3 SPECIFICATIONS

This chapter describes the specifications of the network interface module.

3.1 General Specifications

This section describes the general specifications of the network interface module.

Item	Specifications				
Operating ambient temperature	0 to 55℃				
Storage ambient temperature	-25 to 75℃				
Operating ambient humidity	5 to 95%RH, non-condensing				
Storage ambient humidity					
Vibration resistance	—	Frequency	Constant acceleration	Half amplitude	Number of sweeps
	Under intermittent vibration	5 to 8.4Hz	—	3.5mm	10 times each in the X, Y, and Z directions
		8.4 to 150Hz	9.8m/s²	—	
	Under continuous vibration	5 to 8.4Hz	—	1.75mm	—
		8.4 to 150Hz	4.9m/s²	—	
Shock resistance	147m/s², 3 times each in the X, Y, and Z directions				
Operating atmosphere	No corrosive gases				
Operating altitude*1	0 to 2000m				
Installation location	Inside a control panel*2				
Overvoltage category*3	Ⅱ or lower				
Pollution degree*4	2 or less				

*1 Do not use or store the module under pressure higher than the atmospheric pressure at an altitude of 0 meters. Doing so may cause malfunction. When using the module under pressures, please consult your local Mitsubishi Electric Engineering representative.

*2 Install the module in a control panel that satisfies IP20 protection classification and Type 1 or higher level specified in UL 50. Design the control panel suitable for the environment if necessary.

*3 This indicates the assumption that the equipment is connected to a power distribution system, ranging from a public electrical power distribution network down to machinery within premises. Category Ⅱ applies to equipment for which electrical power is supplied from fixed facilities. The surge voltage withstand level for the equipment with up to the rated voltage of 300V is 2500V.

*4 This index indicates the degree to which conductive material is generated in terms of the environment in which the equipment is used. In pollution degree 2, only non-conductive pollution occurs. A temporary conductivity caused by condensation must be expected occasionally.

3.2 Ethernet Communication Specifications

Item			Network interface module (digital input/output)	Network interface module (analog input/output)
Network specifications	CC-Link IE TSN	Communication speed	1Gbps/100Mbps	
		Communication mode	1000BASE-T full-duplex, 100BASE-TX full-duplex	
		Station type	Remote station	
		Authentication Class	Authentication Class B	
		Topology	Line topology, star topology, or mixture of star topology and line topology	
		Number of link points	RX/RY: 16 points RWr/RWw: 16 points	RX/RY: 32 points RWr/RWw: 32 points
	CC-Link IE Field Network	Communication speed	1Gbps	
		Station type	Remote device station	
		Topology	Line topology, star topology, mixture of star topology and line topology, or ring topology	
		Number of link points	RX/RY: 16 points RWr/RWw: 16 points	RX/RY: 32 points RWr/RWw: 32 points
	CC-Link IE Field Network Basic	Communication speed	100Mbps	
		Communication mode	100BASE-TX full-duplex	
		Station type	Slave station	
		Topology	Star topology	
		Communication method	UDP/IP	
		Number of connected modules	Refer to the manual for the master station used.	
		Number of occupied stations	1	
		Number of link points	RX/RY: 64 points RWr/RWw: 32 points	
		Reference response time	1ms	
	SLMP	Communication speed	100Mbps	
		Communication mode	100BASE-TX full-duplex	
		Station type	Server	
		Topology	Star topology	
		Communication format	Compliant with IEEE 802.3 (100BASE-TX)	
		Communication method	UDP/IP	
		Communications port	45237	
		Frame type	3E frame	
		Communication data code	Binary	
	MODBUS/TCP (FA3-TH1M16XC, FA3-TH1M16Y, FA3-TH1M16YE, FA3-AT1M8X, FA3-AT1M8Y)	Communication speed	100Mbps/10Mbps (auto-negotiation)	
		Communication mode	100BASE-TX full-duplex/half-duplex, 10BASE-T full-duplex/half-duplex	
		Device type	MODBUS/TCP slave device	
		Topology	Star topology	
		Communication format	Compliant with IEEE 802.3 (10BASE-T/100BASE-TX) standard	
		Communication method	TCP/IP	
		Communication port	502	
		Number of TCP connections	Up to two connections	
Interface			RJ45 connector (AUTO MDI/MDI-X)	
Maximum frame size			1518 bytes	
Maximum segment length			100m For the length between hubs, check with the manufacturer of the switching hub to be used.	
Number of cascade connections			Check with the manufacturer of the switching hub to be used.	
IP version			IPv4	

3.3 Performance Specifications

Network interface module (digital input)

Item		FA3-TH1T16XC, FA3-TH1M16XC
Number of input points		16 points
Rated input voltage		24VDC (allowable voltage range: 21.6 to 26.4VDC)
Isolation method		Photocoupler
Maximum number of simultaneous input points		100%
Input response time		*1
Input Format		Positive/negative common shared type
Withstand voltage		500VAC for 1 minute across DC external terminal batch ground
Isolation resistance		500VDC across DC external terminal batch ground 10MΩ or higher (isolation resistance tester)
External interface	Communication part	RJ45 connector
	Module power supply part	Terminal block for module power supply and FG (two-piece spring clamp terminal block)
Applicable DIN rail		☞ Page 86 DIN rail
Connection cable		☞ Page 92 Applicable Ethernet cables
Terminal block for module power supply and FG*2	Applicable wire size	☞ Page 89 Wire
	Applicable solderless terminal (ferrule solderless terminal)	☞ Page 89 Terminal processing of wires
Module power supply*3	Voltage	24VDC (ripple ratio: within 5%) (allowable voltage range: 20.4 to 28.8VDC)
	Current	0.11A
External dimensions	H (high)	105mm (Projection parts are not included.)
	W (width)	40mm
	D (depth)	70mm (Projection parts are not included.)
Weight		160g

*1 The time can be changed with the input response time setting function. (☞ Page 114 Input response time setting function)

Timing	Set value (default: 1ms)							
	0ms	0.2ms	1ms	1.5ms	5ms	10ms	20ms	70ms
OFF → ON (MAX)	0.1ms	0.2ms	1ms	1.5ms	5ms	10ms	20ms	70ms
ON → OFF (MAX)	0.4ms	0.5ms	1ms	1.5ms	5ms	10ms	20ms	70ms

*2 Insert one terminal into one insertion opening for wiring to the terminal block. Failure to do so can cause connection failure.

*3 Use the power supply that meets the following requirements: LVLC (voltage and current limited circuit) of UL 508, SELV (Safety Extra-Low Voltage) circuit, LIM (Limited Energy Circuit).

Network interface module (digital output)

Item		FA3-TH1T16Y, FA3-TH1M16Y	FA3-TH1T16YE, FA3-TH1M16YE
Number of output points		16 points	
Isolation method		Photocoupler	
Rated load voltage		24VDC (allowable voltage range: 21.6 to 26.4VDC)	
Output response time	OFF → ON	0.5ms or less	
	ON → OFF	1.5ms or less	
Output type		Sink type	Source type
Surge suppressor		Zener diode	
Withstand voltage		500VAC for 1 minute across DC external terminal batch ground	
Isolation resistance		500VDC across DC external terminal batch ground 10MΩ or higher (isolation resistance tester)	
External interface	Communication part	RJ45 connector	
	Module power supply part	Terminal block for module power supply and FG (two-piece spring clamp terminal block)	
Applicable DIN rail		☞ Page 86 DIN rail	
Connection cable		☞ Page 92 Applicable Ethernet cables	
Terminal block for module power supply and FG*1	Applicable wire size	☞ Page 89 Wire	
	Applicable solderless terminal (ferrule solderless terminal)	☞ Page 89 Terminal processing of wires	
Module power supply*2	Voltage	24VDC (ripple ratio: within 5%) (allowable voltage range: 20.4 to 28.8VDC)	
	Current	0.12A	
External dimensions	H (high)	105mm (Projection parts are not included.)	
	W (width)	40mm	
	D (depth)	70mm (Projection parts are not included.)	
Weight		160g	

*1 Insert one terminal into one insertion opening for wiring to the terminal block. Failure to do so can cause connection failure.

*2 Use the power supply that meets the following requirements: LVLC (voltage and current limited circuit) of UL 508, SELV (Safety Extra-Low Voltage) circuit, LIM (Limited Energy Circuit).

Network interface module (analog input)

Item		FA3-AT1T8X, FA3-AT1M8X
Analog input	Voltage	1 to 5VDC
Digital output		-384 to 16383
I/O characteristics*1	Analog input range	1 to 5V
	Digital output (practical range)	0 to 16000
Accuracy*1 (accuracy for the maximum digital output value)	Ambient temperature: 0 to 55℃	±0.3% (±48 digit)
	Ambient temperature: 25±5℃	±0.1% (±16 digit)
	Maximum resolution	0.25mV
Maximum conversion speed		1ms/channel
Absolute maximum input		Voltage: ±15V
Number of analog input points		8 channels/module
Isolation	Isolation method	Between communication system terminal and all analog input terminals: Digital isolator Between power supply system terminal and all analog input terminals: Transformer isolation Between analog input channels: Non-isolation
	Withstand voltage	500VAC for 1 minute
	Isolation resistance	5MΩ or higher (500VDC isolation resistance tester)
External interface	Communication part	RJ45 connector
	Module power supply part	Terminal block for module power supply and FG (two-piece spring clamp terminal block)
Applicable DIN rail		☞ Page 86 DIN rail
Connection cable		☞ Page 92 Applicable Ethernet cables
Terminal block for module power supply and FG*2	Applicable wire size	☞ Page 89 Wire
	Applicable solderless terminal (ferrule solderless terminal)	☞ Page 89 Terminal processing of wires
Module power supply*3	Voltage	24VDC (ripple ratio: within 5%) (allowable voltage range: 20.4 to 28.8VDC)
	Current	0.14A
External dimensions	H (high)	105mm (Projection parts are not included.)
	W (width)	40mm
	D (depth)	70mm (Projection parts are not included.)
Weight		160g

*1 For the I/O conversion characteristics and accuracy, refer to the following.
☞ Page 23 I/O conversion characteristics
☞ Page 25 Conversion accuracy

*2 Insert one terminal into one insertion opening for wiring to the terminal block. Failure to do so can cause connection failure.

*3 Use the power supply that meets the following requirements: LVLC (voltage and current limited circuit) of UL 508, SELV (Safety Extra-Low Voltage) circuit, LIM (Limited Energy Circuit).

Network interface module (analog output)

Item		FA3-AT1T8Y, FA3-AT1M8Y
Digital input		0 to 16000
Analog output	Voltage	1 to 5VDC (external load resistance: 10kΩ or more)
I/O characteristics*1	Digital input value (practical range)	0 to 16000
	Analog output range	1 to 5V
Accuracy*1 (accuracy for the maximum analog output value)	Ambient temperature: 0 to 55℃	±0.3% (±12mV)
	Ambient temperature: 25±5℃	±0.1% (±4mV)
	Maximum resolution	0.25mV
Maximum conversion speed		1ms/channel
Output short circuit protection		Available
Maximum output		+5V
Number of analog output points		8 channels/module
Isolation	Isolation method	Between communication system terminal and all analog output terminals: Digital isolator Between power supply system terminal and all analog output terminals: Transformer isolation Between analog output channels: Non-isolation
	Withstand voltage	500VAC for 1 minute
	Isolation resistance	5MΩ or higher (500VDC isolation resistance tester)
External interface	Communication part	RJ45 connector
	Module power supply part	Terminal block for module power supply and FG (two-piece spring clamp terminal block)
Applicable DIN rail		☞ Page 86 DIN rail
Connection cable		☞ Page 92 Applicable Ethernet cables
Terminal block for module power supply and FG*2	Applicable wire size	☞ Page 89 Wire
	Applicable solderless terminal (ferrule solderless terminal)	☞ Page 89 Terminal processing of wires
Module power supply*3	Voltage	24VDC (ripple ratio: within 5%) (allowable voltage range: 20.4 to 28.8VDC)
	Current	0.14A
External dimensions	H (high)	105mm (Projection parts are not included.)
	W (width)	40mm
	D (depth)	70mm (Projection parts are not included.)
Weight		160g

*1 For the I/O conversion characteristics and accuracy, refer to the following.
☞ Page 23 I/O conversion characteristics
☞ Page 25 Conversion accuracy

*2 Insert one terminal into one insertion opening for wiring to the terminal block. Failure to do so can cause connection failure.

*3 Use the power supply that meets the following requirements: LVLC (voltage and current limited circuit) of UL 508, SELV (Safety Extra-Low Voltage) circuit, LIM (Limited Energy Circuit).

I/O conversion characteristics

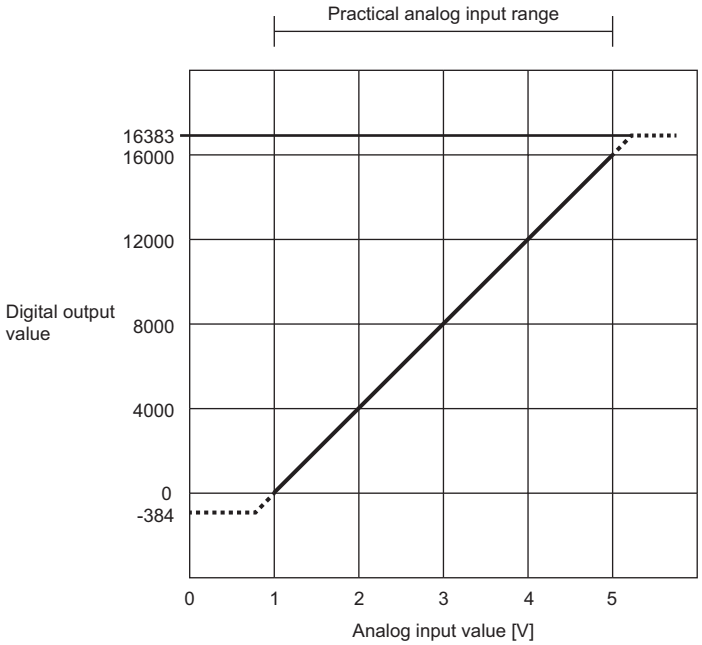
This section describes the I/O conversion characteristics of network interface modules (analog input/output).

FA3-AT1T8X, FA3-AT1M8X

I/O conversion characteristics are expressed by the slope of the straight line connecting the offset value and the gain value, both of which are used when an analog signal (voltage) from outside of a programmable controller is converted to the corresponding digital value.

- The offset value is an analog input value (voltage) which becomes a digital output value of 0 after conversion.
- The gain value is an analog input value (voltage) which becomes a digital output value of 16000 after conversion.

The following graph shows the input conversion characteristics.



Offset value	Gain value	Digital output value	Maximum resolution
1V	5V	0 to 16000	0.25mV

Point

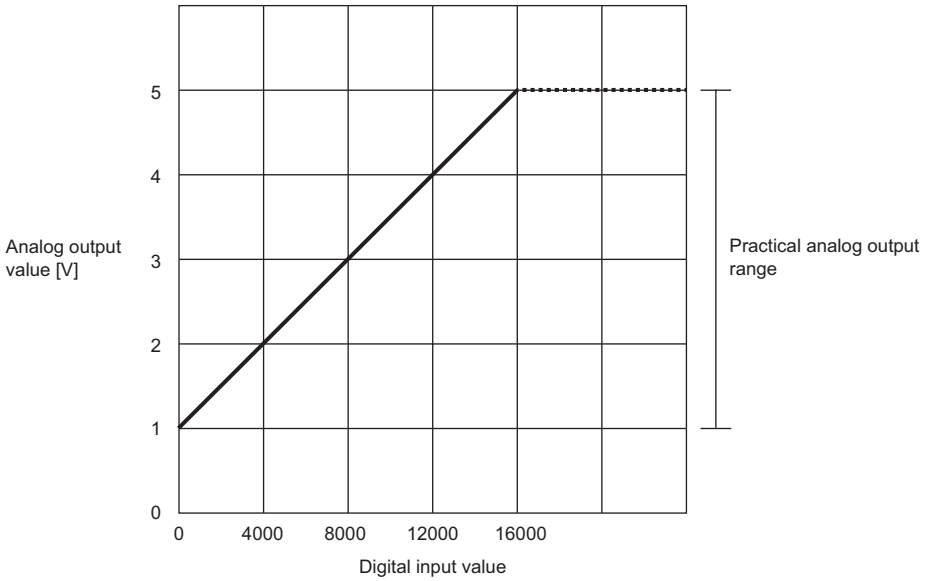
- When the analog input value exceeds the digital output ranges, the digital output value is fixed to the maximum or minimum value. When the digital clip function is disabled, the minimum value is -384 and the maximum value is 16383. When the digital clip function is enabled, the minimum value is 0 and the maximum value is 16000.
- Do not use the value in the dotted line region in the graph of input conversion characteristics. When the value in the solid line region for the analog input and digital output is used, the values of maximum resolution and accuracy will fall within the range of performance specifications. If the value is out of range, the maximum resolution and accuracy may not fall within the range of performance specifications.

FA3-AT1T8Y, FA3-AT1M8Y

The output conversion characteristics are expressed by the slope of the straight line connecting the offset value and the gain value, both of which are used when a digital value set by the CPU module is converted to the corresponding analog output value (voltage).

- The offset value is an analog value (voltage) that is outputted when the digital value specified from the CPU module is 0.
- The gain value is an analog value (voltage) that is outputted when the digital value specified from the CPU module is 16000.

The following graph shows the output conversion characteristics.



Offset value	Gain value	Digital input value	Maximum resolution
1V	5V	0 to 16000	0.25mV

Point

Do not use the value in the dotted line region in the graph of output conversion characteristics. When the value in the solid line region for the digital input and analog output is used, the values of maximum resolution and accuracy will fall within the range of performance specifications. If the value is out of range, the maximum resolution and accuracy may not fall within the range of performance specifications.

Conversion accuracy

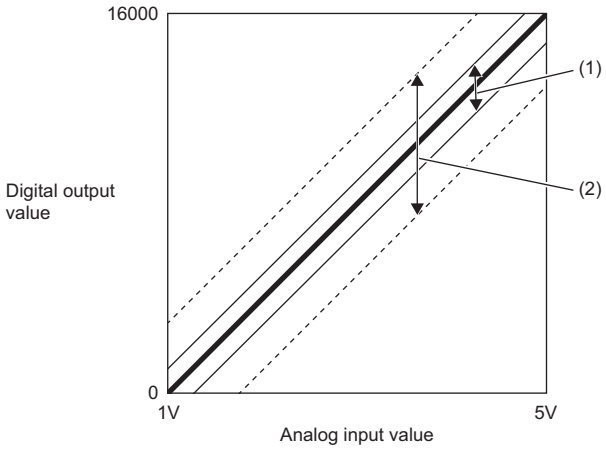
This section describes the conversion accuracy of network interface modules (analog input/output).

Point

The following figure shows the accuracy of the network interface module. The system accuracy means the total accuracy of the network interface module and the connected analog signal converter.

FA3-AT1T8X, FA3-AT1M8X

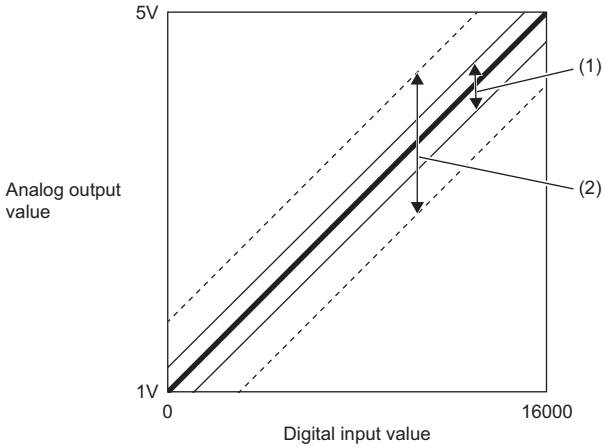
The conversion accuracy is the accuracy of the maximum value of digital output value.
The accuracy of digital output is ±0.1% (±16 digits) at an operating ambient temperature of 25±5℃; ±0.3% (±48 digits) at an operating ambient temperature of 0 to 55℃. (except for the conditions under noise influence).



(1) ±0.1% (±16 digits) or less at an ambient temperature of 25±5℃
(2) ±0.3% (±48 digits) or less at an ambient temperature of 0 to 55℃

FA3-AT1T8Y, FA3-AT1M8Y

The conversion accuracy is the accuracy of the maximum value of analog output value.
The accuracy of analog output is ±0.1% (±4mV) or less at an ambient temperature of 25±5℃, or ±0.3% (±12mV) or less at an ambient temperature of 0 to 55℃. (except for the conditions under noise influence).



(1) ±0.1% (±4mV) or less at an ambient temperature of 25±5℃
(2) ±0.3% (±12mV) or less at an ambient temperature of 0 to 55℃

Conversion speed

This section describes the conversion speed of network interface modules (analog input/output).

FA3-AT1T8X, FA3-AT1M8X

The conversion speed is expressed by the time taken from the channel switching to A/D conversion completion. The conversion speed per channel is 1ms.

In the CC-Link IE TSN system, however, data link processing time is required. Therefore, the cycle for storing a value in CH☐ Digital operation value (RWr2 to RWr9) is calculated by the following formula.

Data link processing time = SM + LS + Remote station processing time

SM: Scan time of master station sequence program

LS: Communication cycle interval

Remote station processing time: Conversion speed (1ms/channel) × Number of conversion enabled channels

For details on data link processing time, refer to the user's manual for the master module to be used.

The processing cycle of the connected analog signal converter is 10ms. When only one conversion enabled channel is specified, the input value can be received in as little as 1ms. For 10ms, however, only the value is received.

FA3-AT1T8Y, FA3-AT1M8Y

The conversion speed is expressed by the time taken from reading the digital output value written in the remote register to outputting the converted analog value. The conversion speed per channel is 1ms.

In the CC-Link IE TSN system, however, data link processing time is required. Therefore, the actual time from D/A conversion of CH☐ Digital value (RWw2 to RWw9) to output of the analog value is calculated by the following formula.

Data link processing time = SM + LS + Remote station processing time

SM: Scan time of master station sequence program

LS: Communication cycle interval

Remote station processing time: Conversion speed (1ms/channel) × Number of conversion enabled channels

For details on data link processing time, refer to the user's manual for the master module to be used.

When only one conversion enabled channel is specified, the output value can be output in as little as 1ms. However, the output value may not be reflected immediately depending on the response speed of the analog signal converter or DA conversion module connected.

3.4 Remote I/O Signal

This section describes the assignment and functions of remote I/O signals.

The remote input (RX) signals are the signals inputted from the network interface module to the master module, and the remote output (RY) signals are the signals outputted from the master module to the network interface module.

FA3-TH1T16XC, FA3-TH1M16XC

Remote I/O signals

Signal direction: Slave → Master		Signal direction: Master → Slave	
Remote input signal (RX)	**Name**	**Remote output signal (RY)**	**Name**
RX0	External input signal X0	RY0	Use prohibited
RX1	External input signal X1	RY1	
RX2	External input signal X2	RY2	
RX3	External input signal X3	RY3	
RX4	External input signal X4	RY4	
RX5	External input signal X5	RY5	
RX6	External input signal X6	RY6	
RX7	External input signal X7	RY7	
RX8	External input signal X8	RY8	
RX9	External input signal X9	RY9	
RXA	External input signal XA	RYA	
RXB	External input signal XB	RYB	
RXC	External input signal XC	RYC	
RXD	External input signal XD	RYD	
RXE	External input signal XE	RYE	
RXF	External input signal XF	RYF	

Point

Do not use any "Use prohibited" remote I/O signals. Doing so can cause abnormal operation.

Details of remote input (RX) signals

■External input signal (RX0 to RXF)

The on/off status of the external input is indicated.

When a major or moderate error occurs in the network interface module, these signals are turned off.

Remote I/O signals

Signal direction: Slave → Master		Signal direction: Master → Slave	
Remote input signal (RX)	Name	Remote output signal (RY)	Name
RX0	Use prohibited	RY0	External output signal Y0
RX1		RY1	External output signal Y1
RX2		RY2	External output signal Y2
RX3		RY3	External output signal Y3
RX4		RY4	External output signal Y4
RX5		RY5	External output signal Y5
RX6		RY6	External output signal Y6
RX7		RY7	External output signal Y7
RX8		RY8	External output signal Y8
RX9		RY9	External output signal Y9
RXA		RYA	External output signal YA
RXB		RYB	External output signal YB
RXC		RYC	External output signal YC
RXD		RYD	External output signal YD
RXE		RYE	External output signal YE
RXF		RYF	External output signal YF

Point

Do not use any "Use prohibited" remote I/O signals. Doing so can cause abnormal operation.

Details of remote output (RY) signals

■External output signal (RY0 to RYF)

This signal turns on/off the external output of the module.

When a major or moderate error occurs in the network interface module, these signals are turned off.

Even if the following case occurs, the latest output value is hold by using the output HOLD/CLEAR setting function. (☞ Page 115 Output HOLD/CLEAR setting function)

- The network interface module is disconnected from the data link.
- The operation status of the CPU module is STOP or it is suspended by an error.

Remote I/O signals

Signal direction: Slave → Master		Signal direction: Master → Slave	
Remote input signal (RX)	**Name**	**Remote output signal (RY)**	**Name**
RX0	Use prohibited	RY0	Use prohibited
RX1		RY1	
RX2		RY2	
RX3		RY3	
RX4		RY4	
RX5		RY5	
RX6		RY6	
RX7		RY7	
RX8		RY8	
RX9	Initial data setting completion flag	RY9	Initial data setting request flag
RXA	Error status flag	RYA	Error clear request flag
RXB	Remote READY	RYB	Use prohibited
RXC	Use prohibited	RYC	
RXD		RYD	
RXE		RYE	
RXF		RYF	
RX10	CH1 A/D conversion completion flag	RY10	
RX11	CH2 A/D conversion completion flag	RY11	
RX12	CH3 A/D conversion completion flag	RY12	
RX13	CH4 A/D conversion completion flag	RY13	
RX14	CH5 A/D conversion completion flag	RY14	
RX15	CH6 A/D conversion completion flag	RY15	
RX16	CH7 A/D conversion completion flag	RY16	
RX17	CH8 A/D conversion completion flag	RY17	
RX18	Warning output signal	RY18	
RX19	Use prohibited	RY19	
RX1A		RY1A	
RX1B		RY1B	
RX1C	Input signal error detection signal	RY1C	
RX1D	Maximum value/minimum value reset completed flag	RY1D	Maximum value/minimum value reset request
RX1E	Use prohibited	RY1E	Use prohibited
RX1F		RY1F	

Point

Do not use any "Use prohibited" remote I/O signals. Doing so can cause abnormal operation.

Details of remote input (RX) signals

■Initial data setting completion flag (RX9)

When setting/changing the operating condition of the FA3-AT network interface module, turn on Initial data setting request flag (RY9) after writing parameters to the remote buffer memory to enable the parameters.

Upon completion of the setting/change of operating conditions, this signal turns on.

Use Initial data setting completion flag (RY9) as an interlock condition for turning on and off Initial data setting request flag (RY9) when changing the following settings.

■Module-based parameter

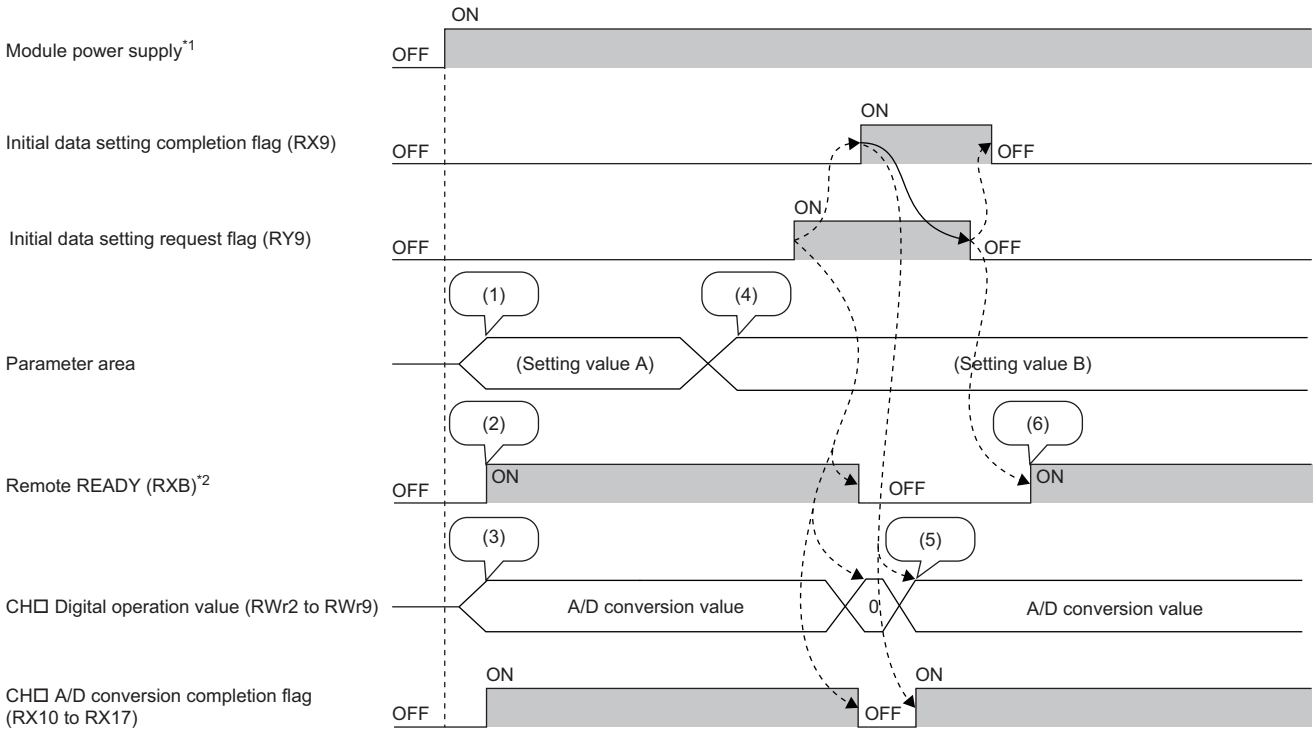
- ☞ Page 66 CH☐ A/D conversion enable/disable setting (0102H)
- ☞ Page 66 CH☐ Averaging processing setting (0105H, 0106H)
- ☞ Page 66 CH☐ Time average/Count average/Moving average (0107H to 010EH)
- ☞ Page 66 Input signal error detection setting (010FH to 0110H)
- ☞ Page 67 Warning output setting (0111H)
- ☞ Page 67 CH☐ Process alarm upper limit value/lower limit value (0112H to 0131H)
- ☞ Page 67 Digital clipping enable/disable setting (0132H)
- ☞ Page 67 Scaling enable/disable setting (0133H)
- ☞ Page 68 CH☐ Scaling upper limit value/lower limit value (0134H to 0143H)

■Module-based control data

- ☞ Page 68 CH☐ Logging data setting (4100H to 4107H)
- ☞ Page 68 CH☐ Logging cycle setting (4108H to 410FH)
- ☞ Page 68 CH☐ Logging cycle unit setting (4110H to 4117H)

While the initial data is setting, the signal suspends A/D conversion and clears the value in CH☐ Digital operation value (RWr2 to RWr9) and CH☐ A/D conversion completion flag (RX10 to RX17).

A/D conversion restarts when Initial data setting completion flag (RX9) turns on.



Controlled by the network interface module.

Controlled by the program.

(1) The default value is read.

(2) The operation starts with setting value A (default value).

(3) A/D conversion starts.

(4) The setting value is changed by the user.

(5) A/D conversion restarts.

(6) With Setting value B, action starts.

*1 For the case where data link is established at the turning on of the power supply of the network interface module

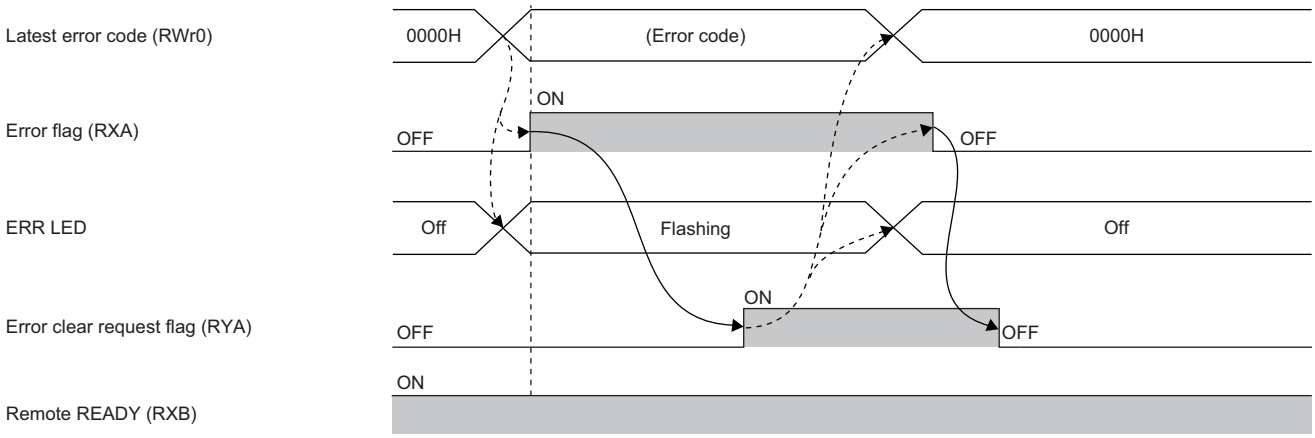
*2 After setting the initial data, check that Remote READY (RXB) is on before using the network interface module.

■Error status flag (RXA)

This signal is turned on when an error occurs.

To clear Latest error code (RWr0), turn on and off Error clear request flag (RYA).

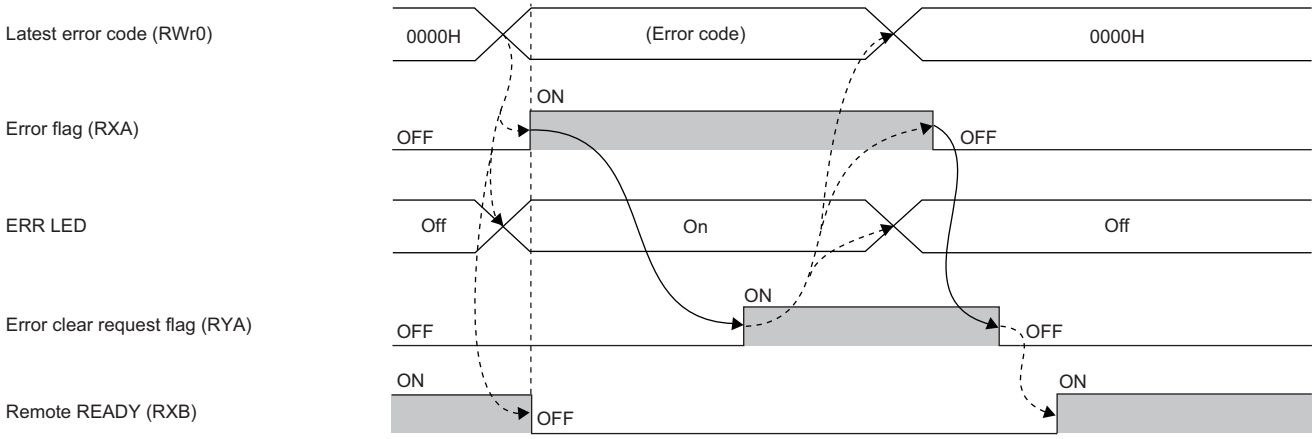
• Minor error



Controlled by the network interface module.

Controlled by the program.

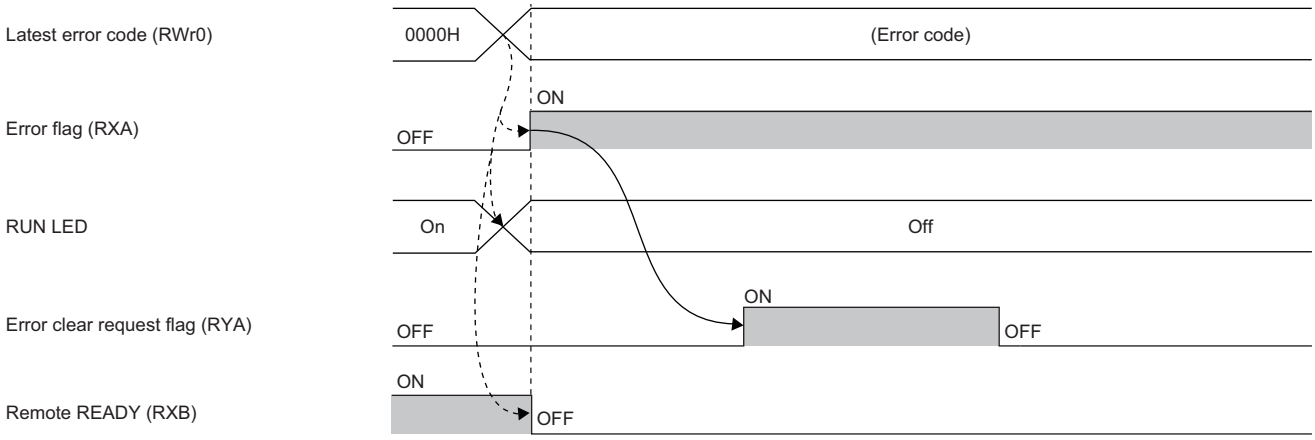
• Moderate error



Controlled by the network interface module.

Controlled by the program.

• Major error



Controlled by the network interface module.

Controlled by the program.

When a major error occurs, it is not cleared even by executing an error clear request.

■Remote READY (RXB)

The signal is used as an interlock to read/write data from the master station to the network interface module.
This signal is turned on when the power supply is turned on. This signal is turned off when a moderate or major error occurs.

■CH□ A/D conversion completion flag (RX10 to RX17)

Upon completion of the A/D conversion on the channels where CH□ A/D conversion enable/disable setting (remote buffer memory: 0102H) is set to Enable, this signal is turned on.
This signal is turned off (default) when Initial data setting request flag (RY9) is turned on and off, and it is turned on when A/D conversion is complete.

■Warning output signal (RX18)

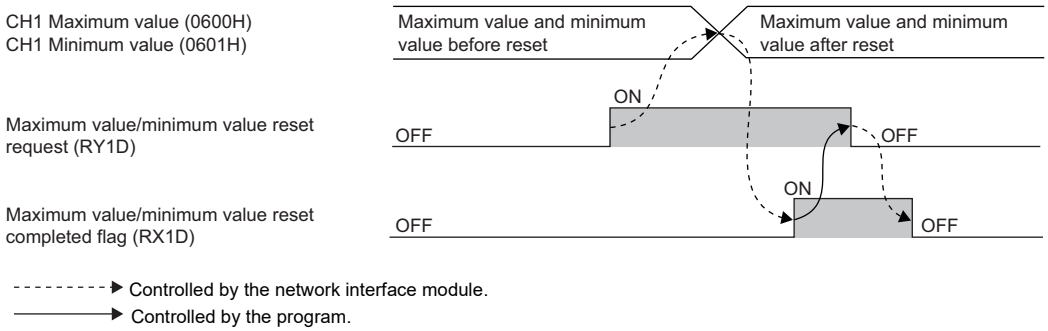
When a digital operation value falls within the warning output range specified in CH□ Process alarm upper/lower limit value (remote buffer memory: 0112H to 0131H), this signal is turned on. (☞ Page 124 Warning output function (process alarm))
When Warning output setting (remote buffer memory: 0111H) is set to Enable and the digital operation value falls within the warning output range, this signal and the corresponding bit of Warning output flag (RWrB) are turned on and the alarm code is stored in Latest alarm code (RWr1). (☞ Page 310 Alarm codes for the FA3-AT1T8X and FA3-AT1M8X)
For all channels where warning output is enabled, when the digital operation value returns to within the normal range from the warning output range, this signal and the corresponding bit of Warning output flag (RWrB) are turned off and the ALM LED is turned off.

■Input signal error detection signal (RX1C)

This signal is turned on when an input signal error is detected in the channel where Input signal error detection setting (remote buffer memory: 010FH and 0110H) is set to Enable. And then, CH□ A/D conversion completion flag (RX10 to RX17) is turned off and the ALM LED flashes. Alarm code (0D2□H) is stored in Latest alarm code (RWr1). (☞ Page 122 Input signal error detection function)
The value to be detected as an input signal error is 0.5V or less or 5.5V or more.
The latest digital operation value of the target channel before error detection is held when Input signal error detection signal (RX1C) is turned on.
When Error clear request flag (RYA) or Initial data setting request flag (RY9) is turned on after the analog input value returns to a value within the normal range, this signal is turned off, the ALM LED is turned off, and Latest alarm code (RWr1) is cleared.
Turn off Error clear request flag (RYA) or Initial data setting request flag (RY9) after this signal turns off. If Error clear request flag (RYA) or Initial data setting request flag (RY9) is turned off before this signal is turned off, this signal is not turned off.
Once the analog input value returns to a value within the normal range, A/D conversion restarts regardless of whether this signal is turned off or not.

■Maximum value/minimum value reset completed flag (RX1D)

This signal is turned on when the maximum value/minimum value stored in the CH□ Maximum value/minimum value (remote buffer memory: 0600H to 060FH) is reset by turning on and off Maximum value/minimum value reset request (RY1D).



Details of remote output (RY) signals

■Initial data setting request flag (RY9)

When setting/changing the operating condition of the FA3-AT network interface module, turn on this signal after writing parameters to the remote buffer memory to enable the parameters.

Turning on this signal allows some errors to be cleared. For errors to be cleared, refer to the following.

☞ Page 303 Error codes for FA3-AT1T8X, FA3-AT1M8X

Upon completion of the setting/change of operating conditions, Initial data setting completion flag (RX9) is turned on.

(☞ Page 30 Initial data setting completion flag (RX9))

■Error clear request flag (RYA)

When this signal is turned on after eliminating the cause of the error or alarm, Error status flag (RXA) is turned off, and the following signal and codes are cleared. (☞ Page 31 Error status flag (RXA))

- Latest error code (RWr0)*1
- Latest alarm code (RWr1)
- Input signal error detection signal (RX1C)

*1 When a major error occurs, Error status flag (RXA) does not turn on even if this signal is turned on.

For details on errors and alarms, refer to the following.

☞ Page 303 Error codes for FA3-AT1T8X, FA3-AT1M8X, ☞ Page 310 Alarm codes for the FA3-AT1T8X and FA3-AT1M8X

Turning off this signal before Error status flag (RXA) is turned off does not allow Error status flag (RXA) to turn off.

The error history is not cleared even when this signal is turned on.

■Maximum value/minimum value reset request (RY1D)

Turning on and off this signal clears CH☐ Maximum value/Minimum value (remote buffer memory: 0600H to 060FH).

For the timing of turning the flag on and off, refer to the following.

☞ Page 32 Maximum value/minimum value reset completed flag (RX1D)

Remote I/O signals

Signal direction: Slave → Master		Signal direction: Master → Slave	
Remote input signal (RX)	**Name**	**Remote output signal (RY)**	**Name**
RX0 to RX8	Use prohibited	RY0 to RY8	Use prohibited
RX9	Initial data setting completion flag	RY9	Initial data setting request flag
RXA	Error status flag	RYA	Error clear request flag
RXB	Remote READY	RYB	Use prohibited
RXC	Use prohibited	RYC	
RXD		RYD	
RXE		RYE	
RXF		RYF	
RX10		RY10	CH1 Output enable/disable flag
RX11		RY11	CH2 Output enable/disable flag
RX12		RY12	CH3 Output enable/disable flag
RX13		RY13	CH4 Output enable/disable flag
RX14		RY14	CH5 Output enable/disable flag
RX15		RY15	CH6 Output enable/disable flag
RX16		RY16	CH7 Output enable/disable flag
RX17		RY17	CH8 Output enable/disable flag
RX18		RY18	Use prohibited
RX19		RY19	
RX1A		RY1A	
RX1B		RY1B	
RX1C		RY1C	
RX1D		RY1D	
RX1E	Warning output signal	RY1E	
RX1F	Use prohibited	RY1F	

Point

Do not use any "Use prohibited" remote I/O signals. Doing so can cause abnormal operation.

Details of remote input (RX) signals

■Initial data setting completion flag (RX9)

When setting/changing the operating condition of the FA3-AT network interface module, turn on Initial data setting request flag (RY9) after writing parameters to the remote buffer memory to enable the parameters.

Upon completion of the setting/change of operating conditions, this signal turns on.

Use Initial data setting completion flag (RY9) as an interlock condition for turning on and off Initial data setting request flag (RY9) when changing the following settings.

■Module-based parameter

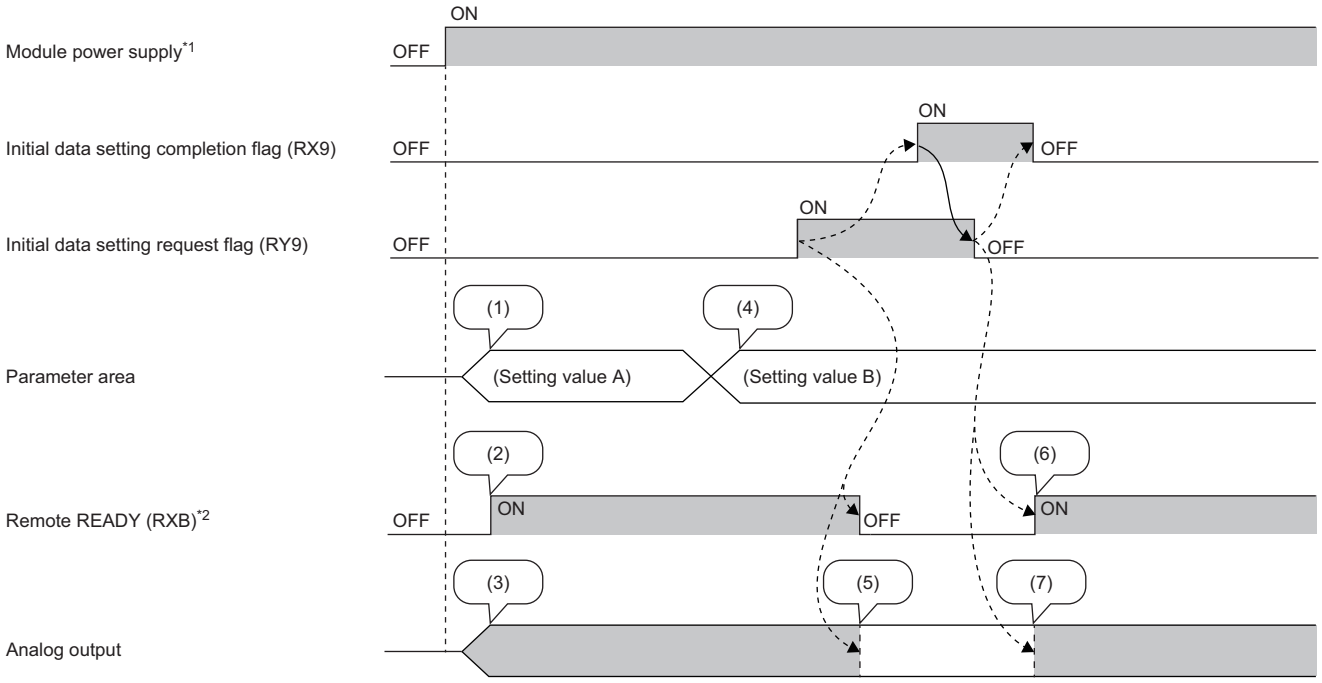
- ☞ Page 71 CH□ D/A conversion enable/disable setting (0102H)
- ☞ Page 71 Analog output HOLD/CLEAR setting (0105H, 0106H)
- ☞ Page 71 Warning output setting (0107H)
- ☞ Page 72 CH□ Warning output upper/lower limit value (0108H to 0117H)
- ☞ Page 72 Scaling enable/disable setting (0118H)
- ☞ Page 72 CH□ Scaling upper limit value/lower limit value (0119H to 0128H)

■Module-based control data

- ☞ Page 72 CH□ Logging data setting (4100H to 4107H)

While the initial data is setting, the signal suspends D/A conversion. The signal, however, temporarily holds the latest analog output level before starting the initial data setting. D/A conversion restarts by turning off Initial data setting request flag (RY9).

Turn off Initial data setting request flag (RY9) immediately after this signal is turned on.



(1) The default value is read.
(2) The operation starts with setting value A (default value).
(3) D/A conversion starts.
(4) The setting value changes.
(5) The resent analog output is held.
(6) The operation starts with setting value B.
(7) D/A conversion restarts.

*1 For the case where data link is established at the turning on of the power supply of the network interface module

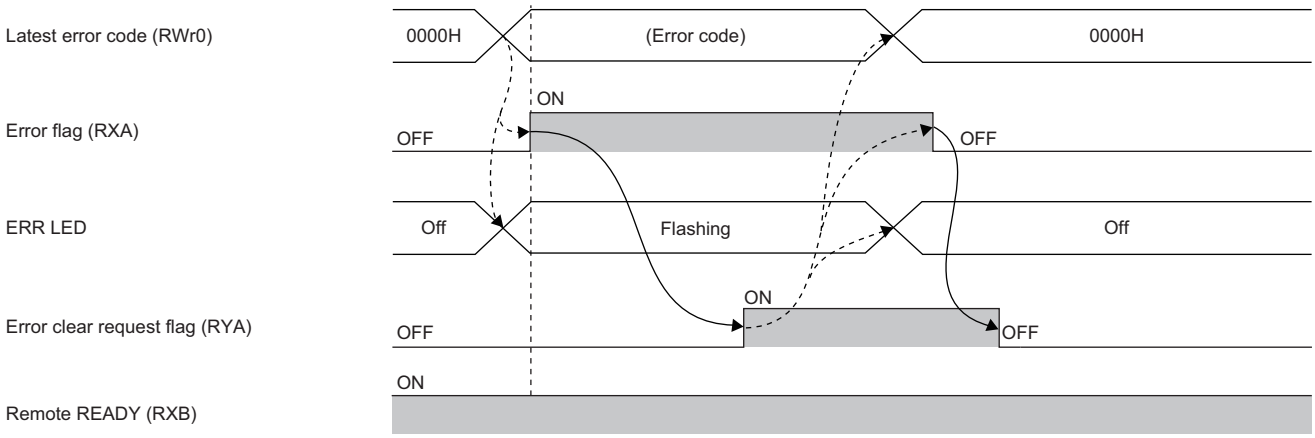
*2 After setting the initial data, check that Remote READY (RXB) is on before using the network interface module.

■Error status flag (RXA)

This signal is turned on when an error occurs.

To clear Latest error code (RWr0), turn on and off Error clear request flag (RYA).

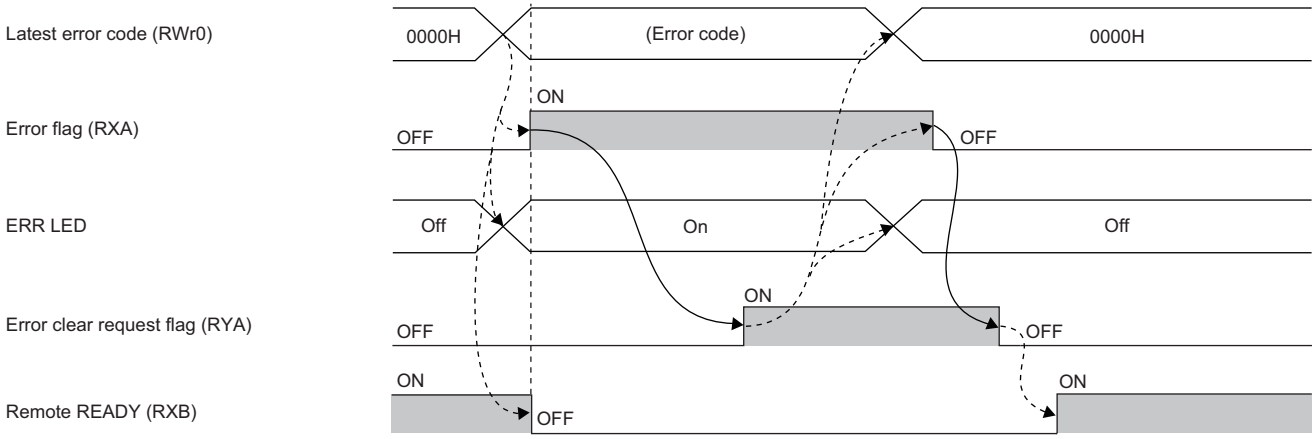
• Minor error



Controlled by the network interface module.

Controlled by the program.

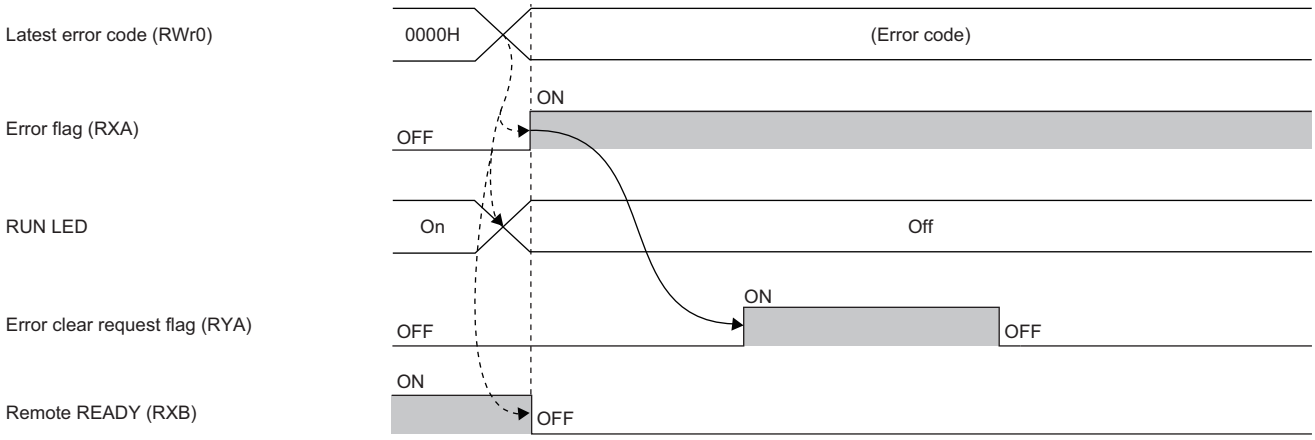
• Moderate error



Controlled by the network interface module.

Controlled by the program.

• Major error



Controlled by the network interface module.

Controlled by the program.

When a major error occurs, it is not cleared even by executing an error clear request.

■Remote READY (RXB)

The signal is used as an interlock to read/write data from the master station to the network interface module.
This signal is turned on when the power supply is turned on. This signal is turned off when a moderate or major error occurs.

■Warning output signal (RX1E)

When a digital value falls within the warning output range specified in CH☐ warning output upper/lower limit value (0108H to 0117H), this signal is turned on. (☞ Page 136 Warning output function)
When CH☐ D/A conversion enable/disable setting (remote buffer memory: 0102H) is set to Enable and the digital value falls within the warning output range, this signal and the corresponding bit of Warning output flag (RWrA) are turned on and the alarm code is stored in Latest alarm code (RWr1). (☞ Page 311 Alarm codes for the FA3-AT1T8Y and FA3-AT1M8Y)
This signal is turned off in the following cases.

- Turning on and off Error clear request flag (RYA) after the digital value returns to within the normal range from the warning output range for all channels
- Turning on and off Initial data setting request flag (RY9) after the digital value returns to within the normal range from the warning output range for all channels

Details of remote output (RY) signals

Turning on this signal allows some errors to be cleared. For errors to be cleared, refer to the following.
☞ Page 303 Error codes for FA3-AT1T8X, FA3-AT1M8X
Upon completion of the setting/change of operating conditions, Initial data setting completion flag (RX9) is turned on.
(☞ Page 30 Initial data setting completion flag (RX9))

■Initial data setting request flag (RY9)

When setting/changing the operating condition of the FA3-AT network interface module, turn on this signal after writing parameters to the remote buffer memory to enable the parameters.
Turning on this signal allows some errors to be cleared. For errors to be cleared, refer to the following.
☞ Page 306 Error codes for FA3-AT1T8Y, FA3-AT1M8Y
Upon completion of the setting/change of operating conditions, Initial data setting completion flag (RX9) is turned on.
(☞ Page 35 Initial data setting completion flag (RX9))

■Error clear request flag (RYA)

When this signal is turned on after eliminating the cause of the error or alarm, Error status flag (RXA) is turned off, and the following signal and codes are cleared. (☞ Page 36 Error status flag (RXA))

- Latest error code (RWr0)*1
- Latest alarm code (RWr1)
- Warning output signal (RX1E)

*1 When a major error occurs, Error status flag (RXA) does not turn off even if this signal is turned on.

For details on errors and alarms, refer to the following.
☞ Page 306 Error codes for FA3-AT1T8Y, FA3-AT1M8Y, ☞ Page 311 Alarm codes for the FA3-AT1T8Y and FA3-AT1M8Y
Turning off this signal before Error status flag (RXA) is turned off does not allow Error status flag (RXA) to turn off.
The error history is not cleared even when this signal is turned on.

■CH☐ Output enable/disable flag (RY10 to RY17)

Set whether to output the D/A conversion value or the offset value for each channel.
On: D/A conversion value
Off: Offset value (☞ Page 24 FA3-AT1T8Y, FA3-AT1M8Y)

3.5 Remote Register

This section describes the assignment and data configuration of remote register.

FA3-TH1T16XC, FA3-TH1M16XC

Remote register areas

Signal direction: Slave → Master			Signal direction: Master → Slave		
Device No.	**Name**	**Default**	**Device No.**	**Name**	**Default**
RWr0	Latest error code	0	RWw0	Module operation area	0
RWr1	Latest alarm code	0	RWw1	Use prohibited	
RWr2	Function selection status area	0	RWw2		
RWr3	Use prohibited		RWw3		
RWr4			RWw4		
RWr5			RWw5		
RWr6	Operation history recording status	0	RWw6	Operation history recording enable/ disable setting	0
RWr7 to 4F	Use prohibited		RWw7 to 4F	Use prohibited	

Point

Do not use any "Use prohibited" remote register areas. Doing so can cause abnormal operation.
When the network interface module is powered off and on, the remote register information returns to the default values.

Details of remote register (RWr)

■Latest error code (RWr0)

This area is used to store the error code when an error occurs. (☞ Page 301 Error codes for FA3-TH)

The errors that have occurred in the past can be checked in the error history. (☞ Page 97 Error history function)

■Latest alarm code (RWr1)

This area is used to store the alarm code when an alarm occurs. (☞ Page 308 Alarm codes for the FA3-TH1T16XC and FA3-TH1M16XC)

The alarms that have occurred in the past can be checked in the error history. (☞ Page 97 Error history function)

■Function selection status area (RWr2)

• Input response setting status (b0 to b2)

The setting status of the input response setting function is shown. (☞ Page 114 Input response time setting function)

Timing to confirm the status: Start-up

Values for b0 to b2			Input response time
b2	b1	b0	
Off	Off	Off	1ms
Off	Off	On	0ms
Off	On	Off	0.2ms
Off	On	On	1.5ms
On	Off	Off	5ms
On	Off	On	10ms
On	On	Off	20ms
On	On	On	70ms

• Communication speed setting status (b8)

The setting status of the communication speed of CC-Link IE TSN is shown.

Timing to confirm the status: Start-up

Value for b8	Communication speed
Off	1Gbps
On	100Mbps

■Operation history recording status (RWr6)

This area is used to store the execution status of operation history recording. (☞ Page 105 Operation history recording function (FA3-TH))

Device No.	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
RWr6	XF	XE	XD	XC	XB	XA	X9	X8	X7	X6	X5	X4	X3	X2	X1	X0

0: Under execution

1: Unexecuted

Details of remote register (RWw)

■Module operation area (RWw0)

• Error clear request flag (b10)

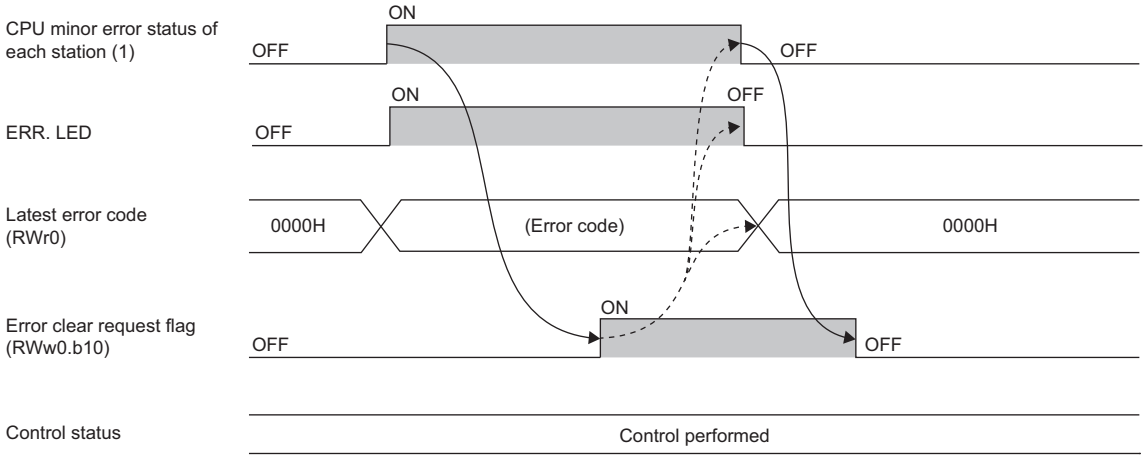
Turning on Error clear request flag (b10) after eliminating the cause of the error or alarm clears Latest error code (RWr0) and Latest alarm code (RWr1).

For details on errors and alarms, refer to the following.

☞ Page 301 Error codes for FA3-TH

☞ Page 308 Alarm codes for the FA3-TH1T16XC and FA3-TH1M16XC

Operation in the event of a minor error (CPU minor error of each station)

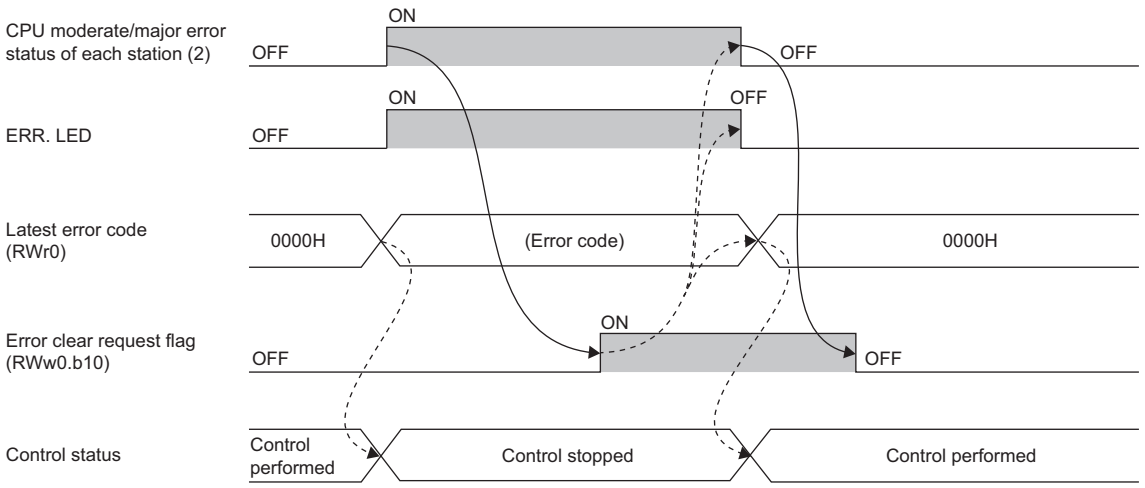


Controlled by the network interface module.

Controlled by the program.

(1) Use the bit for the target station in SW0110 to SW0117 (CPU minor error status of each station) of the master station.

Operation in the event of a moderate error (CPU moderate error of each station)



Controlled by the network interface module.

Controlled by the program.

(2) Use the bit for the target station in SW0100 to SW0107 (CPU moderate error status of each station) of the master station.

■Operation history recording enable/disable setting (RWw6)

This area is used to set whether to enable or disable the operation history recording. (☞ Page 105 Operation history recording function (FA3-TH))

When the bit corresponding to the signal is set to 0 (Enable), the operation history recording starts. To stop the operating history recording, set the bit corresponding to the signal to 1 (Disable).

Device No.	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
RWw6	XF	XE	XD	XC	XB	XA	X9	X8	X7	X6	X5	X4	X3	X2	X1	X0

0: Enable

1: Disable

FA3-TH1T16Y, FA3-TH1T16YE, FA3-TH1M16Y, FA3-TH1M16YE

Remote register areas

Signal direction: Slave → Master			Signal direction: Master → Slave		
Device No.	**Name**	**Default**	**Device No.**	**Name**	**Default**
RWr0	Latest error code	0	RWw0	Module operation area	0
RWr1	Latest alarm code	0	RWw1	Use prohibited	
RWr2	Function selection status area	0	RWw2		
RWr3	Use prohibited		RWw3		
RWr4			RWw4		
RWr5			RWw5		
RWr6	Operation history recording status	0	RWw6	Operation history recording enable/ disable setting	0
RWr7	Use prohibited		RWw7	Use prohibited	
RWr8			RWw8		
RWr9			RWw9		
RWrA	Output Y current value Y0 to YF	0	RWwA		
RWrB	Use prohibited		RWwB		
RWrC	Output Y ON information Y0 to YF	0	RWwC	Output Y ON information clear request Y0 to YF	0
RWrD	Use prohibited		RWwD	Use prohibited	
RWrE	Output Y OFF information Y0 to YF	0	RWwE	Output Y OFF information clear request Y0 to YF	0
RWrF to 4F	Use prohibited		RWwF to 4F	Use prohibited	

Point

Do not use any "Use prohibited" remote register areas. Doing so can cause abnormal operation.
When the network interface module is powered off and on, the remote register information returns to the default values.

Details of remote register (RWr)

■Latest error code (RWr0)

This area is used to store the error code when an error occurs. (☞ Page 301 Error codes for FA3-TH)

The errors that have occurred in the past can be checked in the error history. (☞ Page 97 Error history function)

■Latest alarm code (RWr1)

This area is used to store the alarm code when an alarm occurs. (☞ Page 309 Alarm codes for the FA3-TH1T16Y, FA3-TH1T16YE, FA3-TH1M16Y, FA3-TH1M16YE)

The alarms that have occurred in the past can be checked in the error history. (☞ Page 97 Error history function)

■Function selection status area (RWr2)

• Output HOLD/CLEAR setting status (b3)

The setting status of the output HOLD/CLEAR setting function is shown. (☞ Page 115 Output HOLD/CLEAR setting function)

Value for b3	Output HOLD/CLEAR setting
Off	CLEAR
On	HOLD

• Communication speed setting status (b8)

The setting status of the communication speed of CC-Link IE TSN is shown. (Timing to confirm the status: Start-up)

Value for b8	Communication speed
Off	1Gbps
On	100Mbps

■Operation history recording status (RWr6)

This area is used to store the execution status of operation history recording. (☞ Page 105 Operation history recording function (FA3-TH))

Device No.	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
RWr6	YF	YE	YD	YC	YB	YA	Y9	Y8	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0

0: Under execution

1: Unexecuted

■Output Y current value Y0 to YF (RWrA)

Actual on/off status of output Y can be checked by using Output Y current value. Output Y current value can always be used while a data link is established. The amount of time delay from when Output Y current value changes until the external output accordingly changes is no more than the maximum output response time.

Device No.	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
RWrA	YF	YE	YD	YC	YB	YA	Y9	Y8	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0

0: Output X is turned off.

1: Output Y is turned on.

■Output Y ON information Y0 to YF (RWrC)

Whether the output has been turned on or not can be checked with Output Y ON information. (☞ Page 116 Output on/off information hold function)

Device No.	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
RWrC	YF	YE	YD	YC	YB	YA	Y9	Y8	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0

0: Output Y has never been turned on.

1: Output Y has been turned on.

■Output Y OFF information Y0 to YF (RWrE)

Whether the output has been turned off or not can be checked with Output Y OFF information. (☞ Page 116 Output on/off information hold function)

Device No.	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
RWrE	YF	YE	YD	YC	YB	YA	Y9	Y8	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0

0: Output Y has never been turned off.

1: Output Y has been turned off.

Details of remote register (RWw)

■Module operation area (RWw0)

• Error clear request flag (b10)

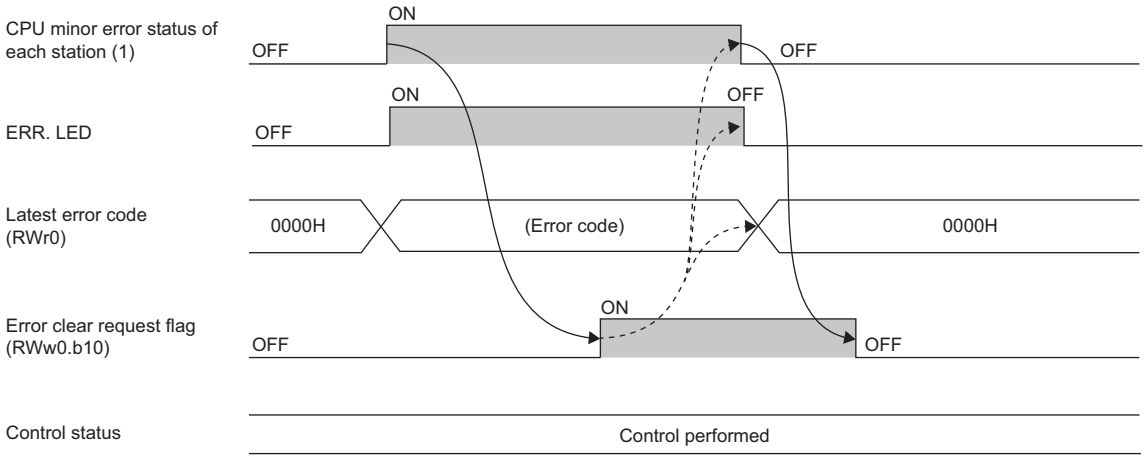
Turning on Error clear request flag (b10) after eliminating the cause of the error or alarm clears Latest error code (RWr0) and Latest alarm code (RWr1).

For details on errors and alarms, refer to the following.

☞ Page 301 Error codes for FA3-TH

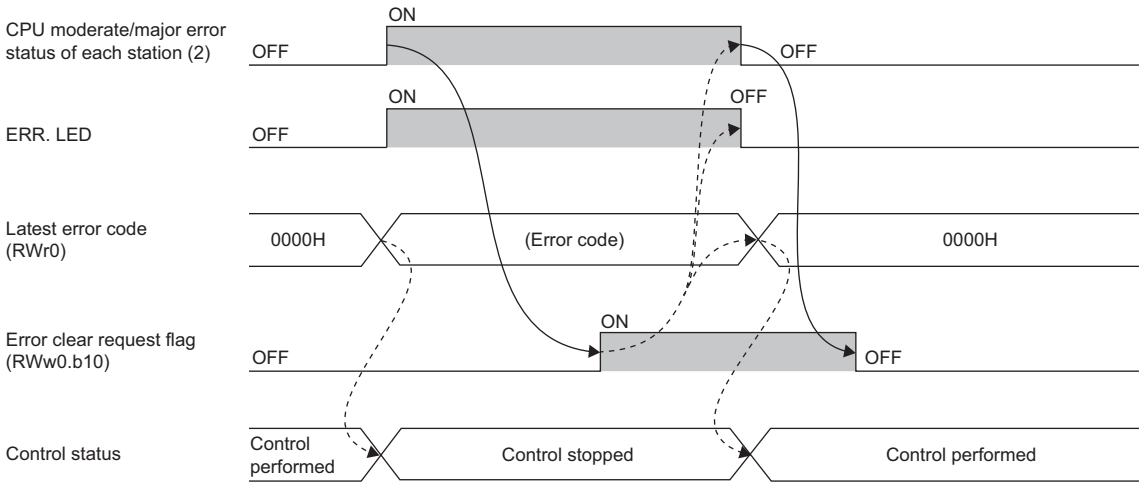
☞ Page 309 Alarm codes for the FA3-TH1T16Y, FA3-TH1T16YE, FA3-TH1M16Y, FA3-TH1M16YE

Operation in the event of a minor error (CPU minor error of each station)



(1) Use the bit for the target station in SW0110 to SW0117 (CPU minor error status of each station) of the master station.

Operation in the event of a moderate error (CPU moderate error of each station)



(2) Use the bit for the target station in SW0100 to SW0107 (CPU moderate error status of each station) of the master station.

■Operation history recording enable/disable setting (RWw6)

This area is used to set whether to enable or disable the operation history recording. (☞ Page 105 Operation history recording function (FA3-TH))

When the bit corresponding to the signal is turned off (Enable), the operation history recording starts. To stop the operating history recording, turn on (Disable) the bit corresponding to the signal.

Device No.	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
RWr6	YF	YE	YD	YC	YB	YA	Y9	Y8	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0

0: Enable

1: Disable

■Output Y ON information clear request Y0 to YF (RWwC)

This remote register is used to clear Output Y ON information stored in Output Y ON information Y0 to YF (RWrC). (☞ Page 116 Output on/off information hold function)

Device No.	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
RWrC	YF	YE	YD	YC	YB	YA	Y9	Y8	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0

0: Output Y ON information is not cleared.

1: Output Y ON information is cleared.

■Output Y OFF information clear request Y0 to YF (RWwE)

This remote register is used to clear Output Y OFF information stored in Output Y OFF information Y0 to YF (RWrE). (☞ Page 116 Output on/off information hold function)

Device No.	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
RWrE	YF	YE	YD	YC	YB	YA	Y9	Y8	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0

0: Output Y OFF information is not cleared.

1: Output Y OFF information is cleared.

Remote register areas

Signal direction: Slave → Master			Signal direction: Master → Slave		
Device No.	Name	Default	Device No.	Name	Default
RWr0	Latest error code	0	RWw0	Use prohibited	
RWr1	Latest alarm code	0	RWw1		
RWr2	CH1 Digital operation value	0	RWw2	CH1 Shifting amount to conversion value	0
RWr3	CH2 Digital operation value	0	RWw3	CH2 Shifting amount to conversion value	0
RWr4	CH3 Digital operation value	0	RWw4	CH3 Shifting amount to conversion value	0
RWr5	CH4 Digital operation value	0	RWw5	CH4 Shifting amount to conversion value	0
RWr6	CH5 Digital operation value	0	RWw6	CH5 Shifting amount to conversion value	0
RWr7	CH6 Digital operation value	0	RWw7	CH6 Shifting amount to conversion value	0
RWr8	CH7 Digital operation value	0	RWw8	CH7 Shifting amount to conversion value	0
RWr9	CH8 Digital operation value	0	RWw9	CH8 Shifting amount to conversion value	0
RWrA	Input signal error detection flag	0	RWwA	Use prohibited	
RWrB	Warning output flag	0	RWwB		
RWrC	Logging execution status	0	RWwC	Logging execution flag	0
RWrD to RWr1F	Use prohibited		RWwD to RWw1F	Use prohibited	

Point

Do not use any "Use prohibited" remote register areas. Doing so can cause abnormal operation.
When the network interface module is powered off and on, the remote register information returns to the default values.

Details of remote register (RWr)

■Latest error code (RWr0)

This area is used to store the error code when an error occurs. (☞ Page 310 Alarm codes for the FA3-AT1T8X and FA3-AT1M8X)

The errors that have occurred in the past can be checked in the error history. (☞ Page 97 Error history function)

■Latest alarm code (RWr1)

This area is used to store the alarm code when an alarm occurs. (☞ Page 310 Alarm codes for the FA3-AT1T8X and FA3-AT1M8X)

The alarms that have occurred in the past can be checked in the error history. (☞ Page 97 Error history function)

■CH□ Digital operation value (RWr2 to RWr9)

When the scaling function or shift function is used, a scale conversion value or a shift-and-add value is stored as 16-bit signed binary data.

Device No.	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
RWr2 to RWr9	Sign bit	Data unit														

Sign bit is 0: Positive

Sign bit is 1: Negative

■Input signal error detection flag (RWrA)

When the analog input value is 0.5V or less or 5.5V or more, an input signal error is detected and the bit of the corresponding channel is turned on. (☞ Page 122 Input signal error detection function)

Device No.	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
RWrA	CH8	0	CH7	0	CH6	0	CH5	0	CH4	0	CH3	0	CH2	0	CH1	0

0: Normal

1: Error detection

When Error clear request flag (RYA) or Initial data setting request flag (RY9) is turned on and off after all channels return to within the normal range, Input signal error detection flag (RWrA) is cleared.

■Warning output flag (RWrB)

The bit of the corresponding channel is turned on if the digital operation value enters the predefined warning output range. (☞ Page 124 Warning output function (process alarm))

Device No.	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
RWrB	CH8 Lower limit	CH8 Upper limit	CH7 Lower limit	CH7 Upper limit	CH6 Lower limit	CH6 Upper limit	CH5 Lower limit	CH5 Upper limit	CH4 Lower limit	CH4 Upper limit	CH3 Lower limit	CH3 Upper limit	CH2 Lower limit	CH2 Upper limit	CH1 Lower limit	CH1 Upper limit

0: Normal

1: Warning occurrence

After the warning is output and the digital operation value returns to within the normal range from the warning output range, the corresponding bit is turned off.

■Logging execution status (RWrC)

This area is used to store the logging execution status. (☞ Page 106 Logging function (FA3-AT))

Device No.	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
RWrC	—	—	—	—	—	—	—	—	CH8	CH7	CH6	CH5	CH4	CH3	CH2	CH1

0: Under execution

1: Unexecuted

Details of remote register (RWw)

■CH☐ Shifting amount to conversion value (RWw2 to RWw9)

Once a value is set, the conversion value shift amount is valid regardless of turning on and off Initial data setting request flag (RY9). (☞ Page 129 Shift function)

The setting range is -32768 to 32767. The default value is 0.

The set conversion value shift amount is reflected in CH☐ Digital operation value (RWr2 to RWr9).

Point

If the digital operation value to which the conversion value shift amount is added is out of the range of -32768 to 32767, it is fixed to the lower limit value (-32768) or the upper limit value (32767).

■Logging execution flag (RWwC)

This area is used to set whether to enable or disable the logging operation. (☞ Page 106 Logging function (FA3-AT))

Device No.	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
RWwC	—	—	—	—	—	—	—	—	CH8	CH7	CH6	CH5	CH4	CH3	CH2	CH1

0: Enable (default)

1: Disable

When the bit of the corresponding channel is set to 0 (Enable), logging is started. To stop logging, set the bit of the corresponding channel to 1 (Disable).

Logging is enabled or disabled immediately. However, to change the value of CH☐ Logging data setting, CH☐ Logging cycle setting, or CH☐ Logging cycle unit setting, turn on and off Initial data setting request flag (RY9). If a setting error occurs, logging is not enabled.

Remote register areas

Signal direction: Slave → Master			Signal direction: Master → Slave		
Device No.	Name	Default	Device No.	Name	Default
RWr0	Latest error code	0	RWw0	Use prohibited	
RWr1	Latest alarm code	0	RWw1		
RWr2	CH1 Set value check code	0	RWw2	CH1 Digital value	0
RWr3	CH2 Set value check code	0	RWw3	CH2 Digital value	0
RWr4	CH3 Set value check code	0	RWw4	CH3 Digital value	0
RWr5	CH4 Set value check code	0	RWw5	CH4 Digital value	0
RWr6	CH5 Set value check code	0	RWw6	CH5 Digital value	0
RWr7	CH6 Set value check code	0	RWw7	CH6 Digital value	0
RWr8	CH7 Set value check code	0	RWw8	CH7 Digital value	0
RWr9	CH8 Set value check code	0	RWw9	CH8 Digital value	0
RWrA	Warning output flag	0	RWwA	Use prohibited	
RWrB	Use prohibited		RWwB		
RWrC	Logging execution status	0	RWwC	Logging execution flag	0
RWrD to RWr1F	Use prohibited		RWwD to RWw1F	Use prohibited	

Point

Do not use any "Use prohibited" remote register areas. Doing so can cause abnormal operation.
When the network interface module is powered off and on, the remote register information returns to the default values.

Details of remote register (RWr)

■Latest error code (RWr0)

This area is used to store the error code when an error occurs. (☞ Page 306 Error codes for FA3-AT1T8Y, FA3-AT1M8Y)

The errors that have occurred in the past can be checked in the error history. (☞ Page 97 Error history function)

■Latest alarm code (RWr1)

This area is used to store the alarm code when an alarm occurs. (☞ Page 311 Alarm codes for the FA3-AT1T8Y and FA3-AT1M8Y)

The alarms that have occurred in the past can be checked in the error history. (☞ Page 97 Error history function)

■CH☐ Set value check code (RWr2 to RWr9)

This area is used to store the check code when a digital value exceeding the setting range is written in CH☐ Digital value (RWw2 to RWw9).

The check code is a code of when a digital value exceeding the setting range is written.

Check code	Description
000FH	A greater digital value than a value in the setting range is written.
00F0H	A less digital value than a value in the setting range is written.
00FFH	A digital value greater or less than a value in the setting range is written. After a digital value exceeding the setting range is set, if a digital value less than a value in the setting range is set before the check code is cleared, 00FFH is stored.

0000H (within setting range) is stored as the default value.

The check code that has been stored is not cleared even if a digital value within the setting range is set.

Set value check code can be cleared by either of the following two methods.

- Set the digital value within the setting range, and turn on and off Error clear request flag (RYA).
- Set the digital value within the setting range, and turn on and off Initial data setting request flag (RY9).

■Warning output flag (RWrA)

The bit of the corresponding channel is turned on if the digital value enters the predefined warning output range. (☞ Page 136 Warning output function)

Device No.	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
RWrA	CH8 Lower limit	CH8 Upper limit	CH7 Lower limit	CH7 Upper limit	CH6 Lower limit	CH6 Upper limit	CH5 Lower limit	CH5 Upper limit	CH4 Lower limit	CH4 Upper limit	CH3 Lower limit	CH3 Upper limit	CH2 Lower limit	CH2 Upper limit	CH1 Lower limit	CH1 Upper limit

0: Normal

1: Warning occurrence

When Error clear request flag (RYA) or Initial data setting request flag (RY9) is turned on and off after all channels return within the normal range, Input signal error detection flag (RWrA) is cleared.

■Logging execution status (RWrC)

This area is used to store the logging execution status. (☞ Page 106 Logging function (FA3-AT))

Device No.	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
RWrC	—	—	—	—	—	—	—	—	CH8	CH7	CH6	CH5	CH4	CH3	CH2	CH1

0: Under execution

1: Unexecuted

Details of remote register (RWw)

■CH☐ Digital value (RWw2 to RWw9)

The area is used to write the digital value for D/A conversion from the CPU module in 16-bit signed binary data.

Device No.	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
RWw2 to RWw9	Sign bit	Data unit														

Sign bit is 0: Positive (default)

Sign bit is 1: Negative

The following table shows the range of digital value.

Setting range	Digital value when a value out of the setting range is written
-384 to 16383 (Actual range: 0 to 16000)	16384 or more: 16383 -385 or less: -384

When a value out of the setting range is written, the following occurs.

- D/A conversion is performed with the upper or lower limit value of the setting range.
- The check code is stored in CH☐ Set value check code (RWr2 to RWr9).
- Error code (190☐H) is stored in Latest error code (RWr0).

When Scaling enable/disable setting is set to Enable, a scale-converted digital value is the target of the range.

■Logging execution flag (RWwC)

This area is used to set whether to enable or disable the logging operation. (☞ Page 106 Logging function (FA3-AT))

When the bit of the corresponding channel is set to 0 (Enable), logging is started. To stop logging, set the bit of the corresponding channel to 1 (Disable).

Device No.	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
RWwC	—	—	—	—	—	—	—	—	CH8	CH7	CH6	CH5	CH4	CH3	CH2	CH1

0: Enable (default)

1: Disable

3.6 Remote Buffer Memory

The default value or the value saved in the non-volatile memory is set in the remote buffer memory at power-on. (☞ Page 52 Saving data in the non-volatile memory)
When the slave station parameter automatic setting is enabled while the CC-Link IE TSN is used, the value is automatically set from the master station. (☞ Page 142 Slave station parameter automatic setting)

Access method

■CC-Link IE TSN

The following dedicated instructions are used in the master station.
When the dedicated instruction is completed with an error, and 4041H is stored in the REMFR/REMTO instruction execution status of the link special register of the master station, check the address and number of word points.

Classification	Dedicated instruction	Description
Read	REMFR	Reads data from the remote buffer memory in units of words. (16-bit address specification)
	REMFRD	Reads data from the remote buffer memory in units of words. (32-bit address specification)
Write	REMTO	Writes data to the remote buffer memory in units of words. (16-bit address specification)
	REMTOD	Writes data to the remote buffer memory in units of words. (32-bit address specification)

Precautions

For a single network interface module, do not execute multiple dedicated instructions at the same time. If multiple dedicated instructions are executed at the same time, the network interface module may be unable to receive the dedicated instructions and the dedicated instructions may time out.

■CC-Link IE Field Network, CC-Link IE Field Network Basic

The dedicated instructions are used in the master station.

- CC-Link IE Field Network: ☞ Page 178 Communications using dedicated instructions
- CC-Link IE Field Network Basic: ☞ Page 202 SLMP communication function

■SLMP

SLMP commands are used in the master station. (☞ Page 243 SLMP command)

■MODBUS/TCP

Functions are used in the master station. (☞ Page 271 Function code and data)
Some remote buffer memory areas are assigned differently to be specified as a MODBUS device. (☞ Page 272 MODBUS device)

Saving data in the non-volatile memory

◎ in the following table indicates that the value saved in the remote buffer memory are automatically saved in the non-volatile memory of the network interface module and then the parameter is enabled.
○ in the following table indicates that the value saved in the remote buffer memory are saved in the non-volatile memory of the network interface module by turning on and off Initial data setting request flag (RY9) and then the parameter is enabled.
◎○: In either case, the values saved in the non-volatile memory are held even when the network interface module is restarted, and the parameters remain enabled.
◎: Saved automatically, ○: Saved by turning on and off Initial data setting request flag (RY9), —: Not saved (setting available), ×: Not available

Model	Remote buffer memory	CC-Link IE TSN	CC-Link IE Field Network	CC-Link IE Field Network Basic	SLMP	MODBUS/TCP
Common to all models	IP address at next startup setting (0000H, 0001H)	◎	×	◎	◎	◎*1
	Elapsed operation time (3B80H, 3B81H)	◎	◎	◎	◎	◎
	Elapsed operation time threshold setting (4122H, 4123H)	—	◎	—	—	◎
	Operation start date (3B82H to 3B86H)	◎	◎	◎	◎	◎
	Latest error history pointer (3BA0H)	◎	◎	◎	◎	◎
	Error history 1 to 16 (3BA2H to 3BB2H, ..., 3CA1H to 3CB1H)	◎	◎	◎	◎	◎
	Destination alive check start interval timer (00F2H)	×	×	×	×	◎
	Destination alive check interval timer (00F3H)	×	×	×	×	◎
	Destination alive check count (00F4H)	×	×	×	×	◎
	Split reception monitoring timer (00F5H)	×	×	×	×	◎
FA3-TH1T16XC FA3-TH1M16XC	X/Y☐ relay ON count (3B60H to 3B61H, ..., 3B7EH to 3B7FH)	◎	◎	◎	◎	◎
	X/Y☐ relay ON count threshold setting (4100H to 4101H, ..., 411EH to 411FH)	—	◎	—	—	◎
	Relay ON count threshold valid/invalid setting (4120H)	—	◎	—	—	◎
	Input response time setting (0100H)	—	◎	—	—	◎
FA3-TH1T16Y FA3-TH1M16Y FA3-TH1T16YE FA3-TH1M16YE	X/Y☐ relay ON count (3B60H to 3B61H, ..., 3B7EH to 3B7FH)	◎	◎	◎	◎	◎
	X/Y☐ relay ON count threshold setting (4100H to 4101H, ..., 411EH to 411FH)	—	◎	—	—	◎
	Relay ON count threshold valid/invalid setting (4120H)	—	◎	—	—	◎
	Output HOLD/CLEAR setting (0101H)	—	◎	—	—	◎
FA3-AT1T8X FA3-AT1M8X	CH☐ A/D conversion enable/disable setting (0102H)	—	○	—	—	○
	CH☐ Averaging processing setting (0105H, 0106H)	—	○	—	—	○
	CH☐ Time average/Count average/Moving average (0107H to 010EH)	—	○	—	—	○
	CH☐ Input signal error detection setting (010FH to 0110H)	—	○	—	—	○
	CH☐ Warning output setting (0111H)	—	○	—	—	○
	CH☐ Process alarm upper limit value/lower limit value (0112H to 0131H)	—	○	—	—	○
	CH☐ Digital clipping enable/disable setting (0132H)	—	○	—	—	○
	CH☐ Scaling enable/disable setting (0133H)	—	○	—	—	○
	CH☐ Scaling upper limit value/lower limit value (0134H to 0143H)	—	○	—	—	○
FA3-AT1T8Y FA3-AT1M8Y	CH☐ D/A conversion enable/disable setting (0102H)	—	○	—	—	○
	CH☐ Analog output HOLD/CLEAR setting (0105H, 0106H)	—	○	—	—	○
	CH☐ Warning output setting (0107H)	—	○	—	—	○
	CH☐ Warning output upper limit value/lower limit value (0108H to 0117H)	—	○	—	—	○
	CH☐ Scaling enable/disable setting (0118H)	—	○	—	—	○
	CH☐ Scaling upper limit value/lower limit value (0119H to 0128H)	—	○	—	—	○

*1 The address of the remote buffer memory used for MODBUS/TCP is as follows. MODBUS device: holding register, address: 00F0H to 00F1H.

Remote buffer memory areas (parameter area)

R: Can be read, W: Can be written

Type	Address		Name/Reference		Default	R/W
	Hexadecimal	Decimal				
Station-based parameter data	0000H	0	IP address at next startup setting (Third and fourth octets)	☞ Page 55 IP address at next startup setting (0000H, 0001H)	03FAH (3.250)	R/W
	0001H	1	IP address at next startup setting (First and second octets)		C0A8H (192.168)	
	0002H to 00FFH	2 to 255	Use prohibited		—	—
Module-based parameter data	0100H	256	☞ Page 55 Input response time setting (0100H)		0000H	R/W
	0101H	257	Use prohibited		—	—
	0102H to 01FFH	258 to 511	Use prohibited		—	—
—	0200H to 02FFH	512 to 767	Use prohibited		—	—

Remote buffer memory areas (monitor area, control area)

Type	Address		Name/Reference		Default	R/W
	Hexadecimal	Decimal				
Module-based monitor data	0300H to 3B5FH	768 to 15199	Use prohibited		—	—
	3B60H, 3B61H	15200, 15201	X0 relay ON count	☞ Page 56 X□ relay ON count (3B60H to 3B61H, ..., 3B7EH to 3B7FH)	00000000H	R
	⋮	⋮	⋮		⋮	⋮
	3B7EH, 3B7FH	15230, 15231	XF relay ON count		00000000H	R
	3B80H, 3B81H	15232, 15233	☞ Page 56 Elapsed operation time (3B80H, 3B81H)		00000000H	R
	3B82H to 3B86H	15234 to 15238	☞ Page 56 Operation start date (3B82H to 3B86H)		0	R
	3B87H to 3B8FH	15239 to 15247	Use prohibited		—	—
	3B90H	15248	☞ Page 56 Parameter automatic setting status monitor (3B90H)		0000H	R
	3B91H to 3B9FH	15249 to 15263	Use prohibited		—	—
	3BA0H	15264	☞ Page 56 Latest error history pointer (3BA0H)		FFFFH	R
	3BA1H	15265	Use prohibited		—	—

Type	Address		Name/Reference		Default	R/W
	Hexadecimal	Decimal				
Module-based monitor data	3BA2H to 3BB2H	15266 to 15282	Error history 1 (Latest when the value of Latest error history pointer is 0)*1	☞ Page 56 Error history 1 to 16 (3BA2H to 3BB2H, ..., 3CA1H to 3CB1H)	0000H	R
	3BB3H to 3BC3H	15283 to 15299	Error history 2 (Latest when the value of Latest error history pointer is 1)*1		0000H	R
	3BC4H to 3BD4H	15300 to 15316	Error history 3 (Latest when the value of Latest error history pointer is 2)*1		0000H	R
	3BD5H to 3BE5H	15317 to 15333	Error history 4 (Latest when the value of Latest error history pointer is 3)*1		0000H	R
	3BE6H to 3BF6H	15334 to 15350	Error history 5 (Latest when the value of Latest error history pointer is 4)*1		0000H	R
	3BF7H to 3C07H	15351 to 15367	Error history 6 (Latest when the value of Latest error history pointer is 5)*1		0000H	R
	3C08H to 3C18H	15368 to 15384	Error history 7 (Latest when the value of Latest error history pointer is 6)*1		0000H	R
	3C19H to 3C29H	15385 to 15401	Error history 8 (Latest when the value of Latest error history pointer is 7)*1		0000H	R
	3C2AH to 3C3AH	15402 to 15418	Error history 9 (Latest when the value of Latest error history pointer is 8)*1		0000H	R
	3C3BH to 3C4BH	15419 to 15435	Error history 10 (Latest when the value of Latest error history pointer is 9)*1		0000H	R
	3C4CH to 3C5CH	15436 to 15452	Error history 11 (Latest when the value of Latest error history pointer is 10)*1		0000H	R
	3C5DH to 3C6DH	15453 to 15469	Error history 12 (Latest when the value of Latest error history pointer is 11)*1		0000H	R
	3C6EH to 3C7EH	15470 to 15486	Error history 13 (Latest when the value of Latest error history pointer is 12)*1		0000H	R
	3C7FH to 3C8FH	15487 to 15503	Error history 14 (Latest when the value of Latest error history pointer is 13)*1		0000H	R
	3C90H to 3CA0H	15504 to 15520	Error history 15 (Latest when the value of Latest error history pointer is 14)*1		0000H	R
	3CA1H to 3CB1H	15521 to 15537	Error history 16 (Latest when the value of Latest error history pointer is 15)*1		0000H	R
	3CB2H to 3FFFH	15538 to 16383	Use prohibited		—	—
Station-based control data	4000H, 4001H	16384, 16385	Use prohibited		—	—
	4002H	16386	☞ Page 56 Parameter area initialization command (4002H)		0	R/W
	4003H	16387	☞ Page 57 Parameter area initialization completed (4003H)		0	R
	4004H to 40FFH	16388 to 16639	Use prohibited		—	—
Module-based control data	4100H, 4101H	16640, 16641	X0 relay ON count threshold setting	☞ Page 57 X□ relay ON count threshold setting (4100H to 4101H, ..., 411EH to 411FH)	00000000H	R/W
	⋮	⋮	⋮		⋮	⋮
	411EH, 411FH	16670, 16671	XF relay ON count threshold setting		00000000H	R/W
	4120H	16672	☞ Page 57 Relay ON count threshold valid/invalid setting (4120H)		0000H	R/W
	4121H	16673	☞ Page 57 Relay ON count reset flag (4121H)		0000H	R/W
	4122H, 4123H	16674, 16675	☞ Page 57 Elapsed operation time threshold setting (4122H, 4123H)		00000000H	R/W
	4124H	16676	☞ Page 57 Elapsed operation time reset flag (4124H)		0000H	R/W
	4125H	16677	☞ Page 57 Operation start date reset flag (4125H)		0000H	R/W
	4126H to 4FFFH	16678 to 20479	Use prohibited		—	—

*1 In the CC-Link IE Field Network system, the history in Error history 1 is always the latest. (☞ Page 56 Latest error history pointer (3BA0H))

Restriction

Do not write data to the items where only R is indicated in R/W column of the above list. If you do so, normal operation is not guaranteed.

Details of remote buffer memory areas

■IP address at next startup setting (0000H, 0001H)

The setting status of the function is shown. (The status is not shown in the CC-Link IE Field Network system.)

Address	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
0000H	Third octet								Fourth octet							
0001H	First octet								Second octet							

Ex.

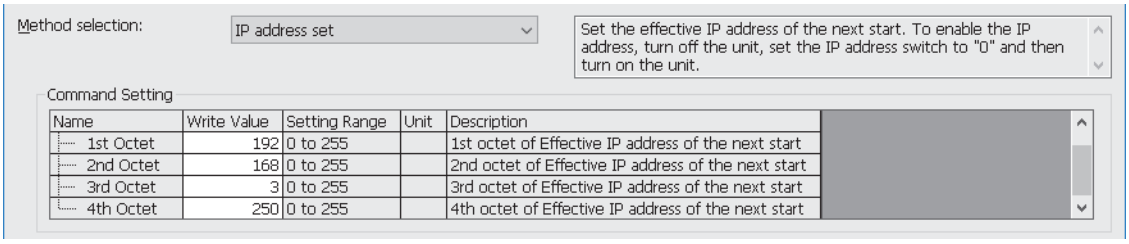
When the IP address at next startup is set to 192.168.3.10

Address	Setting value
0000H	030AH (3.10)
0001H	C0A8H (192.168)

In the CC-Link IE TSN system, this data can be set using "Command Execution of Slave Station" in the engineering tool. (☞ Page 112 Command execution of slave station)

Ex.

When the IP address at next startup is set to 192.168.3.10



Point

To enable IP address at next startup, power off the network interface module, set the IP address/station number setting switches to 0, and then power on the module.

■Input response time setting (0100H)

The setting status of the function is shown. (☞ Page 114 Input response time setting function)

Setting value	Input response time setting details
0	1ms (default)
1	0ms
2	0.2ms
3	1.5ms
4	5ms
5	10ms
6	20ms
7	70ms

If a value exceeding the setting range is set, the module operates with the input response time of 1ms.

■X□ relay ON count (3B60H to 3B61H, ..., 3B7EH to 3B7FH)

This area is used to store the relay ON count of the maintenance information recording function. (☞ Page 109 Maintenance information recording function)

■Elapsed operation time (3B80H, 3B81H)

This area is used to store the elapsed operation time of the maintenance information recording function. (☞ Page 109 Maintenance information recording function)

■Operation start date (3B82H to 3B86H)

This area is used to store the time when the network interface module connects to the network first or when the operation start date is reset. (☞ Page 109 Maintenance information recording function)

■Parameter automatic setting status monitor (3B90H)

This area is used to check the execution status of the parameter automatic setting. (☞ Page 142 Slave station parameter automatic setting)

Monitored value	Parameter automatic setting execution status
0000H	Unexecuted
0001H	Executing
0002H	Completed successfully
0003H	Completed with an error

■Latest error history pointer (3BA0H)

A pointer indicating which of Error history 1 to 16 of the remote buffer memory areas is the latest is stored. The offset value (0 to 15) from the start address is stored in the pointer. The default value is FFFFH. (☞ Page 53 Remote buffer memory areas (parameter area))

In the CC-Link IE Field Network system, the latest error is always stored in Error history 1, and the one before the latest is stored in Error history 2 subsequently. If any error history exists, the value of Latest error history pointer is always 0000H.

■Error history 1 to 16 (3BA2H to 3BB2H, ..., 3CA1H to 3CB1H)

Error history 1 to 16 are stored. (☞ Page 98 Data format of error history)

■Parameter area initialization command (4002H)

This area is used to clear the parameter area of the remote buffer memory. (☞ Page 111 Parameter area initialization function)

Address	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
4002H	Fixed to 0															0: Not commanded 1: Commanded

Setting this area to 1 (Commanded) initializes the parameter area of the remote buffer memory.

The default value is 0 (Not commanded). When any value other than 0 is set to b1 to b15, the parameter area is not initialized regardless of the value set to b0, without resulting in an error.

■Parameter area initialization completed (4003H)

This area is used to indicate the initialization completed status for the parameter area of the remote buffer memory. (☞ Page 111 Parameter area initialization function)

Address	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
4003H	Fixed to 0															0: Unexecuted 1: Completed

After the initialization of the parameter area is finished, b0 will be 1 (Completed). The default value is 0 (Unexecuted).

■X☐ relay ON count threshold setting (4100H to 4101H, ..., 411EH to 411FH)

This area is used to set the threshold for the relay ON count of the maintenance alarm function. (☞ Page 110 Maintenance alarm function)

When Relay ON count threshold valid/invalid setting (4120H) is set to enabled, this threshold is compared with the count value.

■Relay ON count threshold valid/invalid setting (4120H)

This area is used to set whether the relay ON count threshold of the maintenance alarm function is valid or invalid. (☞ Page 110 Maintenance alarm function)

When this function is enabled and the relay ON count exceeds the value specified in X☐ relay ON count threshold setting (4100H to 4101H, ..., 411EH to 411FH), an alarm code for the exceeded relay ON count (0E1☐H) is output.

Address	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
4120H	XF	XE	XD	XC	XB	XA	X9	X8	X7	X6	X5	X4	X3	X2	X1	X0

0: Relay ON count threshold is invalid.

1: Relay ON count threshold is valid.

■Relay ON count reset flag (4121H)

This flag resets the relay ON count of the maintenance information recording function. (☞ Page 109 Maintenance information recording function)

After the count is reset, the flag is turned off by the signal from the network interface module.

Address	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
4121H	XF	XE	XD	XC	XB	XA	X9	X8	X7	X6	X5	X4	X3	X2	X1	X0

0: Relay ON count reset completed or unexecuted

1: Relay ON count reset request

■Elapsed operation time threshold setting (4122H, 4123H)

This area is used to set the threshold of elapsed operation time of the maintenance alarm function in units of hours. (☞ Page 110 Maintenance alarm function)

When the setting value is 0, an alarm for the elapsed operation time does not occur.

■Elapsed operation time reset flag (4124H)

When the setting value is 1, the elapsed operation time of the maintenance information recording function is reset. If any value other than 1 is set, the data is not reset. (☞ Page 109 Maintenance information recording function)

After the time is reset, 0 is stored in the remote buffer memory.

■Operation start date reset flag (4125H)

When the setting value is 1, the operation start date of the maintenance information recording function is set to the present date. If any value other than 1 is set, the data is not reset. (☞ Page 109 Maintenance information recording function)

After setting, 0 is stored in the remote buffer memory.

Remote buffer memory areas (parameter area)

R: Can be read, W: Can be written

Type	Address		Name/Reference		Default	R/W
	Hexadecimal	Decimal				
Station-based parameter data	0000H	0	IP address at next startup setting (Third and fourth octets)	☞ Page 55 IP address at next startup setting (0000H, 0001H)	03FAH (3.250)	R/W
	0001H	1	IP address at next startup setting (First and second octets)		C0A8H (192.168)	
	0002H to 00FFH	2 to 255	Use prohibited		—	—
Module-based parameter data	0100H	256	Use prohibited		—	—
	0101H	257	☞ Page 60 Output HOLD/CLEAR setting (0101H)		0000H	R/W
	0102H to 01FFH	258 to 511	Use prohibited		—	—
—	0200H to 02FFH	512 to 767	Use prohibited		—	—

Remote buffer memory areas (monitor area, control area)

Type	Address		Name/Reference		Default	R/W
	Hexadecimal	Decimal				
Module-based monitor data	0300H to 3B5FH	768 to 15199	Use prohibited		—	—
	3B60H, 3B61H	15200, 15201	Y0 relay ON count	☞ Page 60 Y□ relay ON count (3B60H to 3B61H, ..., 3B7EH to 3B7FH)	00000000H	R
	⋮	⋮	⋮		⋮	⋮
	3B7EH, 3B7FH	15230, 15231	YF relay ON count		00000000H	R
	3B80H, 3B81H	15232, 15233	☞ Page 56 Elapsed operation time (3B80H, 3B81H)		00000000H	R
	3B82H to 3B86H	15234 to 15238	☞ Page 56 Operation start date (3B82H to 3B86H)		0	R
	3B87H to 3B8FH	15239 to 15247	Use prohibited		—	—
	3B90H	15248	☞ Page 56 Parameter automatic setting status monitor (3B90H)		0000H	R
	3B91H to 3B9FH	15249 to 15263	Use prohibited		—	—
	3BA0H	15264	☞ Page 56 Latest error history pointer (3BA0H)		FFFFH	R
	3BA1H	15265	Use prohibited		—	—

Type	Address		Name/Reference		Default	R/W
	Hexadecimal	Decimal				
Module-based monitor data	3BA2H to 3BB2H	15266 to 15282	Error history 1 (Latest when the value of Latest error history pointer is 0)*1	☞ Page 56 Error history 1 to 16 (3BA2H to 3BB2H, ..., 3CA1H to 3CB1H)	0000H	R
	3BB3H to 3BC3H	15283 to 15299	Error history 2 (Latest when the value of Latest error history pointer is 1)*1		0000H	R
	3BC4H to 3BD4H	15300 to 15316	Error history 3 (Latest when the value of Latest error history pointer is 2)*1		0000H	R
	3BD5H to 3BE5H	15317 to 15333	Error history 4 (Latest when the value of Latest error history pointer is 3)*1		0000H	R
	3BE6H to 3BF6H	15334 to 15350	Error history 5 (Latest when the value of Latest error history pointer is 4)*1		0000H	R
	3BF7H to 3C07H	15351 to 15367	Error history 6 (Latest when the value of Latest error history pointer is 5)*1		0000H	R
	3C08H to 3C18H	15368 to 15384	Error history 7 (Latest when the value of Latest error history pointer is 6)*1		0000H	R
	3C19H to 3C29H	15385 to 15401	Error history 8 (Latest when the value of Latest error history pointer is 7)*1		0000H	R
	3C2AH to 3C3AH	15402 to 15418	Error history 9 (Latest when the value of Latest error history pointer is 8)*1		0000H	R
	3C3BH to 3C4BH	15419 to 15435	Error history 10 (Latest when the value of Latest error history pointer is 9)*1		0000H	R
	3C4CH to 3C5CH	15436 to 15452	Error history 11 (Latest when the value of Latest error history pointer is 10)*1		0000H	R
	3C5DH to 3C6DH	15453 to 15469	Error history 12 (Latest when the value of Latest error history pointer is 11)*1		0000H	R
	3C6EH to 3C7EH	15470 to 15486	Error history 13 (Latest when the value of Latest error history pointer is 12)*1		0000H	R
	3C7FH to 3C8FH	15487 to 15503	Error history 14 (Latest when the value of Latest error history pointer is 13)*1		0000H	R
	3C90H to 3CA0H	15504 to 15520	Error history 15 (Latest when the value of Latest error history pointer is 14)*1		0000H	R
	3CA1H to 3CB1H	15521 to 15537	Error history 16 (Latest when the value of Latest error history pointer is 15)*1		0000H	R
	3CB2H to 3FFFH	15538 to 16383	Use prohibited		—	—
Station-based control data	4000H, 4001H	16384, 16385	Use prohibited		—	—
	4002H	16386	☞ Page 56 Parameter area initialization command (4002H)		0	R/W
	4003H	16387	☞ Page 57 Parameter area initialization completed (4003H)		0	R
	4004H to 40FFH	16388 to 16639	Use prohibited		—	—
Module-based control data	4100H, 4101H	16640, 16641	Y0 relay ON count threshold setting	☞ Page 60 Y□ relay ON count threshold setting (4100H to 4101H, ..., 411EH to 411FH)	00000000H	R/W
	⋮	⋮	⋮		⋮	⋮
	411EH, 411FH	16670, 16671	YF relay ON count threshold setting		00000000H	R/W
	4120H	16672	☞ Page 57 Relay ON count threshold valid/invalid setting (4120H)		0000H	R/W
	4121H	16673	☞ Page 57 Relay ON count reset flag (4121H)		0000H	R/W
	4122H, 4123H	16674, 16675	☞ Page 57 Elapsed operation time threshold setting (4122H, 4123H)		00000000H	R/W
	4124H	16676	☞ Page 57 Elapsed operation time reset flag (4124H)		0000H	R/W
	4125H	16677	☞ Page 57 Operation start date reset flag (4125H)		0000H	R/W
	4126H to 4FFFH	16678 to 20479	Use prohibited		—	—

*1 In the CC-Link IE Field Network system, the history in Error history 1 is always the latest. (☞ Page 56 Latest error history pointer (3BA0H))

Restriction

Do not write data to the items where only R is indicated in R/W column of the above list. If you do so, normal operation is not guaranteed.

Details of remote buffer memory areas

■Output HOLD/CLEAR setting (0101H)

When the network interface module is disconnected from data link, when the CPU module operating status is STOP or RESET, or when the CPU module operation is suspended by an error, whether to hold or clear the last output value can be set by this function. (☞ Page 115 Output HOLD/CLEAR setting function)

0: CLEAR (default)

1: HOLD

When any value other than the above (an invalid value) is set, the output value is held.

■Y□ relay ON count (3B60H to 3B61H, ..., 3B7EH to 3B7FH)

This area is used to store the relay ON count of the maintenance information recording function. (☞ Page 109 Maintenance information recording function)

■Y□ relay ON count threshold setting (4100H to 4101H, ..., 411EH to 411FH)

This area is used to set the threshold for the relay ON count of the maintenance alarm function. (☞ Page 110 Maintenance alarm function)

When Relay ON count threshold valid/invalid setting (4120H) is set to enabled, this threshold is compared with the count value.

Remote buffer memory areas (parameter area)

R: Can be read, W: Can be written

Type	Address		Name/Reference		Default	R/W
	Hexadecimal	Decimal				
Station-based parameter data	0000H	0	IP address at next startup setting (Third and fourth octets)	☞ Page 55 IP address at next startup setting (0000H, 0001H)	03FAH (3.250)	R/W
	0001H	1	IP address at next startup setting (First and second octets)		C0A8H (192.168)	
	0002H to 00FFH	2 to 255	Use prohibited		—	—
Module-based parameter data	0100H, 0101H	256, 257	Use prohibited		—	—
	0102H	258	☞ Page 66 CH□ A/D conversion enable/disable setting (0102H)		0000H	R/W
	0103H, 0104H	259, 260	Use prohibited		—	—
	0105H	261	Averaging processing setting (CH1 to CH4)	☞ Page 66 CH□ Averaging processing setting (0105H, 0106H)	0000H	R/W
	0106H	262	Averaging processing setting (CH5 to CH8)		0000H	R/W
	0107H	263	CH1 Time average/Count average/Moving average	☞ Page 66 CH□ Time average/ Count average/ Moving average (0107H to 010EH)	0	R/W
	0108H	264	CH2 Time average/Count average/Moving average		0	R/W
	0109H	265	CH3 Time average/Count average/Moving average		0	R/W
	010AH	266	CH4 Time average/Count average/Moving average		0	R/W
	010BH	267	CH5 Time average/Count average/Moving average		0	R/W
	010CH	268	CH6 Time average/Count average/Moving average		0	R/W
	010DH	269	CH7 Time average/Count average/Moving average		0	R/W
	010EH	270	CH8 Time average/Count average/Moving average		0	R/W
	010FH	271	Input signal error detection setting (CH1 to CH4)	☞ Page 66 Input signal error detection setting (010FH to 0110H)	0000H	R/W
	0110H	272	Input signal error detection setting (CH5 to CH8)		0000H	R/W
	0111H	273	☞ Page 67 Warning output setting (0111H)		00FFH	R/W
	0112H	274	CH1 Process alarm lower lower limit value	☞ Page 67 CH□ Process alarm upper limit value/ lower limit value (0112H to 0131H)	0	R/W
	0113H	275	CH1 Process alarm lower upper limit value		0	R/W
	0114H	276	CH1 Process alarm upper lower limit value		0	R/W
	0115H	277	CH1 Process alarm upper upper limit value		0	R/W
	0116H	278	CH2 Process alarm lower lower limit value		0	R/W
	0117H	279	CH2 Process alarm lower upper limit value		0	R/W
	0118H	280	CH2 Process alarm upper lower limit value		0	R/W
	0119H	281	CH2 Process alarm upper upper limit value		0	R/W
	011AH	282	CH3 Process alarm lower lower limit value		0	R/W
	011BH	283	CH3 Process alarm lower upper limit value		0	R/W
	011CH	284	CH3 Process alarm upper lower limit value		0	R/W
	011DH	285	CH3 Process alarm upper upper limit value		0	R/W
	011EH	286	CH4 Process alarm lower lower limit value		0	R/W
	011FH	287	CH4 Process alarm lower upper limit value		0	R/W
	0120H	288	CH4 Process alarm upper lower limit value		0	R/W
	0121H	289	CH4 Process alarm upper upper limit value		0	R/W
	0122H	290	CH5 Process alarm lower lower limit value		0	R/W
	0123H	291	CH5 Process alarm lower upper limit value		0	R/W
	0124H	292	CH5 Process alarm upper lower limit value		0	R/W
	0125H	293	CH5 Process alarm upper upper limit value		0	R/W
	0126H	294	CH6 Process alarm lower lower limit value		0	R/W

Type	Address		Name/Reference		Default	R/W
	Hexadecimal	Decimal				
Module-based parameter data	0127H	295	CH6 Process alarm lower upper limit value	☞ Page 67 CH□ Process alarm upper limit value/ lower limit value (0112H to 0131H)	0	R/W
	0128H	296	CH6 Process alarm upper lower limit value		0	R/W
	0129H	297	CH6 Process alarm upper upper limit value		0	R/W
	012AH	298	CH7 Process alarm lower lower limit value		0	R/W
	012BH	299	CH7 Process alarm lower upper limit value		0	R/W
	012CH	300	CH7 Process alarm upper lower limit value		0	R/W
	012DH	301	CH7 Process alarm upper upper limit value		0	R/W
	012EH	302	CH8 Process alarm lower lower limit value		0	R/W
	012FH	303	CH8 Process alarm lower upper limit value		0	R/W
	0130H	304	CH8 Process alarm upper lower limit value		0	R/W
	0131H	305	CH8 Process alarm upper upper limit value		0	R/W
	0132H	306	☞ Page 67 Digital clipping enable/disable setting (0132H)		0000H	R/W
	0133H	307	☞ Page 67 Scaling enable/disable setting (0133H)		00FFH	R/W
	0134H	308	CH1 Scaling lower limit value	☞ Page 68 CH□ Scaling upper limit value/lower limit value (0134H to 0143H)	0	R/W
	0135H	309	CH1 Scaling upper limit value		0	R/W
	0136H	310	CH2 Scaling lower limit value		0	R/W
	0137H	311	CH2 Scaling upper limit value		0	R/W
	0138H	312	CH3 Scaling lower limit value		0	R/W
	0139H	313	CH3 Scaling upper limit value		0	R/W
	013AH	314	CH4 Scaling lower limit value		0	R/W
	013BH	315	CH4 Scaling upper limit value		0	R/W
	013CH	316	CH5 Scaling lower limit value		0	R/W
	013DH	317	CH5 Scaling upper limit value		0	R/W
	013EH	318	CH6 Scaling lower limit value		0	R/W
	013FH	319	CH6 Scaling upper limit value		0	R/W
	0140H	320	CH7 Scaling lower limit value		0	R/W
	0141H	321	CH7 Scaling upper limit value		0	R/W
	0142H	322	CH8 Scaling lower limit value		0	R/W
	0143H	323	CH8 Scaling upper limit value		0	R/W
	0144H to 04FFH	324 to 1279	Use prohibited		—	—
—	0500H to 05FFH	1280 to 1535	Use prohibited		—	—

Point

Parameter data of the FA3-AT written to the remote buffer memory is not automatically enabled. To enable the data, turn on and off Initial data setting request flag (RY9).

The data saved in the remote buffer memory is saved in the non-volatile memory either automatically or by turning on and off Initial data setting request flag (RY9). (☞ Page 52 Saving data in the non-volatile memory)

Remote buffer memory areas (monitor area, control area)

Type	Address		Name/Reference		Default	R/W
	Hexadecimal	Decimal				
Module-based monitor data	0600H	1536	CH1 Maximum value	☞ Page 68 CH□ Maximum value/ minimum value (0600H to 060FH)	0	R
	0601H	1537	CH1 Minimum value		0	R
	0602H	1538	CH2 Maximum value		0	R
	0603H	1539	CH2 Minimum value		0	R
	0604H	1540	CH3 Maximum value		0	R
	0605H	1541	CH3 Minimum value		0	R
	0606H	1542	CH4 Maximum value		0	R
	0607H	1543	CH4 Minimum value		0	R
	0608H	1544	CH5 Maximum value		0	R
	0609H	1545	CH5 Minimum value		0	R
	060AH	1546	CH6 Maximum value		0	R
	060BH	1547	CH6 Minimum value		0	R
	060CH	1548	CH7 Maximum value		0	R
	060DH	1549	CH7 Minimum value		0	R
	060EH	1550	CH8 Maximum value		0	R
	060FH	1551	CH8 Minimum value		0	R
	0600H	1536	CH1 Maximum value		0	R
	0601H	1537	CH1 Minimum value		0	R
	0602H	1538	CH2 Maximum value		0	R
	0603H	1539	CH2 Minimum value		0	R
	0604H	1540	CH3 Maximum value		0	R
	0605H	1541	CH3 Minimum value		0	R
	0606H	1542	CH4 Maximum value		0	R
	0607H	1543	CH4 Minimum value		0	R
	0608H	1544	CH5 Maximum value		0	R
	0609H	1545	CH5 Minimum value		0	R
	060AH	1546	CH6 Maximum value		0	R
	060BH	1547	CH6 Minimum value		0	R
	060CH	1548	CH7 Maximum value		0	R
	060DH	1549	CH7 Minimum value		0	R
	060EH	1550	CH8 Maximum value		0	R
	060FH	1551	CH8 Minimum value		0	R
	0610H to 3B7FH	1552 to 15231	Use prohibited		—	—
	3B80H, 3B81H	15232, 15233	☞ Page 56 Elapsed operation time (3B80H, 3B81H)		00000000H	R
	3B82H to 3B86H	15234 to 15238	☞ Page 56 Operation start date (3B82H to 3B86H)		0	R
	3B87H to 3B8FH	15239 to 15247	Use prohibited		—	—
	3B90H	15248	☞ Page 56 Parameter automatic setting status monitor (3B90H)		0000H	R
	3B91H to 3B9FH	15249 to 15263	Use prohibited		—	—

Type	Address		Name/Reference		Default	R/W
	Hexadecimal	Decimal				
Module-based monitor data	3BA0H	15264	☞ Page 56 Latest error history pointer (3BA0H)		FFFFH	R
	3BA1H	15265	Use prohibited		—	—
	3BA2H to 3BB2H	15266 to 15282	Error history 1 (Latest when the value of Latest error history pointer is 0)*1	☞ Page 56 Error history 1 to 16 (3BA2H to 3BB2H, ..., 3CA1H to 3CB1H)	0000H	R
	3BB3H to 3BC3H	15283 to 15299	Error history 2 (Latest when the value of Latest error history pointer is 1)*1		0000H	R
	3BC4H to 3BD4H	15300 to 15316	Error history 3 (Latest when the value of Latest error history pointer is 2)*1		0000H	R
	3BD5H to 3BE5H	15317 to 15333	Error history 4 (Latest when the value of Latest error history pointer is 3)*1		0000H	R
	3BE6H to 3BF6H	15334 to 15350	Error history 5 (Latest when the value of Latest error history pointer is 4)*1		0000H	R
	3BF7H to 3C07H	15351 to 15367	Error history 6 (Latest when the value of Latest error history pointer is 5)*1		0000H	R
	3C08H to 3C18H	15368 to 15384	Error history 7 (Latest when the value of Latest error history pointer is 6)*1		0000H	R
	3C19H to 3C29H	15385 to 15401	Error history 8 (Latest when the value of Latest error history pointer is 7)*1		0000H	R
	3C2AH to 3C3AH	15402 to 15418	Error history 9 (Latest when the value of Latest error history pointer is 8)*1		0000H	R
	3C3BH to 3C4BH	15419 to 15435	Error history 10 (Latest when the value of Latest error history pointer is 9)*1		0000H	R
	3C4CH to 3C5CH	15436 to 15452	Error history 11 (Latest when the value of Latest error history pointer is 10)*1		0000H	R
	3C5DH to 3C6DH	15453 to 15469	Error history 12 (Latest when the value of Latest error history pointer is 11)*1		0000H	R
	3C6EH to 3C7EH	15470 to 15486	Error history 13 (Latest when the value of Latest error history pointer is 12)*1		0000H	R
	3C7FH to 3C8FH	15487 to 15503	Error history 14 (Latest when the value of Latest error history pointer is 13)*1		0000H	R
	3C90H to 3CA0H	15504 to 15520	Error history 15 (Latest when the value of Latest error history pointer is 14)*1		0000H	R
	3CA1H to 3CB1H	15521 to 15537	Error history 16 (Latest when the value of Latest error history pointer is 15)*1		0000H	R
	3CB2H to 3CFFH	15538 to 15615	Use prohibited		—	—
—	3D00H to 3FFFH	15616 to 16383	Use prohibited		—	—
Station-based control data	4000H, 4001H	16384, 16385	Use prohibited		—	—
	4002H	16386	☞ Page 56 Parameter area initialization command (4002H)		0	R/W
	4003H	16387	☞ Page 57 Parameter area initialization completed (4003H)		0	R
	4004H to 40FFH	16388 to 16639	Use prohibited		—	—

Type	Address		Name/Reference		Default	R/W
	Hexadecimal	Decimal				
Module-based control data	4100H	16640	CH1 Logging data setting	☞ Page 68 CH□ Logging data setting (4100H to 4107H)	0000H	R/W
	⋮	⋮	⋮		⋮	⋮
	4107H	16647	CH8 Logging data setting		0000H	R/W
	4108H	16648	CH1 Logging cycle setting	☞ Page 68 CH□ Logging cycle setting (4108H to 410FH)	0001H	R/W
	⋮	⋮	⋮		⋮	⋮
	410FH	16655	CH8 Logging cycle setting		0001H	R/W
	4110H	16656	CH1 Logging cycle unit setting	☞ Page 68 CH□ Logging cycle unit setting (4110H to 4117H)	0000H	R/W
	⋮	⋮	⋮		⋮	⋮
	4117H	16663	CH8 Logging cycle unit setting		0000H	R/W
	4118H to 4121H	16664 to 16673	Use prohibited		—	—
	4122H, 4123H	16674, 16675	☞ Page 57 Elapsed operation time threshold setting (4122H, 4123H)		00000000H	R/W
	4124H	16676	☞ Page 57 Elapsed operation time reset flag (4124H)		0000H	R/W
	4125H	16677	☞ Page 57 Operation start date reset flag (4125H)		0000H	R/W
	4126H to 4FFFH	16678 to 20479	Use prohibited		—	—

*1 In the CC-Link IE Field Network system, the history in Error history 1 is always the latest. (☞ Page 56 Latest error history pointer (3BA0H))

Restriction

Do not write data to the items where only R is indicated in R/W column of the above list. If you do so, normal operation is not guaranteed.

Details of remote buffer memory areas

■CH☐ A/D conversion enable/disable setting (0102H)

This area is used to set whether to enable or disable A/D conversion for each channel.

Address	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
0102H	Fixed to 0								CH8	CH7	CH6	CH5	CH4	CH3	CH2	CH1

0: Enable (default)

1: Disable

Even when any value other than 0 is set to b8 to b15, the settings of b0 to b7 are valid, without resulting in an error.

■CH☐ Averaging processing setting (0105H, 0106H)

This area is used to set Sampling processing or Averaging processing for each channel. (☞ Page 120 Averaging processing)

When Averaging processing is set, select any one of Time average, Count average, or Moving average.

Address	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
0105H	CH4				CH3				CH2				CH1			
0106H	CH8				CH7				CH6				CH5			

Setting value	Processing method
0H	Sampling processing (default)
1H	Time average
2H	Count average
3H	Moving average

A channel to which a value out of the range is written operates with the sampling processing.

■CH☐ Time average/Count average/Moving average (0107H to 010EH)

This area is used to set the time (for averaging), count (for averaging), and moving average count for each channel to which CH☐ Averaging processing (0105H, 0106H) is set. (☞ Page 120 Averaging processing)

Processing method	Setting range
Time average	2 to 10000ms
Count average	4 to 65000 times
Moving average	2 to 128 times

The default value is 0.

An error occurs on channels for which a value out of the setting range is set. In that case, the error code (320☐H, 321☐H, or 322☐H) is stored in Latest error code (RWr0), Error status flag (RXA) is turned on, and the module operates with the settings before the error occurrence.

Point

- A value set for the channels with Sampling processing specified is ignored.
- A channel where 1H (Time average) is specified for Averaging processing executes with the same settings as those for Sampling processing if the processing times are less than two.

■Input signal error detection setting (010FH to 0110H)

This area is used to set whether to enable to disable the input signal error detection for each channel. (☞ Page 122 Input signal error detection function)

Address	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
010FH	CH4				CH3				CH2				CH1			
0110H	CH8				CH7				CH6				CH5			

Setting value	Detection method for input signal error
0H	Disable (default)
4H	Input signal error detection

If a value other than 4H is set, the value is considered 0H.

■Warning output setting (0111H)

This area is used to set whether to enable or disable process alarm warning output for each channel. (☞ Page 124 Warning output function (process alarm))

Address	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
0111H	Fixed to 0								CH8	CH7	CH6	CH5	CH4	CH3	CH2	CH1

0: Enable

1: Disable (default)

Even when any value other than 0 is set to b8 to b15, the settings of b0 to b7 are valid, without resulting in an error.

■CH□ Process alarm upper limit value/lower limit value (0112H to 0131H)

This area is used to set the range of digital operation values to output an alarm for each channel.

A warning is output when a digital operation value falls within the warning output range specified in this remote buffer memory. (☞ Page 124 Warning output function (process alarm))

CH□ Process alarm upper limit value/lower limit value (0112H to 0131H)	Setting range
Process alarm lower lower limit value	-32768 to 32767 (Default: 0)
Process alarm lower upper limit value	
Process alarm upper upper limit value	
Process alarm upper upper limit value	

An error occurs in the channel to which an out-of-range value or a value that does not satisfy the condition of the lower lower limit value ≤ lower upper limit value ≤ upper lower limit value ≤ upper upper limit value is set. In that case, the error code (330□H, 331□H, or 332□H) is stored in Latest error code (RWr0), Error status flag (RXA) is turned on, and the module operates with the settings before the error occurrence.

Point

- The default value is 0. Change the setting value and enable the settings.
- When Scaling enable/disable setting is set to Enable, set a value with scaling conversion considered.

■Digital clipping enable/disable setting (0132H)

This area is used to set whether to enable or disable digital clipping for each channel. (☞ Page 126 Digital clipping function)

Address	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
0132H	Fixed to 0								CH8	CH7	CH6	CH5	CH4	CH3	CH2	CH1

0: Disable (Default)

1: Enable

Even when any value other than 0 is set to b8 to b15, the settings of b0 to b7 are valid, without resulting in an error.

■Scaling enable/disable setting (0133H)

Set whether to enable or disable scaling for each channel. (☞ Page 127 Scaling function)

Address	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
0133H	Fixed to 0								CH8	CH7	CH6	CH5	CH4	CH3	CH2	CH1

0: Enable

1: Disable (Default)

Even when any value other than 0 is set to b8 to b15, the settings of b0 to b7 are valid, without resulting in an error.

■CH□ Scaling upper limit value/lower limit value (0134H to 0143H)

This area is used to set the range of values to be scale-converted for each channel. (☞ Page 127 Scaling function)

CH□ Scaling upper limit value/lower limit value (0134H to 0143H)	Setting range
Scaling lower limit value	-32000 to 32000 (Default: 0)
Scaling upper limit value	

An error occurs in the channel to which an out-of-range value or a value that does not satisfy the condition of the upper limit value > lower limit value is set. In that case, the error code (350□H or 351□H) is stored in Latest error code (RWr0), Error status flag (RXA) is turned on, and the module operates with the settings before the error occurrence.

Point

- The default value is 0. Change the setting value and enable the settings.
- This setting is ignored when Scaling enable/disable setting (0133H) is set to Disable.

■CH□ Maximum value/minimum value (0600H to 060FH)

This area is used to store the maximum and minimum values of the converted digital operation value are stored as 16-bit signed binary data for each channel. (☞ Page 132 Maximum value/minimum value hold function)

The maximum and minimum values are updated every conversion cycle.

When the settings are changed by turning on and off Initial data setting request flag (RY9), the maximum and minimum values are cleared to 0. When Maximum value/minimum value reset request (RY1D) is turned on and off, the maximum and minimum values are replaced with present values.

■CH□ Logging data setting (4100H to 4107H)

This area is used to set which of the following values is collected for each channel. (☞ Page 106 Logging function (FA3-AT))

- 0: Digital output value
- 1: Scaling value (Digital operation value)

When any value other than the above (an invalid value) is set, the digital output value is collected.

■CH□ Logging cycle setting (4108H to 410FH)

This area is used to set the logging cycle for each channel. (☞ Page 107 Logging cycle)

■CH□ Logging cycle unit setting (4110H to 4117H)

This area is used to set the unit to be set the logging cycle for each channel. (☞ Page 107 Logging cycle)

Remote buffer memory areas (parameter area)

R: Can be read, W: Can be written

Type	Address		Name/Reference		Default	R/W
	Hexadecimal	Decimal				
Station-based parameter data	0000H	0	IP address at next startup setting (Third and fourth octets)	☞ Page 55 IP address at next startup setting (0000H, 0001H)	03FAH (3.250)	R/W
	0001H	1	IP address at next startup setting (First and second octets)		C0A8H (192.168)	
	0002H to 00FFH	2 to 255	Use prohibited		—	—
Module-based parameter data	0100H, 0101H	256, 257	Use prohibited		—	—
	0102H	258	☞ Page 71 CH□ D/A conversion enable/disable setting (0102H)		00FFH	R/W
	0103H, 0104H	259, 260	Use prohibited		—	—
	0105H	261	Analog output HOLD/CLEAR setting (CH1 to CH4)	☞ Page 71 Analog output HOLD/CLEAR setting (0105H, 0106H)	0000H	R/W
	0106H	262	Analog output HOLD/CLEAR setting (CH5 to CH8)		0000H	R/W
	0107H	263	☞ Page 71 Warning output setting (0107H)		00FFH	R/W
	0108H	264	CH1 Warning output upper limit value	☞ Page 72 CH□ Warning output upper/lower limit value (0108H to 0117H)	0	R/W
	0109H	265	CH1 Warning output lower limit value		0	R/W
	010AH	266	CH2 Warning output upper limit value		0	R/W
	010BH	267	CH2 Warning output lower limit value		0	R/W
	010CH	268	CH3 Warning output upper limit value		0	R/W
	010DH	269	CH3 Warning output lower limit value		0	R/W
	010EH	270	CH4 Warning output upper limit value		0	R/W
	010FH	271	CH4 Warning output lower limit value		0	R/W
	0110H	272	CH5 Warning output upper limit value		0	R/W
	0111H	273	CH5 Warning output lower limit value		0	R/W
	0112H	274	CH6 Warning output upper limit value		0	R/W
	0113H	275	CH6 Warning output lower limit value		0	R/W
	0114H	276	CH7 Warning output upper limit value		0	R/W
	0115H	277	CH7 Warning output lower limit value		0	R/W
	0116H	278	CH8 Warning output upper limit value		0	R/W
	0117H	279	CH8 Warning output lower limit value		0	R/W
	0118H	280	☞ Page 72 Scaling enable/disable setting (0118H)		00FFH	R/W
	0119H	281	CH1 Scaling lower limit value	☞ Page 72 CH□ Scaling upper limit value/lower limit value (0119H to 0128H)	0	R/W
	011AH	282	CH1 Scaling upper limit value		0	R/W
	011BH	283	CH2 Scaling lower limit value		0	R/W
	011CH	284	CH2 Scaling upper limit value		0	R/W
	011DH	285	CH3 Scaling lower limit value		0	R/W
	011EH	286	CH3 Scaling upper limit value		0	R/W
	011FH	287	CH4 Scaling lower limit value		0	R/W
	0120H	288	CH4 Scaling upper limit value		0	R/W
	0121H	289	CH5 Scaling lower limit value		0	R/W
	0122H	290	CH5 Scaling upper limit value		0	R/W
	0123H	291	CH6 Scaling lower limit value		0	R/W
	0124H	292	CH6 Scaling upper limit value		0	R/W
	0125H	293	CH7 Scaling lower limit value		0	R/W
	0126H	294	CH7 Scaling upper limit value		0	R/W
	0127H	295	CH8 Scaling lower limit value		0	R/W
	0128H	296	CH8 Scaling upper limit value		0	R/W
	0129H to 04FFH	297 to 1279	Use prohibited		—	—

Type	Address		Name/Reference	Default	R/W
	Hexadecimal	Decimal			
—	0500H to 05FFH	1280 to 1535	Use prohibited	—	—

Point

Parameter data of the FA3-AT written to the remote buffer memory is not automatically enabled. To enable the data, turn on and off Initial data setting request flag (RY9).

The data saved in the remote buffer memory is saved in the non-volatile memory either automatically or by turning on and off Initial data setting request flag (RY9). (☞ Page 52 Saving data in the non-volatile memory)

Remote buffer memory areas (monitor area, control area)

Type	Address		Name/Reference		Default	R/W
	Hexadecimal	Decimal				
Module-based monitor data	0600H to 3B7FH	1536 to 15231	Use prohibited		—	—
	3B80H, 3B81H	15232, 15233	☞ Page 56 Elapsed operation time (3B80H, 3B81H)		00000000H	R
	3B82H to 3B86H	15234 to 15238	☞ Page 56 Operation start date (3B82H to 3B86H)		0	R
	3B87H to 3B8FH	15239 to 15247	Use prohibited		—	—
	3B90H	15248	☞ Page 56 Parameter automatic setting status monitor (3B90H)		0000H	R
	3B91H to 3B9FH	15249 to 15263	Use prohibited		—	—
	3BA0H	15264	☞ Page 56 Latest error history pointer (3BA0H)		FFFFH	R
	3BA1H	15265	Use prohibited		—	—
	3BA2H to 3BB2H	15266 to 15282	Error history 1 (Latest when the value of Latest error history pointer is 0)*1	☞ Page 56 Error history 1 to 16 (3BA2H to 3BB2H, ..., 3CA1H to 3CB1H)	0000H	R
	3BB3H to 3BC3H	15283 to 15299	Error history 2 (Latest when the value of Latest error history pointer is 1)*1		0000H	R
	3BC4H to 3BD4H	15300 to 15316	Error history 3 (Latest when the value of Latest error history pointer is 2)*1		0000H	R
	3BD5H to 3BE5H	15317 to 15333	Error history 4 (Latest when the value of Latest error history pointer is 3)*1		0000H	R
	3BE6H to 3BF6H	15334 to 15350	Error history 5 (Latest when the value of Latest error history pointer is 4)*1		0000H	R
	3BF7H to 3C07H	15351 to 15367	Error history 6 (Latest when the value of Latest error history pointer is 5)*1		0000H	R
	3C08H to 3C18H	15368 to 15384	Error history 7 (Latest when the value of Latest error history pointer is 6)*1		0000H	R
	3C19H to 3C29H	15385 to 15401	Error history 8 (Latest when the value of Latest error history pointer is 7)*1		0000H	R
	3C2AH to 3C3AH	15402 to 15418	Error history 9 (Latest when the value of Latest error history pointer is 8)*1		0000H	R
	3C3BH to 3C4BH	15419 to 15435	Error history 10 (Latest when the value of Latest error history pointer is 9)*1		0000H	R
	3C4CH to 3C5CH	15436 to 15452	Error history 11 (Latest when the value of Latest error history pointer is 10)*1		0000H	R
	3C5DH to 3C6DH	15453 to 15469	Error history 12 (Latest when the value of Latest error history pointer is 11)*1		0000H	R
	3C6EH to 3C7EH	15470 to 15486	Error history 13 (Latest when the value of Latest error history pointer is 12)*1		0000H	R
	3C7FH to 3C8FH	15487 to 15503	Error history 14 (Latest when the value of Latest error history pointer is 13)*1		0000H	R
	3C90H to 3CA0H	15504 to 15520	Error history 15 (Latest when the value of Latest error history pointer is 14)*1		0000H	R
	3CA1H to 3CB1H	15521 to 15537	Error history 16 (Latest when the value of Latest error history pointer is 15)*1		0000H	R
	3CB2H to 3CFFH	15538 to 15615	Use prohibited		—	—

Type	Address		Name/Reference		Default	R/W
	Hexadecimal	Decimal				
—	3D00H to 3FFFH	15616 to 16383	Use prohibited		—	—
Station-based control data	4000H, 4001H	16384, 16385	Use prohibited		—	—
	4002H	16386	☞ Page 56 Parameter area initialization command (4002H)		0	R/W
	4003H	16387	☞ Page 57 Parameter area initialization completed (4003H)		0	R
	4004H to 40FFH	16388 to 16639	Use prohibited		—	—
Module-based control data	4100H	16640	CH1 Logging data setting	☞ Page 72 CH□ Logging data setting (4100H to 4107H)	0000H	R/W
	⋮	⋮	⋮		⋮	⋮
	4107H	16647	CH8 Logging data setting		0000H	R/W
	4108H to 4117H	16648 to 16663	Use prohibited		—	—
	4118H to 4121H	16664 to 16673	Use prohibited		—	—
	4122H, 4123H	16674, 16675	☞ Page 57 Elapsed operation time threshold setting (4122H, 4123H)		00000000H	R/W
	4124H	16676	☞ Page 57 Elapsed operation time reset flag (4124H)		0000H	R/W
	4125H	16677	☞ Page 57 Operation start date reset flag (4125H)		0000H	R/W
	4126H to 4FFFH	16678 to 20479	Use prohibited		—	—

*1 In the CC-Link IE Field Network system, the history in Error history 1 is always the latest. (☞ Page 56 Latest error history pointer (3BA0H))

Restriction

Do not write data to the items where only R is indicated in R/W column of the above list. If you do so, normal operation is not guaranteed.

Details of remote buffer memory areas

■CH□ D/A conversion enable/disable setting (0102H)

Set whether to enable or disable D/A conversion for each channel.

Address	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
0102H	Fixed to 0								CH8	CH7	CH6	CH5	CH4	CH3	CH2	CH1

0: Enable

1: Disable (default)

Even when any value other than 0 is set to b8 to b15, the settings of b0 to b7 are valid, without resulting in an error.

■Analog output HOLD/CLEAR setting (0105H, 0106H)

Set whether to hold or clear the last analog output value in any of the following cases: when the network interface module is disconnected from data link, when the CPU module operating status is STOP or RESET, or when the CPU module operation is suspended by an error. (☞ Page 135 Analog output HOLD/CLEAR setting function)

Address	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
0105H	CH4				CH3				CH2				CH1			
0116H	CH8				CH7				CH6				CH5			

0: CLEAR (default)

1: HOLD

When any value other than the above (an invalid value) is set, the output value is held.

■Warning output setting (0107H)

Set whether to enable or disable Warning output for each channel. (☞ Page 136 Warning output function)

Address	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
0107H	0 (Fixed)								CH8	CH7	CH6	CH5	CH4	CH3	CH2	CH1

0: Enable

1: Disable (default)

Even when any value other than 0 is set to b8 to b15, the settings of b0 to b7 are valid, without resulting in an error.

■CH☐ Warning output upper/lower limit value (0108H to 0117H)

This area is used to set the range of digital values to output an alarm for each channel. (☞ Page 136 Warning output function)

A warning is output when a digital value falls within the warning output range specified in this remote buffer memory.

CH☐ Warning output upper/lower limit value setting (0108H to 0117H)	Setting range
Warning output upper limit value	-32768 to 32767 (Default: 0)
Warning output lower limit value	

An error occurs in the channel to which an out-of-range value or a value that does not satisfy the condition of the upper limit value > lower limit value is set. In that case, the error code (330☐H) is stored in Latest error code (RWr0), Error status flag (RXA) is turned on, and the module operates with the settings before the error occurrence.

Point

- When Scaling enable/disable setting is set to Enable, set a value with scaling range considered.
- When Warning output setting (0107H) is set to Disable, the warning output upper and lower limit values of the target channel are ignored.

■Scaling enable/disable setting (0118H)

This area is used to set whether to enable or disable Scaling for each channel. (☞ Page 138 Scaling function)

Address	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
0118H	0 (Fixed)								CH8	CH7	CH6	CH5	CH4	CH3	CH2	CH1

0: Enable

1: Disable (Default)

Even when any value other than 0 is set to b8 to b15, the settings of b0 to b7 are valid, without resulting in an error.

■CH☐ Scaling upper limit value/lower limit value (0119H to 0128H)

This area is used to set the digital value input range when the scaling function is used. (☞ Page 138 Scaling function)

The upper limit value must be greater than the lower limit value.

CH☐ Scaling upper limit value/lower limit value (0119H to 0128H)	Setting range
Scaling lower limit value	-32000 to 32000 (Default: 0)
Scaling upper limit value	

If the lower value is larger than the upper value or a value out of the range is set, the error code (350☐H or 351☐H) is stored in Latest error code (RWr0).

Point

When Scaling enable/disable setting (0118H) is set to Disable, the scaling upper and lower limit values of the target channel are ignored.

■CH☐ Logging data setting (4100H to 4107H)

This area is used to set which of the following values is collected for each channel. (☞ Page 106 Logging function (FA3-AT))

- 0: Digital input value
- 1: Scaling value (Digital operation value)

When any value other than the above (an invalid value) is set, the digital input value is collected.

3.7 Function Block (FB)

This section describes the function blocks (FBs) that can be used in the network interface module.

Function name	Description
Operation history storage	The relay ON/OFF history of the specified external I/O signals is stored in the CSV file.
Logging data storage	The logging data of the target module is stored in the CSV file.

For download of function blocks (FBs) and reference manuals, please consult your local Mitsubishi Electric representative.