

Air conditioner

Installation manual

AM*DNLDKG**

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

Contents

Safety Information	3
---------------------------	----------

Installation Procedure	5
-------------------------------	----------

Step 1 Checking and preparing accessories	5
Step 2 Choosing the installation location	5
Step 3 Selecting the installation location	8
Step 4 Indoor unit installation	13
Step 5 Purging the unit	14
Step 6 Connecting the refrigerant pipe	14
Step 7 Cutting or flaring the pipes	15
Step 8 Performing leak test & insulation	16
Step 9 Drain pipe and drain hose installation	18
Step 10 Wiring work	22
Step 11 Optional: Extending the power cable	25
Step 12 Optional : LED Display indicator specifications when checking Wi-Fi Easy Setup and Wi-Fi status	27
Step 13 Setting an indoor unit address and installation option	29
Step 14 Performing final check and trial operation	49

Appendix	50
-----------------	-----------

Troubleshooting	50
Option table	52

Safety Information

⚠ WARNING

- Hazards or unsafe practices that may result in severe personal injury or death.

⚠ CAUTION

- Hazards or unsafe practices that may result in minor personal injury or property damage.
- 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.

Symbol	Meaning
	Flammable gas
	Flammable materials
	Refrigerant safety group
	Read operating manual
	Refer to operating manual
	Read service manual

⚠ 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.
- 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 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 authorised centres or returned to the retailer so that it can be disposed of correctly and safely.

Safety Information

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.
- 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.
- Be sure not to perform power cable modification, extension wiring, and multiple wire connection.
 - It may cause electric shock or fire due to poor connection, poor insulation, or current limit override.
 - When extension wiring is required due to power line damage, refer to Step 13 Optional: Extending the power cable in the installation manual.

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 control, reception error may occur due to the ballast of the lighting apparatus.

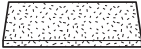
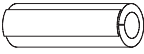
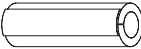
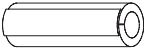
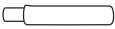
This unit is equipped with electrically powered safety measure. For the safety measures to be effective, the unit must be electrically powered at all times after installation, other than when servicing.

This unit is equipped with a leak detection system for safety. For leak detection to be effective, the unit must be electrically powered at all times after installation, other than when servicing.

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.

Insulation cover	Thermal insulation A (use for refrigerant pipe)
	
Thermal insulation B (use for refrigerant pipe)	Thermal insulation (use for drain hose)
	
User's manual	Installation manual
	
Clamp	Grommet
	
Cable tie	Flexible hose
	
Wi-Fi connecting Wire	
	

Step 2 Choosing the installation location

Installation location requirements

- There must be no obstacles near the air inlet and outlet.
- Install the indoor unit on a ceiling that can support its weight.
- Maintain sufficient clearance around the indoor unit.
- Before installing the indoor unit, be sure to check whether the chosen location is well-drained.
- The indoor unit must be installed such that it is beyond public access and is not touchable by users.
- Rigid wall without vibration.
- Where it is not exposed to direct sunshine.
- Where the air filter can be removed and cleaned easily.
- A location where animals cannot access and urinate on the product. Ammonia may be generated.
- The amount of refrigerant to add differs, depending on the installation conditions (e.g., the total piping length and the indoor unit combination), and the minimum indoor-unit installation area depends on the final amount of refrigerant.
Be sure to install by referring to the minimum indoor-unit installation area depending on the final refrigerant amount, provided in the refrigerant amount table in the outdoor unit installation manual.

WARNING

- Because your air conditioner contains R-32 refrigerant, make sure that it is installed, operated, and stored in a room whose floor area is larger than the minimum required floor area specified.
 - IMPORTANT: It's mandatory to either Follow the table in the Outdoor Unit Installation Manual or follow the federal, state, and/or local regulations regarding the minimum room area allowed for the total refrigerant charge in the system.
 - Minimum installation height of indoor unit is 1.8 m for wall, 2.5 m for ceiling, 2.2 m for Ducted.
 - R-32-exclusive wired remote control: Equipped with a safety alarm.
 - Outdoor unit (AM***DXMD*G/EU): Equipped with a shut-off valve.

Installation Procedure

Do not install the air conditioner in following places.

- A 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 be reduced, or the air conditioner may be out of order.
- A place with exposure to mineral oil, oil vapor or a cooking area where there is spray (If oil adheres to the heat exchanger, performance degradation, spray or condensation scattering may occur. If oil adheres to a plastic component, the component may deform or get damaged. Such issues may result in a system failure or refrigerant leak.)
- A place with aromatic diffusers, aromatherapy, scented candles or perfumes as the chemicals may react to the product's materials and may result in system failure or refrigerant leaks.
- The place where corrosive gas such as sulphuric acid gas is generated from the vent pipe or air outlet.
- The copper pipe or connection pipe may corrode and the refrigerant may leak.
- The place where there is a machine that generates electromagnetic waves. The air conditioner may not operate normally due to the 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.
- The place that is close to heat sources.
- Do not use the indoor unit for the preservation of food items, plants, equipment, and artwork. This may cause deterioration of their quality.
- Do not install the indoor unit if it has any drainage problems.

Installation conditions for indoor units and wired remote controls

- Make sure to install a dedicated R-32-exclusive wired remote control for each indoor unit. See the installation examples below for reference.

Make sure to use R-32-exclusive wired remote controls. The product will not operate if an R-32-exclusive wired remote control is not located in the vicinity or if users try to control the product using a common wired remote control.

※ E694: This error occurs if an installed R-32 indoor unit and R-32-exclusive wired remote control are not a correct combination.

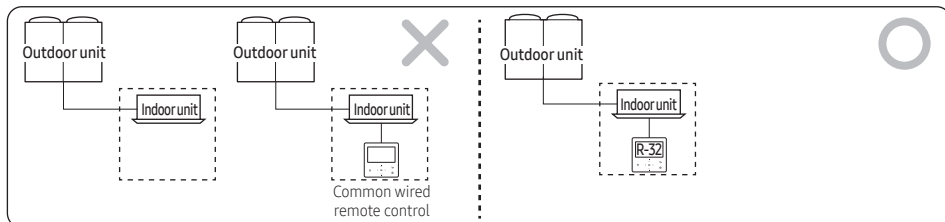
Use R-32-exclusive wired remote controls.

※ MWR-WG01*N

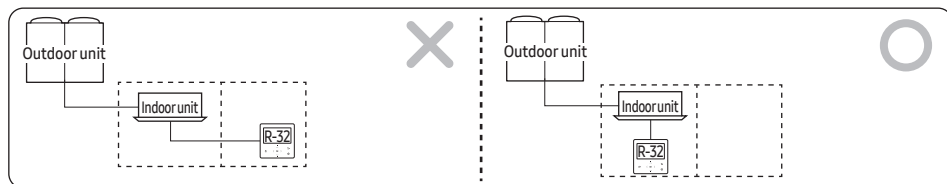
※ R-32-exclusive wired remote controls should be purchased separately.

WARNING

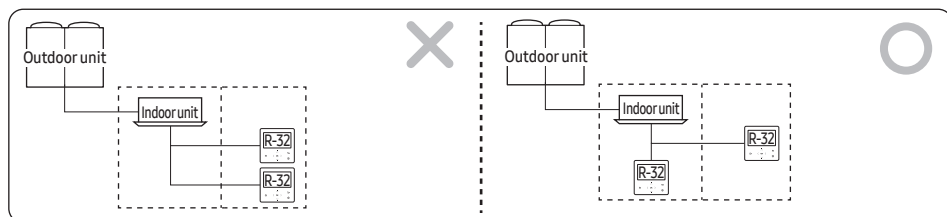
- Samsung Electronics is not responsible for any loss or damage to the product resulting from using anything but the specified wired remote control.



Make sure R-32-exclusive wired remote controls are located in the same room as the indoor units.

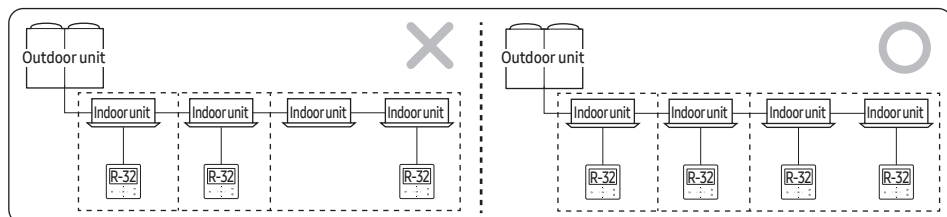


If using two or more R-32-exclusive wired remote controls, at least one of them must be placed in the same room as the indoor units.



Make sure to connect all indoor units to respective R-32-exclusive wired remote controls.

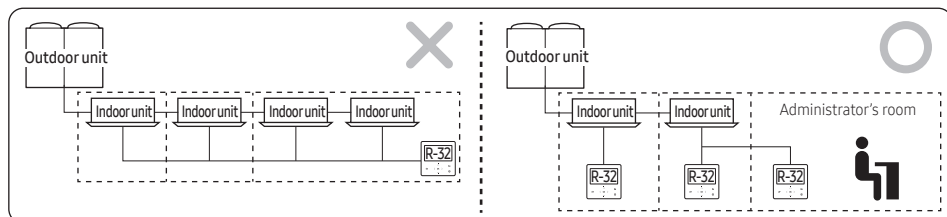
At least one remote control must be installed for each indoor unit, even if multiple indoor units are installed in the same room. Grouped control is not possible.



For the occupancy listed below, the safety alarm system shall also warn at a supervised location, such as the night porter's location, as well as the occupied space:

- rooms, parts of buildings, building where sleeping facilities are provided,
- rooms, parts of buildings, building where people are restricted in their movement,
- rooms, parts of buildings, building where an uncontrolled number of people are present, or
- rooms, parts of buildings, building to which any person has access without being personally acquainted with the necessary safety precautions.

A wired remote control must be installed in the administrator's room, using wired remote control supervisor mode. For details on how to set wired remote control supervisor mode, refer to the wired remote control installation manual.

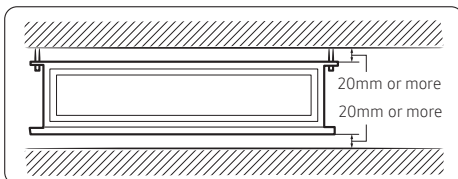


Installation Procedure

Step 3 Selecting the installation location

Indoor Unit

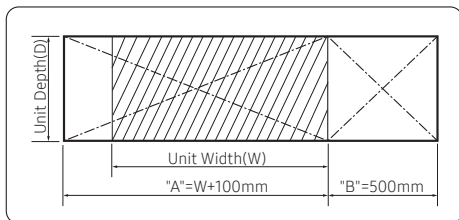
- There must be no obstacles near the air inlet and outlet.
- Install the indoor unit on a ceiling that can support its weight.
- Maintain sufficient clearance around the indoor unit.
- Make sure that the water dripping from the drain hose runs away correctly and safely.
- The indoor unit must be installed in this way, that they are out of public access. (Not touchable by the users)
- After connecting a chamber, insulate the connection part between the indoor unit and the chamber with t10 or thicker insulation. Otherwise, there can be air leak or dew from the connection part.
- Rigid wall without vibration.
- Where it is not exposed to direct sunshine.
- Where the air filter can be removed and cleaned easily.



- You must have 20mm or more space between the ceiling and the bottom of indoor unit. Otherwise, the noise from the vibration of indoor unit may bother the user. When the ceiling is under construction, the hole for check-up must be made to take service, clean and repair the unit.
- It is possible to install the unit at an height of between 2.2~2.5m from the ground, if the unit has a duct with a well defined length (300mm or more), to avoid fan motor blower contact.

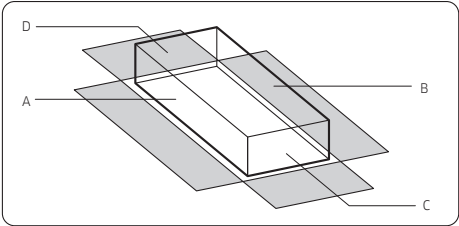
Space requirements for installation & service

- Construction Standard for Inspection Hole.
- 1) In case, the ceiling is textile, Inspection hole dose not need.
 - 2) In case, the ceiling is plaster board, Inspection hole depends on Inside height of the ceiling.
 - a Height is more than 0.5m : Only "B" [Inspection for PBA] is applied.
 - b Height is less than 0.5m : Both "A" & "B" are applied.
 - c "A" & "B" are inspection holes.



Insulation Guide

- Insulate the end of the pipe and some curved area by using separate insulator.
- Insulate the discharge and suction part at the same time when you insulate connection duct.
- If the humidity is over 80%, it is required to add 10mm polyethylene foam or other similar insulation to the indoor unit when installing belt or pipe type indoor unit on the ceiling.



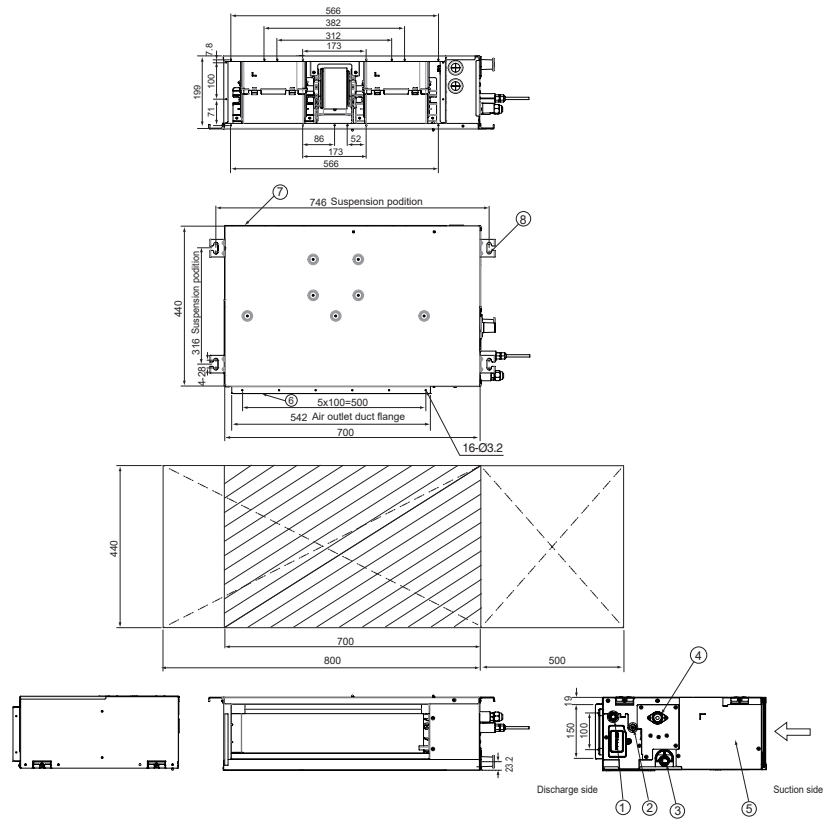
Thickness:more than 10mm

Indoor unit		A	B	C	D	Front	Back
Home Duct S	1.7~3.6kW (700x199x440)	700*200	700*200	440*200	440*200	Insulate the front and back side in proper size at the same time when insulating the suction duct and discharge duct.	
Home Duct 1	4.5~5.6kw (900x199x440)	900*200	900*200	440*200	440*200		
Home Duct 2	7.1kw (1100x199x440)	1100*200	1100*200	440*200	440*200		

Installation Procedure

AM017/022/028/036DNLDKG*

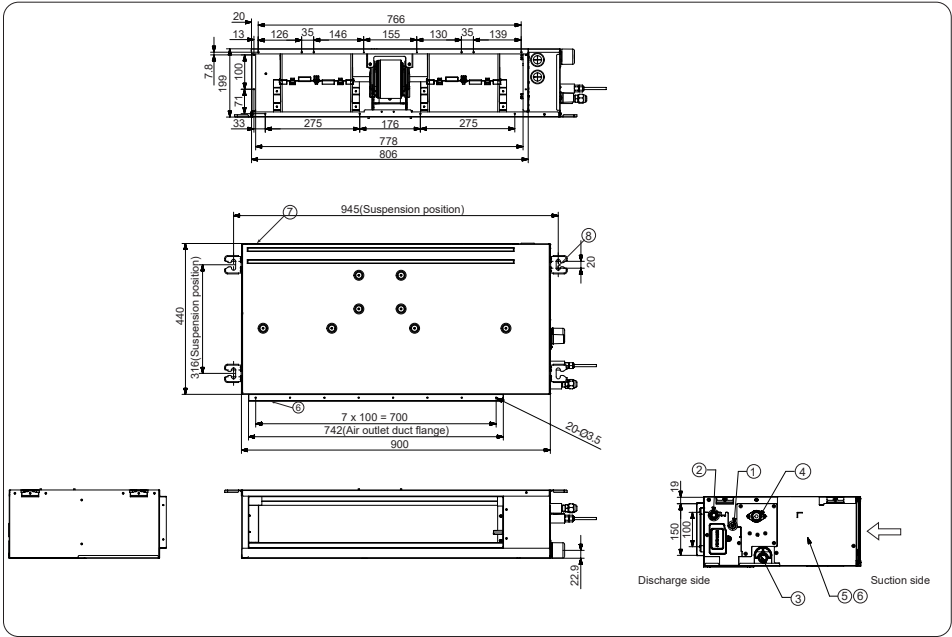
(Unit: mm)



No.	Name	Description
1	Liquid pipe connection	ø6.35
2	Gas pipe connection	ø12.70
3	Drain pipe connection (Without drain pump)	OD ø25, ID ø20
4	Drain pipe connection (With drain pump)	OD ø25, ID ø20
5	Power supply/Communication connection	-
6	Power supply connection	-
7	Air discharge grille flange	-
8	Hook	ø9.52 or M10

AM045/056DNLDKG*

(Unit: mm)

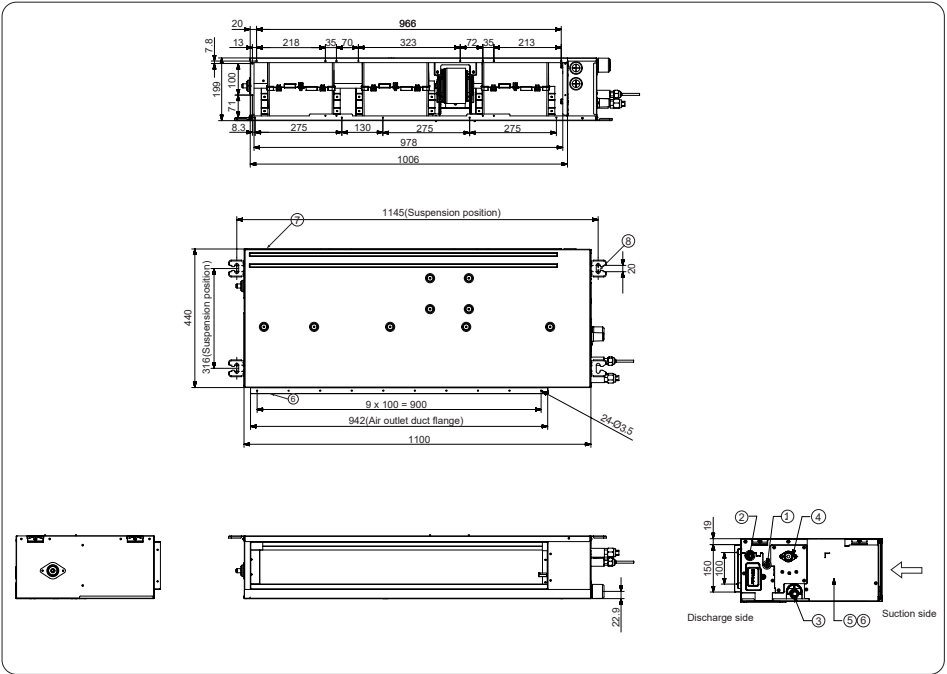


No.	Name	Description
1	Liquid pipe connection	ø6.35
2	Gas pipe connection	ø12.70
3	Drain pipe connection (Without drain pump)	OD ø25, ID ø20
4	Drain pipe connection (With drain pump)	OD ø25, ID ø20
5	Power supply/Communication connection	-
6	Air discharge grille flange	-
7	Suction flange	-
8	Hook	ø9.52 or M10

Installation Procedure

AM071DNLDKG*

(Unit: mm)



No.	Name	Description
1	Liquid pipe connection	ø9.52
2	Gas pipe connection	ø15.88
3	Drain pipe connection (Without drain pump)	OD ø25, ID ø20
4	Drain pipe connection (With drain pump)	OD ø25, ID ø20
5	Power supply/Communication connection	-
6	Air discharge grille flange	-
7	Suction flange	-
8	Hook	ø9.52 or M10

Step 4 Indoor unit installation

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

- 1 Place the pattern sheet on the ceiling at the spot where you want to install the indoor unit.



NOTE

- Since the diagram is made of paper, it may shrink or stretch slightly due to temperature or humidity. For this reason, before drilling the holes maintain the correct dimensions between the markings
 - Pattern sheet is supplied depending on the model type.
- 2 Insert bolt anchors, use existing ceiling supports or construct a suitable support as shown in figure.
 - 3 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.
- 4 Screw eight nuts to the suspension bolts making space for hanging the indoor unit.



CAUTION

- You must install the suspension bolts more than four when installing the indoor unit.
- 5 Hang the indoor unit to the suspension bolts between two nuts.



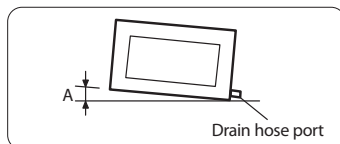
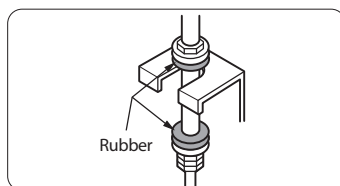
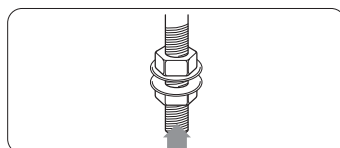
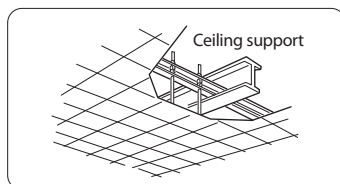
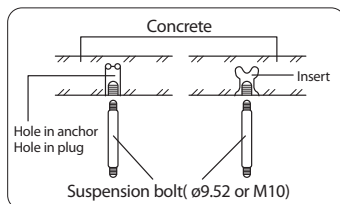
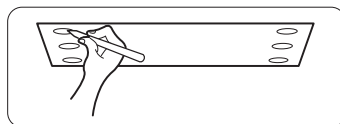
NOTE

- 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.
- 6 Screw the nuts to suspend the unit.
 - 7 Adjust level of the unit by using measurement plate for all 4 sides.



NOTE

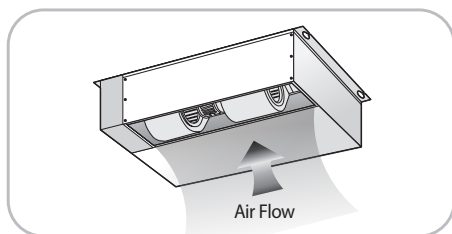
- For proper drainage of condensate, give a 3mm slant to the left or right side of the unit which will be connected with the drain hose, as shown in the figure. Make a tilt when you wish to install the drain pump, too.



Installation Procedure

⚠ CAUTION

- Noise will increase 3~6 dB(A) when the air flow enters from the bottom side (Only for Slim Duct/Home Duct Type product).



Step 5 Purging the unit

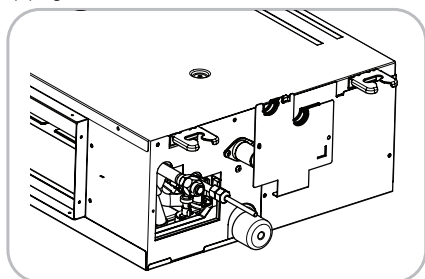
On delivery, the indoor unit is loaded with inert gas. All this gas must therefore be purged before connecting the assembly piping. To purge the inert gas, proceed as follows.

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

Result: All inert gas escapes from the indoor unit.

📄 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.

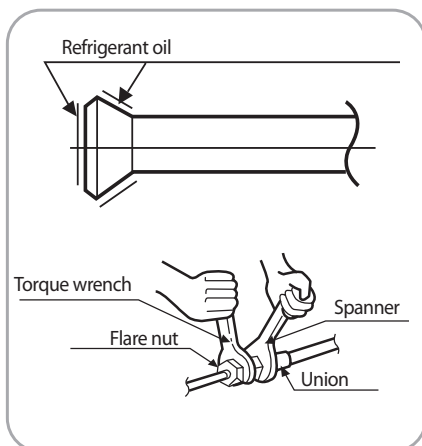
Step 6 Connecting the refrigerant pipe

There are two refrigerant pipes of differing diameters:

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

The connection procedure for the refrigerant pipes varies according to the exit position of the pipes from the indoor unit, as seen when facing the indoor in the "A" side.

- Liquid refrigerant port
- Gas refrigerant port
- Drain hose port

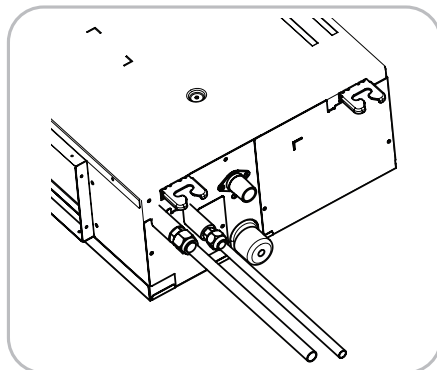
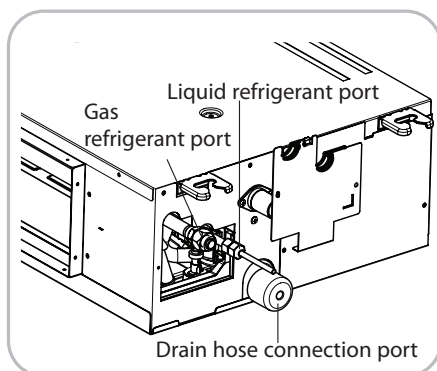


- Remove the pinch pipe on the pipes and connect the assembly pipes to each pipe, tightening the nuts, first manually and then with a torque wrench, a spanner applying the following torque.

Outer Diameter	Torque	
	kgf•cm	N•m
6.35 mm	140~180	14~18
9.52 mm	350~430	34~42
12.70 mm	500~620	49~61
15.88 mm	690~830	68~82

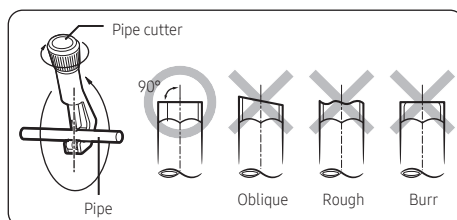
📄 NOTE

- Must apply refrigerant oil on the flaring area to prevent a leak.

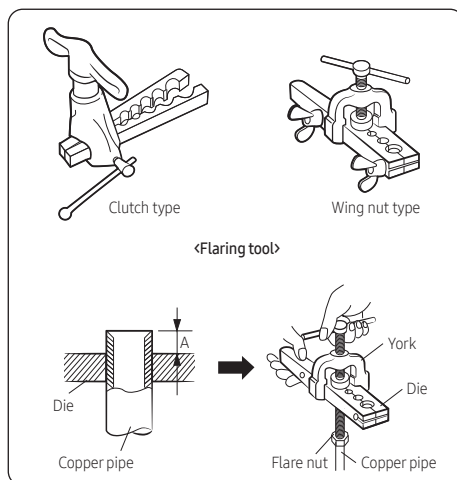


Step 7 Cutting or flaring the pipes

- 1 Make sure that you prepared 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. There are some examples of correctly and incorrectly cut edges below.



- 3 To prevent a gas leak, remove all burrs at the cut edge of the pipe using a reamer.
- 4 Carry out flaring work using flaring tool as shown below.

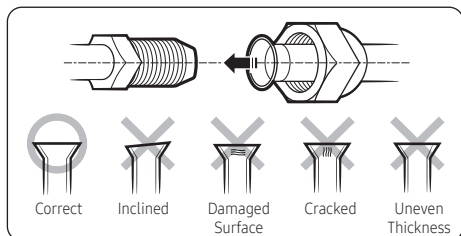


Installation Procedure

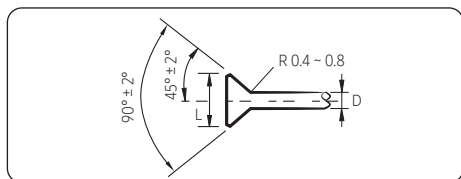
(Unit: mm)

Outer diameter	A		
	Flare tool for R-32 clutch type	Conventional flare tool	
		Clutch type	Wing nut type
6.35	0~0.5	1.0~1.5	1.5~2.0
9.52	0~0.5	1.0~1.5	1.5~2.0
12.7	0~0.5	1.0~1.5	1.5~2.0
15.88	0~0.5	1.0~1.5	1.5~2.0

- 2 Check if you flared the pipe correctly. There are some examples of incorrectly flared pipes below.



- 3 Align the pipes and tighten the flare nuts first manually and then with a torque wrench, applying the following torque.



Outer diameter (D, mm)	Connection Torque		Flare dimension (L, mm)
	kgf•cm	N•m	
6.35	140~180	14~18	8.70~9.10
9.52	350~430	34~42	12.80~13.20
2.7	500~620	49~61	16.20~16.60
15.88	690~830	68~82	19.30~19.70

CAUTION

- In case of needing brazing, you must work with nitrogen gas blowing.

Step 8 Performing leak test & insulation

Leak test

LEAK TEST WITH NITROGEN (before opening valves)

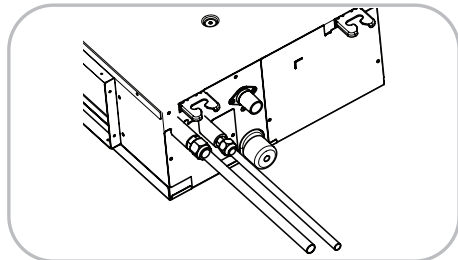
In order to detect basic refrigerant leaks, before recreating the vacuum and recirculating the R-32, it's responsible of installer to pressurize the whole system with nitrogen (using a pressure regulator) at a pressure above 4.1MPa (gauge).

LEAK TEST WITH R-32 (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 R-32.

CAUTION

- Discharge all the nitrogen to create a vacuum and charge the system.

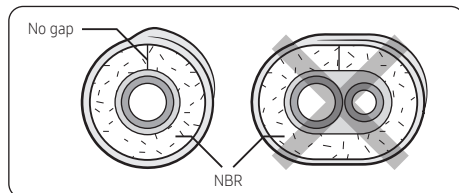


* The designs and shape are subject to change according to the model.

Insulation

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 T13.0 or thicker Acrylonitrile Butadien Rubber separately around each refrigerant pipe.

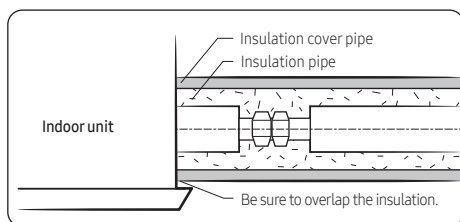


NOTE

- Always make the seam of pipes face upwards.

CAUTION

- The insulation has to be produced in full compliance with European regulation EEC / EU 2037 / 2000 requiring the use of sheaths insulation without using CFC and HCFC gases for health and the environment.
- 2 Wind insulating tape around the pipes and drain hose avoiding compressing the insulation too much.

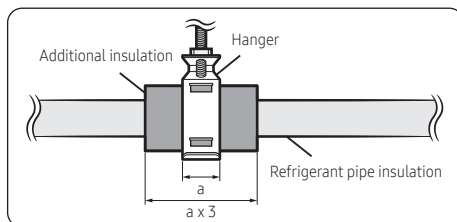


CAUTION

- Be sure to wrap insulation tightly without any gaps.
- 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.
- Make sure that all refrigerant connection must be accessible for easy maintenance and detachment.
- 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.
- All refrigerant connection must be accessible, in order to permit either nit maintenance or removal.



5 Select the insulation of the refrigerant pipe.

- Insulate the gas side and liquid side pipe, noting the insulation thickness that must differ according to the pipe size.
- Standard: Less than an indoor temperature of 30°C, with humidity at 85%. If installing in a high humidity environment, use one grade thicker insulator by referring to the table below. If installing in an unfavourable environment, use thicker one.
- The heat-resistance temperature of the insulator must be more than 120°C.

Pipe	Pipe size (mm)	Insulation Type (Heating/ Cooling)		Remarks
		Standard [30°C, 85%]	High humidity [30°C, over 85%]	
		EPDM, NBR		
Liquid pipe	Ø6.35 to Ø9.52	9t	←	Internal temperature is higher than 120°C
	Ø12.7 to Ø50.80	13t	←	
Gas pipe	Ø6.35	13t	19t	
	Ø9.52 to Ø25.40	19t	25t	
	Ø28.58 to Ø44.45		32t	
	Ø50.80	25t	38t	

Installation Procedure

- 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.
- You can contact the gas side and liquid side pipes but the pipes should not be pressed.
- When contacting the gas side and gas side pipe, use 1 grade thicker insulator.
- Install the gas side and liquid side pipes, leave 10mm of space.
- When contacting the gas side and liquid side pipe, use 1 grade thicker insulator.

Step 9 Drain pipe and drain hose installation

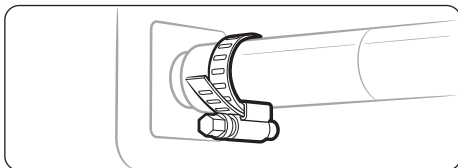
Care must be taken when installing the drain hose for the indoor unit to ensure that any condensate water is correctly drained outside. The drain hose can be installed to the right or left side of the base pan.

- 1 Install the drain hose as short as possible.

NOTE

- In order to discharge condensation water, the drain hose should keep tilted.
- Secure the drain hose with the cable-tie not to be separated from the unit.

- The drain pump connection port is used when using a drain pump.
- The connection port of the flexible hose and PVC drainpipe must be fixed with PVC adhesive.



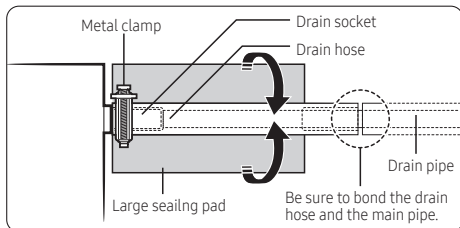
- 2 When there is no draining pump, insulate the drain hose and then fix it as a picture.

NOTE

- Insert the drain hose to bottom of the outfall of water basin.
- Lock steel ring of the drain hose according to the figure.
- Wind and wrap steel ring 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.)

NOTE

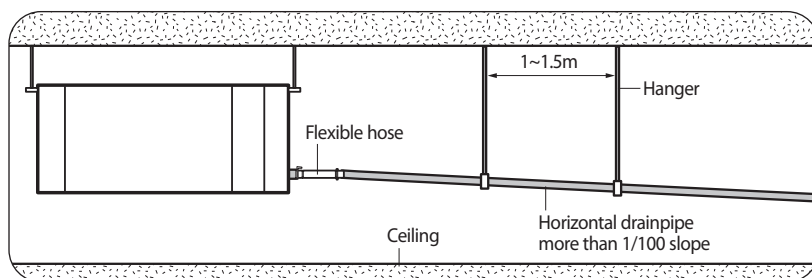
- Check if the rubber ring is installed properly on the draining pump.
- Check if the drain cap blocks the outfall of drain pan properly.



Drain pipe and drain hose installation

Drainpipe Connection without the drain pump

- 1 Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 1.0~1.5m.
- 2 Install U-trap at the end of the drainpipe to prevent a nasty smell to reach the indoor unit.
- 3 Do not install the drainpipe to upward position. It may cause water flow back to the unit.

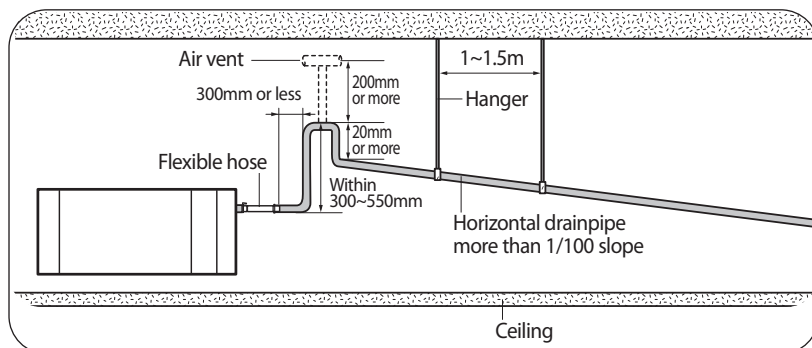


Drainpipe Connection with the drain pump

- 1 The drain pipe should be installed within 300mm to 550mm from the flexible hose and then lift down 20mm or more.
- 2 Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 1.0~1.5m.
- 3 Install the air vent in the horizontal drainpipe to prevent water flow back to the indoor unit.

NOTE

- Note You may not need to install it if there were proper slope in the horizontal drainpipe.
- 4 The flexible hose should not be installed upward position, it may cause water flow back to the indoor unit.

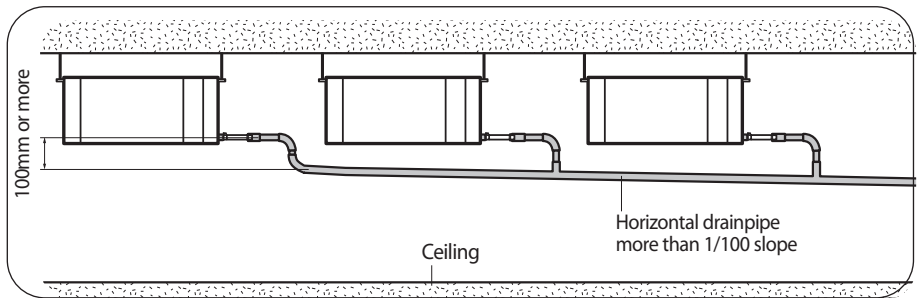


Installation Procedure

Drain pipe and drain hose installation

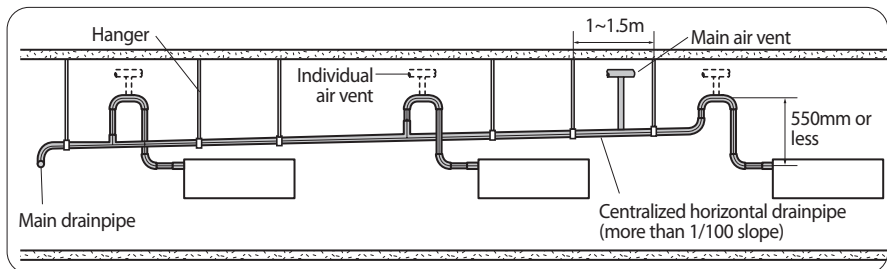
Centralized Drainage Without the drain pump

- 1 Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 1.0~1.5m.
- 2 Install U-trap at the end of the drainpipe to prevent a nasty smell to reach the indoor unit.



Centralized Drainage With the drain pump

- 1 Install main air vent at the front of the farthest indoor unit from the main drain when installed indoor units are more than 3.
- 2 You may need to install individual air vent to prevent water flow back at the top of each indoor unit drainpipe.



Drain pipe and drain hose installation

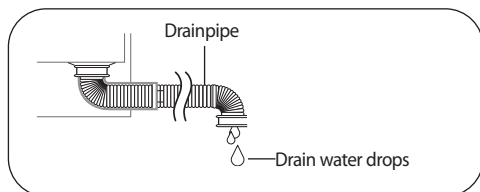
Drainpipe Connection Without the drain pump

- 1 Loosen screws and take out the side cover plate.
- 2 Pour water into the indoor unit as shown in figure.



NOTE

- Drainage test should be done after installation has been finished. To avoid water overflow from the indoor unit because the drain tube is blocked.
- 3 Confirm that the water flows out through the drain hose.
 - 4 When the drain pump is installed, operate the unit as cooling mode and check a drain pump pumping.
 - 5 Check drain water drops at the end of the drain pipe.



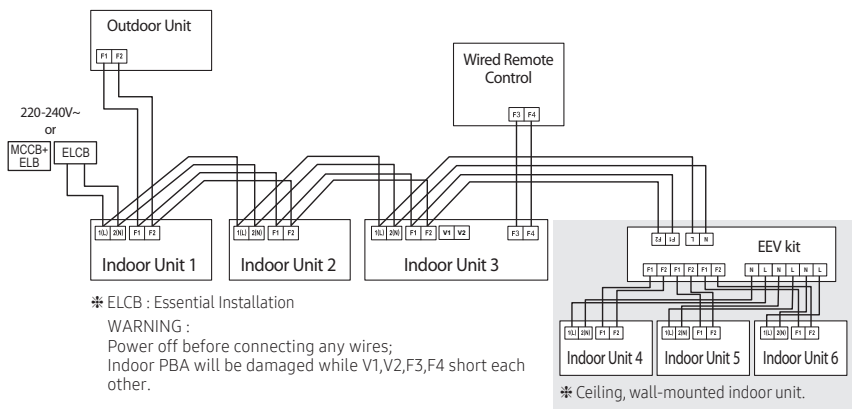
- 6 Make sure there is no water leak at the drainage.
- 7 Reinstall the side cover plate.

Installation Procedure

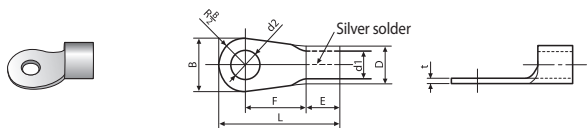
Step 10 Wiring work

Power and communication cable connection

- 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



Nominal dimensions for cable (mm ²)	Nominal 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	X A	X A, 30mmA 0.1s	2.5mm ²	2.5mm ²	0.75-1.5mm ²

- 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)

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

X : The capacity of ELCB(or MCCB+ELB).

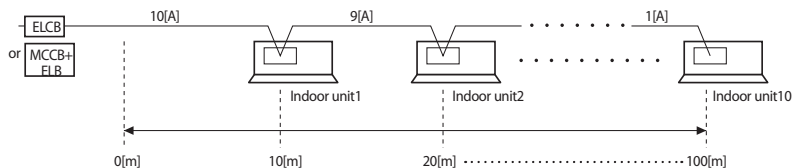
$\sum A_i$: Sum of Rating currents of each indoor unit.

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.

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

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]

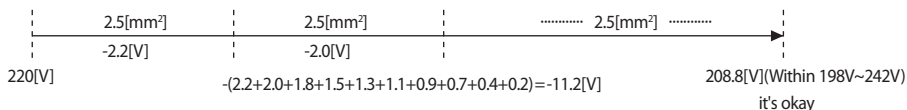


- Apply following equation.

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

- Calculation

✳ Installing with 1 sort wire.



Installation Procedure

✱ Rating current

Unit	Model	Rating current (A)
AM***DNLDKG*	**017**	0.23
	022	0.25
	028	0.28
	036	0.33
	045	0.45
	056	0.62
	071	0.69

 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

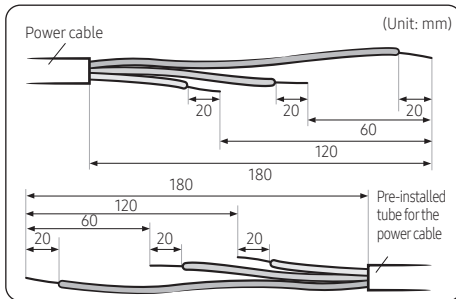
Step 11 Optional: Extending the power cable

1 Prepare the following tools.

Tools	Spec	Shape
Crimping pliers	MH-14	
Connection sleeve (mm)	20 x Ø 6.5 (H x OD)	
Insulation tape	Width 19 mm	
Contraction tube (mm)	70 x Ø 8.0 (L x OD)	

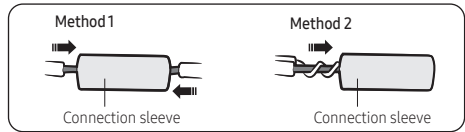
2 As shown in the figure, peel off the shields from the rubber and wire of the power cable.

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



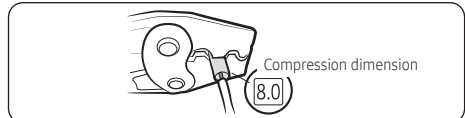
CAUTION

- 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.

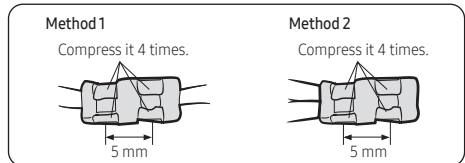


CAUTION

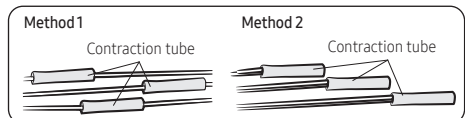
- If cable wires are connected without using connecting sleeves, their contact area becomes reduced, or corrosion develops on the outer surfaces of the wires (copper wires) over a long time. This may cause an increase of resistance (reduction of passing current) and consequently may result in a fire.
- 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 mm².



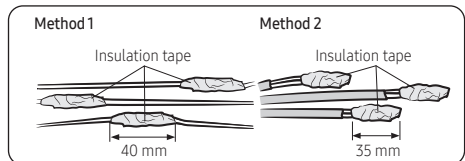
- After compressing it, pull both sides of the wire to make sure it is firmly pressed.



5 Apply heat to the contraction tube to contract it.



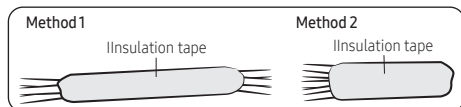
6 Wrap it with the insulation tape twice or more and position your contraction tube in the middle of the insulation tape.



Installation Procedure

- 7 After tube contraction work is completed, wrap it with the insulation tape to finish.

Three or more layers of insulation are required.



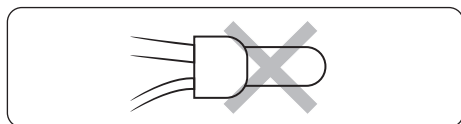
CAUTION

- 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.)



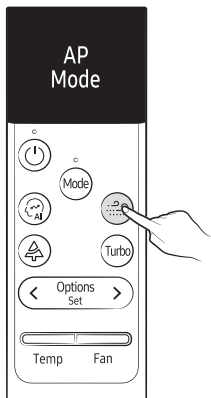
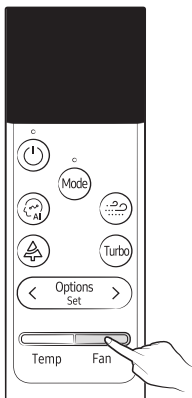
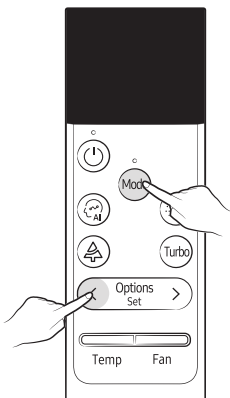
WARNING

- 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 : LED Display indicator specifications when checking Wi-Fi Easy Setup and Wi-Fi status

The wireless remote control can be used for Easy Setup, checking the internet connection status and connecting or disconnecting Wi-Fi.

Easy Setup	Check internet connection status	Enable/Disable Wi-Fi
		
Press the  button for 5 seconds	Press the  button for 5 seconds	Press the  and  button for 5 seconds

Installation Procedure

LED indicator Status

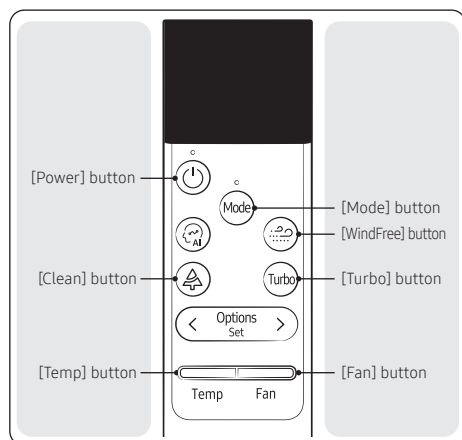
Duct		Indicators				Note	Action
		On / Off	Timer	Fan	Filter sign		
							
Easy Setup	AP Entry	●	●	●	●	All LEDs turn On	
	Device Check	◐	◐	◐	◐	All LEDs Flashing	
	Device Registration	◐	◐	◐	◐	LEDs Flashing sequentially	
	Connection success	◐	◐	◐	◐	All LEDs Flashing(During 3SEC)	
	Connection failed	X	X	X	X	All LEDs turn Off and operate in the original mode	AP setting, Wi-Fi module replacement
Check your internet connection	AP when connected to the Internet normally	●	●	●	●	All LEDs turn On (During 5SEC)	Use normally
	When not connected to AP	X	X	X	X	All LEDs turn Off (During 5SEC)	AP setting, Wi-Fi module replacement
Wi-Fi function	When connected	◐	◐	◐	◐	All LEDs Flashing one time	-
	When disconnected	◐	◐	◐	◐		-
When setting AP with wired remote control		◐	◐	◐	◐	All LEDs Flashing (MAX10Min)	
Initialize connection information		◐	◐	◐	◐	LEDs Flashing sequentially	-
Initialize the device		◐	◐	◐	◐	LEDs Flashing sequentially	-

Step 13 Setting the indoor unit addresses and the installation options

You cannot set both indoor unit addresses and the installation options in a batch: set both respectively.

Common steps for setting the addresses and options

Remote controls

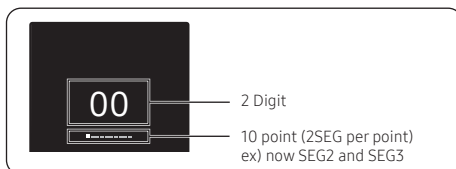


NOTE

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

1 Enter the mode for setting the options.

- Reset remote control: button Down + button Down + Press for 10 seconds
- You can see the "SW Initialization" message and enter the following in 5 seconds.
- Press button and button for 5 seconds.
- Make sure that you are entered to the mode for setting options.



2 Set the option values.

CAUTION

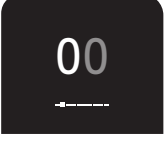
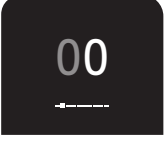
- The total number of available options are 24 : SEG1 to SEG24
- Because SEG1, SEG7, SEG13 and SEG19 are the page options used by the previous remote control models, the modes to set values for these options are skipped automatically.
- Set a 2-digit value for each option pair in the following order.
- You can see 20 SEG (except SEG1, SEG7, SEG13, SEG19) SEG2 → ... → SEG6 → SEG8 → → SEG12 → SEG14 → → SEG18 → SEG20 → ... → SEG24

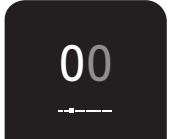
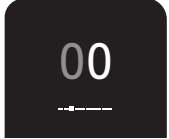
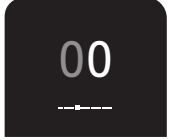
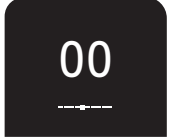
SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	X	X	X	X	X
SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	X	X	X	X	X
SEG13	SEG14	SEG15	SEG16	SEG17	SEG18
2	X	X	X	X	X
SEG19	SEG20	SEG21	SEG22	SEG23	SEG24
3	X	X	X	X	X

- You can set the next SEG by pressing the button.
- You can change the digit value through the following operation.
Left value: up or down, range : 0 ~ F
Right value: up or down, range : 0 ~ F

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  button repeatedly until the value you want to set appears on the remote control display. b Set the SEG3 value by pressing the  button repeatedly until the value you want to set appears on the remote control display. When you press the  or  button, values appear in the following order:  →  → ...  → 	 SEG2  SEG3
2 Press the  button to move to the next page.	
3 Set the SEG4 and SEG5 values: a Set the SEG4 value by pressing the  button repeatedly until the value you want to set appears on the remote control display. b Set the SEG5 value by pressing the  button repeatedly until the value you want to set appears on the remote control display. When you press the  or  button, values appear in the following order:  →  → ...  → 	 SEG4  SEG5
4 Press the  button to move to the next page.	

Steps	Remote control display
5 Set the SEG6 and SEG8 values: a Set the SEG6 value by pressing the  button repeatedly until the value you want to set appears on the remote control display. b Set the SEG8 value by pressing the  button repeatedly until the value you want to set appears on the remote control display. When you press the  or  button, values appear in the following order:  →  → ... →  → 	 SEG6  SEG8
6 Press the  button to move to the next page.	
7 Set the SEG9 and SEG10 values: a Set the SEG9 value by pressing the  button repeatedly until the value you want to set appears on the remote control display. b Set the SEG10 value by pressing the  button repeatedly until the value you want to set appears on the remote control display. When you press the  or  button, values appear in the following order:  →  → ... →  → 	 SEG9  SEG10
8 Press the  button to move to the next page.	

Installation Procedure

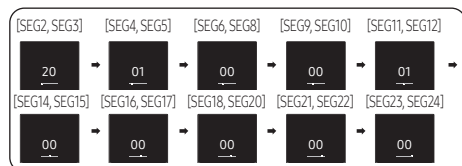
Steps	Remote control display
9 Set the SEG11 and SEG12 values: a Set the SEG11 value by pressing the  button repeatedly until the value you want to set appears on the remote control display. b Set the SEG12 value by pressing the  button repeatedly until the value you want to set appears on the remote control display. When you press the  or  button, values appear in the following order: 0 → 8 → ... E → F	 SEG11  SEG12
10 Press the  button to move to the next page.	
11 Set the SEG14 and SEG15 values: a Set the SEG14 value by pressing the  button repeatedly until the value you want to set appears on the remote control display. b Set the SEG15 value by pressing the  button repeatedly until the value you want to set appears on the remote control display. When you press the  or  button, values appear in the following order: 0 → 8 → ... E → F	 SEG14  SEG15
12 Press the  button to move to the next page.	

Steps	Remote control display
13 Set the SEG16 and SEG17 values: a Set the SEG16 value by pressing the  button repeatedly until the value you want to set appears on the remote control display. b Set the SEG17 value by pressing the  button repeatedly until the value you want to set appears on the remote control display. When you press the  or  button, values appear in the following order:  →  → ... →  → 	 SEG16  SEG17
14 Press the  button to move to the next page.	
15 Set the SEG18 and SEG20 values: a Set the SEG18 value by pressing the  button repeatedly until the value you want to set appears on the remote control display. b Set the SEG20 value by pressing the  button repeatedly until the value you want to set appears on the remote control display. When you press the  or  button, values appear in the following order:  →  → ... →  → 	 SEG18  SEG20
16 Press the  button to move to the next page.	

Installation Procedure

Steps	Remote control display
17 Set the SEG21 and SEG22 values: a Set the SEG21 value by pressing the  button repeatedly until the value you want to set appears on the remote control display. b Set the SEG22 value by pressing the  button repeatedly until the value you want to set appears on the remote control display. When you press the  or  button, values appear in the following order:  →  → ... →  → 	 SEG21  SEG22
18 Press the  button to move to the next page.	
19 Set the SEG23 and SEG24 values: a Set the SEG23 value by pressing the  button repeatedly until the value you want to set appears on the remote control display. b Set the SEG24 value by pressing the  button repeatedly until the value you want to set appears on the remote control display. When you press the  or  button, values appear in the following order:  →  → ... →  → 	 SEG23  SEG24

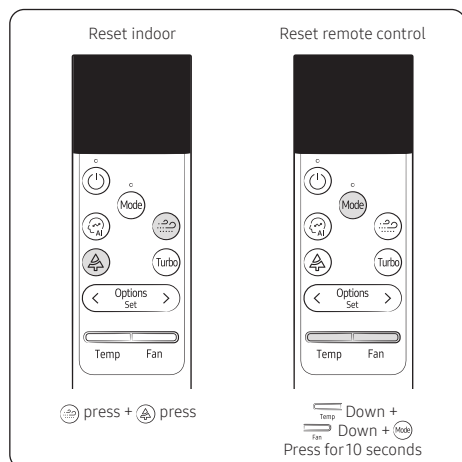
- 3 Check whether the option values you have set are correct by pressing the  button repeatedly.



EX) AM***DNLDKG

020010-100000-2000A0-300000

- 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  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  button again.
- 5 Check whether the air conditioner operates following the option values you have set:
- a Reset the indoor or outdoor unit.
 - Indoor Unit : Press  button +  button for 5 seconds
 - Outdoor Unit : Press the K3 button
 - b Reset remote control:  button Down +  button Down +  Press for 10 seconds
You can see the "SW Initialization" message.



Installation Procedure

Setting an indoor unit address (MAIN/RMC)

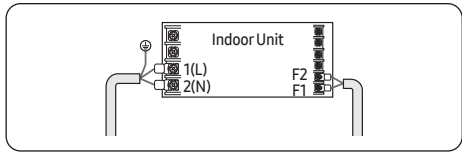
- 1

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

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

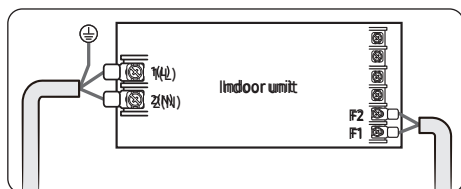
Option	SEG1		SEG2		SEG3		SEG4		SEG5		SEG6	
Explanation	PAGE		Mode		Setting Main address		100-digit of indoor unit address		10-digit of indoor unit		The unit digit of an indoor unit	
Indication and Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	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(x16)		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.

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

- 1 Make sure that the power is supplied to the indoor unit.
 - If the indoor unit is not plugged in, it must include a power supply.
- 2 Make sure that the panel or display is connected to the indoor unit so that it can receive options



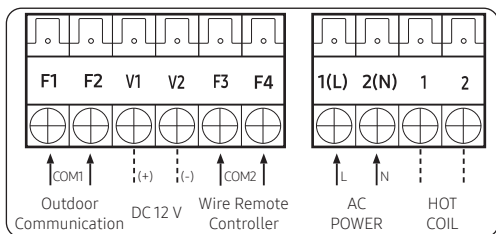
- 3 Set an address for each indoor unit using the remote control, according to your air conditioning system plan.
 - The indoor unit addresses are set to 020010-100000-2000A0-300000 by default.
 - The SEG20 option, Individual control with remote control, allows you to control multiple indoor units individually by using the remote control.

Installation options for the 02 series

SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	2	Evaporator Drying	Use of external room temperature sensor / Minimizing fan operation when thermostat is off	Use of central control	FAN RPM compensation
SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	Use of drain pump	Use of hot water heater	Settings for load operation during heater control Fan control during defrost mode / heater control during defrost mode	EEV Step when heating stops	-
SEG13	SEG14	SEG15	SEG16	SEG17	SEG18
2	Use of external control	Setting the output of external control / External heater signal / Cooling operation signal / Free Cooling control signal	S-Plasma ion	Buzzer control / whether to use humidity sensor / whether to use APP UX DSP (Dual Set Point) / whether to use R-32 sensor	Hours of filter usage
SEG19	SEG20	SEG21	SEG22	SEG23	SEG24
3	Individual control of a remote controller	Heating setting compensation / Removing condensate water in heating mode	Adjusted EEV step of stopped unit during oil return /defrost mode.	-	-

Installation Procedure

- Even if you set the Use of drain pump (SEG8) option to 0, it is automatically set to 2 (the drain pump is used with 3 minute delay).
- If you set the Maximum filter usage time (SEG18) option to a value other than 2 and 6, it is automatically set to 2 (1000 hours).
- If you set an option to a value that is out of range specified above, the option is automatically set to 0 by default.
- The SEG5 option (Use of central control) is set to 1 (Use) by default. Therefore, you don't need to set the SEG5 option additionally. Note that even if the central control system is not connected, no errors occur. If you want a specific indoor unit not to be controlled by the central control system, set the SEG option of that indoor unit to 0 (Disuse).
- The external output of SEG15 is generated via MIM-B14 connection. (Refer to the manual of MIM-B14.)
- If you set the Individual control with remote control (SEG20) option to a value other than 0 to 4, it is automatically set to 0 (Indoor1).



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

02 series installation option (Detailed)

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

Option	SEG1		SEG2		SEG3		SEG4		SEG5		SEG6	
Explanation	PAGE		MODE		Evaporator Drying		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
	0		2		0	Disuse	0	Details	0	Disuse	0	Disuse
								Use of External room temperature sensor				
								Default				
					2	Use (5min) (*1)	1	Use				
							2	Disuse				
							3	Use				
					4	Use (10min) (*1)	4	Disuse				
							5	Use				
							6	Disuse				
					6	Use (30min) (*1)	7	Use	1	Use	0	Disuse
							8	Disuse				
							9	Use				
							A	Disuse				
							B	Use				

Option	SEG7		SEG8		SEG9		SEG10			SEG11		SEG12
Explanation	PAGE		Use of drain pump		Use of hot water heater		Settings for load operation during heater control Fan control during defrost mode / Heater control during defrost mode			EEV Step when heating stops		-
Indication and Details	Indication	Details	Indication	Details	Indication	Details	Indication	Detail		Indication	Details	-
								Fan control during defrost mode	Heater control during defrost mode			
	1		0	Disuse	0	Disuse	0	Fan Off	Off	0	Default	
							1	Fan turns on when heater turns on	Off			
							2	Fan Off	Off			
							3	Fan turns on when heater turns on	Off			
							4	Fan Off	On			
							5	Fan turns on when heater turns on	On			
	1		1	Use	1	Use (*3)	6	Fan Off	On	1	Adjusted EEV Step setting	
							7	Fan turns on when heater turns on	On			
							8	Fan Off	Off			
							9	Fan turns on when heater turns on	Off			
	2		When an indoor unit stops, drain pump will operate for 3min	3	Use (*3)	A	Fan Off	Off				
						B	Fan turns on when heater turns on	Off				
						C	Fan Off	On				
						D	Fan turns on when heater turns on	On				
						E	Fan Off	On				
						F	Fan turns on when heater turns on	On				

Installation Procedure

Option	SEG13		SEG14		SEG15		SEG16		SEG17					SEG18									
Explanation	PAGE		Use of external control		Setting the output of external control / External heater signal / Cooling operation signal / Free Cooling control signal		S-Plasma ion		Buzzer control / whether to use humidity sensor / whether to use APP UX DSP (Dual Set Point) / whether to use R-32 sensor					Hours of filter usage									
Indication and Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Detail				Indication	Details								
	2		0	Disuse	0	External control (Thermo On)	0	Disuse	0	Use Buzzer	Disuse	Disuse	Disuse	2	1000 Hour								
			1	ON/OFF control	1	External control (Operation On)			1	Disuse Buzzer	Disuse	Disuse	Disuse										
						2			OFF control	3	External heater signal (*4)	2	Use Buzzer			Use	Disuse	Disuse					
											4	Cooling operation signal (*5)	5			Free Cooling control (Cooling Thermo On) (*6)	3	Disuse Buzzer	Use	Use	Disuse		
																6	Free Cooling control (Cooling/ Dry Thermo On) (*6)	A	Use Buzzer	Use	Disuse	Use	
																			B	Disuse Buzzer	Use	Disuse	Use
																				C	Use Buzzer	Disuse	Use/ Off
			D	Disuse Buzzer	Disuse	Use			Use														
			E	Use Buzzer	Use	Use	Use																
			F	Disuse Buzzer	Use	Use	Use																

Option	SEG19		SEG20		SEG21			SEG22		SEG23	SEG24
Explanation	PAGE		Individual control of a remote controller		Heating setting compensation / Removing condensate water in heating mode			Adjusted EEV step of stopped unit during oil return /defrost mode.		-	-
Indication and Details	Indication	Details	Indication	Details	Indication	Details		Indication	Details	-	-
						Heating Setting Compensation	Removing Condensate Water in Heating Mode				
	3	0 or 1	channel 1	0	Default	Disuse	0	Default			
				1	2 °C	Disuse					
		2	channel 2	2	5 °C	Disuse					
				3	Default	Use (*7)					
		3	channel 3	4	2 °C	Use (*7)	1	Adjusted EEV positon			
				4	channel 4	5			5 °C		

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

- (*1) When Cooling or dry mode is off. The indoor fan operate in setting minutes.
- (*2) Minimizing fan operation when thermostat is off
 - Fan operates for 20 seconds at an interval of 5 minutes in Heat mode.
 - Fan stops or operates Ultra low in Cooling when thermostat is off.
- (*3) 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.
- (*4) 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.
- (*5) When indoor unit is in cooling or Dry mode, The output signal is "ON"
- (*6) For free cooling control, Economizer controller is required.
- (*7) 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 condensate 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.
- (*8) Soft Off: If no motion is detected for the Soft Off time, the MDS Kit turns off the indoor units.
 Then if any motion is detected until the Hard Off time is passed, the MDS Kit restarts the indoor units.
- (*9) Hard Off: If no motion is detected for the Hard Off time, the MDS Kit turns hard off the indoor units.
 Then although any motion is detected, the MDS Kit does not restart the indoor and outdoor units.
 You must manually restart the units with the wired or wireless remote control.

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 / Use of Cooling only indoor unit of HR	(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	MTFC (*3)	-
SEG13	SEG14	SEG15	SEG16	SEG17	SEG18
2	-	Dual fuel (heater lock) setting	Dual fuel (HP lock) setting	-	Control variables when using hot water / external heater (*4)
SEG19	SEG20	SEG21	SEG22	SEG23	SEG24
3	-	-	-	Forced FAN Operation for Heating and Cooling	Whether to use UV LED / whether to use BLE Onboarding / whether to allow fan speed control during auto mode / MDS (motion detection sensor) control UX type

05 series installation option (Detailed)

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

Option	SEG1		SEG2		SEG3		SEG4		SEG5		SEG6	
Explanation	PAGE		MODE		Use of Auto Change Over for HR only in Auto mode / Use of Cooling only indoor unit of HR		(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	0.5 °C	1	0.5 °C	1	1.5 °C	
				1	Use Auto Change Over for HR only	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	
				2	Use Cooling only indoor unit for HR	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 change Cooling → Heating		(When setting SEG3) Time required for mode change		Compensation option for Long pipe or height difference between indoor units		MTFC (*3)		-	
Indication and Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	-	
	1		0	1 °C	0	5min	0	Default	0	Default	-	
			1	1.5 °C	1	7min	1	(*1) Height difference is more than 30m or (*2) Distance is longer than 110m				
			2	2 °C	2	9min						
			3	2.5 °C	3	11min						
			4	3 °C	4	13min	2	(*1) Height difference is 15~30m or (*2) Distance is 50~110m	2	Use	-	
			5	3.5 °C	5	15min						
			6	4 °C	6	20min						
7	4.5 °C	7	30min									

Installation Procedure

Option	SEG13		SEG14	SEG15		SEG16		SEG17	SEG18						
Explanation	-		-	Dual fuel (heater lock) setting		Dual fuel (HP lock) setting		-	Control variables when using hot water / external heater (*4)						
Indication and Details	Indication	Details	-	Indication	Detail	Indication	Detail	-	Indication	Details					
	2		-	0	Disuse	0	Disuse	-	0	At the same time as thermo on	No delay				
				1	18.3 °C	1	7.2 °C		1	At the same time as thermo on	10 minutes				
				2	15.6 °C	2	4.4 °C		2	At the same time as thermo on	20 minutes				
				3	12.8 °C	3	1.7 °C		3	1.5 °C	No delay				
				4	10 °C	4	-1.1 °C		4	1.5 °C	10 minutes				
				5	7.2 °C	5	-3.9 °C		5	1.5 °C	20 minutes				
				6	4.4 °C	6	-6.7 °C		6	3.0 °C	No delay				
				7	1.7 °C	7	-9.4 °C		7	3.0 °C	10 minutes				
				8	-1.1 °C	8	-12.2 °C		8	3.0 °C	20 minutes				
				9	-3.9 °C	9	-15 °C		9	4.5 °C	No delay				
				A	-6.7 °C	A	-17.8 °C		A	4.5 °C	10 minutes				
				B	-9.4 °C	B	-20.6 °C		B	4.5 °C	20 minutes				
				C	-12.2 °C	C	-23 °C		C	6.0 °C	No delay				
				D	-15 °C	D	-26 °C		D	6.0 °C	10 minutes				
				E	-17.8 °C	E	-29 °C		E	6.0 °C	20 minutes				
				F	Cannot be used	F	Cannot be used								
				Option	SEG19		SEG20		SEG21	SEG22	SEG23		SEG24		
Explanation	PAGE		-	-	-	Forcing FAN Operation for Heating and Cooling		Whether to use UV LED / whether to use BLE Onboarding / whether to allow fan speed control during auto mode / MDS (motion detection sensor) control UX type (*5)							
Indication and Details	Indication	Details	-	-	-	Indication	Details		Indication	UV LED	BLE Onboarding	Detail			
	3		-	-	-	Cooling Fan Setting	Heating Fan Setting	Whether to allow fan speed control during auto mode				MDS (motion detection sensor) control UX type			
						0	Disuse	Disuse				0	Disuse	Disuse	Fan speed and power saving mode can be set simultaneously
						1	Disuse	Use (Fan: User setting)				1	Use	Disuse	Fan speed and power saving mode can be set simultaneously
						2	Disuse	Use (Fan: High)				2	Disuse	Use	Fan speed and power saving mode can be set simultaneously
3	Disuse	Use (Fan: Low)	3	Use	Use	Disuse	Fan speed and power saving mode can be set simultaneously								

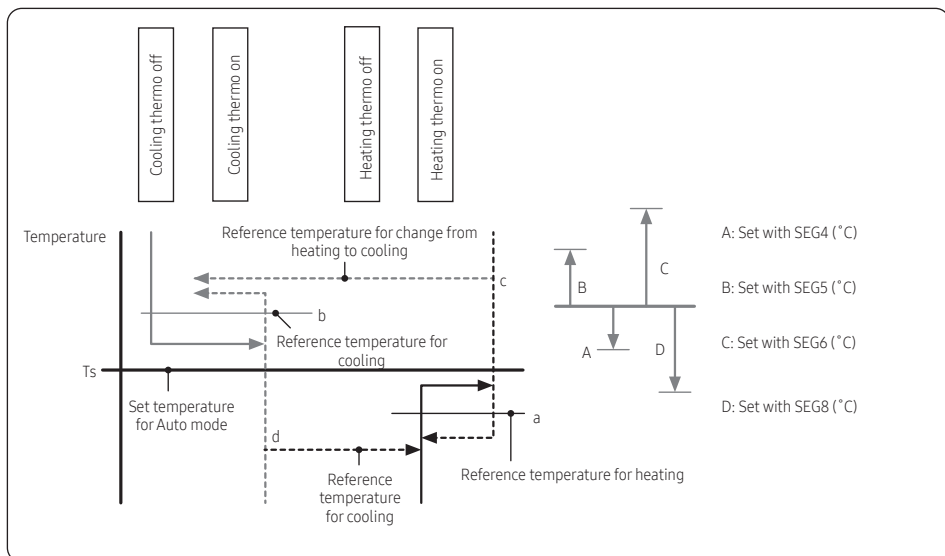
Option	SEG19	SEG20	SEG21	SEG22	SEG23			SEG24				
Explanation	PAGE	-	-	-	Forcing FAN Operation for Heating and Cooling			Whether to use UV LED / whether to use BLE Onboarding / whether to allow fan speed control during auto mode / MDS (motion detection sensor) control UX type				
Indication and Details	3	-	-	-	4	Use (Fan: User setting)	Disuse	4	Disuse	Disuse	Use	Fan speed and power saving mode can be set simultaneously
					5	Use (Fan: User setting)	Use (Fan: User setting)	5	Use	Disuse	Use	Fan speed and power saving mode can be set simultaneously
					6	Use (Fan: User setting)	Use (Fan: High)	6	Disuse	Use	Use	Fan speed and power saving mode can be set simultaneously
					7	Use (Fan: User setting)	Use (Fan: Low)	7	Use	Use	Use	Fan speed and power saving mode can be set simultaneously
					8	Use (Fan: High)	Disuse	8	Disuse	Disuse	Disuse	Only fan speed or power saving mode can be set at a time
					9	Use (Fan: High)	Use (Fan: User setting)	9	Use	Disuse	Disuse	Only fan speed or power saving mode can be set at a time
					A	Use (Fan: High)	Use (Fan: High)	A	Disuse	Use	Disuse	Only fan speed or power saving mode can be set at a time
					B	Use (Fan: High)	Use (Fan: Low)	B	Use	Use	Disuse	Only fan speed or power saving mode can be set at a time
					C	Use (Fan: Low)	Disuse	C	Disuse	Disuse	Use	Only fan speed or power saving mode can be set at a time
					D	Use (Fan: Low)	Use (Fan: User setting)	D	Use	Disuse	Use	Only fan speed or power saving mode can be set at a time
					E	Use (Fan: Low)	Use (Fan: High)	E	Disuse	Use	Use	Only fan speed or power saving mode can be set at a time
					F	Use (Fan: Low)	Use (Fan: Low)	F	Use	Use	Use	Only fan speed or power saving mode can be set at a time

Installation Procedure

- (*1) Height difference : The difference of the height between the corresponding indoor unit 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) The difference between the pipe length of the indoor unit installed 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) For MTFC option, MTFC(Multi Tenant Function Controller) kit is required.
- (*4) 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.
Example 1) Setting 02 series SEG9 = "1" / Setting 05 series SEG18 = "0": The 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.
Example 2) Setting 02 series SEG15 = "2" / Setting 05 series SEG18 = "A": Room temp. $\leq$ 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.)
- (*5) Duct products do not use "UV LED & MDS"

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

When SEG 3 is set to 1 and the HR-specific auto changeover function is run, the indoor unit operates as shown in the following figure:



The mode change between the Cool and Heat modes is made only when the thermo off state is maintained for the period of time set with SEG9.

Changing the addresses and options individually

When you want to change the value of a specific option, refer to the following table and follow the steps in **Common steps for setting the addresses and options** on page <?>.

Option	SEG1		SEG2		SEG3		SEG4		SEG5		SEG6	
Function	Page		Mode		Type of the option to change		Tens position of the option number		Units position of the option number		New value	
Indication and details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details
	0		D		Option type	0 to F	Tens position value	0 to 9	Units position value	0 to 9	New value	0 to F

Example: Changing the Buzzer control (SEG17) option of the installation options to 1 disuse.

Option	SEG1		SEG2		SEG3		SEG4		SEG5		SEG6	
Function	Page		Mode		Type of the option to change		Tens position of the option number		Units position of the option number		New value	
Indication	0		D		2		1		7		1	

CAUTION

- If your indoor units support both cooling and heating, the mixed operation (two or more indoor units operate in different modes simultaneously) is not available when the indoor units are connected to the same outdoor unit. If you set an indoor unit as the master indoor unit by using the remote control, the outdoor unit automatically operate in the current mode of the master indoor unit.

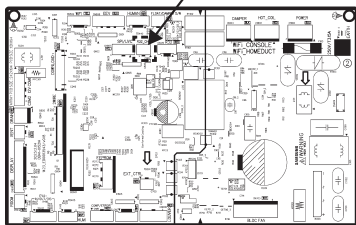
Installing external outputs

- An external output signal occurs if the R-32 sensor in the indoor unit detects a refrigerant leak, or the sensor has a malfunction or short circuit.
- Based on this signal, safety measures required for the indoor unit, such as ventilation system activation and alarm activation, can be taken.
- MIM-B14** (External Contact Control Module) can be used to link the GAS LEAK output.

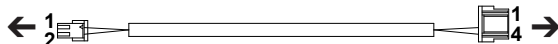
Installation Procedure

For controlling AC LAMP (On/Off)

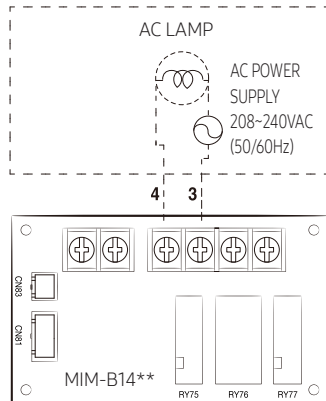
R-32 CHECK : CN802(YELLOW)



※ Use of the WIRE HARNESS included in the product manual

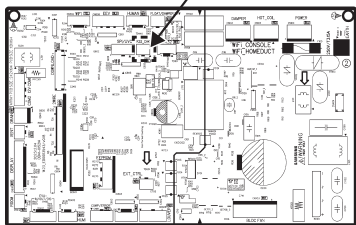


To Main PBA

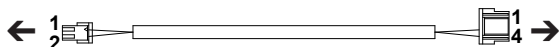


For controlling AC LAMP (On/Off)

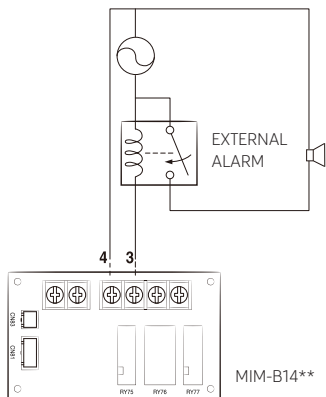
R-32 CHECK : CN802(YELLOW)



※ Use of the WIRE HARNESS included in the product manual



To Main PBA



NOTE

- The MIM-B14xx can be connected to the required load on connectors 3 and 4.
- The load is AC (220-240), AC 2.25Amax
- When an error occurs due to a gas leak or R-32 sensor error, 3 and 4 are in a short state (the relay operates).

Step 14 Performing final check and trial operation

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

- 1 Check the followings.
 - Strength of the installation site
 - Tightness of pipe connection to detect a gas leak
 - Electric wiring connections
 - Heat-resistant insulation of the pipe
 - Drainage
 - Earth conductor connection
 - Correct operation (follow the steps below)

After finishing the installation of the air conditioner, you should explain the following to the user. Refer to appropriate pages in the User's Manual.

- 1 How to start and stop the air conditioner
- 2 How to select the modes and functions
- 3 How to adjust the temperature and fan speed
- 4 How to adjust the airflow direction
- 5 How to set the timers
- 6 How to clean and replace the filters



NOTE

- When you complete the installation successfully, hand over the User's Manual and this Installation Manual to the user for storage in a handy and safe place.

Appendix

Troubleshooting

Detection of errors

- If an error occurs during the operation, an 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

LED Display

- 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.

● : On, ○ : Blinking, X : Off

Abnormal condition	Error code	LED Display				
						
		Blue	Red			
Error on indoor temperature sensor (Short or Open)	E121	X	X	●	X	X
1. Error on Eva-in sensor (Short or Open)	E122	●	X	●	X	X
2. Error on Eva-out sensor (Short or Open)	E123					
3. Discharge sensor error (Short or Open)	E126					
Indoor fan error	E154	X	X	X	●	X
1. Error on outdoor temperature sensor (Short or Open)	E221					
2. Error on cond sensor	E237	●	X	X	●	X
3. Error on discharge sensor	E251					
Other outdoor unit sensor error that is not on the above list						
1. When there is no communication between the indoor-outdoor units for 2 minutes	E101					
2. Communication error received from the outdoor unit	E102					
3. 3 minute tracking error on outdoor unit	E202					
4. Communication error after tracking due to unmatching number of installed units	E201	X	X	●	●	X
5. Error due to repeated communication address	E108					
6. Communication address not confirmed	E109					
Other outdoor unit communication error that is not on the above list						
Self diagnosis error display						
1. Error due to opened EEV (2nd detection)	E151					
2. Error due to closed EEV (2nd detection)	E152	X	X	●	●	●
3. Eva in sensor is detached	E128					
4. Eva out sensor is detached	E129					
5. Thermal fuse error (Open)	E198					

Abnormal condition	Error code	LED Display				
						
		Blue	Red			
1. COND mid sensor is detached	E241					
2. Refrigerant leakage (2nd detection)	E554					
3. Abnormally high temperature on Cond (2nd detection)	E450					
4. Low pressure s/w (2nd detection)	E451					
5. Abnormally 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					
16. Indoor unit R-32 sensor short/open	E116					
17. installation combination of indoor unit and wired remote control Error	E694					
18. Refrigerant leak sensor lifetime unpredictable error	E695					
19. 1st refrigerant leak detection error	E696					
20. 2nd refrigerant leak detection error (Error-causing indoor unit)	E697					
21. Refrigerant leak sensor failure error	E698					
22. Refrigerant leak sensor replacement notification error	E699					
23. Refrigerant leak sensor lifetime expiration error	E700					
24. 2nd refrigerant leak detection error (Not Error-causing indoor unit)	E797					
Other outdoor unit self-diagnosis error that is not on the above list						
Flowating s/w (2nd detection)	E153	×	×	×	●	●
EEPROM error	E162	●	●	●	●	●
EEPROM option error	E163	●	●	●	●	●
Error due to incompatible indoor unit	E164	×	×	×	×	●

Option table

E.S.P(External Static Pressure)setting for phase control motor

With its phase control motor,you can adjust the indoor unit fan speed depending on the installation condition. If the external static pressure is high so that the duct becomes longer or if the external static pressure is low so that the duct becomes shorter,adjust the fan speed by referring the following table.

Model		Static Pressure (mmAq)	Option code for indoor unit
AM017DNLDKG/EU	Home Duct S	0	010054-1C9062-201212-331110
		1	010054-1C90B5-201212-331110
		2	010054-1C940A-201212-331110
		3	010054-1C9584-201212-331110
AM022DNLDKG/EU	Home Duct S	0	010054-1C9073-201616-331110
		1	010054-1C90D5-201616-331110
		2	010054-1C942A-201616-331110
		3	010054-1C95A4-201616-331110
AM028DNLDKG/EU	Home Duct S	0	010054-1C90B3-201C1C-331110
		1	010054-1C9417-201C1C-331110
		2	010054-1C946C-201C1C-331110
		3	010054-1C95C5-201C1C-331110
AM036DNLDKG/EU	Home Duct S	0	010054-1C9404-202424-331110
		1	010054-1C9459-202424-331110
		2	010054-1C94AE-202424-331110
		3	010054-1C9916-202424-331110
AM045DNLDKG/EU	Home Duct 1	0	010054-1C5458-202D2D-331110
		2	010054-1C54EA-202D2D-331110
		4	010054-1C585F-202D2D-331110
AM056DNLDKG/EU	Home Duct 1	0	010054-1C54FC-203838-331110
		2	010054-1C5950-203838-331110
		4	010054-1C59C4-203838-331110
AM071DNLDKG/EU	Home Duct 2	0	010054-1C54D9-204747-331110
		2	010054-1C584E-204747-331110
		4	010054-1C59B2-204747-331110

