

TOSHIBA

For commercial use

Group Remote Controller
(Compact group controller)

RBP-RC001-E

Installation & Owner's Manual

Multilingual installation manuals and owner's manual



[Česky] Stažení Instalační příručky a Uživatelské příručky
[Deutsch] Installationshandbuch und Bedienungsanleitung herunterladen
[Ελληνικά] Λήψη εγχειριδίου εγκατάστασης και εγχειριδίου κατόχου
[English] Installation manual and Owner's manual Download
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<https://www.toshiba-carrier.co.jp/global/manual/rbp-rc001-e.htm>

- Thank you for purchasing this group remote controller.
- In order to use this product safely and correctly, please read this Installation & Owner's Manual carefully before use and make sure that you fully understand the contents.
In particular, please be sure to read the "Safety Precautions".
- After reading this manual, be sure to keep it in a place where the operator of the Unit can always view it.
- This product uses bitmap fonts manufactured and sold by Ricoh Industrial Solutions Inc.

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1 Safety Precautions

Installation Precautions

- Read these "Safety Precautions" carefully before installation.
- The precautions described below include important items regarding safety. Observe them without fail. Understand the following details (indications and symbols) before reading the body text, and follow the instructions.
- After the installation works has been completed, perform a trial operation to check for any problems. Explain how to use and maintain the unit to the customer.
- Ask customer to keep this Manual at accessible place for future reference.

Usage Precautions

- Explains safety precautions you must follow in order to prevent harm to the user and other persons and damage to property.
- "Display Description" explains the classification of the degree of harm or damage that may occur if the unit is handled incorrectly while "Symbol Description" indicates the meanings of symbols.

Display Description	Symbol Description
WARNING Indicates "Content that is expected to result in death or serious injury (*1) to the user in the case of incorrect handling".	Indicates prohibited actions, Specifically prohibited contents are indicated with a picture and/or text in or near the symbol.
CAUTION Indicates "Content that is expected to result in minor injury (*2) to the user or damage to property (*3) in the case of incorrect handling".	Indicates instructions which must be followed. The actual contents of the instructions are indicated with a picture and/or text in or near the symbol.

*1: Serious injury refers to lasting after effects such as blindness, injury, burns (high temperature / low temperature), electric shock, bone fracture, or poisoning, etc and injuries that require hospitalization/long - term outpatient treatment.

*2: Minor injury refers to injuries, burns, or electric shocks, etc, that do not require hospitalization or long-term outpatient treatment.

*3: Damage to property refers to extended damage related to houses, household goods, livestock, or pets, etc.

WARNING

Installation Precautions

 Compulsory	Ask an authorized dealer or qualified installation professional to install or reinstall this unit. Inappropriate installation may result in electric shock or fire.	 Compulsory	Always connect to ground. Improper grounding may result in an electric shock. Before connecting the power, carry out Class D grounding according to the "Engineering Standard for Electric Work" and the "Internal Wiring Regulations".
 Use specified products	Use the heat source products designated by us. Please use the heat source products designated by us. Using products other than specified may cause fire, electric shock, or water leakage. Also, please ask a professional for installation work.	 Compulsory	<ul style="list-style-type: none"> • Electrical work must be performed by a qualified electrician in accordance with this installation manual. The work must satisfy all local, national and international regulations. Inappropriate work may result in electric shock or fire. • Be sure to turn off all main power supply switches before starting any electrical work. Failure to do so may result in electric shock.
 Compulsory	Do not use a power source other than the specified model. Using a power source other than the specified model may cause fire or failure. Please use 220-240 VAC.		

Usage Precautions

 Prohibited	Do not operate the switches with wet hands. Doing so may cause electric shock or failure.
 Prohibited	Do not modify the unit. A fire or an electric shock may occur.
 Prohibited	Do not wet the group remote controller. Be careful not to get the group remote controller wet. Doing so may cause fire, electric shock, or failure.

 Prohibited	Do not start or stop the heat source machine by turning on / off the power switch or circuit breaker. Doing so may cause fire, or electric shock.
 Compulsory	Turn off the power if anything is abnormal (burnt odour etc). Continued use may cause fire or electric shock. Please ask the dealer from whom you purchased the product.

Relocation & Repair Precautions

 Request relocation	Contact a specialist or the dealer from whom you purchased the unit to relocate and re-install the heat source machine. Faulty installation may cause fire, electric shock injury.
---	--

 Request	Please ask the dealer from whom you purchased the unit for repair. Faulty repair may cause fire or electric shock.
--	--

 **CAUTION**

Installation Precautions

 Prohibited	Do not install in the following locations. Doing so may cause a failure. <ul style="list-style-type: none"> • Locations where combustible gas may leak. • Locations with high humidity or water. • Dusty locations. • Locations in direct sunlight and locations subject to high temperatures. • Locations within 1 m from televisions or radios. • Locations where noise is generated. • Outdoors, under awnings, or other locations exposed to rain and dew. • Locations exposed to outside air containing corrosive gases or salinity. • Locations with frequent vibrations.
 Check the installation location	Depending on the installation location, it may be necessary to install an earth-leakage circuit breaker. If the earth leakage breaker is not installed, it may cause an electric shock.

 Compulsory	<ul style="list-style-type: none"> • In installation work, use wiring with the correct ampacity. Failure to do so may result in excessive heat or fire. • Use specified cables and connect them securely, and do not subject connecting terminals to external force. Doing so may result in broken cables, excessive heat or fire. • Always install a circuit breaker on the primary side of the power supply. • When attaching to a metal lath, wire lath or wooden structure with metal boards, attach it to the control panel, etc, without attaching it to the wall .
 Check the installation location	Do not use this device in locations where children may be present.

Usage Precautions

 Prohibited	Do not drop the product or apply strong shock. Doing so may cause a failure.
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 Compulsory	When cleaning and checking, turn off the circuit breaker or the earth-leakage breaker. Failing to do so may cause injury.
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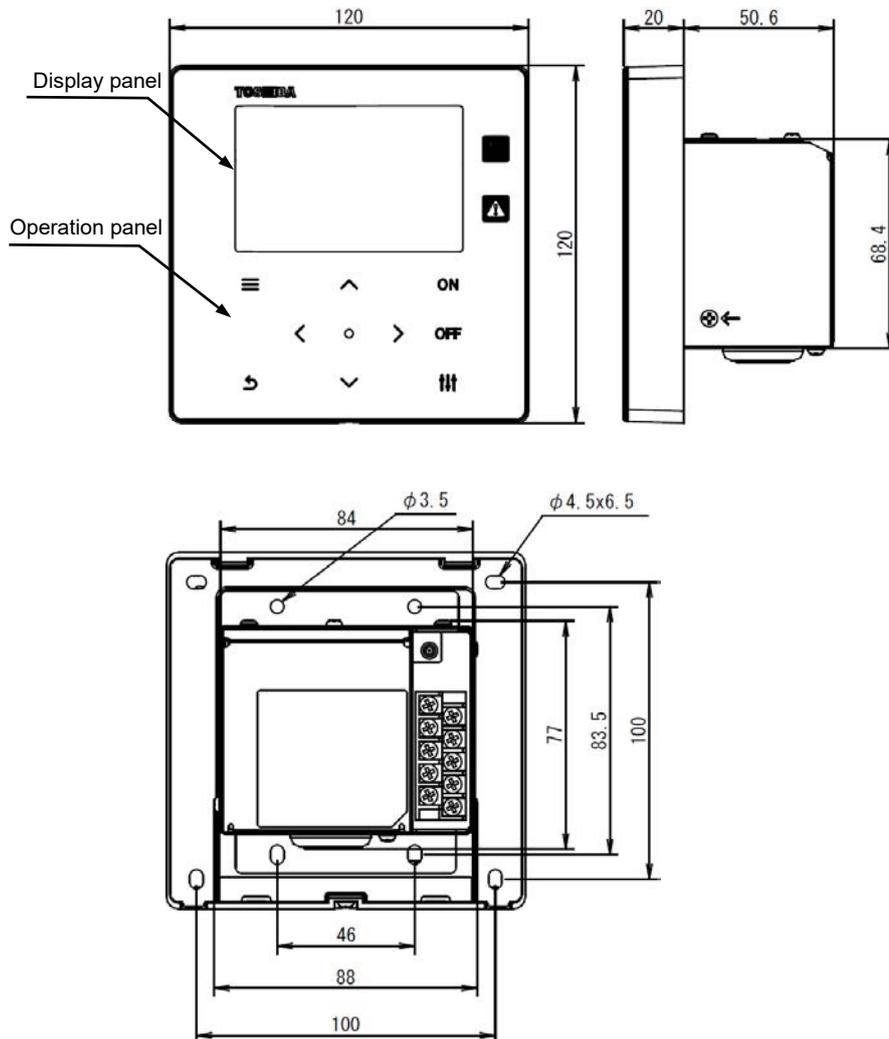
2 Specifications

2-1 Product specifications

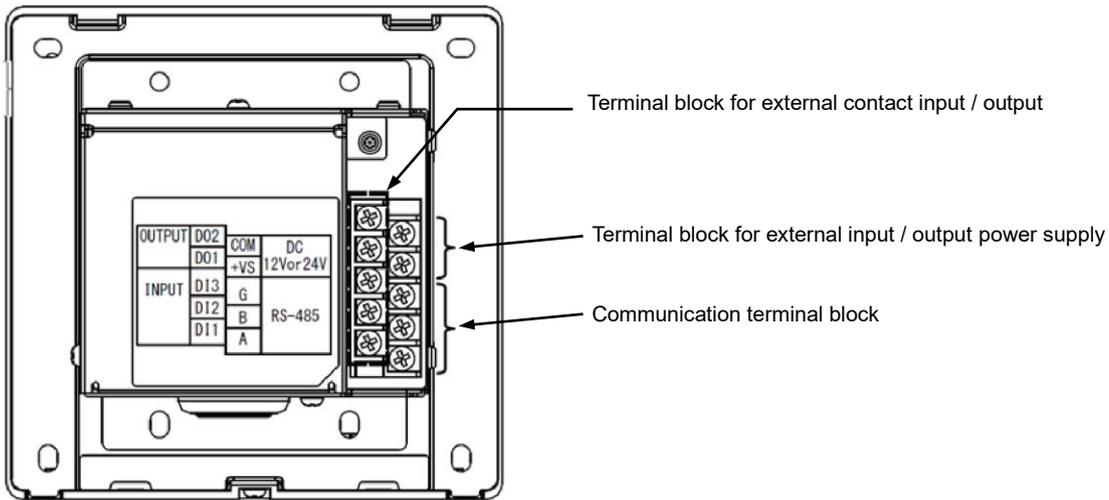
Product name	Group Remote Controller
Model name	RBP-RC001-E
Power supply	220 to 240 VAC 50/60 Hz
Power consumption	6 W
Number of connected units	Up to 2 units (For USX series module controllers)
External contact inputs	3
External contact output	2
Operating temperature/humidity range	0 °C to 40 °C, 10% to 90% RH (no condensation)
Installation location	Indoor Installation only
Dimensions	H 120 × W 120 × D 20 (+50.6) mm (Embedded dimensions shown in parenthesis)
Mass	0.6 kg

2-2 Outline Drawing

(Unit: mm)



2-3 Names of each part



Name	Function
Terminal block for external contact input / output	Connect the signal wires for external contact input / output
Terminal block for external input / output power supply	Connect the power supply wires for external contact input / output
Communication terminal block	Connect the RS-485 communication wiring

2-4 Included Items

Confirm that all the parts listed below are included in the package.

No.	Component name	Q'ty	Remark
1	Group Remote Controller main unit	1	
2	Installation & Owner's Manual	1	This manual
3	Fixing screw	4	M4 × 20
4	Fixing screw	4	M3.8 × 16

2-5 Wiring specifications

Use the following wiring material to connect signal wires and power supply wires. (Locally procured)

No.	Wiring	Wire type / wire diameter / wire length
1	For RS485 communication	Shielded twisted pair wire 0.75 mm ² , up to 100 m 1.25 mm ² , up to 500m
2	For power supply	2mm ² , up to 50m
3	For digital I/O	Multi-core cable 0.5 mm ² , up to 100m

2-6 Screw size of each terminal

Terminal	Screw size
Power terminal / Ground terminal	M4
Terminal block for external contact input / output	M3
Terminal block for external input / output power supply	
Communication terminal block	

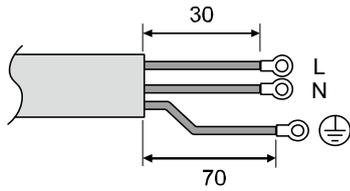
3 Installation

3-1 Power, Signal, Earth and Communication Line Connections

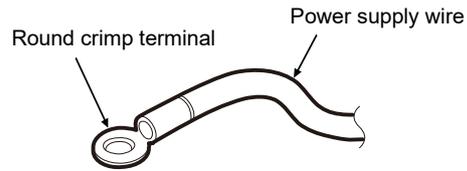
Connect the power, signal earth and communication lines to the specified terminal blocks.
 Attach round crimp terminals to all wiring and tighten the screws securely.
 After tightening, check that the wiring cannot come out.

About Stripping Length

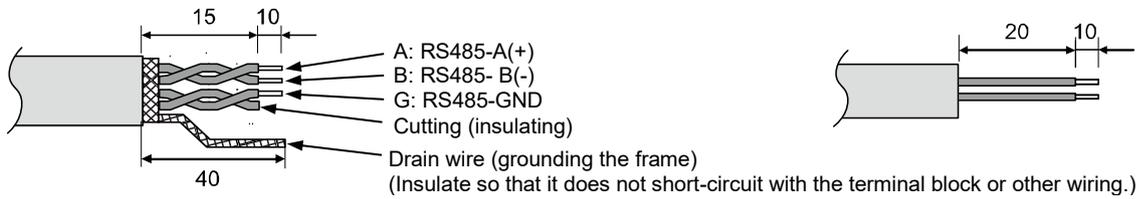
Power supply wire stripping length



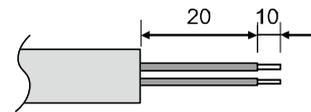
Attach a round crimp terminal to each wire of the power supply wire.



Communication wire stripping length



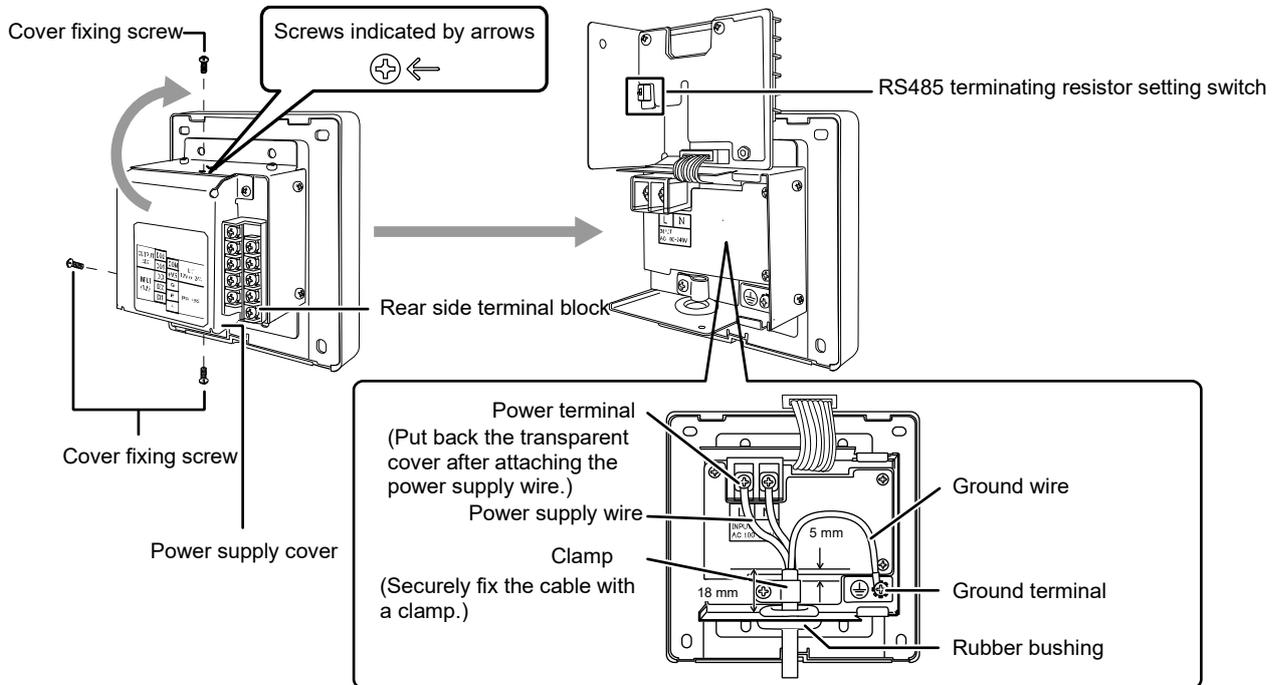
Signal wire stripping length



3-2 Power supply wire and ground wire connection

Connecting the power supply wire and the ground wire

- (1) Remove 3 cover fixing screws pointed to by arrows and open the cover.
- (2) Insert cross notches in the rubber bushing in order to pass the power supply cable.
- (3) Pass the power supply cable through the rubber bushing and the clamp, and connect the power supply wire and the ground wire to the specified terminal block.
- (4) Close the cover and secure with 3 cover fixing screws.



[REQUIREMENT]

- Do not connect the device directly to the primary side of the power supply.
- Be sure to install a circuit breaker or earth-leakage breaker on the primary side of the power supply.
- Fasten the screws to the terminal block with torque of 0.5 N · m.

3-3 Connecting the communication wires

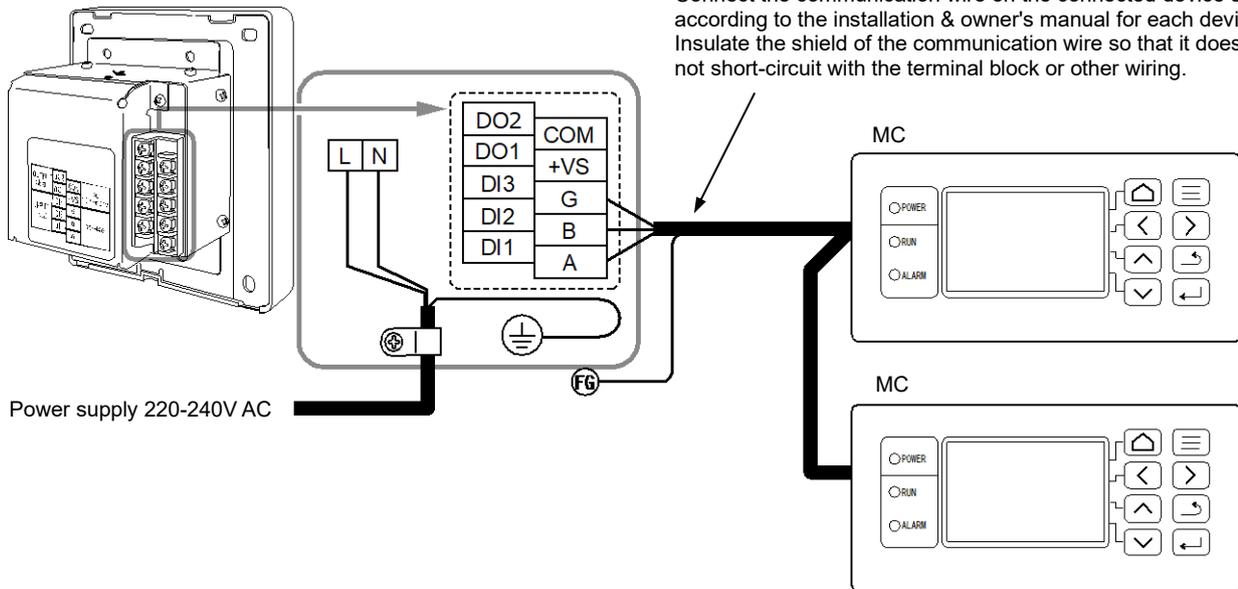
Communication wire connection procedure

RS-485 communication wire has polarity.

- A: RS-485-A (+)
- B: RS-485-B (-)
- G: RS-485-GND

Ground the shield of the communication wire to the frame of the group remote controller, and do not ground it on the connected device side (MC side).

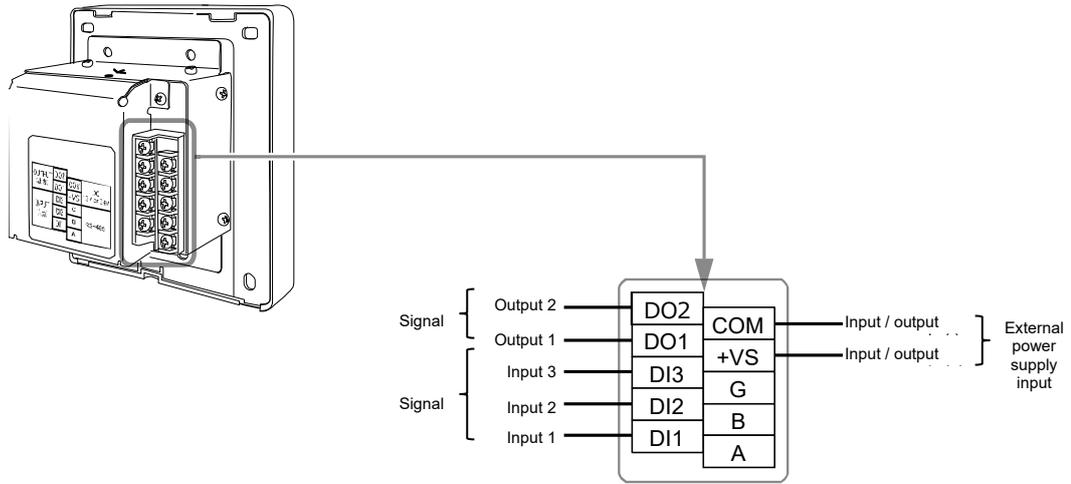
Connect the communication wire on the connected device side according to the installation & owner's manual for each device. Insulate the shield of the communication wire so that it does not short-circuit with the terminal block or other wiring.



[REQUIREMENT]

- Fasten the screws to the terminal block with torque of 0.5 N · m.

3-4 Connection to External Equipment



Example of connection to external equipments

Name	I/O Item	This unit side			Equipment side	
		I/O conditions	Circuit	Terminal name	Circuit example	I/O conditions
Digital I/O terminal	Signal output	Contact A static signal output Contact permissible voltage/current DC 24 V/90 mA		+VS DO1 DO2		
	Signal input	Contact A static or pulse signal input (It depends on the input function settings. For details, Refer to the I/O function list (P. 50).) A contact that supports microcurrent must be selected and used.		DI1 DI2 DI3 COM		Pulse width of pulse signal input: 500 ms or more

- * Wire the cables so that the user does not touch the power supply directly.
- * On the equipment side, use a basically insulated power circuit and place it in a location that where the user cannot touch it.
- * Procure the external power supply for the digital I/O locally.
- * Functions can be assigned to digital inputs 1 to 3 and digital outputs 1 to 2. Refer to "I/O settings (P. 40)"
- * Group remote controller cannot be connected to equipment by our remote monitoring or open protocol (BACnet, Modbus).

[REQUIREMENT]

- Fasten the screws to the terminal block with torque of 0.5 N · m.

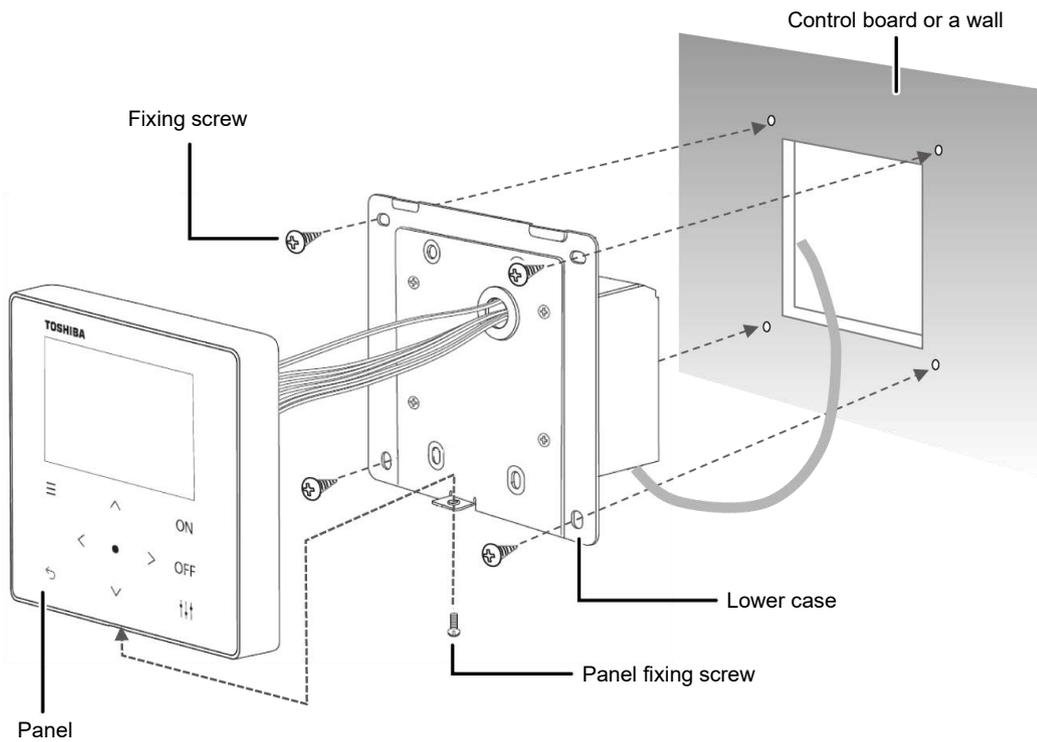
3-5 How to Install

⚠ CAUTION

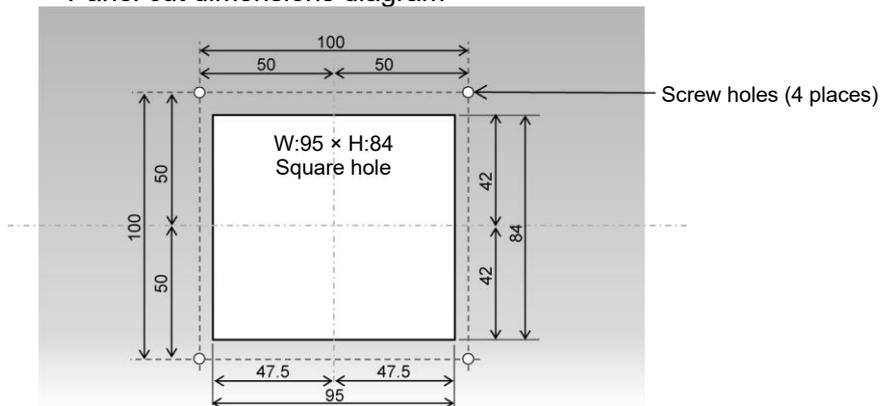
- Do not wire communication lines or input/output wiring next to power supply wiring, etc, or house them in the same metal pipe. Doing so may result in failure.
- Install the group remote controller away from the noise sources.

The thickness of the board or wall must be 1.6 mm to 10 mm.

- Prepare the holes for installation beforehand, following the the diagram below (Panel cut dimensions diagram).
- Remove 1 panel fixing screw and open the panel.
- Attach the lower case with the four included fixing screws.
- Close the panel and attach it with 1 panel fixing screw.



< Panel cut dimensions diagram >

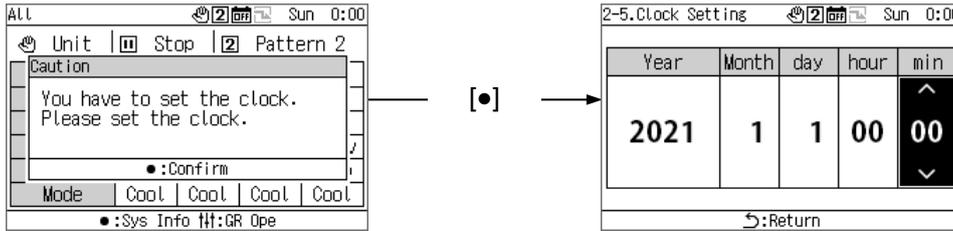


3-6 Clock Setting

⚠ CAUTION

- When the power is turned on for the first time or if the power has been shut down for three days or more, the clock may be initialized (to January 1, 2021). If the clock is initialized, the message below appears. Press the [●] (Confirm) button to switch to the Clock Setting screen. Be sure to set the clock with the clock setting method.
- If the clock is initialized, no schedules will be executed until the clock is set.
- If the clock is initialized, the schedule settings will also be initialized. (The event settings will not be initialized.) If you use a schedule, set the schedule again after setting the clock.

Start screen that appears when the clock is initialized



4 Group remote controller overview

4-1 Overview

The group remote controller (hereinafter referred to as GR) is a compact group controller that connects the following heat source equipment and instructs the distribution of the water system of the heat source equipment, operation mode, set temperature, and start / stop.

Heat source equipment that can be connected to GR (Note)

USX, EDGE series	Heat Recovery CAONS Series 1, 2	SFMC Series 4, 5
CAONS700		

[In the case of Universal Smart X (USX and EDGE Series), CAONS700, and Super Flex Modular Chiller (SFMC Series 4, 5)]

The GR can connect up to two module controllers (hereinafter referred to as MC). By connecting up to 16 unit controllers (hereinafter referred to as UC) to each MC, up to 32 UCs can be controlled.

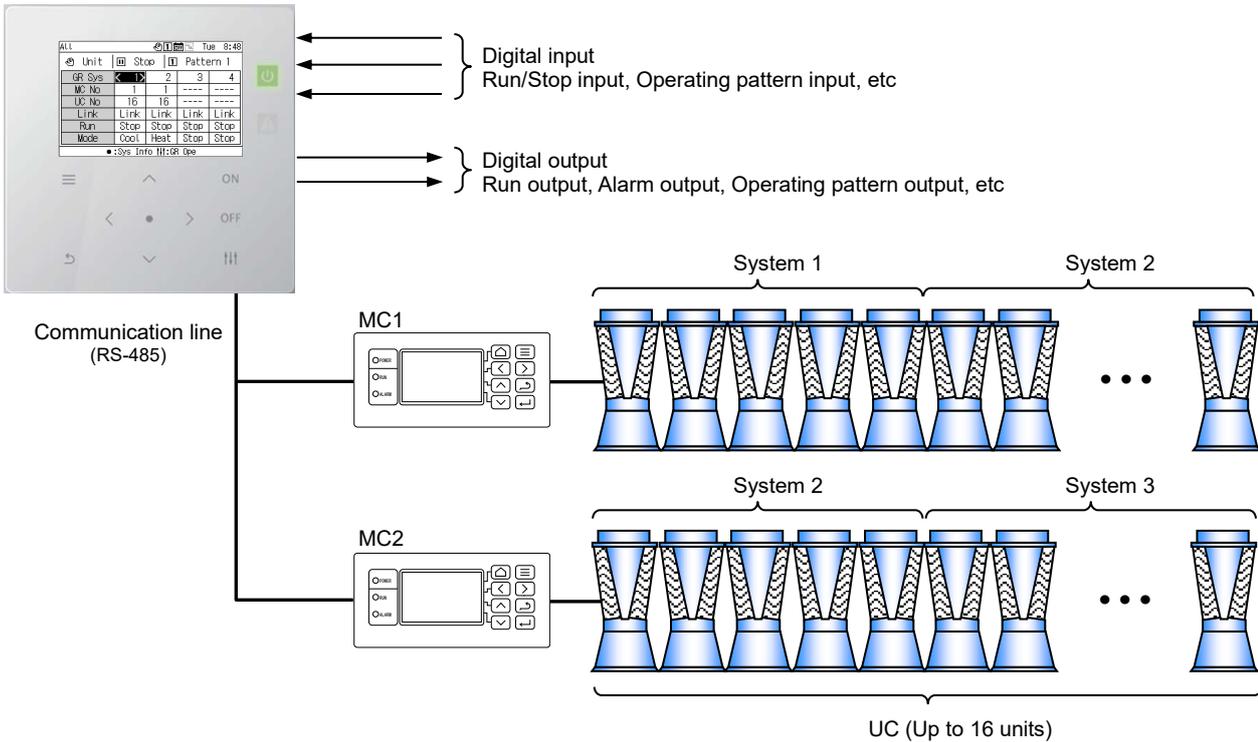
And you can control up to 4 water systems. The UC can be distributed and controlled for each water system. (Up to 2 water systems can be controlled for each MC. A UC extending over MCs can be set as part of the same system and be controlled.)

Each MC detects the required flow rate on the load side according to the GR operation instructions, and instructs each UC to start / stop the built-in inverter pump and the required flow rate or required operating frequency. (For SFMC, USX, EDGE series) It also controls rotation to equalize the operating time of each UC.

Upon receiving the operation instruction from the MC, the UC controls the number and frequency of compressors so that the outlet water temperature approaches the set temperature. The UC then performs rotation control to equalize the operating time of each compressor.

USX connection example and setting example

Group Remote Controller (GR)



Note : The connected models cannot be mixed in the same water system. Also, when connecting a model other than the USX and EDGE series, it is necessary to set the model of the DN code. Refer to the DN code list (P. 51) for model settings.

4-2 Function List

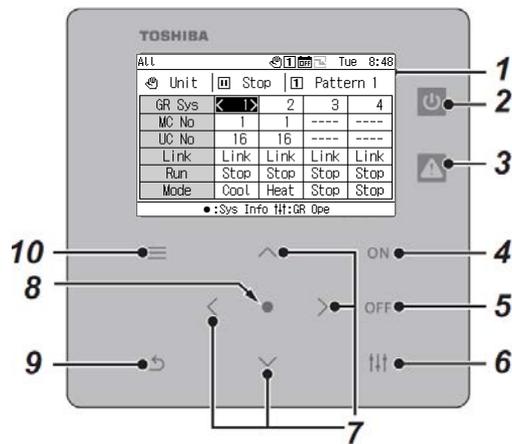
No.	Function	Remark
1	Operation status display	System status Run/stop, operation mode, whether failures occurred, operation capacity, outlet/inlet water temperatures, unit flow (Note 1), and simplified power (including pump power)
2		Module controller status Run/stop, operation mode, fault code, operation capacity, outlet/inlet water temperatures, unit flow (Note 1), and simplified power (including pump power)
3		Module status Run/stop, operation mode, fault code, operation capacity, outlet/inlet water temperatures, unit flow (Note 2), and simplified power (including pump power)
4		Circuit status Refrigeration cycle information, compressor operation time, and the number of compressor startups
5	Operation status output (all)	Run/stop, failure, operation capacity, operation pattern
6	Run/stop	All or system-by-system
7	Pattern settings (switching)	Enables you to set GR operation patterns and switch between them.
8	Operation mode settings (switching)	Enables you to set operation modes for all systems and switch between them.
9	Set temperature change	Enables you to change the set temperatures for all systems.
10	Demand	Enables you to restrict the current or operation capacity, using an external demand signal. Enables you to set a demand current and capacity.
11	System settings	Enables you to distribute all connected modules into systems. (For each module controller system)
12	Schedule Settings	Enables you to set an operation schedule. (For 5 weeks)
13	Failure history display	Enables you to check failure history.
14	Power saving	Enables you to enable and disable the demand setting. To enable the power saving function, the DN code must be set.

Note 1: In the case of CAONS700, the unit flow, supply water temperature, and return water temperature can be displayed if the signals of the flow meter and external heat source side supply water/return water temperature sensors are input to the MC.

Note 2: CAONS700 do not support this function.

5 Names and Functions of Parts

Operation panel



No.	Name	Description (Note 1)
1	LCD	-
2	Operation lamp	ON during running and OFF during stoppage. You can change the output method by setting "Level of operating output". (Note 2)
3	Failure lamp	Lights up when a failure occurs. You can change the output method by setting "Level of failure output". (Note 2)
4	[ON] button	Press this button to run the GR. Enabled if GR is set to Unit or External (Run/Stop input not set).
5	[OFF] button	Press this button to stop the GR. If the GR is set to External and Run/Stop input is set, it is switched to unit stop.
6	[↑↓] (Control) button	Press this button to display the GR operation screen and the system operation screen.
7	[Λ, V, <] and [>] buttons	Press these buttons to select an item.
8	[•] (Confirm) button	Press this button to switch the screen in the order of All→System→MC→UC→Circuit and to select an item and go to the next screen.
9	[↶] (Return) button	Press this button to return to the previous screen.
10	[≡] (Menu) button	Press this button to display the Menu screen.

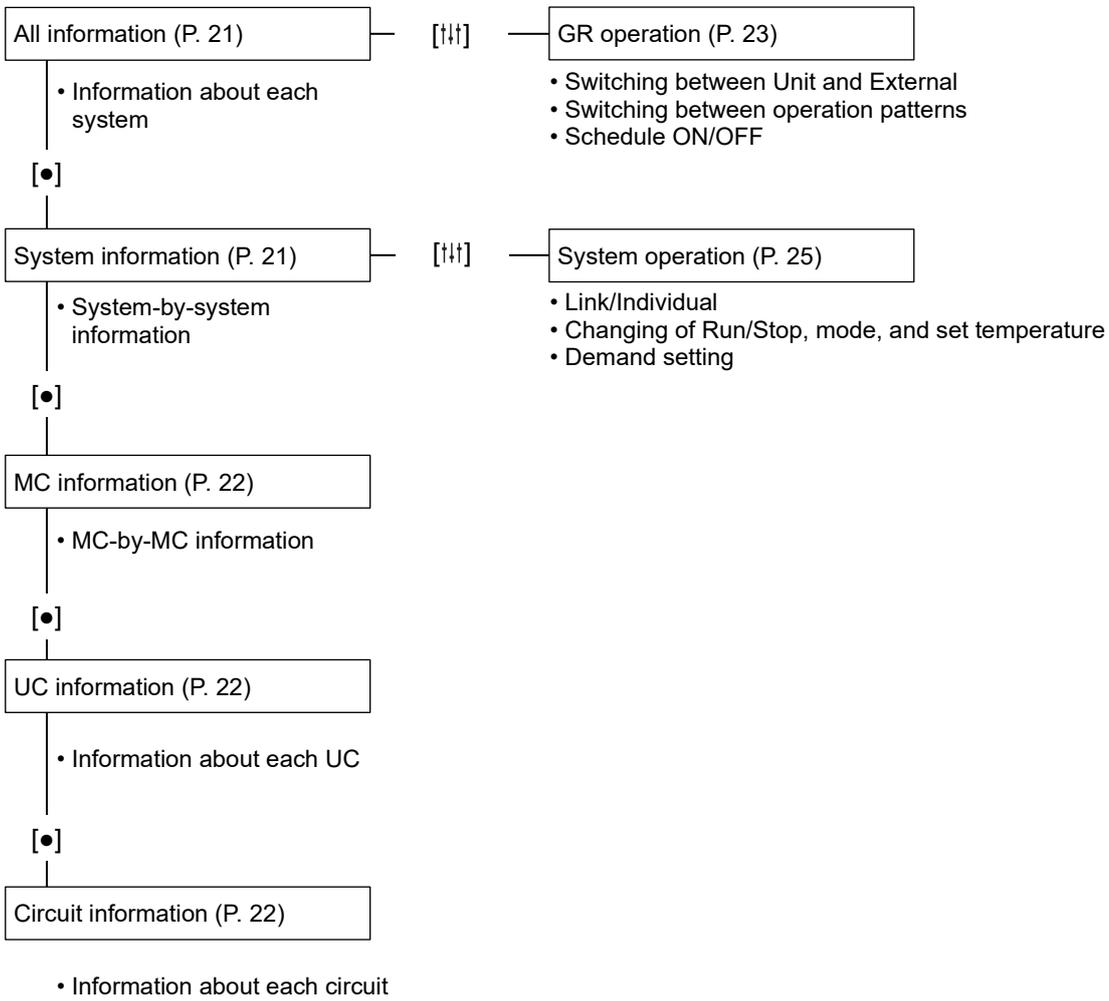
Note 1: If the backlight is OFF although the backlight setting is not "OFF", press any button to turn ON the backlight. (For a button that is set to be long pressed, the backlight is turned ON after it is long pressed.) Button operations are enabled after the backlight is turned ON.

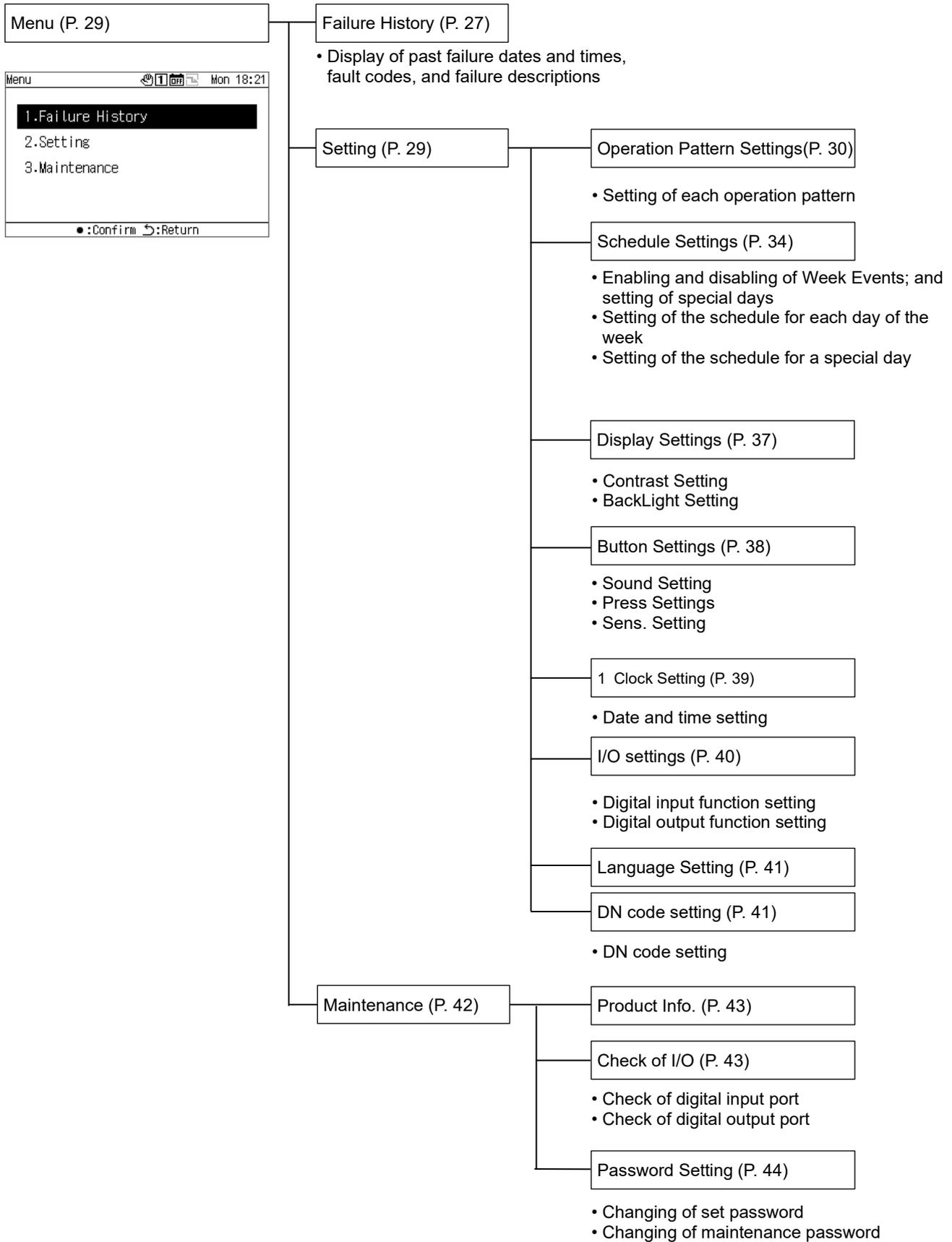
Note 2: For details, refer to "DN code setting (P. 41)".

6 Icon List

Item	Icon	Status	Description
Unit/External		Unit	Indicates that the GR is set to Unit.
		External	Indicates that the GR is set to External.
Run/Stop		Stop	Indicates the stopped state.
		Run	Indicates the running state.
Operation pattern		Pattern 1	Indicates that the pattern is operation pattern 1.
		Pattern 2	Indicates that the pattern is operation pattern 2.
		Pattern 3	Indicates that the pattern is operation pattern 3.
		Pattern 4	Indicates that the pattern is operation pattern 4.
Operation mode		Stop mode	Indicates that the operation mode is Stop.
		Cool	Indicates that the operation mode is Cool.
		Heat	Indicates that the operation mode is Heat.
		Cool storage	Indicates that the operation mode is C.Storage.
		Heat storage	Indicates that the operation mode is H.Storage.
Schedule		Disable	Indicates that the execution of the schedule is disabled.
		Enable	Indicates that the execution of the schedule is enabled.
Demand Power saving		OFF	Indicates that demand/power saving is OFF.
		ON	Indicates that demand/power saving is ON.
System superiority Individual/Link		Individual	Indicates that the system is disconnected from GR operation and is individual.
		Link	Indicates that the system is linked to GR operation.
Schedule Settings		Disable	Indicates that events are disabled.
		Each day of the week	Indicates that an event for a day of the week is set.
		Special1	Indicates that an event for special day 1 is set.
		Special2	Indicates that an event for special day 2 is set.
		Special3	Indicates that an event for special day 3 is set.
Others		Failure, attention	Displayed in the event of a failure or if attention is required.
		Restart	Indicates that the setting item is for a DN code that requires a restart.

7 Screen Structure





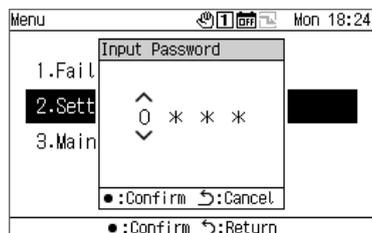
8 Basic Operations

Inputting a password

Select "Setting" or "Maintenance" from the Menu screen to display the Input Password screen.

If no password is set, press [●] (Confirm) without changing the digits.

If you input an incorrect password, an error message appears and the functions are restricted.



1 On the Input Password screen, use [<] and [>] to select an input digit and press [^] and [v] to change the number.

2 After inputting a password, press [●] (Confirm).

In the GR, the password for "Setting" differs from that for "Maintenance".

To change the passwords, refer to "Password Setting (P. 44)".

9 Displaying the Operation Status

The operation state appears on the “all information screen”, “system information screen”, “MC information screen”, “UC information screen”, and “circuit information screen”.

For details of the items displayed on each operation status display screen, refer to “14-1List of display items on information screens (P. 45)”.

9-1 All Information

The screenshot shows the 'All Information' screen with the following data:

GR Sys	1	2	3	4
MC No.	1	1	----	----
UC No.	16	16		
Link	Link	Link	Link	Link
Run	Stop	Stop	Stop	Stop
Mode	Cool	Heat	Stop	Stop

Callouts from the image:

- Displays [ON]/[OFF] of the GR
- Displays the operation pattern number.
- Displays the GR operation pattern.

- You can switch the displayed item to another, using [^] and [v].
- Use [<] and [>] to move the GR system cursor.
- Use [•] (Confirm) to move to the system information screen for the system where the cursor is positioned.
- Use [↑↑↑] (Control) to move to the GR operation screen (P. 24).
- Use [ON]/[OFF] to run/stop the entire GR.
- Use [≡] (Menu) to move to the Menu screen.

9-2 System Information

The screenshot shows the 'System Information' screen with the following data:

Fault code	
MC No.	1
UC No.	16
PST	7.0
LWT	17.5
EWT	17.5

Callouts from the image:

- Displays the current operating state of the system.
- Displays the operation mode of the system.
- Displays the operation pattern of the system.
- Displays the current system number.

- You can switch the displayed item to another, using [^] and [v].
- Use [<] and [>] to switch the displayed system.
- Use [•] (Confirm) to move to the MC information screen.
- Use [↑↑↑] (Control) to move to the system operation screen (P. 26).
- Use [ON]/[OFF] to run/stop the entire system.
- Use [≡] (Menu) to move to the Menu screen.

9-3 MC Information

The screenshot shows the 'MC Information' screen. At the top, it displays 'ALL>>Sys.>>MC' and the date/time 'Tue 8:21'. Below this is a row of system status indicators: 'Sys 1', 'ink', 'Stop', and 'Cool'. The main table contains the following data:

MC-Sys.	1A			
Fault code				
UC No.	16			
Remote	Rmt			
Run	Stop			
Mode	Cool			

At the bottom, it says ':UC Info ↵:Return'. Callouts point to: 'ink' (current operating state), '1A' (operation mode), '16' (operation pattern), and '1' (current system number).

You can switch the displayed item to another, using [^] and [V].
 Use [<] and [>] to move the MC-Sys cursor.
 Use [•] (Confirm) to move to the UC information screen.
 Use [ON]/[OFF] to run/stop the entire system.
 Use [≡] (Menu) to move to the Menu screen.

9-4 UC Information

The screenshot shows the 'UC Information' screen. At the top, it displays 'ALL>>Sys.>>MC>>UC' and the date/time 'Tue 8:22'. Below this is a row of system status indicators: 'MC1-A', 'Rmt', 'Stop', and 'Cool'. The main table contains the following data:

UC	1	2	3	4
Fault code				
Remote	Rmt	Rmt	Rmt	Rmt
Run	Stop	Stop	Stop	Stop
Mode	Cool	Cool	Cool	Cool
Opn Cap	0	0	0	0

At the bottom, it says ':Circuit Info ↵:Return'. Callouts point to: '1' (current operating state), 'Rmt' (operation mode), '1' (operation pattern), and '1' (current MC number).

You can switch the displayed item to another, using [^] and [V].
 Use [<] and [>] to move the UC cursor.
 Use [•] (Confirm) to move to the circuit information screen.
 Use [ON]/[OFF] to run/stop the entire unit.
 Use [≡] (Menu) to move to the Menu screen.

9-5 Circuit Information

The screenshot shows the 'Circuit Information' screen. At the top, it displays '>>>MC>>UC>>Circuit' and the date/time 'Tue 8:30'. Below this is a row of system status indicators: 'UC 1', 'Rmt', 'Stop', and 'Stop'. The main table contains the following data:

Circuit	A	B	C	D
Comp.	OFF	OFF	OFF	OFF
H Press	2.04	2.05	2.06	2.07
L Press	1.94	1.93	1.92	1.91

At the bottom, it says '↵:Return'. Callouts point to: 'UC 1' (current operating state), 'Rmt' (operation mode), '1' (operation pattern), and '1' (current UC number).

You can switch the displayed UC to another, using [<] and [>].
 Use [ON]/[OFF] to run/stop the entire circuit.
 Use [≡] (Menu) to move to the Menu screen.

10 Operating Methods

10-1 Switching the group remote controller between Run/Stop and switching between operation patterns

To switch the GR between Run/Stop and switch between operation patterns, use a unit operation or an external signal. Which of a unit operation or an external signal to use for switching differs depending on the Unit/External and input/output function settings of the GR, as in the table below.

For information about switching between Unit and External, refer to “Changing the group remote controller operation settings (P. 24)”.

Operation item	GR state		Operating method
	Unit/External	Input/output settings	
Switching the current operating state	Unit	–	Unit operation (ON button and OFF button operation)
	External	Run/Stop input not set	
	External	Run/Stop input set	External signal
Switching the operation pattern	Unit	–	Unit operation (Operation from the GR operation screen)
	External	Operation pattern input not set	
	External	Operation pattern input set	External signal

(1) Switching the current operating state

Depending on the current operating state of the GR, any systems that are set to “Link” will run/stop in link with the GR.

In the case of Unit or External (when no Run/Stop input is set)

With the unit operation on the GR (ON button and OFF button operation), switch the current operating state of the GR.

For information about switching between Unit and External, refer to “Changing the group remote controller operation settings (P. 24)”.

* While the failure history screen or various setting/maintenance screen is displayed, you cannot operate the ON button or the OFF button.



To run the GR

1 Press [ON].

The message screen appears.

2 Press [•] (Confirm).

Any “Link” systems enter the operation state and the operation lamp is turned ON.



To stop the GR

1 Press [OFF].

The message screen appears.

2 Press [•] (Confirm).

Any “Link” systems enter the stop state and the operation lamp is turned OFF.

In the case of external operation (when Run/Stop input is set)

Switch the current operating state of the GR with an external Run/Stop input signal. The unit operation (ON button operation) is disabled.

During running with an external signal, performing a unit stop operation (OFF button operation) causes a message to be displayed, so that you can switch to unit stop.

For information about switching between Unit and External, refer to “Changing the group remote controller operation settings (P. 24)”.

(2) Switching the operation pattern

In the case of Unit or External (operation pattern input not set)

Switch between operation patterns with an operation on the “GR operation screen”.

For information about switching between Unit and External, refer to “Changing the group remote controller operation settings (P. 24)”.

In the case of External (operation pattern input is set)

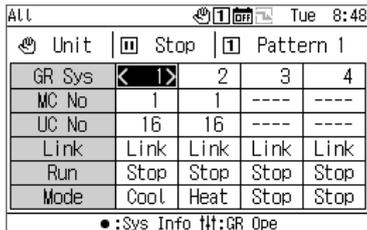
Switch between operation patterns with an external operation pattern input signal.

The operation pattern switching operation on the “GR operation screen” is disabled.

For information about switching between Unit and External, refer to “Changing the group remote controller operation settings (P. 24)”.

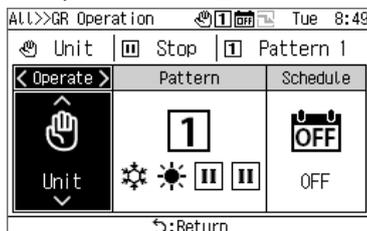
(3) Changing the group remote controller operation settings

All information screen



1 On the all information screen, press [↑↑] to display the GR operation screen.

GR operation screen



2 Use [<] and [>] to select the item to change.
For information about how to set each item, refer to the table below.

3 To confirm the changes, press [↵] (Return) and on the message screen, press [•] (Confirm).

List of the setting items on the remote controller operation screen

Item	Description
Operate	Use [^] and [V] to switch between Unit and External.
Pattern	Use [^] and [V] to switch between operation patterns 1 to 4. In the case of Unit or External (operation pattern input not set), the operation is enabled. * You can change the contents of operation patterns with “Operation Pattern Settings (P. 30)”.
Schedule	Use [^] and [V] to switch between ON and OFF. * Does not operate if the clock is not set. Does not operate on days when no events are set or the schedule is disabled.

10-2 System operation

When set to Link, a system runs/stops in link with the current operating state of the GR.

When set to Individual, a system is operated on the system operation screen.

For information about switching between Link and Individual, refer to P. 26.

(1) Switching the current operating state

In the case of Link

The system also runs/stops in link with the current operating state of the GR and the operation mode of the operation pattern.

In the case of Individual

In the case of Individual, the system runs/stops with operation on the system operation screen.

All information screen

ALL					Tue 8:48				
Unit	Stop	Pattern 1							
GR Sys	< 1 >	2	3	4					
MC No	1	1	----	----					
UC No	16	16	----	----					
Link	Link	Link	Link	Link					
Run	Stop	Stop	Stop	Stop					
Mode	Cool	Heat	Stop	Stop					
●:Sys Info ††:GR Ope									

1 On the all information screen, press [●] to display the system information screen.

System information screen

ALL>>Sys.		Tue 8:51	
< Sys 1 >	Indiv	Stop	Cool
	Fault code		
	MC No.	1	
	UC No.	16	
	PST	7.0	
	LWT	17.5	
EWT	17.5		
●:MC Info ↵:Return ††:Sys Ope			

2 On the system information screen, press [††] (Control) to display the system operation screen.

System operation screen

ALL>>Sys.>>Sys.Ope.			Tue 8:52		
Sys 1	Indiv	Stop	Cool		
Operate	< Run >	Mode			
Indiv	Run	Cool			
↵:Return					
ALL>>Sys.>>Sys.Ope. Tue 8:53					
Sys 1	Indiv	Stop	Cool		
Attention					
Do you want to change operation?					
●:Confirm ↵:CANCEL					
↵:Return					

3 Press [<] and [>] to position the cursor on Run and use [^] and [v] to select “Run”.

To stop the system, select “Stop”.

4 Press [↵] (Return).

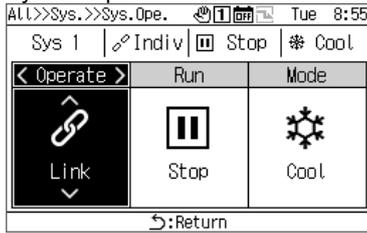
The message screen appears.

5 Press [●] (Confirm).

The displayed system enters the operation state and the operation lamp is turned ON.

(2) Changing the system operation settings

System operation screen



1 On the system information screen, press [↑↓] to display the system operation screen.

2 Use [<] and [>] to select the item to change.
For information about how to set each item, refer to the table below.

3 To confirm the changes, press [↵] (Return) and on the message screen, press [●] (Confirm).

List of the setting items on the system operation screen

Item	Description																																		
Operate	Use [Λ] and [V] to switch between Link and Individual.																																		
Run	Use [Λ] and [V] to switch the current operating state. *If Operate is "Link", you cannot operate the system.																																		
Mode	Use [Λ] and [V] to switch between Stop, Cool, and Heat. *If Operate is "Link", you cannot operate the system. *Changing the mode does not change the mode for the operation pattern.																																		
Cool PST Heat PST	<p>Set the set temperatures for Cool/Heat. Select either "C.PST" or "H.PST" and press [●] (Confirm) to display the set temperature input screen. Use [<] and [>] to select an input digit, use [Λ] and [V] to change the value, and press [●] (Confirm).</p> <p>The valid setting ranges are as in the table below.</p> <table border="1"> <thead> <tr> <th rowspan="2">Model</th> <th colspan="2">Cool PST [°C]</th> <th colspan="2">Heat PST [°C]</th> </tr> <tr> <th>Initial value</th> <th>Setting range</th> <th>Initial value</th> <th>Setting range</th> </tr> </thead> <tbody> <tr> <td>USX, EDGE Series</td> <td>7.0</td> <td>4.0 to 30.0</td> <td>45.0</td> <td>25.0 to 55.0</td> </tr> <tr> <td>SFMC Series 4, 5</td> <td>7.0</td> <td>5.0 to 25.0</td> <td>45.0</td> <td>35.0 to 55.0</td> </tr> <tr> <td>CAONS700</td> <td>–</td> <td>–</td> <td>65.0</td> <td>50.0 to 90.0</td> </tr> <tr> <td>Heat Recovery CAONS Series 1</td> <td>–</td> <td>–</td> <td>65.0</td> <td>50.0 to 85.0</td> </tr> <tr> <td>Heat Recovery CAONS Series 2</td> <td>30.0</td> <td>9.0 to 35.0</td> <td>65.0</td> <td>50.0 to 85.0</td> </tr> </tbody> </table> <p>*If you change the set temperature, the set temperature of the currently selected operation pattern is changed.</p>	Model	Cool PST [°C]		Heat PST [°C]		Initial value	Setting range	Initial value	Setting range	USX, EDGE Series	7.0	4.0 to 30.0	45.0	25.0 to 55.0	SFMC Series 4, 5	7.0	5.0 to 25.0	45.0	35.0 to 55.0	CAONS700	–	–	65.0	50.0 to 90.0	Heat Recovery CAONS Series 1	–	–	65.0	50.0 to 85.0	Heat Recovery CAONS Series 2	30.0	9.0 to 35.0	65.0	50.0 to 85.0
Model	Cool PST [°C]		Heat PST [°C]																																
	Initial value	Setting range	Initial value	Setting range																															
USX, EDGE Series	7.0	4.0 to 30.0	45.0	25.0 to 55.0																															
SFMC Series 4, 5	7.0	5.0 to 25.0	45.0	35.0 to 55.0																															
CAONS700	–	–	65.0	50.0 to 90.0																															
Heat Recovery CAONS Series 1	–	–	65.0	50.0 to 85.0																															
Heat Recovery CAONS Series 2	30.0	9.0 to 35.0	65.0	50.0 to 85.0																															
Demand	<p>Set the demand current (for SFMC Series 4, 5, demand capacity). Select "Demand" and press [●] (Confirm) to display the value input screen. Use [<] and [>] to select an input digit, use [Λ] and [V] to change the value, and press [●] (Confirm).</p> <p>The range of values that can be input is "0" to "30000". *The initial value is "0". Note that if you enable demand/power saving with an incorrect setting, the unit will be stopped. *If you change the demand current and capacity, the demand current and capacity of the currently selected operation pattern is changed.</p>																																		

11 Displaying Failure History

You can display Failure History of the GR and MCs, up to 16 records for each (48 records in total).

In Failure History, the dates and times failures occurred, the numbers of the MCs, UCs, and circuits in which the failures occurred, fault codes, and failure details are displayed.

The display method differs depending on whether the MC Failure History data contains year information or not.

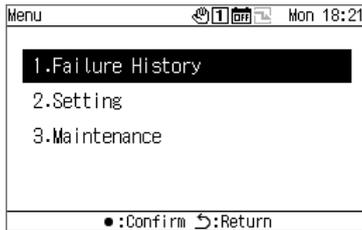
Year information contained: When a failure occurs, the latest fault code appears at the top.

Year information not contained: Failures in the GR, MC1, and MC2 are displayed in this order.

* If at least one device in which the data does not contain year information, the display method for the case in which year information is not contained is used.

11-1 Displaying Failure History

Menu screen



1 Press [≡] to display the Menu screen.

Failure History screen

No.	Date	Time	MC	UC	Cir.	Code
1	2022-05-26	18:13	1	--	--	12
2	2022-05-26	18:12	1	--	--	12
3	2022-05-26	18:11	--	--	--	1C
4	2022-05-26	18:06	--	--	--	1C
5	2022-05-19	13:35	1	1	A	60
6	2022-05-19	13:33	1	1	B	60
7	2022-05-19	13:31	1	1	C	60
8	2022-05-19	13:29	1	1	D	60

2 On the Menu screen, select “Failure History” and press [•] (Confirm).

- Use [Λ] and [V] to switch between pages.
- Use [<] and [>] to display failure details.

Select [<] or [>].

No.	Code	Fault Contents
1	12	Int. comm error
2	12	Int. comm error
3	1C	GR comm error
4	1C	GR comm error
5	60	High press alarm
6	60	High press alarm
7	60	High press alarm
8	60	High press alarm

11-2 Clearing Failure History

Failure History screen

No.	Date	Time	MC	UC	Cir.	Code
1	2022-05-26	18:13	1	--	--	12
2	2022-05-26	18:12	1	--	--	12
3	2022-05-26	18:11	--	--	--	1C
4	2022-05-26	18:06	--	--	--	1C
5	2022-05-19	13:35	1	1	A	60
6	2022-05-19	13:33	1	1	B	60
7	2022-05-19	13:31	1	1	C	60
8	2022-05-19	13:29	1	1	D	60

●:Clear ↵:Return

↓ Clearing Failure History

No.	Date	Time	MC	UC	Cir.	Code
1	2022-05-26	18:13	1	--	--	12
2	2022-05-26	18:12	1	--	--	12
3	2022-05-19	13:35	1	1	A	60
4	2022-05-19	13:33	1	1	B	60
5	2022-05-19	13:31	1	1	C	60
6	2022-05-19	13:29	1	1	D	60
7						
8						

●:Clear ↵:Return

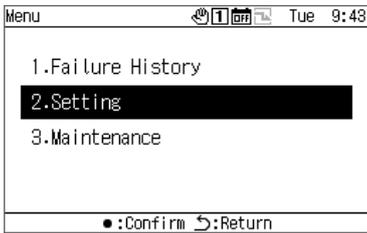
Press [●] (Clear) and on the message screen, press [●] (Confirm).

Failure History of the failures detected by the GR is cleared.

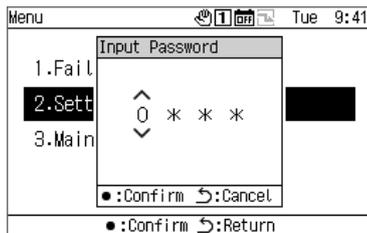
- * You cannot clear the Failure History of MCs from the GR. If you want to clear the Failure History of MCs, you need to clear the Failure History on each MC.

12 Setting Items

■ Displaying the “Setting” screen

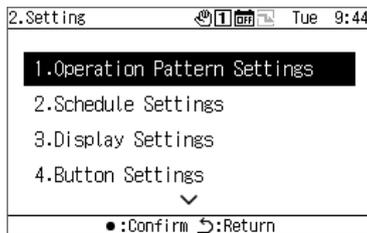


1 Press [≡] to display the Menu screen.



2 On the Menu screen, select “Setting” and press [●] (Confirm).

The Input Password screen appears.



3 Input a 4-digit password and press [●] (Confirm).

Use [←] and [→] to select an input digit and use [Λ] and [V] to select a number.

4 Use [Λ] and [V] to select an item and press [●] (Confirm).

Functions may be restricted due to the input password.

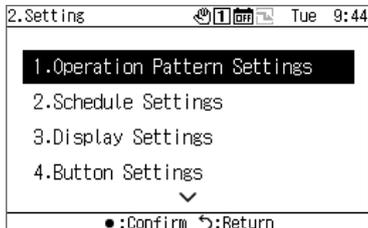
List of setting items

Setting items	Description	Set password level		Reference page
		Administrator	User	
Operation Pattern Settings	Set an operation pattern.	●	○	P.30
Schedule Settings	Enables you to set an operation schedule.	●	○	P.34
Display Settings	Set the contrast and the backlight ON time.	●	●	P.37
Button Settings	Set button operations.	●	○	P.38
Date&time setting	Set a date and time.	●	○	P.39
I/O settings	Set the digital I/O functions.	●	○	P.40
Language Setting	Set the display language.	●	-	P.41
DN code setting	Set a DN code.	●	-	P.41

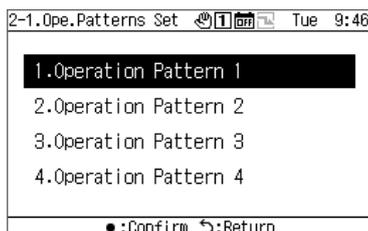
●: Function not restricted, ○: Function restricted, -: Not displayed

12-1 Operation Pattern Settings

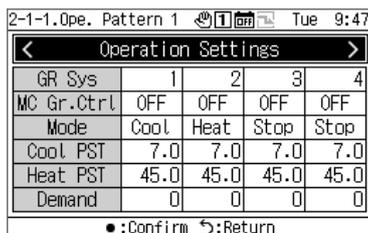
An MC (MC system) and UC system assignment for each GR system, operation mode, set temperature, demand setting, sensor setting, and pattern link output can be collected into a single operation pattern. You can set up to 4 operation patterns. During operation, select one of set operation patterns and issue commands to MCs in accordance with the settings of the operation pattern selected for each system.



1 On the setting screen, select “Operation Pattern Settings” and press [●] (Confirm).



2 Use [Λ] and [V] to select the pattern to change and press [●] (Confirm).



3 Use [<] and [>] to select the setting to change and press [●] (Confirm).

For information about what to set for each item and about how to change each item, refer to the table on the next page.

4 To confirm the changes, press [↵] (Return) and on the message screen, press [●] (Confirm).

Operation Settings

Set the operation conditions for each GR system.

Operation settings screen

Operation Settings				
GR Sys	1	2	3	4
MC Gr.Ctrl	OFF	OFF	OFF	OFF
Mode	Cool	Heat	Stop	Stop
Cool PST	7.0	7.0	7.0	7.0
Heat PST	45.0	45.0	45.0	45.0
Demand	0	0	0	0

●:Change ↵:Return

Set temperature input screen

Cool PST		3	4
GR Sys	7.0	OFF	
MC Gr.Ct		Stop	
Mode			
Cool PST	Maximum: 30.0	.0	7.0
Heat PST	Minimum: 4.0	.0	45.0
Demand	●:Confirm ↵:Cancel	0	0

●:Change ↵:Return

Demand value input screen

Demand		3	4
GR Sys	0	OFF	
MC Gr.Ct		Stop	
Mode			
Cool PST	Maximum: 30000	.0	7.0
Heat PST	Minimum: 0	.0	45.0
Demand	●:Confirm ↵:Cancel	0	0

●:Change ↵:Return

List of "Operation Settings" setting items

Item	Description																																		
MC Gr.Ctrl	<p>Set MC group control to ON/OFF. MC Gr.Ctrl OFF: Operate all MCs in the same system. MC Gr.Ctrl ON: Control the number of MCs to operate in the same system according to load. Operation procedure: Use [Λ], [V], [<], and [>] to select the system to change and press [●] (Confirm) to switch between ON and OFF.</p>																																		
Mode	<p>Switch the mode between Stop, Cool, and Heat. Operation procedure: Use [Λ], [V], [<], and [>] to select the system to change and press [●] (Confirm) to switch between Stop, Cool, and Heat.</p>																																		
Cool PST Heat PST	<p>Set the set temperatures for Cool/Heat. Operation procedure: 1 Use [Λ], [V], [<], and [>] to select the system to change and press [●] (Confirm) to display the set temperature input screen. 2 Use [<] and [>] to select an input digit, use [Λ] and [V] to change the value, and press [●] (Confirm).</p> <p>The valid setting ranges are as in the table below.</p> <table border="1"> <thead> <tr> <th rowspan="2">Model</th> <th colspan="2">Cool PST [°C]</th> <th colspan="2">Heat PST [°C]</th> </tr> <tr> <th>Initial value</th> <th>Setting range</th> <th>Initial value</th> <th>Setting range</th> </tr> </thead> <tbody> <tr> <td>USX, EDGE Series</td> <td>7.0</td> <td>4.0 to 30.0</td> <td>45.0</td> <td>25.0 to 55.0</td> </tr> <tr> <td>SFMC Series 4, 5</td> <td>7.0</td> <td>5.0 to 25.0</td> <td>45.0</td> <td>35.0 to 55.0</td> </tr> <tr> <td>CAONS700</td> <td>—</td> <td>—</td> <td>65.0</td> <td>50.0 to 90.0</td> </tr> <tr> <td>Heat Recovery CAONS Series 1</td> <td>—</td> <td>—</td> <td>65.0</td> <td>50.0 to 85.0</td> </tr> <tr> <td>Heat Recovery CAONS Series 2</td> <td>30.0</td> <td>9.0 to 35.0</td> <td>65.0</td> <td>50.0 to 85.0</td> </tr> </tbody> </table>	Model	Cool PST [°C]		Heat PST [°C]		Initial value	Setting range	Initial value	Setting range	USX, EDGE Series	7.0	4.0 to 30.0	45.0	25.0 to 55.0	SFMC Series 4, 5	7.0	5.0 to 25.0	45.0	35.0 to 55.0	CAONS700	—	—	65.0	50.0 to 90.0	Heat Recovery CAONS Series 1	—	—	65.0	50.0 to 85.0	Heat Recovery CAONS Series 2	30.0	9.0 to 35.0	65.0	50.0 to 85.0
Model	Cool PST [°C]		Heat PST [°C]																																
	Initial value	Setting range	Initial value	Setting range																															
USX, EDGE Series	7.0	4.0 to 30.0	45.0	25.0 to 55.0																															
SFMC Series 4, 5	7.0	5.0 to 25.0	45.0	35.0 to 55.0																															
CAONS700	—	—	65.0	50.0 to 90.0																															
Heat Recovery CAONS Series 1	—	—	65.0	50.0 to 85.0																															
Heat Recovery CAONS Series 2	30.0	9.0 to 35.0	65.0	50.0 to 85.0																															
Demand	<p>Set the demand current (for SFMC Series 4, 5, demand capacity). Operation procedure: 1 Use [Λ], [V], [<], and [>] to select the system to change and press [●] (Confirm) to display the value input screen. 2 Use [<] and [>] to select an input digit, use [Λ] and [V] to change the value, and press [●] (Confirm).</p> <p>The range of values that can be input is "0" to "30000". *The initial value is "0". Note that if you enable demand/power saving with an incorrect setting, the unit will be stopped.</p>																																		

System Settings

Assign the GR system for the A/B systems of an MC.

2-1-1.Ope. Pattern 1 Tue 9:50

System Settings		
MC Sys	Sys A	Sys B
MC-1	Sys 1	----
MC-2	Sys 2	----

•:Change ↵:Return

1 Use [**<**] and [**>**] to select “System Settings” and press [**•**] (Confirm).

2-1-1.Ope. Pattern 1 Tue 9:51

System Settings		
MC Sys	Sys A	Sys B
MC-1	< Sys 1 >	----
MC-2	Sys 2	----

↵:Return

2 Use [**Λ**] and [**V**] to select the item to change and press [**•**] (Confirm).
< and > are displayed, enclosing the selected item.

3 Use [**<**] and [**>**] to select a system and press [**↵**] (Return).

4 To confirm the changes, press [**↵**] (Return) and on the message screen, press [**•**] (Confirm).

UC System Assign

Assign UCs for each MC according to the system.

2-1-1.Ope. Pattern 1 Tue 9:52

UC System Assign			
MC-1	MC Sys	Sys A	Sys B
	GR Sys	Sys 1	----

UC System Assign

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----

•:Confirm ↵:Return

1 Use [**<**] and [**>**] to select “UC System Assign” and press [**•**] (Confirm).

2-1-1.Ope. Pattern 1 Tue 9:53

UC System Assign			
MC-1	MC Sys	Sys A	Sys B
	GR Sys	Sys 1	----

UC System Assign

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----

↵:Return

2 Use [**Λ**] and [**V**] to select the desired MC, use [**<**] and [**>**] to set the UC to assign, and press [**↵**] (Return).

3 To confirm the changes, press [**↵**] (Return) and on the message screen, press [**•**] (Confirm).

Sensor setting

You can set the system for a control sensor.

2-1-1.Ope. Pattern 1 Tue 9:55

Sensor Setting		
MC Sys	Sys A	Sys B
MC-1	----	----
MC-2	----	----

•:Confirm ↵:Return

1 Use [**<**] and [**>**] to select “Sensor setting” and press [**•**] (Confirm).

2-1-1.Ope. Pattern 1 Tue 9:57

Sensor Setting		
MC Sys	Sys A	Sys B
MC-1	< Sys 1 >	----
MC-2	----	----

↵:Return

2 Use [**^**], [**v**], [**<**], and [**>**] to select the item to change and press [**•**] (Confirm).

< and > are displayed, enclosing the selected item.

3 Use [**<**] and [**>**] to select a system and press [**↵**] (Return).

4 To confirm the changes, press [**↵**] (Return) and on the message screen, press [**•**] (Confirm).

Interlock Output Set

Set the output method for the output functions “pattern interlock output1 and pattern interlock output2”.

2-1-1.Ope. Pattern 1 Tue 9:57

Interlock Output Set		
	Interlock 1	Interlock 2
OutPut	OFF	OFF

•:Confirm ↵:Return

1 Use [**<**] and [**>**] to select “Interlock Output Set” and press [**•**] (Confirm).

2-1-1.Ope. Pattern 1 Tue 9:59

Interlock Output Set		
	Interlock 1	Interlock 2
OutPut	OFF	OFF

•:Change ↵:Return

2 Use [**<**] and [**>**] to select the item to change and press [**•**] (Confirm).

It is switched between ON and OFF.

3 To confirm the changes, press [**↵**] (Return) and on the message screen, press [**•**] (Confirm).

12-2 Schedule Settings

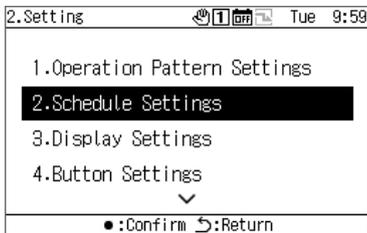
Before making Schedule Settings, be sure to set the clock.

No schedules will operate in any of the following cases:

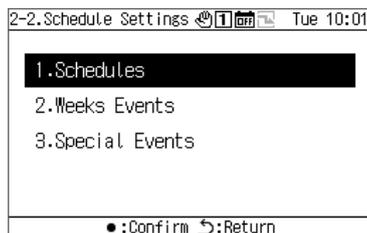
- The clock is not set.

- Schedules are disabled with the Schedule Settings.

- On the GR operation screen, schedules are set to OFF.



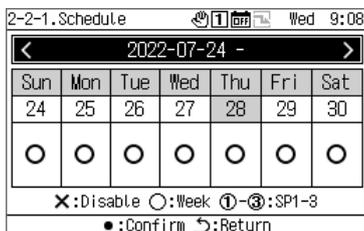
1 On the setting screen, select “Schedule Settings” and press [•] (Confirm).



2 Use [Λ] and [V] to select an item and press [•] (Confirm).

Schedule

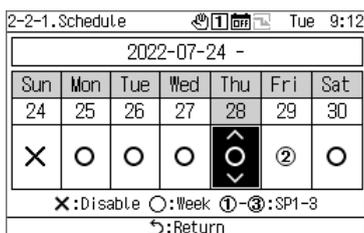
For each date, you can enable or disable Week Events and you can select the operations on Special Events.



1 Use [Λ] and [V] to select “Schedule” and press [•] (Confirm).

2 Use [←] and [→] to select the desired week and press [•] (Confirm).

You can make the settings for 5 weeks.



3 Use [←] and [→] to select the desired date, use [Λ] and [V] to select from X: Disable O: Week 1-3: SP1-3, and press [↵] (Return).

The initial setting is “O (Week Events)” for all dates.

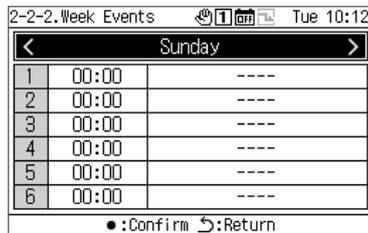
4 To confirm the changes, press [↵] (Return) and on the message screen, press [•] (Confirm).

Week Events

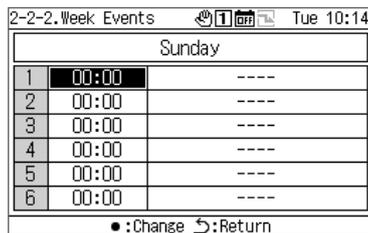
From the GR, you can automatically perform events (Run/Stop) at each event time. You can set up to 6 events a day. If Run/Stop inputs (static signal) are set externally, the external signals are prioritized.

[CAUTION]

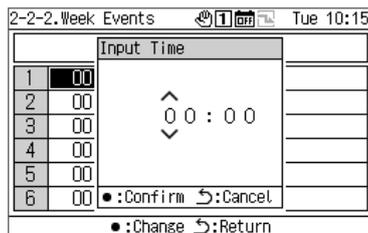
Run/Stop according to a schedule can be operated only once at the set time.



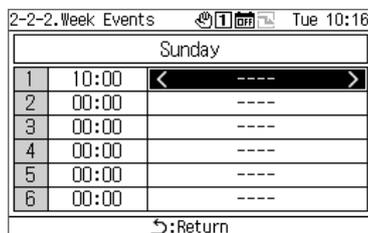
- 1** Use [Λ] and [V] to select “Week Events” and press [●] (Confirm).
- 2** Use [<] and [>] to select the desired day of the week and press [●] (Confirm).
- 3** Use [Λ] and [V] to select a schedule time and press [●] (Confirm).
The Input Time screen appears.



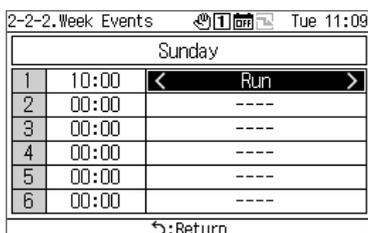
- 4** Use [<] and [>] to select an input digit, use [Λ] and [V] to change the time, and press [●] (Confirm).



- 5** Use [<] and [>] to position the cursor on an event setting item and press [●] (Confirm).
Event switching is now enabled.



- 6** Use [<] and [>] to select between “Run” or “Stop” and press [↵] (Return).

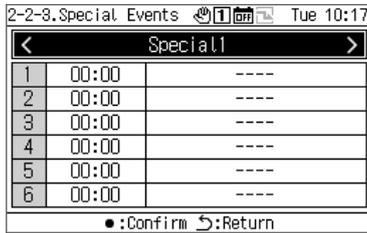


- 7** To confirm the changes, press [↵] (Return) and on the message screen, press [●] (Confirm).

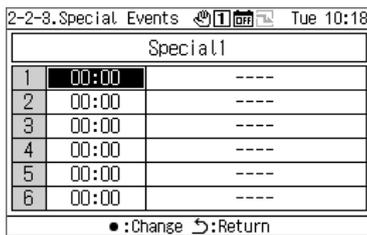
Special Events

[CAUTION]

If you want to operate a schedule with Special Events, set Special1 to Special3 on “Schedule (P. 34)”.



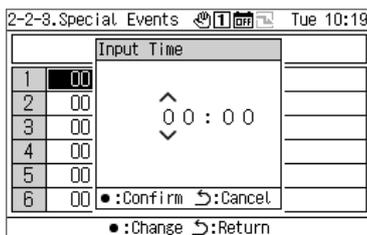
1 Use [Λ] and [V] to select “Special Events” and press [●] (Confirm).



2 Use [<] and [>] to select the desired special day and press [●] (Confirm).

3 Use [Λ] and [V] to select a schedule time and press [●] (Confirm).

The Input Time screen appears.

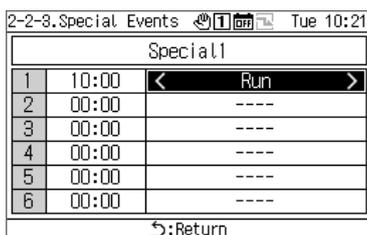


4 Use [<] and [>] to select an input digit, use [Λ] and [V] to change the time, and press [●] (Confirm).



5 Use [<] and [>] to position the cursor on an event setting item and press [●] (Confirm).

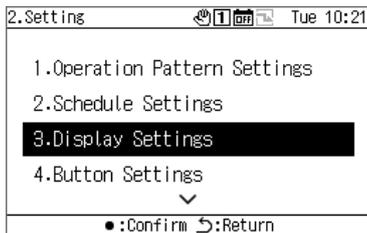
Event switching is now enabled.



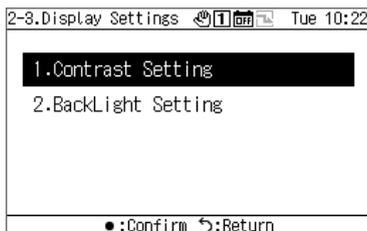
6 Use [<] and [>] to select between “Run” or “Stop” and press [↵] (Return).

7 To confirm the changes, press [↵] (Return) and on the message screen, press [●] (Confirm).

12-3 Display Settings

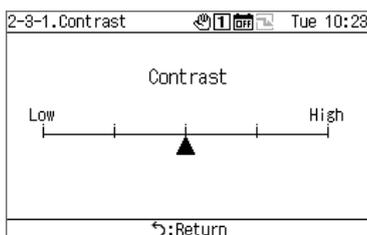


1 On the setting screen, select “Display Settings” and press [●] (Confirm).



2 Use [▲] and [▼] to select an item and press [●] (Confirm).

Contrast

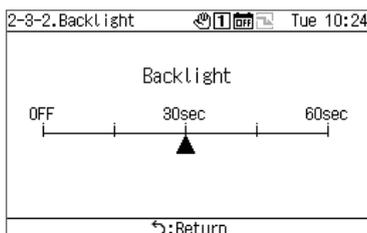


1 Select “Contrast” and press [●] (Confirm).

2 Use [←] and [→] to move the ▲.

3 To confirm the changes, press [↵] (Return) and on the message screen, press [●] (Confirm).

Backlight

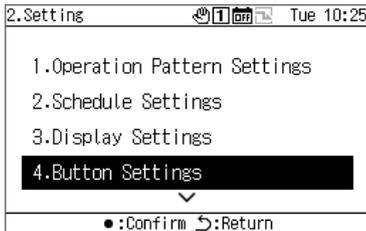


1 Select “Backlight” and press [●] (Confirm).

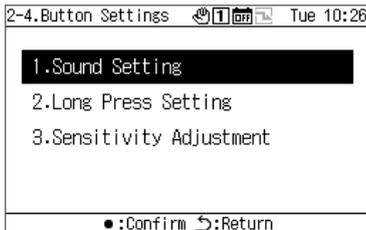
2 Use [←] and [→] to move the ▲.

3 To confirm the changes, press [↵] (Return) and on the message screen, press [●] (Confirm).

12-4 Button Settings



- 1 On the setting screen, select “Button Settings” and press [•] (Confirm).



- 2 Use [Λ] and [V] to select an item and press [•] (Confirm).

Sound Setting



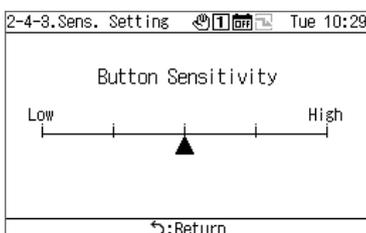
- 1 Select “Sound Setting” and press [•] (Confirm).
- 2 Use [<] and [>] to select “ON” or “OFF”.
- 3 To confirm the changes, press [↵] (Return) and on the message screen, press [•] (Confirm).

Press Settings

No.	Button	Setting
1	OFF Button	< OFF >
2	ON Button	OFF
3	• Button	OFF

- 1 Select “Press Settings” and press [•] (Confirm).
- 2 Use [Λ] and [V] to select the desired button and use [<] and [>] to select “OFF” or a long-press time.
• You can select a long-press time between 1 and 5 seconds.
- 3 To confirm the changes, press [↵] (Return) and on the message screen, press [•] (Confirm).

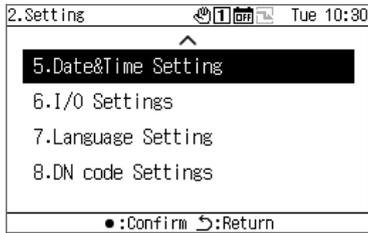
Sens. Setting



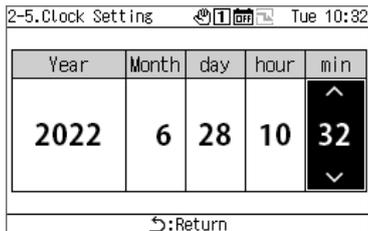
- 1 Select “Sens. Setting” and press [•] (Confirm).
- 2 Use [<] and [>] to move the ▲.
- 3 To confirm the changes, press [↵] (Return) and on the message screen, press [•] (Confirm).

12-5 Date&time setting

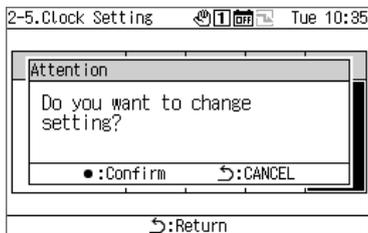
Date&time setting enables you to change the year, month, day, hours, and minutes.
Be sure to set the time so that it can be recorded in failure history and saved operation data.



1 On the setting screen, select “Date&time setting” and press [●] (Confirm).



2 Use [←] and [→] to move the cursor and use [^] and [v] to change the year, month, day, hours, and minutes.



3 To confirm the changes, press [⏏] (Return) and on the message screen, press [●] (Confirm).

12-6 I/O settings

You can assign functions for external inputs such as operation patterns and demand signals, as well as functions for external signal outputs such as operation signals and failure signals.

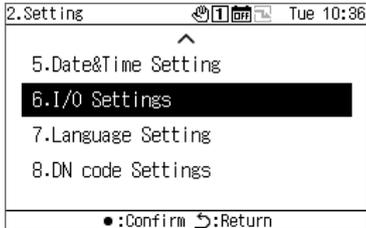
Make sure that no digital noise is applied to the external I/O wiring.

For information about the I/O functions, refer to "I/O function list (P. 50)".

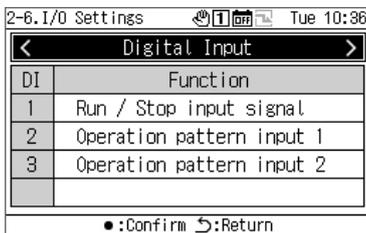
[CAUTION]

If the GR operation is set to "external" or the GR is "running", the setting cannot be changed. Stop the device beforehand.

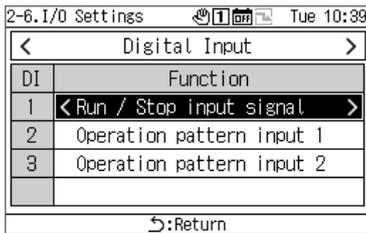
Digital Input settings



1 On the setting screen, select "I/O settings" and press [●] (Confirm).



2 Use [<] and [>] to select "Digital Input" and press [●] (Confirm).

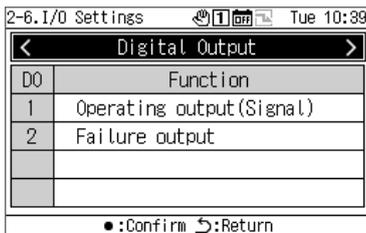


3 Use [^] and [v] to select the input terminal to set and use [<] and [>] to change the input signal.

4 To confirm the changes, press [↵] (Return) and on the message screen, press [●] (Confirm).

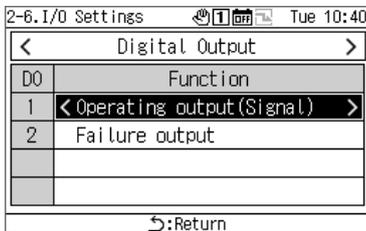
When you change the setting, GR will automatically restart.

Digital Output settings



1 On the setting screen, select "I/O settings" and press [●] (Confirm).

2 Use [<] and [>] to select "Digital Output" and press [●] (Confirm).

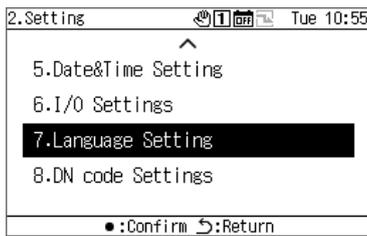


3 Use [^] and [v] to select the output terminal to set and use [<] and [>] to change the output signal.

4 To confirm the changes, press [↵] (Return) and on the message screen, press [●] (Confirm).

When you change the setting, GR will automatically restart.

12-7 Language Setting



1 On the setting screen, select “Language Setting” and press [●] (Confirm).



2 Use [Λ] and [V] to select a language.

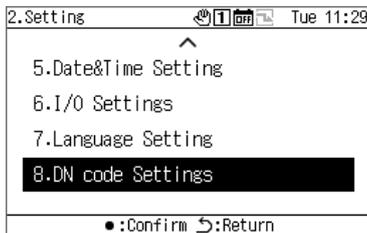
3 To confirm the changes, press [↵] (Return) and on the message screen, press [●] (Confirm).

12-8 DN code setting

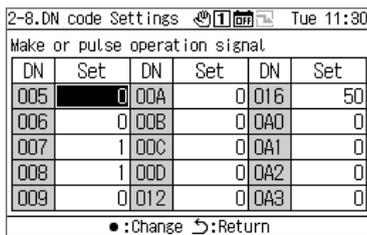
Refer to P. 51 for a DN code list.

[CAUTION]

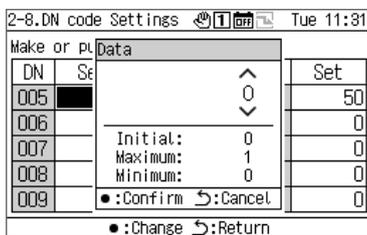
During running, you cannot change a DN code that requires a restart.



1 On the setting screen, select “DN code setting” and press [●] (Confirm).



2 Use [Λ], [V], [←], and [→] to select the DN code to set and press [●] (Confirm).



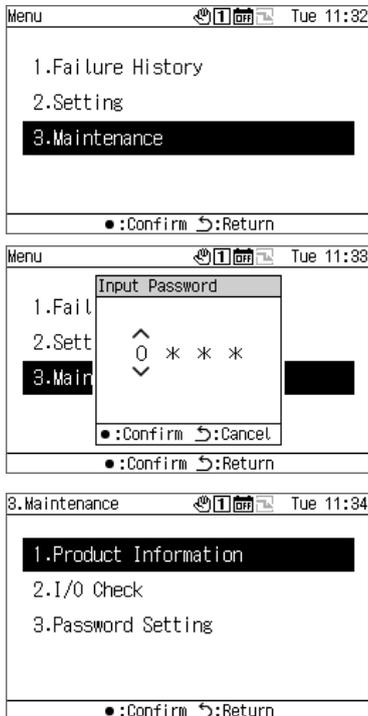
3 Use [Λ] and [V] to change the value and press [●] (Confirm).

4 To confirm the changes, press [↵] (Return) and on the message screen, press [●] (Confirm).

If you changed an item for which ↻ appears in the Set column, GR will restart automatically when the setting change is confirmed.

13 Maintenance Items

■ Displaying the “Maintenance” screen



- 1** Press [≡] to display the Menu screen.
- 2** On the Menu screen, select “Maintenance” and press [•] (Confirm).
The Input Password screen appears.
- 3** Input a 4-digit maintenance password and press [•] (Confirm).
Use [←] and [→] to select an input digit and use [Λ] and [V] to select a number.
- 4** Use [Λ] and [V] to select an item and press [•] (Confirm).
Functions may be restricted due to the input password.

Maintenance item list

Setting items	Description	Maintenance password level		Reference page
		Administrator	User	
Product Info.	Displays product information including the Serial No. and the Software No.	•	•	P.43
Check of I/O	Enables you to check the external inputs and external signal outputs that have been set with I/O settings.	•	-	P.43
Password Setting	Enables you to change the setting password and the maintenance password.	•	-	P.44

•: Function not restricted, ○: Function restricted, -: Not displayed

13-1 Product Info.

8-1.Product Info. Tue 11:34	
Model	: RBP-RC001-E/TR
Serial No.	: 0000W00000
Software No.	: 32RCAP606000000-EN
OS No.	: S31_000_000
↵:Return	

On the Maintenance screen, select “Product Info.” and press [●] (Confirm).

The Model, Serial No., Software No., and OS No. are displayed.

13-2 Check of I/O

Check of Digital Input

You can check the function that is set for each terminal and its state.

Digital Input check screen

8-2.Check of I/O Tue 11:36		
Digital Input		
DI	State	Function
1	OFF	Run / Stop input signal
2	OFF	Operation pattern input 1
3	OFF	Operation pattern input 2
↵:Return		

On the Maintenance screen, select “Check of I/O” and press [●] (Confirm).

Check of Digital Output

[CAUTION]

In the case of External or during running, you cannot operate digital outputs.

Before checking digital outputs, stop the devices.

Digital Output check screen

8-2.Check of I/O Tue 11:37		
Digital Output		
DO	State	Function
1	OFF	Operating output(Signal)
2	OFF	Failure output
●:Confirm ↵:Return		

1 On the Maintenance screen, select “Check of I/O” and press [●] (Confirm).

2 Use [←] and [→] to select “Digital Output” and press [●] (Confirm).

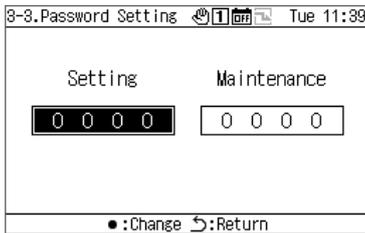
8-2.Check of I/O Tue 11:38		
Digital Output		
DO	State	Function
1	OFF	Operating output(Signal)
2	OFF	Failure output
●:Change ↵:Return		

3 Use [Λ] and [V] to select the terminal to check and use [●] (Confirm) to switch the state between ON and OFF. Check the state of the output destination.

13-3 Password Setting

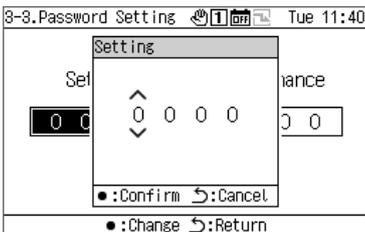
You can change the setting password and the maintenance password.

You can change the setting password and the maintenance password with the same procedure.



1 On the Maintenance screen, select “Password Setting” and press [•] (Confirm).

2 Use [←] and [→] to select between “Setting” and “Maintenance” and press [•] (Confirm).



3 Input a new password and press [•] (Confirm).

Use [←] and [→] to select an input digit and use [^] and [v] to select a number.

4 To confirm the changes, press [↵] (Return) and on the message screen, press [•] (Confirm).

14 List of Display/Setting Items

14-1 List of display items on information screens

A list of items to display on each information screen is provided below. Apart from the items in the note below, some items are not displayed or displayed as “---” depending on the device.

Note 1: In the case of CAONS700, the unit flow, supply water temperature, and return water temperature can be displayed if the signals of the flow meter and external heat source side supply water/return water temperature sensors are input to the MC.

Note 2: In the case of CAONS700, the items can be displayed if the optional pump kit is installed.

Note 3: For SFMC, the simplified power is not displayed.
Simplified power values (accuracy) are not guaranteed.

All information screen

Item	Description	Model				
		USX, EDGE Series	SFMC Series 4, 5	CAONS700	Heat Recovery CAONS Series 1	Heat Recovery CAONS Series 2
GR Sys	Displays the GR system No.	●	●	●	●	●
MC No	Displays the number of MCs in the GR system.	●	●	●	●	●
UC No	Displays the number of UCs in the GR system.	●	●	●	●	●
Link	Displays the operation pattern in the GR system.	●	●	●	●	●
Run	Displays the Run/Stop state of the GR system.	●	●	●	●	●
Mode	Displays the operation mode of the GR system.	●	●	●	●	●
Ope Cap	Displays the operation capacity of the GR system.	●	●	●	●	●
PST	Displays the set temperature of the GR system.	●	●	●	●	●
LWT	Displays the leaving water temperature of the GR system.	●	●	●	●	●
EWT	Displays the entering water temperature of the GR system.	●	●	●	●	●
Unit Flow	Displays the converted flow on the heat source equipment side of the GR system. (Note 1)	●	●	●	●	●
Load Flow	Displays the (converted) flow on the load side of the GR system. (Note 1)	○	○	○	○	○
LSWT	Displays the supply water temperature of the GR system. (Note 1)	○	○	○	○	○
LRWT	Displays the return water temperature of the GR system. (Note 1)	○	○	○	○	○
Power	Displays the simplified power of the GR system. (Note 3)	●	---	●	●	●

●: Displayed, ○: Displayed as “---” depending on the conditions, ---: Displayed as “---”, and ×: Not displayed

System information screen

Item	Description	Model				
		USX, EDGE Series	SFMC Series 4, 5	CAONS700	Heat Recovery CAONS Series 1	Heat Recovery CAONS Series 2
Fault code	<p>Displays the 6-digit fault code of the failure that has occurred in the GR system.</p> <p>123456 56- Fault code 4---Failed circuit No. 0: UC system failure A to D: Circuit failure 23---- Failed UC No. 00: MC failure 01 to 16: UC failure 1----- Failed MC No. 0: GC failure 1 or 2: MC failure</p>	●	●	●	●	●
MC No.	Displays the number of MCs in the GR system.	●	●	●	●	●
UC No.	Displays the number of UCs in the GR system.	●	●	●	●	●
PST	Displays the set temperature of the GR system.	●	●	●	●	●
LWT	Displays the outlet water temperature of the GR system.	●	●	●	●	●
EWT	Displays the inlet water temperature of the GR system.	●	●	●	●	●
Unit flow	Displays the converted flow on the heat source equipment side of the GR system. (Note 1)	●	●	●	●	●
Load flow	Displays the (converted) flow on the load side of the GR system. (Note 1)	○	○	○	○	○
LSWT	Displays the supply water temperature of the GR system. (Note 1)	○	○	○	○	○
LRWT	Displays the return water temperature of the GR system. (Note 1)	○	○	○	○	○
Power	Displays the simplified power of the GR system. (Note 3)	●	×	●	●	●

●: Displayed, ○: Displayed as "----" depending on the conditions, ---: Displayed as "----", and ×: Not displayed

MC information screen

Item	Description	Model				
		USX, EDGE Series	SFMC Series 4, 5	CAONS700	Heat Recovery CAONS Series 1	Heat Recovery CAONS Series 2
Fault code	Displays the 5-digit fault code of the failure that has occurred in the MC system. 12345 45- Fault code 3--- Failed circuit No. 0: UC system failure A to D: Circuit failure 12---- Failed UC No. 00: MC failure 01 to 16: UC failure	•	•	•	•	•
UC No.	Displays the number of UCs in the MC system.	•	•	•	•	•
Remote	Displays the operation pattern in the MC system.	•	•	•	•	•
Run	Displays the Run/Stop state of the MC system.	•	•	•	•	•
Mode	Displays the operation mode of the MC system.	•	•	•	•	•
Ope Cap	Displays the operation capacity of the MC system.	•	•	•	•	•
PST	Displays the set temperature of the MC system.	•	•	•	•	•
LWT	Displays the outlet water temperature of the MC system.	•	•	•	•	•
EWT	Displays the inlet water temperature of the MC system.	•	•	•	•	•
Unit flow	Displays the converted flow on the heat source equipment side of the MC system. (Note 1)	•	•	•	•	•
Power	Displays the simplified power of the MC system. (Note 3)	•	×	•	•	•
Heater	Displays the heater output state of the MC system.	×	×	•	•	•

●: Displayed, ○: Displayed as “---” depending on the conditions, ---: Displayed as “---”, and ×: Not displayed

UC information screen

Item	Description	Model				
		USX, EDGE Series	SFMC Series 4, 5	CAONS700	Heat Recovery CAONS Series 1	Heat Recovery CAONS Series 2
Fault code	Displays the 3-digit fault code of the failure that has occurred in the UC. 123 23- Fault code 1--- Failed circuit No. 0: UC system failure A to D: Circuit failure	●	●	●	●	●
Remote	Displays the operation pattern of the UC.	●	●	●	●	●
Run	Displays the Run/Stop state of the UC.	●	●	●	●	●
Mode	Displays the operation mode of the UC.	●	●	●	●	●
Ope Cap	Displays the operation capacity of the UC.	●	●	●	●	●
PST	Displays the set temperature of the UC.	●	●	●	●	●
LWT	Displays the outlet water temperature of the UC.	●	●	●	●	●
EWT	Displays the inlet water temperature of the UC.	●	●	●	●	●
OAT	Displays the outside air temperature of the UC.	●	●	●	×	×
Unit flow	Displays the unit flow of the UC. (Note 1)	●	●	●	●	●
Power	Displays the simplified power of the UC. (Note 3)	●	×	●	●	●
3way	Displays the degree of opening of the pump kit three-way valve of the UC. (Note 2)	×	×	●	×	×
P-K EWT	Displays the inlet water temperature of the pump kit of the UC. (Note 2)	×	×	●	×	×
ULWT	For CAONS700, the pump kit outlet water temperature of the UC is displayed. (Note 2) For Heat Recovery CAONS Series 1, 2, the outlet temperature of the heat source water is displayed.	×	×	●	●	●
UEWT	For CAONS700, the pump kit inlet water temperature of the UC is displayed. (Note 2) For Heat Recovery CAONS Series 1, 2, the inlet temperature of the heat source water is displayed.	×	×	●	●	●
H prss	Displays the high pressure.	×	●	×	×	×
L prss	Displays the low pressure.	×	●	×	×	×

●: Displayed, ○: Displayed as “---” depending on the conditions, ---: Displayed as “---”, and ×: Not displayed

Circuit information screen

Item	Description	Supported model				
		USX, EDGE Series	SFMC Series 4, 5	CAONS700	Heat Recovery CAONS Series 1	Heat Recovery CAONS Series 2
Comp.	Displays the ON/OFF state of the compressor.	●	×	●	●	●
H prss	Displays the high pressure.	●	×	●	●	●
L prss	Displays the low pressure.	●	×	●	●	●

●: Displayed, ○: Displayed as “---” depending on the conditions, ---: Displayed as “---”, and ×: Not displayed

14-2 I/O function list

Digital Input functions

Function name	Setting classification	Details	Initially set terminal No.
—	—	No function	Not set
Run/Stop input signal	All	Used to perform Run/Stop operations with external static signals. (Note 1)	DI1
Stop input (pulse)		Used to perform a Stop operation with an external pulse signal.	Not set
Operation pattern input 1		Enabled when the remote controller is set to External. Switch the remote controller operation pattern with a combination of input signals of the operation pattern input.	DI2
Operation pattern input 2			DI3
Input of demand mode (Note 2)		Used to enable demand from outside.	Not set

Note 1: Run/Stop (static signal) can be changed to Run/Stop (pulses). For details, refer to “DN code setting (P. 41)” and “DN code list (P. 51)”. If Stop input (pulse) is set, Run/Stop input functions as the Run input (pulse).

Note 2: The initial value for the demand setting value is “0”. Note that if you enable demand with an incorrect setting, the unit will be stopped.

Digital Output functions

Function name	Setting classification	Details	Initially set terminal No.
—	—	No function	Not set
Operating output (Signal)	All	GR outputs during operation. (Also output when the compressor is stopped with capacity control.) You can change the output method by setting “Level of operating output”.*	DO1
Failure output		Output when GR detects a failure. You can change the output method by setting “Level of failure output”.*	DO2
Operation pattern output 1		Outputs the operation pattern state with a combination of operation pattern outputs.	Not set
Operation pattern output 2			Not set
Pattern interlock output1		Outputs the state of the pattern interlock output setting of the selected operation pattern.	Not set
Pattern interlock output2	Not set		

* For details, refer to “DN code setting (P. 41)” and “DN code list (P. 51)”.

14-3 DN code list

DN code	Item	Description	Initial value	Restart
005	Static or pulse operation signal	Switches operation input to pulse signal input. 0: Static signal 1: Pulse signal	0	Not necessary
006	Reset failure outage	Enable fault reset when GR is externally stopped. If it is disabled, a failure is retained during external stop. 0: Disabled 1: Enabled	0	Not necessary
007	Level of operating output	Switches the operations of the operation lamp and the operating output. 0: Output during GR operation. 1: Output during GR operation and system operation (system individual operation). 2: Output during GR operation, system operation (system individual operation), and MC operation (including unit/external operation).	1	Not necessary
008	Level of failure output	Switches the operations of the failure lamp and the failure output. 0: Output in the event of a GR failure. 1: Output in the event of a GR failure and a system failure. 2: Output in the event of a GR failure, system failure, and MC failure (including unit/external operation).	1	Not necessary
009	Demand control display	Displays demand control on the GR operation screen. 0: Non-display 1: Display	0	Not necessary
00A	Power failure recovery	Enables the auto recovery function when power is restored. Regardless of the power failure time, restores the operating state of the remote controller and the system individual Run/Stop states to the states before the power failure when power is restored. 0: Disabled 1: Enabled [CAUTION] If the GR uses Run/Stop input (static signal) externally, the GR follows the Run/Stop input signals.	0	Not necessary
00B	Pwr failure recovery time (s)	Sets the time for power failure recovery. If the power failure is within the set time, the remote controller Run/Stop and system individual Run/Stop states are restored to the state before the power failure when power is restored. To enable the code, set a time of 3 seconds or more. 0 seconds to 2 seconds: Disabled 3 seconds to 9 minutes and 59 seconds: Enabled	0	Not necessary
00C	Pwr Failure recovery time (m)	[CAUTION] • If power failure recovery (DN code: 00A) is enabled, power failure recovery is given priority. • Detection of a power failure time may have an error of up to 2 seconds. Consider the error when setting the power failure recovery time. • If the GR uses Run/Stop input (static signal) externally, the GR follows the Run/Stop input signals.	0	Not necessary
00D	Pwr failure recovery when MC remote	Enables power failure recovery when a remote MC is operating. If it is enabled, and it can be checked within 10 seconds after power is restored that a remote MC is operating, operation is restored regardless of the state before the power failure, avoiding the stop of the MC. 0: Disabled 1: Enabled [CAUTION] If the GR uses Run/Stop input (static signal) externally, the GR follows the Run/Stop input signals.	0	Not necessary
012	Invalid GR demand with ext MC ctrl	Makes GR demand with external MC control invalid. If it is valid, the MC makes demand with the demand signal of the GR even if the MC is set to Unit or External. 0: Enabled 1: Disabled	0	Not necessary

DN code	Item	Description	Initial value	Restart
016	MC in/out temp Min flow rate calc	Sets the lower limit flow for the inlet/outlet average temperature calculation for the system based on the quantity of heat. In the constant flow region, the average temperature may be shifted due to a flow error. If the flow of the MC is below the setting, the simple average value of the inlet/outlet temperature is used.	50	Not necessary
0A0	Model setting for system 1	<p>Switches the operation pattern setting range and the screen display items according to the model setting.</p> <p>0: USX, EDGE Series 1: SFMC Series 4, 5 2: CAONS700 3: Heat Recovery CAONS Series 1 5: Heat Recovery CAONS Series 2</p> <p>* If you change the model setting, the operation pattern mode and the set temperature are changed to setting values that are valid for the model. If you changed the model setting, be sure to check the operation pattern setting.</p>	0	Not necessary
0A1	Model setting for system 2		0	Not necessary
0A2	Model setting for system 3		0	Not necessary
0A3	Model setting for system 4		0	Not necessary

15 When You Suspect a Failure

If a failure occurs in the product, do not attempt to repair it yourself. Contact your dealer or local Toshiba Carrier representative. Let us know the model, fault code, and contact No. (For the contact No., refer to the label attached to the product itself.) The symptoms listed in the table below are not failures. Check the table beforehand.

Symptom	Cause
You pressed a button, but get no response.	<ul style="list-style-type: none"> •If you press any button while the backlight is OFF, the backlight is turned ON. Press again the button you want to operate. •This is a button whose operation is disabled. (The buzzer does not sound.) •If you set the button to be long pressed, long press the button.
Even during operation, the operation lamp is not turned ON or the operating output is not turned ON.	The operations of the operation lamp and the operating output vary depending on the setting of the DN code "Level of operating output". Check the setting of "Level of operating output".
Even during stop, the operation lamp is not turned OFF or the operating output is not turned OFF.	
Even though a failure has occurred, the failure lamp is not turned ON or the failure output is not turned ON.	<ul style="list-style-type: none"> •The operations of the failure lamp and the failure output vary depending on the setting of the DN code "Level of failure output". Check the setting of "Level of failure output". •The I/O functions that output failures include "Failure output" and "Failure inverse output", which outputs a states by inverting it. Check the I/O function settings.
Even though no failure has occurred, the failure lamp is turned ON or the failure output is not turned OFF.	
The I/O function does not operate.	I/O signals require an external power supply. Check if the external power supply is not off.
Device information is not displayed.	<ul style="list-style-type: none"> • Check if the power supply to the connected device is not off. • Check if the address setting of the connected device is correct.

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