

INSTALLATION MANUAL

(PART NO. 9378874015)

For authorized service personnel only.

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SAFETY PRECAUTIONS

- The "SAFETY PRECAUTIONS" indicated in this manual contain important information pertaining to your safety. Be sure to observe them.
- Request the user to keep this manual on hand for future use, such as for relocating or repairing the unit.

WARNING This mark indicates procedures which, if improperly performed, might lead to the death or serious injury of the user.

Perform electrical work by an authorized service personnel in accordance with this manual and the electrical wiring regulations or implementation regulations of the country. Also do not install this unit by yourself. Improper electric work will cause electric shock or a fire.

Perform installation work in accordance with this manual. Request an authorized service personnel to perform installation work. Do not install this unit by yourself. Improper installation will cause injury, electric shock, fire, etc.

In the event of a malfunction (burning smell, etc.), immediately stop operation, turn off the electrical breaker, and consult authorized service personnel.

Install a leakage circuit breaker to power supply cable in accordance with the related laws and regulations and electric company standards.

Use a power source exclusively for this unit. Never share the power source with other electrical equipment. Doing so will cause fire and electric shock.

Do not install the unit in the following areas:

- Do not install the unit near a source of heat, steam, or flammable gas.
- Area filled with mineral oil or containing a large amount of splashed oil or steam, such as a kitchen. It will deteriorate plastic parts, causing the parts to fall or the unit to leak water.
- Area that generates substances that adversely affect the equipment, such as sulfuric gas, chlorine gas, acid, or alkali. It will cause the copper pipes and brazed joints to corrode, which can cause refrigerant leakage.
- Area containing equipment that generates electromagnetic interference. It will cause the control system to malfunction, preventing the unit from operating normally.
- Area that can cause combustible gas to leak, contains suspended carbon fibers or flammable dust, or volatile inflammables such as paint thinner or gasoline. If gas leaks and settles around the unit, it can cause a fire.
- Do not use the unit for special purposes, such as storing food, raising animals, growing plants, or preserving precision devices or art objects. It can degrade the quality of the preserved or stored objects.
- Install the unit in a well-ventilated place avoiding rains and direct sunlight.

Do not operate this unit when your hands are wet. Touching the unit with wet hands will cause an electric shock.

If children may approach the unit, take preventive measures so that they cannot reach the unit.

CAUTION This mark indicates procedures which, if improperly performed, might possibly result in personal harm to the user, or damage to property.

Pay abundant care when transporting this unit because it is a precision device. Improper transportation will cause trouble.

Do not touch the switches with sharp objects. Doing so will cause injury, trouble, or electric shock.

Do not expose this unit directly to water. Doing so will cause trouble, electric shock, or heating.

Do not set vessels containing a liquid on this unit. Doing so will cause heating, fire, or electric shock.

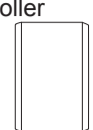



Dispose of the packing materials safely. Tear apart and dispose of the plastic packing bags so that children cannot play with them. There is the danger of suffocation if children play with the original plastic bags.

Do not insert articles into the slit parts of this unit. Doing so will cause trouble, heating, or electric shock.

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ACCESSORIES

The following installation parts are supplied. Use them as required.

Name and Shape	Q'ty	Application	Name and Shape	Q'ty	Application
External switch controller 	1	Main unit	Screw (M4 x 16mm) 	2	For installing the external switch controller
Installation manual 	1	This manual	Binder 	5	For external switch controller and cable binding

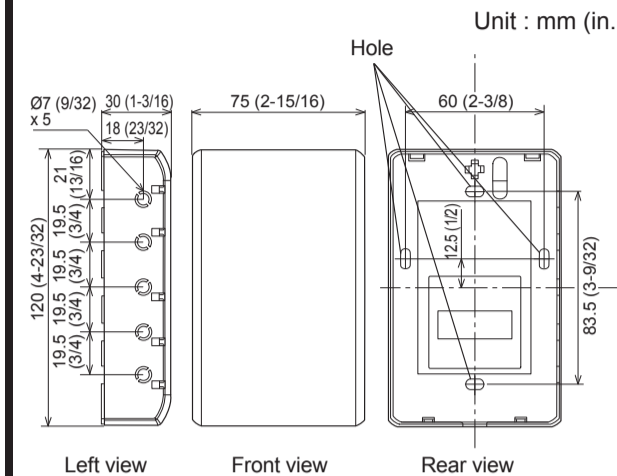
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ELECTRICAL REQUIREMENT

Use	Size	Wire type	Remarks
Remote controller cable	0.33mm ² (22AWG)	Polar 3core, Twisted pair	Use shield cable
External input cable	0.33mm ² (22AWG)	Polar 2core, Twisted pair	

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DIMENSIONS



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INSTALLING THE EXTERNAL SWITCH CONTROLLER

WARNING

Always use the accessories and specified installation work parts. Check the state of the installation parts. Not using the specified parts will cause units to fall off, water leakage, electric shock, fire, etc.

Install at a place that can withstand the weight of the unit and install positively so that the unit will not topple or fall.

When installing this unit, make sure that there are no children nearby. Otherwise, injury or electric shock could result.

CAUTION

Do not set the DIP switch of this unit except as specified in this manual or the installation manual supplied with the air conditioner. Setting the switches other than specified will cause an accident or trouble.

Use an insulated screwdriver to set the DIP switches.

Before opening the case of this unit, completely discharge static electricity charged on you body. Not doing so will cause trouble.

Do not touch the circuit board and circuit board parts directly with your hands. Otherwise, injury or electric shock could result.

Tightening the mounting screws too tight will damage the case of this unit.

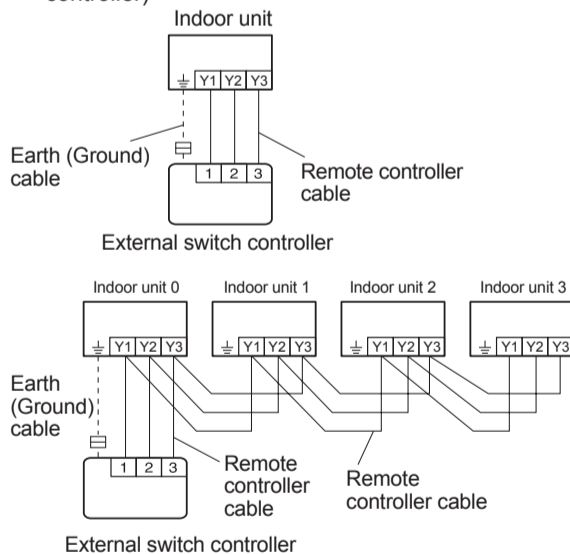
When inserting the hooks, do not push them in unreasonably. Doing so may damage or deform the claws.

* External switch controller and remote controller have the same indoor unit connection method and number of units restriction. "Remote controller" includes external switch controller as well.

1. Group control

- A number of indoor units can be operated at the same time using a single external switch controller.
- S-series air conditioners cannot be connected with V series air conditioners.
- S-series air conditioners with model change code A or B cannot be connected with S-series air conditioners with model change code C.

(1) Wiring method (indoor unit to external switch controller)

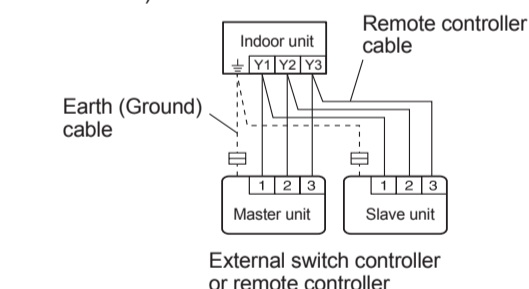


- (2) Remote controller address setting
- Set each remote controller address using the rotary switch of each indoor unit in order from 0. (Refer to the installation manual for the indoor unit.)

2. External switch controller and remote controller, or dual external switch controllers

- 2 remote controllers can be used to operate the indoor units.
- The remote controller (UTB-★LA) and external switch controller (UTY-TEKX) cannot be connected at the same time.

(1) Wiring method (indoor unit to external switch controller)



(2) External switch controller DIP switch setting

Set the external switch controller DIP switch 1 No. 5 according to the following table. When using an external switch controller and a remote controller other than it, always set the remote controller to master. If set to slave, operation cannot be guaranteed.

Number of remote controllers	Master unit	Slave unit
	DIP switch1 No. 5	DIP switch1 No. 5
1 (Single)	OFF	—
2 (Dual)	OFF	ON

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WIRING

WARNING

Before starting installation work, turn off the power of this unit and the connection destination. Do not turn on the power again until installation is completed. Otherwise, it will cause electric shock or fire.

Use the accessories or specified power supply cable and connection cables. Do not modify power supply cable and connection cables other than those specified, do not use extension cables, and do not use independent branch wiring. Overcurrent may cause electric shock or fire.

Install the connection cables securely to the terminal block. Confirm that external force is not applied to the cable. Use connection cables made of the specified cable. If intermediate connection or insertion fixing are imperfect, it will cause electric shock, fire, etc.

When connecting the connection cables, route the cables so that the case of this unit is securely fixed. If the case is imperfectly fixed, it may cause fire or overheating of the terminals.

Perform earth (ground) work positively. Do not connect the earth (ground) cable to a telephone cable, water pipe, or conductor rod.

Always fasten the outside covering of the connection cable with the cable clamp. (If the insulator is chafed, electric leakage may occur.)

Perform all wiring works so that the user does not touch the wiring. Otherwise, injury or electric shock could result.

If any cable is damaged, do not repair or modify it yourself. Improper work will cause electric shock or fire.

CAUTION

Do not bind the remote controller cable and the connection cable together with or parallel to the power supply cable of the indoor and outdoor units. It may cause erroneous operation.

When performing wiring work, be careful not to damage the cable or injure yourself. Also, connect the connectors securely. Loose connectors will cause trouble, heating, fire, or electric shock.

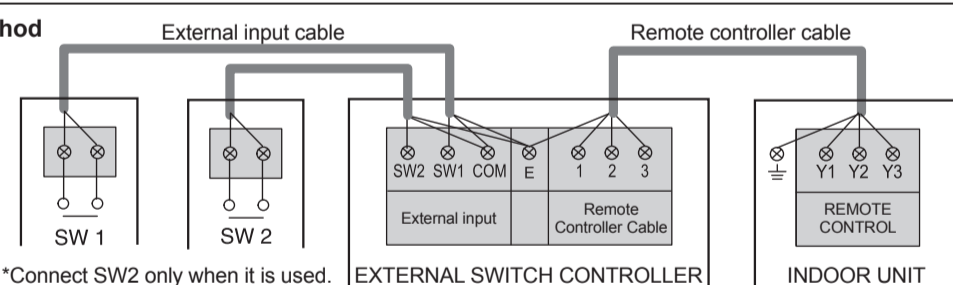
Install the indoor and outdoor units, power supply cable, transmission cable and remote controller cable 1 m (40 in.) away from television and radio to avoid distorted images and noise. Otherwise, a malfunction could result.

Perform wiring so that water does not enter this unit along the external wiring. Always install a trap to the wiring or take other countermeasures. Otherwise it will cause trouble or electric shock or fire.

Confirm the name of each unit and name of each terminal block of the unit and connect the wiring in accordance with the directions given in the manual so that there is no incorrect wiring. Incorrect wiring will damage the electric parts and cause smoke and fire.

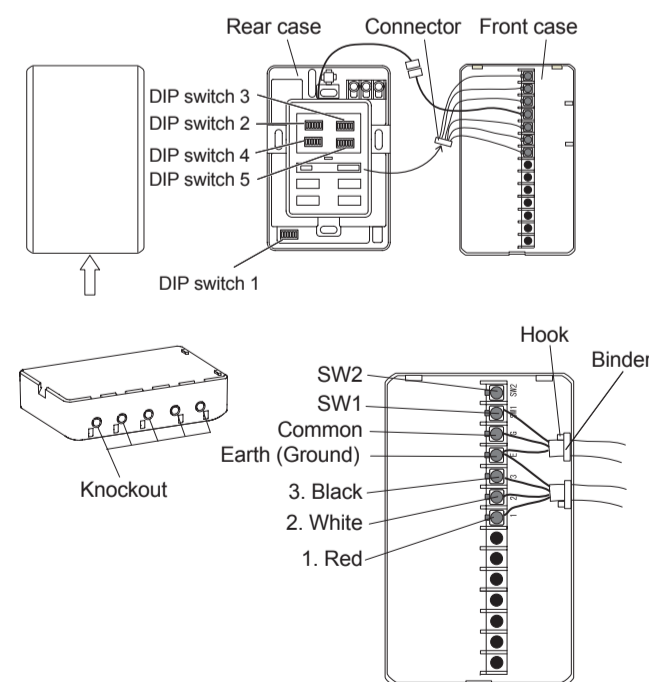
When installing the connection cable near a source of electromagnetic waves, use shielded cable. Otherwise, a breakdown or malfunction could result.

Wiring method



Installation

- Insert the end of a flat blade screwdriver at the arrow parts of the groove at the side of the controller case and remove the front case by turning the screwdriver.
- When disconnecting the connector from the circuit board, be careful not to break the cable. (Refer to the figure on the right.)
- Remove Knockout only for numbers of cables to be connected. Remove burr so that the edge is smooth. Put the cables through a hole.
- Connect the remote controller cable and external input cables to the terminal board.
- Clamp the cable and hook with the binder.
- Cut off the excess binder.
- Install the rear case to the wall, etc., with 2 screws. Fix the 2 screws in either horizontal or vertical position.
- Connect the connector to the circuit board in rear case and put it to the front case.



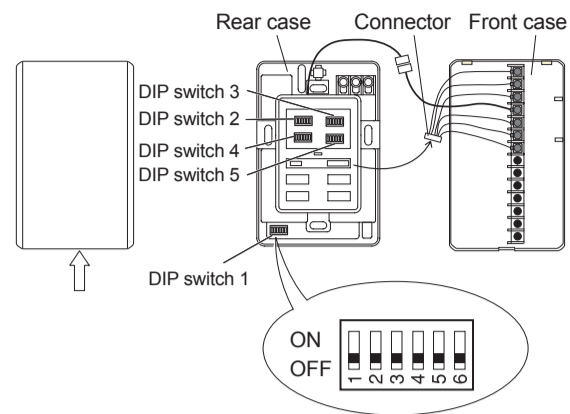
Tightening torque for installing cables to terminal block
0.8 to 1.2 N · m (7.1 to 10.6 lbf · in)

CAUTION

Do not set the DIP switch of this unit except as specified in this manual supplied with the air conditioner. Setting the switches other than specified will cause an accident or trouble.

Use an insulated screwdriver to set the DIP switches.

Set the external switch controller DIP switches.



NO.	Switch state		Detail	
	OFF	ON		
DIP switch 1	1,2	Refer to "(1) MODE setting".	MODE setting	
	3	★ Instant (200msec)	Delay (1 min)	
	4	★ R/C Prohibition effective	R/C Prohibition ineffective	When R/C Prohibition is ineffective, setting change is possible even in the R/C Prohibition state.
	5	★ Master	Slave	Refer to "5. INSTALLING THE EXTERNAL SWITCH CONTROLLER".
	6	★ Fixed at OFF		Cannot be used.
	DIP switch 2	1-6	Refer to "(2) Operation mode setting".	Operation mode setting of parameter setting 1 (P1)
DIP switch 3	5	★ Contact ON ⇒ OFF	Contact OFF ⇒ ON	Setting contact input of SW1 at MODE 0
	6	★ No Condition	Unit in operation only	Operation conditions : Set to ON when switched to P1 or P2 setting by contact input only during indoor unit is in operation.
DIP switch 4	1-6	Refer to "(2) Operation mode setting".	Operation mode setting of parameter setting 2 (P2)	
DIP switch 5	5	★ Contact ON ⇒ OFF	Contact OFF ⇒ ON	Setting contact input of SW2 at MODE 0
	6		★ Fixed at ON	Cannot be used

(★ Factory setting)

Note:

- R/C Prohibition: Function which controls ON/OFF etc. of the remote controller by control unit (example: touch panel controller).

(1) MODE setting

MODE setting	DIP switch1		Detail
	No. 1	No. 2	
MODE 0	★ OFF	★ OFF	This MODE sets to P1 operation mode if SW1 has a contact input of DIP switch3-5. This MODE sets to P2 operation mode if SW2 has a contact input of DIP switch5-5.
MODE 1	OFF	ON	This MODE sets to P1 operation mode if a contact of SW1 is switched ON ⇒ OFF. This MODE sets to P2 operation mode if a contact of SW1 is switched OFF ⇒ ON.
MODE 2	ON	OFF	This MODE sets to P1 operation mode in 1 minute after stop operation if a contact of SW1 is switched ON ⇒ OFF. This MODE sets to P2 operation mode in 1 minute after stop operation if a contact of SW1 is switched OFF ⇒ ON. When switching the operation mode between heating and cooling, operation must be once stopped and then the reselected mode entered. At that time, use MODE 2.
No Setting	ON	ON	Cannot be used.

(★ Factory setting)

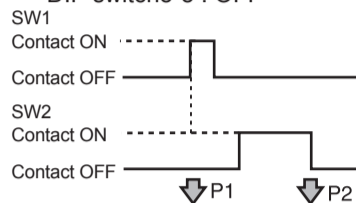
Note:

- Operation state set by DIP switch2, 3 ...P1
- Operation state set by DIP switch4, 5 ...P2

Example :

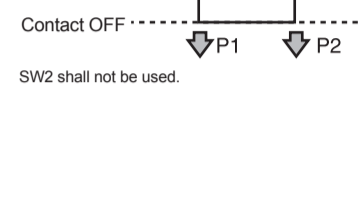
① MODE 0

DIP switch3-5 : ON
DIP switch5-5 : OFF



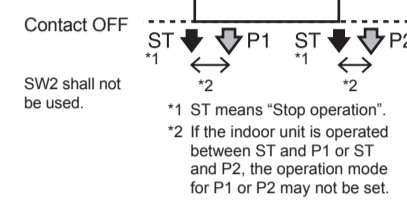
② MODE 1

SW1 Contact ON



③ MODE 2

SW1 Contact ON



(2) Operation mode setting

Set DIP switch2 and 3 for P1, DIP switch4 and 5 for P2, according to the following table.

Operation	DIP switch2,4	
	No. 1	No. 2
Not applicable	★ OFF	★ OFF
OFF	OFF	ON
ON	ON	OFF
SETBACK*1	ON	ON

Operation mode	DIP switch3,5	
	No. 1	No. 2
Not applicable	★ OFF	★ OFF
COOL	OFF	ON
HEAT*2,3	ON	OFF
Not setting	ON	ON

Fan speed	DIP switch3,5	
	No. 3	No. 4
Not applicable	★ OFF	★ OFF
HIGH	OFF	ON
MID	ON	OFF
LOW	ON	ON

Set temperature	DIP switch2,4			
	No. 3	No. 4	No. 5	No. 6
Not applicable	★ OFF	★ OFF	★ OFF	★ OFF
16°C*2,3 (60°F)	OFF	OFF	OFF	ON
17°C*2,3 (62°F)	OFF	OFF	ON	OFF
18°C (64°F)	OFF	OFF	ON	ON
19°C (66°F)	OFF	ON	OFF	OFF
20°C (68°F)	OFF	ON	OFF	ON
21°C (70°F)	OFF	ON	ON	OFF
22°C (72°F)	OFF	ON	ON	ON
23°C (74°F)	ON	OFF	OFF	OFF
24°C (76°F)	ON	OFF	OFF	ON
25°C (78°F)	ON	OFF	ON	OFF
26°C (80°F)	ON	OFF	ON	ON
27°C (82°F)	ON	ON	OFF	OFF
28°C (84°F)	ON	ON	OFF	ON
29°C (86°F)	ON	ON	ON	OFF
30°C (88°F)	ON	ON	ON	ON

(★ Factory setting)

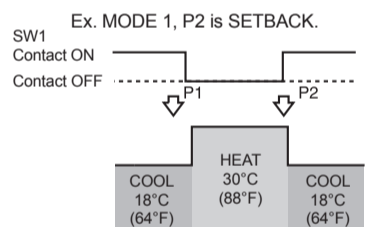
*1 Setting of SETBACK turns back the operation state to that of before switching parameter setting.

(Example shows that the operation state is set back to before switching to P1 setting.)

When SET BACK is set to ON, the Operation Mode, Fan Speed, and Set Temperature settings become ineffective. To make them effective, set SET BACK to OFF.

*2 Do not set the operation mode "HEAT", or the setting temperature "16°C (60°F)" or "17°C (62°F)" for COOLING ONLY MODEL. These settings do not function.

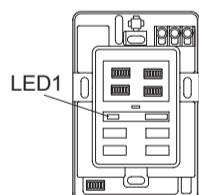
- *3 Units cannot operate correctly under the settings shown below:
- Set the operation mode to "HEAT" and temperature to "16°C (60°F)" or "17°C (62°F)" during operation in Cooling priority.
 - Set the operation mode to "COOL" during operation in Heating priority.
 - Set the Fan speed during the operation mode "DRY".



CAUTION

Recheck the wiring. Incorrect wiring will cause trouble.

- Check the external switch controller wiring and DIP switch settings.
- Check the indoor and outdoor unit wiring and circuit board switch settings, and then turn on the indoor and outdoor units.
- If the power source is connected correctly, LED 1 lights up. LED 1 blinks when errors occur as shown in the table below.



Displays the error contents at the timing at which LED1 blinks.

Error code	Contents
0.5 sec. ON/0.5sec. OFF flashing	Remote controller cable connection error (Indoor unit ⇄ External switch controller)
0.5 sec. ON/1.0sec. OFF flashing	Transmission error (Indoor unit ⇄ External switch controller)

Temperature	Operating	0-46°C (32-114°F)
	Packaged	-10-60°C (14-140°F)
Humidity		0-90% (RH)
		No condensation