ENGLISH

TÜRKÇE

INSTALLATION MANUAL

AIR CONDITIONER

Please read this installation manual completely before installing the product.
Installation work must be performed in accordance with the national wiring standards by authorized personnel only.
Please retain this installation manual for future reference after reading it thoroughly.

CEILING CASSETTE
Original instruction

MFL67855547
Rev.00_103118

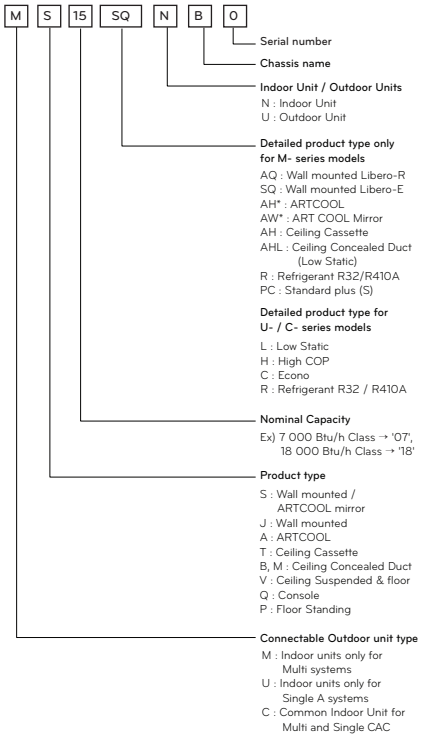
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MODEL DESIGNATION

Product information

- Product Name : Air conditioner
- Model Name :



- Additional Information : serial number is refer to the barcode on the product.
- Maximum allowable pressure High side : 4.2 MPa / Low side : 2.4 MPa
- Refrigerant : R32 / R410A

Airborne Noise Emission

The A-weighted sound pressure emitted by this product is below 70 dB.

** The noise level can vary depending on the site.

The figures quoted are emission level and are not necessarily safe working levels.

Whilst there is a correlation between the emission and exposure levels, this cannot be used reliably to determine whether or not further precautions are required.

Factor that influence the actual level of exposure of the workforce include the characteristics of the work room and the other sources of noise, i.e. the number of equipment and other adjacent processes and the length of time for which an operator exposed to the noise. Also, the permissible exposure level can vary from country to country.

This information, however, will enable the user of the equipment to make a better evaluation of the hazard and risk.

Limiting concentration

Limiting concentration is the limit of Freon gas concentration where immediate measures can be taken without hurting human body when refrigerant leaks in the air. The limiting concentration shall be described in the unit of kg/m^3 (Freon gas weight per unit air volume) for facilitating calculation

Limiting concentration: 0.44 kg/m^3(R410A)

■ Calculate refrigerant concentration

$$\text{Refrigerant concentration } (kg/m^3) = \frac{\text{Total amount of replenished refrigerant in refrigerant facility (kg)}}{\text{Capacity of smallest room where indoor unit is installed } (m^3)}$$

TIPS FOR SAVING ENERGY

Here are some tips that will help you minimize the power consumption when you use the air conditioner. You can use your air conditioner more efficiently by referring to the instructions below:

- Do not cool excessively indoors. This may be harmful for your health and may consume more electricity.
- Block sunlight with blinds or curtains while you are operating the air conditioner.
- Keep doors or windows closed tightly while you are operating the air conditioner.
- Adjust the direction of the air flow vertically or horizontally to circulate indoor air.
- Speed up the fan to cool or warm indoor air quickly, in a short period of time.
- Open windows regularly for ventilation as the indoor air quality may deteriorate if the air conditioner is used for many hours.
- Clean the air filter once every 2 weeks. Dust and impurities collected in the air filter may block the air flow or weaken the cooling / dehumidifying functions.

For your records

Staple your receipt to this page in case you need it to prove the date of purchase or for warranty purposes. Write the model number and the serial number here:

Model number :

Serial number :

You can find them on a label on the side of each unit.

Dealer's name :

Date of purchase :

IMPORTANT SAFETY INSTRUCTIONS

The following symbols are displayed on indoor and outdoor units.

	Read the precautions in this manual carefully before operating the unit.		This appliance is filled with flammable refrigerant (R32)
	This symbol indicates that the Operation Manual should be read carefully.		This symbol indicates that a service personnel should be handling this equipment with reference to the Installation Manual.

READ ALL INSTRUCTIONS BEFORE USING THE APPLIANCE.

Always comply with the following precautions to avoid dangerous situations and ensure peak performance of your product.

⚠ WARNING

It can result in serious injury or death when the directions are ignored.

⚠ CAUTION

It can result in minor injury or product damage when the directions are ignored.

⚠ WARNING

- Installation or repairs made by unqualified persons can result in hazards to you and others.
- The information contained in the manual is intended for use by a qualified service technician familiar with safety procedures and equipped with the proper tools and test instruments.
- Failure to carefully read and follow all instructions in this manual can result in equipment malfunction, property damage, personal injury and/or death.
- Compliance with national gas regulations shall be observed.

Installation

- Always perform grounding.
  - Otherwise, it may cause electrical shock.
- Don't use a power cord, a plug or a loose socket which is damaged.
  - Otherwise, it may cause a fire or electrical shock.
- For installation of the product, always contact the service center or a professional installation agency.
  - Otherwise, it may cause a fire, electrical shock, explosion or injury.

- Securely attach the electrical part cover to the indoor unit and the service panel to the outdoor unit.
  - If the electrical part cover of the indoor unit and the service panel of the outdoor unit are not attached securely, it could result in a fire or electric shock due to dust, water, etc.
- Always install an air leakage breaker and a dedicated switching board.
  - No installation may cause a fire and electrical shock.
- Do not keep or use flammable gases or combustibles near the air conditioner.
  - Otherwise, it may cause a fire or the failure of product.
- Ensure that an installation frame of the outdoor unit is not damaged due to use for a long time.
  - It may cause injury or an accident.
- Do not disassemble or repair the product randomly.
  - It will cause a fire or electrical shock.
- Do not install the product at a place that there is concern of falling down.
  - Otherwise, it may result in personal injury.
- Use caution when unpacking and installing.
  - Sharp edges may cause injury.
- The appliance shall be stored in a room without continuously operating ignition sources
  (for example: open flames, an operating gas appliance or an operating electric heater.)
- Two or more people must lift and transport the product. Avoid personal injury.
- Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.
- Do not pierce or burn refrigerant cycle part.
- Be aware that refrigerants may not contain an odour.
- Keep any required ventilation openings clear of obstruction.
- The appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified for operation.(for R32)
- Refrigerant tubing shall be protected or enclosed to avoid damage.
- Flexible refrigerant connectors (such as connecting lines between the indoor and outdoor unit) that may be displaced during normal operations shall be protected against mechanical damage.

- A brazed, welded, or mechanical connection shall be made before opening the valves to permit refrigerant to flow between the refrigerating system parts.
- Mechanical connections shall be accessible for maintenance purposes.

Operation

- Do not share the outlet with other appliances.
  - It will cause an electric shock or a fire due to heat generation.
- Do not use the damaged power cord.
  - Otherwise, it may cause a fire or electrical shock.
- Do not modify or extend the power cord randomly.
  - Otherwise, it may cause a fire or electrical shock.
- Take care so that the power cord may not be pulled during operation.
  - Otherwise, it may cause a fire or electrical shock.
- Unplug the unit if strange sounds, smell, or smoke comes from it.
  - Otherwise, it may cause electrical shock or a fire.
- Keep the flames away.
  - Otherwise, it may cause a fire.
- Take the power plug out if necessary, holding the head of the plug and do not touch it with wet hands.
  - Otherwise, it may cause a fire or electrical shock.
- Do not use the power cord near the heating tools.
  - Otherwise, it may cause a fire and electrical shock.
- Do not open the suction inlet of the indoor/outdoor unit during operation.
  - Otherwise, it may electrical shock and failure.
- Do not allow water to run into electrical parts.
  - Otherwise, it may cause the failure of machine or electrical shock.
- Hold the plug by the head when taking it out.
  - It may cause electric shock and damage.
- Never touch the metal parts of the unit when removing the filter.
  - They are sharp and may cause injury.
- Do not step on the indoor/outdoor unit and do not put anything on it.
  - It may cause an injury through dropping of the unit or falling down.
- Do not place a heavy object on the power cord.
  - Otherwise, it may cause a fire or electrical shock.

- When the product is submerged into water, always contact the service center.
  - Otherwise, it may cause a fire or electrical shock.
- Take care so that children may not step on the outdoor unit.
  - Otherwise, children may be seriously injured due to falling down.
- Use a vacuum pump or inert (nitrogen) gas when doing leakage test or air purge. Do not compress air or oxygen, and do not use flammable gases. Otherwise, it may cause fire or explosion.
  - There is the risk of death, injury, fire or explosion.
- Do not turn on the breaker or power under condition that front panel, cabinet, top cover, control box cover are removed or opened.
  - Otherwise, it may cause fire, electric shock, explosion or death.
- Turn off all devices that cause fire when the refrigerant leaks., ventilate the room (example : opening window or using ventilation unit), and contact with dealer who you purchased the unit.
- The installation of pipe-work shall be kept to a minimum.
- When mechanical connectors are reused indoors, sealing parts shall be renewed.(for R32)
- When flared joints are reused indoors, the flare part shall be re-fabricated.(for R32)

⚠ CAUTION

Installation

- Install the drain hose to ensure that drain can be securely done.
  - Otherwise, it may cause water leakage.
- Install the product so that the noise or hot wind from the outdoor unit may not cause any damage to the neighbors.
  - Otherwise, it may cause dispute with the neighbors.
- Always inspect gas leakage after the installation and repair of product.
  - Otherwise, it may cause the failure of product.
- Keep level parallel in installing the product.
  - Otherwise, it may cause vibration or water leakage.
- Any person who is involved with working on or breaking into a refrigerant circuit should hold a current valid certificate from an industry-accredited assessment authority, which authorises their competence to handle refrigerants safely in accordance with an industry recognised assessment specification.(for R32)

- Wear adequate personal protection equipment (PPE) when installing, maintaining or servicing the product.

Operation

- Avoid excessive cooling and perform ventilation sometimes.
  - Otherwise, it may do harm to your health.
- Use a soft cloth to clean. Do not use wax, thinner, or a strong detergent.
  - The appearance of the air conditioner may deteriorate, change color, or develop surface flaws.
- Do not use an appliance for special purposes such as preserving animals vegetables, precision machine, or art articles.
  - Otherwise, it may damage your properties.
- Do not place obstacles around the flow inlet or outlet.
  - Otherwise, it may cause the failure of appliance or an accident.
- The appliance shall be stored so as to prevent mechanical damage from occurring.
- Servicing shall only be performed as recommended by the equipment manufacturer. Maintenance and repair requiring the assistance of other skilled personnel shall be carried out under the supervision of the person competent in the use of flammable refrigerants. (for R32)
- Dismantling the unit, treatment of the refrigerant oil and eventual parts should be done in accordance with local and national standards.
- Periodic (more than once/year) cleaning of the dust or salt particles stuck on the heat exchanger by using water.
- Means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.
- The appliance shall be disconnected from its power source during service and when replacing parts.
- Make the connection securely so that screw in terminals may not be loosed when pulling cable.
- Pipe-work shall be protected from physical damage.

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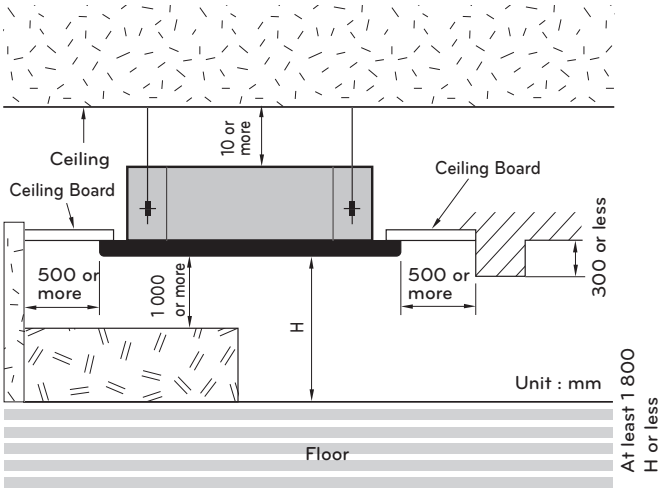
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34 HOW TO SET E.S.P?

INSTALLATION PLACES

- There should not be any heat source or steam near the unit.
- There should not be any obstacles to prevent the air circulation.
- A place where air circulation in the room will be good.
- A place where drainage can be easily obtained.
- A place where noise prevention is taken into consideration.
- Do not install the unit near the door way.
- Ensure the spaces indicated by arrows from the wall, ceiling, or other obstacles.
- The indoor unit must keep the maintenance space.



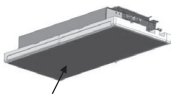
Chassis	H
TU	3 300
TQ/TR/TP	3 600
TN/TM	4 200

* Please use an annexed sheet or the corrugated cardboard on the bottom of packing as installation sheet.



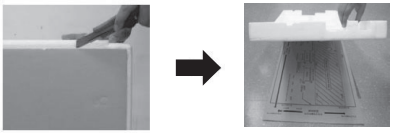
Annexed sheet

Or



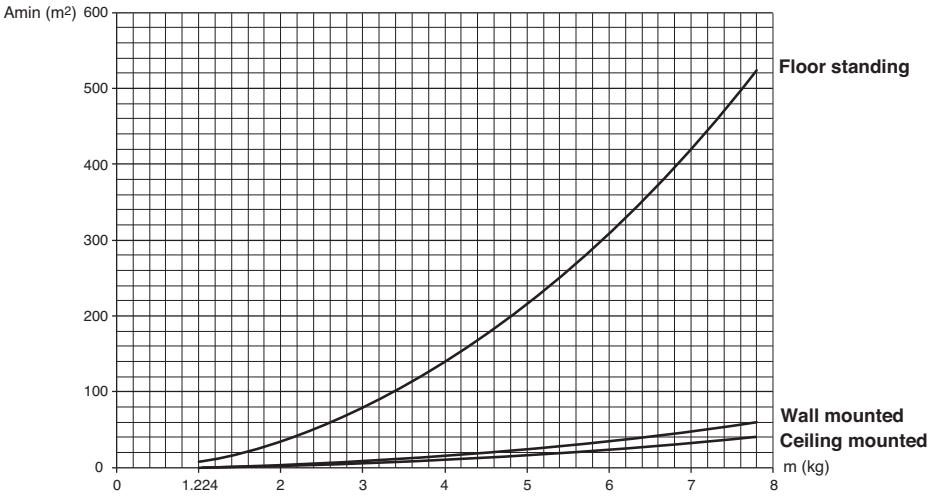
Packing corrugated cardboard on the bottom

* When using the bottom sheet, please use it after separating the installation sheet from packing of the product floor by using a knife etc as a picture below.



Minimum floor area (for R32)

- The appliance shall be installed, operated and stored in a room with a floor area larger than the minimum area.
- Use the graph of table to determine the minimum area.



- m : Total refrigerant amount in the system
- Total refrigerant amount : factory refrigerant charge + additional refrigerant amount
- Amin : minimum area for installation

Floor location	
m (kg)	Amin (m²)
< 1.224	-
1.224	12.9
1.4	16.82
1.6	21.97
1.8	27.80
2	34.32
2.2	41.53
2.4	49.42
2.6	58.00
2.8	67.27
3	77.22
3.2	87.86
3.4	99.19
3.6	111.20
3.8	123.90
4	137.29
4.2	151.36
4.4	166.12

Floor location	
m (kg)	Amin (m²)
4.6	181.56
4.8	197.70
5	214.51
5.2	232.02
5.4	250.21
5.6	269.09
5.8	288.65
6	308.90
6.2	329.84
6.4	351.46
6.6	373.77
6.8	396.76
7	420.45
7.2	444.81
7.4	469.87
7.6	495.61
7.8	522.04

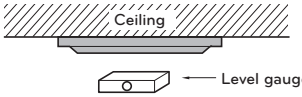
Wall mounted	
m (kg)	Amin (m²)
< 1.224	-
1.224	1.43
1.4	1.87
1.6	2.44
1.8	3.09
2	3.81
2.2	4.61
2.4	5.49
2.6	6.44
2.8	7.47
3	8.58
3.2	9.76
3.4	11.02
3.6	12.36
3.8	13.77
4	15.25
4.2	16.82
4.4	18.46

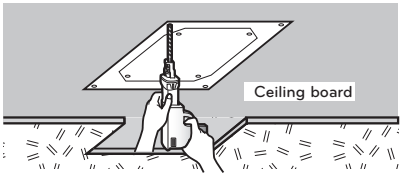
Wall mounted	
m (kg)	Amin (m²)
4.6	20.17
4.8	21.97
5	23.83
5.2	25.78
5.4	27.80
5.6	29.90
5.8	32.07
6	34.32
6.2	36.65
6.4	39.05
6.6	41.53
6.8	44.08
7	46.72
7.2	49.42
7.4	52.21
7.6	55.07
7.8	58.00

Ceiling Mounted	
m (kg)	Amin (m²)
< 1.224	-
1.224	0.956
1.4	1.25
1.6	1.63
1.8	2.07
2	2.55
2.2	3.09
2.4	3.68
2.6	4.31
2.8	5.00
3	5.74
3.2	6.54
3.4	7.38
3.6	8.27
3.8	9.22
4	10.21
4.2	11.26
4.4	12.36

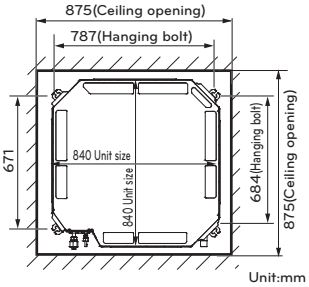
Ceiling Mounted	
m (kg)	Amin (m²)
4.6	13.50
4.8	14.70
5	15.96
5.2	17.26
5.4	18.61
5.6	20.01
5.8	21.47
6	22.98
6.2	24.53
6.4	26.14
6.6	27.80
6.8	29.51
7	31.27
7.2	33.09
7.4	34.95
7.6	36.86
7.8	38.83

THE INDOOR UNIT INSTALLATION

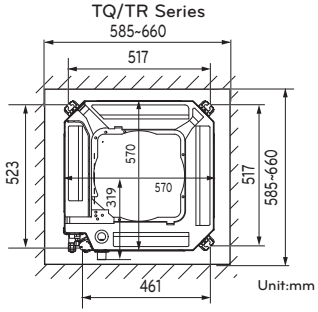




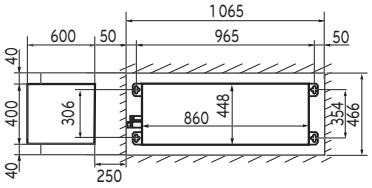
TP/TN/TM Series



TQ/TR Series



TU Chassis



- Select and mark the position for fixing bolts and piping hole.
- Decide the position for fixing bolts slightly tilted to the drain direction after considering the direction of drain hose.
- Drill the hole for anchor bolt on the wall.

⚠ CAUTION

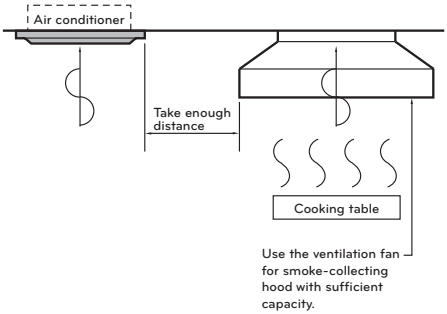
- This air-conditioner uses a drain pump.
- Install the unit horizontally using a level gauge.
- During the installation, care should be taken not to damage electric wires.

NOTE

Avoid the following installation location.

1 Such places as restaurants and kitchen where considerable amount of oil steam and flour is generated. These may cause heat exchange efficiency reduction, or water drops, drain pump mal-function. In these cases, take the following actions;

- Make sure that ventilation fan is enough to cover all noxious gases from this place.
- Ensure enough distance from the cooking room to install the air conditioner in such a place where it may not suck oily steam.

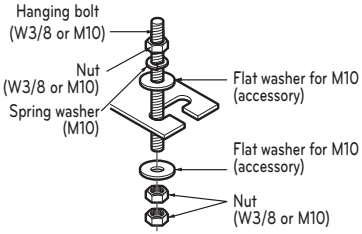


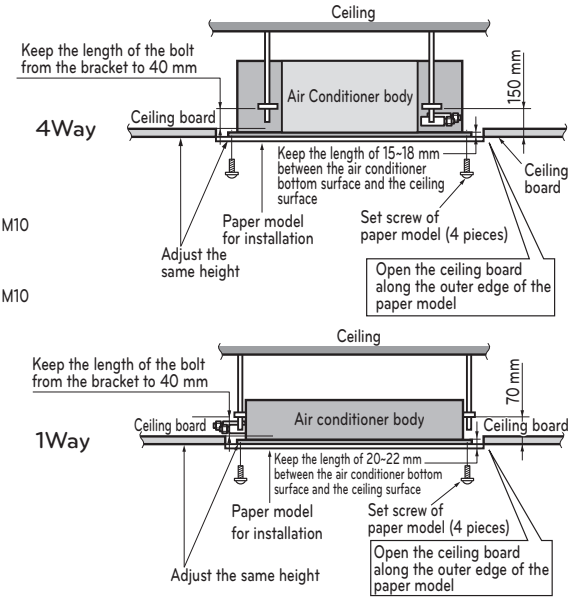
2 Avoid installng air conditioner in such places where cooking oil or iron powder is generated.

3 Avoid places where inflammable gas is generated.

4 Avoid place where noxious gas is generated.

5 Avoid places near high frequency generators.





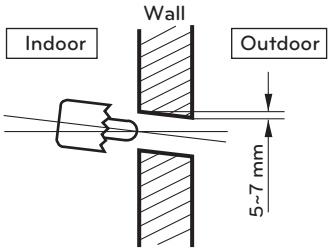
The following parts is option.

① Hanging Bolt - W 3/8 or M10
② Nut - W 3/8 or M10
③ Spring Washer - M10
④ Plate Washer - M10

Drill the piping hole on the wall slightly tilted to the outdoor side using a Ø 70 hole-core drill.

⚠ CAUTION

Tighten the nut and bolt to prevent unit falling.

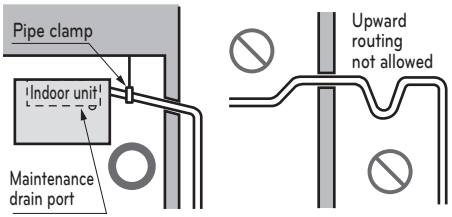


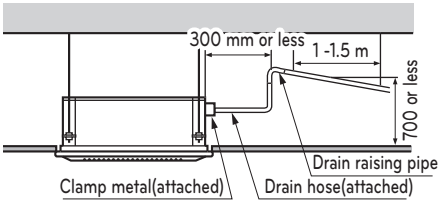
Indoor Unit Drain Piping

- Drain piping must have down-slope (1/50 to 1/100): be sure not to provide up-and-down slope to prevent reversal flow.
- During drain piping connection, be careful not to exert extra force on the drain port on the indoor unit.
- The outside diameter of the drain connection on the indoor unit is 32 mm.

Piping material: Polyvinyl chloride pipe VP-25 and pipe fittings

- Be sure to execute heat insulation on the drain piping.
- Install the drain raising pipes at a right angle to the indoor unit and no more than 300 mm from the unit.



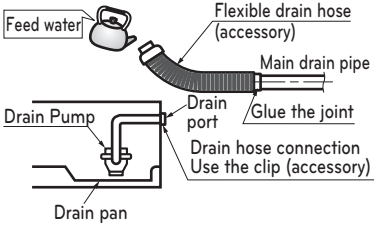


Heat insulation material: Polyethylene foam with thickness more than 8 mm.

Drain test

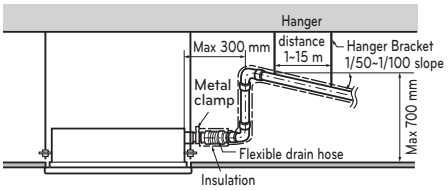
The air conditioner uses a drain pump to drain water.
Use the following procedure to test the drain pump operation:

- Connect the main drain pipe to the exterior and leave it provisionally until the test comes to an end.
- Feed water to the flexible drain hose and check the piping for leakage.
- Be sure to check the drain pump for normal operating and noise when electrical wiring is complete.
- When the test is complete, connect the flexible drain hose to the drain port on the indoor unit.



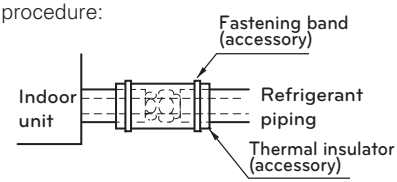
⚠ CAUTION

The supplied flexible drain hose should not be curved, neither screwed. The curved or screwed hose may cause a leakage of water.



HEAT INSULATION

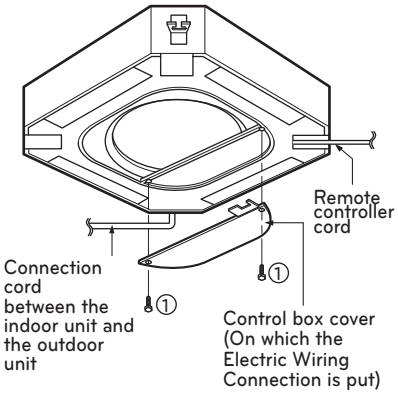
- Use the heat insulation material for the refrigerant piping which has an excellent heat-resistance (over 120 °C).
- Precautions in high humidity circumstance: This air conditioner has been tested according to the "KS Standard Conditions with Mist" and confirmed that there is not any default. However, if it is operated for a long time in high humid atmosphere (dew point temperature: more than 23 °C), water drops are liable to fall. In this case, add heat insulation material according to the following procedure:



- Heat insulation material to be prepared... Adiabatic EPDM or NBR with thickness 10 to 20 mm.
- Stick glass wool on all air conditioners that are located in ceiling atmosphere.

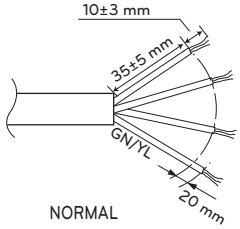
Wiring Connection

- Open the control box cover and connect the Remote controller cord and Indoor power wires.
- Remove the control box cover for electrical connection between the indoor and outdoor unit. (Remove screws ①)
- Use the cord clamper to fix the cord.



⚠ CAUTION

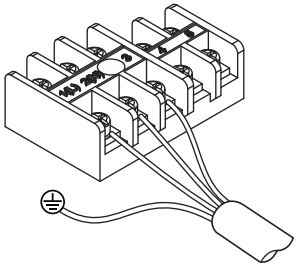
The connecting cable connected to the indoor and outdoor unit should be complied with the following specifications (This equipment shall be provided with a cord set complying with the national regulation).



If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer of its service agent.

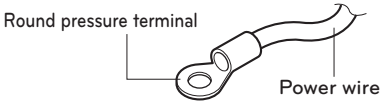
⚠ CAUTION

The Power cord connected to the unit should be selected according to the following specifications.



Precautions when laying power wiring

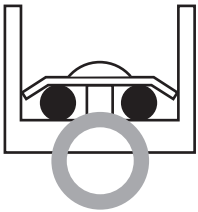
Use round pressure terminals for connections to the power terminal block.



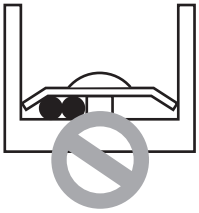
When none are available, follow the instructions below.

- Do not connect wiring of different thicknesses to the power terminal block. (Slack in the power wiring may cause abnormal heat.)
- When connecting wiring which is the same thickness, do as shown in the figure below.

Connect same thickness wiring to both sides.



It is forbidden to connect two to one side.



It is forbidden to connect wiring of different thicknesses.



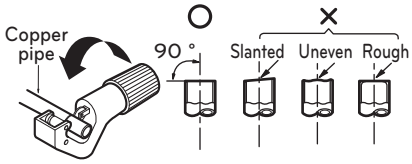
- For wiring, use the designated power wire and connect firmly, then secure to prevent outside pressure being exerted on the terminal block.
- Use an appropriate screwdriver for tightening the terinal screws. A screwdriver with a small head will strip the head and make proper tighterning impossible.
- Over-tightening the terminal screws may break them.

Flaring Work

Main cause for gas leakage is due to defect of flaring work. Carry out correct flaring work in the following procedure.

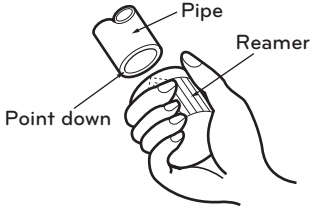
Cut the pipes and the cable

1 Use the piping kit accessory or the pipes purchased locally.
2 Measure the distance between the indoor and the outdoor unit.
3 Cut the pipes a little longer than measured distance.
4 Cut the cable 1.5 m longer than the pipe length.



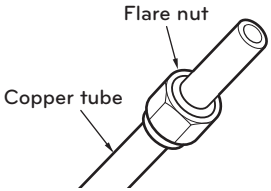
Burrs removal

1. Completely remove all burrs from the cut cross section of pipe/tube.
2. While removing burrs put the end of the copper tube/pipe in a downward direction while removing burrs location is also changed in order to avoid dropping burrs into the tubing.



Putting nut on

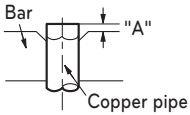
- Remove flare nuts attached to indoor and outdoor unit, then put them on pipe/tube having completed burr removal.
(not possible to put them on after finishing flare work)

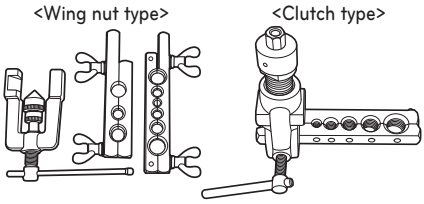


Flaring work

1 Firmly hold copper pipe in a bar with the dimension shown in below table table below.
2 Carry out flaring work with the flaring tool.

Pipe diameter Inch (mm)	A inch (mm)	
	Wing nut type	Clutch type
Ø 1/4 (Ø 6.35)	0.04~0.05 (1.1~1.3)	0~0.02 (0~0.5)
Ø 3/8 (Ø 9.52)	0.06~0.07 (1.5~1.7)	
Ø 1/2 (Ø 12.7)	0.06~0.07 (1.6~1.8)	
Ø 5/8 (Ø 15.88)	0.06~0.07 (1.6~1.8)	
Ø 3/4 (Ø 19.05)	0.07~0.08 (1.9~2.1)	





⚠ CAUTION

Copper in contact with refrigerants shall be oxygen-free or de-oxidized, for example Cu-DHP as specified in EN 12735-1 and EN 12735-2.

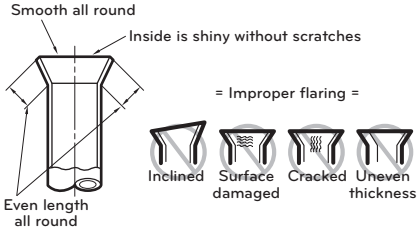
⚠ CAUTION

- Flared joint shall be restricted to use with annealed pipe only, and to pipe sizes not exceeding a diameter of 20 mm outside diameter.

Check

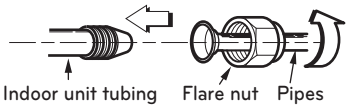
1 Compare the flared work with the figure by.

2 If a flared section is defective, cut it off and do flaring work again.



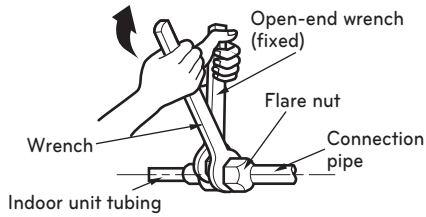
Connecting the installation pipe and drain hose to the indoor unit

1 Align the center of the pipes and sufficiently tighten the flare nut by hand.

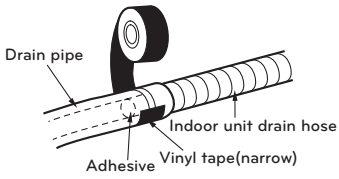


2 Tighten the flare nut with a wrench.

Outside diameter		Torque
mm	inch	kgf.m
Ø 6.35	1/4	1.8~2.5
Ø 9.52	3/8	3.4~4.2
Ø 12.7	1/2	5.5~6.5
Ø 15.88	5/8	6.3~8.2
Ø 19.05	3/4	9.9~12.1

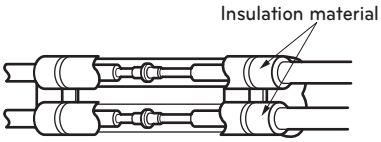


3 When needed to extend the drain hose of indoor unit, assembly the drain pipe as shown on the drawing.

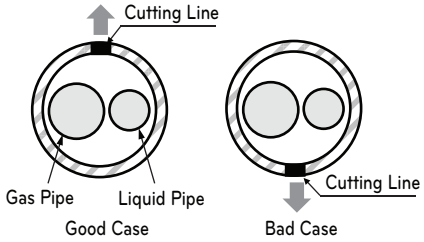


Wrap the insulation material around the connecting portion

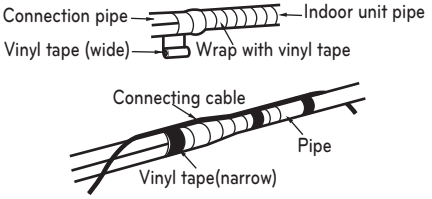
1 Overlap the connection pipe insulation material and the indoor unit pipe insulation material. Bind them together with vinyl tape so that there may be no gap.



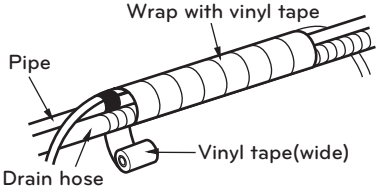
2 Set the tubing cutting line upward.
Wrap the area which accommodates the rear piping housing section with vinyl tape.



* Tubing cutting line have to be upward.



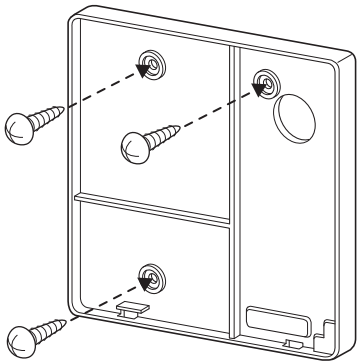
3 Bundle the piping and drain hose together by wrapping them with vinyl tape sufficient enough to cover where they fit into the rear piping housing section.



REMOTE CONTROLLER INSTALLATION

Please fix tightly using provided screw after placing remote controller setup board on the place where you like to setup.

- Please set it up not to bend because poor setup could take place if setup board bends. Please set up remote controller board fit to the reclamation box if there is a reclamation box.
- Install the product so as not to make a gap with the wall side and to prevent shaking after the installation.

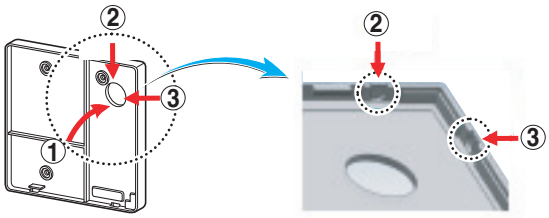


Can set up Wired remote controller cable into three directions.

- Setup direction: the surface of wall reclamation, upper, right
- If setting up remote controller cable into upper and right side, please set up after removing remote controller cable guide groove.

* Remove guide groove with long nose.

① Reclamation to the surface of the wall
② Upper part guide groove
③ Right part guide groove

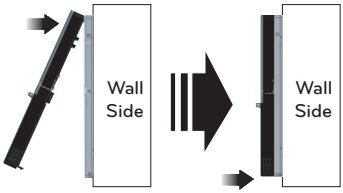


<Wire guide grooves>

Please fix remote controller upper part into the setup board attached to the surface of the wall, as the picture below, and then, connect with setup board by pressing lower part.

- Please connect not to make a gap at the remote controller and setup board's upper and lower, right and left part.
- Before assembly with the installation board, arrange the Cable not to interfere with circuit parts.

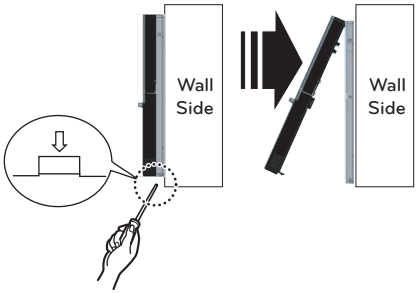
<Connecting order>



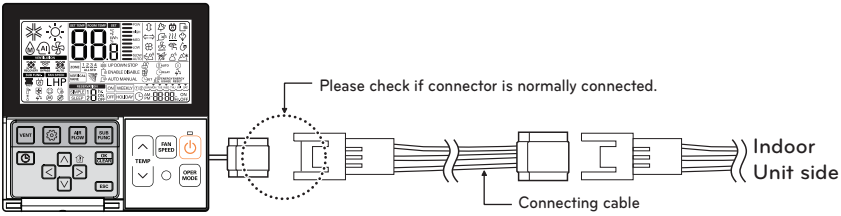
When separating remote controller from setup board, as the picture below, after inserting into the lower separating hole using screw driver and then, spinning clockwise, remote controller is separated.

- There are two separating holes. Please individually separate one at a time.
- Please be careful not to damage the inside components when separating.

<Separating order>



Please connect indoor unit and remote controller using connection cable.



Please use extension cable if the distance between wired remote controller and indoor unit is more than 10 m.

⚠ CAUTION

When installing the wired remote controller, do not bury it in the wall. (It can cause damage in the temperature sensor.) Do not install the cable to be 50 m or above. (It can cause communication error.)

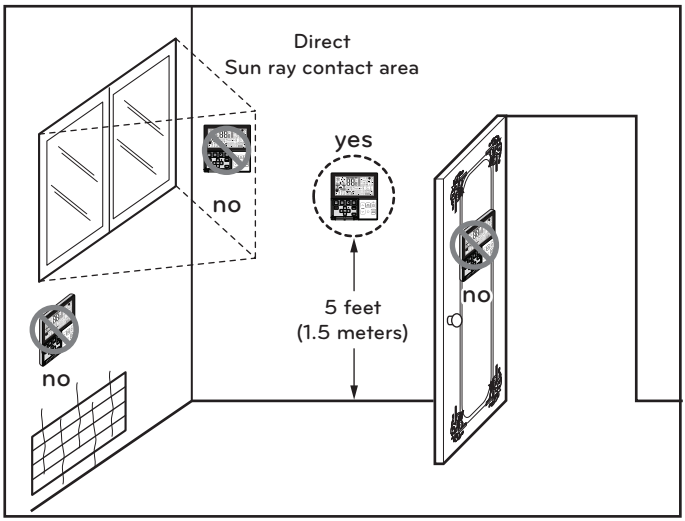
- When installing the extension cable, check the connecting direction of the connector of the remote controller side and the product side for correct installation.
- If you install the extension cable in the opposite direction, the connector will not be connected.
- Specification of extension cable: 2547 1007 22# 2 core 3 shield 5 or above.

Wired remote controller installation

Since the room temperature sensor is in the remote controller, the remote controller box should be installed in a place away from direct sunlight, high humidity and direct supply of cold air to maintain proper space temperature. Install the remote controller about 5 ft(1.5 m) above the floor in an area with good air circulation at an average temperature.

Do not install the remote controller where it can be affected by:

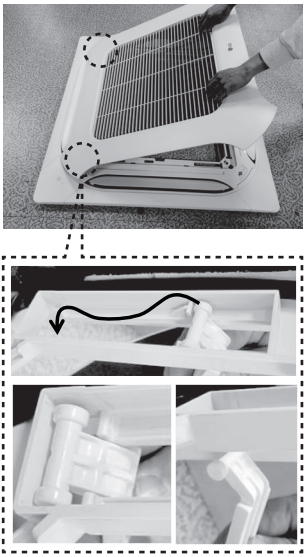
- Drafts, or dead spots behind doors and in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes and chimneys.
- Uncontrolled areas such as an outside wall behind the remote controller.
- This remote controller is equipped with a seven segment LED. display. For proper display of the remote controller LED's, the remote controller should be installed properly as shown in Fig.1. (The standard height is 1.2~1.5 m from floor level.)



INSTALLATION OF DECORATIVE PANEL(ACCESSORY)

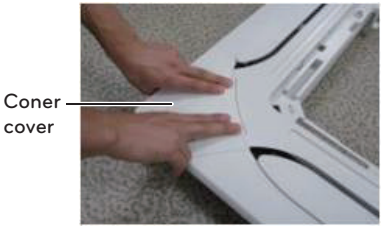
The decorative panel has its installation direction.
Before installing the decorative panel, always remove the paper template.

1 Remove the packing and take out air inlet grille from front panel.



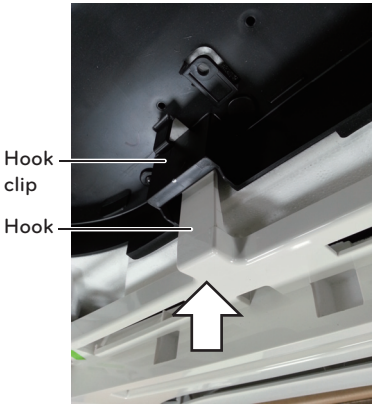
Separate the link from the front grill

2 Remove the Corner covers of the panel.





3 Fit the panel on the unit by inserting hooks as shown in picture.



4 Insert two screws on diagonal corners of panel. Do not tighten the bolts completely. (The fixing screws are included in the indoor unit box.)
Check the alignment of panel with the ceiling. Height can be adjusted using hanging bolts as shown in picture. Insert the other two screws and tighten all screws completely.

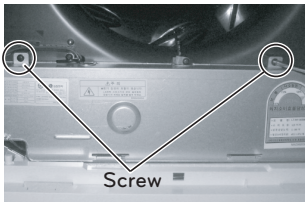




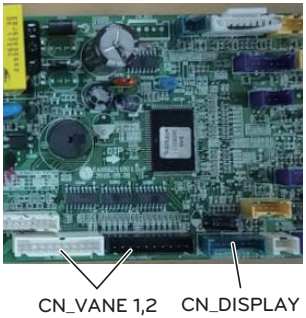
5 Fit the corner covers.



6 Open two screws of control panel cover.



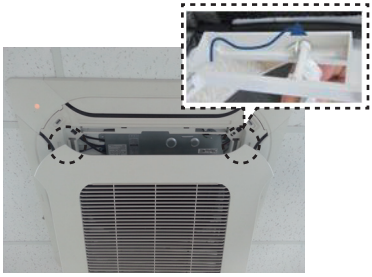
7 Connect one display connector and two vane control connectors of front panel to indoor unit PCB.
The position marking on PCB is as:
Display connector : CN_DISPLAY
Vane control connector: CN_VANE 1,2



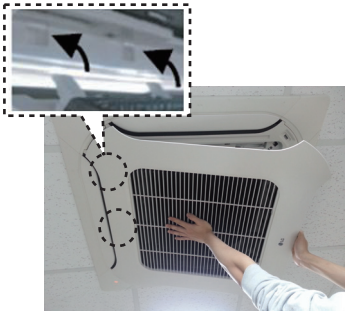
8 Close the cover for control box.



9 Install the air inlet grille and Filter on the panel.
- After inserting the edge of the grill into the panel body, close the door lock and press on the left, right, and center sections.



Installing the grill link on the panel body



Inserting the edge into the panel body



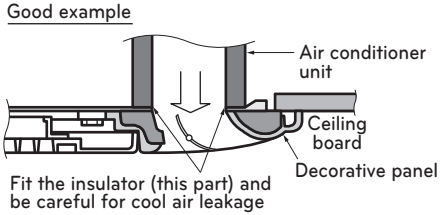
Closing the door lock

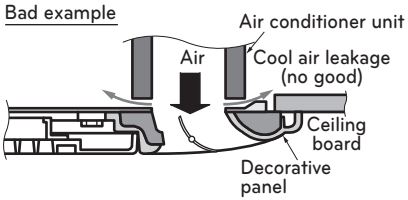


Check the left, right and central sections

⚠ CAUTION

Install certainly the decorative panel.
Cool air leakage causes sweating. ⇨
Water drops fall.





TEST RUNNING

PRECAUTIONS IN TEST RUN

- The initial power supply must provide at least 90 % of the rated voltage.
  Otherwise, the air conditioner should not be operated.

⚠ CAUTION

- For test run, carry out the cooling operation firstly even during heating season. If heating operation is carried out firstly, it leads to the trouble of compressor. Then attention must be paid.
- Carry out the test run more than 5 minutes without fail.
  (Test run will be cancelled 18 minutes later automatically)

- To cancel the test run, press any button.

CHECK THE FOLLOWING ITEMS WHEN INSTALLATION IS COMPLETED

- After completing work, be sure to measure and record trial run properties, and store measured data, etc.
- Measuring items are room temperature, outside temperature, suction temperature, blow out temperature, wind velocity, wind volume, voltage, current, presence of abnormal vibration and noise, operating pressure, piping temperature, compressive pressure.
- As to the structure and appearance, check following items.
  * Is the circulation of air adequate?
  * Is the draining smooth?
  * Is the heat insulation complete (refrigerant and drain piping)?
  * Is there any leakage of refrigerant?
  * Is the remote controller switch operated?
  * Is there any faulty wiring?
  * Are not terminal screws loosened?

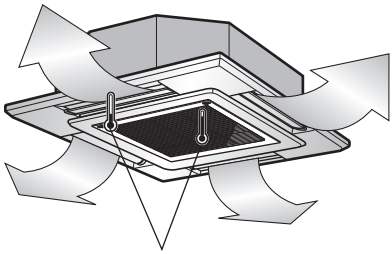
M4.....118 N.cm{12 kgf.cm}
M5.....196 N.cm{20 kgf.cm}
M6.....245 N.cm{25 kgf.cm}
M8.....588 N.cm{60 kgf.cm}

Connection of power supply

- Connect the power supply cord to the independent power supply.
  Circuit breaker is required.
- Operate the unit for 15 minutes or more.

Evaluation of the performance

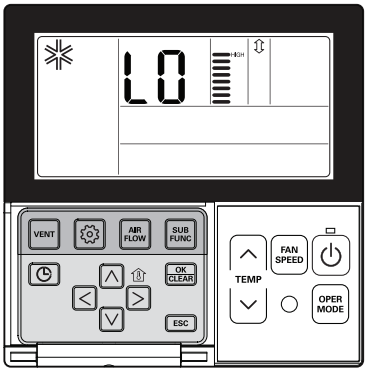
- Measure the temperature of the intake and discharge air.
- Ensure the difference between the intake temperature and the discharge one is more than 8 °C (Cooling) or reversely (Heating).



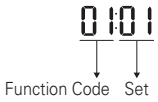
OPTIONAL OPERATION

Installer Setting -Test Run Mode

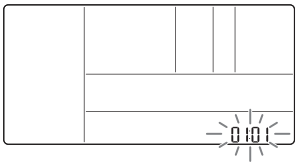
After installing the product, you must run a Test Run mode.
For details related to this operation, refer to the product manual.



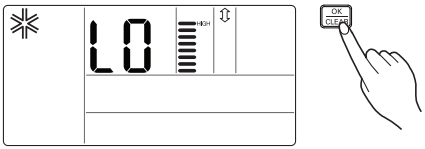
1 If pressing ⚙ button long for 3 seconds, it enters into remote controller setter setup mode.
- If pressing once shortly, it enters into user setup mode. Please press more than 3 seconds for sure.
- Please cancel the right and left of wind direction for RAC product.



2 Setup figure '01' blinks at the lower part of indication window.



3 Press OK CLEAR button to start.

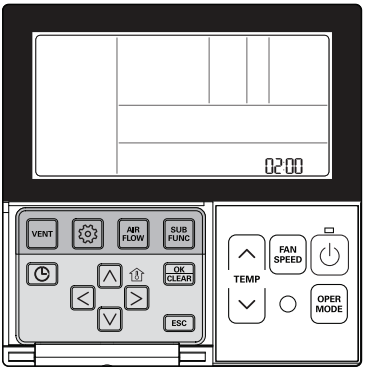


4 During the test run, pressing the below button will exit the test run.
- Select operation, temperature up/down, wind flow control, wind direction, start/stop button.

Installer Setting - Setting Address of Central Control

It's the function to use for connecting central control.

Please refer to central controller manual for the details

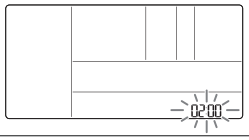


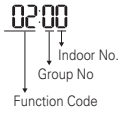
1 If pressing [⚙] button long for 3 seconds, it enters into remote controller setter setup mode.

- If pressing once shortly, it enters into user setup mode. Please press more than 3 seconds for sure.



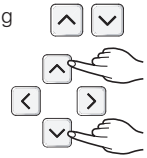
2 If entering into address setup mode by using [⚙] button, it indicates as picture below.





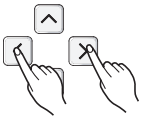
3 Set Group No. by pressing button.(0~F)

02:F0



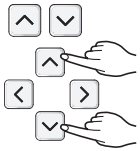
4 Move to Indoor No. setting option by pressing [<] [>] button.

02:F0



5 Set Indoor No. by pressing button.

02:F5



6 Press [OK CLEAR] button to save.

02:F5

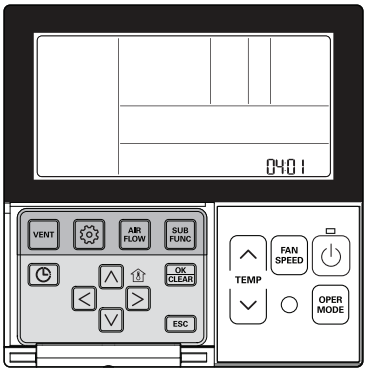


7 Pressing [ESC] button will exit settings mode.

❉ After setup, it automatically gets out of setup mode if there is no button input for 25 seconds.

❉ When exiting without pressing set button, the manipulated value is not reflected.

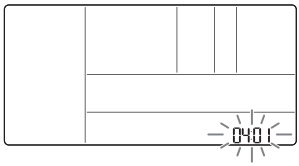
Installer Setting -Thermistor



1 If pressing ⚙ button long for 3 seconds, it enters into remote controller setter setup mode.
- If pressing once shortly, it enters into user setup mode. Please press more than 3 seconds for sure.



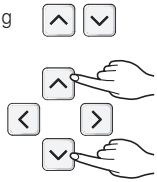
2 If moving to room temperature perception sensor selection menu by pressing ⚙ button, it indicates as picture below.



3 Set Thermistor value by pressing ∧ ∨ button. (01: Remote Controller, 02: Indoor, 03: 2TH)

0401

Function Code — Thermistor setting



4 Press OK CLEAR button to save.

0401



5 Pressing ESC button will exit settings mode.
- ❋ After setup, it automatically gets out of setup mode if there is no button input for 25 seconds.
- ❋ When exiting without pressing set button, the manipulated value is not reflected.

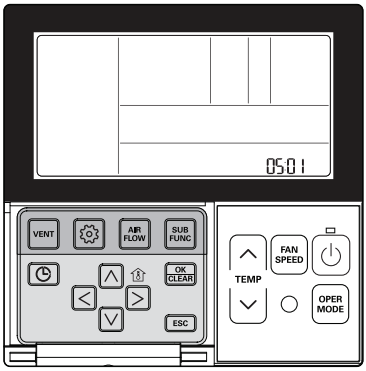
<Thermistor Table>

Temperature sensor selection			Function
01	Remote controller		Operation in remote controller temperature sensor
02	Indoor unit		Operation in indoor unit temperature sensor
03	2 TH	Cooling	Operation of higher temperature by comparing indoor unit's and wired remote controller's temperature. (There are products that operate at a lower temperature.)
		Heating	Operation of lower temperature by comparing indoor unit's and wired remote controller's temperature.

* The function of 2 TH has different operation characteristics according to the product.

Installer Setting -Ceiling Height Selection

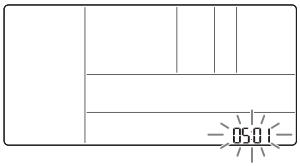
This function is to adjust FAN Airflow rate according to ceilingheight (only cassette model)



1 If pressing [⚙] button long for 3 seconds, it enters into remote controller setter setup mode.
- If pressing once shortly, it enters into user setup mode. Please press more than 3 seconds for sure.

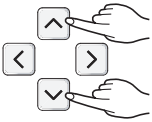


2 If moving to ceiling height selection menu by pressing [⚙] button, it indicates as picture below.



3 Select ceiling height value by pressing [∧] [∨] button. (01:Low, 02:Standard, 03:High, 04:Very high)

05:01
Function Code Thermistor setting



4 Press [OK CLEAR] button to save.

05:01



5 Pressing [ESC] button will exit settings mode.
- ❉ After setup, it automatically gets out of setup mode if there is no button input for 25 seconds.
- ❉ When exiting without pressing set button, the manipulated value is not reflected.

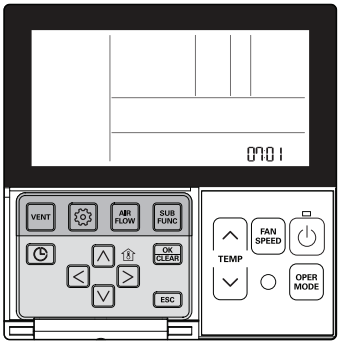
<Ceiling Height Selection Table>

Ceiling Height Level		Description
01	Low	Decrease the indoor airflow rate 1 step from standard level
02	Standard	Set the indoor airflow rate as standard level
03	High	Increase indoor airflow rate 1 step from standard level
04	Super high	Increase indoor airflow rate 2 steps from standard level

* Ceiling height setting is available only for some products.
* Ceiling height of 'Super high' function may not exist depending on the indoor unit.
* Refer to the product manual for more details.

Installer Setting-Group Setting

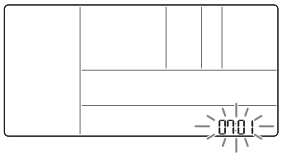
It is a function for settings in group control, or 2-remote controller control.



1 If pressing ⚙ button long for 3 seconds, it enters into remote controller setter setup mode.
- If pressing once shortly, it enters into user setup mode. Please press more than 3 seconds for sure.

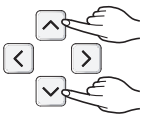


2 If pressing ⚙ button repeatedly, it moves to master/slave selection menu as picture below.



3 Select Master/ Slave by pressing ^ v button.
(00: Slave, 01: Master)

0001
Function Code Master/Slave value



4 Press OK CLEAR button to save.

0001



5 Pressing ESC button will exit settings mode.
- ❉ After setup, it automatically gets out of setup mode if there is no button input for 25 seconds.
- ❉ When exiting without pressing set button, the manipulated value is not reflected.

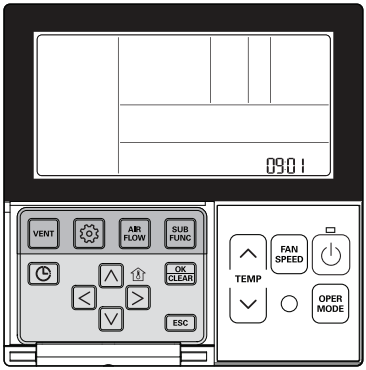
Remote controller	Function
Master	Indoor unit operates based on master remote controller at group control. (Master is set when delivering from the warehouse.)
Slave	Setup all remote controllers except one master remote controller to slave at group control

* Refer to the 'group control' part for details.

- When controlling in groups, basic operation settings, airflow strength weak/medium/strong, lock setting of the remote controller, time settings, and other functions may be restricted.

Installer Setting-Dry Contact Mode Setting

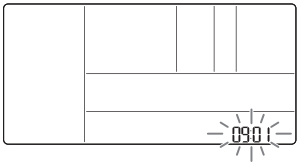
Dry contact function is the function that is possible to use only when dry contact equipment is separately purchased/setup.



1 If pressing ⚙ button long for 3 seconds, it enters into remote controller setter setup mode.
- If pressing once shortly, it enters into user setup mode. Please press more than 3 seconds for sure.



2 If pressing ⚙ button repeatedly, it moves to remote controller dry contact mode setup menu as picture below.



3 Select Dry contact setting by pressing ^ v button.
(00 : Automatic, 01 : manual)



4 Press OK CLEAR button to save.



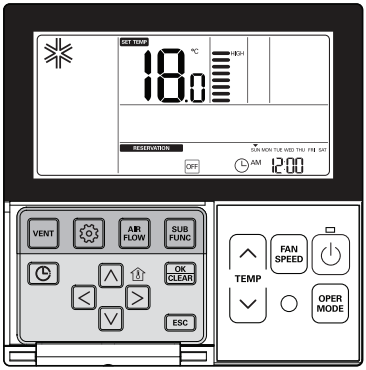
5 Pressing ESC button will exit settings mode.
- ❊ After setup, it automatically gets out of setup mode if there is no button input for 25 seconds.
- ❊ When exiting without pressing set button, the manipulated value is not reflected.

What is Dry Contact?
Like hotel card key and body perception sensor, it is the signal of the point of contact when using air-conditioner by interlocking.

- Please refer to dry contact manual for more details.

Installer Setting-Celsius / Fahrenheit Switching

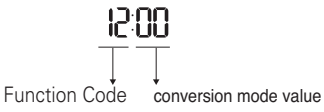
This function is used for switching the display between Celsius and Fahrenheit.
(Optimized only for U.S.A)



1 If pressing ⚙ button long for 3 seconds, it enters into remote controller setter setup mode.
- If pressing once shortly, it enters into user setup mode.
  Please press more than 3 seconds for sure.



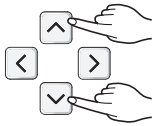
2 Repeat pressing ⚙ button to select Function code 12.



Ex) Fahrengeit Setting

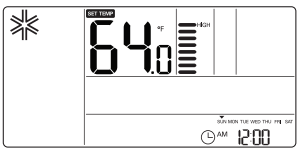
3 Select Temperature unit mode by pressing ^ v button.
(00: Celsius, 01: Fahrenheit)





4 Press OK CLEAR button to save or release.







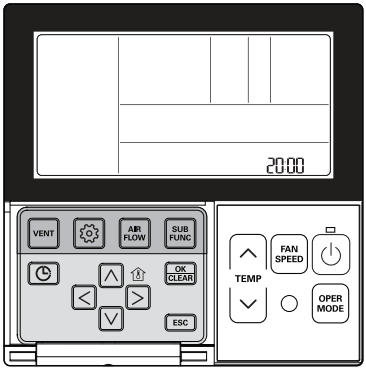
5 Press ESC button to exit or system will automatically exit after 25 seconds without any input.



❋ Whenever press ^ v button in Fahrenheit mode, the temperature will increase/drop 2 degrees.

Installer Setting -Optional Function Setting

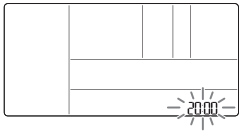
Setting feature for indoor unit when air cleaning / heater / humidifier / Up/down grill / Ventilation KIT / Auxiliary Heater is newly installed, or installed unit is removed.



1 If pressing ⚙ button long for 3 seconds, it enters into remote controller setter setup mode.
- If pressing once shortly, it enters into user setup mode. Please press more than 3 seconds for sure.

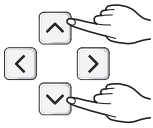


2 If pressing ⚙ button repeatedly, it moves to the selected option function code as picture below.



Function	Code
Plasma purification	20
Electric heater	21
Dehumidifier	22
Elevation grill	23
Ventilation kit	24
Auxiliary heater	25

3 Select existing condition of each mode by pressing ∧ ∨ button.
(00: not installed,
01 : installed)



20:00
Function Code Existing condition

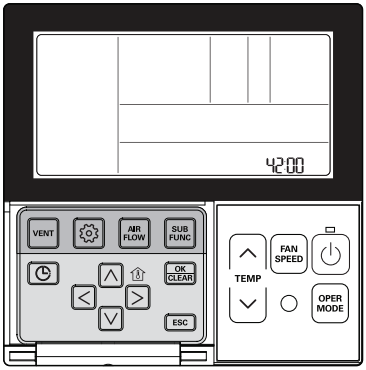
4 Press OK CLEAR button to save.



5 Pressing ESC button will exit settings mode.
- ❉ After setup, it automatically gets out of setup mode if there is no button input for 25 seconds.
- ❉ When exiting without pressing set button, the manipulated value is not reflected.

Installer Setting - Remote controller Mode Lock

This function is used to limit 'operation-mode' selection setting.



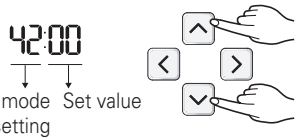
1 Press and hold ⚙ button for more than 3 seconds to enter the installer settings mode.



2 Move to the installer code number 42 in the menu using ⚙ button.



3 Select the remote control master/slave using ∧ ∨ button.



code	Description
42:00	Doesn't limit operation mode setting.
42:01	User can setting to cooling mode only.
42:02	User can setting to heating mode only.

4 Press OK CLEAR button to save the setting.

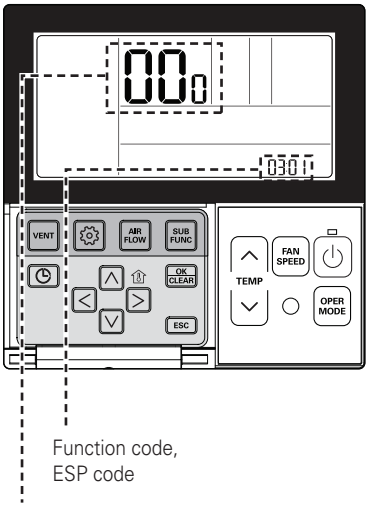
5 Press ESC button to exit.

✻ It can limit only wired remote controller button. other controllers can change operation mode. (for example wireless remote controller and central controller)

HOW TO SET E.S.P?

This is the function that decides the strength of the wind for each wind level and because this function is to make the installation easier.

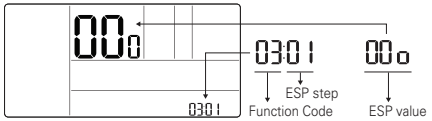
- If you set ESP incorrectly, the air conditioner may malfunction.
- This setting must be carried out by a certificated-technician.



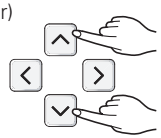
1 If pressing button long for 3 seconds, it enters into remote controller setter setup mode.
- If pressing once shortly, it enters into user setup mode. Please press more than 3 seconds for sure.



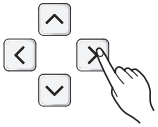
2 If entering into ESP setup mode by using button, it indicates as the picture below.



3 Select ESP fan step by pressing button. (01: very low, 02: low, 03: medium, 04: high, 05: power)

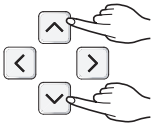


4 Move to ESP value setting by pressing button.
(It is 000 when delivering from the warehouse.)

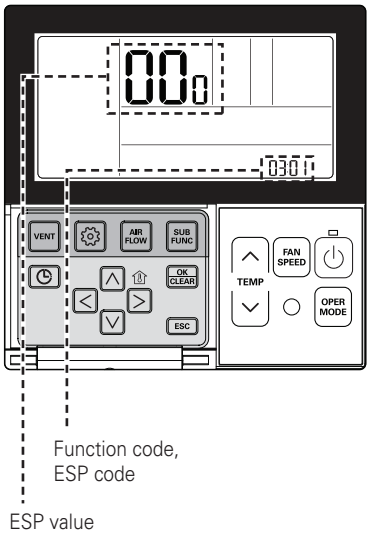


5 Press button to setup ESP value.

(It is possible to setup ESP value from 1 to 255, and 1 is the smallest and 255 is the biggest.)



- When setting ESP value on the product without very weak wind or power wind function, it may not work.



6 Select ESP fan step again by using < > button and setup ESP value, as No. 4 and 5, that corresponds each wind flow

7 Press OK CLEAR button to save.



8 Press ESC button to exit.

❉ After setup, it automatically gets out of setup mode if there is no button input for 25 seconds.

❉ When exiting without pressing set button, the manipulated value is not reflected.

- Please be careful not to change the ESP value for each fan step.
- It does not work to setup ESP value for very low/power step for some products.
- ESP value is available for specific range belongs to the product.


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