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

1: Event 1
2: Event 2
3: Event 3
4: Event 4
5: Event 5
6: Event 6
7: Event 7
8: Event 8
9: Event 9
10: Event 10
11: Event 11
12: Event 12
13: Event 13
14: Event 14
15: Event 15
16: Event 16

● Internal computation result 2

RAM address: 10609 (2971H)

EEPROM address: 26993 (6971H)

MSB ... LSB

b^{15}	b^{14}	b^{13}	b^{12}	b^{11}	b^{10}	b^{9}	b^{8}	b^{7}	b^{6}	b^{5}	b^{4}	b^{3}	b^{2}	b^{1}	b^{0}
16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

1: Event 17
2: Event 18
3: Event 19
4: Event 20
5: Event 21
6: Event 22
7: Event 23
8: Event 24
9 to 16: Undefined

● Internal computation result 13

RAM address: 10620 (297CH)

EEPROM address: 27004 (697CH)

MSB ... LSB

b^{15}	b^{14}	b^{13}	b^{12}	b^{11}	b^{10}	b^{9}	b^{8}	b^{7}	b^{6}	b^{5}	b^{4}	b^{3}	b^{2}	b^{1}	b^{0}
16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

1: DO1 terminal status
2: DO2 terminal status
3: DO3 terminal status
4: DO4 terminal status
5: DO5 terminal status
6: DO6 terminal status
7: DO7 terminal status
8: DO8 terminal status
9: DO9 terminal status
10: DO10 terminal status
11: DO11 terminal status
12: DO12 terminal status
13: DO13 terminal status
14: DO14 terminal status
15: DO15 terminal status
16: DO16 terminal status

● Internal computation result 21

RAM address: 10628 (2984H)

EEPROM address: 27012 (6984H)

MSB															LSB
b^{15}	b^{14}	b^{13}	b^{12}	b^{11}	b^{10}	b^{9}	b^{8}	b^{7}	b^{6}	b^{5}	b^{4}	b^{3}	b^{2}	b^{1}	b^{0}
16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

1: Result of logical operation 1
2: Result of logical operation 2
3: Result of logical operation 3
4: Result of logical operation 4
5: Result of logical operation 5
6: Result of logical operation 6
7: Result of logical operation 7
8: Result of logical operation 8
9: Result of logical operation 9
10: Result of logical operation 10
11: Result of logical operation 11
12: Result of logical operation 12
13: Result of logical operation 13
14: Result of logical operation 14
15: Result of logical operation 15
16: Result of logical operation 16

● Internal computation result 22

RAM address: 10629 (2985H)

EEPROM address: 27013 (6985H)

MSB															LSB
b^{15}	b^{14}	b^{13}	b^{12}	b^{11}	b^{10}	b^{9}	b^{8}	b^{7}	b^{6}	b^{5}	b^{4}	b^{3}	b^{2}	b^{1}	b^{0}
16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

1: Result of logical operation 17
2: Result of logical operation 18
3: Result of logical operation 19
4: Result of logical operation 20
5: Result of logical operation 21
6: Result of logical operation 22
7: Result of logical operation 23
8: Result of logical operation 24
9: Result of logical operation 25
10: Result of logical operation 26
11: Result of logical operation 27
12: Result of logical operation 28
13: Result of logical operation 29
14: Result of logical operation 30
15: Result of logical operation 31
16: Result of logical operation 32

● Internal computation result 45

RAM address: 10652 (299CH)

EEPROM address: 27036 (699CH)

MSB															LSB
b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

1: Communication FL1
2: Communication FL2
3: Communication FL3
4: Communication FL4
5: Communication FL5
6: Communication FL6
7: Communication FL7
8: Communication FL8
9: Communication FL9
10: Communication FL10
11: Communication FL11
12: Communication FL12
13: Communication FL13
14: Communication FL14
15: Communication FL15
16: Communication FL16

● Internal computation result 54

RAM address: 10661 (29A5H)

EEPROM address: 27045 (69A5H)

MSB															LSB
b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

1 to 2: Undefined
3: Adjacent ring disconnected (AL38)
4: Non-adjacent ring disconnected
5 to 16: Undefined

● Internal computation result 55

RAM address: 10662 (29A6H)

EEPROM address: 27046 (69A6H)

MSB ... LSB

b^{15}	b^{14}	b^{13}	b^{12}	b^{11}	b^{10}	b^{9}	b^{8}	b^{7}	b^{6}	b^{5}	b^{4}	b^{3}	b^{2}	b^{1}	b^{0}
16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

1: Result of reception monitoring 1
2: Result of reception monitoring 2
3: Result of reception monitoring 3
4: Result of reception monitoring 4
5: Result of reception monitoring 5
6: Result of reception monitoring 6
7: Result of reception monitoring 7
8: Result of reception monitoring 8
9: Result of reception monitoring 9
10: Result of reception monitoring 10
11: Result of reception monitoring 11
12: Result of reception monitoring 12
13: Result of reception monitoring 13
14: Result of reception monitoring 14
15: Result of reception monitoring 15
16: Result of reception monitoring 16

■ User-defined bit

● User-defined bits 1 to 16

RAM address: 10080 (2760H)

EEPROM address: 26464 (6760H)

MSB b^{15}	b^{14}	b^{13}	b^{12}	b^{11}	b^{10}	b^{9}	b^{8}	b^{7}	b^{6}	b^{5}	b^{4}	b^{3}	b^{2}	b^{1}	LSB b^{0}
16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

1: User-defined bit 1
2: User-defined bit 2
3: User-defined bit 3
4: User-defined bit 4
5: User-defined bit 5
6: User-defined bit 6
7: User-defined bit 7
8: User-defined bit 8
9: User-defined bit 9
10: User-defined bit 10
11: User-defined bit 11
12: User-defined bit 12
13: User-defined bit 13
14: User-defined bit 14
15: User-defined bit 15
16: User-defined bit 16

● User-defined bits 17 to 32

RAM address: 10097 (2771H)

EEPROM address: 26481 (6771H)

MSB b^{15}	b^{14}	b^{13}	b^{12}	b^{11}	b^{10}	b^{9}	b^{8}	b^{7}	b^{6}	b^{5}	b^{4}	b^{3}	b^{2}	b^{1}	LSB b^{0}
16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

1: User-defined bit 17
2: User-defined bit 18
3: User-defined bit 19
4: User-defined bit 20
5: User-defined bit 21
6: User-defined bit 22
7: User-defined bit 23
8: User-defined bit 24
9: User-defined bit 25
10: User-defined bit 26
11: User-defined bit 27
12: User-defined bit 28
13: User-defined bit 29
14: User-defined bit 30
15: User-defined bit 31
16: User-defined bit 32

Chapter 13. LIST OF PARAMETER SETTINGS

Description of the list

Meaning of user levels

0:	Displayed in simple, standard, or multiple functions
1:	Displayed in standard or multiple functions
2:	Displayed in multiple functions

Meaning of the decimal point position in the Remarks field

EV:	Determined by the setting for event No. 1 to 24 in the event configuration bank "decimal point position"
TBL:	Determined by the settings for linearizations 1 to 8 in the linearization table bank "breakpoint decimal point position"

Monitor/Communications Profile

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Monitor	Comm. (device)	1	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Comm. (device)	1	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (device)	1	MV		–	%	0	
Monitor	Comm. (device)	2	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Comm. (device)	2	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (device)	2	MV		–	%	0	
Monitor	Comm. (device)	3	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Comm. (device)	3	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (device)	3	MV		–	%	0	
Monitor	Comm. (device)	4	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Comm. (device)	4	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (device)	4	MV		–	%	0	
Monitor	Comm. (device)	5	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Comm. (device)	5	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (device)	5	MV		–	%	0	
Monitor	Comm. (device)	6	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Comm. (device)	6	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (device)	6	MV		–	%	0	
Monitor	Comm. (device)	7	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Comm. (device)	7	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (device)	7	MV		–	%	0	
Monitor	Comm. (device)	8	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Comm. (device)	8	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (device)	8	MV		–	%	0	
Monitor	Comm. (device)	9	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Comm. (device)	9	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (device)	9	MV		–	%	0	
Monitor	Comm. (device)	10	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Comm. (device)	10	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (device)	10	MV		–	%	0	
Monitor	Comm. (device)	11	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Comm. (device)	11	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (device)	11	MV		–	%	0	
Monitor	Comm. (device)	12	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Comm. (device)	12	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (device)	12	MV		–	%	0	
Monitor	Comm. (device)	13	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Comm. (device)	13	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (device)	13	MV		–	%	0	
Monitor	Comm. (device)	14	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Comm. (device)	14	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (device)	14	MV		–	%	0	
Monitor	Comm. (device)	15	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Comm. (device)	15	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (device)	15	MV		–	%	0	
Monitor	Comm. (device)	16	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Comm. (device)	16	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (device)	16	MV		–	%	0	

Monitor/Communications Profile

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Monitor	Comm. (operation)	1	Manual MV	0.0 to 100.0 %	0.0	%	0	
Monitor	Comm. (operation)	1	READY/RUN	0: RUN 1: READY	0		0	
Monitor	Comm. (operation)	1	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (operation)	2	Manual MV	0.0 to 100.0 %	0.0	%	0	
Monitor	Comm. (operation)	2	READY/RUN	0: RUN 1: READY	0		0	
Monitor	Comm. (operation)	2	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (operation)	3	Manual MV	0.0 to 100.0 %	0.0	%	0	
Monitor	Comm. (operation)	3	READY/RUN	0: RUN 1: READY	0		0	
Monitor	Comm. (operation)	3	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (operation)	4	Manual MV	0.0 to 100.0 %	0.0	%	0	
Monitor	Comm. (operation)	4	READY/RUN	0: RUN 1: READY	0		0	
Monitor	Comm. (operation)	4	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (operation)	5	Manual MV	0.0 to 100.0 %	0.0	%	0	
Monitor	Comm. (operation)	5	READY/RUN	0: RUN 1: READY	0		0	
Monitor	Comm. (operation)	5	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (operation)	6	Manual MV	0.0 to 100.0 %	0.0	%	0	
Monitor	Comm. (operation)	6	READY/RUN	0: RUN 1: READY	0		0	
Monitor	Comm. (operation)	6	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (operation)	7	Manual MV	0.0 to 100.0 %	0.0	%	0	
Monitor	Comm. (operation)	7	READY/RUN	0: RUN 1: READY	0		0	
Monitor	Comm. (operation)	7	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (operation)	8	Manual MV	0.0 to 100.0 %	0.0	%	0	
Monitor	Comm. (operation)	8	READY/RUN	0: RUN 1: READY	0		0	
Monitor	Comm. (operation)	8	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (operation)	9	Manual MV	0.0 to 100.0 %	0.0	%	0	
Monitor	Comm. (operation)	9	READY/RUN	0: RUN 1: READY	0		0	
Monitor	Comm. (operation)	9	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (operation)	10	Manual MV	0.0 to 100.0 %	0.0	%	0	
Monitor	Comm. (operation)	10	READY/RUN	0: RUN 1: READY	0		0	
Monitor	Comm. (operation)	10	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (operation)	11	Manual MV	0.0 to 100.0 %	0.0	%	0	
Monitor	Comm. (operation)	11	READY/RUN	0: RUN 1: READY	0		0	
Monitor	Comm. (operation)	11	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (operation)	12	Manual MV	0.0 to 100.0 %	0.0	%	0	
Monitor	Comm. (operation)	12	READY/RUN	0: RUN 1: READY	0		0	
Monitor	Comm. (operation)	12	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (operation)	13	Manual MV	0.0 to 100.0 %	0.0	%	0	
Monitor	Comm. (operation)	13	READY/RUN	0: RUN 1: READY	0		0	
Monitor	Comm. (operation)	13	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (operation)	14	Manual MV	0.0 to 100.0 %	0.0	%	0	
Monitor	Comm. (operation)	14	READY/RUN	0: RUN 1: READY	0		0	
Monitor	Comm. (operation)	14	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (operation)	15	Manual MV	0.0 to 100.0 %	0.0	%	0	
Monitor	Comm. (operation)	15	READY/RUN	0: RUN 1: READY	0		0	
Monitor	Comm. (operation)	15	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Comm. (operation)	16	Manual MV	0.0 to 100.0 %	0.0	%	0	
Monitor	Comm. (operation)	16	READY/RUN	0: RUN 1: READY	0		0	
Monitor	Comm. (operation)	16	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	

Monitor/Loop Mode

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Monitor	Loop mode	1	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Loop mode	1	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Loop mode	2	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Loop mode	2	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Loop mode	3	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Loop mode	3	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Loop mode	4	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Loop mode	4	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Loop mode	5	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Loop mode	5	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Loop mode	6	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Loop mode	6	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Loop mode	7	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Loop mode	7	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Loop mode	8	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Loop mode	8	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Loop mode	9	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Loop mode	9	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Loop mode	10	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Loop mode	10	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Loop mode	11	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Loop mode	11	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Loop mode	12	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Loop mode	12	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Loop mode	13	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Loop mode	13	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Loop mode	14	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Loop mode	14	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Loop mode	15	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Loop mode	15	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	
Monitor	Loop mode	16	RUN/READY	0: RUN 1: READY	0		0	
Monitor	Loop mode	16	AUTO/MANUAL	0: AUTO 1: MANUAL	0		0	

Monitor/Monitor

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Monitor	Alarm	1	Alarm information 1	Refer to Alarm information 1	–		0	●Alarm information 1 (Refer to page 12-71)
Monitor	Alarm	1	Alarm information 2	Refer to Alarm information 2	–		0	●Alarm information 2 (Refer to page 12-71)
Monitor	Alarm	1	Alarm information 3	Refer to Alarm information 3	–		0	●Alarm information 3 (Refer to page 12-71)
Monitor	Alarm	1	Alarm information 4	Refer to Alarm information 4	–		0	●Alarm information 4 (Refer to page 12-72)
Monitor	Basic	1	MV		–	%	0	
Monitor	Basic	2	MV		–	%	0	
Monitor	Basic	3	MV		–	%	0	
Monitor	Basic	4	MV		–	%	0	
Monitor	Basic	5	MV		–	%	0	
Monitor	Basic	6	MV		–	%	0	
Monitor	Basic	7	MV		–	%	0	
Monitor	Basic	8	MV		–	%	0	
Monitor	Basic	9	MV		–	%	0	
Monitor	Basic	10	MV		–	%	0	
Monitor	Basic	11	MV		–	%	0	
Monitor	Basic	12	MV		–	%	0	
Monitor	Basic	13	MV		–	%	0	
Monitor	Basic	14	MV		–	%	0	
Monitor	Basic	15	MV		–	%	0	
Monitor	Basic	16	MV		–	%	0	
Monitor	DO pulse time left	1	DO pulse remaining time		–	s	0	
Monitor	DO pulse time left	2	DO pulse remaining time		–	s	0	
Monitor	DO pulse time left	3	DO pulse remaining time		–	s	0	
Monitor	DO pulse time left	4	DO pulse remaining time		–	s	0	
Monitor	DO pulse time left	5	DO pulse remaining time		–	s	0	
Monitor	DO pulse time left	6	DO pulse remaining time		–	s	0	
Monitor	DO pulse time left	7	DO pulse remaining time		–	s	0	
Monitor	DO pulse time left	8	DO pulse remaining time		–	s	0	
Monitor	DO pulse time left	9	DO pulse remaining time		–	s	0	
Monitor	DO pulse time left	10	DO pulse remaining time		–	s	0	
Monitor	DO pulse time left	11	DO pulse remaining time		–	s	0	
Monitor	DO pulse time left	12	DO pulse remaining time		–	s	0	
Monitor	DO pulse time left	13	DO pulse remaining time		–	s	0	
Monitor	DO pulse time left	14	DO pulse remaining time		–	s	0	
Monitor	DO pulse time left	15	DO pulse remaining time		–	s	0	
Monitor	DO pulse time left	16	DO pulse remaining time		–	s	0	
Monitor	Monitor (DO %)	1	DO % data		–	%	0	
Monitor	Monitor (DO %)	2	DO % data		–	%	0	
Monitor	Monitor (DO %)	3	DO % data		–	%	0	
Monitor	Monitor (DO %)	4	DO % data		–	%	0	
Monitor	Monitor (DO %)	5	DO % data		–	%	0	
Monitor	Monitor (DO %)	6	DO % data		–	%	0	
Monitor	Monitor (DO %)	7	DO % data		–	%	0	
Monitor	Monitor (DO %)	8	DO % data		–	%	0	
Monitor	Monitor (DO %)	9	DO % data		–	%	0	
Monitor	Monitor (DO %)	10	DO % data		–	%	0	
Monitor	Monitor (DO %)	11	DO % data		–	%	0	
Monitor	Monitor (DO %)	12	DO % data		–	%	0	
Monitor	Monitor (DO %)	13	DO % data		–	%	0	
Monitor	Monitor (DO %)	14	DO % data		–	%	0	
Monitor	Monitor (DO %)	15	DO % data		–	%	0	
Monitor	Monitor (DO %)	16	DO % data		–	%	0	
Monitor	Mntr: DO trml ON/OFF	1	DO terminal ON/OFF data		–		0	
Monitor	Mntr: DO trml ON/OFF	2	DO terminal ON/OFF data		–		0	
Monitor	Mntr: DO trml ON/OFF	3	DO terminal ON/OFF data		–		0	
Monitor	Mntr: DO trml ON/OFF	4	DO terminal ON/OFF data		–		0	
Monitor	Mntr: DO trml ON/OFF	5	DO terminal ON/OFF data		–		0	

Monitor/Monitor

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Monitor	Mntr: DO trml ON/OFF	6	DO terminal ON/OFF data		–		0	
Monitor	Mntr: DO trml ON/OFF	7	DO terminal ON/OFF data		–		0	
Monitor	Mntr: DO trml ON/OFF	8	DO terminal ON/OFF data		–		0	
Monitor	Mntr: DO trml ON/OFF	9	DO terminal ON/OFF data		–		0	
Monitor	Mntr: DO trml ON/OFF	10	DO terminal ON/OFF data		–		0	
Monitor	Mntr: DO trml ON/OFF	11	DO terminal ON/OFF data		–		0	
Monitor	Mntr: DO trml ON/OFF	12	DO terminal ON/OFF data		–		0	
Monitor	Mntr: DO trml ON/OFF	13	DO terminal ON/OFF data		–		0	
Monitor	Mntr: DO trml ON/OFF	14	DO terminal ON/OFF data		–		0	
Monitor	Mntr: DO trml ON/OFF	15	DO terminal ON/OFF data		–		0	
Monitor	Mntr: DO trml ON/OFF	16	DO terminal ON/OFF data		–		0	
Monitor	Mntr: EV trml ON/OFF	1	EV terminal ON/OFF data		–		0	
Monitor	Mntr delay time left	1	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	2	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	3	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	4	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	5	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	6	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	7	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	8	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	9	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	10	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	11	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	12	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	13	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	14	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	15	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	16	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	17	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	18	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	19	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	20	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	21	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	22	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	23	Remaining delay time		–	s	0	
Monitor	Mntr delay time left	24	Remaining delay time		–	s	0	
Monitor	Mntr: calc. result	1	Instrument internal computation result 1 (bitmap)		–		0	●Internal computation result 1 (Refer to page 12-72)
Monitor	Mntr: calc. result	1	Instrument internal computation result 2 (bitmap)		–		0	●Internal computation result 2 (Refer to page 12-73)
Monitor	Mntr: calc. result	1	Instrument internal computation result 13 (bitmap)		–		0	●Internal computation result 13 (Refer to page 12-73)
Monitor	Mntr: calc. result	1	Instrument internal computation result 21 (bitmap)		–		0	●Internal computation result 21 (Refer to page 12-74)
Monitor	Mntr: calc. result	1	Instrument internal computation result 22 (bitmap)		–		0	●Internal computation result 22 (Refer to page 12-74)
Monitor	Mntr: calc. result	1	Instrument internal computation result 45 (bitmap)		–		0	●Internal computation result 45 (Refer to page 12-75)
Monitor	Mntr: calc. result	1	Instrument internal computation result 54 (bitmap)		–		0	●Internal computation result 54 (Refer to page 12-75)
Monitor	Mntr: calc. result	1	Instrument internal computation result 55 (bitmap)		–		0	●Internal computation result 55 (Refer to page 12-76)

Monitor/User-defined Bit

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Monitor	User-defined bit	1	User-defined bits 1-16	Refer to User-defined bits 1-16	0		0	●Refer to User defined bits 1-16 (page 12-77)
Monitor	User-defined bit	1	User-defined bit 1	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 2	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 3	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 4	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 5	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 6	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 7	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 8	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 9	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 10	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 11	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 12	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 13	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 14	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 15	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 16	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bits 17-32	Refer to User-defined bits 17-32	0		0	●Refer to User defined bits 17-32 (page 12-77)
Monitor	User-defined bit	1	User-defined bit 17	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 18	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 19	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 20	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 21	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 22	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 23	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 24	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 25	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 26	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 27	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 28	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 29	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 30	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 31	0: OFF 1: ON	0		0	
Monitor	User-defined bit	1	User-defined bit 32	0: OFF 1: ON	0		0	

Monitor/User-defined Number

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Monitor	User-defined number	1	User-defined number 1	Single-precision floating-point range	0		0	
Monitor	User-defined number	1	User-defined number 2	Single-precision floating-point range	0		0	
Monitor	User-defined number	1	User-defined number 3	Single-precision floating-point range	0		0	
Monitor	User-defined number	1	User-defined number 4	Single-precision floating-point range	0		0	
Monitor	User-defined number	1	User-defined number 5	Single-precision floating-point range	0		0	
Monitor	User-defined number	1	User-defined number 6	Single-precision floating-point range	0		0	
Monitor	User-defined number	1	User-defined number 7	Single-precision floating-point range	0		0	
Monitor	User-defined number	1	User-defined number 8	Single-precision floating-point range	0		0	
Monitor	User-defined number	1	User-defined number 9	Single-precision floating-point range	0		0	
Monitor	User-defined number	1	User-defined number 10	Single-precision floating-point range	0		0	
Monitor	User-defined number	1	User-defined number 11	Single-precision floating-point range	0		0	
Monitor	User-defined number	1	User-defined number 12	Single-precision floating-point range	0		0	
Monitor	User-defined number	1	User-defined number 13	Single-precision floating-point range	0		0	
Monitor	User-defined number	1	User-defined number 14	Single-precision floating-point range	0		0	
Monitor	User-defined number	1	User-defined number 15	Single-precision floating-point range	0		0	
Monitor	User-defined number	1	User-defined number 16	Single-precision floating-point range	0		0	

Monitor/Communication Input Data

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Monitor	Communication input data	1	Communication FL1	0: OFF 1: ON	0		0	
Monitor	Communication input data	1	Communication FL2	0: OFF 1: ON	0		0	
Monitor	Communication input data	1	Communication FL3	0: OFF 1: ON	0		0	
Monitor	Communication input data	1	Communication FL4	0: OFF 1: ON	0		0	
Monitor	Communication input data	1	Communication FL5	0: OFF 1: ON	0		0	
Monitor	Communication input data	1	Communication FL6	0: OFF 1: ON	0		0	
Monitor	Communication input data	1	Communication FL7	0: OFF 1: ON	0		0	
Monitor	Communication input data	1	Communication FL8	0: OFF 1: ON	0		0	
Monitor	Communication input data	1	Communication FL9	0: OFF 1: ON	0		0	
Monitor	Communication input data	1	Communication FL10	0: OFF 1: ON	0		0	
Monitor	Communication input data	1	Communication FL11	0: OFF 1: ON	0		0	
Monitor	Communication input data	1	Communication FL12	0: OFF 1: ON	0		0	
Monitor	Communication input data	1	Communication FL13	0: OFF 1: ON	0		0	
Monitor	Communication input data	1	Communication FL14	0: OFF 1: ON	0		0	
Monitor	Communication input data	1	Communication FL15	0: OFF 1: ON	0		0	
Monitor	Communication input data	1	Communication FL16	0: OFF 1: ON	0		0	
Monitor	Communication input data	1	Communication MV 1	0.0 to 100.0	0.0	%	0	
Monitor	Communication input data	1	Communication MV 2	0.0 to 100.0	0.0	%	0	
Monitor	Communication input data	1	Communication MV 3	0.0 to 100.0	0.0	%	0	
Monitor	Communication input data	1	Communication MV 4	0.0 to 100.0	0.0	%	0	
Monitor	Communication input data	1	Communication MV 5	0.0 to 100.0	0.0	%	0	
Monitor	Communication input data	1	Communication MV 6	0.0 to 100.0	0.0	%	0	
Monitor	Communication input data	1	Communication MV 7	0.0 to 100.0	0.0	%	0	
Monitor	Communication input data	1	Communication MV 8	0.0 to 100.0	0.0	%	0	
Monitor	Communication input data	1	Communication MV 9	0.0 to 100.0	0.0	%	0	
Monitor	Communication input data	1	Communication MV 10	0.0 to 100.0	0.0	%	0	
Monitor	Communication input data	1	Communication MV 11	0.0 to 100.0	0.0	%	0	
Monitor	Communication input data	1	Communication MV 12	0.0 to 100.0	0.0	%	0	
Monitor	Communication input data	1	Communication MV 13	0.0 to 100.0	0.0	%	0	
Monitor	Communication input data	1	Communication MV 14	0.0 to 100.0	0.0	%	0	
Monitor	Communication input data	1	Communication MV 15	0.0 to 100.0	0.0	%	0	
Monitor	Communication input data	1	Communication MV 16	0.0 to 100.0	0.0	%	0	
Monitor	Communication input data	1	DO output 1 time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Monitor	Communication input data	1	DO output 2 time proportional cycle	0.1 to 120.0 s	2.0	s	0	

Monitor/Communication Input Data

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Monitor	Communication input data	1	DO output 3 time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Monitor	Communication input data	1	DO output 4 time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Monitor	Communication input data	1	DO output 5 time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Monitor	Communication input data	1	DO output 6 time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Monitor	Communication input data	1	DO output 7 time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Monitor	Communication input data	1	DO output 8 time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Monitor	Communication input data	1	DO output 9 time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Monitor	Communication input data	1	DO output 10 time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Monitor	Communication input data	1	DO output 11 time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Monitor	Communication input data	1	DO output 12 time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Monitor	Communication input data	1	DO output 13 time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Monitor	Communication input data	1	DO output 14 time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Monitor	Communication input data	1	DO output 15 time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Monitor	Communication input data	1	DO output 16 time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Monitor	Communication input data	1	Communication PT1 (latch)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT2 (latch)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT3 (latch)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT4 (latch)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT5 (latch)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT6 (latch)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT7 (latch)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT8 (latch)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT9 (latch)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT10 (latch)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT11 (latch)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT12 (latch)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT13 (latch)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT14 (latch)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT15 (latch)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT16 (latch)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT1 (count down)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT2 (count down)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT3 (count down)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT4 (count down)	0.00 to 320.00 s	0.00	s	0	

Monitor/Communication Input Data

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Monitor	Communication input data	1	Communication PT5 (count down)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT6 (count down)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT7 (count down)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT8 (count down)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT9 (count down)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT10 (count down)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT11 (count down)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT12 (count down)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT13 (count down)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT14 (count down)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT15 (count down)	0.00 to 320.00 s	0.00	s	0	
Monitor	Communication input data	1	Communication PT16 (count down)	0.00 to 320.00 s	0.00	s	0	

Standard Bit/Standard Bit

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Standard bit	Bit: (1024 to 1151)	1	Always 0 (Off)		0		0	
Standard bit	Bit: (1024 to 1151)	1	Always 1 (On)		1		0	
Standard bit	Bit: (1024 to 1151)	1	Event 1		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 2		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 3		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 4		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 5		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 6		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 7		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 8		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 9		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 10		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 11		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 12		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 13		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 14		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 15		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 16		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 17		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 18		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 19		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 20		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 21		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 22		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 23		–		0	
Standard bit	Bit: (1024 to 1151)	1	Event 24		–		0	
Standard bit	Bit: (1280 to 1407)	1	DO1 terminal status		–		0	
Standard bit	Bit: (1280 to 1407)	1	DO2 terminal status		–		0	
Standard bit	Bit: (1280 to 1407)	1	DO3 terminal status		–		0	
Standard bit	Bit: (1280 to 1407)	1	DO4 terminal status		–		0	
Standard bit	Bit: (1280 to 1407)	1	DO5 terminal status		–		0	
Standard bit	Bit: (1280 to 1407)	1	DO6 terminal status		–		0	
Standard bit	Bit: (1280 to 1407)	1	DO7 terminal status		–		0	
Standard bit	Bit: (1280 to 1407)	1	DO8 terminal status		–		0	

Standard Bit/Standard Bit

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Standard bit	Bit: (1280 to 1407)	1	DO9 terminal status		–		0	
Standard bit	Bit: (1280 to 1407)	1	DO10 terminal status		–		0	
Standard bit	Bit: (1280 to 1407)	1	DO10 terminal status		–		0	
Standard bit	Bit: (1280 to 1407)	1	DO12 terminal status		–		0	
Standard bit	Bit: (1280 to 1407)	1	DO13 terminal status		–		0	
Standard bit	Bit: (1280 to 1407)	1	DO14 terminal status		–		0	
Standard bit	Bit: (1280 to 1407)	1	DO15 terminal status		–		0	
Standard bit	Bit: (1280 to 1407)	1	DO16 terminal status		–		0	
Standard bit	Bit: (1280 to 1407)	1	EV1 terminal status		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 1		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 2		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 3		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 4		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 5		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 6		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 7		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 8		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 9		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 10		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 11		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 12		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 13		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 14		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 15		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 16		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 17		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 18		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 19		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 20		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 21		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 22		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 23		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 24		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 25		–		0	

Standard Bit/Standard Bit

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 26		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 27		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 28		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 29		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 30		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 31		–		0	
Standard bit	Bit: (1408 to 1535)	1	User-defined bit 32		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 1		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 2		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 3		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 4		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 5		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 6		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 7		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 8		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 9		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 10		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 11		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 12		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 13		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 14		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 15		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 16		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 17		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 18		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 19		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 20		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 21		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 22		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 23		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 24		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 25		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 26		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 27		–		0	

Standard Bit/Standard Bit

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 28		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 29		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 30		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 31		–		0	
Standard bit	Bit: (1408 to 1535)	1	Results of logical operation 32		–		0	
Standard bit	Bit: (1536 to 1663)	1	RS-485 status (normal reception of 1 frame)		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 1 RUN/READY status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 2 RUN/READY status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 3 RUN/READY status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 4 RUN/READY status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 5 RUN/READY status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 6 RUN/READY status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 7 RUN/READY status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 8 RUN/READY status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 9 RUN/READY status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 10 RUN/READY status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 11 RUN/READY status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 12 RUN/READY status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 13 RUN/READY status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 14 RUN/READY status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 15 RUN/READY status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 16 RUN/READY status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 1 Auto/Manual status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 2 Auto/Manual status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 3 Auto/Manual status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 4 Auto/Manual status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 5 Auto/Manual status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 6 Auto/Manual status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 7 Auto/Manual status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 8 Auto/Manual status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 9 Auto/Manual status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 10 Auto/Manual status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 11 Auto/Manual status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 12 Auto/Manual status		–		0	

Standard Bit/Standard Bit

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Standard bit	Bit: (1536 to 1663)	1	Loop 13 Auto/Manual status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 14 Auto/Manual status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 15 Auto/Manual status		–		0	
Standard bit	Bit: (1536 to 1663)	1	Loop 16 Auto/Manual status		–		0	
Standard bit	Bit: (1664 to 1791)	1	Communication FL1		–		0	
Standard bit	Bit: (1664 to 1791)	1	Communication FL2		–		0	
Standard bit	Bit: (1664 to 1791)	1	Communication FL3		–		0	
Standard bit	Bit: (1664 to 1791)	1	Communication FL4		–		0	
Standard bit	Bit: (1664 to 1791)	1	Communication FL5		–		0	
Standard bit	Bit: (1664 to 1791)	1	Communication FL6		–		0	
Standard bit	Bit: (1664 to 1791)	1	Communication FL7		–		0	
Standard bit	Bit: (1664 to 1791)	1	Communication FL8		–		0	
Standard bit	Bit: (1664 to 1791)	1	Communication FL9		–		0	
Standard bit	Bit: (1664 to 1791)	1	Communication FL10		–		0	
Standard bit	Bit: (1664 to 1791)	1	Communication FL11		–		0	
Standard bit	Bit: (1664 to 1791)	1	Communication FL12		–		0	
Standard bit	Bit: (1664 to 1791)	1	Communication FL13		–		0	
Standard bit	Bit: (1664 to 1791)	1	Communication FL14		–		0	
Standard bit	Bit: (1664 to 1791)	1	Communication FL15		–		0	
Standard bit	Bit: (1664 to 1791)	1	Communication FL16		–		0	
Standard bit	Bit: (1792 to 1919)	1	Representative of all alarms		–		0	
Standard bit	Bit: (1920 to 2047)	1	Reception monitoring 1		–		0	
Standard bit	Bit: (1920 to 2047)	1	Reception monitoring 2		–		0	
Standard bit	Bit: (1920 to 2047)	1	Reception monitoring 3		–		0	
Standard bit	Bit: (1920 to 2047)	1	Reception monitoring 4		–		0	
Standard bit	Bit: (1920 to 2047)	1	Reception monitoring 5		–		0	
Standard bit	Bit: (1920 to 2047)	1	Reception monitoring 6		–		0	
Standard bit	Bit: (1920 to 2047)	1	Reception monitoring 7		–		0	
Standard bit	Bit: (1920 to 2047)	1	Reception monitoring 8		–		0	
Standard bit	Bit: (1920 to 2047)	1	Reception monitoring 9		–		0	
Standard bit	Bit: (1920 to 2047)	1	Reception monitoring 10		–		0	
Standard bit	Bit: (1920 to 2047)	1	Reception monitoring 11		–		0	
Standard bit	Bit: (1920 to 2047)	1	Reception monitoring 12		–		0	
Standard bit	Bit: (1920 to 2047)	1	Reception monitoring 13		–		0	

Standard Bit/Standard Bit

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Standard bit	Bit: (1920 to 2047)	1	Reception monitoring 14		–		0	
Standard bit	Bit: (1920 to 2047)	1	Reception monitoring 15		–		0	
Standard bit	Bit: (1920 to 2047)	1	Reception monitoring 16		–		0	
Standard bit	Bit: (1920 to 2047)	1	Parameter error (AL94/AL97)		–		0	
Standard bit	Bit: (1920 to 2047)	1	Adjustment data error (AL95/AL98)		–		0	
Standard bit	Bit: (1920 to 2047)	1	EEPROM not initialized (AL83)		–		0	
Standard bit	Bit: (1920 to 2047)	1	ROM error (AL99)		–		0	
Standard bit	Bit: (1920 to 2047)	1	RAM R/W error (AL85)		–		0	
Standard bit	Bit: (1920 to 2047)	1	EEPROM R/W error (AL86)		–		0	
Standard bit	Bit: (1920 to 2047)	1	Reception status summary 1-16 (AL31)		–		0	
Standard bit	Bit: (1920 to 2047)	1	Transmission timeout between modules(AL32)		–		0	
Standard bit	Bit: (1920 to 2047)	1	Writing to EEPROM		–		0	
Standard bit	Bit: (1920 to 2047)	1	Signal to SV timeout		–		0	
Standard bit	Bit: (1920 to 2047)	1	RS-485 setting error (AL33)		–		0	
Standard bit	Bit: (1920 to 2047)	1	Adjacent ring disconnected (AL38)		–		0	Refer to Status of the Ring Communication (Net Status) (page Appendix-12)
Standard bit	Bit: (1920 to 2047)	1	Non-adjacent ring disconnected		–		0	Refer to Status of the Ring Communication (Net Status) (page Appendix-12)
Standard bit	Bit: (1920 to 2047)	1	Base/body communication setting mismatch (AL53)		–		0	
Standard bit	Bit: (1920 to 2047)	1	Base/body model No. mismatch (AL54)		–		0	
Standard bit	Bit: (1920 to 2047)	1	Base verification error (AL55)		–		0	
Standard bit	Bit: (1920 to 2047)	1	External power supply voltage monitoring		–		0	

Standard Number/Standard Number

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Standard number	Standard number (2048 to 2175)	1	Always 0.0		0.0		0	
Standard number	Standard number (2048 to 2175)	1	User-defined number 1		0		0	
Standard number	Standard number (2048 to 2175)	1	User-defined number 2		0		0	
Standard number	Standard number (2048 to 2175)	1	User-defined number 3		0		0	
Standard number	Standard number (2048 to 2175)	1	User-defined number 4		0		0	
Standard number	Standard number (2048 to 2175)	1	User-defined number 5		0		0	
Standard number	Standard number (2048 to 2175)	1	User-defined number 6		0		0	
Standard number	Standard number (2048 to 2175)	1	User-defined number 7		0		0	
Standard number	Standard number (2048 to 2175)	1	User-defined number 8		0		0	
Standard number	Standard number (2048 to 2175)	1	User-defined number 9		0		0	
Standard number	Standard number (2048 to 2175)	1	User-defined number 10		0		0	
Standard number	Standard number (2048 to 2175)	1	User-defined number 11		0		0	
Standard number	Standard number (2048 to 2175)	1	User-defined number 12		0		0	
Standard number	Standard number (2048 to 2175)	1	User-defined number 13		0		0	
Standard number	Standard number (2048 to 2175)	1	User-defined number 14		0		0	
Standard number	Standard number (2048 to 2175)	1	User-defined number 15		0		0	
Standard number	Standard number (2048 to 2175)	1	User-defined number 16		0		0	
Standard number	Standard number (2176 to 2303)	1	MV 1		0.0	%	0	
Standard number	Standard number (2176 to 2303)	1	MV 2		0.0	%	0	
Standard number	Standard number (2176 to 2303)	1	MV 3		0.0	%	0	
Standard number	Standard number (2176 to 2303)	1	MV 4		0.0	%	0	
Standard number	Standard number (2176 to 2303)	1	MV 5		0.0	%	0	
Standard number	Standard number (2176 to 2303)	1	MV 6		0.0	%	0	
Standard number	Standard number (2176 to 2303)	1	MV 7		0.0	%	0	
Standard number	Standard number (2176 to 2303)	1	MV 8		0.0	%	0	
Standard number	Standard number (2176 to 2303)	1	MV 9		0.0	%	0	
Standard number	Standard number (2176 to 2303)	1	MV 10		0.0	%	0	
Standard number	Standard number (2176 to 2303)	1	MV 11		0.0	%	0	
Standard number	Standard number (2176 to 2303)	1	MV 12		0.0	%	0	
Standard number	Standard number (2176 to 2303)	1	MV 13		0.0	%	0	
Standard number	Standard number (2176 to 2303)	1	MV 14		0.0	%	0	
Standard number	Standard number (2176 to 2303)	1	MV 15		0.0	%	0	
Standard number	Standard number (2176 to 2303)	1	MV 16		0.0	%	0	

Standard Number/Standard Number

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Standard number	Standard number (2304 to 2431)	1	Communication MV 1		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Communication MV 2		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Communication MV 3		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Communication MV 4		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Communication MV 5		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Communication MV 6		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Communication MV 7		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Communication MV 8		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Communication MV 9		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Communication MV 10		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Communication MV 11		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Communication MV 12		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Communication MV 13		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Communication MV 14		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Communication MV 15		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Communication MV 16		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Loop 1 MV		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Loop 2 MV		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Loop 3 MV		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Loop 4 MV		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Loop 5 MV		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Loop 6 MV		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Loop 7 MV		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Loop 8 MV		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Loop 9 MV		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Loop 10 MV		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Loop 11 MV		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Loop 12 MV		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Loop 13 MV		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Loop 14 MV		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Loop 15 MV		0.0	%	0	
Standard number	Standard number (2304 to 2431)	1	Loop 16 MV		0.0	%	0	

Standard Number/Standard Number

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Standard number	Standard number (2560 to 2687)	1	Event 1 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 2 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 3 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 4 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 5 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 6 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 7 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 8 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 9 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 10 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 11 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 12 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 13 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 14 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 15 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 16 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 17 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 18 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 19 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 20 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 21 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 22 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 23 timer remaining time		–	s	0	
Standard number	Standard number (2560 to 2687)	1	Event 24 timer remaining time		–	s	0	

Communications/Ethernet Communications

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Communications	Ethernet comm.	1	MAC address 1	0 to 255	–		0	
Communications	Ethernet comm.	1	MAC address 2	0 to 255	–		0	
Communications	Ethernet comm.	1	MAC address 3	0 to 255	–		0	
Communications	Ethernet comm.	1	MAC address 4	0 to 255	–		0	
Communications	Ethernet comm.	1	MAC address 5	0 to 255	–		0	
Communications	Ethernet comm.	1	MAC address 6	0 to 255	–		0	
Communications	Ethernet comm.	1	IPv4 address 1	0 to 255	192		0	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 address 2	0 to 255	168		0	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 address 3	0 to 255	255		0	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 address 4	0 to 255	254		0	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 address net mask 1	0 to 255	255		0	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 address net mask 2	0 to 255	255		0	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 address net mask 3	0 to 255	255		0	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 address net mask 4	0 to 255	0		0	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 default gateway 1	0 to 255	0		0	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 default gateway 2	0 to 255	0		0	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 default gateway 3	0 to 255	0		0	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	IPv4 default gateway 4	0 to 255	0		0	Changes in settings take effect after powering off and back on
Communications	Ethernet comm.	1	CPL/TCP port No.	0 to 65535	1252		0	Changes in settings take effect after powering off and back on 0 to 501 and 503 to 1023 are generally used at times Avoid using them as much as possible Do not use the same value as the MODBUS/TCP port number

Communications/Ethernet Communications

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Communications	Ethernet comm.	1	MODBUS/TCP port No.	0 to 65535	502		0	Changes in settings take effect after powering off and back on 0 to 501 and 503 to 1023 are generally used at times Avoid using them as much as possible Do not use the same value as the CPL/TCP port number

Communication/RS-485 Communication

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Communications	RS-485 comm.	1	Communication type	0: CPL 1: MODBUS/ASCII 2: MODBUS/RTU	0		0	
Communications	RS-485 comm.	1	Station address	0 to 127	127		0	0: Communication function disabled
Communications	RS-485 comm.	1	Transmission speed	0: 4800 bps 1: 9600 bps 2: 19200 bps 3: 38400 bps 4: 57600 bps 5: 115200 bps	2		0	
Communications	RS-485 comm.	1	Data format (Data length)	0: 7 bits 1: 8 bits	1		0	
Communications	RS-485 comm.	1	Data format (parity)	0: Even parity 1: Odd parity	0		0	
Communications	RS-485 comm.	1	Data format (stop bit)	0: 1 stop bit 1: 2 stop bit	0		0	
Communications	RS-485 comm.	1	Minimum response time	1 to 250	3	ms	0	

Basic/Setup

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Basic	Setup	1	Start delay at power ON	0 to 60 s	0	s	1	
Basic	Setup	1	Release all latches	0: Continue latch 1: Release latch	0		1	

Basic/Loop (time propor.)

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Basic	Loop (time propor.)	1	Output operation at changing Auto/Manual	0: Bumpless 1: Preset	0		0	
Basic	Loop (time propor.)	1	Preset MANUAL value	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	2	Output operation at changing Auto/Manual	0: Bumpless 1: Preset	0		0	
Basic	Loop (time propor.)	2	Preset MANUAL value	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	3	Output operation at changing Auto/Manual	0: Bumpless 1: Preset	0		0	
Basic	Loop (time propor.)	3	Preset MANUAL value	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	4	Output operation at changing Auto/Manual	0: Bumpless 1: Preset	0		0	
Basic	Loop (time propor.)	4	Preset MANUAL value	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	5	Output operation at changing Auto/Manual	0: Bumpless 1: Preset	0		0	
Basic	Loop (time propor.)	5	Preset MANUAL value	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	6	Output operation at changing Auto/Manual	0: Bumpless 1: Preset	0		0	
Basic	Loop (time propor.)	6	Preset MANUAL value	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	7	Output operation at changing Auto/Manual	0: Bumpless 1: Preset	0		0	
Basic	Loop (time propor.)	7	Preset MANUAL value	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	8	Output operation at changing Auto/Manual	0: Bumpless 1: Preset	0		0	
Basic	Loop (time propor.)	8	Preset MANUAL value	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	9	Output operation at changing Auto/Manual	0: Bumpless 1: Preset	0		0	
Basic	Loop (time propor.)	9	Preset MANUAL value	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	10	Output operation at changing Auto/Manual	0: Bumpless 1: Preset	0		0	
Basic	Loop (time propor.)	10	Preset MANUAL value	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	11	Output operation at changing Auto/Manual	0: Bumpless 1: Preset	0		0	
Basic	Loop (time propor.)	11	Preset MANUAL value	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	12	Output operation at changing Auto/Manual	0: Bumpless 1: Preset	0		0	
Basic	Loop (time propor.)	12	Preset MANUAL value	0.0 to 100.0%	0.0	%	0	
Basic	Loop (time propor.)	13	Output operation at changing Auto/Manual	0: Bumpless 1: Preset	0		0	
Basic	Loop (time propor.)	13	Preset MANUAL value	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	14	Output operation at changing Auto/Manual	0: Bumpless 1: Preset	0		0	
Basic	Loop (time propor.)	14	Preset MANUAL value	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	15	Output operation at changing Auto/Manual	0: Bumpless 1: Preset	0		0	
Basic	Loop (time propor.)	15	Preset MANUAL value	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	16	Output operation at changing Auto/Manual	0: Bumpless 1: Preset	0		0	
Basic	Loop (time propor.)	16	Preset MANUAL value	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	1	Output at READY	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	2	Output at READY	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	3	Output at READY	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	4	Output at READY	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	5	Output at READY	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	6	Output at READY	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	7	Output at READY	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	8	Output at READY	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	9	Output at READY	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	10	Output at READY	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	11	Output at READY	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	12	Output at READY	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	13	Output at READY	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	14	Output at READY	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	15	Output at READY	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	16	Output at READY	0.0 to 100.0 %	0.0	%	0	
Basic	Loop (time propor.)	1	MV assignment	0: OFF 2048 to 3071: Standard number	2400		0	2400 (Communication MV 1)

Basic/Loop (time propor.)

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Basic	Loop (time propor.)	2	MV assignment	0: OFF 2048 to 3071: Standard number	2401		0	2401 (Communication MV 2)
Basic	Loop (time propor.)	3	MV assignment	0: OFF 2048 to 3071: Standard number	2402		0	2402 (Communication MV 23)
Basic	Loop (time propor.)	4	MV assignment	0: OFF 2048 to 3071: Standard number	2403		0	2403 (Communication MV 4)
Basic	Loop (time propor.)	5	MV assignment	0: OFF 2048 to 3071: Standard number	2404		0	2404 (Communication MV 5)
Basic	Loop (time propor.)	6	MV assignment	0: OFF 2048 to 3071: Standard number	2405		0	2405 (Communication MV 6)
Basic	Loop (time propor.)	7	MV assignment	0: OFF 2048 to 3071: Standard number	2406		0	2406 (Communication MV 7)
Basic	Loop (time propor.)	8	MV assignment	0: OFF 2048 to 3071: Standard number	2407		0	2407 (Communication MV 8)
Basic	Loop (time propor.)	9	MV assignment	0: OFF 2048 to 3071: Standard number	2408		0	2408 (Communication MV 9)
Basic	Loop (time propor.)	10	MV assignment	0: OFF 2048 to 3071: Standard number	2409		0	2409 (Communication MV 10)
Basic	Loop (time propor.)	11	MV assignment	0: OFF 2048 to 3071: Standard number	2410		0	2410 (Communication MV 11)
Basic	Loop (time propor.)	12	MV assignment	0: OFF 2048 to 3071: Standard number	2411		0	2411 (Communication MV 12)
Basic	Loop (time propor.)	13	MV assignment	0: OFF 2048 to 3071: Standard number	2412		0	2412 (Communication MV 13)
Basic	Loop (time propor.)	14	MV assignment	0: OFF 2048 to 3071: Standard number	2413		0	2413 (Communication MV 14)
Basic	Loop (time propor.)	15	MV assignment	0: OFF 2048 to 3071: Standard number	2414		0	2414 (Communication MV 15)
Basic	Loop (time propor.)	16	MV assignment	0: OFF 2048 to 3071: Standard number	2415		0	2415 (Communication MV 16)

Basic/IDLE/IDLE/SV err. (DO) op

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Basic	IDLE/SV err. (DO) op	1	Output type	0: IDLE : Preset SV comm. error : Preset 1: IDLE : Preset SV comm. error : Through 2: IDLE : Preset SV comm. error : Bumpless 3: IDLE : Bumpless SV comm. error : Preset 4: IDLE : Bumpless SV comm. error :Through 5: IDLE : Bumpless SV comm. error : Bumpless	1		2	
Basic	IDLE/SV err. (DO) op	1	Output (%)	0.0 to 100.0	0.0	%	2	
Basic	IDLE/SV err. (DO) op	1	Output (ON/OFF)	0: OFF 1: ON	0		2	
Basic	IDLE/SV err. (DO) op	2	Output type	0: IDLE : Preset SV comm. error : Preset 1: IDLE : Preset SV comm. error : Through 2: IDLE : Preset SV comm. error : Bumpless 3: IDLE : Bumpless SV comm. error : Preset 4: IDLE : Bumpless SV comm. error : Through 5: IDLE : Bumpless SV comm. error : Bumpless	1		2	
Basic	IDLE/SV err. (DO) op	2	Output (%)	0.0 to 100.0	0.0	%	2	
Basic	IDLE/SV err. (DO) op	2	Output (ON/OFF)	0: OFF 1: ON	0		2	
Basic	IDLE/SV err. (DO) op	3	Output type	0: IDLE : Preset SV comm. error : Preset 1: IDLE : Preset SV comm. error : Through 2: IDLE : Preset SV comm. error : Bumpless 3: IDLE : Bumpless SV comm. error : Preset 4: IDLE : Bumpless SV comm. error: : Through 5: IDLE : Bumpless SV comm. error : Bumpless	1		2	
Basic	IDLE/SV err. (DO) op	3	Output (%)	0.0 to 100.0	0.0	%	2	
Basic	IDLE/SV err. (DO) op	3	Output (ON/OFF)	0: OFF 1: ON	0		2	
Basic	IDLE/SV err. (DO) op	4	Output type	0: IDLE : Preset SV comm. error : Preset 1: IDLE : Preset SV comm. error : Through 2: IDLE : Preset SV comm. error : Bumpless 3: IDLE : Bumpless SV comm. error : Preset 4: IDLE : Bumpless SV comm. error : Through 5: IDLE : Bumpless SV comm. error : Bumpless	1		2	
Basic	IDLE/SV err. (DO) op	4	Output (%)	0.0 to 100.0	0.0	%	2	
Basic	IDLE/SV err. (DO) op	4	Output (ON/OFF)	0: OFF 1: ON	0		2	
Basic	IDLE/SV err. (DO) op	5	Output type	0: IDLE : Preset SV comm. error : Preset 1: IDLE : Preset SV comm. error : Through 2: IDLE : Preset SV comm. error : Bumpless 3: IDLE : Bumpless SV comm. error : Preset 4: IDLE : Bumpless SV comm. error : Through 5: IDLE : Bumpless SV comm. error : Bumpless	1		2	
Basic	IDLE/SV err. (DO) op	5	Output (%)	0.0 to 100.0	0.0	%	2	
Basic	IDLE/SV err. (DO) op	5	Output (ON/OFF)	0: OFF 1: ON	0		2	

Basic/IDLE/SV err. (DO) op

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Basic	IDLE/SV err. (DO) op	6	Output type	0: IDLE : Preset SV comm. error : Preset 1: IDLE : Preset SV comm. error : Through 2: IDLE : Preset SV comm. error : Bumpless 3: IDLE : Bumpless SV comm. error : Preset 4: IDLE : Bumpless SV comm. error : Through 5: IDLE : Bumpless SV comm. error : Bumpless	1		2	
Basic	IDLE/SV err. (DO) op	6	Output (%)	0.0 to 100.0	0.0	%	2	
Basic	IDLE/SV err. (DO) op	6	Output (ON/OFF)	0: OFF 1: ON	0		2	
Basic	IDLE/SV err. (DO) op	7	Output type	0: IDLE : Preset SV comm. error : Preset 1: IDLE : Preset SV comm. error : Through 2: IDLE : Preset SV comm. error : Bumpless 3: IDLE : Bumpless SV comm. error : Preset 4: IDLE : Bumpless SV comm. error : Through 5: IDLE : Bumpless SV comm. error : Bumpless	1		2	
Basic	IDLE/SV err. (DO) op	7	Output (%)	0.0 to 100.0	0.0	%	2	
Basic	IDLE/SV err. (DO) op	7	Output (ON/OFF)	0: OFF 1: ON	0		2	
Basic	IDLE/SV err. (DO) op	8	Output type	0: IDLE : Preset SV comm. error : Preset 1: IDLE : Preset SV comm. error : Through 2: IDLE : Preset SV comm. error : Bumpless 3: IDLE : Bumpless SV comm. error : Preset 4: IDLE : Bumpless SV comm. error : Through 5: IDLE : Bumpless SV comm. error : Bumpless	1		2	
Basic	IDLE/SV err. (DO) op	8	Output (%)	0.0 to 100.0	0.0	%	2	
Basic	IDLE/SV err. (DO) op	8	Output (ON/OFF)	0: OFF 1: ON	0		2	
Basic	IDLE/SV err. (DO) op	9	Output type	0: IDLE : Preset SV comm. error: : Preset 1: IDLE : Preset SV comm. error : Through 2: IDLE : Preset SV comm. error : Bumpless 3: IDLE : Bumpless SV comm. error : Preset 4: IDLE : Bumpless SV comm. error : Through 5: IDLE : Bumpless SV comm. error : Bumpless	1		2	
Basic	IDLE/SV err. (DO) op	9	Output (%)	0.0 to100.0	0.0	%	2	
Basic	IDLE/SV err. (DO) op	9	Output (ON/OFF)	0: OFF 1: ON	0		2	
Basic	IDLE/SV err. (DO) op	10	Output type	0	1		2	
Basic	IDLE/SV err. (DO) op	10	Output (%)	0.0 to 100.0	0.0	%	2	
Basic	IDLE/SV err. (DO) op	10	Output (ON/OFF)	0: OFF 1: ON	0		2	
Basic	IDLE/SV err. (DO) op	11	Output type	0: IDLE : Preset SV comm. error : Preset 1: IDLE : Preset SV comm. error : Through 2: IDLE : Preset SV comm. error : Bumpless 3: IDLE : Bumpless SV comm. error : Preset 4: IDLE : Bumpless SV comm. error : Through 5: IDLE : Bumpless SV comm. error : Bumpless	0.0		2	
Basic	IDLE/SV err. (DO) op	11	Output (%)	0.0 to 100.0	0.0	%	2	
Basic	IDLE/SV err. (DO) op	11	Output (ON/OFF)	0: OFF 1: ON	0.0		2	

Basic/IDLE/SV err. (DO) op

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Basic	IDLE/SV err. (DO) op	12	Output type	0: IDLE : Preset SV comm. error : Preset 1: IDLE : Preset SV comm. error : Through 2: IDLE : Preset SV comm. error : Bumpless 3: IDLE : Bumpless SV comm. error : Preset 4: IDLE : Bumpless SV comm. error : Through 5: IDLE : Bumpless SV comm. error : Bumpless	1		2	
Basic	IDLE/SV err. (DO) op	12	Output (%)	0.0 to 100.0	0.0	%	2	
Basic	IDLE/SV err. (DO) op	12	Output (ON/OFF)	0: OFF 1: ON	0		2	
Basic	IDLE/SV err. (DO) op	13	Output type	0: IDLE : Preset SV comm. error : Preset 1: IDLE : Preset SV comm. error : Through 2: IDLE : Preset SV comm. error : Bumpless 3: IDLE : Bumpless SV comm. error : Preset 4: IDLE : Bumpless SV comm. error : Through 5: IDLE : Bumpless SV comm. error : Bumpless	1		2	
Basic	IDLE/SV err. (DO) op	13	Output (%)	0.0 to 100.0	0.0	%	2	
Basic	IDLE/SV err. (DO) op	13	Output (ON/OFF)	0: OFF 1: ON	0		2	
Basic	IDLE/SV err. (DO) op	14	Output type	0: IDLE : Preset SV comm. error : Preset 1: IDLE : Preset SV comm. error : Through 2: IDLE : Preset SV comm. error : Bumpless 3: IDLE : Bumpless SV comm. error : Preset 4: IDLE : Bumpless SV comm. error : Through 5: IDLE : Bumpless SV comm. error : Bumpless	1		2	
Basic	IDLE/SV err. (DO) op	14	Output (%)	0.0 to 100.0	0.0	%	2	
Basic	IDLE/SV err. (DO) op	14	Output (ON/OFF)	0: OFF 1: ON	0		2	
Basic	IDLE/SV err. (DO) op	15	Output type	0: IDLE : Preset SV comm. error : Preset 1: IDLE : Preset SV comm. error : Through 2: IDLE : Preset SV comm. error : Bumpless 3: IDLE : Bumpless SV comm. error : Preset 4: IDLE : Bumpless SV comm. error : Through 5: IDLE : Bumpless SV comm. error : Bumpless	1		2	
Basic	IDLE/SV err. (DO) op	15	Output (%)	0.0 to 100.0	0.0	%	2	
Basic	IDLE/SV err. (DO) op	15	Output (ON/OFF)	0: OFF 1: ON	0		2	
Basic	IDLE/SV err. (DO) op	16	Output type	0: IDLE : Preset SV comm. error : Preset 1: IDLE : Preset SV comm. error : Through 2: IDLE : Preset SV comm. error : Bumpless 3: IDLE : Bumpless SV comm. error : Preset 4: IDLE : Bumpless SV comm. error : Through 5: IDLE : Bumpless SV comm. error : Bumpless	1		2	
Basic	IDLE/SV err. (DO) op	16	Output (%)	0.0 to 100.0	0.0	%	2	
Basic	IDLE/SV err. (DO) op	16	Output (ON/OFF)	0: OFF 1: ON	0		2	

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Basic	IDLE/SV err. (EV) op	1	Output type	0: IDLE : Preset SV comm. error : Preset 1: IDLE : Preset SV comm. error : Through 2: IDLE : Preset SV comm. error : Bumpless 3: IDLE : Bumpless SV comm. error : Preset 4: IDLE : Bumpless SV comm. error : Through 5: IDLE : Bumpless SV comm. error : Bumpless	1		2	
Basic	IDLE/SV err. (EV) op	1	Output (ON/OFF)	0: OFF 1: ON	0		2	

Input-output/DO Output

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Input-output	DO Output	1	Output type	0: OFF 1 to 16: Loop 1 MV to Loop 16 MV 17 to 32: Communication PT1 to 16 (latch) 33 to 48: Communication PT1 to 16 (countdown) 1024 to 2047: Standard bit 2048 to 3071: Standard number	0		0	
Input-output	DO Output	1	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Input-output	DO Output	1	Time proportional operation type	0: Control oriented 1: Actuator-life oriented	0		0	
Input-output	DO Output	1	Min. ON/OFF time	0 to 300 ms	10	ms	0	
Input-output	DO Output	1	Time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Input-output	DO Output	1	Linearization table group definition	0: Disabled 1 to 8: Group number	0		1	
Input-output	DO Output	1	Phase shift	0 to 32000	0	ms	2	(Invalid setting. Leave at initial value 0)
Input-output	DO Output	2	Output type	0: OFF 1 to 16: Loop 1 MV to Loop 16 MV 17 to 32: Communication PT1 to 16 (latch) 33 to 48: Communication PT1 to 16 (countdown) 1024 to 2047: Standard bit 2048 to 3071: Standard number	0		0	
Input-output	DO Output	2	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Input-output	DO Output	2	Time proportional operation type	0: Control oriented 1: Actuator-life oriented	0		0	
Input-output	DO Output	2	Min. ON/OFF time	0 to 300 ms	10	ms	0	
Input-output	DO Output	2	Time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Input-output	DO Output	2	Linearization table group definition	0: Disabled 1 to 8: Group number	0		1	
Input-output	DO Output	2	Phase shift	0 to 32000	0	ms	2	(Invalid setting. Leave at initial value 0)
Input-output	DO Output	3	Output type	0: OFF 1 to 16: Loop 1 MV to Loop 16 MV 17 to 32: Communication PT1 to 16 (latch) 33 to 48: Communication PT1 to 16 (countdown) 1024 to 2047: Standard bit 2048 to 3071: Standard number	0		0	
Input-output	DO Output	3	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Input-output	DO Output	3	Time proportional operation type	0: Control oriented 1: Actuator-life oriented	0		0	
Input-output	DO Output	3	Min. ON/OFF time	0 to 300 ms	10	ms	0	
Input-output	DO Output	3	Time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Input-output	DO Output	3	Linearization table group definition	0: Not used, 1 to 8: Group number	0		1	

Input-output/DO Output

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Input-output	DO Output	3	Phase shift	0 to 32000	0	ms	2	(Invalid setting. Leave at initial value 0)
Input-output	DO Output	4	Output type	0: OFF 1 to 16: Loop 1 MV to Loop 16 MV 17 to 32: Communication PT1 to 16 (latch) 33 to 48: Communication PT1 to 16 (countdown) 1024 to 2047: Standard bit 2048 to 3071: Standard number	0		0	
Input-output	DO Output	4	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Input-output	DO Output	4	Time proportional operation type	0: Control oriented 1: Actuator-life oriented	0		0	
Input-output	DO Output	4	Min. ON/OFF time	0 to 300 ms	10	ms	0	
Input-output	DO Output	4	Time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Input-output	DO Output	4	Linearization table group definition	0: Not used, 1 to 8: Group number	0		1	
Input-output	DO Output	4	Phase shift	0 to 32000	0	ms	2	(Invalid setting. Leave at initial value 0)
Input-output	DO Output	5	Output type	0: OFF 1 to 16: Loop 1 MV to Loop 16 MV 17 to 32: Communication PT1 to 16 (latch) 33 to 48: Communication PT1 to 16 (countdown) 1024 to 2047: Standard bit 2048 to 3071: Standard number	0		0	
Input-output	DO Output	5	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Input-output	DO Output	5	Time proportional operation type	0: Control oriented 1: Actuator-life oriented	0		0	
Input-output	DO Output	5	Min. ON/OFF time	0 to 300 ms	10	ms	0	
Input-output	DO Output	5	Time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Input-output	DO Output	5	Linearization table group definition	0: Not used, 1 to 8: Group number	0		1	
Input-output	DO Output	5	Phase shift	0 to 32000	0	ms	2	(Invalid setting. Leave at initial value 0)
Input-output	DO Output	6	Output type	0: OFF 1 to 16: Loop 1 MV to Loop 16 MV 17 to 32: Communication PT1 to 16 (latch) 33 to 48: Communication PT1 to 16 (countdown) 1024 to 2047: Standard bit 2048 to 3071: Standard number	0		0	
Input-output	DO Output	6	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Input-output	DO Output	6	Time proportional operation type	0: Control oriented 1: Actuator-life oriented	0		0	
Input-output	DO Output	6	Min. ON/OFF time	0 to 300 ms	10	ms	0	
Input-output	DO Output	6	Time proportional cycle	0.1 to 120.0 s	2.0	s	0	

Input-output/DO Output

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Input-output	DO Output	6	Linearization table group definition	0: Not used, 1 to 8: Group number	0		1	
Input-output	DO Output	6	Phase shift	0 to 32000	0	ms	2	(Invalid setting. Leave at initial value 0)
Input-output	DO Output	7	Output type	0: OFF 1 to 16: Loop 1 MV to Loop 16 MV 17 to 32: Communication PT1 to 16 (latch) 33 to 48: Communication PT1 to 16 (countdown) 1024 to 2047: Standard bit 2048 to 3071: Standard number	0		0	
Input-output	DO Output	7	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Input-output	DO Output	7	Time proportional operation type	0: Control oriented 1: Actuator-life oriented	0		0	
Input-output	DO Output	7	Min. ON/OFF time	0 to 300 ms	10	ms	0	
Input-output	DO Output	7	Time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Input-output	DO Output	7	Linearization table group definition	0: Not used, 1 to 8: Group number	0		1	
Input-output	DO Output	7	Phase shift	0 to 32000	0	ms	2	(Invalid setting. Leave at initial value 0)
Input-output	DO Output	8	Output type	0: OFF 1 to 16: Loop 1 MV to Loop 16 MV 17 to 32: Communication PT1 to 16 (latch) 33 to 48: Communication PT1 to 16 (countdown) 1024 to 2047: Standard bit 2048 to 3071: Standard number	0		0	
Input-output	DO Output	8	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Input-output	DO Output	8	Time proportional operation type	0: Control oriented 1: Actuator-life oriented	0		0	
Input-output	DO Output	8	Min. ON/OFF time	0 to 300 ms	10	ms	0	
Input-output	DO Output	8	Time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Input-output	DO Output	8	Linearization table group definition	0: Not used, 1 to 8: Group number	0		1	
Input-output	DO Output	8	Phase shift	0 to 32000	0	ms	2	(Invalid setting. Leave at initial value 0)
Input-output	DO Output	9	Output type	0: OFF 1 to 16: Loop 1 MV to Loop 16 MV 17 to 32: Communication PT1 to 16 (latch) 33 to 48: Communication PT1 to 16 (countdown) 1024 to 2047: Standard bit 2048 to 3071: Standard number	0		0	
Input-output	DO Output	9	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Input-output	DO Output	9	Time proportional operation type	0: Control oriented 1: Actuator-life oriented	0		0	
Input-output	DO Output	9	Min. ON/OFF time	0 to 300 ms	10	ms	0	

Input-output/DO Output

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Input-output	DO Output	9	Time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Input-output	DO Output	9	Linearization table group definition	0: Not used, 1 to 8: Group number	0		1	
Input-output	DO Output	9	Phase shift	0 to 32000	0	ms	2	(Invalid setting. Leave at initial value 0)
Input-output	DO Output	10	Output type	0: OFF 1 to 16: Loop 1 MV to Loop 16 MV 17 to 32: Communication PT1 to 16 (latch) 33 to 48: Communication PT1 to 16 (countdown) 1024 to 2047: Standard bit 2048 to 3071: Standard number	0		0	
Input-output	DO Output	10	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Input-output	DO Output	10	Time proportional operation type	0: Control oriented 1: Actuator-life oriented	0		0	
Input-output	DO Output	10	Min. ON/OFF time	0 to 300 ms	10	ms	0	
Input-output	DO Output	10	Time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Input-output	DO Output	10	Linearization table group definition	0: Not used, 1 to 8: Group number	0		1	
Input-output	DO Output	10	Phase shift	0 to 32000	0	ms	2	(Invalid setting. Leave at initial value 0)
Input-output	DO Output	11	Output type	0: OFF 1 to 16: Loop 1 MV to Loop 16 MV 17 to 32: Communication PT1 to 16 (latch) 33 to 48: Communication PT1 to 16 (countdown) 1024 to 2047: Standard bit 2048 to 3071: Standard number	0		0	
Input-output	DO Output	11	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Input-output	DO Output	11	Time proportional operation type	0: Control oriented 1: Actuator-life oriented	0		0	
Input-output	DO Output	11	Min. ON/OFF time	0 to 300 ms	10	ms	0	
Input-output	DO Output	11	Time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Input-output	DO Output	11	Linearization table group definition	0: Not used, 1 to 8: Group number	0		1	
Input-output	DO Output	11	Phase shift	0 to32000	0	ms	2	(Invalid setting. Leave at initial value 0)
Input-output	DO Output	12	Output type	0: OFF 1 to 16: Loop 1 MV to Loop 16 MV 17 to 32: Communication PT1 to 16 (latch) 33 to 48: Communication PT1 to 16 (countdown) 1024 to 2047: Standard bit 2048 to 3071: Standard number	0		0	
Input-output	DO Output	12	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Input-output	DO Output	12	Time proportional operation type	0: Control oriented 1: Actuator-life oriented	0		0	

Input-output/DO Output

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Input-output	DO Output	12	Min. ON/OFF time	0 to 300 ms	10	ms	0	
Input-output	DO Output	12	Time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Input-output	DO Output	12	Linearization table group definition	0: Disabled 1 to 8: Group number	0		1	
Input-output	DO Output	12	Phase shift	0 to 32000	0	ms	2	(Invalid setting. Leave at initial value 0)
Input-output	DO Output	13	Output type	0: OFF 1 to 16: Loop 1 MV to Loop 16 MV 17 to 32: Communication PT1 to 16 (latch) 33 to 48: Communication PT1 to 16 (countdown) 1024 to 2047: Standard bit 2048 to 3071: Standard number	0		0	
Input-output	DO Output	13	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Input-output	DO Output	13	Time proportional operation type	0: Control oriented 1: Actuator-life oriented	0		0	
Input-output	DO Output	13	Min. ON/OFF time	0 to 300 ms	10	ms	0	
Input-output	DO Output	13	Time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Input-output	DO Output	13	Linearization table group definition	0: Not used, 1 to 8: Group number	0		1	
Input-output	DO Output	13	Phase shift	0 to 32000	0	ms	2	(Invalid setting. Leave at initial value 0)
Input-output	DO Output	14	Output type	0: OFF 1 to 16: Loop 1 MV to Loop 16 MV 17 to 32: Communication PT1 to 16 (latch) 33 to 48: Communication PT1 to 16 (countdown) 1024 to 2047: Standard bit 2048 to 3071: Standard number	0		0	
Input-output	DO Output	14	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Input-output	DO Output	14	Time proportional operation type	0: Control oriented 1: Actuator-life oriented	0		0	
Input-output	DO Output	14	Min. ON/OFF time	0 to 300 ms	10	ms	0	
Input-output	DO Output	14	Time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Input-output	DO Output	14	Linearization table group definition	0: Not used, 1 to 8: Group number	0		1	
Input-output	DO Output	14	Phase shift	0 to 32000	0	ms	2	(Invalid setting. Leave at initial value 0)
Input-output	DO Output	15	Output type	0: OFF 1 to 16: Loop 1 MV to Loop 16 MV 17 to 32: Communication PT1 to 16 (latch) 33 to 48: Communication PT1 to 16 (countdown) 1024 to 2047: Standard bit 2048 to 3071: Standard number	0		0	
Input-output	DO Output	15	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	

Input-output/DO Output

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Input-output	DO Output	15	Time proportional operation type	0: Control oriented 1: Actuator-life oriented	0		0	
Input-output	DO Output	15	Min. ON/OFF time	0 to 300 ms	10	ms	0	
Input-output	DO Output	15	Time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Input-output	DO Output	15	Linearization table group definition	0: Not used, 1 to 8: Group number	0		1	
Input-output	DO Output	15	Phase shift	0 to 32000	0	ms	2	(Invalid setting. Leave at initial value 0)
Input-output	DO Output	16	Output type	0: OFF 1 to 16: Loop 1 MV to Loop 16 MV 17 to 32: Communication PT1 to 16 (latch) 33 to 48: Communication PT1 to 16 (countdown) 1024 to 2047: Standard bit 2048 to 3071: Standard number	0		0	
Input-output	DO Output	16	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Input-output	DO Output	16	Time proportional operation type	0: Control oriented 1: Actuator-life oriented	0		0	
Input-output	DO Output	16	Min. ON/OFF time	0 to 300 ms	10	ms	0	
Input-output	DO Output	16	Time proportional cycle	0.1 to 120.0 s	2.0	s	0	
Input-output	DO Output	16	Linearization table group definition	0: Not used, 1 to 8: Group number	0		1	
Input-output	DO Output	16	Phase shift	0 to 32000	0	ms	2	(Invalid setting. Leave at initial value 0)
Input-output	DO Output	1	ON delay time	0 to 1000 ms	0	ms	1	
Input-output	DO Output	2	ON delay time	0 to 1000 ms	0	ms	1	
Input-output	DO Output	3	ON delay time	0 to 1000 ms	0	ms	1	
Input-output	DO Output	4	ON delay time	0 to 1000 ms	0	ms	1	
Input-output	DO Output	5	ON delay time	0 to 1000 ms	0	ms	1	
Input-output	DO Output	6	ON delay time	0 to 1000 ms	0	ms	1	
Input-output	DO Output	7	ON delay time	0 to 1000 ms	0	ms	1	
Input-output	DO Output	8	ON delay time	0 to 1000 ms	0	ms	1	
Input-output	DO Output	9	ON delay time	0 to 1000 ms	0	ms	1	
Input-output	DO Output	10	ON delay time	0 to 1000 ms	0	ms	1	
Input-output	DO Output	11	ON delay time	0 to 1000 ms	0	ms	1	
Input-output	DO Output	12	ON delay time	0 to 1000 ms	0	ms	1	
Input-output	DO Output	13	ON delay time	0 to 1000 ms	0	ms	1	
Input-output	DO Output	14	ON delay time	0 to 1000 ms	0	ms	1	
Input-output	DO Output	15	ON delay time	0 to 1000 ms	0	ms	1	
Input-output	DO Output	16	ON delay time	0 to 1000 ms	0	ms	1	

Input-output/EV Output

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Input-output	EV Output	1	Output type	1024 to 2047: Standard bit code	1024		0	1024 (always 0 (Off))
Input-output	EV Output	1	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		0	

Event/Event Settings

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Event	Operating point	1	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	1	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	2	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	2	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	3	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	3	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	4	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	4	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	5	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	5	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	6	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	6	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	7	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	7	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	8	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	8	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	9	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	9	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	10	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	10	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	11	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	11	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	12	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	12	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	13	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	13	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	14	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	14	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	15	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	15	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	16	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	16	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	17	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	17	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV

Event/Event Settings

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Event	Operating point	18	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	18	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	19	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	19	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	20	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	20	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	21	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	21	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	22	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	22	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	23	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	23	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	24	Event main setting	-19999 to +32000 U	0		0	Decimal point position = EV
Event	Operating point	24	Event sub-setting	-19999 to +32000 U	0		0	Decimal point position = EV

Event/Event Configuration

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Event	Event config.	1	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	
Event	Event config.	1	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	1	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	1	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	1	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	1	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	1	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	1	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	1	OFF delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	2	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	
Event	Event config.	2	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	2	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	2	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	2	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	2	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	2	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	2	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	2	OFF delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	3	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	

Event/Event Configuration

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Event	Event config.	3	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	3	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	3	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	3	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	3	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	3	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	3	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	3	OFF delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	4	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	
Event	Event config.	4	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	4	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	4	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	4	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	4	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	4	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	4	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	4	OFF delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	5	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	
Event	Event config.	5	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	5	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	5	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	5	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	5	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	5	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	5	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	5	OFF delay	0.0 to 3200.0 s	0.0	s	0	

Event/Event Configuration

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Event	Event config.	6	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	
Event	Event config.	6	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	6	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	6	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	6	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	6	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	6	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	6	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	6	OFF delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	7	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	
Event	Event config.	7	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	7	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	7	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	7	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	7	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	7	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	7	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	7	OFF delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	8	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	

Event/Event Configuration

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Event	Event config.	8	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	8	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	8	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	8	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	8	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	8	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	8	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	8	OFF delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	9	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	
Event	Event config.	9	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	9	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	9	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	9	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	9	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	9	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	9	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	9	OFF delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	10	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	
Event	Event config.	10	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	10	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	10	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	10	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	10	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	10	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	10	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	10	OFF delay	0.0 to 3200.0 s	0.0	s	0	

Event/Event Configuration

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Event	Event config.	11	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	
Event	Event config.	11	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	11	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	11	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	11	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	11	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	11	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	11	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	11	OFF delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	12	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	
Event	Event config.	12	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	12	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	12	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	12	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	12	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	12	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	12	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	12	OFF delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	13	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	

Event/Event Configuration

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Event	Event config.	13	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	13	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	13	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	13	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	13	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	13	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	13	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	13	OFF delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	14	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	
Event	Event config.	14	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	14	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	14	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	14	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	14	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	14	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	14	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	14	OFF delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	15	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	
Event	Event config.	15	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	15	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	15	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	15	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	15	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	15	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	15	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	15	OFF delay	0.0 to 3200.0 s	0.0	s	0	

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Event	Event config.	16	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	
Event	Event config.	16	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	16	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	16	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	16	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	16	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	16	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	16	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	16	OFF delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	17	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	
Event	Event config.	17	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	17	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	17	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	17	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	17	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	17	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	17	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	17	OFF delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	18	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	

Event/Event Configuration

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Event	Event config.	18	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	18	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	18	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	18	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	18	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	18	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	18	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	18	OFF delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	19	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	
Event	Event config.	19	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	19	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	19	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	19	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	19	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	19	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	19	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	19	OFF delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	20	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	
Event	Event config.	20	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	20	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	20	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	20	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	20	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	20	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	20	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	20	OFF delay	0.0 to 3200.0 s	0.0	s	0	

Event/Event Configuration

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Event	Event config.	21	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	
Event	Event config.	21	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	21	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	21	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	21	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	21	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	21	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	21	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	21	OFF delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	22	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	
Event	Event config.	22	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	22	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	22	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	22	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	22	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	22	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	22	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	22	OFF delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	23	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	

Event/Event Configuration

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Event	Event config.	23	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	23	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	23	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	23	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	23	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	23	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	23	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	23	OFF delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	24	Operation type	0: No event 13: MV high limit 14: MV low limit 15: MV high and low limits 26: High limit for standard numbers 27: Low limit for standard numbers 28: High and low limits for standard numbers 61: Alarm (status) 62: READY (status) 63: MANUAL (status) 70: Timer (status)	0		0	
Event	Event config.	24	Loop/channel definition	1 to 16: Loop 1/Channel 1 to Loop 16/Channel 16 2048 to 3071: Standard number	1		0	
Event	Event config.	24	Direct/Reverse	0: Direct 1: Reverse	0		0	
Event	Event config.	24	Standby	0: No standby 1: Standby	0		0	
Event	Event config.	24	EVENT state at READY	0: Continuation 1: Forced OFF	0		0	
Event	Event config.	24	Decimal point position	0: No decimal point 1: 1 digit after the decimal point 2: 2 digits after the decimal point 3: 3 digits after the decimal point 4: 4 digits after the decimal point	0		0	
Event	Event config.	24	Hysteresis	0 to 32000 U	5		0	
Event	Event config.	24	ON delay	0.0 to 3200.0 s	0.0	s	0	
Event	Event config.	24	OFF delay	0.0 to 3200.0 s	0.0	s	0	

Function/Linearization Table

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Linearization table	1	Breakpoint decimal point position	0 to 4	1		1	
Function	Linearization table	1	Breakpoint A1	-19999 to +32000 U	-1999.9		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint A2	-19999 to +32000 U	3200.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint A3	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint A4	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint A5	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint A6	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint A7	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint A8	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint A9	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint A10	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint A11	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint A12	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint A13	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint A14	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint A15	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint A16	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint A17	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint A18	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint A19	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint A20	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint B1	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint B2	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint B3	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint B4	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint B5	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint B6	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint B7	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint B8	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint B9	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint B10	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint B11	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint B12	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint B13	-19999 to +32000 U	0.0		1	Decimal point position = TBL

Function/Linearization Table

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Linearization table	1	Breakpoint B14	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint B15	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint B16	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint B17	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint B18	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint B19	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	1	Breakpoint B20	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint decimal point position	0 to 4	1		1	
Function	Linearization table	2	Breakpoint A1	-19999 to +32000 U	-1999.9		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint A2	-19999 to +32000 U	3200.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint A3	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint A4	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint A5	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint A6	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint A7	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint A8	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint A9	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint A10	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint A11	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint A12	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint A13	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint A14	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint A15	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint A16	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint A17	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint A18	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint A19	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint A20	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint B1	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint B2	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint B3	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint B4	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint B5	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint B6	-19999 to +32000 U	0.0		1	Decimal point position = TBL

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Linearization table	2	Breakpoint B7	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint B8	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint B9	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint B10	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint B11	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint B12	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint B13	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint B14	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint B15	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint B16	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint B17	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint B18	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint B19	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	2	Breakpoint B20	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint decimal point position	0 to 4	1		1	
Function	Linearization table	3	Breakpoint A1	-19999 to +32000 U	-1999.9		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint A2	-19999 to +32000 U	3200.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint A3	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint A4	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint A5	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint A6	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint A7	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint A8	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint A9	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint A10	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint A11	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint A12	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint A13	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint A14	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint A15	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint A16	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint A17	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint A18	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint A19	-19999 to +32000 U	0.0		1	Decimal point position = TBL

Function/Linearization Table

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Linearization table	3	Breakpoint A20	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint B1	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint B2	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint B3	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint B4	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint B5	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint B6	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint B7	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint B8	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint B9	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint B10	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint B11	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint B12	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint B13	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint B14	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint B15	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint B16	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint B17	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint B18	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint B19	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	3	Breakpoint B20	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint decimal point position	0 to 4	1		1	
Function	Linearization table	4	Breakpoint A1	-19999 to +32000 U	-1999.9		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint A2	-19999 to +32000 U	3200.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint A3	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint A4	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint A5	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint A6	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint A7	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint A8	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint A9	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint A10	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint A11	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint A12	-19999 to +32000 U	0.0		1	Decimal point position = TBL

Function/Linearization Table

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Linearization table	4	Breakpoint A13	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint A14	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint A15	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint A16	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint A17	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint A18	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint A19	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint A20	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint B1	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint B2	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint B3	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint B4	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint B5	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint B6	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint B7	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint B8	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint B9	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint B10	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint B11	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint B12	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint B13	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint B14	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint B15	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint B16	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint B17	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint B18	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint B19	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	4	Breakpoint B20	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint decimal point position	0 to 4	1		1	
Function	Linearization table	5	Breakpoint A1	-19999 to +32000 U	-1999.9		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint A2	-19999 to +32000 U	3200.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint A3	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint A4	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint A5	-19999 to +32000 U	0.0		1	Decimal point position = TBL

Function/Linearization Table

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Linearization table	5	Breakpoint A6	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint A7	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint A8	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint A9	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint A10	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint A11	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint A12	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint A13	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint A14	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint A15	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint A16	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint A17	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint A18	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint A19	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint A20	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint B1	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint B2	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint B3	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint B4	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint B5	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint B6	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint B7	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint B8	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint B9	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint B10	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint B11	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint B12	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint B13	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint B14	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint B15	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint B16	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint B17	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint B18	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	5	Breakpoint B19	-19999 to +32000 U	0.0		1	Decimal point position = TBL

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Linearization table	5	Breakpoint B20	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint decimal point position	0 to 4	1		1	
Function	Linearization table	6	Breakpoint A1	-19999 to +32000 U	-1999.9		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint A2	-19999 to +32000 U	3200.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint A3	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint A4	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint A5	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint A6	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint A7	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint A8	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint A9	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint A10	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint A11	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint A12	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint A13	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint A14	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint A15	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint A16	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint A17	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint A18	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint A19	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint A20	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint B1	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint B2	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint B3	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint B4	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint B5	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint B6	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint B7	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint B8	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint B9	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint B10	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint B11	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint B12	-19999 to +32000 U	0.0		1	Decimal point position = TBL

Function/Linearization Table

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Linearization table	6	Breakpoint B13	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint B14	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint B15	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint B16	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint B17	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint B18	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint B19	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	6	Breakpoint B20	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint decimal point position	0 to 4	1		1	
Function	Linearization table	7	Breakpoint A1	-19999 to +32000 U	-1999.9		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint A2	-19999 to +32000 U	3200.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint A3	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint A4	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint A5	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint A6	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint A7	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint A8	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint A9	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint A10	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint A11	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint A12	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint A13	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint A14	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint A15	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint A16	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint A17	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint A18	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint A19	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint A20	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint B1	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint B2	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint B3	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint B4	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint B5	-19999 to +32000 U	0.0		1	Decimal point position = TBL

Function/Linearization Table

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Linearization table	7	Breakpoint B6	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint B7	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint B8	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint B9	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint B10	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint B11	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint B12	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint B13	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint B14	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint B15	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint B16	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint B17	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint B18	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint B19	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	7	Breakpoint B20	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint decimal point position	0 to 4	1		1	
Function	Linearization table	8	Breakpoint A1	-19999 to +32000 U	-1999.9		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint A2	-19999 to +32000 U	3200.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint A3	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint A4	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint A5	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint A6	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint A7	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint A8	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint A9	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint A10	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint A11	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint A12	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint A13	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint A14	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint A15	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint A16	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint A17	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint A18	-19999 to +32000 U	0.0		1	Decimal point position = TBL

Function/Linearization Table

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Linearization table	8	Breakpoint A19	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint A20	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint B1	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint B2	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint B3	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint B4	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint B5	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint B6	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint B7	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint B8	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint B9	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint B10	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint B11	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint B12	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint B13	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint B14	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint B15	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint B16	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint B17	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint B18	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint B19	-19999 to +32000 U	0.0		1	Decimal point position = TBL
Function	Linearization table	8	Breakpoint B20	-19999 to +32000 U	0.0		1	Decimal point position = TBL

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Internal contact IN	1	Operation type	0: No function 5: Linearization table group selection 21: RUN/READY mode selection 22: AUTO/MANUAL mode selection 46: Timer stop/start selection 47: Release all latches	0		0	
Function	Internal contact IN	1	Input type	1024 to 2047: Standard bit code	1024		0	1024 (always 0 (Off))
Function	Internal contact IN	1	Loop/channel definition	0 to 24: (Meaning varies depending on operation type)	1		0	■ Loop/Channel Definition (page 5-9)
Function	Internal contact IN	1	Weighting	0 to 127	1		0	
Function	Internal contact IN	2	Operation type	0: No function 5: Linearization table group selection 21: RUN/READY mode selection 22: AUTO/MANUAL mode selection 46: Timer stop/start selection 47: Release all latches	0		0	
Function	Internal contact IN	2	Input type	1024 to 2047: Standard bit code	1024		0	1024 (always 0 (Off))
Function	Internal contact IN	2	Loop/channel definition	0 to 24: (Meaning varies depending on the operation type)	1		0	■ Loop/Channel Definition (page 5-9)
Function	Internal contact IN	2	Weighting	0 to 127	1		0	
Function	Internal contact IN	3	Operation type	0: No function 5: Linearization table group selection 21: RUN/READY mode selection 22: AUTO/MANUAL mode selection 46: Timer stop/start selection 47: Release all latches	0		0	
Function	Internal contact IN	3	Input type	1024 to 2047: Standard bit code	1024		0	1024 (always 0 (Off))
Function	Internal contact IN	3	Loop/channel definition	0 to 24: (Meaning varies depending on the operation type)	1		0	■ Loop/Channel Definition (page 5-9)
Function	Internal contact IN	3	Weighting	0 to 127	1		0	
Function	Internal contact IN	4	Operation type	0: No function 5: Linearization table group selection 21: RUN/READY mode selection 22: AUTO/MANUAL mode selection 46: Timer stop/start selection 47: Release all latches	0		0	
Function	Internal contact IN	4	Input type	1024 to 2047: Standard bit code	1024		0	1024 (always 0 (Off))
Function	Internal contact IN	4	Loop/channel definition	0 to 24: (Meaning varies depending on the operation type)	1		0	■ Loop/Channel Definition (page 5-9)
Function	Internal contact IN	4	Weighting	0 to 127	1		0	
Function	Internal contact IN	5	Operation type	0: No function 5: Linearization table group selection 21: RUN/READY mode selection 22: AUTO/MANUAL mode selection 46: Timer stop/start selection 47: Release all latches	0		0	
Function	Internal contact IN	5	Input type	1024 to 2047: Standard bit code	1024		0	1024 (always 0 (Off))
Function	Internal contact IN	5	Loop/channel definition	0 to 24: (Meaning varies depending on the operation type)	1		0	■ Loop/Channel Definition (page 5-9)

Function/Internal Contact IN

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Internal contact IN	5	Weighting	0 to 127	1		0	
Function	Internal contact IN	6	Operation type	0: No function 5: Linearization table group selection 21: RUN/READY mode selection 22: AUTO/MANUAL mode selection 46: Timer stop/start selection 47: Release all latches	0		0	
Function	Internal contact IN	6	Input type	1024 to 2047: Standard bit code	1024		0	1024 (always 0 (Off))
Function	Internal contact IN	6	Loop/channel definition	0 to 24: (Meaning varies depending on the operation type)	1		0	■ Loop/Channel Definition (page 5-9)
Function	Internal contact IN	6	Weighting	0 to 127	1		0	
Function	Internal contact IN	7	Operation type	0: No function 5: Linearization table group selection 21: RUN/READY mode selection 22: AUTO/MANUAL mode selection 46: Timer stop/start selection 47: Release all latches	0		0	
Function	Internal contact IN	7	Input type	1024 to 2047: Standard bit code	1024		0	1024 (always 0 (Off))
Function	Internal contact IN	7	Loop/channel definition	0 to 24: (Meaning varies depending on the operation type)	1		0	■ Loop/Channel Definition (page 5-9)
Function	Internal contact IN	7	Weighting	0 to 127	1		0	
Function	Internal contact IN	8	Operation type	0: No function 5: Linearization table group selection 21: RUN/READY mode selection 22: AUTO/MANUAL mode selection 46: Timer stop/start selection 47: Release all latches	0		0	
Function	Internal contact IN	8	Input type	1024 to 2047: Standard bit code	1024		0	1024 (always 0 (Off))
Function	Internal contact IN	8	Loop/channel definition	0 to 24: (Meaning varies depending on the operation type)	1		0	■ Loop/Channel Definition (page 5-9)
Function	Internal contact IN	8	Weighting	0 to 127	1		0	
Function	Internal contact IN	9	Operation type	0: No function 5: Linearization table group selection 21: RUN/READY mode selection 22: AUTO/MANUAL mode selection 46: Timer stop/start selection 47: Release all latches	0		0	
Function	Internal contact IN	9	Input type	1024 to 2047: Standard bit code	1024		0	1024 (always 0 (Off))
Function	Internal contact IN	9	Loop/channel definition	0 to 24: (Meaning varies depending on the operation type)	1		0	■ Loop/Channel Definition (page 5-9)
Function	Internal contact IN	9	Weighting	0 to 127	1		0	
Function	Internal contact IN	10	Operation type	0: No function 5: Linearization table group selection 21: RUN/READY mode selection 22: AUTO/MANUAL mode selection 46: Timer stop/start selection 47: Release all latches	0		0	
Function	Internal contact IN	10	Input type	1024 to 2047: Standard bit code	1024		0	1024 (always 0 (Off))

Function/Internal Contact IN

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Internal contact IN	10	Loop/channel definition	0 to 24: (Meaning varies depending on the operation type)	1		0	■ Loop/Channel Definition (page 5-9)
Function	Internal contact IN	10	Weighting	0 to 127	1		0	
Function	Internal contact IN	11	Operation type	0: No function 5: Linearization table group selection 21: RUN/READY mode selection 22: AUTO/MANUAL mode selection 46: Timer stop/start selection 47: Release all latches	0		0	
Function	Internal contact IN	11	Input type	1024 to 2047: Standard bit code	1024		0	1024 (always 0 (Off))
Function	Internal contact IN	11	Loop/channel definition	0 to 24: (Meaning varies depending on the operation type)	1		0	■ Loop/Channel Definition (page 5-9)
Function	Internal contact IN	11	Weighting	0 to 127	1		0	
Function	Internal contact IN	12	Operation type	0: No function 5: Linearization table group selection 21: RUN/READY mode selection 22: AUTO/MANUAL mode selection 46: Timer stop/start selection 47: Release all latches	0		0	
Function	Internal contact IN	12	Input type	1024 to 2047: Standard bit code	1024		0	1024 (always 0 (Off))
Function	Internal contact IN	12	Loop/channel definition	0 to 24: (Meaning varies depending on the operation type)	1		0	■ Loop/Channel Definition (page 5-9)
Function	Internal contact IN	12	Weighting	0 to 127	1		0	
Function	Internal contact IN	13	Operation type	0: No function 5: Linearization table group selection 21: RUN/READY mode selection 22: AUTO/MANUAL mode selection 46: Timer stop/start selection 47: Release all latches	0		0	
Function	Internal contact IN	13	Input type	1024 to 2047: Standard bit code	1024		0	1024 (always 0 (Off))
Function	Internal contact IN	13	Loop/channel definition	0 to 24: (Meaning varies depending on the operation type)	1		0	■ Loop/Channel Definition (page 5-9)
Function	Internal contact IN	13	Weighting	0 to 127	1		0	
Function	Internal contact IN	14	Operation type	0: No function 5: Linearization table group selection 21: RUN/READY mode selection 22: AUTO/MANUAL mode selection 46: Timer stop/start selection 47: Release all latches	0		0	
Function	Internal contact IN	14	Input type	1024 to 2047: Standard bit code	1024		0	1024 (always 0 (Off))
Function	Internal contact IN	14	Loop/channel definition	0 to 24: (Meaning varies depending on the operation type)	1		0	■ Loop/Channel Definition (page 5-9)
Function	Internal contact IN	14	Weighting	0 to 127	1		0	
Function	Internal contact IN	15	Operation type	0: No function 5: Linearization table group selection 21: RUN/READY mode selection 22: AUTO/MANUAL mode selection 46: Timer stop/start selection 47: Release all latches	0		0	

Function/Internal Contact IN

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Internal contact IN	15	Input type	1024 to 2047: Standard bit code	1024		0	1024 (always 0 (Off))
Function	Internal contact IN	15	Loop/channel definition	0 to 24: (Meaning varies depending on the operation type)	1		0	■ Loop/Channel Definition (page 5-9)
Function	Internal contact IN	15	Weighting	0 to 127	1		0	
Function	Internal contact IN	16	Operation type	0: No function 5: Linearization table group selection 21: RUN/READY mode selection 22: AUTO/MANUAL mode selection 46: Timer stop/start selection 47: Release all latches	0		0	
Function	Internal contact IN	16	Input type	1024 to 2047: Standard bit code	1024		0	1024 (always 0 (Off))
Function	Internal contact IN	16	Loop/channel definition	0 to 24: (Meaning varies depending on the operation type)	1		0	■ Loop/Channel Definition (page 5-9)
Function	Internal contact IN	16	Weighting	0 to 127	1		0	

Function/Logical Operation

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Logical op, preproc.	1	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, preproc.	1	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	1	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	1	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	1	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	1	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	1	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	1	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	1	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	1	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	1	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	1	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	1	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, preproc.	2	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, preproc.	2	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	2	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	2	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	2	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	2	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	2	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	2	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	2	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	2	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	2	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	2	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	2	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, preproc.	3	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, preproc.	3	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))

Function/Logical Operation

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Logical op, preproc.	3	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	3	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	3	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	3	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	3	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	3	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	3	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	3	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	3	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	3	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	3	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, preproc.	4	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, preproc.	4	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	4	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	4	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	4	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	4	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	4	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	4	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	4	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	4	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	4	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	4	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	4	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, preproc.	5	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, preproc.	5	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	5	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	5	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	5	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	5	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	5	Inverted input bit B	0: Direct 1: Reverse	0		1	

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Logical op, preproc.	5	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	5	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	5	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	5	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	5	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	5	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, preproc.	6	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, preproc.	6	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	6	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	6	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	6	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	6	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	6	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	6	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	6	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	6	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	6	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	6	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	6	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, preproc.	7	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, preproc.	7	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	7	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	7	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	7	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	7	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	7	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	7	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	7	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	7	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	7	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	7	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	7	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	

Function/Logical Operation

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Logical op, preproc.	8	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, preproc.	8	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	8	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	8	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	8	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	8	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	8	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	8	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	8	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	8	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	8	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	8	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	8	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, preproc.	9	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, preproc.	9	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	9	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	9	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	9	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	9	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	9	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	9	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	9	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	9	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	9	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	9	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	9	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, preproc.	10	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, preproc.	10	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))

Function/Logical Operation

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Logical op, preproc.	10	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	10	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	10	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	10	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	10	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	10	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	10	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	10	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	10	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	10	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	10	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, preproc.	11	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, preproc.	11	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	11	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	11	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	11	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	11	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	11	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	11	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	11	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	11	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	11	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	11	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	11	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, preproc.	12	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, preproc.	12	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	12	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	12	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	12	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	12	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	12	Inverted input bit B	0: Direct 1: Reverse	0		1	

Function/Logical Operation

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Logical op, preproc.	12	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	12	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	12	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	12	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	12	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	12	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, preproc.	13	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, preproc.	13	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	13	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	13	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	13	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	13	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	13	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	13	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	13	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	13	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	13	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	13	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	13	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, preproc.	14	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, preproc.	14	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	14	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	14	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	14	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	14	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	14	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	14	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	14	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	14	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	14	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	14	Inversion	0: Direct 1: Reverse	0		1	

Function/Logical Operation

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Logical op, preproc.	14	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, preproc.	15	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, preproc.	15	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	15	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	15	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	15	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	15	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	15	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	15	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	15	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	15	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	15	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	15	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	15	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, preproc.	16	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, preproc.	16	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	16	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	16	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	16	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, preproc.	16	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	16	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	16	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	16	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	16	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	16	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, preproc.	16	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, preproc.	16	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, postproc	17	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, postproc	17	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))

Function/Logical Operation

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Logical op, postproc	17	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	17	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	17	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	17	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	17	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	17	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	17	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	17	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	17	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	17	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	17	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, postproc	18	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, postproc	18	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	18	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	18	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	18	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	18	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	18	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	18	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	18	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	18	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	18	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	18	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	18	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, postproc	19	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, postproc	19	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	19	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	19	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	19	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	19	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	19	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	19	Inverted input bit C	0: Direct 1: Reverse	0		1	

Function/Logical Operation

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Logical op, postproc	19	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	19	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	19	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	19	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	19	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, postproc	20	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, postproc	20	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	20	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	20	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	20	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	20	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	20	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	20	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	20	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	20	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	20	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	20	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	20	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, postproc	21	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, postproc	21	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	21	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	21	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	21	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	21	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	21	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	21	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	21	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	21	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	21	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	21	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	21	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	

Function/Logical Operation

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Logical op, postproc	22	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, postproc	22	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	22	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	22	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	22	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	22	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	22	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	22	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	22	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	22	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	22	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	22	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	22	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, postproc	23	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, postproc	23	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	23	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	23	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	23	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	23	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	23	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	23	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	23	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	23	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	23	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	23	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	23	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, postproc	24	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, postproc	24	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	24	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))

Function/Logical Operation

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Logical op, postproc	24	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	24	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	24	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	24	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	24	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	24	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	24	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	24	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	24	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	24	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, postproc	25	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, postproc	25	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	25	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	25	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	25	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	25	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	25	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	25	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	25	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	25	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	25	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	25	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	25	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, postproc	26	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, postproc	26	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	26	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	26	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	26	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	26	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	26	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	26	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	26	Inverted input bit D	0: Direct 1: Reverse	0		1	

Function/Logical Operation

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Logical op, postproc	26	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	26	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	26	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	26	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, postproc	27	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, postproc	27	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	27	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	27	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	27	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	27	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	27	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	27	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	27	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	27	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	27	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	27	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	27	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, postproc	28	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, postproc	28	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	28	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	28	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	28	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	28	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	28	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	28	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	28	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	28	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	28	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	28	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	28	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Logical op, postproc	29	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, postproc	29	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	29	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	29	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	29	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	29	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	29	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	29	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	29	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	29	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	29	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	29	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	29	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, postproc	30	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, postproc	30	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	30	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	30	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	30	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	30	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	30	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	30	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	30	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	30	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	30	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	30	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	30	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, postproc	31	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, postproc	31	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	31	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))

Function/Logical Operation

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Logical op, postproc	31	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	31	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	31	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	31	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	31	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	31	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	31	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	31	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	31	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	31	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	
Function	Logical op, postproc	32	Calculation type	1: Calculation 1 (A and B) or (C and D) 2: Calculation 2 (A or B) and (C or D) 3: Calculation 3 (A or B or C or D) 4: Calculation 4 (A and B and C and D)	1		1	
Function	Logical op, postproc	32	Input assignment A	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	32	Input assignment B	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	32	Input assignment C	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	32	Input assignment D	1024 to 2047: Standard bit code	1024		1	1024 (always 0 (Off))
Function	Logical op, postproc	32	Inverted input bit A	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	32	Inverted input bit B	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	32	Inverted input bit C	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	32	Inverted input bit D	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	32	ON delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	32	OFF delay time	0.0 to 3200.0 s	0.0	s	1	
Function	Logical op, postproc	32	Inversion	0: Direct 1: Reverse	0		1	
Function	Logical op, postproc	32	Latch	0: No latch 1: Latch when ON 2: Latch when OFF (except OFF before power ON)	0		1	

Function/Energy Conservation

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Energy conservation	1	Energy conservation time proportional operation	0: Not used 1: Used	0		2	
Function	Energy conservation	1	Energy conservation delay time	0 to 1000 ms	10	ms	2	
Function	Energy conservation	1	Master/slave selection	0: Master 1: Other than master	0		2	
Function	Energy conservation	1	Time proportional slave channels	1: Time proportioning 1 2: Time proportioning 2 3: Time proportioning 3 4: Time proportioning 4 5: Time proportioning 5 6: Time proportioning 6 7: Time proportioning 7 8: Time proportioning 8 9: Time proportioning 9 10: Time proportioning 10 11: Time proportioning 11 12: Time proportioning 12 13: Time proportioning 13 14: Time proportioning 14 15: Time proportioning 15 16: Time proportioning 16	1		2	
Function	Energy conservation	2	Energy conservation time proportional operation	0: Not used 1: Used	0		2	
Function	Energy conservation	2	Energy conservation delay time	0 to 1000 ms	0	ms	2	
Function	Energy conservation	2	Master/slave selection	0: Master 1: Other than master	0		2	
Function	Energy conservation	2	Time proportional slave channels	1: Time proportioning 1 2: Time proportioning 2 3: Time proportioning 3 4: Time proportioning 4 5: Time proportioning 5 6: Time proportioning 6 7: Time proportioning 7 8: Time proportioning 8 9: Time proportioning 9 10: Time proportioning 10 11: Time proportioning 11 12: Time proportioning 12 13: Time proportioning 13 14: Time proportioning 14 15: Time proportioning 15 16: Time proportioning 16	2		2	
Function	Energy conservation	3	Energy conservation time proportional operation	0: Not used 1: Used	0		2	
Function	Energy conservation	3	Energy conservation delay time	0 to 1000 ms	10	ms	2	
Function	Energy conservation	3	Master/slave selection	0: Master 1: Other than master	0		2	
Function	Energy conservation	3	Time proportional slave channels	1: Time proportioning 1 2: Time proportioning 2 3: Time proportioning 3 4: Time proportioning 4 5: Time proportioning 5 6: Time proportioning 6 7: Time proportioning 7 8: Time proportioning 8 9: Time proportioning 9 10: Time proportioning 10 11: Time proportioning 11 12: Time proportioning 12 13: Time proportioning 13 14: Time proportioning 14 15: Time proportioning 15 16: Time proportioning 16	3		2	
Function	Energy conservation	4	Energy conservation time proportional operation	0: Not used 1: Used	0		2	
Function	Energy conservation	4	Energy conservation delay time	0 to 1000 ms	10	ms	2	
Function	Energy conservation	4	Master/slave selection	0: Master 1: Other than master	0		2	

Function/Energy Conservation

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Energy conservation	4	Time proportional slave channels	1: Time proportioning 1 2: Time proportioning 2 3: Time proportioning 3 4: Time proportioning 4 5: Time proportioning 5 6: Time proportioning 6 7: Time proportioning 7 8: Time proportioning 8 9: Time proportioning 9 10: Time proportioning 10 11: Time proportioning 11 12: Time proportioning 12 13: Time proportioning 13 14: Time proportioning 14 15: Time proportioning 15 16: Time proportioning 16	4		2	
Function	Energy conservation	5	Energy conservation time proportional operation	0: Not used 1: Used	0		2	
Function	Energy conservation	5	Energy conservation delay time	0 to 1000 ms	10	ms	2	
Function	Energy conservation	5	Master/slave selection	0: Master 1: Other than master	0		2	
Function	Energy conservation	5	Time proportional slave channels	1: Time proportioning 1 2: Time proportioning 2 3: Time proportioning 3 4: Time proportioning 4 5: Time proportioning 5 6: Time proportioning 6 7: Time proportioning 7 8: Time proportioning 8 9: Time proportioning 9 10: Time proportioning 10 11: Time proportioning 11 12: Time proportioning 12 13: Time proportioning 13 14: Time proportioning 14 15: Time proportioning 15 16: Time proportioning 16	5		2	
Function	Energy conservation	6	Energy conservation time proportional operation	0: Not used 1: Used	0		2	
Function	Energy conservation	6	Energy conservation delay time	0 to 1000 ms	10	ms	2	
Function	Energy conservation	6	Master/slave selection	0: Master 1: Other than master	0		2	
Function	Energy conservation	6	Time proportional slave channels	1: Time proportioning 1 2: Time proportioning 2 3: Time proportioning 3 4: Time proportioning 4 5: Time proportioning 5 6: Time proportioning 6 7: Time proportioning 7 8: Time proportioning 8 9: Time proportioning 9 10: Time proportioning 10 11: Time proportioning 11 12: Time proportioning 12 13: Time proportioning 13 14: Time proportioning 14 15: Time proportioning 15 16: Time proportioning 16	6		2	
Function	Energy conservation	7	Energy conservation time proportional operation	0: Not used 1: Used	0		2	
Function	Energy conservation	7	Energy conservation delay time	0 to 1000 ms	10	ms	2	
Function	Energy conservation	7	Master/slave selection	0: Master 1: Other than master	0		2	
Function	Energy conservation	7	Time proportional slave channels	1: Time proportioning 1 2: Time proportioning 2 3: Time proportioning 3 4: Time proportioning 4 5: Time proportioning 5 6: Time proportioning 6 7: Time proportioning 7 8: Time proportioning 8 9: Time proportioning 9 10: Time proportioning 10 11: Time proportioning 11 12: Time proportioning 12 13: Time proportioning 13 14: Time proportioning 14 15: Time proportioning 15 16: Time proportioning 16	7		2	

Function/Energy Conservation

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Energy conservation	8	Energy conservation time proportional operation	0: Not used 1: Used	0		2	
Function	Energy conservation	8	Energy conservation delay time	0 to 1000 ms	10	ms	2	
Function	Energy conservation	8	Master/slave selection	0: Master 1: Other than master	0		2	
Function	Energy conservation	8	Time proportional slave channels	1: Time proportioning 1 2: Time proportioning 2 3: Time proportioning 3 4: Time proportioning 4 5: Time proportioning 5 6: Time proportioning 6 7: Time proportioning 7 8: Time proportioning 8 9: Time proportioning 9 10: Time proportioning 10 11: Time proportioning 11 12: Time proportioning 12 13: Time proportioning 13 14: Time proportioning 14 15: Time proportioning 15 16: Time proportioning 16	8		2	
Function	Energy conservation	9	Energy conservation time proportional operation	0: Not used 1: Used	0		2	
Function	Energy conservation	9	Energy conservation delay time	0 to 1000 ms	10	ms	2	
Function	Energy conservation	9	Master/slave selection	0: Master 1: Other than master	0		2	
Function	Energy conservation	9	Time proportional slave channels	1: Time proportioning 1 2: Time proportioning 2 3: Time proportioning 3 4: Time proportioning 4 5: Time proportioning 5 6: Time proportioning 6 7: Time proportioning 7 8: Time proportioning 8 9: Time proportioning 9 10: Time proportioning 10 11: Time proportioning 11 12: Time proportioning 12 13: Time proportioning 13 14: Time proportioning 14 15: Time proportioning 15 16: Time proportioning 16	9		2	
Function	Energy conservation	10	Energy conservation time proportional operation	0: Not used 1: Used	0		2	
Function	Energy conservation	10	Energy conservation delay time	0 to 1000 ms	10	ms	2	
Function	Energy conservation	10	Master/slave selection	0: Master 1: Other than master	0		2	
Function	Energy conservation	10	Time proportional slave channels	1: Time proportioning 1 2: Time proportioning 2 3: Time proportioning 3 4: Time proportioning 4 5: Time proportioning 5 6: Time proportioning 6 7: Time proportioning 7 8: Time proportioning 8 9: Time proportioning 9 10: Time proportioning 10 11: Time proportioning 11 12: Time proportioning 12 13: Time proportioning 13 14: Time proportioning 14 15: Time proportioning 15 16: Time proportioning 16	10		2	
Function	Energy conservation	11	Energy conservation time proportional operation	0: Not used 1: Used	0		2	
Function	Energy conservation	11	Energy conservation delay time	0 to 1000 ms	10	ms	2	
Function	Energy conservation	11	Master/slave selection	0: Master 1: Other than master	0		2	

Function/Energy Conservation

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Energy conservation	11	Time proportional slave channels	1: Time proportioning 1 2: Time proportioning 2 3: Time proportioning 3 4: Time proportioning 4 5: Time proportioning 5 6: Time proportioning 6 7: Time proportioning 7 8: Time proportioning 8 9: Time proportioning 9 10: Time proportioning 10 11: Time proportioning 11 12: Time proportioning 12 13: Time proportioning 13 14: Time proportioning 14 15: Time proportioning 15 16: Time proportioning 16	11		2	
Function	Energy conservation	12	Energy conservation time proportional operation	0: Not used 1: Used	0		2	
Function	Energy conservation	12	Energy conservation delay time	0 to 1000 ms	10	ms	2	
Function	Energy conservation	12	Master/slave selection	0: Master 1: Other than master	0		2	
Function	Energy conservation	12	Time proportional slave channels	1: Time proportioning 1 2: Time proportioning 2 3: Time proportioning 3 4: Time proportioning 4 5: Time proportioning 5 6: Time proportioning 6 7: Time proportioning 7 8: Time proportioning 8 9: Time proportioning 9 10: Time proportioning 10 11: Time proportioning 11 12: Time proportioning 12 13: Time proportioning 13 14: Time proportioning 14 15: Time proportioning 15 16: Time proportioning 16	12		2	
Function	Energy conservation	13	Energy conservation time proportional operation	0: Not used 1: Used	0		2	
Function	Energy conservation	13	Energy conservation delay time	0 to 1000 ms	10	ms	2	
Function	Energy conservation	13	Master/slave selection	0: Master 1: Other than master	0		2	
Function	Energy conservation	13	Time proportional slave channels	1: Time proportioning 1 2: Time proportioning 2 3: Time proportioning 3 4: Time proportioning 4 5: Time proportioning 5 6: Time proportioning 6 7: Time proportioning 7 8: Time proportioning 8 9: Time proportioning 9 10: Time proportioning 10 11: Time proportioning 11 12: Time proportioning 12 13: Time proportioning 13 14: Time proportioning 14 15: Time proportioning 15 16: Time proportioning 16	13		2	
Function	Energy conservation	14	Energy conservation time proportional operation	0: Not used 1: Used	0		2	
Function	Energy conservation	14	Energy conservation delay time	0 to 1000 ms	10	ms	2	
Function	Energy conservation	14	Master/slave selection	0: Master 1: Other than master	0		2	

Function/Energy Conservation

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Energy conservation	14	Time proportional slave channels	1: Time proportioning 1 2: Time proportioning 2 3: Time proportioning 3 4: Time proportioning 4 5: Time proportioning 5 6: Time proportioning 6 7: Time proportioning 7 8: Time proportioning 8 9: Time proportioning 9 10: Time proportioning 10 11: Time proportioning 11 12: Time proportioning 12 13: Time proportioning 13 14: Time proportioning 14 15: Time proportioning 15 16: Time proportioning 16	14		2	
Function	Energy conservation	15	Energy conservation time proportional operation	0: Not used 1: Used	0		2	
Function	Energy conservation	15	Energy conservation delay time	0 to 1000 ms	10	ms	2	
Function	Energy conservation	15	Master/slave selection	0: Master 1: Other than master	0		2	
Function	Energy conservation	15	Time proportional slave channels	1: Time proportioning 1 2: Time proportioning 2 3: Time proportioning 3 4: Time proportioning 4 5: Time proportioning 5 6: Time proportioning 6 7: Time proportioning 7 8: Time proportioning 8 9: Time proportioning 9 10: Time proportioning 10 11: Time proportioning 11 12: Time proportioning 12 13: Time proportioning 13 14: Time proportioning 14 15: Time proportioning 15 16: Time proportioning 16	15		2	
Function	Energy conservation	16	Energy conservation time proportional operation	0: Not used 1: Used	0		2	
Function	Energy conservation	16	Energy conservation delay time	0 to 1000 ms	10	ms	2	
Function	Energy conservation	16	Master/slave selection	0: Master 1: Other than master	0		2	
Function	Energy conservation	16	Time proportional slave channels	1: Time proportioning 1 2: Time proportioning 2 3: Time proportioning 3 4: Time proportioning 4 5: Time proportioning 5 6: Time proportioning 6 7: Time proportioning 7 8: Time proportioning 8 9: Time proportioning 9 10: Time proportioning 10 11: Time proportioning 11 12: Time proportioning 12 13: Time proportioning 13 14: Time proportioning 14 15: Time proportioning 15 16: Time proportioning 16	16		2	

Function/MV Branching Output

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	MV Branching Output	1	Loop assignment	0: Not used 1: Loop 1 2: Loop 2 3: Loop 3 4: Loop 4 5: Loop 5 6: Loop 6 7: Loop 7 8: Loop 8 9: Loop 9 10: Loop 10 11: Loop 11 12: Loop 12 13: Loop 13 14: Loop 14 15: Loop 15 16: Loop 16 2048 to 3071: Standard number	0		0	
Function	MV Branching Output	1	Ratio	0.01 to 320.00	1.00		0	
Function	MV Branching Output	1	Bias	-199.00 to +320.00	0.00	%	0	
Function	MV Branching Output	2	Loop assignment	0: Not used 1: Loop 1 2: Loop 2 3: Loop 3 4: Loop 4 5: Loop 5 6: Loop 6 7: Loop 7 8: Loop 8 9: Loop 9 10: Loop 10 11: Loop 11 12: Loop 12 13: Loop 13 14: Loop 14 15: Loop 15 16: Loop 16 2048 to 3071: Standard number	0		0	
Function	MV Branching Output	2	Ratio	0.01 to 320.00	1.00		0	
Function	MV Branching Output	2	Bias	-199.00 to +320.00	0.00	%	0	
Function	MV Branching Output	3	Loop assignment	0: Not used 1: Loop 1 2: Loop 2 3: Loop 3 4: Loop 4 5: Loop 5 6: Loop 6 7: Loop 7 8: Loop 8 9: Loop 9 10: Loop 10 11: Loop 11 12: Loop 12 13: Loop 13 14: Loop 14 15: Loop 15 16: Loop 16 2048 to 3071: Standard number	0		0	
Function	MV Branching Output	3	Ratio	0.01 to 320.00	1.00		0	
Function	MV Branching Output	3	Bias	-199.00 to +320.00	0.00	%	0	
Function	MV Branching Output	4	Loop assignment	0: Not used 1: Loop 1 2: Loop 2 3: Loop 3 4: Loop 4 5: Loop 5 6: Loop 6 7: Loop 7 8: Loop 8 9: Loop 9 10: Loop 10 11: Loop 11 12: Loop 12 13: Loop 13 14: Loop 14 15: Loop 15 16: Loop 16 2048 to 3071: Standard number	0		0	
Function	MV Branching Output	4	Ratio	0.01 to 320.00	1.00		0	
Function	MV Branching Output	4	Bias	-199.00 to +320.00	0.00	%	0	
Function	MV Branching Output	5	Loop assignment	0: Not used 1: Loop 1 2: Loop 2 3: Loop 3 4: Loop 4 5: Loop 5 6: Loop 6 7: Loop 7 8: Loop 8 9: Loop 9 10: Loop 10 11: Loop 11 12: Loop 12 13: Loop 13 14: Loop 14 15: Loop 15 16: Loop 16 2048 to 3071: Standard number	0		0	
Function	MV Branching Output	5	Ratio	0.01 to 320.00	1.00		0	
Function	MV Branching Output	5	Bias	-199.00 to +320.00	0.00	%	0	
Function	MV Branching Output	6	Loop assignment	0: Not used 1: Loop 1 2: Loop 2 3: Loop 3 4: Loop 4 5: Loop 5 6: Loop 6 7: Loop 7 8: Loop 8 9: Loop 9 10: Loop 10 11: Loop 11 12: Loop 12 13: Loop 13 14: Loop 14 15: Loop 15 16: Loop 16 2048 to 3071: Standard number	0		0	

Function/MV Branching Output

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	MV Branching Output	6	Ratio	0.01 to 320.00	1.00		0	
Function	MV Branching Output	6	Bias	-199.00 to +320.00	0.00	%	0	
Function	MV Branching Output	7	Loop assignment	0: Not used 1: Loop 1 2: Loop 2 3: Loop 3 4: Loop 4 5: Loop 5 6: Loop 6 7: Loop 7 8: Loop 8 9: Loop 9 10: Loop 10 11: Loop 11 12: Loop 12 13: Loop 13 14: Loop 14 15: Loop 15 16: Loop 16 2048 to 3071: Standard number	0		0	
Function	MV Branching Output	7	Ratio	0.01 to 320.00	1.00		0	
Function	MV Branching Output	7	Bias	-199.00 to +320.00	0.00	%	0	
Function	MV Branching Output	8	Loop assignment	0: Not used 1: Loop 1 2: Loop 2 3: Loop 3 4: Loop 4 5: Loop 5 6: Loop 6 7: Loop 7 8: Loop 8 9: Loop 9 10: Loop 10 11: Loop 11 12: Loop 12 13: Loop 13 14: Loop 14 15: Loop 15 16: Loop 16 2048 to 3071: Standard number	0		0	
Function	MV Branching Output	8	Ratio	0.01 to 320.00	1.00		0	
Function	MV Branching Output	8	Bias	-199.00 to +320.00	0.00	%	0	
Function	MV Branching Output	9	Loop assignment	0: Not used 1: Loop 1 2: Loop 2 3: Loop 3 4: Loop 4 5: Loop 5 6: Loop 6 7: Loop 7 8: Loop 8 9: Loop 9 10: Loop 10 11: Loop 11 12: Loop 12 13: Loop 13 14: Loop 14 15: Loop 15 16: Loop 16 2048 to 3071: Standard number	0		0	
Function	MV Branching Output	9	Ratio	0.01 to 320.00	1.00		0	
Function	MV Branching Output	9	Bias	-199.00 to +320.00	0.00	%	0	
Function	MV Branching Output	10	Loop assignment	0: Not used 1: Loop 1 2: Loop 2 3: Loop 3 4: Loop 4 5: Loop 5 6: Loop 6 7: Loop 7 8: Loop 8 9: Loop 9 10: Loop 10 11: Loop 11 12: Loop 12 13: Loop 13 14: Loop 14 15: Loop 15 16: Loop 16 2048 to 3071: Standard number	0		0	
Function	MV Branching Output	10	Ratio	0.01 to 320.00	1.00		0	
Function	MV Branching Output	10	Bias	-199.00 to +320.00	0.00	%	0	
Function	MV Branching Output	11	Loop assignment	0: Not used 1: Loop 1 2: Loop 2 3: Loop 3 4: Loop 4 5: Loop 5 6: Loop 6 7: Loop 7 8: Loop 8 9: Loop 9 10: Loop 10 11: Loop 11 12: Loop 12 13: Loop 13 14: Loop 14 15: Loop 15 16: Loop 16 2048 to 3071: Standard number	0		0	
Function	MV Branching Output	11	Ratio	0.01 to 320.00	1.00		0	
Function	MV Branching Output	11	Bias	-199.00 to +320.00	0.00	%	0	

Function/MV Branching Output

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	MV Branching Output	12	Loop assignment	0: Not used 1: Loop 1 2: Loop 2 3: Loop 3 4: Loop 4 5: Loop 5 6: Loop 6 7: Loop 7 8: Loop 8 9: Loop 9 10: Loop 10 11: Loop 11 12: Loop 12 13: Loop 13 14: Loop 14 15: Loop 15 16: Loop 16 2048 to 3071: Standard number	0		0	
Function	MV Branching Output	12	Ratio	0.01 to 320.00	1.00		0	
Function	MV Branching Output	12	Bias	-199.00 to +320.00	0.00	%	0	
Function	MV Branching Output	13	Loop assignment	0: Not used 1: Loop 1 2: Loop 2 3: Loop 3 4: Loop 4 5: Loop 5 6: Loop 6 7: Loop 7 8: Loop 8 9: Loop 9 10: Loop 10 11: Loop 11 12: Loop 12 13: Loop 13 14: Loop 14 15: Loop 15 16: Loop 16 2048 to 3071: Standard number	0		0	
Function	MV Branching Output	13	Ratio	0.01 to 320.00	1.00		0	
Function	MV Branching Output	13	Bias	-199.00 to +320.00	0.00	%	0	
Function	MV Branching Output	14	Loop assignment	0: Not used 1: Loop 1 2: Loop 2 3: Loop 3 4: Loop 4 5: Loop 5 6: Loop 6 7: Loop 7 8: Loop 8 9: Loop 9 10: Loop 10 11: Loop 11 12: Loop 12 13: Loop 13 14: Loop 14 15: Loop 15 16: Loop 16 2048 to 3071: Standard number	0		0	
Function	MV Branching Output	14	Ratio	0.01 to 320.00	1.00		0	
Function	MV Branching Output	14	Bias	-199.00 to +320.00	0.00	%	0	
Function	MV Branching Output	15	Loop assignment	0: Not used 1: Loop 1 2: Loop 2 3: Loop 3 4: Loop 4 5: Loop 5 6: Loop 6 7: Loop 7 8: Loop 8 9: Loop 9 10: Loop 10 11: Loop 11 12: Loop 12 13: Loop 13 14: Loop 14 15: Loop 15 16: Loop 16 2048 to 3071: Standard number	0		0	
Function	MV Branching Output	15	Ratio	0.01 to 320.00	1.00		0	
Function	MV Branching Output	15	Bias	-199.00 to +320.00	0.00	%	0	
Function	MV Branching Output	16	Loop assignment	0: Not used 1: Loop 1 2: Loop 2 3: Loop 3 4: Loop 4 5: Loop 5 6: Loop 6 7: Loop 7 8: Loop 8 9: Loop 9 10: Loop 10 11: Loop 11 12: Loop 12 13: Loop 13 14: Loop 14 15: Loop 15 16: Loop 16 2048 to 3071: Standard number	0		0	
Function	MV Branching Output	16	Ratio	0.01 to 320.00	1.00		0	
Function	MV Branching Output	16	Bias	-199.00 to +320.00	0.00	%	0	

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Reception monitoring	1	Address (L)	0 to 65535	0		1	
Function	Reception monitoring	1	Address (H)	0 to 65535	0		1	When writing, write 0
Function	Reception monitoring	1	Time-out (L)	0 to 65535	180	s	1	
Function	Reception monitoring	1	Time-out (H)	Fixed at 0	0		1	
Function	Reception monitoring	1	Mode	0: Without reception monitoring 1: With reception monitoring	0		1	
Function	Reception monitoring	2	Address (L)	0 to 65535	0		1	
Function	Reception monitoring	2	Address (H)	0 to 65535	0		1	When writing, write 0
Function	Reception monitoring	2	Time-out (L)	0 to 65535	180	s	1	
Function	Reception monitoring	2	Time-out (H)	Fixed at 0	0		1	
Function	Reception monitoring	2	Mode	0: Without reception monitoring 1: With reception monitoring	0		1	
Function	Reception monitoring	3	Address (L)	0 to 65535	0		1	
Function	Reception monitoring	3	Address (H)	0 to 65535	0		1	When writing, write 0
Function	Reception monitoring	3	Time-out (L)	0 to 65535	180	s	1	
Function	Reception monitoring	3	Time-out (H)	Fixed at 0	0		1	
Function	Reception monitoring	3	Mode	0: Without reception monitoring 1: With reception monitoring	0		1	
Function	Reception monitoring	4	Address (L)	0 to 65535	0		1	
Function	Reception monitoring	4	Address (H)	0 to 65535	0		1	When writing, write 0
Function	Reception monitoring	4	Time-out (L)	0 to 65535	180	s	1	
Function	Reception monitoring	4	Time-out (H)	Fixed at 0	0		1	
Function	Reception monitoring	4	Mode	0: Without reception monitoring 1: With reception monitoring	0		1	
Function	Reception monitoring	5	Address (L)	0 to 65535	0		1	
Function	Reception monitoring	5	Address (H)	0 to 65535	0		1	When writing, write 0
Function	Reception monitoring	5	Time-out (L)	0 to 65535	180	s	1	
Function	Reception monitoring	5	Time-out (H)	Fixed at 0	0		1	
Function	Reception monitoring	5	Mode	0: Without reception monitoring 1: With reception monitoring	0		1	
Function	Reception monitoring	6	Address (L)	0 to 65535	0		1	
Function	Reception monitoring	6	Address (H)	0 to 65535	0		1	When writing, write 0
Function	Reception monitoring	6	Time-out (L)	0 to 65535	180	s	1	
Function	Reception monitoring	6	Time-out (H)	Fixed at 0	0		1	
Function	Reception monitoring	6	Mode	0: Without reception monitoring 1: With reception monitoring	0		1	
Function	Reception monitoring	7	Address (L)	0 to 65535	0		1	
Function	Reception monitoring	7	Address (H)	0 to 65535	0		1	When writing, write 0
Function	Reception monitoring	7	Time-out (L)	0 to 65535	180	s	1	
Function	Reception monitoring	7	Time-out (H)	Fixed at 0	0		1	
Function	Reception monitoring	7	Mode	0: Without reception monitoring 1: With reception monitoring	0		1	
Function	Reception monitoring	8	Address (L)	0 to 65535	0		1	
Function	Reception monitoring	8	Address (H)	0 to 65535	0		1	When writing, write 0
Function	Reception monitoring	8	Time-out (L)	0 to 65535	180	s	1	
Function	Reception monitoring	8	Time-out (H)	Fixed at 0	0		1	
Function	Reception monitoring	8	Mode	0: Without reception monitoring 1: With reception monitoring	0		1	
Function	Reception monitoring	9	Address (L)	0 to 65535	0		1	

Function/Reception Monitoring

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Function	Reception monitoring	9	Address (H)	0 to 65535	0		1	When writing, write 0
Function	Reception monitoring	9	Time-out (L)	0 to 65535	180	s	1	
Function	Reception monitoring	9	Time-out (H)	Fixed at 0	0		1	
Function	Reception monitoring	9	Mode	0: Without reception monitoring 1: With reception monitoring	0		1	
Function	Reception monitoring	10	Address (L)	0 to 65535	0		1	
Function	Reception monitoring	10	Address (H)	0 to 65535	0		1	When writing, write 0
Function	Reception monitoring	10	Time-out (L)	0 to 65535	180	s	1	
Function	Reception monitoring	10	Time-out (H)	Fixed at 0	0		1	
Function	Reception monitoring	10	Mode	0: Without reception monitoring 1: With reception monitoring	0		1	
Function	Reception monitoring	11	Address (L)	0 to 65535	0		1	
Function	Reception monitoring	11	Address (H)	0 to 65535	0		1	When writing, write 0
Function	Reception monitoring	11	Time-out (L)	0 to 65535	180	s	1	
Function	Reception monitoring	11	Time-out (H)	Fixed at 0	0		1	
Function	Reception monitoring	11	Mode	0: Without reception monitoring 1: With reception monitoring	0		1	
Function	Reception monitoring	12	Address (L)	0 to 65535	0		1	
Function	Reception monitoring	12	Address (H)	0 to 65535	0		1	When writing, write 0
Function	Reception monitoring	12	Time-out (L)	0 to 65535	180	s	1	
Function	Reception monitoring	12	Time-out (H)	Fixed at 0	0		1	
Function	Reception monitoring	12	Mode	0: Without reception monitoring 1: With reception monitoring	0		1	
Function	Reception monitoring	13	Address (L)	0 to 65535	0		1	
Function	Reception monitoring	13	Address (H)	0 to 65535	0		1	When writing, write 0
Function	Reception monitoring	13	Time-out (L)	0 to 65535	180	s	1	
Function	Reception monitoring	13	Time-out (H)	Fixed at 0	0		1	
Function	Reception monitoring	13	Mode	0: Without reception monitoring 1: With reception monitoring	0		1	
Function	Reception monitoring	14	Address (L)	0 to 65535	0		1	
Function	Reception monitoring	14	Address (H)	0 to 65535	0		1	When writing, write 0
Function	Reception monitoring	14	Time-out (L)	0 to 65535	180	s	1	
Function	Reception monitoring	14	Time-out (H)	Fixed at 0	0		1	
Function	Reception monitoring	14	Mode	0: Without reception monitoring 1: With reception monitoring	0		1	
Function	Reception monitoring	15	Address (L)	0 to 65535	0		1	
Function	Reception monitoring	15	Address (H)	0 to 65535	0		1	When writing, write 0
Function	Reception monitoring	15	Time-out (L)	0 to 65535	180	s	1	
Function	Reception monitoring	15	Time-out (H)	Fixed at 0	0		1	
Function	Reception monitoring	15	Mode	0: Without reception monitoring 1: With reception monitoring	0		1	
Function	Reception monitoring	16	Address (L)	0 to 65535	0		1	
Function	Reception monitoring	16	Address (H)	0 to 65535	0		1	When writing, write 0
Function	Reception monitoring	16	Time-out (L)	0 to 65535	180	s	1	
Function	Reception monitoring	16	Time-out (H)	Fixed at 0	0		1	
Function	Reception monitoring	16	Mode	0: Without reception monitoring 1: With reception monitoring	0		1	

Others/UFLED Settings

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Other	UFLED settings	1	Conditions for lighting	1024 to 2047: Standard bit	1792		1	Conditions for lighting the F0 LED 1792 (Representative of all alarms)
Other	UFLED settings	1	Lighting status	0: Off 1: Lit 2: Lit (reverse condition) 3: Fast blink 4: Fast blink (reverse condition) 5: Slow blink 6: Slow blink (reverse condition)	3		1	Lighting status of the F0 LED
Other	UFLED settings	2	Conditions for lighting	1024 to 2047: Standard bit	1968		1	Conditions for lighting the F1 LED 1968 (Parameter error)
Other	UFLED settings	2	Lighting status	0: Off 1: Lit 2: Lit (reverse condition) 3: Fast blink 4: Fast blink (reverse condition) 5: Slow blink 6: Slow blink (reverse condition)	3		1	Lighting status of the F1 LED

Others/Instrument Information

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Other	Instrument info.	1	F/W ROM ID		–		0	
Other	Instrument info.	1	F/W ROM version 1		–		0	
Other	Instrument info.	1	F/W ROM version 2		–		0	
Other	Instrument info.	1	Compatible module version		–		0	
Other	Instrument info.	1	Module version (major, minor)		–		0	

Others/DO Tag Name

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Other	DO tag name	1	Tag name 1		DO1		0	
Other	DO tag name	1	Tag name 2					
Other	DO tag name	1	Tag name 3					
Other	DO tag name	1	Tag name 4					
Other	DO tag name	1	Tag name 5					
Other	DO tag name	1	Tag name 6					
Other	DO tag name	1	Tag name 7					
Other	DO tag name	1	Tag name 8					
Other	DO tag name	2	Tag name 1		DO2		0	
Other	DO tag name	2	Tag name 2					
Other	DO tag name	2	Tag name 3					
Other	DO tag name	2	Tag name 4					
Other	DO tag name	2	Tag name 5					
Other	DO tag name	2	Tag name 6					
Other	DO tag name	2	Tag name 7					
Other	DO tag name	2	Tag name 8					
Other	DO tag name	3	Tag name 1		DO3		0	
Other	DO tag name	3	Tag name 2					
Other	DO tag name	3	Tag name 3					
Other	DO tag name	3	Tag name 4					
Other	DO tag name	3	Tag name 5					
Other	DO tag name	3	Tag name 6					
Other	DO tag name	3	Tag name 7					
Other	DO tag name	3	Tag name 8					
Other	DO tag name	4	Tag name 1		DO4		0	
Other	DO tag name	4	Tag name 2					
Other	DO tag name	4	Tag name 3					
Other	DO tag name	4	Tag name 4					
Other	DO tag name	4	Tag name 5					
Other	DO tag name	4	Tag name 6					
Other	DO tag name	4	Tag name 7					
Other	DO tag name	4	Tag name 8					
Other	DO tag name	5	Tag name 1		DO5		0	
Other	DO tag name	5	Tag name 2					
Other	DO tag name	5	Tag name 3					
Other	DO tag name	5	Tag name 4					
Other	DO tag name	5	Tag name 5					
Other	DO tag name	5	Tag name 6					
Other	DO tag name	5	Tag name 7					
Other	DO tag name	5	Tag name 8					
Other	DO tag name	6	Tag name 1		DO6		0	
Other	DO tag name	6	Tag name 2					
Other	DO tag name	6	Tag name 3					
Other	DO tag name	6	Tag name 4					
Other	DO tag name	6	Tag name 5					
Other	DO tag name	6	Tag name 6					
Other	DO tag name	6	Tag name 7					
Other	DO tag name	6	Tag name 8					
Other	DO tag name	7	Tag name 1		DO7		0	
Other	DO tag name	7	Tag name 2					
Other	DO tag name	7	Tag name 3					
Other	DO tag name	7	Tag name 4					
Other	DO tag name	7	Tag name 5					
Other	DO tag name	7	Tag name 6					
Other	DO tag name	7	Tag name 7					
Other	DO tag name	7	Tag name 8					
Other	DO tag name	8	Tag name 1		DO8		0	
Other	DO tag name	8	Tag name 2					

Others/DO Tag Name

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Other	DO tag name	8	Tag name 3					
Other	DO tag name	8	Tag name 4					
Other	DO tag name	8	Tag name 5					
Other	DO tag name	8	Tag name 6					
Other	DO tag name	8	Tag name 7					
Other	DO tag name	8	Tag name 8					
Other	DO tag name	9	Tag name 1		DO9		0	
Other	DO tag name	9	Tag name 2					
Other	DO tag name	9	Tag name 3					
Other	DO tag name	9	Tag name 4					
Other	DO tag name	9	Tag name 5					
Other	DO tag name	9	Tag name 6					
Other	DO tag name	9	Tag name 7					
Other	DO tag name	9	Tag name 8					
Other	DO tag name	10	Tag name 1		DO10		0	
Other	DO tag name	10	Tag name 2					
Other	DO tag name	10	Tag name 3					
Other	DO tag name	10	Tag name 4					
Other	DO tag name	10	Tag name 5					
Other	DO tag name	10	Tag name 6					
Other	DO tag name	10	Tag name 7					
Other	DO tag name	10	Tag name 8					
Other	DO tag name	11	Tag name 1		DO11		0	
Other	DO tag name	11	Tag name 2					
Other	DO tag name	11	Tag name 3					
Other	DO tag name	11	Tag name 4					
Other	DO tag name	11	Tag name 5					
Other	DO tag name	11	Tag name 6					
Other	DO tag name	11	Tag name 7					
Other	DO tag name	11	Tag name 8					
Other	DO tag name	12	Tag name 1		DO12		0	
Other	DO tag name	12	Tag name 2					
Other	DO tag name	12	Tag name 3					
Other	DO tag name	12	Tag name 4					
Other	DO tag name	12	Tag name 5					
Other	DO tag name	12	Tag name 6					
Other	DO tag name	12	Tag name 7					
Other	DO tag name	12	Tag name 8					
Other	DO tag name	13	Tag name 1		DO13		0	
Other	DO tag name	13	Tag name 2					
Other	DO tag name	13	Tag name 3					
Other	DO tag name	13	Tag name 4					
Other	DO tag name	13	Tag name 5					
Other	DO tag name	13	Tag name 6					
Other	DO tag name	13	Tag name 7					
Other	DO tag name	13	Tag name 8					
Other	DO tag name	14	Tag name 1		DO14		0	
Other	DO tag name	14	Tag name 2					
Other	DO tag name	14	Tag name 3					
Other	DO tag name	14	Tag name 4					
Other	DO tag name	14	Tag name 5					
Other	DO tag name	14	Tag name 6					
Other	DO tag name	14	Tag name 7					
Other	DO tag name	14	Tag name 8					
Other	DO tag name	15	Tag name 1		DO15		0	
Other	DO tag name	15	Tag name 2					
Other	DO tag name	15	Tag name 3					
Other	DO tag name	15	Tag name 4					

Others/DO Tag Name

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Other	DO tag name	15	Tag name 5					
Other	DO tag name	15	Tag name 6					
Other	DO tag name	15	Tag name 7					
Other	DO tag name	15	Tag name 8					
Other	DO tag name	16	Tag name 1		DO16		0	
Other	DO tag name	16	Tag name 2					
Other	DO tag name	16	Tag name 3					
Other	DO tag name	16	Tag name 4					
Other	DO tag name	16	Tag name 5					
Other	DO tag name	16	Tag name 6					
Other	DO tag name	16	Tag name 7					
Other	DO tag name	16	Tag name 8					

Others/EV Tag Name

Folder name	Bank name	Code	Item name	Setting range	Initial value	Unit	User Level	Remarks
Other	EV tag name	1	Tag name 1		EV1		0	
Other	EV tag name	1	Tag name 2					
Other	EV tag name	1	Tag name 3					
Other	EV tag name	1	Tag name 4					
Other	EV tag name	1	Tag name 5					
Other	EV tag name	1	Tag name 6					
Other	EV tag name	1	Tag name 7					
Other	EV tag name	1	Tag name 8					

Chapter 14. TROUBLESHOOTING

⚠WARNING

Before removing, mounting, or wiring the NX-DY1/2, be sure to turn off the power to the NX-DY1/2 and all connected devices. Failure to do so might cause electric shock.

■ Alarm codes and corrective actions

Shows the alarm codes and measures in case of abnormal operation of this device.

Alarm code	Failure	Problem	Cause	Measure
AL31	–	Reception status summary 1–16	No data write communication access to the set address within the set time.	Check the module status. Check the settings.
AL32	–	Transmission timeout between modules	There is no response from the set partner module.	
AL33	Soft	RS-485 setting error	RS-485 setting error	Write the data again and turn the power off/on.
AL34	Soft	Communication setting error between modules	There is a communication setting mismatch between modules.	Reset the module communication at the loader.
AL38	Soft	Adjacent ring disconnection	There is a break in the ring between the modules connected by the ring.	Check the communication path*2. replace the unit. ☞ 15-2 Module Replacement (page 15-2)
AL53	Soft	Base/body communication setting mismatch	There is a mismatch between the base and body communication settings.	Button operation*1
AL54	Soft	Base/body model No. mismatch	There is a mismatch between the base and body model numbers.	Button operation*1
AL55	Hard	Base verification error	Data write to the base is not possible.	If the module does not return to normal after the power is turned off/on, replace it. ☞ 15-2 Module Replacement (page 15-2)
AL83	Hard	EEPROM not initialized	EEPROM read error	If the module does not return to normal after the power is turned off/on, replace it. ☞ 15-2 Module Replacement (page 15-2)
AL84	Hard	MAC address error	MAC address error	
AL85	Hard	RAM R/W error	RAM R/W error	
AL86	Hard	EEPROM R/W error	EEPROM R/W error	
AL87	Hard	Base EEPROM R/W error	Base EEPROM R/W error	
AL88	Soft	Base EEPROM error	Base EEPROM invalid	Button operation*1 If the module does not return to normal after the power is turned off and on again, replace it.
AL94	Soft	RAM error (parameter data)	RAM error	If the module does not return to normal after the power is turned off/on, replace it. ☞ 15-2 Module Replacement (page 15-2)
AL95	Soft	RAM error (adjustment data)		
AL97	Soft	EEPROM error (parameter data)	EEPROM read error	
AL98	Soft	EEPROM error (adjustment data)		
AL99	Hard	ROM error	Faulty ROM (memory)	

[Hard]: The FAIL LED is lit for the hard failure.
[Soft]: The FAIL LED blinks slowly for the soft failure.
*1 ☞ Recovering the base EEPROM recovery using the button (page 7-4) for the push button operation.
*2 ☞ Status of the Ring Communication (Net Status) (page Appendix-12).

Note

- Information regarding AL31 and AL32
  ☞ 6-4 Reception Monitoring (page 6-5).

Handling precautions

- The mode changes to IDLE when AL88 (base EEPROM error), AL53 (base/body communication settings mismatch), or AL54 (base/body model No. mismatch) occurs.

■ If a touch panel (etc.) does not respond after module replacement.

If a module communicating with devices like touch panels using the MODBUS/TCP protocol is replaced with another, the replacement module may be unable to communicate with the devices. In this case, either temporarily turn off the power to devices like touch panels, or wait for automatic recovery.

Note

- After module replacemeßnt, the new module requires configuration.
  ☞ 15-2 Module Replacement (page 15-2).

● Major host devices and estimated time required for the automatic recovery

- ARF100/200 series: about 5 minutes
- Azbil Corporation system products: about 10 minutes

  (Harmonas, Harmonas-DEO, PREXION, EneSCOPE etc.)
- Digital Electronics Corporation GP series graphic operator interfaces: about 20 minutes
- Mitsubishi Electric Corporation GOT series graphic operator interfaces: about 20 minutes

● Reason for loss of communications

Host devices using MODBUS/TCP automatically read MAC addresses from modules and regularly update them in order to identify each module.

After module replacement, the MAC address of the replaced module may remain in the host devices. In such a case, they attempt to communicate using the old address.

For this reason, when receiving command messages from host devices, the new module judges that the MAC address in the messages is not its MAC address, even though the IP address is the same, and discards the received messages. Thus communications cannot be established.

For normal communications to resume, time is required to rewrite the MAC address in the host devices. The amount of time varies depending on the host device.

■ If the module can no longer communicate with a device using the MODBUS/TCP protocol

The module can communicate with devices using the MODBUS/TCP protocol. However, in the following cases, MODBUS/TCP communications may not be possible.

In such cases, turn off the power to the devices and module, or wait for 3 minutes for automatic recovery.

● Cases where communication fails

- When the host device is subject to repeated short interruptions
- When network devices (hub, etc.) between the host device and the module experience repeated short power outages or disconnections.

● Reason for loss of communications

Since the module retains data from its communication partners for a certain time, if the host devices experience repeated short interruptions, the module sometimes perceives different devices before and after the interruption.

As a result, the module may mistakenly conclude that the number of host communications exceeds the limit (2) and refuse to accept further communications

Chapter 15. MAINTENANCE, INSPECTION, AND DISPOSAL

15 - 1 Maintenance and Inspection

⚠WARNING
Before removing, mounting, or wiring the NX-DY1/2, be sure to turn off the power to the NX-DY1/2 and all connected devices. Failure to do so might cause electric shock.

⚠CAUTION
Make sure that there are no loose connections. Failure to do so might cause overheating or device failure.
When discarding the NX-DY1/2, dispose of it as industrial waste, following local regulations.

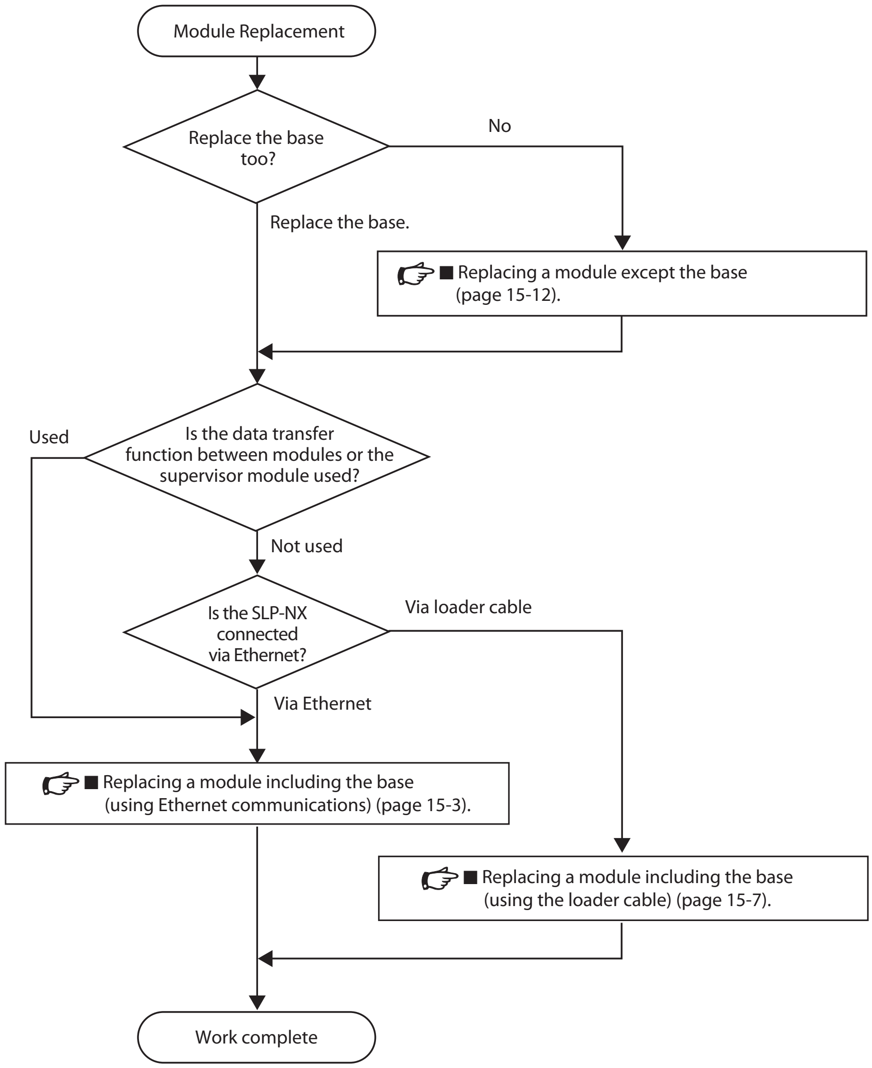
Cleaning:	When removing dirt from the instrument, wipe it off with a soft cloth rag.
Parts replacement:	Do not replace any parts of this module.
Fuse replacement:	When replacing the fuse connected to the electric wiring, always use the fuse that is recommended for your power unit.

15 - 2 Module Replacement

⚠CAUTION

Before wiring the NX-DY1/2, be sure to disconnect the power.
Failure to do so might cause device failure.

There are the following methods to replace an installed operating module.
- Replacing a module including the base (using Ethernet communications)
- Replacing a module including the base (using the loader cable)
- Replacing a module except the base



Handling precautions

- If changing the module model No. before or after replacement, use the SLP-NX Smart Loader Package to change the model No. or create a new project.
- Write the settings in one batch to all modules registered in the project if there is any module that has used the data transfer function between modules or has been under control by the supervisor module.

■ Replacing a module including the base (using Ethernet communications)

If the module is replaced, it is recommended to replace the terminal block and base as well as the body.

The following explains the procedure for module replacement using Ethernet communications.

Handling precautions

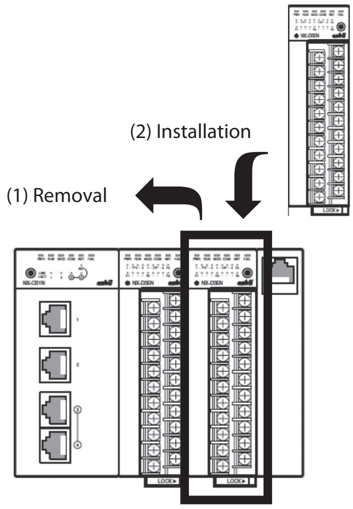
- This explanation is available only for environments where the device network matches the network profile for the SLP-NX Smart Loader Package.
  ☞ Chapter 5. "ACTUAL MODULE COMMUNICATION SETTING" in the Network Instrumentation Module Smart Loader Package SLP-NX User's Manual, CP-UM-5636E.
- If batch writing is executed to all modules, the parameters in the project file will be overwritten, affecting modules that were not replaced. Accordingly, use the latest version of the project file.

Note

- The following is an example. It is not the only way to make the change.

(1) Check that the power is off.

(2) Replace the module.

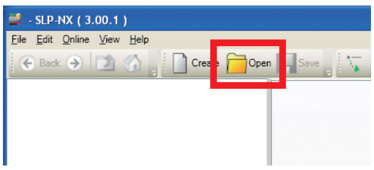


Note

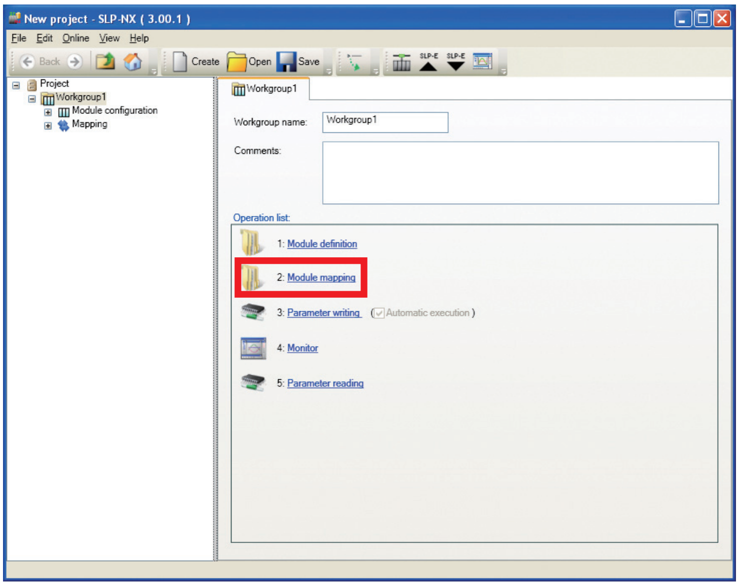
☞ Chapter 2, "INSTALLATION"

(3) Turn the power on.

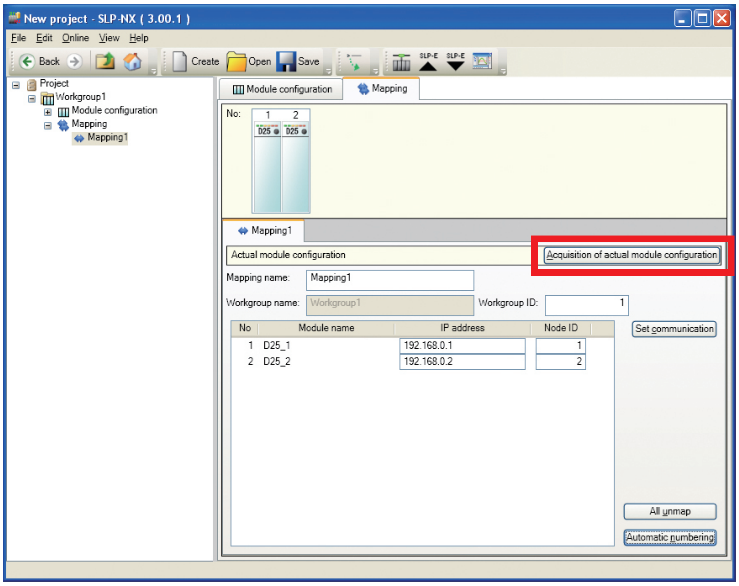
(4) Start the SLP-NX and open the existing project file stored.



(5) Select [Module mapping] in the SLP-NX project window.

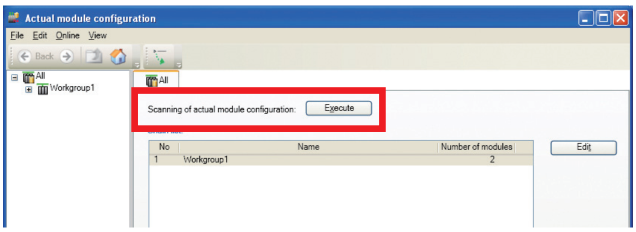


(6) Click [Acquisition of actual module configuration] on the mapping screen.

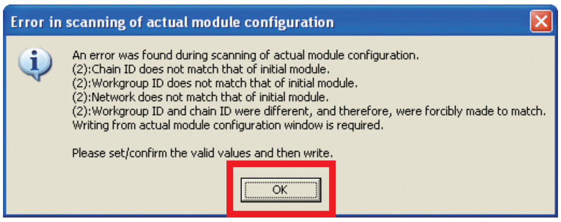


>> The [Actual module configuration] window is displayed.

(7) Open the [Actual module configuration] window, then click the [Execute] button for [Scanning of actual module configuration].



(8) If a scan for the actual module configuration is executed, [Error in scanning of actual module configuration] is displayed. Click the [OK] button and close the error report.



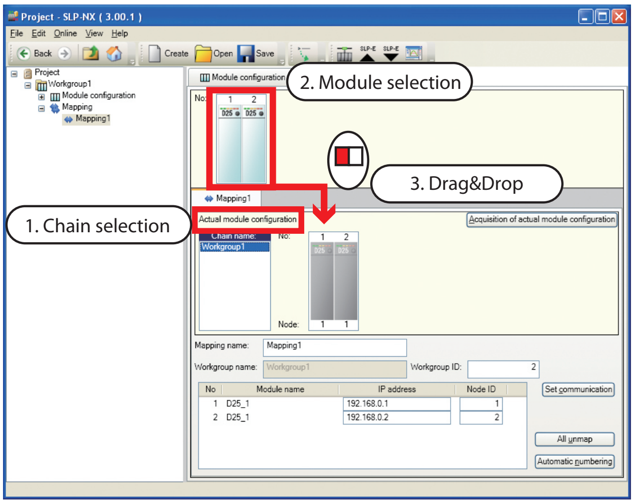
If the module has all settings as the replacement, [Error in scanning of actual module configuration] is not displayed, so go to step (11).

(9) Follow the procedure below to copy communication settings, etc. from the mapping information in the project window to the actual module configuration window.

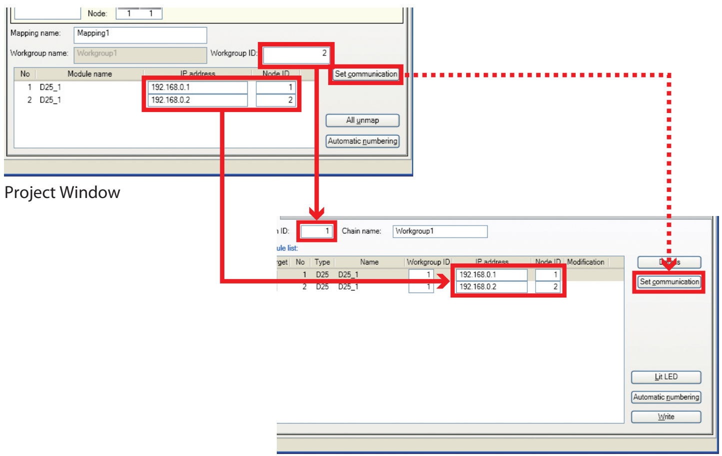
(9)-1 Select the chain of the modules to be replaced

(9)-2 Press the [SHIFT] key while selecting all modules to be mapped

(9)-3 Drag and drop the selected modules onto the actual module configuration modules



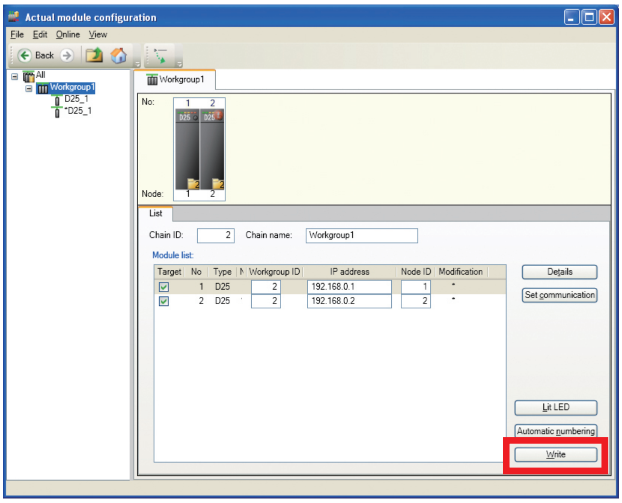
>> Consequently, the mapping information will be copied into the actual module configuration window from the project window.



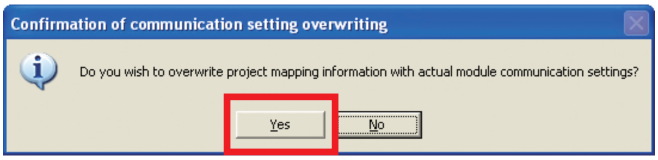
Actual module configuration window

(10) In the actual module configuration window, select the desired chain and modules, and click the [Write] button.

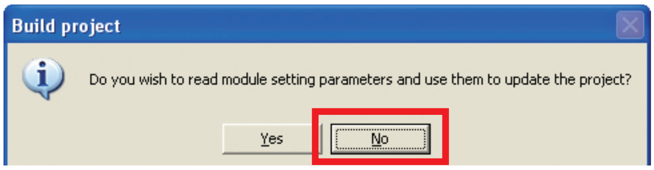
> The communications settings are written to the modules.



(11) When [Confirmation of communication setting overwriting] is displayed, click the [Yes] button.



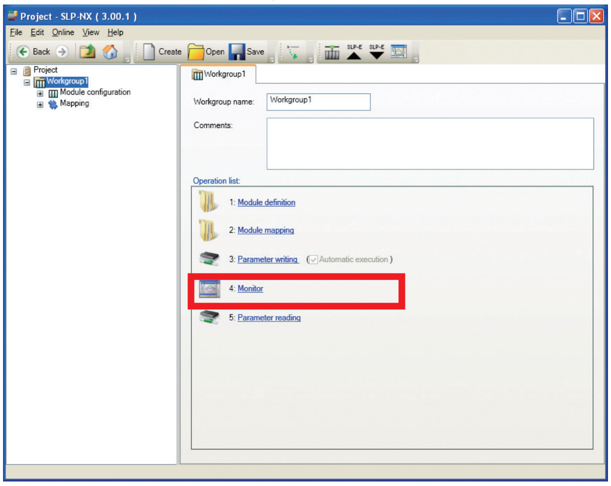
(12) When [Build project] is displayed, click the [No] button.



Handling precautions

- If [Yes] is selected for [Build project], the contents of the project file will be updated to read parameters from the replacement module.

(13) Write parameters to the target modules from the SLP-NX project window.



Handling precautions

- Write the settings in one batch to all modules registered in the project if there is any module that has used the data transfer function between modules or has been under control by the supervisor module.

■ Replacing a module including the base (using the loader cable)

If the module is replaced, it is recommended to replace the terminal block and base as well as the body.

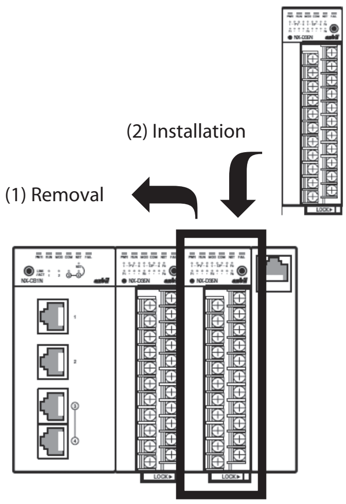
The following shows the procedure for replacing modules using the loader cable.

Note

- The following is an example. It is not the only way to make the change.

(1) Check that the power is off.

(2) Replace the module.

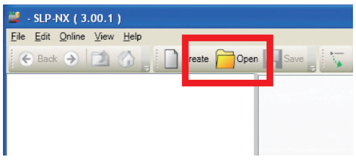


Note

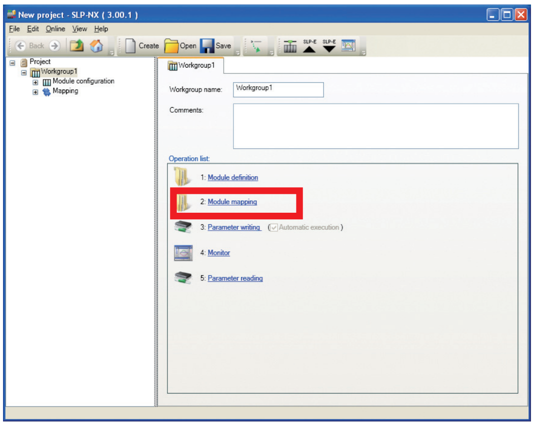
- ☞ Chapter 2, "INSTALLATION"

(3) Turn on the power.

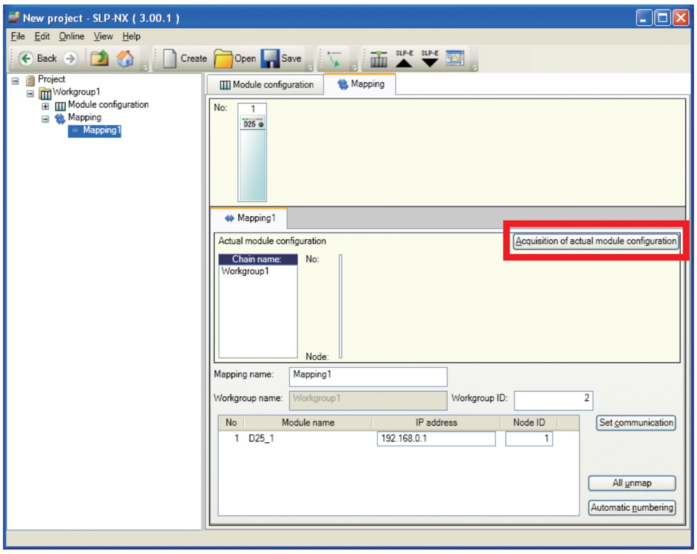
(4) Start the SLP-NX and open the existing project file stored.



(5) Select [Module mapping] in the SLP-NX project window.

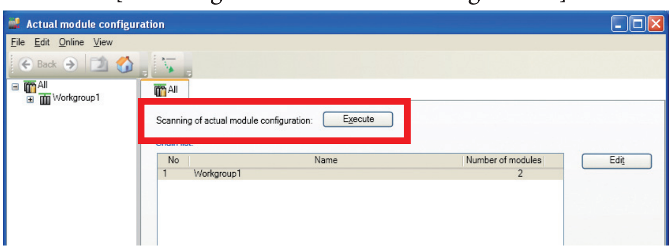


(6) Click [Acquisition of actual module configuration] on the mapping screen.

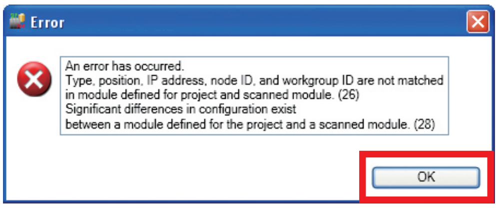


>> The [Actual module configuration] window is displayed.

(7) Open the [Actual module configuration] window, then click the [Execute] button for [Scanning of actual module configuration].

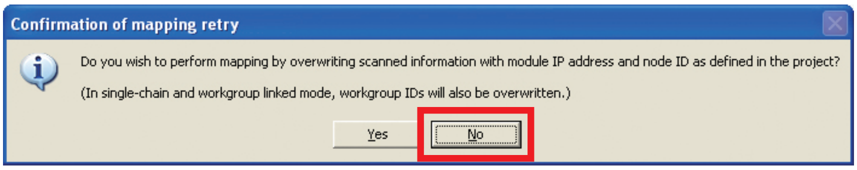


(8) If a scan for the actual module configuration is executed, [Error] is displayed. Click the [OK] button and close the error report.



If the module has all settings as the replacement, [Error] is not displayed, so go to step (11).

(9) When [Confirmation of Mapping Retry] is displayed, click the [No] button.



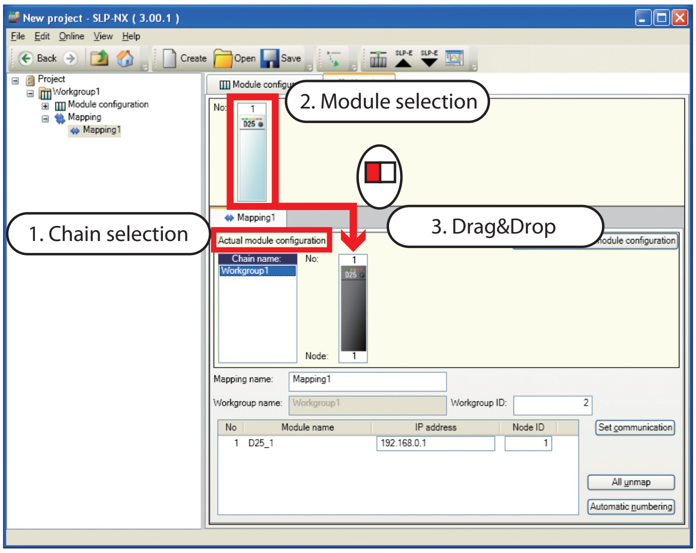
(10) The [Error] message displayed in (8) for confirmation may appear again. Click the [OK] button and close the error report.

(11) Follow the procedure below to copy communication settings, etc. from the mapping information in the project window to the actual module configuration window.

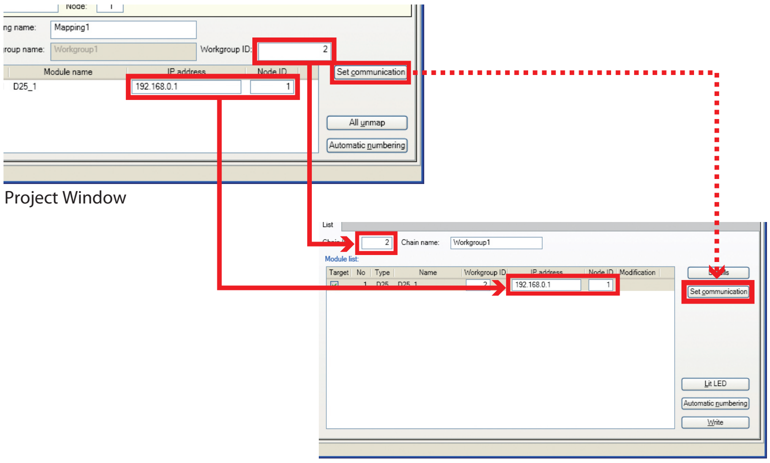
(11)-1 Select the chain of the module to be replaced

(11)-2 Select the module to be mapped

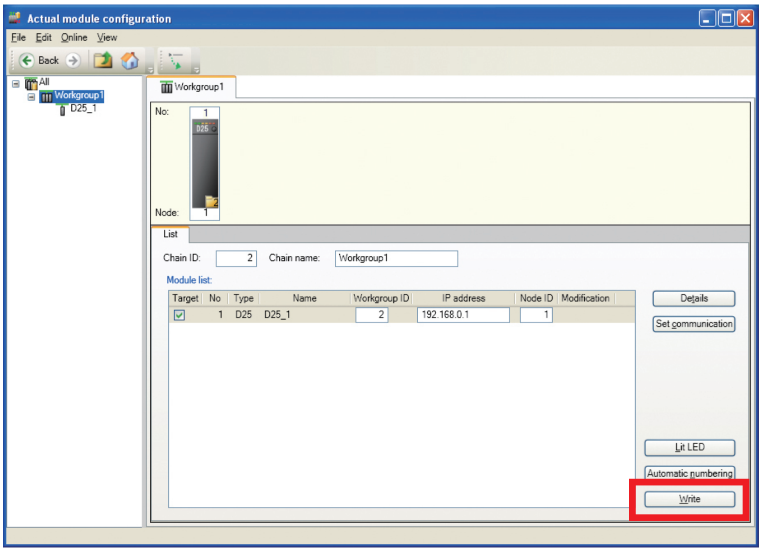
(11)-3 Drag and drop the selected module onto the actual module configuration module.



Consequently, the mapping information will be copied into the actual module configuration window from the project window.

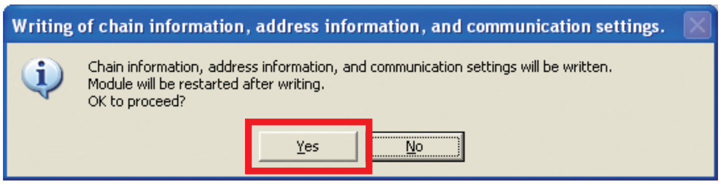


(12) In the actual module configuration window, select the desired chain and modules, and click the [Write] button.

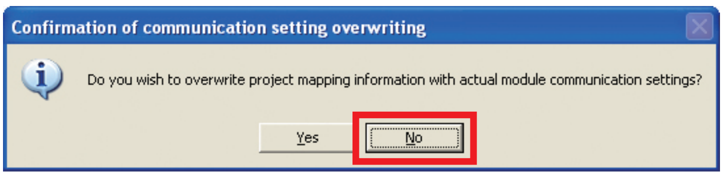


>> The communications settings are written to the modules.

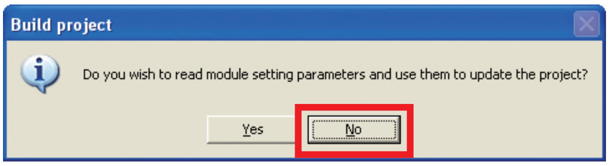
(13) When [Writing of chain information, address information, and communication settings] is displayed, click the [Yes] button.



(14) When [Confirmation of communication setting overwriting] is displayed, click the [No] button.



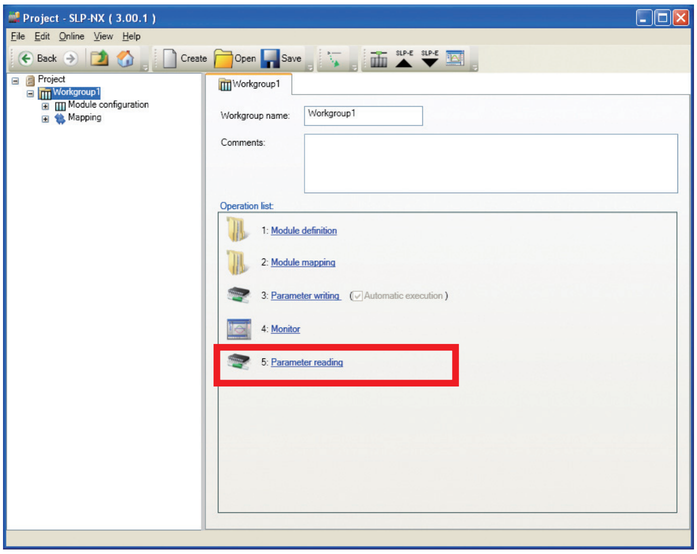
(15) When [Build project] is displayed, click the [No] button.



Handling precautions

- If [Yes] is selected for [Build project], the contents of the project file will be updated to read parameters from the replacement module.

(16) Write parameters to the target modules from the SLP-NX project window



Handling precautions

- Write the settings in one batch to all modules registered in the project if there is any module that has used the data transfer function between modules or has been under control by the supervisor module.

■ Replacing a module except the base

If only the body is replaced, there will be the difference in data between the base and the new body. Accordingly, the following errors will occur.

- AL53: Base/body communication setting mismatch (compatible with ROM versions 3.00 [1_0_1] and later)
- AL54: Base/body model No. mismatch (compatible with ROM versions 3.00 [1_0_1] and later)
- AL88: Base EEPROM error

These errors can be checked by the LED operation indicators.
☞ ■ LED lighting pattern under special conditions (7-4 page)

If an error occurs, execute the base EEPROM recovery. This can eliminate the mismatch between the body and the base.
☞ ■ Base EEPROM recovery using the button (7-4 page)

Subsequently, if using Ethernet communications, follow the procedure described in the following.
☞ ■ Replacing a module including the base (using Ethernet communications) (15-3 page)

If using a loader cable, or Ethernet is available, follow the procedure described in the following.
☞ ■ Replacing a module including the base (using the loader cable) (15-7 page)

15 - 3 Disposal

⚠CAUTION

When discarding the NX-DY1/2, dispose of it as industrial waste, following local regulations.

Chapter 16. SPECIFICATIONS

16 - 1 Specifications

■ Module Specifications

Cycle period:	50 ms

■ Digital Output

Outputs:	16
Output type:	Transistor output (sink type) (NX-DY1)
	Transistor output (source type) (NX-DY2)
Common terminal:	1 common terminal per 8 channels
Isolation between channels:	Channels 1 to 8 isolated from ch. 9 to 16
Contact rated voltage:	24 Vdc
Allowable voltage:	21.6 to 26.4 Vdc
Output allowable current:	100 mAdc max./1 ch
OFF-state leakage current:	1.0 mA max.
ON-state maximum voltage drop:	1.5 V max. (when 24 Vdc and 0.1 A)
Output update cycle:	Same as the cycle period

■ Digital Output External Connection Power Supply Voltage Monitoring

Power supply disconnection detection voltage:	20.4 Vdc max.
Detection terminal:	Channels 1 to 8 (VCC1)

■ Event Output

Output:	1
Output format:	Photo MOS relay output (non-voltage a contact)
Contact rated voltage:	24 Vdc
Applied allowable voltage:	20.4 to 27.6 Vdc
Output allowable current:	100 mAdc max.
Polarity:	None
OFF-state leakage current:	100 μA max.
ON-state maximum voltage drop:	2 V or less (when 24 Vdc and 0.1 A)
Output update cycle:	Same as the cycle period

■ Standard Conditions

Ambient temperature:	23 ±2 °C
Ambient humidity:	60 ±5 % RH (without condensation)
Rated power supply voltage:	24 Vdc
Vibration:	0 m/s^2
Shock:	0 m/s^2
Installation angle:	Reference plane ±3°

■ Operating Conditions

Ambient temperature:	0 to 50 °C (below the installed the module)
Ambient humidity:	10 to 90 % RH (without condensation)
Operation allowable power supply voltage:	21.6 to 26.4 Vdc
Vibration:	0 to 3.2 m/s^2 (10 to 150 Hz for 2 h each in x, y, and z directions)
Shock:	0 to 9.8 m/s^2
Installation angle:	Reference plane ±3°
Dust:	0.3 mg/m^3 max.
Corrosive gas:	None
Altitude:	2000 m max.
Degree of pollution:	2 (equivalent to normal office environments)

■ Transportation and Storage Conditions

Ambient temperature: -20 to +70 °C
Ambient humidity: 5 to 95 % RH (without condensation)
Vibration: 0 to 9.8 m/s² (10 to 150 Hz for 2 h each in x, y, and z directions)
Shock: 0 to 300 m/s² (vertically 3 times while on DIN rail)
Package drop test: Drop height 60 cm (free fall on 1 corner, 3 sides, 6 planes)

■ Others

Memory backup: Nonvolatile memory (EEPROM)
Durability: 100,000 or less
Insulation resistance: 500 Vdc, 20 MΩ max. (between power supply terminals (1) and (2) and I/O terminals insulated from the power supply terminals)
Dielectric strength: 500 Vac for 1 min
(between power supply terminals (1) and (2) and I/O terminals insulated from the power supply terminals)
Power consumption: 4 W max. (under operating conditions)
Operation after power is turned on: Requires approx. 10 s before normal operation begins (under standard conditions)
Power ON inrush current: 20 A max. (under operating conditions)
Case material and color: Modified PPO resin, black
Mass: 200 g max.
Mounting method: DIN rail
Terminal screw tightening torque: 0.6 ±0.1 N·m
Compliant standards: CE (EN61326-1)
UL (UL61010-1)

■ Communication Specifications

- Host communications

Maximum connections: 2
(Total number of sessions of RS-485 and Ethernet communications. Ethernet communications are limited to 1 session if RS-485 is used.)

- Ethernet communication

Protocol: CPL/TCP, MODBUS/TCP

- RS-485 communication

Protocol: Selectable from CPL, MODBUS/ASCII, or MODBUS/RTU
Signal level: RS-485 compliant
Network: Multidrop method (up to 31 slaves per host terminal)
Communication/synchronizing method: Half-duplex, start/stop synchronization
Maximum cable length: 500 m
No. of communication wires: 3-wire system
Terminating resistor: External (150 Ω ±5 %, 1/2 W min.)
Transmission speed: Selectable from 4800, 9600, 19200, 38400, 57600, or 115200 bps
Bit length: 7 or 8 bits
Stop bit: 1 or 2 bits
Parity bit: Even parity, odd parity, or no parity

- Loader communication

Dedicated loader: SLP-NX-J70
SLP-NX-J70PRO
SLP-NX-J71
SLP-NX-J71PRO
Connection cable: USB loader cable included with the loader (the SLP-NX-J70/SLP-NX-J70PRO)

■ Communication Availability

❍: Yes ×: No

Operation type	During startup	Device operation mode RUN	Device operation mode IDLE	Hard failure	Base EEPROM failure (AL88)*1	Base/body model No. mismatch (AL54)*1	Base/body communication setting mismatch (AL53)*1
Host communication	×	❍	❍*2	×	×	×	❍*2
Loader communication			❍	△*3	❍	❍	❍
Data transfer function between modules (sending)			×	×	×	×	×
Data transfer function between modules (receiving)							

*1. Operation mode switches to IDLE mode.

*2. Device operation mode is switched to IDLE while parameters are being written from the loader, but host communication will not operate.

*3. Loader communication via Ethernet is not possible. Communication via the loader jack is possible.

Note

☞ 6-2 Start delay at power ON (page 6-2).

■ Communication Box (Sold Separately, Model No.: NX-CB1_ _ _ _ _ _)

Number of ports: 4

Transmission path type:
- Ethernet ports 1 and 2
  IEEE802.3/IEEE802.3u 10BASE-T/100BASE-TX
  (With auto-negotiation, Auto MDI/MDI-X functions)
- Ethernet ports 3 and 4
  IEEE802.3u 100BASE-TX
  (With Full Duplex, Auto MDI/MDI-X functions. Unless connecting between communication boxes, the auto-negotiation should be enabled for the connected device)

Connector: RJ-45

Cable: UTP cable (4P) Cat 5e or above (straight)
(both ends ANSI/TIA/EIA-568-B)

■ Communication Adapter (Sold Separately, Model No.: NX-CL1_ _ _ _ _ _ , NX-CR1_ _ _ _ _ _)

Number of ports: 1

Transmission path type: IEEE802.3u 100BASE-TX
(With Full Duplex, Auto MDI/MDI-X functions. The auto-negotiation function should be enabled for the connected device)

Connector: RJ-45

Cable: UTP cable (4P) Cat 5e or above (straight)
(both ends ANSI/TIA/EIA-568-B)

■ Terminal Adapter (Sold Separately, Model No.: NX-TL1_ _ _ _ _ _ , NX-TR1_ _ _ _ _ _)

Used as the chain connection ring communications terminal (Ethernet path in the base).

■ Connector Cap (Sold Separately, Model No.: 80700224-010 (male), 80700225-010 (female))

Used to protect the male and female side connectors.

The right connector is male and the left connector is female when the module is viewed from the front.

Quantity: 10

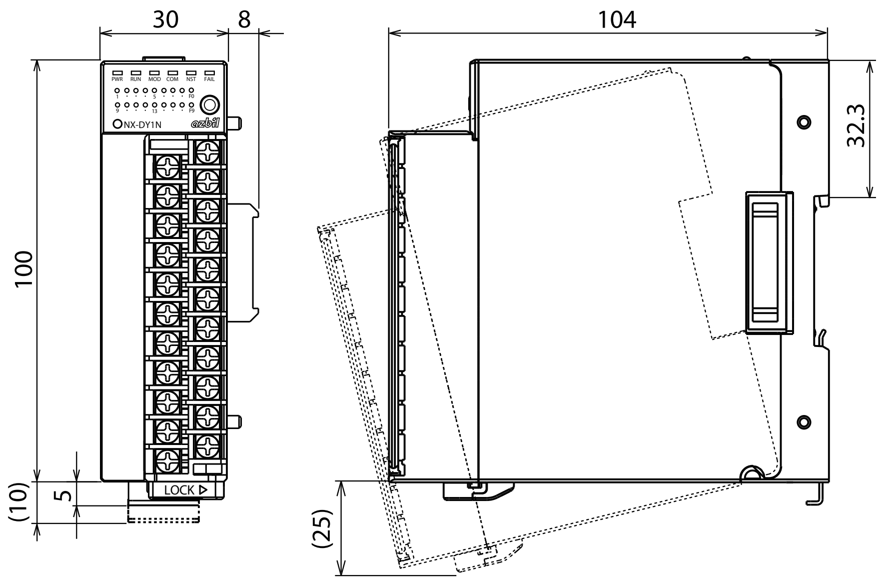
16 - 2 External Dimensions

■ Digital Output Module

The diagram below shows the NX-DY1, which has the same dimensions as the NX-DY2.

● Screw terminal block model

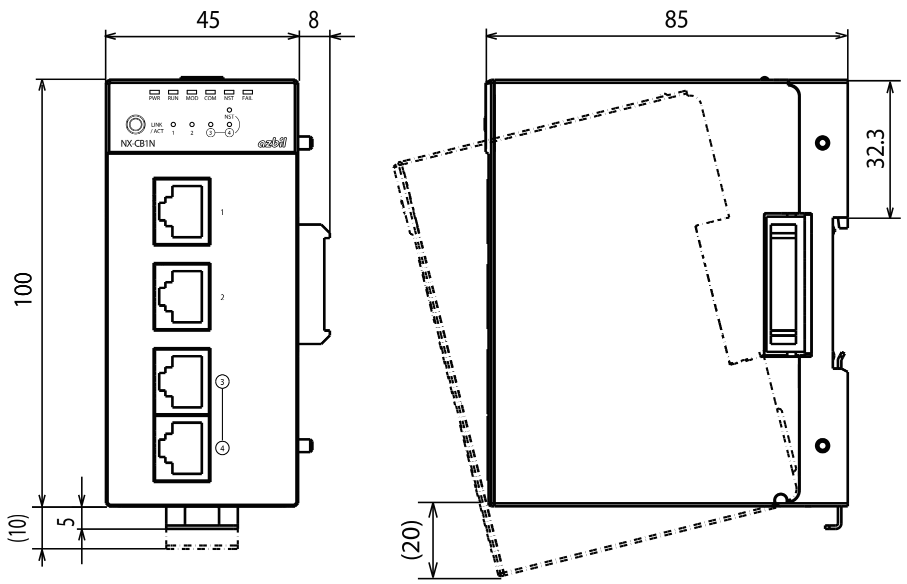
Unit: mm



■ Communication Box

The diagram below shows the NX-CB1N, which has the same dimensions as the NX-CB1R.

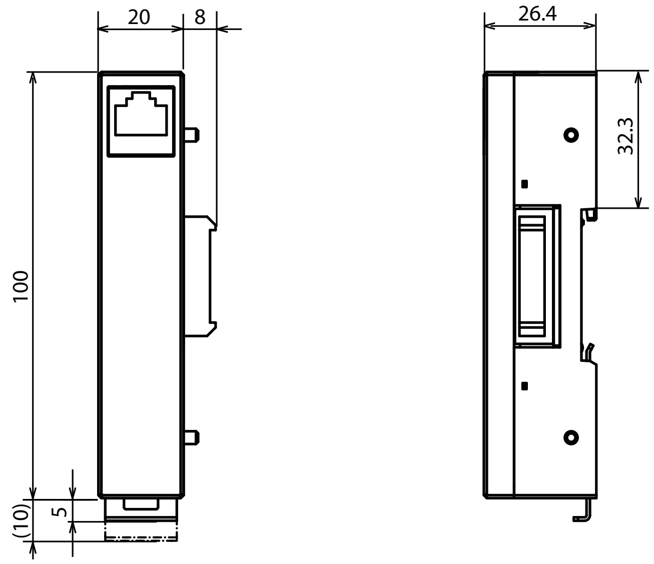
Unit: mm



Communication Adapter

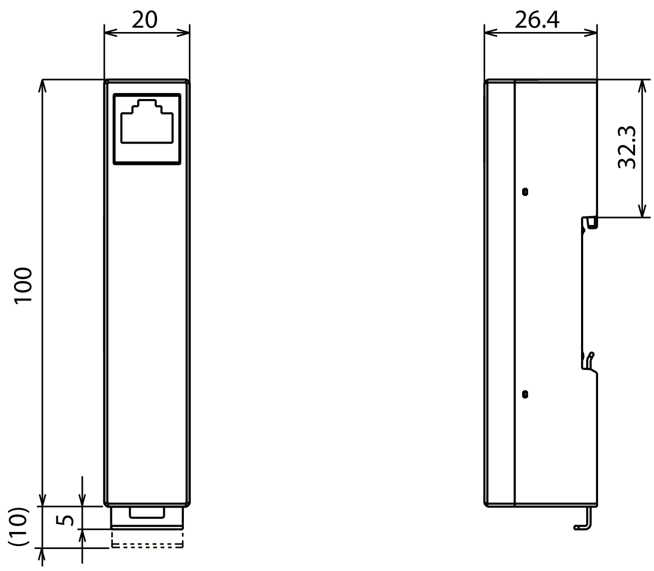
● For left side

Unit: mm



● For right side

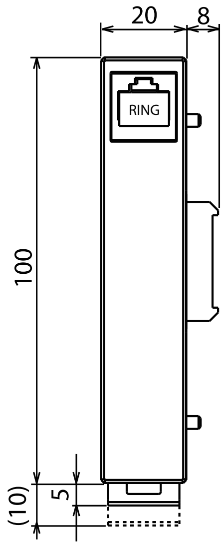
Unit: mm

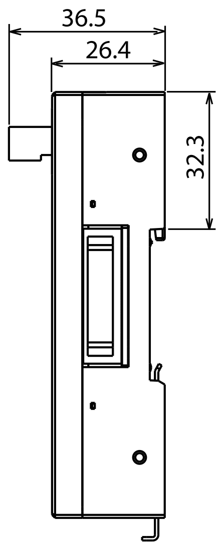


Terminal Adapter

For left side

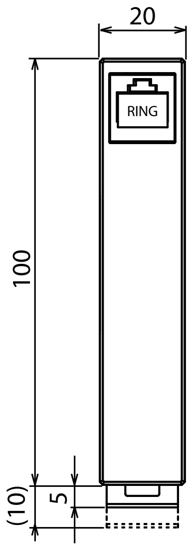
Unit: mm

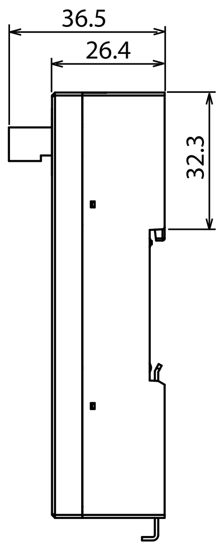




For right side

Unit: mm

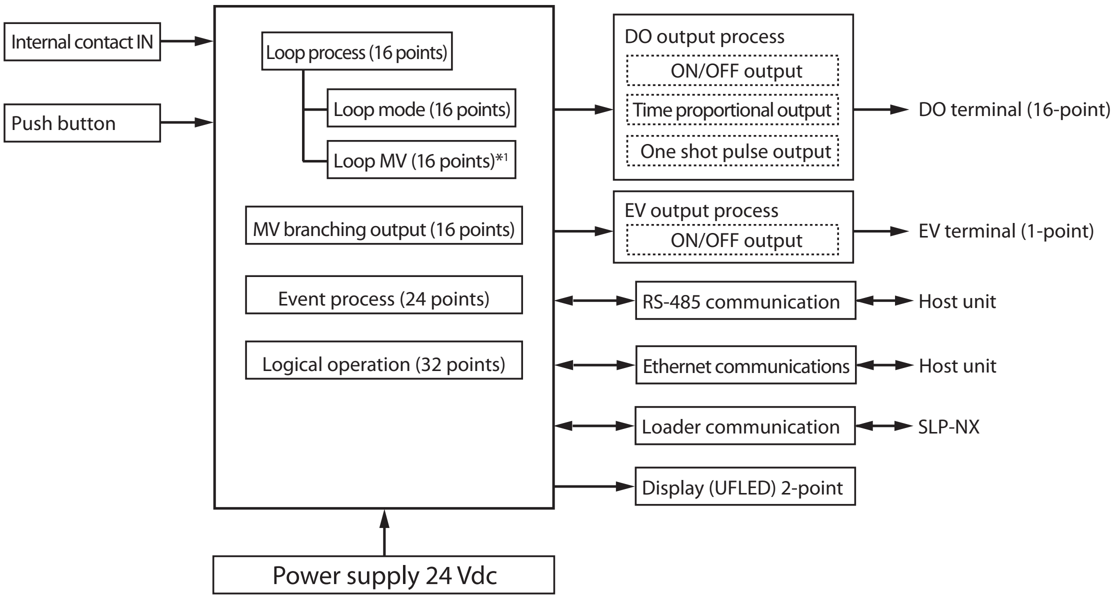




Appendix

Appendix - 1 Function block diagram

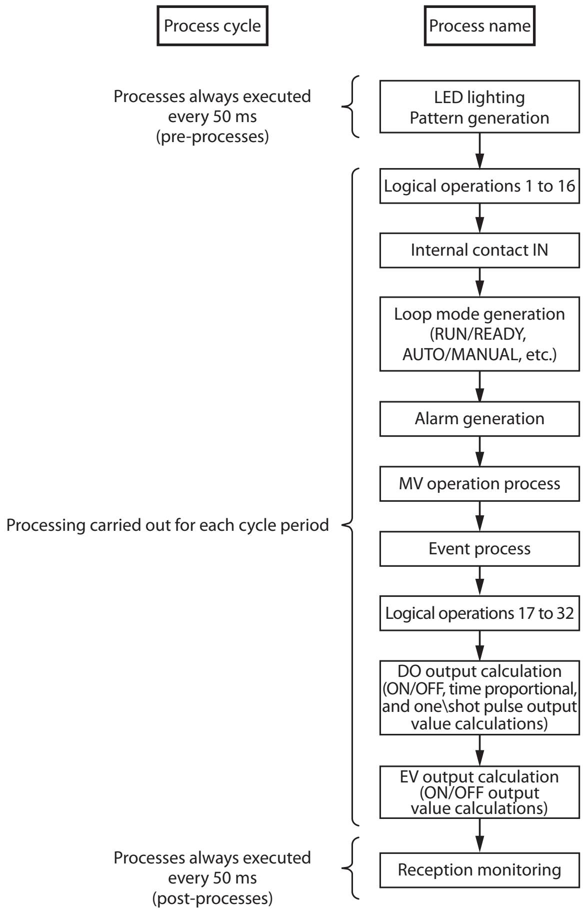
■ Basic Function Block Diagram



*1. ☞ MV Branching Output Process Block Diagram (page Appendix-8).

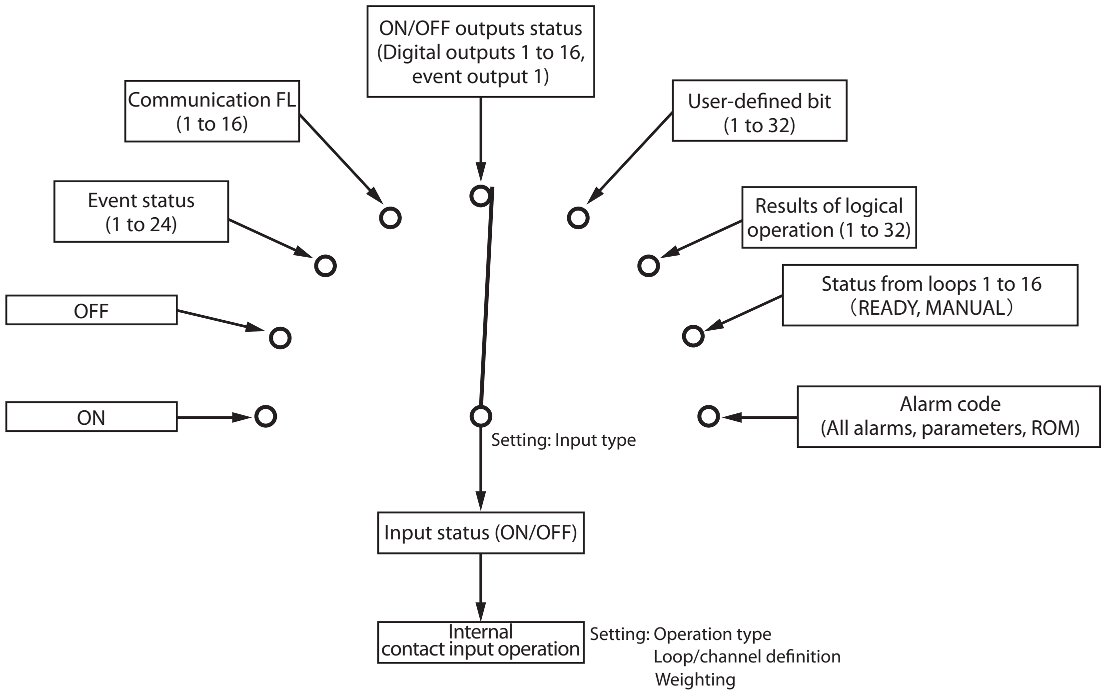
■ Processing Order

Processes are executed in the following sequence.



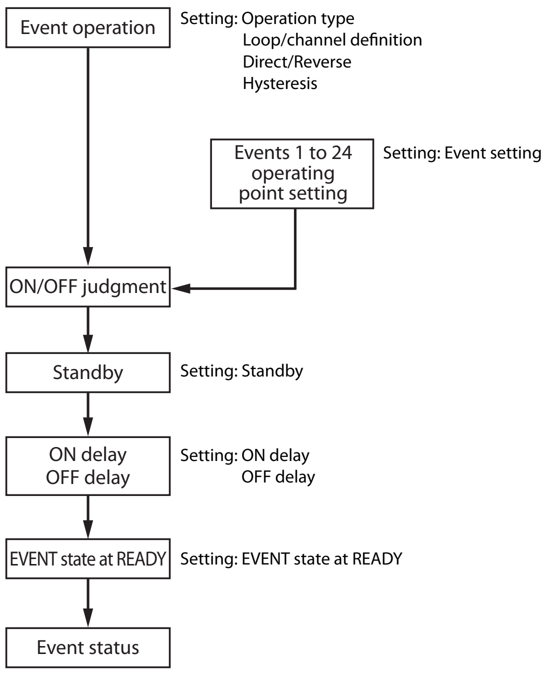
■ Internal Contact Input Process Block Diagram

There are 16 groups of internal contact input processes, and all are the same process. Settings are provided for each group.



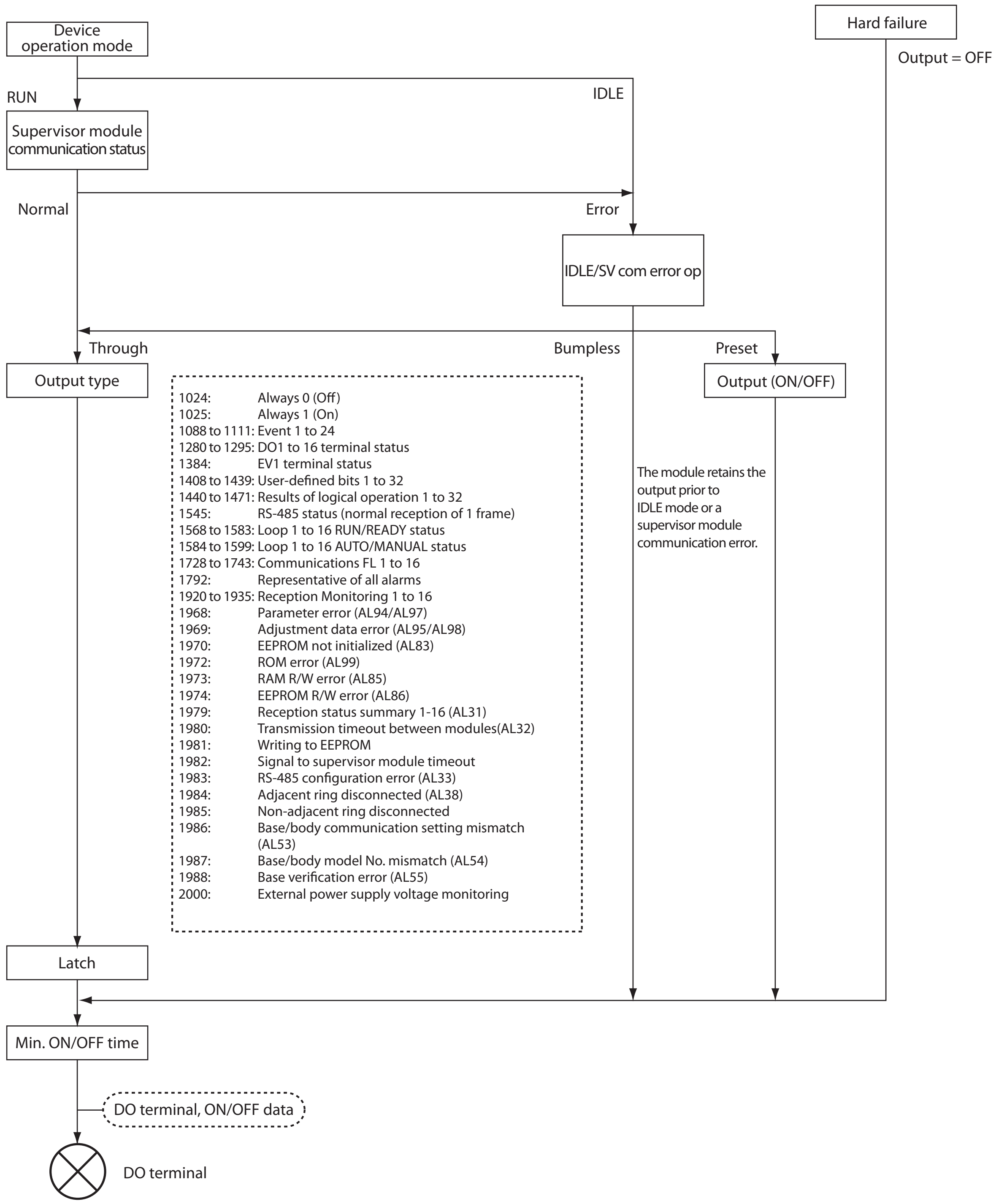
■ Event Process Block Diagram

There are 24 groups of event processes, and all of which are the same process. Settings are provided for each group.



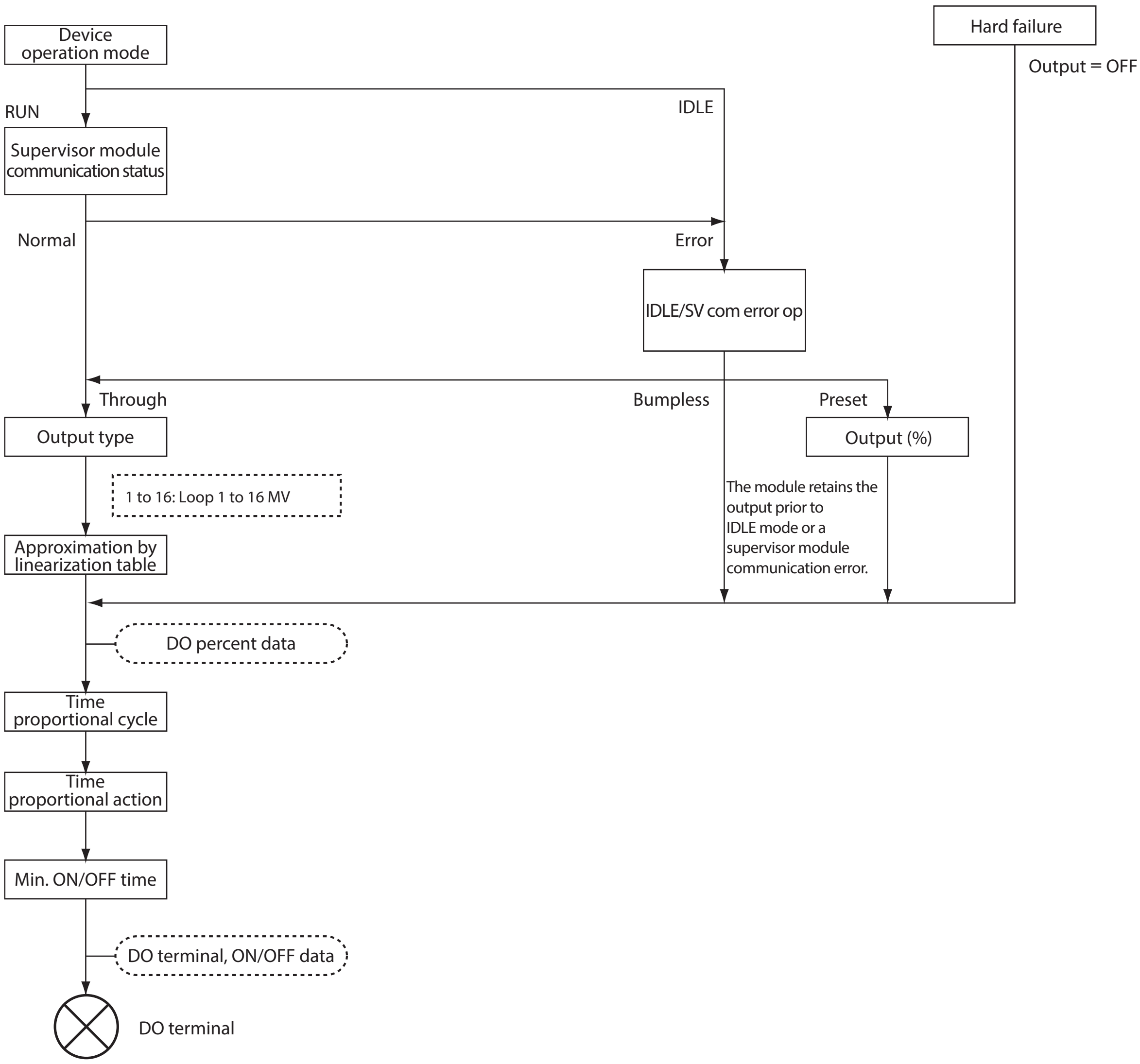
■ DO Output (ON/OFF Output) Process Block Diagram

Process for the digital output.



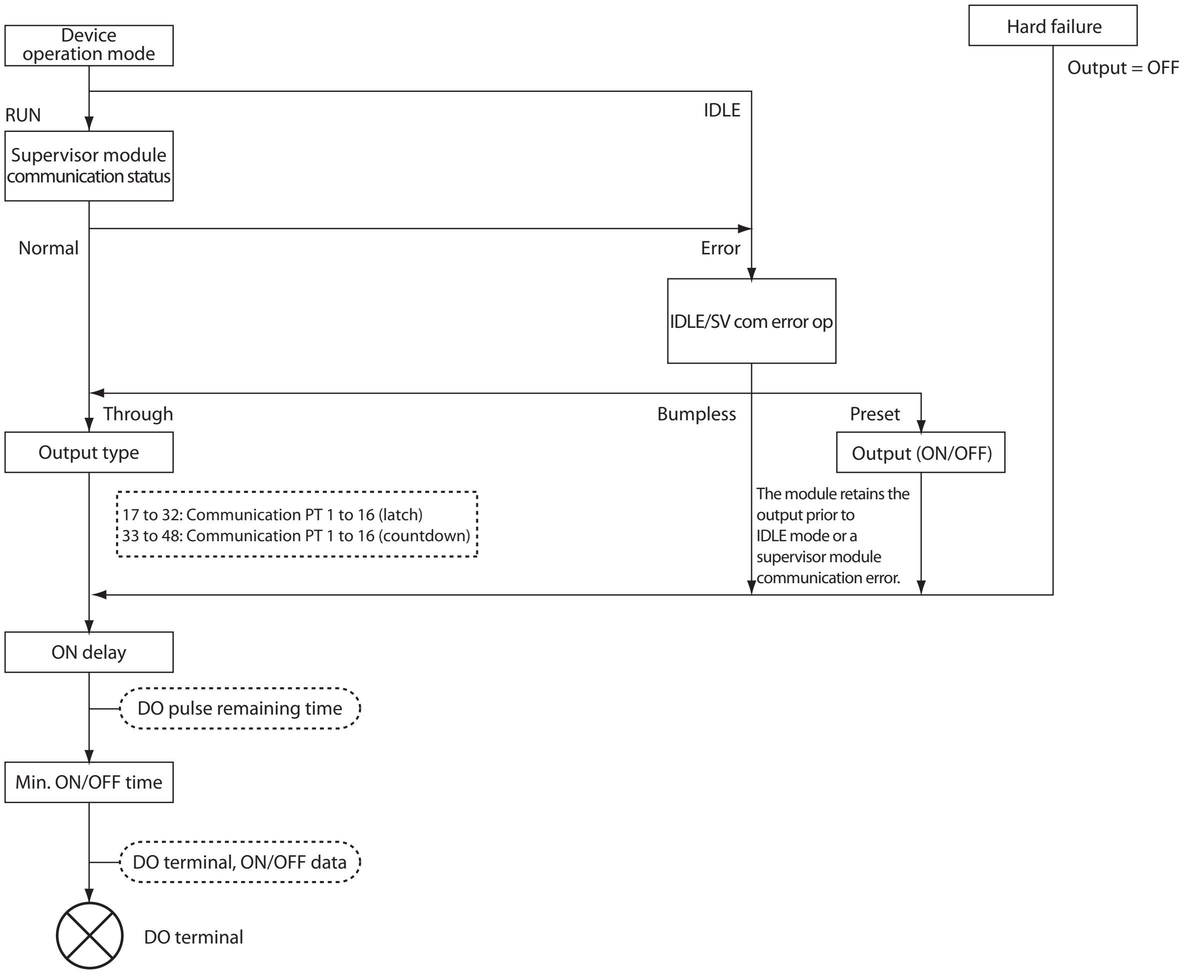
■ DO Output (Time Proportional Output) Process Block Diagram

Process for the digital output.



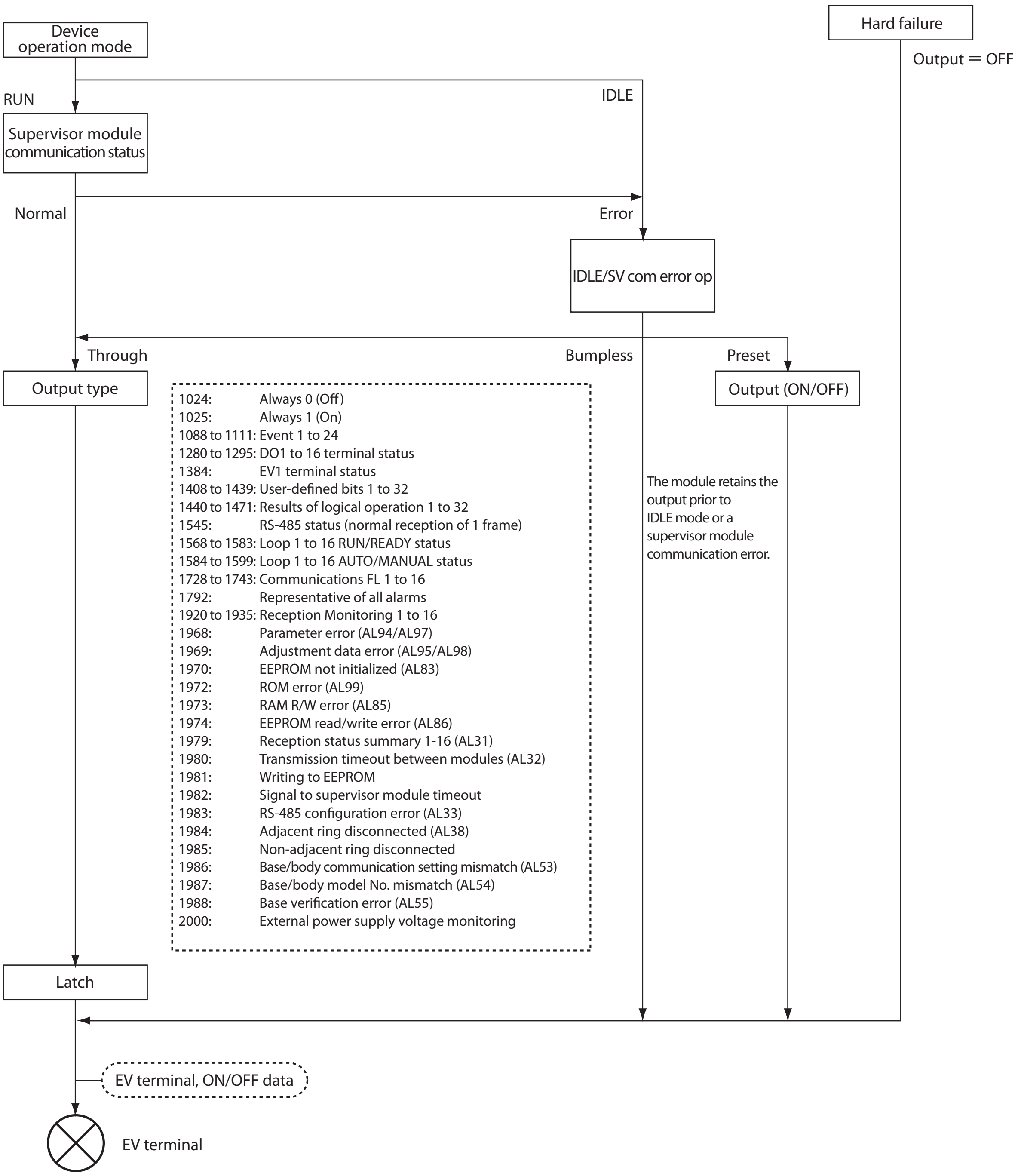
■ DO Output (One Shot Pulse Output) Process Block Diagram

Process for the digital output.

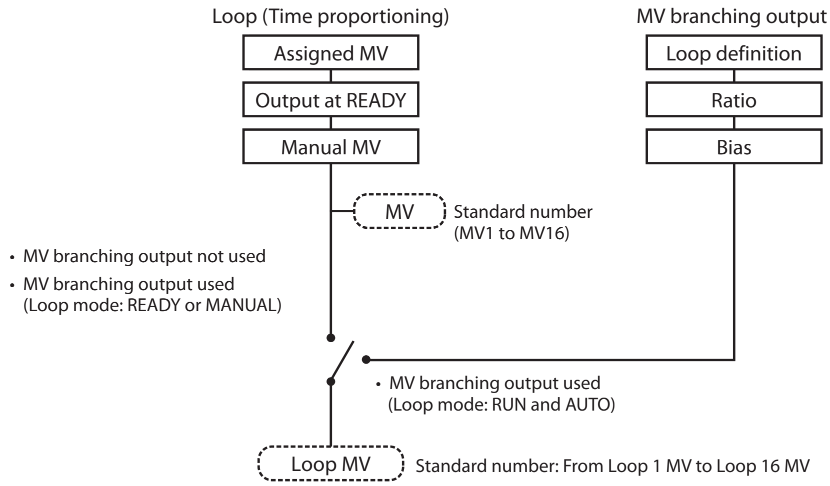


■ EV Output (ON/OFF Output) Process Block Diagram

Process for the event output.



MV Branching Output Process Block Diagram



Appendix - 2 Standard Bits and Standard Numbers

■ Standard Bits

The range of standard bit code is 1024 to 2047.

The numbers not listed below are reserved for system, so do not use them for configuration.

Standard bit code	Meaning of the standard bit code
1024	Always 0 (Off)
1025	Always 1 (On)
1088	Event 1
1089	Event 2
1090	Event 3
1091	Event 4
1092	Event 5
1093	Event 6
1094	Event 7
1095	Event 8
1096	Event 9
1097	Event 10
1098	Event 11
1099	Event 12
1100	Event 13
1101	Event 14
1102	Event 15
1103	Event 16
1104	Event 17
1105	Event 18
1106	Event 19
1107	Event 20
1108	Event 21
1109	Event 22
1110	Event 23
1111	Event 24
1280	DO1 terminal status
1281	DO2 terminal status
1282	DO3 terminal status
1283	DO4 terminal status
1284	DO5 terminal status
1285	DO6 terminal status
1286	DO7 terminal status
1287	DO8 terminal status
1288	DO9 terminal status
1289	DO10 terminal status
1290	DO10 terminal status
1291	DO12 terminal status
1292	DO13 terminal status
1293	DO14 terminal status
1294	DO15 terminal status
1295	DO16 terminal status
1384	EV1 terminal status
1408	User-defined bit 1
1409	User-defined bit 2
1410	User-defined bit 3
1411	User-defined bit 4
1412	User-defined bit 5
1413	User-defined bit 6
1414	User-defined bit 7
1415	User-defined bit 8
1416	User-defined bit 9

Standard bit code	Meaning of the standard bit code
1417	User-defined bit 10
1418	User-defined bit 11
1419	User-defined bit 12
1420	User-defined bit 13
1421	User-defined bit 14
1422	User-defined bit 15
1423	User-defined bit 16
1424	User-defined bit 17
1425	User-defined bit 18
1426	User-defined bit 19
1427	User-defined bit 20
1428	User-defined bit 21
1429	User-defined bit 22
1430	User-defined bit 23
1431	User-defined bit 24
1432	User-defined bit 25
1433	User-defined bit 26
1434	User-defined bit 27
1435	User-defined bit 28
1436	User-defined bit 29
1437	User-defined bit 30
1438	User-defined bit 31
1439	User-defined bit 32
1440	Results of logical operation 1
1441	Results of logical operation 2
1442	Results of logical operation 3
1443	Results of logical operation 4
1444	Results of logical operation 5
1445	Results of logical operation 6
1446	Results of logical operation 7
1447	Results of logical operation 8
1448	Results of logical operation 9
1449	Results of logical operation 10
1450	Results of logical operation 11
1451	Results of logical operation 12
1452	Results of logical operation 13
1453	Results of logical operation 14
1454	Results of logical operation 15
1455	Results of logical operation 16
1456	Results of logical operation 17
1457	Results of logical operation 18
1458	Results of logical operation 19
1459	Results of logical operation 20
1460	Results of logical operation 21
1461	Results of logical operation 22
1462	Results of logical operation 23
1463	Results of logical operation 24
1464	Results of logical operation 25
1465	Results of logical operation 26
1466	Results of logical operation 27
1467	Results of logical operation 28
1468	Results of logical operation 29

Standard bit code	Meaning of the standard bit code
1469	Results of logical operation 30
1470	Results of logical operation 31
1471	Results of logical operation 32
1545	RS-485 status (normal reception of 1 frame)
1568	Loop 1 RUN/READY status
1569	Loop 2 RUN/READY status
1570	Loop 3 RUN/READY status
1571	Loop 4 RUN/READY status
1572	Loop 5 RUN/READY status
1573	Loop 6 RUN/READY status
1574	Loop 7 RUN/READY status
1575	Loop 8 RUN/READY status
1576	Loop 9 RUN/READY status
1577	Loop 10 RUN/READY status
1578	Loop 11 RUN/READY status
1579	Loop 12 RUN/READY status
1580	Loop 13 RUN/READY status
1581	Loop 14 RUN/READY status
1582	Loop 15 RUN/READY status
1583	Loop 16 RUN/READY status
1584	Loop 1 Auto/Manual status
1585	Loop 2 Auto/Manual status
1586	Loop 3 Auto/Manual status
1587	Loop 4 Auto/Manual status
1588	Loop 5 Auto/Manual status
1589	Loop 6 Auto/Manual status
1590	Loop 7 Auto/Manual status
1591	Loop 8 Auto/Manual status
1592	Loop 9 Auto/Manual status
1593	Loop 10 Auto/Manual status
1594	Loop 11 Auto/Manual status
1595	Loop 12 Auto/Manual status
1596	Loop 13 Auto/Manual status
1597	Loop 14 Auto/Manual status
1598	Loop 15 Auto/Manual status
1599	Loop 16 Auto/Manual status
1728	Communication FL1
1729	Communication FL2
1730	Communication FL3
1731	Communication FL4
1732	Communication FL5
1733	Communication FL6
1734	Communication FL7
1735	Communication FL8
1736	Communication FL9
1737	Communication FL10
1738	Communication FL11
1739	Communication FL12
1740	Communication FL13
1741	Communication FL14
1742	Communication FL15

Standard bit code	Meaning of the standard bit code
1743	Communication FL16
1792	Representative of all alarms
1920	Reception monitoring 1
1921	Reception monitoring 2
1922	Reception monitoring 3
1923	Reception monitoring 4
1924	Reception monitoring 5
1925	Reception monitoring 6
1926	Reception monitoring 7
1927	Reception monitoring 8
1928	Reception monitoring 9
1929	Reception monitoring 10
1930	Reception monitoring 11
1931	Reception monitoring 12
1932	Reception monitoring 13
1933	Reception monitoring 14
1934	Reception monitoring 15
1935	Reception monitoring 16
1968	Parameter error (AL94/AL97)
1969	Adjustment data error (AL95/AL98)
1970	EEPROM not initialized (AL83)
1972	ROM error (AL99)
1973	RAM R/W error (AL85)
1974	EEPROM R/W error (AL86)
1979	Reception status summary 1-16 (AL31)
1980	Transmission timeout between modules (AL32)
1981	Writing to EEPROM
1982	SV reception timeout
1983	RS-485 setting error (AL33)
1984	Adjacent ring disconnected (AL38)
1985	Non-adjacent ring disconnected
1986	Base/body communication setting mismatch (AL53)
1987	Base/body model No. mismatch (AL 54)
1988	Base verification error (AL55)
2000	External power supply voltage monitoring

■ Standard Numbers

The range of standard numbers is 2048 to 3071.

Numbers not listed below are reserved for system, so do not use them for configuration.

Standard number	Meaning of standard number
2048	Always 0.0
2111	User-defined number 1
2112	User-defined number 2
2113	User-defined number 3
2114	User-defined number 4
2115	User-defined number 5
2116	User-defined number 6
2117	User-defined number 7
2118	User-defined number 8
2119	User-defined number 9
2120	User-defined number 10
2121	User-defined number 11
2122	User-defined number 12
2123	User-defined number 13
2124	User-defined number 14
2125	User-defined number 15
2126	User-defined number 16
2288	MV 1
2289	MV 2
2290	MV 3
2291	MV 4
2292	MV 5
2293	MV 6
2294	MV 7
2295	MV 8
2296	MV 9
2297	MV 10
2298	MV 11
2299	MV 12
2300	MV 13
2301	MV 14
2302	MV 15
2303	MV 16
2400	Communication MV 1
2401	Communication MV 2
2402	Communication MV 3
2403	Communication MV 4
2404	Communication MV 5
2405	Communication MV 6
2406	Communication MV 7
2407	Communication MV 8
2408	Communication MV 9
2409	Communication MV 10
2410	Communication MV 11
2411	Communication MV 12

Standard number	Meaning of standard number
2412	Communication MV 13
2413	Communication MV 14
2414	Communication MV 15
2415	Communication MV 16
2416	Loop 1 MV
2417	Loop 2 MV
2418	Loop 3 MV
2419	Loop 4 MV
2420	Loop 5 MV
2421	Loop 6 MV
2422	Loop 7 MV
2423	Loop 8 MV
2424	Loop 9 MV
2425	Loop 10 MV
2426	Loop 11 MV
2427	Loop 12 MV
2428	Loop 13 MV
2429	Loop 14 MV
2430	Loop 15 MV
2431	Loop 16 MV
2656	Event 1 timer remaining time
2657	Event 2 timer remaining time
2658	Event 3 timer remaining time
2659	Event 4 timer remaining time
2660	Event 5 timer remaining time
2661	Event 6 timer remaining time
2662	Event 7 timer remaining time
2663	Event 8 timer remaining time
2664	Event 9 timer remaining time
2665	Event 10 timer remaining time
2666	Event 11 timer remaining time
2667	Event 12 timer remaining time
2668	Event 13 timer remaining time
2669	Event 14 timer remaining time
2670	Event 15 timer remaining time
2671	Event 16 timer remaining time
2672	Event 17 timer remaining time
2673	Event 18 timer remaining time
2674	Event 19 timer remaining time
2675	Event 20 timer remaining time
2676	Event 21 timer remaining time
2677	Event 22 timer remaining time
2678	Event 23 timer remaining time
2679	Event 24 timer remaining time

Appendix - 3 Status of the Ring Communication (Net Status)

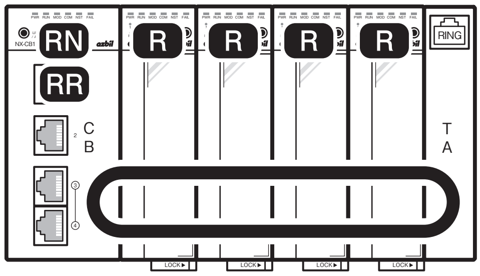
If the module compatible with the ring communication in a chain connection is used, it is possible to check the ring communication status from the host communication other than the [NST] LED.

■ Ring Communication Status

● Normal status

The diagram below shows that ring communication is normally operating in a chain communication.

[NST] LED is turned off when the ring communication is in normal status.



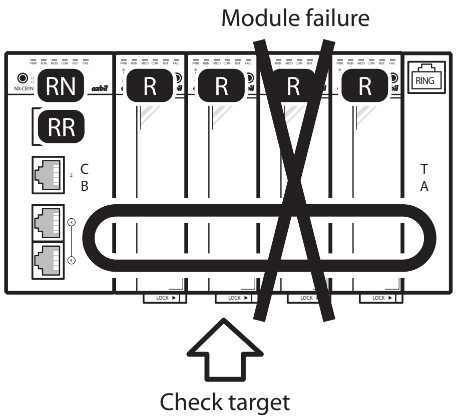
● Adjacent ring disconnected

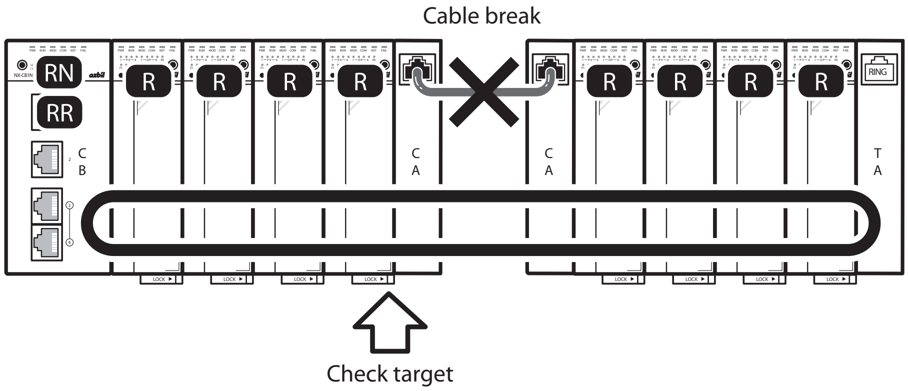
The diagram below shows that ring communication is not possible between the check target module and an adjacent module.

The following are typical causes that make ring communication impossible.

- When the module is turned off
- When the cable connected through a CA is broken
- When there is no CB or TA
- When a module for non-ring communication is connected
- When the hardware is actually broken

[NST] LED will blink slowly if an adjacent ring disconnection occurs.





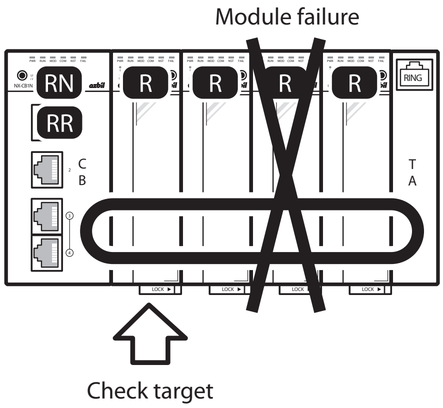
Handling precautions

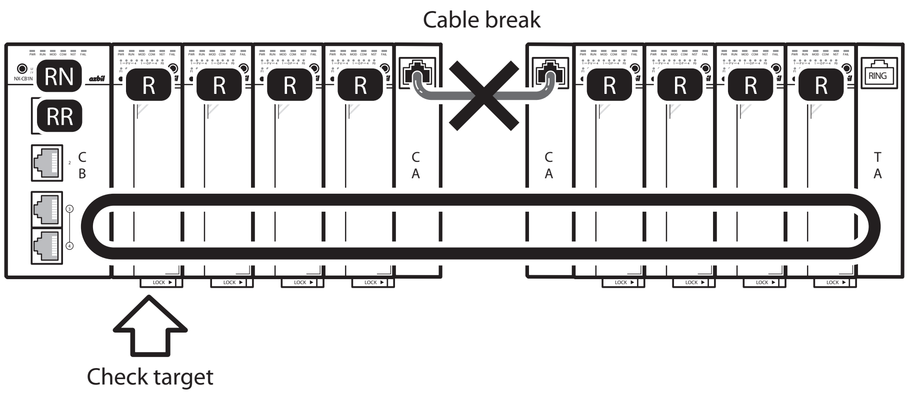
- As shown above, if the cable is broken, the host communication to the linked modules in the right chain is not possible.

● Non-adjacent ring disconnected

The diagram below shows that ring communication is not possible between the check target module and a non-adjacent module.

[NST] LED will blink fast if a non-adjacent ring disconnection occurs.





Handling precautions

- As shown above, if the cable is broken, the host communication to the linked modules in the right chain is not possible.

■ How to Check the Ring Communication Status through Communications

The ring communication status can be checked through the host communication or on the universal monitor of the SLP-NX other than with the [NST] LED located on the the module's front panel.

● Host communication data

The adjacent ring disconnection status and non-adjacent ring disconnection status can be seen by reading the standard bit code.

Target standard bits are shown below.

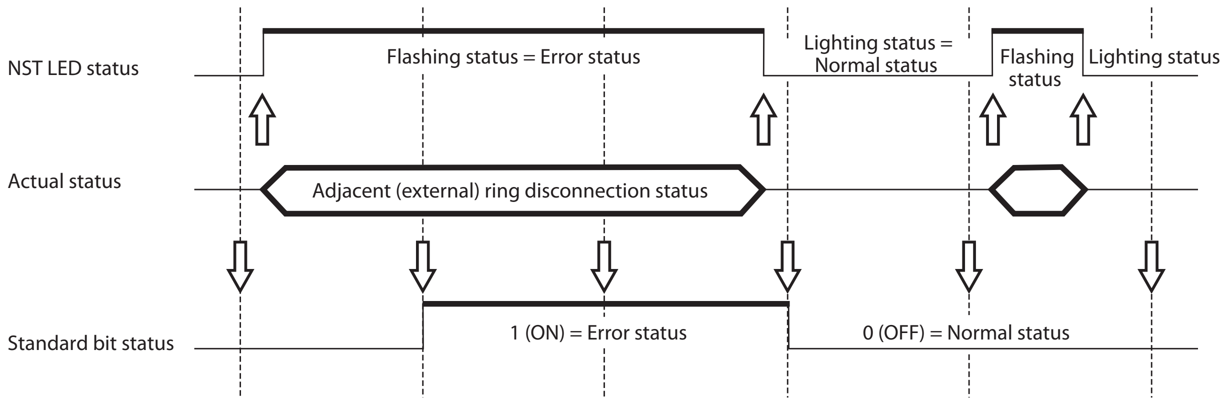
Folder name	Bank name	Item name	Description
Standard bit	Bits (1920-2047)	Adjacent ring disconnected (AL38)	0: Normal 1: Adjacent ring disconnection has occurred
		Non-adjacent ring disconnected	0: Normal 1: Non-adjacent ring disconnection has occurred

● Differences between the [NST] LED and host Communication

The host communication and the [NST] LED take time differently to indicate the ring communication status.

[NST] LED shows the actual status.

Standard bits, which can be read from the host communication, show the actual status at approximately 2 second intervals.



Handling precautions

- Less than 2 seconds of abnormal status may not be applied to the ring communication status, which can be read from the host communication.

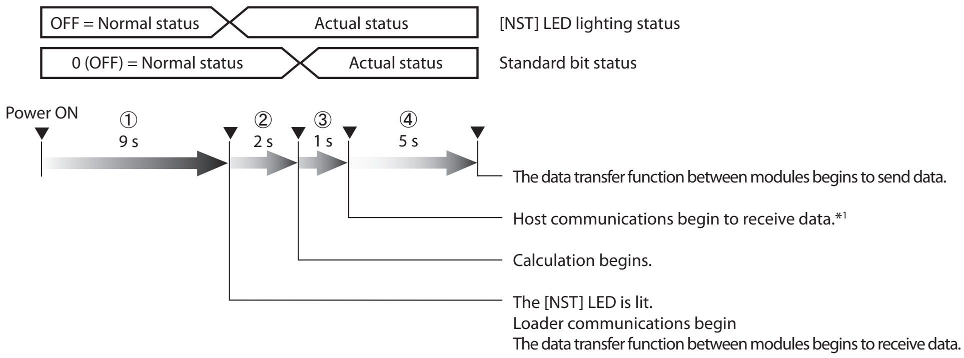
■ Indicating timings of the ring communication status when the power is turned on

When the power is turned on, the module operation to indicate the ring communication status varies depending on the module type.

Handling precautions

- No communication boxes are compatible with this function.

● Controller Module (NX-D15/25/35)

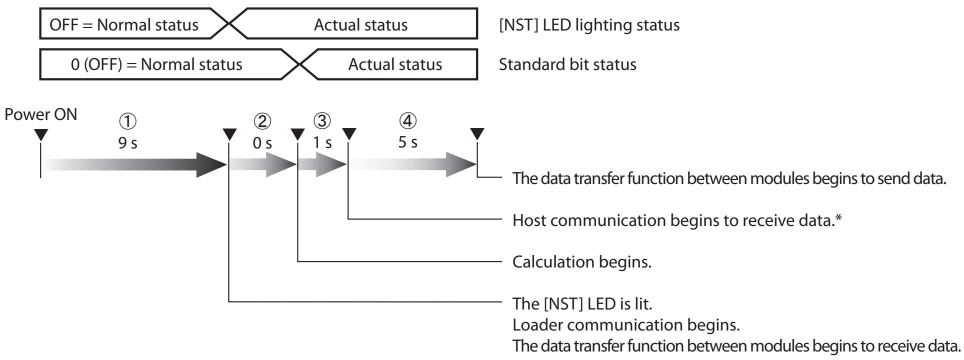


① Startup:	9 seconds (fixed)
② Start delay at power ON:	2 seconds (initial) This setting can be changed.
③ Waiting time for host communications to begin data reception:	1 second (fixed)
④ Waiting time for data transfer between modules:	5 seconds (fixed)*2

*1. In ROM version 1.00 [1_0_0], host communications start after the startup status (1).

*2. In ROM versions 1.00 [1_0_0] and 2.00 [1_0_1], it takes 5 seconds (fixed) to wait for data transfer between modules after the start delay status (2).

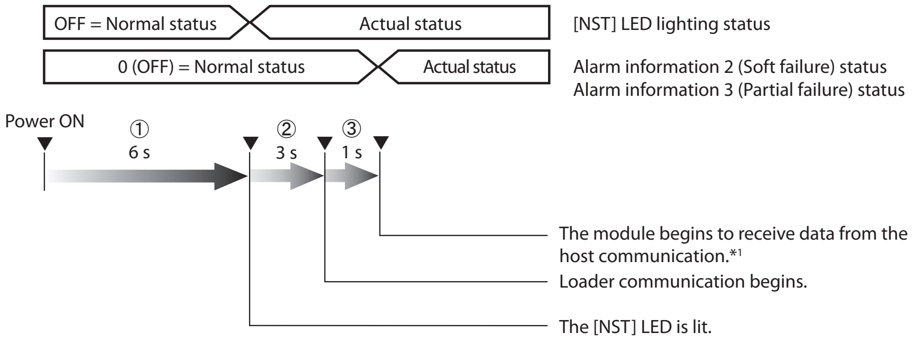
● Digital input/pulse input/digital output module (NX-DX1/DX2, NX-DY1/DY2)



① Startup:	9 seconds (fixed)
② Start delay at power ON:	0 seconds (initial value) This setting can be changed.
③ Waiting time for host communications to begin data reception:	1 second (fixed)
④ Waiting time for data transfer between modules:	5 seconds (fixed)*

* In ROM version 1.00 [2_0_0] of the NX-DX1/DX2, it takes 5 seconds (fixed) to wait for data transfer between modules after the start delay status (2).

● Supervisor Module (NX-S11/12/21)



① Startup: 6 seconds (fixed)
② Restart time: 3 seconds (fixed)
③ Waiting time for host communications to begin data reception: 1 second (variable)

* If the operation mode is RUN, it takes 30 to 60 seconds for the module to establish host communications because communications are firstly established with the IO module under control of the SV.

Appendix - 4 ROM version history

ROM versions are as follows.

■ ROM version 1.00 [1_0_1] (support start date: March 2012)

Revision History of CP-SP-1345E

Printed	Edn.	Revised pages	Description
Jun. 2014	**1**		

Terms and Conditions

We would like to express our appreciation for your purchase and use of Azbil Corporation's products.
You are required to acknowledge and agree upon the following terms and conditions for your purchase of Azbil Corporation's products (system products, field instruments, control valves, and control products), unless otherwise stated in any separate document, including, without limitation, estimation sheets, written agreements, catalogs, specifications and instruction manuals.

1. Warranty period and warranty scope

1.1 Warranty period

Azbil Corporation's products shall be warranted for one (1) year from the date of your purchase of the said products or the delivery of the said products to a place designated by you.

1.2 Warranty scope

In the event that Azbil Corporation's product has any failure attributable to azbil during the aforementioned warranty period, Azbil Corporation shall, without charge, deliver a replacement for the said product to the place where you purchased, or repair the said product and deliver it to the aforementioned place.
Notwithstanding the foregoing, any failure falling under one of the following shall not be covered under this warranty:

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(2) Failure caused for other reasons than Azbil Corporation's product;
(3) Failure caused by any modification or repair made by any person other than Azbil Corporation or Azbil Corporation's subcontractors;
(4) Failure caused by your use of Azbil Corporation's product in a manner not conforming to the intended usage of that product;
(5) Failure that the state-of-the-art at the time of Azbil Corporation's shipment did not allow Azbil Corporation to predict; or
(6) Failure that arose from any reason not attributable to Azbil Corporation, including, without limitation, acts of God, disasters, and actions taken by a third party.

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2. Ascertainment of suitability

You are required to ascertain the suitability of Azbil Corporation's product in case of your use of the same with your machinery, equipment, etc. (hereinafter referred to as "Equipment") on your own responsibility, taking the following matters into consideration:

(1) Regulations and standards or laws that your Equipment is to comply with.
(2) Examples of application described in any documents provided by Azbil Corporation are for your reference purpose only, and you are required to check the functions and safety of your Equipment prior to your use.
(3) Measures to be taken to secure the required level of the reliability and safety of your Equipment in your use
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 You are required to provide your Equipment with safety design such as fool-proof design, *1 and fail-safe design*2 (anti-flame propagation design, etc.), whereby preventing any occurrence of physical injuries, fires, significant damage, and so forth. Furthermore, fault avoidance, *3 fault tolerance,*4 or the like should be incorporated so that the said Equipment can satisfy the level of reliability and safety required for your use.

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 *3. Avoidance of device failure by using highly reliable components, etc.
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In addition,
you are required to conduct a consultation with our sales representative and understand detail specifications, cautions for operation, and so forth by reference to catalogs, specifications, instruction manual, etc. in case that you intend to use azbil product for any purposes specified in (1) through (6) below.
Moreover, you are required to provide your Equipment with fool-proof design, fail-safe design, anti-flame propagation design, fault avoidance, fault tolerance, and other kinds of protection/safety circuit design on your own responsibility to ensure reliability and safety, whereby preventing problems caused by failure or nonconformity.

(1) For use under such conditions or in such environments as not stated in technical documents, including catalogs, specification, and instruction manuals
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 * Nuclear energy/radiation related facilities
 [For use outside nuclear energy controlled areas] [For use of Azbil Corporation's Limit Switch For Nuclear Energy]
 * Machinery or equipment for space/sea bottom
 * Transportation equipment
 [Railway, aircraft, vessels, vehicle equipment, etc.]
 * Antidisaster/crime-prevention equipment

* Burning appliances
* Electrothermal equipment
* Amusement facilities
* Facilities/applications associated directly with billing

(3) Supply systems such as electricity/gas/water supply systems, large-scale communication systems, and traffic/air traffic control systems requiring high reliability
(4) Facilities that are to comply with regulations of governmental/public agencies or specific industries
(5) Machinery or equipment that may affect human lives, human bodies or properties
(6) Other machinery or equipment equivalent to those set forth in items (1) to (5) above which require high reliability and safety

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Although acceleration of the above situation varies depending on the conditions or environment of use of the products, you are required not to use any Azbil Corporation's products for a period exceeding ten (10) years unless otherwise stated in specifications or instruction manuals.

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For those parts that will reach the end of their life due to aged deterioration, recommended replacement cycles are prescribed. You are required to replace parts based on such recommended replacement cycles.

6. Other precautions

Prior to your use of Azbil Corporation's products, you are required to understand and comply with specifications (e.g., conditions and environment of use), precautions, warnings/cautions/notices as set forth in the technical documents prepared for individual Azbil Corporation's products, such as catalogs, specifications, and instruction manuals to ensure the quality, reliability, and safety of those products.

7. Changes to specifications

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For inquires or information on specifications as you may need to check, please contact our branch offices or sales offices, or your local sales agents.

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Accordingly, a separate fee will be charged in any of the following cases:

(1) Installation, adjustment, guidance, and attendance at a test run
(2) Maintenance, inspection, adjustment, and repair
(3) Technical guidance and technical education
(4) Special test or special inspection of a product under the conditions specified by you

Please note that we cannot provide any services as set forth above in a nuclear energy controlled area (radiation controlled area) or at a place where the level of exposure to radiation is equivalent to that in a nuclear energy controlled area.

AAS-511A-014-04

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Specifications are subject to change without notice. (09)

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