

Refrigerant R410A Duct Type

SPLIT TYPE AIR CONDITIONER INSTALLATION INSTRUCTION SHEET

(PART NO. 9374536016)

Indoor unit is an appliance not accessible to the general public.

For authorized service personnel only.

WARNING	This mark indicates procedures which, if improperly performed, might lead to the death or serious injury of the user.
CAUTION	This mark indicates procedures which, if improperly performed, might possibly result in personal harm to the user, or damage to property.

This air conditioner uses new refrigerant HFC (R410A).

The basic installation work procedures are the same as conventional refrigerant models. However, pay careful attention to the following points:

- Since the working pressure is 1.6 times higher than that of conventional refrigerant models, some of the piping and installation and service tools are special. (See the table below.) Especially, when replacing a conventional refrigerant model with a new refrigerant R410A model, always replace the conventional piping and flare nuts with the R410A piping and flare nuts.
- Models that use refrigerant R410A have a different charging port thread diameter to prevent erroneous charging with conventional refrigerant and for safety. Therefore, check beforehand. [The charging port thread diameter for R410A is 1/2 UNF 20 threads per inch.]
- Be more careful that foreign matter (oil, water, etc.) does not enter the piping than with conventional refrigerant models. Also, when storing the piping, securely seal the openings by pinching, taping, etc.
- When charging the refrigerant, take into account the slight change in the composition of the gas and liquid phases, and always charge from the liquid phase side whose composition is stable.
- When moving, if the compressor stops during pump down, close the valve immediately.

Special tools for R410A

Tool name	Contents of change
Gauge manifold	Pressure is high and cannot be measured with a conventional gauge. To prevent erroneous mixing of other refrigerants, the diameter of each port has been changed. It is recommended the gauge with seals -0.1 to 5.3 MPa (-76 cmHg to 53 kgf/cm ²) for high pressure. -0.1 to 3.8 MPa (-76 cmHg to 38 kgf/cm ²) for low pressure.
Charge hose	To increase pressure resistance, the hose material and base size were changed.
Vacuum pump	A conventional vacuum pump can be used by installing a vacuum pump adapter.
Gas leakage detector	Special gas leakage detector for HFC refrigerant R410A.

Copper pipes

It is necessary to use seamless copper pipes and it is desirable that the amount of residual oil is less than 40 mg/10m. Do not use copper pipes having a collapsed, deformed or discolored portion (especially on the interior surface). Otherwise, the expansion valve or capillary tube may become blocked with contaminants. As an air conditioner using R410A incurs pressure higher than when using conventional refrigerant, it is necessary to choose adequate materials. Thicknesses of copper pipes used with R410A are as shown in Table. Never use copper pipes thinner than that in the table even when it is available on the market.

Pipe diameter	Thickness (mm)
Small 9.52 mm (3/8 in)	0.80
Large 15.88 mm (5/8 in)	1.00

STANDARD PARTS

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

INDOOR UNIT ACCESSORIES

Name and Shape	Q'ty	Application	Name and Shape	Q'ty	Application
Hanger	4	For suspending the indoor unit from ceiling	Binder	1 (large)	For fixing the drain hose
Special nut A (large flange)	4	For suspending the indoor unit from ceiling	Remote controller	1 (small)	For fixing the remote controller cord
Special nut B (small flange)	4		Tapping screw (flush heads)	2	For installing the remote controller
Coupler heat insulation (large)	1	For indoor side pipe joint (large pipe)	Remote controller cord	1	For connecting the remote controller
Coupler heat insulation (small)	1	For indoor side pipe joint (small pipe)	Drain hose insulation	1	Insulates the drain hose and vinyl hose

OUTDOOR UNIT ACCESSORIES

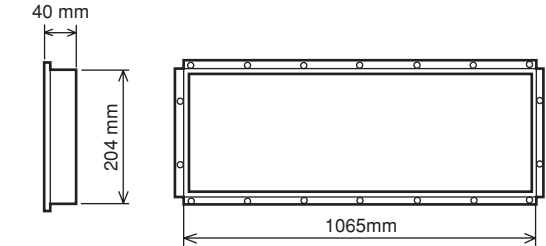
Drain pipe	1	For outdoor unit drain piping work [Heat & Cool mode (Reverse cycle) only]
Drain cap	1	

OPTIONAL PARTS

When connecting the square duct and round duct, use the optional square flange or round flange and flexible duct.

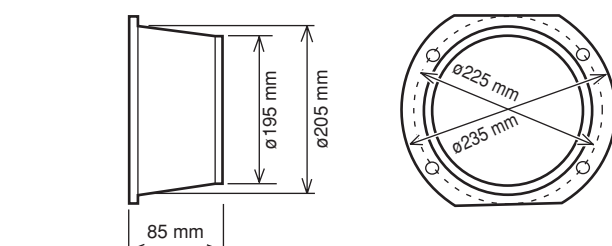
Square flange

Model name : UTD-SF045T (P/N 9098180007)



Round flange

Model name : UTD-RF204 (P/N 9093160004)



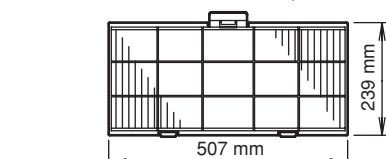
Flexible duct

Model name : UTD-RD202 (P/N 9074165004)



Long-life filter

Model name : UTD-LF25NA (P/N9079892004)



Simple remote controller

Model name : UTB-YPB (P/N9077582006)

Remote sensor

Model name : UTD-RS100 (P/N9072619004)

For authorized service personnel only.

- WARNING**
- For the air conditioner to operate satisfactorily, install it as outlined in this installation instruction sheet.
- Connect the indoor unit and outdoor unit with the air conditioner piping and cords available standards parts. This installation instruction sheet describes the correct connections using the installation set available from our standard parts.
- Installation work must be performed in accordance with national wiring standards by authorized personnel only.
- If refrigerant leaks while work is being carried out, ventilate the area. If the refrigerant comes in contact with a flame, it produces a toxic gas.
- Do not use an extension cord.
- Do not turn on the power until all installation work is complete.

- Be careful not to scratch the air conditioner when handling it.
- After installation, explain correct operation to the customer, using the operating manual.
- Let the customer keep this installation instruction sheet because it is used when the air conditioner is serviced or moved.

SELECTING THE MOUNTING POSITION

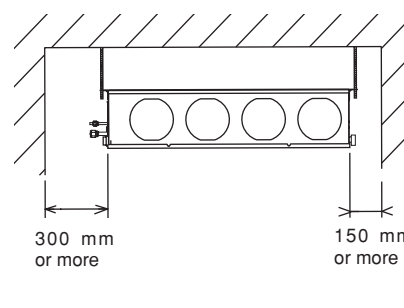
- WARNING**
- Install at a place that can withstand the weight of the indoor and outdoor units and install positively so that the units will not topple or fall.

- CAUTION**
- Do not install where there is the danger of combustible gas leakage.
- Do not install the unit near heat source of heat, steam, or flammable gas.
- If children under 10 years old may approach the unit, take preventive measures so that they cannot reach the unit.

Decide the mounting position with the customer as follows:

INDOOR UNIT

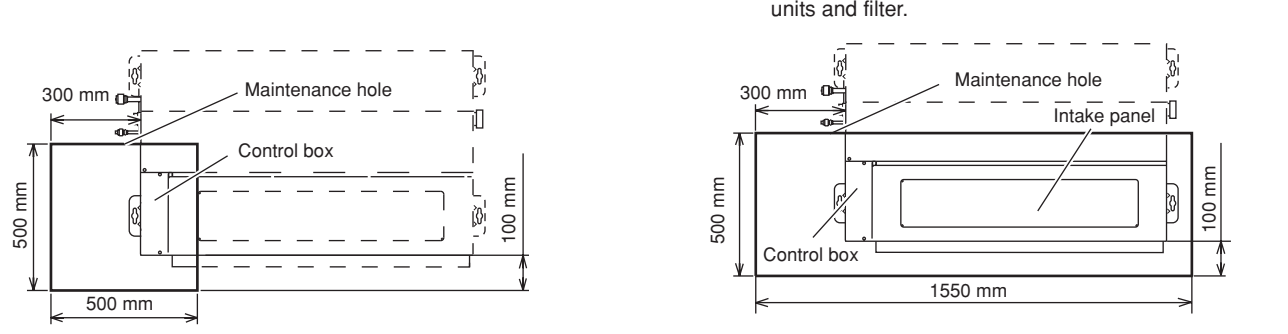
- Install the indoor unit on a place having a sufficient strength so that it withstand against the weight of the indoor unit.
- The inlet and outlet ports should not be obstructed; the air should be able to blow all over the room.
- Leave the space required to service the air conditioner.
- Install the unit where the drain pipe can be easily installed.
- Providing as much space as possible between the indoor unit and the ceiling will make work much easier.
- If installing in a place where its humidity exceeds 80%, use heat insulation to prevent condensation.



Maintenance hole dimension

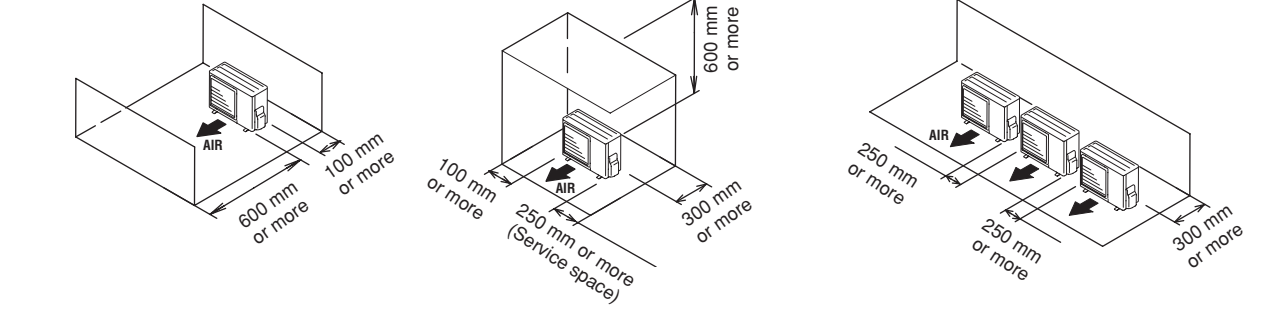
It shall be possible to install and remove the control box.

It shall be possible to install and remove the control box, fan units and filter.



OUTDOOR UNIT

- When there are obstacles at the back or front sides.
- When there are obstacles at the back, side(s), and top.
- When there are obstacles at the back side with the installation of more than one unit.



- WARNING**
- Install the unit where it will not be tilted by more than 5°.
- When installing the outdoor unit where it may be exposed to strong wind, fasten it securely.

- If possible, do not install the unit where it will be exposed to direct sunlight. (If necessary, install a blind that does not interfere with the air flow.)
- Install the outdoor unit in a place where it will be free from being dirty or getting wet by rain as much as possible.
- Install the unit when connection to the indoor unit is easy.
- During heating operation, drain water flows from the outdoor unit. Therefore, install the outdoor unit in a place where the drain water flow will not be obstructed.
- Do not place animals and plants in the path of the warm air.
- Take the air conditioner weight into account and select a place where noise and vibration are small.
- Select a place so that the warm air and noise from the air conditioner do not disturb neighbors.
- Provide the space so that the air flow is not blocked. Also for efficient operation, leave open three of the four directions front, rear, and both sides.

CONNECTING PIPE REQUIREMENT

CAUTION
The maximum lengths of this product are shown in the following table. If the units are further apart than this, correct operation can not be guaranteed.

Liquid	Gas	Pipe length		Maximum height (between indoor and outdoor)
		MAX.	MIN.	
9.52 mm (3/8 in.)	15.88 mm (5/8 in.)	25m	7.5 m	15 m

- Use pipe with water-resistant heat insulation.

CAUTION
Install heat insulation around both the gas and liquid pipes. Failure to do so may cause water leaks. Use heat insulation with heat resistance above 120 °C. (Reverse cycle model only)
In addition, if the humidity level at the installation location of the refrigerant piping is expected to exceed 70%, install heat insulation around the refrigerant piping. If the expected humidity level is 70-80%, use heat insulation that is 15 mm or thicker and if the expected humidity exceeds 80%, use heat insulation that is 20 mm or thicker. If heat insulation is used that is not as thick as specified, condensation may form on the surface of the insulation. In addition, use heat insulation with heat conductivity of 0.045 W/(m·K) or less (at 20 °C).

ELECTRICAL REQUIREMENT

- Electric wire size and fuse capacity:

Power supply cord (mm ²)	Connection cord (mm ²)		Breaker capacity (A)
	MAX.	MIN.	
4.0	3.5	2.5	30

- Always use H07RN-F or equivalent to the connection cord.
- Install all electrical works in accordance to local regulation.
- Install the disconnect device with a contact gap of at least 3 mm nearby the units. (Both indoor unit and outdoor unit)

INSTALLATION PROCEDURE

Install the air conditioner as follows:

1 INDOOR UNIT INSTALLATION

RECOMMENDED RANGE OF EXTERNAL STATIC PRESSURE

30Pa-150Pa

WARNING

- Install the air conditioner in a location which can withstand a load of at least five times the weight of the main unit and which will not amplify sound or vibration. If the installation location is not strong enough, the indoor unit may fall and cause injuries.
- If the job is done with the panel frame only, there is a risk that the unit will come loose. Please take care.

CAUTION

For installation, refer to the technical data.

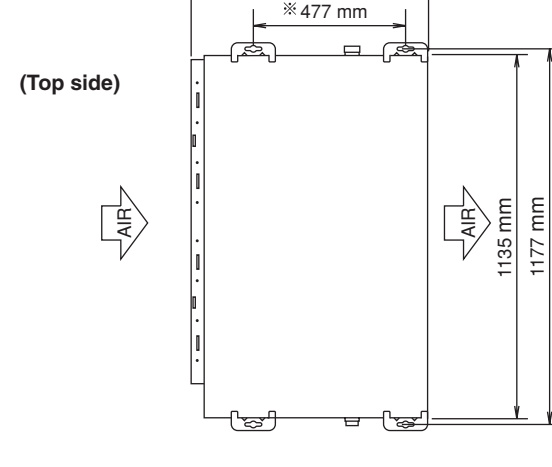
1. INSTALLING THE HANGERS

WARNING

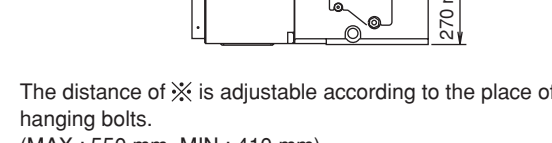
When fastening the hangers, make the bolt positions uniform.

Hanging bolt installation diagram.

(Example)

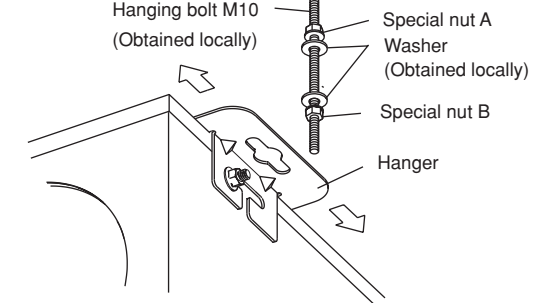


(Top side)



The distance of Φ is adjustable according to the place of the hanging bolts. (MAX : 550 mm, MIN : 410 mm)

Slide the unit in the arrow direction and fasten it.



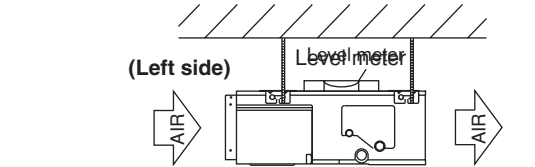
Bolt Strength 9.81 to 14.71 N·m (100 to 150 kgf·cm)

WARNING

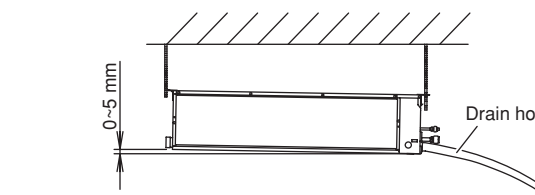
Fasten the unit securely with special nuts A and B.

2. LEVELING

Base vertical direction leveling on the unit (right and left).



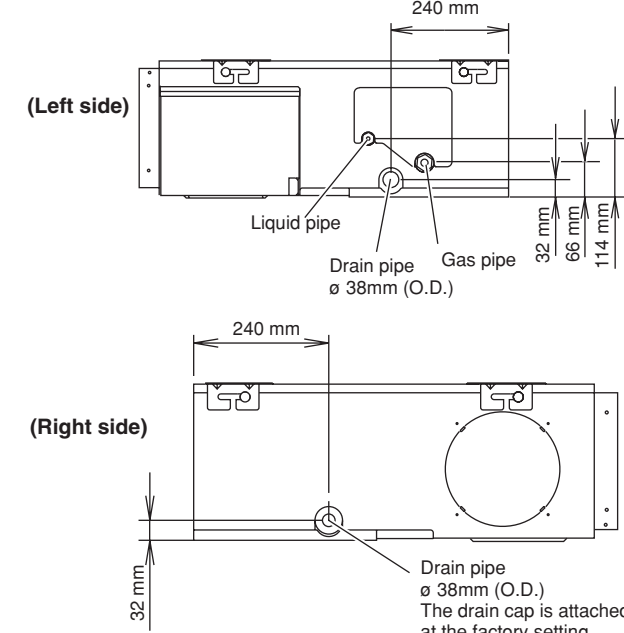
Base horizontal direction leveling on top of the unit.



Give a slight tilt to the side to which the drain hose is connected. The tilt should be in the range of 0 mm to 5 mm

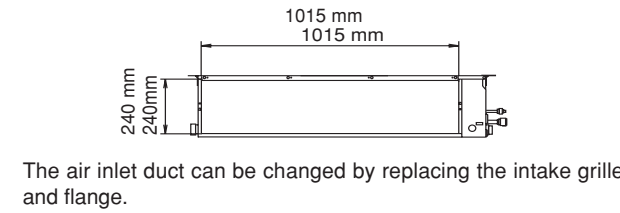
3. INSTALLING DRAIN HOSE

Install the drain hose according to the measurements given in the following figure.

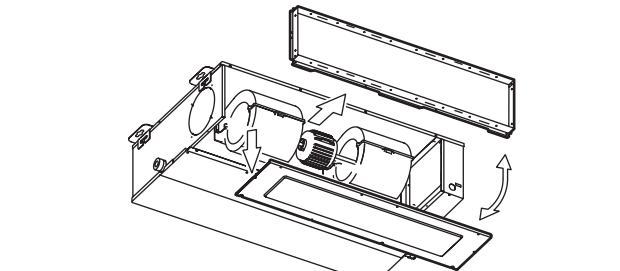


4. INTAKE DUCT CONNECTION

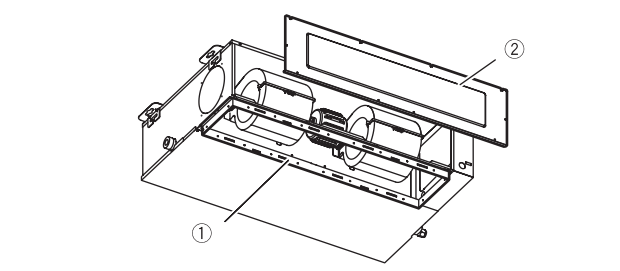
Follow the procedure in the following figure to the ducts.



The air inlet duct can be changed by replacing the intake grille and flange.



For the bottom air intake, follow the procedure of ① → ② for installation. (The factory setting is back air intake.)

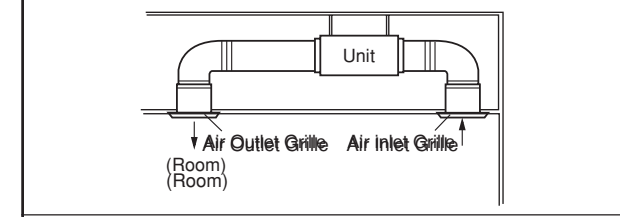


CAUTION

When air is taken in from the bottom side, the operating sound of the product will easily enter the room. Install the product and intake grilles where the affect of the operating sound is small.

CAUTION

- If an intake duct is installed, take care not to damage the temperature sensor (the temperature sensor is attached to the intake port flange).
- Be sure to install the air inlet grille and the air outlet grille for air circulation. The correct temperature cannot be detected.



- Grills must be fixed so that man cannot touch indoor unit fan, and cannot be removed by only hand operation without tool.

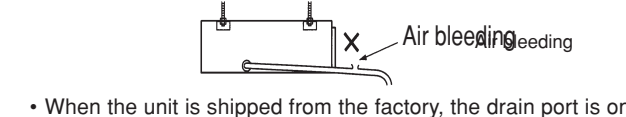
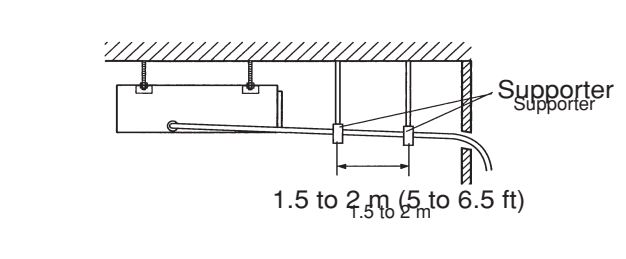
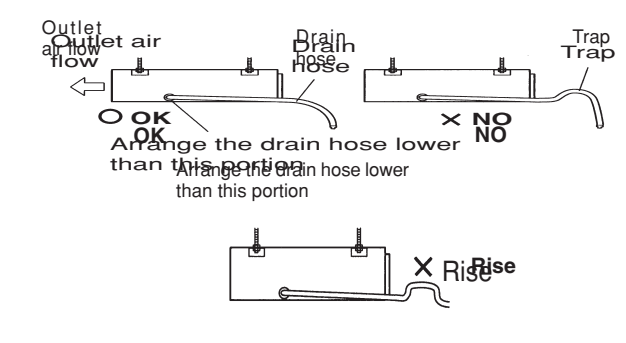
- Be sure to install the air filter in the air inlet. If the air filter is not installed, the heat exchanger may be clogged and its performance may decrease.

CAUTION

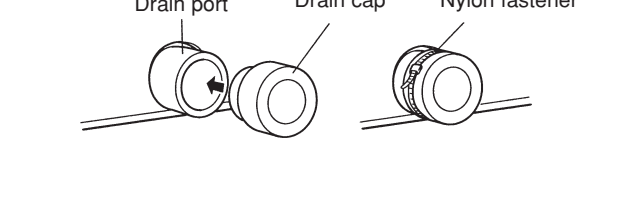
Install the drain hose in accordance with the instructions in this installation instruction sheet and keep the area warm enough to prevent condensation. Problems with the piping may lead to water leaks.

NOTE: INSTALL THE DRAIN HOSE

- Install the drain hose with downward gradient (1/50 to 1/100) and so there are no rises or traps in the hose.
- Use general hard polyvinyl chloride pipe (VP25) (outside diameter 38mm) and connect it with adhesive (polyvinyl chloride) so that there is no leakage.
- When the hose is long, install supporters.
- Do not perform air bleeding.
- Always heat insulate the indoor side of the drain hose.



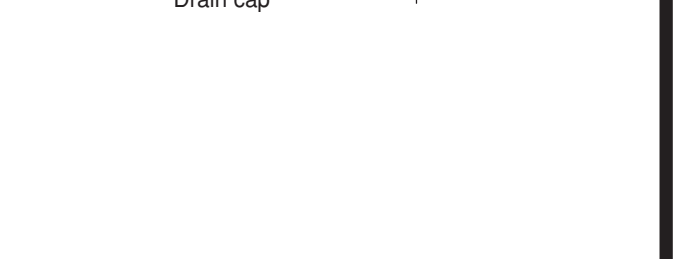
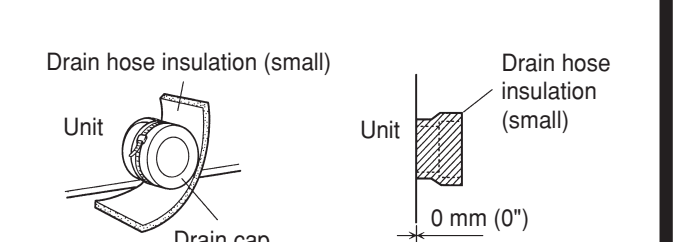
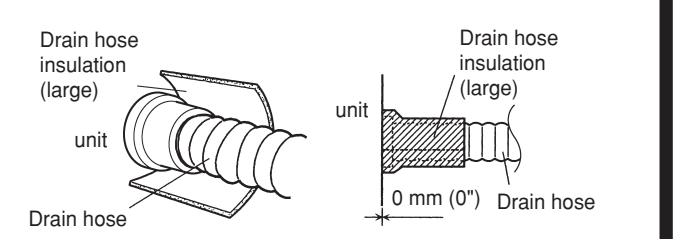
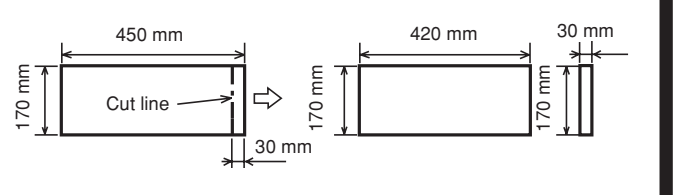
- When the unit is shipped from the factory, the drain port is on the left side (control box side).
- When using the drain port on the right side of the unit, reinstall the drain cap to the left side drain port.



CAUTION

Always check that the drain cap is installed to the unused drain port and is fastened with the nylon fastener. If the drain cap is not installed, or is not sufficiently fastened by the nylon fastener, water may drip during the cooling operation.

- Cut the drain hose insulation at a position approximately 30mm from the end with cutters, etc.
- Stick the large drain hose insulation at the drain hose installation.
- Stick the small drain hose insulation at the drain cap side.

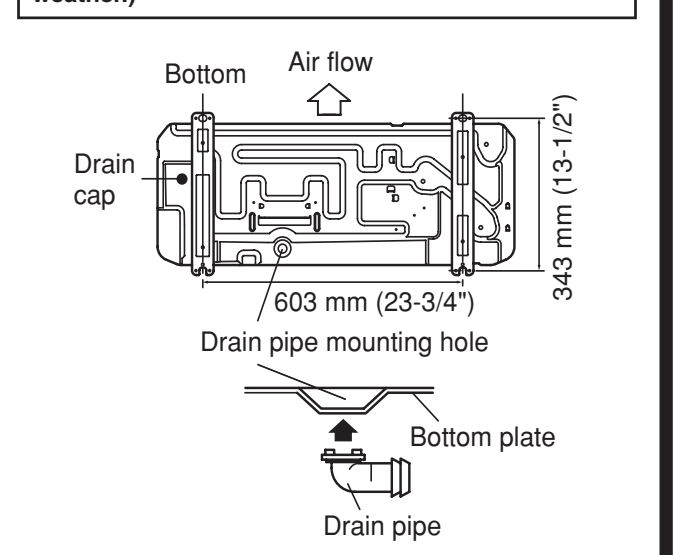


2 OUTDOOR UNIT INSTALLATION

- WARNING**
- Install the unit where it will not be tilted by more than 5°.
- When installing the outdoor unit where it may be exposed to strong wind, fasten it securely.

- Set the unit on a strong stand, such as one made of concrete blocks to minimize shock and vibration.
- Do not set the unit directly on the ground because it will cause trouble.
- Outdoor unit should be fasten with bolts four places indicated by the arrows without fail.
- Since the drain water flows out of the outdoor unit during heating operation, install the drain pipe and connect it to an commercial 16 mm hose. (Heat & Cool model (Reverse cycle) only)
- When installing the drain pipe, plug all the holes (- hole at one place) other than the drain pipe mounting hole in the bottom of the outdoor unit with putty so there is no water leakage. (Heat & Cool model (Reverse cycle) only)

CAUTION
Installation in cold regions. Do not use the accessory drain pipe and drain cap. (If the drain pipe and drain cap are used, the drain water in the pipe may freeze in extremely cold weather.)

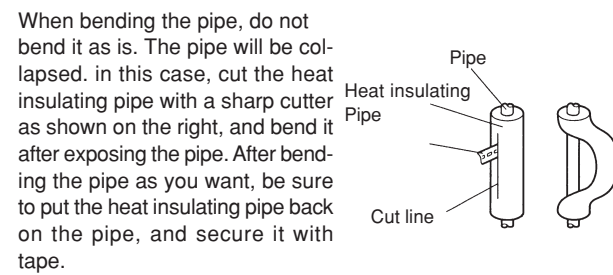




3 CONNECTING THE PIPING

WARNING

Do not use the existing piping and flare nuts.
If the existing materials are used, the pressure inside the refrigerant cycle will rise and cause breakage, injury, etc. (Use the special R410A materials.)



When bending the pipe, do not bend it as is. The pipe will be collapsed, in this case, cut the heat insulating pipe with a sharp cutter as shown on the right, and bend it after exposing the pipe. After bending the pipe as you want, be sure to put the heat insulating pipe back on the pipe, and secure it with tape.

CAUTION

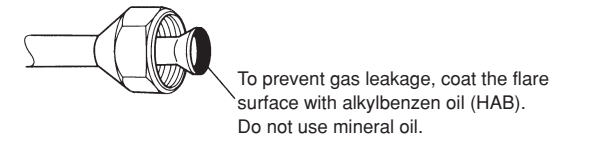
- To prevent breaking of the pipe, avoid sharp bends. Bend the pipe with a radius of curvature of 150 mm or over.
- If the pipe is bent repeatedly at the same place, it will break.

3. CONNECTION PIPES

(1) Indoor unit side
Detach the caps and plugs from the pipes.

CAUTION

- Be sure to apply the pipe against the port on the indoor unit correctly. If the centering is improper, the flare nut cannot be tightened smoothly. If the flare nut is forced to turn, the threads will be damaged.
- Do not remove the flare nut from the indoor unit pipe until immediately before connecting the connection pipe.

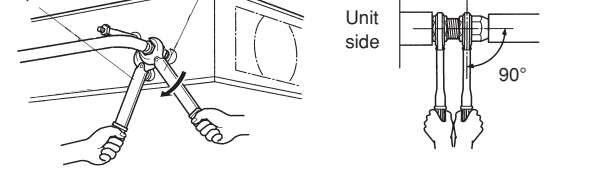


To prevent gas leakage, coat the flare surface with alkylbenzene oil (HAB). Do not use mineral oil.

CAUTION

Hold the torque wrench at its grip, keeping it in the right angle with the pipe, in order to tighten the flare nut correctly.

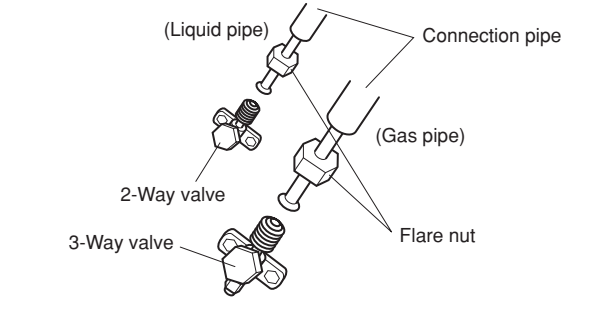
When the flare nut is tightened properly by your hand, use a torque wrench to finally tighten it.



Flare nut tightening torque	
Flare nut	Tightening torque
9.52 mm (3/8 in.) dia.	33 to 42 N·m (330 to 420 kgf·cm)
15.88 mm (5/8 in.) dia.	63 to 77 N·m (630 to 770 kgf·cm)

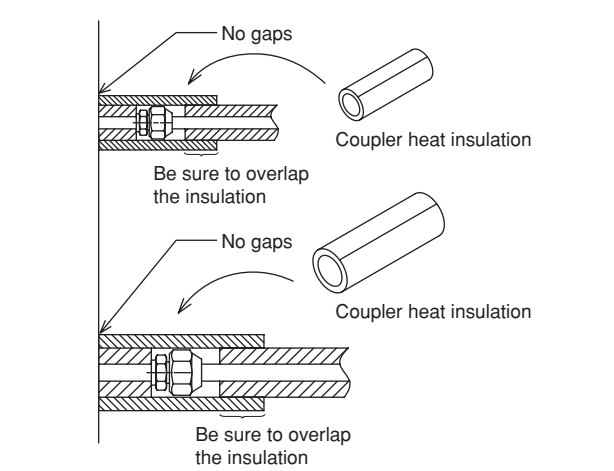
4 HEAT INSULATION ON THE PIPE JOINTS (INDOOR SIDE ONLY)

Slick coupler heat insulation (large and small) to the place where connecting pipes.



4. HEAT INSULATION ON THE PIPE JOINTS (INDOOR SIDE ONLY)

Slick coupler heat insulation (large and small) to the place where connecting pipes.



CAUTION

There should be no gaps between the insulation and the product.



4 VACUUM PROCESS

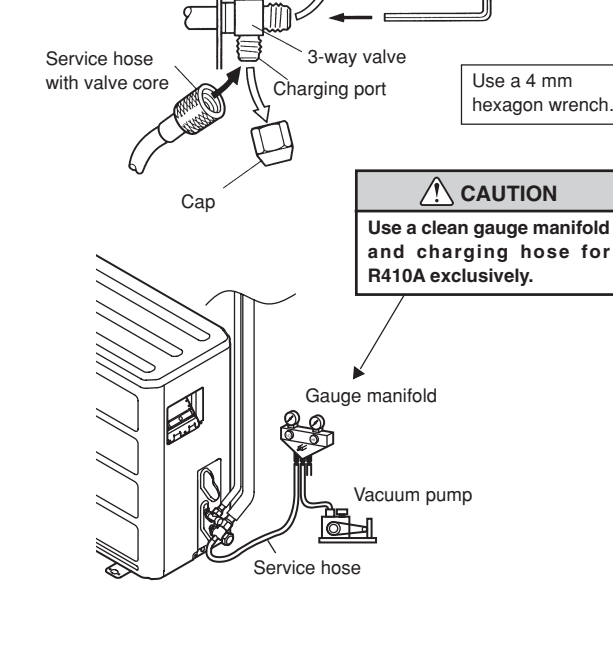
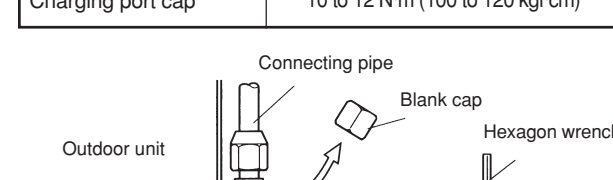
CAUTION

- Do not purge the air refrigerants but use a vacuum pump to vacuum the installation! There is no extra refrigerant in the outdoor unit for air purging!
- Use a vacuum pump for R410A exclusively. Using the same vacuum for different refrigerants may damage the vacuum pump or unit.

1. VACUUM

- Remove the cap, and connect the gauge manifold and the vacuum pump to the charging valve by the service hoses.
- Vacuum the indoor unit and the connecting pipes until the pressure gauge indicates -0.1 MPa (-76 cmHg).
- When -0.1 MPa (-76 cmHg) is reached, operate the vacuum pump for at least 15 minutes.
- Disconnect the service hoses and fit the cap to the charging valve to the specified torque.
- Remove the blank caps, and fully open the spindles of the 2-way and 3-way valves with a hexagon wrench (Torque: 6 to 7 N·m (60 to 70 kgf·cm)).
- Tighten the blank caps of the 2-way valve and 3-way valve to the specified torque.

Tightening torque	
Blank cap (2-way valve)	20 to 25 N·m (200 to 250 kgf·cm)
Blank cap (3-way valve)	30 to 35 N·m (300 to 350 kgf·cm)
Charging port cap	10 to 12 N·m (100 to 120 kgf·cm)



2. ADDITIONAL CHARGE

Refrigerant suitable for a piping length of 7.5 m is charged in the outdoor unit at the factory.

When the piping is longer than 7.5 m, additional charging is necessary. For the additional amount, see the table below.

Pipe length	Heat & Cool (Reverse cycle)				Cooling model
	7.5 m (25 ft)	10 m (33 ft)	15 m (49 ft)	20 m (66 ft)	
Additional refrigerant	None	100 g (3.5 oz)	300 g (10.6 oz)	500 g (17.6 oz)	700 g (24.7 oz)
	None	50 g (1.8 oz)	150 g (5.3 oz)	250 g (8.9 oz)	350 g (12.3 oz)

Between 7.5 m and 25 m, when using a connection pipe other than that in the table, charge additional refrigerant with 40 g (1.4 oz)/1 m (3.3 ft) (Reverse cycle model), 20 g (0.7 oz)/1 m (3.3 ft) (Cooling model) as the criteria.

CAUTION

- When moving and installing the air conditioner, do not mix gas other than the specified refrigerant (R410A) inside the refrigerant cycle.
- When charging the refrigerant R410A, always use an electronic balance for refrigerant charging (to measure the refrigerant by weight).
- When charging the refrigerant, take into account the slight change in the composition of the gas and liquid phases, and always charge from the liquid phase side whose composition is stable.
- Add refrigerant from the charging valve after the completion of the work.
- If the units are further apart than the maximum pipe length, correct operation can not be guaranteed.

5 GAS LEAKAGE INSPECTION

CAUTION

After connecting the piping, check the joints for gas leakage with gas leak detector.

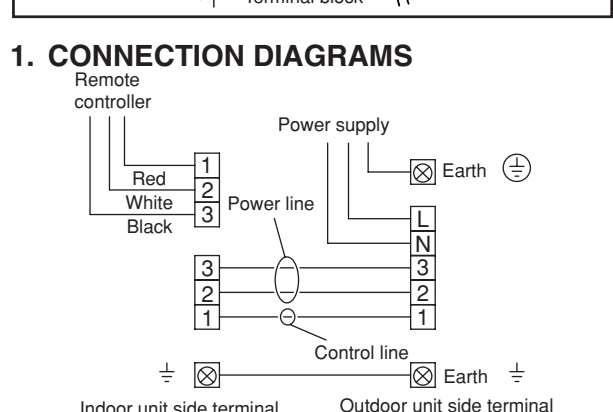
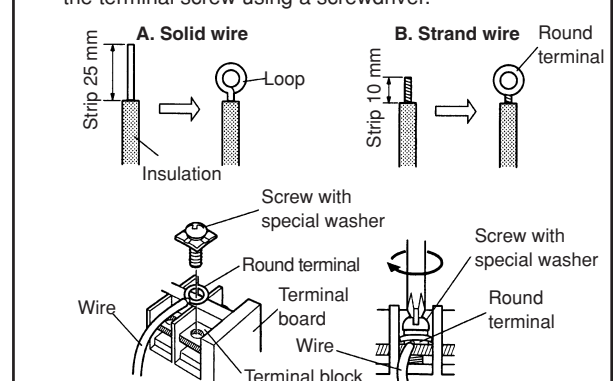
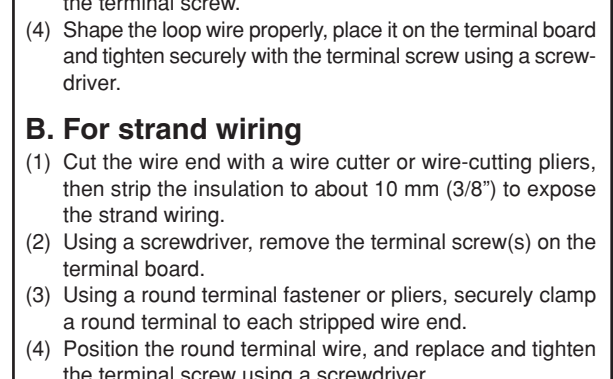
6 ELECTRICAL WIRING

CAUTION

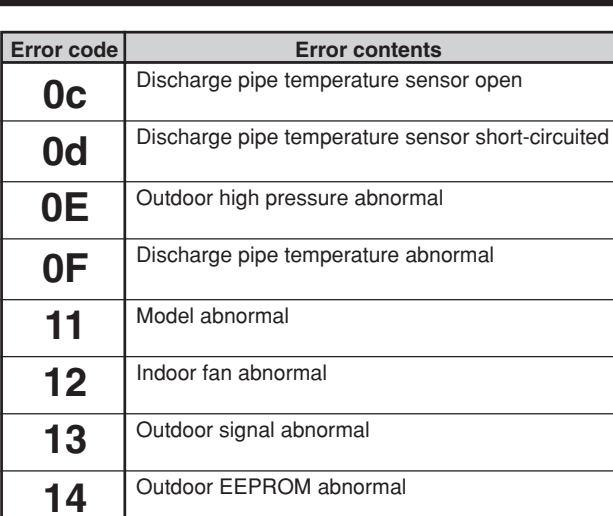
Do not bundle the remote controller cord, or wire the remote controller cord in parallel, with the indoor unit connection wire (to the outdoor unit) and the power supply cord. It may cause erroneous operation.

HOW TO CONNECT WIRING TO THE TERMINALS

- A. For solid core wiring (or F-cable)
- Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation to about 25 mm (1 5/16") to expose the solid wire.
 - Using a screwdriver, remove the terminal screw(s) on the terminal board.
 - Using pliers, bend the solid wire to form a loop suitable for the terminal screw.
 - Shape the loop wire properly, place it on the terminal board and tighten securely with the terminal screw using a screwdriver.



1. CONNECTION DIAGRAMS

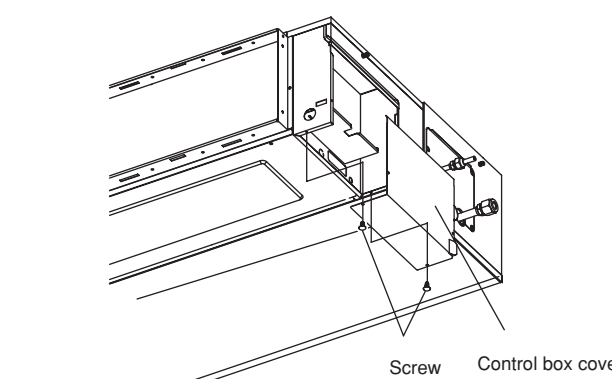


2. INDOOR UNIT SIDE

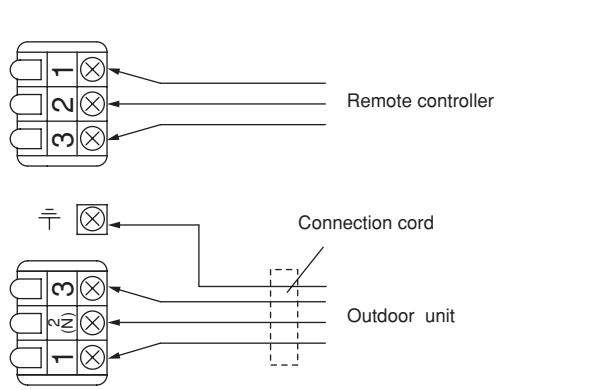
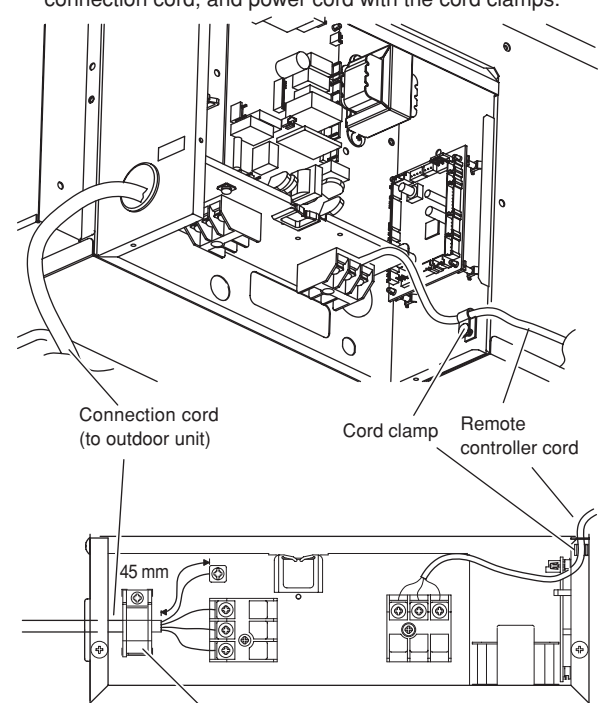
WARNING

- Before starting work, check that power is not being supplied to the indoor unit and outdoor unit.
- Match the terminal board numbers and connection cord colors with those of the outdoor unit. Erroneous wiring may cause burning of the electric parts.
- Connect the connection cords firmly to the terminal board. Imperfect installation may cause a fire.
- Always fasten the outside covering of the connection cord with the cord clamp. (If the insulator is chafed, electric leakage may occur.)
- Always connect the ground wire.

- Remove the control box cover and install each connection wire.

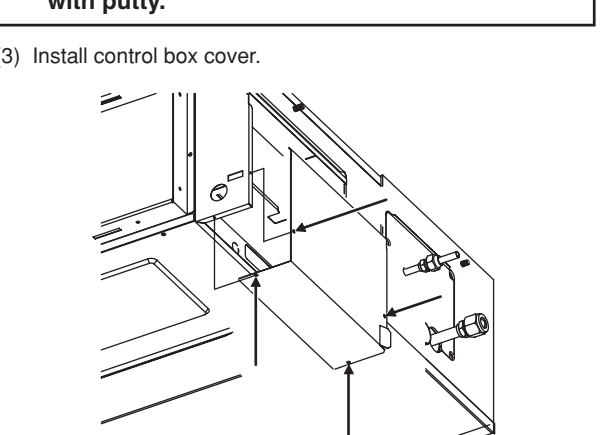


- After wiring is complete, secure the remote controller cord, connection cord, and power cord with the cord clamps.



CAUTION

- Use care not to mistake the power supply cord and connection wires when installing.
- Install so that the wires for the remote controller will not come in contact with other connection wires.
- If there is a risk of entering insects and small animals into the hole for cords, fill in the gap with putty.

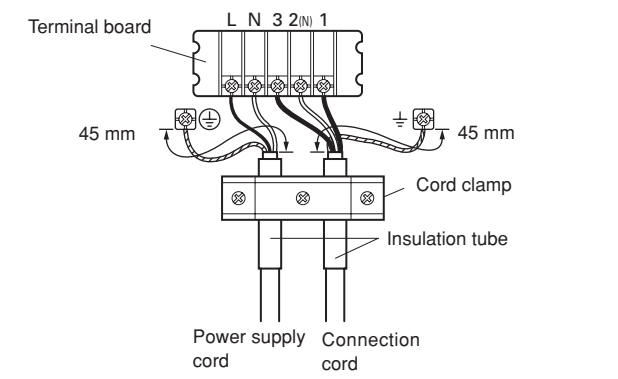
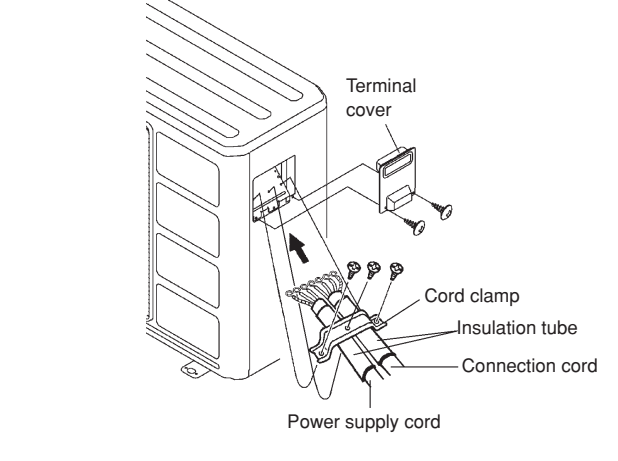


3. OUTDOOR UNIT SIDE

WARNING

- Before starting work, check that power is not being supplied to the indoor unit and outdoor unit.
- Match the terminal board numbers and connection cord colors with those of the indoor unit side. Erroneous wiring may cause burning of the electric parts.
- Connect the connection cord and the power supply cord firmly to the terminal board. Imperfect installation may cause a fire.
- Always fasten the outside covering of the connection cord and the power supply cord with cord clamps. (If the insulator is chafed, electric leakage may occur.)
- Always connect the ground wire.

- Remove the terminal cover of the outdoor unit, and insert the end of the connection cord and the power supply cord into the terminal board.
- Fasten the connection cord and the power supply cord with the cord clamps, and install the terminal cover.



CAUTION

When routing the ground wires, leave slack as shown in the illustrations.

7 POWER

WARNING

- The rated voltage of this product is 230 V A.C. 50 Hz.
- Before turning on to verify that the voltage is within the 198 V to 264 V range.
- Always use a special branch circuit and install a special receptacle to supply power to the air conditioner.
- Use a special branch circuit breaker and receptacle matched to the capacity of the air conditioner. (Fuse/Breaker capacity: 30 A)
- The special branch circuit breaker is installed in the permanent wiring. Always use a circuit that can trip all the poles of the wiring and has an isolation distance of at least 3 mm between the contacts of each pole.
- Perform wiring work in accordance with standards so that the air conditioner can be operated safely and positively.
- Install a leakage special branch circuit breaker in accordance with the related laws and regulations and electric company standards.

CAUTION

- The power source capacity must be the sum of the air conditioner current and the current of other electrical appliances. When the current contracted capacity is insufficient, change the contracted capacity.
- When the voltage is low and the air conditioner is difficult to start, contact the power company the voltage raised.
- This air conditioner must be connected to a power source that has an electrical impedance of 0.159 Ω or less or has a supply current of 100 A or greater. If the power supply does not meet the specifications, contact the power company.

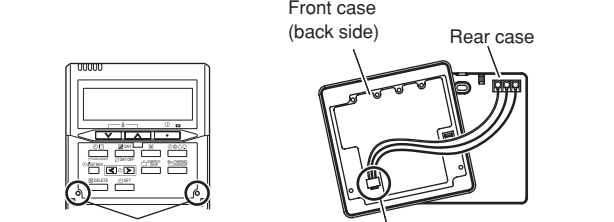
8 REMOTE CONTROLLER SETTING

CAUTION

- In order to detect the room temperature correctly when using the temperature sensor of the remote controller, do not install the remote controller in a place where it will be exposed to direct sunlight or directly below the air outlet of the indoor unit.
- When installing the remote controller and cord near a source of electromagnetic waves, separate the remote controller from the source of the electromagnetic waves and use shielded cord.
- Do not touch the remote controller PC board and PCB board parts directly with your hands.

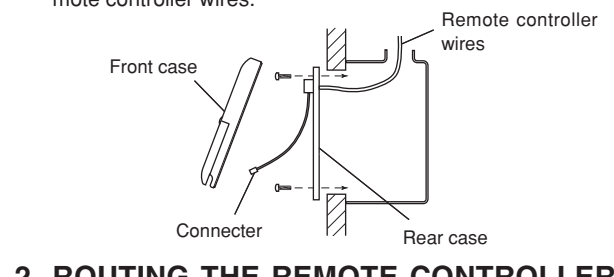
1. INSTALLING THE REMOTE CONTROLLER

(1) Open the operation panel on the front of the remote controller, remove the two screws indicated in the following figure, and then remove the front case of the remote controller.



When installing the remote controller, remove the connector from the front case. The wires may break if the connector is not removed and the front case hangs down. When installing the front case, connect the connector to the front case.

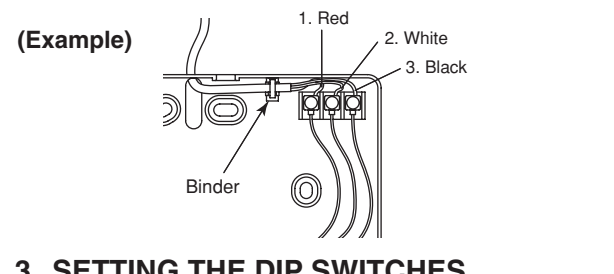
- Install the rear case to the wall, etc. with the two tapping screws. Refer to the following information to install the remote controller wires.



2. ROUTING THE REMOTE CONTROLLER WIRES

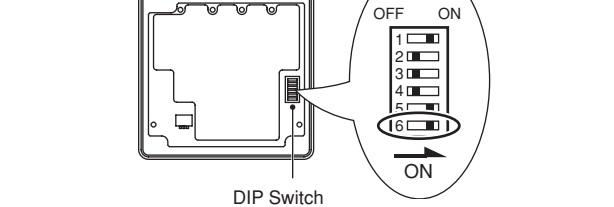
- Install the remote controller wires to the terminals on the top of the rear case as shown in the following figure.
- Fasten the wires with the binder.

Install the remote controller wires so as not to be direct touched with your hand.



3. SETTING THE DIP SWITCHES

When using a battery (memory backup)



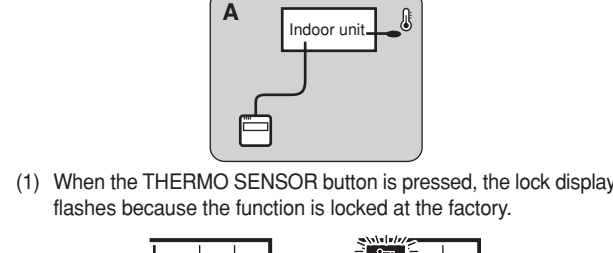
Change the DIP switch setting to use batteries. (The DIP switch is not set to use batteries at the factory.) Change DIP switch No. 6 from OFF to ON. If batteries are not used, all of the settings stored in memory will be deleted if there is a power failure.

4. SETTING THE ROOM TEMPERATURE DETECTION LOCATION

The detection location of the room temperature can be selected from the following three examples. Choose the detection location that is best for the installation location.

A. Indoor unit setting (factory setting)

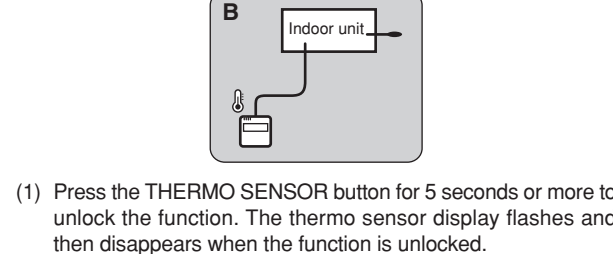
The room temperature is detected by the indoor unit temperature sensor.



- When the THERMO SENSOR button is pressed, the lock display flashes because the function is locked at the factory.

B. Remote controller setting

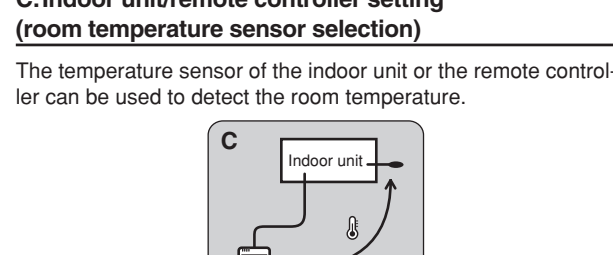
The room temperature is detected by the remote controller temperature sensor.



- Press the THERMO SENSOR button for 5 seconds or more to unlock the function. The thermo sensor display flashes and then disappears when the function is unlocked.
- Press the THERMO SENSOR button. The thermo sensor display appears.

C. Indoor unit/remote controller setting (room temperature sensor selection)

The temperature sensor of the indoor unit or the remote controller can be used to detect the room temperature.



- Press the THERMO SENSOR button for 5 seconds or more to unlock the function. The thermo sensor display flashes and then disappears when the function is unlocked.
- Press the THERMO SENSOR button to select the temperature sensor of the indoor unit or the remote controller.



NOTES

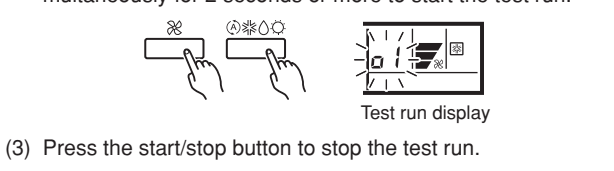
If the function to change the temperature sensor is used as shown in examples A and B (other than example C), be sure to lock the detection location. If the function is locked, the lock display will flash when the THERMO SENSOR button is pressed.

9 TEST RUN

CAUTION

Supply power to the crankcase heater for at least 12 hours before the start of operation in winter.

- Stop the air conditioner operation.
- Press the master control button and the fan control button simultaneously for 2 seconds or more to start the test run.

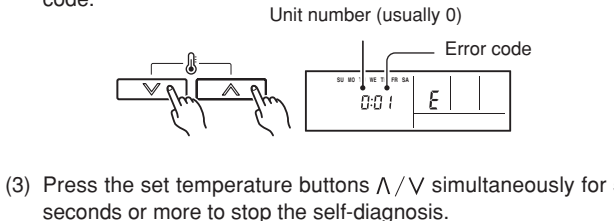


[SELF-DIAGNOSIS]

When the error indication "E:EE" is displayed, follow the following items to perform the self-diagnosis. "E:EE" indicates an error has occurred.

1. REMOTE CONTROLLER DISPLAY

- Stop the air conditioner operation.
- Press the set temperature buttons Δ / ∇ simultaneously for 5 seconds or more to start the self-diagnosis.



Error code	Error contents
00	Communication error (indoor unit → remote controller)
01	Communication error (indoor unit → outdoor unit)
02	Room temperature sensor open
03	Room temperature sensor short-circuited
04	Indoor heat exchanger temperature sensor open
05	Indoor heat exchanger temperature sensor short-circuited
06	Outdoor heat exchanger temperature sensor open
07	Outdoor heat exchanger temperature sensor short-circuited
08	Power source connection error
09	Float switch operated
0A	Outdoor temperature sensor open
0b	Outdoor temperature sensor short-circuited

Error code	Error contents
0c	Discharge pipe temperature sensor open
0d	Discharge pipe temperature sensor short-circuited
0E	Outdoor high pressure abnormal
0F	Discharge pipe temperature abnormal
11	Model abnormal
12	Indoor fan abnormal
13	Outdoor signal abnormal
14	Outdoor EEPROM abnormal

2. OUTDOOR UNIT LEDS

Heat & Cool model (reverse cycle) only

When a malfunction occurs in the outdoor unit, the LEDs on the circuit board light to indicate the error. Refer to the following table for the description of each error according to the LEDs.

LED1	LED2	Error contents
ON	OFF	Quick flash continued
OFF	ON	Lighting continued
ON	OFF	1 quick flash repeated
OFF	ON	2 quick flash repeated
ON	OFF	3 quick flash repeated
OFF	ON	4 quick flash repeated
ON	OFF	5 quick flash repeated
OFF	ON	6 quick flash repeated
ON	OFF	7 quick flash repeated
OFF	ON	8 quick flash repeated

When the fault is cleared, the LED lamp goes off. However, for discharge pipe temperature abnormal and high pressure abnormal, the LED lamp lights continuously for 24 hours, as long as the power is not turned off.

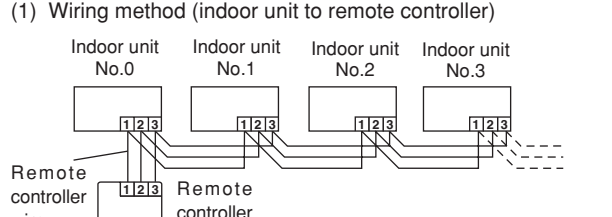
10 SPECIAL INSTALLATION METHODS

CAUTION

- When setting the rotary switch and DIP switches, do not touch any other parts on the circuit board directly with your bare hands.
- Be sure to turn off the main power.

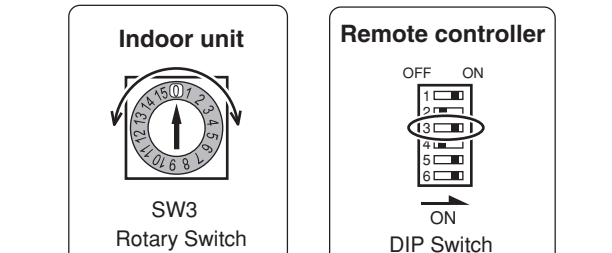
1. GROUP CONTROL SYSTEM

A number of indoor units can be operated at the same time using a single remote controller.



- Rotary switch setting (indoor unit)
Set the unit number of each indoor unit using the rotary switch on the indoor unit circuit board. The rotary switch is normally set to 0.

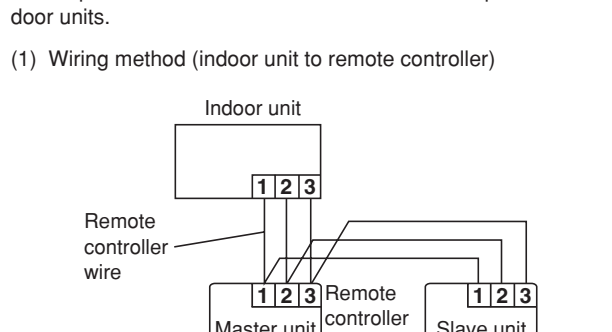
- DIP switch setting (remote controller)
Change DIP switch No. 3 on the remote controller from OFF to ON.



2. DUAL REMOTE CONTROLLERS

Two separate remote controllers can be used to operate the indoor units.

- Wiring method (indoor unit to remote controller)

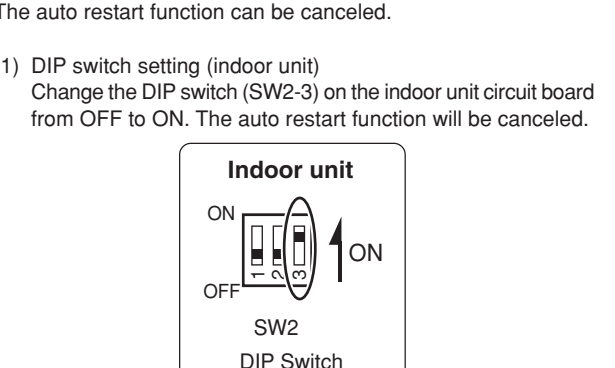


3. CANCELING AUTO RESTART

- DIP switch setting (remote controller)
Set the remote controller DIP switch Nos. 1 and 2 according to the following table.

Number of remote controllers	Master unit		Remote controller
	DIP-SW No. 1	DIP-SW No. 2	
1 (Normal)	ON	OFF	OFF (ON)
2 (Dual)	OFF	OFF	
Number of remote controllers	Slave unit		
	DIP-SW No. 1	DIP-SW No. 2	
1 (Normal)	-	-	ON
2 (Dual)	ON	ON	

Remote controller



[DIP-SWITCH SETTING]

SW2 DIP-Switch	SW state		Detail
	OFF	ON	
1	-	*	Remote sensor setting
2	Edge *	Pulse	Control input setting
3	Validity *	Invalidity	Auto restart setting