VRF (Variable Refrigerant Flow) Installation manual

VUCD***S6-5P

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





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Safety Information

California Proposition 65 Warning (US)

Cancer and Reproductive Harm -WARNING: 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.

- 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 A2L	Refrigerant safety group
	Read operating manual
i	Refer to operating manual
	Read service manual

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 air conditioner 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.

Safety Information

General information

↑ WARNING

- Carefully read the content of this manual before installing the air conditioner 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 air conditioner is sold or transferred.
- This manual explains how to install an indoor unit with a split system with two Lennox units. Using 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 from unauthorized changes or improper electrical connections. The requirements outlined in the "Operating limits" table, included in the manual, shall immediately invalidate the warranty.
- 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 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.
- 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
- Inspect the unit, electrical 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 air conditioner contains a refrigerant that must be disposed of as special waste. At the end of its life cycle, the air conditioner must be disposed of in authorized centers or returned to the retailer so 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 protective equipment is not properly equipped.
- This unit is a partial unit air conditioner, 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 they do not play with the appliance.

Installing the unit



♠ WARNING

IMPORTANT: When installing the unit, always connect the refrigerant tubes first, 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 air conditioner to the user.
- Do not use the air conditioner 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 property damage, 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 air conditioner following 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 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 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.

↑ CAUTION

Make sure that you ground the cables.

 Do not connect the earth wire to the gas pipe, water pipe, lightning rod or telephone wire. If 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 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.

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.

Safety Information

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 or 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 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. All field 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 before 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 'Precharge' + field charge.
- 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 100mm above the floor. The exhaust location outside the building must be at least 3 m away from the building opening and mechanical air intake openings.
- 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 areas such as false ceilings not being used as return air plenum if 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 who are competent to carry out such activity following 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 CO₂ fire extinguisher adjacent to the charging area and workspace.
- The service personnel shall not use any ignition sources in a manner that 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 that may corrode refrigerant containing components.

Initial checks of electrical devices shall include the following.

- that capacitors are discharged safely 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 a flame to open the 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.
- Before 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 the appropriate position as per

- instructions.
- The refrigerant system should be grounded before 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 before 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.

Step 1 Checking and preparing accessories

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

Ceiling type (VUCD018S6-5P)

Pattern sheet	User's manual
o o	
Installation manual	Plate Hanger
	000
Cable-Tie	Conduit Bracket
•	

Cable-tie	User manual
•	
Install manual	Insulation
Rubber	Rubber B

Big Ceiling type (VUCD024/036/048S6-5P)

Pattern sheet	Insulation cover pipe A
	<u> </u>
Insulation cover pipe B	Insulation drain
Flexible hose clamp	Flexible hose

Step 2 Choosing the installation location

- Select a convenient location that permits the air to reach every corner of the area to be cooled.
- Pre-plan for easy and short routing of the refrigerant tubing and wiring to the outdoor unit.
- There should be no flammable gas, alkaline, substances present in the air.
- Avoid location where obstacles preventing good air circulation are present.
- Noise prevention should be considered in determining the unit's location.
- The structure, where the unit is to be installed should be strong enough to support the weight of the unit.
- 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.
- 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.

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 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.
- Refer to the "R-32 system arrangement requirements" section in the user manual for the combined outdoor units, and use a permanent marker pen to write down the indoor-unit installation area for the final refrigerant amount in the "Minimum Room Area" section on the "Rating label" on the indoor unit.
 - * This information is mandatory for "Annex 101.DVF Caution/Warning Standards" and must be filled in. If it is not filled in, the installer will be held responsible for any breakage or damage.

∴ CAUTION

- As a rule, the unit cannot be installed at a height of less than 8.2ft (2.5m).
- If you install a cassette type indoor unit on the ceiling when the 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 air conditioner in the 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-capable wired remote control for each indoor unit.
 See the installation examples below for reference.

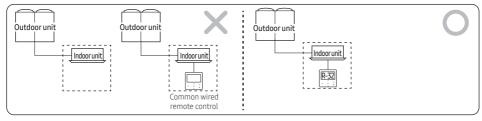
Make sure to use R-32-capable wired remote controls. The product will not operate if an R-32-capable wired remote control is not located in the vicinity or if users try to control the product using a common wired remote control.

* E694: This error occurs if an installed R-32 indoor unit and R-32-capable wired remote control are not a correct combination. Use R-32-capable wired remote controls.

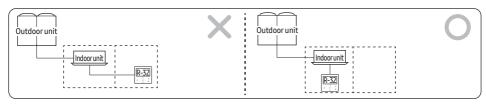
- * VSTAT04P-1
- * R-32-capable wired remote controls should be purchased separately.

⚠ WARNING

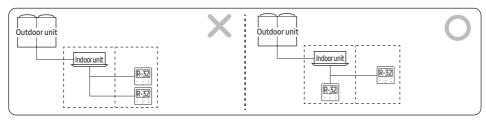
Lennox is not responsible for any loss or damage to the product resulting from using anything but the specified wired remote control.



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

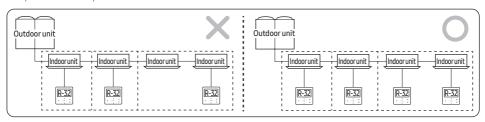


If using two or more R-32-capable wired remote controls, at least one of them must be placed in the same room as the indoor units.



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

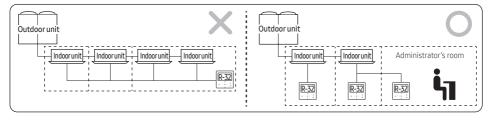
At least one remote control must be installed for each indoor unit, even if multiple indoor units are installed in the same room. Grouped control is not possible.



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:

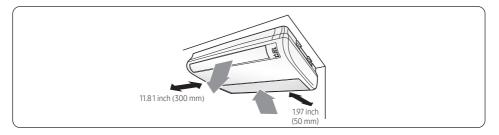
- rooms, parts of buildings, building where sleeping facilities are provided,
- rooms, parts of buildings, building where people are restricted in their movement,
- rooms, parts of buildings, building where an uncontrolled number of people are present, or
- rooms, parts of buildings, building to which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

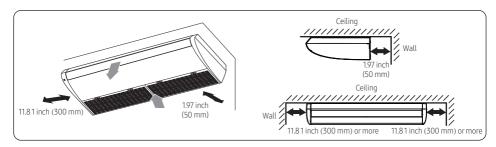


Ceiling installation

Ceiling type (VUCD018S6-5P)



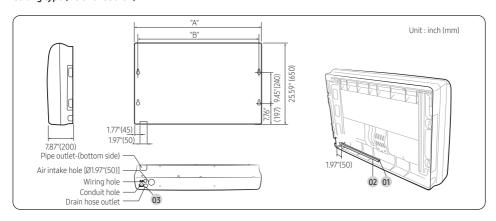
Big Ceiling type (VUCD024/036/048S6-5P)



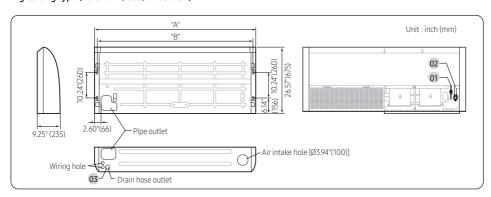
* Floor Installation Not Available

Dimension of the indoor unit

Ceiling type (VUCD018S6-5P)



Big Ceiling type (VUCD024/036/048S6-5P)

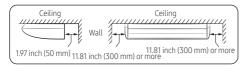


Unit: inch (mm)

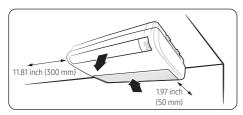
Model	Dimension				1	2	3
Modet	А	В	Liquid pipe connection	Gas pipe connection	Drain pipe connection		
Ceiling type (VUCD018S6-5P)	39.37" (1000)	36.3" (922)	1/4" (ø6.35)	1/2" (ø12.7)	ID 0.71" (ø18) Hose		
Big Ceiling type (VUCD024/036S6-5P)	53.15" (1350)	51.10" (1298)	3/8" (ø9.52)	5/8" (ø15.88)	3/4" (ODø1.05" (26.67))		
Big Ceiling type (VUCD048S6-5P)	64.96"(1650)	62.91"(1598)	3/8" (ø9.52)	5/8" (ø15.88)	3/4" (ODø1.05" (26.67))		

Spacing requirements

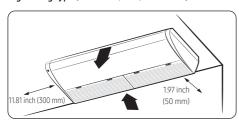
It is recommended to install the Y-joint before installing the indoor unit.



Ceiling type (VUCD018S6-5P)



Big Ceiling type (VUCD024/036/048S6-5P)





Floor Installation Not Available.

Step 3 Installing the indoor unit

Ceiling installation

Ceiling type (VUCD018S6-5P)

1 Select pipe directions. When the directions are selected, drill 3-1/8"-[3.94 inch (100mm), for pipe and cables) and 1-3/4"-[1.54 inch (40mm), for drain hose] diameter holes on the wall so that it slants slightly downwards toward the outdoor for smooth water flow.

NOTE

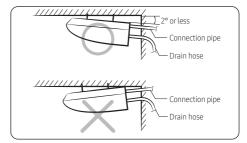
- Use the pattern sheet to select pipe directions.
- 2 Drill holes for anchor bolts according to the distance and mount them.

NOTE

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

♠ NOTE

 For proper drainage of condensate, give a 2° or less slant to the side of the unit which will be connected with the drain hose as shown in the figure. [The gap between the lower end of the indoor unit and the ceiling should be 0.47 inch (12 mm) or less.]



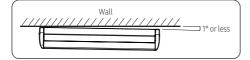


CAUTION

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



 The gap between the lower end of the indoor unit and the ceiling should be 1° [0.63 inch (16 mm)] or less.



Ceiling installation

Big Ceiling type (VUCD024/036/048S6-5P)

1 Select pipe directions.

When the directions are selected, drill 3-1/8"-[3,94 inch (100mm), for pipe and cables) and 1-3/4"-[1.54 inch (40mm), for drain hose] diameter holes on the wall so that it slants slightly downwards toward the outdoor for smooth water flow.

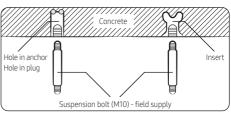


- Use the pattern sheet to select pipe directions.
- 2 Drill holes for anchor bolts according to the distance and mount them.

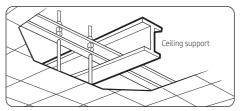


· Use the pattern sheet.

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



4 Install the suspension bolts depending on the ceiling type.



/į\

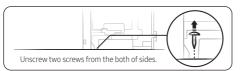
CAUTION

- 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 the suspension bolt is more than 4.92ft
 (1.5m), vibration prevention is recommended. If this is not possible, create an opening on the false ceiling to be able to use it to perform the required operations on the indoor unit.
- If this is not possible, create an opening on the false ceiling in order to be able to use it to perform the required operations on the indoor unit.
- 5 Screw eight nuts to the suspension bolts making space for hanging the indoor unit.

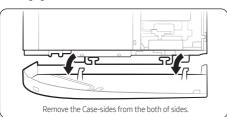


You must install all the suspension rods.

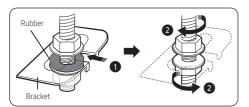
6 When Hanging the set, firstly unscrew the screws from the both of sides, and then disassemble the Case-sides, or else the case-side will be damaged by disassembling it directly.



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



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



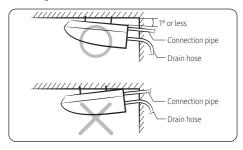
! CAUTION

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

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

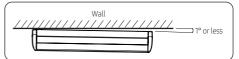


 For proper drainage of condensate, give a 1° or less slant to the side of the unit which will be connected with the drain hose as shown in the figure. [The gap between the lower end of the indoor unit and the ceiling should be 0.47 inch (12 mm) or less.]



NOTE

- VUCD024/036S6-5P: The gap between the lower end
 of the indoor unit and the ceiling should be 1° [0.91 inch
 (23 mm)] or less.
- VUCD048S6-5P: The gap between the lower end of the indoor unit and the ceiling should be 1° [1.10 inch (28 mm)] or less.

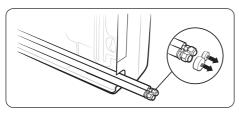


Step 4 Purging inert gas from the indoor unit

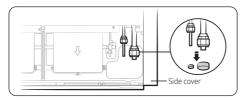
The indoor unit comes with nitrogen gas (inert gas) charged at the factory. Therefore, all inert gas must be purged before connecting the assembly piping.

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

Ceiling type (VUCD018S6-5P)



Big Ceiling type (VUCD024/036/048S6-5P)

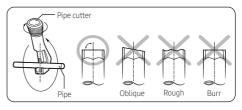


NOTE

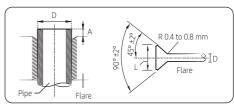
- To prevent dirt or foreign objects from getting into the pipes during installation, do not remove the pinch pipe completely until you are ready to connect the piping.
- The designs and shape are subject to change according to the model.

Step 5 Cutting and flaring the pipes

- 1 Make sure that you have the required tools available: pipe cutter, reamer, flaring tool, and pipe holder.
- 2 If you wish to shorten the pipes, cut them with a pipe cutter, ensuring that the cut edge remains at a 90° angle to the side of the pipe. Refer to the illustrations below for examples of edges cut correctly and incorrectly.

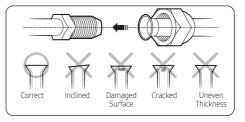


- 3 To prevent any gas from leaking out, remove all burrs at the cut edge of the pipe, using a reamer.
- 4 Slide a flare nut on to the pipe and modify the flare.



Outer Dia	meter (D)	Depth (A)		Flare dimension (L)	
inch	mm	inch	mm	inch	mm
1/4	Ø6.35	0.05	1.3	0.34 to 0.36	8.7 to 9.1
3/8	Ø9.52	0.07	1.8	0.50 to 0.52	12.8 to 13.2
1/2	Ø12.70	0.08	2.0	0.64 to 0.65	16.2 to 16.6
5/8	Ø15.88	0.09	2.2	0.76 to 0.78	19.3 to 19.7
3/4	Ø19.05	0.09	2.2	0.93 to 0.94	23.6 to 24.0

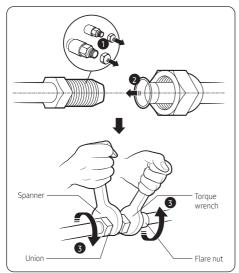
5 Check that the flaring is correct, referring to the illustrations below for examples of incorrect flaring.



Step 6 Connecting the assembly pipes to the refrigerant pipes

There are two refrigerant pipes of different diameters:

- A smaller one for the liquid refrigerant.
- A larger one for the gas refrigerant. The inside of copper pipe must be clean and have no dust.
- 1 Remove the pinch pipe on the pipes and connect the assembly pipes to each pipe, tightening the nuts, first manually and then with a torque wrench, a spanner applying the following torque.



Outer diameter		Torque		
inch	inch mm		N·m	
1/4	Ø6.35	10.3 to 13.3	14 to18	
3/8	Ø9.52	25.1 to 31.0	34 to 42	
1/2	Ø12.70	36.1 to 45.0	49 to 61	
5/8	Ø15.88	50.2 to 60.5	68 to 82	
3/4	Ø19.05	73.8 to 88.51	100 to 120	

(1 N·m=10 kgf·cm=0.738 lbf·ft)

🖺 NOTE

- If the pipes must be shortened, see Step 5 Cutting and flaring the pipes on page 17.
- Tighten the nuts to the specified torques. If overtightened, the nuts could be broken so refrigerant may leak.
- 2 Be sure to use an insulator thick enough to cover the refrigerant tube to protect the condensate water on the outside of the pipe falling onto the floor and to improve the efficiency of the unit.
- **3** Cut off any excess foam insulation.
- 4 Make sure that there are no cracks or waves on the bent area
- 5 It would be necessary to double the insulation thickness (10 mm or more) to prevent condensation even on the insulator when if the installed area is warm and humid.

! CAUTION

- Connect the indoor and outdoor units using pipes
 with flared connections (not supplied). For the lines,
 use insulated, unwelded, degreased and deoxidized
 copper pipe (Cu DHP type to ISO 1337 or UNI EN
 12735-1), suitable for operating pressures of at least
 4.2MPa (609.2 psig) and for a burst pressure of at least
 20.7MPa (3002.3 psig). Copper pipe for hydro-sanitary
 applications is completely unsuitable.
- For sizing and limits (height difference, line length, max. bends, refrigerant charge, etc.) see the outdoor unit installation manual.
- All refrigerant connection must be accessible, in order to permit either unit maintenance or removing it completely.
- If the pipes require brazing, make sure that oxygen free nitrogen (OFN) is flowing through the system.
- Nitrogen blowing pressure range is 0.02 to 0.05 MPa (2.9 to 7.3 psig).

The amount of additional refrigerant for each indoor unit.

Model	Charging additional refrigerant			
Model	(kg)	(lb)		
VUCD018S6-5P	0.35	0.772		
VUCD024S6-5P	0.50	1.1		
VUCD036S6-5P	0.50	1.1		
VUCD048S6-5P	0.86	1.9		

Step 7 Performing the gas leak test

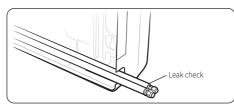
LEAK TEST WITH NITROGEN (before opening valves)

In order to detect basic refrigerant leaks, before recreating the vacuum and recirculating the R-32, it's responsable of installer to pressurize the whole system with nitrogen (using a cylinder with pressure reducer) at a pressure above 40 bar (gauge).

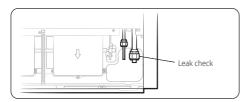
LEAK TEST WITH R-32 (after opening valves)

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.

Ceiling type (VUCD018S6-5P)



Big Ceiling type (VUCD024/036/048S6-5P)



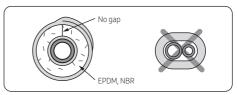
NOTE

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

Step 8 Insulating the refrigerant pipes

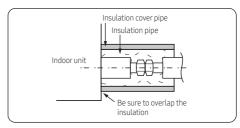
Once you have checked that there are no leaks in the system, you can insulate the piping and hose.

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



NOTE

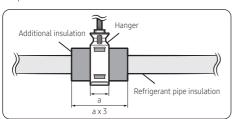
- Always make the seam of pipes face upwards.
- 2 Wind insulating tape around the pipes and drain hose avoiding to compress the insulation too much.
- **3** Finish wrapping insulating tape around the rest of the pipes leading to the outdoor unit.
- 4 The pipes and electrical cables connecting the indoor unit with the outdoor unit must be fixed to the wall with suitable ducts.



∴ CAUTION

- Must fit tightly against body without any gap.
- 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 eithernit 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 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).

					Insulation Type (Cooling, Heating)		
Pipe	Outer diameter		General [86°F(30°C), 85%]		[86°	humidity F(30°C), r 85%]	Remarks
				EPDM, NBR			
	mm	inch	mm	inch	mm	inch	
Liquid	6.35~9.52	1/4~3/8	9	3/8	9	3/8	
pipe	12.7~50.80	1/2~2	13	1/2	13	1/2	Heating resisting
	6.35	1/4	13	1/2	19	3/4	temperature
C	9.52~25.4	3/8~1	19	3/4	25	1	over 248°F(120°C)
Gas pipe	28.58~44.45	11/8~13/4	19	3/4	32	11/4	
	50.8	2	25	1	38	11/2	

 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.

- Refrigerant pipe before EEV kit and MCU or without EEV kit and MCU
 - You can contact the gas side and liquid side pipes but the pipes should not be pressed.
 - When contacting the gas side and liquid side pipe, use 1 grade thicker insulator.
- Refrigerant pipe after EEV kit and MCU
 - Install the gas side and liquid side pipes, leave
 0.39 inch (10mm) of space.
 - When contacting the gas side and liquid side pipe, use 1 grade thicker insulator.

Step 9 Installing the drain hose and drain pipe

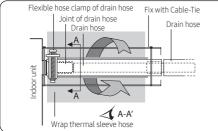
Ceiling type

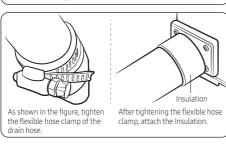
Care must be taken when installing the drain hose for the indoor unit to ensure that any condensate water is correctly drained outside. When passing the drain hose through the hole drilled in the wall, check that none of the following situations occur.

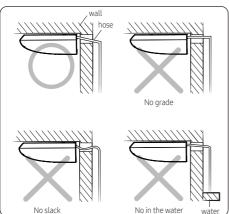
The drain hose can be installed to the right of the base pan. (Big Ceiling type: VUCD024/036/048S6-5P)

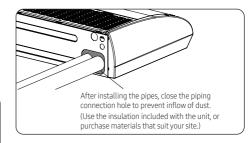
- 1 Installing the drain hose should be the shorter, the better.
 - In order to discharge condensation water, the drain hose should keep tilted.
 - Fix the drain hose with Cable-Tie, so that it will not separate from the machine.
- 2 Insulate and fix the drain hose according to the figure.
 - Insert the drain hose to bottom of the outfall of water basin.

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





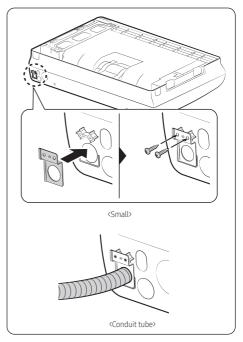




Bushing bracket installation

When connecting the power supply wire conduit, the supplied bracket must be installed as shown in the picture below.

Ceiling type (VUCD018S6-5P)



NOTE

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

Step 10 Connecting the power and communication cables

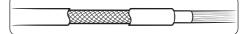
Power and communication cable connection

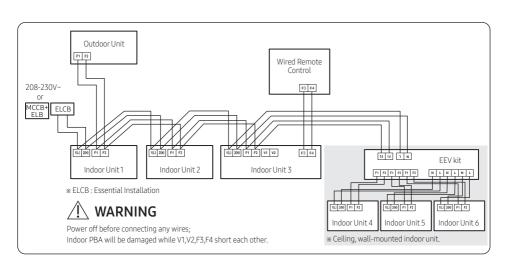
- Before wiring work, you must turn off all power source.
- Connect the power and communication cable among the units within maximum length to set the voltage drop under 10%.
- The auxiliary circuit breaker (ELCB, MCCB, ELB) should be considered more capacity if many indoor units are connected from one breaker.
- Connect F3, F4(for communication) to the communication cable of the wired remote control.
- Tighten the electric wires with a proper tool within the torque limit to connect and fix them firmly, and then organize the wires to prevent outside pressure being exerted on the covers and other parts. Failure to do so may result in overheating, electric shock, and fire.

Tightening torque ft∙lb(N•m)				
M3.5	0.58 ~ 0.87 (0.8 ~ 1.2)			
M4	0.87 ~ 1.31 (1.2 ~ 1.8)			

(1 N•m = 10 kgf•cm)

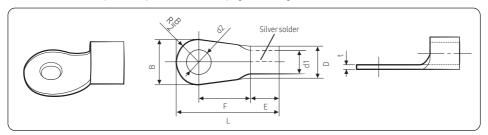
- To protect the product from water and possible shock, you should keep the power and the communication cables of the indoor and outdoor units in the iron pipe.
- Connect the power cable to the auxiliary circuit breaker (ELCB, MCCB, ELB).
- Keep distances of 1.97 inch (50mm) or more between power cable and communication cables.
- 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: H07RN-F or IEC:60245 IEC 66 / CENELEC: H07RN-F)
- Screws on terminal block must not be unscrewed with the torque less than 0.87 lbf•ft (12 kgf•cm).
- When installing the indoor unit in a computer room, use the double shielded (tape aluminum / polyester braid + copper) cable of FROHH2R type.





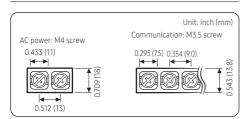
Selecting the crimping terminal lug

- 1 Select the crimping terminal lug based on the norminal dimension of the power cable.
- 2 Cover the connection part of the power cable and crimping terminal lug to insulate it.



No	minal dimensions for cable [Inch² (mm²)]	0.0023 (1.5)		0.0039 (2.5)		0.0062 (4)		
No	minal dimensions for screw [Inch (mm)]	0.157 (4) 0.157 (4)		0.157 (4)	0.157 (4)	0.157 (4)		
В	Standard dimension [Inch (mm)]	0.260 (6.6)	0.315 (8.0)	0.260 (6.6)	0.335 (8.5)	0.374 (9.5)		
	Allowance [Inch (mm)]	±0.008	3 (±0.2)	±0.008	3 (±0.2)	±0.008 (±0.2)		
	Standard dimension [Inch (mm)]	0.134	(3.4)	0.165	(4.2)	0.220 (5.6)		
D	Allowance [Inch (mm)]	+0.012 (+0.3) -0.008 (-0.2)		+0.012 (+0.3) -0.008 (-0.2)		+0.012 (+0.3) -0.008 (-0.2)		
d1	Standard dimension [Inch (mm)]	0.067 (1.7)		0.091 (2.3)		0.134 (3.4)		
a i	Allowance [Inch (mm)]	±0.008 (±0.2)		±0.008 (±0.2)		±0.008 (±0.2)		
E	Min. [Inch (mm)]	0.161 (4.1)		0.236 (6)		0.236 (6)		
F	Min. [Inch (mm)]	0.236 (6)		0.236 (6)		0.236 (6)		
L	Max. [Inch (mm)]	0.630 (16)		0.689 (17.5)		0.787 (20)		
	Standard dimension [Inch (mm)]	0.169 (4.3)		0.169 (4.3)		0.169 (4.3)		0.169 (4.3)
d2	Allowance [Inch (mm)]		3 (+0.2) (0)		3 (+0.2) (0)	+0.008 (+0.2) 0 (0)		
t	Min. [Inch (mm)]	0.028	3 (0.7)	0.031	(0.8)	0.035 (0.9)		

Specifications of the terminal blocks



Power supply (single phase)	МССВ	ELB
Min : 187V	XA	XA, 30 mA
Max : 253V	XA.	0.1 s
Power cable	Earth cable	Communication
1 ower cubic	Lartifeable	cable

Decide the power cable specification and maximum length by formula ${\bf 2}.$

1 Decide the capacity of ELB and MCCB by below formula.

The capacity of ELB, MCCB X[A] = 1.25 X 1.1 X ΣAi



- X: The capacity of ELB, MCCB
- ΣAi : Sum of rating currents of each indoor unit.

Rating current

Unit	Model	Rating current
Ceiling type	VUCD018S6-5P	0.43A
	VUCD024S6-5P	0.47A
Big Ceiling type	VUCD036S6-5P	0.94A
	VUCD048S6-5P	1.45A

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

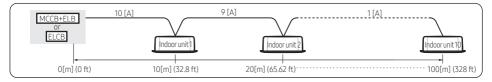




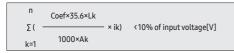
- Coef: 1.55
- Lk: Distance among each indoor unit[m], Ak: Power cable specification[mm²]
- ik: Running current of each unit[A]

Example of Installation

Total power cable length L = 328.08 ft (100 m), Initial pull-in current = 10[A], Running current of each units = 1[A], Total 10 indoor units were installed



· Apply following equation.



- Calculation
 - Installing with 1 sort wire.

-(2.2+2.0+1.8+1.5+1.3+1.1+0.9+0.7+0.4+0.2)=-11.2 [V]

- Installing with 2 different sort wire.

-(1.4+1.2+1.8+1.5+1.3+1.1+0.9+0.7+0.4+0.2)=-10.5 [V]

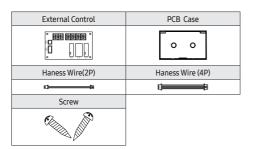
- Connect the power cable to the auxiliary circuit breaker.
 An all pole disconnection from the power supply must be incorporated in the fixed wiring [20.12 inch (3mm)].
- You must keep the cable in a protection tube.
- Maximum length of power cables are decided within 10% of power drop. If it exceeds, you must consider another power supplying method.
- The circuit breaker(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.

⚠ CAUTION

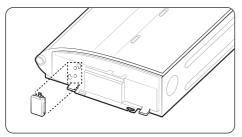
- Select the power cable in accordance with relevant local and national.
- Wire size must comply with local and national code.
- You should connect the power cable into the power cable terminal and fasten it with a clamp.
- The unbalanced power must be maintained within 10% of supply rating among whole 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

Step 11 Optional: Installing an interface module

Interface module: VSTAT10P-1



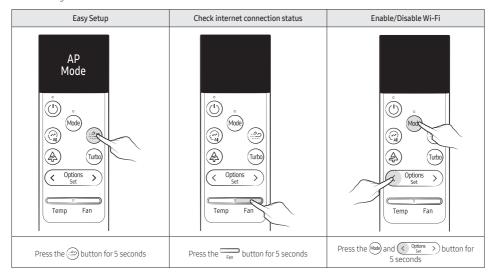
1 Fix the case at with bolts on the side of the control box in the indoor unit.(See the picture)



- 2 Attach the Interface module PCB to the case in the control box of the indoor unit, then connect the power and the communication cable between the Interface module and the indoor unit;
- 3 If you install a Interface module to an indoor unit, every outdoor unit which is connected to an indoor unit can be controlled simultaneously.
- 4 Each indoor unit connected to the same centralized controller has its own Interface module.

Step 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.

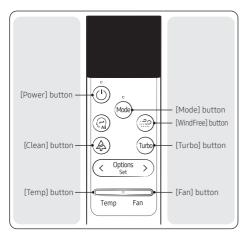


Step 13 Setting the indoor unit addresses and the installation options

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

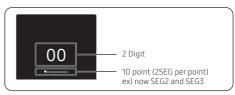


NOTE

- The remote control display and buttons may vary depending on the model.
- 1 Enter the mode for setting the options.
 - a Reset remote control: Temp button Down +

 button Down + Accepted Press for 10 seconds
 - **b** You can see the "SW Initialization" message and enter the following in 5 seconds.
 - c Press button and 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 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	Х	Х	X	Х
SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	Х	Х	Х	Х	Х
SEG13	SEG14	SEG15	SEG16	SEG17	SEG18
2	Х	Х	Х	Х	Х
SEG19	SEG20	SEG21	SEG22	SEG23	SEG24
3	Х	Х	Х	Х	Х

- You can set the next SEG by pressing the (how) button.
- You can change the digit value through the following operation.

Left value: T_{emp} up or down, range : 0 ~ F Right value: T_{emp} up or down, range : 0 ~ F

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.	00
	 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: □ • □ • □ • □ 	00
2	Press the we button to move to the next page.	00
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.	00
	 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 button, values appear in the following order: □ → □ → □ → □ 	00
4	Press the 📾 button to move to the next page.	00

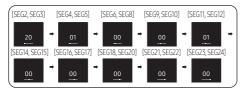
	Steps	Remote control display
5	Set the SEG6 and SEG8 values: a Set the SEG6 value by pressing the Femp button repeatedly until the value you want to set appears on the remote control display.	00
	 b Set the SEG8 value by pressing the button repeatedly until the value you want to set appears on the remote control display. When you press the or button, values appear in the following order: □ • □ • □ • □ 	OO SEG8
6	Press the www button to move to the next page.	00
7	Set the SEG9 and SEG10 values: a Set the SEG9 value by pressing the to set appears on the remote control display.	00
	 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: □ • □ • □ • □ 	00
8	Press the button to move to the next page.	00

	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.	00
	b Set the SEG12 value by pressing the Fam button repeatedly until the value you want to set appears on the remote control display. When you press the Fam or Fam button, values appear in the following order: □ → □ → □ → □	SEG11 00
10	Press the 📾 button to move to the next page.	00
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.	00
12	When you press the Fam or Temp button, values appear in the following order: □ → □ → □ ← □ Press the Mose button to move to the next page.	SEG15

	Steps	Remote control display
13	Set the SEG16 and SEG17 values: a Set the SEG16 value by pressing the to set appears on the remote control display.	00
	 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 00
14	Press the 🖦 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.	00
	 b Set the SEG20 value by pressing the Franch button repeatedly until the value you want to set appears on the remote control display. When you press the Franch or Franch button, values appear in the following order: □ → □ → □ → E 	00
16	Press the 🖦 button to move to the next page.	00

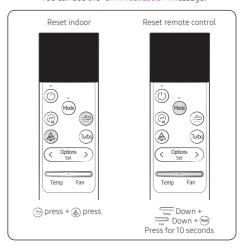
		5
	Steps	Remote control display
17	Set the SEG21 and SEG22 values: a Set the SEG21 value by pressing the to set appears on the remote control display.	00
	 b Set the SEG22 value by pressing the Fam button repeatedly until the value you want to set appears on the remote control display. When you press the Fam or Fam button, values appear in the following order: □ → □ → □ 	00
18	Press the we 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.	00
	b Set the SEG24 value by pressing the Fam button repeatedly until the value you want to set appears on the remote control display. When you press the Fam or Fam button, values appear in the following order: □ → □ → □ ← □ Fam button, values appear in the following order:	00 SEG24

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



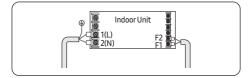
- Save the option values into the indoor unit: Point the remote control to the remote control sensor on the indoor unit and then press the (b) button on the remote control twice.
 - Make sure that this command is received by the indoor unit. When it is successfully received, you can hear a short sound 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
 - Outdoor Unit: Press the K3 button

 $\begin{array}{cc} \textbf{b} & \text{Reset remote control:} & \overbrace{\text{\tiny Temp}} \text{ button Down +} \\ & & \overbrace{\text{\tiny Fan}} \text{ button Down +} & \bigcirc \text{Press for 10 seconds} \end{array}$ You can see the "SW Initialization" message.



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	SEG	1	SEG2 SEG3		33	SEG4		SEG5		SEG6		
Explanation	PAG	E	Mod	Mode Setting Main address 100-digit of indoor unit address			10-digit of indoor unit		The unit digit of an indoor unit			
	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details
Indication and	0		А		0	No Main address						
Details					1	Main address setting mode	0~9	100-digit	0~9	10-digit	0~9	A unit digit
Option	SEG	7	SEG	8	SEC	3 9	SEG10		SEG	11	SEG	12
Explanation	PAG	E			Setting RM	C address	dress		Group chai	nnel(x16)	Group ac	ldress
	Indication	Details			Indication	Details			Indication	Details	Indication	Details
to disastina and	1		- 1		0	No RMC address						
Indication and Details					RMC address setting	-		RMC1 0~F	RMC2 0	0~F		
						mode						

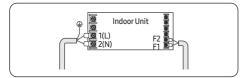


CAUTION

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

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



- 2 The panel(display) should be connected to an indoor unit to receive option.
- **3** Set the installation option according to the installation condition of an air conditioner.
 - The default setting of an indoor unit installation option is "020010-100000- 2000E0-300000".
 - Individual control of a remote controller(SEG20) is the function that controls an indoor unit individually when there is more than one indoor unit.
- 4 Set the indoor unit option by wireless remote controller.

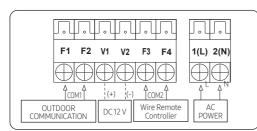
Option No.: 0AXXXX-1XXXXX-2XXXXX-3XXXXX

02 series installation option

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	Dew removal operation in wind free mode
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.	Motion detect sensor	-

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

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



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

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

02 series installation option(Detailed)

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

Option	SE	·G1	SE	G2	SEC	33		SEG4		SEG	i5		SEG6		
Explanation		.GE	MO		Evaporati			xternal room tempo fan operation whe		Use of c	entral		compensation		
								Det	tails						
	Indication	Details	Indication	Details	Indication	Details	Indication	Use of External room temperature sensor	Minimizing fan operation when thermostat is off	Indication	Details	Indication	Details		
							0	Default	Default						
					0	Disuse	1	Use	Disuse	1			D:		
							2	Disuse	Use (Heating) (*2)	0	D:	0	Disuse		
						Use	3	Use	Use (Heating) (*2)] "	Disuse				
					2	(5min)	4	Disuse	Use (Cooling) (*2)]					
						(*1)	5	Use	Use (Cooling) (*2)						
Indication							l la		6	Disuse	Use (Heating / Cooling) (*2)			1	RPM compensation
and Details		n n	2)	4	Use (10min) (*1)	7	Use	Use (Heating / Cooling) (*2)						
	·	,		-		(^1)	8	Disuse	Use (Cooling Ultra Low Fan) (*2)						
							9	Use	Use (Cooling Ultra Low Fan) (*2)	1	Use		10.1 20		
		Use 6 (30min)	А	Disuse	Use (Heating / Cooling Ultra Low Fan) (*2)			2	High ceiling KIT (4way model only)						
						(*1)	*1) B U		Use (Heating / Cooling Ultra Low Fan) (*2)						

Option	SE	G7	SE	G8	SEC	39		SEG10		SEG	11	S	EG12	
Explanation	PA	GE	Use of dr	ain pump	Use of hot water heater			r load operation during during defrost mode during defrost mode	/ Heater control	EEV Step heating			val operation in free mode	
								Detai	[
	Indication	Details	Indication	Details	Indication	Details	Indication	Fan control during defrost mode	Heater control during defrost mode	Indication	Details	Indication	Details	
							0	Fan Off	Off					
							1	Fan turns on when heater turns on	Off				(Default)	
							2	Fan Off	Off				Maintain	
			0 [0	Disuse	3	Fan turns on when heater turns on	Off	0	Default	0	blade status in wind free	
							4	Fan Off	On				mode	
								Fan turns on when heater turns on	On					
Indication							6	Fan Off	On					
and Details			1		1	Use (*3)	7	Fan turns on when heater turns on	On					
	1	1	'	Use	'	USE (*3)	8	Fan Off	Off					
							9	Fan turns on when heater turns on	Off					
							А	Fan Off	Off		Adjusted		Cooling	
					When an indoor			В	Fan turns on when heater turns on	Off	1	EEV Step setting	1	operation by opening the blade
				unit stops,			С	Fan Off	On				Dlade	
		2	drain pump will	3	Use (*3)	D	Fan turns on when heater turns on	On						
				operate for 3min			Е	Fan Off	On					
					I IOI SIIIIN			F	Fan turns on when heater turns on	On				

Option	SEG	i13	SEG	14		SEG15	SEG	i16			SEG17			SEG	18	
Explanation	PAG	ŝE	Use of extern	nal control	control / Ex / Cooling	output of external ternal heater signal operation signal / ing control signal	S-Plasr	ma ion	Buzzer co whether to	use APP U	ether to use K DSP (Dual se R-32 sens	Set Point)		Hours of filt	er usage	
											Det					
	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Buzzer Control	Humidity sensor	APP UX DSP	R-32 sensor	Indication	Details	
			0	Disuse	0	External control			0	Use Buzzer	Disuse	Disuse	Disuse			
			L	Disuse	U	(Thermo On)			1	Disuse Buzzer	Disuse	Disuse	Disuse			
					1	External control			2	Use Buzzer	Use	Disuse	Disuse			
			1	ON/OFF	ļ ļ	(Operation On)	0	Diama	3	Disuse Buzzer	Use	Disuse	Disuse	2	1000	
Indication				control		External heater	0	Disuse	4	Use Buzzer	Disuse	Use	Disuse	2	Hour	
					2	signal (*4)			5	Disuse Buzzer	Disuse	Use	Disuse			
								External heater			6	Use Buzzer	Use	Use	Disuse	
and Details				OFF	3	signal (*4)			7	Disuse Buzzer	Use	Use	Disuse			
	2		2	control	,	Cooling operation			8	Use Buzzer	Disuse	Disuse	Use			
					4	signal (*5)			9	Disuse Buzzer	Disuse	Disuse	Use			
					-	Free Cooling			А	Use Buzzer	Use	Disuse	Use			
					5	control (Cooling Thermo On) (*6)			В	Disuse Buzzer	Use	Disuse	Use]	2000	
				Window			1	Use	С	Use Buzzer	Disuse	Use	Use	6	Hour	
			3	ON/OFF control		Free Cooling control (Cooling/			D	Disuse Buzzer	Disuse	Use	Use			
				Control	6	control (Cooling/ Dry Thermo On) (*6)			E	Use Buzzer	Use	Use	Use			
									F	Disuse Buzzer	Use	Use	Use			

Option	SEG	19	SEG	520		SEG21		SEC	522		SEG23	SEG24
Explanation	PA	GΕ	Individual o			g setting compensati densate water in hea		Adjusted E stopped u oil return mo	nit during /defrost	Setting the	e MDS Kit installation option	-
						Det	ails					
	Indication	Details	Indication	Details	Indication	Heating Setting Compensation	Removing Condensate Water in Heating Mode	Indication	Details	Indication	Details	
			0 or 1	channel 1	0	Default	Disuse			0	Disuse (Soft Off+Hard off) (*8)	
			0011	Cidilleti	1	3.6 °F (2 °C)	Disuse			1	Off after 20 min. (Soft Off+Hard off)	
					2	9°F(5°C)	Disuse	0	Default	2	Off after 40 min. (Soft Off+Hard off)	
	2	channel 2					Delault	3	Off after 80 min. (Soft Off+Hard off)			
Indication					3	Default	Use (*7)			4	Off after 20 min. (Soft Off+Hard off)	
and Details										5	Off after 40 min. (Soft Off+Hard off)	-
	3		3	channel 3						6	Off after 80 min. (Soft Off+Hard off)	
					4	3.6 °F (2 °C)	Use (*7)			7	Off after 20 min. (Soft Off only) (*9)	
					4	J.0 F(Z C)	058("7)			8	Off after 40 min. (Soft Off only)	
								1	ÉEV	9	Off after 80 min. (Soft Off only)	
			4	channel 4					pusitull	А	Off after 20 min. (Soft Off only)	
					5	9°F(5°C)	Use (*7)			В	Off after 40 min. (Soft Off only)	
						Adjusted 1 EEV 9 Off after 80 min.						

- * 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
- (*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
 - 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.

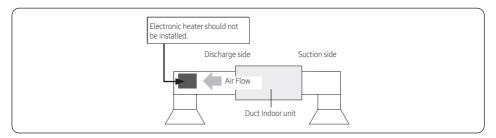
 Then if any motion is detected until the Hard Off time is passed, the MDS Kit restarts the indoor units.
- (*9) Hard Off: If no motion is detected for the Hard Off time, the MDS Kit turns hard off the indoor units.

 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.



• Do not install electronic heaters in the ductwork of the indoor unit, unless the heater complies with the latest edition of UL-60335-2-40, ASRHAE 15, and all federal, state and local codes.



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 UVLED/ 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-1XXXXX-2XXXXX-3XXXXX

Option	SEG	1	SEC	52	SEC	3	SI	EG4	S	EG5	SEG6	
Explanation	PAG	E	MOI	DE	Use of Aut Over for H Auto mode Cooling or unit o	R only in e / Use of aly indoor	Standard h	tting SEG3) eating temp. fset	Standard o	etting SEG3) cooling temp. ffset	Standar change	etting SEG3) d for mode Heating → oling
	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details
						Follow	0	0°F(0°C)	0	0°F(0°C)	0	1.8°F(1°C)
					0	product option	1	0.9°F(0.5°C) 1 0.9°F(0.5°		0.9°F(0.5°C)	1	2.7°F(1.5°C)
						Use Auto	2	1.8°F(1°C)	2	1.8°F(1°C)	2	3.6°F(2°C)
Indication					1	Change Over for	3	2.7°F(1.5°C)	3	2.7°F(1.5°C)	3	4.5°F(2.5°C)
and Details	0		5			HR only	4	3.6°F(2°C)	4	3.6°F(2°C)	4	5.4°F(3°C)
						Use	5	4.5°F(2.5°C)	5	4.5°F(2.5°C)	5	6.3°F(3.5°C)
						Cooling	6	5.4°F(3°C)	6	5.4°F(3°C)	6	7.2°F(4°C)
					2	only indoor unit for HR	7	6.3°F(3.5°C)	7	6.3°F(3.5°C)	7	8.1°F(4.5°C)

Option	SEG	7	S	EG8	SEC	G9	SE	G10	SEG	511	SEG	12
Explanation	PAG	E	Standar change	tting SEG3) d for mode Cooling → ating	(When sett Time requ mode c	uired for	for Long pi difference be	etion option pe or height etween indoor nits	MTFC	(*3)	-	
	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details		
			0	1.8°F(1°C)	0	5 min.	0	Default				
				2.7°F(1.5°C)	1	7 min.		(*1) Height				
			2	3.6°F(2°C)	2	9 min.		difference is more than	0	Default		
Indication and Details	1		3	4.5°F(2.5°C)	3	11 min.	1	30m or (*2) Distance is longer than 110m				
			4	5.4°F(3°C)	4	13 min.		(*1) Height				
			5	6.3°F(3.5°C)	5	15 min.	2	difference is 15~30m or	2	Use		
				6 7.2°F(4°C)	6	20 min.		(*2) Distance	_	036		
			7	8.1°F(4.5°C)	7	30 min.		is 50~110m				

Option	SEC	G13	SEG14	9	SEG15		SEG16	SEG17		SEG18	
Explanation	-		-	Dual fuel (he	eater lock) setting	Dual fue	l (HPlock) setting	-	Control va	riables when using hot v heater (*4)	water / external
										Details	;
	Indication	Details	-	Indication	Detail	Indication	Detail	-	Indication	0	Disuse
				0	Disuse	0	Disuse		0	At the same time as thermo on	No delay
				1	64.9°F(18.3°C)	1	45.0°F(7.2°C)		1	At the same time as thermo on	10 minutes
				2	60.1°F(15.6°C)	2	39.9°F(4.4°C)		2	At the same time as thermo on	20 minutes
				3	55.0°F(12.8°C)	3	35.1°F(1.7°C)		3	2.7°F(1.5°C)	No delay
				4	50.0°F(10.0°C)	4	30.0°F(-1.1°C)		4	2.7°F(1.5°C)	10 minutes
Indication and Details				5	45.0°F(7.2°C)	5	25.0°F(-3.9°C)		5	2.7°F(1.5°C)	20 minutes
dilu Deldils	;	1		6	39.9°F(4.4°C)	6	19.9°F(-6.7°C)		6	5.4°F(3.0°C)	No delay
	4	<u>'</u>	-	7	35.1°F(1.7°C)	7	15.1°F(-9.4°C)	-	7	5.4°F(3.0°C)	10 minutes
				8	30.0°F(-1.1°C)	8	10.0°F(-12.2°C)		8	5.4°F(3.0°C)	20 minutes
				9	25.0°F(-3.9°C)	9	5.0°F(-15°C)		9	8.1°F(4.5°C)	No delay
				А	19.9°F(-6.7°C)	А	0°F(-17.8°C)		А	8.1°F(4.5°C)	10 minutes
				В	15.1°F(-9.4°C)	В	-5.1°F(-20.6°C)		В	8.1°F(4.5°C)	20 minutes
			С	10.0°F(-12.2°C)	С	-9.4°F(-23.0°C)		С	10.8°F(6.0 °C)	No delay	
				D	5.0°F(-15°C)	D	-14.8°F(-26.0°C)		D	10.8°F(6.0 °C)	10 minutes
				Е	0°F(-17.8°C)	E	-20.2°F(-29.0°C)				
				F	Cannot be used	F	Cannot be used		E	10.8°F(6.0 °C)	20 minutes

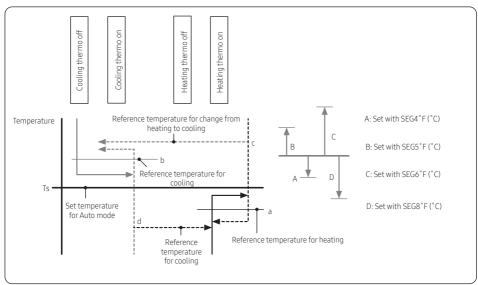
Option	SEG	19	SEG20	SEG21	SEG22		SEG23				SE	G24	
Explanation	PAG	BE	-	-	-	Forcing FA	AN Operation for and Cooling	or Heating	Whethert	allow	fan speed con	to use BLE Onl trol during auto n sensor) conti	
							Detai	ls				Detail	
	Indication	Details	-	-	-	Indication	Cooling Fan Setting	Heating Fan Setting	Indication	UV LED	BLE Onboarding	Whether to allow fan speed control during auto mode	MDS (motion detection sensor) control UX type
						0	Disuse	Disuse	0	Disuse	Disuse	Disuse	Fan speed and power saving mode can be set simultaneously
						1	Disuse	Use (Fan: User setting)	1	Use	Disuse	Disuse	Fan speed and power saving mode can be set simultaneously
						2	Disuse	Use (Fan: High)	2	Disuse	Use	Disuse	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
						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
Indication and Details						6	Use (Fan: User setting)	Use (Fan: High)	6	Disuse	Use	Use	Fan speed and power saving mode can be set simultaneously
	3		_			7	Use (Fan: User setting)	Use (Fan: Low)	7	Use	Use	Use	Fan speed and power saving mode can be set simultaneously
	3		-	-	-	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
						А	Use (Fan: High)	Use (Fan: High)	А	Disuse	Use	Disuse	Only fan speed or power saving mode can be set at a time
						В	Use (Fan: High)	Use (Fan: Low)	В	Use	Use	Disuse	Only fan speed or power saving mode can be set at a time
						С	Use (Fan: Low)	Disuse	С	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)	Е	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

- (*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 131.23ft(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 328 ft (100 m) and the corresponding indoor unit is 131.23ft(40m) away from an outdoor unit, select the option "2", (328ft(100m) 131.23ft(40m) = 196.85ft(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. ≤ set temp. + f (heating compensation temp.)
 - External heater is turned on when the temperature is maintained as 8.1 °F (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 8.1 °F (4.5 °C) + 1.8 °F (1 °C) [1,8 °F (1 °C) is the Hysteresis for On/Off selection.]

Additional information on SEG3, 4, 5, 6, 8, 9

When SEG3 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 a particular option

You can change each digit of set option.

Option	SEG	1	SEC	G2	SEG3		SEG	i4	SEG	5	SEG6	
Explanation	PAG	PAGE MODE		DE	Type of the option to change		Tens position of the option number		Units pos the option		New value	
	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details
Indication and Details	0		D		Option mode	0~F	Tens position value	0~9	Units position value	0~9	New value	0~F



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

Option	SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
Explanation	PAGE	MODE	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 outdoor unit, such as ventilation system activation and alarm activation, can be taken.

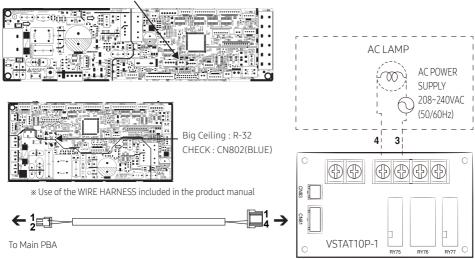
VSTAT10P-1 (External Contact Control Module) can be used to link the GAS LEAK output.

NOTE

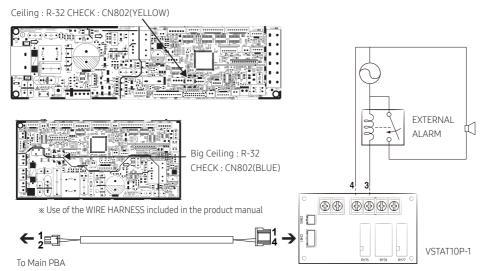
- The VSTAT10P-1 can be connected to the required load on connectors 3 and 4.
- The load is AC (208-230), AC 2.25Amax
- When an error occurs due to a gas leak or R-32 sensor error, 3 and 4 are in a short state (the relay operates).

For controlling AC LAMP (On/Off)





For controlling EXTERNAL ALARM (On/Off)



Troubleshooting

Ceiling type (VUCD018S6-5P)

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

LED Display on the receiver & display unit

				LED Display	,	
Abnormal condition	Error code		(£)	c _S		*
Error on indoor temperature sensor (Short or Open)	E121	Х	•	Х	X	Х
1. Error on Eva-in sensor (Short or Open)	E122					
2. Error on Eva-out sensor (Short or Open)	E123			×	×	х
3. Discharge sensor error (Short or Open)	E126					
Indoor fan error	E154	Х	Х	•	Х	Х
1. Error on outdoor temperature sensor (Short or Open)	E221					
2. Error on cond sensor	E237					
3. Error on discharge sensor	E251		X		X	Х
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					
Communication error after tracking due to unmatching number of installed units	E201	X	•	•	×	Х
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	E1289					
5. Thermal fuse error (Open)	E198					

Abnormal condition		LED Display				
			(E)	85		*
1. COND mid sensor is detached	E241					
2. Refrigerant leakage (2nd detection)	E554					
3. Abnomally high temperature on Cond (2nd detection)	E450					
4. Low pressure s/w (2nd detection)	E451					
5. Abnomally high temperature on discharged air on outdoor unit (2nd detection)	E416					
6. Indoor operation stop due to unconfirmed error on outdoor unit	E559					
7. Error due to reverse phase detection	E425					
8. Comp stop due to freeze detection (6th detection)	E403					
9. High pressure sensor is detached	E301					
10. Low pressure sensor is detached	E306					
11. Outdoor unit copression ration error	E428					
12. Outdoor sump down_1 prevetion control	E413	Х	•			X
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. Error indicating a short-circuit, open-circuit or fault signal in the refrigerant leak sensor	E116					
17. Error indicating the refrigerant leak sensor's lifespan cannot be predicted	E695					
18. Error indicating a secondary refrigerant leak detected	E697					
19. Error indicating a malfunction of the refrigerant leak sensor	E698					
20. Error indicating a refrigerant leak sensor replacement is required	E699					
21. Error indicating the refrigerant leak sensor's lifespan expired	E700					
Other outdoor unit self-diagnosis error that is not on the above list						
Flowating s/w (2nd detection)	E153	Х	Х	•	•	Х
EEPROM error	E162	•	•	•	•	•
EEPROM option error	E163	•	•	•	•	•
Error due to incompatible indoor unit	E164	Х	Х	Х	•	Х

Troubleshooting

Big Ceiling type (VUCD024/036/048S6-5P)

- If an error occurs during the operation, one or more LED flickers and the operation is stopped except the LED.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.
- On OFlickering X Off
- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
- If you re-operate the air conditioner, it operates normally at first, then detects an error again.
- If the LED displays only one color, it is turned on for a second and turned off for a second.
- If the LED displays more than two colors, each color is shown for a second alternately.

LED Display on the indoor unit

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

Wired remote control

- If an error occurs, $\prod_{i \in I}$ is displayed on the wired remote control.
- If you would like to see an error code, press the Test button.

Display	Explanation
E108	Error due to repeated communication address
E116	Indoor unit R-32 sensor short/open
E121	Error on room temperature sensor of indoor unit (Short or Open)
E122	Error on EVA IN sensor of indoor unit (Short or Open)
E123	Error on EVA OUT sensor of indoor unit (Short or Open)
E153	Error on float switch (2nd detection)
E154	Indoor fan error
E198	Error on thermal fuse of indoor unit (Open)
E201	Communication error between indoor unit and outdoor unit (Pre tracking failure or when actual number of indoor units are different from the indoor unit quantity setting on the outdoor unit) Error due to communication traking failure after initial power is supplied.
E202	Communication error between indoor unit and outdoor unit (When there is no response from indoor units after tracking is completed)
E203	Communication error between outdoor unit inv - main micom (For PF #4-#6 controller, error will be determined from the time when compressor is turned on)
E221	Error on outdoor temperature sensor (Short or Open)
E231	Error on outdoor COND OUT sensor (Short or Open)
E251	Error on discharge temperature sensor of compressor1 (Short or Open)
E320	Error on OLP sensor (Short or Open)
E403	Compressor down due to freeze protection control
E404	System stop due to overload protection control
E416	System stop due to discharge temperature
E422	Blockage detected on high pressure pipe
E425	Reverse phase or open phase
E440	Heating operation restricted at outdoor temperature over Theat_high value (default: 30 °C)
E441	Cooling operation restricted at outdoor temperature below Tcool_low value (default: 0 °C)
E458	Fan speed error
E461	Error due to operation failure of inverter compressor
E462	System stop due to full current control
E463	Over current trip / PFC over current error

Troubleshooting

Display	Explanation
E464	IPM Over Current(O.C)
E465	Comp. Over load error
E466	DC-Link voltage under/over error
E467	Error due to abnormal rotation of the compressor or unconnected wire of compressor
E468	Error on current sensor (Short or Open)
E469	Error on DC-Link voltage sensor (Short or Open)
E470	Outdoor unit EEPROM Read/Write error (Option)
E471	Outdoor unit EEPROM Read/Write error (H/W)
E472	AC Line Zero Cross Signal out
E473	Comp Lock error
E474	Error on IPM Heat Sink sensor of inverter1 (Short or Open)
E475	Error on inverter fan 2
E484	PFC Overload (Over current) Error
E485	Error on input current sensor of inverter1 (Short or Open)
E500	IPM over heat error on inverter1
E508	Smart install is not installed
E554	Gas leak detected
E556	Error due to mismatching capacity of indoor and outdoor unit
E557	DPM remote controller option error
E590	Inverter EEPROM CheckSum error
E660	Inverter Boot Code error
E694	Installation combination of indoor unit and wired remote control Error
E695	Refrigerant leak sensor lifetime unpredictable error
E696	1st refrigerant leak detection error
E697	2nd refrigerant leak detection error (Error-causing indoor unit)
E698	Refrigerant leak sensor failure error
E699	Refrigerant leak sensor replacement notification error
E700	Refrigerant leak sensor lifetime expiration error
E797	2nd refrigerant leak detection error (Not Error-causing indoor unit)

