

BACnet Gateway INSTALLATION MANUAL

DMS502B71

This manual must be read prior to installation. During installation, please refer to the indoor unit installation manual.

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 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 used to alert 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 are 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 sulfuric 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.

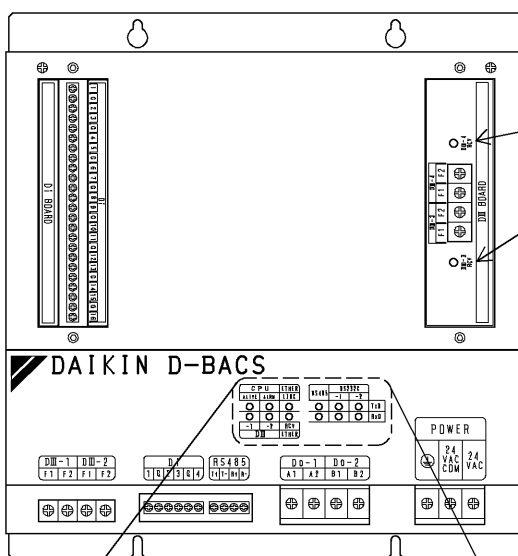
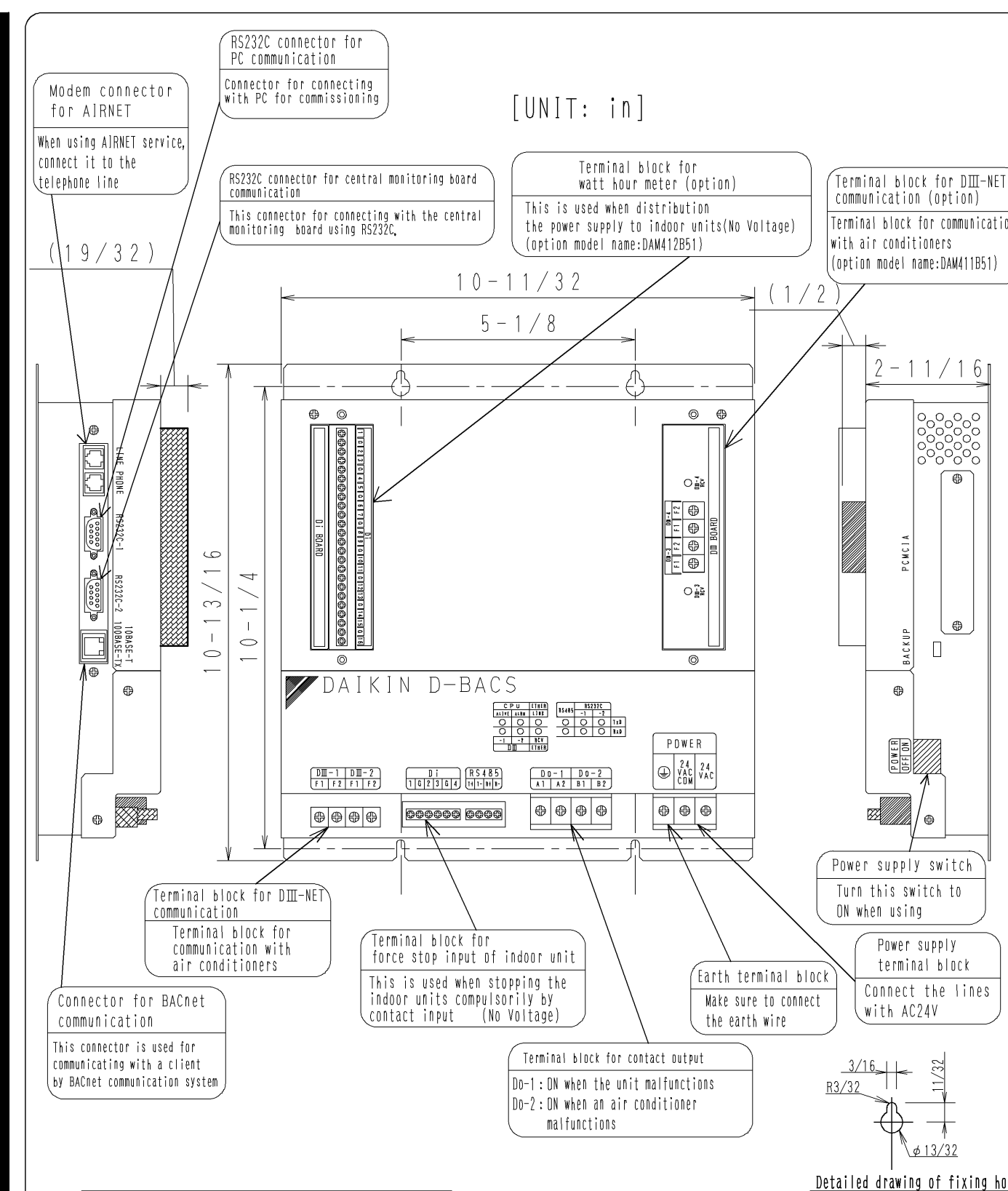
In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

1 Components

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

BACnet Gateway	1 set
INSTALLATION MANUAL	1 copy

2 Names and functions of each part

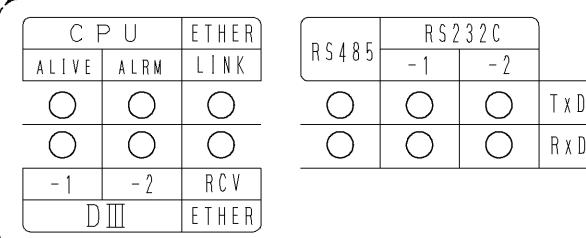


LED display

D III - 4 RCV	It flashes when it receives/transmits data from/to the equipment connected with DIII-4 such as air conditioners
D III - 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.
D III - 1	It flashes when it receives/transmits data from/to the equipment connected with DIII-1 such as air conditioners
D III - 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



3 Installation

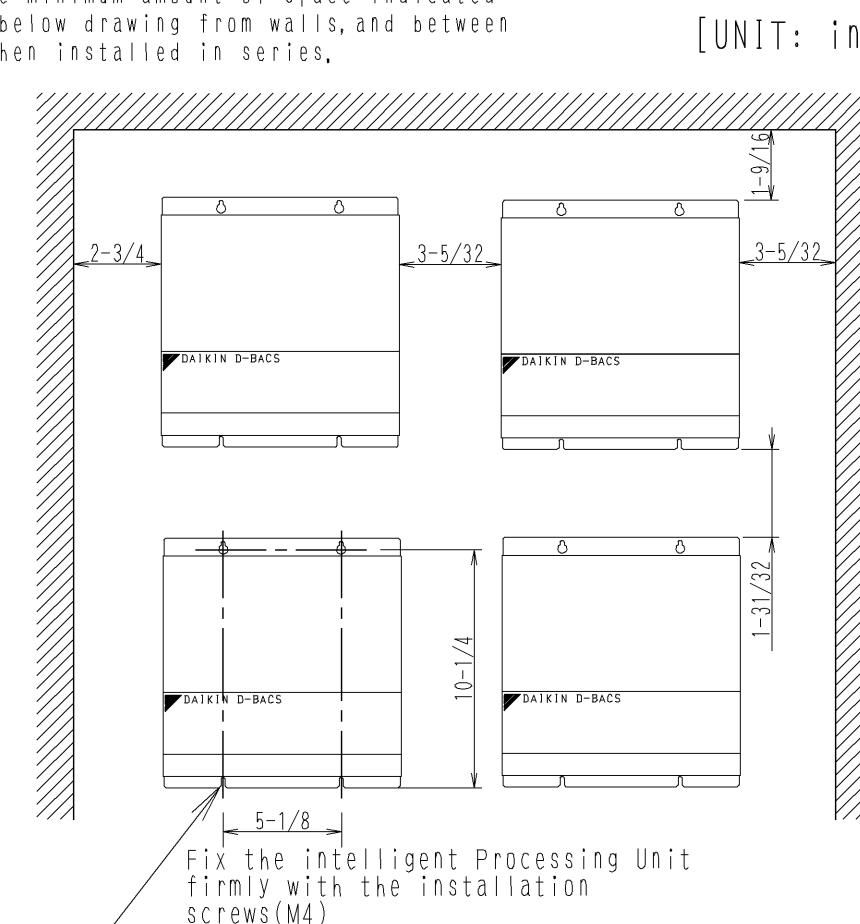
Don't fail to turn OFF the indoor unit power switch before installing BACnet Gateway. Failure to observe this instruction could result in electric shock.

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 3-15/16in

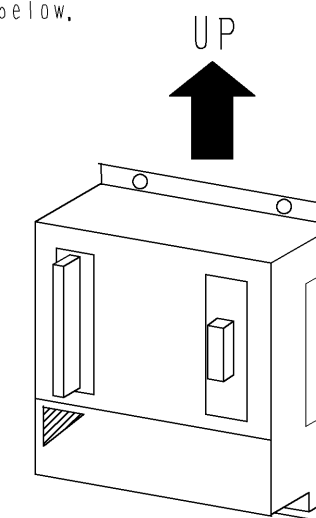
Required installation space

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



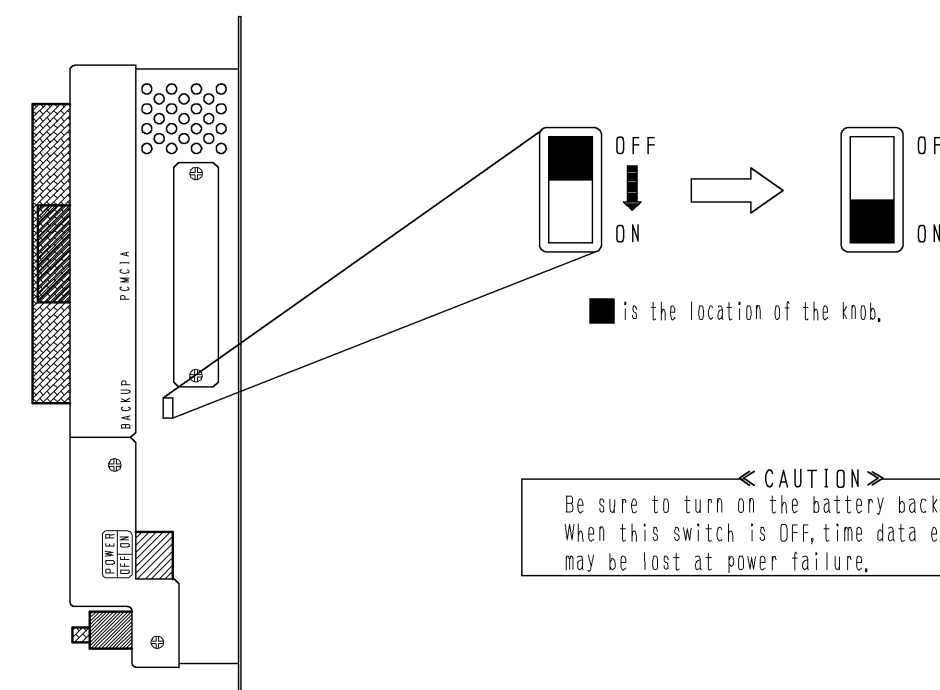
How to install

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.



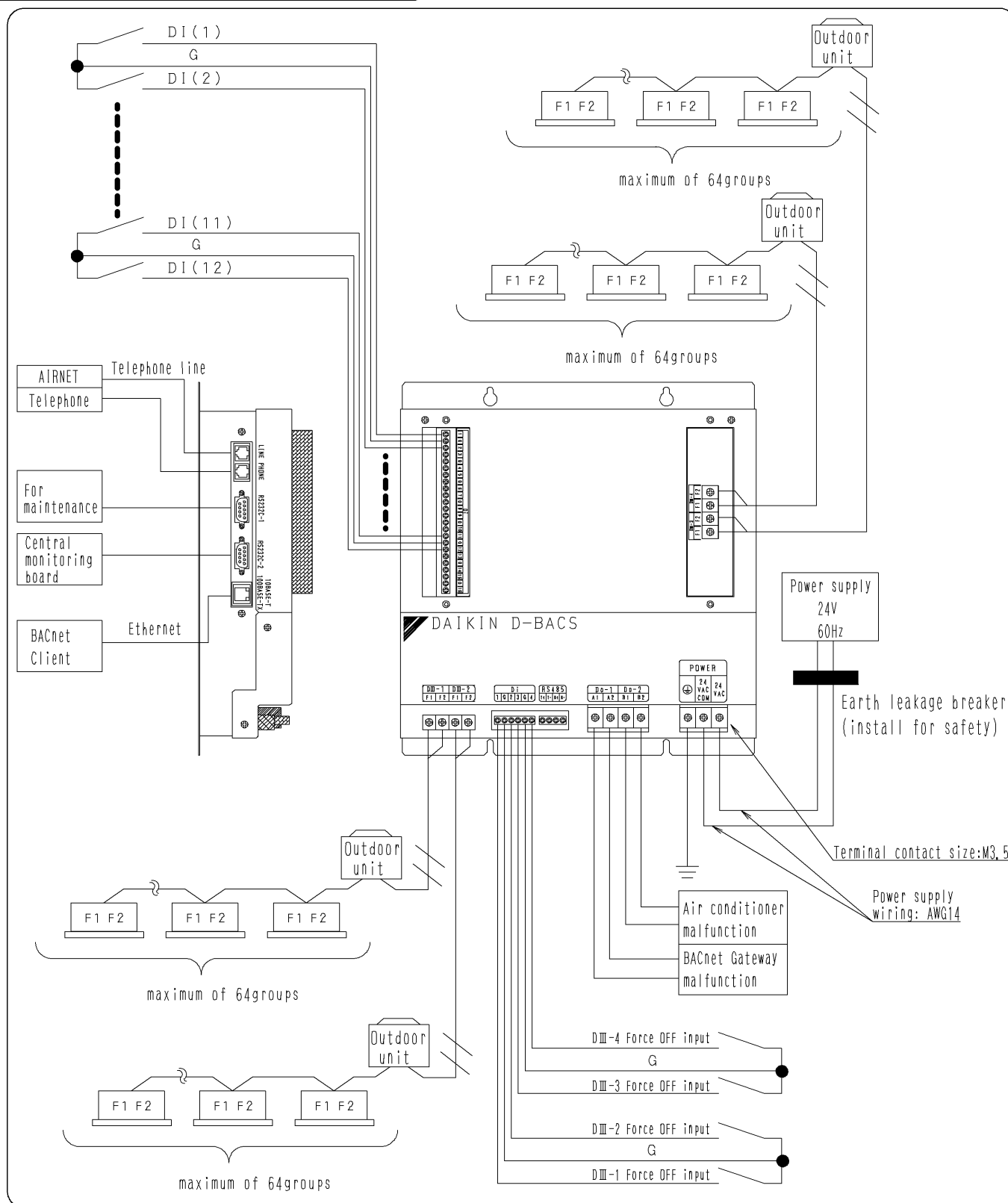
CAUTION
Be sure to turn on the battery backup switch. When this switch is OFF, time data etc. may be lost at power failure.

TO BACK

4 「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 together with other centralized controllers such as centralized management controllers or ON/OFF controllers.

5 Malfunction of unit

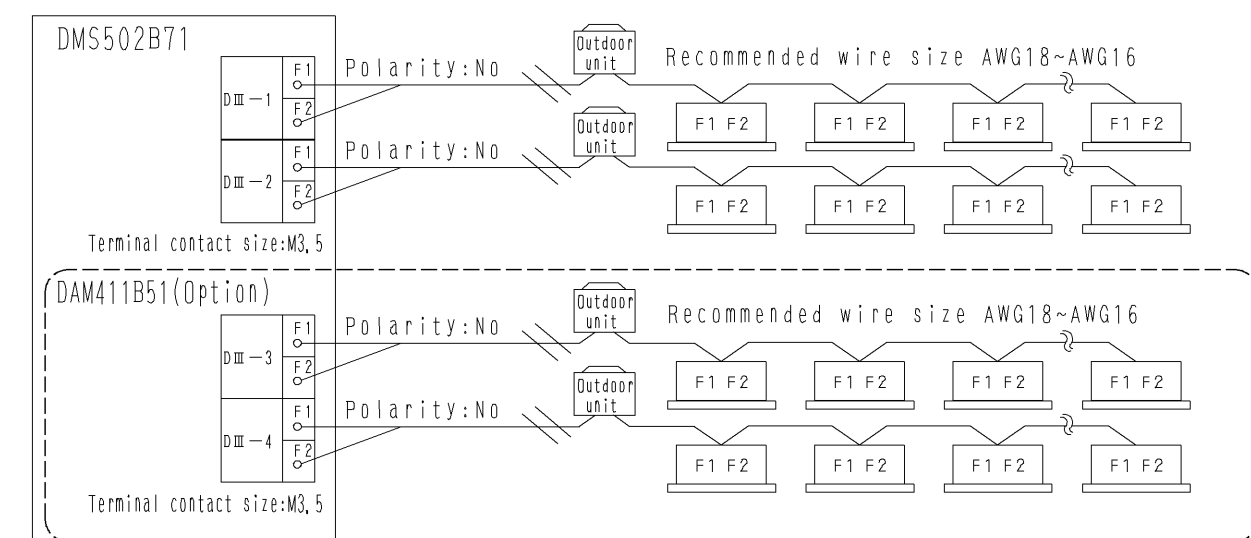


6 Electric Wiring Connection

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

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

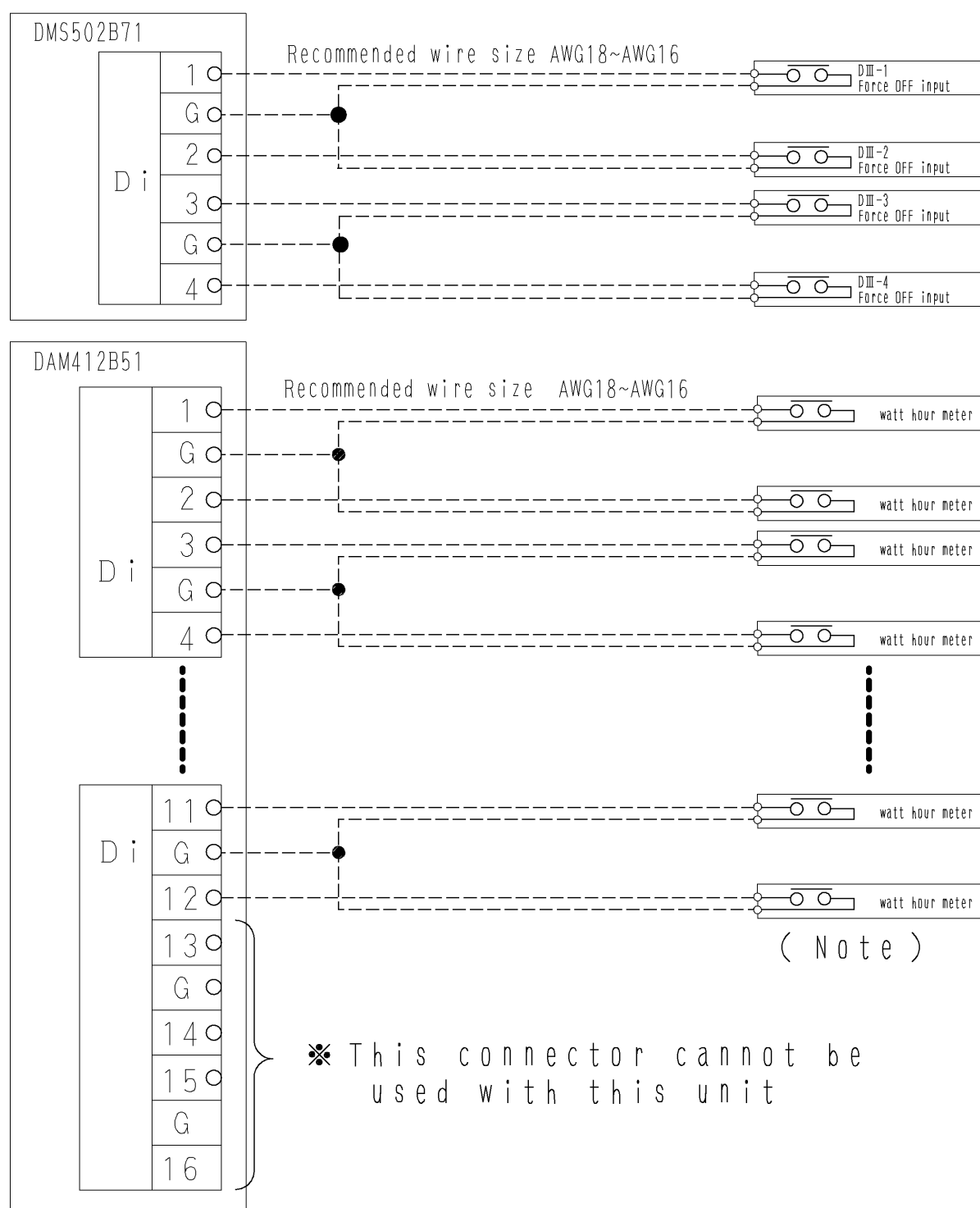
DIII-NET wiring



Cautions for wiring

1. Do not use multicore cables with three or more cores
2. Use wires of sizes between AWG18 and AWG16
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 3280ft

No voltage contact input wiring

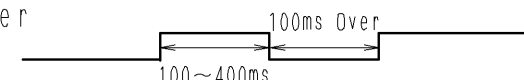


(Note)

※ This connector cannot be used with this unit

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

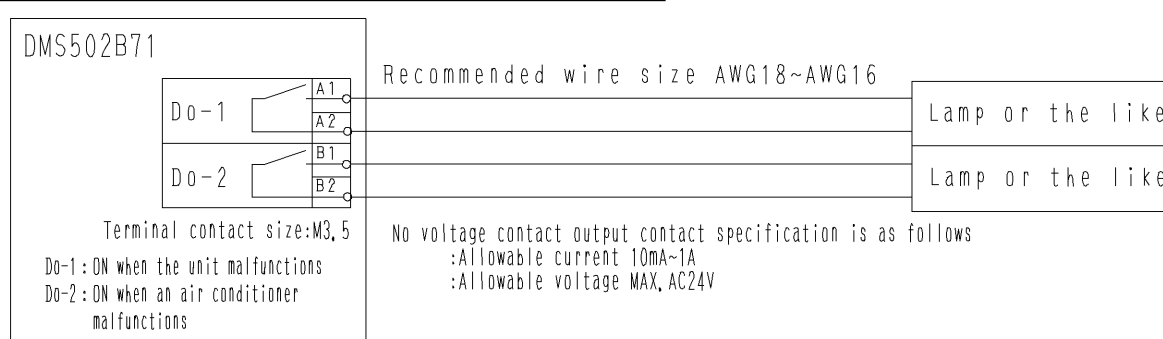
The pulse of watt hour meter



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 AWG18 and AWG16
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 492ft

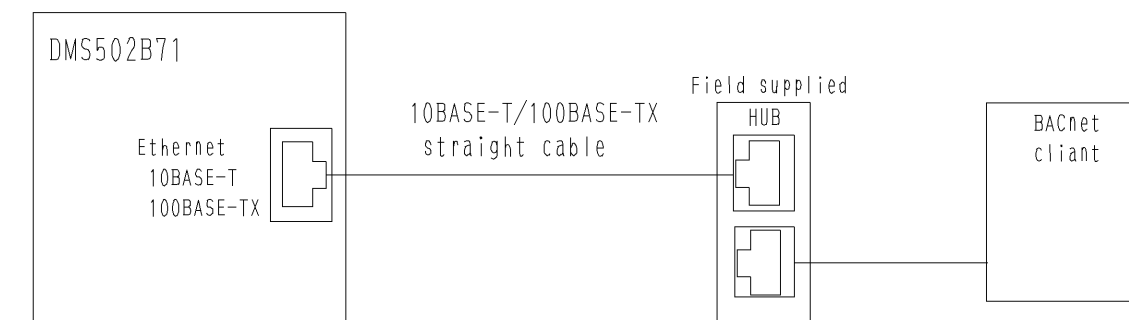
No voltage contact output wiring



Cautions for wiring

1. Do not use multicore cables with three or more cores
2. Use wires of sizes between AWG18 and AWG16
3. Do not bind the wire for control
4. Wirings for control must be isolated from the power lines
5. Wire length: Max 492ft

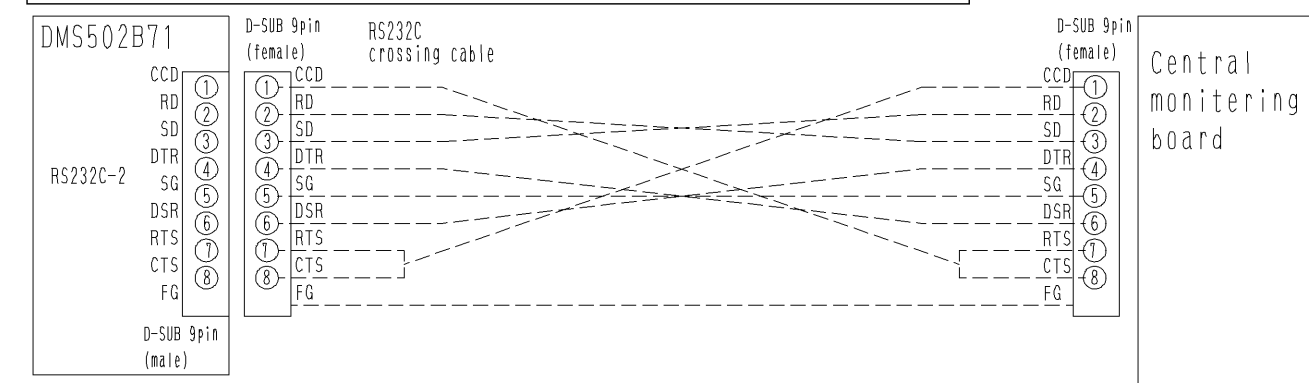
Ethernet communication wiring



Cautions for wiring

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

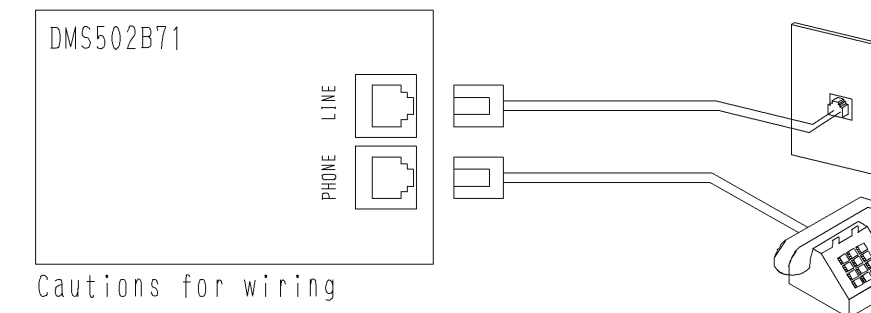
Communication between central monitoring board



Interface	: RS232C
Baud rate	: 9600 or 4800 bps (automatic baud rate detection allows matching of baud rates between BACnet Gateway and Central monitoring board)
Transmission method	: Asynchronous; Start bit: 1, Stop bit: 1
Control protocol	: Polling/Selecting (centralized); Comforms to JISX5002. Control station : Central monitoring board Substation : DMS502B71
Transfer code	: JIS7 unit +1 parity bit
Error control	: Vertical parity check (Even) Horizontal parity check (LRC) Timer-based monitoring
Wiring length	: Max. 49ft

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.

7 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 BACnet Gateway. (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 "BB".)

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

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

(4) Use the "MODE" 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 "MODE" to set the selected group No.

(6) Press "MODE" 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.

