MITSUBISHI ELECTRIC

<ORIGINAL>

CE

Air Conditioning Control System
Centralized Controller
AE-C400/EW-C50
AE-200/AE-50/EW-50

Instruction Book
–BACnet® Trial Run Tool–

Before using the controller, please read this Instruction Book carefully to ensure proper operation.
Retain this manual for future reference.

Contents

Safety precautions

► Thoroughly read the following safety precautions prior to installation.

► Observe these precautions carefully to ensure safety.

⚠ WARNING	: indicates a hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION	: indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

► After reading this manual, pass the manual on to the end user to retain for future reference.

► The user should keep this manual for future reference and refer to it as necessary. The manual should be made available to those who repair or relocate the product. Make sure that the manual is passed on to any future air conditioning system user.

■ General precautions

⚠ WARNING

Do not use the product where large amounts of oil, steam, organic solvents, or corrosive gases (such as ammonia, sulfuric compounds, and acids) are present or where acidic/ alkaline solutions or special chemical sprays are used frequently. These substances may corrode the internal parts, resulting in electric shock, performance degradation, malfunction, smoke, or fire.

To reduce the risk of injury, electric shock, or fire, do not alter or modify the product.

To reduce the risk of injury, keep children away while installing, inspecting, or repairing the product.

To reduce the risk of fire or explosion, do not place flammable materials or use flammable sprays around the product.

To reduce the risk of short circuits, current leakage, electric shock, malfunction, smoke, or fire, do not wash the product with water or any other liquid.

To reduce the risk of electric shock, malfunctions, smoke, or fire, do not touch the electrical parts, USB memory device, or touch panel with wet hands.

To reduce the risk of injury or electric shock, before spraying a chemical around the product, stop the operation and cover the product.

If you notice any abnormality (e.g. a burning smell), stop the operation, turn off the product, and contact your dealer. Continuing the use of the product without correcting the abnormality may result in electric shock, malfunction, or fire.

Properly install all required covers to keep dust and moisture out of the product. Dust or moisture entering the product may result in electric shock, smoke, or fire.

⚠ CAUTION

To reduce the risk of injury from broken glass, do not apply excessive force to the glass parts.

To reduce the risk of electric shock or malfunction, do not touch the touch panel, switches, or buttons with a pointed object.

To reduce the risk of injury, electric shock, or malfunction, do not touch sharp edges of parts.

Consult an authorized agency for proper disposal of the product. Inappropriate disposal can lead to environmental pollution.

■ Precautions for relocating or repairing the product

⚠ WARNING

The product must be relocated or repaired only by qualified personnel. The user must not disassemble or modify the product. Improper installation or repair may result in injury, electric shock, or fire.

1. Introduction

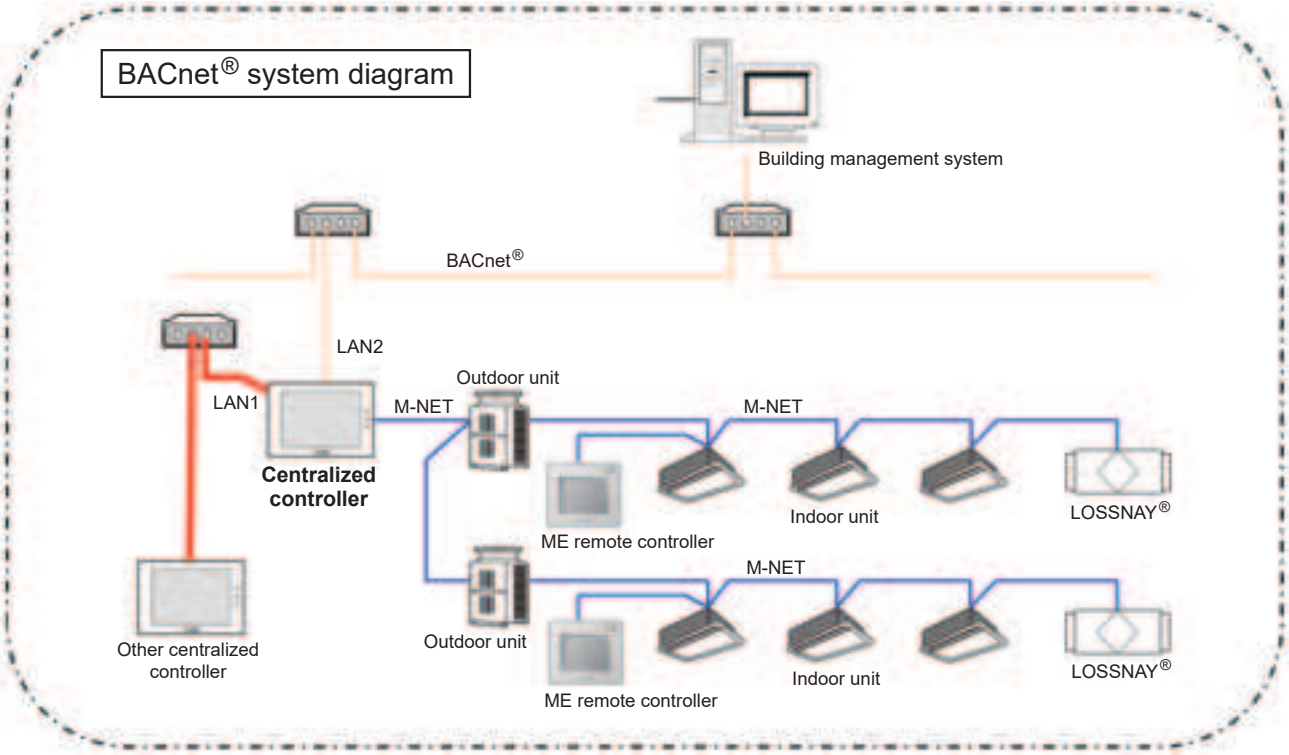
This document explains BACnet® simulated trial run using the BACnet® Trial Run Tool.

Prior to a trial run connected to the building management system, it is possible to use the BACnet® Trial Run Tool to carry out simulated trial run.

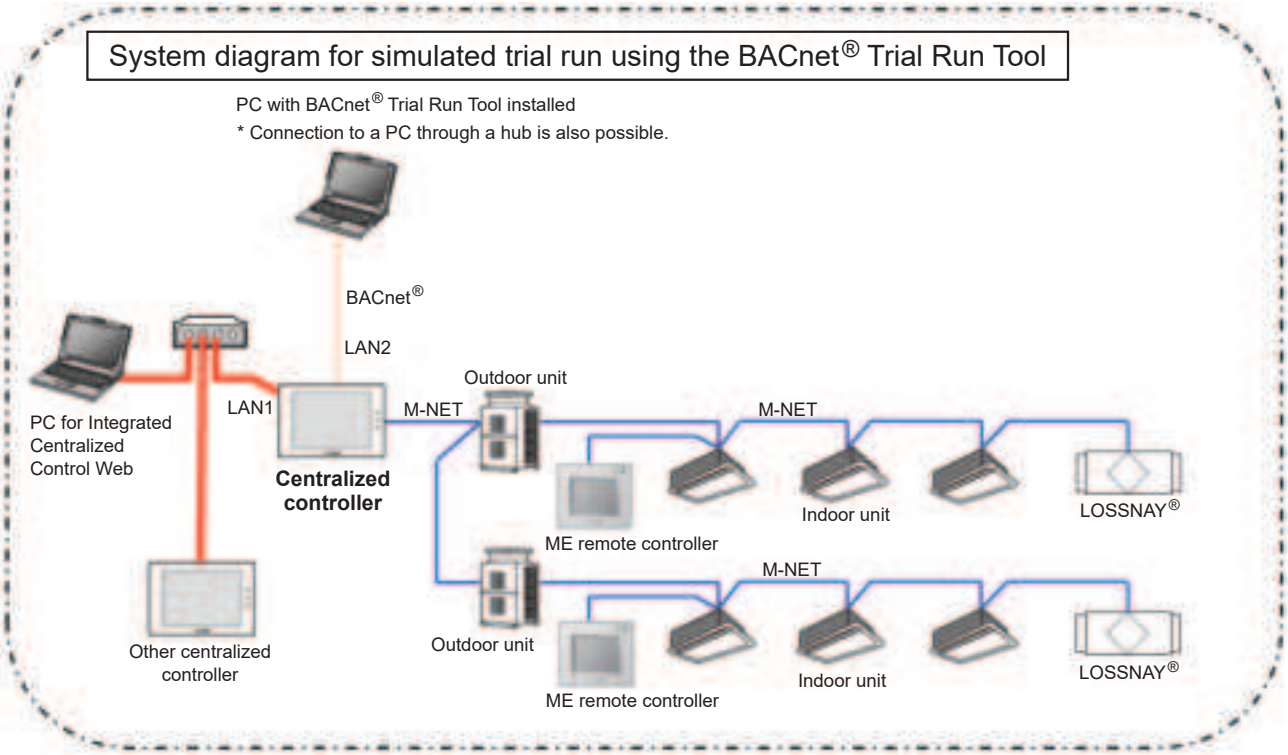
A simulated trial run enables confirmation that the BACnet® functions of the centralized controller (AE-C/EW-C/AE-200/AE-50/EW-50) are operating correctly.

Unless otherwise specified in this document, “centralized controller” refers to AE-C, EW-C, AE-200, AE-50, or EW-50.

BACnet® system diagram



System diagram for simulated trial run using the BACnet® Trial Run Tool



Note

- Although simulated trial run can be performed with a single PC for BACnet® trial run, using one more PC for Integrated Centralized Control Web enables more efficient trial runs because the units can be more easily monitored and operated from the centralized controller during trial runs.

2. Preparation

2-1. Operation environment

The BACnet® Test Run Tool (Bins) requires the following environment.

Item	Requirement
CPU	1 GHz or higher (2 GHz or higher is recommended.)
Memory	2 GB or more
Screen resolution	XGA (1280 x 768) or higher
LAN	1 port (100 BASE-TX)
OS	Microsoft® Windows 11 (64 bit) *1 Microsoft® Windows 10 (64 bit) *1
Execution environment	Minimum system requirements for Windows® 10 or Windows® 11 must be met. Microsoft® .NET Framework 3.5 WinPCap 4.1.3 or later Microsoft® Visual C++ Runtime 2008

*1 Verified to work on the Pro edition

Note

• The use of the latest version of the OS is recommended.

2-2. Installation and settings

Install .NetFramework, WinPCAP, and Microsoft® Visual C++ Runtime.

2-2-1. Installation of .NetFramework

If installation is required, then install from the following website.

https://dotnet.microsoft.com/en-us/download/dotnet-framework/net35-sp1

If installation fails, see “Troubleshoot the installation of the .NET Framework 3.5” at the following URL.

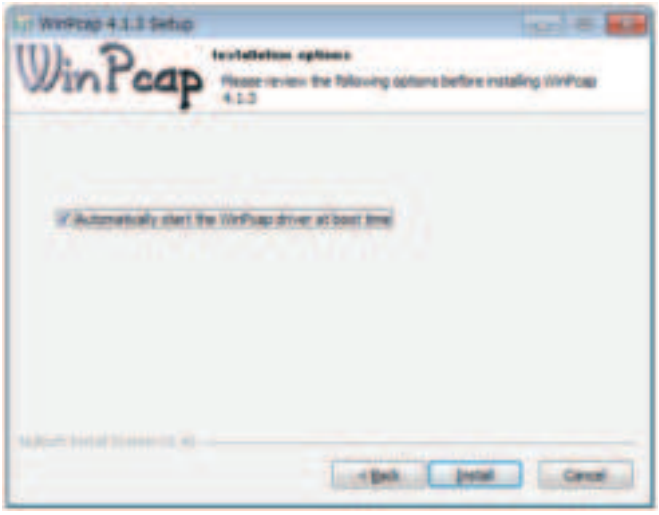
https://docs.microsoft.com/en-US/dotnet/framework/install/dotnet-35-windows

2-2-2. Installation of WinPCAP

Download the following file, and install.

http://www.winpcap.org/install/bin/WinPcap_4_1_3.exe

* When installing, ensure the check box below is selected.



2-2-3. Microsoft® Visual C++ Runtime 2008

If installation is required, then install from the following website.

32bit(x86): https://www.microsoft.com/en-US/download/details.aspx?id=26368

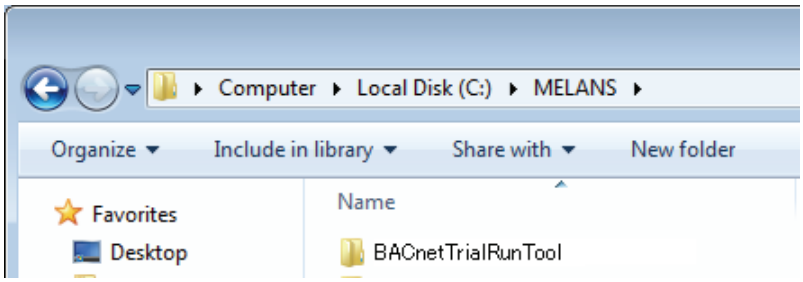
Note

• Even if the OS is 64 bit, download and use 32 bit for Visual C++.

2-3. Preparing the BACnet® Trial Run Tool

2-3-1. Saving the “BACnetTrialRunTool” file

On the Local Disk (C:), create a MELANS folder, and in this, extract the “BACnetTrialRunTool.zip” file.



2-3-2. Network settings

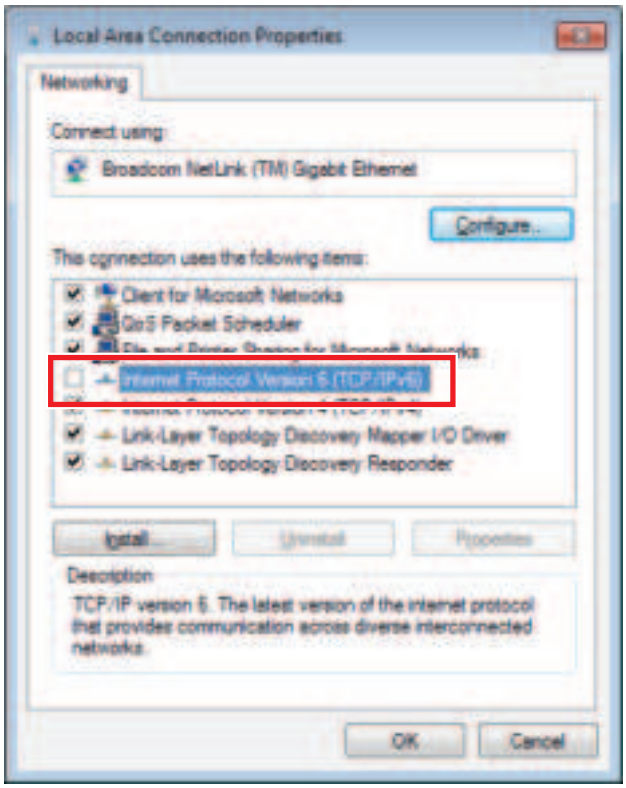
① Open [Local Area Connection*1]

Search for the control panel using the search box, and click [Network and Sharing Center]>[Ethernet*2], and click [Properties].

*1 This may have a name other than [Local Area Connection]. Select the name of the connection being used.

*2 This may have a name other than [Ethernet]. Select the name of the connection being used.

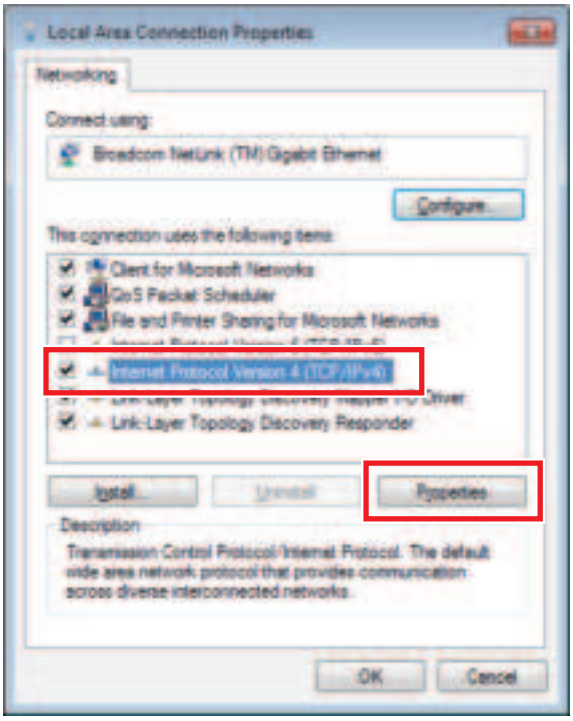
② In the [Local Area Connection Properties] window, remove the check of IPv6.

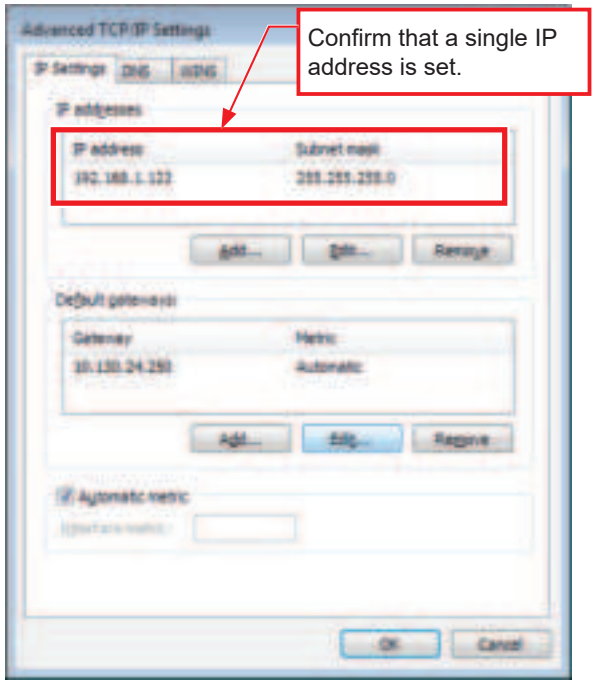


③ In the [Local Area Connection Properties] window, select IPv4 and click [Properties], and set a single*3 IPv4 IP address*4.

*3 If multiple IP addresses are set, other than the target IP address will be used, and this may result in BACnet® communications not functioning correctly.

*4 Set the same network IP address as the target centralized controller LAN2.

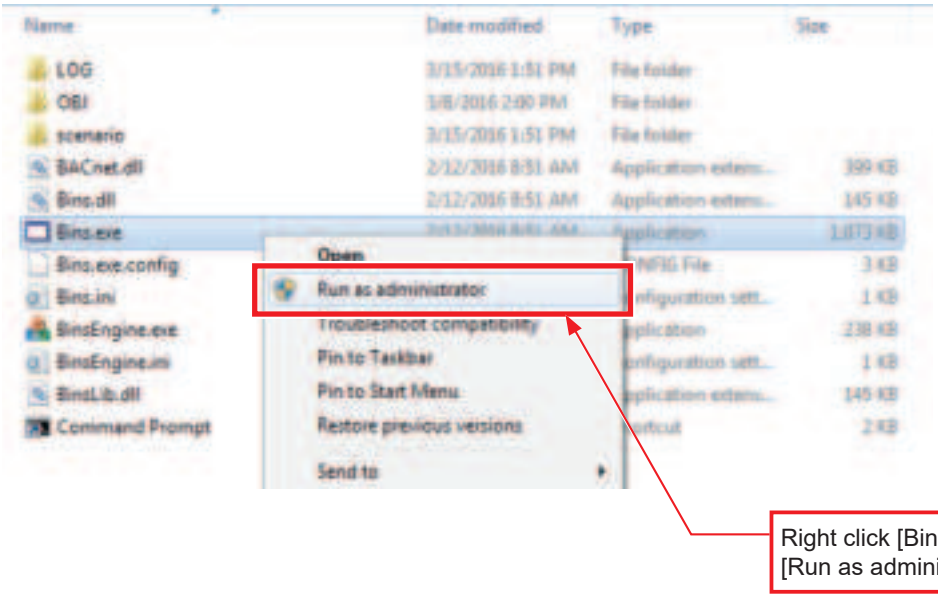




2-4. Initial settings for BACnet® Trial Run Tool

2-4-1. Starting the BACnet® Trial Run Tool (Bins)

Open the Bins folder within the “BACnetTrialRunTool” folder, right click [Bins.exe], and select [Run as administrator] to start Bins.

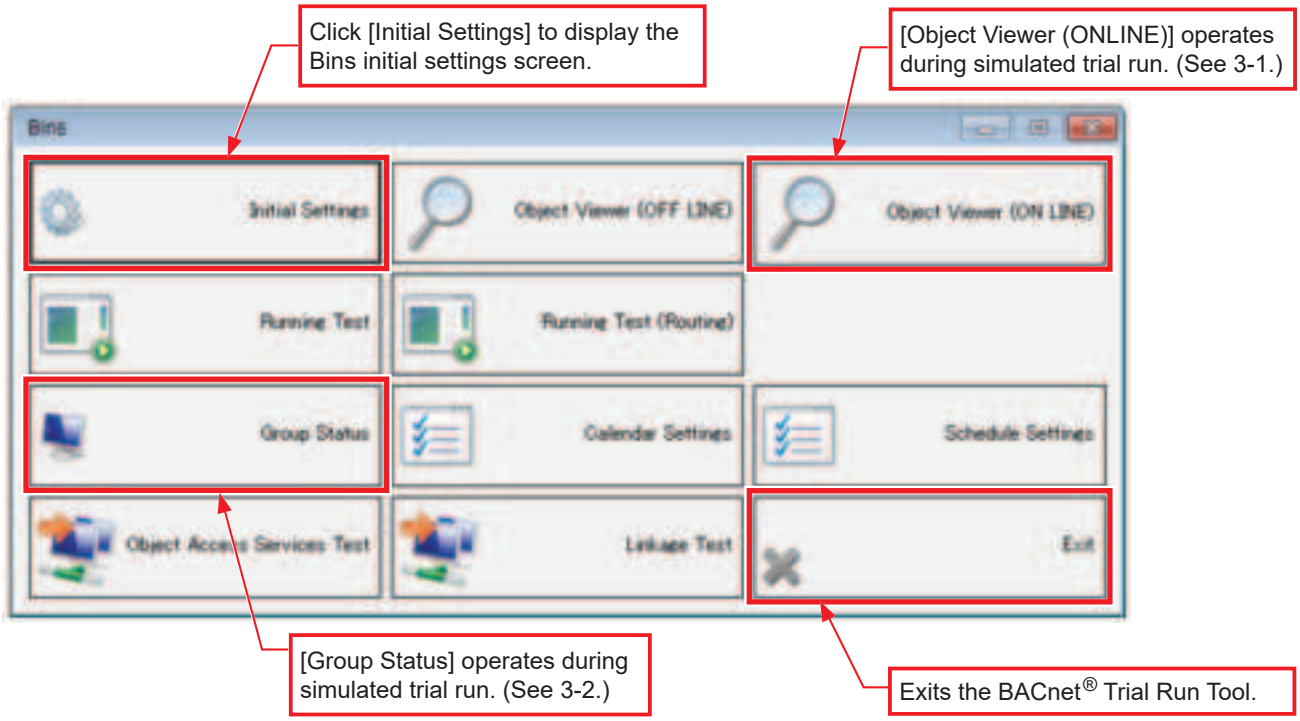


2-4-2. Initial settings for BACnet® Trial Run Tool (Bins)

(1) After starting Bins, on the start-up screen, click [Initial Settings] to display the Bins initial settings screen.

Important

Before starting initial setting of BACnet® Trial Run Tool, restart the AE-200/AE-50/EW-50. For details of the restarting method, refer to the AE-200/AE-50 Installation Manual and EW-50 Installation and Instructions Manual. Choose the reset switch or re-input power using the breaker, etc. to restart the AE-200/AE-50/EW-50. Before restarting the AE-200/AE-50/EW-50, ask the administrator whether it is OK to restart.



Important

Simulated trial run uses only [Initial Settings], [Object Viewer (ONLINE)], [Group Status], and [Exit] for Bins. Do not use the other menu items.

Bins functions are as follows.

Button name	Description
Initial Settings	This changes settings for simulated building management and connection destinations (centralized controller).
Object Viewer (OFFLINE)	Do not use during simulated trial run.
Object Viewer (ONLINE)	Checks the property values for each object.
Running Test	Do not use during simulated trial run.
Running Test (Routing)	Do not use during simulated trial run.
Group Status	Monitors the unit operation and status.
Calender Settings	Do not use during simulated trial run.
Schedule Settings	Do not use during simulated trial run.
Object Access Services Test	Do not use during simulated trial run.
Linkage Test	Do not use during simulated trial run.
Exit	Exits Bins.

(2) After inputting information in ① through ③ , click [OK] to save the settings, and complete Bins initial settings.

Important

When making the BACnet® Trial Run Tool to simulate in an environment in which equipment items are already connected to the BACnet®, separate the LAN beforehand to avoid the overlap of IP addresses and Device Instance Numbers with the equipment items. If they overlap accidentally, the equipment items or central monitor may not properly be able to perform BACnet® communication. This situation may exert a serious impact on the system, such as need for restarting a great number of equipment items for restoration.

① In BACnetIF, input the Device Instance Number* and IP Address of the centralized controller to test.

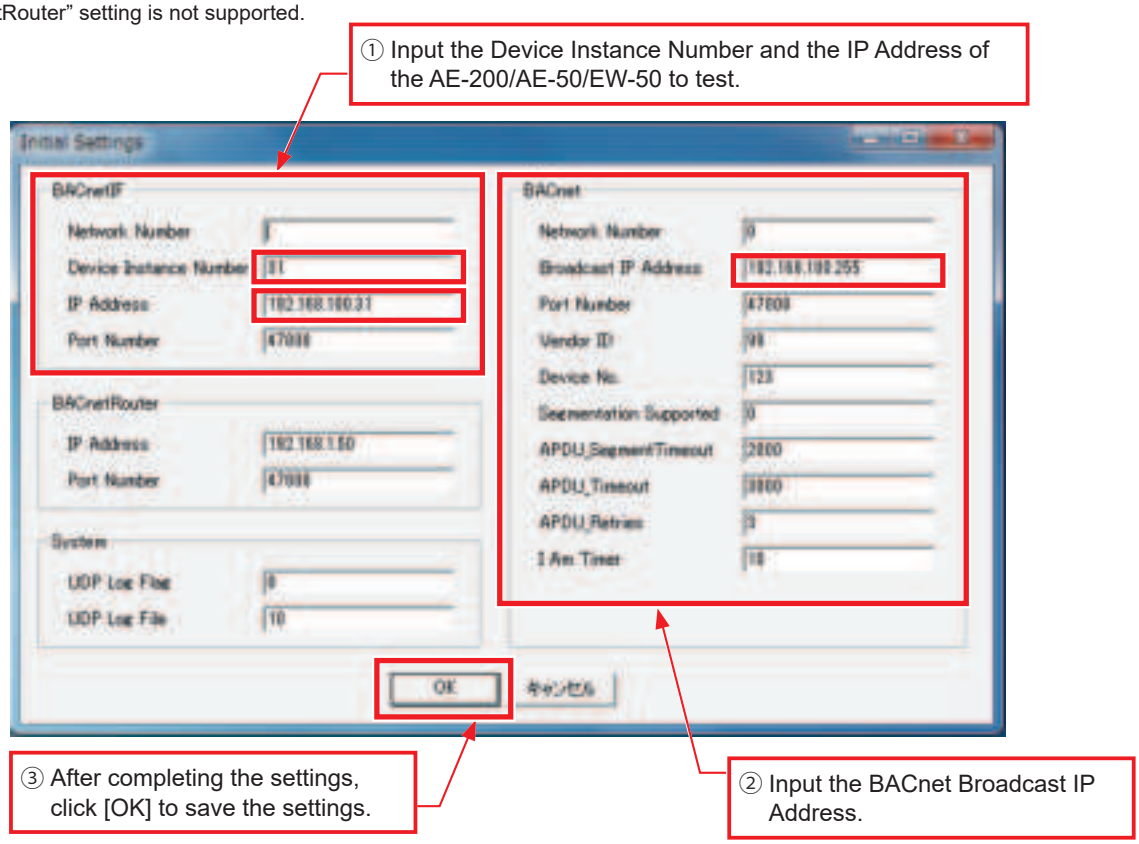
* In Device Instance Number, input the Device No. set on the BACnet® Setting Tool.

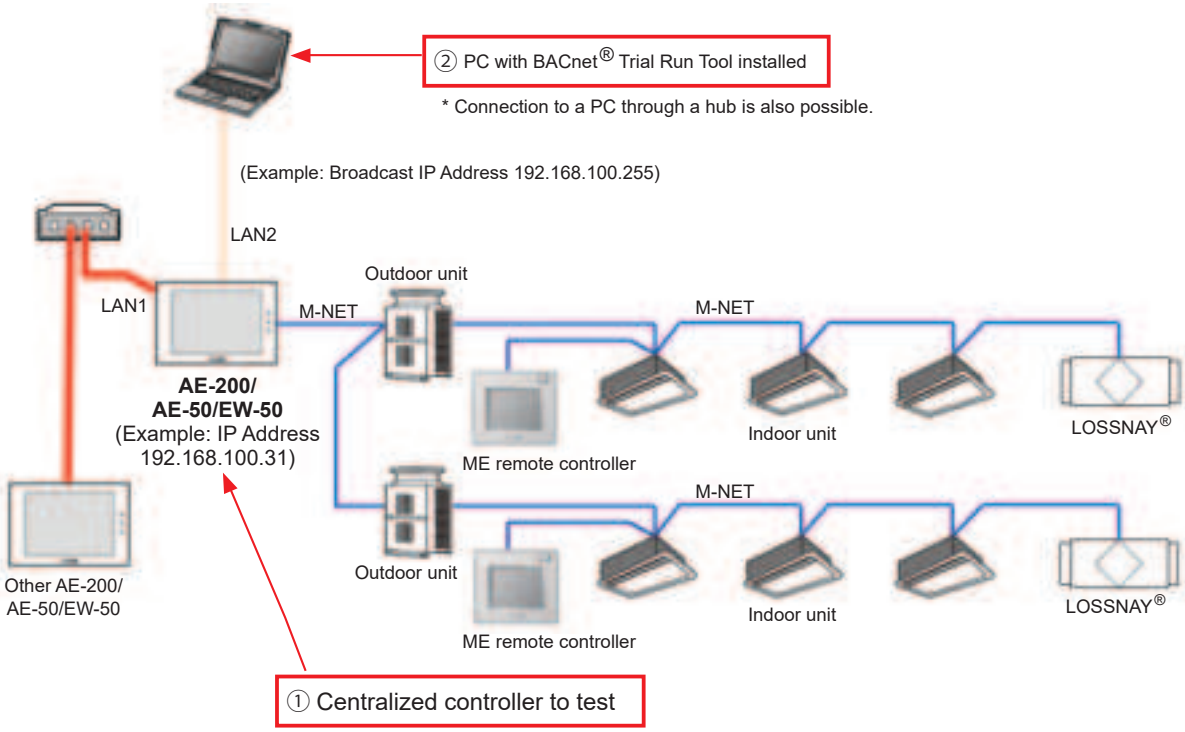
② Input the BACnet Broadcast IP Address. *1

*1 Input the IP address of the broadcast, not of the PC.

③ Click [OK] to save the settings.

* The “BACnetRouter” setting is not supported.




② PC with BACnet® Trial Run Tool installed
* Connection to a PC through a hub is also possible.
(Example: Broadcast IP Address 192.168.100.255)
LAN2
LAN1
Outdoor unit
M-NET
M-NET
AE-200/
AE-50/EW-50
(Example: IP Address
192.168.100.31)
ME remote controller
Indoor unit
LOSSNAY®
M-NET
Outdoor unit
Other AE-200/
AE-50/EW-50
ME remote controller
Indoor unit
LOSSNAY®
① Centralized controller to test

3. Simulated trial run

For objects to use with the system, carry out simulated trial run from BACnet®. Follow the confirmation procedure as in “Trial Run List Table Using BACnet® Trial Run Tool” below, and carry out simulated trial run of the objects to use.
For usage methods of the BACnet® Trial Run Tool, refer to the items detailed in the “Reference section” row in the table below.
Refer to the centralized controller’s Instruction Book –BACnet® function– as to whether or not objects can be supported by the type of management machine.

Note

- Using Wireshark, check that the objects in which COV/EVENT notification is set are notified.

Trial Run List Table Using BACnet® Trial Run Tool

Object	Object ID	Status	Reference section	Checking procedures
On Off Setup	BO_01xx01	INACTIVE(0): OFF ACTIVE(1): ON	3-2 “Bins Group Status”	(1) From Bins Group Status, operate run/stop for a specific group. (2) Using the centralized controller or the remote controller, check to see that the run/stop state of the relevant group is updated to an operating state.
On Off State	BI_01xx02	INACTIVE(0): OFF ACTIVE(1): ON	3-1 “Bins Object Viewer (Online)”	(1) Using the centralized controller or the remote controller, operate run/stop of a specific group. (2) In Bins Object Viewer (Online), check to see that the state of run/stop of the relevant group is updated to the operating state.
Alarm Signal (4-digit error code)	BI_01xx03	INACTIVE(0): Normal ACTIVE(1): Error	3-1 “Bins Object Viewer (Online)”	(1) Cause air conditioning unit of a specific group to generate an error. (2) In Bins Object Viewer (Online), check to see that the alarm signal of the relevant group has been updated to “Error” (ACTIVE). (3) Return from an error in an air conditioning unit of a specific group. (4) In Bins Object Viewer (Online), check to see that the alarm signal of the relevant group has been updated to “Normal” (INACTIVE).
Error Code	MI_01xx04	01: Normal 02: Other errors 03: Refrigeration system fault 04: Water system error 05: Air system error 06: Electronic system error 07: Sensor fault 08: Communication error 09: System error	3-2 “Bins Group Status”	(1) Remove the M-NET transmission line which is connected to the centralized controller. (2) In Bins Group Status, check to see that error codes for all groups have been updated to “Communication error” (08). (3) Connect the M-NET transmission line to the centralized controller. (4) In Bins Group Status, check to see that error codes for all groups have been updated to “Normal” (01). (Perform this when no other errors have occurred. In addition, other errors may occur when there is a communication error, however, in this checking step, attention should be focused on error codes).
Operational Mode Setup	MO_01xx05	01: Cool 02: Heat 03: Fan 04: Auto 05: Dry 06: Setback	3-2 “Bins Group Status”	(1) From Bins Group Status, change the operational mode for a specific group. (2) Using the centralized controller or the remote controller, check to see that the operational mode for the relevant group is updated to the operating mode.

Object	Object ID	Status	Reference section	Checking procedures
Operational Mode State	MI_01xx06	01: Cool 02: Heat 03: Fan 04: Auto 05: Dry 06: Setback	3-2 “Bins Group Status”	(1) Using the centralized controller or the remote controller, change the operational mode for a specific group. (2) In Bins Group Status, check to see that the operational mode for the relevant group has been updated to the operating mode.
Fan Speed Setup	MO_01xx07	01: Low 02: High 03: Mid 2 04: Mid 1 05: Auto	3-2 “Bins Group Status”	(1) From Bins Group Status, change the fan speed for a specific group. (2) Using the centralized controller or the remote controller, check to see that the fan speed for the relevant group is updated to the operating fan speed.
Fan Speed State	MI_01xx08	01: Low 02: High 03: Mid 2 04: Mid 1 05: Auto	3-2 “Bins Group Status”	(1) Using the centralized controller or the remote controller, change the fan speed for a specific group. (2) In Bins Group Status, check to see that the fan speed for the relevant group is updated to the operating fan speed.
Room Temp [Water Temp]	AI_01xx09	ºF/ºC (32ºF–199ºF/0.0ºC–99.0ºC)	3-2 “Bins Group Status”	(1) Change the intake air temperature for a specific group by cooling or heating. (2) Check to see that the display on Bins Group Status coincides with the display on the centralized controller or the remote controller.
Set Temp [Set Water Temp]	AV_01xx10	ºF/ºC (32ºF–199ºF/0.0ºC–99.0ºC)	3-2 “Bins Group Status”	(1) From Bins Group Status, set the set temperature for a specific group. (2) Using the centralized controller or the remote controller, check to see that the set temperature for the relevant group has been updated to an operating value. (3) Using the centralized controller or the remote controller, change the set temperature for a specific group. (4) In Bins Group Status, check to see that the set temperature for the relevant group has been updated to the operating value.
Set Temp Cool	AV_01xx24	ºF/ºC (32ºF–199ºF/0.0ºC–99.0ºC)	3-1 “Bins Object Viewer (Online)”	(1) From Bins Object Viewer (Online), set the cooling set temperature for a specific group. (2) Using the centralized controller or the remote controller, check to see that the cooling set temperature for the relevant group has been updated to an operating value. (3) Using the centralized controller or the remote controller, change the cooling set temperature for a specific group. (4) In Bins Object Viewer (Online), check to see that the cooling set temperature for the relevant group has been updated to the operating value.

Object	Object ID	Status	Reference section	Checking procedures
Set Temp Heat	AV_01xx25	ºF/ºC (32ºF–199ºF/0.0ºC–99.0ºC)	3-1 “Bins Object Viewer (Online)”	(1) From Bins Object Viewer (Online), set the heating set temperature for a specific group. (2) Using the centralized controller or the remote controller, check to see that the heating set temperature for the relevant group has been updated to an operating value. (3) Using the centralized controller or the remote controller, change the heating set temperature for a specific group. (4) In Bins Object Viewer (Online), check to see that the heating set temperature for the relevant group has been updated to the operating value.
Set Temp Auto	AV_01xx26	ºF/ºC (32ºF–199ºF/0.0ºC–99.0ºC)	3-1 “Bins Object Viewer (Online)”	(1) From Bins Object Viewer (Online), set the set temperature (single-set-point in the Auto mode) for a specific group. (2) Using the centralized controller or the remote controller, check to see that the set temperature (single-set-point in the Auto mode) for the relevant group has been updated to an operating value. (3) Using the centralized controller or the remote controller, change the set temperature (single-set-point in the Auto mode) for a specific group. (4) In Bins Object Viewer (Online), check to see that the set temperature (single-set-point in the Auto mode) for the relevant group has been updated to the operating value.
Set High Limit Setback Temp	AV_01xx27	ºF/ºC (32ºF–199ºF/0.0ºC–99.0ºC)	3-1 “Bins Object Viewer (Online)”	(1) From Bins Object Viewer (Online), set the set temperature (upper limit in the Setback mode) for a specific group. (2) Using the centralized controller or the remote controller, check to see that the set temperature (upper limit in the Setback mode) for the relevant group has been updated to an operating value. (3) Using the centralized controller or the remote controller, change the set temperature (upper limit in the Setback mode) for a specific group. (4) In Bins Object Viewer (Online), check to see that the set temperature (upper limit in the Setback mode) for the relevant group has been updated to the operating value.

Object	Object ID	Status	Reference section	Checking procedures
Set Low Limit Setback Temp	AV_01xx28	ºF/ºC (32ºF–199ºF/0.0ºC–99.0ºC)	3-1 “Bins Object Viewer (Online)”	(1) From Bins Object Viewer (Online), set the set temperature (lower limit in the Setback mode) for a specific group. (2) Using the centralized controller or the remote controller, check to see that the set temperature (lower limit in the Setback mode) for the relevant group has been updated to an operating value. (3) Using the centralized controller or the remote controller, change the set temperature (lower limit in the Setback mode) for a specific group. (4) In Bins Object Viewer (Online), check to see that the set temperature (lower limit in the Setback mode) for the relevant group has been updated to the operating value.
Filter Sign	BI_01xx11	INACTIVE(0): OFF ACTIVE(1): ON	3-2 “Bins Group Status” Filter sign cannot be issued in actual machine, therefore no test.	(1) Issue the filter sign for a specific group. (2) In Bins Group Status, check to see that the filter sign for the relevant group has been updated to “ON” (ACTIVE).
Filter Sign Reset	BV_01xx12	INACTIVE(0): Reset ACTIVE(1): Void	3-1 “Bins Object Viewer (Online)” Simulated trial run cannot be carried out using the BACnet® Trial Run Tool.	(1) From Bins Object Viewer (Online), reset the filter sign for a specific group. (2) Using the centralized controller or the remote controller, check to see that the filter sign for the relevant group has been updated to “OFF” (INACTIVE).
Prohibition On Off	BV_01xx13	INACTIVE(0): Permit ACTIVE(1): Prohibit	3-2 “Bins Group Status”	(1) From Bins Group Status, carry out prohibition operation for remote controller operation (run/stop) for a specific group. (2) Check to see that run/stop operations have been prohibited by the remote controller in the relevant group. (3) From Bins Group Status, carry out permission operation for remote controller operation (run/stop) for a specific group. (4) Check to see that run/stop operations have been permitted by the remote controller in the relevant group.
Prohibition Mode	BV_01xx14	INACTIVE(0): Permit ACTIVE(1): Prohibit	3-1 “Bins Object Viewer (Online)”	• Although the operating target is an operational mode, the checking method is the same as “Prohibition On Off” above.
Prohibition Filter Sign Reset	BV_01xx15	INACTIVE(0): Permit ACTIVE(1): Prohibit	3-1 “Bins Object Viewer (Online)”	• Although the operating target is resetting filter sign, the checking method is the same as “Prohibition On Off” above.
Prohibition Set Temperature	BV_01xx16	INACTIVE(0): Permit ACTIVE(1): Prohibit	3-1 “Bins Object Viewer (Online)”	• Although the operating target is a set temperature, the checking method is the same as “Prohibition On Off” above.
Prohibition Fan Speed	BV_01xx17	INACTIVE(0): Permit ACTIVE(1): Prohibit	3-1 “Bins Object Viewer (Online)”	• Although the operating target is a set temperature, the checking method is the same as “Prohibition On Off” above.

Object	Object ID	Status	Reference section	Checking procedures
M-NET Communication State	BI_01xx20	INACTIVE(0): Normal ACTIVE(1): Error	3-1 “Bins Object Viewer (Online)”	(1) Remove the M-NET transmission line which is connected to the centralized controller. (2) In Bins Object Viewer (Online), check to see that the M-NET communication status of all groups has been updated to “Error” (ACTIVE). (3) Connect the M-NET transmission line to the centralized controller. (4) In Bins Object Viewer (Online), check to see that the M-NET communication state for all groups has been updated to “Normal” (INACTIVE). (Other errors occur when there is a communication error, however, in this checking step, attention should be focused on the M-NET communication state).
System Forced Off (individual)	BV_01xx21	INACTIVE(0): Reset ACTIVE(1): Execute	3-2 “Bins Group Status”	(1) Set “External Input Setting” of the centralized controller to “Demand (Level signal)/Not in use” and operate emergency stop for a specific group from Bins Group Status. (2) In Bins Group Status, check to see that the air conditioning units of the relevant group are stopped. Also, check to see that run/stop operations have been prohibited by the remote controller in the relevant group. (3) From Bins Group Status, carry out emergency stop release for a specific group. (4) Check to see that run/stop operations have been permitted by the remote controller in the relevant group.
System Forced Off (collective)	BV_019921	INACTIVE(0): Reset ACTIVE(1): Execute	3-2 “Bins Group Status”	(1) Set “External Input Setting” of the centralized controller to “Demand (Level signal)/Not in use” and carry out batch emergency stop from Bins Group Status. (2) In Bins Group Status, check to see that all groups have been stopped. Also, check to see that run/stop operations have been prohibited by all remote controllers. (3) From Bins Group Status, carry out batch emergency stop release. (4) Check to see that run/stop operations have been permitted by all remote controllers.
Air Direction Setup	MO_01xx22	01: Horizontal 02: Downblow 60% 03: Downblow 80% 04: Downblow 100% 05: Swing	3-2 “Bins Group Status”	(1) From Bins Group Status, change the air direction for a specific group. (2) Using the centralized controller or the remote controller, check to see that the air direction for the relevant group is updated to the operating air direction.
Air Direction State	MI_01xx23	01: Horizontal 02: Downblow 60% 03: Downblow 80% 04: Downblow 100% 05: Swing	3-2 “Bins Group Status”	(1) Using the centralized controller or the remote controller, change the air direction for a specific group. (2) In Bins Group Status, check to see that the air direction for the relevant group is updated to the operating air direction.

Object	Object ID	Status	Reference section	Checking procedures
Ventilation Mode Setup	MO_01xx35	01: Heat exchange 02: Bypass 03: Auto	3-1 “Bins Object Viewer (Online)”	(1) From Bins Object Viewer (Online), change the ventilation mode for a specific group. (2) Using the centralized controller or the remote controller, check to see that the ventilation mode for the relevant group is updated to the operating ventilation mode.
Ventilation Mode State	MI_01xx36	01: Heat exchange 02: Bypass 03: Auto	3-1 “Bins Object Viewer (Online)”	(1) Using the centralized controller or the remote controller, change the ventilation mode for a specific group. (2) In Bins Object Viewer (Online), check to see that the ventilation mode for the relevant group has been updated to the operating ventilation mode.
Air To Water Mode Setup	MO_01xx37	01: Heating 02: Heating ECO 03: Hot Water 04: Anti-freeze 05: Cooling	3-1 “Bins Object Viewer (Online)”	(1) From Bins Object Viewer (Online), change the Air To Water mode for a specific group. (2) Using the centralized controller or the remote controller, check to see that the Air To Water mode for the relevant group is updated to the operating Air To Water mode.
Air To Water Mode State	MI_01xx38	01: Heating 02: Heating ECO 03: Hot Water 04: Anti-freeze 05: Cooling	3-1 “Bins Object Viewer (Online)”	(1) Using the centralized controller or the remote controller, change the Air To Water mode for a specific group. (2) In Bins Object Viewer (Online), check to see that the Air To Water mode for the relevant group has been updated to the operating Air To Water mode.
System Alarm Signal (4-digit error code)	BI_010048	INACTIVE(0): Normal ACTIVE(1): Error	3-1 “Bins Object Viewer (Online)”	(1) Shut off the power to the centralized controller, disconnect the M-NET power supply connector (CN21), and turn on the power. (The groups of units without connection to remote controllers will stop when the M-NET power supply connector is removed.) (2) Check that the system alarm signal is updated to Error (ACTIVE) on the building management system. (A four-digit error code will be output in the Description and in the Event notification message text. Make sure this error code matches the one detected by the centralized controller when the error was caused.) (3) Shut off the power to the centralized controller, connect the M-NET power supply connector (CN21), and turn on the power. (4) Check that the system alarm signal is updated to Normal (INACTIVE) on the building management system. (Although other errors will occur along with the communication error, focus on the system alarm signal at this point.)

Object	Object ID	Status	Reference section	Checking procedures
PI Controller Alarm Signal (4-digit error code)	BI_41mm03	INACTIVE(0): Normal ACTIVE(1): Error	3-1 “Bins Object Viewer (Online)”	(1) Remove the M-NET transmission line which is connected to a specific PI controller. (2) In Bins Object Viewer (Online), check to see that PI controller alarm signal for the relevant PI controller has been updated to “Error” (ACTIVE). (3) Connect the M-NET transmission line to a specific PI controller. (4) In Bins Object Viewer (Online), check to see that PI controller alarm signal for the relevant PI controller has been updated to “Normal” (INACTIVE).
Error Code Detail	AI_01xx49	Normal: 8000 Error: Error code (4 digits)	3-1 “Bins Object Viewer (Online)”	(1) Remove the M-NET transmission line which is connected to the centralized controller. (2) In Bins Object Viewer (Online), check to see that Error Code Detail for all groups have been updated to “M-NET communication error” (660*). (3) Connect the M-NET transmission line to the centralized controller. (4) In Bins Object Viewer (Online), check to see that Error Code Detail for all groups have been updated to “Normal” (8000). (Perform this when no other errors have occurred. In addition, other errors may occur when there is a communication error, however, in this checking step, attention should be focused on error codes (4 digits)).
Group Apportioned Electric Energy	AC_01xx39	0.1 kWh (0–999,999,999)	3-1 “Bins Object Viewer (Online)”	(1) From Bins Object Viewer (Online), set the current values for electric energy (indoor unit + outdoor unit) for each group in a specific group in the “Value_Set” property. Alternatively, in Bins Object Viewer (Online), record the current values for electric energy (indoor unit + outdoor unit) for each specific group. (2) Operate the air conditioning units in the relevant group continuously for at least two hours. (3) In Bins Object Viewer (Online), obtain electric energy (indoor unit + outdoor unit) for each group in the relevant group, total the difference with the value set in the “Value_Set” property (or the electric energy recorded in (1)) for each energy management block set with the centralized controller, and check (using a CSV file) to see that this coincides with the energy management block apportioned electric energy.

Object	Object ID	Status	Reference section	Checking procedures
Interlocked Units Apportioned Electric Energy	AC_61aa39	0.1 kWh (0–999,999,999)	3-1 “Bins Object Viewer (Online)”	(1) From Bins Object Viewer (Online), without registering this in a group, set the current values for electric energy (indoor unit + outdoor unit) for specific OA Processing Unit which has been set as an interlocked unit in the “Value_Set” property. Alternatively, in Bins Object Viewer (Online), without registering this in a group, record the current values for electric energy (indoor unit + outdoor unit) for specific OA Processing Unit which has been set as an interlocked unit. (2) Operate the relevant interlocked units continuously for at least two hours. (3) In Bins Object Viewer (Online), obtain electric energy (indoor unit + outdoor unit) for the relevant interlocked unit, total the difference with the value set in the “Value_ Set” property (or the electric energy recorded in (1)) for each energy management block set with the centralized controller, and check (using a CSV file) to see that this coincides with the energy management block apportioned electric energy.
PI controller Electric Energy 1–4	AC_41mm40–43	0.1 kWh (0–999,999,999)	3-1 “Bins Object Viewer (Online)”	(1) From Bins Object Viewer (Online) set the current value for electric energy for the electricity meter (1 to 4) connected to the PI controller pulse input in the “Value_Set” property. Alternatively, in Bins Object Viewer (Online), record the current value for electric energy for the electricity meter (1 to 4) connected to the PI controller pulse input. (2) Operate devices connected to the electricity meter (1 to 4) connected to pulse input of the PI controller continuously for at least two hours. (3) In Bins Object Viewer (Online), check (using a CSV file) to see that the electric energy (or difference between the current electric energy and that recorded in (1)) coincides with the reading of the metering device of the centralized controller.

Object	Object ID	Status	Reference section	Checking procedures
Pulse Input Electric Energy 1–4 (AE-50/EW-50 only)	AC_410040–43	0.1 kWh (0–999,999,999)	3-1 “Bins Object Viewer (Online)”	(1) From Bins Object Viewer (Online), set the current value for electric energy for the electricity meter (1 to 4) connected to the AE-50/EW-50 built-in Pulse Input (PI) in the “Value_Set” property. Alternatively, in Bins Object Viewer (Online), record the current value for electric energy for the electricity meter (1 to 4) connected to the AE-50/EW-50 built-in Pulse Input (PI). (2) Operate devices connected to the electricity meter (1 to 4) connected to the built-in Pulse Input (PI) of the AE-50/EW-50 continuously for at least two hours. (3) In Bins Object Viewer (Online), check (using a CSV file) to see that the electric energy (or difference between the current electric energy and that recorded in (1)) coincides with the reading of the metering device of AE-50/EW-50.
Group Apportionment Parameter	AC_01xx44	0.1 (No Units) (0–999,999,999)	3-1 “Bins Object Viewer (Online)”	(1) From Bins Object Viewer (Online), set the current values for apportionment parameter (outdoor unit) for each group in a specific group in the “Value_Set” property. Alternatively, in Bins Object Viewer (Online), record the current values for apportionment parameter (outdoor unit) for each specific group. (2) Operate the air conditioning units in the relevant group for at least two hours continuously. (3) In Bins Object Viewer (Online), obtain apportionment parameter (outdoor unit) for each group in the relevant group, total the difference with the value set in the “Value_Set” property (or the electric energy recorded in (1)) for each energy management block set with the centralized controller, and check (using a CSV file) to see that this coincides with the outdoor unit apportionment parameter of the energy management block.

Object	Object ID	Status	Reference section	Checking procedures
Interlocked Units Apportionment Parameter	AC_61aa44	0.1 (No Units) (0–999,999,999)	3-1 “Bins Object Viewer (Online)”	(1) From Bins Object Viewer (Online), without registering this in a group, set the current values for apportionment parameter (outdoor unit) for specific OA Processing Unit which has been set as an interlocked unit in the “Value_Set” property. Alternatively, in Bins Object Viewer (Online), without registering this in a group, record the current values for apportionment parameter (outdoor unit) for the specific OA Processing Unit which has been set as an interlocked unit. (2) Operate the relevant interlocked units continuously for at least two hours. (3) In Bins Object Viewer (Online), obtain apportionment parameter (outdoor unit) for the relevant interlocked unit, total the difference with the value set in the “Value_ Set” property (or the apportionment parameter recorded in (1)) for each energy management block set with the centralized controller, and check (using a CSV file) to see that this coincides with the outdoor unit apportionment parameter of the energy management block.
Night Purge State	BI_01xx46	INACTIVE(0): OFF ACTIVE(1): ON		(1) Using the centralized controller or the remote controller, change the night purge for a specific group. (2) In Bins Object Viewer (Online), check to see that the night purge for the relevant group is updated to the operating night purge.
Thermo On Off State	BI_01xx47	INACTIVE(0): Thermo OFF ACTIVE(1): Thermo ON	3-1 “Bins Object Viewer (Online)”	(1) Using the centralized controller or the remote controller, have a specific group perform fan operation. (2) In Bins Object Viewer (Online), check to see that the thermo ON/ OFF status of the relevant group has been updated to “Thermo OFF”. (3) Using the centralized controller or the remote controller, cool a specific group using a low temperature setting of at least 2°C lower than the room temperature or heat at a high temperature setting of at least 2°C higher than the room temperature. (4) In Bins Object Viewer (Online), check to see that the thermo ON/ OFF status of the relevant group has been updated to “Thermo ON”.
External Heat Source State	BI_01xx50	INACTIVE(0): OFF ACTIVE(1): ON	3-1 “Bins Object Viewer (Online)”	(1) Change the ON/OFF conditions of the external heat source that is connected to the indoor unit CN24 connector of the specific group. (2) In Bins Object Viewer (Online), check to see that the state of External heat source for the relevant group is updated to the operated value.
COP	AI_51zz01	0-99.99 [1 (No units)]	3-1 “Bins Object Viewer (Online)”	(1) Change the ON/OFF conditions of specific Outdoor unit. (2) In the building management system, check to see that the “COP” value is updated to the changed value.

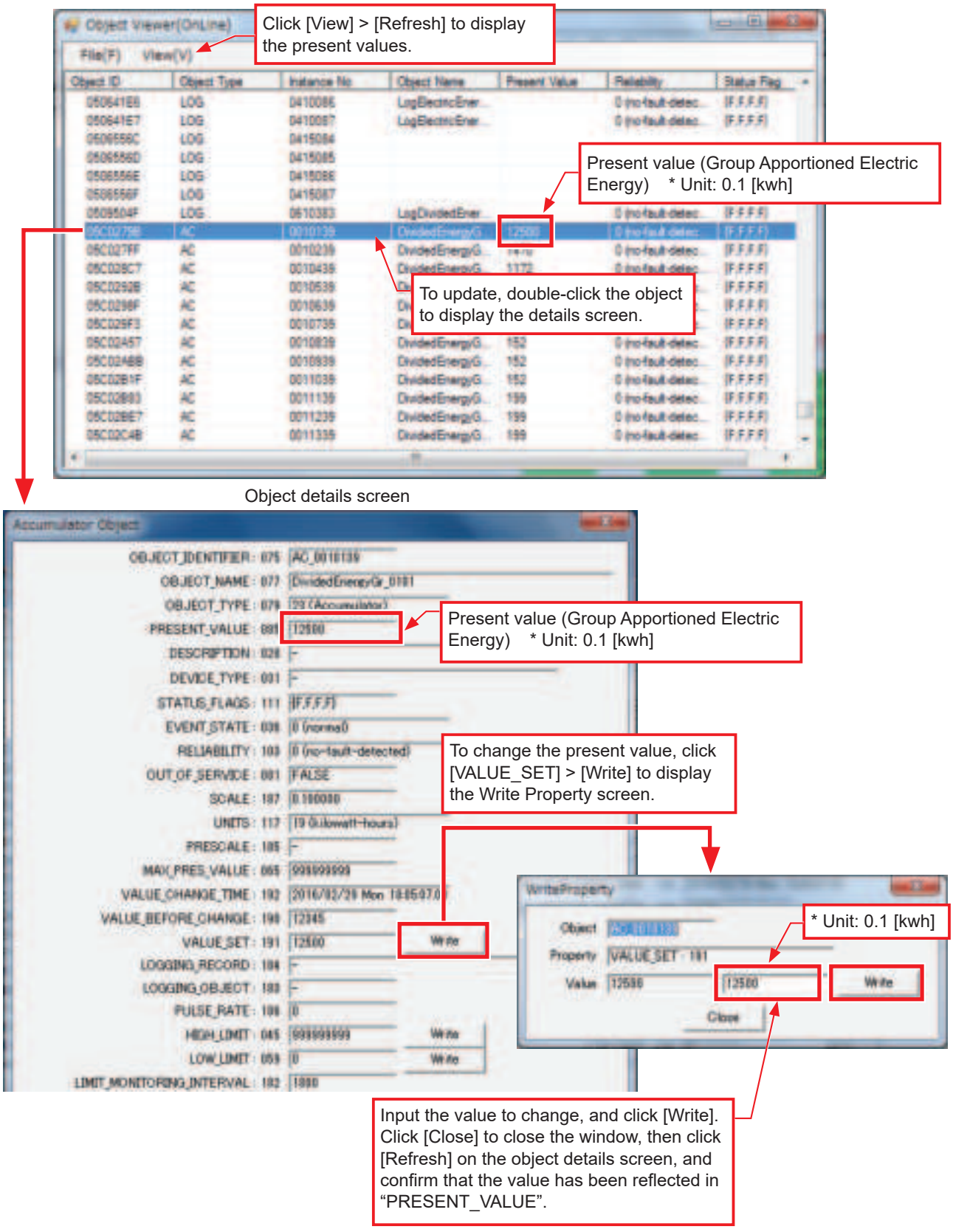
Object	Object ID	Status	Reference section	Checking procedures
Trend Log Room Temp	LOG_01xx80		3-1 “Bins Object Viewer (Online)”	(1) Record the “Room Temp” value and check the log record of the “LogBuffer” property and check that the “Room Temp” data has been logged in after the time longer than collection cycle that is set from Bins Object Viewer (Online) has been elapsed.
Trend Log Group Apportioned Electric Energy	LOG_01xx83		3-1 “Bins Object Viewer (Online)”	(1) Record the “Group Apportioned Electric Energy” value and check the log record of the “LogBuffer” property and check that the “Group Apportioned Electric Energy” data has been logged in after the time longer than collection cycle that is set from Bins Object Viewer (Online) has been elapsed.
Trend Log Interlocked Units Apportioned Electric Energy	LOG_61aa83		3-1 “Bins Object Viewer (Online)”	(1) Record the “Interlocked Units Apportioned Electric Energy” value and check the log record of the “LogBuffer” property and check that the “Interlocked Units Apportioned Electric Energy” data has been logged in after the time longer than collection cycle that is set from Bins Object Viewer (Online) has been elapsed.
Trend Log PI controller Electric Energy 1–4	LOG_41mm84–87		3-1 “Bins Object Viewer (Online)”	(1) Record the “PI controller Electric Energy 1–4” value and check the log record of the “LogBuffer” property and check that the “PI controller Electric Energy 1–4” data has been logged in after the time longer than collection cycle that is set from Bins Object Viewer (Online) has been elapsed.
Trend Log Pulse Input Electric Energy 1–4 (AE-50/EW-50 only)	LOG_410084–87		3-1 “Bins Object Viewer (Online)”	(1) Record the “Pulse Input Electric Energy 1–4” value and check the log record of the “LogBuffer” property and check that the “Pulse Input Electric Energy 1–4” data has been logged in after the time longer than collection cycle that is set from Bins Object Viewer (Online) has been elapsed.
Trend Log Group Apportionment Parameter	LOG_01xx88		3-1 “Bins Object Viewer (Online)”	(1) Record the “Group Apportionment parameter” value and check the log record of the “LogBuffer” property and check that the “Group Apportionment parameter” data has been logged in after the time longer than collection cycle that is set from Bins Object Viewer (Online) has been elapsed.
Trend Log Interlocked Units Apportionment Parameter	LOG_61aa88		3-1 “Bins Object Viewer (Online)”	(1) Record the “Interlocked Units Apportionment Parameter” value and check the log record of the “LogBuffer” property and check that the “Interlocked Units Apportionment Parameter” data has been logged in after the time longer than collection cycle that is set from Bins Object Viewer (Online) has been elapsed.

* xx: Group number (01–50)
* mm: PI controller address (01–50)
* aa: Interlocked unit address (01–50)
* zz: Outdoor unit address minus 50 (01-50)

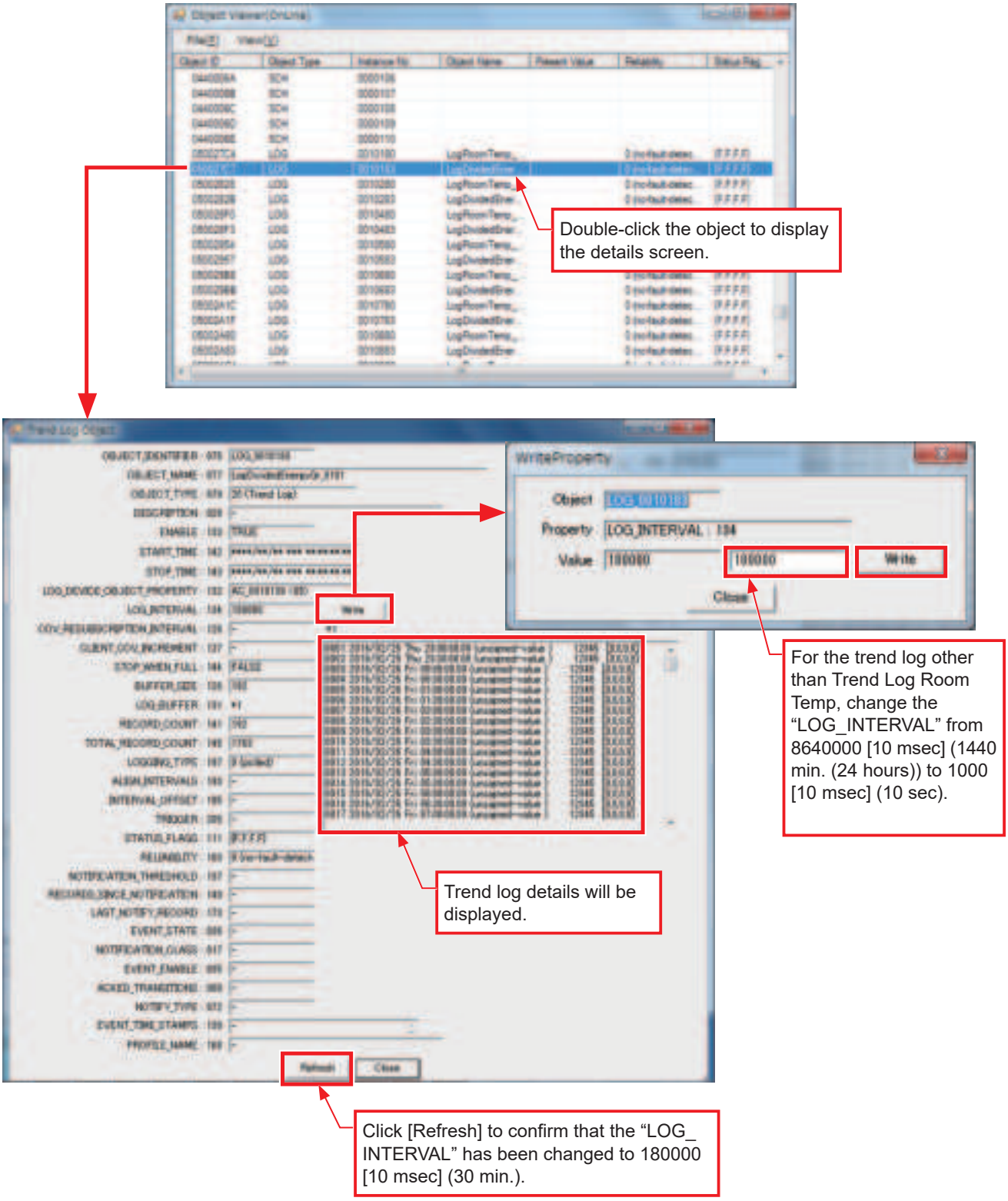
3-1. Bins Object Viewer (Online)

The Bins Object Viewer (Online) menu item is used for confirming object property values. Some property values can be written. On the Bins start-up screen, click the [Object Viewer (Online)] button to display the Object Viewer (Online) screen, where object property values can be confirmed.

(1) Object type AC (Accumulator) confirmation (example of Group Apportioned Electric Energy)

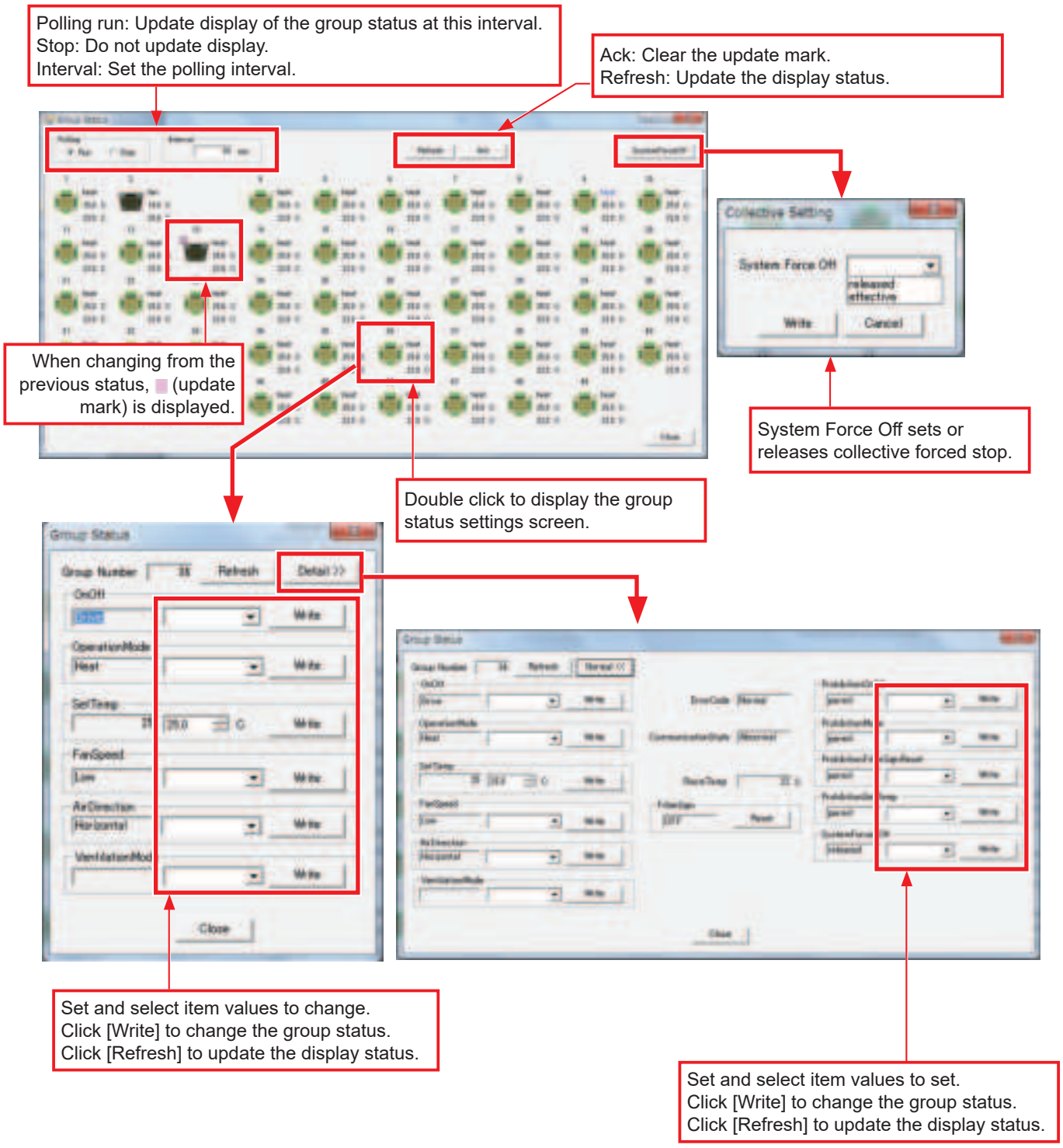


(2) Object type LOG (Trend Log) confirmation (example of Trend Log Group Apportioned Electric Energy)



3-2. Bins Group Status

The Bins Group Status menu displays in a graphical manner the status of the air conditioner group. On the Bins start-up screen, click [Group Status] to display the following screen, where the group status can be confirmed, and the groups can be operated.



Important

Check the COV/EVENT notification for LOSSNAY and Air To Water units using Wireshark.

Note

- Group icons will not appear if the check box next to “BI_01xx02ON/OFF(Status)” of the object setting of the BACnet setting tool is not checked.

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The product at hand is based on the following EU regulations:

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- Electromagnetic Compatibility Directive 2014/30/EU

2011/65/EU; (EU) 2015/863; (EU) 2017/2102:
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Please be sure to put the contact address/telephone number on this manual before handing it to the customer.

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