

Air Conditioning Control System BM ADAPTER



**Instruction Book** 







BACS-AP50

The serial number and DP of the product can be found on the back cover of this manual. They are required to use the product, so please keep this manual safe.

Proper installation is important for your safety and proper functioning of the units. Thoroughly read the following safety precautions prior to installation.

Safety notes are marked with  $\triangle$  **WARNING** or  $\triangle$  **CAUTION**, depending on the severity of possible consequences that may result when the instructions are not followed exactly as stated.

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

# 🛄 Manual Download



## http://www.mitsubishielectric.com/ldg/ibim/

- en Go to the above website to download manuals, select model name, then choose language.
- de Besuchen Sie die oben stehende Website, um Anleitungen herunterzuladen, wählen Sie den Modellnamen und dann die Sprache aus.
- fr Rendez-vous sur le site Web ci-dessus pour télécharger les manuels, sélectionnez le nom de modèle puis choisissez la langue.
- n Ga naar de bovenstaande website om handleidingen te downloaden, de modelnaam te selecteren en vervolgens de taal te kiezen.
- es Visite el sitio web anterior para descargar manuales, seleccione el nombre del modelo y luego elija el idioma.
- it Andare sul sito web indicato sopra per scaricare i manuali, selezionare il nome del modello e scegliere la lingua.
- el Μεταβείτε στον παραπάνω ιστότοπο για να κατεβάσετε εγχειρίδια. Επιλέξτε το όνομα του μοντέλου και, στη συνέχεια, τη γλώσσα.
- pt Aceda ao site Web acima indicado para descarregar manuais, seleccione o nome do modelo e, em seguida, escolha o idioma.
- da Gå til ovenstående websted for at downloade manualer og vælge modelnavn, og vælg derefter sprog.
- sv Gå till ovanstående webbplats för att ladda ner anvisningar, välj modellnamn och välj sedan språk.
- tr Kılavuzları indirmek için yukarıdaki web sitesine gidin, model adını ve ardından dili seçin.
- ги Чтобы загрузить руководства, перейдите на указанный выше веб-сайт; выберите название модели, а затем язык.
- ик Щоб завантажити керівництва, перейдіть на зазначений вище веб-сайт; виберіть назву моделі, а потім мову.
- bg Посетете горепосочения уебсайт, за да изтеглите ръководства, като изберете име на модел и след това език.
- pl Odwiedź powyższą stronę internetową, aby pobrać instrukcje, wybierz nazwę modelu, a następnie język.
- no Gå til nettstedet over for å laste ned håndbøker og velg modellnavn, og velg deretter språk.
- fi Mene yllä mainitulle verkkosivulle ladataksesi oppaat, valitse mallin nimi ja valitse sitten kieli.
- cs Příručky naleznete ke stažení na internetové stránce zmíněné výše poté, co zvolíte model a jazyk.
- sk Na webovej stránke vyššie si môžete stiahnuť návody. Vyberte názov modelu a zvoľte požadovaný jazyk.
- hu A kézikönyvek letöltéséhez látogasson el a fenti weboldalra, válassza ki a modell nevét, majd válasszon nyelvet.
- sl Obiščite zgornjo spletno stran za prenos priročnikov; izberite ime modela, nato izberite jezik.
- ro Accesați site-ul web de mai sus pentru a descărca manualele, selectați denumirea modelului, apoi alegeți limba.
- et Kasutusjuhendite allalaadimiseks minge ülaltoodud veebilehele, valige mudeli nimi ja seejärel keel.
- Iv Dodieties uz iepriekš norādīto tīmekļa vietni, lai lejupielādētu rokasgrāmatas; tad izvēlieties modeļa nosaukumu un valodu.
- It Norėdami atsisiųsti vadovus, apsilankykite pirmiau nurodytoje žiniatinklio svetainėje, pasirinkite modelio pavadinimą, tada kalbą.
- hr Kako biste preuzeli priručnike, idite na gore navedeno web-mjesto, odaberite naziv modela, a potom odaberite jezik.
- sr Idite na gore navedenu veb stranicu da biste preuzeli uputstva, izaberite ime modela, a zatim izaberite jezik.

中<简>前往上述网站下载手册,选择产品型号,然后选择语言。

# Contents

Safety precautions	.4
1. Introduction	. 6
1-1. About this manual	. 6
1-2. Related manuals	. 6
1-3. Trademarks and registered trademarks	. 6
1-4. Compliance with applicable laws and regulations	. 6
1-5. Software details	. 7
2. Parts names	. 8
2-1. BACS-AP50	. 8
3. Before using the controller	12
4. Regular inspection	13
5. Initial settings	14
5-1. Preparation for initial settings	14
5-2. Setting the BACnet Setting Tool	15
5-2-1. Starting the BACnet Setting Tool	15
5-2-2. Existing the BACnet Setting Tool	16
5-3. Menus of the BACnet Setting Tool	17
5-3-1. Screen configuration	17
5-3-2. Menu bar configuration	18
5-3-3. Setting tab configuration	19
5-4. Group settings	20
5-4-1. Group settings	20
5-4-2. UC settings	22
5-4-5. LOSSINAT settings	23
6. Checking for proper installation and conducting commissioning	25
6-1. Checking for proper installation	25
6-2. Commissioning	25
7. Specifications	26
8. Before requesting repairs	27

# Safety precautions

- Thoroughly read the following safety precautions prior to installation.
- Observe these precautions carefully to ensure safety.



- 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

# 

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.

# 

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

# 

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

The BACS-AP50 is a BACnet adapter to monitor and control air-conditioning units.

#### 1-1. About this manual

- This manual explains basic controller operations and initial settings.
- To make initial settings, you need to log in to the controller from the BACnet Setting Tool. The default settings are as follows: User ID: initial Password: Init + DP For DP, refer to the back cover of the Instruction Book (supplied with the controller). ex.) When DP is 123456, the password will be Init123456.
- In this manual, unless otherwise specified, "unit" means general air-conditioning equipment.
- For matters not explained in this manual, refer to the Instruction Book (Detailed Operation) for BACS-AP50.

## 1-2. Related manuals

- Installation Manual (supplied with the controller)
- · Instruction Book (supplied with the controller): this manual

#### Note

• In addition to the Instruction Book (supplied with the controller), the Instruction Book (Detailed Operation) and other manuals are available.

For the latest version of the manuals, refer to the specified page. "Manual Download (page 2)"

## 1-3. Trademarks and registered trademarks



MicroSDHC logo is a trademark of SD-3C, LLC.

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MODBUS is a registered trademark of Schneider Electric USA Inc.

Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates in the U.S. and other countries.

Other company names and product names shown in this manual may be trademarks or registered trademarks of their respective companies.

## 1-4. Compliance with applicable laws and regulations

• For information about the compliance of the controller with applicable laws and regulations, refer to the web site of Mitsubishi Electric Corporation.

## 1-5. Software details

Details of the open source integrated in the controller are available at the following URL: https://(IP address of the controller)/license/

## 2. Parts names

### 2-1. BACS-AP50

#### ■ BACS-AP50 (with the service cover)



	Item
	Function and description
	LED
(A)	POWER
	Lit in green: The controller is receiving power. Unlit: The controller is not receiving power.
(B)	ON/OFF *1
	Lit in green: On Blinking in green: Error Unlit: Off
(C)	STATUS
	Indicates the status of the controller. The lamp is lit off, or lit or blinks in green during normal operation of the controller. If the lamp is blinking in orange, yellow, or pink, consult your dealer.
(D)	LINK/ACT1
	Blinking in orange: Data transmission in progress (LAN1) Unlit: No data transmission
(E)	LINK/ACT2
	Blinking in orange: Data transmission in progress (LAN2) Unlit: No data transmission

\*1 This LED shows the operation status of the devices controlled directly by the controller or the devices controlled by the entire system.



	Iter	m					
	Function and description						
	Push switch						
(F)		-					
(G)		RE	SET				
	Restarts the controller.						
(H)	Ro	Rotary switch					
		SV	W1 0 to F				
			Sets the IP address of LAN1 <sup>*2</sup> .				
(I)	US	JSB port (Type-C) (USB 3.1 Gen1)					
			For updating the software				
(J)	Se	rvice	e cover				
			To be removed when the AC power cable or M-NET transmission cable is connected to the controller.				

\*2 For details, refer to the Instruction Book (Detailed Operation) for BACS-AP50.

### ■ BACS-AP50 (without the service cover)



	Ite	m						
		Function and description						
(A)	.) LAN1							
		LAN port for initial setting and updating the software.						
(B)	LA	N2						
LAN port for BACnet connection. Connects to a building management system with a LAN cable via a switching HUB.								
(C) (D)	(C) CN5 (D) CN6							
		Not available						
(E)	CN21							
		Connector for M-NET power supply. Attaching this connector to the controller supplies power to M-NET from the controller. (The controller is shipped with the connector attached.) To supply power to M-NET from other devices, remove this connector.						



	Ite	tem					
		Function and description					
(F)	(F) TB3 (M3.5)						
		Terminal block for connecting the M-NET transmission cable.					
(G)	ΤВ	1 (M3.5)					
		Terminal block for connecting the AC power wires (L/L1, N/L2).					
(H)	1) Ground (M4)						
		Terminal for connecting the protective ground wire.					
(I)	CN10						
		Not available					
(J)	Se	rial number label					
		The serial label is on the rear of the controller. See the figure below.					

#### Serial number label

Serial Number : Ver. : <Ver.>は出荷時点のものを記載しています <Ver.>indicate factory default vers



# 3. Before using the controller

- The controller must not be installed by the user. (Proper safety level and functionality may not be ensured.)
- The installation of the controller must be performed by the dealer (or the contractor) in accordance with the applicable laws, regulations, and certifications.
- When the installation work is completed, check that the initial settings are made properly. Refer to the specified page for details of the initial settings. "Initial settings (page 14)"
- After the installation work is completed by a professional contractor, attend the commissioning performed by the dealer (or the contractor) to obtain instructions on correct use to ensure safety.
- Make sure that all the items on the checklist of the Installation Manual are ticked off by the dealer (or the contractor). Receive the checklist from the dealer (or the contractor).

# 4. Regular inspection

Product components deteriorate over time and can pose safety hazards. Regularly conduct safety inspections to use the product safely and in good condition.

# 5. Initial settings

This chapter explains initial settings made after the installation work.

For details of the initial settings and commissioning, refer to the specified page. "Commissioning (page 25)" Initial settings require a computer.

#### **5-1.** Preparation for initial settings

- [1] Installing .NET Framework
- [2] Installing the BACnet Setting Tool
- [3] Importing the root CA certificate
- [4] Setting the IP address of the computer
- [5] Updating the software of the BACS-AP50
- [6] Clock setting of the BACS-AP50

#### Note

- This manual explains the following. For details, refer to the Instruction Book (Detailed Operation) for BACS-AP50.
  - Brief description of setting items.
  - Group settings for Air conditioning units (CITY MULTI) and LOSSNAY units (interlocked)
- For how to view the IP address of the controller, refer to the Instruction Book (Detailed Operation).

## 5-2. Setting the BACnet Setting Tool

#### 5-2-1. Starting the BACnet Setting Tool

Double-click the BACnet Setting Tool icon (BACS-AP50\_SetBACnet) to start up the BACnet Setting Tool shown in the figure on the left below.

Select [New Settings] from [File] in the menu bar or select [Acquire settings] from [BACS-AP50] in the menu bar to display the screen shown in the figure on the right below.

SetBACnet_v700 - 192.168.1.1	- • ×	₩ SetBACnet_v700 - 192.168.1.1	- 0
File BACS-AP50 Help		Eile BACS-AP50 Help	
		System Settings Group Settings BACne	et Settings
		Basic System M-NET	
		Basic System	
		LAN for Static Tool No randre P Adves Sadre Mak EXEC for BACred P Adves LAN2 for BACred P Adves EXEC for BACred P Adves EXEC for BACred P Adves BACred Nak CES Sadre Mak CES Safs BACred Part No. (VFIII) CES	Kir of Temperature     Orderess-Cellus     Orderess-Cellus     Orderess-Cellus     Orderess-Cellus     Orderess-Cellus     BKCS-MP50 Data     BKCS-MP50 Data     BKCS-MP50 Program Version     BKCset Program Version
COPYRIGHT (C) 2015(2025) MITSUBISHI ELECTRIC CORPORATION ALL BIGHTS RESERVED			Save Settings Ca

If [Acquire settings] is selected when the BACnet Setting Tool (PC) is not connected with the BACS-AP50 unit or when a connection is not established, a communication error pop-up screen as shown below appears after approximately 30 seconds.



If a communication error occurs, check the following.

- Is the BACS-AP50 running? (About 10 minutes is required to complete the start-up process of BACS-AP50.)
- Is the cable between the PC and BACS-AP50 (LAN1) connected correctly?
- Is the IP address of the PC set to an IP address of the same network as LAN1 of the BACS-AP50?
- Does the destination IP address setting of the BACnet Setting Tool match the IP address of LAN1 of the BACS-AP50?

## 5-2-2. Existing the BACnet Setting Tool

To exit the BACnet Setting Tool, click 🔀 at the top right of the BACnet Setting Tool screen or select [Exit] from [File] in the menu bar.

🥷 SetBACnet_v600 - 192.168.1.1 — 🛛 🔿								
File AE-C400/EW-C50 Help								
New Settings Ctrl+N								
Open Settings Ctrl+O roup Settings BACnet Set	tings							
Save Settings As								
Exit								
Basic System								
LAN1 (for air conditioning system)	Unit of Temperature							
	⊙ degrees-Celsius ⊖ degrees-Fahrenheit							
IP Address 192 168 1 1								
Subnet Mask 255 255 0	Use Time Synchronaization by Central Monitoring Device							
MAC Address	AE-C400/EW-C50 Data							
	Serial No.							
LAN2 (for BACnet)	AE-C400/EW-C50 Program Version							
IP Address 192_168_2_1	BACnet Program Version							
Subnet Mask 255 255 0								
Default Gateway								
MAC Address								
BACnet Port No. 47808								
	Save Settings Cancel							
	Save Settings Cancer							

## 5-3. Menus of the BACnet Setting Tool

### 5-3-1. Screen configuration

The screen configuration of the BACnet Setting Tool is shown below. To switch the settings screens, select menus on the menu bar, main tabs, or sub tabs.

Menu bar 🔍	🖳 SetBACnet_v600 - 192	2.168.1.1					×
Main tab	File AE-C400/EW-C50	Help Group Settings	BACnet Set	lings			
	Basic System						-
	Basic Syst	em					
	LAN1 (for air condition	ning system)		Unit of Temperature			
	□ No sending			⊙ degrees-Celsius	🔿 degrees-Fahrenheit		
	IP Address Subpet Mack	192 168 1 1 255 255 255 0		Use Time Synchronaization by Cer	tral Monitoring Device	]	
	MAC Address			AE-C400/EW-C50 Data Serial No.			
	LAN2 (for BACnet)			AE-C400/EW-C50 Program Version			
	IP Address	192 . 168 . 2 . 1		BACnet Program Version			
	Subnet Mask	255 255 0					
	Default Gateway						
	MAC Address						
	BACnet Port No.	47808					
					Save Settings	Cancel	

## 5-3-2. Menu bar configuration

Setting and operation items available from the menu bar are shown below.

Menu	Sub menu	Setting and operation items
File	- New Settings	Displays the settings screen for making new settings.
-	Open Settings	Opens an existing settings data file, and apply the settings data contained in the file to the BACnet Setting Tool.
-	Save Settings As	Saves BACnet Setting Tool settings data to a specific folder with a specific file name.
	- Exit	Exits the BACnet Setting Tool.
BACS-AP50	Property	Sets the LAN1 IP address for the BACS-AP50 to communicate with.
_	Acquire settings	Acquires the settings data from the BACS-AP50.
_	Send settings	Sends the settings data to the BACS-AP50.
-	- Mode Setting	Sets the BACnet connection mode (Online/Offline).
	Date and Time	Sets the current date and time in the BACS-AP50.
Help	About	Displays the version of the BACnet Setting Tool.

## 5-3-3. Setting tab configuration

Settings screens that are selected in the main tab and sub tab are as follows, and the items that can be set on each settings screen are as below.

Main tab	Sub tab	Setting items
System Settings	Basic System	Sets IP address information for BACS-AP50 LAN1 (for Setting Tool) and LAN2 (for BACnet connection), and time synchronization for air conditioning unit to connect. This screen also displays the BACS-AP50 serial number, BACS-AP50 program version, and the BACnet program version.
	M-NET	M-NET-related settings
Group Settings	Group	Group settings for the air conditioning unit, remote controller, and system controller; and OC settings
	LOSSNAY	Interlocked LOSSNAY settings
BACnet Settings	BACnet	Sets BACnet settings including BACS-AP50 device numbers, device names, APDU settings, and I-Am transmission periods; and air conditioning unit settings including dry mode usage Y/N, fan speed Mid1/Mid2 usage Y/N, and operation mode status automatic display Y/N.
-	Network and Device	Registers notification destination devices for COV and event notifications.
-	COV Notification	Registers device number, process ID, and notification type (with confirmation, without confirmation) for COV notification destinations.
-	Event Notification	Registers device number, process ID, and notification type (with confirmation, without confirmation) for event notification destinations.
-	Object	Selects the object to use, the requirement for COV/event notification and the notification destination, and sets the event notification (Event_Enable, Notify_Type).
	Other	Set the notification destination at reset.
	- ForcedOff Reset	Used when using the Settings Tool to cancel a BACS-AP50 emergency stop originating from the central monitoring device (BACnet). Settings not required.

## 5-4. Group settings

The [Group Settings] tab contains the [Group] and [LOSSNAY] sub tabs.

#### 5-4-1. Group settings

Take the following steps to configure the group settings (units, remote controllers, and system controllers for each group).

(The default settings for all items are blank.)

Grou	oup	LOSSNAY						
irou								
	n Sattin							
nou	p Settin	gs						
GroupNo.		📾 Unit		Remote Controller	System Controller	-	OC Sett	tings
1	1 2 3			101	201			_
2	4 5			104 105	201			
3	6 7 8 9 10			106 107	201 202			
4	11 12 13 14 15	16 17 18 19 20 21 22 23 24	4 25 28		201 202 203 204	11.		
5	27 28 29 30			127	201			
6								
7								
8								
8								
10								
11								
12								
12								
12 13 14								
12 13 14								
12 13 14 15								

No.	Item	Description	Notes
1	Group No.	Group number (Group range: 1 - 50)	
2	Unit	Configure the M-NET address of the units (air conditioning units, LOSSNAY, etc.) in the group.	*1*3
3	Remote controller	Configure the M-NET address of the remote controllers that control the group.	*2
4	System controller	Configure the M-NET address of the system controllers that control the group.	*2

\*1 The maximum number of units that can be configured into a group is 16.

Each group can be comprised only of the same type of units

(e.g., Air conditioning units cannot be grouped together with LOSSNAY units).

When setting chiller (e-Series), the number of units should be limited to 6.

\*2 The maximum number of remote controllers and system controllers that can be configured into a group is four, not including the BACS-AP50 unit. No more than two remote controllers can be included in each group.

\*3 The number of units connected to M-NET (one system) must satisfy the following restrictions.

- The maximum number of connected air conditioning units must be 50 or less (when converted to the number of indoor units).
- Convert the number of units to the number of indoor units to determine the maximum number of connected units, referring to the table below.

	Converted number of units	Maximum number of connectable units
Air conditioning unit (CITY MULTI for buildings, PAC for stores and offices)	1	50
Ventilation equipment	1	50
Chiller (e-Series)	3	16 17 to 24 <sup>*1</sup>
Hot water supply	2	24

\*1: When 17 to 24 units are connected, other types of units must not be present in the system.

#### (1) Configuring the group setting for the units

Double-click the Unit address field of the group to be set to display the [Select Unit Address] popup window. Select the units to be included in each group on this window.

Select U	nit Ad	dress									
Gro	Group 3										
1	2	3	4	5	6	- 7 -	8	9	10		
11	12	13	14	15	16	17	18	19	20		
21	22	23	24	25	26	27	28	29	30		
31	32	33	34	35	36	37	38	39	40		
41	42	43	44	45	46	47	48	49	50		
					OK			Can	cel		

#### (a) Unit selection

Click a unit address to select. Click the selected address to deselect.

The unit selection status is indicated in different colors.

Light gray indicates the units that are available for selection, and lime green indicates the units that are currently selected.

Light gray: Units that do not belong to any group

Lime green: Units that are currently selected

Dark gray: Units that belong to other groups

#### (2) Configuring the group setting for the remote controllers

Double-click the Remote controller address field to display the [Select Remote Controller Address] popup window. Select the remote controllers to be assigned to each group on this window.

Se	elect R	emote	Contr	oller A	ddres	5				
	Gro	up	3							
	101	102	103	104	105	106	107	108	109	110
	111	112	113	114	115	116	117	118	119	120
	121	122	123	124	125	126	127	128	129	130
	131	132	133	134	135	136	137	138	139	140
	141	142	143	144	145	146	147	148	149	150
	151	152	153	154	155	156	157	158	159	160
	161	162	163	164	165	166	167	168	169	170
	171	172	173	174	175	176	177	178	179	180
	181	182	183	184	185	186	187	188	189	190
	191	192	193	194	195	196	197	198	199	200
						ЭК		(	Dancel	

(a) Remote controller selection

Click a remote controller address to select. Click the selected remote controller address to deselect.

The remote controller selection status is indicated in different colors.

Light gray indicates the remote controllers that are available for selection, and lime green indicates the remote controllers that are currently selected.

Light gray: Remote controllers that do not belong to any group Lime green: Remote controllers that are currently selected

Dark gray: Remote controllers that belong to other groups

#### (3) Configuring the group setting for the system controllers

Double-click the System Controller address field to display the [Select System Controller Address] popup window. Select the system controllers to be assigned to each group on this window.

Select Sy	/stem	Contro	oller Ad	ddress					
Gro	up	3							
									0
201	202	203	204	205	206	207	208	209	210
211	212	213	214	215	216	217	218	219	220
221	222	223	224	225	226	227	228	229	230
231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250
						_			
					ок			Cance	

(a) System controller selection

Click a system controller address to select. Click the selected address to deselect.

The system controller selection status is indicated in different colors.

Light gray indicates the system controllers that are available for selection, and lime green indicates the system controllers that are currently selected.

Light gray: System controllers that do not belong to any group Lime green: System controllers that are currently selected Dark gray: BACS-AP50 address

#### 5-4-2. OC settings

To use objects related to outdoor units (COP (AI\_51zz01), etc.), enter their addresses in the OC settings.

	20.1.1					- 0	>
ile <u>B</u> ACS-AP50 <u>H</u> elp	)						
System Settings	Group Settings	BACnet Settings					
Group	LOSSNAY						
iroup Setti	ngs						
GroupNo.	👼 Unit		Remote Controller	System Controller	-	OC Setting	s
1							
2					11.		
3							
4							
5							
6							
7							
8							
8							
8 9 10							
8 9 10 11							
8 8 10 11 12							
8 9 10 11 12 13							
8 9 10 11 12 13 14							
8 9 10 11 12 13 14 15							

No.	Item	Description	Notes
1	OC settings	Button for displaying the Select OC Address popup window.	

#### (1) Configuring the outdoor unit settings

Click [OC Settings] to display the Select OC Address popup window.

Syster	n Settings	Group Settings	BACnet Settings				
Gr	oup						
Grou	p Settir	ngs					
GroupNo.		👜 Unit		Remote Controller	System Controller	1	OC Settings
1							
2							
3							
4							
5							
8							

Select C	DC Ado	dress							
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	-74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
				(	ОК		(	Dancel	

(a) Outdoor unit selection

Click an outdoor unit address to select. Click the selected address to deselect.

The unit selection status is indicated in different colors.

Light gray indicates the units that are available for selection, and lime green indicates the units that are currently selected.

Light gray: Units that are available for selection Lime green: Units that are currently selected

#### 5-4-3. LOSSNAY settings

To interlock the operation of LOSSNAY and indoor units, enter their addresses in the appropriate fields. (The default settings for all items are blank.)

Eile BM ADAPTE	R –				
System Sett	ings Group Settings	BACnet Settings			
Group	LOSSNAY				
Interlock	ed LOSSNAY				
<b>Sec</b> LOSSNAY	🌒 IC		×		
31	1 2 3 4 5		_		
32	6 / 8 9 10	00 04 05 00			
				Save Settings	Gancel

No.	Item	Description	Notes
1	LOSSNAY	Address of the LOSSNAY unit to be interlocked with the indoor units	*1
2	IC	Address of the indoor units to be interlocked with the LOSSNAY unit	*2

\*1 Only one LOSSNAY address can be entered in each field.

\*2 The maximum number of indoor units that can be interlocked with each LOSSNAY unit is 16. Each indoor unit can be interlocked with only one LOSSNAY unit. (1) Configuring the interlock settings for the LOSSNAY units

Double-click the LOSSNAY address field to display the [Select LOSSNAY Address] popup window.

Select L	OSSNA	Y Add	ress						
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
				(	ОК		(	Cancel	

(a) Interlocking LOSSNAY address selection

Click the address of the LOSSNAY unit to select. Click the selected address to deselect.

Light gray indicates the units that are available for selection, and lime green indicates the units that are currently selected.

Light gray: Indoor or LOSSNAY units that are not interlocked Lime green: LOSSNAY units that are currently selected Dark gray: Indoor or LOSSNAY units that are already interlocked

(2) Configuring the interlock settings for the indoor units

Double-click the LOSSNAY address field to display the [Select IC Address] popup window.

Select I	C Addr	ess								
LOSSNAY Unit Address										
1	2	3	4	5	6	7	8	9	10	
11	12	13	14	15	16	17	18	19	20	
21	22	23	24	25	26	27	28	29	30	
31	32	33	34	35	36	- 37	38	-39	40	
41	42	43	44	45	46	47	48	49	50	
					OK		1 🗖	Gane	-el	
								Jan		

(a) Indoor unit address selection

Click the address of the indoor unit to select. Click the selected address to deselect.

Light gray: Indoor or LOSSNAY units that are configured into a group, but not interlocked Lime green: Indoor units that are currently selected

Dark gray: Indoor or LOSSNAY units that are not configured into a group or are interlocked

# 6. Checking for proper installation and conducting commissioning

## 6-1. Checking for proper installation

- The controller must be installed by the dealer (or the contractor) in accordance with the applicable laws, regulations, and certifications.
- Attend the commissioning to be conducted by the dealer (or the contractor).
- Receive instructions on the correct usage from the dealer (or the contractor) to ensure safety.
- When the installation work is completed, check the following items yourself.

Check item	Check-off column
Did you receive instructions on safety precautions?	
Did you receive instructions on operation procedures and correct usage to ensure safety?	
Did you make sure that the items listed on the installation work checklist of the Installation Manual are checked off?	
Did you receive instructions on the initial settings?	
Did you receive a report on the commissioning result? Did you attend the commissioning?	

## 6-2. Commissioning

- Before the commissioning for the controller is conducted, a test run for the indoor units must be completed. For details, refer to the installation manual for the indoor units. The following checks must be conducted to make sure that the initial settings of the controller are correct and that the air-conditioning system is configured properly.
- (1) Start and stop the indoor units from the BACS-AP50, and make sure the indoor units operate accordingly.
- (2) Start and stop the indoor units from the local remote controller, and make sure the correct operation statuses appear on the BACS-AP50.
- (3) Perform items (1) and (2) for all indoor unit groups.

#### Important

• Conduct a test run for each group. Incorrect initial settings (e.g., incorrect group settings) for the controller can result in operation problems (e.g., target/non-target indoor units do not operate or stop as intended).

#### Note

- Item (2) can be skipped when testing a system without local remote controllers.
- BACS-AP50 needs to be operated by BACnet. For details, refer to the Instruction Book (BACnet Trial Run Tool).

# 7. Specifications

#### ■ BACS-AP50

	Item	Specifications	
Power supply Rating		100-240 VAC ±10%, 50/60 Hz, single phase	
Power consumption		15 W	
LAN1, LAN2		100BASE-TX	
Ambient conditions	Operating temperature range	-10°C to +55°C (+14°F to +131°F)	
	Storage temperature range	-20°C to +60°C (-4°F to +140°F)	
	Humidity	30% to 90% RH (non-condensing)	
Exterior		Body: Electrogalvanized steel sheet Cover: PC + ABS	
External dimensions	W x H x D	x D $\begin{array}{l} 185 \times 278 \times 60.3 \text{ mm} (7-5/16 \times 10-31/32 \times 2-3/8 \text{ in}) \\ (185 \times 278 \times 81.5 \text{ mm} (7-5/16 \times 10-31/32 \times 3-7/32 \text{ in}) \text{ when installed on} \\ \text{the installation frame}) \end{array}$	
Weight		1.9 kg (5 lbs)	
Installation conditions		In the metal control box installed indoors	

# 8. Before requesting repairs

If the problem cannot be solved by referring to the "Before requesting repairs" chapter of the Instruction Book (this manual), stop the operation, and turn off the molded-case circuit breaker. Contact the dealer (contractor, service provider) with the information on the nature of the problem.

	Symptom	Possible cause	Countermeasure
1	When the controller is not operated, an indoor unit or a LOSSNAY unit starts or stops.	<ul> <li>Even when the controller is not operated, indoor units may be started or stopped by the following event:</li> <li>1) Control from the local remote controller</li> <li>2) Activation of the schedule function or the timer of the local remote controller</li> <li>3) Activation of the interlocked control</li> </ul>	When an indoor unit or a LOSSNAY unit is started or stopped by the events listed on the left, it is not a malfunction. Cause 1) Indoor units or LOSSNAY units may start or stop according to the operation of the local remote controller. Cause 2) Indoor units or LOSSNAY units may start or stop according to certain settings of the local remote controller, such as the schedule setting, ON/OFF timer setting, and Auto-OFF timer setting. Cause 3) LOSSNAY units may start or stop, interlocking with multiple indoor units.

The serial number and DP contained in this manual are required to use the product, so please keep this manual safe.



This product is designed and intended for use in the residential, commercial and light-industrial environment.

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

- Low Voltage Directive 2014/35/EU
- Electromagnetic Compatibility Directive 2014/30/EU

2011/65/EU; (EU) 2015/863; (EU) 2017/2102:

The restriction of the use of certain hazardous substances in electrical and electronic equipment

Please be sure to put the contact address/telephone number on this manual before handing it to the customer.



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