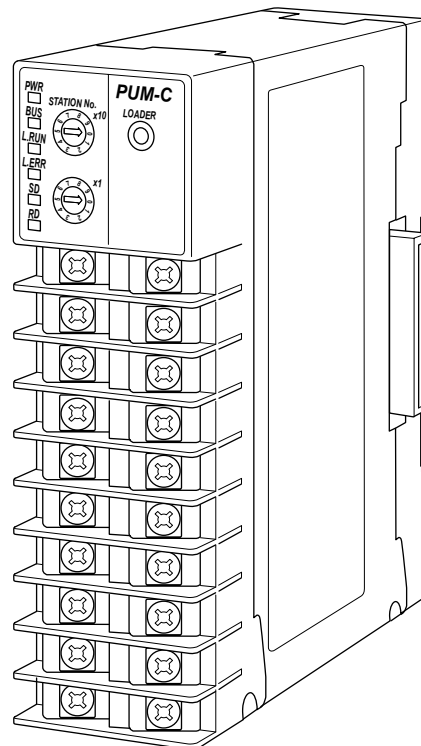


**MULTI-LOOP MODULE TYPE
TEMPERATURE CONTROLLER
<Enhanced Communication
Module (CC-Link)>**

TYPE: PUMCL



Please Read First (Safety Warnings)

Please read this section thoroughly before using and observe the mentioned safety warnings fully.

Safety warnings are categorized as “Warning” or “Caution”.

⚠Caution	Improper use of the equipment may result in death or serious injuries.
⚠Warning	Improper use of the equipment may cause injury to the user or property damage.

⚠ Warning

Installation and Wiring

- This equipment is intended to be used under the following conditions.

Ambient temperature	-10 to 50 degree C
Ambient humidity	90% RH or below (with no condensation)
Vibration	10 to 70Hz less than 9.8m/s ² (1G)
Warm-up time	30 min. or more
Installation category	IEC1010-1: class II
Pollution level	IEC1010-1: degree 2

- Between the temperature sensor and the location where the voltage reaches or generates the values described below, secure clearance space and creepage distance as shown in the table below.

If such space cannot be secured, the EN61010 safety compliance may become invalid.

Voltage used or generated by any assemblies	Clearance Space [mm]	Creepage Space [mm]
Up to 50 Vrms or Vdc	0.2	1.2
Up to 100 Vrms or Vdc	0.2	1.4
Up to 150 Vrms or Vdc	0.5	1.6
Up to 300 Vrms or Vdc	1.5	3.0
Above 300 Vrms or Vdc	Please consult our distributor	

- For the above, if voltage exceeds 50Vdc (called danger voltage), basic insulation is required between the earth and all terminals of the equipment.

Note that the insulation class for this equipment is as follows. Before installing, please confirm that the insulation class for equipment meets usage requirements.

Power	SLD/FG Terminal (CC-Link connecting terminal)
Loader communication	CC-Link communication

— Functional insulation (AC1000V)
 — Functional insulation (AC500V)
 - - - Functional insulation (AC50V)

- In cases where damage or problems with this equipment may lead to serious accidents, install appropriate external protective circuits.
- To prevent damage and failure of the equipment, provide the rated power voltage.
- To prevent electric shock and equipment failure, do not turn the power ON until all wiring is complete.
- Before turning the power ON, confirm that clearance space has been secured to prevent shock or fire.
- Do not touch the terminal while the machine is ON. Doing so risks shock or equipment errors.
- Never disassemble, convert, modify or repair this equipment. Doing so risks abnormal operation, shock or fire.

Maintenance

- When installing or removing the equipment, turn the power OFF. Otherwise, shock, operational errors or failures may be caused.
- Periodic maintenance is recommended for continuous and safe use of this equipment.
- Some parts installed on this equipment have a limited life and/or may deteriorate with age.
- The warranty period for this unit (including accessories) is one year, if the product is used properly.

⚠ Caution

Cautions when Installing

Please avoid installing in the following locations.

- Locations in which the ambient temperature falls outside the range of 0 to 50 degrees C when equipment is in use.
- Locations in which the ambient humidity falls outside the range of 45 to 85% RH when equipment is in use.
- Locations with rapid temperature changes, leading to dew condensation.
- Locations with corrosive gases (especially sulfide gas, ammonia, etc.) or flammable gases.
- Locations with vibration or shock directly.

- Locations in contact with water, oil, chemicals, steam or hot water.
(If the equipment gets wet, there is a risk of electric shock or fire, so have it inspected by Fuji distributor.)
- Locations with high concentrations of atmospheric dust, salt or iron particles.
- Locations with large inductive interference, resulting in static electricity, magnetic fields or noise.
- Locations in direct sunlight.
- Locations that build up heat from radiant heat sources, etc.

Cautions when Mounting to Cabinets / DIN Rails

- In case of mounting the temperature controllers to DIN rails, remember to push up the locking tabs to fasten the controllers onto DIN rail.
- To connect controllers, first release all locking tabs. Then, connect controllers and push up all locking tabs. Make sure that all locking tabs are fastened.
- Never fail to turn the power OFF, before detaching the terminal block or removing the main unit from the base part.
- In order to aid heat dissipation, do not block the top and the bottom of the equipment.
- When mounting / dismantling controllers to / from DIN rails, 30mm of clearance above and under the controllers should be provided.

Cautions for Wiring

- To comply with CE marking (EMC), we recommend to attach ferrite core to communication cable and power cable.
- For wiring to the terminal block, apply crimp type terminals size M3.
Use terminal screws in this product only.
Screw size: M3×7 (with square washer)
Screw tightening torque: 0.78N•m (8kgf•cm)
- To avoid the influence of inductive noise, input signal wires should be separated from electric power lines or load lines.

Error Operation

- The alarm function does not work properly when an error occurs unless the settings are made correctly. Always verify its setting before operation.

Others

- Please do not wipe the equipment with organic solvents such as alcohol or benzene, etc. If wiping is necessary, use a neutral cleaning agent.
- Do not use mobile phones near this equipment (within 50cm). Otherwise a malfunction may result.
- Malfunctions may occur if the equipment is used near a radio, TV, or wireless device.
- This equipment requires approx. 20 seconds before it starts to output.
- Before installing and wiring, take necessary measures for electrostatic discharge (ESD).
- The power supply for this product is 24V DC. Please use the power source of appropriate volume depending on the number of units you connect.

Recommended power supply :

Cosel Electronics Co., Ltd. PBA Series

Omron Corporation S8VM Series

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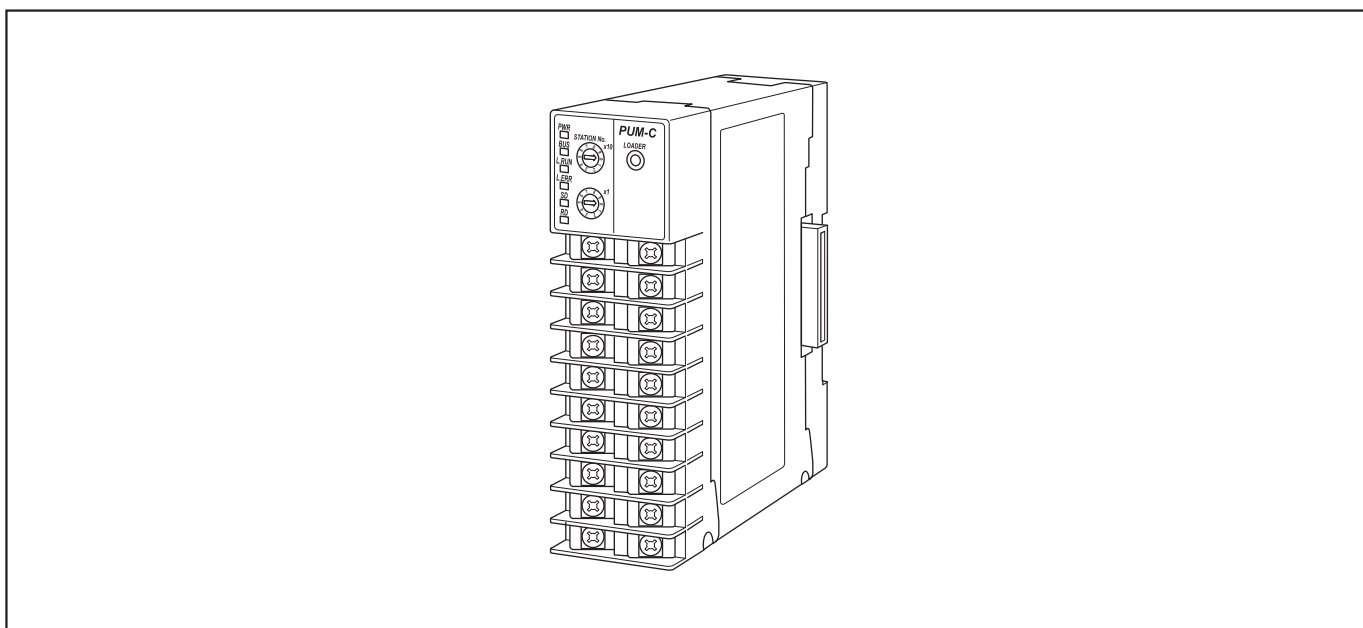
Overview

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1.1 Overview

Enhanced communication module, PUMCL, is a module to perform communications with each company's PLC, which is CC-Link compliant.

- This PUMCL is used when you make up the temperature control system with the module-type temperature controller, PUM series and to perform communications with using CC-Link.
- The communication functions comply with the MODBUS RTU just like the other modules of PUM series.
- Labor saving wiring ; with only one unit directly connected to power supply, all connected controllers are also connected to it internally via side connectors.



Hereinafter, PUMCL will be referred to as "this equipment" or "enhanced communication module".

Confirming accessories

Before using the product, please confirm that all of following accessories are included.

Description	Quantity
Temperature Controller Enhanced Communication Module	1 unit
Instruction manual (Installation)	1 copy

1.2 Model Code

Enhanced communication module

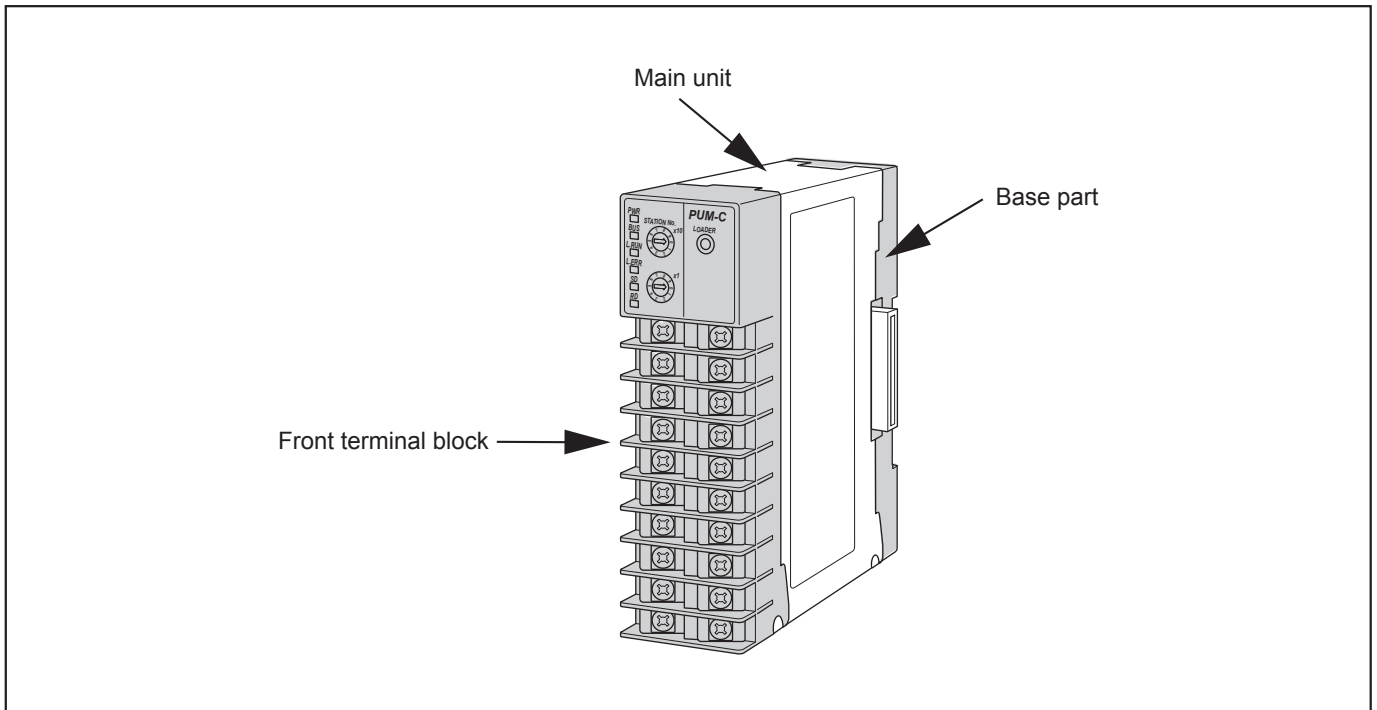
1	2	3	4	5	6	7	8	9	10	Description
P	U	M			Y	Y	1	0		Module type
			C							Enhanced communication module
										Communication functions
			L							CC-Link communication
										Instruction manual
								A		Japanese
								B		English

Accessories (Option)

1	2	3	4	5	6	7	8	Description
P	U	M	Z	*				DIN rail mounting endplate
				A	0	2		Side connecting terminal cover (right & left 1set)
				A	0	3		Front face screw terminal cover
				A	0	4		Loader connecting cable (RS232C)
				L	0	1		

1.3 Part Names and Functions

External view



Front terminal block

The front terminal block is equipped with loader communication port, CC-Link station No. configuration switch, and LED indicator lamps.

- Removable from the main body without tools in seconds.

Main unit

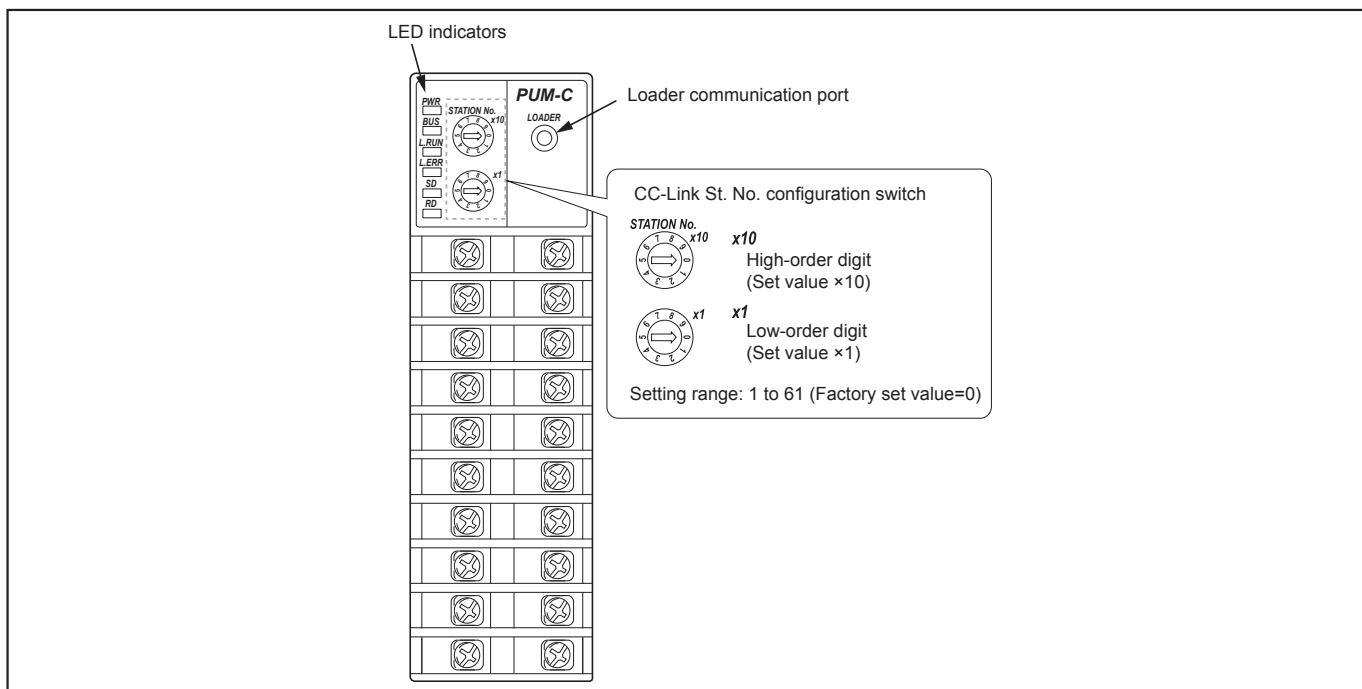
The main unit is the controller with circuit for CC-Link communications.

- The main unit can be removed from the base part without tools in seconds.
- The main unit is equipped with the CC-Link communication speed configuration switch and number of stations occupied/extended cyclic configuration switch on the back face (on the side of base part).

Base part

The base part incorporates power terminal, connectors for connecting modules laterally, and the structure for mounting modules onto a DIN-rail.

Front terminal block



LED indicators

LED lamps indicate the operation status below.

LED	Green	Red	Orange
PWR	(Order of priority) OFF: Power OFF Green blinking (0.4-sec interspace): 1) No unit detected by initial polling 2) Inter-module communication error occurred after initial polling Green blinking (0.1-sec interspace): During initial polling Green lamp ON: In operation	—	—
BUS	On: In reception of inter-module communications	—	In transmit of inter-module communications
L.RUN	ON: In execution of data link OFF: In reset H/W or data link has unexecuted	—	—
L.ERR	—	ON: Communication error (CRC error, St. No. setting error, communication speed setting error) OFF: In normal reception or reset H/W Blinking: Set the switches when the power is on	—
SD	ON: In transmit of CC-Link data	—	—
RD	ON: In reception of CC-Link data	—	—

Loader communication port

Loader communication port is an interface to connect PUM with a PC with parameter loader software installed using an optional loader connecting cable.

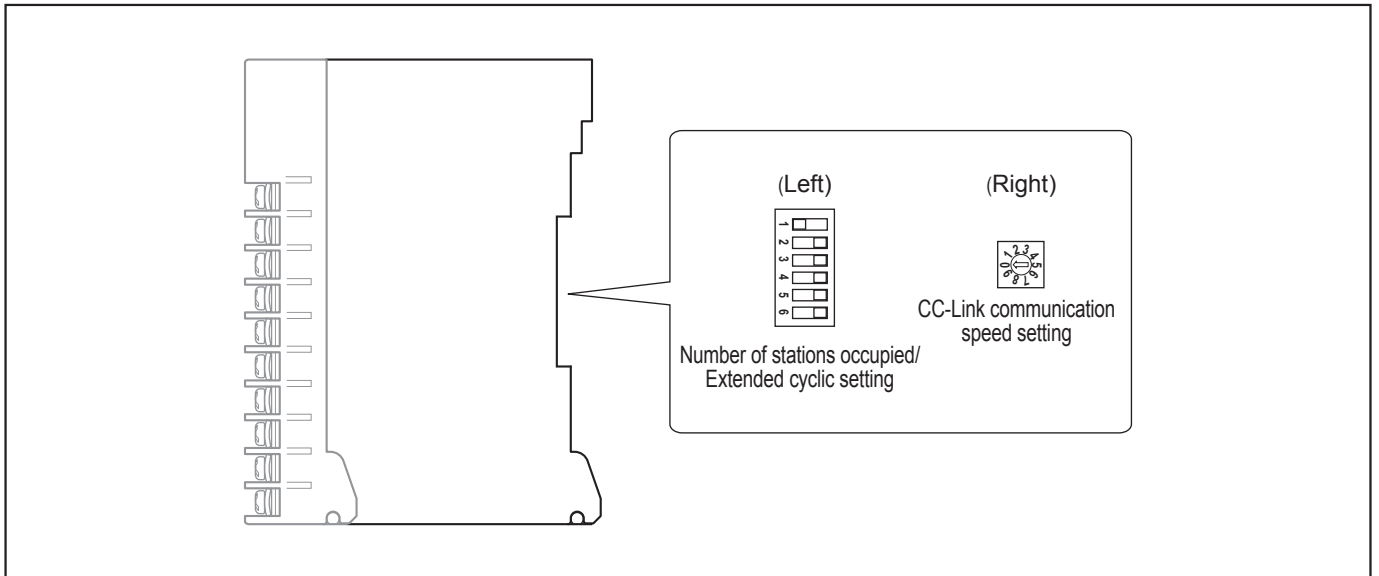
CC-Link station number configuration switch

Set the CC-Link station numbers (1 to 61) for this equipment.

Note

- CC-Link communications is not available when the station number is 0 (Factory set value). Make sure to set the station number.
 - Station number selection error occurs and the red L.ERR indicator lamp will ON, if you set the value of "0" or larger than "62".
-

Main unit (Back face)



CC-Link communication speed setting switch

Configure communication speed for CC-Link by the station number configuration switch.

Communication speed and maximum transmission distance (when using a ver.1.10 compliant CC-Link special cable)

Communication speed setting	Communication speed	Maximum transmission distance (Max. length of network)
0	156kbps	1200m
1	625kbps	900m
2	2.5Mbps	400m
3	5Mbps	160m
4	10Mbps	100m

Note

If "5" to "9" is selected, communication speed selection error occurs and the red LED lamp, "L.ERR", will turn on.

Number of stations occupied/Extended cyclic setting switch

Number of stations occupied and extended cyclic can be set by DIP switch.

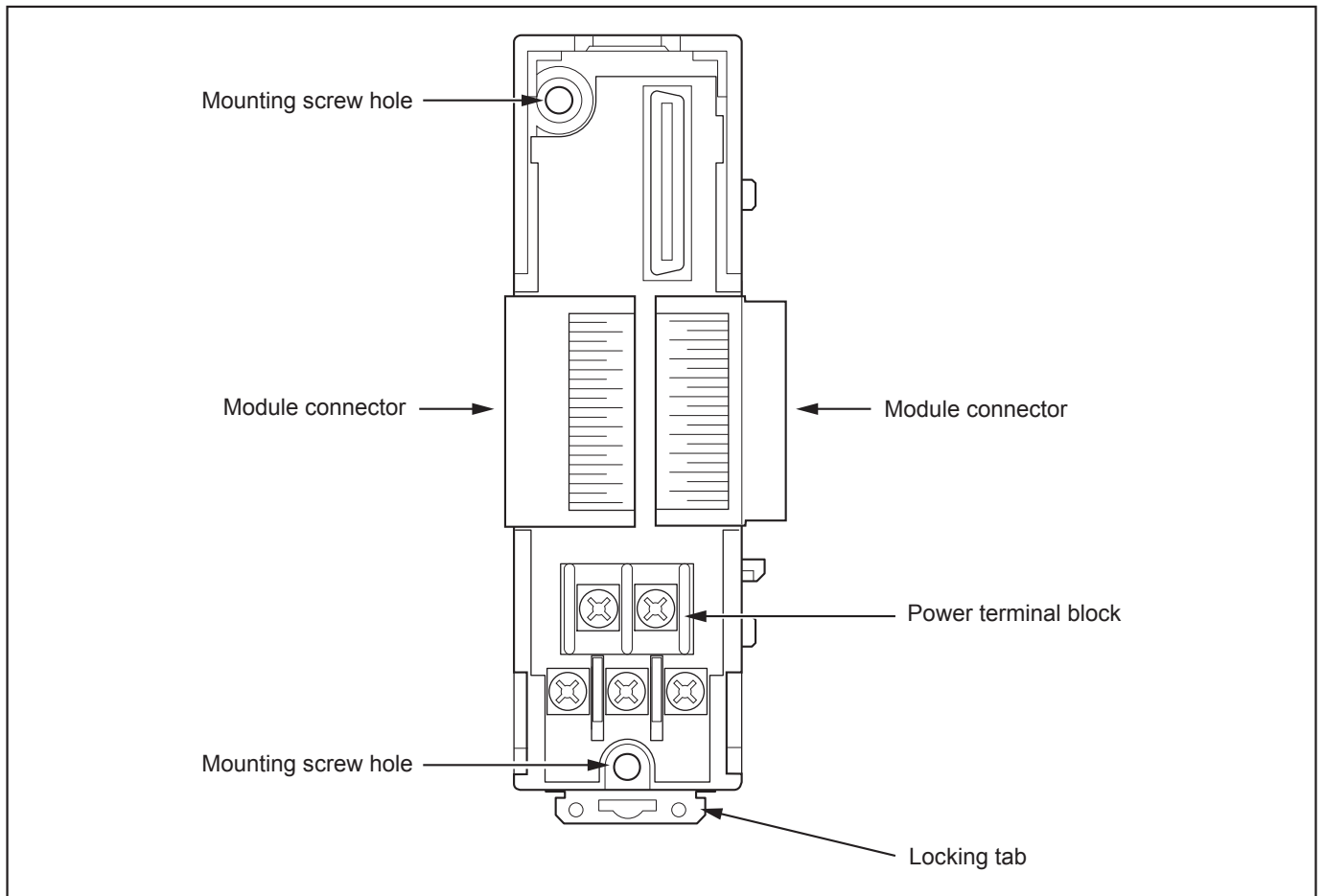
Number of stations occupied / Extended cyclic setting

SW1	SW2	SW3	SW4	Number of stations occupied/Extended cyclic setting (Number of channels)	Compliant version
OFF	OFF	OFF	OFF	4 stations occupied ×1 (8Ch)	Ver.1
ON	OFF	OFF	OFF	4 stations occupied ×1 (16Ch)	
OFF	ON	OFF	OFF	4 stations occupied ×2 (16Ch)	Ver.2
ON	ON	OFF	OFF	4 stations occupied ×2 (32Ch)	
OFF	OFF	ON	OFF	4 stations occupied ×4 (32Ch)	
ON	OFF	ON	OFF	4 stations occupied ×4 (64Ch)	

Note

“4 stations occupied ×1(8 Ch)” will be set, if the setting other than the table above is set to DIP switch.

Base part



Module connector

Module connectors connect controllers laterally.

Power terminal block

Power terminal block connects to the power supply of module.

If any one of connected controllers is directly connected with power supply, power will be provided to all of controllers via side connectors.

Locking tab

Locking tab fastens a controller onto DIN rail when mounting controllers to a DIN rail. Locking tabs also fasten controllers each other.

2

System Configuration Example

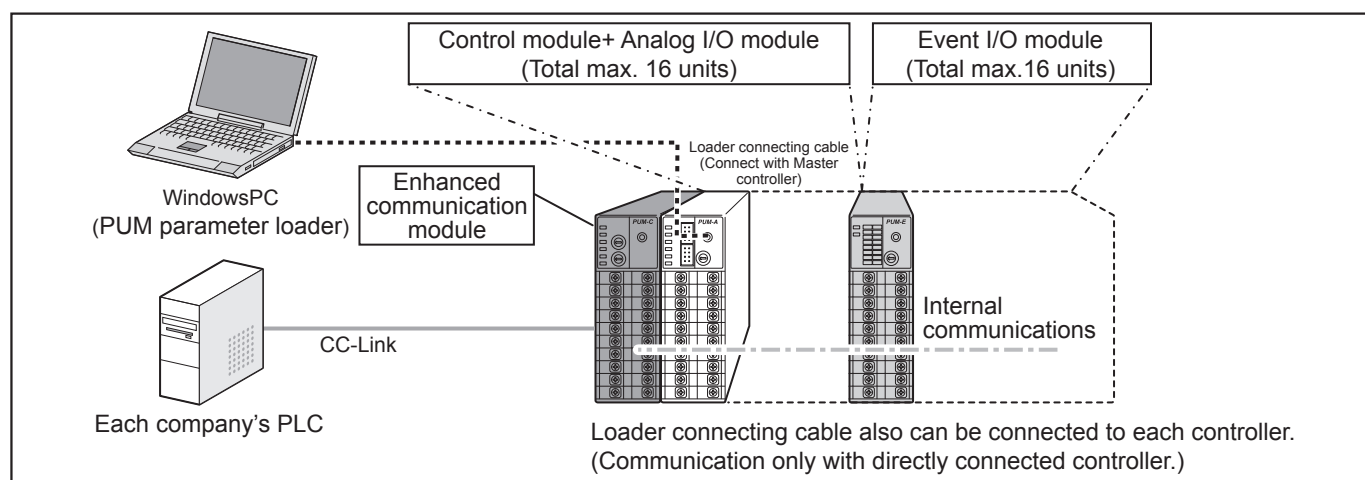
2.1 System Configuration Example2-3

2.1 System Configuration Example

The followings are examples of a temperature controller system added this equipment to multi-loop module type temperature controller PUM series.

System configuration using the enhanced communication module

- By adding the enhanced communication module to the system, communication with each company's PLC via CC-Link is available.



Point

- Station number of the control/analog I/O module (1 to 16)

In order to perform communication correctly, station number setting is required. Set the leftmost controller to "1". Number the rest of controllers consecutively as "2", "3", "16". Make sure that there is no duplicate station number in the same system.

- Station number of event I/O module (17 to 32)

The station number of event I/O module must start with "17". Number the rest of controllers consecutively as "18", "19", "32". Make sure that there is no duplicate station number in the same system.

Basic setting items

In case of this example, the following settings are required.

- Station number setting
- RS-485 communication setting
- CC-Link communication setting

Point

In order to use an enhanced communication module, set the enhance communication module communication permission for the control module, analog I/O module, and event I/O module to "1: PUMCL connected (RS-485 Disable)".

Note

Only PUMA/B (control module) can be accessed from the host PLC via CC-Link communication.

3

Installation

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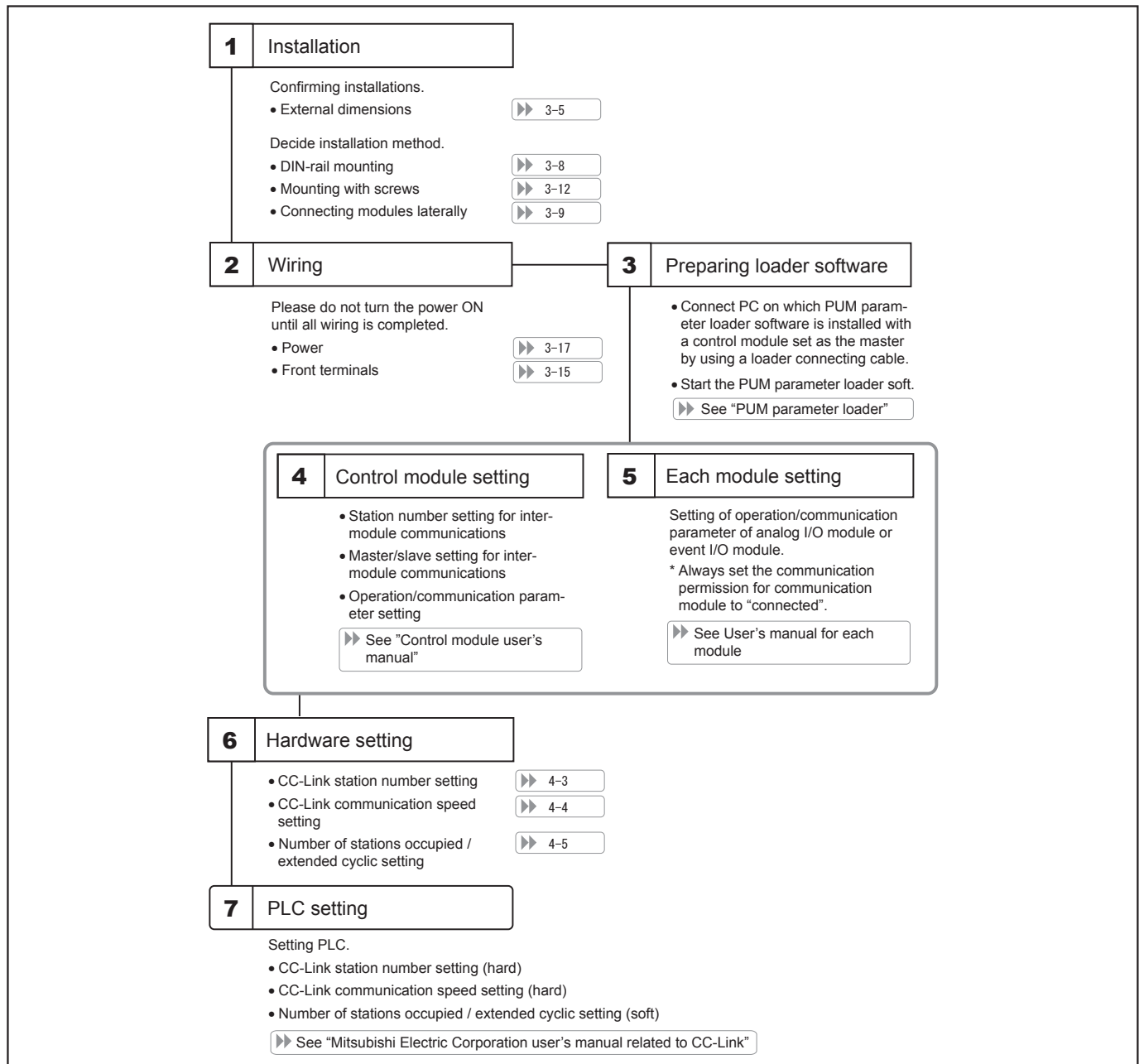
3.1 Installation Procedure

The procedures from installation to startup via PUM parameter loader software are shown below.

Then, the procedures of communication setting of host equipment and trial run are shown.

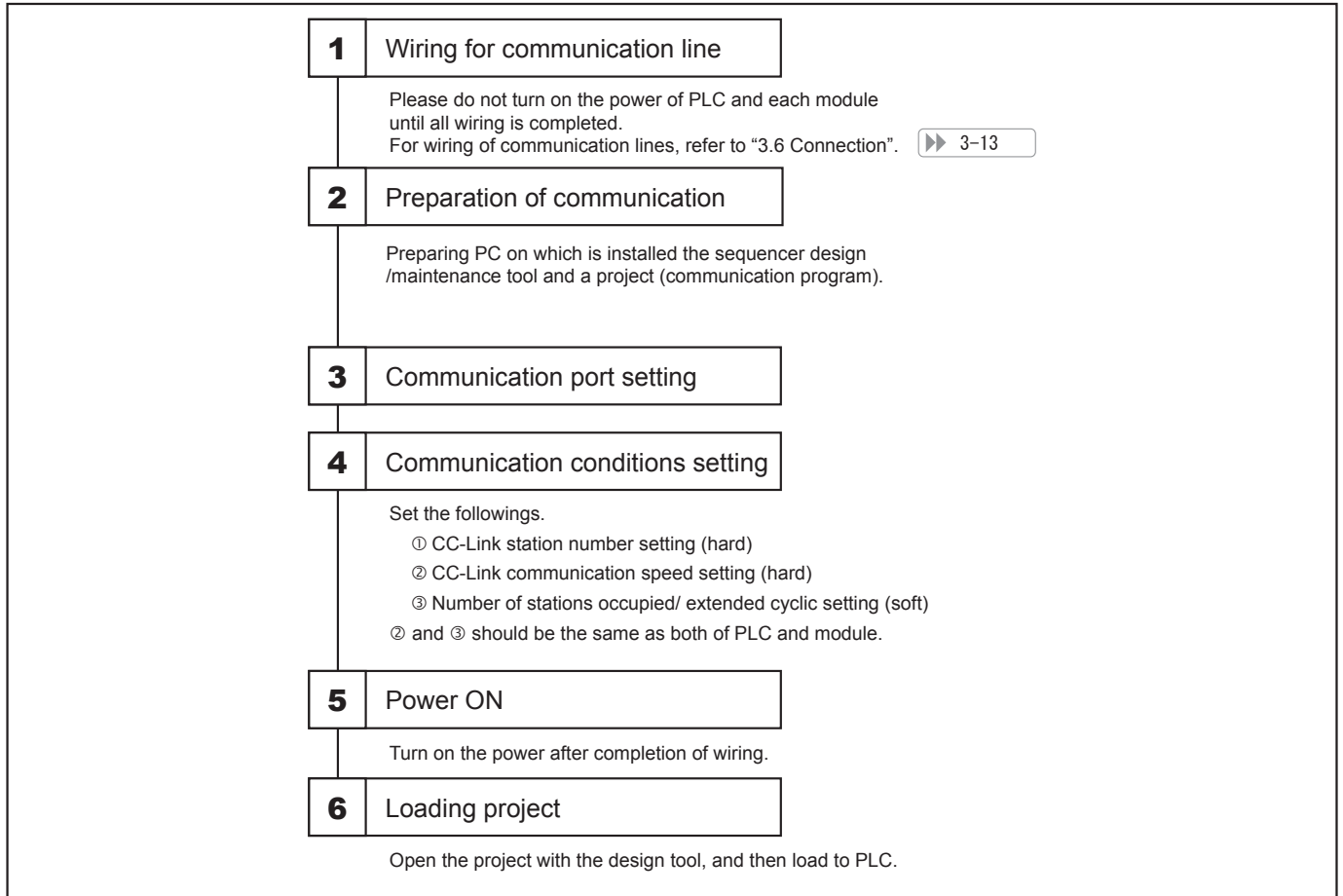
PUM setting and installation

- Communication permission for the enhanced communication module should be set to “Connected” on the all modules of the system.
- If connected PUM parameter loader to the master module, other module’s setting can also be made at the same time.
- Setting of the station number (CC-Link station number) for the enhanced communication module is necessary.



CC-Link master (PLC) setting

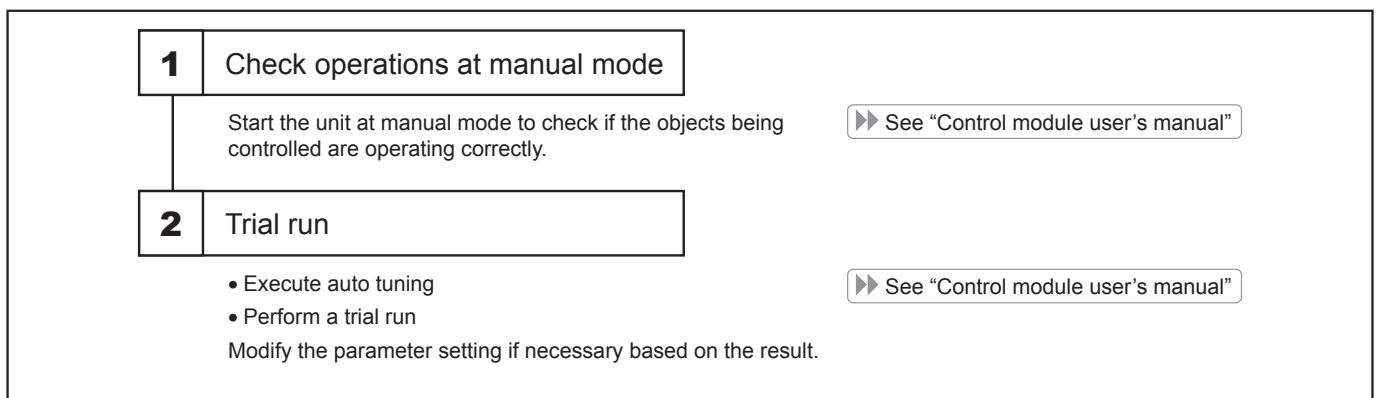
- Setting of the host equipment (PLC) and this equipment should be the same in order to perform communication.
- Turn OFF the each module's power when wiring.



Trial Run

Control trial

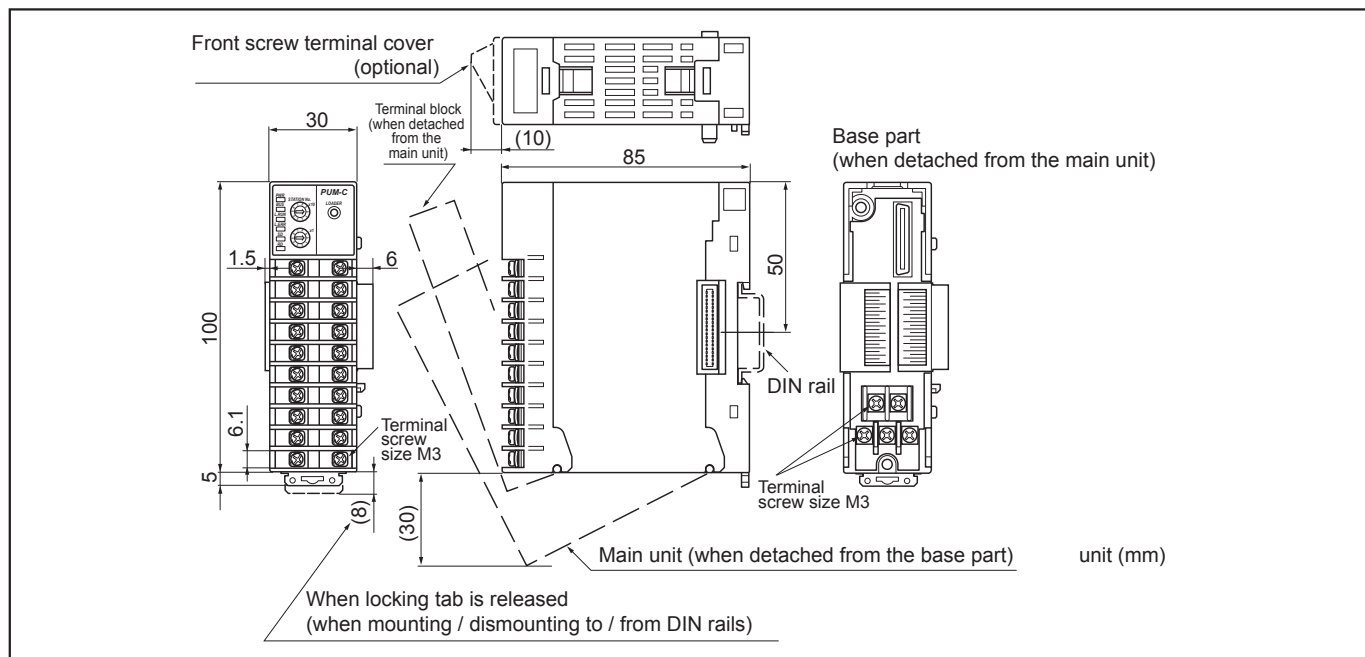
Check that the system can control the objects correctly.



3.2 Dimensions

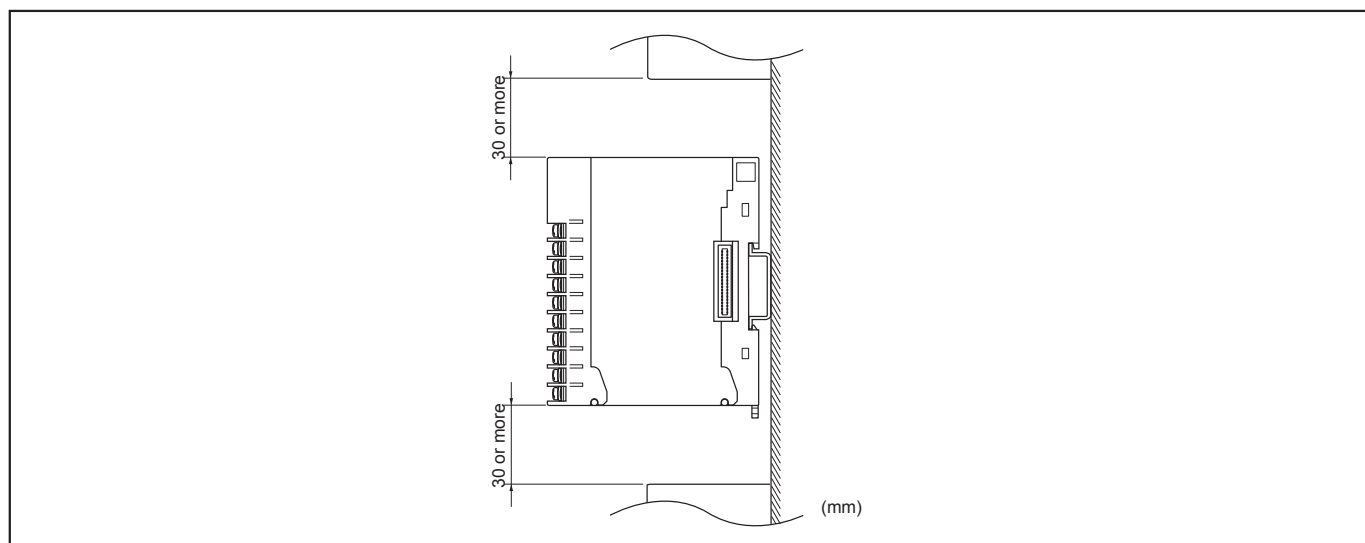
Dimensions

Refer to the dimensions shown below and provide enough clearance space when install controllers.



Cautions when mounting

In order to aid heat dissipation, 30mm of clearance (50mm recommended) above and under the controllers should be provided.



Point

When mounting / dismantling controllers to / from DIN rails, 30mm of clearance above and under the controllers should be provided.

3.3 Mounting to DIN rail

How to Remove Front Terminal Block / Base Part from the Main Unit

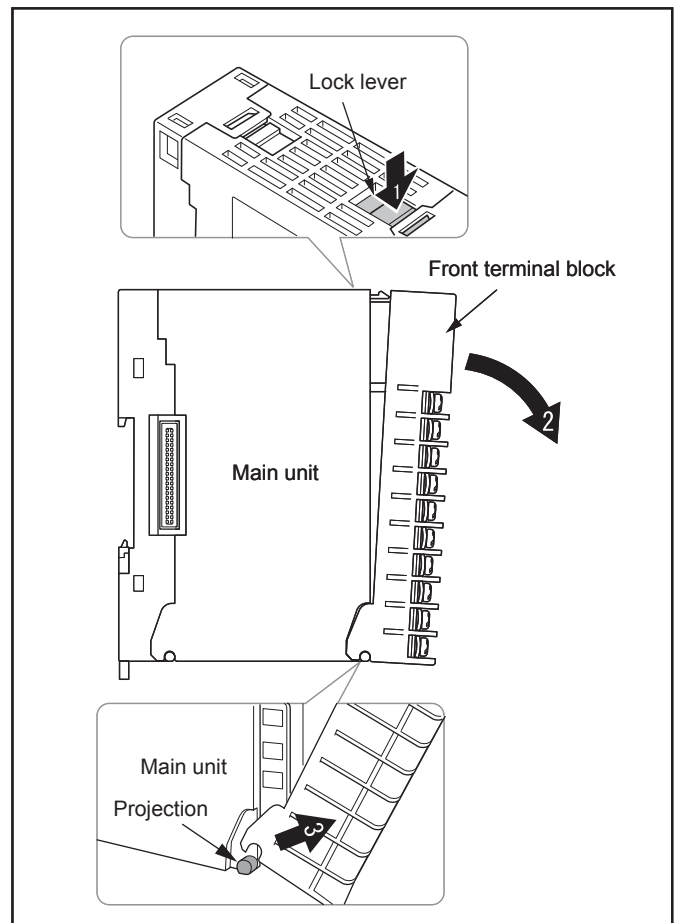
Front terminal block and base part of this equipment are removable from the main unit without tools in seconds, which enables easy mounting and maintenance.

How to remove front terminal block

1. Press the lock lever on the top of the main unit.
2. Pull down the front terminal block.
3. Detach the cutout on the lower end of the front terminal block from the projection on the main unit.

Point

- When attaching the front terminal block to the main unit, take the reverse procedure to remove the front terminal block from the main unit.
- Make sure that the lock lever of the main unit is fitted into the front terminal block.

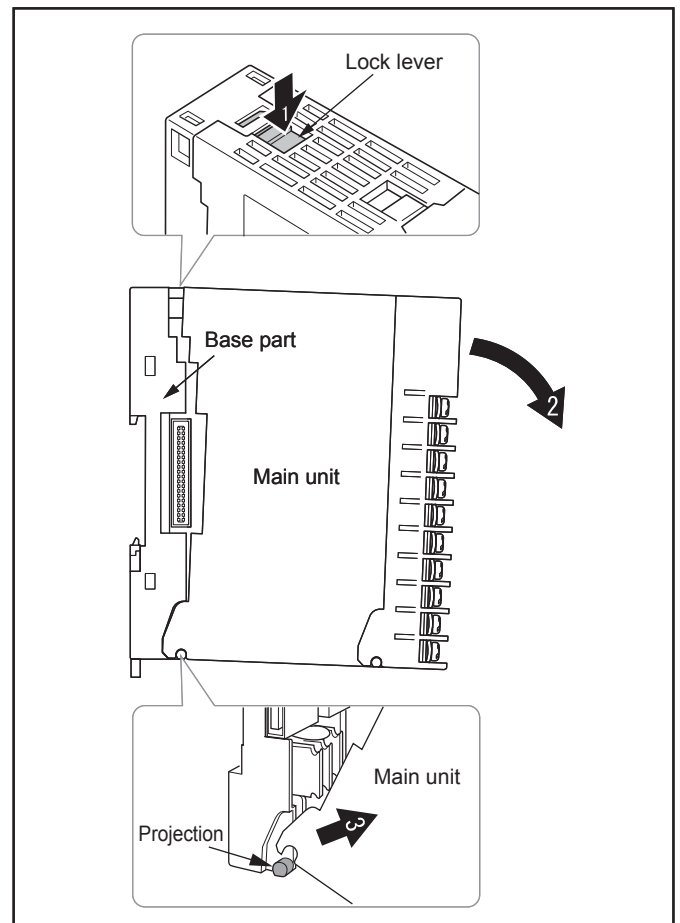


How to remove base part

1. Press the lock lever on the top of the main unit.
2. Pull down the upper part of main unit.
3. Detach the cutout on the lower end of back of main unit from the projection on the base part.

Point

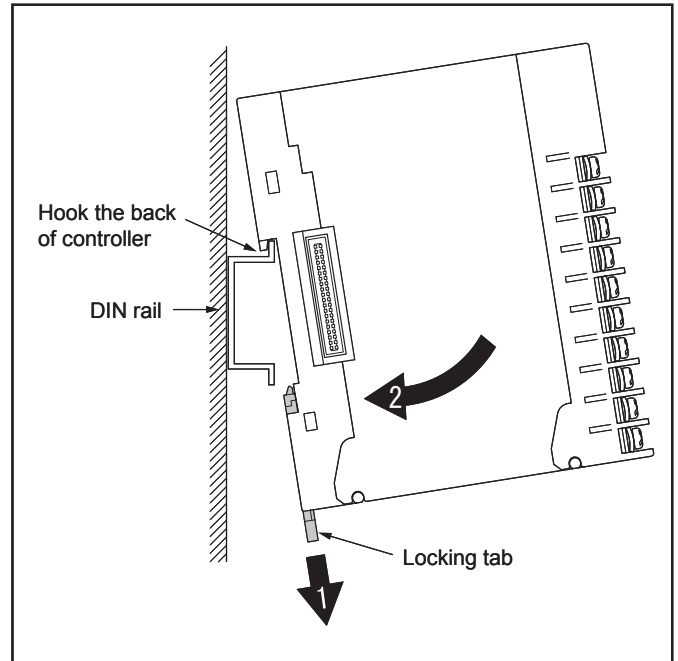
- When attaching the base part to the main unit, take the reverse procedure to removing the base part from the main unit.
- Make sure that the lock lever of the main unit is fitted into the base part.



Mounting to DIN Rails

Mount controllers

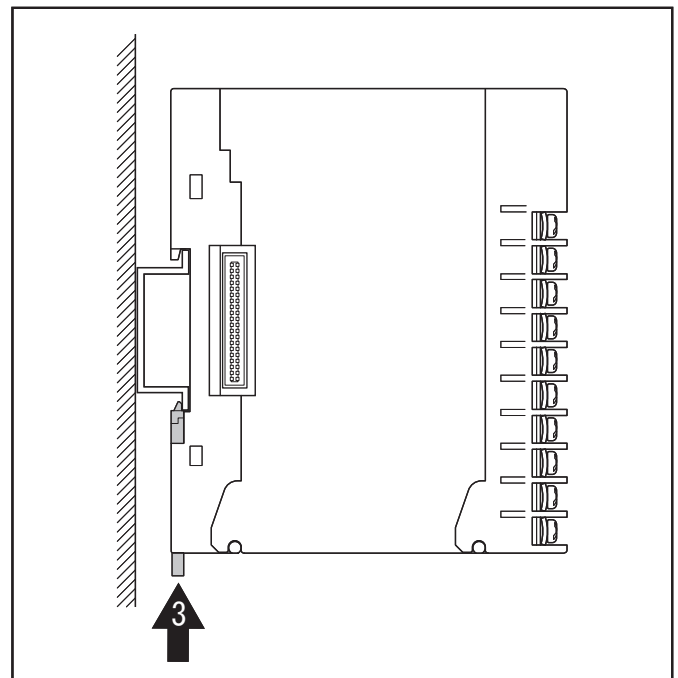
1. Pull down the locking tab of the base part.
Hook the back of the controller onto the upper part of DIN rail.
2. Push the controller in the direction of arrow 2.



3. Push up the locking tab to fasten the controller onto DIN rail.

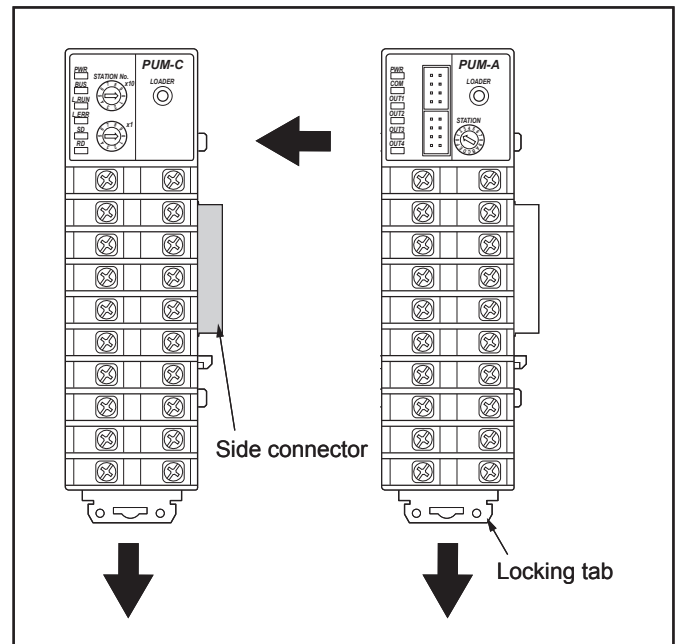
Point

When connecting controllers after mounting to DIN rail, push up the locking tab after doing so.

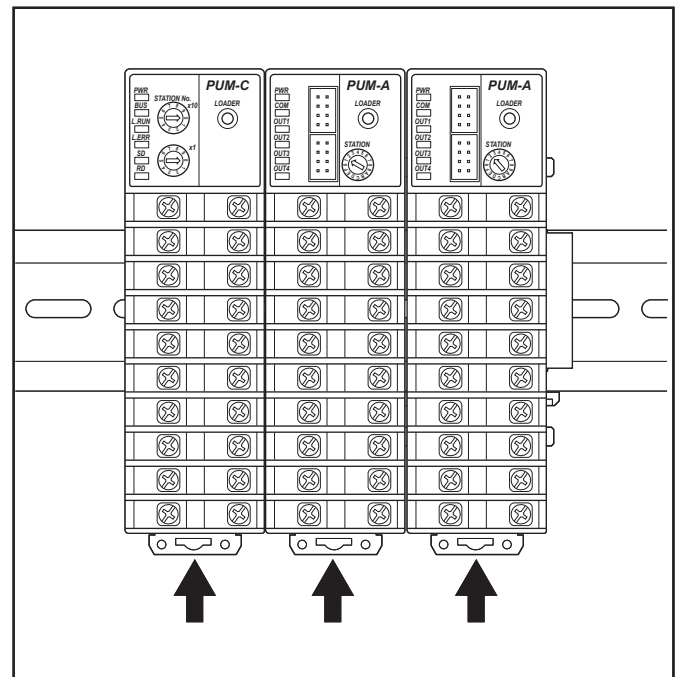


Connecting controllers

1. Check that locking tabs are pulled down (released).
2. Connect controllers with each other using side connectors.

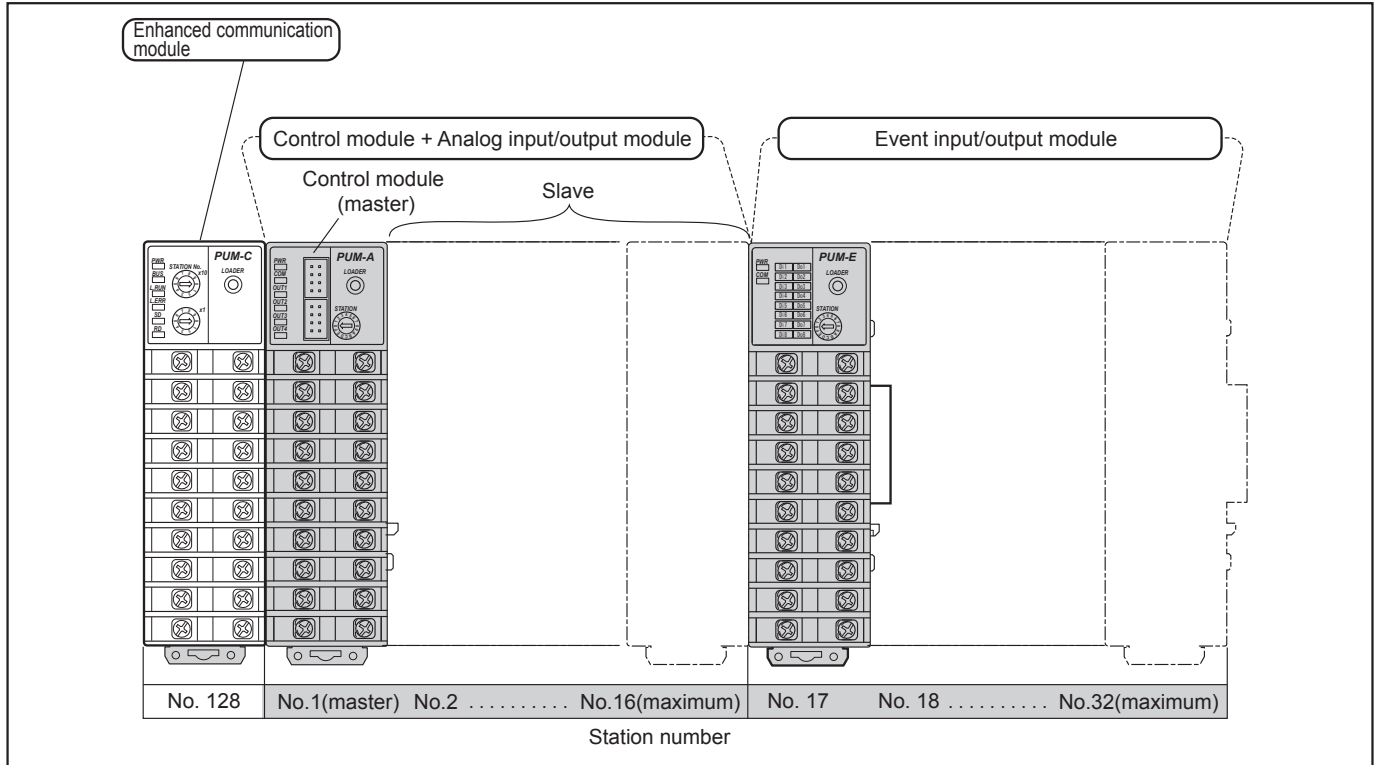


3. After mounting connected controllers onto DIN rail, make sure to push up all locking tabs. Controllers are fastened to DIN rail and to each other.
4. All connected controllers are connected to power supply via side connectors if one of controllers is directly connected to them.



Order of Controllers

PUM series module type temperature controllers should be connected in the order shown below.



Point

Enhanced communication module should be placed on the left end.

- Enhanced communication module should be placed on the left side of the master control module. It means enhanced communication module is always placed on the left end.

Basically, connect modules in order of the station number from the left.

- Assign station numbers 1 to 16 to control module and analog input/output module. Maximum 16units in total can be connected. Make sure that there is no duplicate station number in the same system.
- When setting slave or master, set the control module of station No.1 as the master controller. The master controller should be on the extreme left if an enhanced communication module is not used.
- Assign station numbers 17 to 32 to event input/output module. Maximum 16units can be connected. Make sure that there is no duplicate station number in the same system.

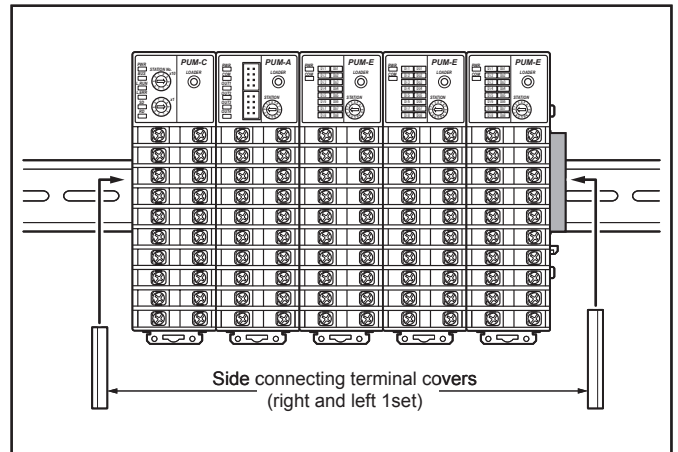
Note

Only PUMA/B (control module) can be accessed from the host PLC via CC-Link communication.

3.4 Attaching Accessories (Optional)

Attaching Side Connecting Terminal Covers

Side connectors on the both ends of connected controllers are exposed. To prevent accidents and to protect them, we recommend to attach side connecting terminal covers (PUMZ*A03) to the ends of the rightmost and leftmost controllers.

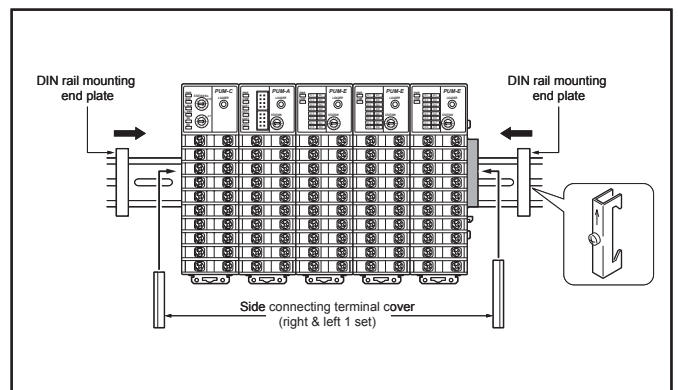


Attaching End Plates

In order to secure controllers onto DIN rail more tightly, end plates (PUMZ*A02) are also available.

Note

When attaching end plates, make sure to attach side connecting terminal covers first.



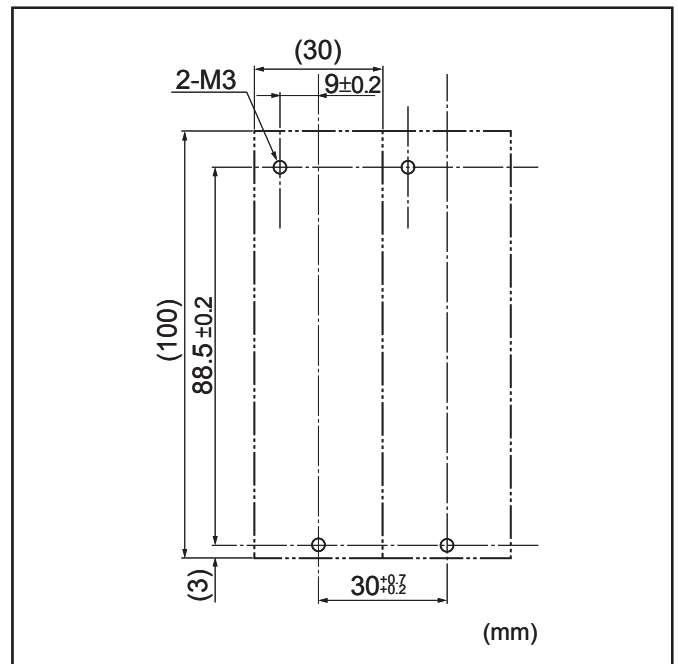
3.5 Mounting with Screws

When mounting controllers with screws inside a cabinet, check the screw hole size of the base part and the mounting position beforehand.

Point

- Mounting screws are not included in the product. Prepare two M3 screws per unit.

1. Refer to the right figure for the mounting screw hole size and the pitch to decide the mounting position.



2. Remove the main units from the base parts.

(3.3 Mounting controllers) [▶▶ 3-6](#)

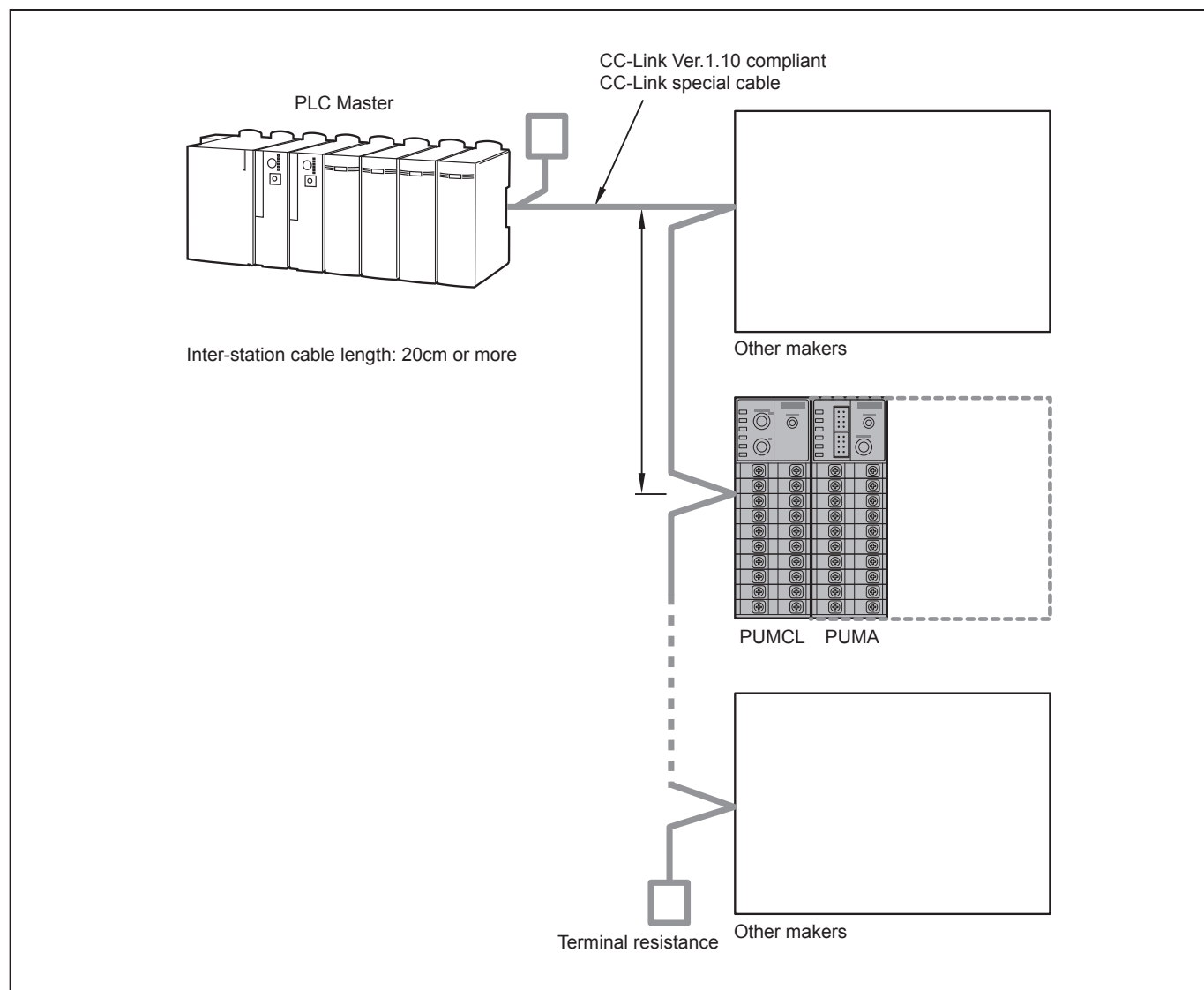
3. Connect base parts. Push up to fasten all the locking tabs.
4. Fixate the base parts onto the mounting position inside the cabinet with screws.
5. Attach the main units to the base parts.

3.6 Connection

CC-Link connection

Make CC-Link connection for PUM series temperature control system via this equipment.

- This equipment comes to be the CC-Link station, and PUM series occupies 4 of 64 stations.
- Make a multi-drop connection to PLC (master) with using CC-Link ver.1.10 compliant CC-Link special cable.
- Terminal resistances are necessary for the both end of CC-Link communication line.



Note

To prevent damage and failure of the equipment, wiring after turning OFF the power of this equipment and peripheral equipment.


3.6 Connection

Point

- CC-Link special cable is not included in this product. Please prepare CC-Link Ver.1.10 compliant CC-Link special cable optionally.
- For the cable specifications, connecting method, and the makers, refer to the homepage of CC-Link Partner Association
Homepage address: <http://www.cc-link.org/>
- Communication speed and maximum transmission distance is shown below

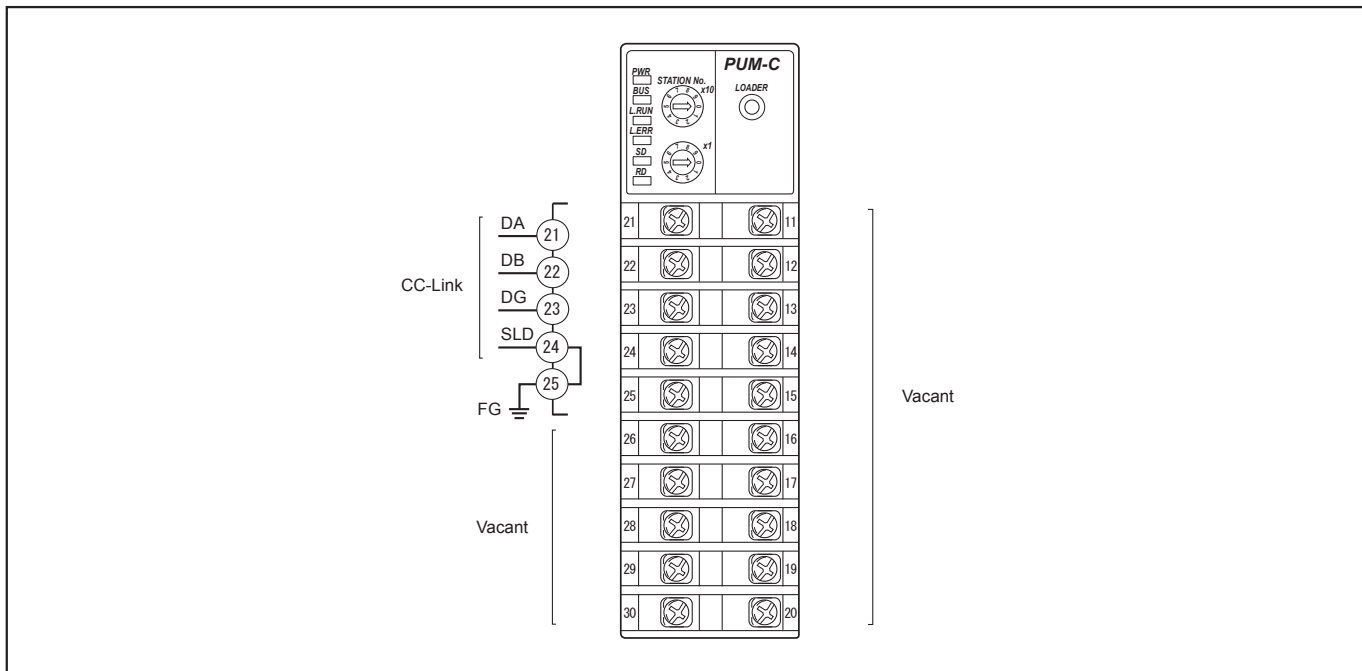
Communication speed and maximum transmission distance (when using Ver.1.10-compliant CC-Link special cable)

Communication speed setting	Inter-station cable length	Max. transmission distance (Max. length of network)
10Mbps	20cm or more	100m
5Mbps		160m
2.5Mbps		400m
625kbps		900m
156kbps		1200m

* About communication speed, please refer to "4.1 CC-Link communication setting".  4-3

* For more details, please refer to the CC-Link Cable Wiring Manual published by CC-Link Partner Association.

Terminal



Terminal No.	Code	Cable color
21	DA	Blue
22	DB	White
23	DG	Yellow
24	SLD	Earthing conductor (Shield)
25	FG	-

Point

Communication terminal numbers and signal descriptions

- CC-Link communication terminal is not attachable/detachable online. For replacement of this equipment, you need to down the whole link. Also, Frame ground (FG), terminal No.25, is only for the functional FG of CC-Link, and not for the whole of PUM system.
- D-class grounding with ground resistance of 100Ω or less is required for both ends of the shielded line of CC-Link ver.1.10 compliant CC-Link special cable via each controller's SLD terminals and FG terminals.
- Do not share the shielded line to other equipments and use the line more than 20 mm².
- Note that the insulation class for this equipment is as follows. Before installing, please confirm that the insulation class for the equipment meets usage requirements.

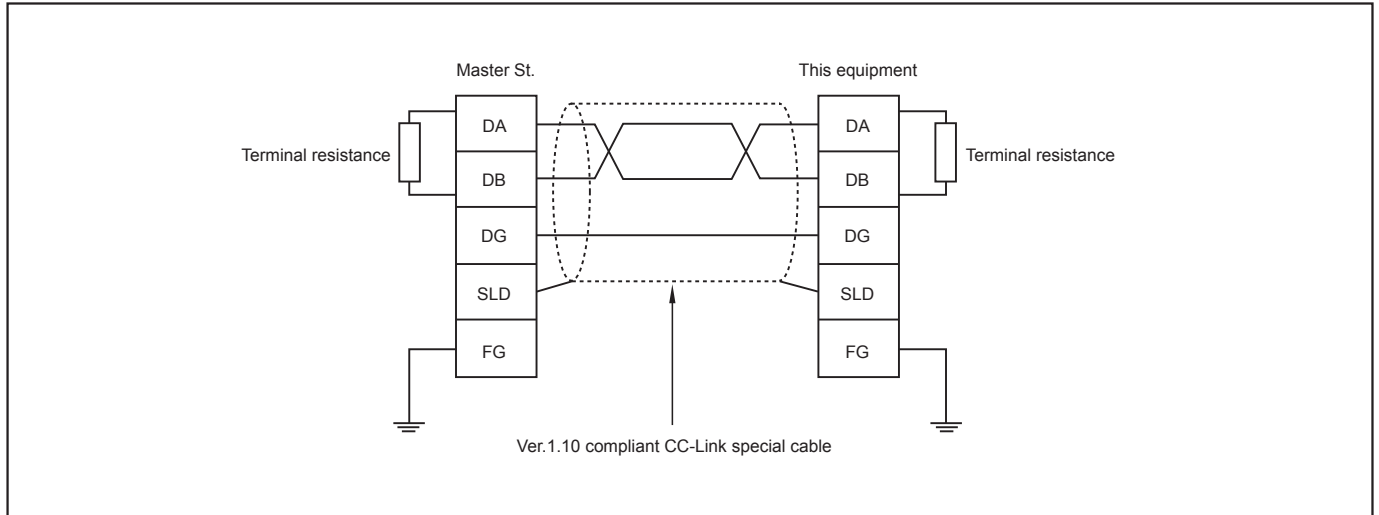
Power	SLD/FG terminal (CC-Link earthing terminal)
Loader communication	CC-Link communication

≡ Functional insulation (AC1000V) — Functional insulation (AC500V) - - - - - Functional insulation (AC50V)

* For more details, please refer to the CC-Link Cable Wiring Manual published by CC-Link Partner Association.

Connection of terminal resistance

Terminal resistances are required to both end of CC-Link communication line.
Connect the terminal resistances between DA and DB terminals.



Point

- Please use the terminal resistance of specifications shown below.
110Ω±5% 1/2W

Connecting modules

The modules that can be connected to this equipment are follows.

- PUMA/B (Control module), PUMV/N/T (Analog I/O module), PUME (Event I/O module)

Point

- Maximum 32 units per this equipment are connectable. However, number of connectable units is depends on module types. Please refer to the user's manual for each module.
- When connected modules, if any one of connected controllers is directly connected with power supply, power will be provided to all of controllers via side connectors.

Note

Only PUMA/B (control module) can be accessed from the host PLC via CC-Link communication.

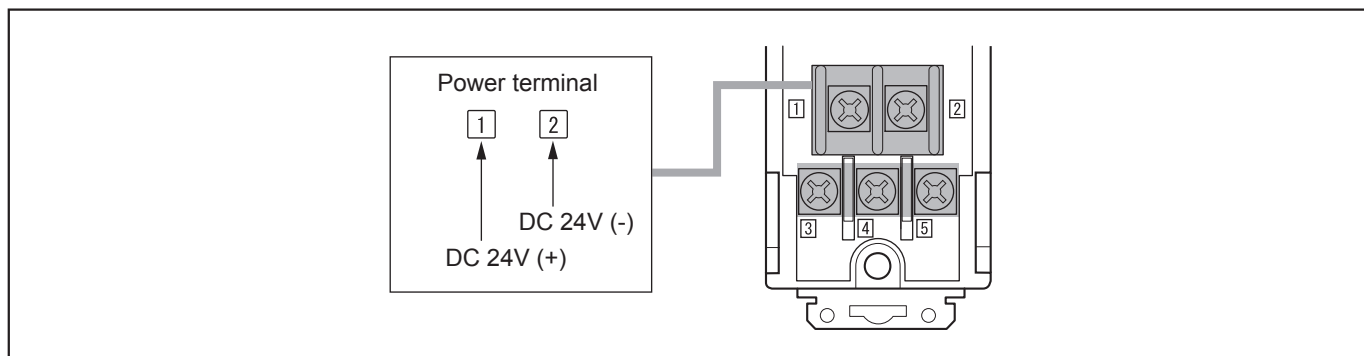
Wiring for power supply

Terminal layout

Power terminal is on the base part of each controller.

The terminal layout of all controllers is the same.

Power supply is connected to connected controllers via side connectors if one controller is directly connected to them.



Note

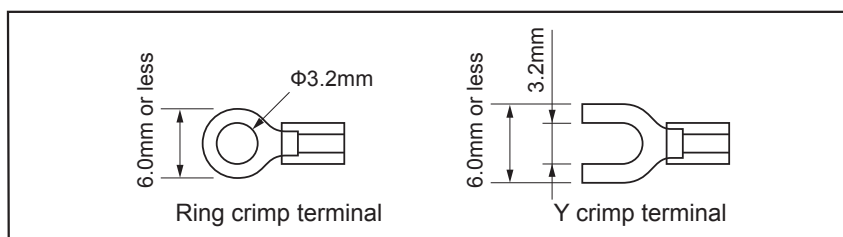
- For wiring to the terminal block, apply crimp type terminals size M3.
Make sure to use screws included in this product only.
Screw size : M3 x 7 (with square washer)
Screw tightening torque : 0.78N•m (8kgf•cm)
- Apply power cable with allowable current capacity larger than the total consumption current of all connected controllers.
- For wiring to power terminal, do not apply more than two cables to one terminal.
(Power cable should be connected to power terminal directly from the power unit.)
- Please prepare power cables and crimp terminals of the size indicated below.

Power cable

Cable type	Size
Thermocouple (Compensation lead wire)	1.25mm ² or less
Power supply	1.25mm ² or less

Crimp terminal

Cable size	Screw tightening torque
0.25 to 1.25mm ²	0.8 N•m



4

Enhanced Communication Function Setting

4.1	CC-Link Communication Setting	4-3
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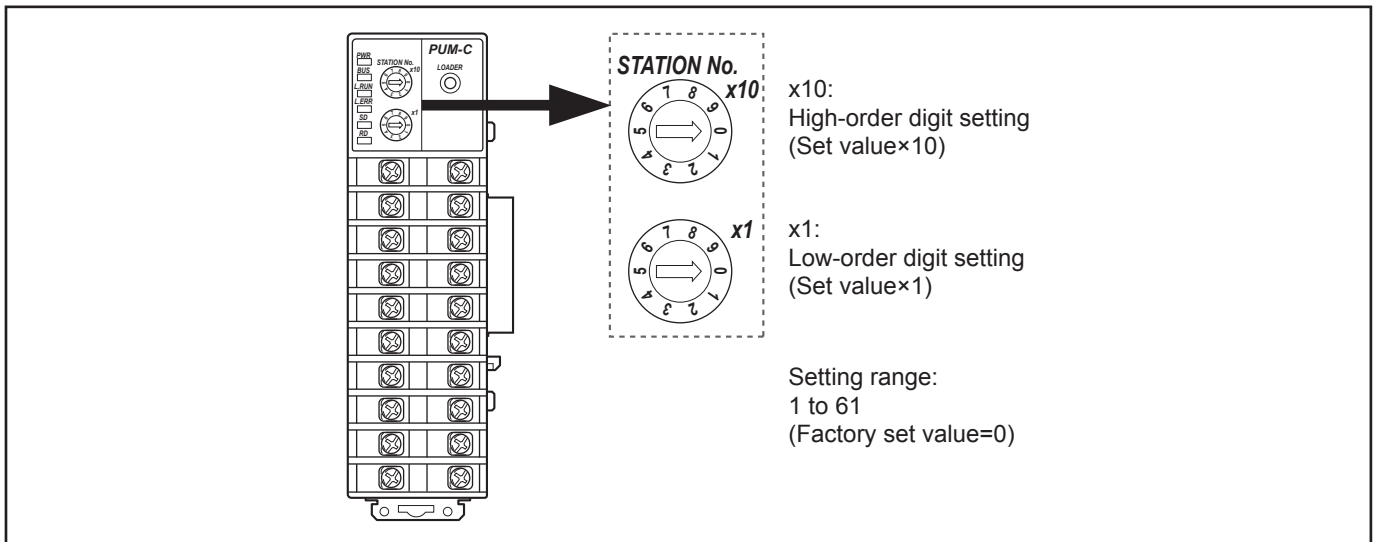
4.1 CC-Link Communication Setting

In order to perform communication between PUM module (remote device station) and PLC (master station), setting of station numbers and communication speed is necessary.

CC-Link station number setting

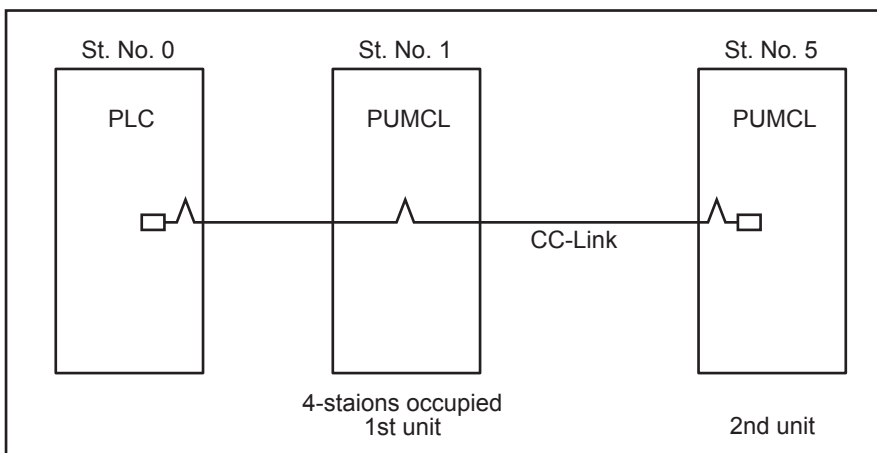
With CC-Link station number setting, station number is settable from "1" to "61".

Apply a fine tip flat-head screwdriver to turn the Station No. configuration switch.



Note

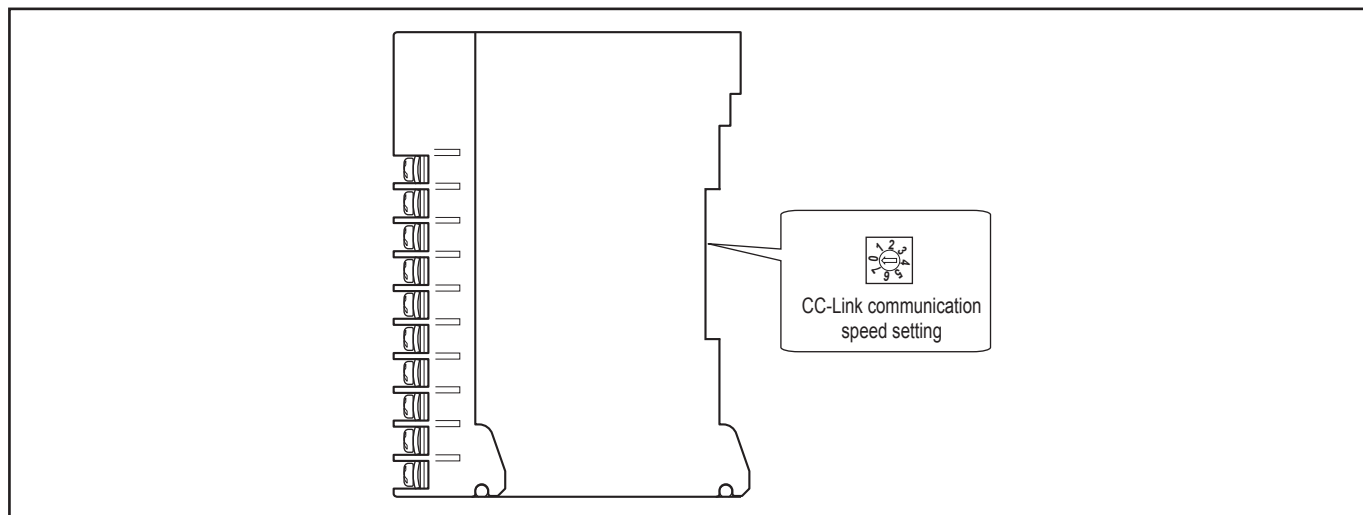
- If "0" or larger than "62" is selected, station number selection error occurs, and "L.ERR" LED will be ON.
- When more than one remote device is used as below, the assigned station number for the 2nd unit is depends on occupied station numbers of the 1st unit. When 1st unit is 4-station occupied and the station number is "1", station number,"5", is assigned to the 2nd unit.



CC-Link communication speed setting

Set the CC-Link communication speed by the station number configuration switch on the right of module's back face.

Switch setting with using a fine tip flat-head screwdriver and so on.



Communication speed and maximum transmission distance (When using ver.1.10-compliant CC-Link special cable)

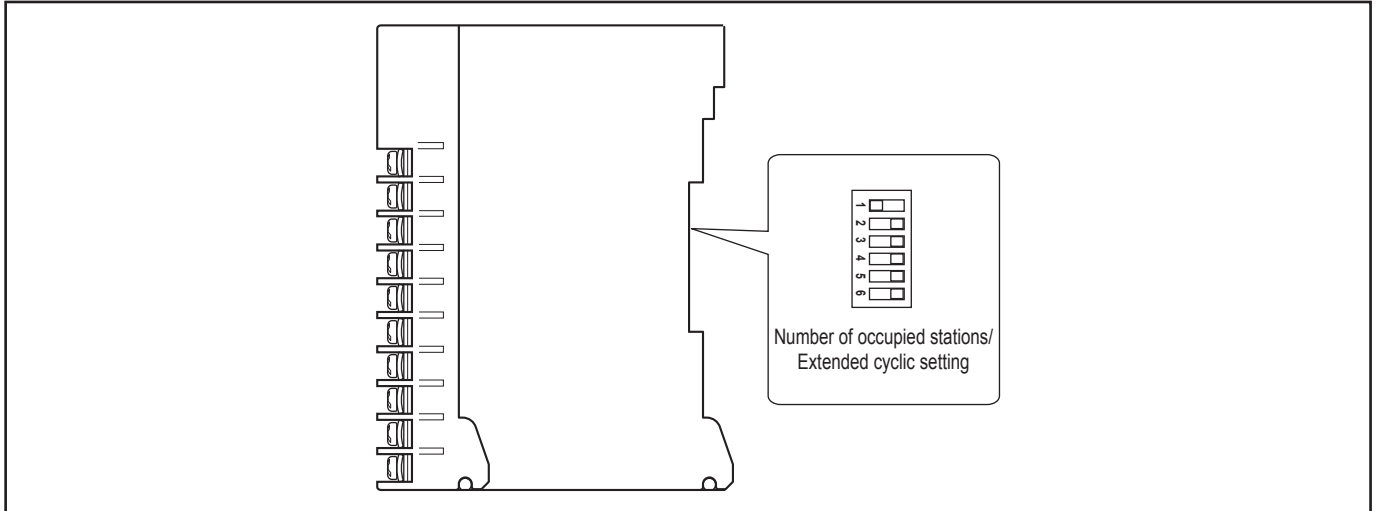
Communication speed setting	Communication speed	Maxi. transmission distance (Max. length of network)
0	156kbps	1200m
1	625kbps	900m
2	2.5Mbps	400m
3	5Mbps	160m
4	10Mbps	100m

Note

If "5" to "9" is selected, communication error occurs, and "L.ERR" LED will turn ON.

Number of stations occupied/Extended cyclic setting

Number of stations occupied /Extended cyclic is set by DIP switch (SW1 to SW4) on the left of back face of the main unit.



Select from 6 modes below.

SW1	SW2	SW3	SW4	Number of stations occupied/ Extended cyclic setting (Number of loop)	Compliant ver- sion
OFF	OFF	OFF	OFF	Setting for 4 stations occupied × 1 (8Ch)	Ver.1
ON	OFF	OFF	OFF	Setting for 4 stations occupied × 1 (16Ch)	
OFF	ON	OFF	OFF	Setting for 4 stations occupied × 2 (16Ch)	Ver.2
ON	ON	OFF	OFF	Setting for 4 stations occupied × 2 (32Ch)	
OFF	OFF	ON	OFF	Setting for 4 stations occupied × 4 (32Ch)	
ON	OFF	ON	OFF	Setting for 4 stations occupied × 4 (64Ch)	

Note

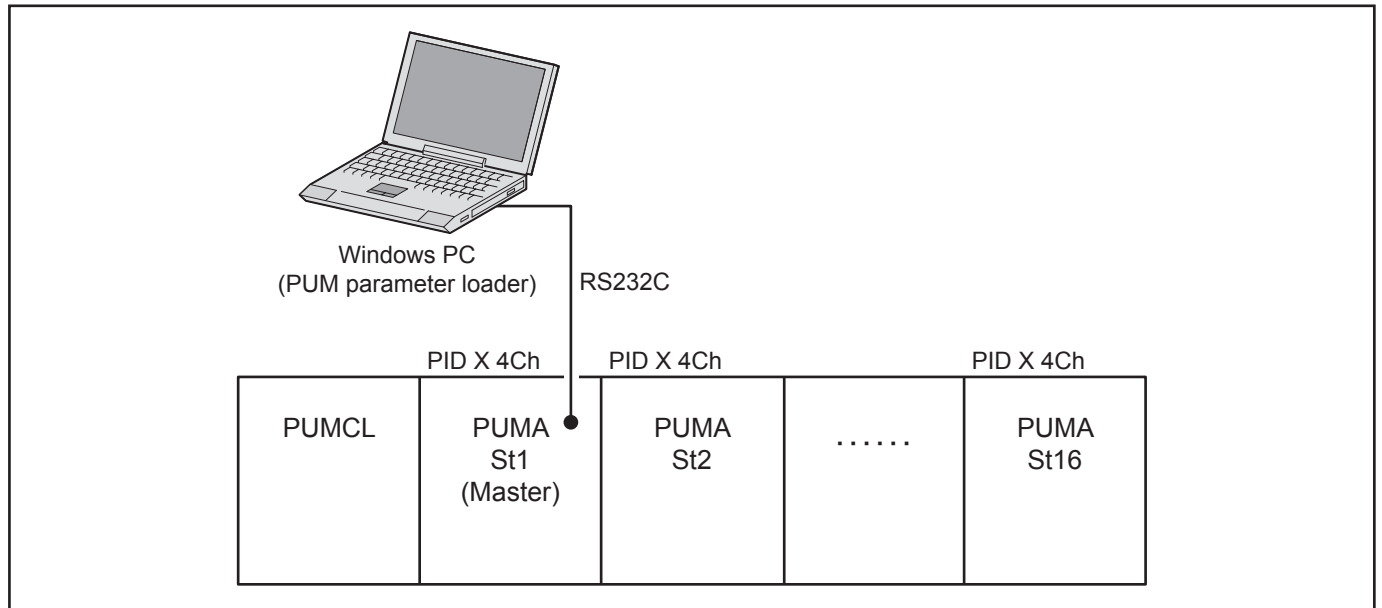
If the setting other than the above is set to DIP switch, "Setting for 4 stations occupied × 1 (8 Ch)" is set.

Channel allocation

Channel allocation is different between when using a loader communication port and when using CC-Link.

When connecting PC to the loader communication port and monitor by using PUM parameter loader

<Configuration of 4Ch module (General PID) is 16 units>



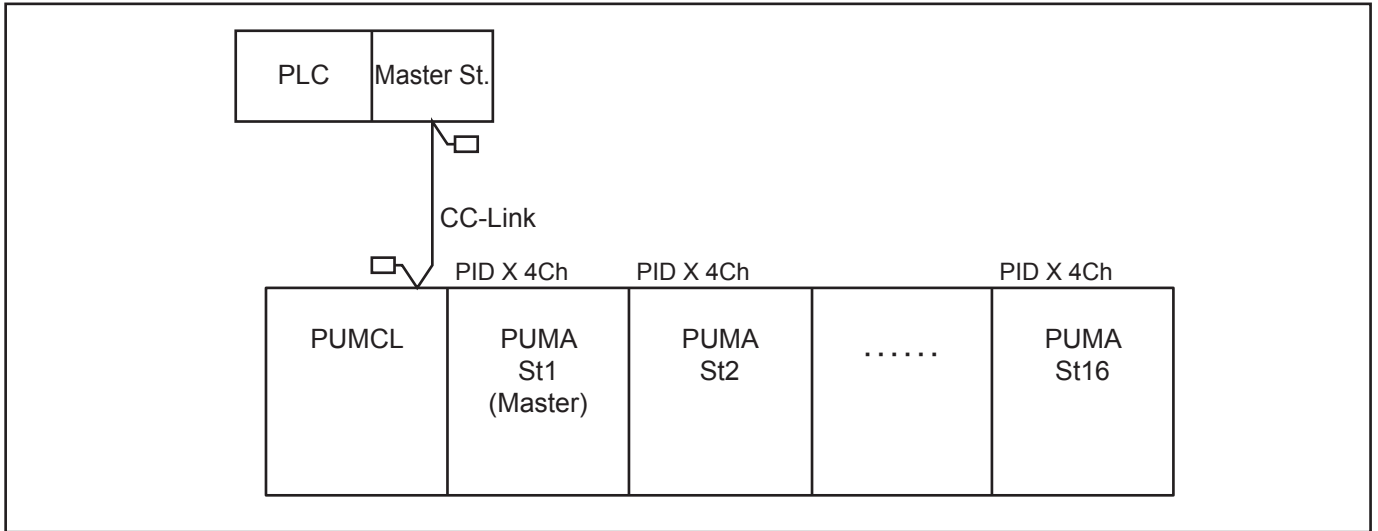
The image on PUM parameter loader

	St1				St2				...	St16			
	Ch1	Ch2	Ch3	Ch4	Ch1	Ch2	Ch3	Ch4	...	Ch1	Ch2	Ch3	Ch4
PV	○	○	○	○	○	○	○	○	...	○	○	○	○
MV (heating)	○	○	○	○	○	○	○	○	...	○	○	○	○
MV (cooling)	-	-	-	-	-	-	-	-	...	-	-	-	-

"1" to "4" Ch is allocated to per station, and each channel has data.

When connecting to PLC via CC-Link communication and monitoring

<Configuration of 4Ch module (General PID) is 16 units>



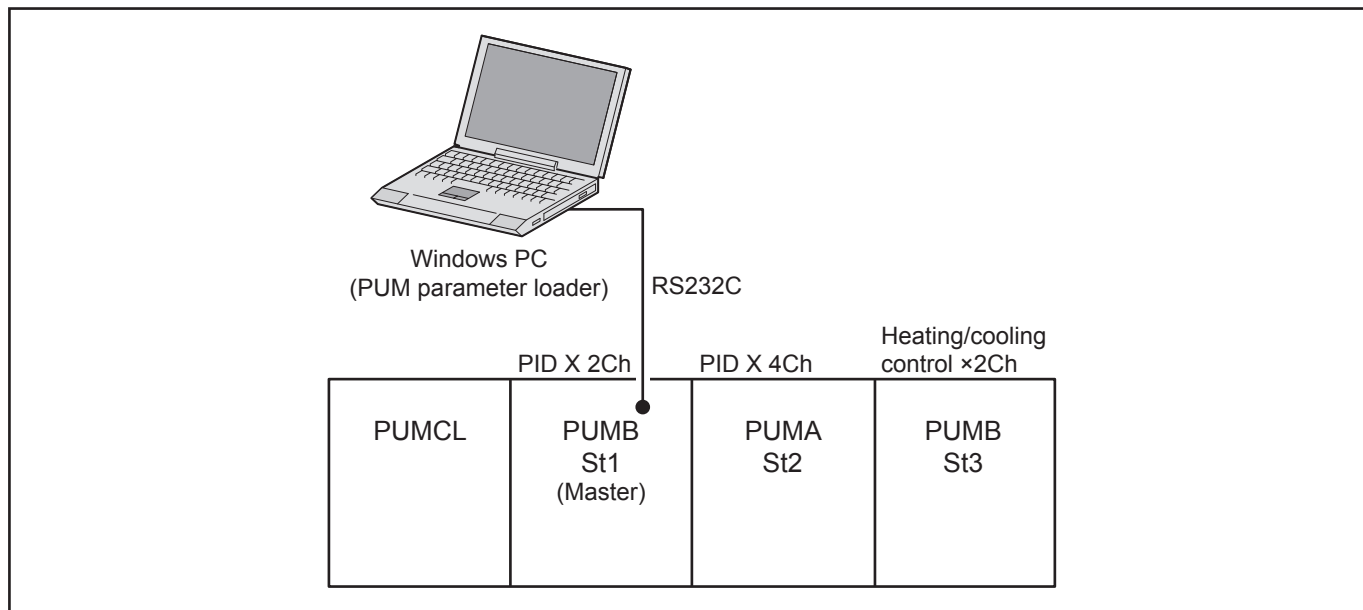
Memory images on PLC

	St1				St2				...	St16			
	Ch1	Ch2	Ch3	Ch4	Ch5	Ch6	Ch7	Ch8	...	Ch61	Ch62	Ch63	Ch64
PV	○	○	○	○	○	○	○	○	...	○	○	○	○
MV (heating)	○	○	○	○	○	○	○	○	...	○	○	○	○
MV (cooling)	-	-	-	-	-	-	-	-	...	-	-	-	-

Channel is numbered serially starting from St.1 and has data per Ch1 to 64.

When connecting PC to the loader communication port and monitoring by using PUM parameter loader

<Mixed configuration of 2Ch module (General PID), 4Ch module (General PID), and 2Ch (Heating /cooling control) >



The image on the PUM parameter loader

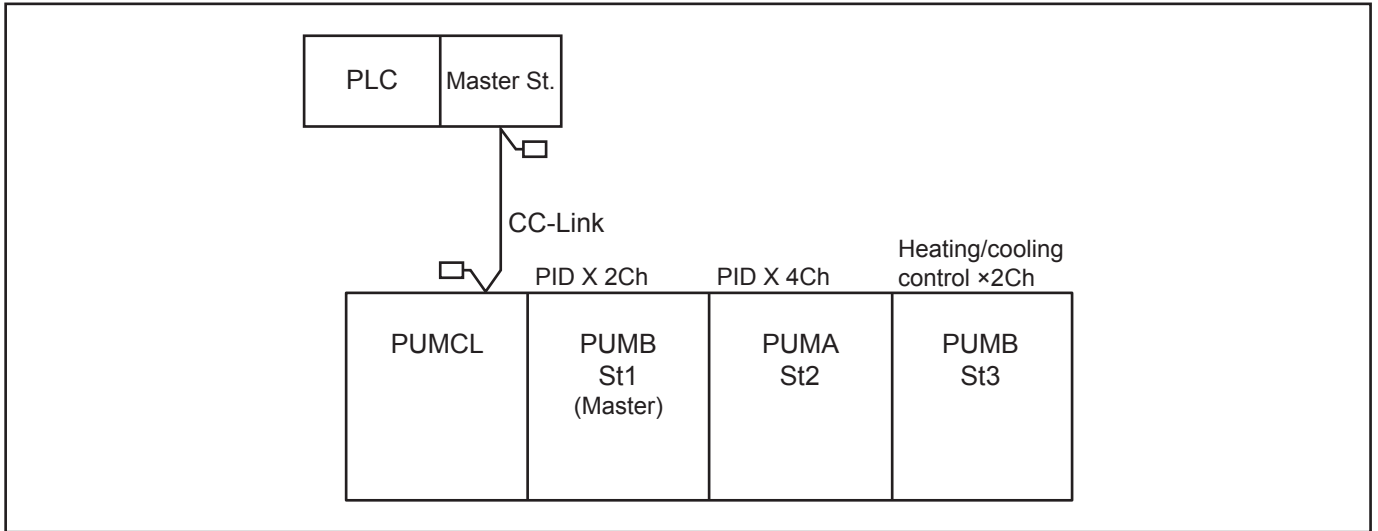
	St1				St2				St3			
	Ch1	Ch2	Vacant	Vacant	Ch1	Ch2	Ch3	Ch4	Ch1	Ch2	Vacant	Vacant
PV	○	○	Vacant	Vacant	○	○	○	○	○	○	Vacant	Vacant
MV (heating)	○	○	Vacant	Vacant	○	○	○	○	○	○	Vacant	Vacant
MV (cooling)	-	-	Vacant	Vacant	-	-	-	-	○	○	Vacant	Vacant

1 to 2Ch or 1 to 4 Ch per station is allocated to a channel, and each channel has data.

If 2-Ch module exists, there will be vacant channels.

When connecting to PLC via CC-Link communication and monitoring

<Mixed configuration of 2Ch module (General PID), 4Ch module (General PID), and 2Ch module (Heating/cooling control) >



Memory image on PLC

	St1				St2				St3			
	Ch1	Ch2	Vacant	Vacant	Ch5	Ch6	Ch7	Ch8	Ch9	Ch10	Vacant	Vacant
PV	○	○	Vacant	Vacant	○	○	○	○	○	○	Vacant	Vacant
MV (heating)	○	○	Vacant	Vacant	○	○	○	○	○	○	Vacant	Vacant
MV (cooling)	-	-	Vacant	Vacant	-	-	-	-	○	○	Vacant	Vacant

Channel is numbered serially starting from St.1, and has data per Ch1 to 64.

If 2-Ch module exists, there will be vacant channels.

5

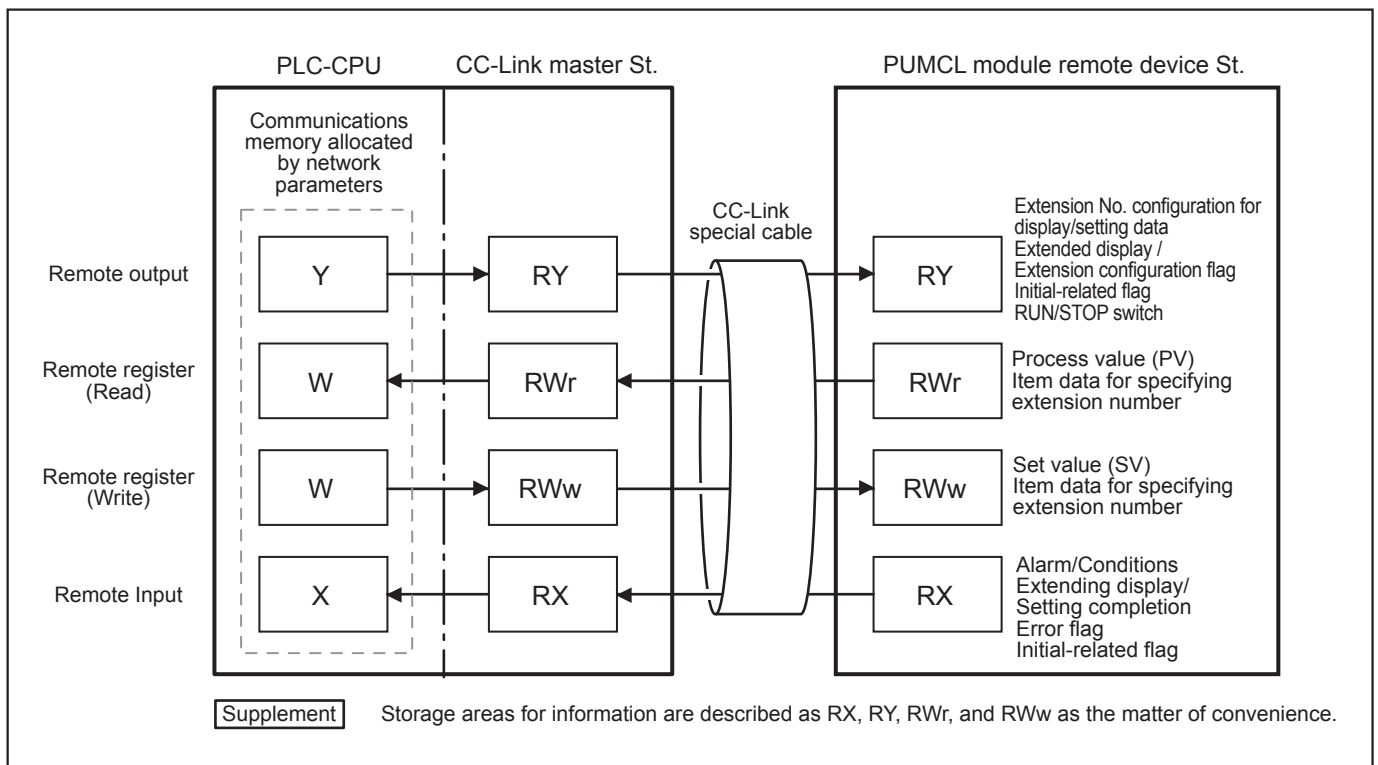
Communication Devices

5.1	Interface Overview of Master Station and PUMCL Module (Remote Device Station) ..	5-3
5.2	Data Handling Instructions	5-7
5.3	List of Remote Input/Output	5-8
5.4	List of Remote Register	5-39
5.5	Extension Number Setting	5-55
5.6	List of Extension Numbers	5-57
5.7	CC-Link Flag Operation	5-76
5.8	Sample Program	5-79

5.1 Interface Overview of Master Station and PUMCL Module (Remote Device Station)

PUMCL module (CC-Link), the remote device station, interfaces to PLC by using the remote input (RX) area, the remote output (RY) area, and the remote register (RWw, RWr) area.

Interface Overview



Remote output

Remote output is bit information to operate the remote device and to specify data operated in the remote register.

Main functions are shown below.

Signal	Descriptions
Extension number configuration for display data	Specify the extension number of data you desire to read from a remote device to a remote register
Extension number configuration for setting data	Specify the extension number you desire to write form a remote device to a remote register
Extended display flag	Execute reading
Extension configuration flag	Execute writing
Initial-related flag	Execute the operation for request/completion of initialization
RUN/STOP switch	Switch a control module operation (RUN/STOP)

Remote input

Remote input is bit information to describe the remote device conditions.

The main status display is shown below.

Signal	Descriptions
Alarm	Alarm escalated from a control module
Status	Status escalated from a control module
Extended display completion flag	Flag to inform the reading execution completion
Extension configuration completion flag	Flag to inform the writing execution completion
Initial-related flag	Initial demand/completion status
Error flag	Information about CC-Link communication

Remote register

Remote register is the word area to read/write into the remote device.

Data handled differs by number of stations occupied/extended cyclic setting.

For details, please refer to Remote Register on the next page.

Point

When the master station (PLC) is in the stop status, writing to the remote output (RY)/remote register (RWw) is not reflected in this equipment.

For detail information about communications, please refer to the instruction manual for PLC.

Remote Register

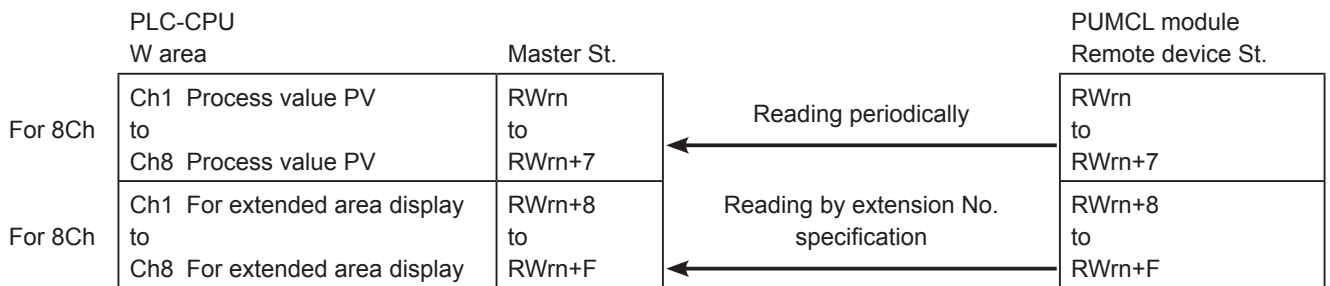
Use of the remote register differs by Setting for number of stations occupied/extended cyclic. The explanation below is the case of 4 stations occupied×1 setting.

4 stations occupied ×1 setting (8Ch)

Remote register (Read)

Transmission is consists of two areas.

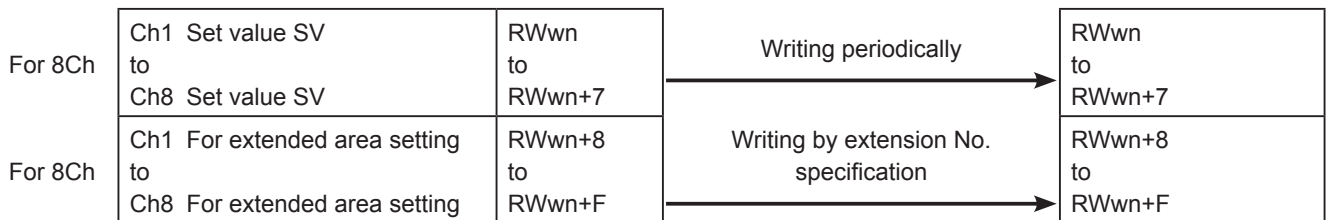
1. The area for being read PV value periodically.
2. The area for reading corresponding data to specified extension number. Extension number is specified by remote output (bit output).



Remote register (Write)

Transmission consists of two areas.

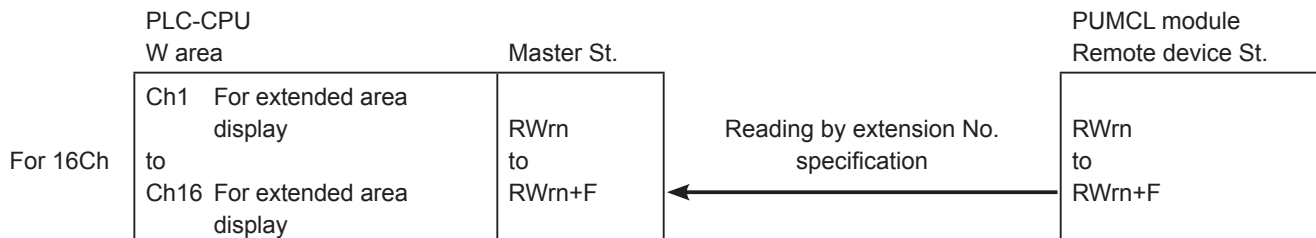
1. The area for writing SV value periodically.
2. The area for writing corresponding data to specified extension number. Extension number is specified by remote output (bit output).



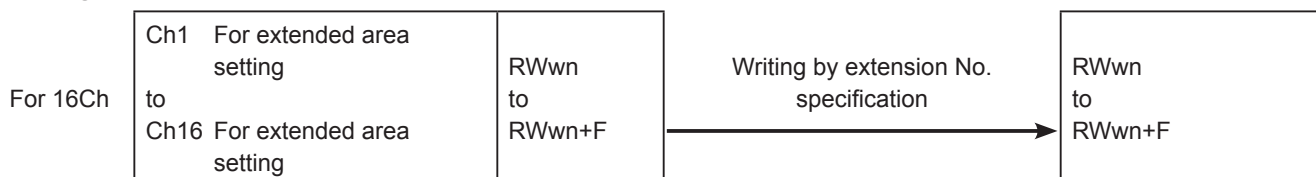
4 stations occupied ×1 setting (16Ch)

Corresponding data to the extension number specified by the all area is handled. The extension number is specified by remote output (bit output).

Remote register (Read)



Remote register (Write)



5.2 Data Handling Instructions

There are some cases with the numeric value (remote register) that obtained by sending / receiving to/from PUM module. The case are that the value has no decimal point, has decimal point, and minus.

Note

Do not access to the address not listed on the "5.6 List of Extension numbers". [▶▶ 5-57](#)

When the value has no decimal point

If value has no decimal point, no change added.

Ex) Read out data when SV value is 100°C

Decimal number representation; 100 Hexadecimal number representation: 64H

When the value has a decimal point

If the numeric value has a decimal point, the decimal point is omitted.

Ex) The remote register read out value when the process value (PV) is 101.1°C

Decimal number representation: 1011 Hexadecimal representation: 03F3H

When the value is minus

If the numeric value is minus, minus is represented by complement representation of "2".

It means the value is that subtracted the minus value from 10000H in the hexadecimal number.

Ex) Read out value when the process value (PV) is -1.1°C.

Decimal number representation: -11 Hexadecimal number representation: FFF5H (10000H-BH)

5.3 List of Remote Input /Output

Remote input (RX) and remote output (RY) are bit information.

Point

- "n" in the list is the address allocated to the master station by CC-Link station number setting.

"n" is calculated by using the following formula. However, this formula is used when designing the network with only our PUM modules and the all number of stations occupied / extended cyclic setting is the same.

Number of stations occupied / extended cyclic setting	Formula
4 stations occupied ×1 setting	$n = \frac{(\text{St. No.} - 1) \times 32}{16}$
4 stations occupied ×2 setting	$n = \frac{(\text{St. No.} - 1) \times 56}{16}$
4 stations occupied ×4 setting	$n = \frac{(\text{St. No.} - 1) \times 112}{16}$

Because the calculation results are represented by decimal numbers, convert it to hexadecimal numbers prior to assign it to "n" in the list.

Ex) PUM module setting is 4 stations occupied × 1 and the station number is "5".

$$n = \frac{(5-1) \times 32}{16} = 8 \text{ (decimal number)}$$

$$= 8 \text{ (hexadecimal number)}$$

If the St. No. is 5: Remote input RXn0 to RX (n+7) F → RX80 to RXFF
Remote output RYn0 to RY (n+7) F → RY80 to RYFF

- The data of the channel other than the channels used is nonuse.

Note

If connecting several PUM of 4 stations occupied, the station numbers are not serial such as, 1, 5, 9.

4 stations occupied ×1 setting

List of remote input

Data direction: CC-Link communication module (remote device station) → Master station (PLC)

Data capacity: 128 bits

4 stations occupied × 1 setting List of remote input

Address	Communication items (Status)		Data range	Factory-set value
RXn0	Ch1	Event1	0: OFF	—
RXn1		Event2	1: ON	—
RXn2		Burnout	0: OFF 1: ON	—
RXn3		Event3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RXn4		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RXn5	Ch2	Event1	0: OFF	—
RXn6		Event2	1: ON	—
RXn7		Burnout	0: OFF 1: ON	—
RXn8		Event3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RXn9		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RXnA	Nonuse		—	—
RXnB	Nonuse		—	—
RXnC	Extended display completion		0: OFF 1: ON	—
RXnD	Extension configuration completion		0: OFF 1: ON	—
RXnE	Nonuse		—	—
RXnF	Hard error flag		0: OFF 1: ON It will be ON when CC-Link communication module hard error occurs	—
RX (n+1) 0 to RX (n+1) F	Reserved		—	—
RX (n+2) 0	Ch3	Event1	0: OFF	—
RX (n+2) 1		Event2	1: ON	—
RX (n+2) 2		Burnout	0: OFF 1: ON	—
RX (n+2) 3		Event3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+2) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)	—

5.3 List of Remote Input /Output

4 stations occupied × 1 setting List of remote input

Address	Communication items (Status)	Data range	Factory-set value	
RX (n+2) 5	Ch4	Event1	0: OFF	—
RX (n+2) 6		Event2	1: ON	—
RX (n+2) 7		Burnout	0: OFF 1: ON	—
RX (n+2) 8		Event3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+2) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+2) A	Ch5	Event1	0: OFF	—
RX (n+2) B		Event2	1: ON	—
RX (n+2) C		Burnout	0: OFF 1: ON	—
RX (n+2) D		Event3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+2) E		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+2) F	Ch6	Event1	0: OFF	—
RX (n+3) 0		Event2	1: ON	—
RX (n+3) 1		Burnout	0: OFF 1: ON	—
RX (n+3) 2		Event3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+3) 3		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+3) 4	Ch7	Event1	0: OFF	—
RX (n+3) 5		Event2	1: ON	—
RX (n+3) 6		Burnout	0: OFF 1: ON	—
RX (n+3) 7		Event3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+3) 8		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+3) 9	Ch8	Event1	0: OFF	—
RX (n+3) A		Event2	1: ON	—
RX (n+3) B		Burnout	0: OFF 1: ON	—
RX (n+3) C		Event3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+3) D		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+3) E	Nonuse		—	—
RX (n+3) F			—	—

4 stations occupied × 1 setting List of remote input

Address	Communication items (Status)	Data range	Factory-set value	
RX (n+4) 0	Ch9	Event1	0: OFF	—
RX (n+4) 1		Event2	1: ON	—
RX (n+4) 2		Burnout	0: OFF 1: ON	—
RX (n+4) 3		Event3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+4) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+4) 5	Ch10	Event1	0: OFF	—
RX (n+4) 6		Event2	1: ON	—
RX (n+4) 7		Burnout	0: OFF 1: ON	—
RX (n+4) 8		Event3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+4) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+4) A	Ch11	Event1	0: OFF	—
RX (n+4) B		Event2	1: ON	—
RX (n+4) C		Burnout	0: OFF 1: ON	—
RX (n+4) D		Event3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+4) E		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+4) F	Ch12	Event1	0: OFF	—
RX (n+5) 0		Event2	1: ON	—
RX (n+5) 1		Burnout	0: OFF 1: ON	—
RX (n+5) 2		Event3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+5) 3		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+5) 4	Ch13	Event1	0: OFF	—
RX (n+5) 5		Event2	1: ON	—
RX (n+5) 6		Burnout	0: OFF 1: ON	—
RX (n+5) 7		Event3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+5) 8		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+5) 9	Ch14	Event1	0: OFF	—
RX (n+5) A		Event2	1: ON	—
RX (n+5) B		Burnout	0: OFF 1: ON	—
RX (n+5) C		Event3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+5) D		PID/AT SW	0: PID control 1: Auto tuning (AT)	—

5.3 List of Remote Input /Output

4 stations occupied × 1 setting List of remote input

Address	Communication items (Status)	Data range	Factory-set value	
RX (n+3) E	Nonuse	—	—	
RX (n+3) F				
RX (n+6) 0	Ch15	Event1	0: OFF	—
RX (n+6) 1		Event2	1: ON	—
RX (n+6) 2		Burnout	0: OFF 1: ON	—
RX (n+6) 3		Event3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+6) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+6) 5	Ch16	Event1	0: OFF	—
RX (n+6) 6		Event2	1: ON	—
RX (n+6) 7		Burnout	0: OFF 1: ON	—
RX (n+6) 8		Event3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+6) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+6) A to RX (n+6) F	Nonuse	—	—	
RX (n+7) 0 to RX (n+7) 7	Reserved	—	—	
RX (n+7) 8	Request flag for initial data processing	0: OFF 1: ON	—	
RX (n+7) 9	Completion flag for initial data setting	0: OFF 1: ON	—	
RX (n+7) A	Error flag	0: OFF	—	
RX (n+7) B	Remote ready	0: Unready 1: Ready	—	
RX (n+7) C to RX (n+7) F	Reserved	—	—	

List of remote output

Data direction: Master station (PLC) → CC-Link communication module (Remote device station)

Data capacity: 128 bits

4 stations occupied × 1 setting List of remote output

Address	Communication items (Status)		Data range	Factory-set value
RYn0	b0	Extension No. configuration for display data	Extension No. configuration for display data by ON/OFF of RYn0 to RYn5 and RY (n+1) 0 to RY (n+1) 3 Data0: OFF 1: ON [Decimal number representation]: 0 to 1023	0
RYn1	b1			
RYn2	b2			
RYn3	b3			
RYn4	b4			
RYn5	b5			
RYn6	b0	Extension No. configuration for setting data	Extension No. configuration for setting data by ON/OFF of RYn6 to RYnB and RY (n+1) 8 to RY (n+1) B Data0: OFF 1: ON [Decimal number representation]: 0 to 1023	0
RYn7	b1			
RYn8	b2			
RYn9	b3			
RYnA	b4			
RYnB	b5			
RYnC	Extended display flag		0: OFF 1: ON	0
RYnD	Extension configuration flag		0: OFF 1: ON	0
RYnE	Nonuse		—	—
RYnF	RUN/STOP SW		0: RUN (Start control) 1: STOP (Stop control)	0
RY (n+1) 0	b6	Extension No. configuration for display data b10 to b13: Nonuse	Extension No. configuration for display data by ON/OFF of RYn0 to RYn5 and RY (n+1) 0 to RY (n+1) 3 Data0: OFF 1: ON [Decimal number representation]: 0 to 1023	0
RY (n+1) 1	b7			
RY (n+1) 2	b8			
RY (n+1) 3	b9			
RY (n+1) 4	b10			
RY (n+1) 5	b11			
RY (n+1) 6	b12			
RY (n+1) 7	b13			
RY (n+1) 8	b6	Extension No. configuration for setting data b10 to b13: Nonuse	Extension No. configuration for setting data by ON/OFF of RYn6 to RYnB and RY (n+1) 8 to RY (n+1) B Data0: OFF 1: ON [Decimal number representation]: 0 to 1023	0
RY (n+1) 9	b7			
RY (n+1) A	b8			
RY (n+1) B	b9			
RY (n+1) C	b10			
RY (n+1) D	b11			
RY (n+1) E	b12			
RY (n+1) F	b13			

5.3 List of Remote Input /Output

4 stations occupied × 1 setting List of remote output

Address	Communication items (Status)		Data range	Factory-set value
RY (n+2) 0	b0	Reserved	Write inhibit	0
RY (n+2) 1	b1			
RY (n+2) 2	b2			
RY (n+2) 3	b3			
RY (n+2) 4	b4			
RY (n+2) 5	b5			
RY (n+2) 6	b6			
RY (n+2) 7	b7			
RY (n+2) 8	b0	Reserved	Write inhibit	0
RY (n+2) 9	b1			
RY (n+2) A	b2			
RY (n+2) B	b3			
RY (n+2) C	b4			
RY (n+2) D	b5			
RY (n+2) E	b6			
RY (n+2) F	b7			
RY (n+3) A to RY (n+6) F	Nonuse		—	—
RY (n+7) 0 to RY (n+7) 7	Reserved		—	—
RY (n+7) 8	Completion flag for initial data processing		0: OFF 1: ON	0
RY (n+7) 9	Request flag for initial data setting		0: OFF 1: ON	0
RY (n+7) A	Request flag for error reset		0: OFF 1: ON	0
RY (n+7) B to RY (n+7) F	Reserved		—	—

4 stations occupied ×2 setting

List of remote input

Data direction: CC-Link communication module (remote device station) → Master station (PLC)

Data capacity: 224 bits

4 stations occupied × 2 setting List of remote input

Address	Communication items (Status)		Data range	Factory-set value
RXn0	Ch1	Event 1	0: OFF	—
RXn1		Event 2	1: ON	—
RXn2		Burnout	0: OFF 1: ON	—
RXn3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RXn4		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RXn5	Ch2	Event 1	0: OFF	—
RXn6		Event 2	1: ON	—
RXn7		Burnout	0: OFF 1: ON	—
RXn8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RXn9		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RXnA	Nonuse		—	—
RXnB				
RXnC	Extended display completion		0: OFF 1: ON	—
RXnD	Extension configuration completion		0: OFF 1: ON	—
RXnE	Nonuse		—	—
RXnF	Hard error flag		0: OFF 1: ON It will be ON when CC-Link communication module hard error occurs	—
RX (n+1) 0 to RX (n+1) F	Reserved		—	—
RX (n+2) 0	Ch3	Event 1	0: OFF	—
RX (n+2) 1		Event 2	1: ON	—
RX (n+2) 2		Burnout	0: OFF 1: ON	—
RX (n+2) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+2) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)	—

5.3 List of Remote Input /Output

4 stations occupied × 2 setting List of remote input

Address	Communication items (Status)	Data range	Factory-set value
RX (n+2) 5	Ch4	Event 1	0: OFF
RX (n+2) 6		Event 2	1: ON
RX (n+2) 7		Burnout	0: OFF 1: ON
RX (n+2) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+2) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+2) A	Ch5	Event 1	0: OFF
RX (n+2) B		Event 2	1: ON
RX (n+2) C		Burnout	0: OFF 1: ON
RX (n+2) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+2) E		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+2) F	Ch6	Event 1	0: OFF
RX (n+3) 0		Event 2	1: ON
RX (n+3) 1		Burnout	0: OFF 1: ON
RX (n+3) 2		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+3) 3		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+3) 4	Ch7	Event 1	0: OFF
RX (n+3) 5		Event 2	1: ON
RX (n+3) 6		Burnout	0: OFF 1: ON
RX (n+3) 7		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+3) 8		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+3) 9	Ch8	Event 1	0: OFF
RX (n+3) A		Event 2	1: ON
RX (n+3) B		Burnout	0: OFF 1: ON
RX (n+3) C		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+3) D		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+3) E	Nonuse		—
RX (n+3) F			—

4 stations occupied × 2 setting List of remote input

Address	Communication items (Status)	Data range	Factory-set value	
RX (n+4) 0	Ch9	Event 1	0: OFF	—
RX (n+4) 1		Event 2	1: ON	—
RX (n+4) 2		Burnout	0: OFF 1: ON	—
RX (n+4) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+4) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+4) 5	Ch10	Event 1	0: OFF	—
RX (n+4) 6		Event 2	1: ON	—
RX (n+4) 7		Burnout	0: OFF 1: ON	—
RX (n+4) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+4) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+4) A	Ch11	Event 1	0: OFF	—
RX (n+4) B		Event 2	1: ON	—
RX (n+4) C		Burnout	0: OFF 1: ON	—
RX (n+4) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+4) E		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+4) F	Ch12	Event 1	0: OFF	—
RX (n+5) 0		Event 2	1: ON	—
RX (n+5) 1		Burnout	0: OFF 1: ON	—
RX (n+5) 2		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+5) 3		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+5) 4	Ch13	Event 1	0: OFF	—
RX (n+5) 5		Event 2	1: ON	—
RX (n+5) 6		Burnout	0: OFF 1: ON	—
RX (n+5) 7		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+5) 8		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+5) 9	Ch14	Event 1	0: OFF	—
RX (n+5) A		Event 2	1: ON	—
RX (n+5) B		Burnout	0: OFF 1: ON	—
RX (n+5) C		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+5) D		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+5) E	Nonuse		—	—
RX (n+5) F			—	—

5.3 List of Remote Input /Output

4 stations occupied × 2 setting List of remote input

Address	Communication items (Status)	Data range	Factory-set value
RX (n+6) 0	Ch15	Event 1	0: OFF
RX (n+6) 1		Event 2	1: ON
RX (n+6) 2		Burnout	0: OFF 1: ON
RX (n+6) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+6) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+6) 5	Ch16	Event 1	0: OFF
RX (n+6) 6		Event 2	1: ON
RX (n+6) 7		Burnout	0: OFF 1: ON
RX (n+6) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+6) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+6) A to RX (n+6) F	Nonuse	—	—
RX (n+7) 0	Ch17	Event 1	0: OFF
RX (n+7) 1		Event 2	1: ON
RX (n+7) 2		Burnout	0: OFF 1: ON
RX (n+7) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+7) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+7) 5	Ch18	Event 1	0: OFF
RX (n+7) 6		Event 2	1: ON
RX (n+7) 7		Burnout	0: OFF 1: ON
RX (n+7) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+7) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+7) A	Ch19	Event 1	0: OFF
RX (n+7) B		Event 2	1: ON
RX (n+7) C		Burnout	0: OFF 1: ON
RX (n+7) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+7) E		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+7) F	Nonuse	—	—

4 stations occupied × 2 setting List of remote input

Address	Communication items (Status)	Data range	Factory-set value	
RX (n+8) 0	Ch20	Event 1	0: OFF	—
RX (n+8) 1		Event 2	1: ON	—
RX (n+8) 2		Burnout	0: OFF 1: ON	—
RX (n+8) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+8) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+8) 5	Ch21	Event 1	0: OFF	—
RX (n+8) 6		Event 2	1: ON	—
RX (n+8) 7		Burnout	0: OFF 1: ON	—
RX (n+8) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+8) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+8) A	Ch22	Event 1	0: OFF	—
RX (n+8) B		Event 2	1: ON	—
RX (n+8) C		Burnout	0: OFF 1: ON	—
RX (n+8) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+8) E		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+8) F	Nonuse	—	—	
RX (n+9) 0	Ch23	Event 1	0: OFF	—
RX (n+9) 1		Event 2	1: ON	—
RX (n+9) 2		Burnout	0: OFF 1: ON	—
RX (n+9) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+9) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+9) 5	Ch24	Event 1	0: OFF	—
RX (n+9) 6		Event 2	1: ON	—
RX (n+9) 7		Burnout	0: OFF 1: ON	—
RX (n+9) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+9) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+9) A	Ch25	Event 1	0: OFF	—
RX (n+9) B		Event 2	1: ON	—
RX (n+9) C		Burnout	0: OFF 1: ON	—
RX (n+9) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+9) E		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+9) F	Nonuse	—	—	

5.3 List of Remote Input /Output

4 stations occupied × 2 setting List of remote input

Address	Communication items (Status)	Data range	Factory-set value
RX (n+A) 0	Ch26	Event 1	0: OFF
RX (n+A) 1		Event 2	1: ON
RX (n+A) 2		Burnout	0: OFF 1: ON
RX (n+A) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+A) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+A) 5	Ch27	Event 1	0: OFF
RX (n+A) 6		Event 2	1: ON
RX (n+A) 7		Burnout	0: OFF 1: ON
RX (n+A) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+A) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+A) A	Ch28	Event 1	0: OFF
RX (n+A) B		Event 2	1: ON
RX (n+A) C		Burnout	0: OFF 1: ON
RX (n+A) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+A) E		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+A) F	Nonuse	—	—
RX (n+B) 0	Ch29	Event 1	0: OFF
RX (n+B) 1		Event 2	1: ON
RX (n+B) 2		Burnout	0: OFF 1: ON
RX (n+B) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+B) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+B) 5	Ch30	Event 1	0: OFF
RX (n+B) 6		Event 2	1: ON
RX (n+B) 7		Burnout	0: OFF 1: ON
RX (n+B) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+B) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+B) A	Ch31	Event 1	0: OFF
RX (n+B) B		Event 2	1: ON
RX (n+B) C		Burnout	0: OFF 1: ON
RX (n+B) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+B) E		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+B) F	Nonuse	—	—

4 stations occupied × 2 setting List of remote input

Address	Communication items (Status)	Data range	Factory-set value	
RX (n+C) 0	Ch32	Event 1	0: OFF	—
RX (n+C) 1		Event 2	1: ON	—
RX (n+C) 2		Burnout	0: OFF 1: ON	—
RX (n+C) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+C) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+C) 5 to RX (n+C) F	Nonuse	—	—	
RX (n+D) 0 to RX (n+D) 7	Reserved	—	—	
RX (n+D) 8	Request flag for initial data processing	0: OFF 1: ON	—	
RX (n+D) 9	Completion flag for initial data setting	0: OFF 1: ON	—	
RX (n+D) A	Error flag	0: OFF	—	
RX (n+D) B	Remote ready	0: Unready 1: Ready	—	
RX (n+D) C to RX (n+D) F	Reserved	—	—	

5.3 List of Remote Input /Output

List of remote output

Data direction: Master station (PLC) → CC-Link communication module (remote device station)

Data capacity: 224 bits

4 stations occupied × 2 setting List of remote output

Address	Communication items (Status)		Data range	Factory-set value
RYn0	b0	Extension No. configuration for display data	Extension No. configuration for display data by ON/OFF of RYn0 to RYn5 and RY (n+1) 0 to RY (n+1) 3 Data0: OFF 1: ON [Decimal number representation]: 0 to 1023	0
RYn1	b1			
RYn2	b2			
RYn3	b3			
RYn4	b4			
RYn5	b5			
RYn6	b0	Extension No. configuration for setting data	Extension No. configuration for setting data by ON/OFF of RYn6 to RYnB and RY (n+1) 8 to RY (n+1) B Data0: OFF 1: ON [Decimal number representation]: 0 to 1023	0
RYn7	b1			
RYn8	b2			
RYn9	b3			
RYnA	b4			
RYnB	b5			
RYnC	Extended display flag		0: OFF 1: ON	0
RYnD	Extension configuration flag		0: OFF 1: ON	0
RYnE	Nonuse		—	—
RYnF	RUN/STOP SW		0: RUN (Start control) 1: STOP (Stop control)	0
RY (n+1) 0	b6	Extension No. configuration for display data b10 to b13: Nonuse	Extension No. configuration for display data by ON/OFF of RYn0 to RYn5 and RY (n+1) 0 to RY (n+1) 3 Data0: OFF 1: ON [Decimal number representation]: 0 to 1023	0
RY (n+1) 1	b7			
RY (n+1) 2	b8			
RY (n+1) 3	b9			
RY (n+1) 4	b10			
RY (n+1) 5	b11			
RY (n+1) 6	b12			
RY (n+1) 7	b13			
RY (n+1) 8	b6	Extension No. configuration for setting data b10 to b13: Nonuse	Extension No. configuration for setting data by ON/OFF of RYn6 to RYnB and RY (n+1) 8 to RY (n+1) B Data0: OFF 1: ON [Decimal number representation]: 0 to 1023	0
RY (n+1) 9	b7			
RY (n+1) A	b8			
RY (n+1) B	b9			
RY (n+1) C	b10			
RY (n+1) D	b11			
RY (n+1) E	b12			
RY (n+1) F	b13			

4 stations occupied × 2 setting List of remote output

Address	Communication items (Status)		Data range	Factory-set value
RY (n+2) 0	b0	Reserved	Write inhibit	0
RY (n+2) 1	b1			
RY (n+2) 2	b2			
RY (n+2) 3	b3			
RY (n+2) 4	b4			
RY (n+2) 5	b5			
RY (n+2) 6	b6			
RY (n+2) 7	b7			
RY (n+2) 8	b0	Reserved	Write inhibit	0
RY (n+2) 9	b1			
RY (n+2) A	b2			
RY (n+2) B	b3			
RY (n+2) C	b4			
RY (n+2) D	b5			
RY (n+2) E	b6			
RY (n+2) F	b7			
RY (n+3) 0 to RY (n+C) F	Nonuse		—	—
RY (n+D) 0 to RY (n+D) 7	Reserved		—	—
RY (n+D) 8	Completion flag for initial data processing		0: OFF 1: ON	0
RY (n+D) 9	Request flag for initial data setting		0: OFF 1: ON	0
RY (n+D) A	Request flag for error reset		0: OFF 1: ON	0
RY (n+D) B to RY (n+D) F	Reserved		—	—

4 stations occupied ×4 setting

List of remote input

Data direction: CC-Link communication module (remote device station)→Master station (PLC)

Data capacity: 448 bits

4 stations occupied × 4 setting List of remote input

Address	Communication items (Status)		Data range	Factory-set value
RXn0	Ch1	Event 1	0: OFF	—
RXn1		Event 2	1: ON	—
RXn2		Burnout	0: OFF 1: ON	—
RXn3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RXn4		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RXn5	Ch2	Event 1	0: OFF	—
RXn6		Event 2	1: ON	—
RXn7		Burnout	0: OFF 1: ON	—
RXn8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RXn9		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RXnA	Nonuse		—	—
RXnB				
RXnC	Extended display completion		0: OFF 1: ON	—
RXnD	Extension configuration completion		0: OFF 1: ON	—
RXnE	Nonuse		—	—
RXnF	Hard error flag		0: OFF 1: ON It will be ON when COM-JT hard error occurs	—
RX (n+1) 0 to RX (n+1) F	Reserved		—	—
RX (n+2) 0	Ch3	Event 1	0: OFF	—
RX (n+2) 1		Event 2	1: ON	—
RX (n+2) 2		Burnout	0: OFF 1: ON	—
RX (n+2) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+2) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)	—

4 stations occupied × 4 setting List of remote input

Address	Communication items (Status)		Data range	Factory-set value
RX (n+2) 5	Ch4	Event 1	0: OFF	—
RX (n+2) 6		Event 2	1: ON	—
RX (n+2) 7		Burnout	0: OFF 1: ON	—
RX (n+2) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+2) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+2) A	Ch5	Event 1	0: OFF	—
RX (n+2) B		Event 2	1: ON	—
RX (n+2) C		Burnout	0: OFF 1: ON	—
RX (n+2) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+2) E		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+2) F	Ch6	Event 1	0: OFF	—
RX (n+3) 0		Event 2	1: ON	—
RX (n+3) 1		Burnout	0: OFF 1: ON	—
RX (n+3) 2		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+3) 3		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+3) 4	Ch7	Event 1	0: OFF	—
RX (n+3) 5		Event 2	1: ON	—
RX (n+3) 6		Burnout	0: OFF 1: ON	—
RX (n+3) 7		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+3) 8		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+3) 9	Ch8	Event 1	0: OFF	—
RX (n+3) A		Event 2	1: ON	—
RX (n+3) B		Burnout	0: OFF 1: ON	—
RX (n+3) C		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+3) D		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+3) E	Nonuse		—	—
RX (n+3) F	Nonuse		—	—
RX (n+4) 0	Ch9	Event 1	0: OFF	—
RX (n+4) 1		Event 2	1: ON	—
RX (n+4) 2		Burnout	0: OFF 1: ON	—
RX (n+4) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+4) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)	—

5.3 List of Remote Input /Output

4 stations occupied × 4 setting List of remote input

Address	Communication items (Status)	Data range	Factory-set value
RX (n+4) 5	Ch10	Event 1	0: OFF
RX (n+4) 6		Event 2	1: ON
RX (n+4) 7		Burnout	0: OFF 1: ON
RX (n+4) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+4) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+4) A	Ch11	Event 1	0: OFF
RX (n+4) B		Event 2	1: ON
RX (n+4) C		Burnout	0: OFF 1: ON
RX (n+4) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+4) E		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+4) F	Ch12	Event 1	0: OFF
RX (n+5) 0		Event 2	1: ON
RX (n+5) 1		Burnout	0: OFF 1: ON
RX (n+5) 2		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+5) 3		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+5) 4	Ch13	Event 1	0: OFF
RX (n+5) 5		Event 2	1: ON
RX (n+5) 6		Burnout	0: OFF 1: ON
RX (n+5) 7		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+5) 8		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+5) 9	Ch14	Event 1	0: OFF
RX (n+5) A		Event 2	1: ON
RX (n+5) B		Burnout	0: OFF 1: ON
RX (n+5) C		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+5) D		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+5) E	Nonuse		—
RX (n+5) F	Nonuse		—
RX (n+6) 0	Ch15	Event 1	0: OFF
RX (n+6) 1		Event 2	1: ON
RX (n+6) 2		Burnout	0: OFF 1: ON
RX (n+6) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+6) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)

4 stations occupied × 4 setting List of remote input

Address	Communication items (Status)		Data range	Factory-set value
RX (n+6) 5	Ch16	Event 1	0: OFF	—
RX (n+6) 6		Event 2	1: ON	—
RX (n+6) 7		Burnout	0: OFF 1: ON	—
RX (n+6) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+6) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+6) A to RX (n+6) F	Nonuse		—	—
RX (n+7) 0	Ch17	Event 1	0: OFF	—
RX (n+7) 1		Event 2	1: ON	—
RX (n+7) 2		Burnout	0: OFF 1: ON	—
RX (n+7) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+7) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+7) 5	Ch18	Event 1	0: OFF	—
RX (n+7) 6		Event 2	1: ON	—
RX (n+7) 7		Burnout	0: OFF 1: ON	—
RX (n+7) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+7) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+7) A	Ch19	Event 1	0: OFF	—
RX (n+7) B		Event 2	1: ON	—
RX (n+7) C		Burnout	0: OFF 1: ON	—
RX (n+7) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+7) E		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+7) F	Nonuse		—	—
RX (n+8) 0	Ch20	Event 1	0: OFF	—
RX (n+8) 1		Event 2	1: ON	—
RX (n+8) 2		Burnout	0: OFF 1: ON	—
RX (n+8) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+8) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)	—

5.3 List of Remote Input /Output

4 stations occupied × 4 setting List of remote input

Address	Communication items (Status)		Data range	Factory-set value
RX (n+8) 5	Ch21	Event 1	0: OFF	—
RX (n+8) 6		Event 2	1: ON	—
RX (n+8) 7		Burnout	0: OFF 1: ON	—
RX (n+8) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+8) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+8) A	Ch22	Event 1	0: OFF	—
RX (n+8) B		Event 2	1: ON	—
RX (n+8) C		Burnout	0: OFF 1: ON	—
RX (n+8) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+8) E		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+8) F	Nonuse		—	—
RX (n+9) 0	Ch23	Event 1	0: OFF	—
RX (n+9) 1		Event 2	1: ON	—
RX (n+9) 2		Burnout	0: OFF 1: ON	—
RX (n+9) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+9) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+9) 5	Ch24	Event 1	0: OFF	—
RX (n+9) 6		Event 2	1: ON	—
RX (n+9) 7		Burnout	0: OFF 1: ON	—
RX (n+9) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+9) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+9) A	Ch25	Event 1	0: OFF	—
RX (n+9) B		Event 2	1: ON	—
RX (n+9) C		Burnout	0: OFF 1: ON	—
RX (n+9) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+9) E		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+9) F	Nonuse		—	—

4 stations occupied × 4 setting List of remote input

Address	Communication items (Status)		Data range	Factory-set value
RX (n+A) 0	Ch26	Event 1	0: OFF	—
RX (n+A) 1		Event 2	1: ON	—
RX (n+A) 2		Burnout	0: OFF 1: ON	—
RX (n+A) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+A) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+A) 5	Ch27	Event 1	0: OFF	—
RX (n+A) 6		Event 2	1: ON	—
RX (n+A) 7		Burnout	0: OFF 1: ON	—
RX (n+A) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+A) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+A) A	Ch28	Event 1	0: OFF	—
RX (n+A) B		Event 2	1: ON	—
RX (n+A) C		Burnout	0: OFF 1: ON	—
RX (n+A) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+A) E		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+A) F	Nonuse		—	—
RX (n+B) 0	Ch29	Event 1	0: OFF	—
RX (n+B) 1		Event 2	1: ON	—
RX (n+B) 2		Burnout	0: OFF 1: ON	—
RX (n+B) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+B) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+B) 5	Ch30	Event 1	0: OFF	—
RX (n+B) 6		Event 2	1: ON	—
RX (n+B) 7		Burnout	0: OFF 1: ON	—
RX (n+B) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+B) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+B) A	Ch31	Event 1	0: OFF	—
RX (n+B) B		Event 2	1: ON	—
RX (n+B) C		Burnout	0: OFF 1: ON	—
RX (n+B) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON	—
RX (n+B) E		PID/AT SW	0: PID control 1: Auto tuning (AT)	—
RX (n+B) F	Nonuse		—	—

5.3 List of Remote Input /Output

4 stations occupied × 4 setting List of remote input

Address	Communication items (Status)	Data range	Factory-set value
RX (n+C) 0	Ch32	Event 1	0: OFF
RX (n+C) 1		Event 2	1: ON
RX (n+C) 2		Burnout	0: OFF 1: ON
RX (n+C) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+C) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+C) 5	Ch33	Event 1	0: OFF
RX (n+C) 6		Event 2	1: ON
RX (n+C) 7		Burnout	0: OFF 1: ON
RX (n+C) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+C) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+C) A	Ch34	Event 1	0: OFF
RX (n+C) B		Event 2	1: ON
RX (n+C) C		Burnout	0: OFF 1: ON
RX (n+C) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+C) E		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+C) F	Nonuse	—	—
RX (n+D) 0	Ch35	Event 1	0: OFF
RX (n+D) 1		Event 2	1: ON
RX (n+D) 2		Burnout	0: OFF 1: ON
RX (n+D) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+D) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+D) 5	Ch36	Event 1	0: OFF
RX (n+D) 6		Event 2	1: ON
RX (n+D) 7		Burnout	0: OFF 1: ON
RX (n+D) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+D) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+D) A	Ch37	Event 1	0: OFF
RX (n+D) B		Event 2	1: ON
RX (n+D) C		Burnout	0: OFF 1: ON
RX (n+D) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+D) E		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+D) F	Nonuse	—	—

4 stations occupied × 4 setting List of remote input

Address	Communication items (Status)	Data range	Factory-set value
RX (n+E) 0	Ch38	Event 1	0: OFF
RX (n+E) 1		Event 2	1: ON
RX (n+E) 2		Burnout	0: OFF 1: ON
RX (n+E) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+E) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+E) 5	Ch39	Event 1	0: OFF
RX (n+E) 6		Event 2	1: ON
RX (n+E) 7		Burnout	0: OFF 1: ON
RX (n+E) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+E) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+E) A	Ch40	Event 1	0: OFF
RX (n+E) B		Event 2	1: ON
RX (n+E) C		Burnout	0: OFF 1: ON
RX (n+E) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+E) E		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+E) F	Nonuse	—	—
RX (n+F) 0	Ch41	Event 1	0: OFF
RX (n+F) 1		Event 2	1: ON
RX (n+F) 2		Burnout	0: OFF 1: ON
RX (n+F) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+F) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+F) 5	Ch42	Event 1	0: OFF
RX (n+F) 6		Event 2	1: ON
RX (n+F) 7		Burnout	0: OFF 1: ON
RX (n+F) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+F) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+F) A	Ch43	Event 1	0: OFF
RX (n+F) B		Event 2	1: ON
RX (n+F) C		Burnout	0: OFF 1: ON
RX (n+F) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+F) E		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+F) F	Nonuse	—	—

5.3 List of Remote Input /Output

4 stations occupied × 4 setting List of remote input

Address	Communication items (Status)	Data range	Factory-set value
RX (n+10) 0	Ch44	Event 1	0: OFF
RX (n+10) 1		Event 2	1: ON
RX (n+10) 2		Burnout	0: OFF 1: ON
RX (n+10) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+10) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+10) 5	Ch45	Event 1	0: OFF
RX (n+10) 6		Event 2	1: ON
RX (n+10) 7		Burnout	0: OFF 1: ON
RX (n+10) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+10) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+10) A	Ch46	Event 1	0: OFF
RX (n+10) B		Event 2	1: ON
RX (n+10) C		Burnout	0: OFF 1: ON
RX (n+10) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+10) E		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+10) F	Nonuse	—	—
RX (n+11) 0	Ch47	Event 1	0: OFF
RX (n+11) 1		Event 2	1: ON
RX (n+11) 2		Burnout	0: OFF 1: ON
RX (n+11) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+11) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+11) 5	Ch48	Event 1	0: OFF
RX (n+11) 6		Event 2	1: ON
RX (n+11) 7		Burnout	0: OFF 1: ON
RX (n+11) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+11) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+11) A	Ch49	Event 1	0: OFF
RX (n+11) B		Event 2	1: ON
RX (n+11) C		Burnout	0: OFF 1: ON
RX (n+11) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+11) E		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+11) F	Nonuse	—	—

4 stations occupied × 4 setting List of remote input

Address	Communication items (Status)	Data range	Factory-set value
RX (n+12) 0	Ch50	Event 1	0: OFF
RX (n+12) 1		Event 2	1: ON
RX (n+12) 2		Burnout	0: OFF 1: ON
RX (n+12) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+12) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+12) 5	Ch51	Event 1	0: OFF
RX (n+12) 6		Event 2	1: ON
RX (n+12) 7		Burnout	0: OFF 1: ON
RX (n+12) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+12) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+12) A	Ch52	Event 1	0: OFF
RX (n+12) B		Event 2	1: ON
RX (n+12) C		Burnout	0: OFF 1: ON
RX (n+12) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+12) E		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+12) F	Nonuse	—	—
RX (n+13) 0	Ch53	Event 1	0: OFF
RX (n+13) 1		Event 2	1: ON
RX (n+13) 2		Burnout	0: OFF 1: ON
RX (n+13) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+13) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+13) 5	Ch54	Event 1	0: OFF
RX (n+13) 6		Event 2	1: ON
RX (n+13) 7		Burnout	0: OFF 1: ON
RX (n+13) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+13) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+13) A	Ch55	Event 1	0: OFF
RX (n+13) B		Event 2	1: ON
RX (n+13) C		Burnout	0: OFF 1: ON
RX (n+13) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+13) E		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+13) F	Nonuse	—	—

5.3 List of Remote Input /Output

4 stations occupied × 4 setting List of remote input

Address	Communication items (Status)	Data range	Factory-set value
RX (n+14) 0	Ch56	Event 1	0: OFF
RX (n+14) 1		Event 2	1: ON
RX (n+14) 2		Burnout	0: OFF 1: ON
RX (n+14) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+14) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+14) 5	Ch57	Event 1	0: OFF
RX (n+14) 6		Event 2	1: ON
RX (n+14) 7		Burnout	0: OFF 1: ON
RX (n+14) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+14) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+14) A	Ch58	Event 1	0: OFF
RX (n+14) B		Event 2	1: ON
RX (n+14) C		Burnout	0: OFF 1: ON
RX (n+14) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+14) E		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+14) F	Nonuse	—	—
RX (n+15) 0	Ch59	Event 1	0: OFF
RX (n+15) 1		Event 2	1: ON
RX (n+15) 2		Burnout	0: OFF 1: ON
RX (n+15) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+15) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+15) 5	Ch60	Event 1	0: OFF
RX (n+15) 6		Event 2	1: ON
RX (n+15) 7		Burnout	0: OFF 1: ON
RX (n+15) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+15) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)

4 stations occupied × 4 setting List of remote input

Address	Communication items (Status)	Data range	Factory-set value
RX (n+15) A	Ch61	Event 1	0: OFF
RX (n+15) B		Event 2	1: ON
RX (n+15) C		Burnout	0: OFF 1: ON
RX (n+15) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+15) E		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+15) F	Nonuse	—	—
RX (n+16) 0	Ch62	Event 1	0: OFF
RX (n+16) 1		Event 2	1: ON
RX (n+16) 2		Burnout	0: OFF 1: ON
RX (n+16) 3		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+16) 4		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+16) 5	Ch63	Event 1	0: OFF
RX (n+16) 6		Event 2	1: ON
RX (n+16) 7		Burnout	0: OFF 1: ON
RX (n+16) 8		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+16) 9		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+16) A	Ch64	Event 1	0: OFF
RX (n+16) B		Event 2	1: ON
RX (n+16) C		Burnout	0: OFF 1: ON
RX (n+16) D		Event 3 [Heater break alarm (HBA)] specification	0: OFF 1: ON
RX (n+16) E		PID/AT SW	0: PID control 1: Auto tuning (AT)
RX (n+16) F	Nonuse	—	—
RX (n+17) 0 to RX (n+1A) F	Nonuse	—	—
RX (n+1B) 0 to RX (n+1B) 7	Reserved	—	—
RX (n+1B) 8	Request flag for initial data processing	0: OFF 1: ON	—
RX (n+1B) 9	Completion flag for initial data setting	0: OFF 1: ON	—
RX (n+1B) A	Error flag	0: OFF	—
RX (n+1B) B	Remote ready	0: Unready 1: Ready	—

5.3 List of Remote Input /Output

4 stations occupied × 4 setting List of remote input

Address	Communication items (Status)	Data range	Factory-set value
RX (n+1B) C to RX (n+1B) F	Reserved	—	—

List of remote output

Data direction: Master station (PLC) → CC-Link communication module (remote device station)

Data capacity: 448 bits

4 stations occupied × 4 setting List of remote output

Address	Communication items (Status)		Data range	Factory-set value
RYn0	b0	Extension No. configuration for display data	Extension No. configuration for display data by ON/OFF of RYn0 to RYn5 and RY (n+1) 0 to RY (n+1) 3 Data0: OFF 1: ON [Decimal number representation]: 0 to 1023	0
RYn1	b1			
RYn2	b2			
RYn3	b3			
RYn4	b4			
RYn5	b5			
RYn6	b0	Extension No. configuration for setting data	Extension No. configuration for setting data by ON/OFF of RYn6 to RYnB and RY (n+1) 8 to RY (n+1) B Data0: OFF 1: ON [Decimal number representation]: 0 to 1023	0
RYn7	b1			
RYn8	b2			
RYn9	b3			
RYnA	b4			
RYnB	b5			
RYnC	Extended display flag		0: OFF 1: ON	0
RYnD	Extension configuration flag		0: OFF 1: ON	0
RYnE	Nonuse		—	—
RYnF	RUN/STOP SW		0: RUN (Start control) 1: STOP (Stop control)	0
RY (n+1) 0	b6	Extension No. configuration for display data b10 to b13: Nonuse	Extension No. configuration for display data by ON/OFF of RYn0 to RYn5 and RY (n+1) 0 to RY (n+1) 3 Data0: OFF 1: ON [Decimal number representation]: 0 to 1023	0
RY (n+1) 1	b7			
RY (n+1) 2	b8			
RY (n+1) 3	b9			
RY (n+1) 4	b10			
RY (n+1) 5	b11			
RY (n+1) 6	b12			
RY (n+1) 7	b13			
RY (n+1) 8	b6	Extension No. configuration for setting data b10 to b13: Nonuse	Extension No. configuration for setting data by ON/OFF of RYn6 to RYnB and RY (n+1) 8 to RY (n+1) B Data0: OFF 1: ON [Decimal number representation]: 0 to 1023	0
RY (n+1) 9	b7			
RY (n+1) A	b8			
RY (n+1) B	b9			
RY (n+1) C	b10			
RY (n+1) D	b11			
RY (n+1) E	b12			
RY (n+1) F	b13			
RY (n+2) 0	b0	Reserved	Write inhibit	0
RY (n+2) 1	b1			
RY (n+2) 2	b2			
RY (n+2) 3	b3			
RY (n+2) 4	b4			
RY (n+2) 5	b5			
RY (n+2) 6	b6			
RY (n+2) 7	b7			

5.3 List of Remote Input /Output

4 stations occupied × 4 setting List of remote output

Address	Communication items (Status)	Data range	Factory-set value
RY (n+2) 8	b0	Write inhibit	0
RY (n+2) 9	b1		
RY (n+2) A	b2		
RY (n+2) B	b3		
RY (n+2) C	b4		
RY (n+2) D	b5		
RY (n+2) E	b6		
RY (n+2) F	b7		
RY (n+3) 0 to RY (n+1A) F	Nonuse	—	—
RY (n+1B) 0 to RY (n+1B) 7	Reserved	—	—
RY (n+1B) 8	Completion flag for initial data processing	0: OFF 1: ON	0
RY (n+1B) 9	Request flag for initial data setting	0: OFF 1: ON	0
RY (n+1B) A	Request flag for error reset	0: OFF 1: ON	0
RY (n+1B) B to RY (n+1B) F	Reserved	—	—

5.4 List of Remote Register

Remote register (RW_r, RW_w) are numeric values.

point

- "n" in the list is address allocated to the master station by CC-Link station number setting.

"n" is calculated by using the following formula. However, this formula is used when designing the network with only our PUM modules and the all number of stations occupied / extended cyclic setting is the same.

Number of stations occupied / extended cyclic setting	Formula
4 stations occupied × 1 setting	$n = (\text{St. No.} - 1) \times 4$
4 stations occupied × 2 setting	$n = (\text{St. No.} - 1) \times 8$
4 stations occupied × 4 setting	$n = (\text{St. No.} - 1) \times 16$

Because calculation results are represented by decimal numbers, convert them to hexadecimal numbers prior to assign them to "n" in the list.

Ex) PUM module setting is 4 stations occupied × 1 and the station number is "5".

$$n = (5-1) \times 4 = 16 \text{ (decimal number)} \rightarrow 10 \text{ (hexadecimal number)}$$

If the St. No. is 5: Remote register RW_r_n to RW_r_n + F → RW_r10 to RW_r1F

RW_w_n to RW_w_n + F → RW_w10 to RW_w1F

- The data of the channel other than the used channels is nonuse.

Note

If connecting several PUM of 4 stations occupied, the station numbers are not serial such as, 1, 5, 9.

4 stations occupied ×1 setting (8Ch allocation)

List of remote register (RWr)

Data direction: CC-Link communication module (remote device station) → Master station (PLC)

Data capacity: 16 words

Address	Communication items (Status)		Data range	Factory-set value
RWr _n	Ch1	Process value (PV)	Input scale lower limit to Input scale upper limit	—
RWr _{n+1}	Ch2	Process value (PV)		—
RWr _{n+2}	Ch3	Process value (PV)		—
RWr _{n+3}	Ch4	Process value (PV)		—
RWr _{n+4}	Ch5	Process value (PV)		—
RWr _{n+5}	Ch6	Process value (PV)		—
RWr _{n+6}	Ch7	Process value (PV)		—
RWr _{n+7}	Ch8	Process value (PV)		—
RWr _{n+8}	Ch1	For extended area display	Extension No. data specified by extension No. configuration for display data, RY _n 0 to RY _n 5 and RY (n+1) 0 to RY (n+1) 3.	—
RWr _{n+9}	Ch2	For extended area display		—
RWr _{n+A}	Ch3	For extended area display		—
RWr _{n+B}	Ch4	For extended area display		—
RWr _{n+C}	Ch5	For extended area display		—
RWr _{n+D}	Ch6	For extended area display		—
RWr _{n+E}	Ch7	For extended area display		—
RWr _{n+F}	Ch8	For extended area display		—

List of remote register (RWw)

Data direction : Master station (PLC) → CC-Link communication module (remote device station)

Data capacity: 16 words

Address	Communication items (Status)		Data range	Factory-set value
RWwn	Ch1	Set value (SV)	Setting limiter lower to Setting limiter upper	0
RWwn+1	Ch2	Set value (SV)		0
RWwn+2	Ch3	Set value (SV)		0
RWwn+3	Ch4	Set value (SV)		0
RWwn+4	Ch5	Set value (SV)		0
RWwn+5	Ch6	Set value (SV)		0
RWwn+6	Ch7	Set value (SV)		0
RWwn+7	Ch8	Set value (SV)		0
RWwn+8	Ch1	For extended area setting	Extension No. data specified by extension No. configuration for setting data, RYn6 to RYnB and RY (n+1) 8 to RY (n+1) B.	—
RWwn+9	Ch2	For extended area setting		—
RWwn+A	Ch3	For extended area setting		—
RWwn+B	Ch4	For extended area setting		—
RWwn+C	Ch5	For extended area setting		—
RWwn+D	Ch6	For extended area setting		—
RWwn+E	Ch7	For extended area setting		—
RWwn+F	Ch8	For extended area setting		—

4 stations occupied ×1 setting (16Ch allocation)

List of remote register (RWr)

Data direction: CC-Link communication module (remote device station) → Master station (PLC)

Data capacity: 16 words

Address	Communication items (Status)		Data range	Factory-set value
RWr _n	Ch1	For extended area display	Extension No. data specified by extension No. configuration for display data, RY _n 0 to RY _n 5 and RY (n+1) 0 to RY (n+1) 3.	—
RWr _{n+1}	Ch2	For extended area display		—
RWr _{n+2}	Ch3	For extended area display		—
RWr _{n+3}	Ch4	For extended area display		—
RWr _{n+4}	Ch5	For extended area display		—
RWr _{n+5}	Ch6	For extended area display		—
RWr _{n+6}	Ch7	For extended area display		—
RWr _{n+7}	Ch8	For extended area display		—
RWr _{n+8}	Ch9	For extended area display		—
RWr _{n+9}	Ch10	For extended area display		—
RWr _{n+A}	Ch11	For extended area display		—
RWr _{n+B}	Ch12	For extended area display		—
RWr _{n+C}	Ch13	For extended area display		—
RWr _{n+D}	Ch14	For extended area display		—
RWr _{n+E}	Ch15	For extended area display		—
RWr _{n+F}	Ch16	For extended area display		—

List of remote register (RWw)

Data direction: Master station (PLC) → CC-Link communication module (remote device station)

Data capacity: 16 words

Address	Communication items (Status)		Data range	Factory-set value
RWw _n	Ch1	For extended area setting	Extension No. data specified by extension No. configuration for setting data, RY _n 6 to RY _n B and RY (n+1) 8 to RY (n+1) B.	—
RWw _{n+1}	Ch2	For extended area setting		—
RWw _{n+2}	Ch3	For extended area setting		—
RWw _{n+3}	Ch4	For extended area setting		—
RWw _{n+4}	Ch5	For extended area setting		—
RWw _{n+5}	Ch6	For extended area setting		—
RWw _{n+6}	Ch7	For extended area setting		—
RWw _{n+7}	Ch8	For extended area setting		—
RWw _{n+8}	Ch9	For extended area setting		—
RWw _{n+9}	Ch10	For extended area setting		—
RWw _{n+A}	Ch11	For extended area setting		—
RWw _{n+B}	Ch12	For extended area setting		—
RWw _{n+C}	Ch13	For extended area setting		—
RWw _{n+D}	Ch14	For extended area setting		—
RWw _{n+E}	Ch15	For extended area setting		—
RWw _{n+F}	Ch16	For extended area setting		—

4 stations occupied ×2 setting (16Ch allocation)

List of remote register (RWr)

Data direction: CC-Link communication module (remote device station) → Master station (PLC)

Data capacity: 32 words

Address	Communication items (Status)		Data range	Factory-set value
RWr _n	Ch1	Process value (PV)	Input scale lower limit to Input scale upper limit	—
RWr _{n+1}	Ch2	Process value (PV)		—
RWr _{n+2}	Ch3	Process value (PV)		—
RWr _{n+3}	Ch4	Process value (PV)		—
RWr _{n+4}	Ch5	Process value (PV)		—
RWr _{n+5}	Ch6	Process value (PV)		—
RWr _{n+6}	Ch7	Process value (PV)		—
RWr _{n+7}	Ch8	Process value (PV)		—
RWr _{n+8}	Ch9	Process value (PV)		—
RWr _{n+9}	Ch10	Process value (PV)		—
RWr _{n+A}	Ch11	Process value (PV)		—
RWr _{n+B}	Ch12	Process value (PV)		—
RWr _{n+C}	Ch13	Process value (PV)		—
RWr _{n+D}	Ch14	Process value (PV)		—
RWr _{n+E}	Ch15	Process value (PV)		—
RWr _{n+F}	Ch16	Process value (PV)		—
RWr _{n+10}	Ch1	For extended area display	Extension No. data specified by extension No. configuration for display data, RY _n 0 to RY _n 5 and RY (n+1) 0 to RY (n+1) 3.	—
RWr _{n+11}	Ch2	For extended area display		—
RWr _{n+12}	Ch3	For extended area display		—
RWr _{n+13}	Ch4	For extended area display		—
RWr _{n+14}	Ch5	For extended area display		—
RWr _{n+15}	Ch6	For extended area display		—
RWr _{n+16}	Ch7	For extended area display		—
RWr _{n+17}	Ch8	For extended area display		—
RWr _{n+18}	Ch9	For extended area display		—
RWr _{n+19}	Ch10	For extended area display		—
RWr _{n+1A}	Ch11	For extended area display		—
RWr _{n+1B}	Ch12	For extended area display		—
RWr _{n+1C}	Ch13	For extended area display		—
RWr _{n+1D}	Ch14	For extended area display		—
RWr _{n+1E}	Ch15	For extended area display		—
RWr _{n+1F}	Ch16	For extended area display		—

5.4 List of Remote Register

List of remote register (RWr)

Data direction: Master station (PLC) → CC-Link communication module (remote device station)

Data capacity: 32 words

4 stations occupied ×2 setting (16Ch allocation)

Address	Communication items (Status)		Data range	Factory-set value
RWwn	Ch1	Set value (SV)	Setting limit lower to Setting limit upper	0
RWwn+1	Ch2	Set value (SV)		0
RWwn+2	Ch3	Set value (SV)		0
RWwn+3	Ch4	Set value (SV)		0
RWwn+4	Ch5	Set value (SV)		0
RWwn+5	Ch6	Set value (SV)		0
RWwn+6	Ch7	Set value (SV)		0
RWwn+7	Ch8	Set value (SV)		0
RWwn+8	Ch9	Set value (SV)		0
RWwn+9	Ch10	Set value (SV)		0
RWwn+A	Ch11	Set value (SV)		0
RWwn+B	Ch12	Set value (SV)		0
RWwn+C	Ch13	Set value (SV)		0
RWwn+D	Ch14	Set value (SV)		0
RWwn+E	Ch15	Set value (SV)		0
RWwn+F	Ch16	Set value (SV)		0
RWwn+10	Ch1	For extended area setting	Extension No. data specified by extension No. configuration for setting data, RYn6 to RYnB and RY (n+1) 8 to RY (n+1) B.	—
RWwn+11	Ch2	For extended area setting		—
RWwn+12	Ch3	For extended area setting		—
RWwn+13	Ch4	For extended area setting		—
RWwn+14	Ch5	For extended area setting		—
RWwn+15	Ch6	For extended area setting		—
RWwn+16	Ch7	For extended area setting		—
RWwn+17	Ch8	For extended area setting		—
RWwn+18	Ch9	For extended area setting		—
RWwn+19	Ch10	For extended area setting		—
RWwn+1A	Ch11	For extended area setting		—
RWwn+1B	Ch12	For extended area setting		—
RWwn+1C	Ch13	For extended area setting		—
RWwn+1D	Ch14	For extended area setting		—
RWwn+1E	Ch15	For extended area setting		—
RWwn+1F	Ch16	For extended area setting		—

4 stations occupied ×2 setting (32Ch allocation)

List of remote register (RWr)

Data direction: CC-Link communication module (remote device station) → Master station (PLC)

Data capacity: 32 words

Address	Communication items (Status)		Data range	Factory-set value
RWr _n	Ch1	For extended area display	Extension No. data specified by extension No. configuration for display data, RY _n 0 to RY _n 5 and RY (n+1) 0 to RY (n+1) 3.	—
RWr _{n+1}	Ch2	For extended area display		—
RWr _{n+2}	Ch3	For extended area display		—
RWr _{n+3}	Ch4	For extended area display		—
RWr _{n+4}	Ch5	For extended area display		—
RWr _{n+5}	Ch6	For extended area display		—
RWr _{n+6}	Ch7	For extended area display		—
RWr _{n+7}	Ch8	For extended area display		—
RWr _{n+8}	Ch9	For extended area display		—
RWr _{n+9}	Ch10	For extended area display		—
RWr _{n+A}	Ch11	For extended area display		—
RWr _{n+B}	Ch12	For extended area display		—
RWr _{n+C}	Ch13	For extended area display		—
RWr _{n+D}	Ch14	For extended area display		—
RWr _{n+E}	Ch15	For extended area display		—
RWr _{n+F}	Ch16	For extended area display		—
RWr _{n+10}	Ch17	For extended area display		—
RWr _{n+11}	Ch18	For extended area display		—
RWr _{n+12}	Ch19	For extended area display		—
RWr _{n+13}	Ch20	For extended area display		—
RWr _{n+14}	Ch21	For extended area display		—
RWr _{n+15}	Ch22	For extended area display		—
RWr _{n+16}	Ch23	For extended area display		—
RWr _{n+17}	Ch24	For extended area display		—
RWr _{n+18}	Ch25	For extended area display		—
RWr _{n+19}	Ch26	For extended area display		—
RWr _{n+1A}	Ch27	For extended area display		—
RWr _{n+1B}	Ch28	For extended area display		—
RWr _{n+1C}	Ch29	For extended area display		—
RWr _{n+1D}	Ch30	For extended area display		—
RWr _{n+1E}	Ch31	For extended area display		—
RWr _{n+1F}	Ch32	For extended area display		—

5.4 List of Remote Register

List of remote register (RWw)

Data direction: Master station (PLC) → CC-Link communication module (remote device station)

Data capacity: 32 words

4 stations occupied ×2 setting (32Ch allocation)

Address	Communication items (Status)		Data range	Factory-set value
RWwn	Ch1	For extended area setting	Extension No. data specified by extension No. configuration for setting data, RYn6 to RYnB and RY (n+1) 8 to RY (n+1) B.	—
RWwn+1	Ch2	For extended area setting		—
RWwn+2	Ch3	For extended area setting		—
RWwn+3	Ch4	For extended area setting		—
RWwn+4	Ch5	For extended area setting		—
RWwn+5	Ch6	For extended area setting		—
RWwn+6	Ch7	For extended area setting		—
RWwn+7	Ch8	For extended area setting		—
RWwn+8	Ch9	For extended area setting		—
RWwn+9	Ch10	For extended area setting		—
RWwn+A	Ch11	For extended area setting		—
RWwn+B	Ch12	For extended area setting		—
RWwn+C	Ch13	For extended area setting		—
RWwn+D	Ch14	For extended area setting		—
RWwn+E	Ch15	For extended area setting		—
RWwn+F	Ch16	For extended area setting		—
RWwn+10	Ch17	For extended area setting		—
RWwn+11	Ch18	For extended area setting		—
RWwn+12	Ch19	For extended area setting		—
RWwn+13	Ch20	For extended area setting		—
RWwn+14	Ch21	For extended area setting		—
RWwn+15	Ch22	For extended area setting		—
RWwn+16	Ch23	For extended area setting		—
RWwn+17	Ch24	For extended area setting		—
RWwn+18	Ch25	For extended area setting		—
RWwn+19	Ch26	For extended area setting		—
RWwn+1A	Ch27	For extended area setting		—
RWwn+1B	Ch28	For extended area setting		—
RWwn+1C	Ch29	For extended area setting		—
RWwn+1D	Ch30	For extended area setting		—
RWwn+1E	Ch31	For extended area setting		—
RWwn+1F	Ch32	For extended area setting		—

4 stations occupied ×4 setting (32Ch allocation)

List of remote register (RWr)

Data direction: CC-Link communication module (remote device station) → Master station (PLC)

Data capacity: 64 words

Address	Communication items (Status)		Data range	Factory-set value
RWrn	Ch1	Process value (PV)	Input scale lower limit to Input scale upper limit	—
RWrn+1	Ch2	Process value (PV)		—
RWrn+2	Ch3	Process value (PV)		—
RWrn+3	Ch4	Process value (PV)		—
RWrn+4	Ch5	Process value (PV)		—
RWrn+5	Ch6	Process value (PV)		—
RWrn+6	Ch7	Process value (PV)		—
RWrn+7	Ch8	Process value (PV)		—
RWrn+8	Ch9	Process value (PV)		—
RWrn+9	Ch10	Process value (PV)		—
RWrn+A	Ch11	Process value (PV)		—
RWrn+B	Ch12	Process value (PV)		—
RWrn+C	Ch13	Process value (PV)		—
RWrn+D	Ch14	Process value (PV)		—
RWrn+E	Ch15	Process value (PV)		—
RWrn+F	Ch16	Process value (PV)		—
RWrn+10	Ch17	Process value (PV)		—
RWrn+11	Ch18	Process value (PV)		—
RWrn+12	Ch19	Process value (PV)		—
RWrn+13	Ch20	Process value (PV)		—
RWrn+14	Ch21	Process value (PV)		—
RWrn+15	Ch22	Process value (PV)		—
RWrn+16	Ch23	Process value (PV)		—
RWrn+17	Ch24	Process value (PV)		—
RWrn+18	Ch25	Process value (PV)		—
RWrn+19	Ch26	Process value (PV)		—
RWrn+1A	Ch27	Process value (PV)		—
RWrn+1B	Ch28	Process value (PV)		—
RWrn+1C	Ch29	Process value (PV)		—
RWrn+1D	Ch30	Process value (PV)		—
RWrn+1E	Ch31	Process value (PV)		—
RWrn+1F	Ch32	Process value (PV)		—

5.4 List of Remote Register

4 stations occupied ×4 setting (32Ch allocation) Remote register (RWr)

Address	Communication items (Status)		Data range	Factory-set value
RWrm+20	Ch1	For extended area display	Extension No. data specified by extension No. configuration for display data, RYn0 to RYn5 and RY (n+1) 0 to RY (n+1) 3.	—
RWrm+21	Ch2	For extended area display		—
RWrm+22	Ch3	For extended area display		—
RWrm+23	Ch4	For extended area display		—
RWrm+24	Ch5	For extended area display		—
RWrm+25	Ch6	For extended area display		—
RWrm+26	Ch7	For extended area display		—
RWrm+27	Ch8	For extended area display		—
RWrm+28	Ch9	For extended area display		—
RWrm+29	Ch10	For extended area display		—
RWrm+2A	Ch11	For extended area display		—
RWrm+2B	Ch12	For extended area display		—
RWrm+2C	Ch13	For extended area display		—
RWrm+2D	Ch14	For extended area display		—
RWrm+2E	Ch15	For extended area display		—
RWrm+2F	Ch16	For extended area display		—
RWrm+30	Ch17	For extended area display		—
RWrm+31	Ch18	For extended area display		—
RWrm+32	Ch19	For extended area display		—
RWrm+33	Ch20	For extended area display		—
RWrm+34	Ch21	For extended area display		—
RWrm+35	Ch22	For extended area display		—
RWrm+36	Ch23	For extended area display		—
RWrm+37	Ch24	For extended area display		—
RWrm+38	Ch25	For extended area display		—
RWrm+39	Ch26	For extended area display		—
RWrm+3A	Ch27	For extended area display		—
RWrm+3B	Ch28	For extended area display		—
RWrm+3C	Ch29	For extended area display		—
RWrm+3D	Ch30	For extended area display		—
RWrm+3E	Ch31	For extended area display		—
RWrm+3F	Ch32	For extended area display		—

List of remote register (RWw)

Data direction: Master station (PLC)→ CC-Link communication module (remote device station)

Data capacity: 64 words

4 stations occupied ×4 setting (32Ch allocation)

Address	Communication items (Status)		Data range	Factory-set value
RWwn	Ch1	Set value (SV)	Setting limiter lower to Setting limiter upper	—
RWwn+1	Ch2	Set value (SV)		—
RWwn+2	Ch3	Set value (SV)		—
RWwn+3	Ch4	Set value (SV)		—
RWwn+4	Ch5	Set value (SV)		—
RWwn+5	Ch6	Set value (SV)		—
RWwn+6	Ch7	Set value (SV)		—
RWwn+7	Ch8	Set value (SV)		—
RWwn+8	Ch9	Set value (SV)		—
RWwn+9	Ch10	Set value (SV)		—
RWwn+A	Ch11	Set value (SV)		—
RWwn+B	Ch12	Set value (SV)		—
RWwn+C	Ch13	Set value (SV)		—
RWwn+D	Ch14	Set value (SV)		—
RWwn+E	Ch15	Set value (SV)		—
RWwn+F	Ch16	Set value (SV)		—
RWwn+10	Ch17	Set value (SV)		—
RWwn+11	Ch18	Set value (SV)		—
RWwn+12	Ch19	Set value (SV)		—
RWwn+13	Ch20	Set value (SV)		—
RWwn+14	Ch21	Set value (SV)		—
RWwn+15	Ch22	Set value (SV)		—
RWwn+16	Ch23	Set value (SV)		—
RWwn+17	Ch24	Set value (SV)		—
RWwn+18	Ch25	Set value (SV)		—
RWwn+19	Ch26	Set value (SV)		—
RWwn+1A	Ch27	Set value (SV)		—
RWwn+1B	Ch28	Set value (SV)		—
RWwn+1C	Ch29	Set value (SV)		—
RWwn+1D	Ch30	Set value (SV)		—
RWwn+1E	Ch31	Set value (SV)		—
RWwn+1F	Ch32	Set value (SV)		—

5.4 List of Remote Register

4 stations occupied ×4 setting (32Ch allocation) Remote register (RWw)

Address	Communication items (Status)		Data range	Factory-set value
RWwn+20	Ch1	For extended area setting	Extension No. data specified by extension No. configuration for setting data, RYn6 to RYnB and RY (n+1) 8 to RY (n+1) B.	—
RWwn+21	Ch2	For extended area setting		—
RWwn+22	Ch3	For extended area setting		—
RWwn+23	Ch4	For extended area setting		—
RWwn+24	Ch5	For extended area setting		—
RWwn+25	Ch6	For extended area setting		—
RWwn+26	Ch7	For extended area setting		—
RWwn+27	Ch8	For extended area setting		—
RWwn+28	Ch9	For extended area setting		—
RWwn+29	Ch10	For extended area setting		—
RWwn+2A	Ch11	For extended area setting		—
RWwn+2B	Ch12	For extended area setting		—
RWwn+2C	Ch13	For extended area setting		—
RWwn+2D	Ch14	For extended area setting		—
RWwn+2E	Ch15	For extended area setting		—
RWwn+2F	Ch16	For extended area setting		—
RWwn+30	Ch17	For extended area setting		—
RWwn+31	Ch18	For extended area setting		—
RWwn+32	Ch19	For extended area setting		—
RWwn+33	Ch20	For extended area setting		—
RWwn+34	Ch21	For extended area setting		—
RWwn+35	Ch22	For extended area setting		—
RWwn+36	Ch23	For extended area setting		—
RWwn+37	Ch24	For extended area setting		—
RWwn+38	Ch25	For extended area setting		—
RWwn+39	Ch26	For extended area setting		—
RWwn+3A	Ch27	For extended area setting		—
RWwn+3B	Ch28	For extended area setting		—
RWwn+3C	Ch29	For extended area setting		—
RWwn+3D	Ch30	For extended area setting		—
RWwn+3E	Ch31	For extended area setting		—
RWwn+3F	Ch32	For extended area setting		—

4 stations occupied ×4 setting (64Ch allocation)

List of remote register (RWr)

Data direction: CC-Link communication module (remote device station) → Master station (PLC)

Data capacity: 64 words

Address	Communication items (Status)		Data range	Factory-set value
RWrn	Ch1	For extended area display	Extension No. data specified by extension No. configuration for display data, RYn0 to RYn5 and RY (n+1) 0 to RY (n+1) 3.	—
RWrn+1	Ch2	For extended area display		—
RWrn+2	Ch3	For extended area display		—
RWrn+3	Ch4	For extended area display		—
RWrn+4	Ch5	For extended area display		—
RWrn+5	Ch6	For extended area display		—
RWrn+6	Ch7	For extended area display		—
RWrn+7	Ch8	For extended area display		—
RWrn+8	Ch9	For extended area display		—
RWrn+9	Ch10	For extended area display		—
RWrn+A	Ch11	For extended area display		—
RWrn+B	Ch12	For extended area display		—
RWrn+C	Ch13	For extended area display		—
RWrn+D	Ch14	For extended area display		—
RWrn+E	Ch15	For extended area display		—
RWrn+F	Ch16	For extended area display		—
RWrn+10	Ch17	For extended area display		—
RWrn+11	Ch18	For extended area display		—
RWrn+12	Ch19	For extended area display		—
RWrn+13	Ch20	For extended area display		—
RWrn+14	Ch21	For extended area display		—
RWrn+15	Ch22	For extended area display		—
RWrn+16	Ch23	For extended area display		—
RWrn+17	Ch24	For extended area display		—
RWrn+18	Ch25	For extended area display		—
RWrn+19	Ch26	For extended area display		—
RWrn+1A	Ch27	For extended area display		—
RWrn+1B	Ch28	For extended area display		—
RWrn+1C	Ch29	For extended area display		—
RWrn+1D	Ch30	For extended area display		—
RWrn+1E	Ch31	For extended area display		—
RWrn+1F	Ch32	For extended area display		—

5.4 List of Remote Register

4 stations occupied ×4 setting (64Ch allocation) Remote register (RWr)

Address	Communication items (Status)		Data range	Factory-set value
RWrn+20	Ch33	For extended area display	Extension No. data specified by extension No. configuration for display data, RYn0 to RYn5 and RY (n+1) 0 to RY (n+1) 3.	—
RWrn+21	Ch34	For extended area display		—
RWrn+22	Ch35	For extended area display		—
RWrn+23	Ch36	For extended area display		—
RWrn+24	Ch37	For extended area display		—
RWrn+25	Ch38	For extended area display		—
RWrn+26	Ch39	For extended area display		—
RWrn+27	Ch40	For extended area display		—
RWrn+28	Ch41	For extended area display		—
RWrn+29	Ch42	For extended area display		—
RWrn+2A	Ch43	For extended area display		—
RWrn+2B	Ch44	For extended area display		—
RWrn+2C	Ch45	For extended area display		—
RWrn+2D	Ch46	For extended area display		—
RWrn+2E	Ch47	For extended area display		—
RWrn+2F	Ch48	For extended area display		—
RWrn+30	Ch49	For extended area display		—
RWrn+31	Ch50	For extended area display		—
RWrn+32	Ch51	For extended area display		—
RWrn+33	Ch52	For extended area display		—
RWrn+34	Ch53	For extended area display		—
RWrn+35	Ch54	For extended area display		—
RWrn+36	Ch55	For extended area display		—
RWrn+37	Ch56	For extended area display		—
RWrn+38	Ch57	For extended area display		—
RWrn+39	Ch58	For extended area display		—
RWrn+3A	Ch59	For extended area display		—
RWrn+3B	Ch60	For extended area display		—
RWrn+3C	Ch61	For extended area display		—
RWrn+3D	Ch62	For extended area display		—
RWrn+3E	Ch63	For extended area display		—
RWrn+3F	Ch64	For extended area display		—

List of remote register (RWw)

Data direction: Master station (PLC) → CC-Link communication module (remote device station)

Data capacity: 64 words

4 stations occupied ×4 setting (64Ch allocation)

Address	Communication items (Status)		Data range	Factory-set value
RWwn	Ch1	For extended area setting	Extension No. data specified by extension No. configuration for setting data, RYn6 to RYnB and RY (n+1) 8 to RY (n+1) B.	—
RWwn+1	Ch2	For extended area setting		—
RWwn+2	Ch3	For extended area setting		—
RWwn+3	Ch4	For extended area setting		—
RWwn+4	Ch5	For extended area setting		—
RWwn+5	Ch6	For extended area setting		—
RWwn+6	Ch7	For extended area setting		—
RWwn+7	Ch8	For extended area setting		—
RWwn+8	Ch9	For extended area setting		—
RWwn+9	Ch10	For extended area setting		—
RWwn+A	Ch11	For extended area setting		—
RWwn+B	Ch12	For extended area setting		—
RWwn+C	Ch13	For extended area setting		—
RWwn+D	Ch14	For extended area setting		—
RWwn+E	Ch15	For extended area setting		—
RWwn+F	Ch16	For extended area setting		—
RWwn+10	Ch17	For extended area setting		—
RWwn+11	Ch18	For extended area setting		—
RWwn+12	Ch19	For extended area setting		—
RWwn+13	Ch20	For extended area setting		—
RWwn+14	Ch21	For extended area setting		—
RWwn+15	Ch22	For extended area setting		—
RWwn+16	Ch23	For extended area setting		—
RWwn+17	Ch24	For extended area setting		—
RWwn+18	Ch25	For extended area setting		—
RWwn+19	Ch26	For extended area setting		—
RWwn+1A	Ch27	For extended area setting		—
RWwn+1B	Ch28	For extended area setting		—
RWwn+1C	Ch29	For extended area setting		—
RWwn+1D	Ch30	For extended area setting		—
RWwn+1E	Ch31	For extended area setting		—
RWwn+1F	Ch32	For extended area setting		—

5.4 List of Remote Register

4 stations occupied ×4 setting (64Ch allocation) Remote register (RWw)

Address	Communication items (Status)		Data range	Factory-set value
RWwn+20	Ch33	For extended area setting	Extension No. data specified by extension No. configuration for setting data, RYn6 to RYnB and RY (n+1) 8 to RY (n+1) B.	—
RWwn+21	Ch34	For extended area setting		—
RWwn+22	Ch35	For extended area setting		—
RWwn+23	Ch36	For extended area setting		—
RWwn+24	Ch37	For extended area setting		—
RWwn+25	Ch38	For extended area setting		—
RWwn+26	Ch39	For extended area setting		—
RWwn+27	Ch40	For extended area setting		—
RWwn+28	Ch41	For extended area setting		—
RWwn+29	Ch42	For extended area setting		—
RWwn+2A	Ch43	For extended area setting		—
RWwn+2B	Ch44	For extended area setting		—
RWwn+2C	Ch45	For extended area setting		—
RWwn+2D	Ch46	For extended area setting		—
RWwn+2E	Ch47	For extended area setting		—
RWwn+2F	Ch48	For extended area setting		—
RWwn+30	Ch49	For extended area setting		—
RWwn+31	Ch50	For extended area setting		—
RWwn+32	Ch51	For extended area setting		—
RWwn+33	Ch52	For extended area setting		—
RWwn+34	Ch53	For extended area setting		—
RWwn+35	Ch54	For extended area setting		—
RWwn+36	Ch55	For extended area setting		—
RWwn+37	Ch56	For extended area setting		—
RWwn+38	Ch57	For extended area setting		—
RWwn+39	Ch58	For extended area setting		—
RWwn+3A	Ch59	For extended area setting		—
RWwn+3B	Ch60	For extended area setting		—
RWwn+3C	Ch61	For extended area setting		—
RWwn+3D	Ch62	For extended area setting		—
RWwn+3E	Ch63	For extended area setting		—
RWwn+3F	Ch64	For extended area setting		—

5.5 Extension Number Setting

Communication items dealt with in the extended area of remote register (RWr, RWw) are specified by extension numbers. Extension number is the number specified by remote output in order to select data dealt with in the remote register. Select necessary data in the list of extension numbers, and set that extension number on the remote output, it will be able to be handled for remote register (RWr, RWw).

About remote register, please refer to "5.4 List of Remote Register" [▶▶ 5-39](#)

About extension numbers, please refer to "5.6 List of Extension Numbers" [▶▶ 5-57](#)

When read out data (Extension number configuration for display)

Extension number for display is set by remote output, RYn0 to RYn5 and RY (n+1) 0 to RY (n+1) 7.

Bit image

RY (n+1) 7	RY (n+1) 6	RY (n+1) 5	RY (n+1) 4	RY (n+1) 3	RY (n+1) 2	RY (n+1) 1	RY (n+1) 0
bit13	bit12	bit11	bit10	bit9	bit8	bit7	bit6

RYn5	RYn4	RYn3	RYn2	RYn1	RYn0
bit5	bit4	bit3	bit2	bit1	bit0

Bit data: 0(OFF), 1(ON) [Decimal number representation: 0 to 1023]

When write data (Extension number configuration for setting)

Extension number for setting is set by remote output, RYn6 to RYnB and RY (n+1) 8 to RY (n+1) F.

Bit image

RY (n+1) F	RY (n+1) E	RY (n+1) D	RY (n+1) C	RY (n+1) B	RY (n+1) A	RY (n+1) 9	RY (n+1) 8
bit13	bit12	bit11	bit10	bit9	bit8	bit7	bit6

RYnB	RYnA	RYn9	RYn8	RYn7	RYn6
bit5	bit4	bit3	bit2	bit1	bit0

Bit data: 0(OFF), 1(ON) [Decimal number representation: 0 to 1023]

5.5 Extension Number Setting

Ex) When set [3] set value (SV) to the extension number for setting

Number of stations occupied/extended cyclic setting: 4 stations occupied ×1 setting

Extension No. 3: Set value (SV)



bit13	bit12	bit11	bit10	bit9	bit8	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
0	0	0	0	0	0	0	0	0	0	0	0	1	1



RY (n+1) F	RY (n+1) E	RY (n+1) D	RY (n+1) C	RY (n+1) B	RY (n+1) A	RY (n+1) 9
OFF	OFF	OFF	OFF	OFF	OFF	OFF

RY (n+1) 8	RYnB	RYnA	RYn9	RYn8	RYn7	RYn6
OFF	OFF	OFF	OFF	OFF	ON	ON



Bit data: 0 (OFF), 1 (ON)

5.6 List of Extension Numbers

Figure of extension numbers for CC-Link communication module (0-511)

Extension No.	Attribute	Contents	Read/Write data setting range	Factory set value
0	RO	Process value (PV)	-5-105%FS	—
1	RO	Output value (MV1)	-3.0-103.0%	—
2	RO	Heater current value [A]	0.0-50.0A	—
3	R/W	SV value	0-100%FS	0
4	R/W	Auto-tuning RUN command	0: Stop/End	0
			1: Normal type	
			2: Low PV type	
5	R/W	Proportional band [P]	0.0-999.9%	50
6	R/W	Integration time [I]	0-3200sec	240
7	R/W	Derivative time [D]	0.0-999.9sec	600
8	R/W	PV input shift	-10-10%FS	0
9	R/W	ALM1 set value1	-100%-100%FS	2.5%FS
10	R/W	ALM2 set value1	-100%-100%FS	2.5%FS
•				
17	R/W	RUN/Standby SW	0: RUN	0
			1: Standby	
18	R/W	Out1proportional cycle	1-120 sec.	1
19	R/W	Manual mode SW	0: Auto	0
			1: Manual	
20	R/W	MV value	-3.0-103.0%	—
21	R/W	SV limit (upper)	0-100%FS	100%FS
22	R/W	SV limit (lower)	0-100%FS	0%FS
23	R/W	PV input filter	0.0-120.0sec	2.0
24	R/W	CT [A] HB alarm set value	0.0-50.0(A)	0
25	R/W	Decimal point position	0-2	0
26	RO	Output value (MV2)	-3.0-103.0%	—
27	R/W	Cooling proportional band coefficient [cool]	0.0-100.0%	10
•				
29	R/W	Dead band	-50.0-50.0%	0
•				
31	RO	SV value	0-100%FS	—
32	RO	Error source display	0-FFFF	—
•				
34	R/W	Control algorithm	0: PID control	0 (PID)
			1: Fuzzy control	
			2: PID control against open-loop	
•				

5.6 List of Extension Numbers

Extension No.	Attribute	Contents	Read/Write data setting range	Factory set value
36	R/W	PV input type	0: JPt100 (0-150)	7
			1: JPt100 (-150-600)	
			2: Pt100 (0-150)	
			3: Pt100 (-150-300)	
			4: Pt100 (-150-850)	
			5: J (0-400)	
			6: J (0-800)	
			7: K (0-400))	
			8: K (0-800)	
			9: K (0-1200)	
			10: R (0-1600)	
			11: B (0-1800)	
			12: S (0-1600)	
			13: T (-199-400)	
			14: E (-199-800)	
			15: Not selectable	
			16: Not selectable	
			17: Not selectable	
			18: N (0-1300)	
			19: PL-2 (0-1300)	
			20: Not selectable	
			21: Voltage (0 to 5V)	
			22: Voltage (1 to 5V)	
			23: Voltage (0 to 10V)	
			24: Voltage (2 to 10V)	
25: Not selectable				
.				
38	R/W	Direct/Reverse action setting [MV1/MV2]	0: Heating (Reverse)/None	0/2 (single/dual)
			1: Heating (Direct) /None	
			2: Heating (Reverse) /Cooling (Direct)	
			3: Heating (Direct) / Cooling (Reverse)	
			4: Heating (Reverse) /Cooling (Reverse)	
5: Heating (Direct) / Cooling (Direct)				
39	R/W	DO1 Output event type setting	0 - 102  5-70	0
40	R/W	DO2 Output event type setting	0 - 102  5-70	0
41	R/W	ALM1 hysteresis	0-50%FS	1°C
42	R/W	ALM2 hysteresis	0-50%FS	1°C
43	R/W	DO1 option function setting	bit 0: Alarm latch function bit 1: Error input alarm function bit 2: Non-excitation output function bit 3: Hold reset function	0
44	R/W	DO2 option function setting	bit 0: Alarm latch function bit 1: Error input alarm function bit 2: Non-excitation output function bit 3: Hold reset function	0
.				
46	R/W	MV1 upper limit	-3.0-103.0%	1030
47	R/W	MV1 lower limit	-3.0-103.0%	-30

5.6 List of Extension Numbers

Extension No.	Attribute	Contents	Read/Write data setting range	Factory set value
•				
50	R/W	Loop break detection time	0-9999sec	0 (Off)
51	R/W	Loop break detection band	0-100%FS	10°C
•				
54	R/W	ALM3 set value1	-100%-100%FS	2.5%FS
55	R/W	ALM4 set value1	-100%-100%FS	2.5%FS
56	R/W	DO3 output event type setting	0-102 5-70	0
57	R/W	DO4 output event type setting	0-102 5-70	0
58	R/W	ALM3 hysteresis	0-50%FS	1°C
59	R/W	ALM4 hysteresis	0-50%FS	1°C
60	R/W	DO3 option function setting	bit 0: Alarm latch function bit 1: Error input alarm function bit 2: Non-excitation output function bit 3: Hold reset function	0
61	R/W	DO4 option function setting	bit 0: Alarm latch function bit 1: Error input alarm function bit 2: Non-excitation output function bit 3: Hold reset function	0
•				
63	RO	Alarm1-5 status	0-001F	—
64	RO	RSV terminal input value	-500-10500	—
•				
69	RO	Event input status	0-FFFF	—
•				
75	RO	Heater current value 2	0.0-50.0A	—
•				
90	R/W	Remote mode SW	0: Local 1: Remote	0
•				
128	R/W	Output convergence value setting	-100.0-100.0%	0/5000 (single/dual)
148	R/W	RSV zero adjustment	-50-50%FS	0
•				
150	R/W	RSV span adjustment	-50-50%FS	0
151	R/W	CT [B] HB alarm set value	0.0-50.0 (A)	0
•				
160	R/W	Unit display	0: 0°C 1: Not selectable	°C
161	R/W	PV input upper limit	-1999-9999	100%FS
162	R/W	PV input lower limit	-1999-9999	0%FS
•				

5.6 List of Extension Numbers


Extension No.	Attribute	Contents	Read/Write data setting range	Factory set value
170	R/W	DI-1 function select	0: (No function)	0
			1: RUN/Standby SW	
			2: Auto/ Manual SW	
			3: Local/Remote SW	
			4: (No function)	
			5: (No function)	
			6: Start AT (Normal type)	
			7: Start AT (low PV type)	
			8: (No function)	
			9: (No function)	
			10: Ramp SV ON/OFF	
			11: Ramp SV Hold	
			12: (No function)	
			13: (No function)	
			14: (No function)	
			15: (No function)	
			16: (No function)	
			17: Alarm latch release command (All)	
			18: Alarm latch release command (DO1)	
			19: Alarm latch release command (DO2)	
			20: Alarm latch release command (DO3)	
			21: Alarm latch release command (DO4)	
			22: Alarm latch release command (DO5)	
			23: (No function)	
			24: (No function)	
			25: (No function)	
			26: Start timer (DO1)	
			27: Start timer (DO2)	
			28: Start timer (DO3)	
			29: Start timer (DO4)	
			30: Start timer (DO5)	
			31: (No function)	
			32: (No function)	
			33: (No function)	
			34: (No function)	
			35: (No function)	
			36: (No function)	
			37: (No function)	
			38: (No function)	
			39: (No function)	
			40: (No function)	

5.6 List of Extension Numbers

Extension No.	Attribute	Contents	Read/Write data setting range	Factory set value
		DI-1 function select	41: (No function) 42: (No function) 43: (No function) 44: (No function) 45: (No function) 46: (No function) 47: (No function) 48: (No function) 49: Output 1 shutdown 50: Output 2 shutdown 51: Output 3 shutdown 52: Output 4 shutdown	
•				
189	R/W	Standby mode setting	0: ALM=OFF 1: ALM=ON	0
190	R/W	Output type	0: Own St. PV 1: Own St. SV 2: Own St. DV 3: Own St. MV1 4: Own St. MV2 5: Other St. PV 6: Other St. SV 7: Other St. MV	3
191	R/W	Output scaling span	-100-100%	100
192	R/W	Output scaling base	-100-100%	0
•				
203	R/W	ALM1 delay time	0 to 99min. 59sec./0 to 99hr 59min.	0
•				
207	R/W	ALM2 delay time	0 to 99min. 59sec./0 to 99hr 59min.	0
•				
211	R/W	ALM3 delay time	0 to 99min. 59sec./0 to 99hr 59min.	0
•				
215	R/W	ALM4 delay time	0 to 99min. 59sec./0 to 99hr 59min.	0
•				
246	R/W	FAULT MV1 set value	-3.0-103.0%	-30
•				
254	R/W	MV2 upper limit	-3.0-103.0%	1030
255	R/W	MV2 lower limit	-3.0-103.0%	-30
•				
258	R/W	Standby MV1 output value	-3.0-103.0%	-30
259	R/W	Standby MV2 output value	-3.0-103.0%	-30

Figure of extension numbers for CC-Link communication module (512-1023)

Extension No.	Attribute	Contents	Read/Write data setting range	Factory set value
512	R/W	SV value	0-100%FS	0
513	R/W	MV value	-3.0-103.0%	-
514	R/W	Manual mode SW	0: Auto 1: Manual	0
515	R/W	RUN/Standby SW	0: RUN 1: Standby	0
516	R/W	Remote mode SW	0: Local 1: Remote	0
•				
518	R/W	Auto tuning RUN command	0: Stop/End 1: Normal type 2: Low PV type	0
519	R/W	DO output latch release command	0: OFF 1: Latch release	0
•				
532	R/W	ALM1 set value1	-100%-100%FS	2.5%FS
533	R/W	ALM1 set value2	-100%-100%FS	2.5%FS
534	R/W	ALM2 set value1	-100%-100%FS	2.5%FS
535	R/W	ALM2 set value2	-100%-100%FS	2.5%FS
536	R/W	ALM3 set value1	-100%-100%FS	2.5%FS
537	R/W	ALM3set value2	-100%-100%FS	2.5%FS
538	R/W	ALM4 set value1	-100%-100%FS	2.5%FS
539	R/W	ALM4 set value2	-100%-100%FS	2.5%FS
540	R/W	ALM5 set value1	-100%-100%FS	2.5%FS
541	R/W	ALM5 set value2	-100%-100%FS	2.5%FS
•				
552	R/W	Proportional band [P]	0.0-999.9%	50
553	R/W	Integration time [I]	0-3200sec	240
554	R/W	Derivation time [D]	0.0-999.9sec	600
555	R/W	ON/OFF control hysteresis	0-50%FS	1°C
556	R/W	Cooling proportional band coefficient [Cool]	0.0-100.0%	10
557	R/W	Dead band	-50.0%-50.0%	0
558	R/W	Output convergence value	-100.0%-100.0%	0
559	R/W	Anti-reset windup [ARW]	0-100%FS	100%FS
560	R/W	Direct/Reverse action setting [MV1/MV2]	0: Reverse/None 1: Direct/None 2: Reverse/Direct 3: Direct/Reverse 4: Reverse/Reverse 5: Direct/Direct	0
•				
571	R/W	SV limit (lower)	0-100%FS	0%FS
572	R/W	SV limit (upper)	0-100%FS	100%FS

Extension No.	Attribute	Contents	Read/Write data setting range	Factory set value
573	R/W	MV1 lower limit	-3.0-103.0%	-30
574	R/W	MV1 upper limit	-3.0-103.0%	1030
575	R/W	MV2 lower limit	-3.0-103.0%	-30
576	R/W	MV2 upper limit	-3.0-103.0%	1030
577	R/W	Output limiter type setting	0-15  5-75	0
•				
661	RO	Process value (PV)	-5-105%FS	—
662	RO	SV value	0-100%FS	—
663	RO	DV	-105-105%FS%	—
664	RO	Output value (MV1)	-3.0-103.0%	—
665	RO	Output value (MV2)	-3.0-103.0%	—
666	RO	RSV terminal input value	-500-10500	—
667	RO	RCJtemp	-3276.7-3276.7%	—
668	RO	Heater current value [A]	0.0-50.0A	—
669	RO	Heater current value [B]	0.0-50.0A	—
•				
673	RO	Error source display	0-FFFF	—
674	RO	Alarm 1-5 status	0-001F	—
675	RO	Event input status	0-FFFF	—
676	RO	Remaining time on timer1	0 to 99min.59sec./0 to 99hr.59min.	—
677	RO	Remaining time on timer2	0 to 99min.59sec./0 to 99hr.59min.	—
678	RO	Remaining time on timer3	0 to 99min.59sec./0 to 99hr.59min.	—
679	RO	Remaining time on timer4	0 to 99min.59sec./0 to 99hr.59min.	—
680	RO	Remaining time on timer5	0 to 99min.59sec./0 to 99hr.59min.	—
•				






5.6 List of Extension Numbers

Extension No.	Attribute	Contents	Read/Write data setting range	Factory set value
714	R/W	PV input type	0: JPt100 (0-150)	7
			1: JPt100 (-150-600)	
			2: Pt100 (0-150)	
			3: Pt100 (-150-300)	
			4: Pt100 (-150-850)	
			5: J (0-400)	
			6: J (0-800)	
			7: K (0-400))	
			8: K (0-800)	
			9: K (0-1200)	
			10: R (0-1600)	
			11: B (0-1800)	
			12: S (0-1600)	
			13: T (-199-400)	
			14: E (-199-800)	
			15: Not selectable	
			16: Not selectable	
			17: Not selectable	
			18: N (0-1300)	
			19: PL-2 (0-1300)	
			20: Not selectable	
			21: Voltage (0 to 5V)	
			22: Voltage (0 to 5V)	
			23: Voltage (1 to 5V)	
			24: Voltage (0 to 10V)	
25: Voltage (2 to 10V)				
715	R/W	PV input lower	-1999-9999	0%FS
716	R/W	PV input upper	-1999-9999	100%FS
717	R/W	Decimal point position	0-2	0
718	R/W	Unit display	0: °C	°C
			1: Not selectable	
719	R/W	PV input shift	-10-10%FS	0
720	R/W	SV set value shift	-50-50%FS	0
721	R/W	PV input filter	0.0-120.0sec	0
722	R/W	PV display zero adjustment	-50-50%FS	0
723	R/W	PV display span adjustment	-50-50%FS	0
724	R/W	Cold junction compensation	0: OFF	1 (ON)
			1: ON	
725	R/W	RSV zero adjustment	-50-50%FS	0
726	R/W	RSVSpan adjustment	-50-50%FS	0
•				
728	R/W	RSV input filter	0.0-120.0sec	0
•				
730	R/W	Remote input master St. No.	0 to 255 St	0
731	R/W	Remote input master Ch. No.	1 to 4 loop	1
732	R/W	FAULT MV1 set value	-3.0-103.0%	-30
733	R/W	FAULT MV2 set value	-3.0-103.0%	-30

5.6 List of Extension Numbers

Extension No.	Attribute	Contents	Read/Write data setting range	Factory set value
734	R/W	Soft start MV1 set value	-3.0-103.0%	1030
735	R/W	Soft start MV2 set value	-3.0-103.0%	1030
736	R/W	Soft start time	0 to 99hr.59min.	0
737	R/W	Standby MV1 output value	-3.0-103.0%	-30
738	R/W	Standby MV2 output value	-3.0-103.0%	-30
739	R/W	Standby mode setting	0: ALM=OFF	0
			1: ALM=ON	
•				
743	R/W	Linkage operation master St. No.	0 to 255 St	0
744	R/W	Linkage operation master Ch. No.	1 to 4 loop	1
•				
765	R/W	DI-1 function select	0: (No function)	0
			1: RUN/Standby SW	
			2: Auto/ Manual SW	
			3: Local/Remote SW	
			4: (No function)	
			5: (No function)	
			6: Start AT (Normal type)	
			7: Start AT (Low PV type)	
			8: (No function)	
			9: (No function)	
			10: Ramp SV ON/OFF	
			11: Ramp SV Hold	
			12: (No function)	
			13: (No function)	
			14: (No function)	
			15: (No function)	
			16: (No function)	
			17: Alarm latch release command (All)	
			18: Alarm latch release command (DO1)	
			19: Alarm latch release command (DO2)	
			20: Alarm latch release command (DO3)	
			21: Alarm latch release command (DO4)	
			22: Alarm latch release command (DO5)	
			23: (No function)	
			24: (No function)	
			25: (No function)	
			26: Start timer (DO1)	
			27: Start timer (DO2)	
			28: Start timer (DO3)	
			29: Start timer (DO4)	
			30: Start timer (DO5)	
			31: (No function)	
			32: (No function)	

5.6 List of Extension Numbers

Extension No.	Attribute	Contents	Read/Write data setting range	Factory set value
		DI-1 function select	33: (No function) 34: (No function) 35: (No function) 36: (No function) 37: (No function) 38: (No function) 39: (No function) 40: (No function) 41: (No function) 42: (No function) 43: (No function) 44: (No function) 45: (No function) 46: (No function) 47: (No function) 48: (No function) 49: Output1 shutdown 50: Output2 shutdown 51: Output3 shutdown 52: Output4 shutdown	
766	R/W	DI-2 function select	0-52	0
767	R/W	DI-4 function select	0-52	0
768	R/W	DI-5 function select	0-52	0
769	R/W	DO1 output event type setting	0-102  5-70	0
770	R/W	DO1 option function setting	bit 0: Alarm latch function bit 1: Error input alarm function bit 2: Non-excitation output function bit 3: Hold reset function	0
771	R/W	DO2 output event type setting	0-102  5-70	0
772	R/W	DO2 option function setting	bit 0: Alarm latch function bit 1: Error input alarm function bit 2: Non-excitation output function bit 3: Hold reset function	0
773	R/W	DO3 output event type setting	0-102  5-70	0
774	R/W	DO3 option function setting	bit 0: Alarm latch function bit 1: Error input alarm function bit 2: Non-excitation output function bit 3: Hold reset function	0
775	R/W	DO4 output event type setting	0-102  5-70	0
776	R/W	DO4 option function setting	bit 0: Alarm latch function bit 1: Error input alarm function bit 2: Non-excitation output function bit 3: Hold reset function	0
777	R/W	DO5 output event type setting	0-102  5-70	0
778	R/W	DO5 option function setting	bit 0: Alarm latch function bit 1: Error input alarm function bit 2: Non-excitation output function bit 3: Hold reset function	0

5.6 List of Extension Numbers

Extension No.	Attribute	Contents	Read/Write data setting range	Factory set value
779	R/W	Ramp SV ON/OFF	0: OFF	1
			1: ON	
780	R/W	Ramp SV decline	0-100%FS	0
781	R/W	Ramp SV incline	0-100%FS	0
782	R/W	Ramp SV slope time units	0: Slope deg/hr.	0 (hr.)
			1: Slope deg/min.	
•				
784	R/W	Control algorithm	0: PID control	0 (Pid)
			1: Fuzzy control	
			2: PID control against open-loop	
•				
786	R/W	ON/OFF hysteresis setting	0: OFF	1 (ON)
			1: ON	
•				
789	R/W	Mode at startup	0: Auto	0
			1: Manual	
			2: Remote	
			3: Standby	
•				
799	R/W	ALM1 hysteresis	0-50%FS	1°C
800	R/W	ALM1 delay time	0 to 99min.59sec. /0 to 99hr.59min.	0
801	R/W	ALM1 delay time units	0: sec.	0 (sec.)
			1: min.	
802	R/W	ALM2 hysteresis	0-50%FS	1°C
803	R/W	ALM2 delay time	0 to 99min.59sec. /0 to 99hr.59min.	0
804	R/W	ALM2 delay time units	0: sec.	0 (sec.)
			1: min.	
805	R/W	ALM3 hysteresis	0-50%FS	1°C
806	R/W	ALM3 delay time	0 to 99min.59sec. /0 to 99hr.59min.	0
807	R/W	ALM3 delay time units	0: sec.	0 (sec.)
			1: min.	
808	R/W	ALM4 hysteresis	0-50%FS	1°C
809	R/W	ALM4 delay time	0 to 99min.59sec. /0 to 99hr.59min.	0
810	R/W	ALM4 delay time units	0: sec.	0 (sec.)
			1: min.	
811	R/W	ALM5 hysteresis	0-50%FS	1°C
812	R/W	ALM5 delay time	0 to 99min.59sec. /0 to 99hr.59min.	0
813	R/W	ALM5 delay time units	0: sec.	0 (sec.)
			1: min.	

5.6 List of Extension Numbers

Extension No.	Attribute	Contents	Read/Write data setting range	Factory set value
814	R/W	Object Ch. No. for interchannel ALM1	1-4Ch.	1
815	R/W	Object Ch. No. for interchannel ALM2	1-4Ch.	1
816	R/W	Object Ch. No. for interchannel ALM3	1-4Ch.	1
817	R/W	Object Ch. No. for interchannel ALM4	1-4Ch.	1
818	R/W	Object Ch. No. for interchannel ALM5	1-4Ch.	1
819	R/W	Ch1HB alarm set value	0.0-50.0 (A)	0
820	R/W	Ch1HB alarm hysteresis	0.0-50.0 (A)	5
821	R/W	Ch1 load short-circuit alarm set value	0.0-50.0 (A)	0
822	R/W	Ch1 load short-circuit alarm hysteresis	0.0-50.0 (A)	5
823	R/W	Ch2HB alarm set value	0.0-50.0 (A)	0
824	R/W	Ch2HB alarm hysteresis	0.0-50.0 (A)	5
825	R/W	Ch2 load short-circuit alarm set value	0.0-50.0 (A)	0
826	R/W	Ch2 load short-circuit alarm hysteresis	0.0-50.0 (A)	5
827	R/W	Loop break detection time	0-9999sec	0 (OFF)
828	R/W	Loop break detection band	0-100%FS	10°C
•				
843	R/W	Control when input burnout is detected	0: OFF 1: ON	0
•				
855	R/W	Current output range	0: (No function) 1: (No function) 2: (No function) 3: (No function) 4: 0-20mA 5: 4-20mA	5
856	R/W	Out1 proportion cycle	1-120sec.	1
857	R/W	Output type	0: Own St. PV 1: Own St. SV 2: Own St. DV 3: Own St. MV1 4: Own St. MV2 5: Other St. PV 6: Other St. SV 7: Other St. MV	3
858	R/W	Output master St.	0 to 255 Station	0
859	R/W	Output master Ch.	1 to 4 loop	1
860	R/W	Output scaling span	-100 - 100%	100%
861	R/W	Output scaling base	-100 - 100%	0%

Further notes on the data of extension numbers list

Further notes on the list are shown below.

PV input type

The setting limits of input range and decimal point position according to the input type set value are as follows.

Input type		Input code	Measurable range	Decimal point position setting limit
			[°C]	[°C]
Resistance bulb	JPT100Ω	0	0 to 150	1
		1	-150 to 600	1
	Pt100Ω	2	0 to 150	1
		3	-150 to 300	1
		4	-150 to 850	1
Thermocouple	J	5	0 to 400	1
		6	0 to 800	1
	K	7	0 to 400	1
		8	0 to 800	1
		9	0 to 1200	0
	R	10	0 to 1600	0
	B	11	0 to 1800	0
	S	12	0 to 1600	0
	T	13	-199 to 400	1
	E	14	-199 to 800	1
	N	18	0 to 1300	0
PL-II	19	0 to 1300	0	
DC voltage	DC0-5V	21	-1999 to 9999	2
	DC1-5V	22		2
	DC0-10V	23		2
	DC2-10V	24		2

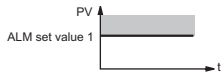
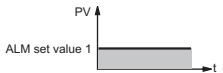
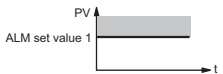
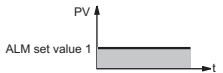


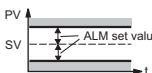
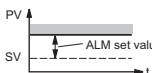
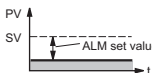
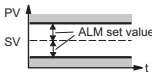
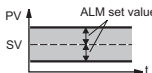
DO output event type setting

Select the event number for the DO output event type from the table below.

- No event

Event category	Event No.	Event type	Behavior diagram
—	0	OFF	—

- Alarm event

Event category	Event No.	Event type	Behavior diagram
PV absolute alarm	1	Upper limit absolute	
	2	Lower limit absolute	
	3	Upper limit absolute with hold	
	4	Lower limit absolute with hold	
Deviation alarm	5	Upper limit deviation	
	6	Lower limit deviation	
	7	Upper/lower limit deviation	
	8	Upper limit deviation with hold	
	9	Lower limit deviation with hold	
	10	Upper/lower limit deviation with hold	
Range alarm1	11	Range upper/lower limit deviation	

Event category	Event No.	Event type	Behavior diagram
Upper / lower limit alarm	16	Upper/lower limit absolute	
	17	Upper/lower limit deviation	
	18	Upper limit absolute, lower limit deviation	
	19	Upper limit deviation, lower limit absolute	
	20	Upper/lower limit absolute with hold	
	21	Upper/lower limit deviation with hold	
	22	Upper limit absolute, lower limit deviation with hold	
	23	Upper limit deviation, lower limit absolute with hold	
Range alarm 2	24	Range upper/lower limit absolute	
	25	Range upper/lower limit deviation	
	26	Range upper limit absolute, lower limit deviation	
	27	Range upper limit deviation, lower limit absolute	
	28	Range upper/lower limit absolute with hold	
	29	Range upper/lower limit deviation with hold	
	30	Range upper limit deviation, lower limit absolute with hold	
	31	Range upper limit absolute, lower limit absolute with hold	

5.6 List of Extension Numbers

Event category	Event No.	Event type	Behavior diagram
SV alarm	32	SV upper limit	
	33	SV lower limit	
	34	SV upper/lower limit	
MV alarm	35	MV upper limit (heat)	
	36	MV lower limit (heat)	
	37	MV upper/lower limit (heat)	
	38	MV upper limit (cool))	
	39	MV lower limit (cool)	
	40	MV upper/lower limit (cool)	
Interchannel PV deviation alarm	41	Interchannel upper limit deviation	
	42	Interchannel lower limit deviation	
	43	Interchannel upper/lower limit deviation	
	44	Interchannel upper limit deviation with hold	
	45	Interchannel lower limit deviation with hold	
	46	Interchannel upper/lower limit deviation with hold	

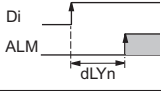
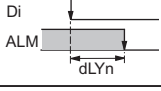
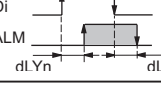
Event category	Event No.	Event type	Behavior diagram
Break/short-circuit alarm	61	Loop break alarm	—
	64	CT[A] HB alarm	—
	65	CT[B] HB alarm	
	66	CT[A] HB alarm or CT[B] HB alarm	—
	67	CT[A] load short-circuit alarm	
	68	CT[B] load short-circuit alarm	
	69	CT[A] load short-circuit alarm or CT[B] load short-circuit alarm	

Point

- When selecting an event type with either of upper limit or lower limit only, the event always refers to "ALM set value 1".
- Event No.11 detects whether both negative and positive deviation between PV and SV is within the range of "ALM set value1". Event No.13 detects whether deviation between PV and SV is within "ALM set value1" on the positive side and "ALM set value 2" on the negative side.

5.6 List of Extension Numbers

- Events other than alarms

Event category	Event No.	Event type	Behavior diagram
Timer code	52	ON delay timer	
	53	OFF delay timer	
	54	ON/OFF delay timer	
Condition output	71	During auto-tuning	—
	72	Normal Operation	—
	73	Standby	—
	74	Manual Mode operating	—
	75	Remote SV operating	—
	76	During ramp SV	—

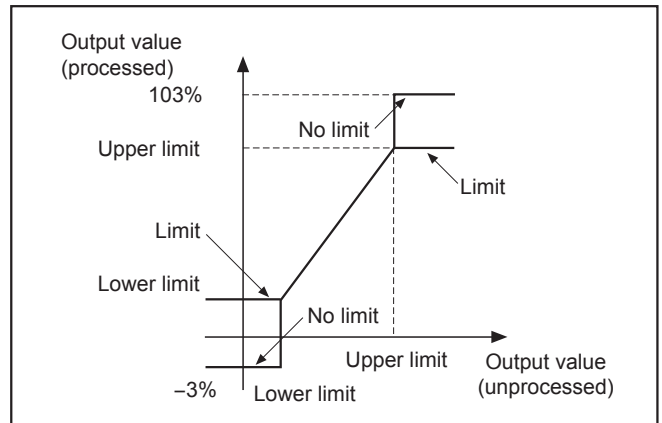
Relevant parameters

- ALM set value1/ ALM set value2
- Event delay time
- Event delay time unit
- ALM hysteresis
- DO option

Output limiter type setting

Set value	MV1		MV2	
	Lower limits	Upper limits	Lower limits	Upper limits
0	-3.0%	103%	-3.0%	103%
1	Lower limits	103%	-3.0%	103%
2	-3.0%	Upper limits	-3.0%	103%
3	Lower limits	Upper limits	-3.0%	103%
4	-3.0%	103%	Lower limits	103%
5	Lower limits	103%	Lower limits	103%
6	-3.0%	Upper limits	Lower limits	103%
7	Lower limits	Upper limits	Lower limits	103%
8	-3.0%	103%	-3.0%	Upper limits
9	Lower limits	103%	-3.0%	Upper limits
10	-3.0%	Upper limits	-3.0%	Upper limits
11	Lower limits	Upper limits	-3.0%	Upper limits
12	-3.0%	103%	Lower limits	Upper limits
13	Lower limits	103%	Lower limits	Upper limits
14	-3.0%	Upper limits	Lower limits	Upper limits
15	Lower limits	Upper limits	Lower limits	Upper limits

The output changes according to the limit, as follows.



5.7 CC-Link Flag Operation

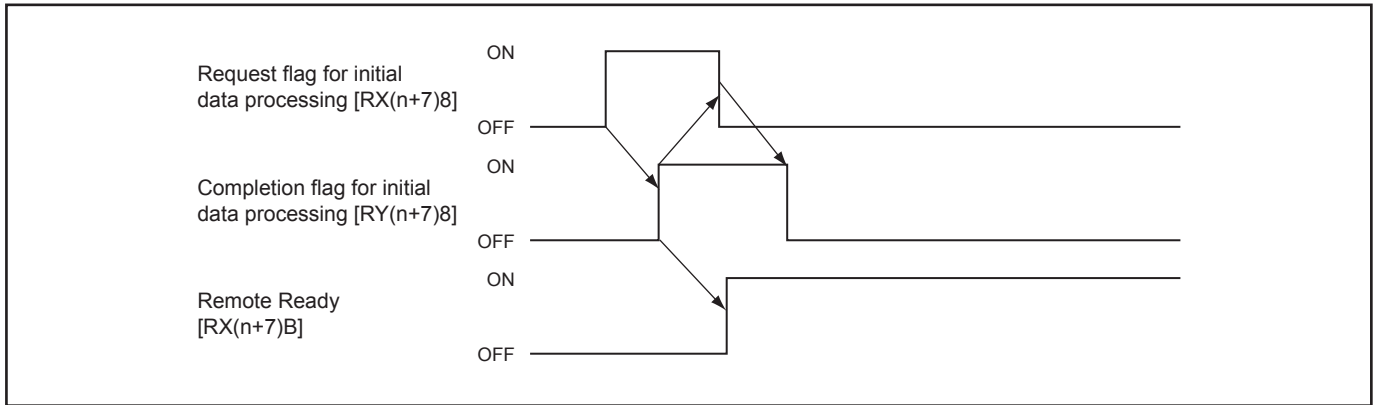
Flag operations for remote input/output or remote register are shown below.

Ex) When the setting for number of stations occupied/extended cyclic is 4-stations occupied ×1 (8Ch allocation)

Request for initialization when the power is on

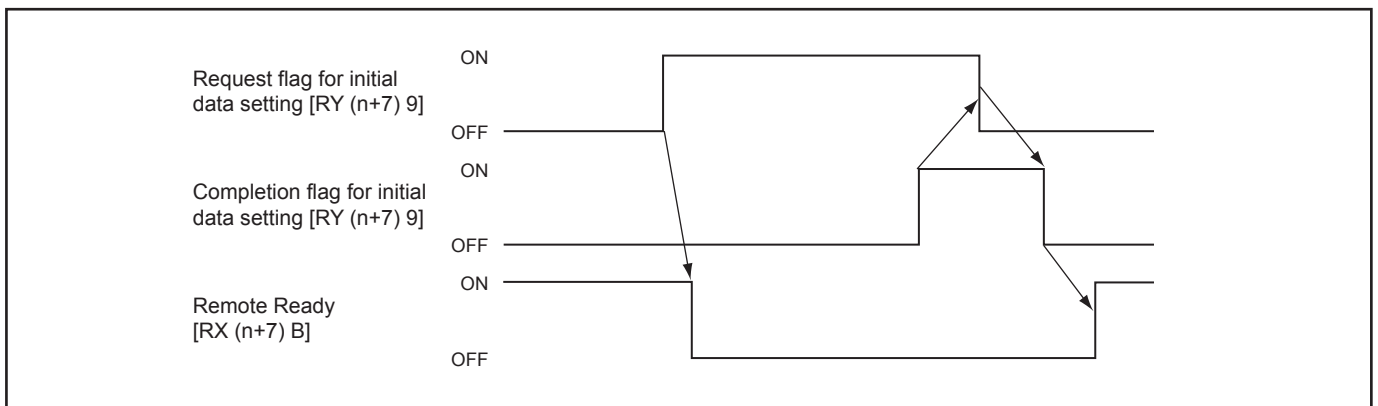
Request for initialization by the remote device station (PUM module)

When the power is on, initialization is completed on PUM module, and then the request flag for initial data processing [RX (n+7) 8] will be ON. As a result, turn ON the completion flag for initial data processing [RY (n+7) 8]. [RX (n+7) 8] will be OFF. When the PUM module comes to be in the ready status, remote ready [RX (n+1) B] will be ON.



Request for initial setting by the master station (PLC)

This is the request for initial setting from the master station to PUM module. Since there is any initial data especially, no process is necessary.

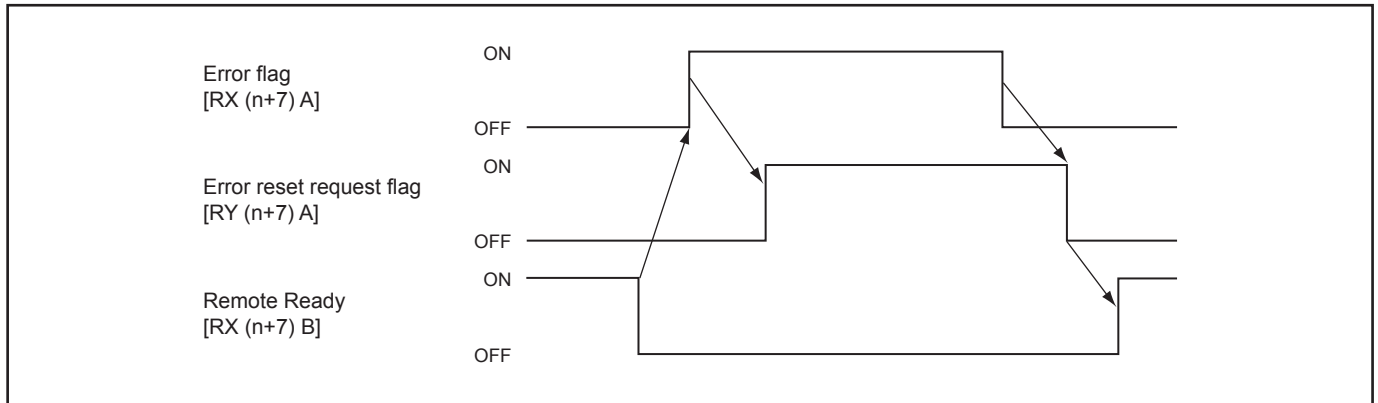


Error flag/Error reset

If the error flag [RX (n+7) A] is ON, error codes are stored in the remote register.

If the request flag for error reset [RY (n+7) A] will be ON when error occurs, [RX (n+7) A] comes to be OFF to clear the error code.

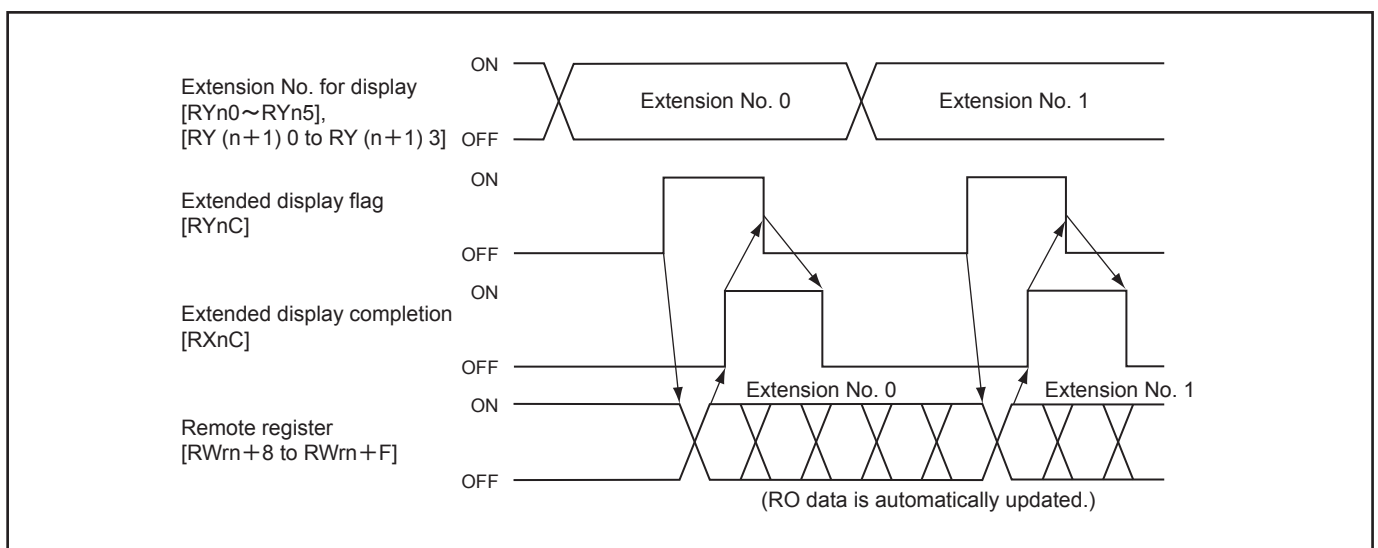
If switch [RY (n+7) A] to OFF after that, remote ready comes to be ON.



Switch the extension number for display

Switch the content of extended display for remote register.

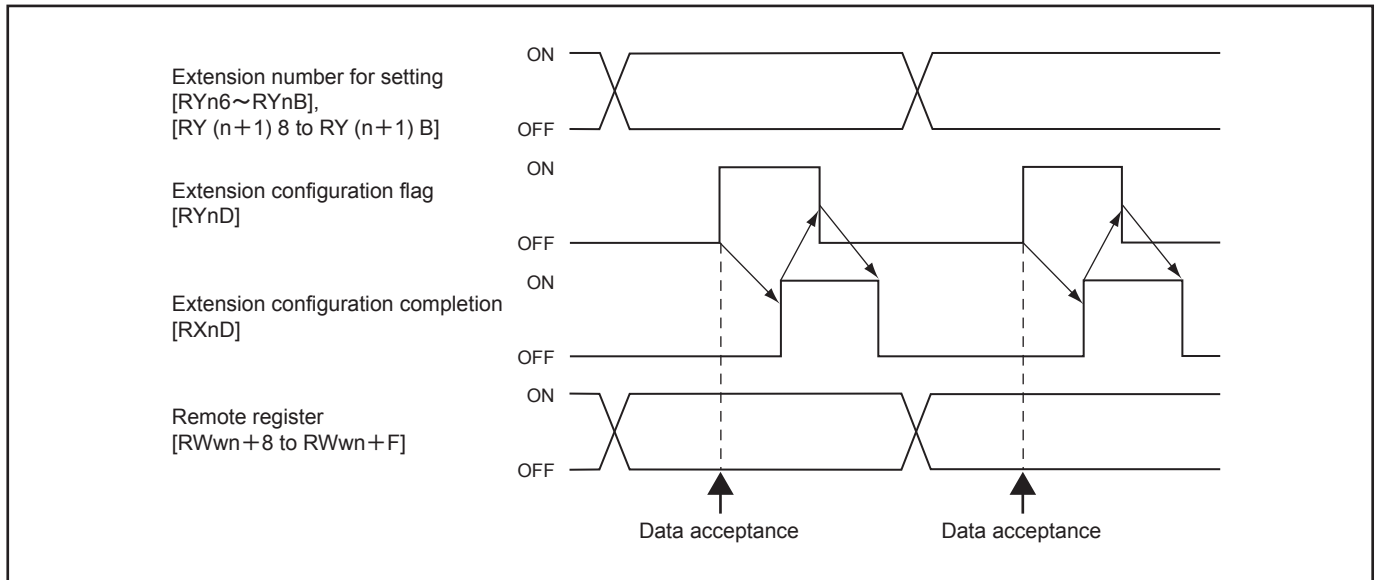
After setting the extension number for display [RYn0 to Ryn5] and [RY (n+1) 0 to RY (n+1) 3], switch the extended display flag [RYnC] to ON. Then, check that data display of the remote register [RWrn + B to RWrn + F] will end, and extended display completion [RXnC] comes to be ON, prior to switch OFF the extended display flag [RYnC]. When the extended display flag [RYnC] comes to be OFF, the extended display completion [RXnC] will be OFF.



Switch the extension number for setting

Switch the content of extension configuration for remote register and change the set value.

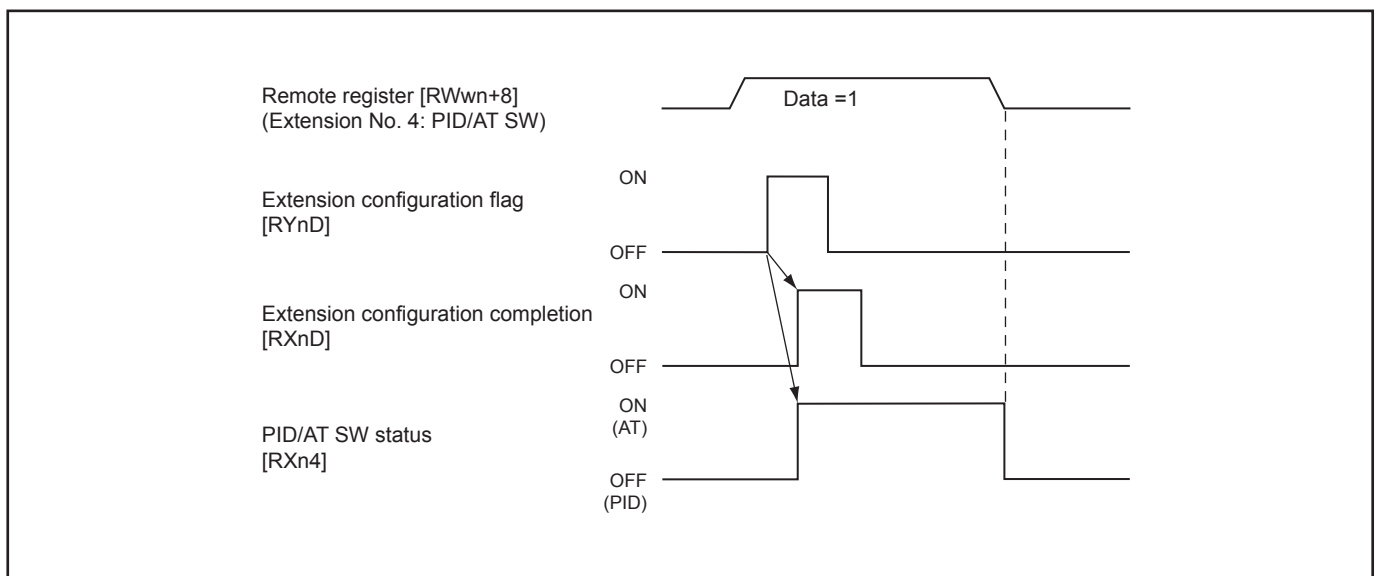
After setting the extension number for setting [RYn6 to RYnB] and [RY (n+1) 8 to RY (n+1) B], switch the extension configuration flag [RYnD] ON. Then, check that the contents of remote register [RWwn + 8 to RWwn + F] will end, and extension configuration completion [RXnD] comes to be ON, prior to switch OFF the extension configuration flag [RYnD]. When the extension configuration flag [RYnD] comes to be OFF, the extension configuration completion [RXnD] will be OFF.



Start AT (Example of Channel 1)

Switch processing of extension number for setting by writing [1] to the remote register [RWwn + 8].

When AT command is received, PID/AT switch status [RXn4] comes to be ON and get into AT status. When finish AT, [RXn4] switches OFF and the remote register will back to "0".



5.8 Sample program

A sample program for reading and writing data that runs on Mitsubishi sequencer, MELSEC, is distributed in our home page.

The sample program is meant to be used as a reference for your own program creation, and therefore all its actions are not guaranteed.

Sample program body can be downloaded from our home page indicated below.

Home page address: <http://www.fic-net.jp/> CC-Link sample PG_V10

Sequencer design / maintenance tool

GX Developer Version 8.30G

Sequencer

MELSEC series (Q00CPU)

Note

- GX Developer Version 8.30G is the registered trademark of Mitsubishi Electric Corporation.
- MELSEC is the registered trademark of Mitsubishi Electric Corporation.

Fuji Electric Systems Co., Ltd. assumes no responsibility for damages or infringement upon third party rights as a result of using this sample program. Use this program while conforming to the contents of the agreement listed within.

6

Troubleshooting

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6.1 Troubleshooting procedures

The following table lists troubles that may occur during communication and those solutions.

Troubles	Causes	Solutions
Read/Write on the control module is not available despite the fact that Remote Ready signal is ON. (Green PWR lamp of the control module is lighted)	Communication permission setting is incorrect.	Set communication permission setting of modules other than CC-Link module to "connected" and restart.
Read/Write on the control module is not available despite the fact that Remote Ready signal is ON. (Red PWR lamp of the control module is lighted)	Internal communications between modules are in the abnormal status.	<p>Improve PWR lamp from red to green. <About LED indicator display> "PWR" indicator of the module LED that connected laterally might comes to be red by one of the following status.</p> <ul style="list-style-type: none"> • More than 2 out of modules connected laterally, which have the same St. No. • More than 2 out of modules connected laterally, which are set "Master/slave setting for internal communications between modules" to "0: Master". • The module that has the St. No. set to the output master St. or DI input master St. is nonexistent.
Data is not updated.	Faulty wiring of CC-Link cables	Check CC-Link wiring.
	Miscompare of communication speed setting	Check the communication speed of PLC and the communication module. (St. No. configuration SW)
	Miscompare setting of number of stations occupied/extended cyclic	Check the PLC soft definition and communication module DIP SW.
	Incorrect setting of communication St. No.	Check communication module St. No is in the 1 to 61 range, and 1 is set to the first unit.
Hardware error flag is ON.	MODBUS communication error occurred	<p>Check that the modules other than CC-Link are connected firmly.</p> <ul style="list-style-type: none"> • Connection part of modules' lateral connection. (Connection among backboard) • Connection of the main unit and backboard.
		Check if something wrong with the modules' hardware other than CC-Link.

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