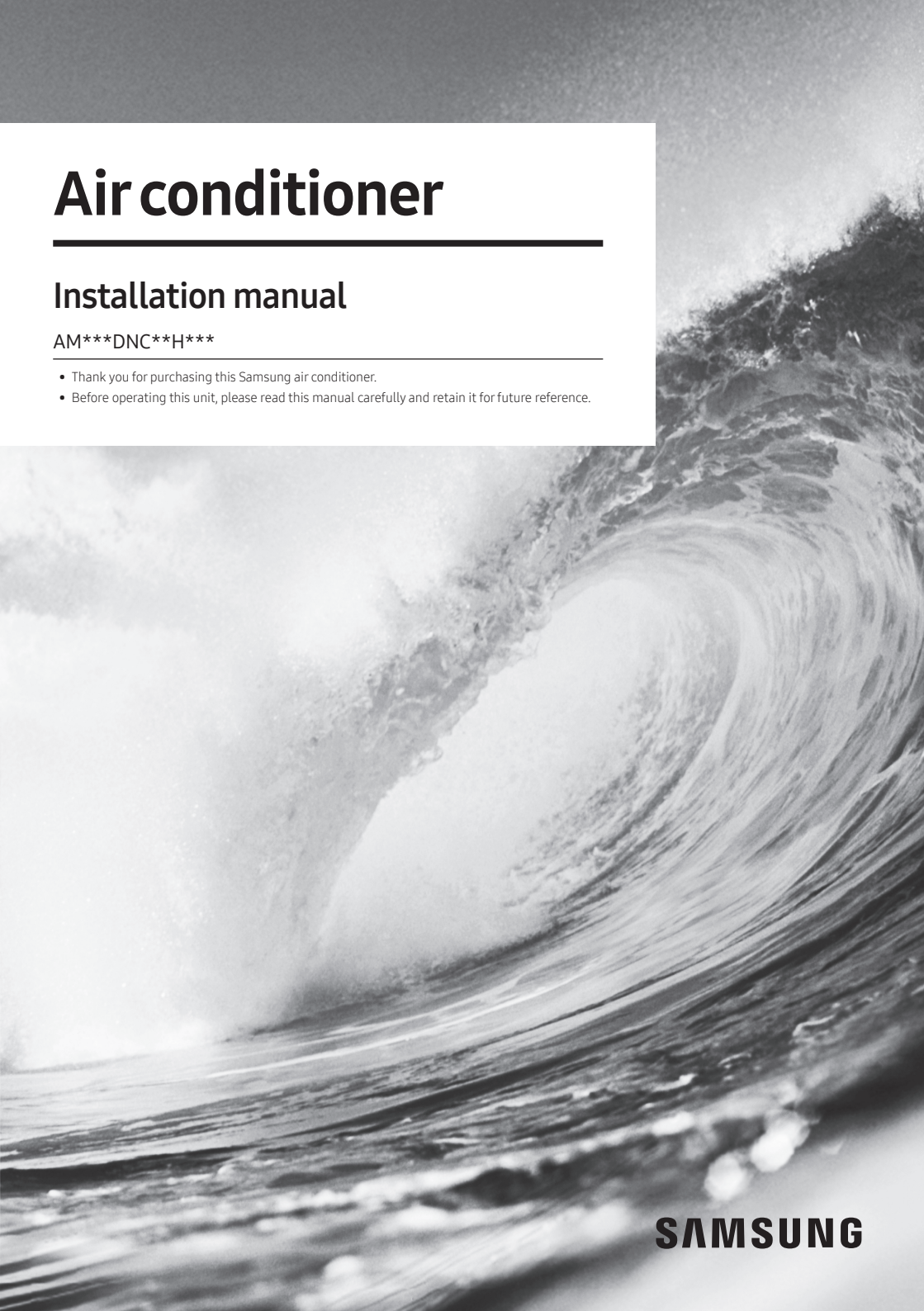
Air conditioner

Installation manual

AM***DNC**H***

- Thank you for purchasing this Samsung air conditioner.
- Before operating this unit, please read this manual carefully and retain it for future reference.



SAMSUNG

Contents

Safety Information

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

⚠ WARNING

- 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

⚠ WARNING

- 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.
- 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 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.
- Wear protective equipment (such as safety gloves, goggles, and headgear) during installation and maintenance works. Installation/repair technicians may be injured if protective equipment is not properly equipped.

Installing the unit

⚠ WARNING

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.

Safety Information

- 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.
- Our units should be installed in compliance with the spaces shown in the installation manual, to ensure accessibility from both sides and allow repairs or maintenance operations to be carried out. The unit's components should be accessible and easy to disassemble without endangering people and objects.
- For this reason, when provisions of the installation manual are not complied with, the cost required to access and repair the units (in SAFETY CONDITIONS, as set out in prevailing regulations) with harnesses, ladders, scaffolding or any other elevation system will NOT be considered part of the warranty and will be charged to the end customer.

Power supply line, fuse or circuit breaker

⚠ WARNING

- 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.
- Devices disconnected from the power supply should be completely disconnected in the condition of overvoltage category.

⚠ CAUTION

Make sure that you earth the cables.

- Do not connect the earth wire to the gas pipe, water pipe, lighting rod or telephone wire. If earthing is not complete, electric shock or fire may occur.

Install the circuit breaker.

- If the circuit breaker is not installed, electric shock or fire may occur.

Make sure that the condensed water dripping from the drain hose runs out properly and safely.

Install the power cable and communication cable of the indoor and outdoor unit at least 1m away from the electric appliance.

Install the indoor unit away from lighting apparatus using the ballast.

- If you use the wireless remote controller, reception error may occur due to the ballast of the lighting apparatus.

Do not install the air conditioner in following places.

- Place where there is mineral oil or arsenic acid. Resin parts flame and the accessories may drop or water may leak. The capacity of the heat exchanger may reduce or the air conditioner may be out of order.
- The place where corrosive gas such as sulfurous acid gas generates from the vent pipe or air outlet.

The copper pipe or connection pipe may corrode and refrigerant may leak.

- The place where there is a machine that generates electromagnetic waves. The air conditioner may not operate normally due to control system.
- The place where there is a danger of existing combustible gas, carbon fiber or flammable dust.

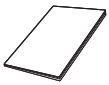
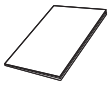
The place where thinner or gasoline is handled. Gas may leak and it may cause fire.

Installation Procedure

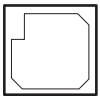
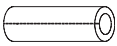
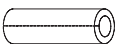
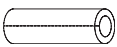
Step 1 Checking and preparing accessories

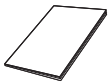
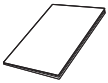
The following accessories are supplied with the indoor unit. The type and quantity may differ depending on the specifications.

Ceiling type (AM056DNCH***)**

Pattern sheet	User's manual
	
Installation manual	Plate Hanger
	
Cable-Tie	
	

Big Ceiling type (AM071DNCH***)**

Pattern sheet	Insulation cover pipe A
	
Insulation cover pipe B	Insulation drain
	
Flexible hose clamp	Flexible hose
	

Cable-tie	User manual
	
Install manual	Insulation
	
Rubber	
	

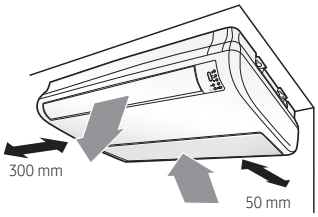
Step 2 Choosing the installation location

- Select a convenient location that permits the air to reach every corner of the area to be cooled.
- Pre-plan for easy and short routing of the refrigerant tubing and wiring to the outdoor unit.
- There should be no flammable gas, alkaline, substances present in the air.
- Avoid location where obstacles preventing good air circulation are present.
- Noise prevention should be considered in determining the unit's location.
- The structure, where the unit is to be installed should be strong enough to support the weight of the unit.
- Rigid wall without vibration.
- Where it is not exposed to direct sunshine.
- Where the air filter can be removed and cleaned easily.

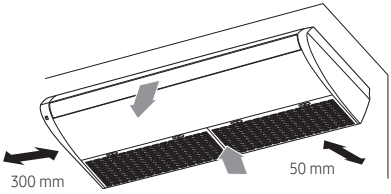
Installation Procedure

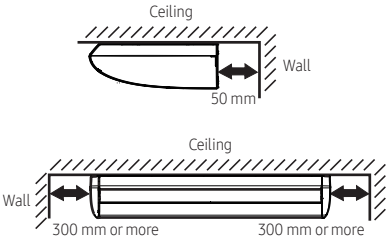
Ceiling installation

Ceiling type (AM056DNCH***)**



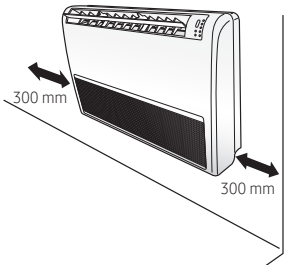
Big Ceiling type (AM071DNCH***)**





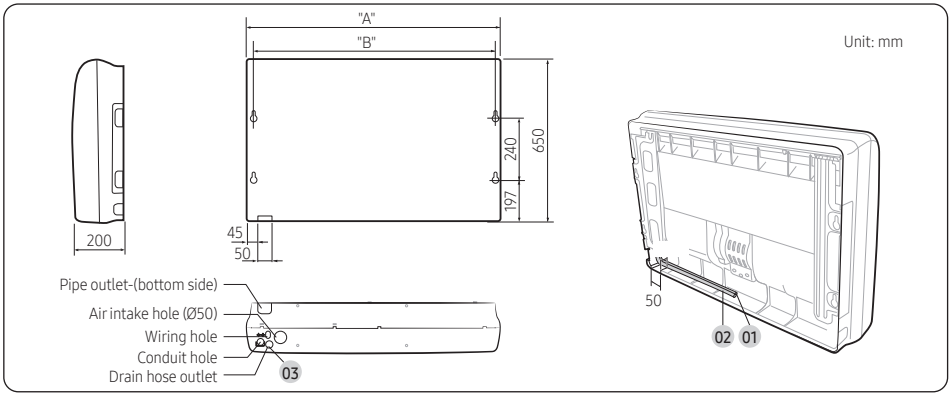
Floor installation

Ceiling type (AM056DNCH***)**

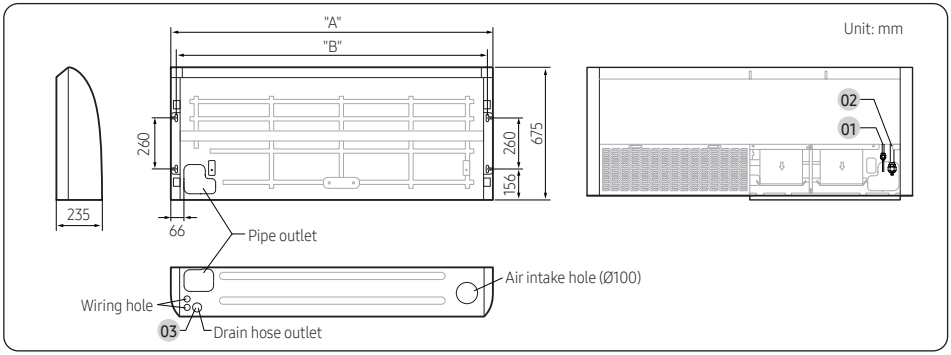


Dimension of the indoor unit

Ceiling type (AM056DNC**H***)



Big Ceiling type (AM071DNC**H***)

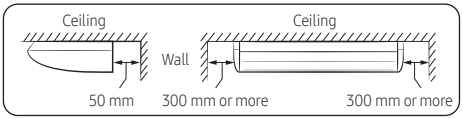


Model	Dimension		1	2	3
	A	B	Liquid pipe connection	Gas pipe connection	Drain pipe connection
Ceiling type (AM056DNC**H***)	1000	922	ø6.35 (1/4")	ø12.7 (1/2")	ID ø18 Hose
Big Ceiling type (AM071DNC**H***)	1350	1298	ø9.52 (3/8")	ø15.88 (5/8")	OD ø25; ID ø20

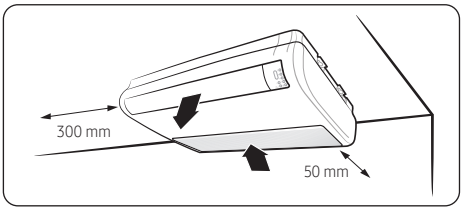
Installation Procedure

Spacing requirements

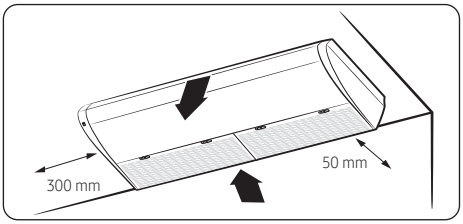
It is recommended to install the Y-joint before installing the indoor unit.



Ceiling type (AM056DNCH***)**



Big Ceiling type (AM071DNCH***)**



Step 3 Installing the indoor unit

Ceiling installation

Ceiling type (AM056DNCH***)**

1 Select pipe directions.
When the directions are selected, drill 3-1/8"-(100mm, for pipe and cables) and 1-3/4"-(40mm, for drain hose) diameter holes on the wall so that it slants slightly downwards toward the outdoor for smooth water flow.

NOTE

- Use the pattern sheet to select pipe directions.

2 Drill holes for anchor bolts according to the distance and mount them.

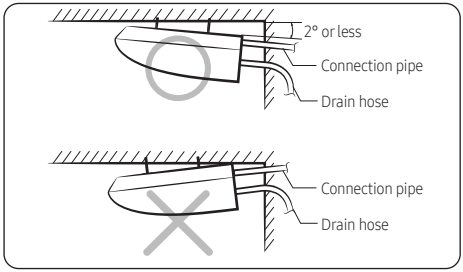
NOTE

- Use the pattern sheet.

3 Install the unit onto the ceiling. Be sure to arrange the drain hose so that it is leveled lower than the drain hose connecting port of the indoor unit.

NOTE

- For proper drainage of condensate, give a 2° or less slant to the side of the unit which will be connected with the drain hose as shown in the figure. (The gap between the lower end of the indoor unit and the ceiling should be 12 mm or less.)

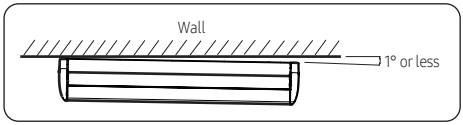


CAUTION

- Ensure that the ceiling is strong enough to support the weight of the indoor unit.
- Before hanging the unit, test the strength of each attached suspension bolt.
- Install the drain hose from the rear of the unit.

NOTE

- The gap between the lower end of the indoor unit and the ceiling should be 1˚ (16 mm) or less.



Ceiling installation

Big Ceiling type (AM071DNC**H***)

1 Select pipe directions.

When the directions are selected, drill 3-1/8"-(100mm, for pipe and cables) and 1-3/4"-(40mm, for drain hose) diameter holes on the wall so that it slants slightly downwards toward the outdoor for smooth water flow.

NOTE

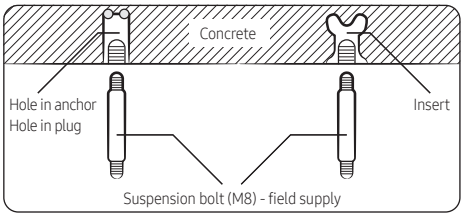
- Use the pattern sheet to select pipe directions.

2 Drill holes for anchor bolts according to the distance and mount them.

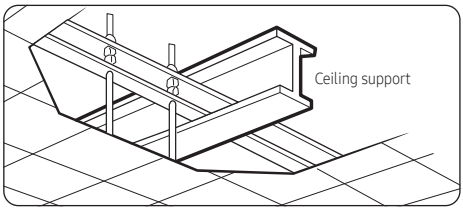
NOTE

- Use the pattern sheet.

3 Insert bolt anchors. Use existing ceiling supports or construct a suitable support as shown in figure.



4 Install the suspension bolts depending on the ceiling type.



CAUTION

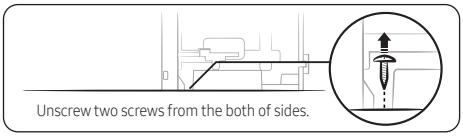
- Ensure that the ceiling is strong enough to support the weight of the indoor unit. Before hanging the unit, test the strength of each attached suspension bolt.
- If the length of suspension bolt is more than 1.5m, it is required to prevent vibration.
- If this is not possible, create an opening on the false ceiling in order to be able to use it to perform the required operations on the indoor unit.

5 Screw eight nuts to the suspension bolts making space for hanging the indoor unit.

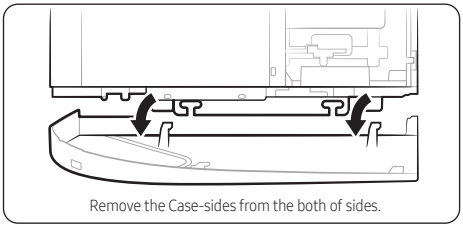
NOTE

- You must install all the suspension rods.

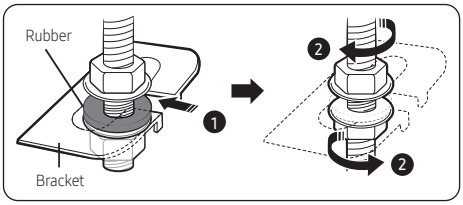
6 When Hanging the set, firstly unscrew the screws from the both of sides, and then disassemble the Case-sides, or else the case-side will be damaged by disassembling it directly.



7 Reassemble the Case-sides, tightening the screws after hanging the set.



8 Hang the indoor unit to the suspension bolts between two nuts.



CAUTION

- Piping must be laid and connected inside the ceiling when suspending the unit. If the ceiling is already constructed, lay the piping into position for connection to the unit before placing the unit inside the ceiling.

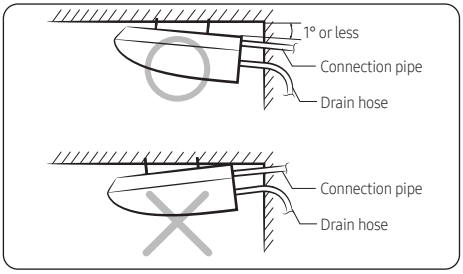
Installation Procedure

9 Screw the nuts to suspend the unit.

10 Adjust level of the unit by using measurement plate for all 4 sides.

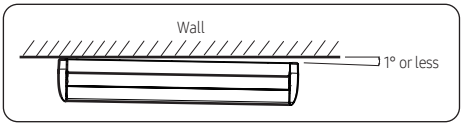
NOTE

- For proper drainage of condensate, give a 1° or less slant to the side of the unit which will be connected with the drain hose as shown in the figure. (The gap between the lower end of the indoor unit and the ceiling should be 12 mm or less.)



NOTE

- The gap between the lower end of the indoor unit and the ceiling should be 1˚ (23 mm) or less.



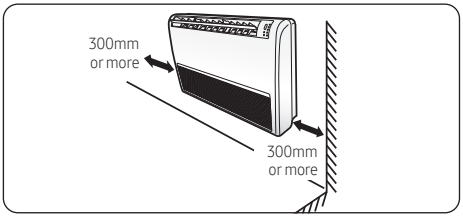
Floor installation

Ceiling type (AM056DNCH***)**

1 Select pipe directions.

When the directions are selected, drill 3-1/8" (100mm, for pipe and cables) and 1-3/4" (40mm, for drain hose)

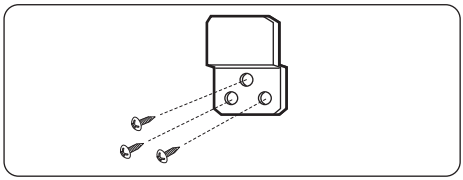
diameter holes on the wall so that it slants slightly downwards toward the outdoor for smooth water flow.



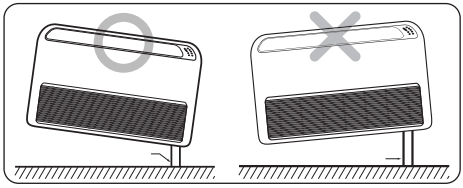
NOTE

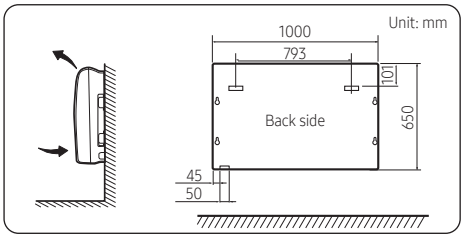
- Use the pattern sheet to select pipe directions.

2 Install the hanging plate according to the distance and mount it.



3 Install the unit and be sure to arrange the drain hose so that it is leveled lower than the drain hose connecting port of the indoor unit.



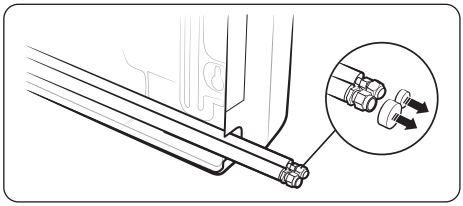


Step 4 Purging inert gas from the indoor unit

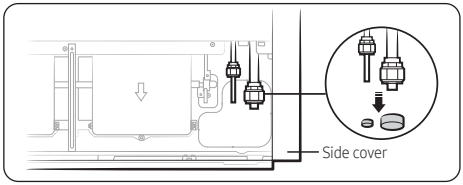
The indoor unit comes with nitrogen gas (inert gas) charged at the factory. Therefore, all inert gas must be purged before connecting the assembly piping.

Unscrew the pinch pipe at the end of each refrigerant pipe.

Ceiling type (AM056DNCH***)**



Big Ceiling type (AM071DNCH***)**



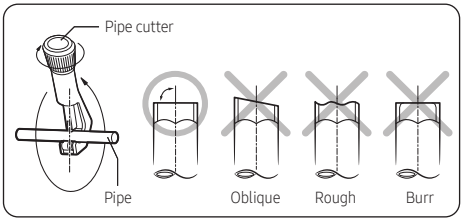
NOTE

- To prevent dirt or foreign objects from getting into the pipes during installation, do not remove the pinch pipe completely until you are ready to connect the piping.
- The designs and shape are subject to change according to the model.

Step 5 Cutting and flaring the pipes

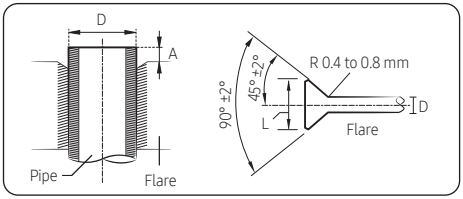
1 Make sure that you have the required tools available: pipe cutter, reamer, flaring tool, and pipe holder.

2 If you wish to shorten the pipes, cut them with a pipe cutter, ensuring that the cut edge remains at a 90° angle to the side of the pipe. Refer to the illustrations below for examples of edges cut correctly and incorrectly.



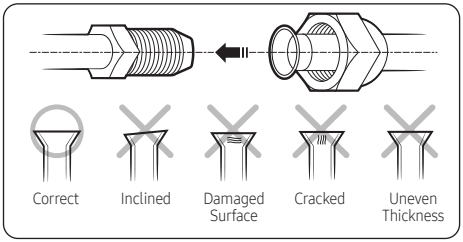
3 To prevent any gas from leaking out, remove all burrs at the cut edge of the pipe, using a reamer.

4 Slide a flare nut on to the pipe and modify the flare.



Outer Diameter (D)	Depth (A)	Flare dimension (L)
Ø6.35 mm	1.3 mm	8.7 to 9.1 mm
Ø9.52 mm	1.8 mm	12.8 to 13.2 mm
Ø12.70 mm	2.0 mm	16.2 to 16.6 mm
Ø15.88 mm	2.2 mm	19.3 to 19.7 mm
Ø19.05 mm	2.2 mm	23.6 to 24.0 mm

5 Check that the flaring is correct, referring to the illustrations below for examples of incorrect flaring.



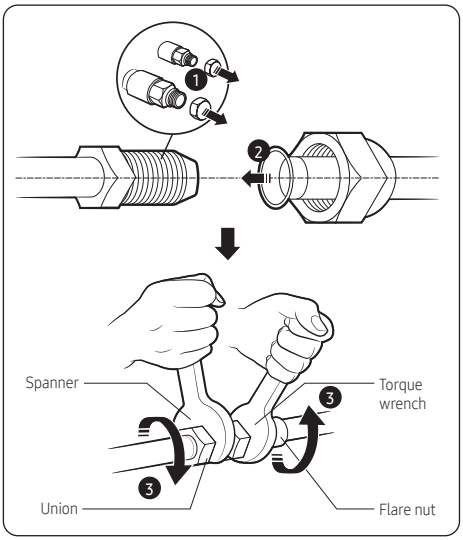
Installation Procedure

Step 6 Connecting the assembly pipes to the refrigerant pipes

There are two refrigerant pipes of different diameters :

- A smaller one for the liquid refrigerant.
- A larger one for the gas refrigerant. The inside of copper pipe must be clean and has no dust.

1 Remove the pinch pipe on the pipes and connect the assembly pipes to each pipe, tightening the nuts, first manually and then with a torque wrench, a spanner applying the following torque.



Outer diameter (mm)	Torque (N·m)
Ø6.35	14 to18
Ø9.52	34 to 42
Ø12.70	49 to 61
Ø15.88	68 to 82
Ø19.05	100 to 120

(1 N·m=10 kgf·cm)

NOTE

- If the pipes must be shortened, see Step 5 Cutting and flaring the pipes on page 11.
- Tighten the nuts to the specified torques. If overtightened, the nuts could be broken so refrigerant may leak.

2 Be sure to use an insulator thick enough to cover the refrigerant tube to protect the condensate water on the outside of the pipe falling onto the floor and to improve the efficiency of the unit.

3 Cut off any excess foam insulation.

4 Make sure that there are no cracks or waves on the bent area.

5 It would be necessary to double the insulation thickness (10 mm or more) to prevent condensation even on the insulator when if the installed area is warm and humid.

⚠ CAUTION

- Connect the indoor and outdoor units using pipes with flared connections (not supplied). For the lines, use insulated, unwelded, degreased and deoxidized copper pipe (Cu DHP type to ISO 1337 or UNI EN 12735-1), suitable for operating pressures of at least 4.2 MPa and for a burst pressure of at least 20.7 MPa. Copper pipe for hydro-sanitary applications is completely unsuitable.
- For sizing and limits (height difference, line length, max. bends, refrigerant charge, etc.) see the outdoor unit installation manual.
- All refrigerant connection must be accessible, in order to permit either unit maintenance or removing it completely.
- If the pipes require brazing, make sure that oxygen free nitrogen (OFN) is flowing through the system.
- Nitrogen blowing pressure range is 0.02 to 0.05 MPa.

Step 7 Performing the gas leak test

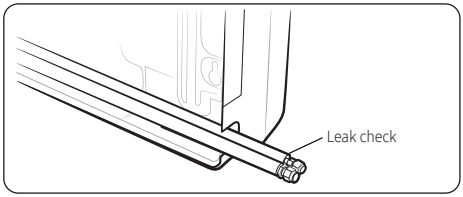
LEAK TEST WITH NITROGEN (before opening valves)

In order to detect basic refrigerant leaks, before recreating the vacuum and recirculating the R-410A, it's responsable of installer to pressurize the whole system with nitrogen (using a cylinder with pressure reducer) at a pressure above 40 bar (gauge).

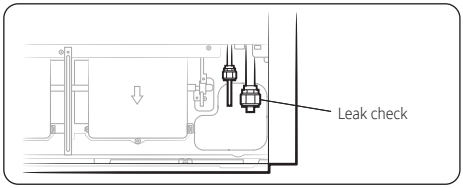
LEAK TEST WITH R-410A (after opening valves)

Before opening valves, discharge all the nitrogen into the system and create vacuum. After opening valves check leaks using a leak detector for refrigerant R410A.

Ceiling type (AM056DNCH***)**



Big Ceiling type (AM071DNCH***)**



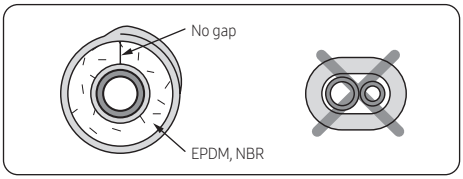
NOTE

- The designs and shape are subject to change according to the model.

Step 8 Insulating the refrigerant pipes

Once you have checked that there are no leaks in the system, you can insulate the piping and hose.

1 To avoid condensation problems, place Acrylonitrile Butadien Rubber separately around each refrigerant pipe.



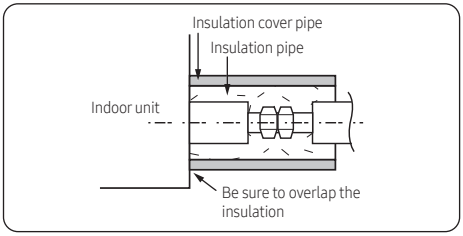
NOTE

- Always make the seam of pipes face upwards.

2 Wind insulating tape around the pipes and drain hose avoiding to compress the insulation too much.

3 Finish wrapping insulating tape around the rest of the pipes leading to the outdoor unit.

4 The pipes and electrical cables connecting the indoor unit with the outdoor unit must be fixed to the wall with suitable ducts.



CAUTION

- Must fit tightly against body without any gap.
- All refrigerant connection must be accessible, in order to permit either unit maintenance or removing it completely.

Installation Procedure

5 Select the insulation of the refrigerant pipe.

- Insulate the gas side and liquid side pipe referring to the thickness according to the pipe size.
- Indoor temperature of 30 °C and humidity of 85 % is the standard condition.
  - If installing in a high humidity condition, use one grade thicker insulator by referring to the table below.
  - If installing in an unfavorable conditions, use thicker one.
- Insulator's heat-resistance temperature should be more than 120 °C.

Pipe	Pipe size	Insulation Type (Heating/Cooling)		Remarks
		Standard [30 °C, 85 %]	High humidity [30 °C, over 85 %]	
		EPDM, NBR		
Liquid pipe	Ø 6.35 ~ Ø 9.52	9 t	9 t	Internal temperature is higher than 120 °C
	Ø 12.7 ~ Ø 19.05	13 t	13 t	
Gas pipe	Ø 6.35	13 t	19 t	
	Ø 9.52	19 t	25 t	
	Ø 12.70			
	Ø 15.88			
	Ø 19.05			

When installing insulation in places and conditions below, use the same insulation that is used for high humidity conditions

<Geological condition>

- High humidity places such as shoreline, hot spring, near lake or river, and ridge (when the part of the building is covered by earth and sand.)

<Operation purpose condition>

- Restaurant ceiling, sauna, swimming pool etc.

<Building construction condition>

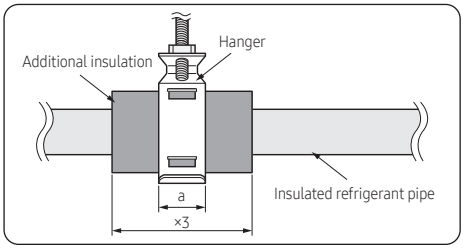
- The ceiling frequently exposed to moisture and cooling is not covered.

e.g. The pipe installed at a corridor of a dormitory and studio or near an exit that opens and closes frequently.

- The place where the pipe is installed is highly humid due to the lack of ventilation system.

⚠ CAUTION

- Install the insulation not to get wider and use the adhesives on the connection part of it to prevent moisture from entering.
- Wind the refrigerant pipe with insulation tape if it is exposed to outside sunlight.
- Install the refrigerant pipe respecting that the insulation does not get thinner on the bent part or hanger of pipe.
- Add the additional insulation if the insulation plate gets thinner.



Step 9 Installing the drain hose and drain pipe

Big Ceiling type (AM071DNC**H***)

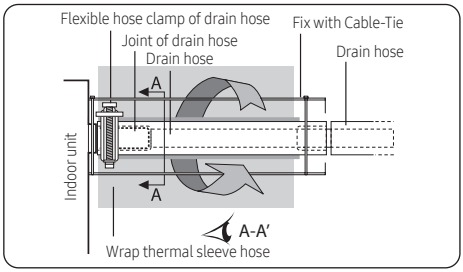
Care must be taken when installing the drain hose for the indoor unit to ensure that any condensate water is correctly drained outside.

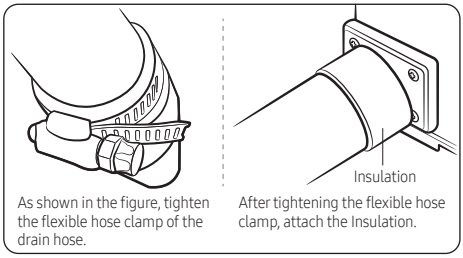
The drain hose can be installed to the right of the base pan.

1 Installing the drain hose should be the shorter, the better.

- In order to discharge condensation water, the drain hose should keep tilted.
- Fix the drain hose with Cable-Tie, so that it will not separate from the machine.

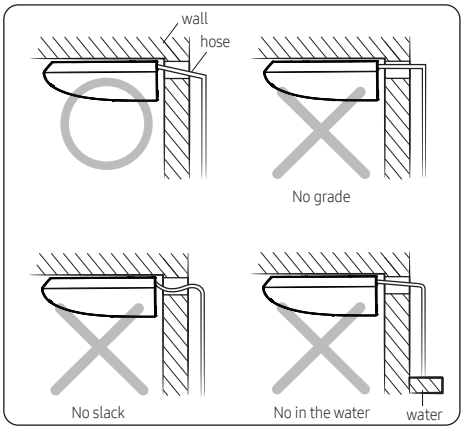
2 Insulate and fix the drain hose according to the figure.
- Insert the drain hose to bottom of the outfall of water basin.
- Lock flexible hose clamp of the drain hose according to the figure.
- Wind and wrap flexible hose clamp and drain hose fully with thermal insulation sponge; fix both ends of external layer with ribbon for thermal insulation.
- After being installed, drain hose must be insulated fully by heat insulating material. (To be provided at site.)

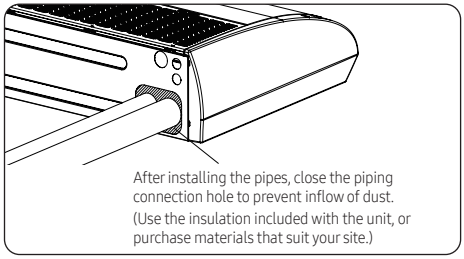




As shown in the figure, tighten the flexible hose clamp of the drain hose.

After tightening the flexible hose clamp, attach the Insulation.





After installing the pipes, close the piping connection hole to prevent inflow of dust.
(Use the insulation included with the unit, or purchase materials that suit your site.)

NOTE

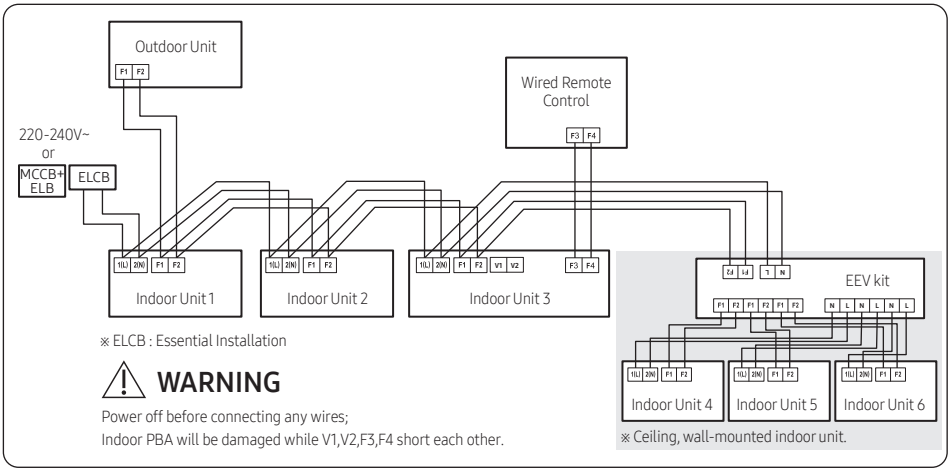
- Please follow national and local electrical codes. Additional electrical connection components may be required.

Installation Procedure

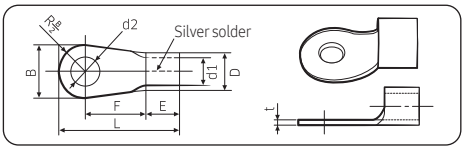
Step 10 Connecting the power and communication cables

1 Before wiring work, you must turn off all power source.
2 Indoor unit power should be supplied through the breaker(ELCB or MCCB+ELB) separated by the outdoor power.
- ELCB : Earth Leakage Circuit Breaker
- MCCB : Molded Case Circuit Breaker
- ELB : Earth Leakage Breaker

3 The power cable should be used only copper wires.
4 Connect the power cable{1(L), 2(N)} among the units within maximum length and communication cable(F1, F2) each.
5 Connect F3, F4(for communication) when installing the wired remote control.



Selecting compressed ring terminal



Norminal dimensions for cable (mm2)	Norminal dimensions for screw (mm)	B		D		d1		E	F	L	d2		t
		Standard dimension (mm)	Allowance (mm)	Standard dimension (mm)	Allowance (mm)	Standard dimension (mm)	Allowance (mm)	Min.	Min.	Max.	Standard dimension (mm)	Allowance (mm)	Min.
1.5	4	6.6	±0.2	3.4	+0.3 -0.2	1.7	±0.2	4.1	6	16	4.3	+0.2 0	0.7
	4	8											
2.5	4	6.6	±0.2	4.2	+0.3 -0.2	2.3	±0.2	6	6	17.5	4.3	+0.2 0	0.8
	4	8.5											
4	4	9.5	±0.2	5.6	+0.3 -0.2	3.4	±0.2	6	5	20	4.3	+0.2 0	0.9

Specification of electronic wire

Power supply	MCCB	ELB or ELCB	Power cable	Earth cable	Communication cable
Max : 242V Min : 198V	XA	XA, 30mmA 0.1 s	2.5mm²	2.5mm²	0.75~1.5mm²

- Decide the capacity of ELCB(or MCCB+ELB) by below formula.
- 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 or IEC:60245 IEC 66 / CENELEC: H07RN-F)

The capacity of ELCB(or MCCB+ELB) X[A] = 1.25 X 1.1 X $\sum A_i$

- X : The capacity of ELCB(or MCCB+ELB).
- $\sum A_i$: Sum of Rating currents of each indoor unit.
- Refer to each installation manual about the rating current of indoor unit.

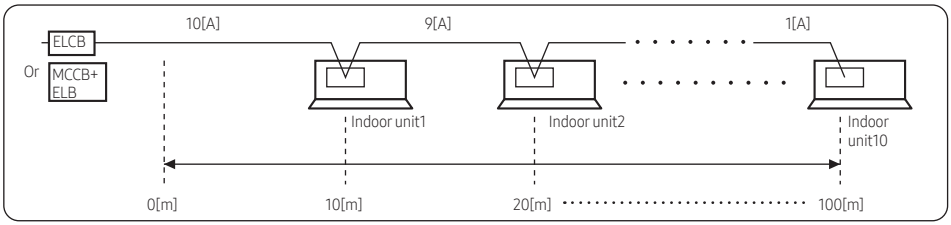
- Decide the power cable specification and maximum length within 10% power drop among indoor units.

$$\sum_{k=1}^{n} \left(\frac{Coef \times 35.6 \times L_k \times i_k}{1000 \times A_k} \right) < 10\% \text{ of input voltage[V]}$$

- Coef: 1.55
- L_k: Distance among each indoor unit[m],
  A_k: Power cable specification[mm²]
  i_k: Running current of each unit[A]

Example of Installation

- Total power cable length L = 100(m), Running current of each units 1[A]
- Total 10 indoor units were installed



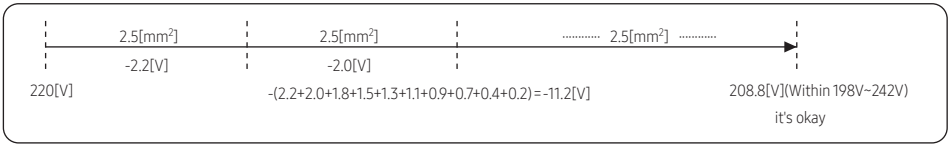
- Apply following equation.

$$\sum_{k=1}^{n} \left(\frac{Coef \times 35.6 \times L_k \times i_k}{1000 \times A_k} \right) < 10\% \text{ of input voltage[V]}$$

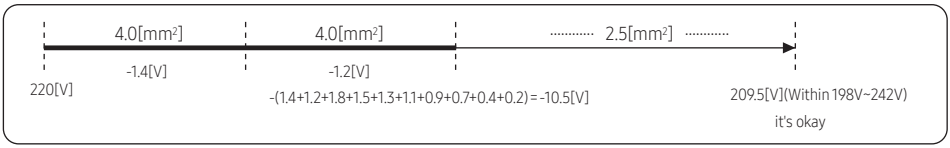
Installation Procedure

Calculation

- Installing with 1 sort wire.



- Installing with 2 different sort wire.



Rating current

Unit	Model	Rating current
Ceiling type	AM056DNC**H***	0.43A
Big Ceiling type	AM071DNC**H***	0.47A

⚠ CAUTION

- Select the power cable in accordance with relevant local and national regulations.
- Wire size must comply with local and national code.
- For the power cable, use the grade of H07RN-F or H05RN-F materials.
- You should connect the power cable into the power cable terminal and fasten it with a clamp.
- The unbalanced power must be maintained within 10% of supply rating among whole indoor units.
- If the power is unbalanced greatly, it may shorten the life of the condenser. If the unbalanced power is exceeded over 10% of supply rating, the indoor unit is protected, stopped and the error mode indicates.
- To protect the product from water and possible shock, you should keep the power cable and the connection cord of the indoor and outdoor units in the iron pipe.
- Connect the power cable to the auxiliary circuit breaker. An all pole disconnection from the power supply must be incorporated in the fixed wiring(≥3mm).
- You must keep the cable in a protection tube.
- Keep distances of 50mm or more between power cable and communication cable.
- Maximum length of power cables are decided within 10% of power drop. If it exceeds, you must consider another power supplying method.
- The circuit breaker(ELCB or MCCB+ELB) should be considered more capacity if many indoor units are connected from one breaker.
- Use round pressure terminal for connections to the power terminal block.
- For wiring, use the designated power cable and connect it firmly, then secure to prevent outside pressure being exerted on the terminal board.
- Use an appropriate screwdriver for tightening the terminal screws. A screwdriver with a small head will strip the head and make proper tightening impossible.
- Over-tightening the terminal screws may break them.
- See the table below for tightening torque for the terminal screws.

	Tightening torque	
	N•m	kgf•cm
M3.5	0.8~1.0	8.0~10.0
M4	1.2~1.5	12.0~14.7

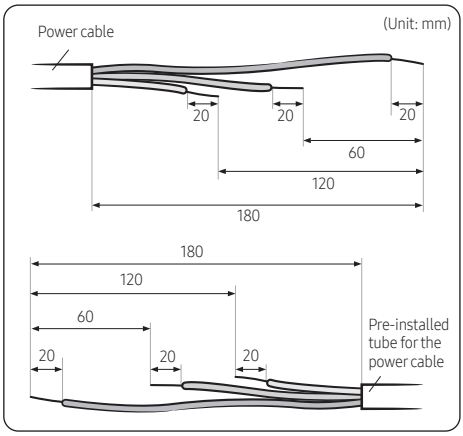
Step 11 Optional: Extending the power cable

1 Prepare the following tools.

Tools	Spec	Shape
Crimping pliers	MH-14	
Connection sleeve (mm)	20 x Ø6.5 (H x OD)	
Insulation tape	Width 19 mm	
Contraction tube (mm)	70 x Ø8.0 (L x OD)	

2 As shown in the figure, peel off the shields from the rubber and wire of the power cable.

- Peel off 20 mm of cable shields from the pre-installed tube.

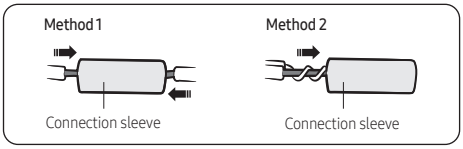


⚠ CAUTION

- For information about the power cable specifications for indoor and outdoor units, refer to the installation manual.
- After peeling off cable wires from the pre-installed tube, insert a contraction tube.

3 Insert both sides of core wire of the power cable into the connection sleeve.

- Method 1: Push the core wire into the sleeve from both sides.
- Method 2: Twist the wire cores together and push it into the sleeve.

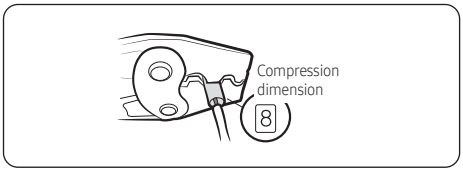


⚠ CAUTION

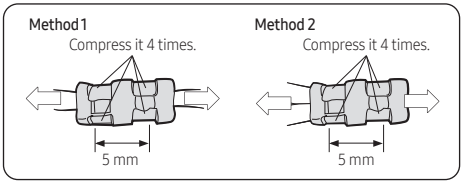
- If cable wires are connected without using connecting sleeves, their contact area becomes reduced, or corrosion develops on the outer surfaces of the wires (copper wires) over a long time. This may cause an increase of resistance (reduction of passing current) and consequently may result in a fire.

4 Using a crimping tool, compress the two points and flip it over and compress another two points in the same location.

- The compression dimension should be 8.0.

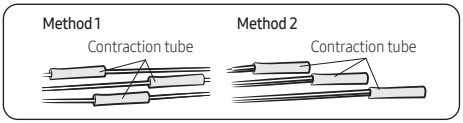


- After compressing it, pull both sides of the wire to make sure it is firmly pressed.

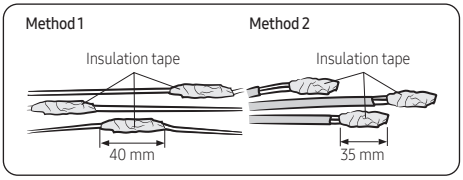


Installation Procedure

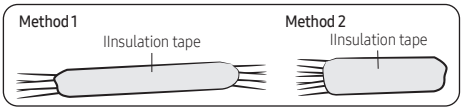
5 Apply heat to the contraction tube to contract it.



6 Wrap it with the insulation tape twice or more and position your contraction tube in the middle of the insulation tape.



7 After tube contraction work is completed, wrap it with the insulation tape to finish.
Three or more layers of insulation are required.

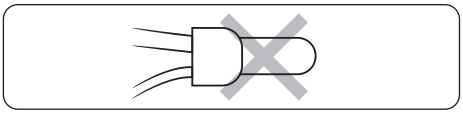


⚠ CAUTION

- Make sure that the connection parts are not exposed to outside.
- Be sure to use insulation tape and a contraction tube made of approved reinforced insulating materials that have the same level of withstand voltage with the power cable. (Comply with the local regulations on extensions.)

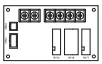
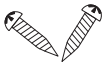
⚠ WARNING

- In case of extending the electric wire, please DO NOT use a round-shaped Pressing socket.
  - Incomplete wire connections can cause electric shock or a fire.

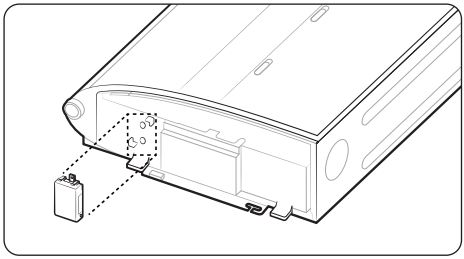


Step 12 Optional: Installing an interface module

Interface module : MIM-B14

External Control	PCB Case
	
Haness Wire(2P)	Haness Wire (4P)
	
Screw	
	

1 Fix the case at with bolts on the side of the control box in the indoor unit.(See the picture)



2 Attach the Interface module PCB to the case in the control box of the indoor unit, then connect the power and the communication cable between the Interface module and the indoor unit;

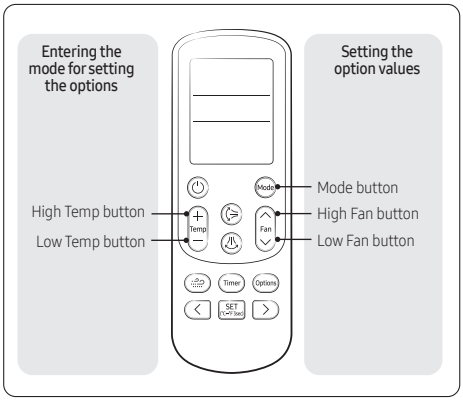
3 If you install a Interface module to an indoor unit, every outdoor unit which is connected to an indoor unit can be controlled simultaneously.

4 Each indoor unit connected to the same centralized controller has its own Interface module.

Step 13 Setting the indoor unit addresses and the installation options

- Set the indoor unit address and installation option with remote controller option. Set the each option separately since you cannot set the ADDRESS setting and indoor unit installation setting option at the same time. You need to set twice when setting indoor unit address and installation option.
- Please use the proper wireless remote controller which can set 24 digit option code.
- Please refer to the wired remote controller installation manual for setting with the wired remote controller.

Common steps for setting the addresses and options

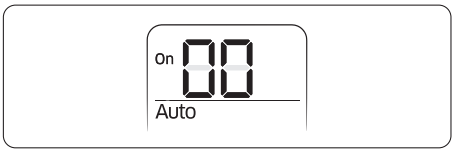


NOTE

- The remote control display and buttons may vary depending on the model.

1 Enter the mode for setting the options:

- **a** Remove the batteries from the remote control, and then insert them again.
- **b** While holding down the (High Temp) and (Low Temp) buttons simultaneously, insert the batteries into the remote control.
- **c** Make sure that you are entered to the mode for setting the options:



2 Set the option values.

CAUTION

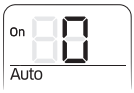
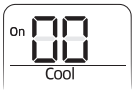
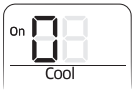
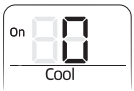
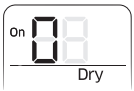
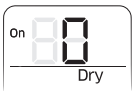
- The total number of available options are 24: SEG1 to SEG24.
- Because SEG1, SEG7, SEG13, and SEG19 are the page options used by the previous remote control models, the modes to set values for these options are skipped automatically.
- Set a 2-digit value for each option pair in the following order: SEG2 and SEG3 → SEG4 and SEG5 → SEG6 and SEG8 → SEG9 and SEG10 → SEG11 and SEG12 → SEG14 and SEG15 → SEG16 and SEG17 → SEG18 and SEG20 → SEG21 and SEG22 → SEG23 and SEG24

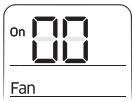
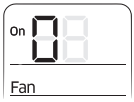
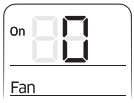
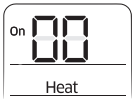
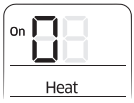
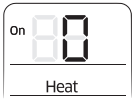
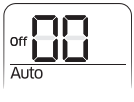
SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	X	X	X	X	X
SEG7	**SEG8**	**SEG9**	**SEG10**	**SEG11**	**SEG12**
1	X	X	X	X	X
SEG13	**SEG14**	**SEG15**	**SEG16**	**SEG17**	**SEG18**
2	X	X	X	X	X
SEG19	**SEG20**	**SEG21**	**SEG22**	**SEG23**	**SEG24**
3	X	X	X	X	X

On (SEG1 to SEG12)	Off (SEG13 to SEG24)
	

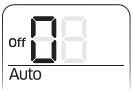
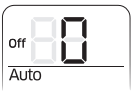
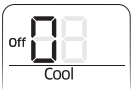
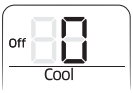
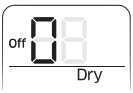
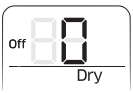
Installation Procedure

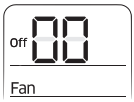
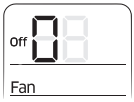
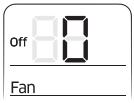
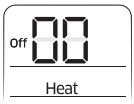
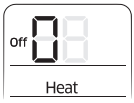
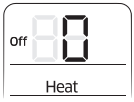
Take the steps presented in the following table:

Steps	Remote control display
1 Set the SEG2 and SEG3 values: **a** Set the SEG2 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG3 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG2  SEG3
2 Press the (Mode) button. **Cool** and **On** appear on the remote control display.	
3 Set the SEG4 and SEG5 values: **a** Set the SEG4 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG5 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG4  SEG5
4 Press the (Mode) button. **Dry** and **On** appear on the remote control display.	
5 Set the SEG6 and SEG8 values: **a** Set the SEG6 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG8 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG6  SEG8

Steps	Remote control display
6 Press the (Mode) button. **Fan** and **On** appear on the remote control display.	
7 Set the SEG9 and SEG10 values: **a** Set the SEG9 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG10 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG9  SEG10
8 Press the (Mode) button. **Heat** and **On** appear on the remote control display.	
9 Set the SEG11 and SEG12 values: **a** Set the SEG11 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG12 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG11  SEG12
10 Press the (Mode) button. **Auto** and **Off** appear on the remote control display.	

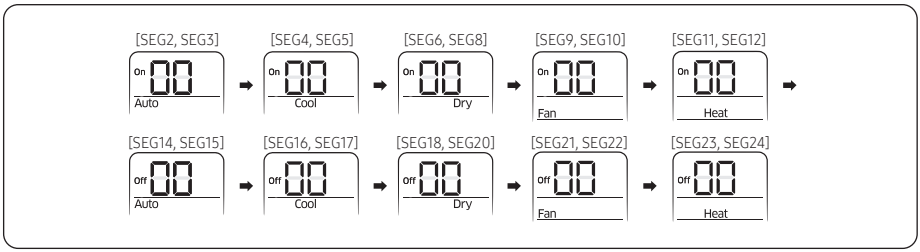
Installation Procedure

Steps	Remote control display
11 Set the SEG14 and SEG15 values: **a** Set the SEG14 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG15 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG14  SEG15
12 Press the (Mode) button. **Cool** and **Off** appear on the remote control display.	
13 Set the SEG16 and SEG17 values: **a** Set the SEG16 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG17 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG16  SEG17
14 Press the (Mode) button. **Dry** and **Off** appear on the remote control display.	
15 Set the SEG18 and SEG20 values: **a** Set the SEG18 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG20 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG18  SEG20

Steps	Remote control display
16 Press the (Mode) button. **Fan** and **Off** appear on the remote control display.	
17 Set the SEG21 and SEG22 values: **a** Set the SEG21 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG22 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG21  SEG22
18 Press the (Mode) button. **Heat** and **Off** appear on the remote control display.	
19 Set the SEG23 and SEG24 values: **a** Set the SEG23 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG24 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG23  SEG24

Installation Procedure

3 Check whether the option values that you have set are correct by pressing the (Mode) button repeatedly



4 Save the option values into the indoor unit:
Point the remote control to the remote control sensor on the indoor unit and then press the (Power) button on the remote control twice. Make sure that this command is received by the indoor unit. When it is successfully received, you can hear a short sound from the indoor unit. If the command is not received, press the (Power) button again.

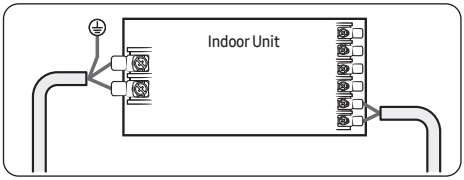
5 Check whether the air conditioner operates in accordance with the option values you have set:

- **a** Reset the indoor unit by disconnecting and then reconnecting the power cable of the indoor unit or by pressing the RESET button on the outdoor unit.
- **b** Remove the batteries from the remote control, insert them again, and then press the (Power) button on the remote control.

Setting an indoor unit address (MAIN/RMC)

Option No. : 0AXXXX-1XXXXX-2XXXXX-3XXXXX

1 Check whether power is supplied or not.
   – When the indoor unit is not plugged in, there should be additional power supply in the indoor unit.



2 The panel(display) should be connected to1 an indoor unit to receive option.
3 Before installing the indoor unit, assign an address to the indoor unit according to the air conditioning system plan.
4 Assign an indoor unit address by wireless remote controller.
   – The initial setting status of indoor unit ADDRESS(MAIN/RMC) is "0A0000-100000-200000-300000".

Option	SEG1		SEG2		SEG3		SEG4		SEG5		SEG6	
Explanation	PAGE		Mode		Setting Main address		100-digit of indoor unit address		10-digit of indoor unit		The unit digit of an indoor unit	
Indication and Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details
	0		A		0	No Main address	0~9	100-digit	0~9	10-digit	0~9	A unit digit
					1	Main address setting mode						

Option	SEG7		SEG8	SEG9		SEG10	SEG11		SEG12	
Explanation	PAGE			Setting RMC address			Group channel(*16)		Group address	
Indication and Details	Indication	Details	-	Indication	Details	-	Indication	Details	Indication	Details
	1			0	No RMC address		RMC1	0~F	RMC2	0~F
				1	RMC address setting mode					

⚠ CAUTION

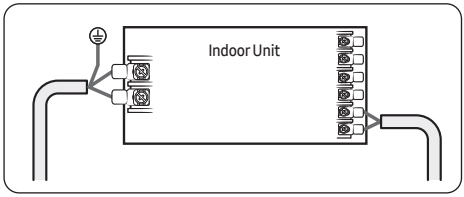
- When "A"~"F" is entered to SEG5~6, the indoor unit MAIN ADDRESS is not changed.
- If you set the SEG 3 as 0, the indoor unit will maintain the previous MAIN ADDRESS even if you input the option value of SEG5~6.
- If you set the SEG 9 as 0, the indoor unit will maintain previous RMC ADDRESS even if you input the option value of SEG11~12.
- You cannot set SEG11 and SEG12 as F value at the same time.

Installation Procedure

Setting an indoor unit installation option (suitable for the condition of each installation location)

Option No. : 0AXXXX-1XXXXX-2XXXXX-3XXXXX

1 Check whether power is supplied or not.
   – When the indoor unit is not plugged in, there should be additional power supply in the indoor unit.



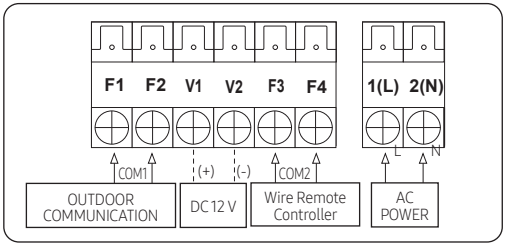
2 The panel(display) should be connected to an indoor unit to receive option.
3 Set the installation option according to the installation condition of an air conditioner.
   – The default setting of an indoor unit installation option is "020010-100000- 200000-300000".
   – Individual control of a remote controller(SEG20) is the function that controls an indoor unit individually when there is more than one indoor unit.
4 Set the indoor unit option by wireless remote controller.

02 series installation option

SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	2	-	External room temperature sensor / Minimizing fan operation when thermostat is off	Central control	FAN RPM compensation
SEG7	**SEG8**	**SEG9**	**SEG10**	**SEG11**	**SEG12**
1	Drain pump	Hot water heater	-	EEV Step when heating stops	-
SEG13	**SEG14**	**SEG15**	**SEG16**	**SEG17**	**SEG18**
2	External control	External control output / External heater On or Off signal	S-Plasma ion	Buzzer	Number of hours using filter
SEG19	**SEG20**	**SEG21**	**SEG22**	**SEG23**	**SEG24**
3	Individual control of a remote controller	Heating setting compensation / Removing condensated water in heating mode	EEV Step of stopped unit during oil return/ defrost mode	Motion detect sensor	-

- 1WAY/2WAY/4WAY MODEL : Drain pump(SEG8) will be set to 'USE + 3minute delay' even if the drain pump is set to 0.
- 1 WAY/2WAY/4WAY,DUCT MODEL : Number of hours using filter(SEG18) will be set to '1000hour' even if the SEG18 is set to exept for 2 or 6.
- When setting the option other than above SEG values, the option will be set as "0".
- SEG5 central control option is basically set as 1 (Use), so you don't need to set the central control option additionally.
  However, if the central control is not connected but it doesn't indicate an error message, you need to set the central control option as 0 (Disuse) to exclude the indoor unit from the central control.

- The output of hot water heater in SEG9 is generated from the hot coil part of the terminal board in duct models.



* The output of hot coil terminal is AC 220 V / 230 V (The same as Indoor Unit's input Power)

- The external output of SEG15 is generated by MIM-B14 connection. (Refer to the manual of MIM-B14.)

02 series installation option(Detailed)

Option No. : 02XXXX-1XXXXX-2XXXXX-3XXXXX

Option	SEG1		SEG2		SEG3		SEG4			SEG5		SEG6	
Explanation	PAGE		MODE		Use of robot cleaning		Use of external room temperature sensor / Minimizing fan operation when thermostat is off			Use of central control		FAN RPM compensation	
Indication and Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details		Indication	Details	Indication	Details
								Use of External room temperature sensor	Minimizing fan operation when thermostat is off				
	0		2		0	Disuse	0	Disuse	Disuse	0	Disuse	0	Disuse
							1	Use	Disuse			1	RPM compensation
					1	Use	2	Disuse	Use (*1)	1	Use	2	High ceiling KIT
							3	Use	Use (*1)				

Option	SEG7		SEG8		SEG9		SEG10		SEG11		SEG12	
Explanation	PAGE		Use of drain pump		Use of hot water heater				EEV Step when heating stops			
Indication and Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details
	1		0	Disuse	0	Disuse			0	Default value		
			1	Use	1	Use (*2)			1	Noise decreasing setting		
			2	When an indoor unit stops, drain pump will operate for 3min	2	-						
					3	Use (*2)						

Installation Procedure

Option	SEG13		SEG14		SEG15			SEG16		SEG17		SEG18	
Explanation	PAGE		Use of external control		Setting the output of external control / External heater On/Off signal			S-Plasma ion		Buzzer control		Hours of filter usage	
Indication and Details	Indication	Details	Indication	Details	Indication	Details: Setting the output of external control	Details: External heater On/Off signal	Indication	Details	Indication	Details	Indication	Details
	2		0	Disuse	0	Thermo on	-	0	Disuse	0	Use buzzer	2	1000 Hour
			1	ON/OFF control	1	Operation on	-	1	Use	1	Disuse buzzer	6	2000 Hour
			2	OFF control	2	-	Use (*3)						
			3	Window ON/OFF control	3	-	Use (*3)						

Option	SEG19		SEG20		SEG21			SEG22		SEG23		SEG24
Explanation	PAGE		Individual control of a remote controller		Heating setting compensation / Removing condensated water in heating mode			EEV Step of stopped unit during oil return/ defrost mode		Motion detect sensor		-
Indication and Details	Indication	Details	Indication	Details	Indication	Details: Heating Setting Compensation	Details: Removing Condensated Water in Heating Mode	Indication	Details	Indication	Details	
	3		0 or1	channel 1	0	Default (*4)	Disuse	0	Default value	0	Disuse	
										1	Turn out in 30min. without motion	
			2	channel 2	1	2 °C	Disuse	1	Oil return or Noise decreasing in defrost mode	2	Turn out in 60min. without motion	
			3	channel 3	2	5 °C	Disuse			3	Turn out in 120min. without motion	
			4	channel 4	3	Default (*4)	Use (*5)			4	Turn out in 180min. without motion	
					4	2 °C	Use (*5)			5	Turn out in 30min. without motion or *advanced function	
					5	5 °C	Use (*5)			6	Turn out in 60min. without motion or *advanced function	
										7	Turn out in 120min. without motion or *advanced function	
										8	Turn out in 180min. without motion or *advanced function	

* Advanced function: Controlling cooling/heating current or power saving with motion detect.

(*1) Minimizing fan operation when thermostat is off
- Fan operates for 20 seconds at an interval of 5 minutes in heat mode.

(*2) 1: Fan is turned on continually when the hot water heater is turned on,
3: Fan is turned off when the hot water heater is turned on with cooling only indoor unit
Cooling only indoor unit: To use this option,install the Mode Select switch(MCM-C200) on the outdoor unit and fix it as cool mode.

(*3) When the following 2 or 3 is used as external heater On/Off signal, the signal for monitoring external contact control will not be output.
2: Fan is turned on continually when the external heater is turned on,
3: Fan is turned off when the external heater is turned on with cooling only indoor unit
Cooling only indoor unit: To use this option,install the Mode Select switch(MCM-C200) on the outdoor unit and fix it as cool mode.

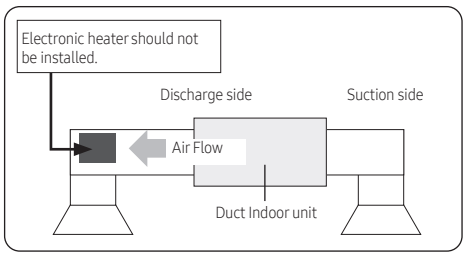
- If Fan is set to off for cooling only indoor unit by setting the SEG9=3 or SEG15=3, you need to use an external sensor or wired remote controller sensor to detect indoor temperature exactly.

(*4) Default setting value:
- 4Way Cassette, Mini 4Way Cassette: 5 °C
- Other indoor units: 2 °C

(*5) This function can be applied to 4 Way Cassette and Mini 4 Way Cassette only. If the air conditioner operates the heating mode immediately after finishing the cooling mode, the condensated water in the drain pan becomes water vapor by the heat of the indoor unit heat exchanger. Since the water vapor might be condensed on the indoor unit, which may fall into a living space, use this function to get rid of the water vapor out of the indoor unit by operating the fan (for maximum 20 minutes) even when the indoor unit is turned off after cooling mode is turned to heating mode.

⚠ CAUTION

- Do not install the electronic heater in the flow channel of the indoor unit fan.



Installation Procedure

05 series installation option

SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	5	Use of Auto Change Over for HR only in Auto mode	(When setting SEG3) Standard heating temp. Offset	(When setting SEG3) Standard cooling temp. Offset	(When setting SEG3) Standard for mode change Heating → Cooling
SEG7	**SEG8**	**SEG9**	**SEG10**	**SEG11**	**SEG12**
1	(When setting SEG3) Standard for mode change Cooling → Heating	(When setting SEG3) Time required for mode change	Compensation option for Long pipe or height difference between indoor units	-	-
SEG13	**SEG14**	**SEG15**	**SEG16**	**SEG17**	**SEG18**
2	-	-	-	-	Control variables when using hot water / external heater
SEG19	**SEG20**	**SEG21**	**SEG22**	**SEG23**	**SEG24**
3	-	-	-	-	-

05 series installation option(Detailed)

Option No. : 05XXXX-1XXXXX-2XXXXX-3XXXXX

Option	SEG1		SEG2		SEG3		SEG4		SEG5		SEG6	
Explanation	PAGE		MODE		Use of Auto Change Over for HR only in Auto mode		(When setting SEG3) Standard heating temp. Offset		(When setting SEG3) Standard cooling temp. Offset		(When setting SEG3) Standard for mode change Heating → Cooling	
Indication and Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details
	0		5		0	Follow product option	0	0°C	0	0°C	0	1°C
					1	Use Auto Change Over for HR only	1	0.5°C	1	0.5°C	1	1.5°C
							2	1°C	2	1°C	2	2°C
							3	1.5°C	3	1.5°C	3	2.5°C
							4	2°C	4	2°C	4	3°C
							5	2.5°C	5	2.5°C	5	3.5°C
							6	3°C	6	3°C	6	4°C
							7	3.5°C	7	3.5°C	7	4.5°C

Option	SEG7		SEG8		SEG9		SEG10		SEG11		SEG12	
Explanation	PAGE		(When setting SEG3) Standard for mode changing Cooling → Heating mode		(When setting SEG3) Time required for mode change		Compensation option for Long pipe or height diffference between indoor units					
Indication and Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details				
	1		0	1°C	0	5 min.	0	Use default value				
			1	1.5°C	1	7 min.	1	Height difference(*1) is more than 30m or Distance(*2) is longer than 110m				
			2	2°C	2	9 min.						
			3	2.5°C	3	11 min.						
			4	3°C	4	13 min.	2	Height difference(*1) is 15~30m or Distance(*2) is 50~110m				
			5	3.5°C	5	15 min.						
			6	4°C	6	20 min.						
			7	4.5°C	7	30 min.						

Option	SEG13	SEG14	SEG15	SEG16	SEG17	SEG18(*3)		
Explanation						Control variables when using hot water / external heater		
Indication and Details						Indication	Details	
							Set temp. for heater On/Off	Delay time for heater On
	2					0	At the same time as thermo on	No delay
						1	At the same time as thermo on	10 minutes
						2	At the same time as thermo on	20 minutes
						3	1.5 °C	No delay
						4	1.5 °C	10 minutes
						5	1.5 °C	20 minutes
						6	3.0 °C	No delay
						7	3.0 °C	10 minutes
						8	3.0 °C	20 minutes
						9	4.5 °C	No delay
						A	4.5 °C	10 minutes
						B	4.5 °C	20 minutes
						C	6.0 °C	No delay
						D	6.0 °C	10 minutes
						E	6.0 °C	20 minutes

Installation Procedure

(*1) Height difference : The difference of the height between the corresponding indoor uint and the indoor unit installed at the lowest place.
For example, When the indoor unit is installed 40m higher than the indoor unit installed at the lowest place, select the option "1".

(*2) Distance : The difference between the pipe length of the indoor unit istalled at farthest place from an outdoor unit and the pipe length of the corresponding indoor unit from an outdoor unit.
For example, when the farthest pipe length is 100 m(328 ft) and the corresponding indoor unit is 40 m away from an outdoor unit, select the option "2". (100 - 40 = 60m)

(*3) Heater operation when the SEG9 of 02 series installation option is set to using hot water heater or when SEG15 is set to using external heater

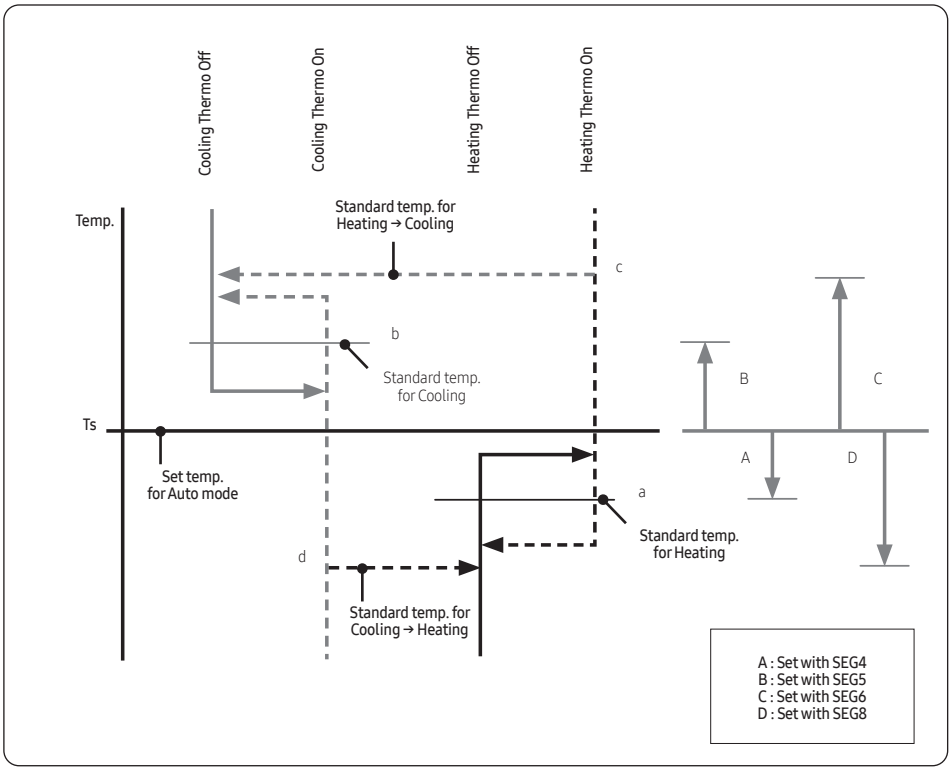
e.g. 1) Setting 02 series SEG9 ="1" / Setting 05 series SEG18 = "0": Hot water heater is turned on at the same time as the heating thermostat is on, and turned off when the heating thermostat is off.

e.g. 2) Setting 02 series SEG15 ="2" / Setting 05 series SEG18 ="A":
Room temp. ≤ set temp. + f(heating compensation temp.)

- External heater is turned on when the temperature is maintained as 4.5 °C for 10 minutes.
  Room temp. › set temp. + f(heating compensation temp.)
- External heater is turned off when the temperature is maintained as 4.5 °C + 1 °C (1 °C is the Hysteresis for On/Off selection.)

Additional information on SEG 3, 4, 5, 6, 8, 9

When the SEG 3 is set as "1" and follow Auto Change Over for HR only operation, it will operate as follows.



Cooling/Heating mode can be changed when Thermo Off status is maintained during the time with SEG9.

Installation Procedure

Changing a particular option

You can change each digit of set option.

Option	SEG1		SEG2		SEG3		SEG4		SEG5		SEG6	
Explanation	PAGE		MODE		The option mode you want to change		The tens' digit of an option SEG you will change		The unit digit of an option SEG you will change		Changed value	
Indication and Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details
	0		D		Option mode	1~6	Tens' digit of SEG	0~9	Unit digit of SEG	0~9	The changed value	0~F

NOTE

- When changing a digit of an indoor unit address setting option, set the SEG3 as 'A'.
- When changing a digit of indoor unit installation option, set the SEG3 as '2'.
  Ex) When setting the 'buzzer control' into disuse status.

Option	SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
Explanation	PAGE	MODE	The option mode you want to change	The tens' digit of an option SEG you will change	The unit digit of an option SEG you will change	Changed value
Indication	0	D	2	1	7	1

⚠ CAUTION

- If you are using heat pump model, mixed operation mode (two or more indoor units operating in different operation mode simultaneously) is not available when the indoor units are connected to same outdoor unit. If you set the master

Troubleshooting

Ceiling type (AM056DNCH***)**

- If an error occurs during the operation, one or more LED flickers and the operation is stopped except the LED.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.

LED Display on the receiver & display unit

Abnormal condition	Error code	LED Display				
						
Error on indoor temperature sensor (Short or Open)	E121	X	◑	X	X	X
1. Error on Eva-in sensor (Short or Open) 2. Error on Eva-out sensor (Short or Open) 3. Discharge sensor error (Short or Open)	E122 E123 E126	◑	◑	X	X	X
Indoor fan error	E154	X	X	◑	X	X
1. Error on outdoor temperature sensor (Short or Open) 2. Error on cond sensor 3. Error on discharge sensor Other outdoor unit sensor error that is not on the above list	E221 E237 E251	◑	X	◑	X	X
1. When there is no communication between the indoor·outdoor units for 2 minutes 2. Communication error received from the outdoor unit 3. 3 miniute tracking error on outdoor unit 4. Communication error after tracking due to unmatching number of installed units 5. Error due to repeated communication address 6. Communication address not confirmed Other outdoor unit communication error that is not on the above list	E101 E102 E202 E201 E108 E109	X	◑	◑	X	X
Self diagnosis error display 1. Error due to opened EEV (2nd detection) 2. Error due to closed EEV (2nd detection) 3. Eva in sensor is detached 4. Eva out sensor is detached 5. Thermal fuse error (Open)	E151 E152 E128 E1289 E198	X	◑	◑	◑	X

Troubleshooting

Abnormal condition	Error code	LED Display				
1. COND mid sensor is detached	E241	X	◑	◑	◑	X
2. Refrigerant leakage (2nd detection)	E554					
3. Abnomally high temperature on Cond (2nd detection)	E450					
4. Low pressure s/w (2nd detection)	E451					
5. Abnomally high temperature on discharged air on outdoor unit (2nd detection)	E416					
6. Indoor operation stop due to unconfirmed error on outdoor unit	E559					
7. Error due to reverse phase detection	E425					
8. Comp stop due to freeze detection (6th detection)	E403					
9. High pressure sensor is detached	E301					
10. Low pressure sensor is detached	E306					
11. Outdoor unit copression ration error	E428					
12. Outdoor sump down_1 prevetion control	E413					
13. Compressor down due to low pressure sensor prevention control_1	E410					
14. Simultaneous opening of cooling/heating MCU SOL valve (1st detection)	E180					
15. Simultaneous opening of cooling/heating MCU SOL valve (2nd detection)	E181					
Other outdoor unit self-diagnosis error that is not on the above list						
Flowating s/w (2nd detection)	E153	X	X	◑	◑	X
EEPROM error	E162	◑	◑	◑	◑	◑
EEPROM option error	E163	◑	◑	◑	◑	◑
Error due to incompatible indoor unit	E164	X	X	X	◑	X

● On ◑ Flickering X Off

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.
- When E108 error occurs, change the address and reset the system.Ex.) When address of the indoor unit #1 and #2 are set as 5, address of the indoor unit #1 will become 5 and indoor unit #2 will display E108, A002.

Big Ceiling type (AM071DNCH***)**

- If an error occurs during the operation, one or more LED flickers and the operation is stopped except the LED.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.

LED Display on the indoor unit

Abnormal conditions	Indicators				Remarks
	Blue	Green	Orange	Red	
Power reset	◑	X	X	X	0.5[S]=On, 0.5[S]=Off
Operation on	●	X	X	X	
Operation off	X	X	X	X	
Reservation	X	●	X	X	
Filter sign	X	X	●	X	
Defrosting	◑	X	X	X	1[S]=On, 9[S]=Off
Communication error between indoor units	X	◑	X	X	
EEPROM error /EEPROM option error	◑	X	X	◑	
Error of temperature sensor in indoor unit (open/short)	X	X	X	◑	
Error of outdoor Unit/Self-Diagnosis	X	X	◑	X	
Error of the indoor unit pipe sensor	X	◑	X	◑	
High pressure blockage error	X	X	◑	X	
Indoor fan error	◑	◑	X	X	
Thermal fuse open error	◑	X	◑	X	
Indoor unit float S/W 2nd detection	X	◑	◑	X	

● On ◑ Flickering X Off

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
- If you re-operate the air conditioner, it operates normally at first, then detects an error again.
- If the LED displays only one color, it is turned on for a second and turned off for a second.
- If the LED displays more than two colors, each color is shown for a second alternately.

Troubleshooting

Wired remote control

- If an error occurs, TEST is displayed on the wired remote control.
- If you would like to see an error code, press the Test button.

Display	Explanation
E108	Error due to repeated communication address
E121	Error on room temperature sensor of indoor unit (Short or Open)
E122	Error on EVA IN sensor of indoor unit (Short or Open)
E123	Error on EVA OUT sensor of indoor unit (Short or Open)
E153	Error on float switch (2nd detection)
E154	Indoor fan error
E198	Error on thermal fuse of indoor unit (Open)
E201	Communication error between indoor unit and outdoor unit (Pre tracking failure or when actual number of indoor units are different from the indoor unit quantity setting on the outdoor unit) Error due to communication traking failure after initial power is supplied.
E202	Communication error between indoor unit and outdoor unit (When there is no response from indoor units after tracking is completed)
E203	Communication error between outdoor unit inv - main micom (For PF #4~#6 controller, error will be determined from the time when compressor is turned on)
E221	Error on outdoor temperature sensor (Short or Open)
E231	Error on outdoor COND OUT sensor (Short or Open)
E251	Error on discharge temperature sensor of compressor1 (Short or Open)
E320	Error on OLP sensor (Short or Open)
E403	Compressor down due to freeze protection control
E404	System stop due to overload protection control
E416	System stop due to discharge temperature
E422	Blockage detected on high pressure pipe
E425	Reverse phase or open phase
E440	Heating operation restricted at outdoor temperature over Theat_high value (default: 30 °C)
E441	Cooling operation restricted at outdoor temperature below Tcool_low value (default: 0 °C)
E458	Fan speed error
E461	Error due to operation failure of inverter compressor
E462	System stop due to full current control
E463	Over current trip / PFC over current error
E464	IPM Over Current(O.C)

Display	Explanation
E465	Comp. Over load error
E466	DC-Link voltage under/over error
E467	Error due to abnormal rotation of the compressor or unconnected wire of compressor
E468	Error on current sensor (Short or Open)
E469	Error on DC-Link voltage sensor (Short or Open)
E470	Outdoor unit EEPROM Read/Write error (Option)
E471	Outdoor unit EEPROM Read/Write error (H/W)
E472	AC Line Zero Cross Signal out
E473	Comp Lock error
E474	Error on IPM Heat Sink sensor of inverter1 (Short or Open)
E475	Error on inverter fan 2
E484	PFC Overload (Over current) Error
E485	Error on input current sensor of inverter1 (Short or Open)
E500	IPM over heat error on inverter1
E508	Smart install is not installed
E554	Gas leak detected
E556	Error due to mismatching capacity of indoor and outdoor unit
E557	DPM remote controller option error
E590	Inverter EEPROM CheckSum error
E660	Inverter Boot Code error

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