

# Part 9 Installation Manual (DMS504B51)

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# 1. Installation Manual

## 1.1 DMS504B51

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 overheating, 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.

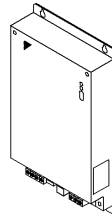
1. Cuisine and other place where the controller is inevitably exposed to mineral oil, scattered oil or steam. Installing at such places could cause deterioration of the resin parts, corrosion or short circuit.
2. Where corrosive gases such as sulfur dioxide generate inevitably.
3. Where a machine as 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 BACKUP BATTERY SWITCH.

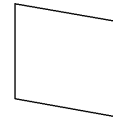
# 1 Components

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

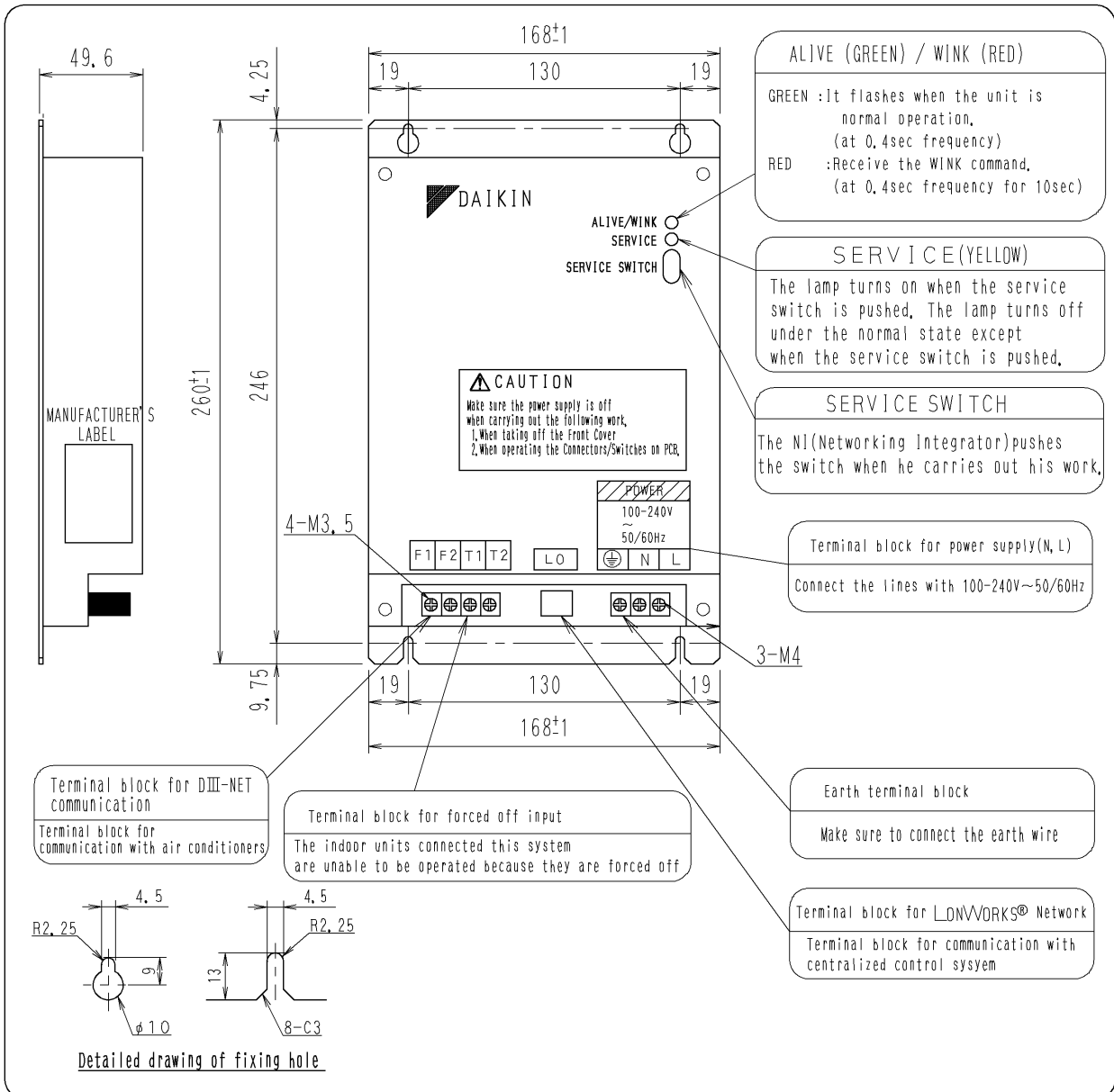
DMS-IF  
DMS504B51



INSTALLATION  
MANUAL

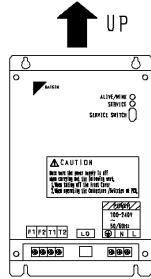


# 2 Names and functions of each part



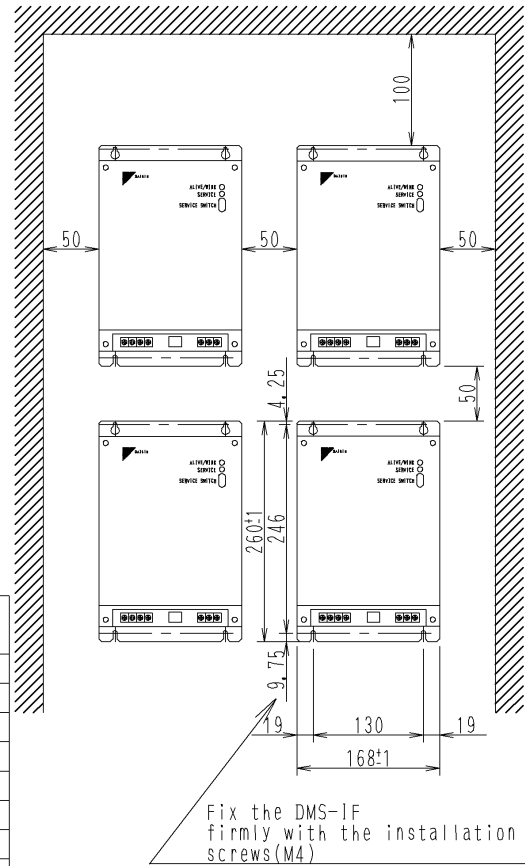
### ③ Installation

- 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.



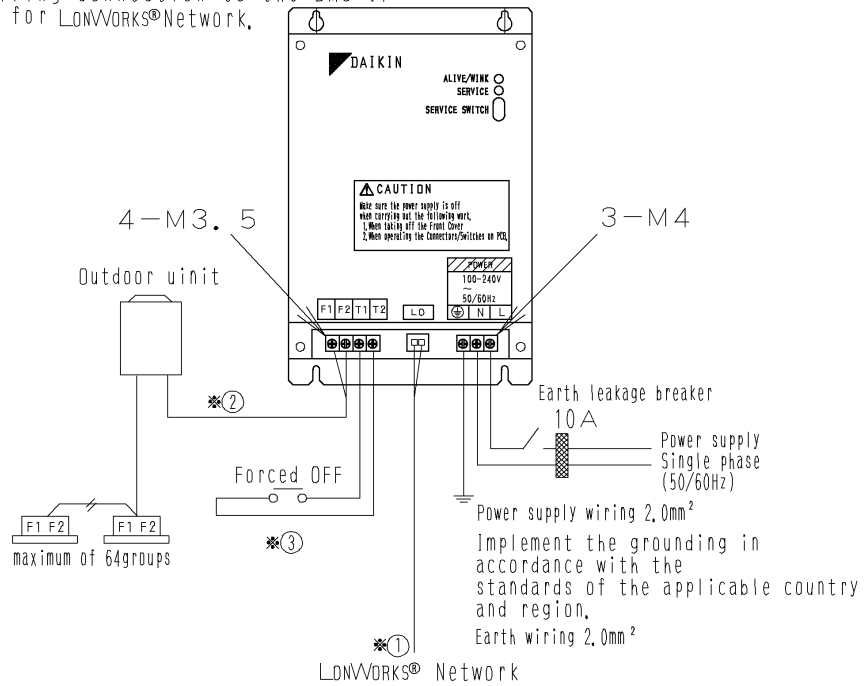
Make sure to install the unit vertically. Do not install the unit horizontally, because it may cause malfunction,

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°C
	(3)Ambient humidity : 0~95% (Sweating is not acceptbale)
	(4)Preservation : -20~+60°C
3) Performance :	Insulation resistance : 50MΩ or more by DC500 megohmmeter
4)Mass :	1,5Kg
5)Colour of the unit :	stainless steel sus304-NO, 4



## 4 Electric Wiring Connection

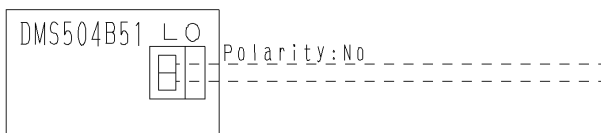
- Use a round crimp terminal with reinforcing sleeve for safety wiring connection to the DMS-IF except the terminal for LonWORKS® Network.



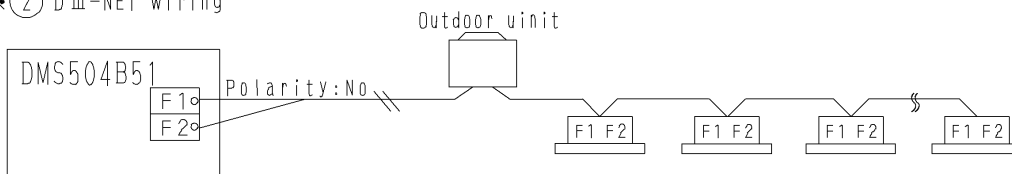
## 5 Wiring specification

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

- \*① LonWORKS® Network communication wiring  
Use the dedicated line for the LonWORKS® Network.



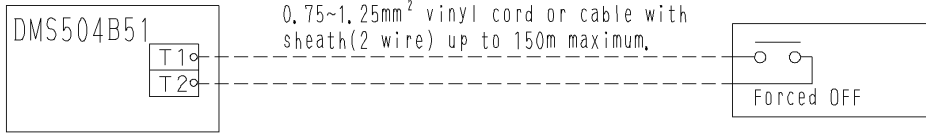
- \*② DⅢ-NET wiring



1. Do not use multicore cables with three or more cores.
2. Use wires of sizes between 0.75mm<sup>2</sup> and 1.25mm<sup>2</sup>
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



Cautions for wiring

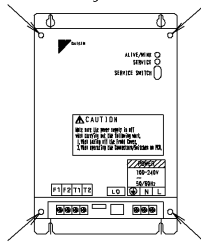
When Forced OFF INPUT is kept on, the indoor units connected this system are unable to be operated because they are Forced OFF.

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.

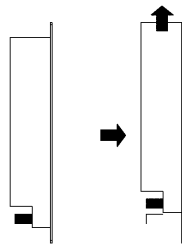
## ⑥ Names and functions of P. C. B ASSY

① How to open the cover

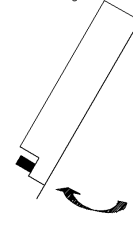
- Remove the 4 screws as shown in the drawing below



- Slide the cover upward



- Lift the cover to the front as shown in the drawing

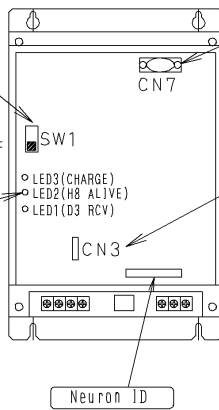


② Names and functions of P. C. B ASSY

Backup battery switch

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

ON  
OFF



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 centralized control

- The connector must be permanently connected (The connector is connected when shipped out of the factory. Do not pull out the connector)

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 D III-Net communication is normal.  
LED1 flashes when receiving data by D III-Net communication.

Since the control substrate is weak to static electricity, do not touch the parts on the substrate. Make sure to discharge 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).

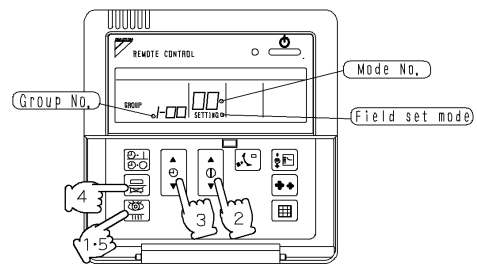
**Turn ON** the switch for backup of set data such as the information regarding the network variables at power failure.

- 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- para- tions	<ul style="list-style-type: none"> <li>• Check no troubles exist with installation and wiring before turning ON the power.</li> <li>• Turn ON the power to the indoor unit and DMS-IF. Setting is not possible with the power OFF.</li> </ul>
	<ul style="list-style-type: none"> <li>• 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.</li> </ul>

1	Hold down  for 4 seconds or more to enter the field set mode.
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2	Press  and set the mode NO. to '00'.
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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  button to initiate flashing of "GROUP" on the liquid crystal display.
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4	Press  to set the group No.
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5	Press  . This will return the system to the normal mode.
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• 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 Ventiaire or adapters (wiring adapter for other air conditioners, etc.), refer to the instruction manual of the said unit.