ENGLISH

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 CONCEALED DUCT
B62AWYN9L6 / B62AWYU7L6
B70AWYN9L6 / B70AWYU7L6
Original instruction

MFL41755815
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ENGLISH

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INTRODUCTION

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

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.
- Installation of all field wiring and components MUST conform with local building codes.
- 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.
- 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 use of the appliance by a person responsible for their safety.

Installation

- Do not use a defective or underrated circuit breaker. Use this appliance on a dedicated circuit.
  - There is risk of fire or electric shock.
- For electrical work, contact the dealer, seller, a qualified electrician, or an Authorized Service Center.
  - Do not disassemble or repair the product. There is risk of fire or electric shock.
- Always ground the product.
  - There is risk of fire or electric shock.
- Install the panel and the cover of control box securely.
  - There is risk of fire or electric shock.
- Always install a dedicated circuit and breaker.
  - Improper wiring or installation may cause fire or electric shock.
- Use the correctly rated breaker or fuse.
  - There is risk of fire or electric shock.
- Do not modify or extend the power cable.
  - There is risk of fire or electric shock.
- Do not let the air conditioner run for a long time when the humidity is very high and a door or a window is left open.
  - Moisture may condense and wet or damage furniture.
- Be cautious when unpacking and installing the product.
  - Sharp edges could cause injury. Be especially careful of the case edges and the fins on the condenser and evaporator.
- For installation, always contact the dealer or an Authorized Service Center.
  - There is risk of fire, electric shock, explosion, or injury.
- Do not install the product on a defective installation stand.
  - It may cause injury, accident, or damage to the product.
- Be sure the installation area does not deteriorate with age.
  - If the base collapses, the air conditioner could fall with it, causing property damage, product failure, and personal injury.

- 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.

Operation

- Take care to ensure that power cable could not be pulled out or damaged during operation. There is risk of fire or electric shock.
- Do not place anything on the power cable. There is risk of fire or electric shock.
- Do not plug or unplug the power supply plug during operation. There is risk of fire or electric shock.
- Do not touch(operate) the product with wet hands. There is risk of fire or electrical shock.
- Do not place a heater or other appliances near the power cable. There is risk of fire and electric shock.
- Do not allow water to run into electric parts. There is risk of fire, failure of the product, or electric shock.
- Do not store or use flammable gas or combustibles near the product. There is risk of fire or failure of product.
- Do not use the product in a tightly closed space for a long time. Oxygen deficiency could occur.
- When flammable gas leaks, turn off the gas and open a window for ventilation before turn the product on. Do not use the telephone or turn switches on or off. There is risk of explosion or fire
- If strange sounds, or smell or smoke comes from product. Turn the breaker off or disconnect the power supply cable. There is risk of electric shock or fire.
- Stop operation and close the window in storm or hurricane. If possible, remove the product from the window before the hurricane arrives. There is risk of property damage, failure of product, or electric shock.
- Do not open the inlet grill of the product during operation.(Do not touch the electrostatic filter, if the unit is so equipped.) There is risk of physical injury, electric shock, or product failure.
- When the product is soaked (flooded or submerged), contact an Authorized Service Center. There is risk of fire or electric shock.
- Be cautious that water could not enter the product. There is risk of fire, electric shock, or product damage.
- Ventilate the product from time to time when operating it together with a stove, etc. There is risk of fire or electric shock.
- Turn the main power off when cleaning or maintaining the product. There is risk of electric shock.
- When the product is not be used for a long time, disconnect the power supply plug or turn off the breaker. There is risk of product damage or failure, or unintended operation.
- Take care to ensure that nobody could step on or fall onto the outdoor unit. This could result in personal injury and product damage.

- 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.
- The sound pressure of this product is below 70 dB.
- The noise level can vary depending on the site.

⚠ CAUTION

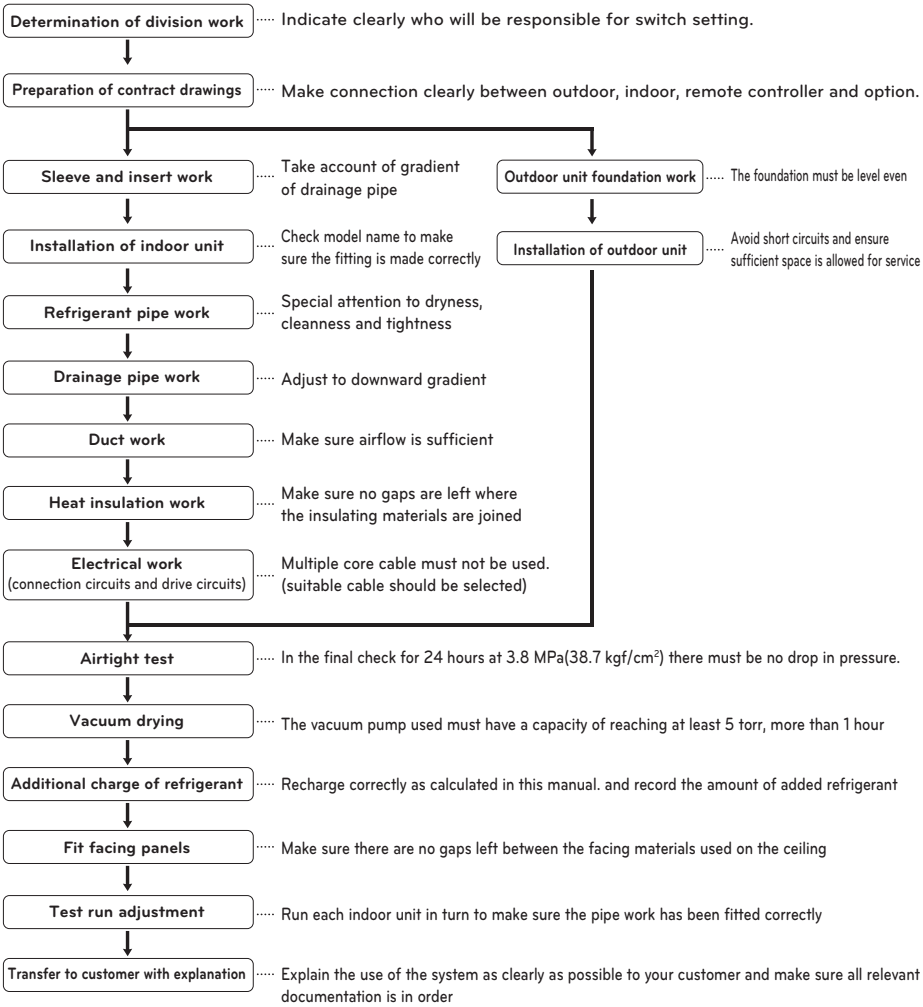
Installation

- Always check for gas (refrigerant) leakage after installation or repair of product. Low refrigerant levels may cause failure of product.
- Install the drain hose to ensure that water is drained away properly. A bad connection may cause water leakage.
- Keep level even when installing the product. To avoid vibration or water leakage.
- Do not install the product where the noise or hot air from the outdoor unit could damage the neighborhoods. It may cause a problem for your neighbors.
- Use two or more people to lift and transport the product. Avoid personal injury.
- Do not install the product where it will be exposed to sea wind (salt spray) directly. It may cause corrosion on the product. Corrosion, particularly on the condenser and evaporator fins, could cause product malfunction or inefficient operation.
- (Australia only) This product must be installed by a professional installer.
- After the installation of the product in the customer premises, fully remove all product packaging (including any expanded or moulded plastic packaging materials) and recycle or dispose of such packaging responsibly. Do not dispose any expanded plastic packaging in the household bin.

Operation

- Do not expose the skin directly to cool air for long periods of time. (Don't sit in the draft.) This could harm to your health.
- Do not use the product for special purposes, such as preserving foods, works of art, etc. It is a consumer air conditioner, not a precision refrigeration system. There is risk of damage or loss of property.
- Do not block the inlet or outlet of air flow. It may cause product failure.
- Use a soft cloth to clean. Do not use harsh detergents, solvents, etc. There is risk of fire, electric shock, or damage to the plastic parts of the product.
- Do not touch the metal parts of the product when removing the air filter. They are very sharp! There is risk of personal injury.
- Do not step on or put anything on the product. (outdoor units) There is risk of personal injury and failure of product.
- Always insert the filter securely. Clean the filter every two weeks or more often if necessary. A dirty filter reduces the efficiency of the air conditioner and could cause product malfunction or damage.
- Do not insert hands or other objects through the air inlet or outlet while the product is operated. There are sharp and moving parts that could cause personal injury.
- Do not drink the water drained from the product. It is not sanitary and could cause serious health issues.
- Use a firm stool or ladder when cleaning or maintaining the product. Be careful and avoid personal injury.
- Replace the all batteries in the remote control with new ones of the same type. Do not mix old and new batteries or different types of batteries. There is risk of fire or explosion
- Do not recharge or disassemble the batteries. Do not dispose of batteries in a fire. They may burn or explode.
- If the liquid from the batteries gets onto your skin or clothes, wash it well with clean water. Do not use the remote if the batteries have leaked. The chemicals in batteries could cause burns or other health hazards.
- If you eat the liquid from the batteries, brush your teeth and see doctor. Do not use the remote if the batteries have leaked. The chemicals in batteries could cause burns or other health hazards.
- Means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.

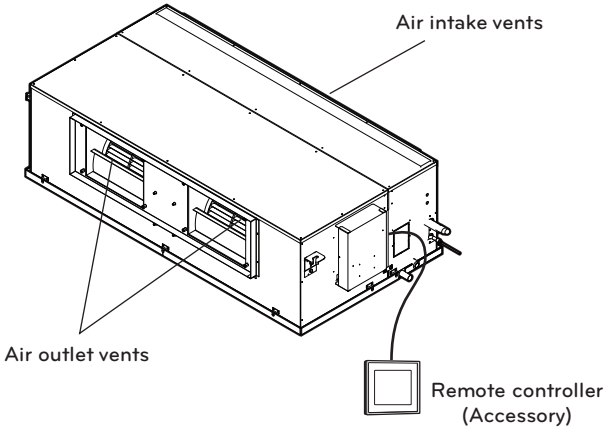
Installation process

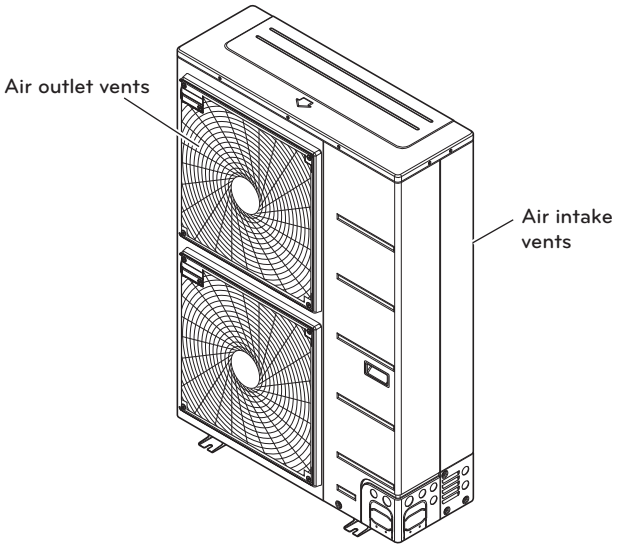


⚠ CAUTION

- The above list indicates the order in which the individual work operations are normally carried out but this order may be varied where local conditions warrants such change.
- The wall thickness of the pipe should comply with the relevant local and national regulations for the designed pressure 3.8 MPa.
- Since R-410A is a mixed refrigerant, the required additional refrigerant must be charged in its liquid state.(If the refrigerant is charged in its gaseous state, its composition changes and the system will not work properly.)

Features


Air intake vents
Air outlet vents
Remote controller
(Accessory)


Air outlet vents
Air intake
vents

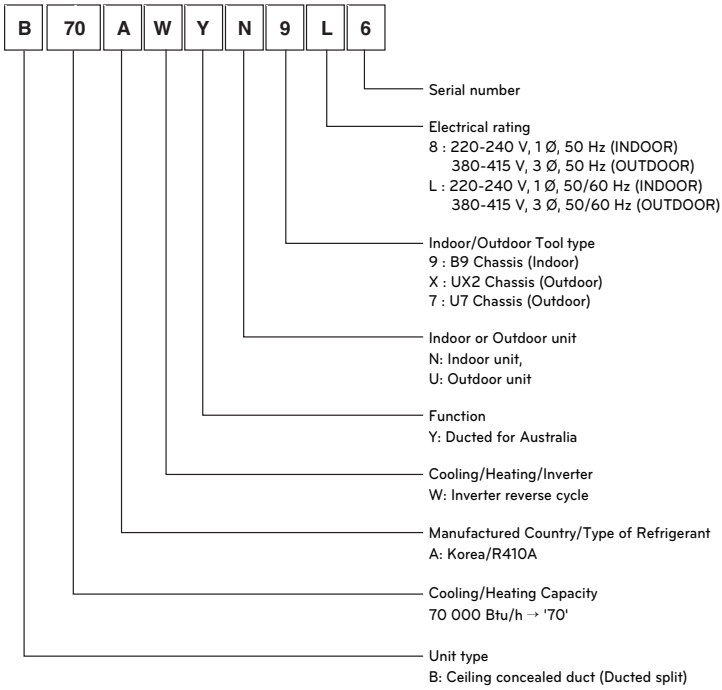
Environment-friendly alternative refrigerant R-410A

- The refrigerant R-410A has the property of higher operating pressure in comparison with R22.
  Therefore, all materials have the characteristics of higher resisting pressure than R22 ones and this characteristic should be also considered during the installation.
  R-410A is an azeotrope of R32 and R125 mixed at 50:50, so the ozone depletion potential (ODP) of R-410A is 0. These days the developed countries have approved it as the environment-friendly refrigerant and encouraged to use it widely to prevent environment pollution.

⚠ CAUTION

- The wall thickness of the pipe should comply with the relevant local and national regulations for the designed pressure 3.8 MPa
- Since R-410A is a mixed refrigerant, the required additional refrigerant must be charged in its liquid state.
  If the refrigerant is charged in its gaseous state, its composition changes and the system will not work properly.
- Do not place the refrigerant container under the direct rays of the sun to prevent it from exploding.
- For high-pressure refrigerant, any unapproved pipe must not be used.
- Do not heat pipes more than necessary to prevent them from softening.
- Be careful not to install wrongly to minimize economic loss because it is expensive in comparison with R22.

Nomenclature



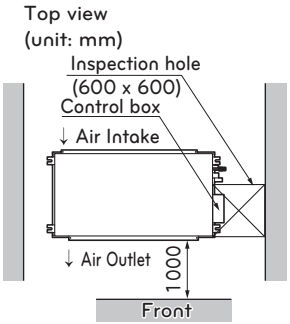
INSTALLATION PLACE

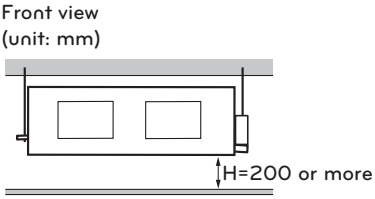
Select space for installing outdoor unit, which will meet the following conditions:

- No direct thermal radiation from other heat sources
- No possibility of annoying neighbors by noise from unit
- No exposition to strong wind
- With strength which bears weight of unit
- Note that drain flows out of unit when heating
- With space for air passage and service work shown next
- Because of the possibility of fire, do not install unit to the space where generation, inflow, stagnation, and leakage of combustible gas is expected.
- Avoid unit installation in a place where acidic solution and spray (sulfur) are often used.
- Do not use unit under any special environment where oil, steam and sulfuric gas exist.
- It is recommended to fence round the outdoor unit in order to prevent any person or animal from accessing the outdoor unit.
- If installation site is area of heavy snowfall, then the following directions should be observed.
  - Make the foundation as high as possible.
  - Fit a snow protection hood.
- Select installation location considering following conditions to avoid bad condition when additionally performing defrost operation.
  - Install the outdoor unit at a place well ventilated and having a lot of sunshine in case of installing the product at a place With a high humidity in winter (near beach, coast, lake, etc.)
    (Ex : Rooftop where there is always sunshine.)

Indoor unit installation place

- The place shall easily bear a load exceeding four times the indoor unit's weight.
- The place shall be able to inspect the unit.
- The place where the unit shall be leveled.
- The place shall allow easy water drainage.
- The place shall easily connect with the outdoor unit.
- The place where the unit is not affected by an electrical noise.
- The place where air circulation in the room will be good .
- There should not be any heat source or steam near the unit

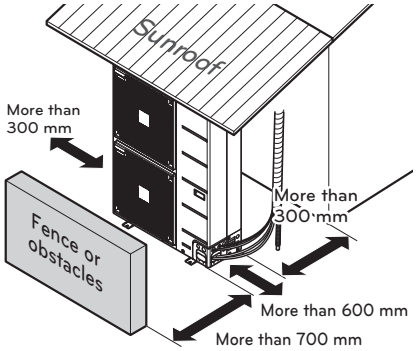




* Suitable dimension "H" is necessary to get a slope to drain.

Outdoor unit installation place

- If an awning is built over the unit to prevent direct sunlight or rain exposure, make sure that heat radiation from the condenser is not restricted.
- Ensure that the spaces indicated by arrows around front, back and side of the unit.
- Do not place animals and plants in the path of the warm air.
- Take the air conditioner weight into account and select a place where noise and vibration are minimum.
- Select a place so that the warm air and noise from the air conditioner do not disturb neighbors.



Unit : mm

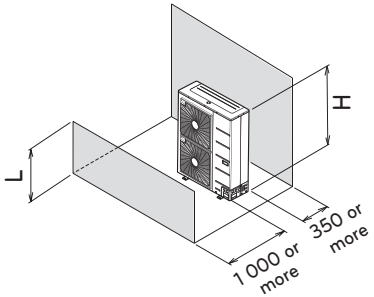
- Place that can sufficiently endure the weight and vibration of the outdoor unit and where even installation is possible.
- Place that has no direct influence of snow or rain
- Place with no danger of snowfall or icicle drop
- Place without weak floor or base such as decrepit part of the building or with a lot of snow accumulation
- Install at a place with fluent water draining to prevent damage from localized heavy rain and avoid frequent flooded area.

Obstacle height of discharge side is lower than the unit

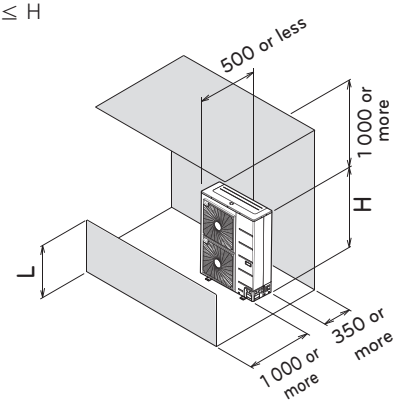
1. Stand alone installation

[Unit:mm]

L ≤ H

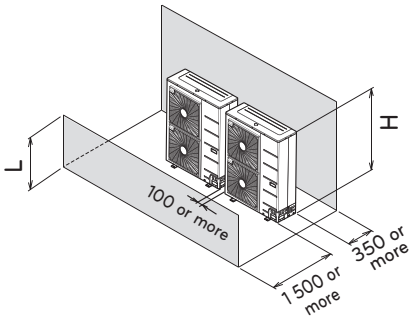


L ≤ H

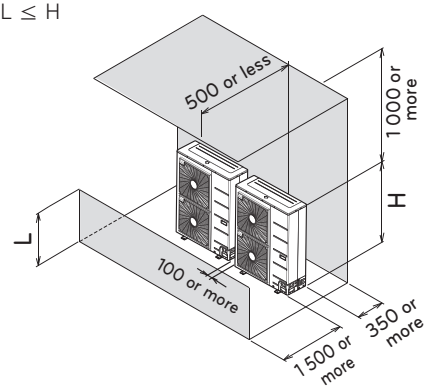


2. Collective installation

L ≤ H



L ≤ H



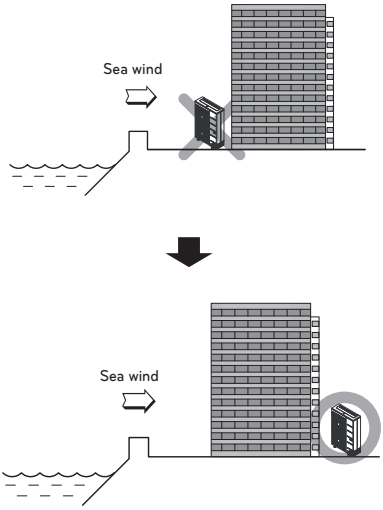
Installation guide at the seaside

⚠ CAUTION

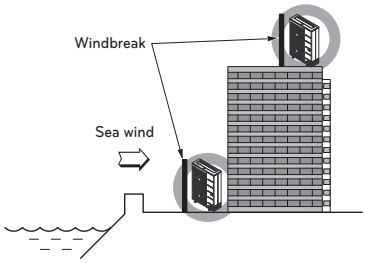
- Air conditioners should not be installed in areas where corrosive gases, such as acid or alkaline gas, are produced.
- Do not install the product where it could be exposed to sea wind (salty wind) directly. It can result corrosion on the product. Corrosion, particularly on the condenser and evaporator fins, could cause product malfunction or inefficient performance.
- If outdoor unit is installed close to the seaside, it should avoid direct exposure to the sea wind. Otherwise it needs additional anticorrosion treatment on the heat exchanger.

Selecting the location(Outdoor Unit)

If the outdoor unit is to be installed close to the seaside, direct exposure to the sea wind should be avoided. Install the outdoor unit on the opposite side of the sea wind direction.



In case, to install the outdoor unit on the seaside, set up a windbreak not to be exposed to the sea wind.



- It should be strong enough like concrete to prevent the sea wind from the sea.
- The height and width should be more than 150 % of the outdoor unit.
- It should be keep more than 70 cm of space between outdoor unit and the windbreak for easy air flow.

Place with fluent water draining

- Install at a place with fluent water draining to prevent damage from localized heavy rain and avoid frequent flooded area.

- If you can't meet above guide line in the seaside installation, please contact LG Electronics for the additional anticorrosion treatment.
- Periodic (more than once/year) cleaning of the dust or salt particles stuck on the heat exchanger by using water

PRODUCT INSTALLATION

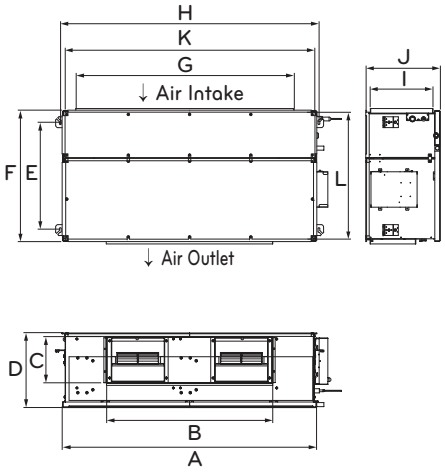
Indoor unit installation

Case1

Position of suspension Bolt

- Apply a joint-canvas between the unit and duct to absorb unnecessary vibration.
- Apply a filter Accessory at air return hole.

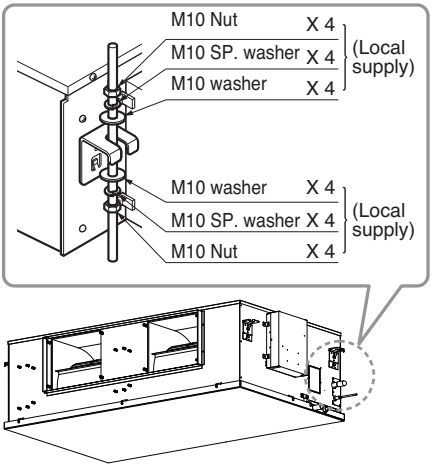
Dimension / Capacity (kBtu/h)	A	B	C	D	E	F	G	H	I	J	K	L
62 / 70	1 594	1 044	286	464	657	821	1 368	1 622	392	458	1 563	791



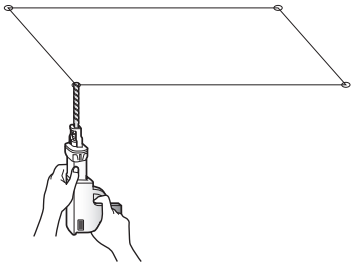
Case2

Position of Console Bolt

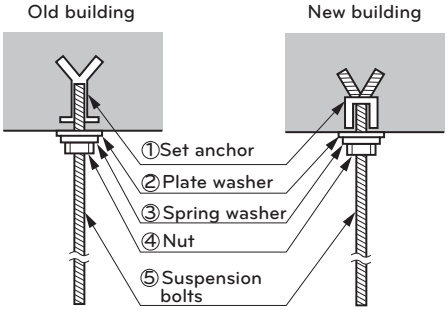
- A place where the unit will be leveled and that can support the weight of the unit.
- A place where the unit can withstand its vibration.
- A place where service can be easily performed.

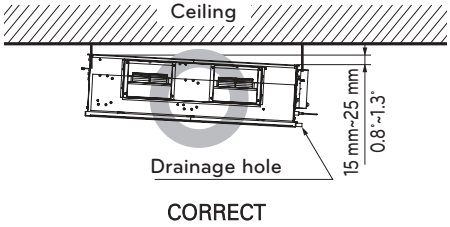


- Select and mark the position for fixing bolts.
- Drill the hole for set anchor on the face of ceiling.

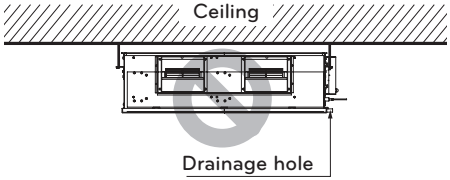


- Insert the set anchor and washer onto the suspension bolts for locking the suspension bolts on the ceiling.
- Mount the suspension bolts to the set anchor firmly.
- Secure the installation plates onto the suspension bolts (adjust level roughly) using nuts, washers and spring washers.

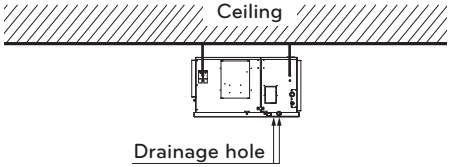




CORRECT



INCORRECT



• Local supply
  ① Set anchor
  ② Plate washer - M10
  ③ Spring washer - M10
  ④ Nut - W3/8 or M10
  ⑤ Suspension bolt - W3/8 or M10

⚠ CAUTION

Tighten the nut and bolt to prevent unit falling.

⚠ CAUTION

Install declination of the indoor unit is very important for the drain of the duct type air conditioner. Always lay the indoor unit with downward inclination (0.8˚ to 1.3˚). Prevent any upward flow or reverse flow in any part.

Separating work of the indoor unit (if required)

To install the indoor unit, it can be easily separated into 2 sections by making it lighter to carry and easier to maneuver through openings and in the ceiling.

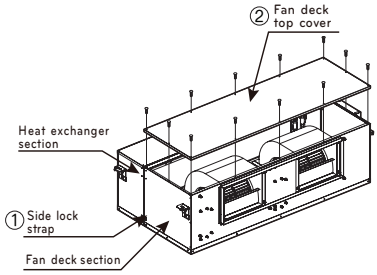
⚠ CAUTION

Please separate the indoor unit only when necessary. Please disassemble and reassemble on a flat surface.

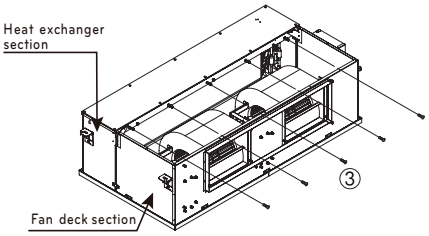
The method to separate the indoor unit is as follows.

① Remove the two side lock straps.

② Unscrew the top cover of the fan deck section.

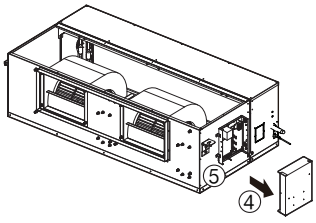


③ Unscrew the five bolts securing the two sections.

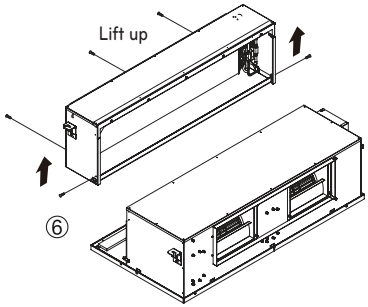


④ Remove the control box cover and unplug the air and two heat exchanger thermistors also unplug expansion valve cable.

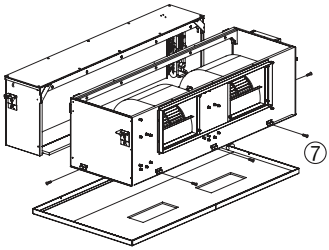
⑤ Carefully un-clip the three thermistor leads and push the leads through the back of the electrical box.



⑥ Unscrew 5 screws and separate the heat exchanger section from unit. Carefully unlatch the heat exchanger section from the fan deck section by lifting up the heat exchanger section and then pulling away. Ensure that the thermistor or expansion valve motor cables do not catch on either section as the unit is separated.

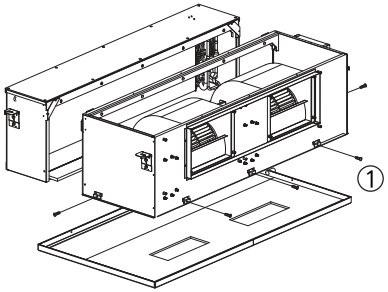


⑦ Unscrew the 5 screws and separate the fan deck section from sub drain pan



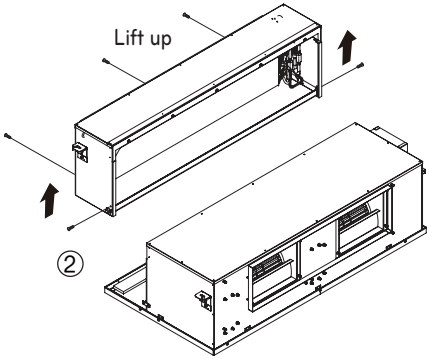
The method to rejoin the indoor unit is as follows.

① Sub drain pan and the fan deck section together with the 5 screws.

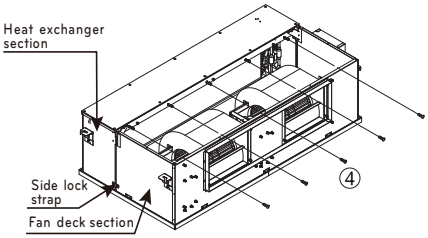


② Carefully align the heat exchanger section and fan deck section.

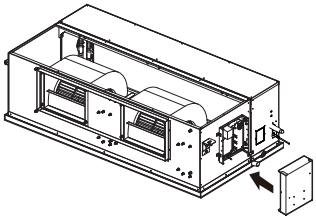
③ Lift the heat exchanger section about 50 mm, push it forward and then back down And screw the 5 screws the heat exchanger section with unit.



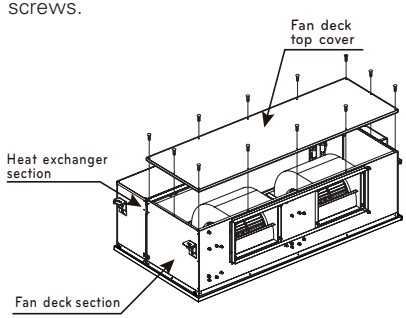
④ Secure the two sections together with the 5 bolts. Re-attach the side lock strap.



⑤ Re-connect the unplugged cables. Reassemble the control box cover.



⑥ Carefully replace the fan deck section top cover and secure the cover with the screws.



⚠ CAUTION

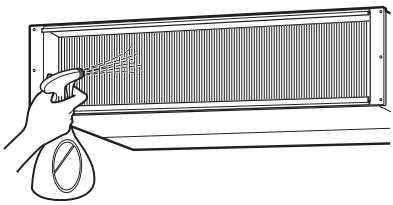
Please be sure to secure two section with 5 screws. if one of screw is missing, it could cause unbalance of product or capacity degradation.

Checking the Drainage

Checking the Drainage

* Check the drainage.

- Spray one or two glasses of water upon the evaporator.
- Ensure that water flows drainage hose of indoor unit without any leakage.

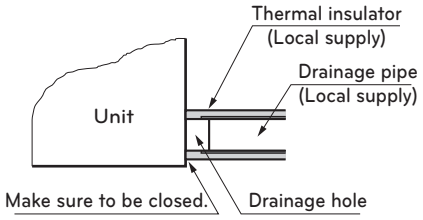


Caution for gradient of unit and drainage pipe

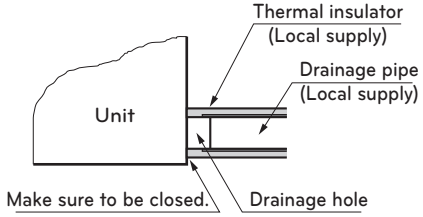
Lay the drainage pipe hose with a downward inclination so water will drain out.

Main drain

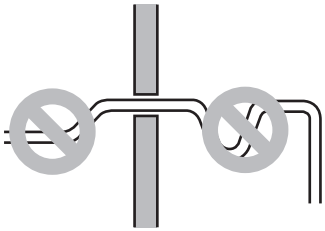
- Always lay the drainage with downward inclination (0.8° to 1.3°).
  Prevent any upward flow or reverse flow in any part.
- 10 mm or thicker formed thermal insulator shall always be provided for the drainage pipe.



- Install the P-Trap (or U-Trap) to prevent a water leakage caused by the blocking of intake air filter.

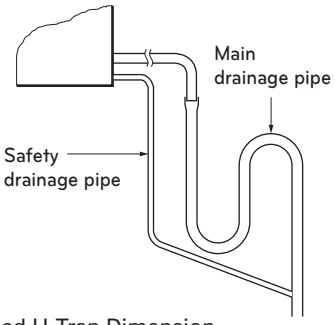


- Upward routing not allowed

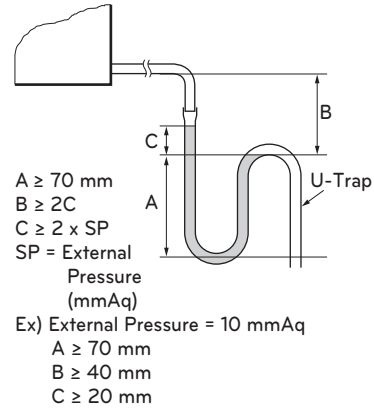


Safety drainage

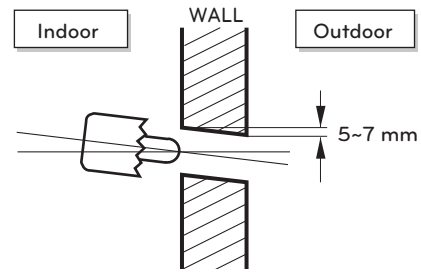
- There is no need to provide a trap for the safety drainage. If the safety drainage pipe is connected to the main drainage pipe, make the connection below the trap on the main drainage pipe.



Applied U-Trap Dimension

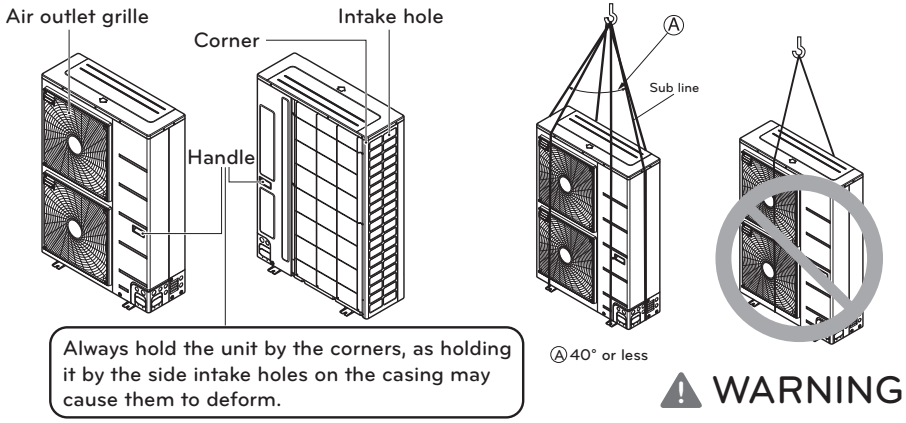


- Drill the pipe hole with 65 mm dia, hole core drill.
- Pipe hole should be slightly slant to the outdoor side.



Lifting method of the outdoor unit

- When carrying the suspended, unit pass the ropes between legs of base panel under the unit.
- Always lift the unit with ropes attached at four points so that impact is not applied to the unit.
- Attach the ropes to the unit at an angle of 40° or less.
- Use only accessories and parts which are of the designated specification when installing.



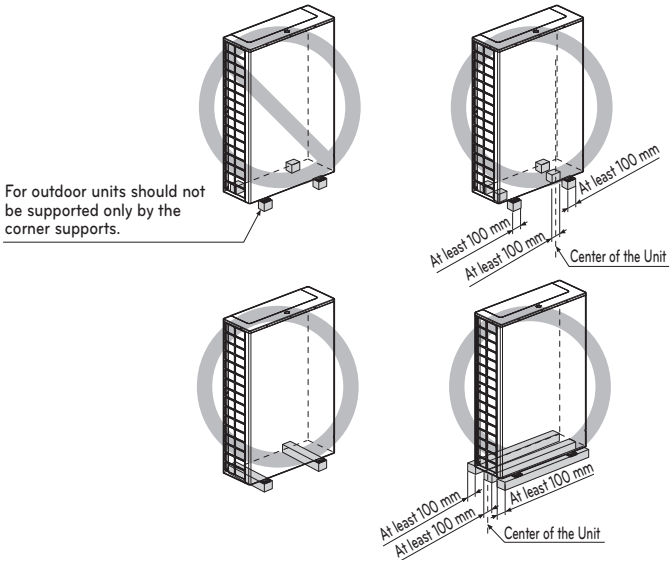
CAUTION

Be very careful while carrying the product.

- Do not have only one person carry product if it is more than 20 kg.
- PP bands are used to pack some products. Do not use them as a mean for transportation because they are dangerous.
- Do not touch heat exchanger fins with your bare hands. Otherwise you may get a cut in your hands.
- Tear plastic packaging bag and scrap it so that children cannot play with it. Otherwise plastic packaging bag may suffocate children to death.
- When carrying in Outdoor Unit, be sure to support it at four points. Carrying in and lifting with 3-point support may make Outdoor Unit unstable, resulting in a fall.
- Use 2 belts of at least 8 m long.
- Place extra cloth or boards in the locations where the casing comes in contact with the sling to prevent damage.
- Hoist the unit making sure it is being lifted at its center of gravity.

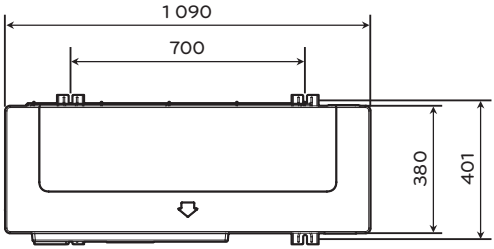
The outdoor unit installation

- Install at places where it can endure the weight and vibration/noise of the outdoor unit.
- The outdoor unit supports at the bottom shall have width of at least 100 mm under the Unit's legs before being fixed.
- The outdoor unit supports should have minimum height of 200 mm.
- Anchor bolts must be inserted at least 75 mm.



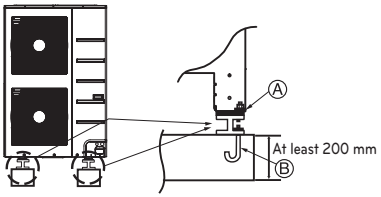
The location of the Anchor bolts

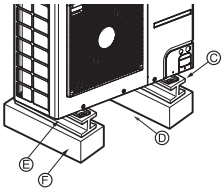
[Unit : mm]

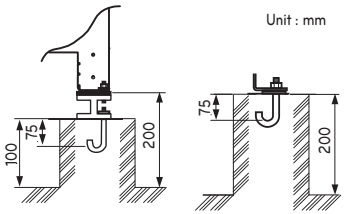


Foundation for outdoor unit Installation

- Fix the unit tightly with bolts as shown below so that unit will not fall down due to earthquake or gust.
- Use the H-beam support as a base support
- Noise and vibration may occur from the floor or wall since vibration is transferred through the installation part depending on installation status. Thus, use anti-vibration materials (cushion pad) fully (The base pad shall be more than 200 mm).







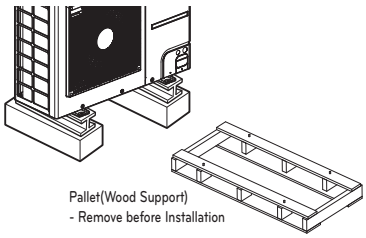
Ⓐ The corner part must be fixed firmly. Otherwise, the support for the installation may be bent.
Ⓑ Get and use M10 Anchor bolt.
Ⓒ Put Cushion Pad between the outdoor unit and ground support for the vibration protection in wide area.
Ⓓ Space for pipes and wiring (Pipes and wirings for bottom side)
Ⓔ H-beam support
Ⓕ Concrete support

⚠ WARNING

- Install where it can sufficiently support the weight of the outdoor unit.
  If the support strength is not enough, the outdoor unit may drop and hurt people.
- Install where the outdoor unit may not fall in strong wind or earthquake.
  If there is a fault in the supporting conditions, the outdoor unit may fall and hurt people.
- Please take extra cautions on the supporting strength of the ground, water outlet treatment(treatment of the water flowing out of the outdoor unit in operation), and the passages of the pipe and wiring, when making the ground support.
- Do not use tube or pipe for water outlet in the Base pan. Use drainage instead for water outlet. The tube or pipe may freeze and the water may not be drained.
- If it is installed at a place with a lot of snowfall, install with the frame and base height higher than the most extreme snowfall amount standard, and mount the snowfall hood (separately sold).

⚠ CAUTION

- Be sure to remove the Pallet(Wood Support) of the bottom side of the outdoor unit Base Pan before fixing the bolt. It may cause the unstable state of the outdoor settlement, and may cause freezing of the heat exchanger resulting in abnormal operations.
- Be sure to remove the Pallet(Wood Support) of the bottom side of the outdoor unit before welding. Not removing Pallet(Wood Support) causes hazard of fire during welding.



PIPE CONNECTION

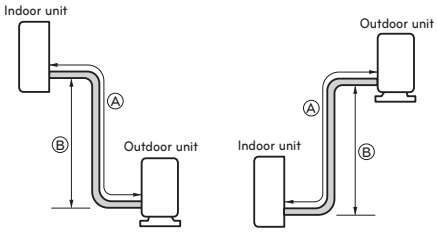
Pipe length and the elevation

• Single Operation

Model	Pipe Size mm(inch)		Length A(m)		Elevation B(m)		Additional refrigerant (g/m)
	Gas	Liquid	Standard	Max.	Standard	Max.	
B62AWYU7L6 B70AWYU7L6	Ø 22.2(7/8)	Ø 12.7(1/2)	15	75	5	30	70

If installed tube is shorter than 15 m, additional charging is not necessary.

Additional Refrigerant
= (A-15) x Additional refrigerant (g)



⚠ WARNING

• Regulation for refrigerant leakage
: the amount of refrigerant leakage should satisfy the following equation for human safety.

$$\frac{\text{Total amount of refrigerant in the system}}{\text{Volume of the room at which Indoor Unit of the least capacity is installed}} \leq 0.44 \text{ (kg / m}^3\text{)}$$

If the above equation can not be satisfied, then follow the following steps.

• Selection of air conditioning system: select one of the next
- Installation of effective opening part
- Reconfirmation of Outdoor Unit capacity and piping length
- Reduction of the amount of refrigerant
- Installation of 2 or more security device (alarm for gas leakage)

• Change Indoor Unit type
: installation position should be over 2 m from the floor (Wall mounted type ⟶ Cassette type)

• Adoption of ventilation system
: choose ordinary ventilation system or building ventilation system

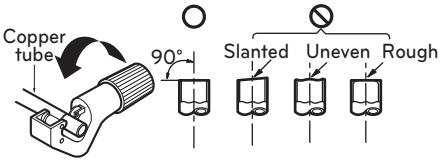
• Limitation in piping work
: Prepare for earthquake and thermal stress

Preparation of Pipe

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

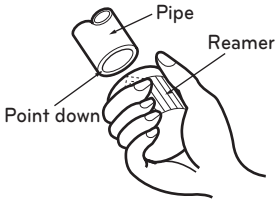
Cut the pipes and the cable.

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



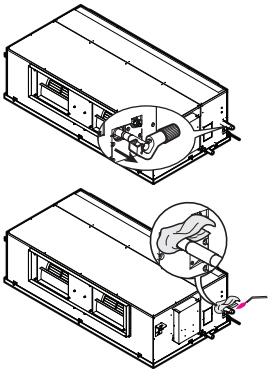
Burrs removal

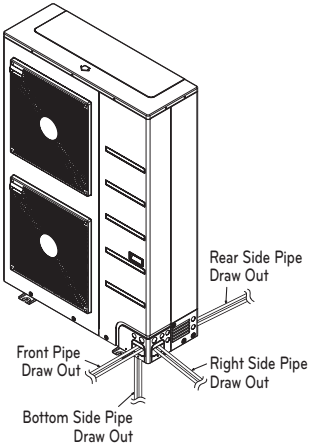
- Completely remove all burrs from the cut cross section of pipe.
- Put the end of the copper pipe to downward direction as you remove burrs in order to avoid to let burrs drop in the pipe.

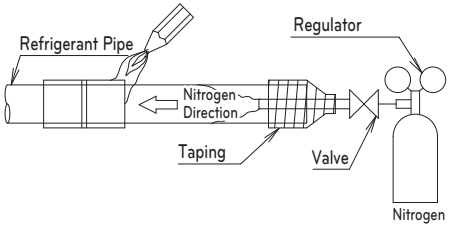


Welding

- Pipe connections can be done on the front side or on the side according to the installation environments.
- Be sure to let 0.2 kgf/cm^2 Nitrogen flow in the pipe when welding.
- If Nitrogen was not flown during welding, many oxidized membranes may form inside the pipe and disturb the normal operations of valves and condensers.

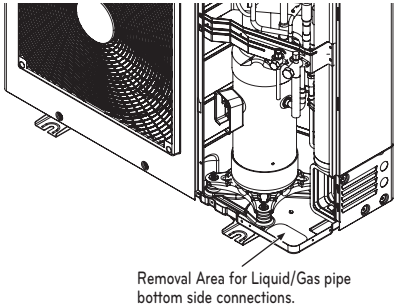


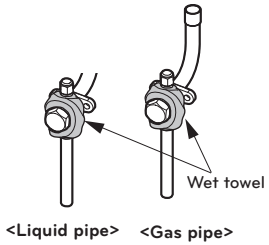




Preparation Work

- Use Knock Outs of Base Pan of the outdoor unit for Left/Right or Bottom pipe drawing outs.





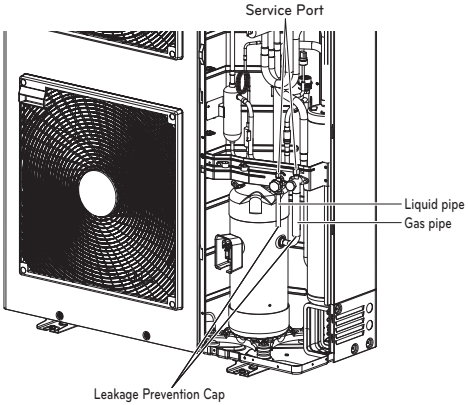
※ Pictures may differ depending on the model.

⚠ CAUTION

- Do not give damage to the pipe/base during the Knock Out work.
- Proceed to pipe work after removing burr after Knock Out work.
- Perform sleeve work to prevent damage to the wire when connecting wires using knock Outs.
- Take care so that there is no thermal damage on the service valves of the outdoor unit. (Especially packing part of service port.) Wrap the service valve with a wet towel when brazing it as shown figure above.

Remove leakage prevention cap

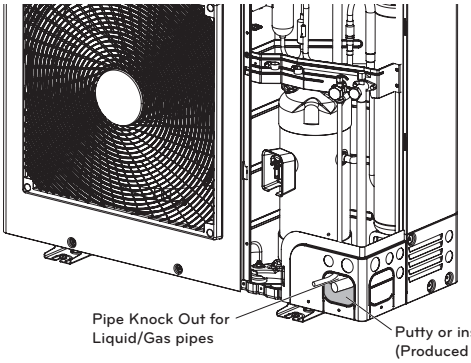
- Remove the leakage prevention cap attached to the outdoor unit service valve before pipe work.
- Proceed the leakage prevention cap removal as follows:
  - Verify whether the liquid/gas pipes are locked.
  - Extract remaining refrigerant or air inside using the service port.
  - Remove the leakage prevention cap



Pipe Drawing Out

Method of drawing out pipes on the front side and right side

- Proceed with the pipe work as shown in the below figure for front side and right side pipe drawing out.



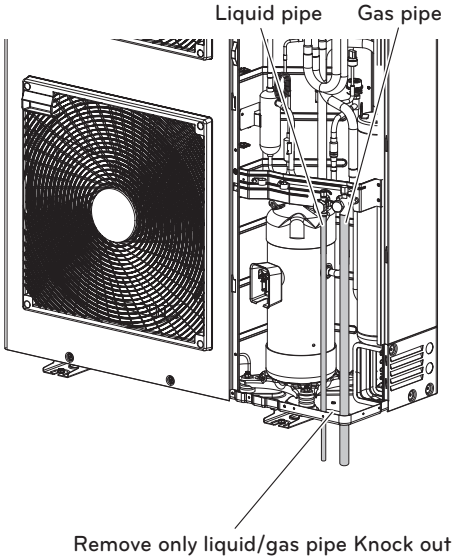
Preventing foreign objects form entering

- Plug the pipe through-holes with putty or insulation material(procured locally)to stop up all gaps,as shown in the figure.
- Insects or small animals entering the outdoor unit may cause a short circuit in the electrical box.

※ Pictures may differ depending on the model.

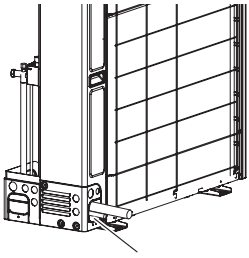
Method of drawing out pipes on the bottom side

- Drawing out common pipe through base panel



Method of drawing out pipes on the rear side

- Proceed with the pipe work as shown in the below figure for rear side pie drawing out.

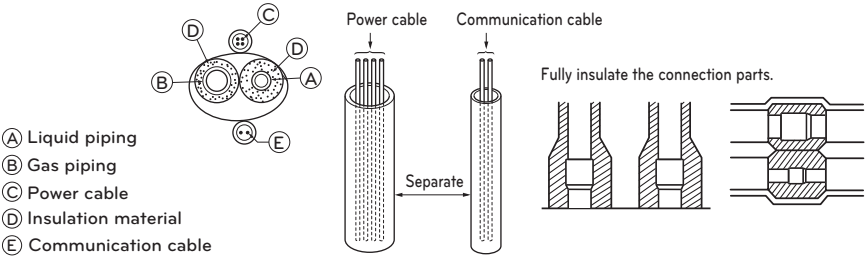


Pipe Knock Out for Liquid/Gas pipes

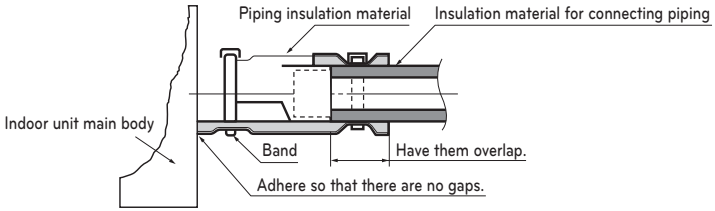
※ Pictures may differ depending on the model.

Thermal insulation of refrigerant pipe

- Loosen the flare nut of the indoor unit's piping connection port, insert it into the liquid pipe and the gas pipe, and then conduct flaring work on the ends of each pipe.
- Insulate each of the liquid pipes and gas pipes using insulation material for piping.



- Use the piping insulation included in the accessories to once again insulate the piping connection part of the gas pipe as shown below. (Piping insulation must be at least 19 mm thick)



Applies to	Insulation material standard (mm) (besides normal conditions for residential use)		Insulation material Standard (mm) - residential		Insulation material standard (mm) (unfavorable conditions)
			If installed in an air-conditioned place (CASE 1) (ex: bedroom, living room, etc.)	If installed in a non-air-conditioned place (CASE 2) (ex: hallway, outdoors, etc.)	
	Refrigerant piping dimensions (mm)	EPDM	EPDM	EPDM	EPDM
Gas piping	6.35	19	13	19	19
	9.52	19	13	19	25
	12.7	19	13	19	25
	15.88	19	13	19	25
	19.05	19	13	19	25
	22.22	19	13	19	32
	25.40	19	19	19	32
	28.58	19	19	19	32
	31.75	19	19	19	32
	38.1	25	19	25	32
	44.45	25	19	25	32
Liquid piping	6.35 9.52	9	9	9	9
	12.7~ 44.45	13	13	13	13

- Normal conditions: Temperature of 30 °C, relative humidity of 85 %
- Unfavorable conditions: Temperature of 30 °C, relative humidity of 90 % (humid places such as bathrooms, swimming pools, etc.: air supply and exhaust fan installation)

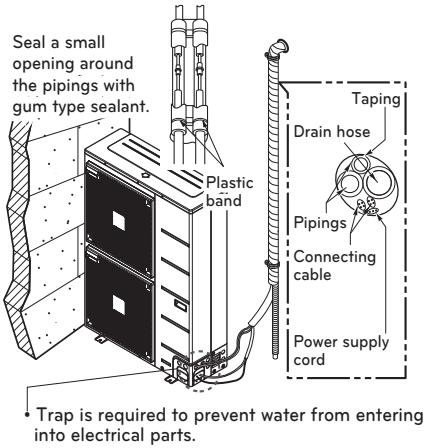
Forming the piping

Form the piping by wrapping the connecting portion of the indoor unit with insulation material and secure it with two kinds of vinyl tape.

- If you want to connect an additional drain hose, the end of the drain outlet should be routed above the ground. Secure the drain hose appropriately.

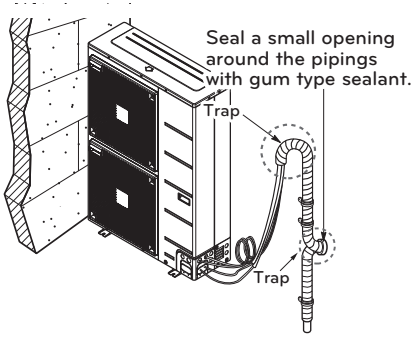
In cases where the outdoor unit is installed below the indoor unit perform the following.

- Tape the piping, drain hose and connecting cable from down to up.
- Secure the tapped piping along the exterior wall using saddle or equivalent.



In cases where the outdoor unit is installed above the indoor unit perform the following.

- Tape the piping and connecting cable from down to up.
- Secure the taped piping along the exterior wall. Form a trap to prevent water entering the room.
- Fix the piping onto the wall by saddle or equivalent.



LEAKAGE TEST AND EVACUATION

Air and moisture remaining in the refrigerant system have undesirable effects as indicated below.

- Pressure in the system rises.
- Operating current rises.
- Cooling(or heating) efficiency drops.
- Moisture in the refrigerant circuit may freeze and block capillary tubing.
- Water may lead to corrosion of parts in the refrigeration system.

Therefore, the indoor/outdoor unit and connecting tube must be checked for leak tight, and vacuumed to remove incondensible gas and moisture in the system.

Preparation

- Check that each tube(both liquid and gas side tubes) between the indoor and outdoor units have been properly connected and all wiring for the test run has been completed. Remove the service valve caps from both the gas and the liquid side on the outdoor unit. Check that both the liquid and the gas side service valves on the outdoor unit are kept closed at this stage.

Leakage test

- Connect the manifold valve(with pressure gauges) and dry nitrogen gas cylinder to this service port with charge hoses.

⚠ CAUTION

Be sure to use a manifold valve for leakage test. If it is not available, use a stop valve for this purpose. The "Hi" knob of the manifold valve must always be kept close.

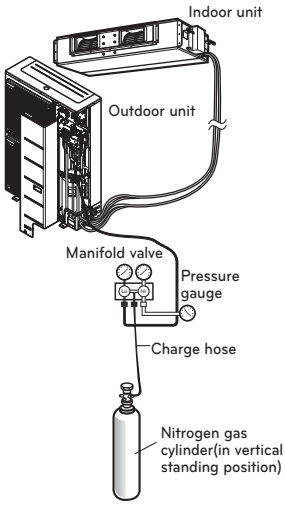
- Pressurize the system to no more than 3.8 MPa with dry nitrogen gas and close the cylinder valve when the gauge reading reached 3.8 MPa Next, test for leaks with liquid soap.

⚠ CAUTION

To avoid nitrogen entering the refrigerant system in a liquid state, the top of the cylinder must be higher than its bottom when you pressurize the system. Usually, the cylinder is used in a vertical standing position.

1 Do a leakage test of all joints of the tubing(both Indoor unit and outdoor unit) and both gas and liquid side service valves. Bubbles indicate a leak. Be sure to wipe off the soap with a clean cloth.

2 After the system is found to be free of leaks, relieve the nitrogen pressure by loosening the charge hose connector at the nitrogen cylinder. When the system pressure is reduced to normal, disconnect the hose from the cylinder.



Evacuation

- Connect the charge hose end described in the preceding steps to the vacuum pump to evacuate the tubing and indoor unit. Confirm the "Lo and Hi" knob of the manifold valve is open. Then, run the vacuum pump. The operation time for evacuation varies with tubing length and capacity of the pump. The following table shows the time required for evacuation.
- When the desired vacuum is reached, close the "Lo and Hi" knob of the manifold valve and stop the vacuum pump.

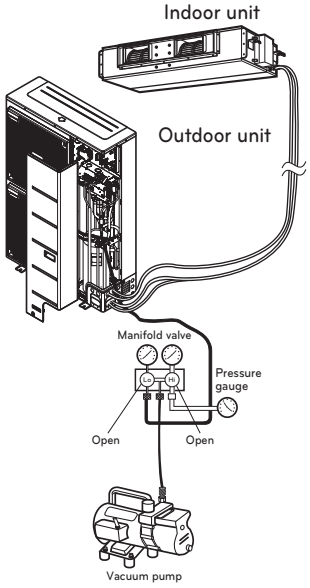
Required time for evacuation when 30 gal/h vacuum pump is used	
If tubing length is less than 10 m(33 ft)	If tubing length is longer than 10 m(33 ft)
30 minutes or more	60 minutes or more
0.07 kPa or less	

Finishing the job

- With a service valve wrench, turn the valve stem of liquid side valve counter-clockwise to fully open the valve.
- Turn the valve stem of gas side valve counter-clockwise to fully open the valve.
- Loosen the charge hose connected to the gas side service port slightly to release the pressure, then remove the hose.
- Replace the flare nut and its bonnet on the gas side service port and fasten the flare nut securely with an adjustable wrench. This process is very important to prevent leakage from the system.
- Replace the valve caps at both gas and liquid side service valves and fasten them tight.

This completes air purging with a vacuum pump.

The air conditioner is now ready to test run.



WIRING

Electrical Wiring

- Follow ordinance of your governmental organization for technical standard related to electrical equipment, wiring regulations and guidance of each electric power company.

⚠ WARNING

- Be sure to have authorized electrical engineers do the electric work using special circuits in accordance with regulations and this installation manual. If power supply circuit has a lack of capacity or electric work deficiency, it may cause an electric shock or fire.

- Install the Outdoor Unit transmission line away from the power source wiring so that it is not affected by electric noise from the power source. (Do not run it through the same conduit.)
- Be sure to provide designated grounding work to Outdoor Unit.

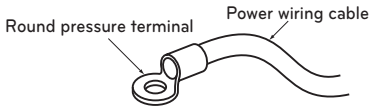
⚠ CAUTION

- Be sure to correct the outdoor unit to earth. Do not connect earth line to any gas pipe, liquid pipe, lightening rod or telephone earth line. If earth is incomplete, it may cause an electric shock.

- Give some allowance to wiring for electrical part box of Indoor and Outdoor Units, because the box is sometimes removed at the time of service work.
- Never connect the main power source to terminal block of transmission line. If connected, electrical parts will be burnt out.
- Only the transmission line specified should be connected to the terminal block for Outdoor Unit transmission.

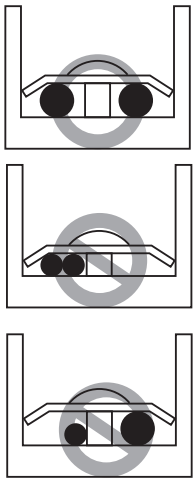
Precautions when laying power wiring cable

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



When none are available, follow the instructions below.

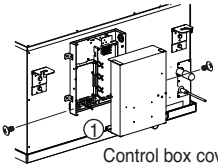
- Do not connect wiring cable of different thicknesses to the power terminal block. (Slack in the power wiring cable may cause abnormal heat.)
- When connecting wiring which is the same thickness, do as shown in the figure below.



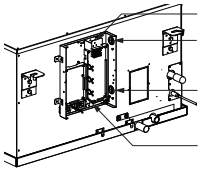
- For wiring, use the designated power wiring cable and connect firmly, then secure to prevent outside pressure being exerted on the terminal block.
- Use an appropriate screwdriver for tightening the terminal screws. A screwdriver with a small head will strip the head and make proper tighterning impossible.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

Indoor Unit

- 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.



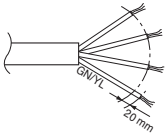
Control box cover
(On which the Electric
Wiring Connection is put)



Control terminal board
Connection cord between the indoor unit and the outdoor unit
Remote controler cord
Control box

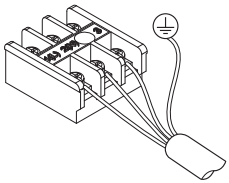
⚠ CAUTION

The connecting cable connected to the indoor and outdoor unit should be complied with the following specifications (Rubber insulation, type H05RN-F approved by HAR or SAA).



NORMAL CROSS-SECTIONAL AREA 1.0 mm²

If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer of its service agent. When the connection line between the indoor unit and outdooor unit and outdoor unit is over 40 m, connect the telecommunication line and power line separately.



Connecting the cable to Outdoor Unit

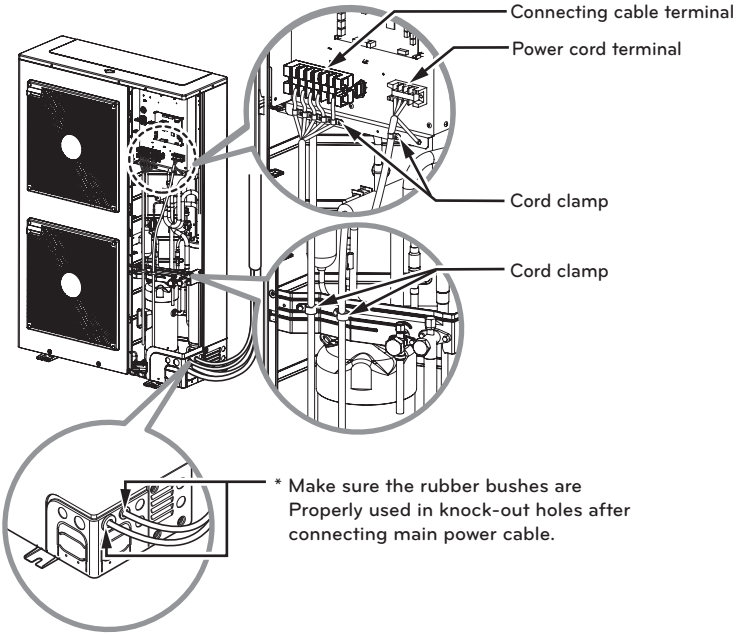
Remove the side panel for wiring connection.

Use the cord clamp to fix the cord.

Earthing work

- Case 1 : Terminal block of Outdoor Unit have ⏚ mark.
  Connect the cable of diameter 1.6 mm^2 or more to the earthing terminal provided in the control box and do earthing.

- Case 2 : Terminal block of Outdoor Unit don't have ⏚ mark.
  Connect the cable of diameter 1.6 mm^2 or more, to the panel of control box, marked as ⏚ and fasten with earth screw

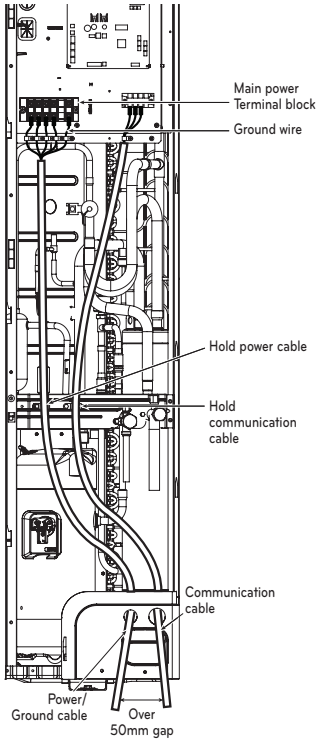


⚠ CAUTION

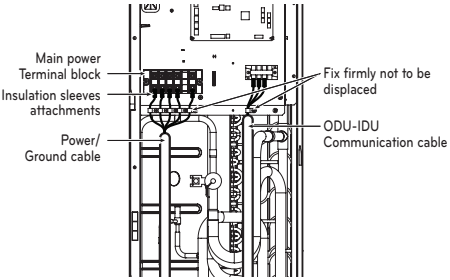
- The circuit diagram is not subject to change without notice.
- Be sure to connect wires according to the wiring diagram.
- Connect the wires firmly, so that not to be pulled out easily.
- Connect the wires according to color codes by referring the wiring diagram.
- The Power cord connected to the unit should be selected according to the following specifications.

Example) Connection of power and communication cable

Front side



Main Power and Communication Connection



⚠ CAUTION

It should be wiring power cables or communication cables to avoid interference with the oil level sensor. Otherwise, That oil level sensor would be operated abnormally.

Communication and Power wiring cable

1) Communication wiring cable

- Types : shielding wire
- Cross section : 1.0~1.5 mm^2
- Maximum allowable temperature: 105 °C
- Maximum allowable line length: under 100 m

2) Remote wiring cable

- Types : 3 wiring cable

4) Separation of transmission and power lines

- communication and power wiring cable are run alongside each other then there is a strong likelihood of operational faults developing due to interference in the signal wiring caused by electrostatic and electromagnetic coupling.
  The tables below indicates our recommendation as to appropriate spacing of communication and power wiring cable where these are to be run side by side

Current capacity of power line		Spacing
100 V or more	10 A	300 mm
	50 A	500 mm
	100 A	1 000 mm
	Exceed 100 A	1 500 mm

NOTE

- The figures are based on assumed length of parallel cabling up to 100 m. For length in excess of 100 m the figures will have to be recalculated in direct proportion to the additional length of line involved.
- If the power supply waveform continues to exhibit some distortion the recommended spacing in the table should be increased.
  - If the lines are laid inside conduits then the following point must also be taken into account when grouping various lines together for introduction into the conduits
  - Power lines(including power supply to air conditioner) and signal lines must not be laid inside the same

⚠ CAUTION

- If apparatus is not properly earthed then there is always a risk of electric shocks, the earthing of the apparatus must be carried out by a qualified person.

Wiring of main power supply and equipment capacity

1. Bear in mind ambient conditions (ambient temperature,direct sunlight, rain water,etc.) when proceeding with the wiring and connections.
2. The wire size is the minimum value for metal conduit wiring. The power wiring cable size should be 1 rank thicker taking into account the line voltage drops. Make sure the power-supply voltage does not drop more than 10 %.
3. Specific wiring requirements should adhere to the wiring regulations of the region.
4. Power wiring cable of parts of appliances for outdoor use should not be lighter than polychloroprene sheathed flexible cord.
5. Don't install an individual switch or electrical outlet to disconnect each of indoor unit separately from the power supply.

⚠ WARNING

- Follow ordinance of your governmental organization for technical standard related to electrical equipment, wiring regulations and guidance of each electric power company.
- Make sure to use specified wires for connections so that no external force is imparted to terminal connections. If connections are not fixed firmly, it may cause heating or fire.
- Make sure to use the appropriate type of over current protection switch. Note that generated over current may include some amount of direct current.

⚠ CAUTION

- Some installation site may require attachment of an earth leakage breaker. If no earth leakage breaker is installed, it may cause an electric shock.
- Do not use anything other than breaker and fuse with correct capacity. Using fuse and wire or copper wire with too large capacity may cause a malfunction of unit or fire.

Cable Size and Type

Unit	Cable	No. x mm^2 (AWG)
Indoor	Power and Communication Cable (included Earth)	4C x 1.0 (18)
Outdoor	Power Supply Cable (included Earth)	5C x 2.5 (12)

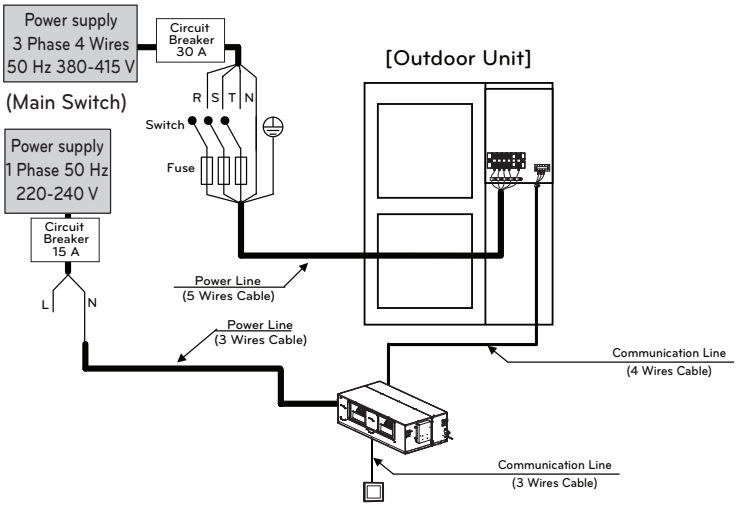
- Indoor :
  1. Rubber sheathed : Insulation material of supply line shall be at least those of ordinary tough rubber sheathed. (code designation 60245 IEC 53)
  2. Polychloroprene sheathed : Insulation material of supply line shall be at least those of ordinary polychloroprene sheathed. (code designation 60245 IEC 57)

- Outdoor :

  Supply line of appliances shall not be lighter than polychloroprene sheathed. (code designation 60245 IEC 57)

Field Wiring

◆ Example Connection of Communication wiring cable
Indoor Unit 50 Hz, 1 Ø, 220-240 V
Outdoor Unit 50 Hz, 3 Ø, 380-415 V



<Figure 1>

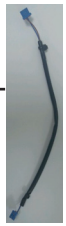
⚠ WARNING

- Indoor Unit ground Lines are required for preventing electrical shock accident during current leakage, Communication disorder by noise effect and motor current leakage (without connection to pipe).
- Install the electronic wiring cable like <Figure 1>
- Use a recognized circuit breaker between the power source and the Unit.
- Capacity of circuit breaker recommended by authorized personnel only
- Install the main switch that can interrupt all the power sources in an integrated manner because this system consists of the equipment utilizing the multiple power sources.
- If there exists the possibility of reversed phase, lose phase, momentary blackout or the power goes on and off while the product is operating, attach a reversed phase protection circuit locally. Running the product in reversed phase may break the compressor and other parts.

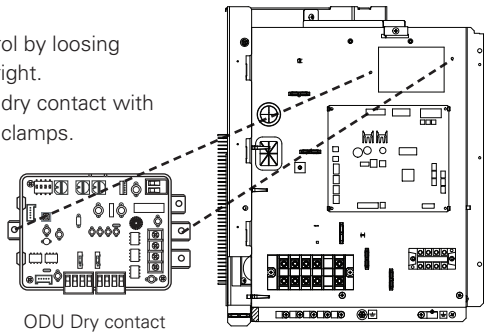
The GND terminal at the main PCB is a '-' terminal for dry contact, it is not the point to make ground connection.

Connecting the DRED to the outdoor unit

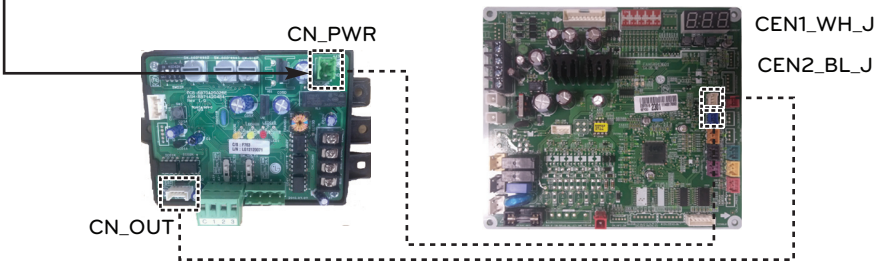
- This air conditioner is capable of DRM1, DRM2 and DRM3 and complies with standard AS/NZS 4755.3.1.
- Remove the Front panel and the cover,control by loosing screw. Tighten a screw at two point as the right.
- After connect the Outdoor PCB to the ODU dry contact with the cable provided, arrange the wire by two clamps.



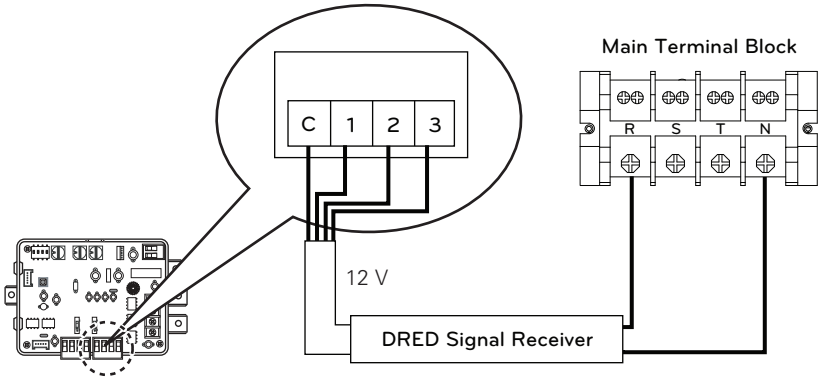
(Cut the provided Cable from Outdoor unit and Connect Cen2_BL_J to CN_PWR)



ODU Dry contact (PQDSBCDVM0)

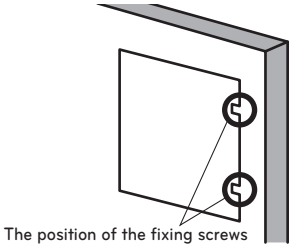


- When connecting cable, follow the Connection method below
- Refer to the ODU dry contact Installation manual

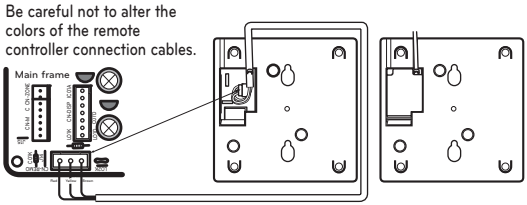


Wired remote controller installation

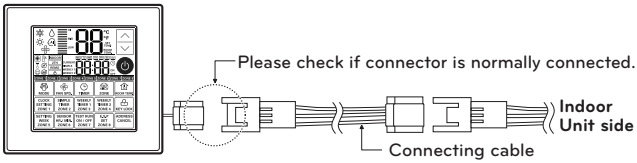
1 Put the installation paper on the place and determine the position and height of the fixing screws of the deluxe wired remote controller.
- Refer to the printed side of the installation paper.



2 Please connect indoor unit and remote controller using connection cable.
- The product is being shipped with the cable connected only to the remote controller. Put each cable to the remote controller according to the color match
- Please use extension cable if the distance between wired remote controller and indoor unit is more than 10 m.



12 V	Red
Signal	Yellow
GND	Black

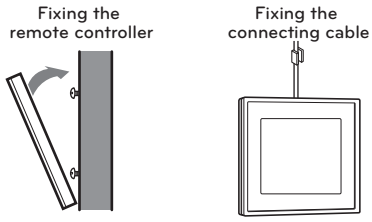


⚠ CAUTION

Installation work must be performed in accordance with the national wiring standards by authorized personnel only.

- Installations must comply with the applicable local/national or international standards.
- Apply totally enclosed noncombustible conduit (metal raceway) in case of local electric & building code require plenum cable usage.
- 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 remote controller near by window or door, because it is difficult to sensing real room temperature.
- 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.

3 Remove the installation paper before installing the remote controller so that it can fit into the right place.



Supply the power after connecting deluxe wired remote controller.
When you need to change wired remote controller, turn off the main power and change it before turn on the main power.

Location of remote controller

- 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.)

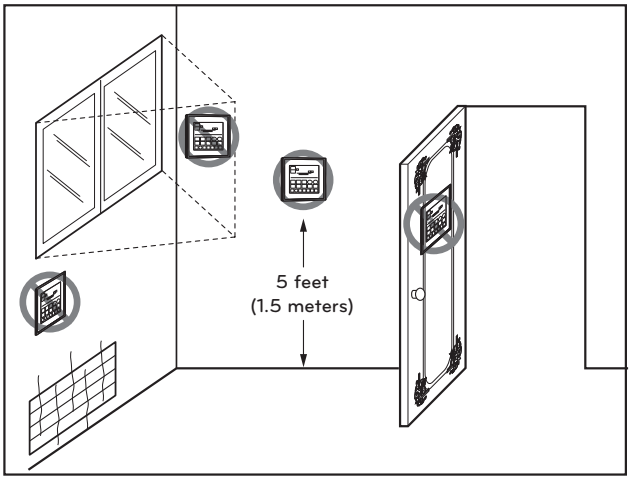


Fig.1 Typical locations for remote controller

SETTING & TEST

Model	Step	CMM	Static Pressure[mmAq(Pa)]										
			6(59)	7(69)	8(78)	9(88)	10(98)	12(118)	13(127)	14(137)	15(147)	16(157)	18(176)
			Setting Value										
			32:01	32:02	32:03	32:04	32:05	32:06	32:07	32:08	32:09	32:10	32:11
B62AWYN9L6 B70AWYN9L6	LOW	64	74	75	76	78	79	82	84	86	89	91	95
	MID	72	78	79	80	82	83	87	89	91	94	96	100
	HIGH	80	82	84	86	88	90	93	95	97	100	101	105

NOTE

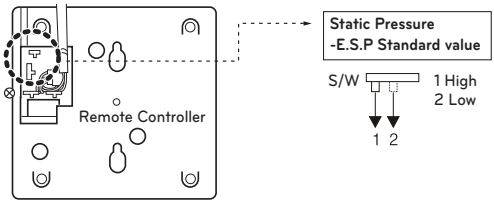
1. Be sure to set the value refering table 1. Unexpected set value will cause mal-function.
2. Table 1 is based at 230 V. According to the fluctuation of voltage, air flow rate varies.
3. Factory Set(External Static Pressure) each Model

Model	Factory set (E.S.P.) mmAq(Pa)
B62AWYN9L6 B70AWYN9L6	13 (127)

* If it is zero static pressure, please set value below Maximum value.

Model	Maximum value
B62AWYN9L6 B70AWYN9L6	105

How to set Remote Controller's Switch 2

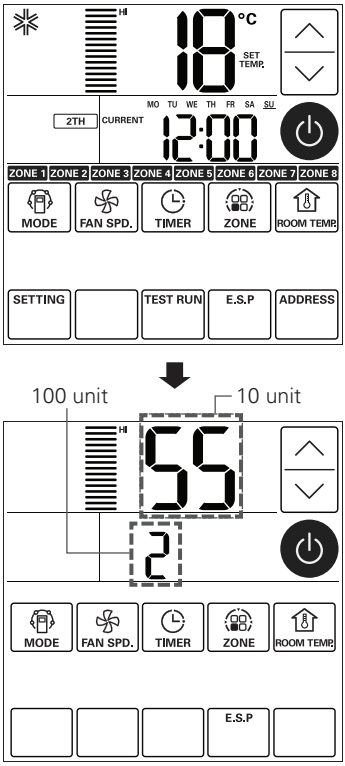


Installer Setting - E.S.P Function

E.S.P function is setting the volume of each air flow. It is for the convenience of installation. It is recommended that you should not use this function while using the wireless remote controller.

⚠ CAUTION

If you set E.S.P incorrectly, the air conditioner may malfunction.
This setting must be carried out by authorized personnel only.



1 Press [ZONE] button to appear [SETTING] button on the screen. mode.



2 Press the [SETTING] button for 3secs.



3 Press the [E.S.P] button.



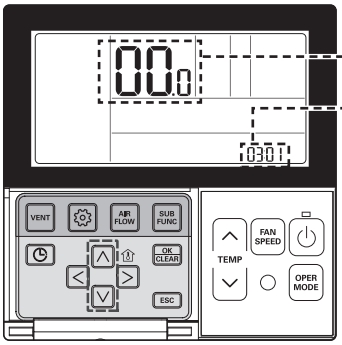
4 Set the volume of each air flow (LOW→MID→HI) by using the [▲▼] button. Press the [FAN SPD.] button to select the air flow. (The value of E.S.P could be adjusted from 1 to 255.) (The figure on the left shows when the strong wind's E.S.P value has been set to 255.)



5 If you press the [⏻] button, the E.S.P value will be set.



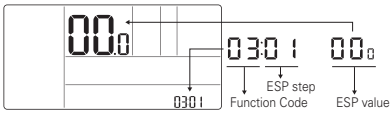
* The E.S.P value is already appropriately set when manufactured from the factory, it is recommended that you do not change the E.S.P value.



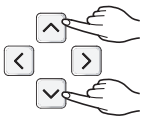
1 If pressing ⚙ button long for 3 seconds, it enters into remote controller setter setup mode.
- If pressing once shortly, it enters into user setup mode. Please press more than 3 seconds for sure.



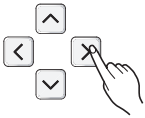
2 If entering into ESP setup mode by using ⚙ button, it indicates as the picture below.



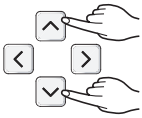
3 Select ESP fan step by pressing ∧ ∨ button.
(01: very low, 02: low, 03: medium, 04: high, 05: very high)



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.)



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.

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

Precaution in test running

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

⚠ CAUTION

① 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.

② 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 complete

- 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, pipe temperature, compressive pressure.
- As to the structure and appearance, check following items.

*Is the circulation of air adequate?

*Is the drainage smooth?

*Is the heat insulation complete (refrigerant and drainage pipe)?

*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 wiring cable

1 Connect the power wiring cable to the independent power supply.
  - Circuit breaker is required.
2 Operate the unit for fifteen minutes or more.

Evaluation of the performance

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

⚠ CAUTION

After the confirmation of the above conditions, prepare the wiring as follows:

1) Never fail to have an individual power specialized for the air conditioner. As for the method of wiring, be guided by the circuit diagram pasted on the inside of control box cover.
2) Provide a circuit breaker switch between power source and the unit.
3) The screw which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could give rise to burn-out of the wires.)
4) Specification of power source
5) Confirm that electrical capacity is sufficient.
6) Be sure that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.
7) Confirm that the cable thickness is as specified in the power sources specification.
(Particularly note the relation between cable length and thickness.)

8) Never fail to equip a leakage breaker where it is wet or moist.
9) The following troubles would be caused by voltage drop-down.
   - Vibration of a magnetic switch, damage on the contact point there of, fuse breaking, disturbance to the normal function of a overload protection device.
   - Proper starting power is not given to the compressor.

HAND OVER

Teach the customer the operation and maintenance procedures, using the operation manual
(air filter cleaning, temperature control, etc.).

Self-diagnosis function

Error Indicator

- This function indicates types of failure in self-diagnosis and occurrence of failure for air condition.
- Error mark is displayed on display window of indoor units and wired remote controller, and 7-segment LED of outdoor unit control board as shown in the table.
- If more than two troubles occur simultaneously, lower number of error code is first displayed.
- After error occurrence, if error is released, error LED is also released simultaneously.

Error Display

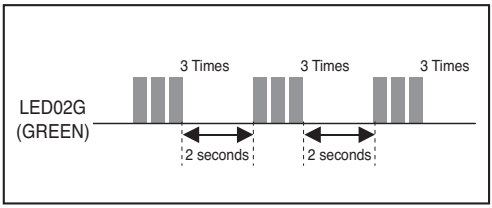
1st,2nd LED of 7-segment indicates error number, 3rd LED indicates unit number.

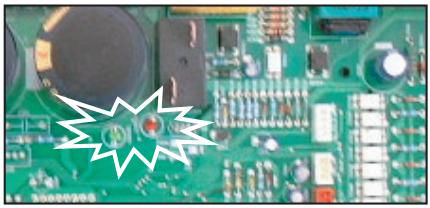
※ 3rd LED : For single inverter comp. It should indicate only '1'

Ex) 211 : No.21 error of Outdoor unit
011 → 051 : No.105 error of Outdoor unit

Indoor Unit Error

Ex) Error 03 (Remote controller error)





Error Code	Description	LED 1 (Red)	LED 2 (Green)	Indoor status
01	Indoor Room sensor error	0	1 time ◑	OFF
02	Indoor in-pipe sensor error	0	2 times ◑	OFF
03	Remote controller error	0	3 times ◑	OFF
04	Drain pump error	0	4 times ◑	OFF
05	Communication error indoor and outdoor	0	5 times ◑	OFF
06	Indoor out-pipe sensor error	0	6 times ◑	OFF
09	EEPROM error (indoor)	0	9 times ◑	OFF
10	BLDC motor fan lock (indoor)	1 time ◑	0	OFF

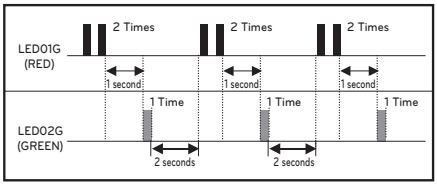
※ Because remote controller turn off when occur ERROR in simultaneous operation system, it should check LED blinks of outdoor in order to confirm error code.

※ Repeatedly after LED 1 is turned on and off as the Error code number of tens digit, LED 2 is turned on and off as the Error code number of single-digit.

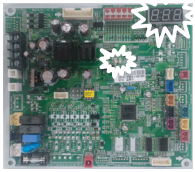
Error Indicator (Outdoor)

Outdoor Error

Ex) Error 21 (DC Peack)







Error Code	Description	LED 1 (Red)	LED 2 (Green)	Indoor status
21	DC Peak(IPM Fault)	2 times ◑	1 time ◑	OFF
22	Max. CT(CT2)	2 times ◑	2 times ◑	OFF
23	DC Link Low Volt.	2 times ◑	3 times ◑	OFF
24	Pressure switch/Heater Sink.	2 times ◑	4 times ◑	OFF
26	DC Comp Position Error	2 times ◑	6 times ◑	OFF
29	Comp Over Current	2 times ◑	9 times ◑	OFF
32	D-Pipe High(Inv.)	3 times ◑	2 times ◑	OFF
35	Low pressure Error	3 times ◑	5 times ◑	OFF
41	Inv. D-Pipe Th Error(Open/Short)	4 times ◑	1 time ◑	OFF
43	Pressure Sensor Error	4 times ◑	3 times ◑	OFF
44	Outdoor air Th Error(Open/Short)	4 times ◑	4 times ◑	OFF
45	Cond. Middle Pipe Th Error(Open/Short)	4 times ◑	5 times ◑	OFF
46	Suction Pipe Th Error(Open/Short)	4 times ◑	6 times ◑	OFF
48	Cond. Out-Pipe Th Error(Open/Short)	4 times ◑	8 times ◑	OFF
51	Capacity over	5 times ◑	1 time ◑	OFF
53	Communication Error(Indoor ↔ Outdoor)	5 times ◑	3 times ◑	OFF
54	Open and Reverse Phase Error	5 times ◑	4 times ◑	OFF
60	EEPROM Error(Outdoor)	6 times ◑	0	OFF
61	Cond. Middle Pipe High	6 times ◑	1 time ◑	OFF
62	Heatsink Error(High)	6 times ◑	2 times ◑	OFF
65	Heatsink Th Error(Open/Short)	6 times ◑	5 times ◑	OFF
67	BLDC motor fan lock(Outdoor)	6 times ◑	7 times ◑	OFF

DIP switch setting

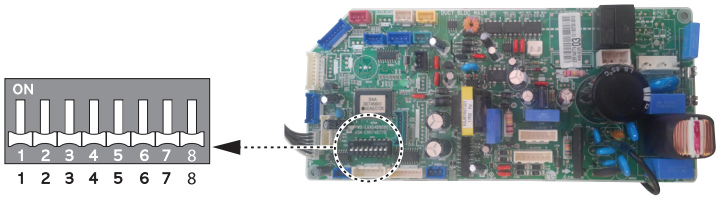
⚠ CAUTION

When you set the DIP switch, you should turn off the circuit breaker or shut the power source of the product down.

⚠ CAUTION

- Unless the applicable DIP switch is set properly, the product may not work.
- If you want to set a specific function, request that the installer sets the DIP switch appropriately during installation.

Indoor Unit

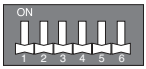


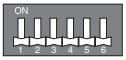
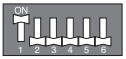
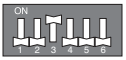
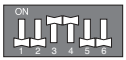
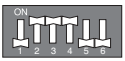
▲ Factory Set : All OFF

Function		Description	Setting Off	Setting On	Default
SW1	Communication	Communication Between Indoor & Outdoor	Communication	Non Communication	Off
SW3	Group Control	Selection of Master or Slave	Master	Slave	Off
SW4	Dry Contact Mode	Selection of Dry Contact Mode	Wired/Wireless remote controller Selection of Manual or Auto operation Mode	Auto	Off
SW5	Installation	Fan continuous operation	Continuous operation Removal	Working	Off

Outdoor Unit

If you set the DIP Switch when power is on, the change in setting is not applicable. The changing setting is enabled only when Power is reset.

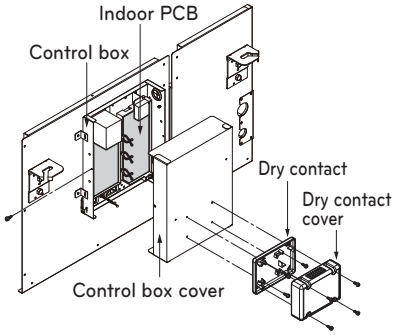


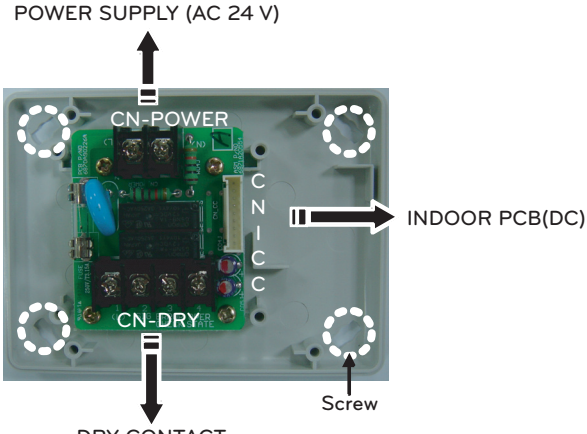
DIP Switch 1 2 3 4 5 6	Function
	Normal Operation (No Function)
	Forced Cooling Operation
	Saving Power Consumption (Step 1)
	Saving Power Consumption (Step 2)
	Mode Lock (Cooling)
	Mode Lock (Heating)
	Night Quiet Mode (Step 1)
	Night Quiet Mode (Step 2)
	Mode Lock (Cooling) + Night Quiet Mode (Step 1)
	Mode Lock (Cooling) + Night Quiet Mode (Step 2)
	Mode Lock (Cooling) + Saving Power Consumption (Step 1)
	Mode Lock (Cooling) + Saving Power Consumption (Step 2)
	Mode Lock (Heating) + Saving Power Consumption (Step 1)
	Mode Lock (Heating) + Saving Power Consumption (Step 2)

ACCESSORY GUIDE

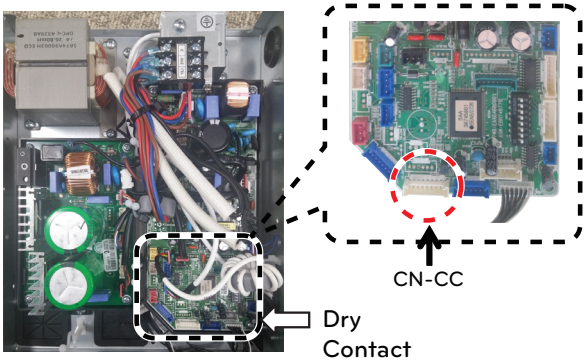
Dry Contact(Only AC 24 V)

- Fix dry contact on the indoor control box cover.
- Connect dry contact(CN-CC) to Indoor PCB(CN-CC) with cable.
- Use the DC line hole when connecting the cable to indoor PCB.(Figure 2).
- Connect CN-POWER to power supplier.(Only AC 24 V).
- Connect CN-DRY to dry contact controller. (Power supplier and dry contact controller are produced locally.)
- Tie the cables with the tie-wraps and clamps. (Figure 2).
- Refer to dry contact installation manual for detailed installation method.





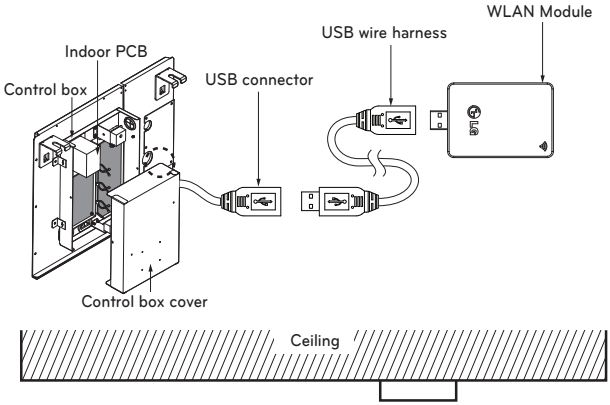
(Figure 1)

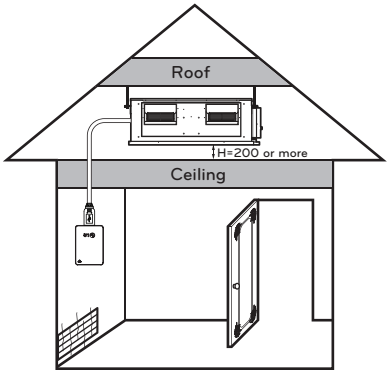


(Figure 2)

WLAN module installation (PWFMDD101)

1. Connect USB wire harness to USB connector. Beside the control box of the product.
2. Connect USB wire harness to WAN module
3. Install WLAN module proper location under ceiling and set AP mode to use App.
4. Refer to WLAN module and App installation manual. For detailed installation method.





Please check these out.

- Install WLAN module in a space open on all sides.
  (Avoid installing it in a blind spot where the signal is weak or blocked.)
- Install the unit so that the LG logo in WLAN module face in the direction of Wi-Fi wireless router installed.
- Avoid to install the WLAN module in a place blocked by the wall if possible.

Damper Controller(PBZC80)

- Open the cover of indoor unit control box and damper controller(Figure 1)
- Assemble the damper controller on the cover which is seperated.
- Connect the lead wires between main PCB and damper controller.(Figure 2)
- Connect the main power cable and actuator cable to damper controller.(Figure 2)
- Assemble the damper controller to indoor unit and then assemble cover of damper controller.
- Check the slide switch position, it should be located "1" position.
- Refer to damper controller Installation manual for detailed installation metheod.

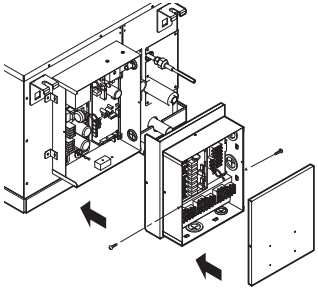


Figure 1

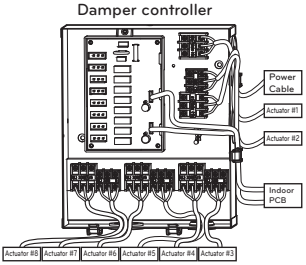
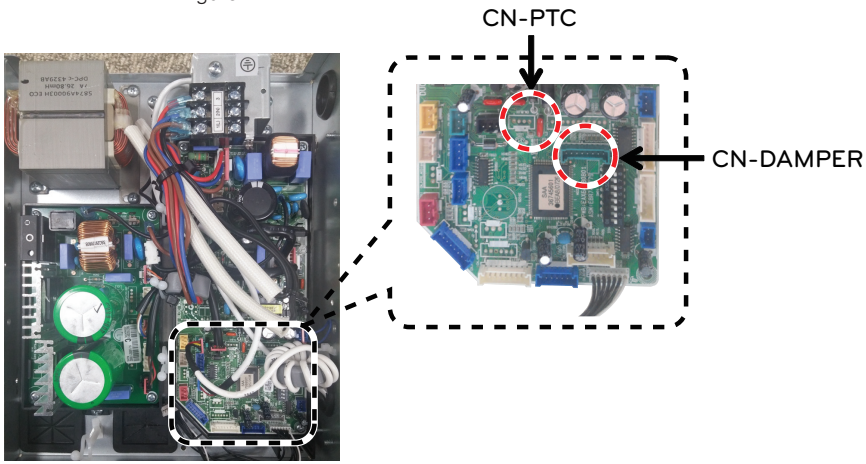


Figure 2



NOTICE

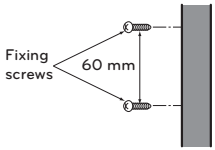
When install Damper Controller, The Remote controller Should be matched as following table

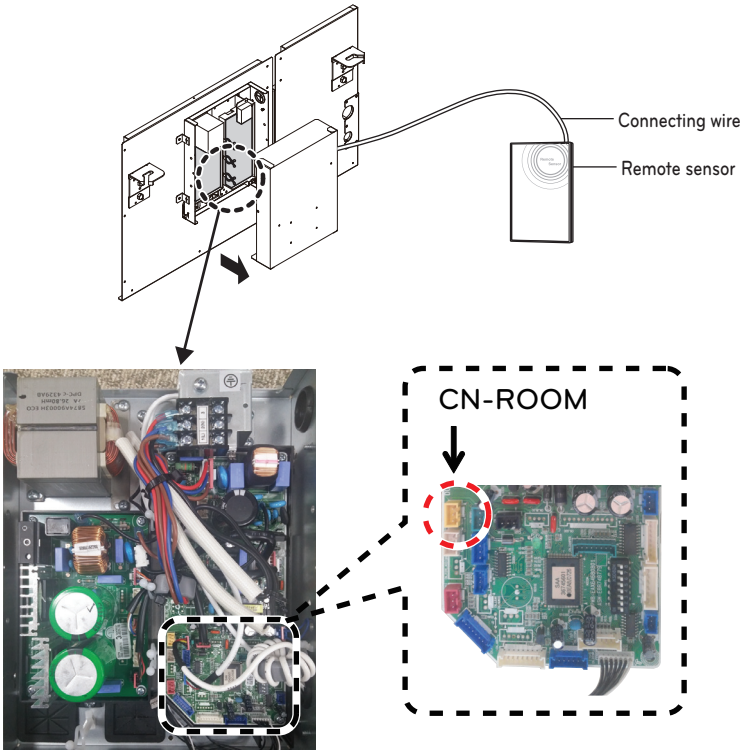
No.	Model name of Damper Controller	Model name of Remote controller	Remark
1	PBZC80	PDRCUDC0	
2	PBDC40	PDRCUDB0	

If There is a mismatched usage such as PDRCUDC0 and PBDC40, The unit can have improper operation

Remote Temperature Sensor(PQRSTA0)

- After deciding where the remote temperature sensor is installed, decide the location and height of the fixing screws. (Interval between the screws : 60 mm).
- After removing the control box cover of the indoor unit, remove the room temperature sensor in CN-ROOM of the main PCB.
- Insert the connector of remote sensor wire into CN-ROOM.
- Using the DC line hole when connecting the wire to Indoor PCB.
- For using the two thermistor fuction, the remote sensor should be installed from the wired remote controller as far as possible.
- Refer to damper remote sensor manual for detailed installation metheod.



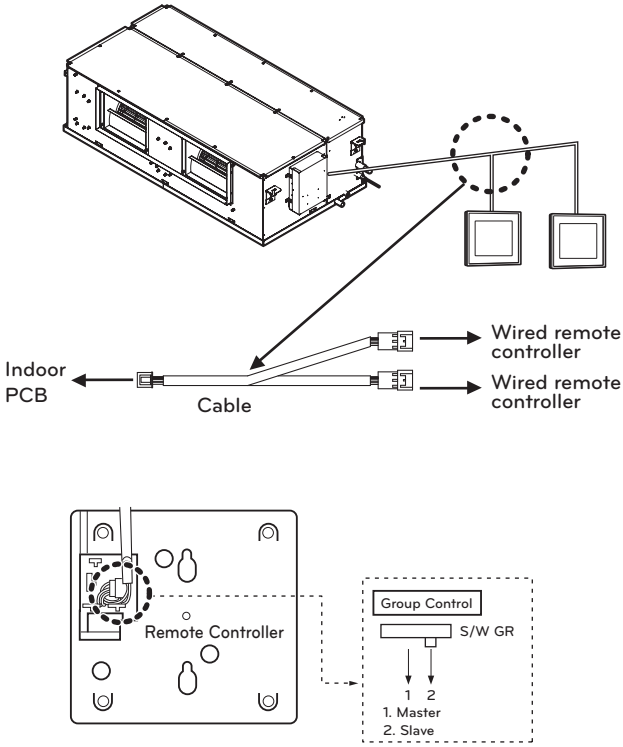


NOTE

PDRCUDC0 is a remote controller connected to 8 damper controller.

Two wired remote controller

- All wired remote controllers are displayed on identical information.
- Last used wired romote controller has priority on product's movement.
- Set one wired remote controller as master,the others as slave.<Figure 1>
- The thermistor mode is operated by the wired remote controller set as "master"



<Figure 1>

⚠ CAUTION

Two wired remote controllers should be same model name, otherwise it can cause unexpected problems.
For example) Using PQRCVSLOQW with PQRCVSLOQW is proper.
Using PDRCUDC0 with PDRCUDC0 is proper.
PQRCVSLOQW & PDRCUDC0 are improper.

