Mini-Split
Installation manual

MFMD***S6-1P , MFMD***M6-1P

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

LENNOX Powered by SAMSUNG

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Safety Information

California Proposition 65 Warning (US)

⚠ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

IMPORTANT – This product has been designed and manufactured to meet ENERGY STAR criteria for energy efficiency when matched with appropriate coil components.

However, proper refrigerant charge and proper air flow are critical to achieve rated capacity and efficiency.

Installation of this product should follow the manufacturer's refrigerant charging and air flow instructions.

Failure to confirm proper charge and airflow may reduce energy efficiency and shorten equipment life.

⚠ 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 mini-split 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 mini-split is not installed in an easily accessible area.

Symbol	Meaning
	Flammable gas
	Flammable materials
Refrigerant Safety Group A2L	Refrigerant safety group
	Read operating manual
	Refer to operating manual
	Read service manual

⚠ WARNING

The installation and testing of this appliance must be performed by a qualified technician.

- The instructions in this manual are not intended as a substitute for proper training or adequate experience in the safe installation of the appliance.

Always install the mini-split in compliance with current local, state, and federal safety standards.

- Do not use means to accelerate the defrost operation or to clean, other than those recommended by Lennox.
- Do not pierce or burn.
- Be aware that refrigerants may not contain an odor.

General information

⚠ WARNING

- Carefully read the content of this manual before installing the mini-split and store the manual in a safe place to be able to use it as a 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 mini-split is sold or transferred.
- This manual explains how to install an indoor unit with a split system with two LENNOX 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 electricity and requirements outlined in the "Operating limits" table, included in the manual, shall immediately invalidate the warranty.

Safety Information

- All pipe work including piping material, pipe routing, and installation shall include protection from physical damage in operation and service and comply with national and local codes and standards, such as ASHRAE 15, ASHRAE 15.2, IAPMO Uniform Mechanical Code, ICC International Mechanical Code, or CSA B52. Any field joints shall be accessible for inspection before being covered or enclosed.
- The mini-split 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.
- To prevent electric shocks, fires or injuries, always stop the unit, disable the protection switch and contact LENNOX's technical support if the unit produces smoke, if the power cable is hot or damaged or if the unit is very noisy.
- 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.
- The mini-split contains a refrigerant that has to be disposed of as special waste. At the end of its life cycle, the mini-split 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 work. Installation/repair technicians may be injured if improper protective equipment is worn.
- This unit is a partial unit mini-split, complying with partial unit requirements of this International Standard, and must only be connected to other units that have been confirmed as complying with corresponding partial unit requirements of this International Standard.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety.
  Children should be supervised to ensure that they do not play with the appliance.

Installing the unit

⚠ WARNING

IMPORTANT: When installing the unit, always remember to connect first the refrigerant tubes, and 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 instructions on how to operate the mini-split to the user.
- Do not use the mini-split in environments with hazardous substances or close to equipment that releases free flames to avoid the occurrence of fires, explosions or injuries.
- Do not install the product on a ship or a vehicle (such as a campervan). Salt, vibration or other environmental factors may cause the product to malfunction, electric shock or fire.
- Excessive indoor humidity or clogged condensate drain lines may cause water to drip from indoor units.
  Do not install the indoor unit where dripping could result in damage to property, such as over electronic equipment or other sensitive instruments.
- Our units must be installed in compliance with the space specifications presented in the installation manual to ensure accessibility from both sides and allow repairs or maintenance operations to be carried out.
  The unit's components must be accessible and easy to disassemble without endangering people and objects.
- For this reason, where it is not observed as indicated in the Installation Manual, the cost necessary to reach and repair the unit (safely as required by local regulations) with slings, trucks, scaffolding or any other means of elevation won't be considered in warranty and charged to end user.
- If any gas or impurities, except R-32 refrigerant, come into the refrigerant pipe, a serious problem may occur and it may cause injury.
  Use the supplied accessories, specified components and tools for the installation.
  - Do not use the pipe and the installation product used for the R-22, R-410A refrigerant.
  - Failure to use the specified components can cause the product to fall, water leakage, electrical shock, and fire. (The pipe and flare components used for R-22, R-410A refrigerant must not be used)

Power supply line, fuse or circuit breaker

⚠ WARNING

- Always make sure that the power supply is compliant with current safety standards. Always install the mini-split 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 mini-split is connected to the power supply following 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 mini-splits.
- Devices disconnected from the power supply should be completely disconnected in the condition of overvoltage category.

⚠ CAUTION

Make sure that you ground the cables.

- Do not connect the ground wire to the gas pipe, water pipe, lightning rod, or telephone wire. If the grounding 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 3.3ft (1m) away from the electric appliance.

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

- If you use the wireless remote control, reception error may occur due to the ballast of the lighting apparatus.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons to avoid a hazard.

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.

Precautions for using R-32 refrigerant

General

- This product is pre-charged with mildly flammable gas classified as A2L by ASHRAE. The following precautions and instruction manuals must be followed during installation, operation, servicing and decommissioning of the product.
- The appliance shall be stored in a room without continuously operating ignition sources, like open flames, a gas appliance, or an electric heater.
- All national and local regulations shall be observed at all times.
- All pipe work including piping material, pipe routing and installation shall include protection from physical damage in operation and service, and comply national and local codes and standards, such as ASHRAE 15, ASHRAE 15.2, IAPMO Uniform Mechanical Code, ICC International Mechanical Code, or CSA B52. All filed joints shall be accessible for inspection before being covered or enclosed.
- All field piping and joints shall be pressure tested with an inert gas according to prevalent industry standards prior to refrigerant charging and system commissioning.
- Where additional field charging is required. The installer shall write with a permanent marker the field charge added on the ODU label provided, such that the Total Charge = Factory 'Pre-charge' + field charge.
- Minimum floor area of the room shall be in compliance with the min. room area according to the total charge of the installation according to Table 1.
- For ducted systems, any auxiliary systems that are potential ignition sources shall not be installed in the duct work. Examples of ignition sources are hot surfaces with temperatures exceeding 700°C and electric switching devices.
- Any auxiliary device installed must be approved by Lennox and must be suitable for operating with the refrigerant marked on the label.
- For mechanical ventilation the lower edge of the air extraction opening shall not be more than 3.9 inch (100mm) above the floor. The exhaust location outside the building must be at least 9.8ft (3m) away from the building opening and mechanical air intake openings.

Safety Information

- To handle, purge, and dispose of the refrigerant, or break into the refrigerant circuit, the worker should have a certificate from an industry-accredited authority.
- Non-ducted systems may be installed in the areas such as false ceilings not being used as return air plenum as long as the conditioned air does not mix with the air in the false ceilings.
- For ducted appliances false ceilings or drop ceilings may be used as return air plenum if a refrigerant leak detection system is provided in the system and any external connections are also provided with a sensor immediately below the return air plenum duct joint.
- Installation, servicing and any type of maintenance or repair must be performed by certified personnel that is competent to carry such activity in accordance with national and local regulations.

General Information on Servicing

- Do not work in a confined space. Ensure adequate ventilation is provided at the workspace during the entirety of the duration of the work to safely disperse any released refrigerant.
- All maintenance staff and others working in the local area shall be instructed on the nature of the work being performed and instructed to follow all instructions provided by Lennox, national and local authorities.
- The area shall be checked with an approved refrigerant detector before and during any work on the system.
- Have a dry CO_2 fire extinguisher adjacent to the charging area and workspace.
- The service personnel shall not use any ignition sources in a manner that it may lead to the risk of fire or explosion.
- Potential ignition sources shall be kept away from the work area where the flammable refrigerant can be released into the surrounding area.
- The work area should be checked to ensure that there are no flammable hazards or ignition risks. The "No Smoking" sign shall be attached.
- Under no circumstances shall potential sources of ignition be used upon detection of leakage.

The following checks shall be applied to installations and maintenance operations.

- The actual total refrigerant charge is in accordance with the room size in accordance with Table 1.
- The ventilation machinery and outlets are operating adequately and are not obstructed.
- Markings on the equipment are visible and legible.
- Refrigerant pipes or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components.

Initial checks of electrical devices shall include the following.

- That capacitors are discharged in a safe manner to avoid sparking.
- That no live electrical components and wiring are exposed while charging, recovering or purging the system.
- That there is continuity to earth bonding.
- Check that cabling is not worn, corroded or damaged in any manner.

Electrical repair safety measures

- All electrical components used or replaced must be to Lennox's specifications.
- If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with.
- Sealed electrical components and intrinsically safe components shall be replaced and not repaired.
- Cabling should be protected from excessive vibration, pressure, sharp edges, and other adverse environmental factors.

Detection of flammable refrigerants

- Electronic leak detectors shall be used to detect flammable refrigerants, but the sensitivity may not be adequate or may need re-calibration. (Detection equipment shall be calibrated in a refrigerant-free area.)
- Make sure that the detector is not a potential source of ignition.
- Leak detection equipment shall be set at a percentage of the LFL (Lower flammable limit) of the refrigerant and shall be calibrated to the refrigerant employed and the appropriate percentage of gas (25% maximum) is confirmed.
- The use of detergents containing chlorine shall be avoided for cleaning because the chlorine may react with the refrigerant and corrode the piping.
- If leakage is suspected, naked flames shall be removed.

- If a leakage is found while brazing, the entire refrigerant shall be recovered from the product or isolated (e.g. using shut-off valves). It shall not be directly released into the environment. Oxygen-free nitrogen (OFN) shall be used for purging the system before and during the brazing process.
- The work area shall be checked with an appropriate refrigerant detector before and during work.
- Ensure that the leakage detector is appropriate for use with flammable refrigerants.

Removal and Evacuation

- When removing refrigerant for servicing it is recommended to remove the entire quantity.
- When removing refrigerant follow local and national regulations and follow best practices including;
  - evacuate;
  - purge the circuit with inert gas (optional for A2L);
  - evacuate (optional for A2L);
  - continuously flush or purge with inert gas when using flame to open circuit; and
  - open the circuit.
- Use proper recovery cylinders appropriate for the type of refrigerant.
- Follow prescribed industry best practices for purging and evacuation.
- Oxygen free nitrogen shall be used for purging the system.

Charging procedure

- Follow industry standard refrigerant charging best practices.
- Prior to recharging the system shall be pressure tested with oxygen free nitrogen gas.
- Ensure that contamination of different refrigerants does not occur when charging.
- Cylinders shall be kept in appropriate position as per instructions.
- The refrigerant system should be earthed prior to charging the system.
- Label the system when charging is completed.
- Take extreme care not to overfill the refrigeration system.
- The system shall be leak tested on completion of charging prior to commissioning.

Decommissioning

- Only qualified licensed professionals shall perform refrigerant recovery and decommissioning.
- Isolate the system electrically.
- All recovery equipment and cylinders shall conform to appropriate standards. Only approved cylinders, with pressure relief valves, for the type of refrigerant shall be used.
- Recover refrigerant following industry standard procedure for flammable refrigerants.
- When draining compressors oil care must be taken that there is no flammable refrigerant in the compressor and that the compressor is not hot. Oil should be handled according to local and federal regulations.
- After decommissioning, the system shall be labeled stating that it has been decommissioned. The label shall be dated and signed. The label should state that it “contains flammable refrigerant”.
- Ensure that there are labels on the equipment indicating the equipment contains flammable refrigerant.
- Recovered refrigerant shall not be mixed or reused. It shall be processed according to national, state and local regulations.

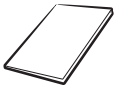
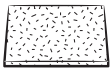
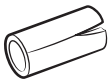
About Refrigerant Detection System(RDS)

- This system includes a refrigerant detection system (RDS) and automatic leak mitigation controls.
- When a leak is detected, the RDS will stop the compressor and energize the indoor unit(s) fan for air circulation to disperse the leaked gas and display an error code.
- The RDS sensor does automatic self-test each hour and does not require any periodic maintenance.
- The sensor should be replaced upon end of life when error Code E700 is displayed.
- For complete replacement instructions, please refer to the Service Manual.
- The RDS sensor must only be replaced with sensors as specified by Lennox. Sensor replacement must be performed by a certified technician.
- VSTAT10P-1 (sold as accessory) which may be used to energize external ventilation fans, as applicable, and close any zone dampers which may be installed in the ductwork, as applicable.
- 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.

User manual (1)	Installation manual (1)
	
Insulation Install Outlet (1)	Insulation Install SVC (1)
	
Bracket Hanger (1)	Cable-tie (8)
Drain Hose (1)	M4x12 tapped screw(1)
Flare Nuts MFMD015M6-1P	Tube connector MFMD015M6-1P
Remote control (1)	

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.
- A vibration-resistant location that is not inclined (If the indoor unit is installed on a structure that is not sturdy, it may fall and get damaged or cause injury.)
- 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.

⚠ WARNING

- Because your mini-split 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 in the following table:

<Table 1>

m [lbs(kg)]	Minimum required room area [A, ft²(m²)] Reference Height [h_0, ft(m)] Floor-standing(with R-32 sensor) 1.97(0.6)
≤ 4.047(1.836)	- no room area restrictions -
4.049(1.837)	215(20.0)
4.18(1.9)	223(20.7)
4.40(2.0)	235(21.8)
4.85(2.2)	258(24.0)
5.29(2.4)	281(26.1)
5.73(2.6)	305(28.3)
6.17(2.8)	328(30.5)
6.61(3.0)	352(32.7)
7.05(3.2)	375(34.9)
7.49(3.4)	399(37.0)
7.93(3.6)	422(39.2)
8.37(3.8)	446(41.4)
8.81(4.0)	469(43.6)
9.25(4.2)	492(45.8)

- m : Total refrigerant charge in the system
- A : Minimum required floor area
- Calculated in accordance with UL 60335-2-40 Annex GG

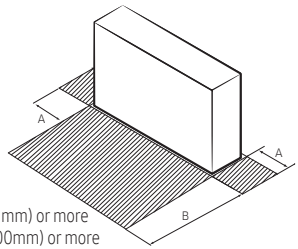
- IMPORTANT: It's mandatory to either follow the table above or follow the federal, state, and/or local regulations regarding the minimum room area allowed for the total refrigerant charge in the system.
- The actual refrigerant charge shall be per the room size within which the refrigerant-containing parts are installed.
- The ventilation machinery and outlets shall be operating adequately and not obstructed.
- If an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant.
- Marking the equipment shall continue to be visible and legible. Markings and signs that are illegible shall be corrected.
- Refrigerating pipes or components shall be installed in a position where they are unlikely to be exposed to any substance that may corrode refrigerant-containing components unless the components are constructed of materials that are inherently resistant to being corroded or are suitably protected against being so corroded.

⚠ CAUTION

- As a rule, the unit cannot be installed at a height of less that 1.97 ft (0.6 m).
- If you install a cassette type indoor unit on the ceiling when temperature is over 80.6°F (27°C) and humidity is over 80%, you must apply an extra 0.39inch (10mm) thick polyethylene insulation or a similar type of insulation to the body of the indoor unit.

Do not install the mini-split 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 be reduced or the mini-split may be out of order.
- A place exposed 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 mini-split 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 that 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.

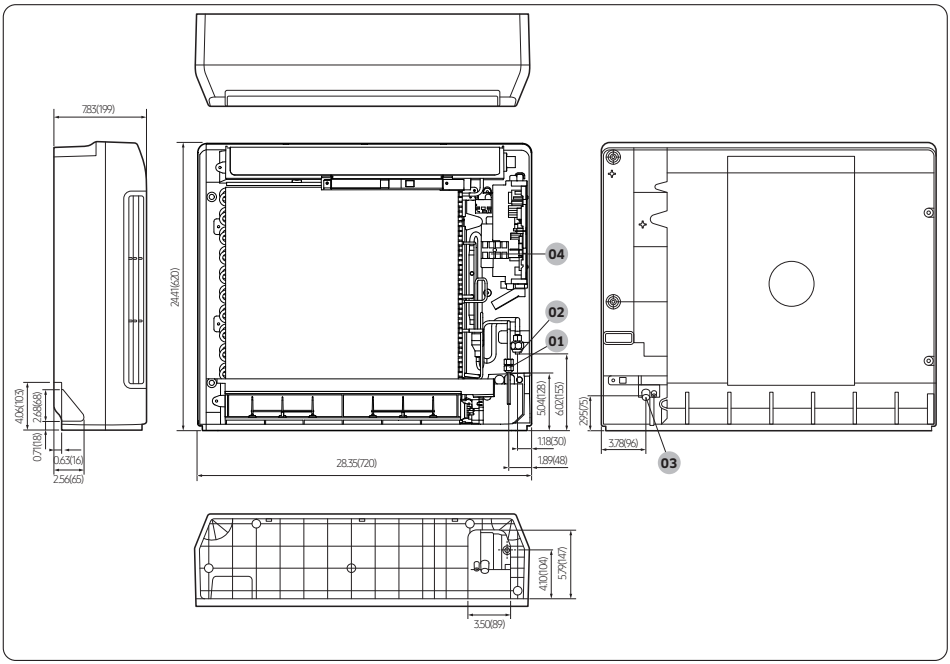


A : 11.81 inch (300mm) or more
B : 39.37 inch (1000mm) or more

Installation Procedure

Indoor unit dimensions

Unit:inch (mm)

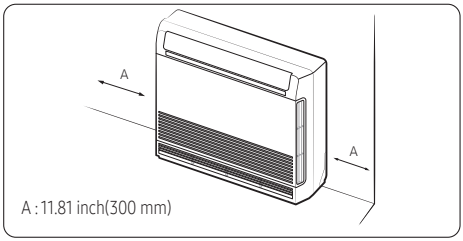


No.	Name		Model	
			MFMD009S6-1P MFMD012S6-1P	MFMD015M6-1P MFMD018S6-1P
01	Liquid pipe connection	inch (mm)	Ø1/4(6.35)	
02	Gas pipe connection	inch (mm)	Ø3/8(9.52)	Ø1/2(12.70)
03	Drainpipe connection	inch (mm)	ID : Ø0.47(12) ; OD : Ø0.71(18)	
04	Power supply connection	inch (mm)	-	

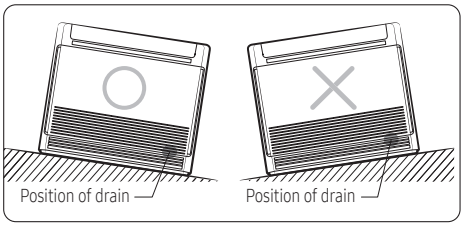
- Length of pipes and difference in height: see the outdoor unit installation manual
- Vacuum and refrigerant charge: see the outdoor unit installation manual

Step 3 Installing the indoor unit

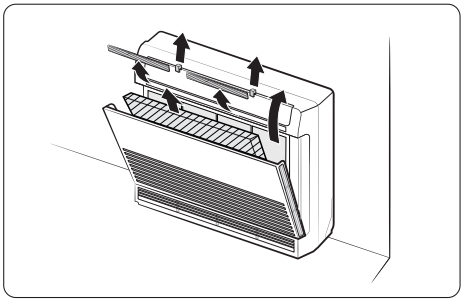
1 When you install the indoor with side-pipe connection, please make space more than 11.81 inch(300 mm) from the wall.



2 When you install the indoor at the inclined floor, please lean the set toward the drain hose and pipe connection to prevent water overflowing.

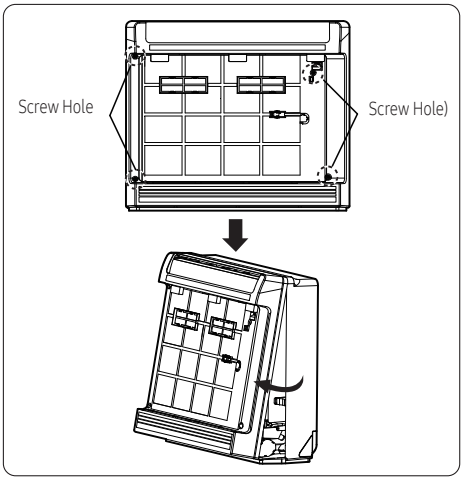


3 Please remove packaging materials when installing the unit. (**009/012******: 6 Items / **015/018******: 7 Items)

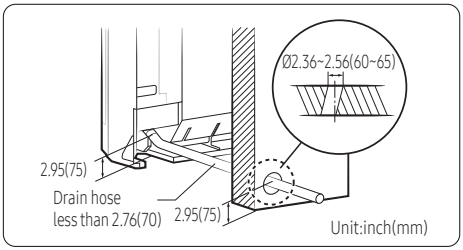


4 The body front should be opened to connect pipes.

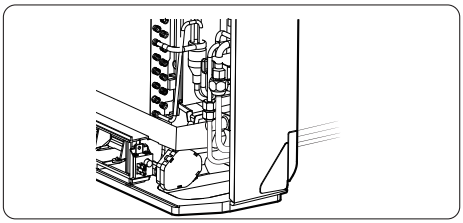
Remove the 4 screws on the front of the unit and then pull the lower section of the unit out as shown below.



5 Make a hole in the wall.



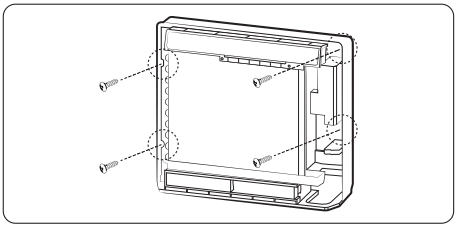
6 Refrigerant and drain pipes and cables should go through the hole located at the on the back of the unit at the bottom.



Installation Procedure

7 Hanging the indoor unit on the Bracket Hanger, then fix the Indoor Unit by using 4 Screws.

- Case 1. Installing on the floor: You must secure the unit to the wall using 4 screws to ensure that the unit does not fall.
- Case 2. Hanging on the wall : Follow the installation guide supplied in the accessory part.
  - Screw positions are specified on the installation guide.



Step 4 Purging inert gas from the indoor unit

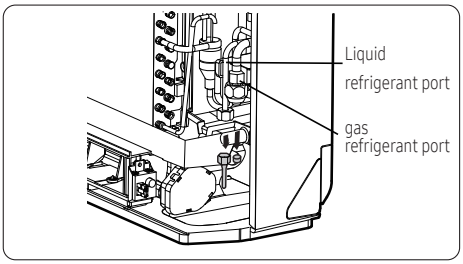
From factory the unit is supplied and set with a pre-charge of nitrogen gas (inert gas). Therefore, all inert gas must be purged before connecting the assembly piping.

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.



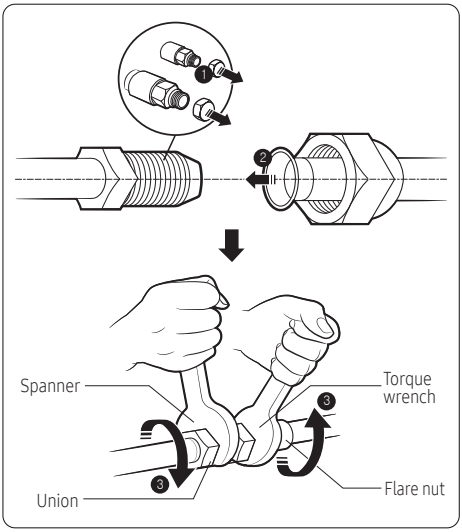
The designs and shape are subject to change according to the model.

Step 5 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 pipes and connect the assembly pipes. First tighten the flare nuts manually and then with a torque wrench and a spanner applying the following torque.



Outer Diameter		Torque	
mm	inch	N•m	lbf.ft
Ø6.35	1/4	14 to 18	10.3 to 13.3
Ø9.52	3/8	34 to 42	25.1 to 31.0
Ø12.70	1/2	49 to 61	36.1 to 45.0
Ø15.88	5/8	68 to 82	50.2 to 60.5
Ø19.05	3/4	100 to 120	73.8 to 88.5

(1 N•m=10 kgf•cm)

NOTE

If the pipes must be shortened, see **Step 6 Cutting and flaring the pipes** on page **13**.

2 Use insulation that is thick enough to cover the refrigerant pipe to prevent condensate water on the outside of pipe and to ensure system efficiency. Condensation can drip onto the floor causing property damage or a slip hazard.

3 Cut off any excess foam insulation.

4 Make sure that the bent sections of pipe are not kinked or cracked.

5 It is necessary to double the insulation thickness [0.39 inch (10 mm) or more] to prevent condensation even on the insulator when if the installed area is warm and humid.

6 Do not use joints or extensions for the pipes that connect the indoor and outdoor unit.

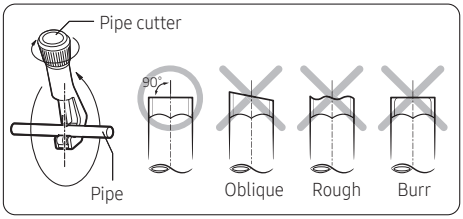
⚠ CAUTION

- 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), Operating pressure depends on outdoor unit specifications. Check the outdoor unit installation manual. Copper pipes for hydro-sanitary applications are 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.
- The nitrogen blowing pressure range is 0.02 to 0.05 MPa (2.9 to 7.3 psi).

Step 6 Cutting and flaring the pipes

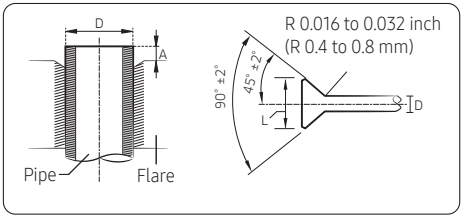
1 Make sure that you have the required tools available. (pipe cutter, reamer, flaring tool and pipe holder)

2 If you wish to shorten the pipes, cut it with a pipe cutter, taking care to ensure that the cut edge remains at a 90° angle with 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.

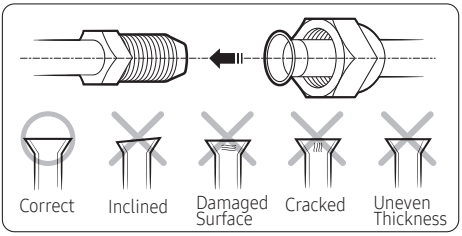


Outer Diameter (D)	Depth (A)	Flare dimension (L)
Ø1/4 (6.35)	0.051 (1.3)	0.34~0.36 (8.7~9.1)
Ø3/8 (9.52)	0.071 (1.8)	0.50~0.52 (12.8~13.2)
Ø1/2 (12.70)	0.079 (2.0)	0.64~0.65 (16.2~16.6)
Ø5/8 (15.88)	0.087 (2.2)	0.76~0.78 (19.3~19.7)
Ø3/4(19.05)	0.087 (2.2)	0.93~0.94 (23.6~24.0)

Unit:inch (mm)

Installation Procedure

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



⚠ CAUTION

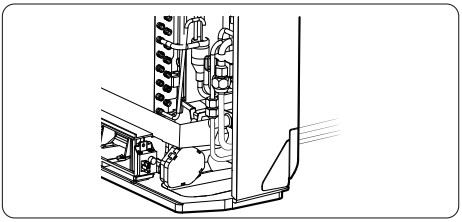
- If the pipes require brazing ensure that OFN (Oxygen Free Nitrogen) is flowing through the system.
- Nitrogen blowing pressure range is 0.02 ~ 0.05MPa.

Step 7 Performing the gas leak test

To identify potential gas leaks in the indoor unit, inspect the connection area of each refrigerant pipe using a leak detector for R-32.

Before creating a vacuum and adding refrigerant, pressurize the whole system with nitrogen using a cylinder with a pressure reducer at a pressure above 0.2 MPa(29.0 psi), less than 4.0 MPa(594.7 psi) (gauge) to detect leaks on the refrigerant fittings.

Refer to the outdoor unit installation manual for the complete steps for pressure testing and vacuuming the system before charging with refrigerant.



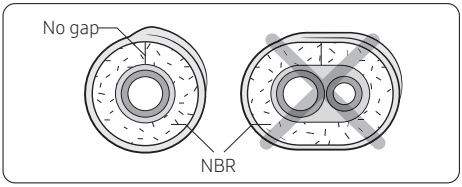
⚠ CAUTION

- If the pipes require brazing ensure that OFN (Oxygen Free Nitrogen) is flowing through the system.

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.

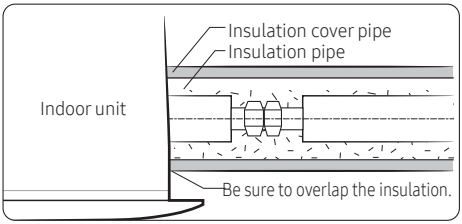
1 To avoid condensation problems, place Acrylonitrile Butadien Rubber separately around each refrigerant pipe.



NOTE

- Always make the seam of pipes face upwards.

2 Wind insulating tape around the pipes and drain hose avoiding 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

- Make sure that all refrigerant connection must be accessible for easy maintenance and detachment.

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 86 °F (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 248 °F (120 °C).

Pipe	Outer diameter		Insulation Type (Cooling, Heating)				Remarks
			General [86 °F (30 °C), 85%]		High humidity [86 °F (30 °C), over 85%]		
			EPDM, NBR				
	mm	inch	mm	inch	mm	inch	
Liquid pipe	6.35~9.52	1/4~3/8	9	3/8	9	3/8	The internal temperature is higher than 248 °F (120 °C)
	12.7~50.80	1/2~2	13	1/2	13	1/2	
Gas pipe	6.35	1/4	13	1/2	19	3/4	
	9.52~25.4	3/8~1	19	3/4	25	1	
	28.58~44.45	1 1/8~1 3/4	19	3/4	32	1 1/4	
	50.8	2	25	1	38	1 1/2	

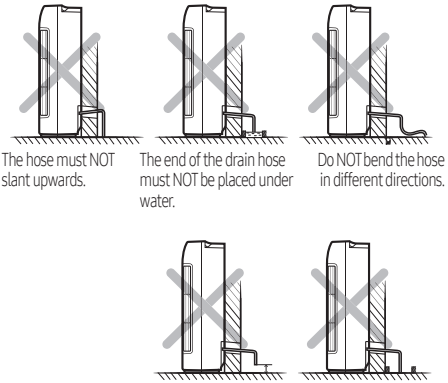
- When installing insulation in the places and conditions below, use the same insulation that is used for high humidity conditions.

<Geological condition>
High humidity locations such as shorelines, hot springs, lake or riversides, and ridges (when part of the building is covered by earth and sand)
<Operation purpose condition>
Restaurant ceiling, sauna, swimming pool etc.
<Building construction condition>
Ceilings frequently exposed to moisture and cooling are not covered. For example, pipes installed at a corridor of a dormitory and studio or near an exit that opens and closes frequently. Places (where the pipes are installed) that are highly humid due to a lack of ventilation.

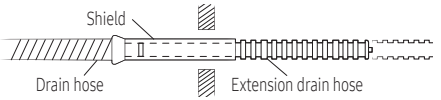
Installation Procedure

Step 9 Installing the drain hose and drain pipe

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



1 If necessary, connect the 6.56 ft (2 m) extension drain hose to the drain hose.



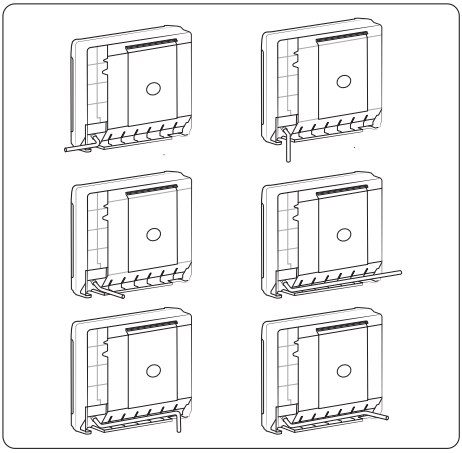
2 If you use the extension drain hose, insulate the outside of the extension drain hose with a insulation.

3 Fit the drain hose into 1 of 2 drain hose holes, then fix the end of the drain hose tightly with a clamp.
   - If you don't use the other drain hose hole, block it with a rubber stopper.

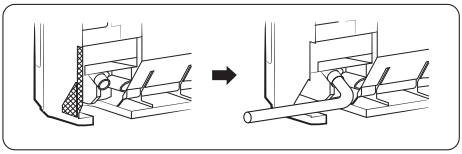
4 Pass the drain hose under the refrigerant pipes, keeping the drain hose tight.

5 Pass the drain hose through the hole in the wall. Verify that it slants downwards.

6-ways for drain hose and drain pipe connection



Knock out

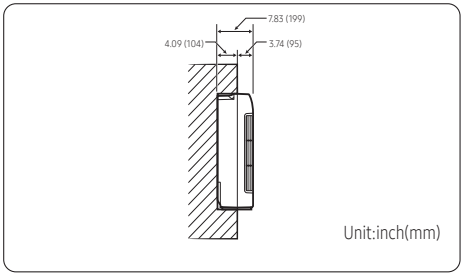


NOTE

- The hose will be fixed permanently into position after finishing the installation and the gas leak test; refer to page 12 for further details.

Step 10 Optional : Half concealed Installation

When installing this unit with a part in the wall, please keep the dimensions as shown below.



Step 11 Connecting the power and communication cables

⚠ CAUTION

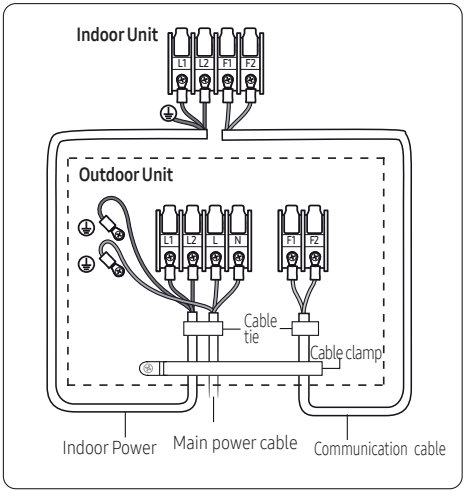
- Always remember to connect the refrigerant pipes before performing the electric connections.
  When disconnecting the system, always disconnect the electric cables before disconnecting the refrigerant pipes.
- For the product that uses the R-32 refrigerant, be cautious not to generate a spark by keeping the following requirements:
  – Do not remove fuses with power on.

⚠ CAUTION

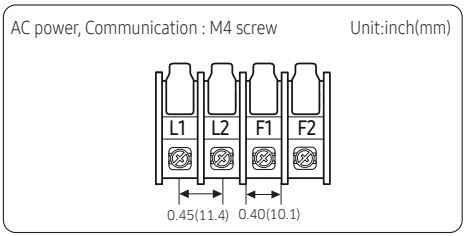
- Always remember to connect the mini-split to the grounding system before performing the electric connections. Use a crimp ring terminal at the end of each wire.

The indoor unit is powered through the outdoor unit using a H05RN-F (60245 / IEC57) connection cable (or a more powerful model), with insulation in synthetic rubber and a jacket in polychloroprene (neoprene), following the requirements specified in the standard EN 60335-2-40.

1 Remove the screw on the electrical component box and remove the cover plate.
2 Route the connection cord through the side of the indoor unit and connect the cable to the terminals refer to the figure below.
3 Route the other end of the cable to the outdoor unit.
4 Reassemble the electrical component box cover, carefully tightening the screw.



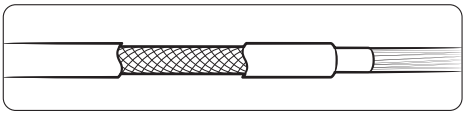
Indoor power supply		
Power supply	**Max/Min(V)**	**Indoor power cable**
208 to 230V, 60 Hz	±10%	AWG18↑, 3 wires
Communication cable		
AWG18↑, 2 wires		



Tightening torque lbf·ft (kgf • cm)	
M3.5	0.58 to 0.87 (8.0 to 12.0)
M4	0.87 to 1.30 (12.0 to 18.0)

Installation Procedure

- Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cords.
  - Code designation [1-phase] IEC: 60245 IEC 57 / CENELEC: H05RN-F grade or more
- Since it has the external power supply, refer to the outdoor unit installation manual for MAIN POWER.

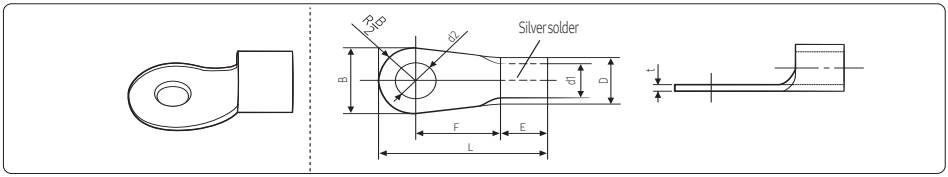


⚠ CAUTION

- When installing the indoor unit in a computer room or network room, use the double shielded communication cable (tape aluminum / polyester braid + copper) of FROHH2R or LiYCY type.

Wiring work

Selecting compressed ring terminal



Nominal dimensions for cable [Inch² (mm²)]		0.002 (1.5)		0.003 (2.5)		0.006 (4)
Nominal dimensions for screw [Inch (mm)]		0.15 (4)	0.15 (4)	0.15 (4)	0.15 (4)	0.15 (4)
B	Standard dimension [Inch (mm)]	0.25 (6.6)	0.31 (8.0)	0.25 (6.6)	0.33 (8.5)	0.37 (9.5)
	Allowance [Inch (mm)]	±0.007 (±0.2)		±0.007 (±0.2)		±0.007 (±0.2)
D	Standard dimension [Inch (mm)]	0.13 (3.4)		0.16 (4.2)		0.22 (5.6)
	Allowance [Inch (mm)]	+0.011 (+0.3) -0.007 (-0.2)		+0.011 (+0.3) -0.007 (-0.2)		+0.011 (+0.3) -0.007 (-0.2)
d1	Standard dimension [Inch (mm)]	0.06 (1.7)		0.09 (2.3)		0.13 (3.4)
	Allowance [Inch (mm)]	±0.007 (±0.2)		±0.007 (±0.2)		±0.007 (±0.2)
E	Min. [Inch (mm)]	3/16 (4.1)		1/4 (6)		1/4 (6)
F	Min. [Inch (mm)]	1/4 (6)		1/4 (6)		1/4 (6)
L	Max. [Inch (mm)]	5/8 (16)		3/4 (17.5)		3/4 (20)
d2	Standard dimension [Inch (mm)]	0.16 (4.3)		0.16 (4.3)		0.16 (4.3)
	Allowance [Inch (mm)]	+0.007 (+0.2) 0 (0)		+0.007 (+0.2) 0 (0)		+0.007 (+0.2) 0 (0)
t	Min. [Inch (mm)]	0.02 (0.7)		0.03 (0.8)		0.035 (0.9)

Step 12 Optional : Setting the Emergency Temperature Output (ETO) function

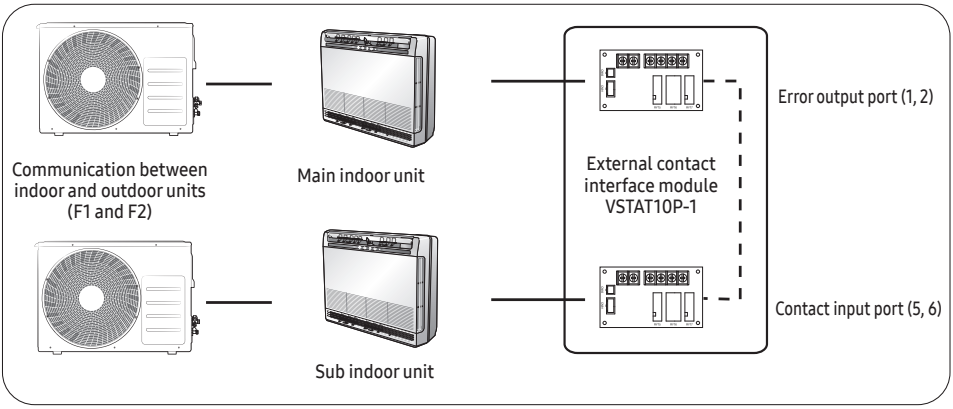
Emergency Temperature Output (ETO) function (for the multi system, this function is not supported.)

⚠ CAUTION

- In order to deploy the ETO function, the VSTAT10P-1, an external contact interface module, must be installed in each indoor unit.

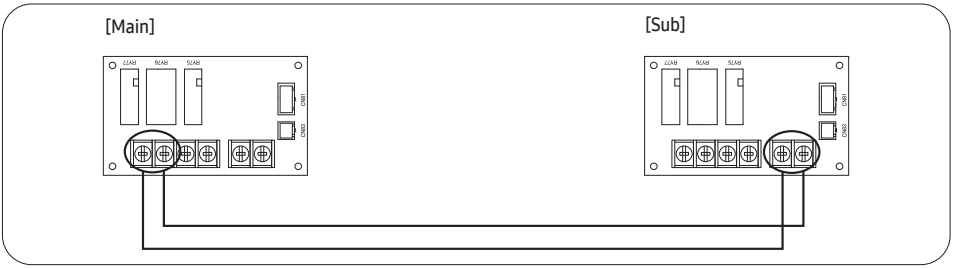
– To use the ETO function, should use Lennox Service Software.
– The ETO is a concept of emergency operation of indoor units. If the indoor unit 1 (main indoor unit) stops because of an error, the indoor unit 2 (sub indoor unit) starts to operate.
– Basically, the indoor unit 2 operates in the previous mode. [For the first time operation, it starts in 75 °F (24 °C) Auto mode.]
– To set more detailed operation conditions for the indoor unit 2, use the Lennox Service Software.

Setting up the ETO



1 Main indoor unit
  – Disable the external contact control (Default).
  – Connect the Lennox Service Software to F1 and F2.
  – Enable the ETO function and set the temperature and time.
2 Sub indoor unit
  – (Required) Enable the external contact control (with the installation option SEG14 - Reverse Control).
  – Connect the Lennox Service Software to F1 and F2.
  – Enable the entrance control and set the mode, set temperature, and fan speed.

Installation Procedure



ETO operation specifications

1 Main indoor unit
   - Based on the external contact control settings, the main indoor unit decides whether to generate output when an error (indoor unit stop) occurs.
   - Based on the ETO settings, the main indoor unit decides whether to generate output according to the temperature and time conditions.

2 Sub indoor unit
   - Based on the entrance control settings, the sub indoor unit decides the mode, set temperature, and fan speed when contact inputs are given.

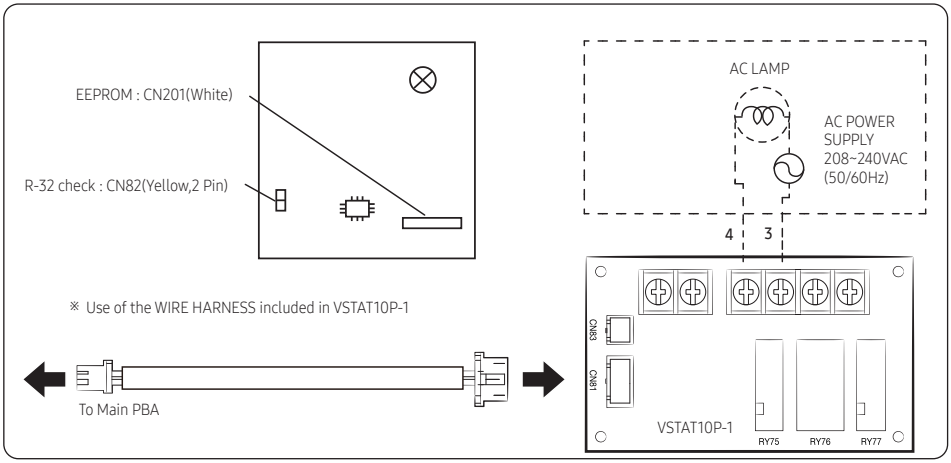
	Enable of ETO	Enable of external contact	Error port output
Main indoor unit	X	X	N/A
	X	O	Output due to an error
	O	X	Output by ETO entrance conditions (temperature / time / error occurrence)
	O	O	Output by ETO entrance conditions (temperature / time / error occurrence) ❊ Ready to control the main contact input

	Enable of entrance control	Enable of external contact	Operation when outputting Main
Sub indoor unit	X	X	N/A
	X	O	On with the previous operation conditions
	O	O	On with the entrance control enabled

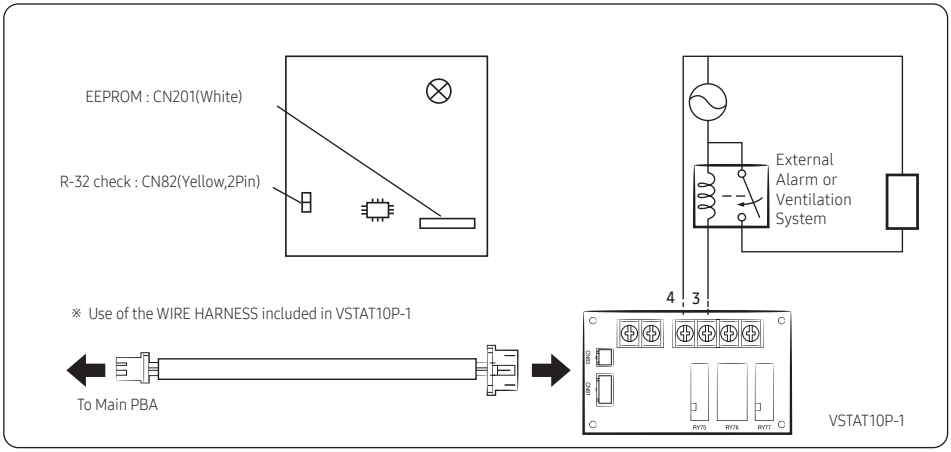
Installing external outputs

- 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.
- VSTAT10P-1 (External Contact Control Module) can be used to link the GAS LEAK output.
- This function is available only when an R-32 sensor KIT is installed. (M1HRDS01 or M1LRDS01)

For controlling AC LAMP (On/Off)



For controlling EXTERNAL ALARM or VENTILATION SYSTEM (On/Off)



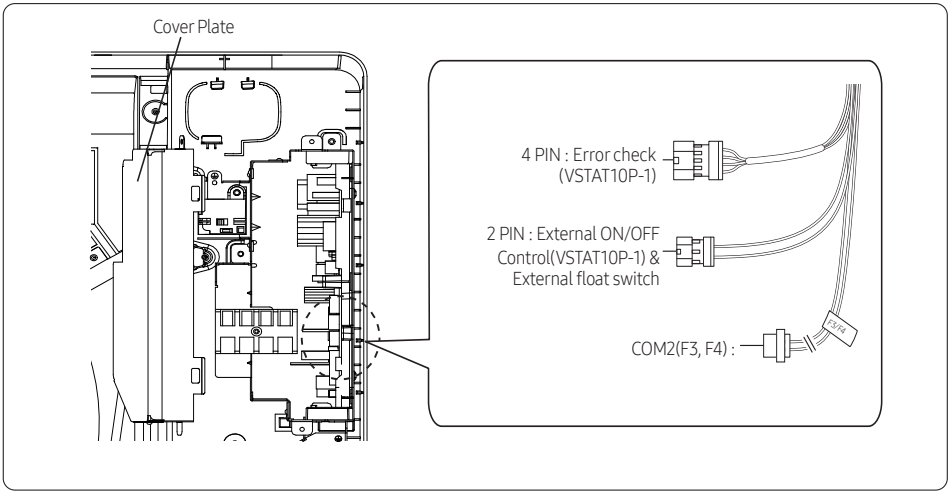
NOTE

- The VSTAT10P-1 can be connected to the required load on connectors 3 and 4.
- The load is AC (208-230), AC 2.25 A max.
- 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).

Installation Procedure

Step 13 Optional : Connecting the External control (VSTAT10P-1), Wired Controller and External Floating switch

After disassembling the body front and cover plate, you can connect the wires from the indoor unit' electrical component box to the External control (VSTAT10P-1) and wired controller, External floating switch.



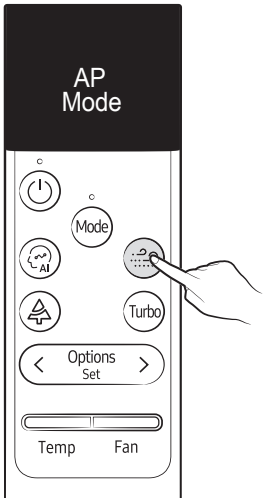
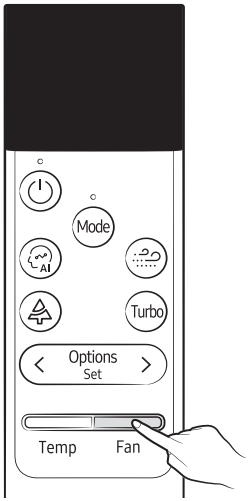
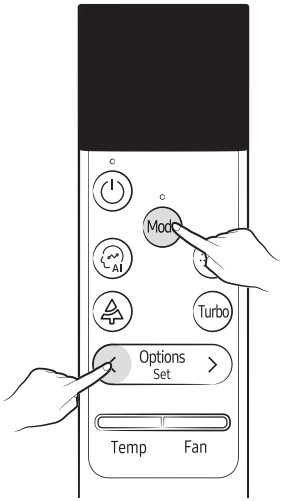
- External controller (VSTAT10P-1) : Connect the wires of the external controller to 4PIN (Error check) and 2PIN (External On/Off). (Refer to the manual of VSTAT10P-1.)
  Next,set Install option (02 mode). (Refer to step15. Setting the indoor unit addresses and the installation options .)
- Wired Controller : Be sure to connect the wired controller for installation after cutting the COM2(F3,F4) wire.
- Connecting the External Floating switch :
  1. Connect the external float switch to the 2PIN wire.
  2. If the connector types of the external float switch and 2PIN wire do not match, cut off the end of the 2PIN wire before connecting the wire to the external float switch.
  3.Set SEG8 for the Install option (02 mode) to '8'. (Refer to "step15. Setting the indoor unit addresses and the installation options ")

NOTE

- The External Floating switch is not sold separately by Lennox.
- External Control (VSTAT10P-1) and External Floating switch cannot be connected simultaneously. Only either of them can be connected at a time.

Step 14 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	Connect/Disconnect Wi-Fi
		
Press the button for 5 seconds	Press the Fan button for 5 seconds	Press the Mode and Options Set button for 5 seconds

Installation Procedure

Installation Procedure

LED Indicator Status

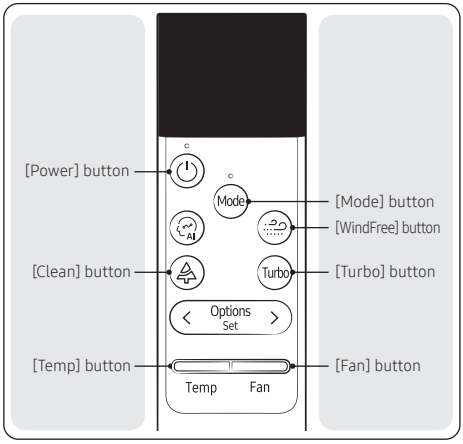
Console		LED lamp display					Remarks	Measure
		Wi-Fi	Fan	Timer	Defrost	Operation		
Easy Setup	AP entry	◑	X	X	X	X	Wi-Fi LED flash (0.5 on / 0.5 off)	-
	Check device	◑	X	X	X	X	Wi-Fi LED flash (0.5 on / 0.5 off)	-
	Registering device	◑	X	X	X	X	Wi-Fi LED flash (1.5 on / 0.5 off)	-
	Connected	●	X	X	X	X	Wi-Fi LED On	-
	Connection failed	X	X	X	X	X	Wi-Fi LED Off	Try again from the AP entry stage.
Wi-Fi	Enable	◑/●	◑	◑	◑	◑	All LED lights flash once and then Wi-Fi LED On	-
	Disable	◑	◑	◑	◑	◑	All LED lights flash once and then Wi-Fi LED Off	-
Connection info reset		◑	◑	◑	◑	◑	All LED lights flash in order (OPERATION → DEICE → TIMER → FAN → Wi-Fi)	-
All devices reset		◑	◑	◑	◑	◑	All LED lights flash in order (Wi-Fi → TIMER → DEICE → OPERATION → Wi-Fi)	-

Step 15 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 of them respectively.

Common steps for setting the addresses and options

Remote controls



NOTE

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

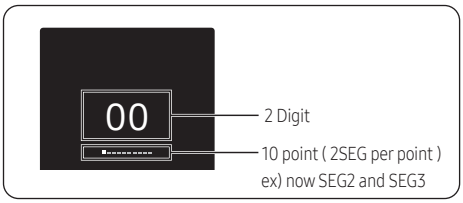
1 Enter the mode for setting the options.

  a Reset remote control: Temp button Down + Fan button Down + Mode Press for 10 seconds

  b You can see "SW Reset" message and enter the following in 5 seconds.

  c Press button and Turbo button for 5 seconds.

  d Make sure that you are entered to the mode for setting options.



2 Set the option values.

CAUTION

- The total number of available options is 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.
- 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 Mode button.
- You can change the digit value through the following operation.
  Left value : Temp up or down, range : 0 ~ F
  Right value : Fan 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 Temp button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG3 value by pressing the Fan button repeatedly until the value you want to set appears on the remote control display. When you press the Fan or Temp button, values appear in the following order: 0 → 1 → ··· E → F	00 SEG2 00 SEG3
2 Press the Mode button to move to the next page.	00
3 Set the SEG4 and SEG5 values: **a** Set the SEG4 value by pressing the Temp button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG5 value by pressing the Fan button repeatedly until the value you want to set appears on the remote control display. When you press the Fan or Temp button, values appear in the following order: 0 → 1 → ··· E → F	00 SEG4 00 SEG5
4 Press the Mode button to move to the next page.	00

Steps	Remote control display
5 Set the SEG6 and SEG8 values: **a** Set the SEG6 value by pressing the Temp button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG8 value by pressing the Fan button repeatedly until the value you want to set appears on the remote control display. When you press the Fan or Temp button, values appear in the following order: 0 → 1 → ··· E → F	00 SEG6 00 SEG8
6 Press the Mode button to move to the next page.	00
7 Set the SEG9 and SEG10 values: **a** Set the SEG9 value by pressing the Temp button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG10 value by pressing the Fan button repeatedly until the value you want to set appears on the remote control display. When you press the Fan or Temp button, values appear in the following order: 0 → 1 → ··· E → F	00 SEG9 00 SEG10
8 Press the Mode button to move to the next page.	00

Installation Procedure

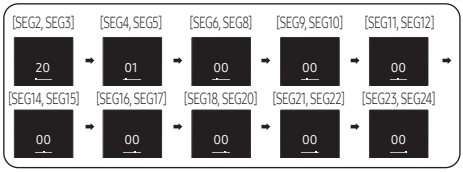
Steps	Remote control display
9 Set the SEG11 and SEG12 values: **a** Set the SEG11 value by pressing the Temp button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG12 value by pressing the Fan button repeatedly until the value you want to set appears on the remote control display. When you press the Fan or Temp button, values appear in the following order: 0 → 1 → ··· E → F	00 SEG11 00 SEG12
10 Press the Mode button to move to the next page.	00
11 Set the SEG14 and SEG15 values: **a** Set the SEG14 value by pressing the Temp button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG15 value by pressing the Fan button repeatedly until the value you want to set appears on the remote control display. When you press the Fan or Temp button, values appear in the following order: 0 → 1 → ··· E → F	00 SEG14 00 SEG15
12 Press the Mode button to move to the next page.	00

Steps	Remote control display
13 Set the SEG16 and SEG17 values: **a** Set the SEG16 value by pressing the Temp button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG17 value by pressing the Fan button repeatedly until the value you want to set appears on the remote control display. When you press the Fan or Temp button, values appear in the following order: 0 → 1 → ··· E → F	00 SEG16 00 SEG17
14 Press the Mode button to move to the next page.	00
15 Set the SEG18 and SEG20 values: **a** Set the SEG18 value by pressing the Temp button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG20 value by pressing the Fan button repeatedly until the value you want to set appears on the remote control display. When you press the Fan or Temp button, values appear in the following order: 0 → 1 → ··· E → F	00 SEG18 00 SEG20
16 Press the Mode button to move to the next page.	00

Installation Procedure

Steps	Remote control display
17 Set the SEG21 and SEG22 values: **a** Set the SEG21 value by pressing the Temp button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG22 value by pressing the Fan button repeatedly until the value you want to set appears on the remote control display. When you press the Fan or Temp button, values appear in the following order: 0 → 1 → ··· E → F	00 SEG21 00 SEG22
18 Press the Mode button to move to the next page.	00
19 Set the SEG23 and SEG24 values: **a** Set the SEG23 value by pressing the Temp button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG24 value by pressing the Fan button repeatedly until the value you want to set appears on the remote control display. When you press the Fan or Temp button, values appear in the following order: 0 → 1 → ··· E → F	00 SEG23 00 SEG24

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



EX) MFMD***S6-1P , MFMD***M6-1P

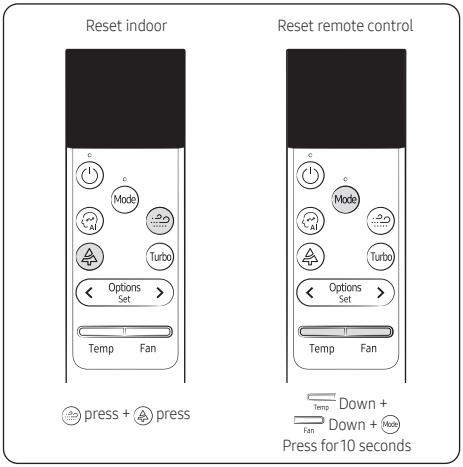
020010-100000-200020-300000

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 mini-split operates following the option values you have set:

a Reset the indoor or outdoor unit.
- Indoor Unit : Press (Auto) button + (Turbo) button for 5 seconds
- Outdoor Unit: Press the K3 button

b Reset remote control: (Temp) button Down + (Fan) button Down + (Mode) Press for 10 seconds
You can see the "SW Initialization" message.



Installation Procedure

Setting the indoor unit addresses

Option No. for an indoor unit address: 0AXXXX-1XXXXX-2XXXXX-3XXXXX

Before installing an indoor unit, be sure to set an address for the indoor unit by taking the following steps:

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 Set an address for each indoor unit using the remote control, according to your air conditioning system plan, by referring to the following table and by following the steps in **Common steps for setting the addresses and options** on page **24.**

- The indoor unit addresses (main and RMC addresses) are set to 0A0000-100000-200000-300000 by default.
- If indoor units and outdoor units match 1:1, you don't need to set the main address because it is automatically set by the outdoor unit.
- If you are using on or off controller, set RMC address.

Option	SEG1		SEG2		SEG3		SEG4	SEG5		SEG6	
Function	Page		Mode		Setting main address		Reserved	Indoor unit number		Indoor unit number	
Indication and details	Indication	Details	Indication	Details	Indication	Details		Indication	Details	Indication	Details
	0		A		0	No main address		0 to 1	Tens digit	0 to 9	Units digit
					1	Main address setting mode					

Option	SEG7		SEG8	SEG9		SEG10	SEG11		SEG12	
Function	Page		Reserved	Setting RMC address		Reserved	Group channel (x16)		Group address	
Indication and details	Indication	Details		Indication	Details		Indication	Details	Indication	Details
	1			0	No RMC address		RMC1	0 to 2	RMC2	0 to F
				1	RMC address setting mode					

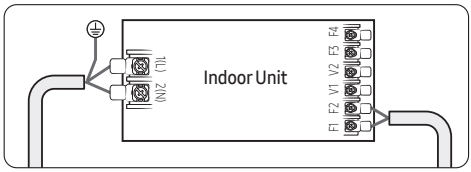
⚠ CAUTION

- The main address must be set to a value in the range 0 to 15. If you set other values, communication error will occur.
- If any of SEG5 and SEG6 is set to a value in the range A to F, the main address of the indoor unit does not change.
- If SEG3 is set to 0, the indoor unit maintains the existing main address even if SEG6 is set to a new value.
- If SEG9 is set 0, the indoor unit maintains the existing RMC address even if SEG11 and SEG12 are set to new values.

Setting the installation options in a batch

Installation option No. for an installation options :0XXXXX-1XXXXX-2XXXXX-3XXXXX

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 Set the installation options of indoor units, by referring to the following table and by following the steps in **Common steps for setting the addresses and options** on page **24**.

- The installation options of indoor units are set to like a below table by default.

Model	MFMD***S6-1P , MFMD***M6-1P
02 series installation option	020010-100000-200020-300000
05 series installation option	050030-100700-200000-300000

- The SEG20 option, Individual control with remote control, allows you to control multiple indoor units individually by using the remote control.

02 series installation option (Detailed)

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

Option	SEG1		SEG2		SEG3	SEG4			SEG5		SEG6
Function	Page		Mode			Use of external room temperature sensor / Minimizing fan operation when thermostat is off [1]			Central control		
Indication and details	Indication	Details	Indication	Details	Reserved	Indication	Details		Indication	Details	Reserved
							Use of external room temperature sensor	Minimizing fan operation when thermostat is off [1]			
	0		2	Installation Option1		0	Disuse	Disuse	0	Disuse	
						1	Use	Disuse			
						2	Disuse	Use(Heating)			
						3	Use	Use(Heating)			
						4	Disuse	Use(Cooling)			
						5	Use	Use(Cooling)	1	Use	
						6	Disuse	Use (Cooling/Heating)			
						7	Use	Use (Cooling/Heating)			
						8	Disuse	Use (Cooling Ultra low speed)			
						9	Use	Use (Cooling Ultra low speed)			
						A	Disuse	Use (Heating/Cooling Ultra low speed)			
						B	Use	Use (Heating/Cooling Ultra low speed)			

Installation Procedure

Option	SEG7		SEG8			SEG9	SEG10	SEG11	SEG12
Function	Page		Use of drain pump & Emergency Stop [2]			Reserved	Reserved	Reserved	Reserved
Indication and details	Indication	Details	Indication	Details					
				Drain pump	Emergency Stop				
	1		0 or 4	Disuse	Disuse				
			1 or 5	Use					
			2 or 6	Use with 3min delay					
			3 or 7	Disuse					
			8 or C	Disuse	Use				
			9 or D	Use					
			A or E	Use with 3min delay					
			B or F	Disuse					

Option	SEG13		SEG14			SEG15		SEG16	SEG17			SEG18	
Function	Page		Use of external control			Setting the output of extermal control [3]		Reserved	Indication	Buzzer control / Refrigerant detection sensor		Maximum filter usage time [4]	
Indication and details	Indication	Details	Indication	Details		Indication	Details			Details		Indication	Details
										Buzzer	Refrigerant detection sensor		
	2		0	Disuse	Sub, Existing control	0	Thermo on		0	Use	Disuse	2	1000 hours
			1	On/Off									
			2	Off		1	Operation on						
			3	Window On/Off									
			4	Disuse	Main, Existing control	2	External heater use(Fan On when the heater is running) Emergency heater disuse		1	Disuse	Disuse		
			5	On/Off									
			6	Off		3	External heater use(Fan OFF when the heater is running) Emergency heater disuse						
			7	Window On/Off									
			8	Disuse	Sub, Reverse control	4	External heater use(Fan On when the heater is running, Fan off only in case of Defrost) Emergency heater disuse		2	Use	Use	6	2000 hours
			9	On/Off									
			A	Off		5	External heater use(Fan On when the heater is running) Emergency heater use						
			B	Window On/Off									
			C	Disuse	Main, Reverse control	6	External heater use(Fan OFF when the heater is running) Emergency heater use		3	Disuse	Use		
			D	On/Off									
			E	Off		7	External heater use(Fan On when the heater is running, Fan off only in case of Defrost) Emergency heater use						
			F	Window On/Off									

Option	SEG19		SEG20		SEG21		SEG22	SEG23	SEG24
Function	Page		Individual control with remote control [5]		Heating setting compensation		Reserved	Reserved	Reserved
Indication and details	Indication	Details	Indication	Details	Indication	Details			
	3		0 or1	Indoor1	0	Default			
			2	Indoor2	1	3.6 ˚F (2 ˚C)			
			3	Indoor3	2	9 ˚F (5 ˚C)			
			4	Indoor4					

• 1) SEG4

By SEG4 setting, 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.

• 2) SEG8

Drain pump: The Drain pump option is automatically set to [Used with 3minute delay], even if you set it to [Disuse].

Emergency Stop: If you set Emergency Stop to [Use], it is not possible to use the ETO or On/Off Control feature through External Control (SEG14).

• 3) SEG15

The external output of SEG15 is generated by VSTAT10P-1 connection. (Refer to the manual of VSTAT10P-1)

• 4) SEG18

If you set the Maximum filter usage time option to a value other than 2 and 6, it is automatically set to 2 (1000 hours).

• 5) SEG20

If you set the Individual control with remote control option to a value other than 0 to 4, it is automatically set to 0 (Indoor 1)

05 series installation option (Detailed)

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

SEG1		SEG2		SEG3	SEG4	SEG5	SEG6		
Page		Mode					Auxiliary heater offset temp. and time delay		
								Details	
Indication	Details	Indication	Details				Indication	Set temperature for auxiliary heat on	Time delay for auxiliary heat on
0		5	Installation Option 2	Reserved	Reserved	Reserved	0	No temperature offset	No delay
							1	No temperature offset	10 minutes
							2	No temperature offset	20 minutes
							3	2.7 °F (1.5 °C)	No delay
							4	2.7 °F (1.5 °C)	10 minutes
							5	2.7 °F (1.5 °C)	20 minutes
							6	5.4 °F (3 °C)	No delay
							7	5.4 °F (3 °C)	10 minutes
							8	5.4 °F (3 °C)	20 minutes
							9	8.1 °F (4.5 °C)	No delay
							A	8.1 °F (4.5 °C)	10 minutes
							B	8.1 °F (4.5 °C)	20 minutes
							C	10.8 °F (6 °C)	No delay
							D	10.8 °F (6 °C)	10 minutes
							E	10.8 °F (6 °C)	20 minutes

Installation Procedure

SEG7		SEG8		SEG9		SEG10			SEG11	SEG12
Page		heater lock out		Heat pump lock out		Bit 0 : Allow Fan control in auto mode Bit 1 : Onboarding Type (AP / BLE)			0	Reserved
Indication	Details	Indication	Details	Indication	Details	Indication	Details			
1		0	Disuse	0	Disuse	0	Not allow	AP Onboarding		
		1	65 °F (18.3 °C)	1	45 °F (7.2 °C)	1	allow	AP Onboarding		
		2	60 °F (15.6 °C)	2	40 °F (4.4 °C)					
		3	55 °F (12.8 °C)	3	35 °F (1.7 °C)	2	Not allow	BLE Onboarding		
		4	50 °F (10.0 °C)	4	30 °F (-1.1 °C)					
		5	45 °F (7.2 °C)	5	25 °F (-3.9 °C)	3	allow	BLE Onboarding		
		6	40 °F (4.4 °C)	6	20 °F (-6.7 °C)					
		7	35 °F (1.7 °C)	7	15 °F (-9.4 °C)	4	Not allow	AP Onboarding		
		8	30 °F (-1.1 °C)	8	10 °F (-12.2 °C)					
		9	25 °F (-3.9 °C)	9	5 °F (-15 °C)	5	allow	AP Onboarding		
		A	20 °F (-6.7 °C)	A	0 °F (-17.8 °C)					
		B	15 °F (-9.4 °C)	B	-5 °F (-20.6 °C)	6	Not allow	BLE Onboarding		
		C	10 °F (-12.2 °C)	C	-10 °F (-23 °C)					
		D	5 °F (-15 °C)	D	-15 °F (-26 °C)	7	allow	BLE Onboarding		
		E	0 °F (-17.8 °C)	E	-20 °F (-29 °C)					

SEG13		SEG14	SEG15	SEG16	SEG17	SEG18
Page		Reserved	Reserved	Reserved	Reserved	Reserved
Indication	Details					
2						
SEG19		**SEG20**	**SEG21**	**SEG22**	**SEG23**	**SEG24**
Page		Reserved	Reserved	Reserved	Reserved	Reserved
Indication	Details					
3						

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 **24**.

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

Troubleshooting

- 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 mini-split, it operates normally at first, then detect an error again.

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 E129 E198	◑	◑	◑	X	X
1. COND mid sensor is detached 2. Refrigerant leakage (2nd detection) 3. Abnomally high temperature on Cond (2nd detection) 4. Low pressure s/w (2nd detection) 5. Abnomally high temperature on discharged air on outdoor unit (2nd detection) 6. Indoor operation stop due to unconfirmed error on outdoor unit 7. Error due to reverse phase detection 8. Comp stop due to freeze detection (6th detection) 9. High pressure sensor is detached 10. Low pressure sensor is detached 11. Outdoor unit copression ration error 12. Outdoor sump down_1 prevetion control 13. Compressor down due to low pressure sensor prevention control_1 14. Simultaneous opening of cooling/heating MCU SOL valve (1st detection) 15. Simultaneous opening of cooling/heating MCU SOL valve (2nd detection) 16. Error indicating a short-circuit, open-circuit or fault signal in the refrigerant leak sensor 17. Error indicating the refrigerant leak sensor's lifespan cannot be predicted 18. Error indicating a secondary refrigerant leak detected 19. Error indicating a malfunction of the refrigerant leak sensor 20. Error indicating a refrigerant leak sensor replacement is required 21. Error indicating the refrigerant leak sensor's lifespan expired 22 Error indicating another indoor unit that shares the outdoor unit detects the R-32 refrigerant. Other outdoor unit self-diagnosis error that is not on the above list	E241 E554 E450 E451 E416 E559 E425 E403 E301 E306 E428 E413 E410 E180 E181 E116 E695 E697 E698 E699 E700 E797	◑	◑	◑	X	X
1. Floating s/w (2nd detection) 2.Emergency alarm system on (Emergency Stop)	E153 E665	◑	◑	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 mini-split when the LED is flickering, the LED is also turned off.