



Energy Saving Data Collecting Server  
EcoWebServerIII

MODEL

**MES3-255C-DM-EN**

User's Manual (Hardware)

- Before operating the instrument, you should first read thoroughly this operation manual for safe operation and optimized performance of the product. Deliver this user's manual to the end user.

## ■ Introduction

Thank you for purchasing Mitsubishi Energy Saving Data Collecting Server (EcoWebServer III).  
 This instruction manual explains how to install and use the product.  
 Before using the product, read the instruction manual carefully for correct operation.  
 Be sure to read "1 Safety Precautions" to correctly handle the product.  
 Keep this instruction manual in a safe, accessible place for ready reference.  
 Make sure that this instruction manual will be delivered to the end users.

For details on setting EcoWebServerIII, refer to "**User's Manual - Setting (IB63919)**".

For details on setting EcoWebServerIII, refer to "**User's Manual - Operating (IB63918)**".

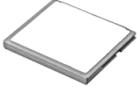
## ■ Packing materials and instruction manual

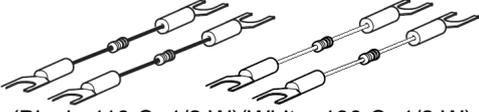
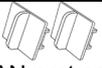
To reduce the load on the environment:

- Packing materials use corrugated cardboard.
- The instruction manual uses recycled paper.

## ■ Packaged items

Open the package and make sure all the following items are included.

Item	Qty.
 Energy Saving Data Collecting Server (main unit)	1
 Memory card (software)	1
 Configuration software (CD-R) -Instruction manual included	1
 Battery (built in the bottom of the main unit server section)	1
 Panel mounting screw (M4 x 14)	4
Instruction Manual – Hardware (*This document)	1

Item	Qty.
 (Black: 110 Ω, 1/2 W)(White: 130 Ω, 1/2 W) CC-Link termination resistor	Black × 2 White × 2
 IEC rail mounting adaptor	Small × 2 Large × 1
IEC rail mounting kit	
 IEC rail mounting screw (M5 x 10)	2
 IEC rail mounting square washer	2
 IEC rail stopper	2
 LAN port cap	2

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# 1. Safety Precautions

## ■ Precautions concerning the operating environment and usage conditions

Do not use the product in the places specified below. Failure to observe this may result in malfunction or reduced life of the product.

<ul style="list-style-type: none"> <li>● Ambient temperature exceeds 0 to +55 °C. (Température ambiante excède 0° à +55 °C.)</li> <li>● Daily average ambient temperature exceeds 35 °C. (Température ambiante quotidienne et moyenne excède 35 °C.)</li> <li>● Relative humidity exceeds 5 to 95% or condensation is observed. (Humidité relative excède 5% à 95% ou condensation est observée.)</li> <li>● Altitude exceeds 2000 m. (Altitude excède 2000 m.)</li> <li>● Dust, corrosive gas, saline and oil smoke exist. (Poussière, gaz corrosif, salin et huile fumée existe.)</li> </ul>	<ul style="list-style-type: none"> <li>● Frequent vibration or impact exists. (Vibration fréquente ou impact existe.)</li> <li>● Rainfall or water droplet hits the product. (Pluie ou gouttelette frappe le produit.)</li> <li>● Exposed to direct sunlight. (Exposé à lumière du soleil directe.)</li> <li>● Metal pieces or conductive materials blow. (Pièce métal ou matière conducteur souffle.)</li> <li>● Under strong electromagnetic field or noise. (Sous champ électromagnétique fort ou bruit.)</li> </ul>
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## ■ Precautions concerning the installation

Read this instruction manual before installation.

<b>Cautions</b>		
<ul style="list-style-type: none"> <li>● The product shall be installed and wired by technicians specializing in electric work.</li> <li>● Always handle the end face of metal parts with care. The sharp part may cause injuries.</li> <li>● During threading or wiring work, take precaution so that any metal chip or a part of wire cut does not enter the product.</li> <li>● Make sure to use the connection diagram for correct wire connection. Incorrect wiring may cause the device malfunction, fire or electric shock.</li> <li>● Never work with live wires. Otherwise, it may lead to electric shock, fire or device problems.</li> <li>● Use electric wires of appropriate size. If an inappropriate size electric wire is used, it may cause fire due to generated heat.</li> <li>● Use solderless terminals which fit the wire. If an inappropriate solderless terminal is used, wire breakage or contact failure may occur, resulting in the device malfunction, failure, burnout, or fire.</li> <li>● To comply with the UL/c-UL standard, use wires whose temperature rating is 60 °C/75 °C for copper conductors. (Pour UL/c-UL standard, utilisez le conduit en cuivre dont la température classée à 60 °C /75 °C.)</li> </ul>		
Part	Wire size	Appropriate solderless terminal
Power supply section terminal block	0.75 to 2 mm <sup>2</sup>	RAV1.25-3.5 RAV2-3.5
CC-Link communication section terminal block	Ver. 1.10-compatible CC-Link dedicated cable	R1.25-3
Contact output section terminal block	0.3 to 0.75 mm <sup>2</sup>	R1.25-3 (Solderless terminals with an insulating sleeve cannot be used.)
Demand surveillance section terminal block	0.5 to 1.3 mm <sup>2</sup>	TGV TC-1.25-11T (NICHIFU-made) or equivalent
<ul style="list-style-type: none"> <li>● Make sure all the fittings are securely tightened. Failure in tightening may cause the device malfunction, fire, or electric shock. (Assurez-vous que tout le serrage est fermement serré. Manque de serrage peut causer mauvais fonctionnement du dispositif, feu, ou commotion électrique.)</li> <li>● Fixing fittings must be tightened to the specified tightening torque. Excessive tightening may cause damage to terminals or screws. (Fixation du serrage doit être serrée à couple de serrage spécifié. Serrage excessif peut endommager du terminal ou vis.) Insufficient tightening may cause the device malfunction, fire, or electric shock. (Serrage insuffisant peut causer mauvais fonctionnement du dispositif, feu, ou commotion électrique.)</li> <li>● If you use a twisted wire on the voltage input terminal, twist the wire end to prevent the thin wires (stick terminal) from spreading out.</li> <li>● Accessory of LAN port cap can be used for dust-proof.</li> <li>● <u>Please return the unit which you removed for wiring. The units are only support to be worked as EcoWebServerIII. It will be not worked without using for EcoWebServerIII.</u></li> <li>● <u>Please do not replace for any unit of EcoWebServerIII. Operation verification of EcoWebServerIII is confirmed as the purchase. It may cause a malfunction or failure if EcoWebServerIII is used in any other combination.</u></li> </ul>		

Part (Partie)	Tightening torque (Couple de serrage)
Terminal screw for power supply section terminal block (Borne de terminal pour terminal bloc dans la section d'alimentation électrique)	(M3.5 screw) (Vis M3.5) 0.8 to 1.0 N•m
Terminal screw for CC-Link communication section terminal block (Borne de terminal pour terminal bloc dans la section de CC-Link communication)	(M3 screw) (Vis M3) 0.42 to 0.58 N•m
Mounting screw for CC-Link communication section terminal block (Borne de montage pour terminal bloc dans la section de CC-Link communication)	(M3.5 screw) (Vis M3.5) 0.66 to 0.89 N•m
Terminal screw for contact output terminal block (Borne de terminal pour terminal bloc dans la section de contact sortie)	(M3 screw) (Vis M3) 0.42 to 0.58 N•m
Mounting screw for contact output section terminal block (Borne de montage pour terminal bloc dans la section de contact sortie)	(M3.5 screw) (Vis M3.5) 0.66 to 0.89 N•m
Unit fixing screw (Vis pour fixation l'unité)	(M3 × 12 screw) (Vis M3) 0.36 to 0.48 N•m

- Make sure that all the terminal covers are mounted after wiring. Failure to mount them may cause electric shock. (Assurez-vous que tout les couvercle sont attachés. Manque d'attachement peut causer mauvais fonctionnement du dispositif, feu, ou commotion électrique.)
- Avoid installing in a panel where high pressure equipment is installed. Please install a surge suppressor in the device which is prone to noise.
- CC-Link communication signal line and other signal lines, auxiliary power supply line, the power supply frequency input line to prevent the introduction of noise, please do not approach and unity of the power line or high voltage line. Please separate the separation distance when the signal line and the power line / high voltage line are parallel as a guide. (Excluding terminal block input section)

[CC-Link communication signal line]

Condition	Distance
All power lines	More than 100mm

[Other signal line / auxiliary power line / power frequency input line]

Condition	Distance
Power line of 600V or less	More than 300mm
Other power lines	More than 600mm

- Please connect the shield wire of the CC-Link communication cable to the SLD terminal of each of the CC-Link communication terminals.  
And "SLD" of each terminal "FG" are connected inside the unit.
- To prevent induction noise, keep control lines and communication cables as far away from power lines as possible. (We recommend that you keep a distance of 100 mm or longer between them.)  
Do not place them in a control panel containing high-voltage equipment.  
Mount surge absorbers on equipment that is likely to produce noise.
- Connect both ends of the shielded wire in a CC-Link communication cable to the "SLD" terminal of the units.  
"SLD" and "FG" are connected to each other inside each unit.  
Make sure to insulate the shielded wire using vinyl tape or the like.
- For the actual usage, perform class D grounding dedicated for the "FG" terminal.
- Perform insulation withstand voltage tests and insulation resistance tests without connecting the FG terminal to the external case (ground).

## ■ Precautions concerning the preparation before use

- Make sure that your installation site meets the requirements for the operation environment and usage conditions.
- Before use, configure the settings of the product. Wrong settings may cause the product to malfunction.
- Check the power ratings of the product.
- After installing the product and performing wiring work, peel off the dustproof seal.  
Failure to peel it off may cause the product to malfunction due to internal heat generation.
- The product has a built-in lithium battery. It is not connected to the product when shipped from the factory. Connect it before using the product.  
(See "6. Battery Installation and Replacement".)

## ■ Precautions for use

- Use the product within the ratings specified of this manual. If it is used outside the ratings, it may cause not only malfunction or failure but also fire or burn damage.
- Settings including an IP address assignment are required to connect the product to the network (Ethernet). Before use, perform an IP address assignment and other necessary network settings using the supplied configuration software. (See "7.1 Setting an IP address".)
- The product is configured as follows when shipped from the factory:

**IP address = 192.168.10.1, Subnet mask = 255.255.255.0, Gateway = None**

If you connect the product directly to a single PC, these settings do not need to be changed.

- The product has a built-in clock. Before use, set the current date and time using the supplied configuration software.
- Before operating the product, make sure that an active live wire, etc. does not exist around the product. If any bare wire is found, stop the operation immediately, and conduct necessary work such as insulation protection.
- If the power is turned on immediately (within 5 seconds) after it is turned off, an out-of-spec inrush current (20 A 8 ms or lower) may be generated. After power shutdown, wait at least 5 seconds before turning on power again.
- Periodically adjust the time. (Approx. once every 6 months)  
\*Refer to '4.8.1 Time Settings in User's Manual – Setting.'

 <b>Cautions</b>	<ul style="list-style-type: none"> <li>● Do not disassemble or modify the product. It may cause failure, electric shock or fire.</li> <li>● Do not remove the seal on the side of this product. Such as maintenance and failure analysis will be out of service without integral sealed.</li> </ul>
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## ■ Precautions for maintenance and inspection

- Do not disassemble or modify the unit. It may cause failure, malfunction, personal injury, or fire.
- Do not touch the terminals under energized conditions. It may cause electric shock, failure, or malfunction of the unit.
- Be sure to externally turn off the input power before cleaning or additionally tightening unit mounting screws. Otherwise, it may cause electric shock, failure, or malfunction of the unit.
- Use a soft, dry cloth to clean off dirt of the product surface.
- Do not let a chemical cloth remain on the surface for an extended period of time nor wipe the surface with thinner or benzene.
- Check the following items to use the product properly for a long time.  
Items to be checked once or twice every 6 months:  
(1) No damage on the product (2) No abnormality with LED indicators (3) No abnormal noise, smell or heat.  
Item to be checked once a year:  
(4) No looseness with installation and terminal block wiring. (Check this under de-energized conditions.)
- Please replace the battery when a voltage drop occurred (BAT.LED on server section is red lighting) or every 3 years.

 <b>Cautions</b>	<ul style="list-style-type: none"> <li>● Checking for looseness with installation, terminal block wiring, and connector connection must be done under de-energized conditions.</li> <li>● When a power failure is occurred in a voltage drop state, clock and data might be reset. Please configure again.</li> </ul>
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## ■ Precautions for storage

- To store the product, turn off the power, remove wires, and store it in a plastic bag.
- To keep the power off for a long time, remove the battery connector.  
(The battery's total power-interruption backup time is 13,700 hours (1.57 years). If you continue to use the battery after the expiration of the backup time, measured data may be deleted.)
- For long-time storage, avoid the following places. Failure to observe this may result in malfunction or reduced life of the product.

<ul style="list-style-type: none"> <li>● Ambient temperature exceeds -25 to +75 °C.</li> <li>● Daily average ambient temperature exceeds 35 °C.</li> <li>● Relative humidity exceeds 5 to 95% or condensation is observed.</li> <li>● Dust, corrosive gas, saline and oil smoke exist.</li> <li>● Altitude over 2000m.</li> </ul>	<ul style="list-style-type: none"> <li>● Frequent vibration or impact exists.</li> <li>● Rainfall or water droplet hits the product.</li> <li>● Exposed to direct sunlight.</li> <li>● Metal pieces or conductive materials blow.</li> <li>● Under strong electromagnetic field or noise.</li> </ul>
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## ■ Precautions for disposal

- The product shall be properly disposed of in compliance with the "Wastes Disposal and Public Cleansing Act."
- The product has a built-in lithium battery in server section and demand control section. The lithium battery shall be disposed of in compliance with your local regulations.

 <b>Cautions</b>	● There may be some electricity left in the lithium battery removed. Keep it away from other metal parts because its contact with the metal parts may cause heat, rupture, or fire.
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## ■ Network building

- For inquiries about installation and configuration of web browsers and JavaVM (Java Virtual Machine) and their technical issues, contact your network administrator or appropriate department.
- For inquiries about installation and configuration of servers such as SMTP (mail transfer) servers and FTP (file) servers and their technical issues, contact your network administrator, appropriate department, or the manufacturers for those servers.
- We don't offer technical support for the above.
- When needed for keeping system security against illegal access from outside, users should take proper measure. We do not assume responsibility for any trouble arising from illegal access. We recommend users to note the followings.
  - 1) Use LAN for preventing illegal access from outside.
  - 2) Take measures like firewall and VPN when connecting internet.
  - 3) Before using, change the default account (login ID, password).  
Set the account so as not to leak the account information according to the following precautions.  
Avoid using simple string like Name, birth date and numbers.  
Set the complex logging ID and password at least 8 characters by mixing uppercase or lowercase alphanumeric characters.

## ■ QR code attached on the product

- The QR code attached on the product is intended for the management of product manufacturing and should not be used by the customer.  
Reading of the QR code using commercially available code readers is not guaranteed.

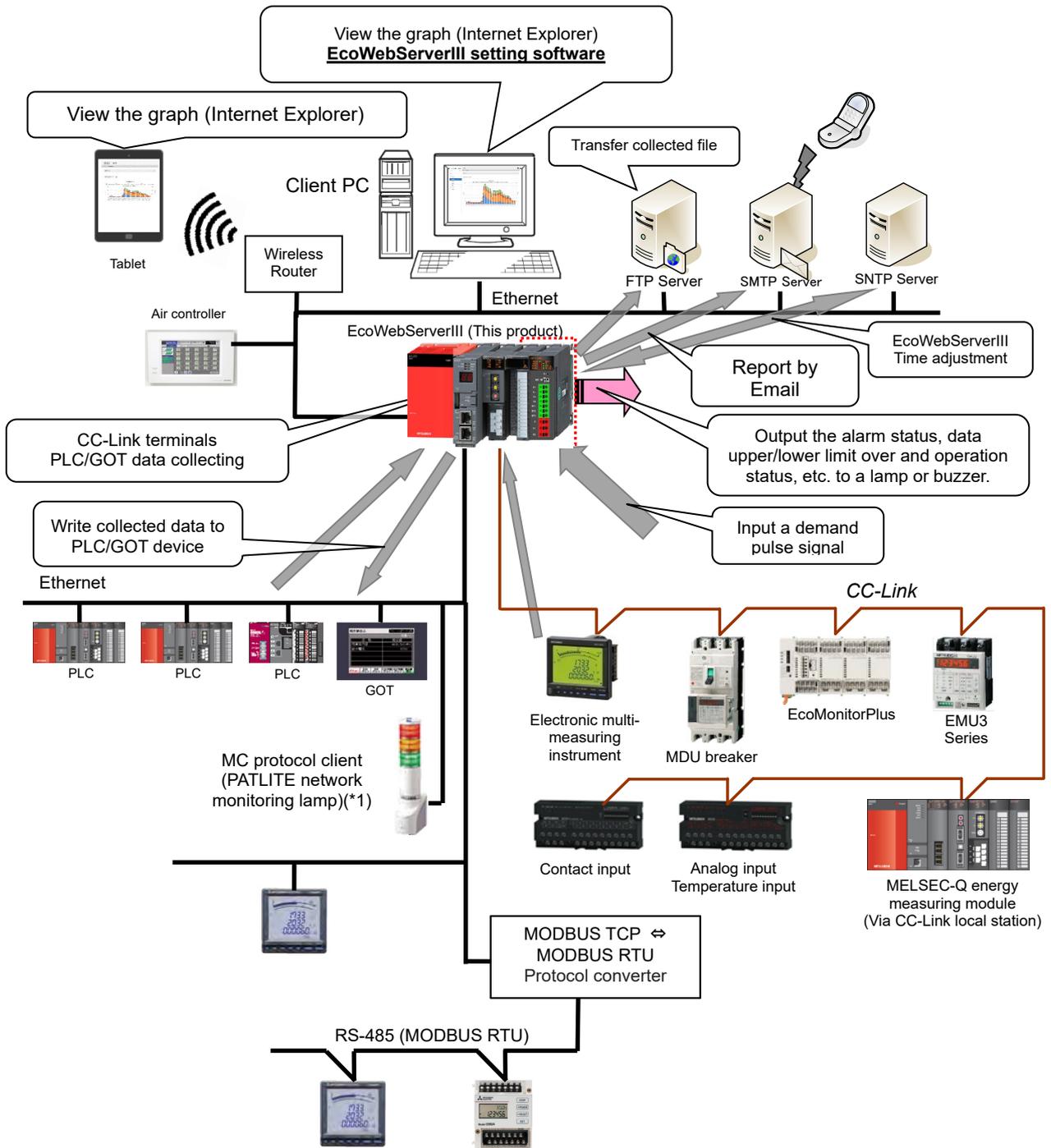
## ■ Special purposes

- Please contact our sales staff when you consider applying the product to special purposes, including use with devices and systems for nuclear engineering, aerospace engineering, medical care, or automobiles. (See the end of this document for details.)

## 2. Main Features

- This product can be performed alarm output and contact operation using demand surveillance and also save the data collected via CC-Link communications or MODBUS from measuring instruments and programmable logic controllers to this product.
- The product is preinstalled with software needed to view the data saved. The data can be downloaded via Ethernet to PCs connected to the Internet/Intranet. The statuses of demand surveillance and the collected data can be viewed in graph or list format using a web browser on the PC over the Intranet. Equipment efficiency can be checked in graph by collecting the loading time and downtime of equipment and the numbers of processed products and non-defective products.
- An alarm can be issued in given events, such as when the target demand, the upper/lower limit of data collected, the specific consumption planned value, or the energy planned value is reached or when a measuring point turns on or off. Abnormal states can be quickly detected by sounding buzzers and turning on lamps.
- With just a simple setup, the collected data can be sent to the devices in programmable logic controllers, enabling easy coordination with the equipment control.
- Installing a mail server (SMTP server) or file transfer server (FTP server) allows you to send email notifications when the target demand is exceeded or an upper/lower limit alarm operates and to save measured data in a CSV format by automatic transfer. With these features, whenever a trouble occurs, you can handle it immediately.
- Transfer of XML files with an air-conditioner controller allows automatic control of lighting and air conditioning according to the demand level.
- Installing a clock server (SNTP server) allows clock synchronization among the equipment that supports SNTP server capabilities.
  - \* Do not use this feature the clock is based on the time of a transaction meter.

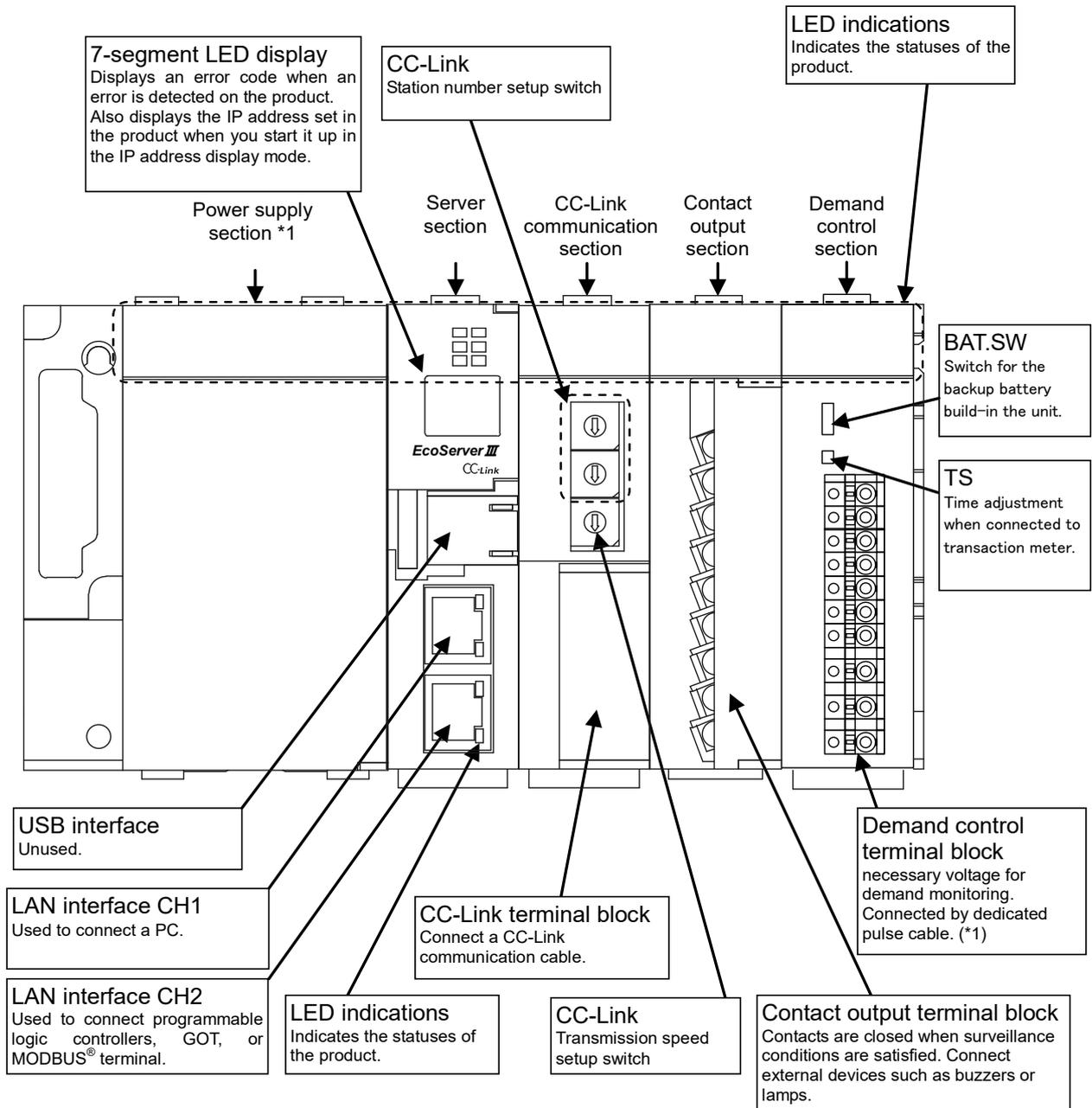
# Configuration example



\*1 Limited to be a MC protocol client.

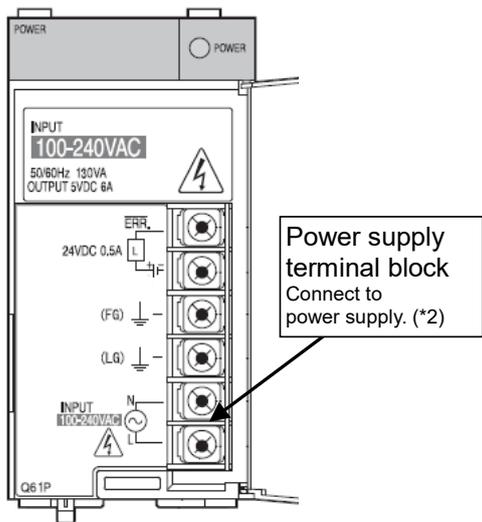
### 3. Names and Functions of Parts

#### Front

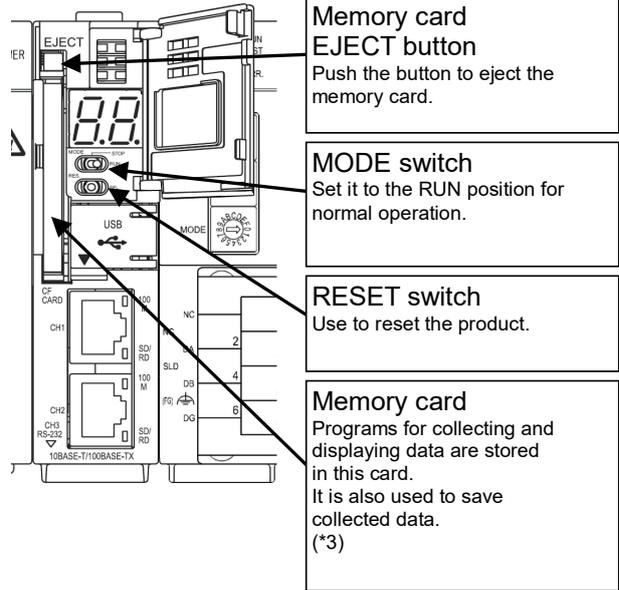


**\*1 Demand control section requires for additional power.**  
**It is necessary to connect AC100 to 240V (+10%,-15%) 50/60Hz to V1,V2 in demand terminal block.**  
**It is possible to take the power from the power supply section**  
**Do not use UPS, SAG and etc. to supply the power.**

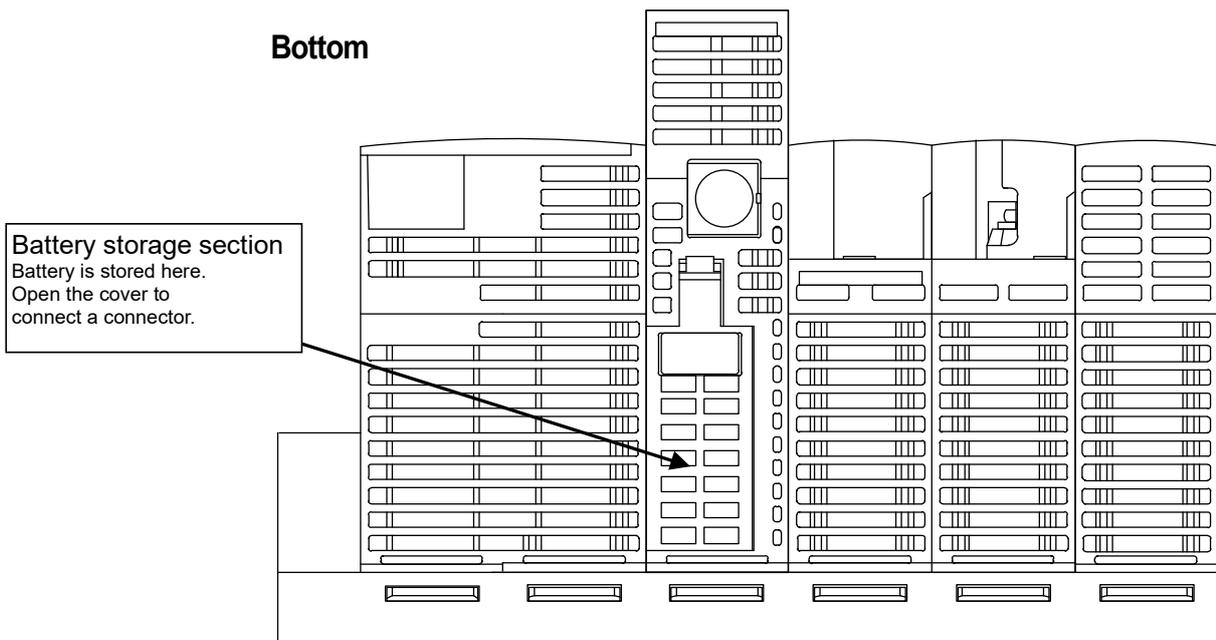
**Front**  
(with power supply cover opened)



**Front**  
(with the server section cover opened)



**Bottom**



- \*2 Connect a power supply of 100-240 V AC (+10%, -15%) 50/60 Hz.  
Do not connect any power supply other than the above, otherwise it may cause malfunction.
- \*3 The memory card should stay inserted in the product all the time.  
Removing it while the power is on or the card is being accessed may cause the product to malfunction.  
Before removing the card from the memory card slot, make sure to hold the RESET switch in the "SEL." position and to turn the power off after the "CF CARD" LED goes out.  
Incorrect procedure might cause data logging failure or equipment failure. Please consider UPS if the power failure is frequently occurred.

◆ LED indications

Part	Indication name	Status	Operation
Power supply section	POWER	Power supply indication	Turns green: Power is on.
Server section	RUN	Operation indication	Turns green: MODE switch is set to RUN position (during regular operation). Turns off: MODE switch is set to STOP position (during the IP address display mode).
	CF CARD	Memory card status	Turns green: Memory card is accessible. Blinks green: Memory card is being ejected. (RESET switch is held in SELECT position.) Turns off: Memory card is ready to be ejected.
	MODE	Operation mode	Turns green: During regular operation
	ERR.	Error indication	Turns red: At the time of occurrence of a battery error Blinks red: During initial startup after purchase During a power outage due to battery exhaustion
	STA.	Operation status	Blinks green: During startup after the power is turned on Turns green: Startup is complete. Blinks red: Error occurrence *The details of error vary depending on the error code displayed on 7 segment LED of server section. Refer to 12 Troubleshooting.
	100M	LAN communication	Turns green: Connected at 100 Mbps Turns off: Connected at 10 Mbps
	SD/RD		Turns green: Connected to LAN Turns off: Disconnected from LAN Blinks: In the process of establishing LAN communication
CC-Link communication section	RUN	Operation status of CC-Link communication	Turns green: CC-Link communication section is running normally. Turns off: CC-Link communication section is in an abnormal condition.
	MST	CC-Link master	Turns green: During normal operation (This LED remains green all the time because the product is fixed in CC-Link master mode during operation.)
	SD	CC-Link communication status	Blinks green: In the process of transmitting through CC-Link communication
	RD		Blinks green: In the process of receiving through CC-Link communication
	L RUN	CC-Link link status	Blinks green: In the process of linking through CC-Link communication Turns off: No link through CC-Link communication
	S MST	CC-Link standby master	Turns off: During normal operation (This LED remains off all the time because the product is fixed in CC-Link master mode during operation.)
	L ERR.	Error status of CC-Link communication	Blinks red at regular intervals: A switch on the CC-Link communication section is operated with power on. Blinks red at irregular intervals: Termination resistors are not mounted. (The unit or CC-Link dedicated cable is being affected by noise.) Turns red: The setting does not correspond to the connected equipment.
	ERR	Error status	Lights green: Master stations overlap on the same line. (This equipment is used with fixed CC-Link master mode) The cable is disconnected, or being affected by noise. Blinks red: The station number of the remote station is duplicated.
Contact output section	0 to 9, A to F	Contact output status	Turns off: Contact output is open. Turns red: Contact output is closed.

Demand surveillance section	RUN	Operation status of demand surveillance	Turns green: During normal operation Turns off: When the internal power is a hardware error occurs
	ERR	Error status	Turns red: At the time of occurrence of a hardware error, power frequency out-of-range error, clock backup battery voltage drop error, or outside time limit synchronism error Blinks red: Setting value out-of-range error Turns off: During normal operation
	ALM1/2 (*4)	Level 1/2 alarm status	Blinks red: At the time of occurrence of a level 1 alarm or system alarm Turns red: At the time of occurrence of a level 2 alarm Turns off: Other than the above
	ALML/F (*4)	Limit/Fixed alarm status	Turns red: At the time of occurrence of a limit/fixed alarm Blinks red: At the time of occurrence of a system alarm Turns off: Other than the above
	BAT.ERR	Backup battery status for demand monitoring Section	Turns red: Clock backup battery voltage drop error is occurring (or the battery switch is turned off) Turns off: Other than the above
	T	Input status of outside time limit synchronism signal or time limit synchronization switch	Turns green: When the outside time limit synchronism signal is being inputted or the time limit synchronization switch is being pressed Turns off: Other than the above
	DS	Starting status of demand time limit or status of demand time limit	Turns green (for 2 seconds): When the demand time limit starts or the pressing of the time limit synchronization switch is detected Turns green: At the time of occurrence of an outside time limit synchronism error Blinks green: At the time of occurrence of a power frequency out-of-range error Turns off: Other than the above
	R	Input status of electric energy pulses	Turns green: During the inputting of electric energy pulses Turns off: Other than the above

**\*4 System alarm of demand monitoring section contains the following error message.**

**Hardware error, build-in clock error, clock backup low battery error, power frequency range error, time limit synchronism error.**

◆ **LAN interface CH1, CH2 (100BASE-TX/10BASE-T)**

Item	Specifications
Communication specifications	Ethernet (10BASE-T/100BASE-TX)
Communication speed	10 Mbps, 100 Mbps
Communication media	UTP (Unshielded twisted pair cable)
Max. segment length	100 m (to hub)

◆ **MODE switch**

Item	Specifications
STOP	Turning the product off then on or resetting it with the switch in the "STOP" position displays the IP address currently assigned to the product. (7.2 Checking the IP address)
RUN	The product is usually used with the switch in the "RUN" position.

◆ **RESET switch**

Item	Specifications
RES.	Use this switch to reset the product. Refer to 12.1 Reset of the product.
SEL.	Holding the switch in the "SEL." position during operation stops the reading/writing of the memory card. Make sure to perform this procedure before turning the product off or resetting it.

◆ **CompactFlash memory card slot (server section)**

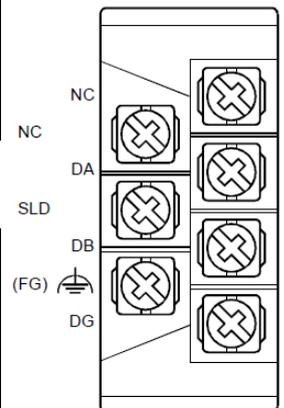
- Insert the CompactFlash memory card supplied into this slot when the product is turned off. The product will not work without inserting the CompactFlash memory card supplied into the slot. The CompactFlash memory card must stay inserted in the slot during operation. The product can operate only when the CompactFlash memory card is in the slot.

◆ **Terminal block (power supply section)**

Terminal symbol	Function
ERR.	ERR. terminal (Unused)
FG	FG terminal (ground terminal)
LG	LG terminal (Grounded through the power filter.)
N	Auxiliary power input
L	(Input ratings: Power supply 100 to 240 V AC)

◆ **Terminal block (CC-Link communication section)**

Terminal symbol	Function
DA	CC-Link communication line A
DB	CC-Link communication line B
DG	CC-Link communication line ground
SLD	CC-Link communication line shield
NC	(Unused)

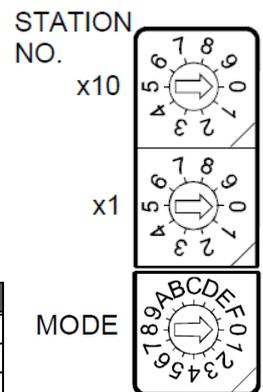


Connect both ends of the shielded wire in a CC-Link dedicated cable to the "SLD" terminal of the unit.

Perform class D (Type 3) grounding work dedicated for the "FG" terminal of each unit. "SLD" and "FG" are connected to each other inside each unit.

◆ **CC-Link station number setup switch (CC-Link communication section)**

- Set (Hold) the switch to 0.
- (Note) It is set to 0 when shipped from the factory. Do not change the setting. If it is set to any position other than 0, CC-Link communication cannot be established.



◆ **CC-Link communication speed setup switch (CC-Link communication section)**

Setting	Communication speed
0	156 kbps
1	625 kbps
2	2.5 Mbps
3	5 Mbps
4	10 Mbps
5 to 9, A to F	Prohibited

(Note 1) All the CC-Link terminal devices connected to the product must be set to the same communication speed. If they operate at different communication speeds, communication cannot be established.

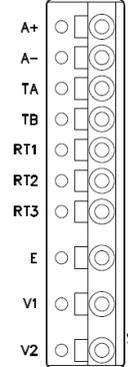
(Note 2) The switch is set to 0 (communication speed = 156 kbps) when shipped from the factory.

◆ **Terminal block (contact output section)**

Terminal symbol	Function
0 to 9, A to F	Contact relay output terminals 0 to 9, A to F
COM	Contact relay output common terminal (common for output terminals 0 to 9, A to F)
NC	(Unused)

◆ **Terminal block (demand surveillance section)**

Terminal symbol	Function
A+	System alarm output terminal (no-voltage normally-closed contact)
A-	
TA	Outside time limit input terminal
TB	
RT1	Pulse input terminal (RT2: negative terminal, RT3: positive terminal)
RT2	
RT3	
E	Earth
V1	Power frequency input terminal
V2	



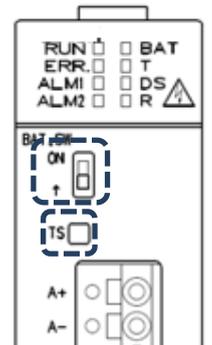
**NOTE:** System alarm output by demand unit terminal is able to output the alarms below.  
H/W error, clock error, low battery for clock backup, power frequency out of range error or external pulse signal error.  
Power OFF: output ON, Normal: output OFF, System alarm: output ON

◆ **BAT.SW <battery switch> (demand surveillance section)**

- When the demand function is used, turn on this switch to maintain the clock setting, even if the product is powered off.
- \* Factory default of BAT.SW is OFF. Please turn it on before demand monitoring.

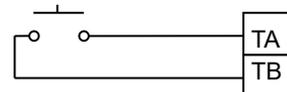
◆ **TS <time limit synchronization switch> (demand surveillance section)**

- Use this switch to synchronize the time limit.  
Synchronize the time limit means time adjustment to the transaction electricity meter.  
(Note) Press the switch in synchronization with the switching (on the hour or on the half-hour) of the time limit of the transaction electricity meter.



**If the product is located at a distance from the transaction electricity meter:**

The time limit can also be synchronized by short-circuiting TA and TB instead of pressing TS (time limit synchronization switch). Time limit synchronization can be facilitated by connecting a cable equipped with a push button to the TA and TB terminals and extending it to near the transaction electricity meter.



## 4. Procedures for Installation and Configuration

### ■ Installation

The following explains the procedure from package opening to installation.

- (1) Open the package.
- (2) Check the packaged contents.  
(See "Packaged items".)
- (3) Insert the supplied CompactFlash memory card into the memory card slot.
- (4) Connect the battery mounting connector.  
(See "6.1 Installing the battery".)
- (5) Check that the CC-Link station number setup switch is set to "0."  
(See "CC-Link station number setup switch" in "3 Names and Functions of Parts".)
- (6) Set a communication speed using the CC-Link communication speed setup switch.  
(See "CC-Link communication speed setup switch" in "3 Names and Functions of Parts".)
- (7) Install this product.  
(See "5 Main Unit Installation".)
- (8) Conduct wiring.  
(See "8 Connection Diagram".)
- (9) Check wiring conducted in step (8).
- (10) Set BAT.SW on the demand surveillance section to ON.  
(See "6.3 Setting the demand surveillance unit battery switch to ON".)

This completes the installation procedure.

	<b>Cautions</b> <ul style="list-style-type: none"><li>● Read "Precautions concerning the installation" carefully to perform the operation safely.</li><li>● If the product gives off abnormal noise, smell, smoke or heat, turn the power off immediately.</li></ul>
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### ■ Configuration

The following explains the procedure for getting the product ready for operation after installation.

- (1) Use the supplied CD to install the configuration software on your PC.  
(See "2.3 Installation of the software" in User's Manual – Setting.)
- (2) Use the configuration software to set an IP address for the product.  
(See "7 IP Address Setting".)  
\* If you use the factory default setting (IP address = 192.168.10.1), you do not have to perform this step.
- (3) Use the configuration software to set a year, month, day, and clock for the product.  
(See "Chapter 4 Operating Procedures, 4.8.1 Time Settings" in Instruction Manual – Configuration.)
- (4) Configure the client computer to your network environment.  
For details on settings, contact your network administrator.  
For details on setting procedures, see the instruction manual of your computer or contact its manufacturer.
- (5) Configure the web browser in the client computer.  
(See "Chapter 2 Before Use, 2.4 Setting the Web Browser" in Instruction Manual – Operation.)
- (6) Set necessary information such as connected devices and measuring points.  
(See "Chapter 4 Operating Procedures" in Instruction Manual – Configuration.)
- (7) Set information required for demand surveillance  
(See "Chapter 4 Operating Procedures" in Instruction Manual – Configuration.)
- (8) Synchronize the demand time limit.  
(See "Chapter 4 Operating Procedures" in Instruction Manual – Configuration.)
- (9) Check the product operation.  
(See Instruction Manual – Operation.)

	<b>Cautions</b> <ul style="list-style-type: none"><li>● Wrong network settings may cause other devices on the network to malfunction.</li><li>● The product is configured as follows when shipped from the factory: IP address = 192.168.10.1, Subnet mask = 255.255.255.0, Gateway = None If you connect the product directly to a single PC, these settings do not need to be changed.</li></ul>
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## 5. Main Unit Installation (Installation de l'unité principale)

This product can be installed in two ways, installation on an IEC rail (35 mm wide) and direct installation on a panel.  
(Le produit peut être installé au deux moyens, installation sur un IEC rail (35 mm de large) et installation directe sur une planche.)

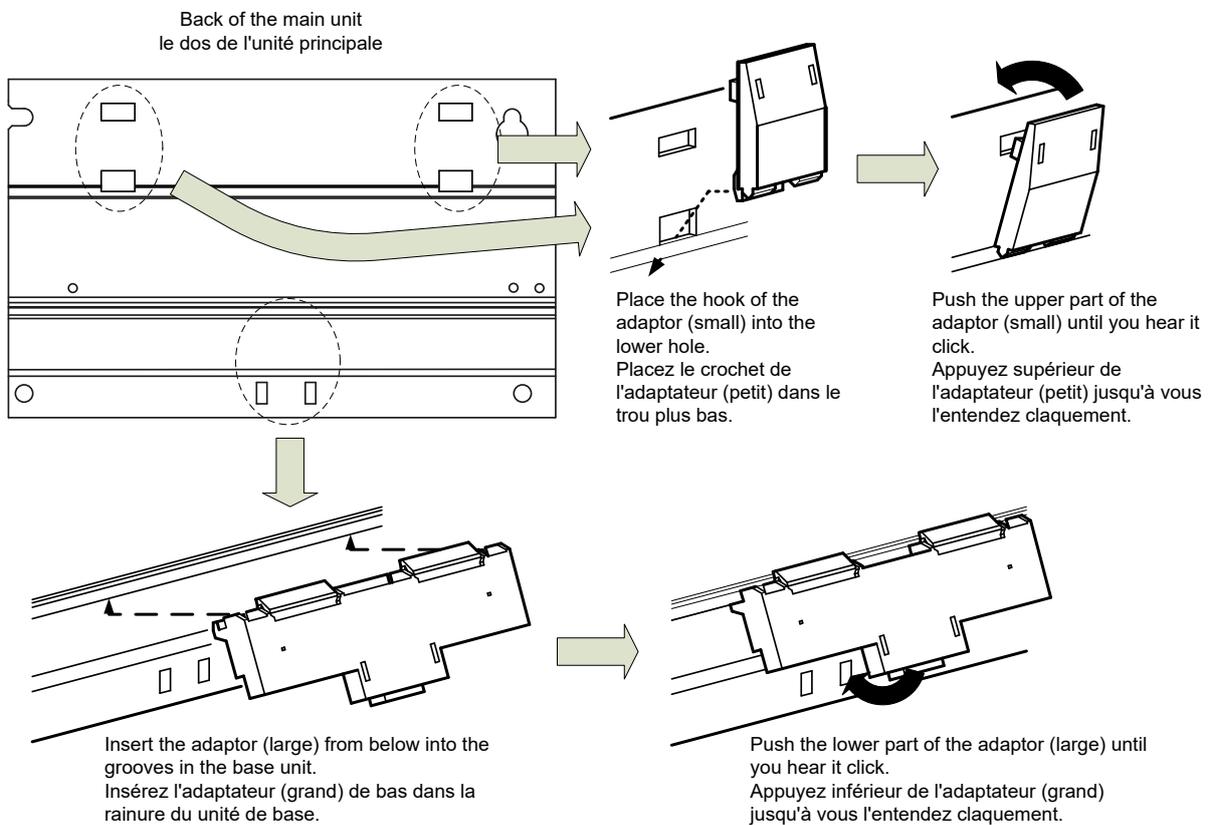
### 5.1 Installation on the IEC rail (35 mm wide)

#### (Installation sur un IEC rail (35 mm de large))

#### 5.1.1. Mounting the IEC rail mounting adaptors

##### (Montage d'adaptateur pour monter sur IEC rail)

Mount the supplied IEC rail mounting adaptors (small × 2 and large × 1) on the back of the main unit.  
(Montez adaptateurs pour monter sur IEC rail (petits × 2 et grand × 1) sur le dos de l'unité principale.)

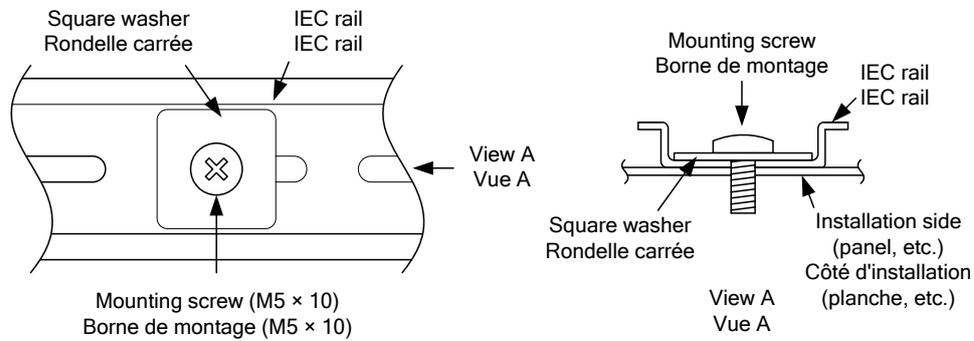


## 5.1.2. Mounting the IEC rail fixing square washers

### (Montage de rondelle carrée pour fixer IEC rail)

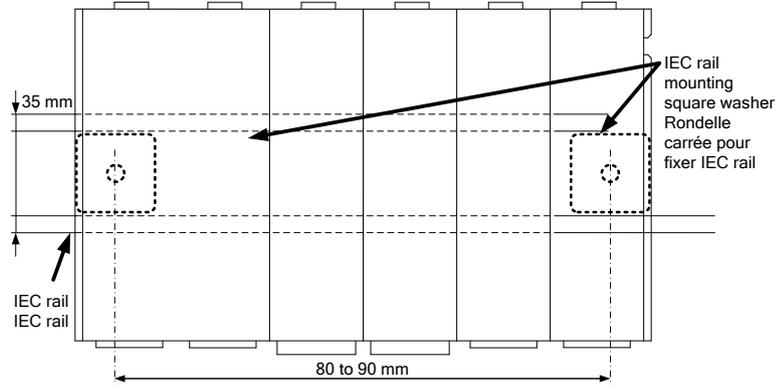
Use the square washers and mounting screws (M5 × 10) to fix the IEC rail to the position where the main unit will be installed.

(Utilisez rondelles carrées et bornes de montage (M5 × 10) pour fixer l'IEC rail dans la position où l'unité principale sera installée.)



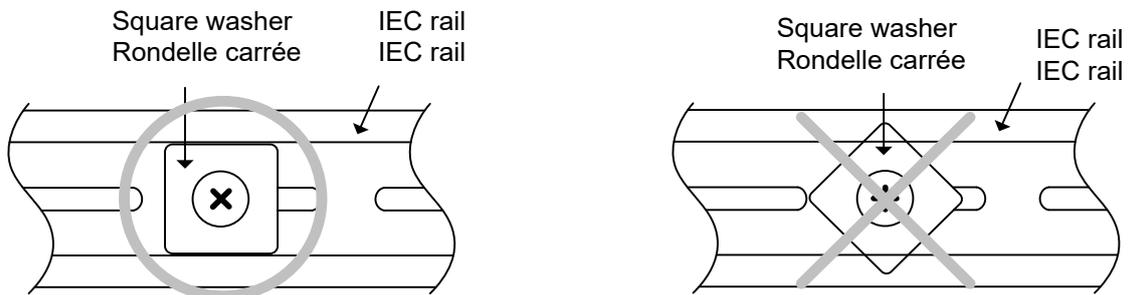
Keep 80 to 90 mm between the square washers.

(Maintenez de 80 à 90 mm entre des rondelle carrées.)



### Point

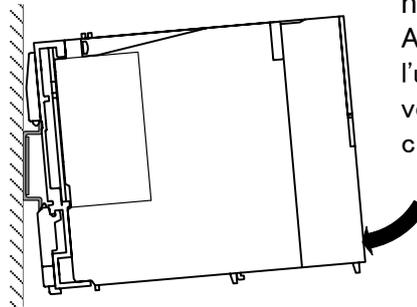
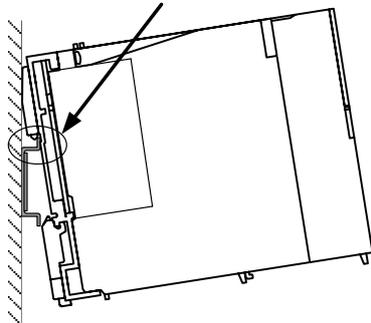
Make sure to place the square washers parallel to the IEC rail (the washers should fit into a groove in the rail).  
(Assurez-vous à placer des rondelle carrées en parallèle de l'IEC rail.)



### 5.1.3. Installing the main unit on the IEC rail

#### (Installation de l'unité principale sur IEC rail)

Hook the adaptor into the IEC rail.  
Accrochez l'adaptateur à l'IEC rail.

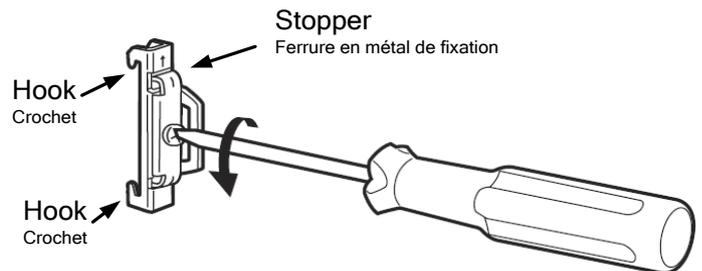


Push the lower part of the main unit until you hear it click.  
Appuyez inférieure de l'unité principale jusqu'à vous l'entendez claquement.

### 5.1.4. Fixing the main unit (Fixation de l'unité principale)

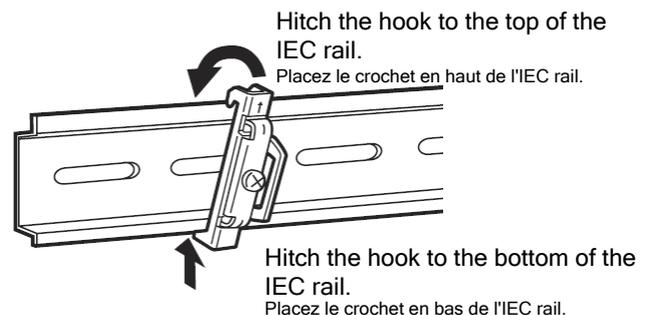
To prevent vibration when you transport the product installed in a panel, make sure to fix the product using the IEC rail stoppers.

- (1) Loosen the screw on the top of the stopper.  
(Desserrez le vis au sommet de ferrure en métal de fixation.)



- (2) Hitch the lower hook of the stopper to the bottom of the IEC rail.  
(Placez le crochet inférieur de ferrure en métal de fixation en bas de l'IEC rail.)

- (3) Hitch the upper hook of the stopper to the top of the IEC rail.  
(Placez le crochet supérieur de ferrure en métal de fixation en supérieur de l'IEC rail.)



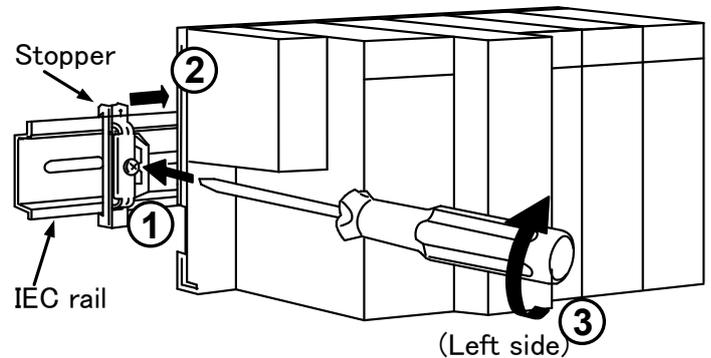
- (4) Slide the stopper to come into intimate contact with the main unit, and tighten the screw on the top with a screwdriver.  
 (Tightening torque: 1.00 to 1.35 N•m)  
 (Glissez la ferrure en métal de fixation pour toucher étroitement à l'unité principale, et serrez le vis supérieur avec un tournevis.  
 (Couple de serrage: 1.00 à 1.35 N•m))

Follow the steps (1) to (3) shown in the right figure to secure the main unit.

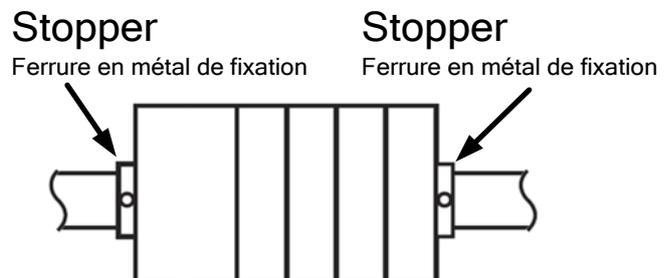
- (1) Loosely fasten the stopper to the IEC rail so that it will not come off the rail.
- (2) Slide the stopper to come into intimate contact with the main unit.
- (3) Fasten the stopper while keeping it in intimate contact with the main unit.

Suivez de (1) à (3)

- (1) Fixer le DIN rail
- (2) Mettre la ferrure en métal de fixation à l'unité principale
- (3) Desserre la ferrure en métal de



- (5) Do the same to fasten the stopper on the other side to the main unit.  
 (Vérifiez que la ferrures en métal de fixation en droite et gauche sont fermement attachées à l'IEC rail.)
- (6) Check that both right and left stoppers are secured to the IEC rail.  
 (Vérifiez que la ferrures en métal de fixation en droite et gauche sont fermement attachées à l'IEC rail.)



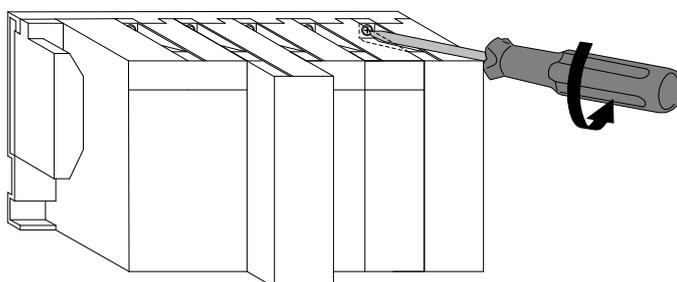
## 5.2 Direct installation on a panel (Installation directe une planche.)



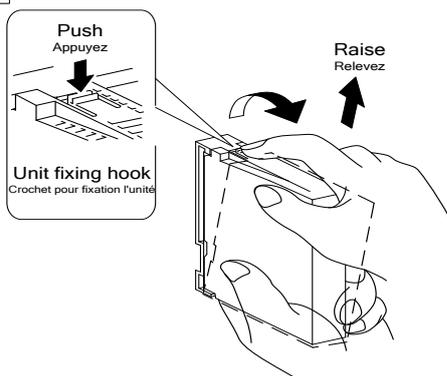
### Cautions

- **Please return the unit which you removed for wiring. The units are only support to be worked as EcoWebServerIII.**  
**It will be not worked without using for EcoWebServerIII.**
- **Please do not replace for any unit of EcoWebServerIII. Operation verification of EcoWebServerIII is confirmed as the purchase. It may cause a malfunction or failure if EcoWebServerIII is used in any other combination.**

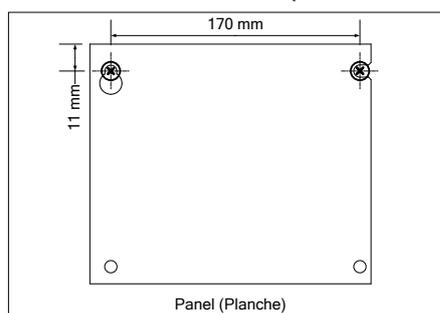
- (1) Remove the fixing screws on the top of the demand surveillance section unit.  
(Déboutonnez les vis pour fixation l'unité qui sont supérieurs de l'unité pour la section d'alimentation électrique et de l'unité pour la section de contact sortie.)



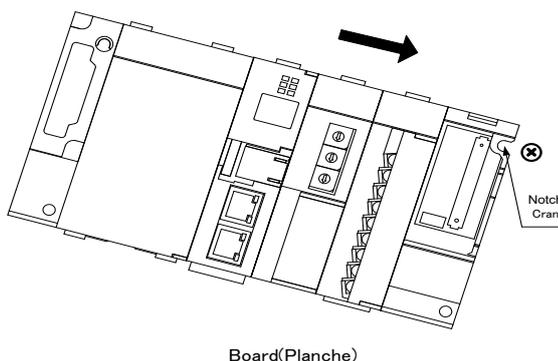
- (2) Remove the demand surveillance section unit.  
(Retirez l'unité pour la section d'alimentation électrique et de l'unité pour la section de contact.)



- (3) Mount two panel mounting screws (M4 × 12) on the board to fix the upper side of this product.  
(Montez deux bornes de montage (M4 × 12) sur la planche pour fixer le côté supérieur du produit.)



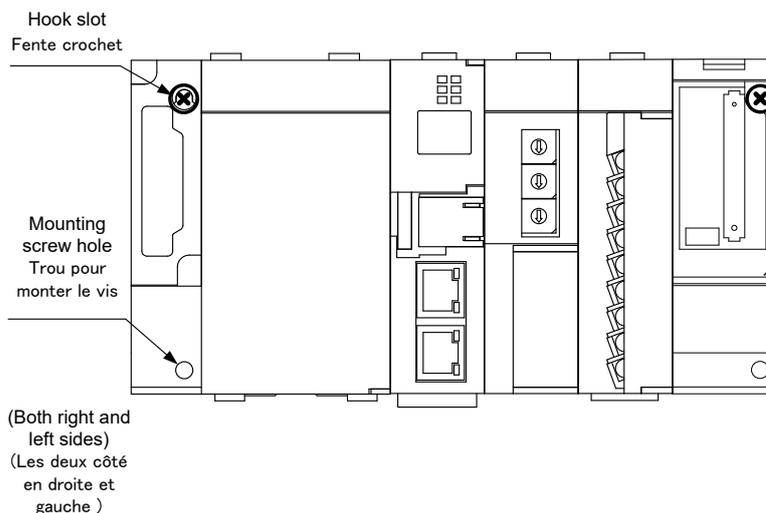
- (4) Hook the notch in the right side of this product on the right screw.  
(Crochez le cran du côté droite du produit sur le vis droite.)



Board(Planche)

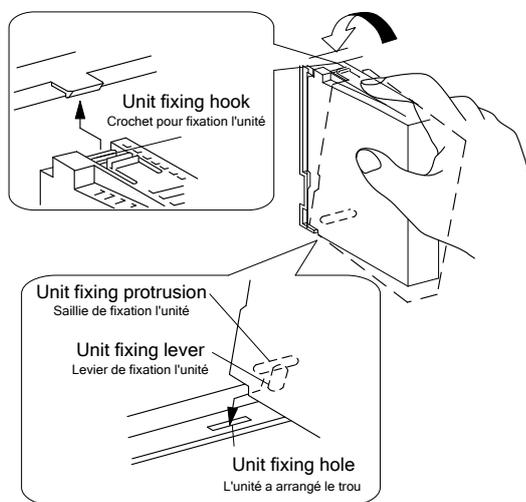
- (5) Hook the hook slot in the left side of this product on the left screw.  
(Crochez le cran du côté gauche du produit sur le vis gauche.)

- (6) Place mounting screws into the right and left screw holes in the lower side of this product, and tighten all the mounting screws.  
(Placez deux bornes de montage dans les trous de vis (en droite et gauche) en bas du produit et serrez toue les bornes de montage.)

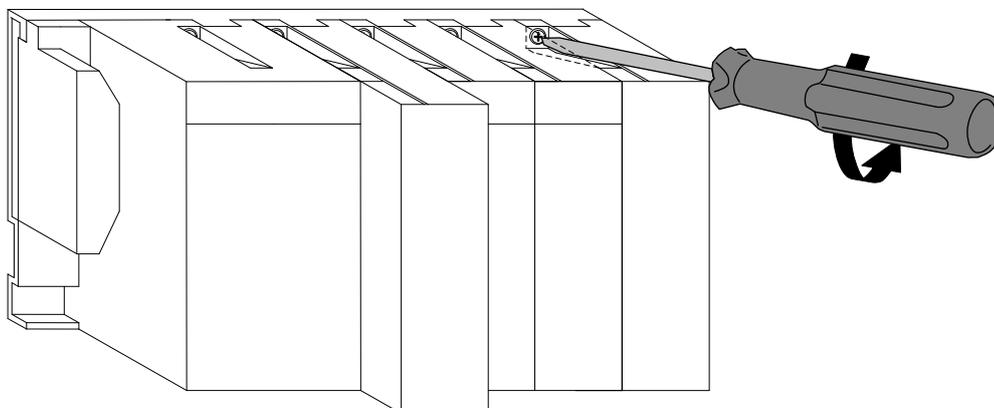


### Board(Planche)

- (7) Mount the power supply section unit and the contact output section unit.  
(Montez l'unité pour la section d'alimentation électrique et l'unité pour la section de contact de sortie.)



- (8) Tighten the unit fixing screws on the top of the power supply section unit and the contact output section unit.  
(Tightening torque: 0.36 to 0.48 N•m)  
\* Tighten the screws securely to prevent the units from dropping.  
(Serrez les vis pour fixation l'unité au sommet de l'unité pour la section d'alimentation électrique et de l'unité pour la section de contact de sortie. (Couple de serrage: 0.36 à 0.48 N•m))  
(Assurez-vous que le couple est serré)

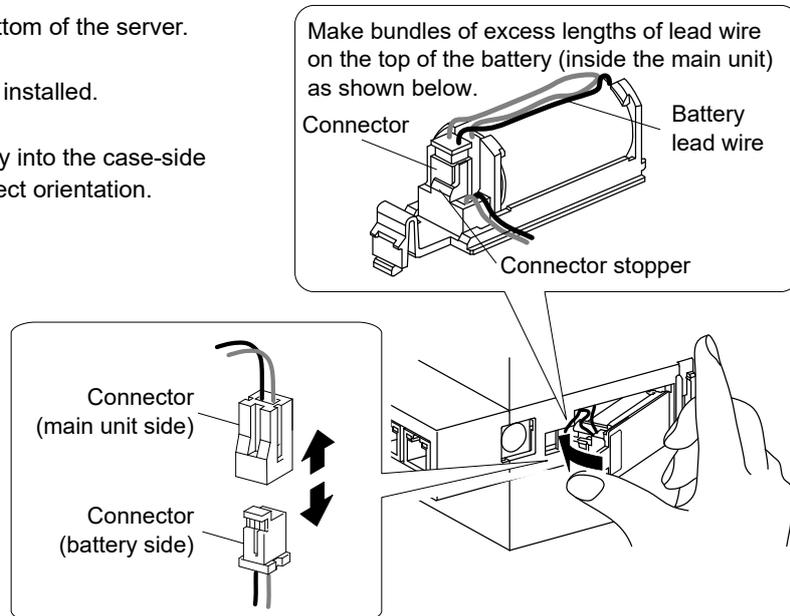


## 6. Battery Installation and Replacement(Server section)

### 6.1 Installing the battery(Server section)

The battery is shipped with the battery connector removed. Before use, make sure to connect the battery connector.

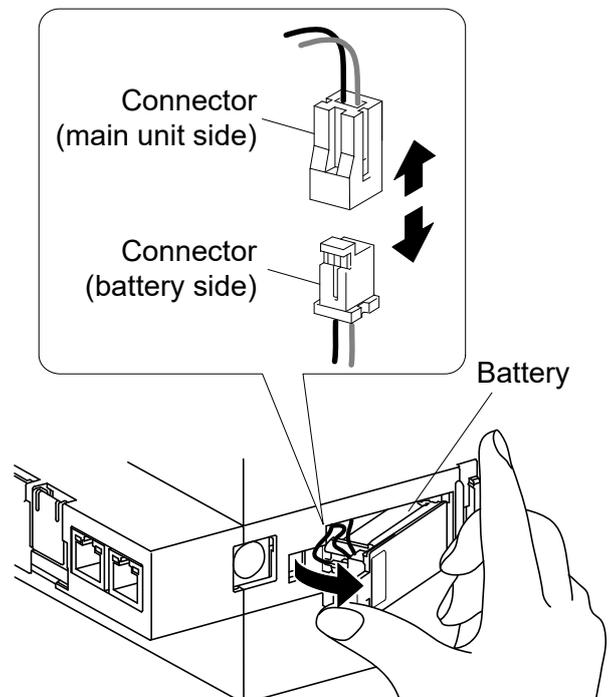
- (1) Open the battery cover on the bottom of the server.
- (2) Check that the battery is properly installed.
- (3) Insert the connector on the battery into the case-side connector pin, observing the correct orientation.



### 6.2 Replacing the battery(Server section)

When the battery reaches its end of life, the "ERR." LED on the server section turns red. Replace the battery with a new one. (See "11 Options.")

- (1) Open the front cover on the server section, and set the RESET switch to the SEL position.
- (2) When the "CF CARD" LED turns off, turn the product off.
- (3) Open the battery cover on the bottom of the server section.
- (4) Remove the battery from the holder.
- (5) Insert a new battery into the holder in the correct orientation and connect the lead connector to the connector.
- (6) Close the battery cover.
- (7) Turn the product on.



#### Cautions

- Make sure to perform battery replacement with power turned off.
- Complete battery replacement within 3 minutes. If 3 minutes passes with the battery removed, the data for the last 1 hour and the clock setting may be initialized. (The data and setting values older than those for the last 1 hour are not initialized.)  
If the IP address and clock settings are initialized, reconfigure those settings after backing up the data.

### 6.3 Setting the demand surveillance unit battery switch to ON

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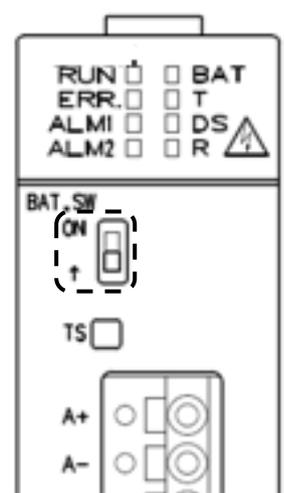
Before using the product, set the battery switch (BAT.SW) on the demand surveillance unit to ON.

(1) Before using the product, set the battery switch on the demand monitoring section to ON.

\* Turning off the programmable logic controller with this switch set to OFF will reset the clock setting to the default value (0:00, 1/1/2012).

(Note) Build-in clock in demand monitoring section will not be backup by the battery in C language controller.

Please make sure to set BAT.SW to ON before demand monitoring.



## 7. IP Address Setting

### 7.1 Setting an IP address

- (1) Install setting software to computer.
- (2) Connect this product via a LAN straight cable or crossover cable to a PC that has the configuration software installed in it.

- (3) Take a note of the IP address set in the PC.

PC's IP address	:	<input type="text"/>
PC's subnet mask	:	<input type="text"/>
PC's default gateway	:	<input type="text"/>

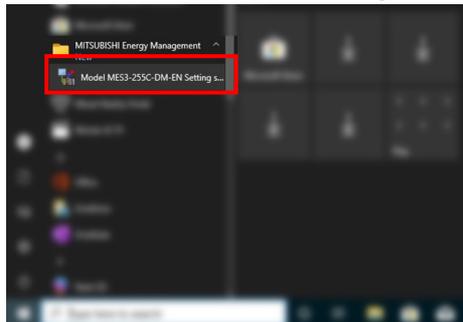
- (4) Change the IP address set in the PC according to the IP address (factory setting: 192.168.10.1) set in the product.

IP address set in the product	IP address to be set to the PC
192.168.10.1	192.168.10.xx xx is a value from 2 to 254. * The upper 3 digits should be consistent with those for the product.

- (5) Use the configuration software to set an IP address for EcoWebServerIII. Run the EcoWebServerIII setting software.

As the following sample by Windows 10, displayed content might be different by OSs and installed applications.  
[Start menu] > [MITSUBISHI Energy Management]

> Click [Model MES3-255C-DM-EN Setting software ver3].

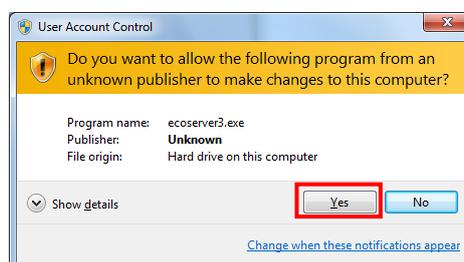


You can also launch the configuration software by double-clicking the **Model: MES3-255C-DM-EN Setting Software ver3** icon on the desktop.

After a few seconds, the following project management window appears.



\* If the User Account Control dialog box appears as shown below, Click Yes to launch the configuration software.

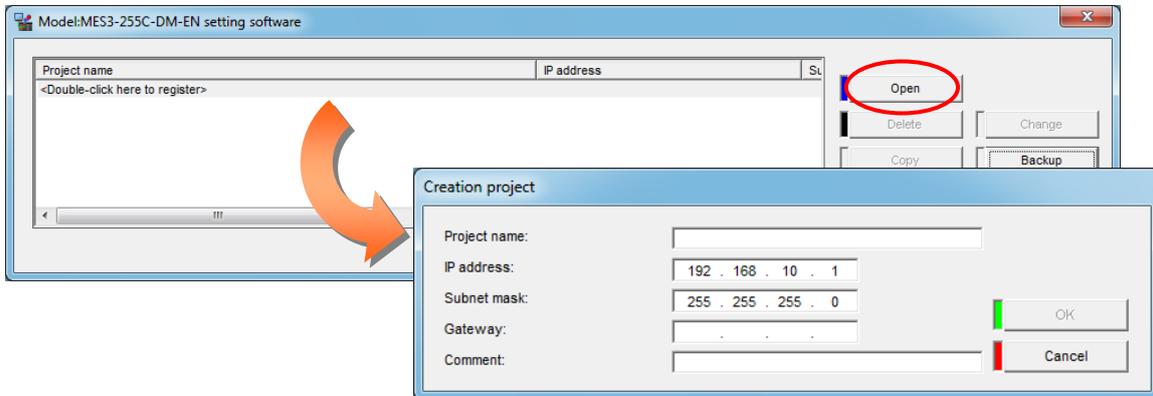


(6) Create a new project.

Double-click <Double-click here to create a new project.> in the project management window.

Or

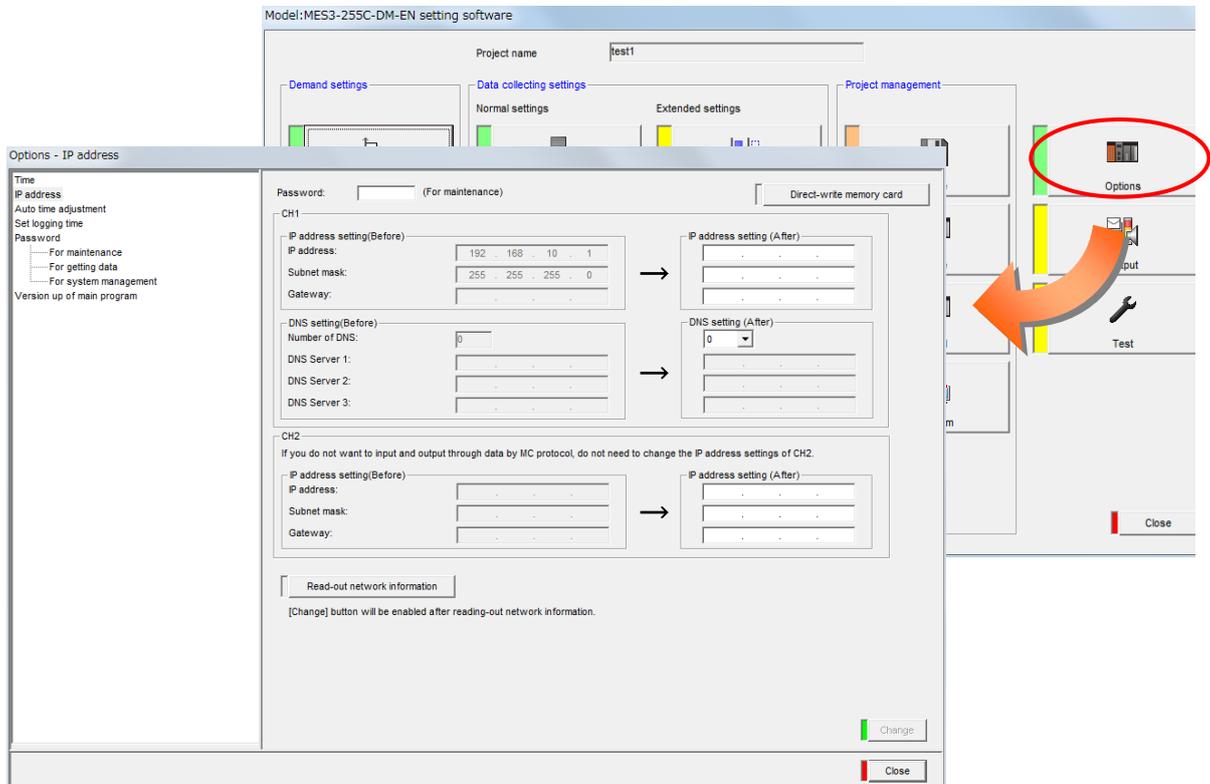
Select <Double-click here to create a new project.> and click **Open**.



Configure the following settings in the **Create New Project** window and click **OK**.

Project name	Optional (Specify a name such as "Factory A" or "Floor B" so that you can recognize it as a project for EcoWebServer III.)
IP address	192.168.10.1 (Specify the factory default IP address.)
Subnet mask	255.255.255.0
Default gateway	Left blank
Comment	Optional

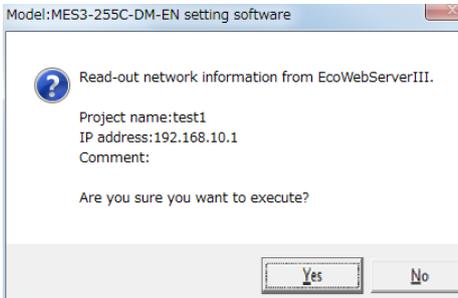
(7) Change the IP address for EcoWebServer III. Click Options in the project configuration window. Click **IP address** in the tree menu.



- (8) Read the network information.  
Click **Read the network information**.



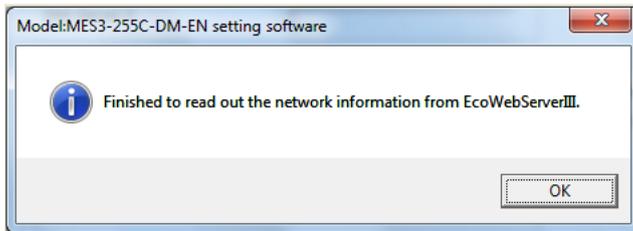
Clicking the button displays the network information read confirmation message.



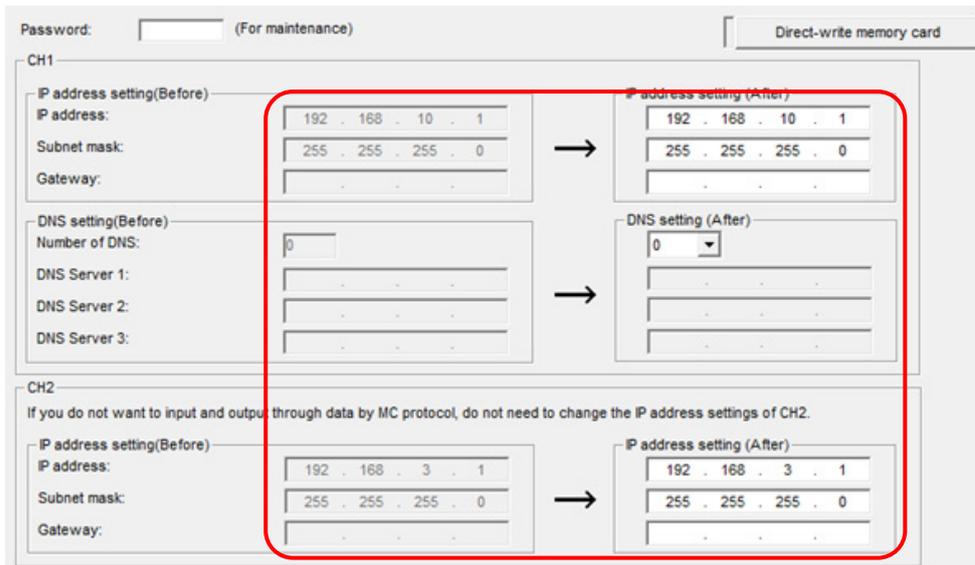
[Yes]: Executes network information reading.

[No]: Cancels network information reading.

After reading is completed, the message below is displayed.  
Click **OK**.

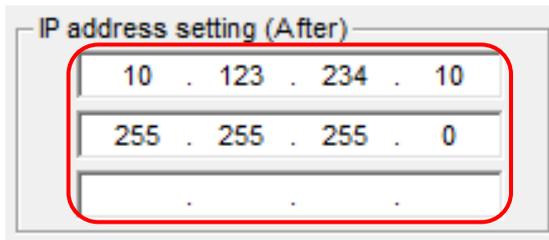


The network information currently set in EcoWebServer III is reflected to the IP address setting (Before) and IP address setting (After) in CH1 and CH2.



(9) Change the IP address in IP address settings (new).

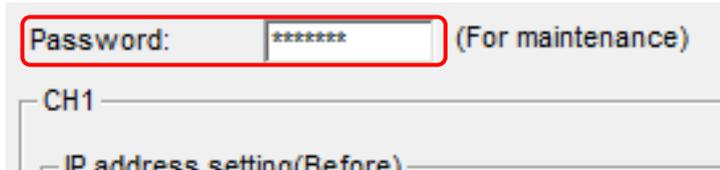
(The following figure shows an example of changing the IP address to 10.123.234.10. Type an IP address, subnet mask, and default gateway to be used for operation.)



IP address setting (After)

10	.	123	.	234	.	10
255	.	255	.	255	.	0
.	.	.	.	.	.	.

(10) Type a maintenance password (factory default: **ecopass**) in **Password** and click **Apply**.

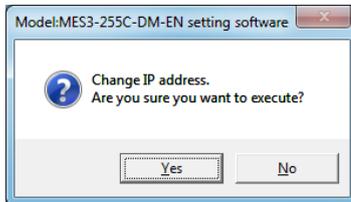


Password: \*\*\*\*\* (For maintenance)

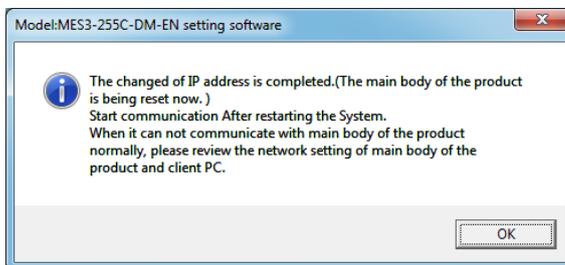
CH1

IP address setting(Before)

In the confirmation dialog box that appears after you click **Change**, click **Yes**.



When the IP address configuration is complete, the following dialog box appears. Click **OK**.

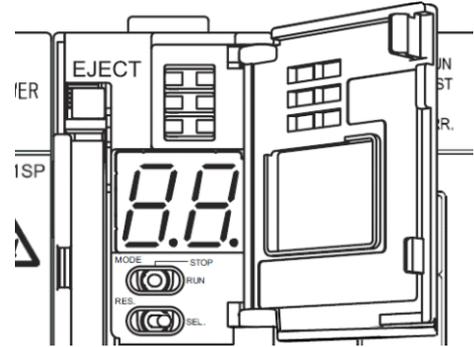


- \*1 After the IP address configuration is complete, EcoWebServer III is automatically reset. (After it is reset, the new IP address settings take effect.)
- \*2 Resetting takes 1 to 8 minutes to complete. Check to see that resetting is complete and the "STA." LED on the EcoWebServer III main unit turns on before starting communications.
- \*3 The values of **IP address**, **Subnet mask**, and **Default gateway** in the project information are also automatically updated with the new values.

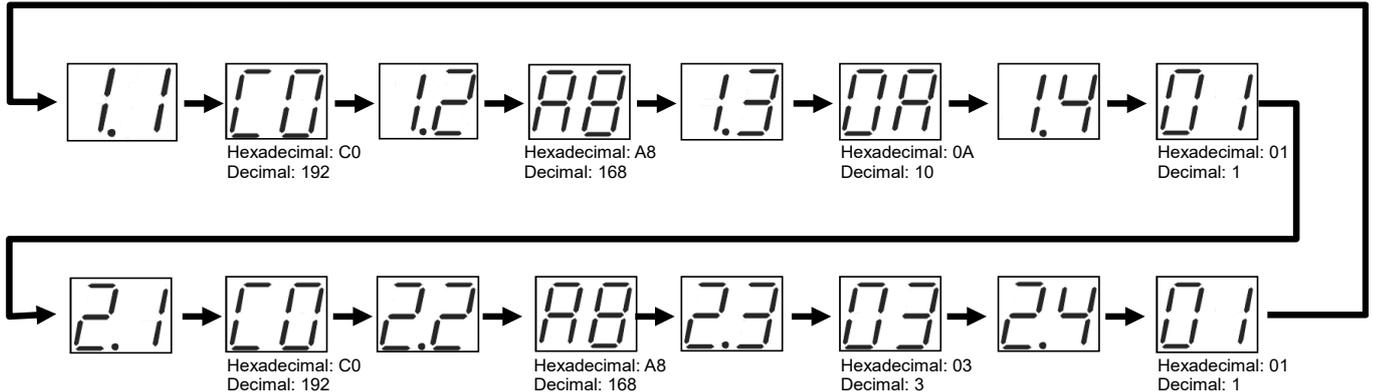
(11) After changing the IP address for the product, return the PC's IP address to its original address.

## 7.2 Checking the IP address

- (1) Open the front cover on the server section, and set the MODE switch to the "STOP" position.
- (2) Set the RESET switch to the "SEL." position.
- (3) After the "CF CARD" LED turns off, turn the RESET switch to the "RES."
- (4) After all the LEDs except the "POWER" LED on the power supply section turn off, return the RESET switch to the central position.
- (5) Wait until the product starts up and the IP address is displayed on the 7-segment LED at the front.



IP address display (Example of 192.168.10.1 set to CH1 and 192.168.3.1 set to CH2.)



- (6) After you finish checking the IP address, turn the MODE switch to the "RUN" position.

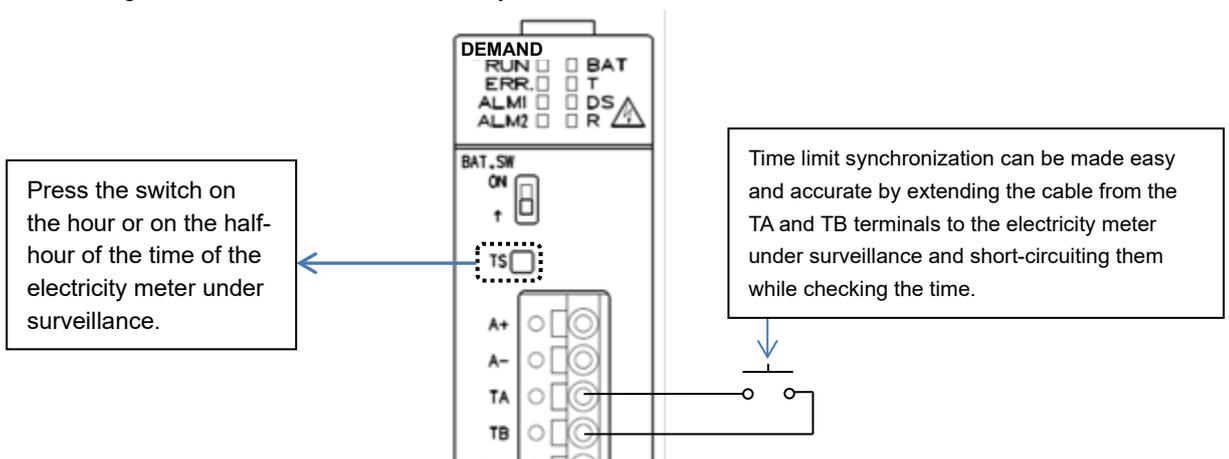
## 7.3 Time limit synchronization of the demand surveillance section

- (1) Press TS (time limit synchronization switch) to synchronize the time limit.  
Press the TS switch in synchronization with the switching (on the hour or on the half-hour) of the time limit of the transaction electricity meter.

### \* If the product is located at a distance from the transaction electricity meter:

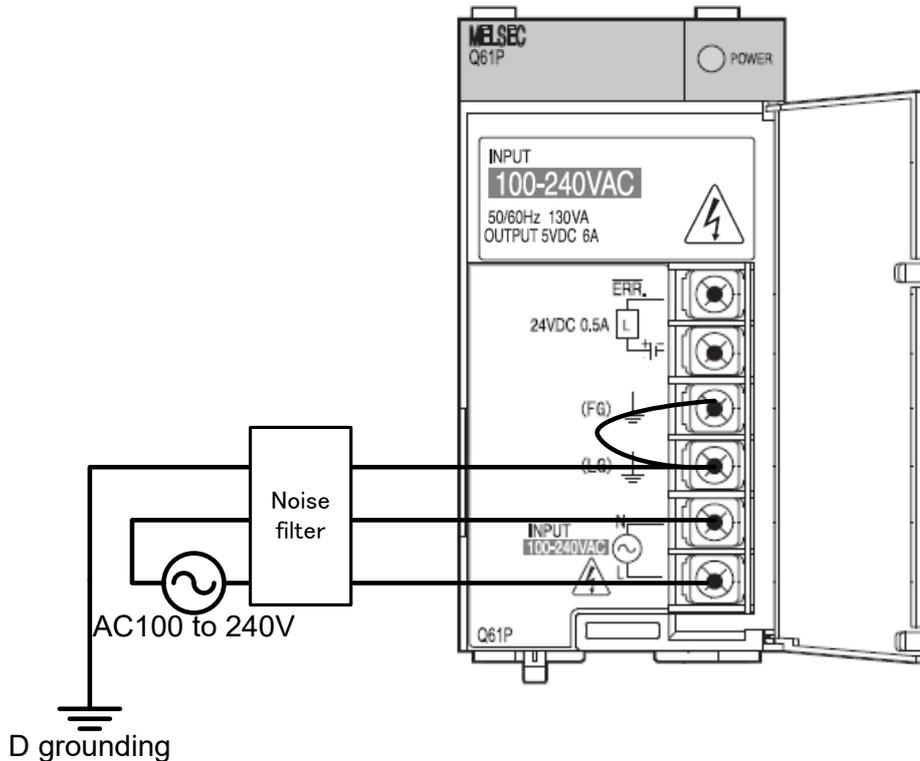
The time limit can also be synchronized by short-circuiting TA and TB instead of pressing TS (time limit synchronization switch).

Time limit synchronization can be facilitated by connecting a cable equipped with a push button to the TA and TB terminals and extending it to near the transaction electricity meter.



## 8. Connection Diagram

### 8.1 Power supply section (Section de l'alimentation électrique)



\* An optional noise filter can be installed to the power source line in order to reduce noise more effectively.  
<Recommended model>

Model: FN343-3/01 (Rated current: 3 A)  
Manufacturer: SCHAFFNER

\* **Demand control section requires for additional power.**

**It is necessary to connect AC100 to 240V (+10%, -15%) 50/60Hz to V1, V2 in demand terminal block.**

**It is possible to take the power from the power supply section.**

**Do not use UPS, SAG and etc. to supply the power.**

#### Note

- \* See page 3 for detailed cautions.
- \* Never work with live wires.
- \* Use electric wires of appropriate size.  
See page 3 for information on wire size.
- \* Perform class D grounding dedicated for the FG and LG terminals.
- \* Use the power terminals L and N via a noise filter.

#### Note

- \* Voyez les remarques sur la page 3.
- \* Fil sous tension N'est PAS permis.
- \* Taille de câble, regardez la page 3.
- \* FG, LG est réservé s exclusive aux bases de classe D.

Software and data of EcoWebServerIII is being saved in compact flash card.

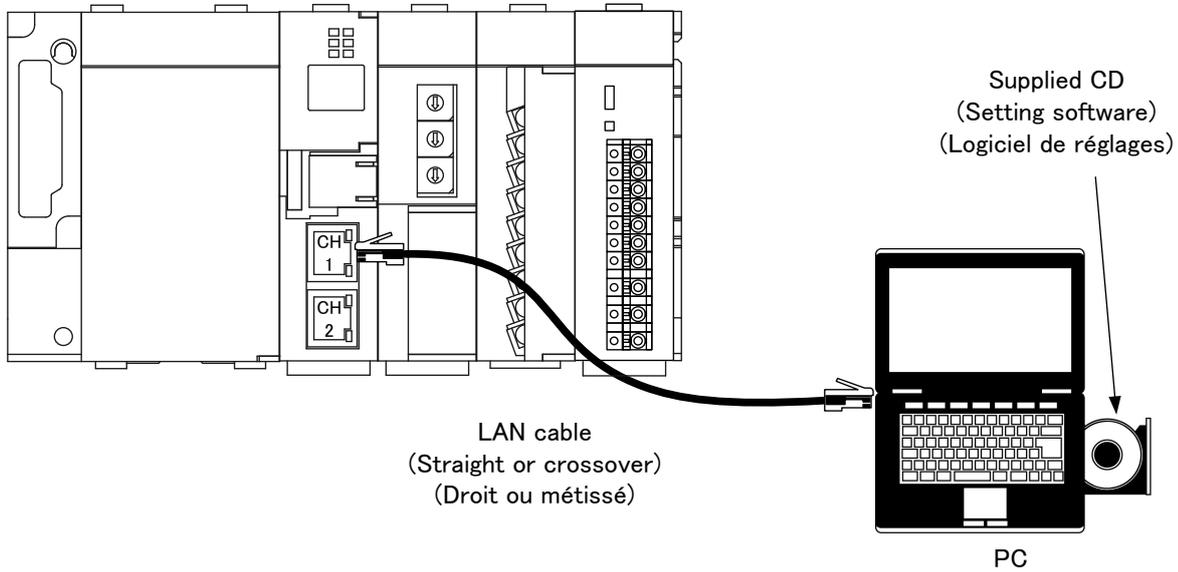
It might cause data corruption by a power failure or an instant power. Please consider UPS if the power failure is frequently occurred. Please confirm the content to turn off EcoWebServerIII for maintenance. Procedure refers to [Names and functions of parts].

## 8.2 Ethernet communication section (CH1 for connection to PC)

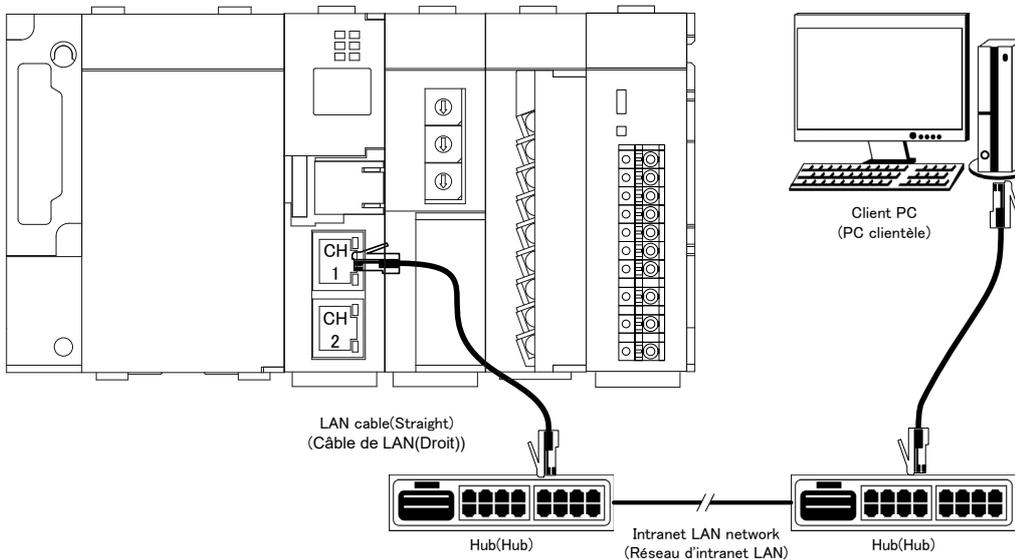
(Section de communication Ethernet)

### 8.2.1. For initial setting (IP address setting)

(Pour les réglages initiaux (adresse IP fixation))



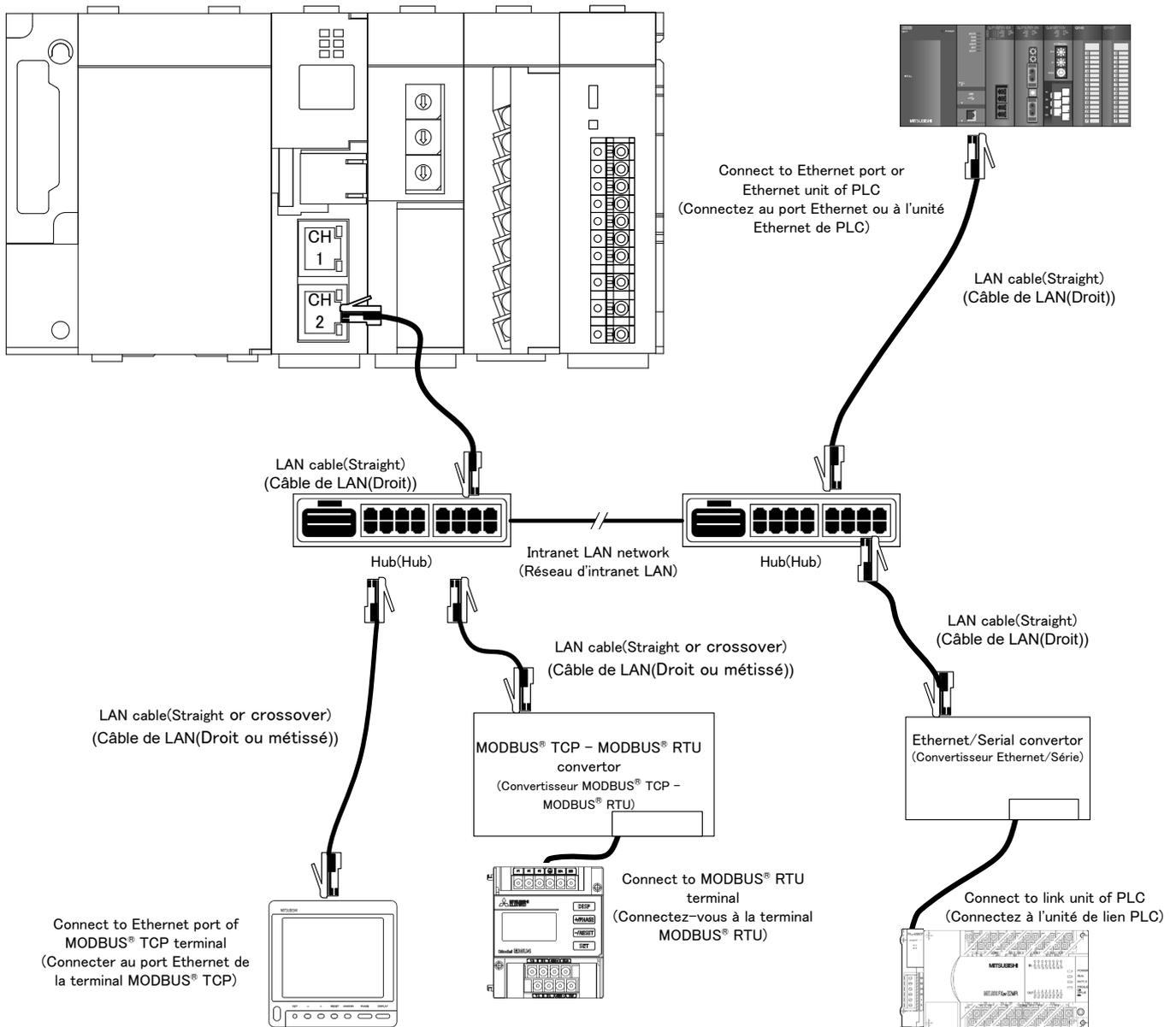
### 8.2.2. For operation (Pour opération)



### 8.3 Ethernet communication section (CH2 for connection to programmable logic controllers and MODBUS terminals.)

(Section de communication Ethernet (CH2))

#### 8.3.1. For operation (Pour opération)



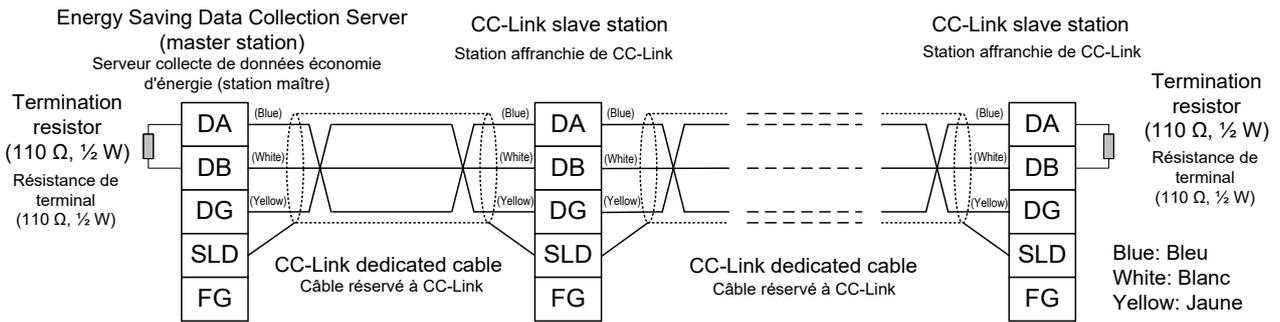
\* See the manual for the programmable logic controller for information on Ethernet connection of programmable logic controllers and link connection of computers.  
(\*Voyez le mode d'emploi de PLC en détail.)

\* Mitsubishi FX series programmable logic controllers cannot be connected directly to Ethernet. An Ethernet/Serial communication converter is required.  
(Série FX est seulement soutenue pour la communication en série au moyen de convertisseur Ethernet/Série.)

\* The Ethernet/Serial communication converter model that has been functionally verified is LINE EYE SI-65.

\* Operation of MODBUS TCP - MODBUS RTU convertor model that has been functionally verified is LINE EYE SI-485MB.

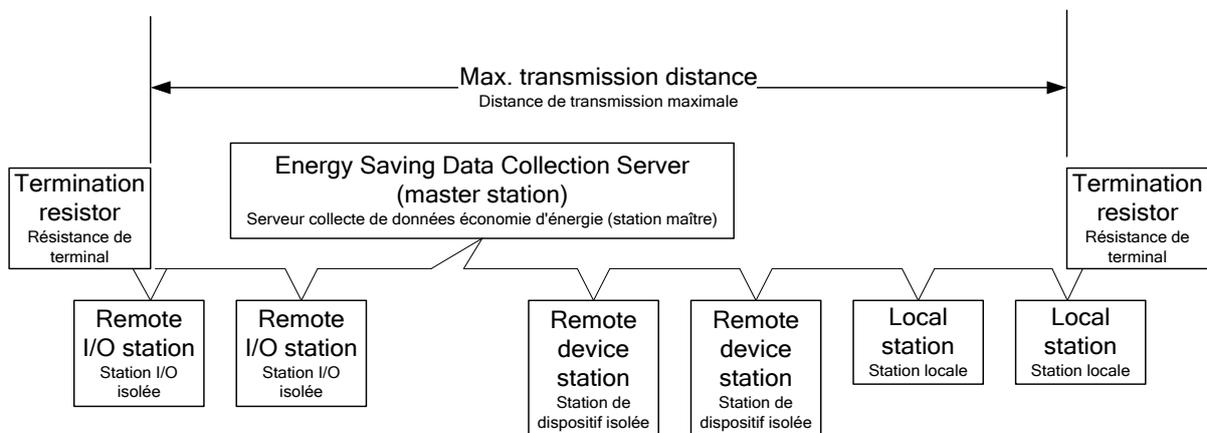
## 8.4 CC-Link communication section (Section de CC-Link communication)



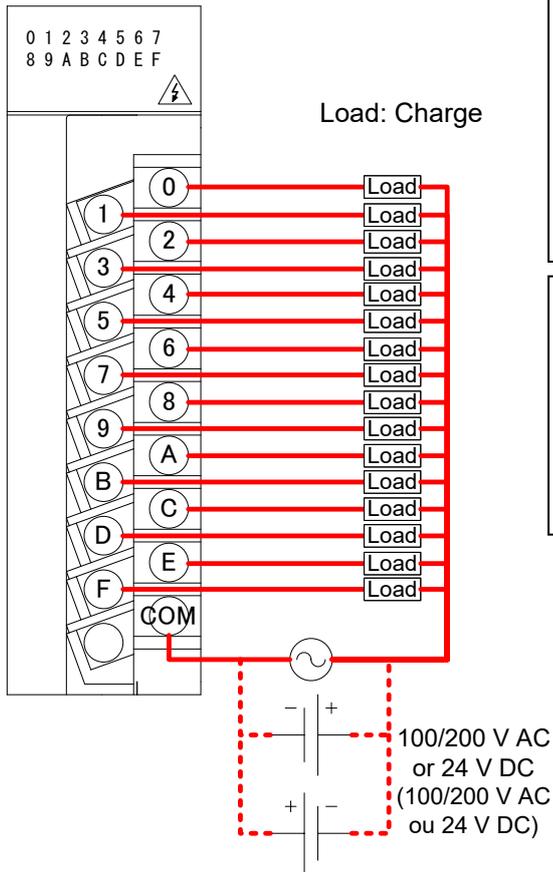
### Point

The maximum transmission distance depends on the CC-Link communication speed setting.  
 (Distance de transmission maximale compte sur la fixation de la vitesse de communication.)  
 Perform wiring according to the following table so that it will not exceed the maximum transmission distance.  
 (Réalisez le câblage selon la table suivante afin qu'il n'excède pas la distance de transmission maximale.)

Communication speed (Vitesse de la communication)	156 kbps	625 bps	2.5 Mbps	5 Mbps	10 Mbps
Cable length between stations (Longueur du câble entre les stations)	20 cm or longer (20 cm ou plus)				
Max. transmission distance (Distance de transmission maximale)	1200 m	900 m	400 m	160 m	100 m



## 8.5 Contact output section (Section de sortie contact)



### Note

- \* See page 3 for detailed cautions on installation of the product.
- \* To prevent induction noise, keep control lines as far away from power lines as possible.
- \* Use electric wires of appropriate size. See page 3 for information on wire size.
- \* Additional terminal blocks should be installed by the customer if more contact points are connected to COM.

### Note

- \* Voyez les remarques sur la page 3.
- \* Pour empêcher le bruit d'induction, écartez les lignes de contrôle des lignes électriques autant que possible.
- \* Taille de câble, regardez la page 3.
- \* Si COM sera connecté aux points plusieurs, terminaux doit être disposé par client.

Terminal symbol	Function
0 to 9, A to F	Contact relay output terminals 0 to 9, A to F
COM	Contact relay output common terminal (common for output terminals 0 to 9, A to F)
NC	(Unused)

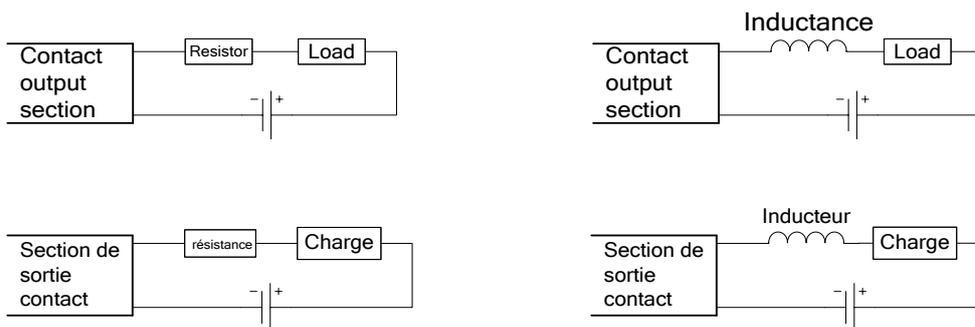
## Point!

When a counter or timer that uses a DC-DC converter is connected as a load, its inrush current should be below the maximum load current of the contact output section.

(Si l'un compteur ou chronomètre ce qu'il utilise un DC-DC transformateur sera connecté comme une charge, le courant d'afflux doit être inférieur au courant de charge maximum de la section de contact de sortie.)

If the inrush current is larger, perform any one of the following to reduce the impact of the inrush current.

(Si le courant d'afflux est grand, réalisez l'un des suivants pour diminuer l'impact du courant d'afflux.)



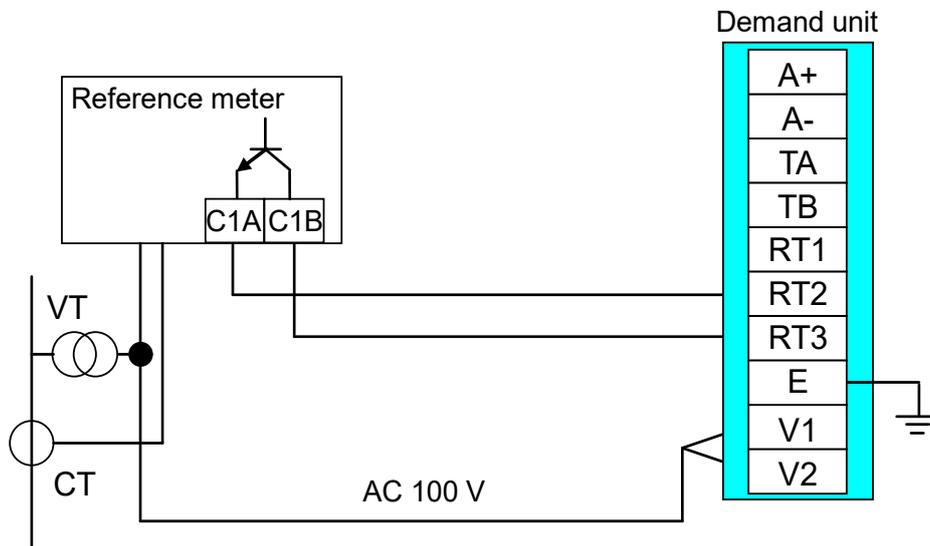
## 8.6 Demand surveillance unit section (Section de sortie contact)

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### Wiring

Perform wiring in accordance with the wiring diagram below.  
For detailed specifications and usage, see Instruction Manual – Configuration.  
Earth terminal is support to be wiring to earth. (Un-connected inside)

When an open-collector transmitter is used as a reference meter:  
(This is an example for ME96SS series with option unit (model: ME-4210-SS96) in the following.)



## 9. Requirement for the compliance with EMC Directives

EMC Directives prescribe both "Emission (electromagnetic interference): Do not radiate strong electromagnetic waves outside" and "Immunity (electromagnetic susceptibility): Do not be influenced by electromagnetic waves from outside".

This section compiles the precautions for the compliance of the system incorporating Energy Saving Data Collecting Server (target model: MES3-255C-DM-EN) with the EMC Directives. The following description is based on the requirement of the regulations and the standards we understand, but we do not guarantee to comply with the directives above for the whole system built in accordance with this description. The manufacturer of the system finally needs to evaluate the way of the compliance with EMC Directives and whether the system complies with them or not.

- (1) Harmonized standard for EMC Directives: EN61000-6-2: 2005, EN61000-6-4: 2007/ A1:2011
  - (a) Compatibility condition for harmonized standard

Energy Saving Data Collecting Server is the open type device (i.e. the device incorporated in other device), and needs to be installed in the conductive control panel. The unit is tested with installed in the control panel for the emission and the immunity out of the test items for the standard.
  - (2) Recommended condition for installation in the control panel
    - (a) Control panel
      - Control panel needs to have conducting property.
      - When bolting the top panel, bottom panel etc. of the control panel, mask the grounding part of the panel so as not to be painted.
      - In inner panel, keep the conductivity in as large area as possible by masking the bolting part to the main panel to keep the electric contact to main panel.
      - Ground the main panel by the thick wire so as to keep high impedance even for high-frequency wave.
    - (b) Installation of power line and ground line
      - Set up the ground point to the control panel near Energy Saving Data Collecting Server, and ground the frame GND terminal of the unit to the ground terminal of the control panel (PE) by as thick and short wires as possible. (wire length is 30cm or shorter)
- (3) Cable
  - (a) Auxiliary power, Input voltage, CC-Link cable, Ethernet cable, Contact output, Pulse input

When it is necessary to comply with the EMC Directive (EN61000-6-2: 2005, EN61000-6-4: 2007/ A1:2011), attach EMI filter and ferrite cores to each cable. EMI filter and Ferrite cores used in our testing is below.

    - Auxiliary power  
COSEL, NBH-06-432
    - CC-Link cable, Ethernet cable, Contact output, Pulse input  
TDK, ZCAT2235-1030A

## 10. Specifications

### 10.1 Hardware specifications

Item		Specifications					
Power supply section	Auxiliary power input (Entrée d'alimentation électrique)	100 to 240 V AC (+10%, -15%)					
	Input frequency (Fréquence d'entrée)	50/60 Hz (±5%)					
	Input voltage distortion (Distorsion)	Within 5%					
	Consumption VA (Consommation VA)	34VA (at 110 V AC), 46 VA (at 220 V AC)					
	Inrush current (Courant d'afflux)	20 A, 8 ms or less (20 ms ou moins (100 V AC ou plus))					
	Allowable momentary power interruption time	20 ms or less (100 V AC or higher)					
	Withstand voltage	Between all input/LG terminals and all output terminals 2,830 Vrms AC/3 cycles (altitude: 2,000 m)					
	Insulation resistance	10 MΩ or more by 500 V DC insulation tester at the same locations as for withstand voltage					
	Noise immunity	- Noise voltage 1500 Vp-p, noise width 1 μs Measured by noise simulator with a noise frequency of 25 to 60 Hz - Noise voltage IEC61000-4-4, 2 kV					
	Operating ambient temperature	0 to 55 °C					
	Storage ambient temperature	-25 to +75 °C					
	Operating ambient humidity	5 to 95% RH					
	Storage ambient humidity	5 to 95% RH					
	Vibration resistance	Conforming to JIS B 3502, IEC 61131-2	—	Frequency	Constant acceleration	Half amplitude	Sweep count
			Intermittent vibration	5 to 9 Hz	—	3.5 mm	10 times in each axis X, Y, Z
			Continuous vibration	9 to 150 Hz	9.8 m/s <sup>2</sup>	—	
				5 to 9 Hz	—	1.75 mm	—
			9 to 150 Hz	4.9 m/s <sup>2</sup>	—	—	
	Impact resistance	Conforming to JIS B 3502, IEC 61131-2 (147 m/s <sup>2</sup> , 3 times in each axis X, Y, Z)					
	Operating atmosphere	No corrosive gas					
Operating altitude	2000 m or below						
Installation area	Inside a control panel						
Overvoltage category(*1)	II or below						
Contamination level(*2)	2 or below						
Weight	1.25 kg						
Fuse	Built-in (unreplaceable by user)						
Server section	Ethernet	Interface	10BASE-T 100BASE-TX				
		Transmission method	Baseband				
		Cascade connection limit	4 levels max. (10BASE-T), 2 levels max. (100BASE-TX)				
		Max. segment length	100 m				
		Compatible connector	RJ45				
		Functions supported	Autonegotiation (10BASE-T/100BASE-TX automatically detected) Auto MDIX function (straight/crossover cable automatically detected)				
	Protocol	LAN CH1	HTTP (view by web browser), FTP (read time, file transfer), SMTP (send mail), SNTP (set time)				
			LAN CH2 (MC protocol)	client	Ethernet direct: QnA compatible 3E frame (ASCII) Ethernet / Serial conversion time: A compatible 1C frame format 4 (ASCII)		
		server		3 E frame (binary) / 4 E frame (binary)			
	Clock accuracy	0 to 55 °C	Per day: -10.89 to +8.64 sec		Additional difference of ±0.5 seconds can be produced during power outages.		
		25 °C	Per day: -4.32 to +5.25 sec				
	Power-interrupti	Backup data	Backed up by battery. - Clock				

Item		Specifications			
on backup (*4)		- Measured data for the last 1 hour Backed up by nonvolatile memory card.			
		- Setting values			
		- Measured data except for the last 1 hour			
	Battery	Type	Lithium manganese dioxide primary battery		
		Initial voltage	3.0 V		
		Nominal current	1800 mAh		
		Life when in storage	5 years at room temperature (actual service value)		
Life when in use		Energized time ratio	Guaranteed value	Guaranteed time after battery error occurs	
	0%	13,700 hours, 1.57 years	600 hours, 25 days		
	30%	19,100 hours, 2.18 years			
	50%	25,800 hours, 2.96 years			
	70%	40,000 hours, 4.57 years			
	100%	43,800 hours, 5 years			
CC-Link communication section	Transmission speed	156 kbps / 625 kbps / 2.5 Mbps / 5 Mbps / 10 Mbps			
	Max. overall cable length (Max. transmission distance)	Communication speed	Cable length between stations	Max. overall cable length	
		156 kbps	20 cm or longer	1200 m	
		625 kbps		900 m	
		2.5 Mbps		400 m	
		5 Mbps		160 m	
	10 Mbps	100 m			
	Max. number of connected units	64 units under the following conditions.			
		1. Total number of stations			
		$a + b \times 2 + c \times 3 + d \times 4 \leq 64$			
		a: Number of units occupying 1 station, b: Number of units occupying 2 stations, c: Number of units occupying 3 stations, d: Number of units occupying 4 stations			
		2. Number of connected units			
		$16 \times (A + D) + 54 \times B + 88 \times c \leq 2304$			
	A: Number of remote I/O station units	--- 64 units max.			
	B: Number of remote device station units	--- 42 units max.			
	C: Number of local station/intelligent device station units	--- 26 units max.			
	D: Number of reserved station units*				
* Unregistered station numbers between the station number 1 and the last station number are counted as reserved station units.					
Communication method	Broadcast polling method				
Synchronization method	Frame synchronous method				
Encoding method	NRZI method				
Transmission path type	Bus (RS-485)				
Transmission format	HDLC compliant				
Error control method	CRC ( $X^{16} + X^{12} + X^5 + 1$ )				
Connection cable	Ver. 1.10-compatible CC-Link dedicated cable				
Contact output section	Number of output points	16 points			
	Insulation method	Relay insulation			
	Rated switching voltage/current	24 V DC 2 A (resistance load)		/1 point, 8 A/1 common	
		240 V AC 2 A (COSφ=1) (24 V DC 2 A (charge de résistance)) (240 V AC 2 A (COSφ=1))			
	Min. switching load	5 V DC, 1 mA			
	Max. switching load	264 V AC 2 A, 125 V DC 2 A			
Life	Mechanical: 20,000,000 times or more, electrical: 100,000 times or more at rated switching voltage/current				

Item		Specifications		
Demand surveillance section	Pulse input/ Time limit synchronization signal input	Pulse detection CT	Number of pulses: 50000 pulses/kWh Distance: 100 m or less (dedicated cable)	
		Pulse conditions	Signal type: No-voltage a-contact/Open collector Voltage/Current: DC12 V, 10 mA Number of pulses: 50000, 12500, 10000, 2000, 500 pulse/kWh Pulse width: Pulse input 10 ms or more, Time limit synchronization signal input 50 ms or more Pulse interval: 25 ms or more Pulse conditions: Pulse width, Pulse interval	
	Power frequency input		AC100 to 240 V, -15% +10%, 50/60 Hz	
	Power interruption backup		Clock	Even during power failure, measurement continues by clock backup battery of demand surveillance section. Clock accuracy: 1 minute/Monthly difference *6
			Clock backup battery	Cumulative power interruption backup time: 5 years (Lithium battery life: 10 years) *The clock backup battery is not exchangeable because it is built into the unit.
	Contact output		No-voltage a-contact, AC250 V 1 A, DC30 V 1 A	
	Compatible standards		EMC: EN61000-6-2: 2005, EN61000-6-4: 2007/ A1:2011, Safety: EN61131-2: 2007, UL: UL508, c-UL: CSAC22.2 No.14	

- \*1 This refers to the assumed part of electric distribution where the device is to be installed within the area ranging from public electric distribution to premises machinery. The measurement category II applies to devices power-supplied from fixed equipment. The surge withstand voltage of devices whose rated voltage is up to 300 V is 2500 V. (IEC 60664-1)
- \*2 The index indicates the degree of occurrence of conductive substances in the device's operating environment. Contamination level 2 means only occurrence of non-conductive substances. In this degree, however, temporary conduction may be caused by accidental condensation. (IEC 60664-1)
- \*3 It is only for products with demand control function.
- \*4 If the product is reset when the battery's power-interruption backup cannot function due to the expiry of the backup time or any other causes, the time is initialized to the default value (0:00, 1/1/2002). If you change the time of the product in this state, measured data may be deleted. Therefore, be sure to collect necessary measured data before changing the time. For details on data collection, see "4.7.1 Maintenance, Collecting data" in Instruction Manual – Configuration.
- \*5 For UL/c-UL standard, please use the copper conductors wire which temperature rating is 60 °C /75 °C.

## 10.2 Operating environment

The system environment requirements for this software to properly operate as follows:

[PC]

Item	Description
OS (basic software)	Microsoft Windows 7 Professional (32-bit or 64-bit) (English version) SP1 Microsoft Windows 8.1 Pro (32-bit or 64-bit) (English version) Microsoft Windows 10 Pro (32bit, 64bit) (English version)
CPU	1 GHz or higher Pentium® processor, or compatible microprocessor (DOS/V compatible)
Memory *1	1 GB or more
Hard disk *1	Save data collected by EcoWebServerIII to PC, enough disk space for the data is required
CD drive	One or more drives (required to install the setting software)
Display resolution	1,280 × 1,024 pixels or more
Display color	65,536 colors or more
Input device	A mouse and a keyboard
English input system	The system included in OS (English version only)
External interface	10BASE-T/100BASE-TX Memory card reader (when writing / reading / confirming a project via drive by setting software)
Web browser *2	Microsoft Internet Explorer 9 (32-bit), 10 (32-bit), or 11(32-bit) Microsoft Edge Google Chrome

\*1 Note that the required memory and free space of hard disk vary depending on the system environment.

\*2 Operation check for Microsoft Edge is done in version 97.  
Operation check for Google Chrome is done in version 97.

[Tablet \*3]

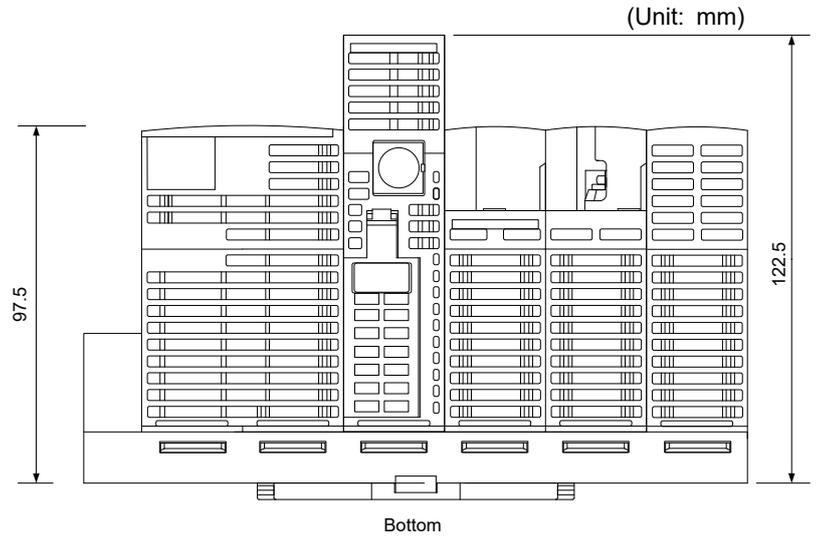
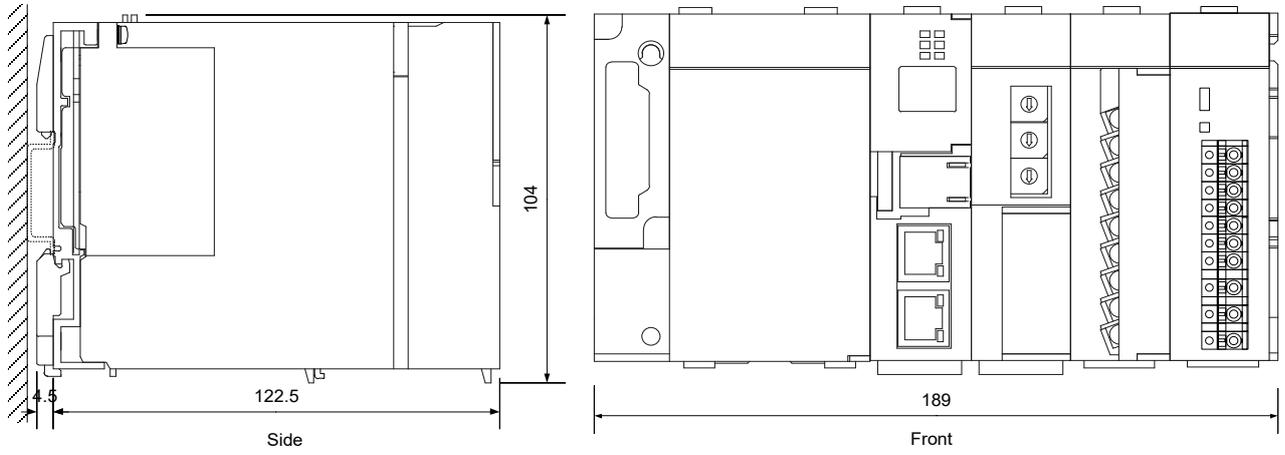
Item	Description	
OS	Android6.0	iOS10
Web browser *4	Google Chrome	Safari

\*3 Tablet is only for browsing the web screen. Setting software cannot be used on the tablet.

\*4 Operation check for Google Chrome is done in version 54.  
Operation check for Safari is done in version 10.

# 11. Outline Dimensions

## 11.1 Outline dimensions

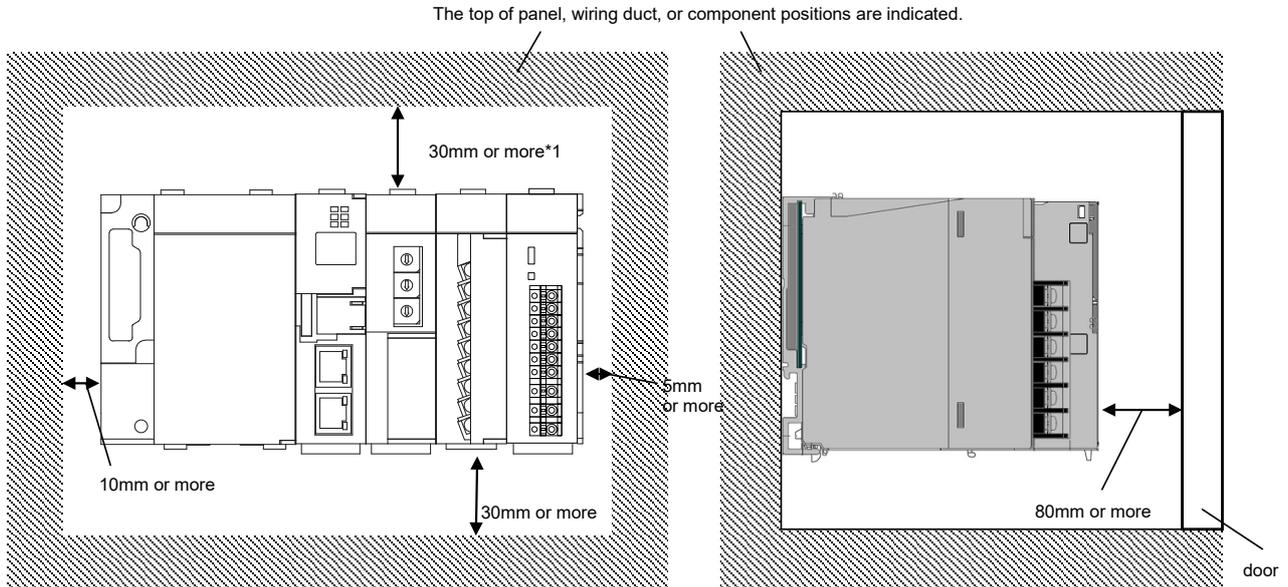


## 11.2 Installation conditions

The following figures show the installation conditions taking heat dissipation into account. Sufficient space must also be provided under the product for battery replacement.

When EcoWebServerIII is superimposed on the up and down, please keep the dissipation to be 60mm(30mm × 2).

\*1 It is no problem to remove the LAN port cap during the operating.



\*1 This length applies when the height of the wiring duct is 50mm or less. If not, the length should be 40mm or more.

## 12. Options

Item	Model	Note
<p>Replacement battery (Server section)</p>	Q6BAT	Recommended replacement time: 3 years

For inquiries on the replacement battery, contact the dealer where you purchased this product.

## 13. Troubleshooting

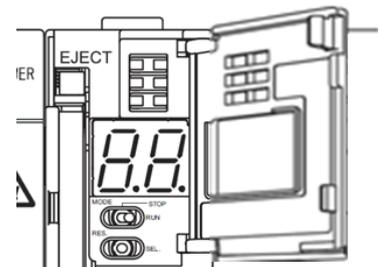
If the product gives off abnormal noise, smell, smoke or heat, turn the power off immediately.  
Check the following items for troubleshooting.

Situation	Check points
The POWER lamp on the power supply section does not turn on.	<ul style="list-style-type: none"> <li>● Is the power supply (100 to 240 V AC, 50/60 Hz) properly connected between L and N on the terminal block of the power supply section?</li> <li>● Is there any short-circuit or break in the power line?</li> </ul>
The "ERR." LED on the CC-Link communication section is lighting or blinking.	Is there any error in communication with CC-Link terminal devices? Check whether CC-Link terminal devices, CC-Link station numbers and CC-Link baud rate are properly configured and communication cables and termination resistors are properly connected.
The "ERR." LED on the server section is lighting.	<ul style="list-style-type: none"> <li>● The battery is at the end of its life. Replace the battery. Refer to 6.2 Replacing the battery.</li> <li>● Is the battery connected?</li> </ul>
The "STA." LED on the server section is blinking for a long time.	The data in the memory card is being restored during startup. The product starts up normally after a few minutes.
"E0" is displayed on the 7-segment LED on the server section.	AC100 to 240V (+10%,-15%) 50/60Hz is not connected to V1,V2 in demand terminal block. It is possible to take the power from the power supply section.
"E1" is displayed on the 7-segment LED on the server section.	Access to the internal memory has failed. Reset the product. Refer to 12.1 Reset of the product.
"E2" is displayed on the 7-segment LED on the server section.	Access to the CompactFlash memory card has failed. Reset the product. Refer to 12.1 Reset of the product.
"E3" is displayed on the 7-segment LED on the server section.	Automatic time adjustment with the SNTP server has failed. Check whether normal communication can be established with the SNTP server or settings in the SNTP server are correct.
"E4" is displayed on the 7-segment LED on the server section.	File transfer to the FTP server has failed. Check whether normal communication can be established with the FTP server or settings in the FTP server are correct.
The indication rotates on the 7-segment LED on the server section.	Is any CompactFlash card other than that supplied with the product connected? Only the supplied CompactFlash card can be used. Connect the supplied card. Please compare CompactFlash and the right side of main product by the sheet in the right. <div style="text-align: right;">  </div>
Illegal data is displayed when you reset the product or change the clock setting while browsing.	Close the browser and restart it.
'01' blinks on the 7-segment LED of the server section at startup and the product does not start.	It occurs when the battery is exhausted or when there is a power outage for a long time without connecting the battery. Initialize the body memory. Refer to 12.2 Initialization of the body memory.

If you cannot solve your trouble in accordance with the check items above, contact your supplier or us.

### 13.1 Reset of the product

- (1) Open the front cover on the server section, set the RESET switch to SEL., and check that the CF CARD LED is off.
- (2) When setting to the RES., you hear a click. Check that all the LEDs other than POWER of the power supply are off.
- (3) Return the RESET switch to the central position.



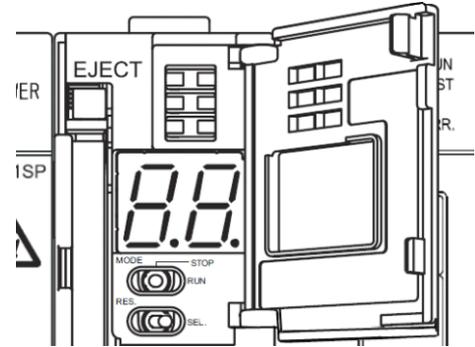
#### Cautions

Before turning the product off or resetting it, make sure that the RESET switch is in the SEL setting and the CF CARD LED is off.  
If you turn the product off or reset it without the operation (1) above, data may be deleted that saved in the memory card.

## 13.2 Initialization of the body memory

The main unit memory requires initialization when you use the product for the first time or when you keep the product nonenergized for an extended period of time with the battery exhausted or disconnected ("01" blinks on the 7-segment LED of the server section at startup).

- (1) Check that the main unit is turned off.
- (2) Install the battery.
- (3) Open the front cover on the server section, and set the MODE/STOP/RUN switch to STOP.
- (4) Turn the main unit on with the MODE/STOP/RUN switch in the MODE position.
- (5) After the MODE LED lights up orange and 00 is displayed on the 7-segment LED, return the MODE/STOP/RUN switch to the STOP position.
- (6) Turn the RESET switch to the SEL. position 9 times to see 11 on the 7-segment LED.
- (7) Turn the MODE/STOP/RUN switch to the RUN position. The RUN LED blinks and initialization of the body memory starts.
- (8) After the RUN LED turns off and 00 is displayed on the 7-segment LED, turn the RESET switch to the RES. position.
- (9) Turn the RESET switch to the RES. position to see all the LEDs other than the POWER LED of the power supply section are off, and return the RESET switch to the central position.
- (10) Formatting of the body memory starts. (The RUN LED blinks and the STA. LED blinks green.)
- (11) After the MODE LED starts blinking green, turn the RESET switch to the RES. position to see all the LEDs other than the POWER LED of the power supply section are off, and return the RESET switch to the central position. This is the end of the initialization of the body memory. Set up the IP address. Refer to 7.1 Setting an IP address.



## 14. Warranty

- For technical and non-technical inquiries about the product, contact the nearest Mitsubishi office or dealer.
- This document and product have undergone strict quality control and inspection before delivery, but in the unlikely event that the document or product is defective in manufacture, our company shall provide replacement. Contact the dealer where you purchased this product. However, this warranty does not apply to the product or document that has been damaged by acts of God or misapplication.
- Our company shall not be liable for any damages arising out of your or third parties' system troubles, legal problems, misapplication, failures during use, or any other defects.
- The product is warranted for a period of less than one (1) year from the date of your purchase or from the date of delivery to your specified location or within eighteen (18) months from the date of shipment from our factory (from the month and year of manufacture), whichever is less.  
If any of the following applies, however, the cost of repair or replacement shall be charged even during the warranty period:
  - (1) Any malfunction arising from misapplication
  - (2) Any malfunction arising from misoperationRepair or replacement made after the expiration of the warranty period shall be subject to charges.
- The warranty period shall not be renewed after repair.

## Software License Agreement

This "Software License Agreement" (hereinafter referred to as "the Agreement") is applicable to the relevant software (hereinafter referred to as "the Software") manufactured and sold by the Mitsubishi Electric Corporation (hereinafter referred to as "Mitsubishi Electric"). Software means all programs on the recording media and all related documents.

### **Article 1 (License of use)**

Mitsubishi Electric shall hereunder agree to grant the user the license to use the Software, and the user shall accept all provisions stated below and agree not to assign such license of use to anyone other than contractors and not to possess an exclusive license of use.

### **Article 2 (Reproduction of the Software)**

The user must not reproduce all or part of the Software, except for the following:

(1) The reproduction of the Software is only allowed when this is for the security of the Software and the use of such reproduction is limited to the designated computer. This shall only apply to the software that has been designed to enable the reproduction of the Software.

### **Article 3 (Use on computers other than the designated computer)**

The Software shall not be used on computers other than the designated computer. However, if any of the following events occurs, the Software can temporarily be used on a computer other than the designated computer, for the period until such event ceases to exist:

- (1) The designated computer cannot be used due to the work for maintenance, adjustment, failure, etc., or
- (2) The installation of the designated computer is not completed.

### **Article 4 (Limitation of liability)**

(1) Mitsubishi Electric shall not guarantee that the Software is suitable or useful for the specific purpose intended by the user.

(2) Mitsubishi Electric shall assume no liability for any damage to the user or any third party's claim against the user, arising from the execution of the license of use granted to the user under the Agreement.

### **Article 5 (Alteration of the Software by user)**

Any modification of the Software by the user shall not be allowed without written permission from Mitsubishi Electric. Mitsubishi Electric shall assume no responsibility for the Software that has been modified by the user.

### **Article 6 (Copyright)**

The copyright to the Software shall belong to the Mitsubishi Electric. The copyright to any reproductions described in Article 2 shall also belong to Mitsubishi Electric. However, the recording media on which the Software is recorded shall not belong to Mitsubishi Electric.

### **Article 7 (Confidentiality)**

The user shall keep confidential, and must not disclose, the Software, its reproductions, and the materials related to these.

The user must not leak to a third party any of Mitsubishi Electric's business secrets that the user may get to know under the Agreement.

### **Article 8 (Duration of the Agreement)**

The Agreement shall come into force when the user agrees to the Agreement and installs the Software, and shall continue in force for the duration until the Agreement becomes invalid due to any of the following:

- (1) The user can terminate the license of use, within one (1) month after written notice is given to Mitsubishi Electric.
- (2) Mitsubishi Electric can terminate the license of use, if the user violates the Agreement.

### **Article 9 (Domestic use only)**

The user must not take the Software out of Japan, or send it to any area outside Japan, without prior written permission from Mitsubishi Electric.

### **Article 10 (Termination)**

When the license of use under the Agreement is terminated, the original Software, and all its reproductions, printed materials, etc. shall be returned to, or a document proving that these are destroyed shall be sent to, Mitsubishi Electric, within one (1) month from the date of such termination. All costs for such return or destruction shall be incurred by the user.

**三菱省エネデータ収集サーバEcoServerⅢ(MES3-255B-DM/MES3-255C-DM)定格銘板位置について**

**三菱节能数据收集服务器EcoWebServerⅢ(MES3-255C-DM-CN) 关于额定铭板的位置**

**Mitsubishi Energy Saving Data Collecting Server EcoWebServerⅢ(MES3-255C-DM-EN)  
additional information on the place of the rating label**

**定格銘板例 / 额定铭板参考例 / Example of the rating label**

MES3-255C-DM-EN の例です。  
以 MES3-255C-DM-EN 为例。  
Example of MES3-255C-DM-EN is shown below.



形名 / 型号 / Model

**定格銘板位置 / 关于额定铭板的位置 / The place of the rating label**

<p>■MES3-255B-DM 本製品の定格銘板は右側面にあります。</p> <p>定格銘板</p>	<p>■MES3-255C-DM-CN 本产品的额定铭板在产品的右侧面。</p> <p>额定铭板</p>
<p>■MES3-255C-DM 本製品の定格銘板は右側面にあります。</p> <p>定格銘板</p>	<p>■MES3-255C-DM-EN The rating label can be found on the right side of the product.</p> <p>the rating label</p>

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# Mitsubishi Energy Saving Data Collecting Server EcoWebServerIII

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