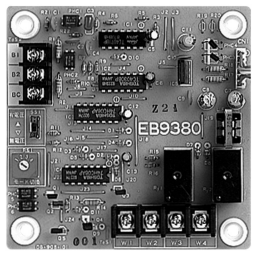
20. Unification Adaptor for Computerized Control

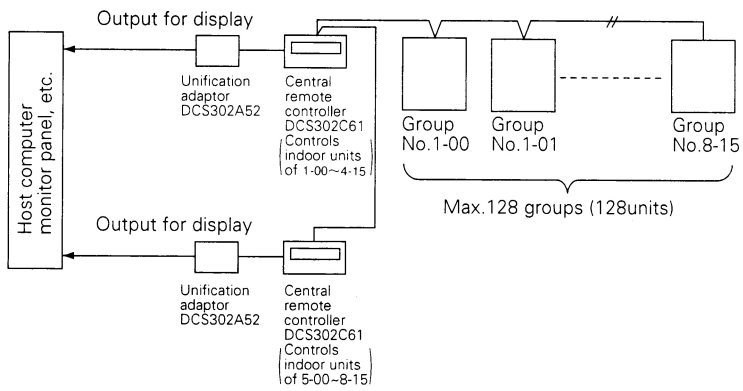
20.1 DCS302A52

■ Function

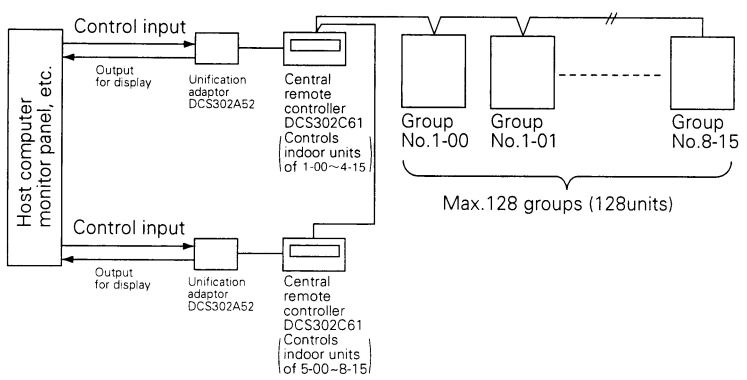
When connected to the central remote controller, this kit enables unified display (operation/malfunction) and unified control (operation/stop).



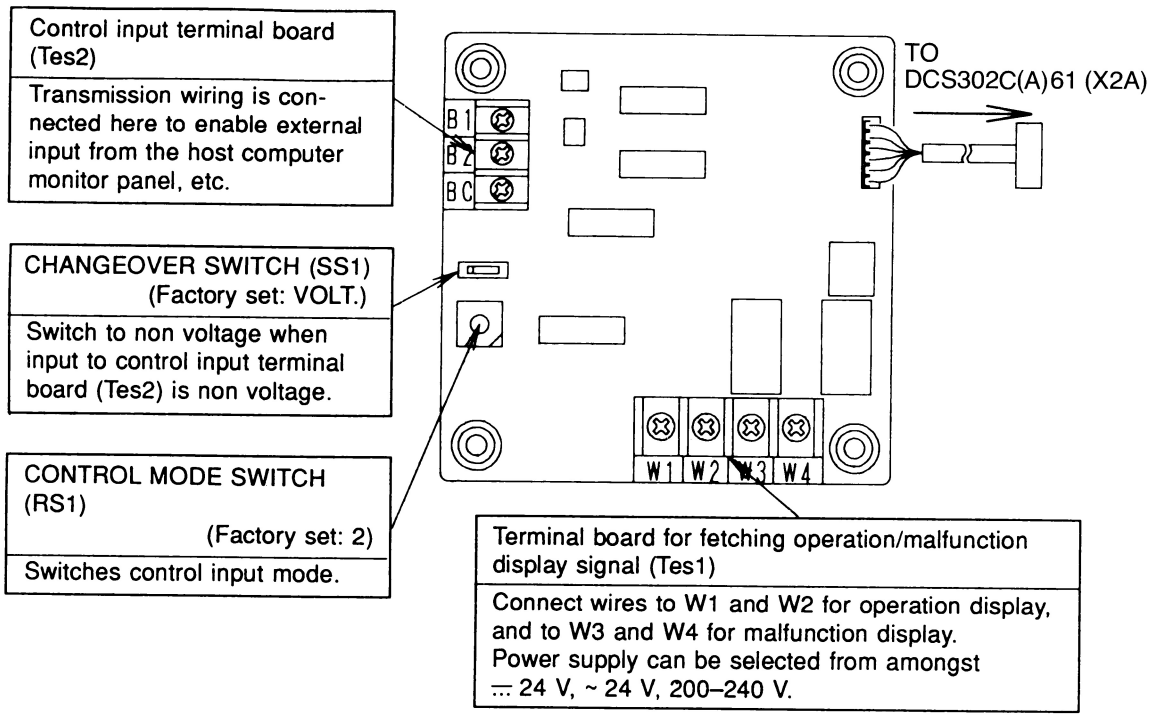
1. Unified display



2. Unified control



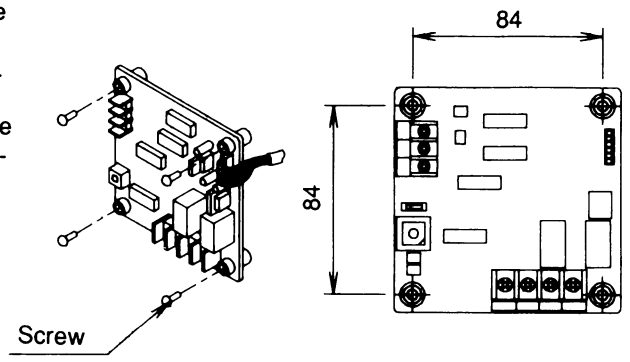
■ Names of parts and function



C: 2PA53489

■ Installation

- Securely install the adaptor inside the electric panel box (field supplied) with the 4 attached screws.
- Install the adaptor in a place within 5 m from the central remote controller to enable cable connection.



NOTE

1. Do not damage the PC board with your screwdriver, etc.
2. Install the adaptor inside an electric panel box to protect from electromagnetic waves and dust.

■ Electric wiring work and initial setting

First, wire between the indoor and outdoor units, and between each unit and the power supply source. Then, wire between the indoor unit and remote controller. Finally, check operation is normal.

- For details, refer to the installation manuals for the indoor and outdoor units.

Next, wire between the indoor unit and the central remote controller. Then, wire the central remote controller to the power supply source and make the necessary settings. Finally, check operation is normal.

- For details, refer to the installation manual for the central remote controller.

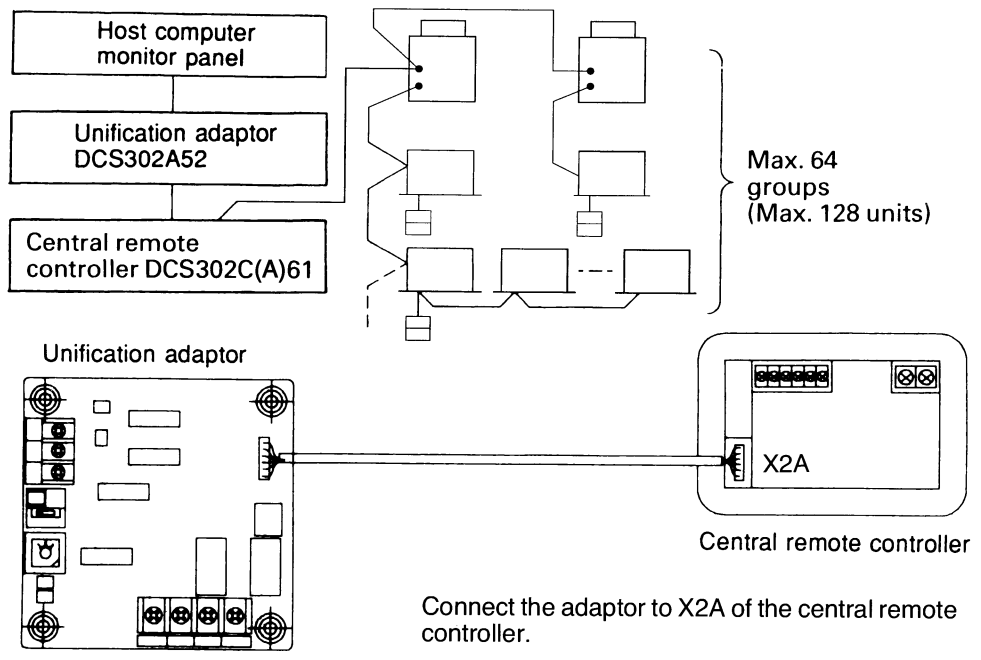
Wire between the unification adaptor for computerized control and the central remote controller.

- Refer to WIRING TO THE CENTRAL REMOTE CONTROLLER.

Set the CHANGE OVER SWITCH and CONTROL MODE SWITCH. And, wire to the host computer monitor panel or other external input device.

- Refer to WIRING TO EXTERNAL INPUT DEVICES.

WIRING TO THE CENTRAL REMOTE CONTROLLER



Connect the adaptor to X2A of the central remote controller.

C: 2PA53489

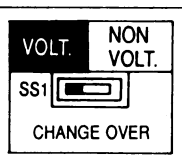
WIRING TO EXTERNAL INPUT DEVICES

(Wire specifications)
0.75 – 1.25 mm^2 gauge sheathed vinyl cord or cable (2-wire)
Max. length: 150 m

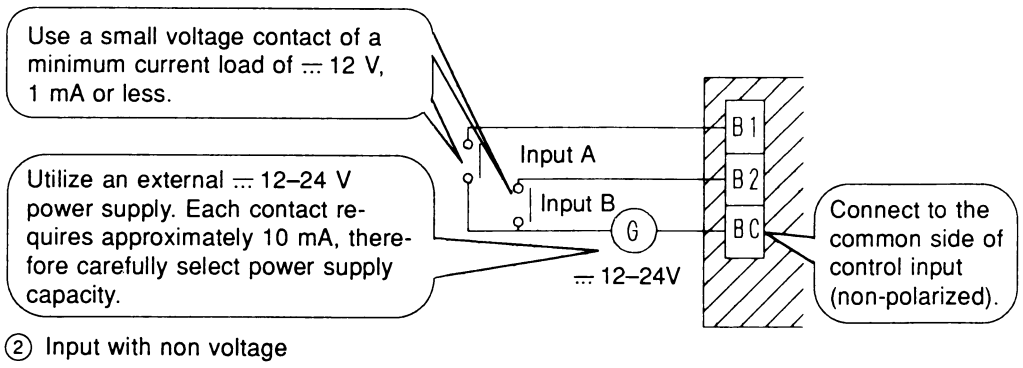
1. Control input (Unified operation/stop)
Wire as explained here following, depending on whether input carries a voltage (VOLT.) or not (NON VOLT.).

① Input with voltage

Set the CHANGE OVER SWITCH(SS1) to VOLT.. (Factory set: VOLT.)

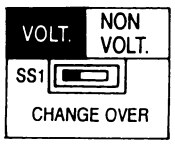


The ■ mark indicates switch position.

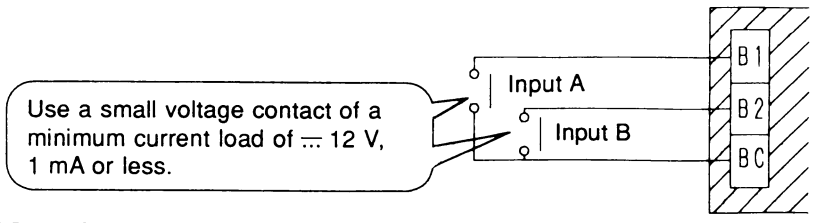


② Input with non voltage

Set the CHANGE OVER SWITCH to NON VOLT.. (Factory set: VOLT.)

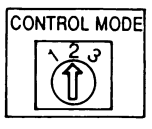


The ■ mark indicates switch position.



2. CONTROL MODE SWITCH (RS1) setting

Control mode can be selected from input A and B at this switch on the PC board adaptor.
(Factory set: 2)



① For normal operation by input A

Position	Input A
2	OFF → ON: Unified operation
	ON → OFF: Unified stop

★ Input B can be disregarded.

② For instantaneous operation by input A and B
(Use an instantaneous input of 400 msec or more at ON time.)

Position	Input A	Input B
3	ON: Unified operation	ON: Unified stop

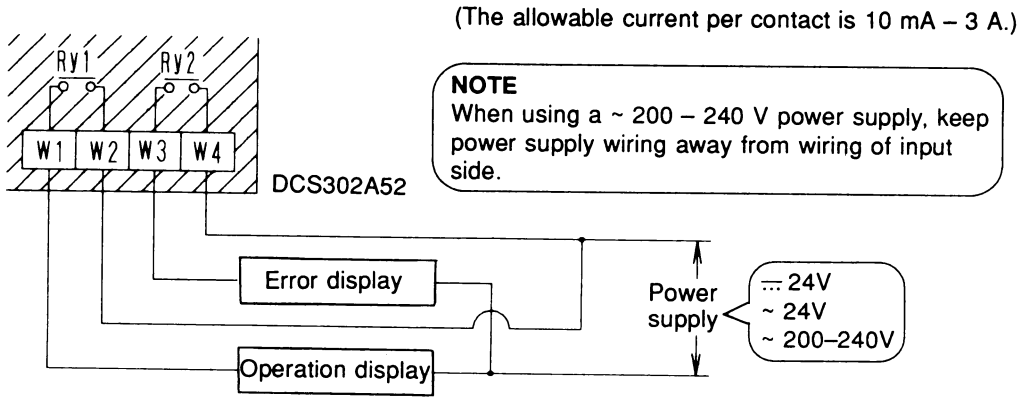
③ Do not set the switch to position 1. This switch can be set at any time.

C: 2PA53489

3. Fetching the display signal

Terminals W1 – W4 are non voltage contacts used in normal operation to output operation display (W1 and W2) and malfunction display (W3 and W4) signals.

(The allowable current per contact is 10 mA – 3 A.)



Output conditions are indicated as below.

When Ry1 and Ry2 are OFF	When only Ry1 is ON	When only Ry2 is ON
All indoor units are stopped.	No error has occurred with the indoor units, and at least 1 unit is operating.	At least 1 unit has stopped operating due to malfunction, or a communications error has occurred between tbe central remote controller and the indoor unit.

C: 2PA53489

21. Wiring Adaptor for Other Air-Conditioner

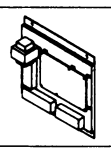
21.1 DTA103A51

Applicable models

Kit	Applicable model
DTA103A51	DCS301B(A)61 DCS302C(A)61 DPF201A51 DST301B(A)61 KRP2A61·62

ACCESSORIES

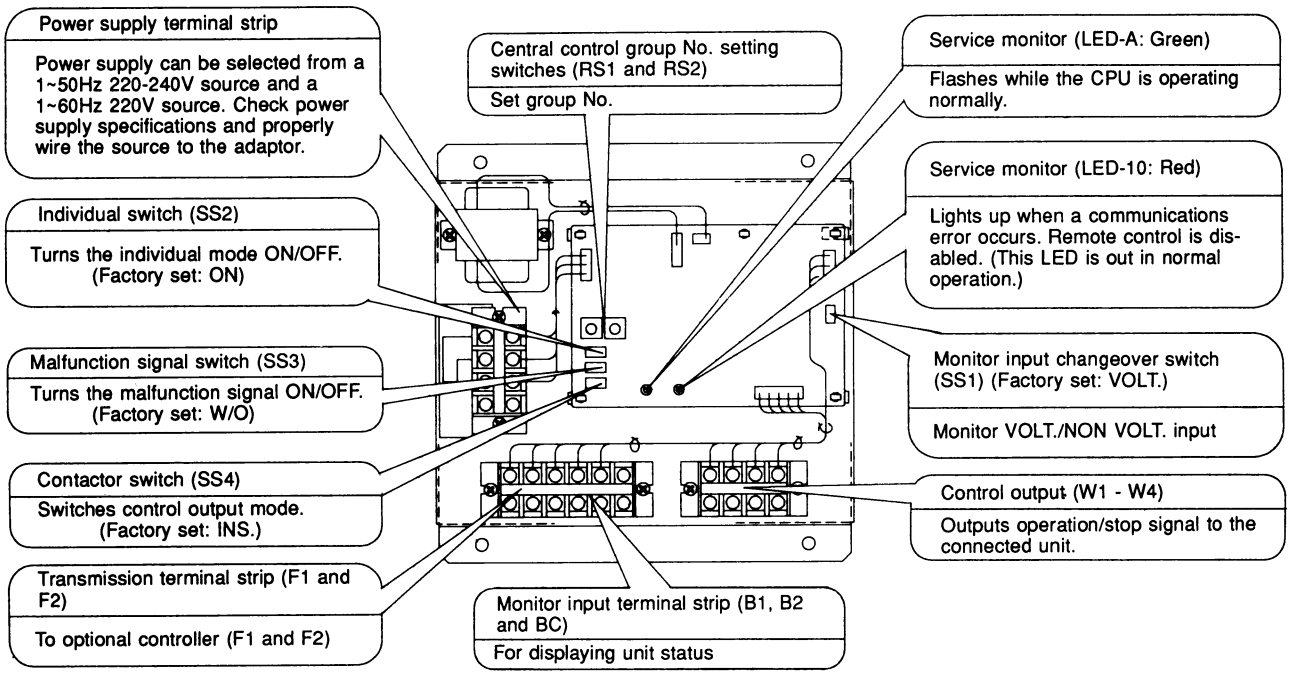
Check the following accessories are included in the kit.

Adapter 	Installation screws x 4
	Clamp x 3
	Installation manual x 2

1 FUNCTION

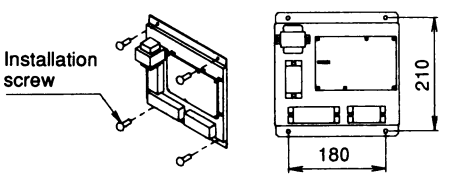
This kit contains an I/O interface adaptor for optional controller for centralized control, used when there is a non-connectable air conditioner. When connected to the central control line, this adaptor enables operation/stop and display of operation/error monitors from the optional controller.

2 NAMES OF PARTS AND FUNCTION



3 INSTALLATION

Securely install the adaptor with the attached installation screw.



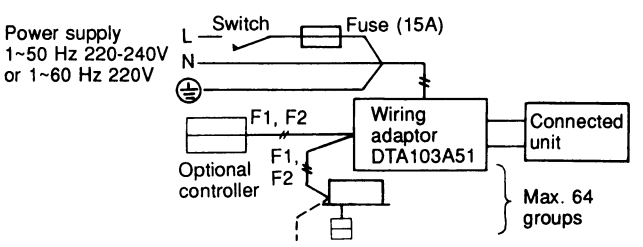
〈 **NOTE** 〉

Install the adaptor inside a control box of outer dimensions: 230W x 230D x 60H.
Supply a control box at site with outer dimensions equal to or larger than those shown below.
230W x 230D x 60H.

4 ELECTRIC WIRING WORK

WIRING REQUIREMENTS

① Wire between the adaptor and optional controller (F1,F2).
. . . For details, refer to the installation manual of the optional controller.
② Wire to the connected units and set all switches.
. . . For details, refer to WIRING TO CONNECTED UNITS.
③ Wire to the power supply.
. . . For details, refer to POWER SUPPLY WIRING.



C: 2PA53853

GENERAL INSTRUCTIONS

- All wiring, components and materials to be procured on the site must comply with the applicable local and national codes.
- Use copper conductors only.
- All field wiring and components must be provided by licensed electrician.
- Unit shall be grounded in compliance with the applicable local and national codes.
- Fit the power supply wiring with a fuse and a switch.
- After wiring work, check power to the equipment shuts OFF when the switch is shut OFF.

WIRING SPECIFICATION

	Type	Size
Power supply wiring	H05VV-U3G	(Note 1)
Transmission wiring	(Note 2)	0.75 – 1.25 mm²

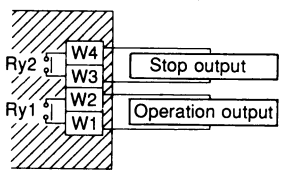
NOTE) 1. Select the size in electric wire in accordance with the local and national standards.
2. You can use the shielded wire, sheathed vinyl cord or cable (2 conductors). See the installation manual of the optional controllers for centralized control to be connected for further details.

WIRING TO CONNECTED UNITS

CONTROL OUTPUT

Terminals W1 - W4 are non voltage contacts used in normal operation to output operation display (W1 and W2) and error display (W3 and W4) signals.

Ry1 and Ry2 contact specifications		
Voltage	Max. current	Min. current
1~50Hz 220–240V 1~60Hz 220V	2A	1mA
⎓ 5–24V	3A	1mA

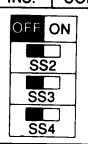


Output modes include instantaneous output and constant output. Mode is changed at the contactor switch (SS4). (Factory set: INS)

Setting by switch ON/OFF

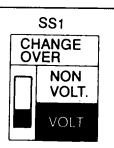
	SETTING	OFF	ON
SS2	INDIVIDUAL	ON	OFF
SS3	MAL. SIGNAL	W/O	W
SS4	CONTACTOR	INS.	CON.

The figure on the right shows the factory set switch positions.



MONITOR INPUT

Wire as explained here following, depending on whether input carries a voltage (VOLT.) or not (NON VOLT.). Make the VOLT./NON VOLT. setting at the monitor input changeover switch (SS1).

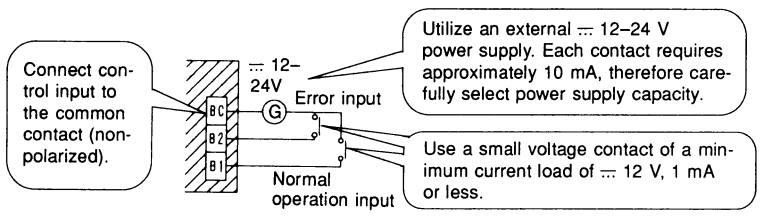


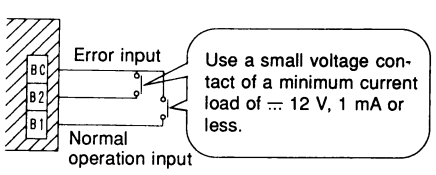
(For voltage charged input)

Set the monitor input changeover switch to VOLT. (Factory set: VOLT.)

(For non voltage input)

Set the monitor input changeover switch to NON VOLT. (Factory set: VOLT.)





① Switch the malfunction signal switch (SS3) according to needs (Factory set: W/O [OFF]). Set the switch to W (ON) to display errors even if no operation feedback from the indoor unit is available, for example, when power to the indoor unit is OFF. Together, set the individual switch (SS2) to OFF (ON).

NOTE
- This switch is ineffective when SS2 is set to ON (OFF).
- The optional controller display will change, as shown on the right, depending on the monitor input state and the malfunction signal switch (SS3) setting.
- After switching the optional controller from stop to operation, it will take from 10 to 30 seconds before the optional controller display will indicate an error.

(SS3) Malfunction signal	Optional controller display at command output		
	Monitor input state		
	Operation input ON	Operation input OFF	Error input ON
W	Operation display	Error (A1 display)	Error (A1 display)
W/O		Operation display	

② Set the group No. at the central control group No. setting switches (RS1 and RS2). Refer to the below table to set group No. Group No. increases in the order of 1-00, 1-01 ... 1-15, 2-00, ... 4.15. Refer to the installation manual of the optional controller.

RS1 switch setting and upper group No. position

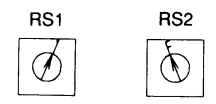
Position	0	1	2	3	4	5	6	7	8	9
Group No.		1	2	3	4					

RS2 switch setting and lower group No. position

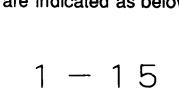
Position	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Group No.	00	01	02	03	04	05	06	07	09	09	10	11	12	13	14	15

NOTE
- Group number need not be set on this adaptor during individual use with either a a wiring adaptor for electrical appendices or a schedule timer. Setting is automatic.

Ex. Setting group No. 1-15



First and second group Nos. are indicated as below.

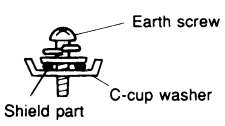


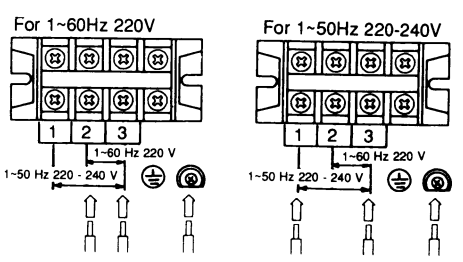
Make settings before turning ON the power.

POWER SUPPLY WIRING

Power supply can be selected from a 1~50 Hz 220-240V source and a 1~60 Hz 220V source. Check power supply specifications and properly wire the source to the adaptor.

⟨⟨ **NOTE** ⟩⟩
- Ground wires as shown in the figure on the right.
- The adaptor may malfunction or be damaged if improperly wired.
- The fuse is designed for short-circuit protection (Overcurrent protection). Therefore, it may not offer sufficient protection against improper voltage.





C: 2PA53853

22. Interface for use in BACnet®

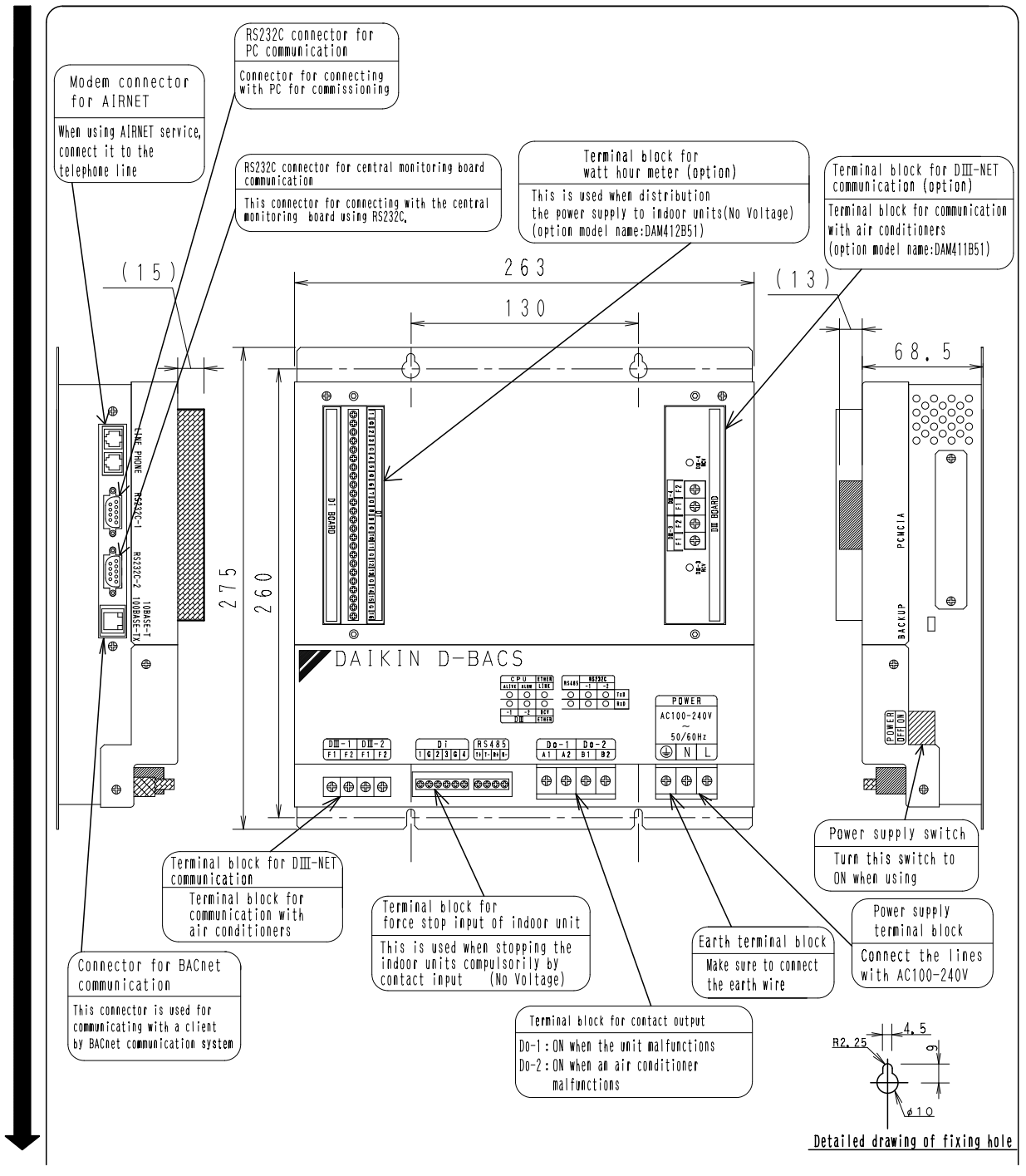
22.1 DMS502B51

❶ Components

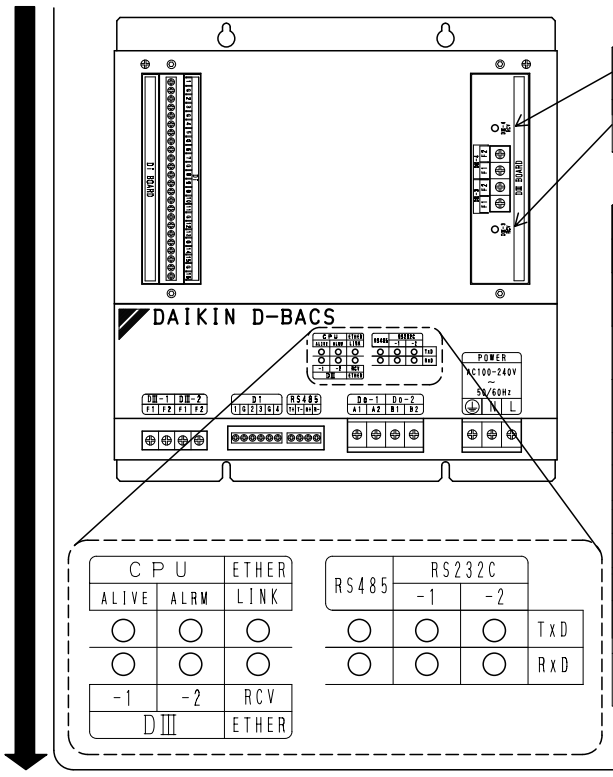
The following parts are attached to this unit.
Make sure to check them before installation.

Interface for use in BACnet®	1 set
INSTALLATION MANUAL	1 copy

❷ Names and functions of each part



1P191169C



LED display

DIII－4 RCV	It flashes when it receives/transmits data from/to the equipment connected with DIII-4 such as air conditioners
DIII－3 RCV	It flashes when it receives/transmits data from/to the equipment connected with DIII-3 such as air conditioners

LED display

CPU ALIVE	It flashes when the unit is normal operation.
CPU ALRM	It flashes when the unit is abnormal operation.
DIII－1	It flashes when it receives/transmits data from/to the equipment connected with DIII-1 such as air conditioners
DIII－2	It flashes when it receives/transmits data from/to the equipment connected with DIII-2 such as air conditioners
Ether RCV	It flashes when it receives/transmits data from/to BACnet client
Ether Link	It lights when the 10BASE-T cable or 100BASE-TX cable
RS485(TxD)	This LED display cannot be used with this unit
RS485(RxD)	This LED display cannot be used with this unit
RS232C-1(TxD)	It flashes when it transmits data to PC
RS232C-1(RxD)	It flashes when it receives data to PC
RS232C-2(TxD)	It flashes when it transmits data to the central monitoring board
RS232C-2(RxD)	It flashes when it receives data from the central monitoring board

❸ Installation

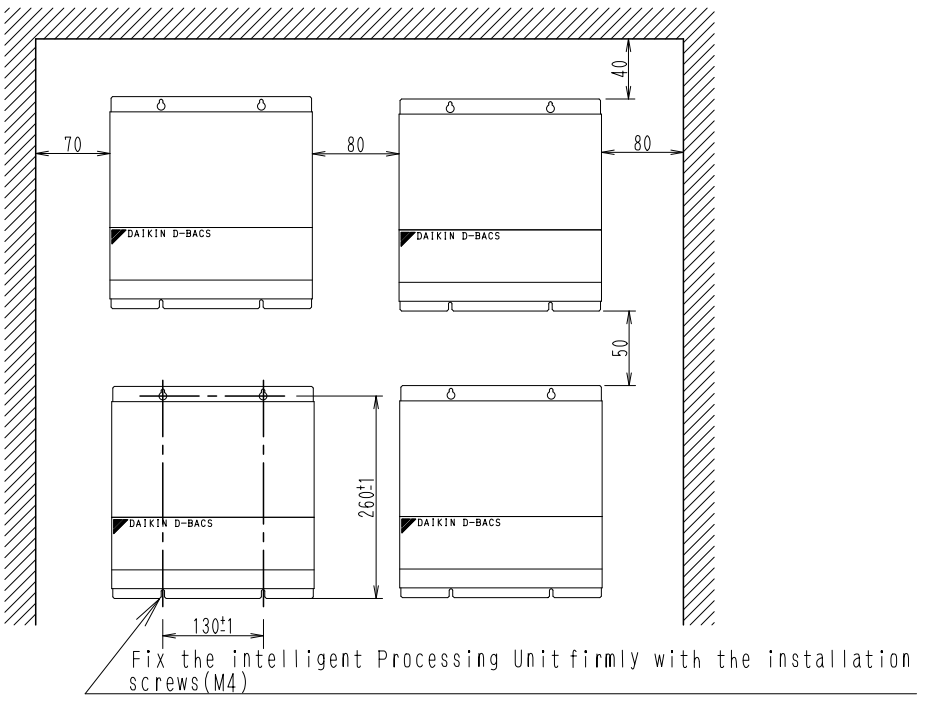
Don't fail to turn OFF the indoor unit power switch before installing **Interface for use** in BACnet®.
Failure to observe this instruction could result in electric shock.

● Location

Make sure to install the unit on the inside of the inaccessible and lockable (or needed to use exclusive tools to open) electrical component box installed indoors where the effect of electromagnetic wave or dust can be avoided.
The minimum depth required for installation is 100mm

● Required installation space

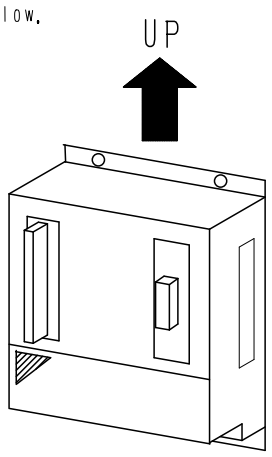
Keep the minimum amount of space indicated in the below drawing from walls, and between units when installed in series.



1P191169C

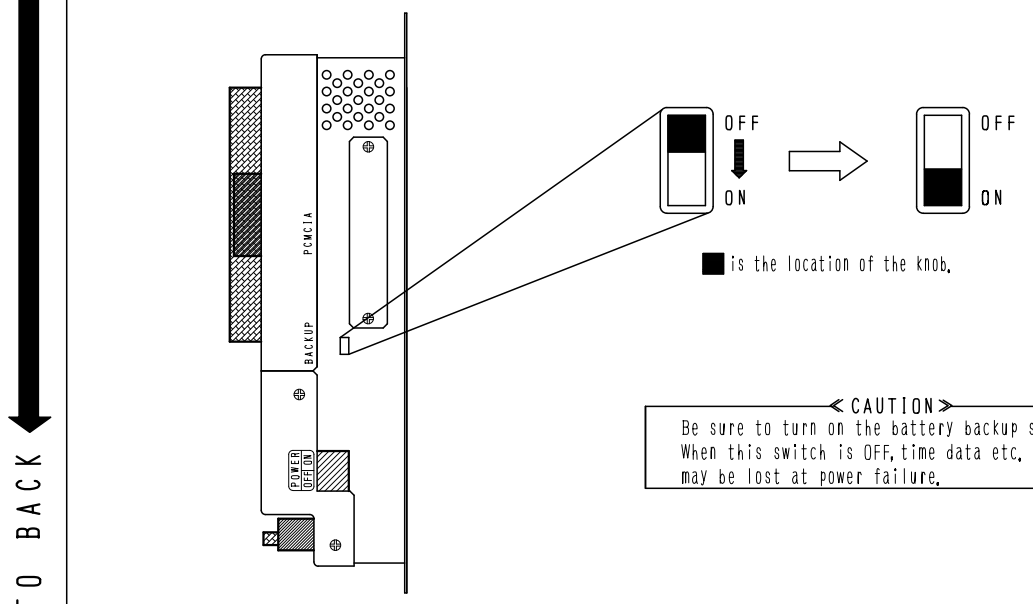
● How to install

For installation direction follow the drawing shown below.



≪ CAUTION ≫
Make sure to install the unit vertically. Do not install the unit horizontally, because it may cause malfunction.

Setting "BACK-UP BATTERY VALIDATE" switch
(shifted to OFF when being shipped from the shop. -- Back-up battery set to INVALIDATE)
For the switch to back up the clock, etc. in case of any power failure, actuate it from OFF side (knob is located above) to ON side (knob is located below) as shown in the sketch below.



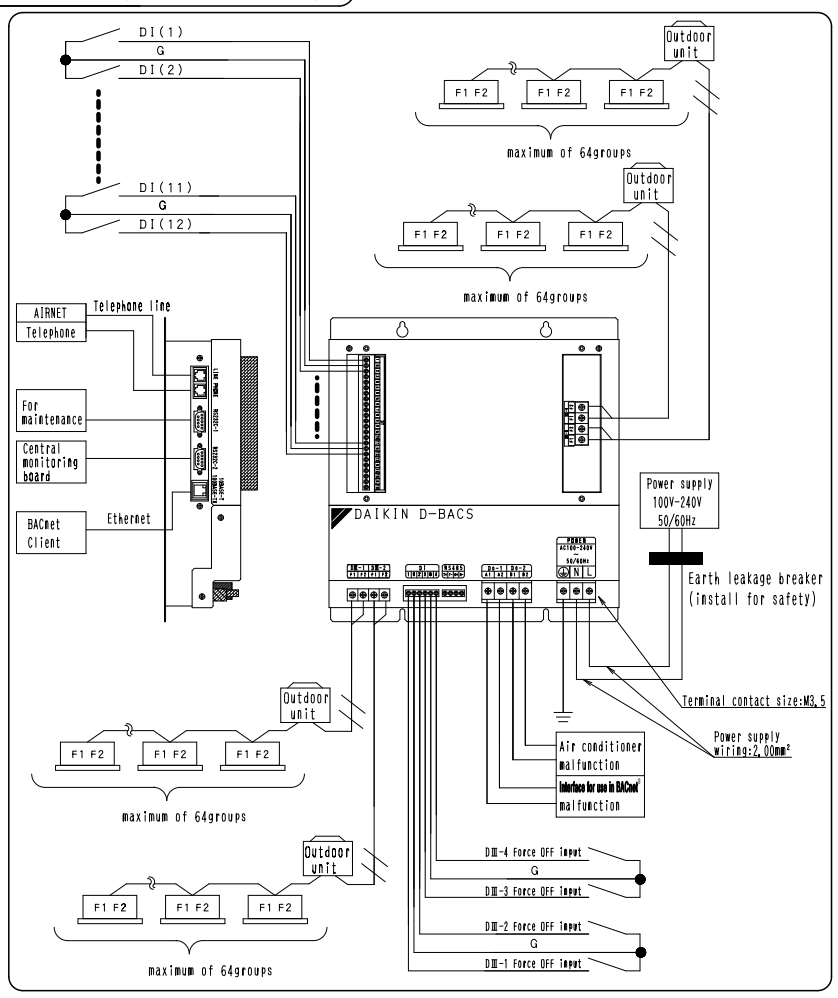
≪ CAUTION ≫
Be sure to turn on the battery backup switch. When this switch is OFF, time data etc. may be lost at power failure.

1P191169C

❹「DⅢ-NET master」setting

●Make sure to connect the unit with「DⅢ-NET master」
(Do not remove the master central setting connector.)
Remove the master central setting connectors of the centralized management controllers or ON/OFF controllers When using togeter with other centralized controllers such as centralizedmanagement controllers or ON/OFF controllers.

❺Malfunction of unit

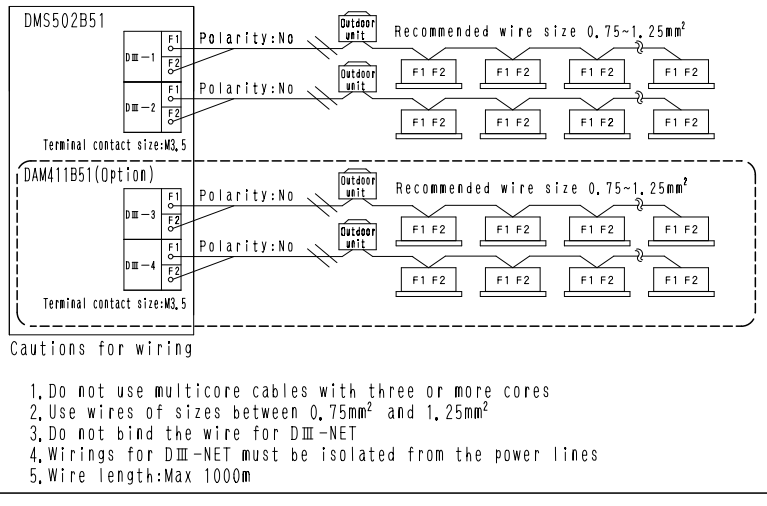


❻Electric Wiring Connection

Don't fail to turn OFF the indoor unit power switch before installing Interface for use in BACnet®.
Failure to observe this instruction could result in electric shock.

■Everything relating with field wiring must be supplied in the field.

● DⅢ-NET wiring

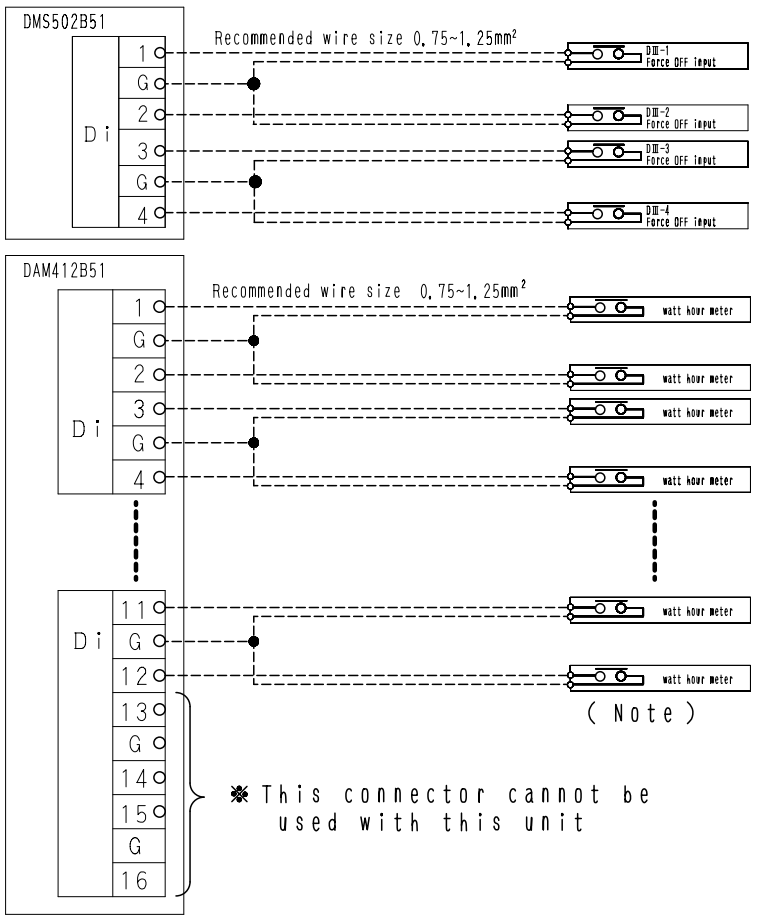


Cautions for wiring

1. Do not use multicore cables with three or more cores
2. Use wires of sizes between 0.75mm² and 1.25mm²
3. Do not bind the wire for DⅢ-NET
4. Wirings for DⅢ-NET must be isolated from the power lines
5. Wire length:Max 1000m

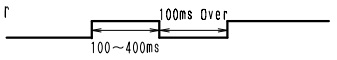
1P191170C

● No voltage contact input wiring



(Note) : Use a meter that outputs one pulse of a width from 100～400ms, per one kWh.

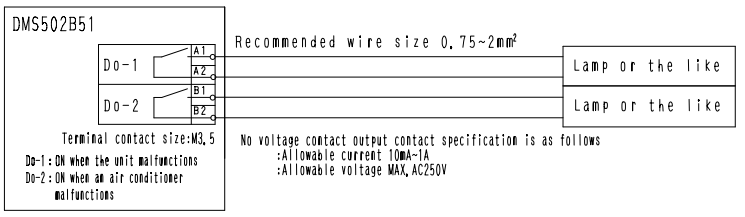
The pulse of watt hour meter



Cautions for wiring

1. The input are all the no voltage contact
2. Use a contact which can guarantee minimum application load DC16V and 10mA
3. Do not use multicore cables with three or more cores
4. Use wires of sizes between 0.75mm² and 1.25mm²
5. Do not bind the wire for control
6. Wirings for control must be isolated from the power lines
7. Terminals G are inter-connected. Connecting to either one is allowed, but the number of cables connectable to one terminal is limited to 2 pieces
8. Wire length:Max 150m

● No voltage contact output wiring

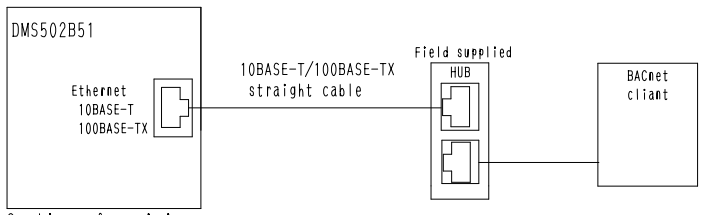


Cautions for wiring

1. Do not use multicore cables with three or more cores
2. Use wires of sizes between 0.75mm² and 2mm²
3. Do not bind the wire for control
4. Wirings for control must be isolated from the power lines
5. Wire length:Max 150m

1P191170C

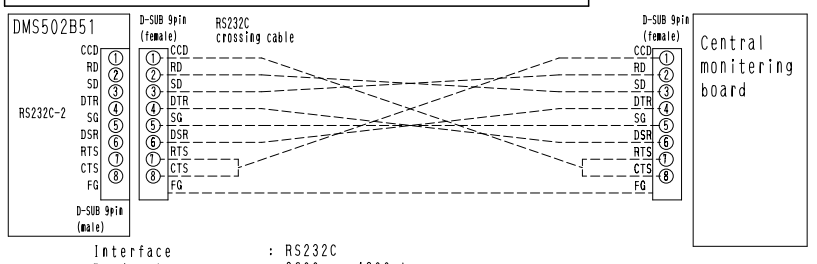
● Ethernet communication wiring



Cautions for wiring

Don't clamp these cables together with high voltage cables. Failure to observe this instruction would cause control error.

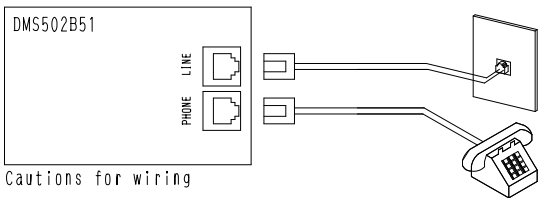
● Communication between central monitoring board



Interface : RS232C
Baud rate : 9600 or 4800 bps
(automatic baud rate detection allows matching of baud rates between Interface for use in BACnet® and Central monitering board)
Transmission method : Asynchronous;Start bit:1, Stop bit:1
Control protocol : Polling/Selecting(centralized);Comforms to JISX5002.
Control station :Central monitoring board
Substation :DMS502B51
Transfer code : JIS7 unit +1 parity bit
Error control : Vertical parity check(Even)
: Horizontal parity check(LRC)
: Timer-based montitoring
Wiring length : Max. 15m

● Connection to public telephone line

Connect to the telephone line in order to monitor the air-conditioner via AIRNET service.
Connect to modular cable from the public telephone line to the upper connector with a stamping of LINE, and connect the modular cable of the telephone to the lower connector with a stamping of PHONE, as shown in the sketch below.



Cautions for wiring

1. Don't clamp these cables together with high voltage cables. Failure to observe this instruction would cause control error.
2. When using AIRNET service, it is necessary to use a separate modem specified by us and enter into Maintenance Agreement with charge.

❼ Setting group No. for centralized control

Set the group number of each group of the indoor unit from the remote controller. (In case of no remote controller, also connect the remote controller and set the group No. Then, remove the remote controller.)

(1) Turn ON the power of the indoor unit and Interface for use in BACnet®.
(Unless the power is ON, no setting can be made.)
Check that the installation and electrical wiring are correct before turning the power supply ON.
(When the power supply is turned ON, all LCD appear once and the unit may not accept the operation for about one minute with the display of "88".)

(2) While in the normal mode, hold down the "[filter]" button for a minimum of 4 seconds.
The remote controller will enter the FIELD SET MODE.

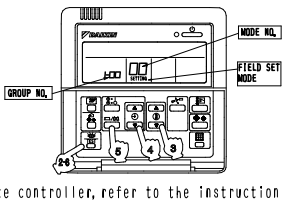
(3) Select the MODE No. "00" with the "[temp]" button.

(4) Use the "[temp]" button to select the group No. for each group.

(Group numbers increase in the order of
1-00, 1-01, • • • 1-15, 2-00, • • • 4-15)

(5) Press "[time]" to set the selected group No.

(6) Press "[filter]" to return to the NORMAL MODE.



NOTE) • For details on making settings from the simplified remote controller, refer to the instruction manual of the unit.
• See the instruction manuals which came with the Ventilair and adapters(i.e., multi-purpose adapters) for details on their Group No. settings.

NOTICE Be sure to keep the operation manual for maintenance.

C: 1P191170C

23. Interface for use in LONWORKS®

23.1 DMS504B51

23.1.1 Installation

This manual must be read prior to installation.
Make sure the power supply is off
when carring out the installation.

WARNING
This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Please carefully read the "Safety Precautions" as follows and install the controller as instructed.

- The precautions given herein are classified as "⚠ WARNING" and "⚠ CAUTION". However, particular precautions which, unless they are observed in installing that could result in death and serious injury are identified by "⚠ WARNING". Needless to say even other precautions which are not identified by "⚠ CAUTION" could lead to a serious accident unless they are observed. Therefore, please do not fail to observe these precautions.
- After completion of the installation, please conduct a test run on the controller to check that it is free from any fault and in addition simultaneously instruct the user how to operate and maintain it correctly (in accordance with the Operation Manual).
  Furthermore, request the user to keep this manual together with the Operation Manual for future reference.

⚠WARNING

The installation work must be requested by the dealer.
Installation by user himself could cause electric shock, fire, etc.

Install correctly in accordance with this installation manual.
Incorrect installation, if any, may cause electric shock, fire, etc.

Installing; don not fail to use the accessories and specific parts which are supplied together with the indoor unit.
Failure to observe this instruction may cause electric shock, fire, etc.

Perform correctly the electric wiring connection using the specified cables and firmly clamp each terminal connector to prevent cable load from being transferred thereto.
Unstable and improper cable connecting and clamping could cause overheat, fire, etc.

⚠CAUTION

Grounding.
Do not connect the grounding wire to any of gas pipes, city water pipes, lightning rods, or telephone grounding wire. Imperfect grounding would cause electric shock.

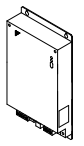
Avoid installing at the following locations.
1. Cuisine and other place where the controller is inevitably exposed to mineral oil, scattered oil or steam.
   Installing at such places could cause deterioration of the resin parts, corrosion or short circuit.
2. Where corrosive gases such as sulfur dioxide generate inevitably.
3. Where a machine as generates electromagnetic waves. Installing at such a place could cause trouble of the control line and failure of normal air-conditioning operation.
4. Where leak of combustible gas is forecast and place where volatile ignitable gases such as thinner, gasoline, etc. are handled.
   Should such gas leak and accumulate around the devices, could cause igniting.

SETTING THE BACPUP BATTERY SWITCH.

1 Components

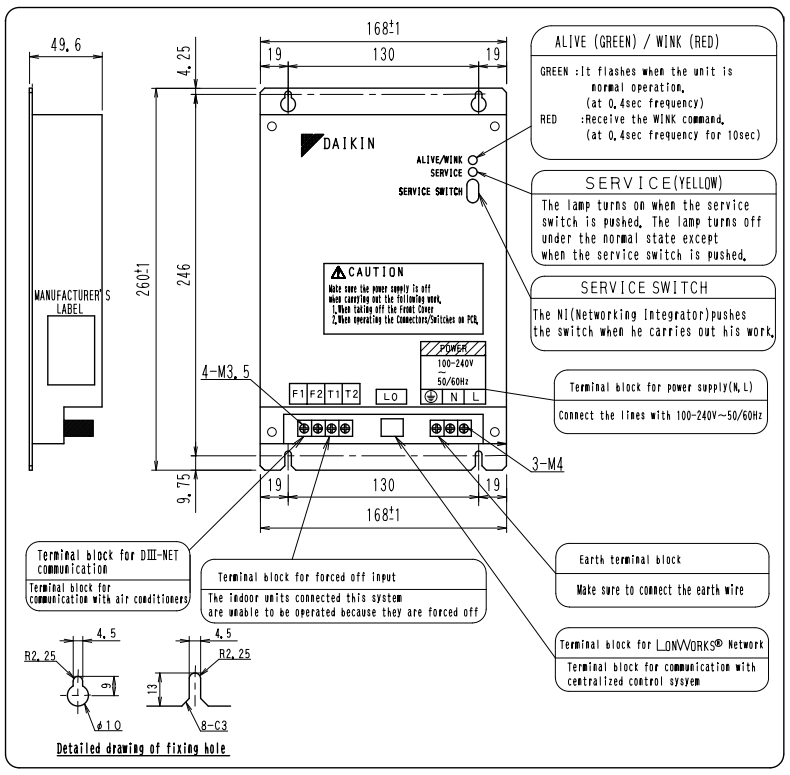
The following parts are attached to this unit.
Make sure to check them before installation.

DMS-IF
DMS504B51



INSTALLATION MANUAL

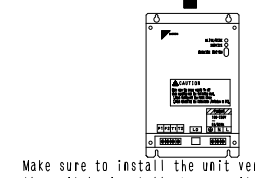
2 Names and functions of each part



1P111315-1-1

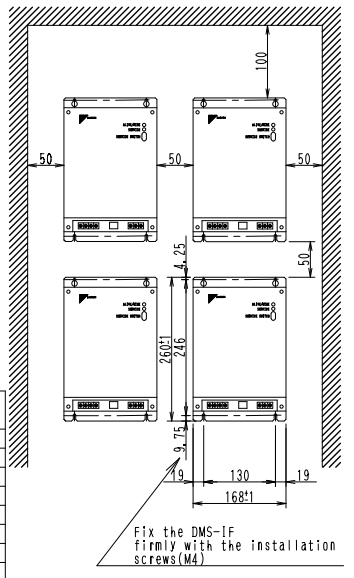
❸ Installation

- Make sure to install the unit on the inside of the inaccessible and lockable (or needed to use exclusive tools to open) electrical component box installed indoors where the effect of electromagnetic wave or dust can be avoided.
  The minimum depth required for installation is 80mm
- Keep the minimum amount of space indicated in the below drawing from walls, and between units when installed in series.
- For installation direction follow the drawing shown below.



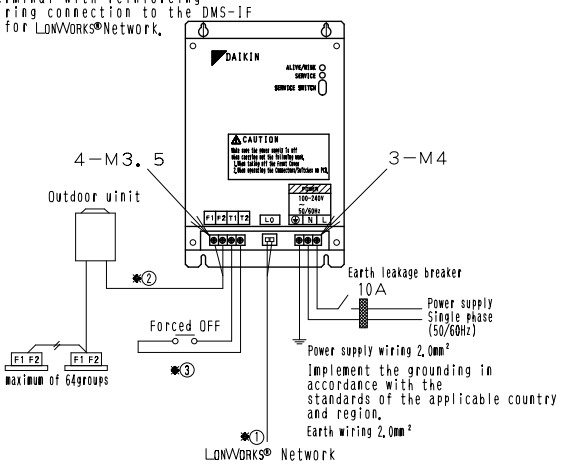
Make sure to install the unit vertically. Do not install the unit horizontally, because it may cause malfunction.

1)Electrical rating	(1)Rated voltage and frequency : Single phase AC100~240V 50/60Hz	
	(2)Rated power consumption : maximum 5W	
2)Conditions	(1)Power supply fluctuation : ±10%	
	(2)Ambient temperatyre : -10~+50℃	
	(3)Ambient humidity : 0~95% (Sweating is not acceptablle)	
	(4)Preservation : -20~+60℃	
3) Performance : Insulation resistance : 50MΩ or more by DC500 megohmmeter		
4)Mass : 1,5Kg		
5)Colour of the unit : stainless steel sus304-NO,4		



❹ Electric Wiring Connection

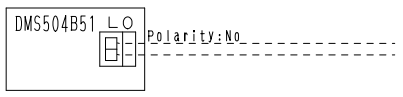
- Use a round crimp terminal with reinforcing sleeve for safety wiring connection to the DMS-IF except the terminal for LONWORKS® Network.



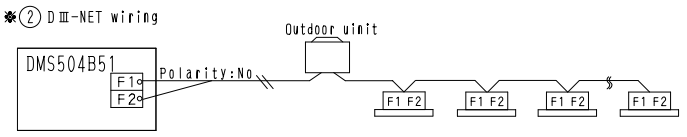
❺ Wiring specification

■Everything relating with field wiring must be supplied in the field.

✱① LONWORKS® Network communication wiring
Use the dedicated line for the LONWORKS®Network.



✱② DIII-NET wiring

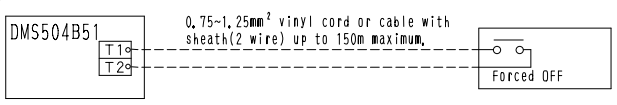


1. Do not use multicore cables with three or more cores.
2. Use wires of sizes between 0.75mm² and 1.25mm²
3. Wire length:Max 1000m

1P111315-1-2

4. Do not bind the wire for DⅢ-NET
5. Wirings for DⅢ-NET must be isolated from the power lines.
6. Terminal contact size:M3.5

※③ Forced OFF

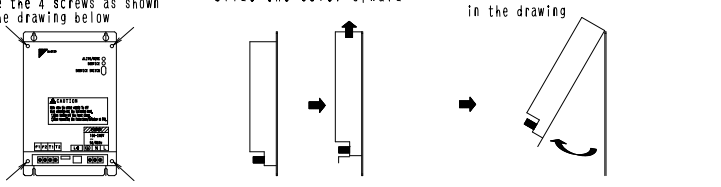


Cautions for wiring
When Forced OFF INPUT is kept on, the indoor units connected this system are unable to be operated because they are Forced OFF.

1. Use a no voltage contact.
2. Use a contact which can guarantee minimum application load DC16V and 10mA.
3. Do not use multicore cables with three or more cores.
4. Wirings must be isolated from the power lines.
5. Terminal contact size:M3.5.

⑥ Names and functions of P.C.B ASSY

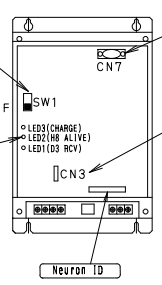
① How to open the cover
- Remove the 4 screws as shown in the drawing below
- Slide the cover upward
- Lift the cover to the front as shown in the drawing



② Names and functions of P.C.B ASSY

Backup battery switch
- **Turn ON** the switch to bring the backup battery effective. This mark ■ shows the swtich position when DMS-IF is shipped out of the factory

LED display
LED3 turns on during the battery is charged. Even after the battery is completely charged, the lamp slightly turns on.
LED2 flashes (at 0.4sec frequency) when the CPU for DⅢ-Net communication is normal.
LED1 flashes when receiving data by DⅢ-Net communication.



Connector for service PC
- This connector is to be connected to the PC when commissioning is carried out by a service person

Connector for setting the master of centalized control
- The connector must be permanetly connected (The connector is connected when shipped out of the factory. Do not pull out the connector)

Since the control substrate is weak to static electricity, do not touch the parts on the substrate. Make sure to dischange static electricity from human body before starting the work. (Static electricity can be discharged by touching the sheet metal of the control panel which is earthed)

⑦「DⅢ-NET master」setting

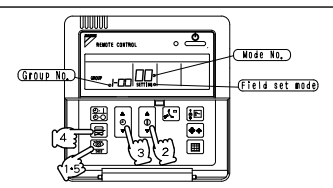
Make sure to connect the unit with「DⅢ-NET master」

⑧ Setting the backup battery switch

When shipped out of the factory, the backup battery switch is turned off (the battery is ineffective).
Turn ON the switch for backup of set data such as the information regarding the network variables at power failure.
- Guaranteed hours of power failure. One month (31days)
- The lithium battery is used and is rechargeable. After the power is restored it is necessary to continuously electrify the battery for approximately one day until the it is completely charged. (The battery is completely charged when shipped out from the factory.)

⑨ Setting group No. for centralized control

Turn ON the power to the DMS-IF Following the below procedure, set the group numbers for the indoor units connected to the DⅢ-NET. This group number is set for each indoor unit system. (When not using the remote controller, the remote controller is to be connected just for making settings but must be disconnected when finished.)



Pre-parations	● Check no troubles exist with installation and wiring before turning ON the power. ● Turn ON the power to the indoor unit and DMS-IF. Setting is not possible with the power OFF.

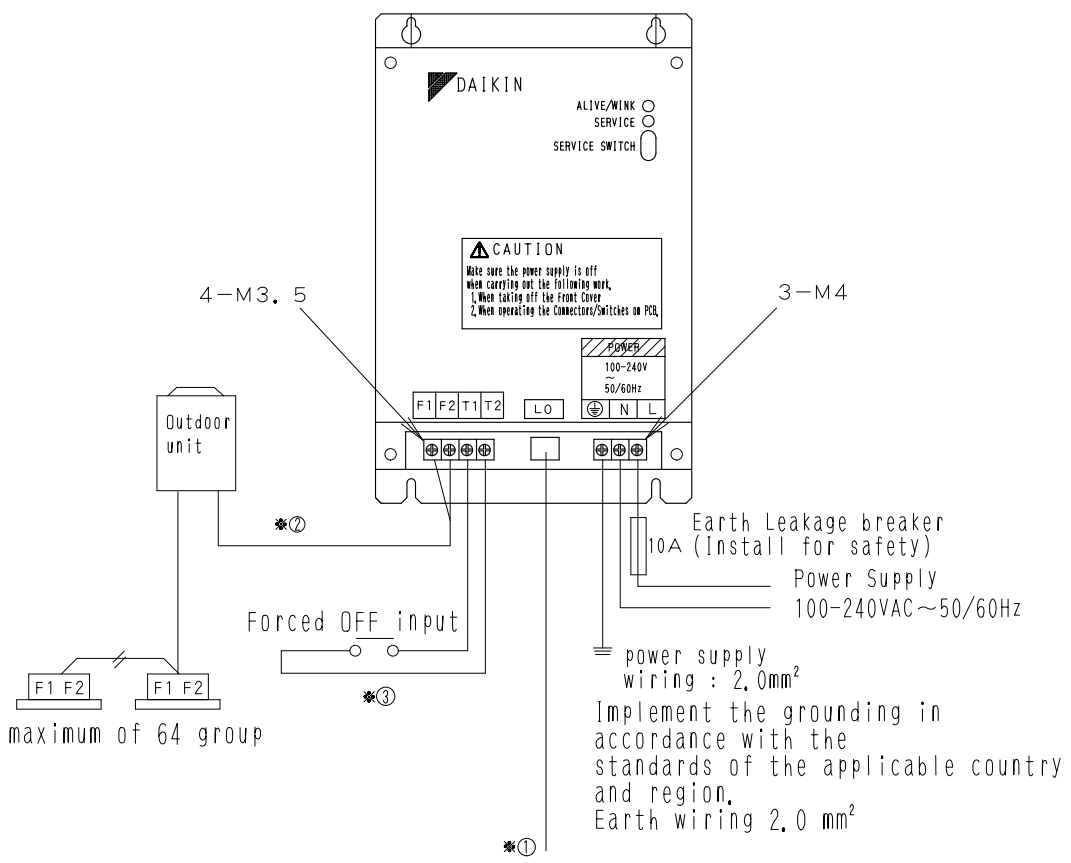
● Nothing is wrong with the equipment if "88" is displayed when power is turned ON. This may happen and the unit may not respond to operation, but the situation should last only a moment.

1	Hold down TEST for 4 seconds or more to enter the field set mode.
2	Press ▲▼ and set the mode NO. to "00"
3	Press ▲▼ and set the group No. Group No. increases in the order of 1-00, 1-01 ... 1-15, 2-00,... 4-15 Set the group No. when "GROUP" on the liquid crystal display is flashing. Press the SET button to initiate flashing of "GROUP" on the liquid crystal display.
4	Press ◀▶ to set the group No.
5	Press TEST. This will return the system to the normal mode.

- For details on making settings from the simplified remote controller, refer to the instruction manual of the unit.
- For details on making settings of the group No. of the Ventilaire or adapters (wiring adapter for other air conditioners, etc.), refer to the instruction manual of the said unit.

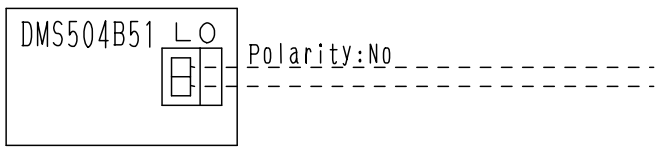
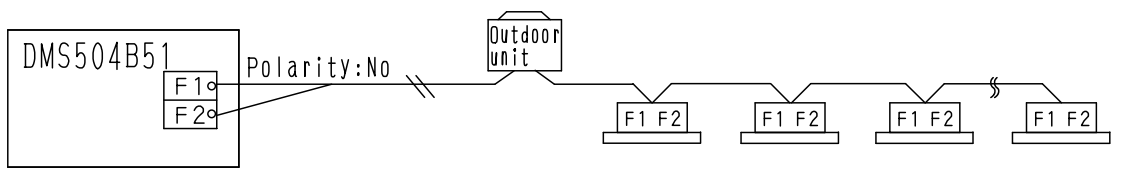
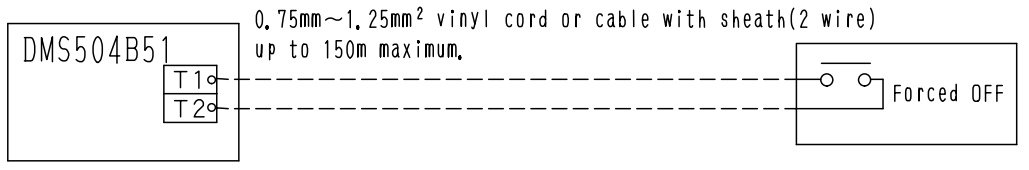
1P111315-1-3

23.1.2 System Wiring Diagram



LONWORKS® Network

3D040974

NO ※	Wiring specification
①	● LONWORKS® Network Communication wiring Use the dedicated line for the LONWORKS® Network 
②	● D Ⅲ-NET wiring  Cautions for wiring 1. Do not use multicore cables with three or more cores. 2. Use wires of sizes between 0.75mm² and 1.25mm² 3. Wire length:MAX 1000m 4. Do not bind the wire for D Ⅲ－NET 5. Wirings for D Ⅲ－NET must be isolated from the power lines. 6. Terminal contact size :M3.5
③	● Forced OFF input  When forced OFF input is kept on, the indoor units connected this system are unable to be operated because they are forced off. 1. Use a no voltage contact. 2. Use a contact which can guarantee minimum application load DC16V and 10mA 3. Do not use multicore cables with three or more cores. 4. Wirings must be isolated from the power lines. 5. Terminal contact Size:M3.5

Everything relating with field wiring must be supplied in the field.

3D040974

1. Object Request Input(Node Request)
It features objects for a group of 64 indoor units.
As shown below, the object name and the last " _nn" in the " nv Name" correspond with the DⅢ-NET location setting address.

Table 1 Object Request Input

Controlling items	nv Name	TYPE	(Value, State) :Operation
On/OFF Command	nviOnOff_nn	SNVT_switch	(0, 1)or(★, 0) : OFF, (>0, 1) : ON
Operation Mode Setting	nviHeatCool_nn	SNVT_hvac_mode	0 :Auto 1 : Heating 3 : Cooling 9 : Ventilation
Temperature Setting	nviSetpoint_nn	SNVT_temp_p	Temperature ℃
Airflow Rate Setting	nviFanSpeed_nn	SNVT_switch	(0<value<=100, 1) : low, (>100, 1) : high
Filter Sign Reset	nviFSReset_nn	SNVT_switch	value= 0 or 1 : Reset
Forced Thermostat OFF Setting	nviThermoOff_nn	SNVT_switch	(0, 1)or(★, 0) : Reset, (>0, 1) : OFF Setting
Remote ON/OFF Control Rejection	nviRejOnOff_nn	SNVT_switch	(0, 1)or(★, 0) : permitted, (>0, 1) : Prohibited
Remote Operation Mode Control Rejection	nviRejMode_nn	SNVT_switch	(0, 1)or(★, 0) : permitted, (>0, 1) : Prohibited
Remote Temperature Setting Control Rejection	nviRejSetpoint_nn	SNVT_switch	(0, 1)or(★, 0) : permitted, (>0, 1) : Prohibited
System Forced OFF Setting	nviSystemOff	SNVT_switch	(0, 1)or(★, 0) : Reset, (>0, 1) : Forced OFF
Sub Group Address Control Rejection Setting	nviRejLC	SNVT_switch	(0, 1)or(★, 0) : permitted, (>0, 1) : Prohibited

★ Any (0～255)

The system is designed to keep the memory of the set conditions even when the air conditioner stops due to a power failure. Each time when the setting of temperature, ON/OFF, heat/cool mode, or air volume is changed, it is written into the non-volatile memory. The frequency of writing the setting into the non-volatile memory is limted and if the setting is frequently written into the memory after exceeding the limit, it may cause malfunction. Therefore, take caution so that the frequency of changing the setting of each indoor unit may not exceed 7000 times/year when changing the setting of temperature, ON/OFF, heat/cool mode, or air volume frequently by automatic control or the like from the central monitoring panel.

2. Object Status Output (Object Status)

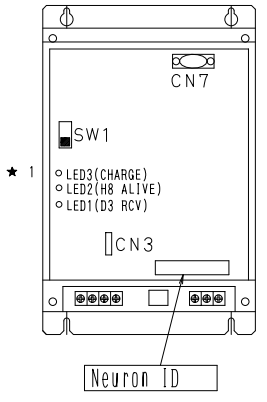
Table 2 Object Status Output

Monitoring items	nv Name	TYPE	(Value, State) :Condition
ON/OFF Status Report	nvoOnOff_nn	SNVT_switch	(0, 0) : OFF, (200, 1) : ON
Operation Mode Status Report	nvoHeatCool_nn	SNVT_hvac_mode	1 : Heating 3 : Cooling 9 : Ventilation
Temperature Setting Report	nvoSetpoint_nn	SNVT_temp_p	Temperature ℃
Room Temperature Report ★2	nvoSpaceTemp_nn	SNVT_temp_p	Temperature ℃
Airflow Rate Setting Report	nvoFanSpeed_nn	SNVT_switch	(100, 1) : low, (200, 1) : high
Filter Sign Report	nvoFiltersign_nn	SNVT_switch	(0, 0): No Filter Sign, (200, 1) : Filter Sign
Error Status Report	nvoFailure_nn	SNVT_switch	(0, 0) : Nomal, (200, 1) : Error
Error Code Report	nvoErrStatus_nn	SNVT_count	0 : Normal, >0 Error Code 2-character ASCII decimal code
Thermostat Status Report	nvoThermo_nn	SNVT_switch	(0, 0) : OFF, (200,1) : ON
Forced Thermostat OFF Setting Status Report	nvoThermoOff_nn	SNVT_switch	(0, 0) : Reset, (200, 1) : OFF Setting
Remote ON/OFF Operation Rejection Report	nvoRejOnOff_nn	SNVT_switch	(0, 0) : Permitted, (200, 1) : Prohibited
Remote Control Operation Mode Setting Rejection Report	nvoRejMode_nn	SNVT_switch	(0, 0) : Permitted, (200, 1) : Prohibited
Remote Control Temperature Setting Operation Rejection Report	nvoRejSetpoint_nn	SNVT_switch	(0, 0) : Permitted, (200, 1) : Prohibited
System Forced OFF Setting Report	nvoSystemOff	SNVT_switch	(0, 0) : Reset, (200, 1) : Forced OFF
Sub Group Address Control Operation Rejection Setting Report	nvoRejLC	SNVT_switch	(0, 0) : Permitted, (200, 1) : Prohibited
A/C Communication Statuss Report	nvoHvacExist_nn	SNVT_switch	value=0 : No connection 1 : Normal Connection 2 : Communication error state=1

★1 These error codes are shown in a 2-character ASCII decimal code specified by DAIKIN.

★2 As the indoor fan stops when the operation is in special operation mode such as thermostat off, at rest or defrosting, the 'Room Temperature Report' is affected by the heat exchanger and the sensor may happen to detect the temperature different from that to the indoor and transmit the signal. Due to the above mentioned reason, consider the temperature as a rule of thumb. If the system control is to be based on this temperature (such as changeover of operation mode and changing the set temperature), the manufacturer of the building management system is kindly requeated to carry out on its own responsibility.

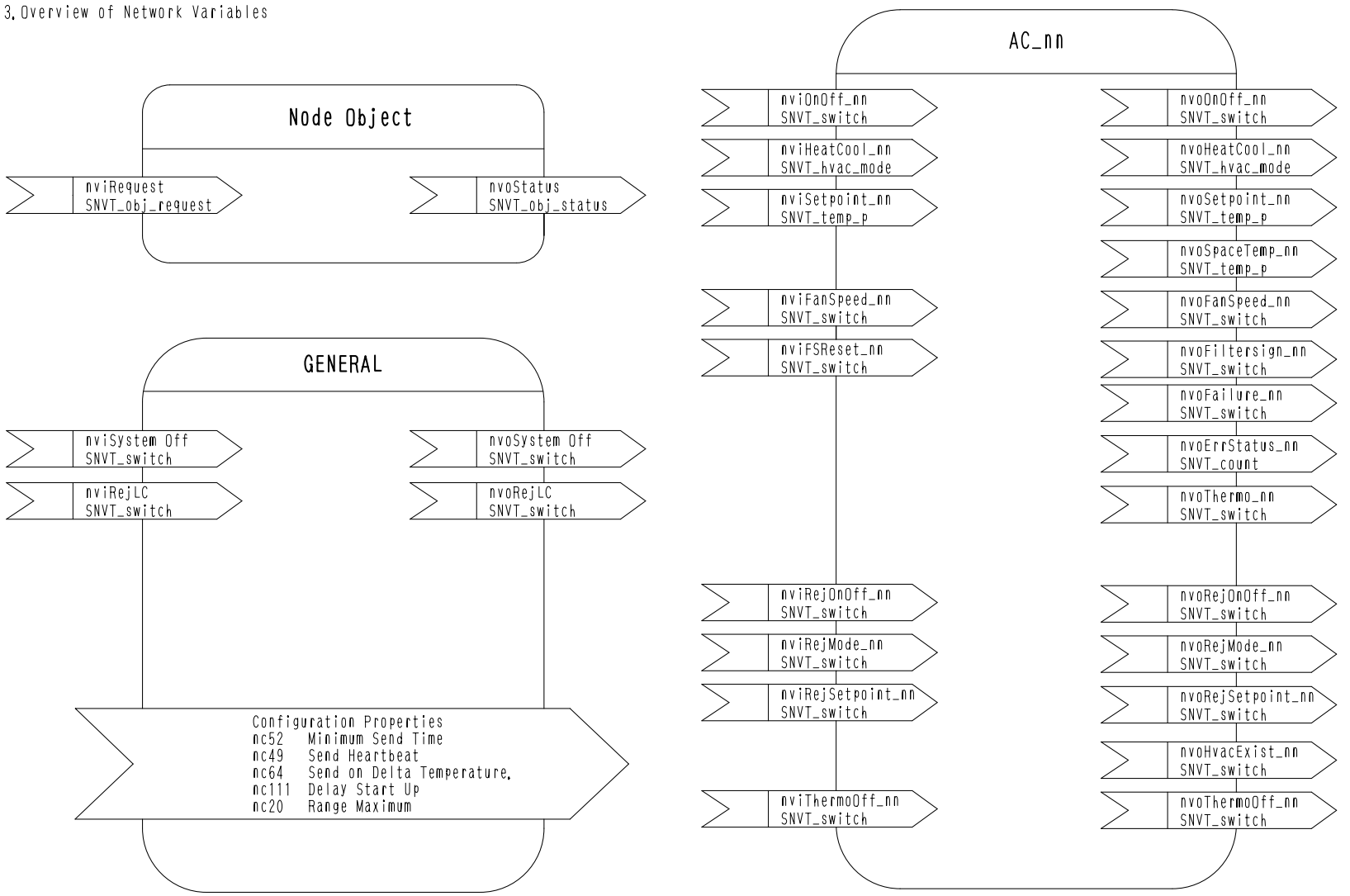
[NOTE]
When the Front Cover is removed, Neuron ID is shown on P.C.B.



Model Name	DMS504B1
XIF File	DMS_IF02.XIF

3D040975A

3. Overview of Network Variables



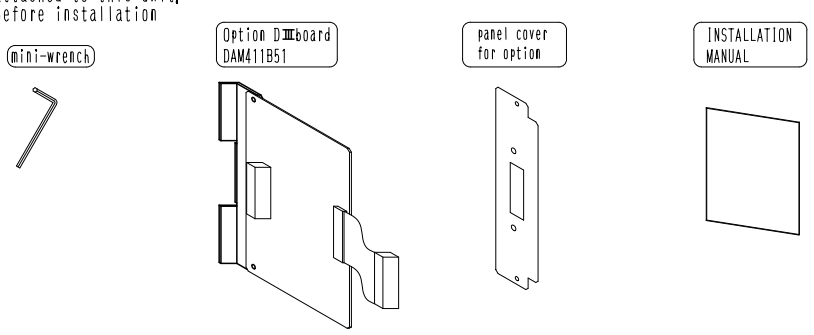
3D040976

24. Optional DIII Board

24.1 DAM411B51

❶ Components

The following parts are attached to this unit.
Make sure to check them before installation



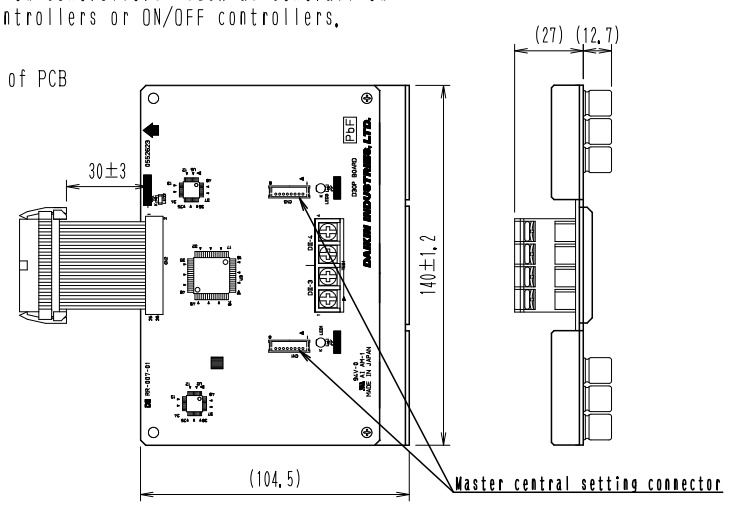
❷ Outline of functions

**Don't fail to turn OFF the indoor unit power switch before Interface for use in BACnet®.
Failure to observe this instruction could result in electric shock.**

This unit is for adding 2 port to the DⅢ-NET communication port by installing it on the Interface for use in BACnet® DMS502B51.

- Make sure to connect the unit with 「DⅢ-NET master」
  (Do not remove the master central setting connector.)
  Remove the master central setting connectors of the centralized management controllers or ON/OFF contorollers When using togeter with other centralized controllers such as centralized management controllers or ON/OFF controllers.

Outside dimension of PCB



1P191165B

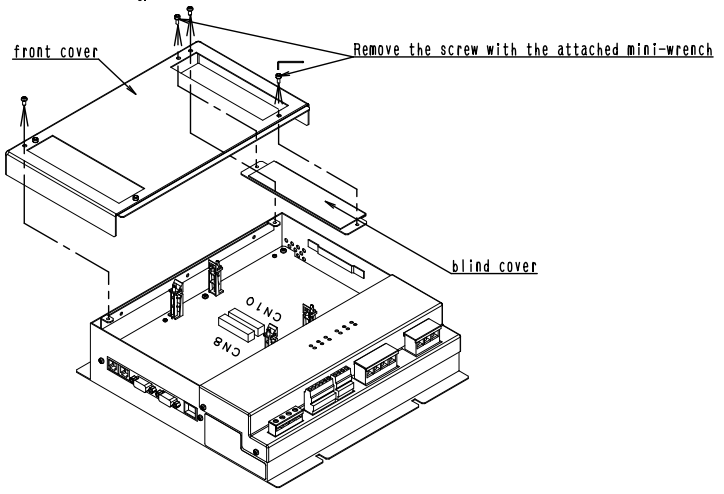
❸ Installation

**Don't fail to turn OFF the indoor unit power switch before Interface for use in BACnet®.
Failure to observe this instruction could result in electric shock.**

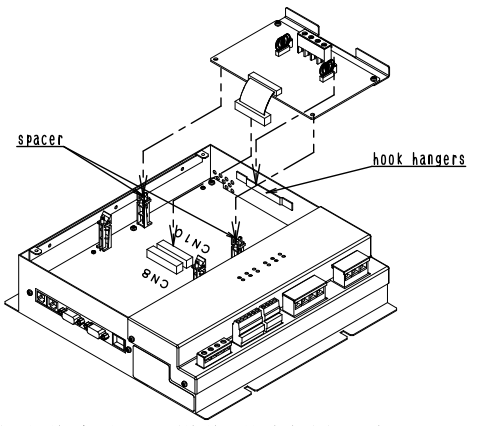
Before installing the PCB, check that the power supply is turned OFF.
Since PCB's are weak to static electricity, make sure to remove the static electricity accumulated in the worker's body.
(The accumulated static electricity can be removed by touching the earthed controlboard and the like.)

① Remove the front cover of Interface for use in BACnet® and remove the blind cover attached to the front cover with the attached mini-wrench.

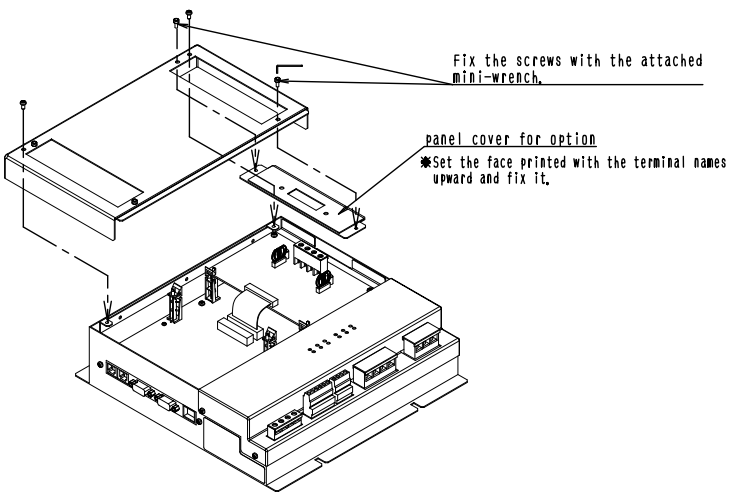
Caution: Keep the removed screws. These screws for fixing the front cover and the blind cover(2 for each) will be required for reassembling.



② As shown in the figure below, insert the connector DIIIboard into the connector CN10 of Interface for use in BACnet® until it clicks, then hook the latch of DIIIboard to the hook hanger, and put the hole of DIIIboard into the spacer and fix it.



③ Fix the panel cover for option to the front cover with the attached mini-wrench.
After that, fix the front cover to Interface for use in BACnet®.

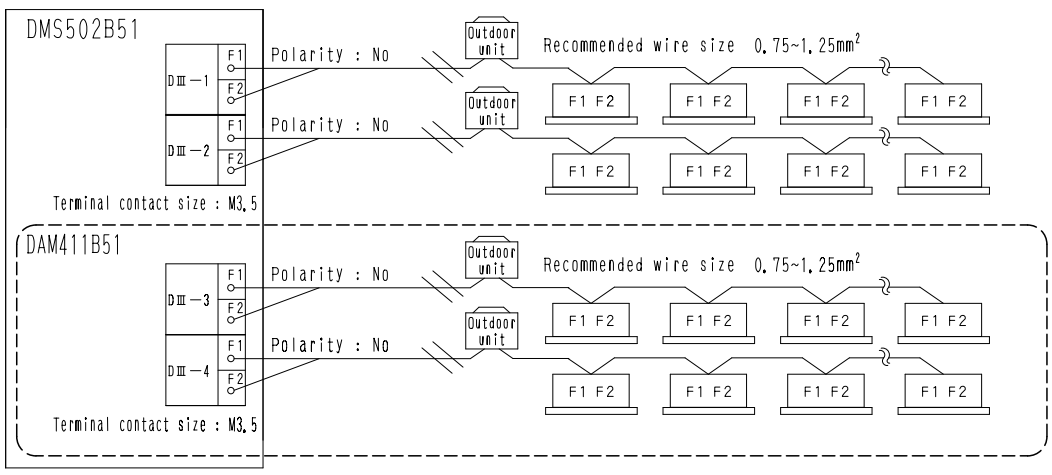


1P191165B

④ For external wiring

(Do not fail to use a round crimp terminal with reinforcing sleeve for safety wiring connection to the Interface for use in BACnet®.)

■Everything relating with field wiring must be supplied in the field.



LED display
This unit has the following LED display. When each corresponding port transmits or receives the data the LED flashes.

Cautions for wiring
1. Do not use multicore cables with three or more cores
2. Use wires of sizes between 0.75mm² and 1.25mm²
3. Wire length:Max 1000m
4. Do not bind the wires for DIII-NET
5. Wirings for DIII-NET must be isolated from the power lines.
6. Terminal contact size :M3.5

⑤ Setting group No. for centralized control

Set the group number of each group of the indoor unit from the remote controller. (In case of no remote controller, also connect the remote controller and set the group No. Then, remove the remote controller.)

(1) Turn ON the power of the indoor unit and Interface for use in BACnet®.
(Unless the power is ON, no setting can be made.)
Check that the installation and electrical wiring are correct before turning the power supply ON.
(When the power supply is turned ON, all LCD appear once and the unit may not accept the operation for about one minute with the display of "88".)

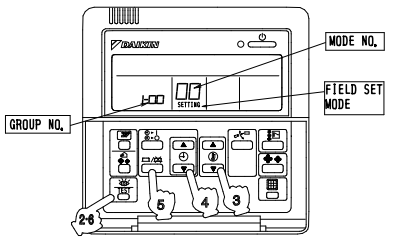
(2) While in the normal mode, hold down the "TEST" button for a minimum of 4 seconds.
The remote controller will enter the FIELD SET MODE.

(3) Select the MODE No. "00" with the "▲ ▼" button.

(4) Use the "▲ ▼" button to select the group No. for each group.
(Group numbers increase in the order of
1-00, 1-01, • • • 1-15, 2-00, • • • 4-15)

(5) Press "SET" to set the selected group No.

(6) Press "TEST" to return to the NORMAL MODE.



NOTE) • For details on making settings from the simplified remote controller, refer to the instruction manual of the unit.
• See the instruction manuals which came with the Ventiair and adapters(i.e., multi-purpose adapters) for details on their Group No. settings.

NOTICE Be sure to keep the operation manual for maintenance.

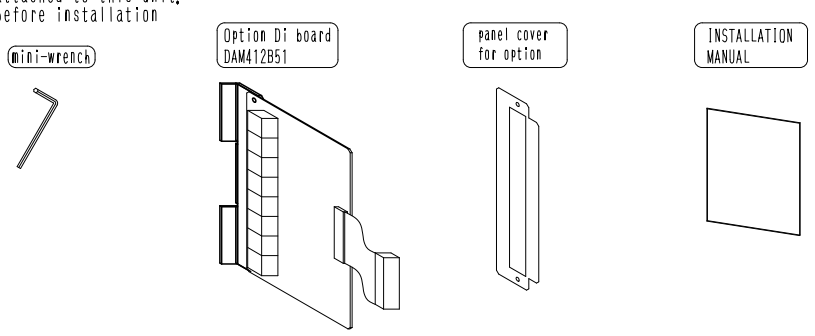
C: 1P191165B

25. Optional Di Board

25.1 DAM412B51

① Components

The following parts are attached to this unit.
Make sure to check them before installation

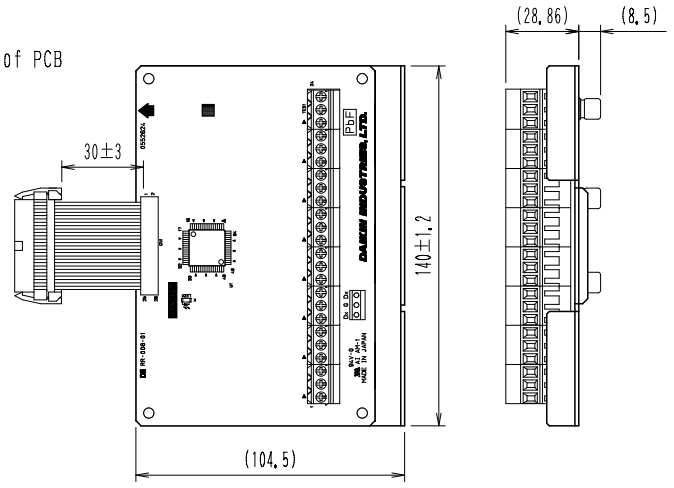


② Outline of functions

Don't fail to turn OFF the indoor unit power switch before Interface for use in BACnet®.
Failure to observe this instruction could result in electric shock.

This unit is for 12 points of Di input(no voltage contact input) by installing it on the Interface for use in BACnet® DMS502B51.

Outside dimension of PCB



1P191166C

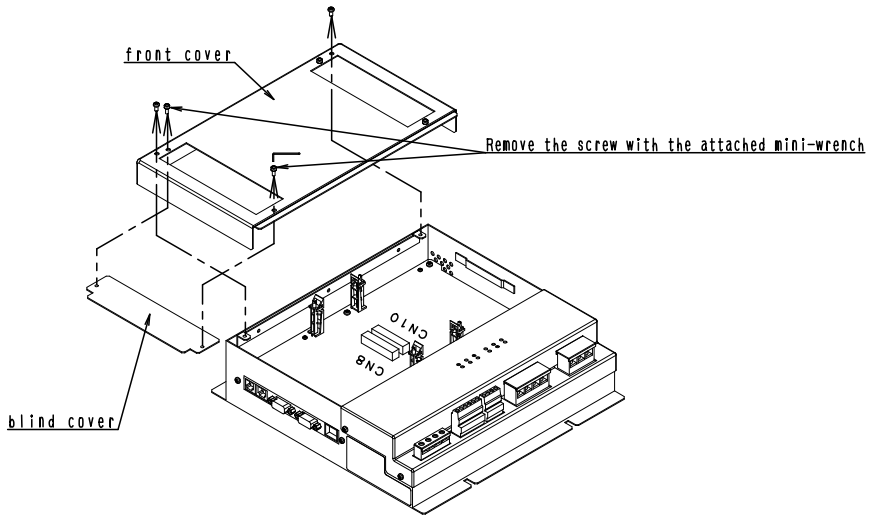
❸ Installation

Don't fail to turn OFF the indoor unit power switch before Interface for use in BACnet®. Failure to observe this instruction could result in electric shock.

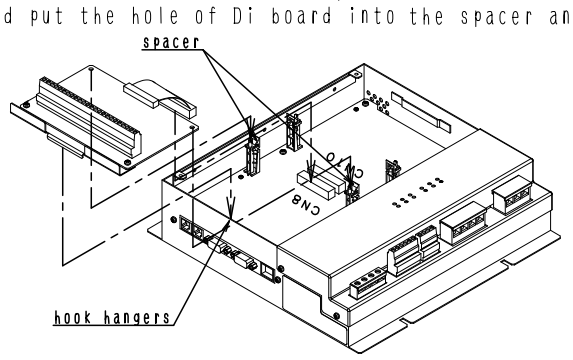
Before installing the PCB, check that the power supply is turned OFF.
Since PCB's are weak to static electricity, make sure to remove the static electricity accumulated in the worker's body.
(The accumulated static electricity can be removed by touching the earthed controlboard and the like.)

① Remove the front cover of Interface for use in BACnet® (DMS502B51) and remove the blind cover attached to the front cover with the attached mini-wrench.

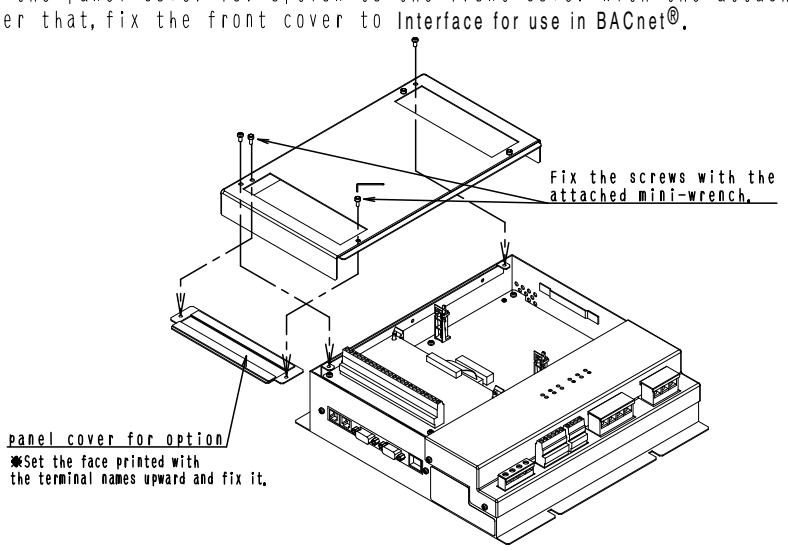
Caution: Keep the removed screws. These screws for fixing the front cover and the blind cover(2 for each)will be required for reassembling.



② As shown in the figure below, insert the connector Di board into the connector CN8 of Interface for use in BACnet® until it clicks, then hook the latch of Di board to the hook hanger, and put the hole of Di board into the spacer and fix it.



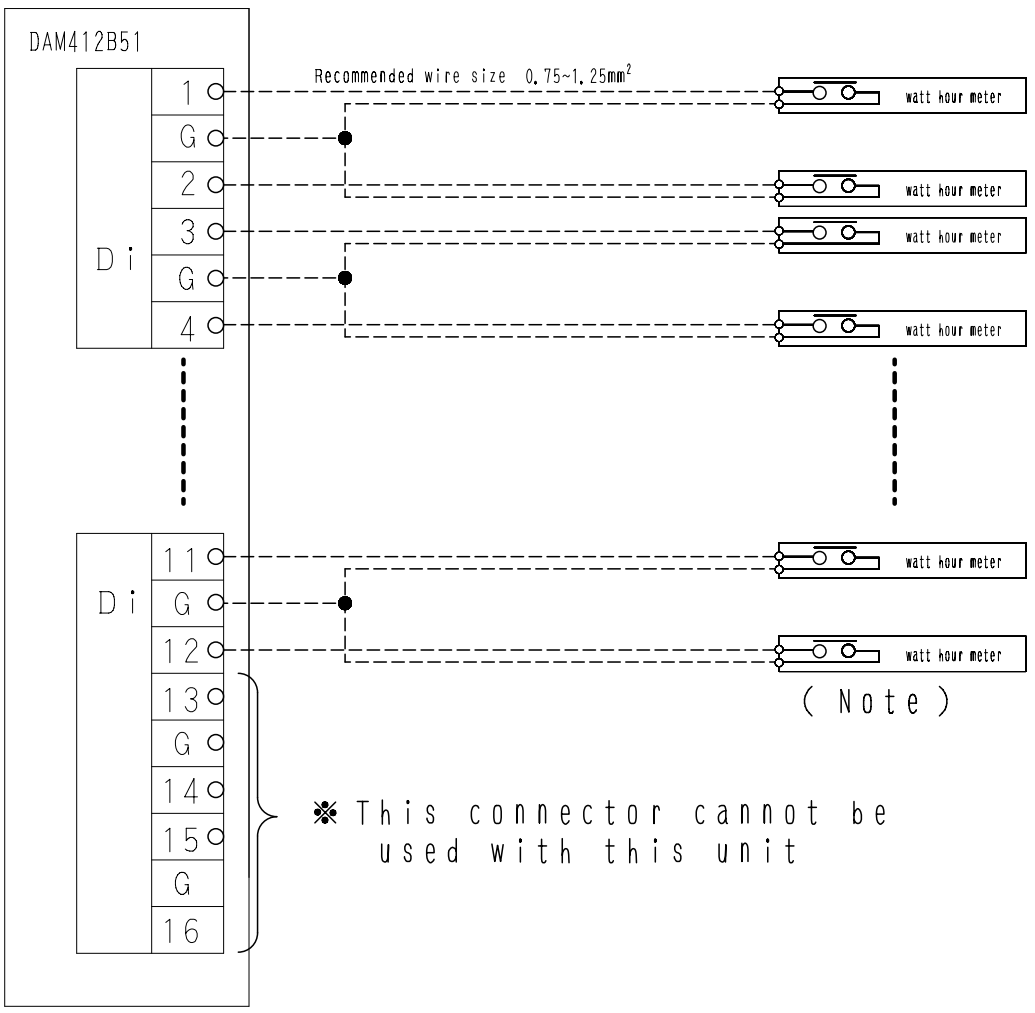
③ Fix the panel cover for option to the front cover with the attached mini-wrench. After that, fix the front cover to Interface for use in BACnet®.



1P191166C

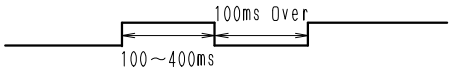
④ For external wiring

■Everything relating with field wiring must be supplied in the field.



(Note) : Use a meter that outputs one pulse of a width from 100～400ms, per one kWh.

The pulse of watt hour meter



Cautions for wiring

1. The input are all the no voltage contact
2. Use a contact which can guarantee minimum application load DC16V and 10mA
3. Do not use multicore cables with three or more cores
4. Use wires of sizes between 0.75mm² and 1.25mm²
5. Do not bind the wire for control
6. Wirings for control must be isolated from the power lines
7. Terminals G are inter-connected. Connecting to either one is allowed, but the number of cables connectable to one terminal is limited to 2 pieces
8. Wire length:Max 150m

1P191166C

26. Optional DIII Ai Unit

26.1 DAM101A51

❶ Component parts

The components of the kit are as follows.
Before installing, be sure to check whether they are supplied.

Name	Quantity
Main unit	1
Installation Manual	1
External temperature sensor	1
Harness pressure terminal	2

Name	Quantity
Ferrite core (large)	1
Ferrite core (small)	1
Clamp material with snaps	2
Clamping material	3

Name	Quantity
Hole cover (large)	1
Hole cover (small)	1
Harness for multi-purpose sensor	1

❷ Attachment

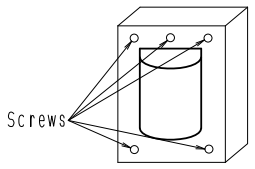
Failure to observe this installation could result in electric shock.
This device is a precision instrument, so caution must be exercised with static electricity. (Static electricity can be avoided by touching a grounded control panel, etc.)

Attachment location

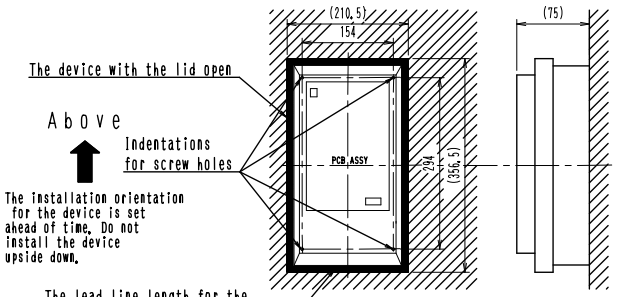
Install this device outside in a location out of direct sunlight and rain. The set height should have at least 30 cm between the floor and the device. The pull-out length of the outdoor thermometer from the bottom of the device is approximately 50 cm. The installation location for the device should be selected with the above in mind.

2−1. **Installing the main unit.**

First, remove the lid from the main unit. (5 screws) Do not lose the removed screws. You will need them when you close the lid after all work is done.



This device is mounted with 4 screws.
Open the four indentations for the screw holes with self tapping screws or drill them and secure them with the 4 screws.
(The recommended screw size is M4. Screws should be procured locally.)



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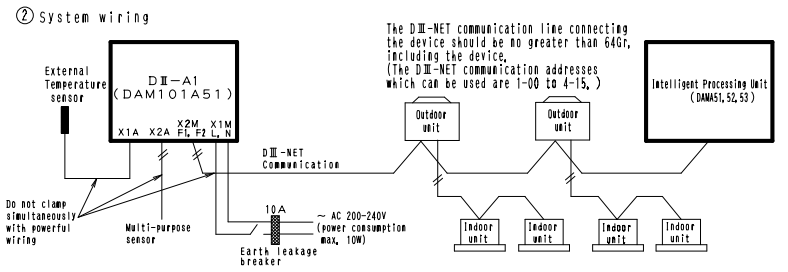
2－2. Wiring connections

① There are 4 types of wiring for the device.

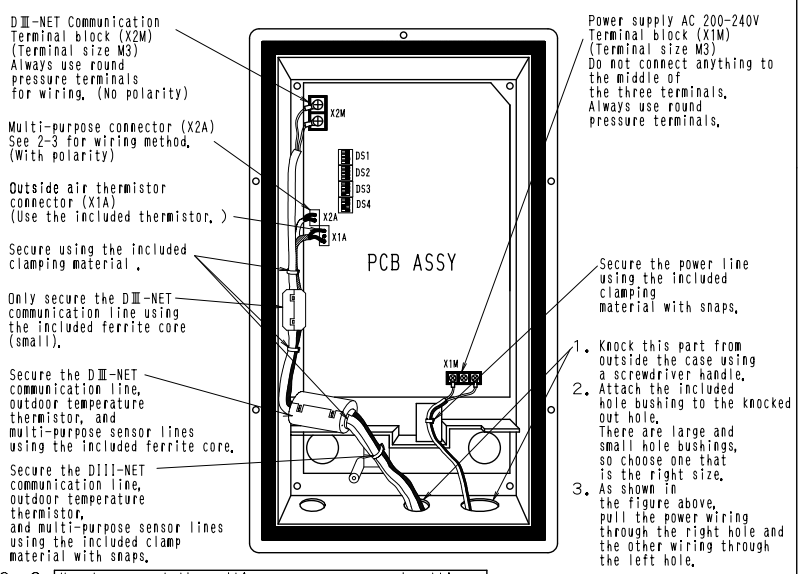
Name	Specifications for electric wiring used	Remarks
Power wiring	1.25mm²	Power supply voltage: max. 200-240V (50/60Hz)
Communication wiring	Sheathed vinyl cord or cable 0.75~1.25mm² (balanced-type) --- max. length 1000m (up to total extension 2000m) (Total extension length 1500m when using shield wire)	No polarity
External temperature sensor	Use the included sensor	-
Multi-purpose sensor	When extending the included harness --- max 15m	DC 0-5V sensor can be connected (procured locally)

② System wiring



Connecting and clamping the wiring (Be sure not to force screws. This may break them.)

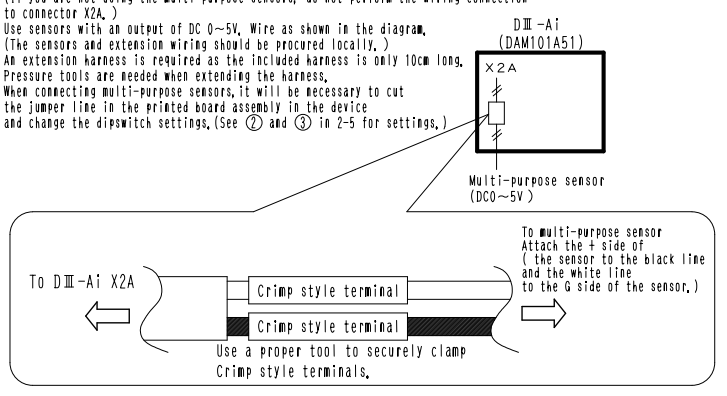
Names and functions of each part



2－3. How to connect the multi-purpose sensors and settings

Other than the supplied outdoor temperature sensor, it is also possible to connect other brand multi-purpose sensors to the device.

This section describes the wiring when connecting the multi-purpose sensors. (If you are not using the multi-purpose sensors, do not perform the wiring connection to connector X2A.)
Use sensors with an output of DC 0~5V. Wire as shown in the diagram. (The sensors and extension wiring should be procured locally.)
An extension harness is required as the included harness is only 10cm long. Pressure tools are needed when extending the harness.
When connecting multi-purpose sensors, it will be necessary to cut the jumper line in the printed board assembly in the device and change the dipswitch settings. (See ② and ③ in 2-5 for settings.)



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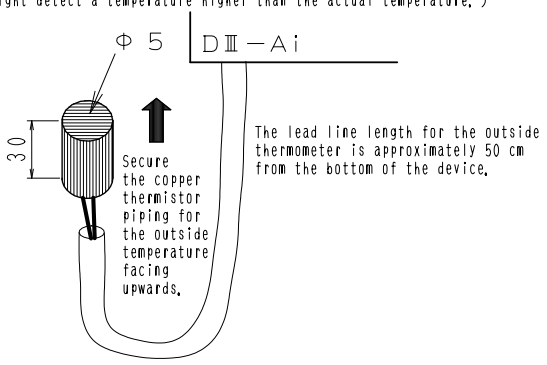
2－4. Attaching the outside temperature sensor

Securing the sensor
Always secure the sensor downwards as shown in the diagram. Install in a well-ventilated location where the unit will not be subject to direct rain or sunlight. (If the unit receives direct sunlight, it might detect a temperature higher than the actual temperature.)

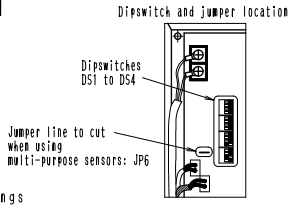


2－5. Setting the dipswitches and cutting the jumper line

Meaning of each dipswitch and jumper line

Number	Meaning
DS1	DⅢ-NET Communication address last digit
DS2	DⅢ-NET Communication address first digit
DS3	Enabling and disabling the sensor
DS4	Switching sensor uses
JP6	When using multi-purpose sensors, cut the main jumper line.

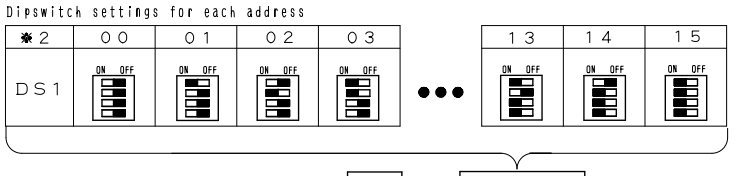
Dipswitch and jumper location



① DS1 and DS2 (DⅢ-NET communication address) settings

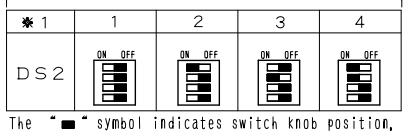
Setting DS1 and DS2* sets the DⅢ-NET communication address.
Set the DⅢ-NET communication address between 1-00 and 4-15.
Normally only one address is used per unit. The factory default is 1-00.
However, when using the settings below in ② to use multi-purpose sensors, two addresses are used per unit. (For example, if the address is set to 2-10 using the DS1 and DS2 settings, 2-10 and 2-11 are thereby used and cannot be set on other AC units.
If the setting is for using the multi-purpose sensors, do not set DS1 and DS2 to 4-15. The multi-purpose sensor detection data cannot be properly monitored by i-Manager.)

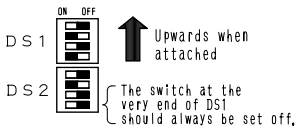
Dipswitch settings for each address



DⅢ－NET Address ※1 － ※2

Ex: 3－10

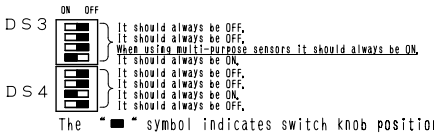




The "■" symbol indicates switch knob position.

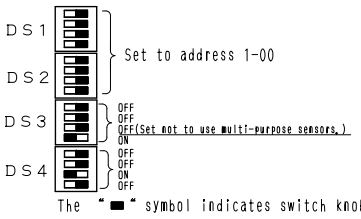
② DS3 and DS4 (sensor-related) settings

DS3 should only have its setting changed if locally-procured sensors are being used.
When using locally procured sensors, set the third switch from the front on.
(The factory default settings are for not using multi-purpose sensors.)
NB: When using multi-purpose sensors, cut the jumper line ③ at the same time as the settings are being done.
There is no need to change the factory default setting for DS4.



The "■" symbol indicates switch knob position.

The following settings should be done for the factory default DS1 to DS4 settings.



The "■" symbol indicates switch knob position.

③ Cutting JP6

When using multi-purpose sensors, cut jumper JP6 on the printed board using nippers, etc.
※: When using multi-purpose sensors, set DS3 at the same time as these settings are being done.
※: Be sure to get rid of line cuttings when cutting the jumper. Failing to remove them may cause the printed board to malfunction.

2－6. Once all settings are complete, Replace the removed cover in 2-1 using the screws.

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27. intelligent Manager

27.1 DAM602B51 / DAM602B52

27.1.1 Model Series (Factory in Charge)

iPU Model Name	Number of units to be connected	Number of DIII-NET port	Number of Digital input
DAM602B51	256 units	4	20
DAM602B52	128 units	2	

Optional	Model name
DAM002A51	Power Proportional Distribution software
DAM003A51	ECO software
DAM004A51	Web software

* MADE IN JAPAN

27.1.2 Concept and Main Specifications

<Product concept>

- **A/C monitoring panel targeting the simplified BMS market.**
  The needs of the current i-Manager A/C monitoring panel will be covered continuously, and we make inroads into the BMS market by expansion of functions.
- **Expansion of function to be realized by optional software.**
  Customers can select required functions.
  Price can be set up in accordance with required functions.

<Major Specification>

Major modified functions		I-Manager II	I-Manager III
Constitution of iPU (Number of III ports)		2,3,4 port version	2,4 port version
Power proportional distribution		○	DAM002A51 (option)
ECO (Energy saving/Power limit control)		○	DAM003A51 (option)
Web function	Individual control	—	DAM004A51 (option)
	Monitoring of abnormality *1		
	Control setting *2		
	Power proportional distribution data *3		
Analog interlock function		—	○
Corresponding with air cooled chillers and CHESBAC (Monitoring of AIRNET data)		—	○
Number of control points of control group		Max. 128 points	Max. 1024 points
Optimum starting control (from Jan/2007)		—	○
Indication of history of operation source (from Jan/2007)		—	○
Monitoring of continuous operation time		○	
Calendar		Rotation	1-year use disposable
Use of built-in optional modem for AIRNET		—	○

*1: E-mail communication function is included when the equipment is abnormal.
*2: Schedule control setting, Set temperature control setting
*3: PPD software(DAM002A51) is required for the PPD data available on web.

27.1.3 Installation

Please read these "SAFETY CONSIDERATIONS" carefully before installing this unit and be sure to install it correctly. After completing the installation, make sure that the unit operates properly during the start-up operation.
Please instruct the customer on how to operate the unit and keep it maintained.
Also, inform customers that they should store this installation manual along with the operation manual for future reference. This unit comes under the term "appliances not accessible to the general public".

Meaning of warning, caution and note symbols.
⚠ WARNING Indication a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION Indication a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be sued to alect against unsafe practices.
⚠ NOTE Indication situation that may result in equipment or property-damage-only accidents.

⚠WARNING

Ask your dealer or qualified personnel to carry out installation work. Do not try to install the machine by yourself. Improper installation may result in electric shocks or fire.

Perform installation work in accordance with this installation manual.
Improper installation may result in electric shocks or fire.

Be sure to use only the specified accessories and parts for installation work.
Failure to use the specified parts may result in electric shocks, fire or the unit falling.

Carry out the specified installation work after taking into account earthquakes.
Improper installation work may result in the equipment falling and causing accidents.

Make sure that a separate power supply circuit is provided for this unit and that all electrical work is carried out by qualified personnel according to local laws and regulations and this installation manual.
An insufficient power supply capacity or improper electrical construction may lead to electric shocks or fire.

Make sure that all wiring is secured, the specified wires and used, and no external forces act on the terminal connections or wires.
Improper connections or installation may result in fire.

When wiring the power supply and connecting the remote controller wiring and transmission wiring, position the wires so that the electric parts box lid can be securely fastened.
Improper positioning of the electric parts box lid may result in electric shocks, fire or the terminals overheating.

Before touching electrical parts, turn off the unit.

Ground this unit. Do not connect the ground wire to gas or water pipes, lightning rod or a telephone ground wire.
Incomplete grounding may result in electric shocks.

Do not reconstruct or change the settings of the protection devices.
If the pressure switch, thermal switch, or other protection device is shorted and operated forcibly, or parts other than those specified by Daikin are used, fire or explosion may result.

Do not touch the switch with wet fingers.
Touching a switch with wet fingers can cause electric shock.

Install an leak circuit breaker, as required.
If an leak circuit breaker is not installed, electric shock may result.

Do not install this unit in the following locations.
(a) where a mineral oil mist or an oil spray or vapor is produced, for example in a kitchen.
plastic parts may deteriorate and fall off or result in water leakage.
(b) where corrosive gas, such as sulfurous acid gas, is produced.
Corroding copper pipes or soldered parts may result in refrigerant leakage.
(C) near machinery emitting electromagnetic waves.
Electromagnetic waves may disturb the operation of the control system and result in malfunction of the equipment.
(d) where flammable gases may leak, where there are carbon fiber or ignitable dust suspensions in the air, or where volatile flammables such as thinner or gasoline are handled.
Operating the unit in such conditions may result in fire.

⚠CAUTION

Be very careful about product transportation.

Safely dispose of the packing materials.
Packing materials, such as nails and other metal or wooden parts, may cause stabs or other injuries.
Tear apart and throw away plastic packaging bags so that children will not play with them.
If children play with a plastic bag which was not torn apart, they face the risk of suffocation.

⚠NOTE

Install this unit, power supply wiring and connecting wires at least 3.5ft. away from televisions or radios in order to prevent image interference or noise.
(Depending on the radio waves, a distance of 3.5ft. may not be sufficient enough to eliminate the noise.)

This unit is a class A product.

In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

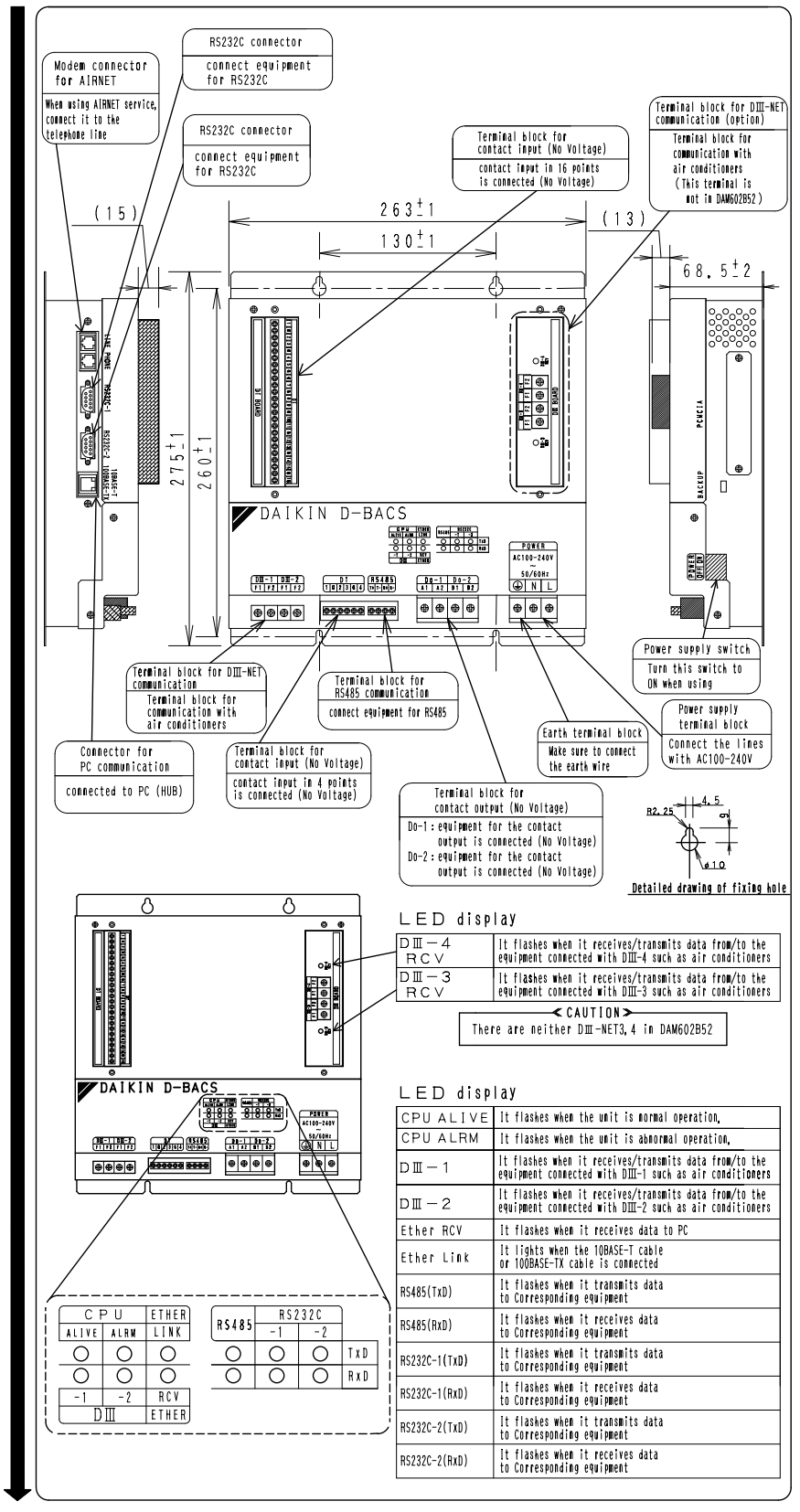
1 Components

The following parts are attached to this unit.
Make sure to check them before installation.

intelligent Processing Unit	1 set
INSTALLATION MANUAL	1 copy

1P177851C

❷ Names and functions of each part



1P177851C

❸ Installation

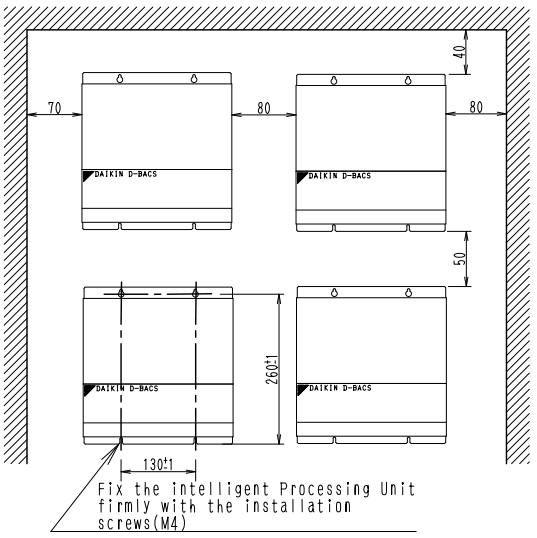
Don't fail to turn OFF the indoor unit power switch before installing intelligent Processing Unit.
Failure to observe this instruction could result in electric shock.

●Location

Make sure to install the unit on the inside of the inaccessible and lockable (or needed to use exclusive tools to open) electrical component box installed indoors where the effect of electromagnetic wave or dust can be avoided.
The minimum depth required for installation is 100mm

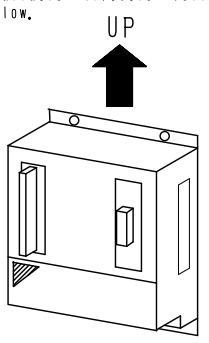
●Required installation space

Keep the minimum amount of space indicated in the below drawing from walls, and between units when installed in series.



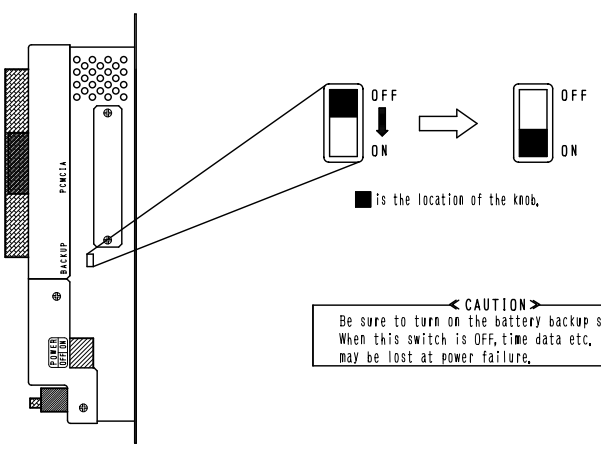
●How to install

For installation direction follow the drawing shown below.



≪CAUTION≫
Make sure to install the unit vertically. Do not install the unit horizontally, because it may cause malfunction.

Setting "BACK-UP BATTERY VALIDATE" switch
(shifted to OFF when being shipped from the shop. -- Back-up battery set to INVALIDATE)
For the switch to back up the clock, etc. in case of any power failure, actuate it from OFF side (knob is located above) to ON side (knob is located below) as shown in the sketch below.



≪CAUTION≫
Be sure to turn on the battery backup switch.
When this switch is OFF, time data etc. may be lost at power failure.

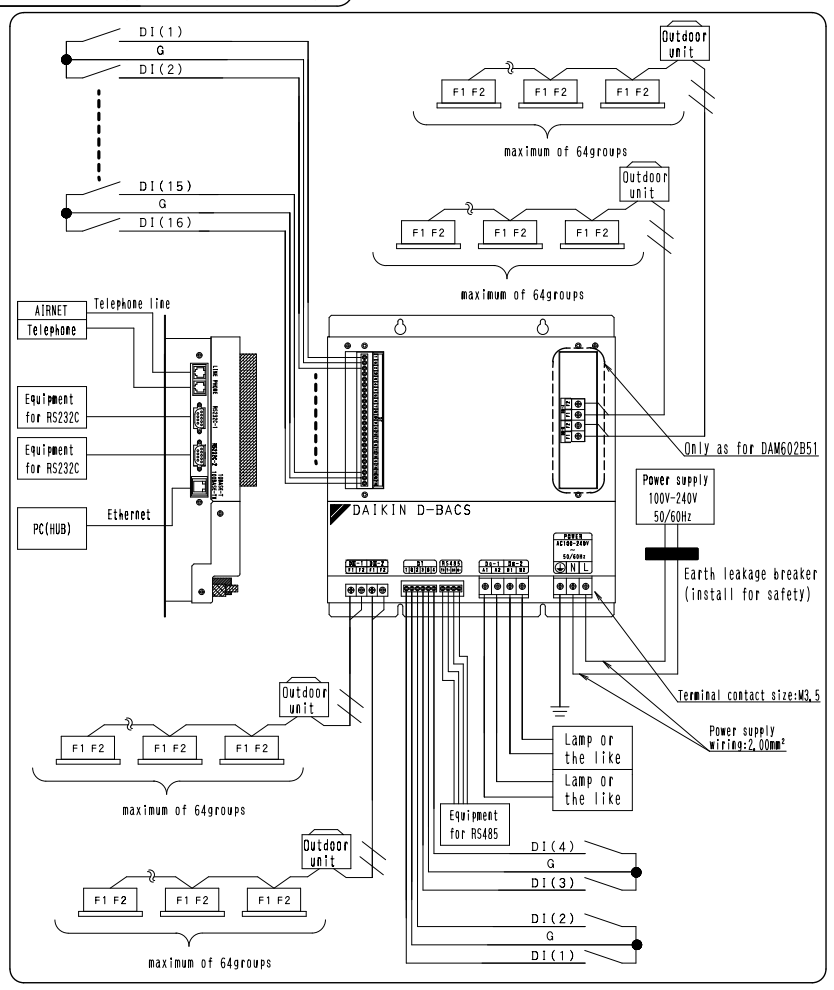
TO BACK

1P177851C

❹「DⅢ-NET master」setting

Make sure to connect the unit with 「DⅢ-NET master」
Remove the master central setting connectors of the
intelligent Touch Controller or centralized management controller or ON/OFF controller
When using together with other centralized controllers such as
intelligent Touch Controller or centralized management controller or ON/OFF controller.

❺Malfunction of unit

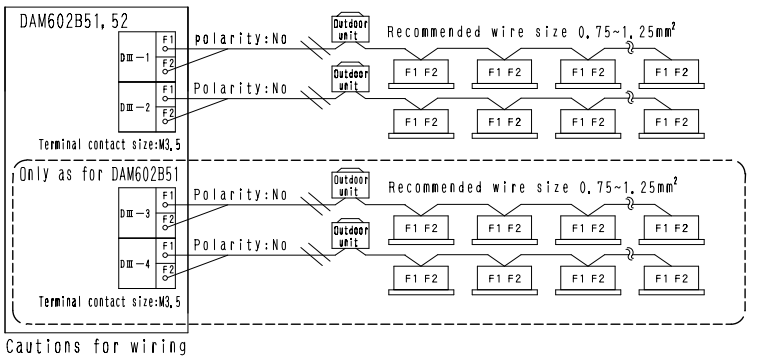


❻Electric Wiring Connection

Don't fail to turn OFF the indoor unit power switch before installing intelligent Processing Unit.
Failure to observe this instruction could result in electric shock.

■Everything relating with field wiring must be supplied in the field.

● DⅢ-NET wiring



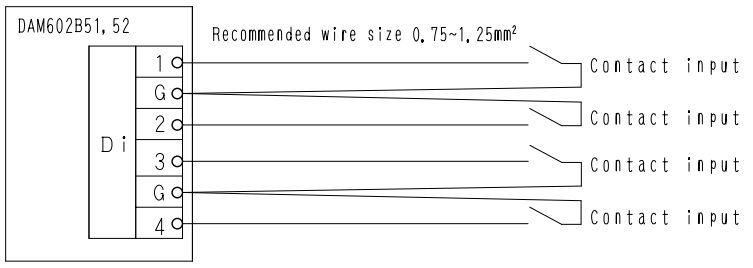
Cautions for wiring

1. Do not use multicore cables with three or more cores
2. Use wires of sizes between 0.75mm² and 1.25mm²
3. Do not bind the wire for DⅢ-NET
4. Wirings for DⅢ-NET must be isolated from the power lines
5. Wire length:Max 1000m

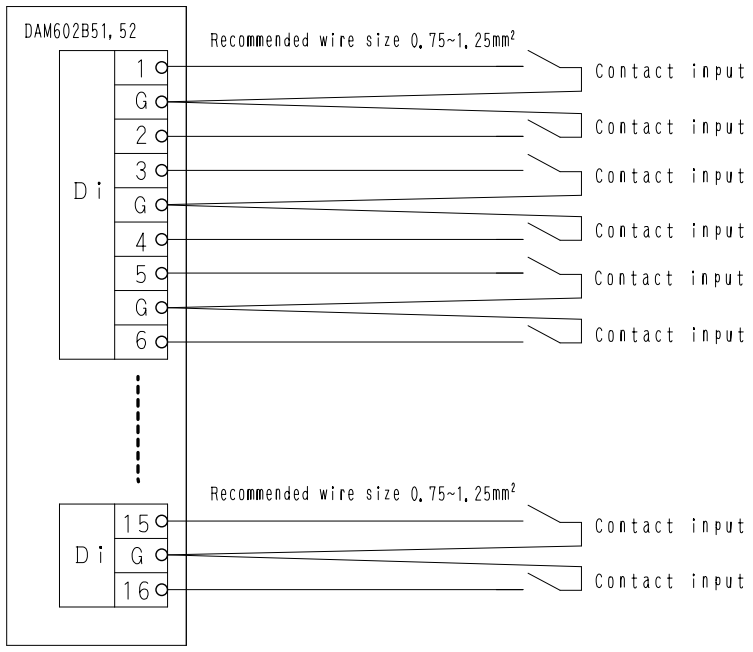
1P177853B

● No voltage contact input wiring

● Di wiring



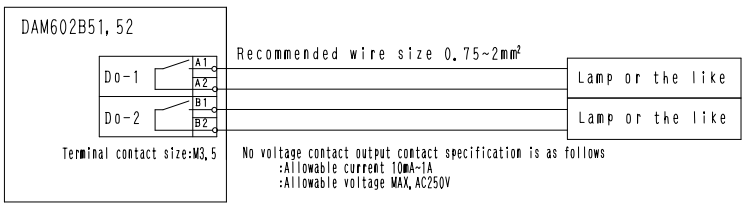
● Di BOARD wiring



Cautions for wiring

1. The input are all the no voltage contact
2. Use a contact which can guarantee minimum application load DC16V and 10mA
3. Do not use multicore cables with three or more cores
4. Use wires of sizes between 0.75mm² and 1.25mm²
5. Do not bind the wire for control
6. Wirings for control must be isolated from the power lines
7. Terminals G are inter-connected. Connecting to either one is allowed, but the number of cables connectable to one terminal is limited to 2 pieces
8. Wire length:Max 150m

● No voltage contact output wiring



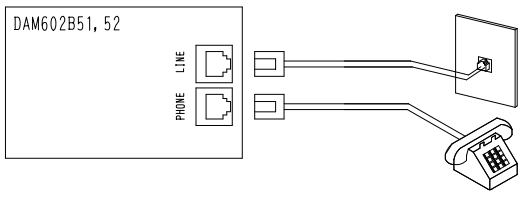
Cautions for wiring

1. Do not use multicore cables with three or more cores
2. Use wires of sizes between 0.75mm² and 2mm²
3. Do not bind the wire for control
4. Wirings for control must be isolated from the power lines
5. Wire length:Max 150m

1P177853B

● Connection to public telephone line

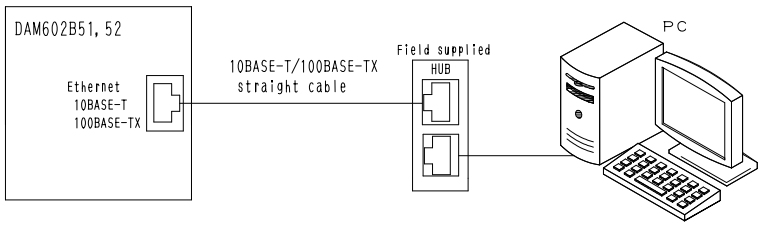
Connect to the telephone line in order to monitor
the air-conditioner via AIRNET service.
Connect to modular cable from the public telephone line to the upper connector
with a stamping of LINE, and connect the modular cable of the telephone
to the lower connector with a stamping of PHONE, as shown in the sketch below.



Cautions for wiring

1. Don't clamp these cables together with high voltage cables. Failure to observe this instruction would cause control error.
2. When using AIRNET service, it is necessary to use a separate modem specified by us and enter into Maintenance Agreement with charge.

● Ethernet communication wiring



Cautions for wiring

Don't clamp these cables together with high voltage cables. Failure to observe this instruction would cause control error.

❼ Setting group No. for centralized control

Set the group number of each group of the indoor unit from the remote controller. (In case of no remote controller, also connect the remote controller and set the group No. Then, remove the remote controller.)

(1) Turn ON the power of the indoor unit and intelligent Processing Unit.
(Unless the power is ON, no setting can be made.)
Check that the installation and electrical wiring are correct before turning the power supply ON.
(When the power supply is turned ON, all LCD appear once and the unit may not accept the operation for about one minute with the display of "88".)

(2) While in the normal mode, hold down the "[SET]" button for a minimum of 4 seconds.
The remote controller will enter the FIELD SET MODE.

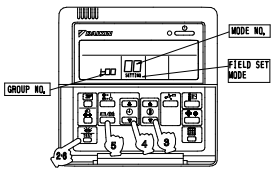
(3) Select the MODE No. "00" with the "[TEMP]" button.

(4) Use the "[TIME]" button to select the group No. for each group.

(Group numbers increase in the order of
1-00, 1-01, • • • 1-15, 2-00, • • • 8-15)

(5) Press "[CLOCK]" to set the selected group No.

(6) Press "[SET]" to return to the NORMAL MODE.



NOTE) • For details on making settings from the simplified remote controller, refer to the instruction manual of the unit.
• See the instruction manuals which came with the Ventiair and adapters (i. e., multi-purpose adapters) for details on their Group No. settings.

NOTICE Be sure to keep the operation manual for maintenance.

1P177853B

28. intelligent Touch Controller

28.1 DCS601C51

28.1.1 Feature and Specification

This controller is a central remote controller offering higher functions than those of the previous controller DCS302C(A)61, and easier operation.

Up to 64 groups of indoor units may be connected to 1 unit of this controller.

This controller aims to be a product positioned between the current central controlling device (central controller DCS302C(A)61) and the controller intelligent-manager for large scale buildings (in both the viewpoints of application area and functional grade), and is a central controller most suitable for middle and small size buildings.

< Products Features >

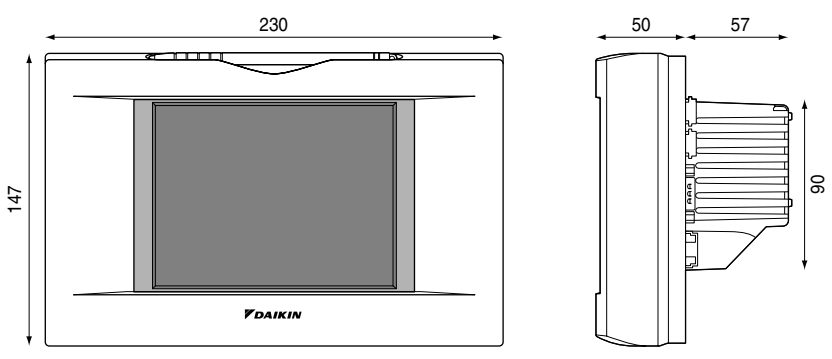
1. High Level Functions
   - Annual schedule control
   - Electricity proportional distribution function (option)
   - Air net function (DCS601C51 only)
2. Easy Operation
   - Color liquid crystal
   - Icon display
   - Touch panel application
   - Air conditioner name and zone name input available
3. D-III NET x 1 line (64 units)
4. Saving expenses
   - Controlling personnel not required (saving control expenses)
   - Energy saving schedule
   - Functions equal to those of a compact monitor panel

Specification

Power		AC100 - 240V 50/60Hz
Power consumption		10 W maximum
Force stop input		Normally-open contact Contact current approximately 10 mA
Operating temperature range	Ambient temperature	0°C~40°C
	Ambient humidity	85%RH (Non condensing)
Storage temperature range	Ambient temperature	-10°C~50°C
	Ambient humidity	85%RH (Non condensing)
Size		230×147×107 (W×H×D)
Weight (Mass)		1.2kg

Dimension

Unit:mm



The specification and appearance of the product may be modified for improvement without prior notice.

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■ **Operation Menu**
intelligent Touch Controller is capable of starting/stopping of the operation by the group or zone. Collective starting/stopping is also available.

■ **Air Conditioner Detail Setup**
Temperature setting, switching between temperature control modes, switching of speed and direction of wind and remote control mode setting are available by the group, by the zone or collectively.

■ **Monitoring of Various Information on Indoor Units**
Information on operation such as the operation mode and temperature setting of the indoor units, maintenance information including the filter or element cleaning sign, troubleshooting information such as error codes can be displayed by the group or the zone.

■ **Diversified Operation Modes**
Operation can be controlled both with the main unit and the remote control to provide diversified operation management. Setting with the main unit allows the following remote control settings by the group, by the zone or collectively:

1. Start/Stop	2. Operation Mode	3.Temperature Setting
:(Remote control) Inhibited	:(Remote control) Inhibited	:(Remote control) Inhibited
:(Remote control) Permitted	:(Remote control) Permitted	:(Remote control) Permitted
:Priority		

■ **Zone Control Simplifying Complicated Setting Operations**
Up to 64 groups can be controlled with the intelligent Touch Controller.
More than one group can be consolidated into a zone, which can be registered, to allow the following settings by the zone. This eliminates the need for repeating the same setting operation for each group.
Function to allow collective setting for all groups is also available.
· Start/stop
· Temperature setting
· Switching between operation modes
· Setting of direction and fan speed
· Disabling/enabling the remote control

■ **Detailed Scheduled Operation Control**
The intelligent Touch Controller allows detailed scheduled operation by the group, by the zone or collectively. Up to 8 options for annual schedule can be set. Each schedule can include four types of plans: for Monday, Tuesday... Sunday, Special day 1~10, Special days 1 and Special days 2. Each of the plans allows setting of up to 16 operations.

■ **Handy Automated Control**
The intelligent Touch Controller can do the following.
· Change Over Settings : automatically switches between cooling and heating according to the room temperature.
· Temperature Limit Setting : Prevents the temperature from rising too high or too low in unmanned rooms.
· Heating Optimization Settings : stops uncomfortable hot air from blowing when the heating the thermo is off.

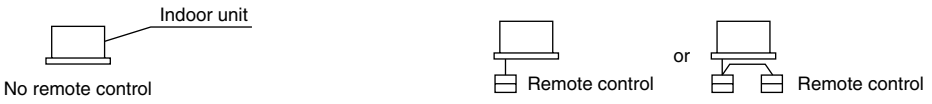
28.1.2 System Overview

This intelligent Touch Controller is capable of controlling/monitoring up to 64 groups of indoor units (hereafter “groups”).

The main functions of the intelligent Touch Controller include:
1. Collective starting/stopping of operation of the indoor units connected to the intelligent Touch Controller.
2. Starting/stopping of operation, temperature setting, switching between temperature control modes and enabling/disabling of operation with the hand-held remote control by zone or group.
3. Scheduling by zone or group.
4. Monitoring of the operation status by zone or group.
5. Display of the air conditioner operation history.
6. Compulsory contact stop input from the central monitoring panel (non-voltage, normally-open contact).
7. Power distribution of the air conditioners. (With the optional DCS002C51)
8. Control and Monitoring of air conditioner with personal computer by the Controller (with the optional DCS004A51).

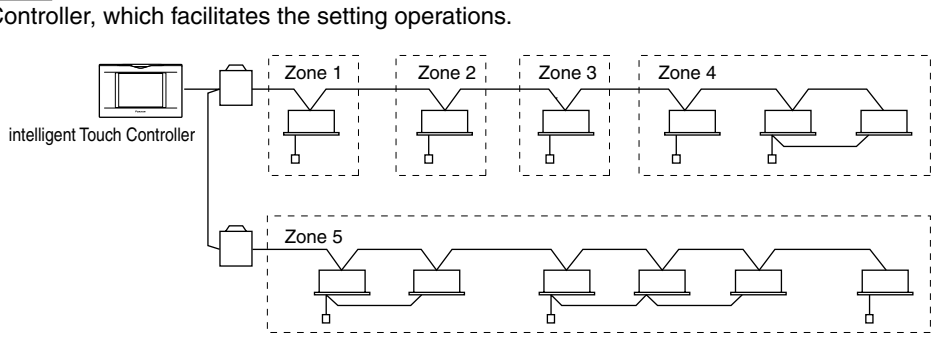
* A group of indoor units include:

① One indoor unit without a remote control. ② One indoor unit controlled with one or two remote controls.



③ Up to 16 indoor units controlled with one or two remote controls.

* Zone control with the intelligent Touch Controller
* Zone control, which allows collective settings for more than one group, is available with the intelligent Touch Controller, which facilitates the setting operations.



- One setting makes the same setting for all of the units in one zone.
- Up to 128 zones can be set with one intelligent Touch Controller. (The maximum number of groups in one zone is 64.)
- Groups can be zoned at will with the intelligent Touch Controller.
- Units in one group can be divided into more than one zone.

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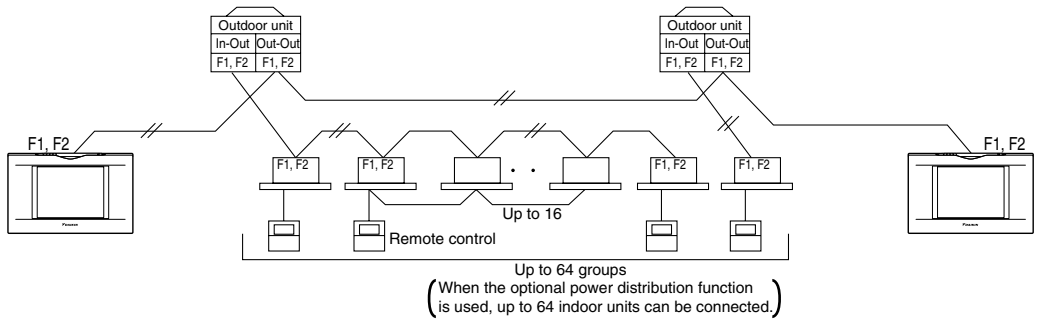
28.1.3 Double intelligent Touch Controllers

Using two intelligent Touch Controllers allows central control of indoor units from different places.



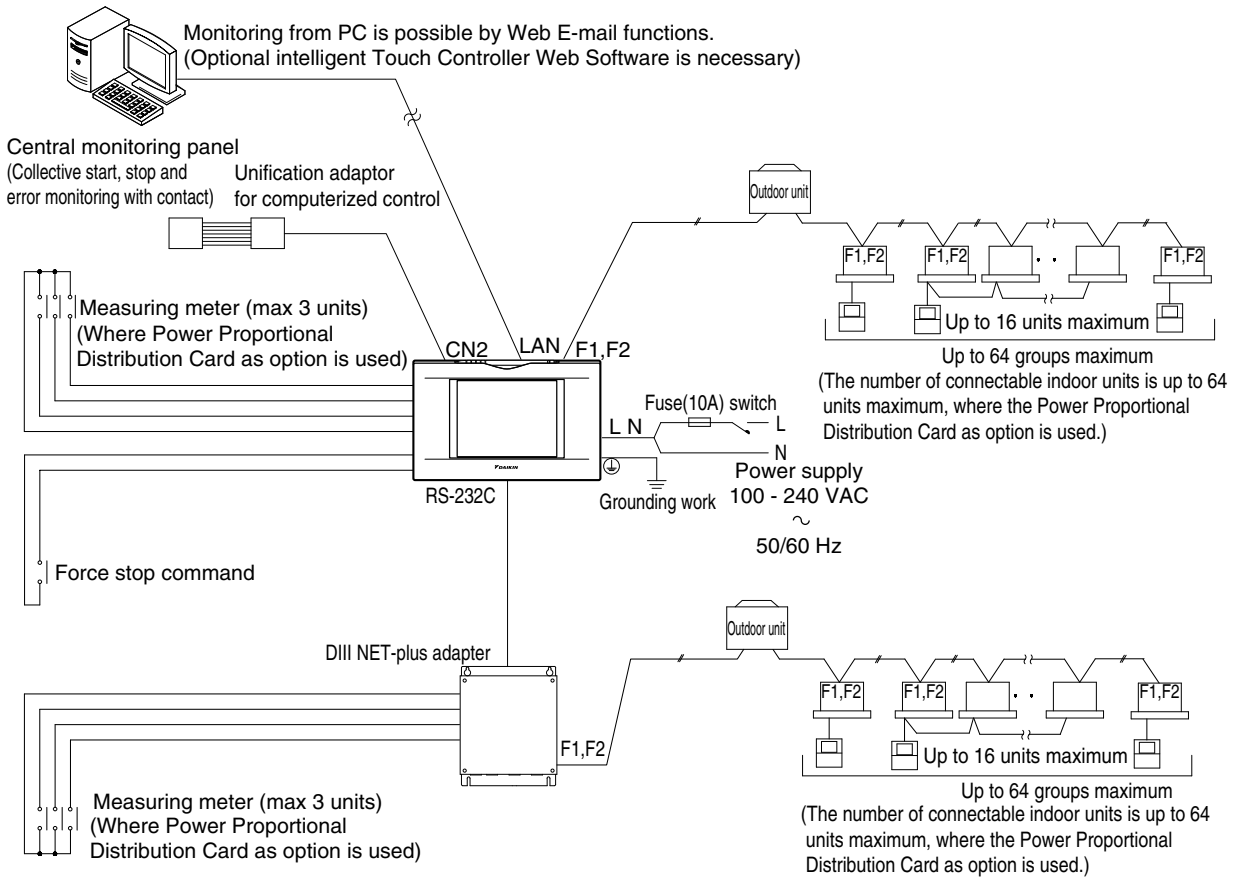
Note

- For combination and settings for double intelligent Touch controllers, be sure to consult the vendor.

(V3017)

28.1.4 Options

Connecting Unification adaptor allows using the contact for normal and abnormal operation signal and collective start/stop with a contact. For details, contact the vendor you purchased the product from.
Also, by connecting DIII NET-plus adapter, it is possible to operate and monitor the indoor units of 64 groups (intelligent Touch Controller plus DIII NET-plus adapter-128 groups in total) additionally.



3P073677-12R

28.1.5 Part Names and Functions

Front and Side View

PCMCIA Card Slot

Used when using the optional Power Proportional Distribution (DCS002C51) or updating the intelligent Touch Controller software to a newer version.

Color LCD with Touch Panel

Provides a display for monitoring and operation.
Be sure to use the touch pen provided for operation.

Touch Pen

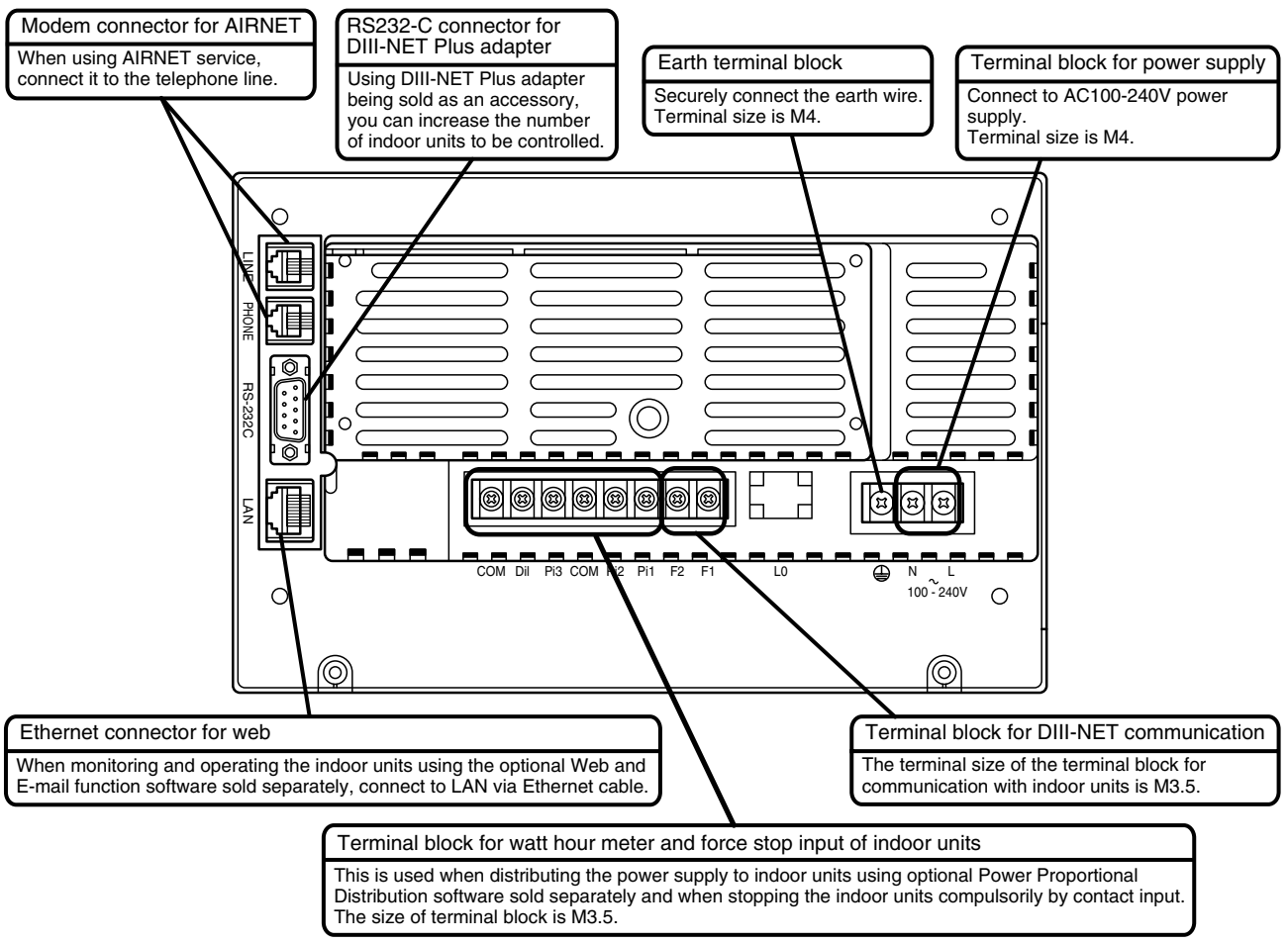
Use the touch pen for operation.
Be sure to use the touch pen for operation.
Use caution not to lose the touch pen.
(When the pen is lost, contact the dealer you purchased the product from.)

NOTE

- Be sure to use the touch pen for operation of the touch panel of the intelligent Touch Controller. Operating with an object other than the touch pen provided may cause damage and failure.

3P073677-12R

28.1.6 Terminals on the Back of intelligent Touch Controller



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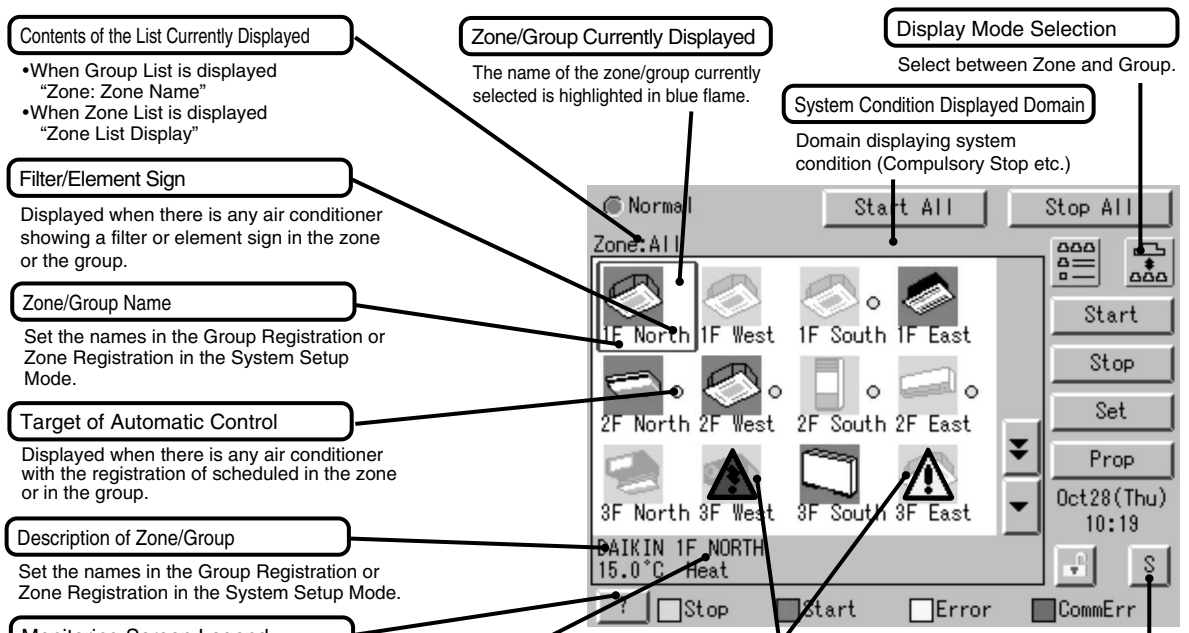
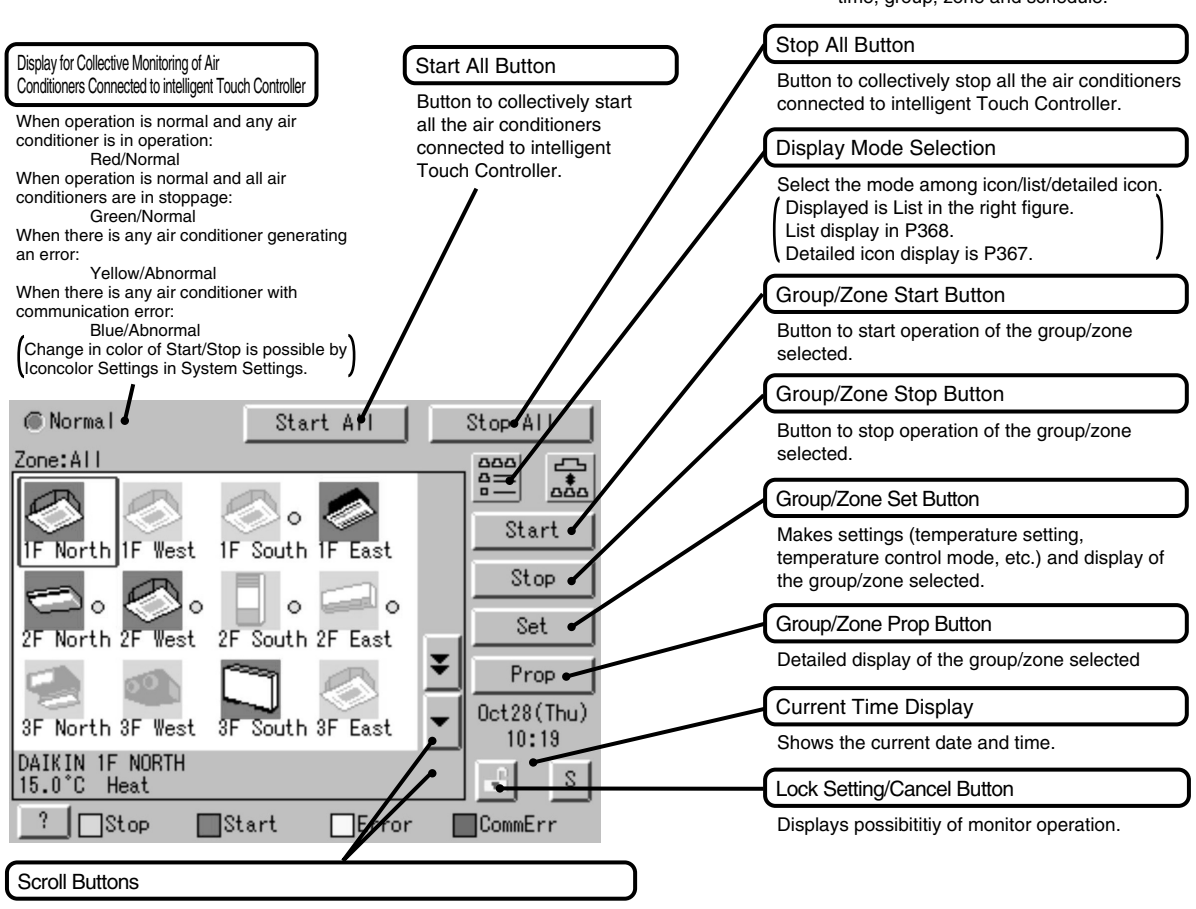
28.1.7 Part Names on the Monitoring Screen and the Functions

Icon





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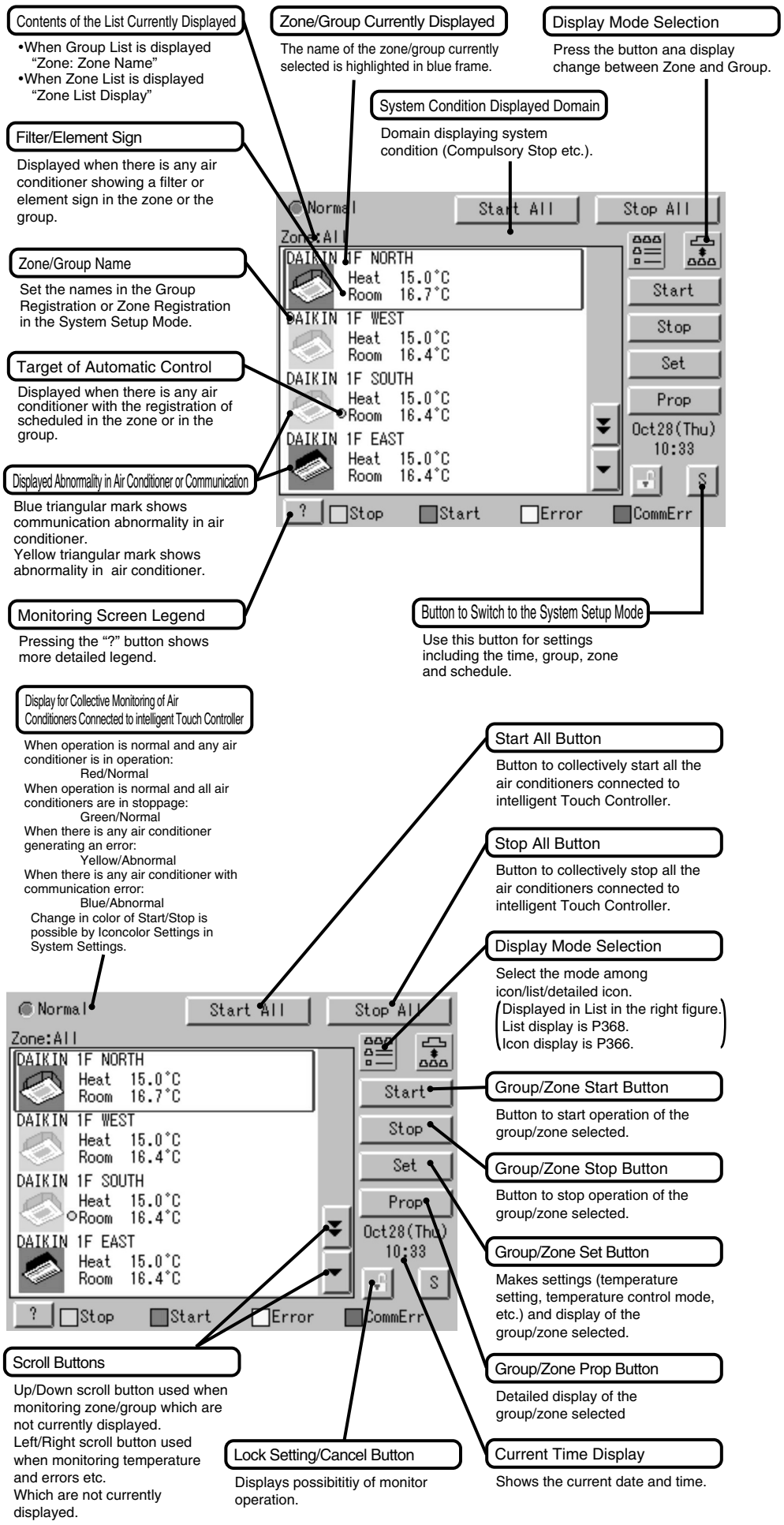

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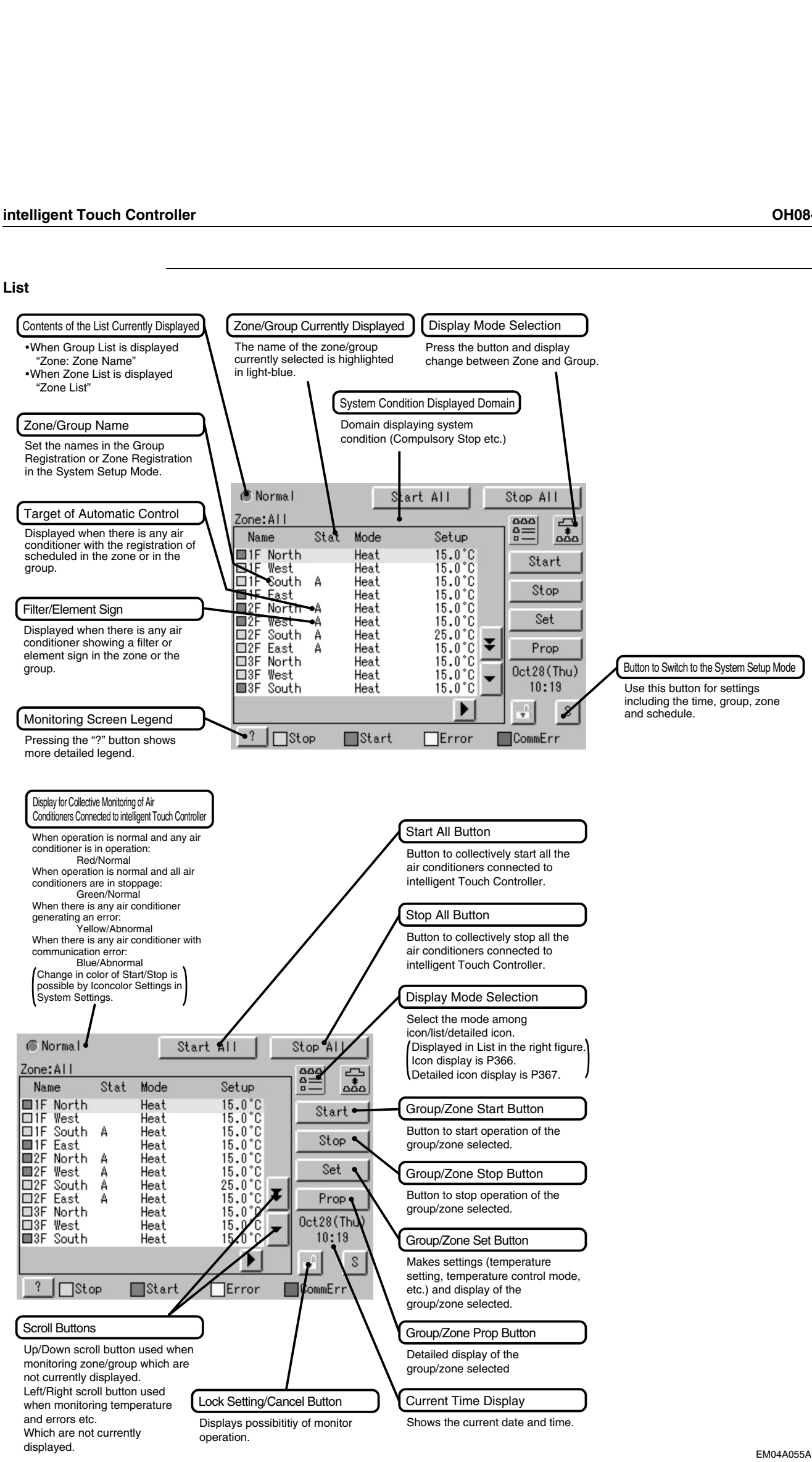
List



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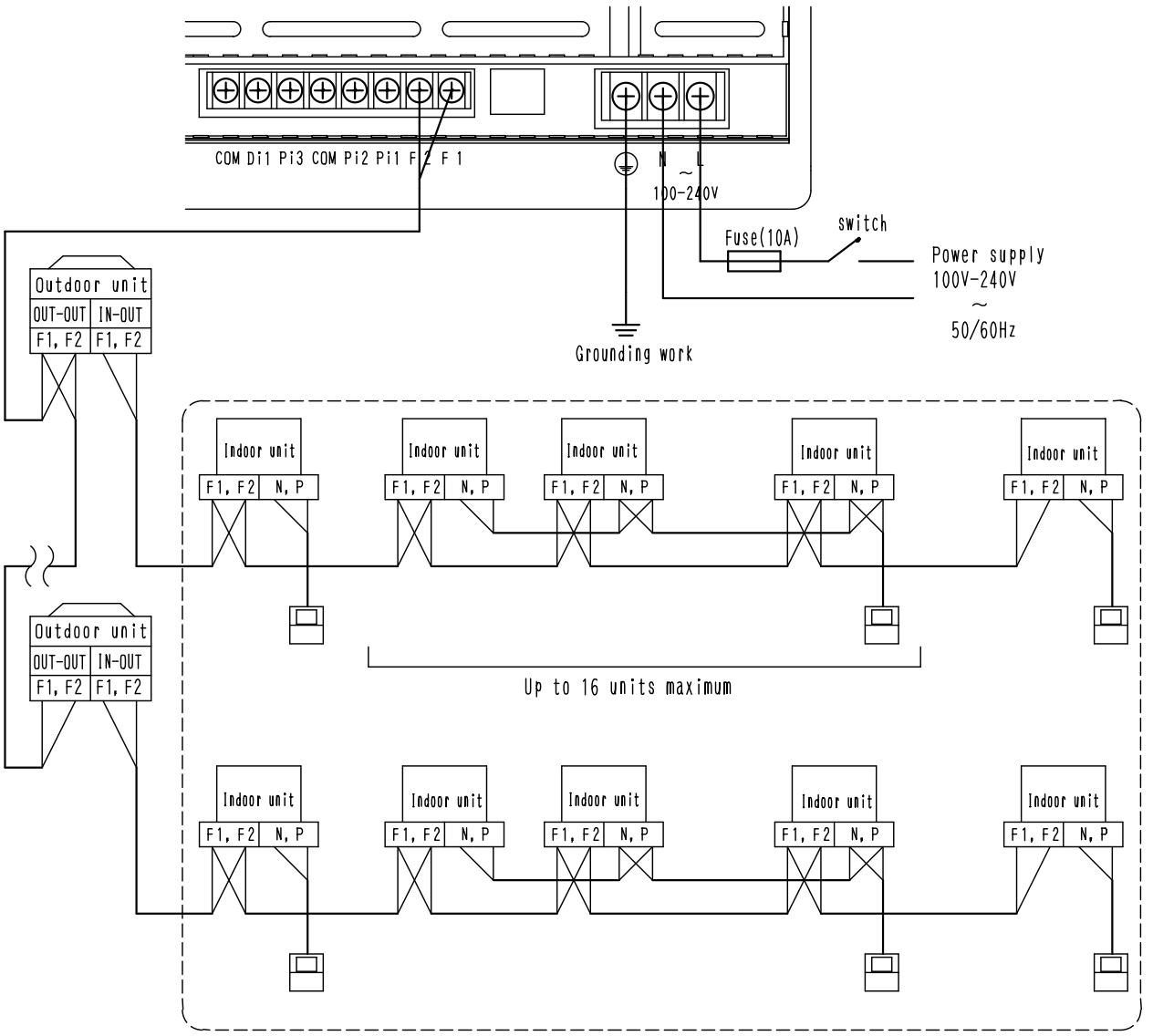
28.1.8 System Wiring

When wiring, cut off the power supply (using a local switch) and do not apply power until all work has been finished.

Wiring for power supply and Connecting wiring for DⅢ-NET communication of indoor units

In order to perform centralized control of indoor units using this controller, connect the power wiring to terminals L and N, earth wire to earth terminal ⏚ and connecting wiring for DⅢ-NET communication of air-conditioner (indoor unit and outdoor unit) to terminals F1 and F2 respectively as shown in the sketch below.



Power cable wiring	1.25mm²
Fuse	10A
Connecting wiring for DⅢ- NET communication of indoor and outdoor units	0.75 - 1.25 mm² vinyl cord or cable with sheath (2 wire) ---Up to 1000 m maximum (wiring length -- up to 2000 m maximum) (When shield cable is used, the wiring length is available up to 1500m.) For the type of electric wire, refer to the design guide.

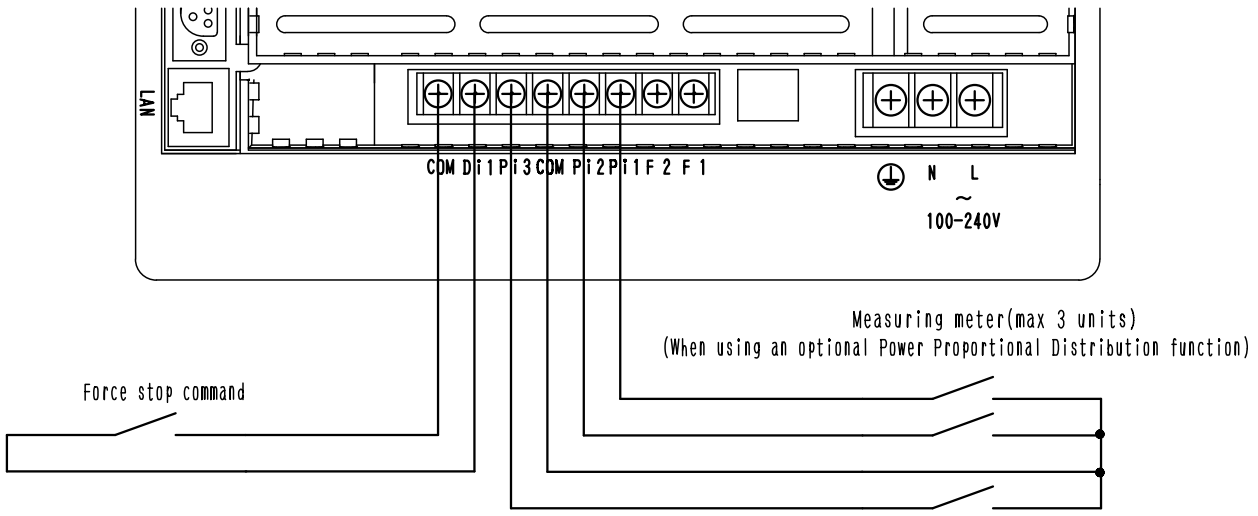
≪CAUTION≫

- Don't fail to perform installation of Grounding work. Don't connect the grounding wire to any of gas pipe, city water pipe, lightning rod, and telephone grounding wire.
- Don't turn ON the power supply (front switch) until all the works are complete.
- The connecting wiring for communication of indoor and outdoor units is a connecting wiring for the control. Don't clamp these cables together with high voltage cables. Failure to observe this instruction would cause control error.
- Don't connect the power cable to F1, F2 terminal blocks. Wrong connection to these terminal blocks could result in damage and burning of the centralized control devices and of the electric parts of the indoor and outdoor units. This is very hazardous. Check each wired cable once more before turning ON the power switch.

1P153198D

Wiring for force stop input and for electric power distribution

In order to stop the air-conditioner through force stop input, connect the wiring for force stop input to the terminals Di1 and COM as shown in the sketch below.
In addition, in order to calculate the electric energy using optional Power Proportional Distribution software, connect the wiring for electric energy to the terminals Pi and COM as shown in the sketch below.



Wiring for force stop input	• 0.75 - 1.25 mm^2 vinyl cord or cable with sheath (2 wire) -- up to 150m maximum • When FORCE-STOP INPUT is kept ON, the indoor units connected thereto are unable to be operated because they are force-stopped. • Use a contact which can guarantee minimum application load DC16V and 10mA. • Use an instantaneous contact of 200msec or more in current feed time, where required.

Meter wiring for power distribution(option)	• 0.75 - 1.25 mm^2 vinyl cord or cable with sheath (2 wire) -- up to 150m maximum
	• The number of connectable indoor units is up to 64 units maximum, where the Power Proportional Distribution Card as option is used.
	• The measuring meters to be connected must meet the requirements specified below.
	  • To be a measuring meter with pulse oscillator. (pulse/kwh)
	  • Pulse band of 100msec or mores
	  • Measuring meter which uses semiconductor relay for pulse output and outputs pulses from non-voltage contact

≪CAUTION≫

- Don't clamp these cables together with high voltage cables. Failure to observe this instruction would cause control error.
- Terminals COM are inter-connected. Connecting to either one is allowed, but the number of cables connectable to one terminal is limited to 2 pieces.
- Don't connect the power cable to Pi, Di, COM terminal blocks. Wrong connection to these terminal blocks could result in damage and burning of the centralized control devices and of the electric parts of the indoor and outdoor units. This is very hazardous. Check each wired cable once more before turning ON the power switch.

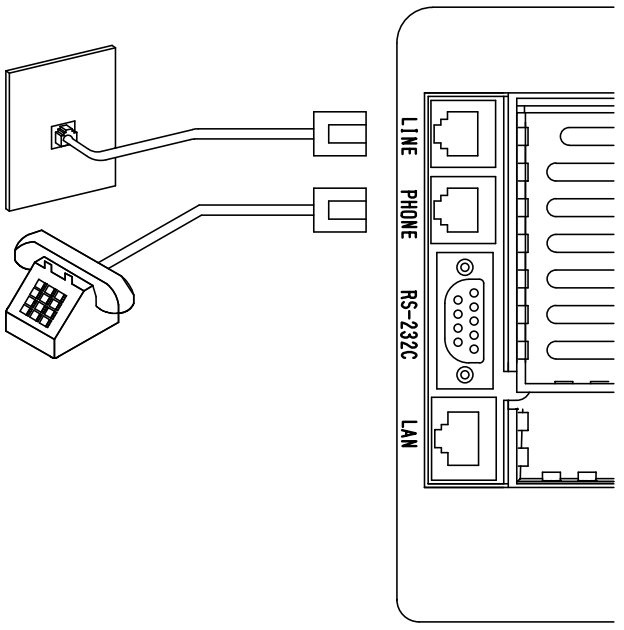
1P153198D

Connection to public telephone line

Connect to the telephone line in order to monitor the air-conditioner via AIRNET service.
Connect to modular cable from the public telephone line to the upper connector with a stamping of LINE, and connect the modular cable of the telephone to the lower connector with a stamping of PHONE, as shown in the sketch below.

≪CAUTION≫

- Don't clamp these cables together with high voltage cables. Failure to observe this instruction would cause control error.
- When using AIRNET service, it is necessary to use a separate modem specified by us and enter into Maintenance Agreement with charge.

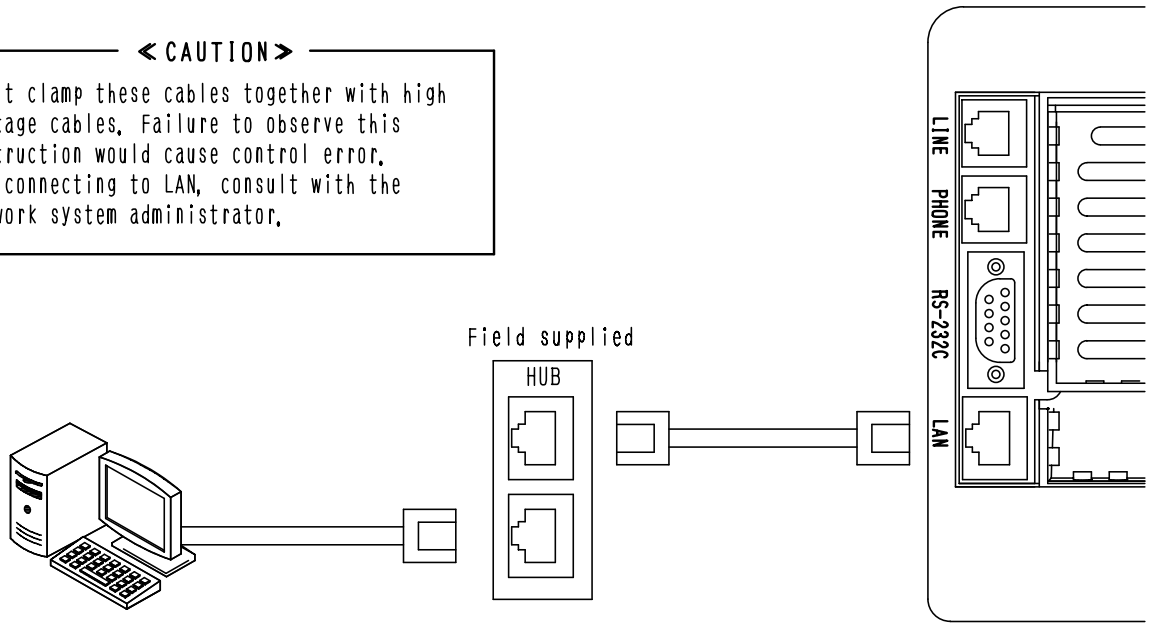


Connection to LAN

In order to monitor/control the air-conditioner using optional Web and E-mail function software sold separately, use a UTP cable to connect to LAN.
Connect the UTP cable to the Ethernet connector with a stamping of LAN.

≪CAUTION≫

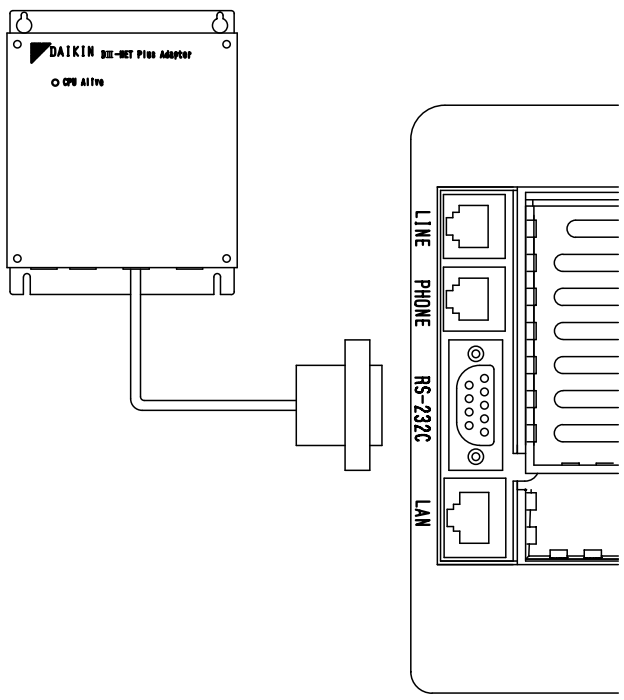
- Don't clamp these cables together with high voltage cables. Failure to observe this instruction would cause control error.
- For connecting to LAN, consult with the network system administrator.



1P153198D

DⅢ-NET Plus adaptor connection

In order to increase the number of indoor units to be controlled, connect DⅢ- NET Plus adaptor using RS232-C cable attached to the adaptor.
For details, refer to the installation manual of DⅢ- NET Plus adaptor.

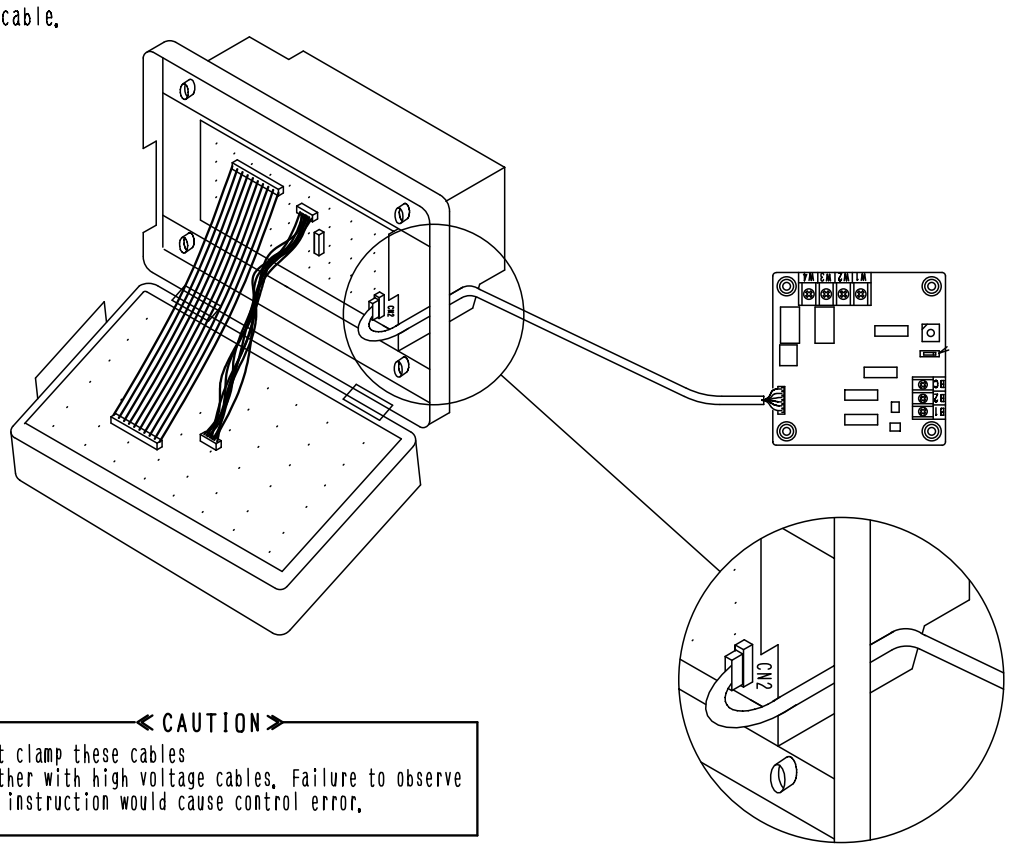


≪CAUTION≫

- Don't clamp these cables together with high voltage cables. Failure to observe this instruction would cause control error.

Connection for Unification Adaptor

In order to perform total start and stop/situation monitoring from central supervisory board, etc., connect a Unification Adaptor sold separately.
As shown in the sketch below, open the controller and connect the cable from the Unification Adaptor to CN2 connector located on the printed board on the lower case.
If you route the cable in the cable guide groove on the lower case, you can make a smart connection without any slack of the cable.



≪CAUTION≫

- Don't clamp these cables together with high voltage cables. Failure to observe this instruction would cause control error.

1P153198D

28.2 DCS002C51 — Power Proportional Distribution Card

Function and Outline

Power Proportional Distribution Card, in combination with an existing intelligent Touch Controller, enables to proportionally calculate and display electricity amount used by air conditioner per indoor unit.

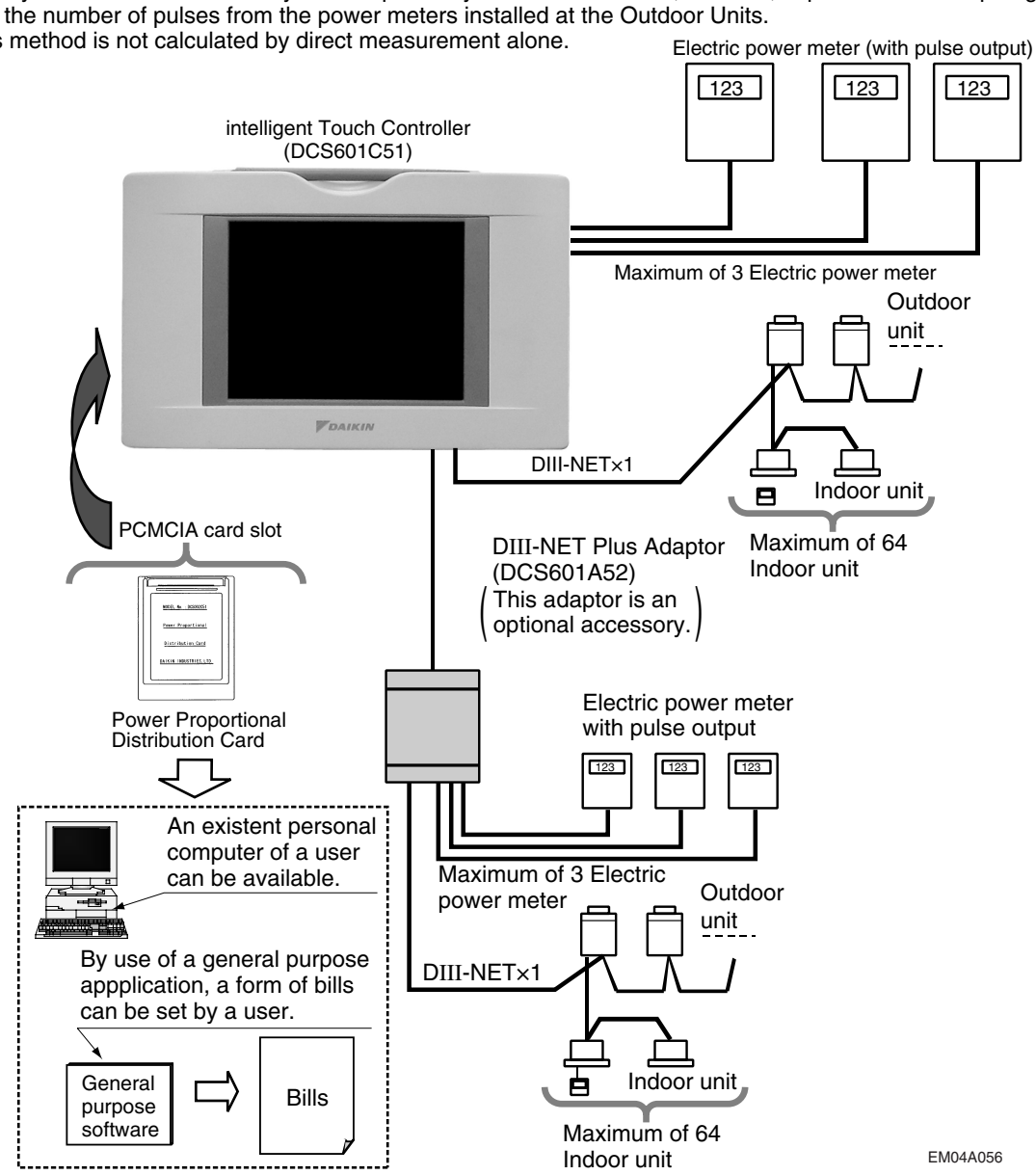
Main Functions

Power proportional distribution results data can be saved for 12 months. (max. 12 months and 30 days)

- Per intelligent Touch Controller, power proportional distribution can be calculated for 64 indoor units at maximum.
- When DIII-NET Plus Adaptor is connected, power proportional distribution can be calculated for more 64 indoor units at maximum (a total of 128).
- 3 Electric power meters at maximum can be connected to an intelligent Touch Controller.
- When DIII-NET Plus Adaptor is connected, more 3 Electric power meters at maximum (a total of 6) can be connected.
- Power proportion distribution results data can be saved into a PCMCIA card.
  Data is saved CSV format generally applied to personal computers, so bills can be issued by use of a general purpose table calculation software package in easy manners.
  (A personal computer and a general purpose table calculation software package can be available separately.)

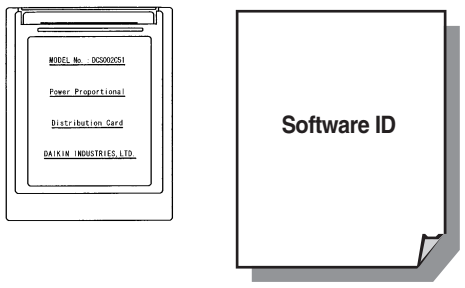
Precautions

This system calculates electricity consumptions by size of indoor units, run time, expansion valves open gap, suction rate and the number of pulses from the power meters installed at the Outdoor Units.
This method is not calculated by direct measurement alone.



Checking Attachments

Power Proportional Distribution Card includes the following attachments.



EM04A056

How to Connect

To activate the power proportional distribution function, it is necessary to set the program by use of the attached PCMCIA card and carry out a trial operation.
Before use, consult your supplier.

EM04A056

28.3 DCS004A51 — Web Software

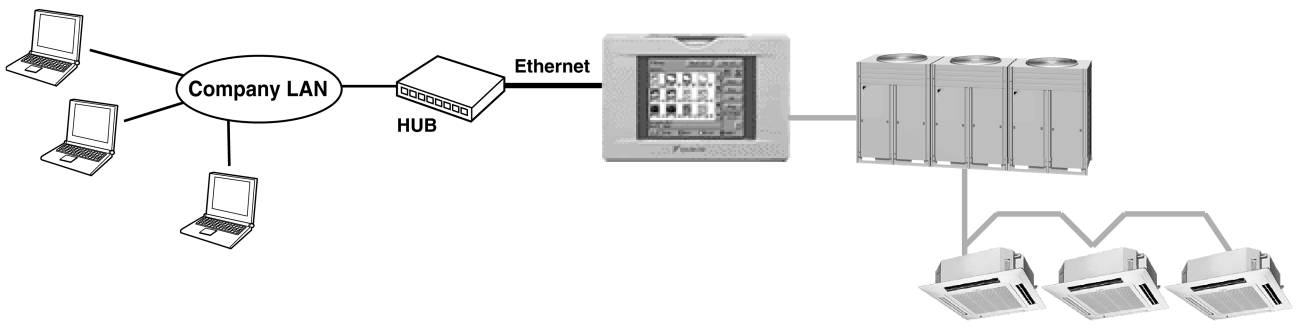
Functions and Outline

Using this software enables you to operate and monitor air conditioners linked to the intelligent Touch Controller on the Windows PC, which is connected with the intelligent Touch Controller and the Ethernet communication (LAN).

* The intelligent Touch Controller functions as a Web server to visit the Website of the intelligent Touch Controller through the Internet Explorer, which is incorporated in the PC like as its standard software, thus making it possible to operate and monitor the air conditioners.

Furthermore, through the use of a mail server, if a malfunction occurs in any of the air conditioners which are linked to the intelligent Touch Controller, it will be able to transmit mails to a pre-assigned address to alert you to the malfunction.

For further information, contact our sales representatives.



Web Interface of the intelligent Touch Controller

Permissions: Privileges Given to Each Login Name

There are two categories of login users: General User who can perform basic operations via the web interface and Administrator who can setup the system and change system settings.

Two Display Modes

You can select the display mode from two modes during login process: the Basic mode which provides a simple and easy-to-use interface and the Advanced mode which allows you to use advanced setting options.

Start/Stop Operation

You can start or stop all the devices in a group, a zone, or multiple zones at a time.

Advanced Settings for Air Conditioners

You can set temperature, operation modes, direction of air flow, air volume, and remote controller mode of all devices in a group, a zone, or multiple zones.

Various Operation Modes

You can operate devices from a web interface, the intelligent Touch Controller console, or a local remote controller. Also the Administrator can permit or prohibit remote controller operations of devices in a specified group or zone using the web interface.

User Administration

The Administrator can register or delete General Users, who can operate air conditioners via the web interface, and set/change his/her own password and General Users' password.

Scheduling Function

The Administrator can precisely schedule operations for a specific group or zone of devices. Weekly schedule and 10 extra schedules can be created.

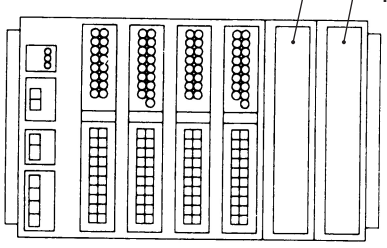
29. Parallel Interface

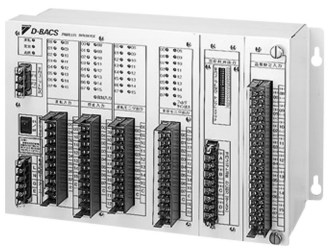
29.1 DPF201A51 — Basic Unit

1 COMPONENT

This kit contains the following components.
Confirm them before installation.

Body





Installation manual	1 pc.
Switch status label	1 pc.

Four M6 mounting screws are necessary for installing the body.

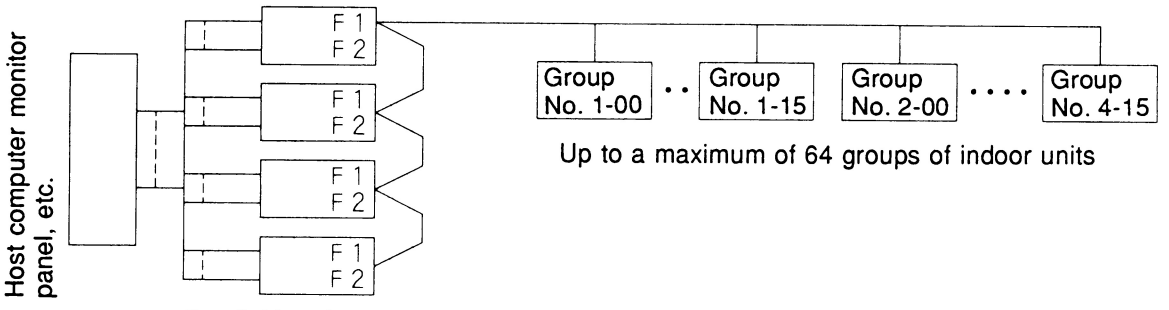
2 SYSTEM CONFIGURATION

DESCRIPTION OF FUNCTIONS

1) A maximum of 16 groups of indoor units can be turned ON/OFF individually by entering the contact point.
2) Operating conditions, abnormal conditions, and display time to clean air filter can be monitored at no-voltage normally open contactors.
3) All indoor units connected to the centralized control line can be stopped simultaneously by forced OFF input.
4) By installing up to 4 additional units of this kit, a maximum of 64 groups of indoor units of the centralized control line can be controlled and monitored individually.

When combined with optional accessories, the following functions can be realized.
For details, refer to the installation manuals of respective units.

5) Room temperature unit (DPF201A52)
   This unit converts indoor temperatures between 0 and 50°C of any 4 groups of indoor units (air inlet temperature) to 0 to 5V DC and outputs the voltage.
6) Temperature set unit (DPF201A53)
   By applying 1.6 to 3.2VDC, the indoor temperature of 16 groups can be set individually.

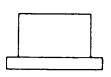


(Note that this kit cannot be used with the optional wiring adaptor for electrical appendices.)

(B0204)

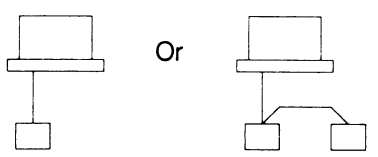
A group of indoor units is defined as follows.

① One indoor unit without remote controller

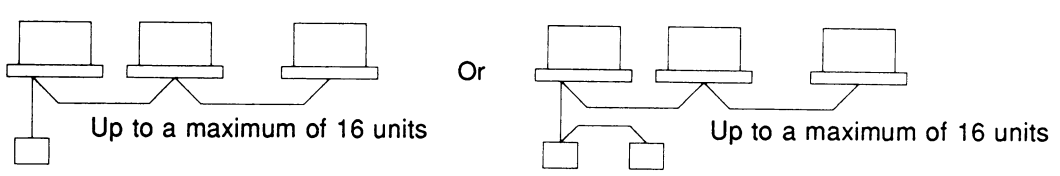


Note)
Without remote controller

② One indoor unit controlled by one or two remote controllers



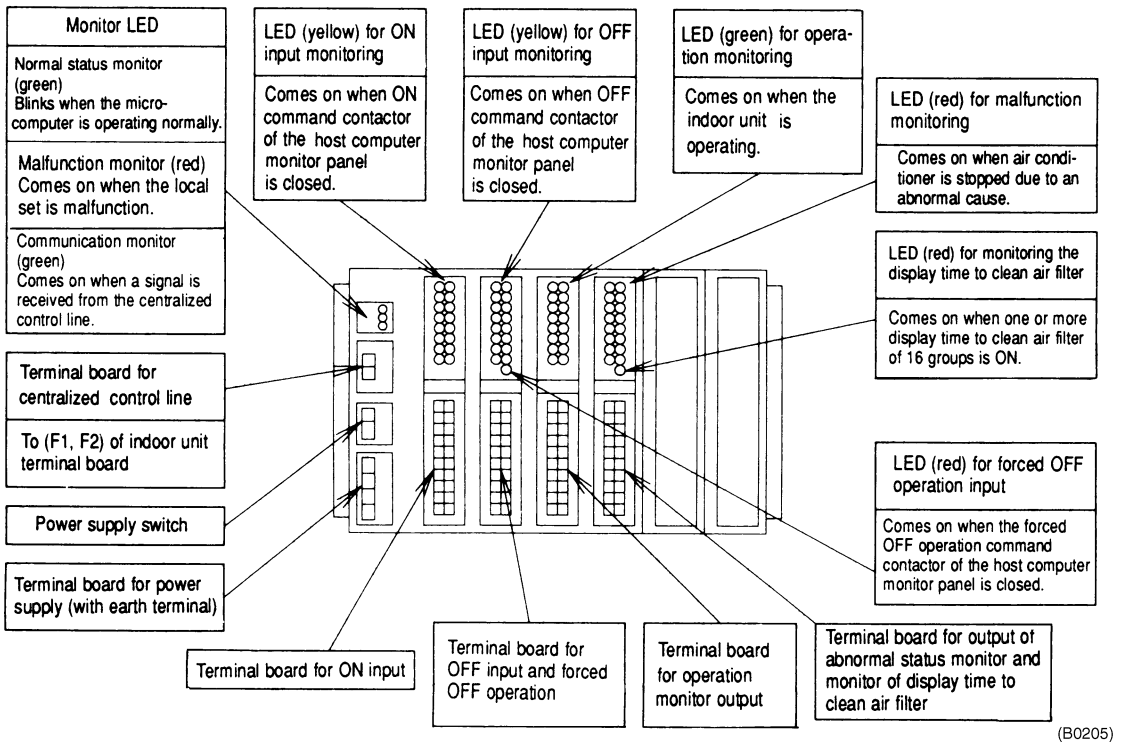
③ Maximum of up to 16 indoor units controlled by 1 or 2 remote controllers



Remote controller
2 remote controllers

NOTE) Parallel interface cannot change the air flow direction or the fan speed and cannot reset the display time to clean air filter.
When connecting a group of indoor units without remote controller, use of the central remote controller is recommended.

3 NAME AND OPERATION OF COMPONENT

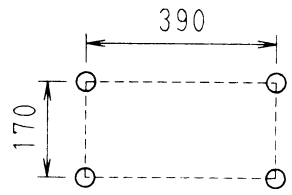


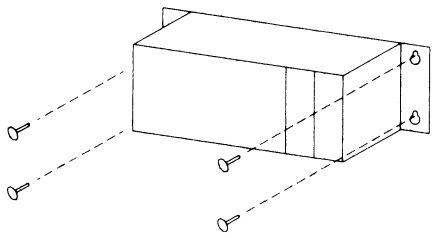
(B0205)

4 INSTALLATION

Securely fix the basic unit with the mounting screws (M6).

Mounting pitch

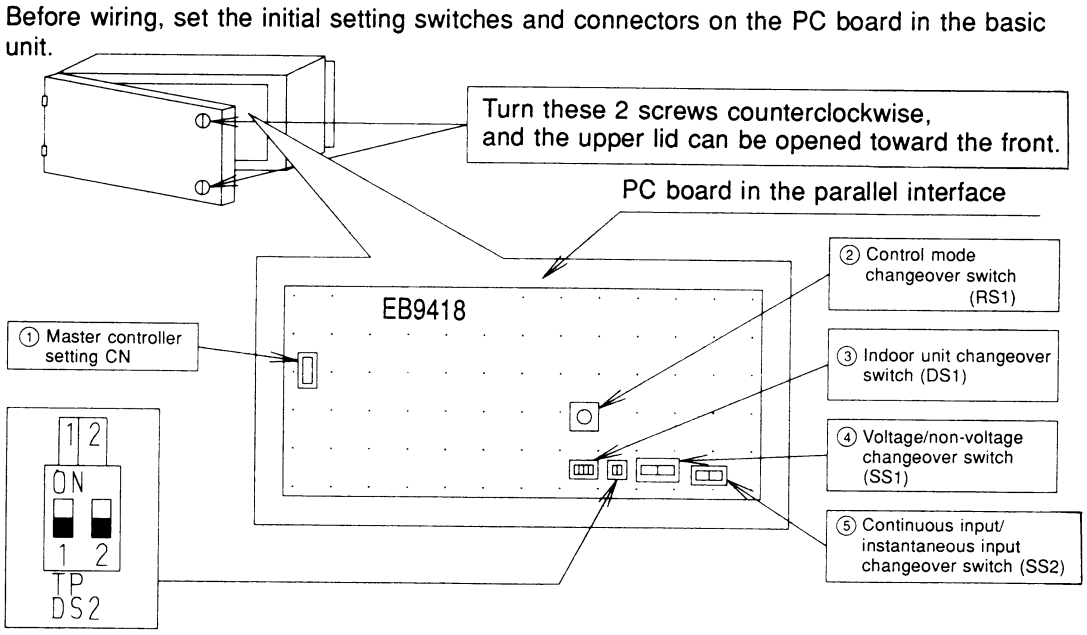




NOTE) To protect against the influence of electromagnetic interference or dust, install the basic unit in the switch box. (A mounting space of W x H x D = 450 x 290 x 150 mm or more is necessary.)

5 INITIAL SETTING

Before wiring, set the initial setting switches and connectors on the PC board in the basic unit.



NOTE) Do not change DS2 from the factory set position shown above.
"■" indicates the switch position. The same notation applies to the following switches.

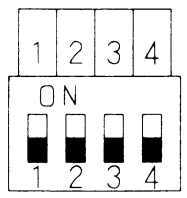
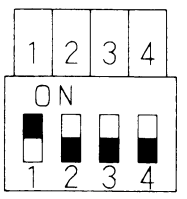
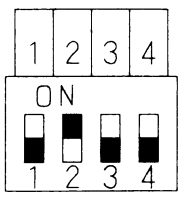
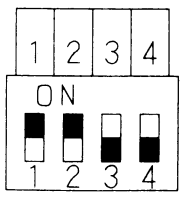
(B0206)

① Master controller setting CN (CN1: With the factory equipped connector)
When connecting 2 to 4 units of this kit from 1 centralized line, use only the connector equipped with parallel interface of one unit.
Remove connectors of other units.
When using this kit with data calculate unit, remove the connector of this kit.

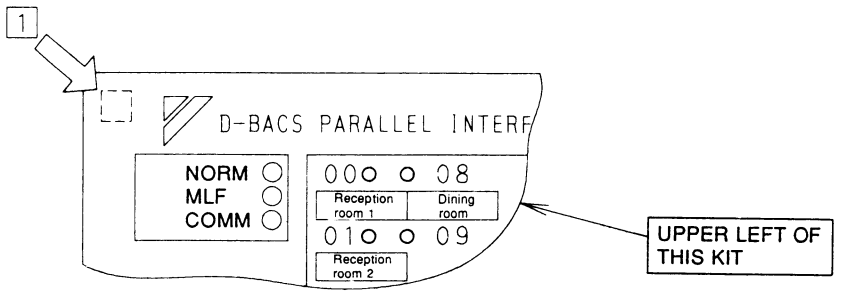
② Control mode changeover switch (RS1: Set to the factory set position 1.)
Set the control mode of the indoor unit according to the setting of the rotary switch.

Position	Function	Remote controller operation
RS1 	Individual	Always enabled.
RS1 	Centralized	Enabled when operated from this kit. Disabled when this kit does not operate.
RS1 	Remote controller operation mode disabled.	Only the control mode is always disabled.

③ Indoor unit changeover switch (DS1: Control is factory set to 1-00 to 1-15.)
The switch sets the range of the group numbers of the indoor unit to be controlled by this kit.

Setting range	1–00 ~ 1–15	2–00 ~ 2–15	3–00 ~ 3–15	4–00 ~ 4 –15
Setting of DS1				
	DS1 ADDRESS/ INDOOR	DS1 ADDRESS/ INDOOR	DS1 ADDRESS/ INDOOR	DS1 ADDRESS/ INDOOR

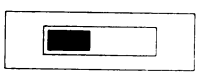
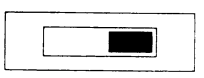
After setting the group numbers, paste the numbered seals of respective control ranges to the attached display sticker.



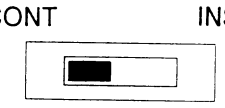
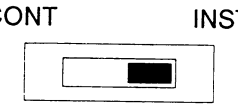
(Example) Paste 1 for 1-00 to 1-15.

Paste the room name label near the LED for ON/OFF input monitoring, as shown above. (B0207)

④ Voltage/non-voltage changeover switch (SS1: Factory set to voltage side.)
Set the switch as shown below according to the specification of the ON/OFF operation input from the host computer monitor panel.

Position	Input from host computer monitor panel
VOLTAGE NON VOLTAGE  SS1	Voltage (16 to 24VDC is applied upon command.)
VOLTAGE NON VOLTAGE  SS1	Non-voltage normally open contactor (Contactor "closes" upon command.)

⑤ Continuous input/instantaneous input changeover switch (SS2: Factory set to instantaneous side.) Set the switch as shown below according to the specification of the ON/OFF operation input from the host computer monitor panel.

Position	Input from host computer monitor panel
CONT INST  SS2	Continuous "a" contactor input
CONT INST  SS2	Instantaneous (200 msec or more) "a" contactor input

NOTE) When the continuous input is used in the individual mode, the indoor unit may stop operation by the remote controller during operation command (starts with operation command contactor of host computer monitor panel "close").
To restart the unit, "open" the operation command contactor once and "close" the contactor again.

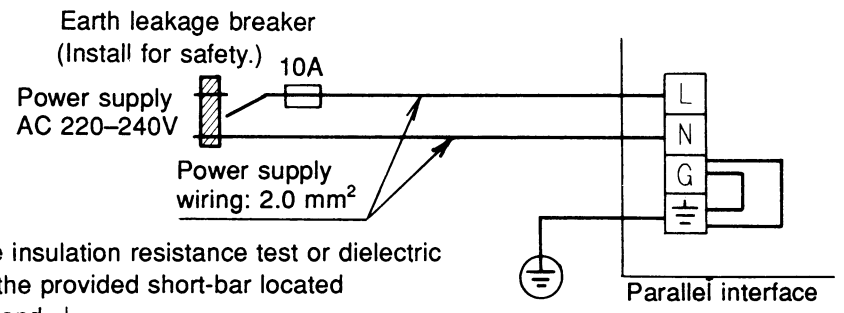
6 ELECTRICAL WIRING

GENERAL PRECAUTIONS

- All wiring and locally supplied parts and materials shall satisfy the standards of the applicable country and region.
- Only use copper wires for wiring.
- The electrical wiring work should be carried out by an authorized contractor.
- Install the switches and fuses shown below in the power supply lines.

POWER SUPPLY WIRING

Implement the grounding in accordance with the standards of the applicable country and region.

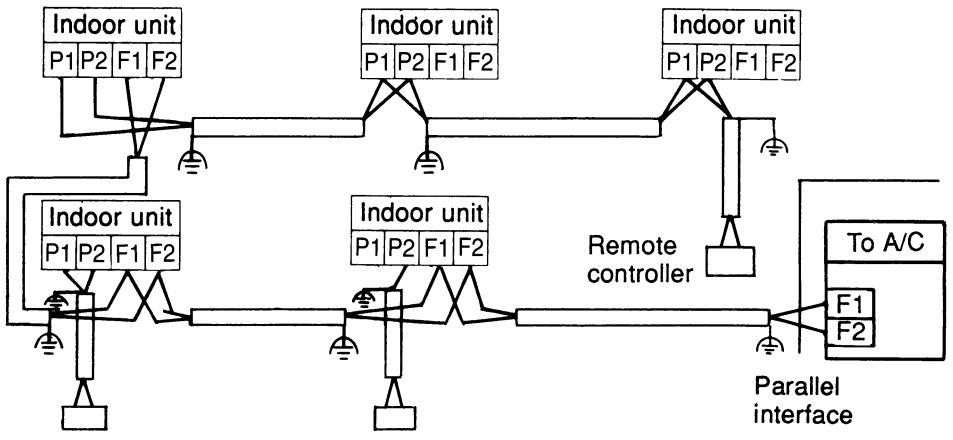


(B0208)

NOTE) Before conducting the insulation resistance test or dielectric voltage test, remove the provided short-bar located between terminals G and ⏚

WIRING TO INDOOR UNIT

Install wiring as shown below, from terminals (F1, F2) for centralized control line of the parallel interface to terminals (F1, F2) of the indoor unit.(Since there is no polarity, F1 and F2 may be reversed.)

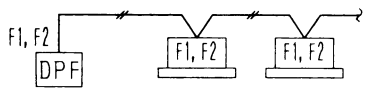


NOTE) 1. For wiring to the indoor unit of the centralized line (F1, F2), install the wiring to either one of the indoor units in the same group (may be wired to the indoor unit to which the remote controller is not connected directly).
If, however, the data calculate unit is used with the indoor unit, install wiring to all of the indoor units.
2. For transmission wiring between indoor units, use 0.75 to 1.25 mm^2 shield wire (2 wire), and ground the shield part as shown above. (overall length of 1000 meters)

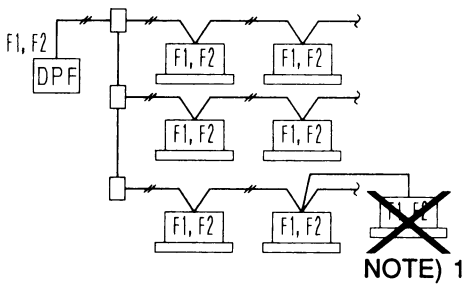
EXAMPLES OF CENTRALIZED LINE WIRING

DPF : Parallel interface
: Indoor unit
: Terminal board (Field supplied)

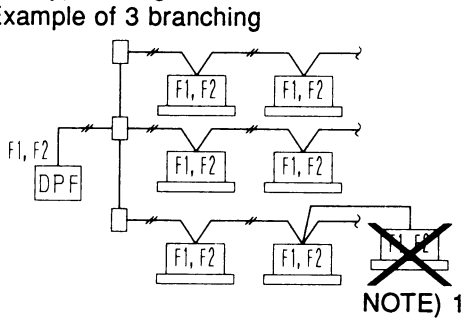
① Series wiring



② Bus type wiring
Example of 3 branching



③ Star type wiring
Example of 3 branching

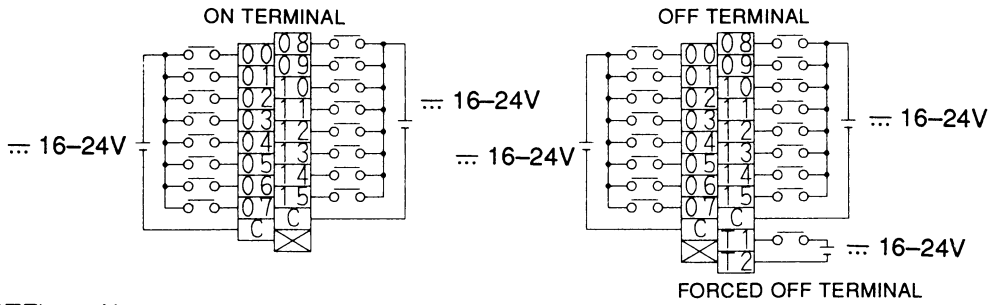


NOTE) 1. Branched wiring cannot be branched further.
2. For branching more than 3 control wirings from the same terminal board, use a relay terminal board (field supplied).

(B0209)

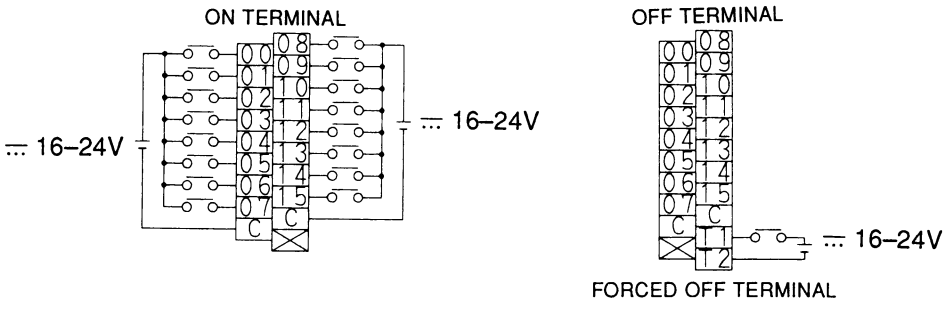
ON/OFF OPERATION INPUT WIRING

① For voltage input of instantaneous "a" contactor from host computer monitor panel:



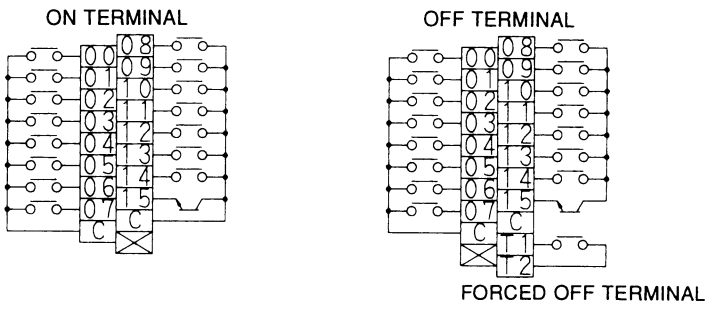
NOTE) 1. Necessary input current is about 10mA per contactor.
For relay contactor, use contactor for micro current.
2. The number of the terminal board corresponds to the group number.
(Example) Connect the contactor controlling the indoor unit group No. 1–08 to the input terminal No. 08.
3. For ON/OFF command mode, "close" the contactor for 200 msec or longer.
4. Recommended power supply for external wiring:
Sheathed vinyl cord or cable of 0.75–2mm^2.
Other: Wiring length should be 150 meters or less and separated from the power line to prevent malfunction.

② For voltage input of continuous "a" contactor from host computer monitor panel:



NOTE) 1. Necessary input current is about 10mA per contactor.
For relay contactor, use contactor for micro current.
2. The number of the terminal board corresponds to the group number.
(Example) Connect the contactor controlling the indoor unit group No. 1–08 to the input terminal No. 08.
3. Recommended power supply for external wiring:
Sheathed vinyl cord or cable of 0.75–2mm^2.
Other: Wiring length should be 150 meters or less and separated from the power line to prevent malfunction.

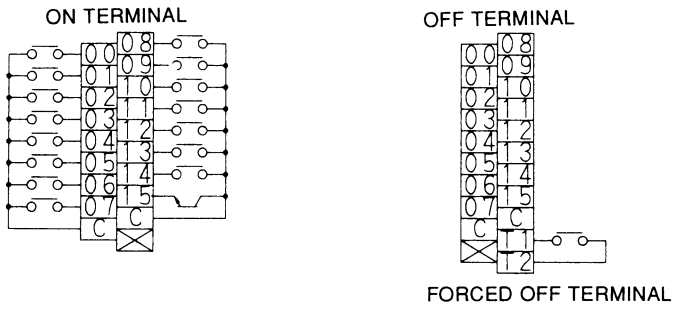
③ For non-voltage input of instantaneous "a" contactor from host computer monitor panel:



(B0210)

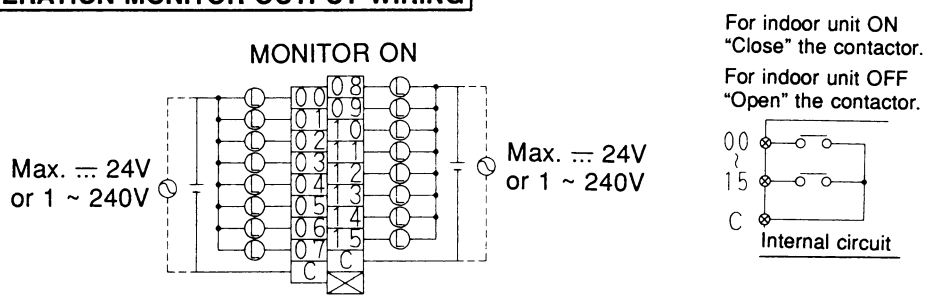
NOTE) 1. Necessary input current is about 10mA per contactor.
For relay contactor, use contactor for micro current.
2. The number of the terminal board corresponds to the group number.
(Example) Connect the contactor controlling the indoor unit group No. 1–08 to the input terminal No. 08.
3. For ON/OFF command mode, "close" the contactor for 200 msec or longer.
4. Recommended power supply for external wiring:
Sheathed vinyl cord or cable of 0.75–2mm^2.
Other: Wiring length should be 150 meters or less and separated from the power line to prevent malfunction.

④ For non-voltage input of continuous "a" contactor from host computer monitor panel:



NOTE) 1. Necessary input current is about 10mA per contactor.
For relay contactor, use contactor for micro current.
2. The number of the terminal board corresponds to the group number.
(Example) Connect the contactor controlling the indoor unit group No. 1–08 to the input terminal No. 08.
3. Recommended power supply for external wiring:
Sheathed vinyl cord or cable of 0.75–2mm^2.
Other: Wiring length should be 150 meters or less and separated from the power line to prevent malfunction.

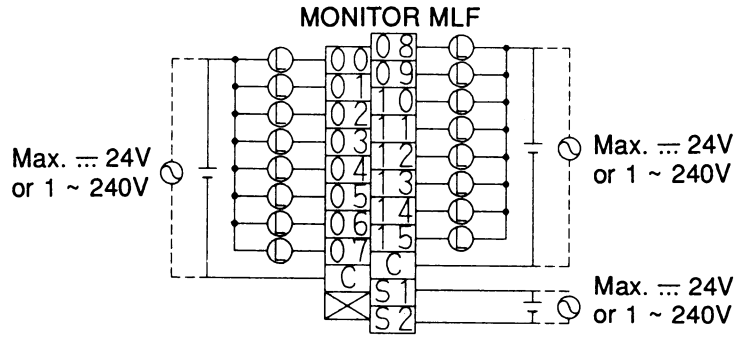
OPERATION MONITOR OUTPUT WIRING



NOTE) 1. When using an external power supply of 1~100–240V and separate from the input wiring.
2. Rating of output relay contactor in this kit is 3A maximum (resistance load). Minimum applicable load is ⎓ 12V/10 mA.
For Ⓛ section, connect a general load which satisfies the specification of the output relay contactor.

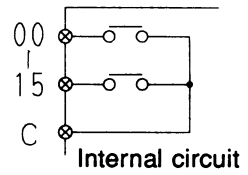
(B0211)

MALFUNCTION MONITOR OUTPUT WIRING



For indoor unit malfunction "close" the contactor.

For indoor unit normal operation or OFF "open" the contactor.



Output of display time to clean air filter

NOTE) 1. When using an external power supply of 1~100–240V and separate from the input wiring.
2. Rating of output relay contactor in this kit is 3A maximum (resistance load). Minimum applicable load is ⎓ 12V/10 mA.
For Ⓛ section, connect a general load which satisfies the specification of the output relay contactor.

NOTE)
Do not connect the power supply line (1~200–240V) to the terminal board for centralized control and the terminal board for input.
If connected by mistake, breakdown and burning of this kit and electronic parts of the indoor unit may result, which is extremely dangerous.
Check the wiring before turning on the power switch.

7 SETTING OF GROUP NO. FOR CENTRALIZED CONTROL

Set the group No. of each group of indoor units using the remote controller. (For the indoor unit without the remote controller, connect the remote controller to the indoor unit when setting the group No., and remove the remote controller after setting.)

① Turn the indoor unit power and the parallel interface ON.
(Setting cannot be made unless power is supplied.)
Before turning the power ON, confirm that installation and electrical wiring are all correct.
(When the power is supplied, all the liquid crystal displays come on simultaneously and may not accept operations while [8 8] is displayed, for about one minute.)

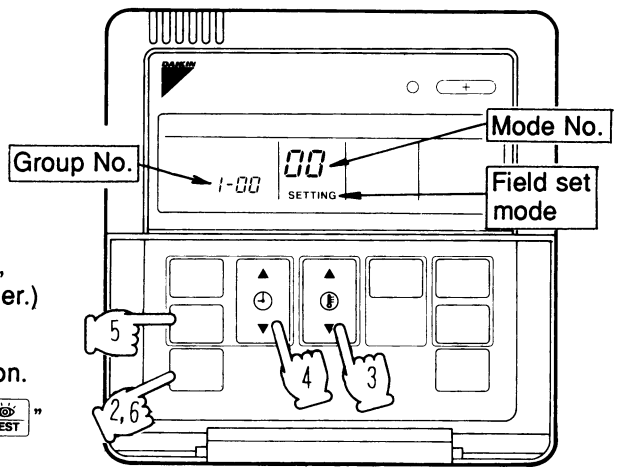
② Carry out the set mode.
Depress "TEST" button for 4 seconds or more to activate the field set mode.

③ Select the mode No.
Select the mode number 00 by "⏱".

④ Select the group No.
Select the group No. by "⏲" toggle switch. (Group No. increases from 1–00, 1–01, ~, 1–15, 2–00, ~, 4–15 in that order.)

⑤ Determine the group No.
Determine the group No. by "⏲" button.

⑥ Return to the normal mode. Depress "TEST" button.



NOTE) • Refer to the installation table when using a simple remote controller.
• For setting the group No. of Venti Air and various adaptors (such as wiring adaptor for other air conditioners), refer to respective manuals.

(B0212)

8 CONFIRMATION OF OPERATION

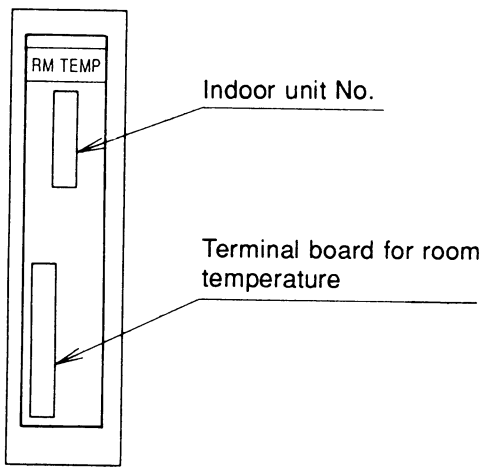
Before the test operation, turn on the power switches of the indoor and outdoor units and the parallel interface and depress the ON/OFF button.
Flashing of the operation lamp of the remote controller indicates malfunction of the indoor unit of that group.
Lighting of the malfunction LED of the parallel interface indicates a faulty setting of the centralized equipment.
Refer to this manual and the installation manuals of related equipment and correct any abnormalities.

NOTE
- When power is supplied, the MALFUNCTION LED of the parallel interface comes on for about 30 seconds for the initial setting, not an abnormal condition.
- For test operations of indoor and outdoor units, refer to the installation manual attached with the unit.
- If the input from the host computer monitor panel is not executed 2 minutes or more after the power is supplied to this kit, check the following.
  - Check for correct setting of the connector for setting master controller.
  - Check that the group No. for centralized control of the indoor unit has been set.
  - Except when the data calculate unit is used, check that the centralized line is not connected to two or more indoor units in the same group.

(B0213)

29.2 DPF201A52 — Temperature Measurement Units

1 APPEARANCE AND PART NAMES



Room temperature Unit
[DPF201A52]

NOTE When handling, be careful not to damage the electronic components on the PC board.

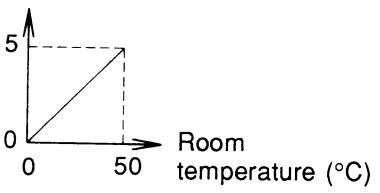
2 DESCRIPTION OF FUNCTIONS

Room temperature Unit [DPF201A52]

Converts the room temperature (air inlet temperature/0–50°C) of any four groups of indoor units controlled/monitored by the basic unit into analog output (⎓ 0–5V) and outputs.

Output characteristics

Analog output (⎓)

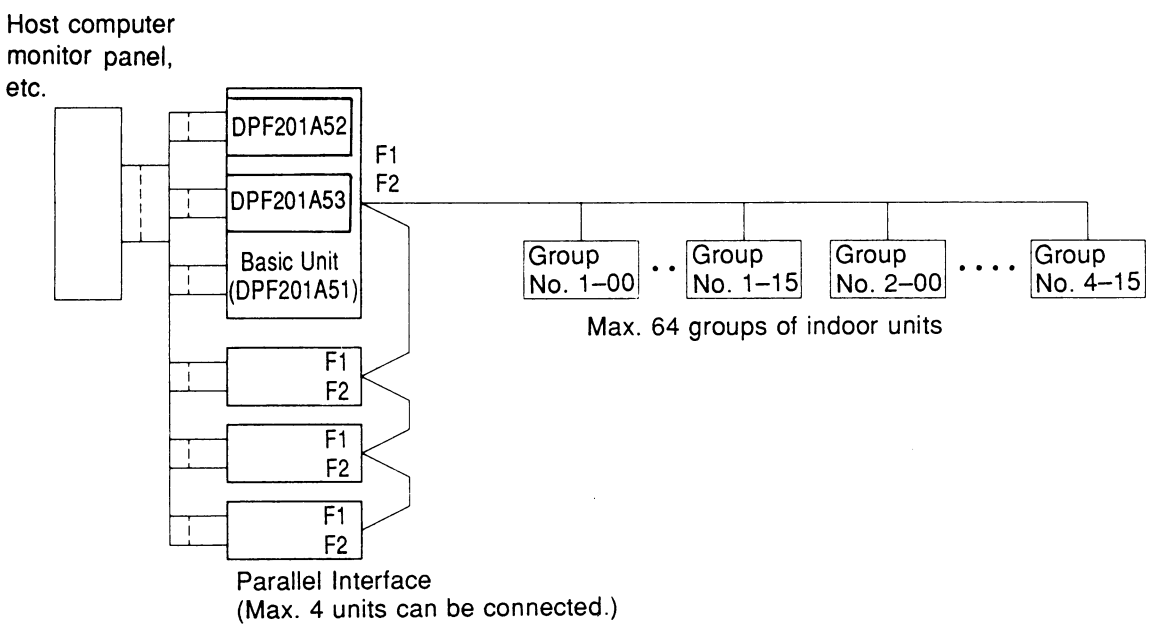


Output resolution:
0.2°C units

NOTE: The permissible load resistance for the room temperature unit is 5 kΩ or more.

C: 2PA53243

System Configuration Diagram

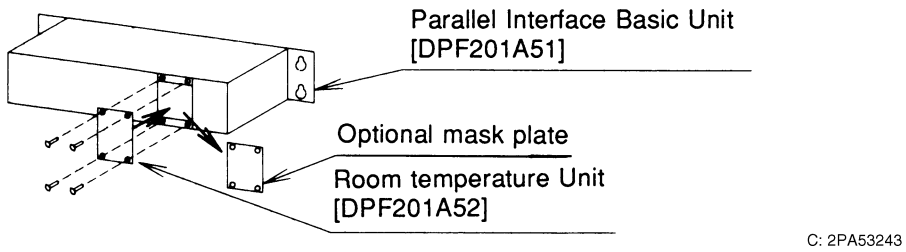


3 INSTALLATION

First, carry out installation and make initial settings for the basic unit. Then, with the basic unit's power turned off, install the kit on the basic unit according to the following procedure.

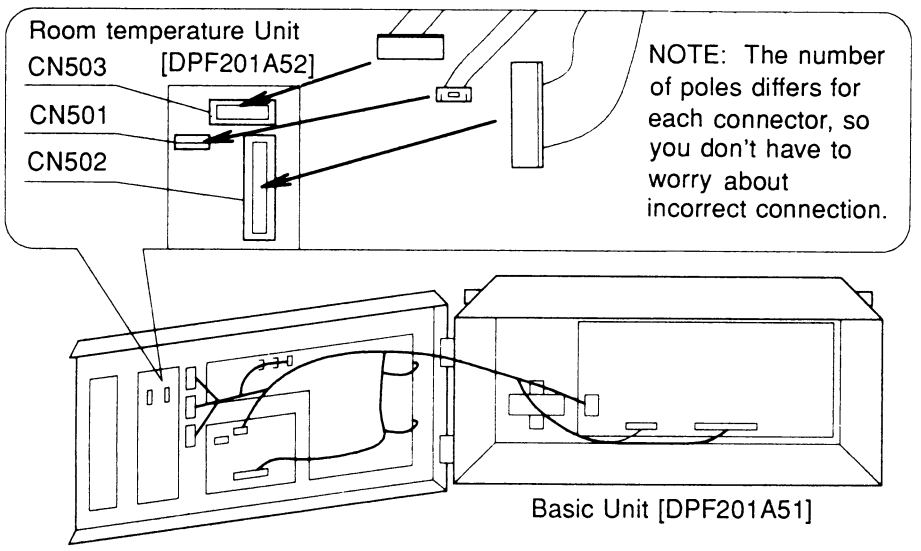
Room temperature Unit [DPF201A52]

① Remove the optional mask plate on the left side of the basic unit, and fasten the kit with screws.



C: 2PA53243

② Plug the basic unit's connector into the kit.
- Loosen the knurling screw on the front right side of the basic unit and open the upper cover towards yourself as shown in the figure below.
- Remove the clamp binding the three connector leads, and firmly plug the connectors into the three places shown in the figure below.
- Close the basic unit's upper cover.



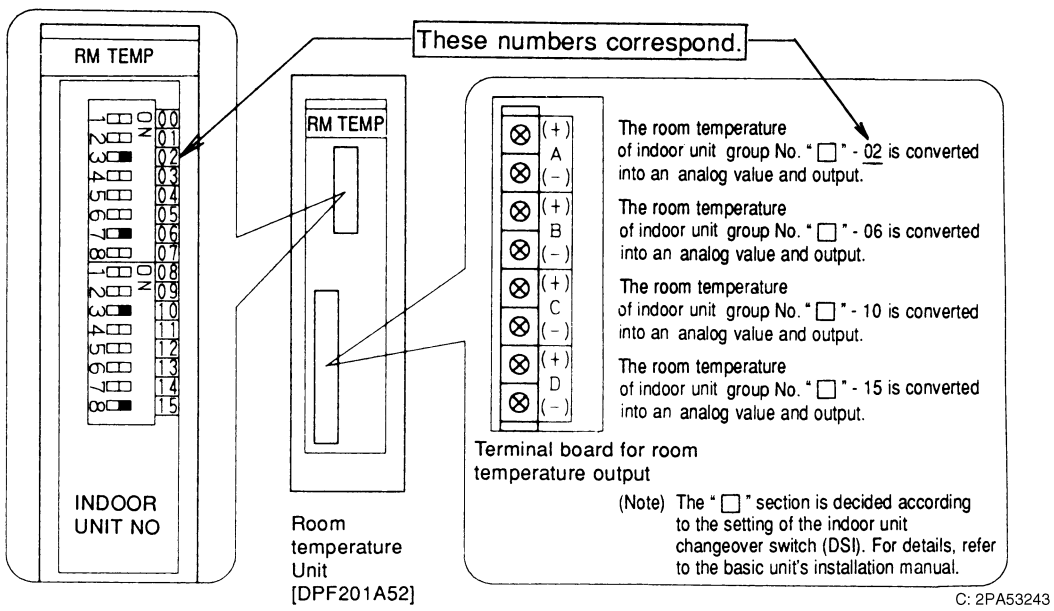
4 INITIAL SETTING

Room temperature Unit [DPF201A52]

Use the method described below to select the indoor unit group No. for which room temperature measuring is to be carried out. Set exactly four of sixteen indoor unit No. selector switches to ON. (All set to OFF for factory set)

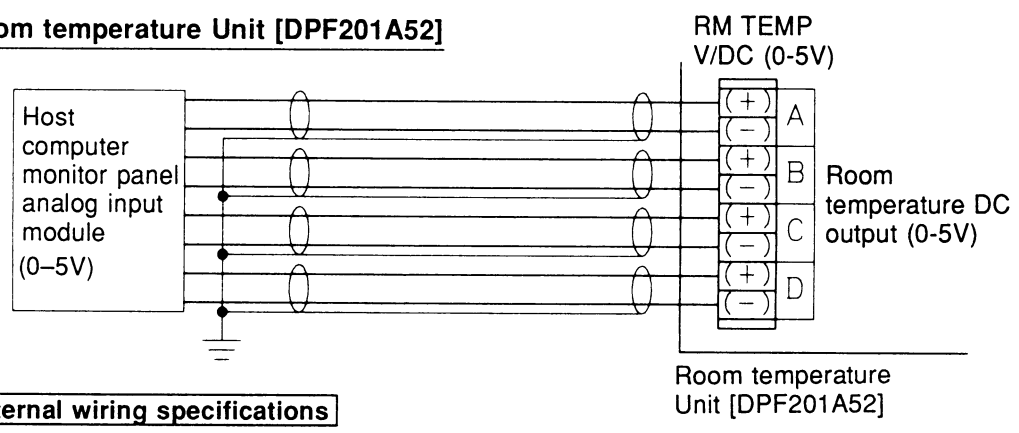
(NOTES)
- The numbers of the switches set to ON correspond to analog output of terminals A through D of the terminal board for room temperature measuring output, in order starting from the smallest number.
- If more than four switches are set to ON, the smallest number switch set to ON to the fourth are effective.

Example of switch settings and corresponding output terminals



5 ELECTRIC WIRING

Room temperature Unit [DPF201A52]



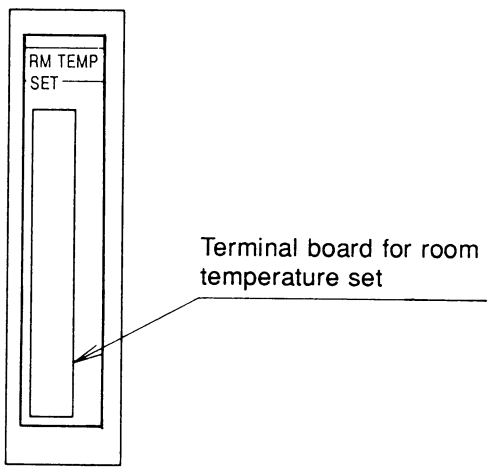
External wiring specifications

Recommended cable:	0.9 mm CPEV-S (2 wire) or 0.9 mm^2 CVV-S (2 wire)
Wiring length:	Max. 150 m per cable, however if the limit for the host computer monitor panel is 150 m or less, it is given priority.
Other:	Ground the shield part at one side as shown in the figure above. Keep separate from the power line in order to prevent malfunction.

C: 2PA53243

29.3 DPF201A53 — Temperature Setting Units

1 APPEARANCE AND PART NAMES



Room temperature set Unit
[DPF201A53]

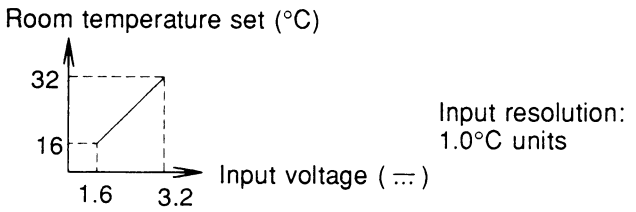
NOTE When handling, be careful not to damage the electronic components on the PC board.

2 DESCRIPTION OF FUNCTIONS

Room temperature set Unit [DPF201A53]

By applying ⎓ 1.6–3.2V, the room temperature can be individually set for sixteen groups of indoor units controlled / monitored by the basic unit.

Output characteristics

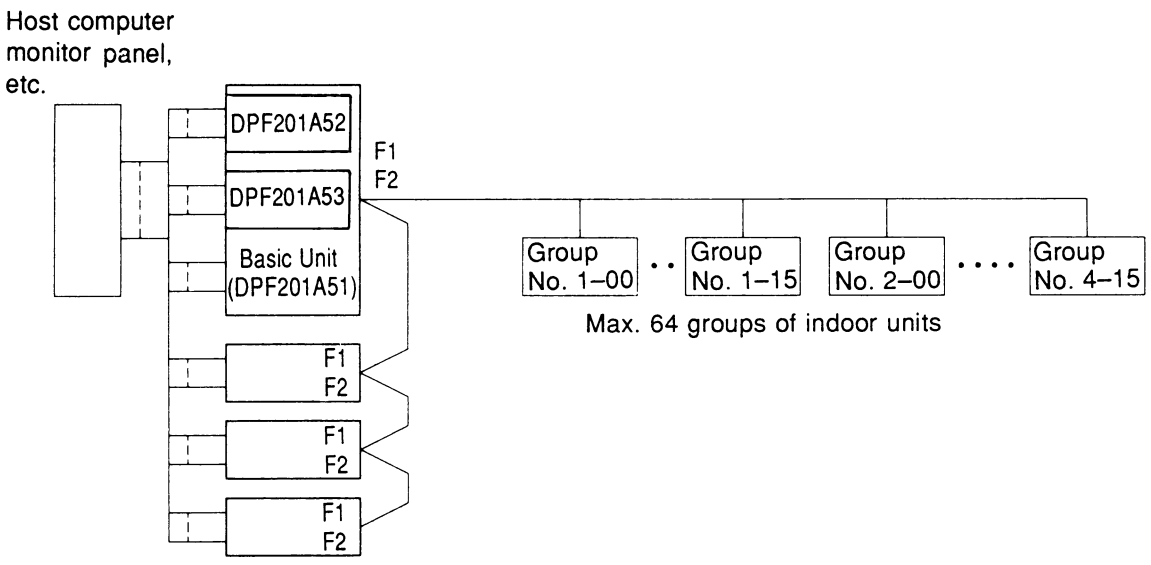


Input resolution:
1.0°C units

NOTE: The impedance interface for the room temperature set unit is 10 kΩ or more.

C: 2PA53243

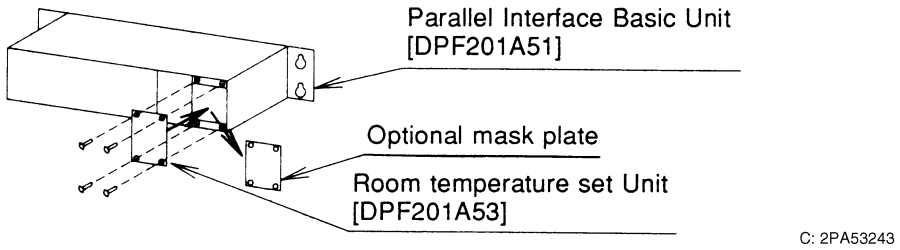
System Configuration Diagram



3 INSTALLATION

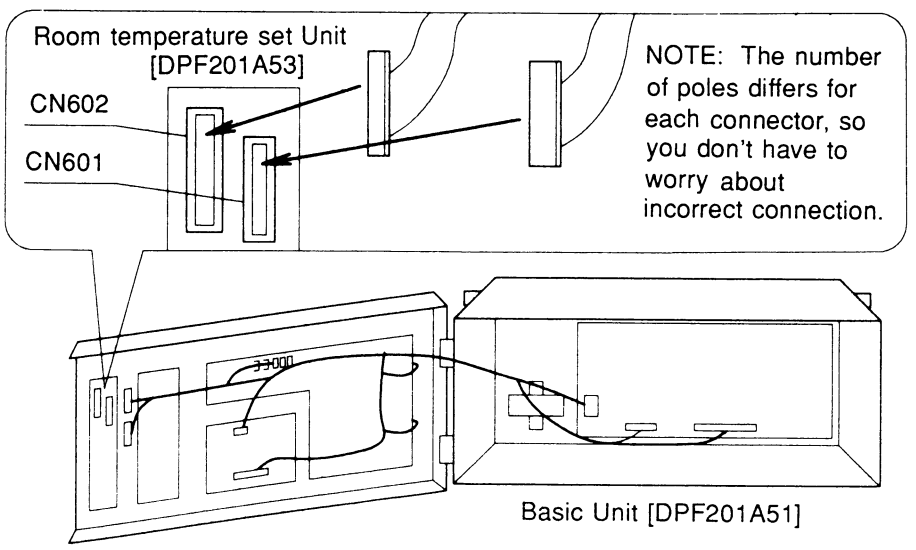
Room temperature set Unit [DPF201A53]

① Remove the optional mask plate on the right side of the basic unit, and fasten the kit with screws.



C: 2PA53243

② Plug the basic unit's connector into the kit.
- Loosen the knurling screw on the front right side of the basic unit and open the upper cover towards yourself as shown in the figure below.
- Remove the clamp binding the 2 connector leads, and firmly plug the connectors into the 2 places shown in the figure below.
- Close the basic unit's upper cover.



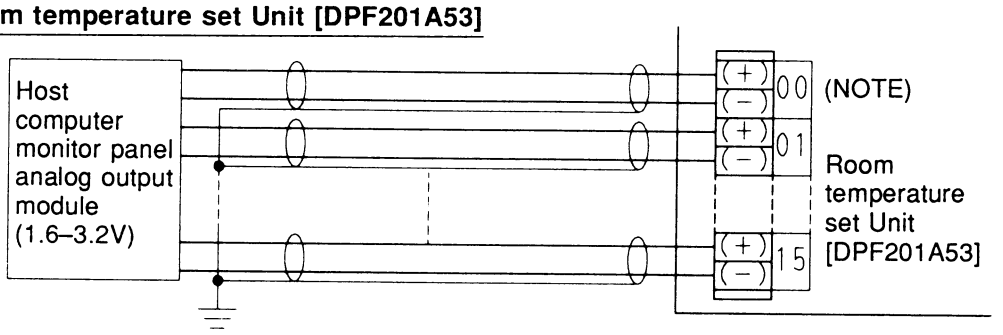
4 INITIAL SETTING

Room temperature set Unit [DPF201A53]

There are no initial setting parameters.

5 ELECTRIC WIRING

Room temperature set Unit [DPF201A53]



NOTE: The terminal board numbers correspond to indoor unit group numbers.
Example: Wire the contact that controls indoor unit group No. 1-08 to input terminal No. 08.

External wiring specifications

Recommended cable:	0.9 mm CPEV-S (2 wire) or 0.9 mm^2 CVV-S (2 wire)
Wiring length:	Max. 150 m per cable, however if the limit for the host computer monitor panel is 150 m or less, it is given priority.
Other:	Ground the shield part at one side as shown in the figure above. Keep separate from the power line in order to prevent malfunction.

C: 2PA53243