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Safety precautions

Carefully follow the precautions listed below because they are essential to guarantee the safety of the equipment.

• Always disconnect the air conditioner from the power supply before servicing it or accessing its internal components.

• Verify that installation and testing operations are performed by qualified personnel.

· Verify that the air conditioner is not installed in an easily accessible area.

General information

- Carefully read the content of this manual before installing the air conditioner and store the manual in a safe place in order to be able to use it as reference after installation.
- For maximum safety, installers should always carefully read the following warnings.
- Store the operation and installation manual in a safe location and remember to hand it over to the new owner if the air conditioner is sold or transferred.
- This manual explains how to install an indoor unit with a split system with two SAMSUNG units. The use of other types of units with different control systems may damage the units and invalidate the warranty. The manufacturer shall not be responsible for damages arising from the use of non compliant units.
- The manufacturer shall not be responsible for damage originating from unauthorized changes or the improper connection of electric and requirements set forth in the "Operating limits" table, included in the manual, shall immediately invalidate the warranty.
- The air conditioner should be used only for the applications for which it has been designed: the indoor unit is not suitable to be installed in areas used for laundry.
- Do not use the units if damaged. If problems occur, switch the unit off and disconnect it from the power supply.
- In order to help prevent electric shocks, fires or injuries, always stop the unit, disable the protection switch and contact SAMSUNG's technical support if the unit produces smoke, if the power cable is hot or damaged or if the unit is very noisy.
- Always remember to inspect the unit, electric connections, refrigerant tubes and protections regularly. These operations should be performed by qualified personnel only.
- > The unit contains moving parts, which should always be kept out of the reach of children.

- Do not attempt to repair, move, alter or reinstall the unit. If performed by unauthorized personnel, these operations may cause electric shocks or fires.
- Do not place containers with liquids or other objects on the unit.
- All the materials used for the manufacture and packaging of the air conditioner are recyclable.
- The packing material and exhaust batteries of the remote controller(optional) must be disposed of in accordance with current laws.
- The air conditioner contains a refrigerant that has to be disposed of as special waste. At the end of its life cycle, the air conditioner must be disposed of in authorized centers or returned to the retailer so that it can be disposed of correctly and safely.

Installing the unit

IMPORTANT: When installing the unit, always remember to connect first the refrigerant tubes, then the electrical lines. Always disassemble the electric lines before the refrigerant tubes.

- Upon receipt, inspect the product to verify that it has not been damaged during transport. If the product appears damaged, DO NOT INSTALL it and immediately report the damage to the carrier or retailer (if the installer or the authorized technician has collected the material from the retailer.)
- After completing the installation, always carry out a functional test and provide the instructions on how to operate the air conditioner to the user.
- Do not use the air conditioner in environments with hazardous substances or close to equipment that release free flames to avoid the occurrence of fires, explosions or injuries.
- ▶ To help prevent injury when accidentally touching the indoor unit fan, install the indoor unit at least 2.5 m above the floor.
- The air conditioner should be used only for the applications for which it has been designed : the indoor unit is not suitable to be installed in areas used for laundry.
- Our units must be installed in compliance with the spaces indicated in the installation manual to ensure either accessibility from both sides or ability to perform routine maintenance and repairs. The units' components must be accessible and that can be disassembled in conditions of complete safety either for people or things. For this reason, where it is not observed as indicated into the Installation Manual, the cost necessary to reach and repair the unit (in safety, as required by current regulations in force) with slings, trucks, scaffolding or any other means of elevation won't be considered in-warranty and charged to end user.

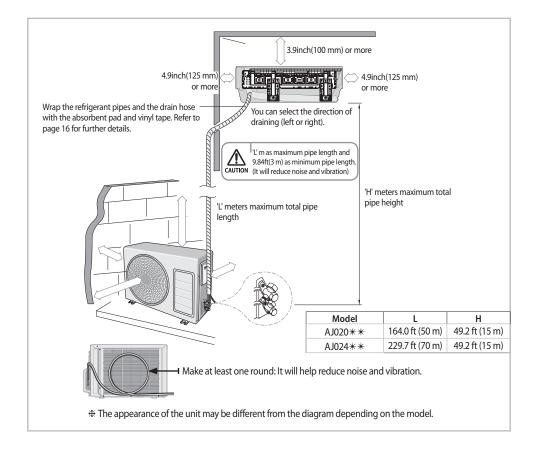
Power supply line, fuse or circuit breaker

- Always make sure that the power supply is compliant with current safety standards. Always install the air conditioner in compliance with current local safety standards.
- Always verify that a suitable grounding connection is available.
- Verify that the voltage and frequency of the power supply comply with the specifications and that the installed power is sufficient to ensure the operation of any other domestic appliance connected to the same electric lines.
- Always verify that the cut-off and protection switches are suitably dimensioned.
- Verify that the air conditioner is connected to the power supply in accordance with the instructions provided in the wiring diagram included in the manual.
- Always verify that electric connections (cable entry, section of leads, protections...) are compliant with the electric specifications and with the instructions provided in the wiring scheme. Always verify that all connections comply with the standards applicable to the installation of air conditioners.
- Use Copper Supply Wires.

Choosing the installation location

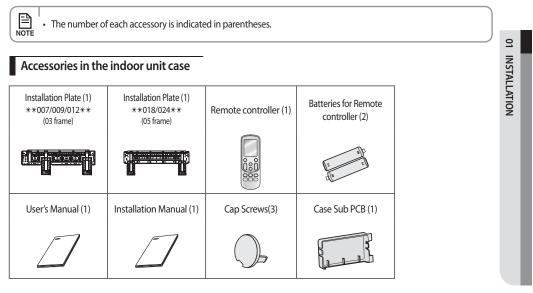
Indoor unit

- Where airflow is not blocked.
- Where cool air can be distributed throughout the room.
- Install the refrigerant piping length and the height difference of both indoor and outdoor units as indicated in the installation diagram.
- ▶ Wall that prevents vibration and is strong enough to hold the product weight.
- Out of the direct sunlight .
- ▶ 40" (1m) or more away from the TV or radio (to prevent the screen from being distorted or noise from being generated).
- As far away as possible from the fluorescent and incandescent lights (so that the remote controller can be operated well).
- A place where the air filter can be replaced easily.
- > Don't install directly above electronics equipment as leaking water may cause damage if not serviced. (eg. Computers, TV, etc).



Accessories

The following accessories are supplied with the air conditioner:



Tools required for installation

General Tools

Vacuum Pump(Bac	kward flowing prev	ention)	Manifold Gauge	• Stud Finder
 Torque Wrench 	 Pipe Cutter 	Reamer	 Pipe Bender 	Spirit Level
Screw Driver	Spanner	• Drill	• L Wrench	Measuring Tape

Tools for test operations

Fixing the installation plate

You can select the direction of the drain hose depending on where you want to install the indoor unit. Therefore before fixing the installation plate to a wall or a window frame, you must determine the position of the 2.56inch(65 mm) hole through which the cable, pipe and hose pass to connect the indoor unit to the outdoor unit.

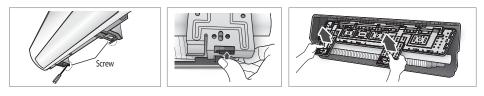
When facing the wall, the pipe and cable can be connected from the:

- * Direction of pipe • Right (A) • Left (B) • Underside_right (C) • Rear_right or left (D)
- 1. Disassemble the cover panel as described in page 7~8.

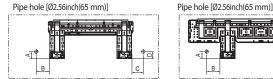
2. Remove the Hanger plate from the indoor unit.

(1) Unscrew 2 screws that fixes the Hanger plate to the indoor unit.

(2) Push the hooks (on the bottom part of the indoor unit) up to release the installation plate from the hooks that holds it. (3) Pull the installation plate to release it completely from the indoor unit.



3. Determine the position of the pipe and drain hose hole as seen in the picture and drill the hole with an inner diameter of 2.56inch(65 mm) so that it slants slightly downwards.





[Unit : inch(mm)]

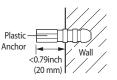


4. Fix the indoor unit.

If you fix the indoor unit on a wall

(1) Fix the installation plate to the wall giving attention to the weight of the indoor unit.

NOTE • If you mount the plate to a concrete wall using plastic anchors, make sure that gaps between the wall and the plate, created by projected anchor, is less than 0.79inch(20 mm).



If you fix the indoor unit on a window frame

(1) Determine the positions of the wooden uprights to be attached to the window frame.

(2) Attach the wooden uprights to the window frame giving attention to the weight of the indoor unit.

(3) Attach the installation plate to the wooden upright using tapping screws.

If you fix the indoor unit on a gypsum board

(1) Use stud finder to find out locations of the studs.

(2) Fix the plate hanger on two studs.



WARNING

Search for other spots if there are less than two studs, or the distance between the studs are different from the plate hanger.

• Fix the installation plate without inclining to one side.

Make sure that a wall can withstand the weight of the product. If you install the product in a place where it is not strong enough to withstand the product weight, the unit could fall and cause injury.

Assembling the hanger screw

Use 2 screws to fix the indoor unit with hanger plate as shown in the picture.



2

INSTALLATION

Disassembling/Assembling the Cover panel for indoor unit installation

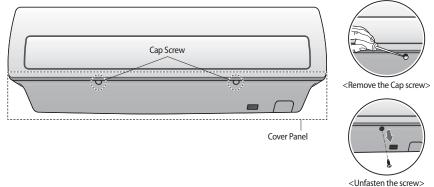


Please scan this QR code for detail video of indoor unit installation.

In order to install the indoor unit, you must disassemble the cover panel first. Please proceed following instructions to disassemble and assemble the cover panel. Hooks (on the cover panel) may get damaged if you apply excessive force as you disassemble and assemble the cover panel. Please follow the following instructions.

Removing the screws

Cover panel is assembled on the bottom part of the indoor unit (as shown in the illustration) and it is fastened with screws. Remove the Cap screw first and unfasten the screws so that you can disassemble the cover panel.



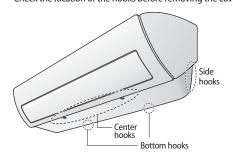
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Disassembling/Assembling the Cover panel for indoor unit installation

Removing the Cover panel (Before mounting the indoor unit)

The bottom panel fits the main body using the side, center, and bottom hooks as shown. Unlock the side hooks first, and then unlock the center and bottom hooks. Check the location of the hooks before removing the cover panel.



Number and location of the hooks **(a**) Bottom hook Center hook 5

Location of the hooks on the central part

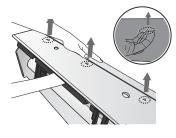
refer to cover panel with indicating arrows based on physical goods.

Removing the hooks on the side



Caution (fragile) Gently press the both side of the cover panel inwards () and release the hooks on both sides().

- For specific Hook location and quantity, please *
- Removing the hooks on the central part

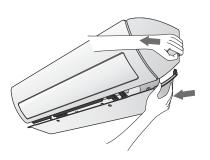


- Caution (fragile) * - Use both hands
 - Release each hook by pushing it up at an angle.

Assembling the Cover panel (After mounting the indoor unit)

To assemble the Cover panel, proceed in reverse order of disassembling.

Use both hands for assembling and be extra careful not to damage the pipes and drain hose. Lock the side, center, and bottom hooks in this sequence. Tighten the bottom panel with the screws, and close the screw holes with their cap.







<Lock the bottom hook>



<Assemble the Cap screw>

English-8

<Fasten the screw>

Connecting the wiring

If using a multi system, install as described in the installation manual supplied with the outdoor unit.

Cable specification

Power cable	Interconnection cable	Type GL	
3G1.5mm ² H07RN-F	3G1.0mm ² H07RN-F	20A	
	2x0.75mm ² H05RN-F		
3G2.5mm ² H07RN-F	3G1.0mm ² H07RN-F	25A	
	2x0.75mm ² H05RN-F		
	3G1.5mm ² H07RN-F	3G1.5mm ² H07RN-F 3G2.5mm ² H07RN-F 3G2.5mm ² H07RN-F 3G2.5mm ² H07RN-F	

 \sim Connect the power cable to the auxiliary circuit breaker. If every pole fails to connect to the power supply, it must be incorporated in a wire with a contact opening of ≥ 0.118 inch(3 mm).

- Use shield cable (Category 5; less than 50pF/m) for noisy environmental site.
- Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene
- sheathed flexible cord. (Code designation IEC:60245 IEC 57 / CENELEC:H05RN-F , IEC:60245 IEC 66 / CENELEC: H07RN-F)

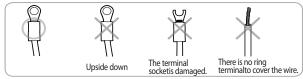
2

INSTALLATION

Connecting the cable

Electrical work

- (1) For electrical and earth works, comply with the 'technical standards of electrical installations' and the the 'wiring regulations' of the Local wiring regulations.
- (2) Tighten the terminal block screw to under 0.87ft-lb[1.2 N·m (12 kgf·cm).
- (3) Precautions when connecting terminal blocks of the indoor unit
- ▶ Before connecting, make sure the connecting part of the terminal socket is facing upwards.



There must be no space between the terminal and the screw when connected.
 Any remaining space may become a fire hazard due to overheating of the electrical contact.





For the terminal block wiring, use a wire with a ring terminal socket only.
 Regular wires without a ring terminal socket may become a fire hazard due to overheating of the electrical contact during a wiring work.

* When you install the unit, make first refrigerant connections and then electrical connections. Connect the air conditioner to grounding system before performing the electrical connection. If unit is uninstalled, first disconnect electrical cables, then refrigerant connections.

If the outdoor unit is more than 16.4ft(5m) away from the indoor unit, you must extend the cable. The maximum length of the cable is 49.2ft(15m)(**007/009/012**) / 98.4ft(30m)(**018/024**).

1. Extend the assembly cable if necessary.



• Do not connect two or more different cables to extend the length. It may cause fire.

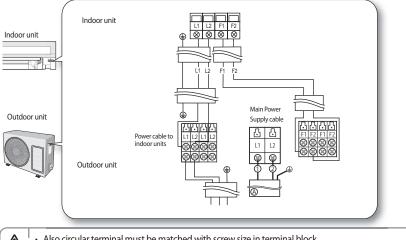
Connecting the wiring

- 2. Open the cover panel.
- 3. Remove the screw securing the connector cover.
- 4. Pass the assembly cable through the rear of the indoor unit and connect the assembly cable to terminals. (Refer to the picture below)

Each wire is labeled with the corresponding terminal number.

- 5. Pass the other end of the cable through the 2.56inch(65 mm) hole in the wall.
- 6. Close the connector cover by tightening the screw carefully.
- 7. Close the cover panel.
- 8. Remove the terminal board cover on the side of the outdoor unit.
- 9. Connect the cables to the terminals as seen in the picture.

P Each wire is labeled with the corresponding terminal number. NOTE



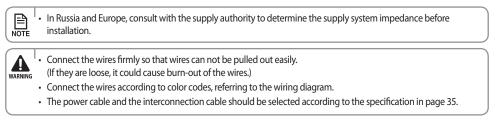
• Also circular terminal must be matched with screw size in terminal block.

• After connecting the cables, make sure terminal numbers on the indoor/outdoor unit matches.

• Please ensure that Power & Communication cables are separated, they must not be in the same cable.

10. Connect the grounding conductor to the grounding terminals.

11. Close the terminal board cover by tightening the screw carefully.





Installing and connecting the assembly pipe of the indoor unit

Connect indoor and outdoor units with field-supplied copper pipes by means of flare connections. Use insulated seamless refrigeration grade pipe only, (Cu DHP type according to ISO1337), degreased and deoxidized, suitable for operating pressures of at least 4200 kPa and for burst pressure of at least 20700 kPa. Under no circumstances must sanitary type copper pipe be used.

There are 2 refrigerant pipes of different diameters:

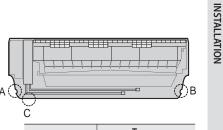
- The smaller one is for the liquid refrigerant
- The larger one is for the gas refrigerant

A short pipe is already fitted to the air conditioner. You may need to extend the pipe using the assembly pipe (optional).

The connection procedure for the refrigerant pipe varies according to the exit position of the pipe when facing the wall:

- Right(A)
- Left(B)
- Underside(C)
- Rear
- 1. Cut out the appropriate knock-out piece (A, B, C) on the rear of the indoor unit unless you connect the pipe directly from the rear.
- 2. Smooth the cut edges.
- 3. Remove the protection caps of the pipes and connect the assembly pipe to each pipe. Tighten the nuts first with your hands, and then with a torque wrench, applying the following torque:

If you want to shorten or extend the pipes, refer to page 12~13.



2

	Tor	que
Outer Diameter	N∙m	ft•lb (kgf•cm)
ø1/4 inch (ø6.35mm)	14~18	10.1~13.0 (140~180)
ø3/8 inch (ø9.52mm)	34~42	25.3~31.1 (350~430)
ø1/2 inch (ø12.70 mm)	49~61	36.2~44.8 (500~620)
ø5/8 inch (ø15.88mm)	68~82	49.9~60.0 (690~830)

- 4. Cut off the remaining foam insulation.
- 5. If necessary, bend the pipe to fit along the bottom of the indoor unit. Then pull it out through the appropriate hole.
 - ▶ The pipe should not project from the rear of the indoor unit.
 - ► The bending radius should be 3.94inch(100 mm) or more.
- 6. Pass the pipe through the hole in the wall.

Tighten the flare nut with torque wrench according to specified method.

If the flare nut is over-tightened, the flare may break and cause refrigerant gas leakage.

- DO NOT WALL UP THE PIPE CONNECTION !
 - All refrigerant pipe connection must be easy accessible and serviceable.

Evacuating the indoor unit

The indoor unit is supplied with inert gas (nitrogen).

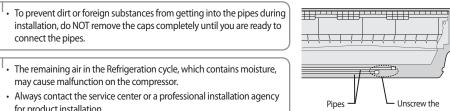
Before installing the unit, check if nitrogen gas flow out of indoor unit.

If this one isn't true, DO NOT INSTALL THE UNIT since leakage could be inside the indoor unit.

- 1. Unscrew the caps at the end of each pipe.
- ▶ All inert gas exhausts from the indoor unit.

connect the pipes.

for product installation.



caps

Cutting or extending the pipe

The length of the pipe can be:

- Extended up to : see table page 4
- Shorten up to: see page 4



P

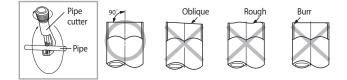
NOTE

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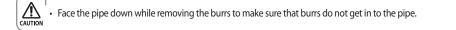
If you need a pipe longer than 16.4ft(5 meters):

· You must add refrigerant to the pipes; otherwise, the indoor unit may freeze.

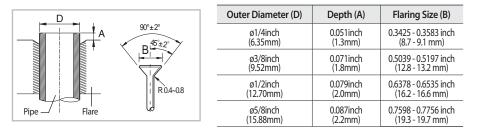
- 1. Make sure that you have all the required tools (pipe cutter, reamer, flaring tool and pipe holder).
- 2. If you want to shorten the pipe, cut it using a pipe cutter, ensuring that the cut edge remains at 90° with the side of the pipe (see below examples of correct and incorrect cut edges).



3. To prevent a gas leak, remove all burrs at the cut edge of the pipe using a reamer.



4. Put a flare nut slightly into the pipe and modify the flare.



5. Check if you flared the pipe correctly (see examples of incorrectly flared pipes below).

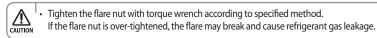


6. Align the pipes to connect them easily. Tighten the flare nuts first with your hands, and then with a torque wrench, applying the following torque:

	Flare nut	Outer Diameter		Torque
			N•m	ft•lb(kgf•cm)
		ø1/4 inch (ø6.35mm)	14~18	10.1~13.0 (140~180)
		ø3/8 inch (ø9.52mm)	34~42	25.3~31.1 (350~430)
		ø1/2 inch (ø12.70 mm)	49~61	36.2~44.8 (500~620)
Indoor outlet pipe	Connecting pipe	ø5/8 inch (ø15.88mm)	68~82	49.9~60.0 (690~830)

• Excessive torque can be cause of gas leakage. If extending pipe by welding/brazing please ensure nitrogen is used during welding/brazing process. The joint must be accessible and serviceable.

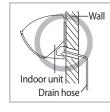
7. For further details on how to connect to the outdoor unit and evacuate the air, refer to the installation manual supplied with the outdoor unit.

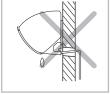


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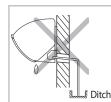
Installing and connecting the condensate drain hose to indoor unit

When installing the drain hose for the indoor unit, check if condensation draining is adequate. When passing the drain hose through the 2.56"(65 mm) hole drilled in the wall, check the followings:





The drain hose must NOT slant upwards.



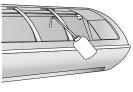
Keep a clearance of at least 5 cm between the end of the drain hose and the ground.

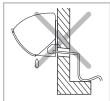
5cm less

Do not place the end of the drain hose in a hollow.

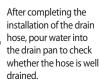


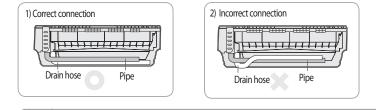
The end of the drain hose must NOT be placed under water.





The drain hose must not be bent.





Don't tie drain hose to the assembly pipe which may lead to water leakage.

Drain hose installation

<u>/</u>

CAUTION

- 1. If necessary, connect the 6.56 ft(2 m) extension drain hose to the drain hose.
- 2. If you use the extension drain hose, insulate the inside of the extension drain hose with a shield.
- 3. Fit the drain hose into 1 of 2 drain hose holes, then fix the end of the drain hose tightly with a clamp.

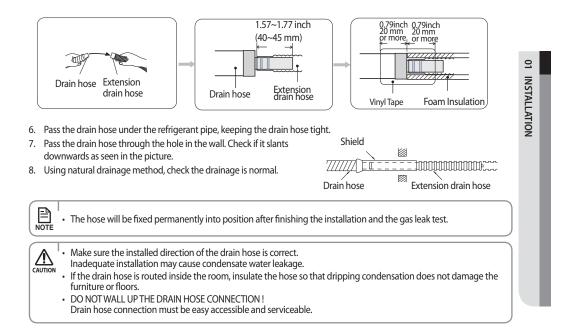
NOTE If you do not use the other dra block it with a rubber stopper	in hose hole,
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4. When extending the Drain Hose, hold the end of Drain Hose and Extended Hose, rotate and insert the drain hose into Extended hose for 1.57~1.77 inch(40~45 mm). Make sure the two hoses are firmly connected, there is no water leakage.



5. Connect the Drain Hose after using Foam Insulation to wrap the Extended Hose. Then, Use vinyl tape to wrap the each side of connection by 0.79inch(20 mm).





Screw hole

Screw

Drain hose

Drain pan outlet

Rubber cap

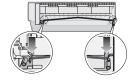
Changing drain connection

Change the direction only when it is necessary.

- 1. Detach the rubber cap with the pliers.
- 2. Detach the drain hose by pulling it and turning to the left.
- 3. Insert the drain hose by fixing it with the screw into the groove of the drain hose and the outlet of the drain pan.
- 4. Attach the rubber cap with a screwdriver by turning it to the right until it fixes to the end of the groove.
- 5. Check for leakage on both side of the drain outlet.

Pour the water in direction of arrow.

* Direction of the drained water





 Make sure the indoor unit is in upright position when you pour water to check for leakage. Make sure that the water does not overflow onto the electrical part.



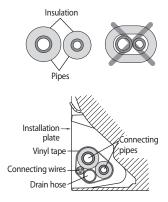
Installing the indoor unit

Perform the following work on the area where gas leak test was done priory. After checking for gas leaks in the system, insulate the pipe, hose and cables. Then place the indoor unit on the installation plate.

- 1. To minimise condensation problems, wrap foam insulation (as shown in the figure) on a part without insulation on the end of the pipes.
- 2. Wind the pipe, assembly cable and drain hose with vinyl tape.
- Place the bundle (the pipe, assembly cable and drain hose) in the lower part of the indoor unit carefully so it does not project from the rear of the indoor unit.
- 4. Hook the indoor unit to the installation plate and move the unit to the right and left until it is securely in place.

Make sure pipe does not move when you install the indoor unit on an installation plate.

- 5. Wrap the rest of the pipe with vinyl tape.
- 6. Attach the pipe to the wall using clamps (optional).



Final check and trial operation

To complete the installation, perform the following checks and tests to ensure that the air conditioner operates correctly.

Check the followings:

- Strength of the installation site
- Tightness of pipe connection to detect gas leak
- Electric wiring connection
- Heat-resistant insulation of the pipe
- Drainage

NOTE

- Grounding connection
- Correct operation (follow the steps below)

1. Press the **Power** () button and check the following:

- The indicator on the indoor unit lights up.
- ▶ The airflow blade opens and the fan gears up for operation.

2. Press the Mode button to select Cool or Heat mode.

- ▶ In Cool mode, use **Temp hr. +** or button and set the temperature at 16 °C(61°F).
- ▶ In Heat mode, use Temp hr. + or button and set the temperature at 30 °C (86°F).

 Approximately 3~5 minutes later, outdoor unit will start to operate and the Cool or Warm air will blow out.

• After 12 minutes of stationary condition check the indoor unit air treatment.

Cooling mode (indoor unit check) \rightarrow Inlet air temp. - Outlet air temp: From 18 °F to 22 °F (indicative delta T)

Heating mode (indoor unit check) \rightarrow Outlet air temp. - Inlet air temp: From 20 °F to 25°F (indicative delta T)

In heating mode, the indoor fan motor can remain off to prevent cold air being blown in to conditioned space.

3. Press the Air swing (≥ button and check the following: The airflow blades work properly.

4. Press the **Power** () button to stop the operation.

■ [|] • When you complete the installation successfully, hand over this manual to the user for storage in a handy and safe place.



Far

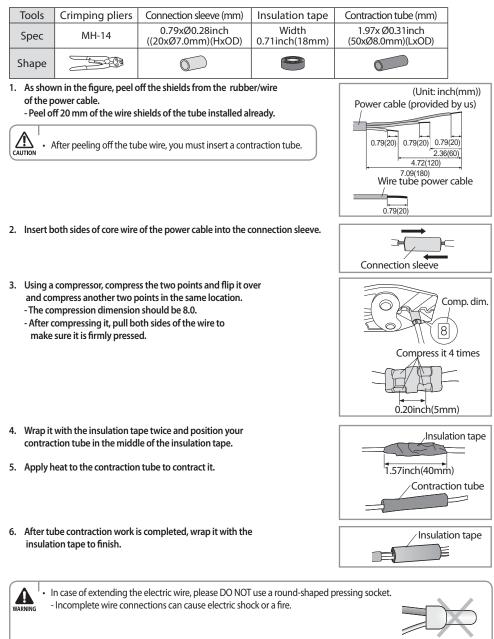
Tem

2

How to extend the power wiring

Items to prepare

(compressor and insulation tape should be prepared by an installation technician.)



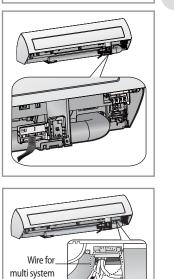
Sub PCB installation(optional)

(Wired remote controller, central remote controller etc.)

- 1. Turn the power off and take off the cover panel of the indoor unit.
- 2. Attach the Sub PCB to the Case Sub PCB.
- 3. Assemble the Case Sub PCB to the indoor unit.

- 4. Find the PCB wire, and connect the wire to the Sub PCB as seen in the picture.
- 5. Connect the wire(remote controller, central remote controller etc) to the Sub PCB.

- 6. Assemble the Cover PCB and the front panel.
- * If the Sub PCB is not installed, arrange the wire for multi system (connection) as shown in the illustration.



JU

Case Sub PCB Sub PCB

connection

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INSTALLATION

