ENGLISH
FRANÇAIS
ESPAÑOL

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.

Convertible

P/NO : MFL42803122

http://www.lghvac.com
www.lg.com

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IMPORTANT!

Please read this instruction sheet completely before installing the product.

This air conditioning system meets strict safety and operating standards. As the installer or service person, it is an important part of your job to install or service the system so it operates safely and efficiently.

⚠ 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 or, in the absence of local codes, with the National Electrical Code 70 and the National Building Construction and Safety Code or Canadian Electrical code and National Building Code of Canada.
- 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.

CAUTION: Improper installation, adjustment, alteration, service or maintenance can void the warranty. The weight of the condensing unit requires caution and proper handling procedures when lifting or moving to avoid personal injury. Use care to avoid contact with sharp or pointed edges.

Safety Precautions

- Always wear safety eye wear and work gloves when installing equipment.
- Never assume electrical power is disconnected. Check with meter and equipment.
- Keep hands out of fan areas when power is connected to equipment.
- R-410A causes frostbite burns.
- R-410A is toxic when burned.

NOTE TO INSTALLING DEALER: The Owners Instructions and Warranty are to be given to the owner or prominently displayed near the indoor Furnace/Air Handler Unit.

⚠ Special warnings

When wiring:

Electrical shock can cause severe personal injury or death. Only a qualified, experienced electrician should attempt to wire this system.

- Do not supply power to the unit until all wiring and tubing are completed or reconnected and checked.
- Highly dangerous electrical voltages are used in this system. Carefully refer to the wiring diagram and these instructions when wiring. Improper connections and inadequate grounding can cause accidental injury or death.
- Ground the unit following local electrical codes.
- Connect all wiring tightly. Loose wiring may cause overheating at connection points and a possible fire hazard.
- The choice of materials and installations must comply with the applicable local/national or international standards.

When transporting:

Be careful when picking up and moving the indoor and outdoor units. Get a partner to help, and bend your knees when lifting to reduce strain on your back. Sharp edges or thin aluminum fins on the air conditioner can cut your finger.

When installing...

... in a wall: Make sure the wall is strong enough to hold the unit's weight. It may be necessary to construct a strong wood or metal frame to provide added support.

... in a room: Properly insulate any tubing run inside a room to prevent "sweating" that can cause dripping and water damage to wall and floors.

... in moist or uneven locatinons: Use a raised concrete pad or concrete blocks provide a solid, level foundation for the outdoor unit. This prevents water damage and abnormal vibration.

... in an area with high winds: Securely anchor the outdoor unit down with bolts and a metal frame. Provide a suitable air baffle.

... in a snowy area(for Heat Pump Model): Install the outdoor unit on a raised platform that is higher than drifting snow. Provide snow vents.

When connecting refrigerant tubing

- Keep all tubing runs as short as possible.
- Use the flare method for connecting tubing.
- Check carefully for leaks before starting the test run.

When servicing

- Turn the power OFF at the main power box(mains) before opening the unit to check or repair electrical parts and wiring.
- Keep your fingers and clothing away from any moving parts.
- Clean up the site after you finish, remembering to check that no metal scraps or bits of wiring have been left inside the unit being serviced.

Convertible type Air Conditioner Installation Manual

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Required Parts

- ❏ Four type "A" screws & plastic anchors
- ❏ Connecting cable
- ❏ Installation guide map
- ❏ Pipes: Gas side .....3/8", 1/2"
  Liquid side .....1/4"
- ❏ Insulation materials
- ❏ Additional drain pipe
  (Outer diameter .....15.5mm)
- ❏ Two type "B" screws

Required Tools

- ❏ Level gauge
- ❏ Screw driver
- ❏ Electric drill
- ❏ Hole core drill
  (ø25mm, ø45mm, ø70mm)
- ❏ Horizontal meter
- ❏ Flaring tool set
- ❏ Specified torque wrenches
  1.8kg.m, 4.2kg.m, 5.5kg.m,
  6.6kg.m
  (different depending on model No.)
- ❏ Spanner .....Half union
- ❏ A glass of water
- ❏ Screw driver
- ❏ Hexagonal wrench(4mm)
- ❏ Leak detector
- ❏ Vacuum pump
- ❏ Gauge manifold
- ❏ Owner's manual
- ❏ Thermometer
- ❏ Remote control holder

Safety Precautions

To prevent injury to the user or other people and property damage, the following instructions must be followed.

- Be sure to read before installing the air conditioner.
- Be sure to observe the cautions specified here as they include important items related to safety.
- Incorrect operation due to ignoring instruction will cause harm or damage. The seriousness is classified by the following indications.

⚠WARNING	This symbol indicates the possibility of death or serious injury.
⚠CAUTION	This symbol indicates the possibility of injury or damage to properties only.

- Meanings of symbols used in this manual are as shown below.

	**Be sure not to do.**
	**Be sure to follow the instruction.**

⚠WARNING

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.

- 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 modify or extend the power cable.
  - There is risk of fire or electric shock.

• Do not install, remove, or re-install the unit by yourself (customer).
  - There is risk of fire, electric shock, explosion, or injury.

• 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.

• 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.

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.
  - It may cause 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 small 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.

⚠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.

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 anyting 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.

Introduction

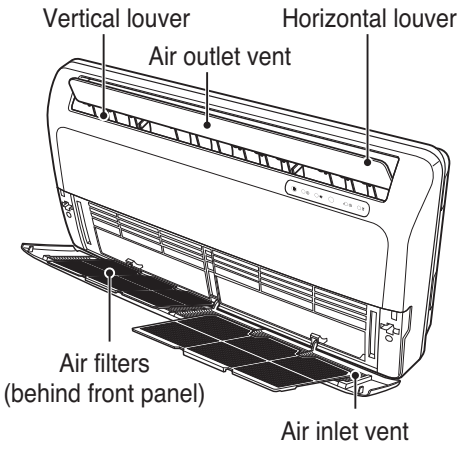
Symbols used in this Manual

This symbol alerts you to the risk of electric shock.

This symbol alerts you to hazards that may cause harm to the air conditioner.

NOTICE **This symbol indicates special notes.**

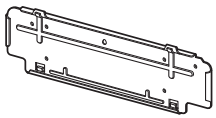
Features



Installation

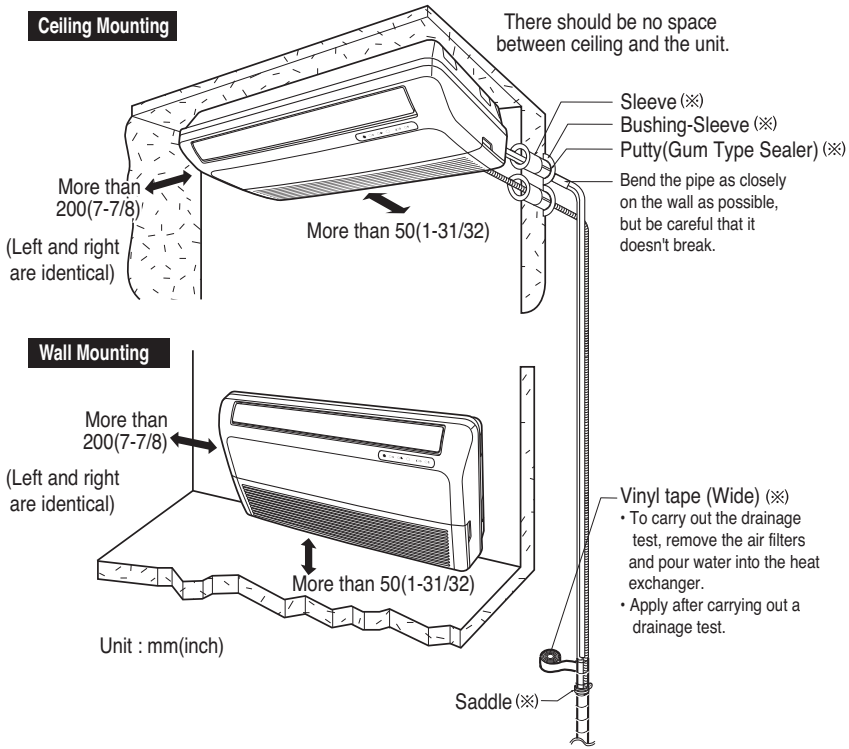
Read carefully, and then follow step by step.

Installation Parts

Installation plate(1 EA)	Type "A" screw and plastic anchor(4 EA)	Type "B" screw (2EA)	Conduit mounting plate(1 EA)
			

Installation Map

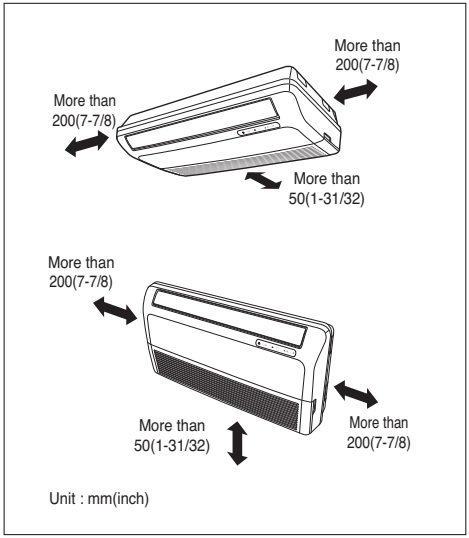
NOTICE Installation parts you should purchase. (※)



Select the best Location

Indoor unit

1. Do not have any heat or steam near the unit.
2. Select a place where there are no obstacles in front of the unit.
3. Make sure that condensation drainage can be conveniently routed away.
4. Do not install near a doorway.
5. Ensure that the interval between a wall and the left (or right) of the unit is more than 200mm(7-7/8 inch). The unit should be installed as low as possible on the wall, allowing a minimum of 50mm(2 inch) from floor.
6. Use a stud finder to locate studs to prevent unnecessary damage to the wall.



Preparing Work for Installation

Open panel front

1. Remove the five screws.
2. Release the claws in the 3 places indicated.
3. Pull up the Front Panel.

Cover pipe and cover side remove

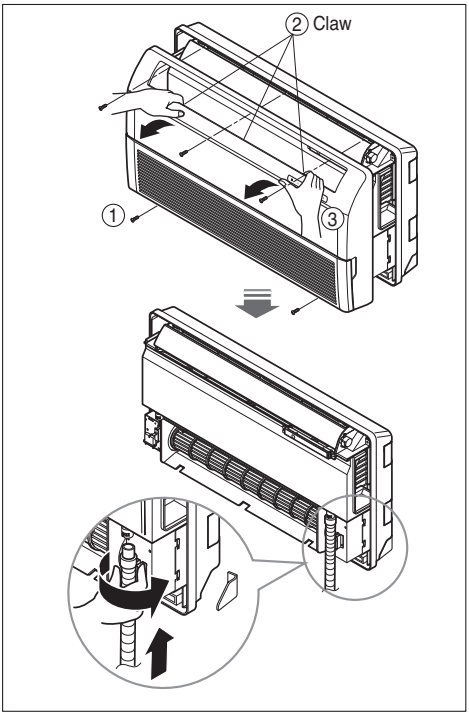
1. Pull up the side cover of desired connecting direction, then cover side is separated.
2. Pick the pipe hole of the side cover.

CAUTION: After removing the pipe hole, cut the burr for safety.

NOTICE When making pipe path through rear wall, you don't need to pick the pipe hole.

Drain hose junction

1. Remove the rubber stopple in the desired drain direction.
2. Insert drain hose into the handle of drain pan, and join drain hose and connecting hose according to the figure by.

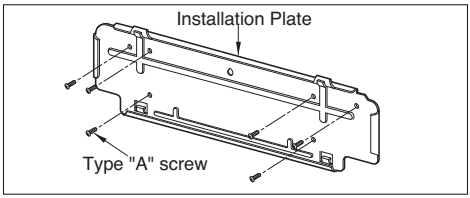


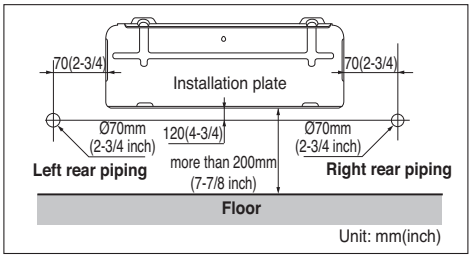
Mounting the installation plate(Wall Mounting)

The wall you select should be strong and solid enough to prevent vibration

1. Mount the installation plate on the wall with type "A" screws. If mounting the unit on a concrete wall, use anchor bolts.
• Mount the installation plate horizontally by aligning the centerline using a level.

2. Measure the wall and mark the centerline. It is also important to use caution concerning the location of the installation plate-routing of the wiring to power outlets is through the walls typically. Drilling the hole through the wall for piping connections must be done safely.



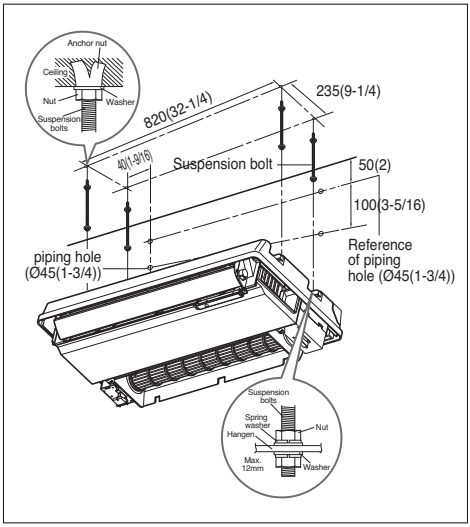


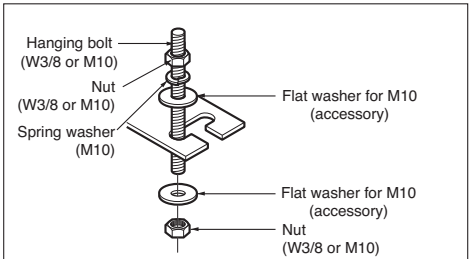
Mounting the anchor Nut & Bolt(Ceiling Mounting)

- Prepare 4 suspension bolts. (Each bolts length should be same.)
- Measure and mark the position for the Suspension bolts and the piping hole.
- Drill the hole for anchor nut on the ceiling.
- Insert the nuts and washer onto the suspension bolts for locking the suspension bolts on the ceiling.
- Mount the suspension bolts to the anchor-nuts firmly.
- Secure the hangers onto the Suspension bolts (adjust level roughly.) using nuts, washers and spring washers.
- Adjust a level with a level gauge on the direction of left-right, back-forth by adjusting suspension bolts.
- Adjust a level on the direction of top-bottom by adjusting supension bolts. Then the unit will be declined to the bottomside so as to drain well.

⚠CAUTION

: Tighten the nut and bolt to prevent unit falling.





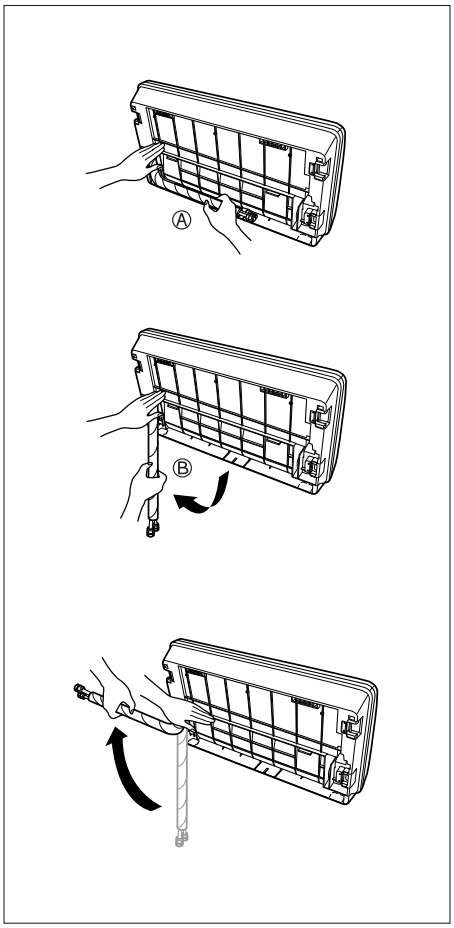
⚠CAUTION

: Installation Information For right piping. Follow the instruction below.

Good case

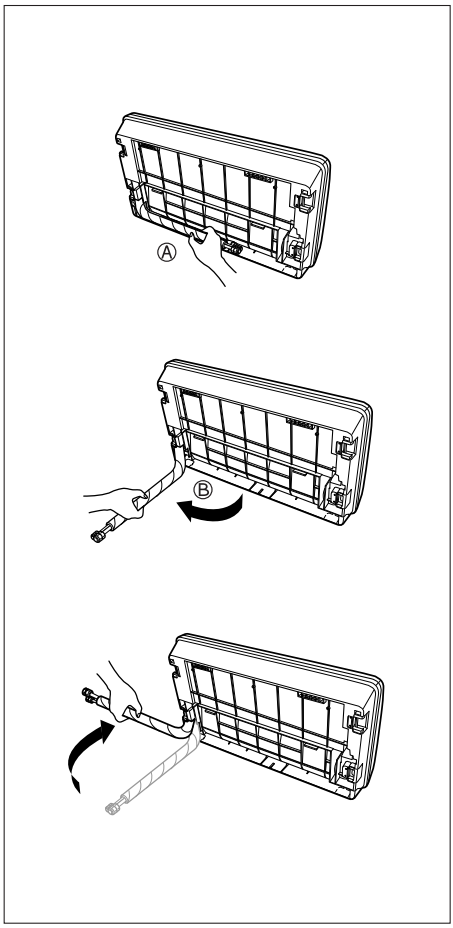
For left piping. Follow the instruction below.

1. Press on the upper side of clamp. (Ⓐ)
2. Unfold the tubing to downward slowly. (Ⓑ)
3. Bend the tubing to the left side of chassis.



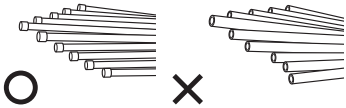
Bad case

1. Following bending type from right to left could cause problem of pipe damage.

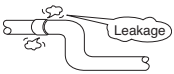


Plumbing materials and storage methods

Pipe must be able to obtain the specified thickness and should be used with low impurities.
Also when handling storage, pipe must be careful to prevent a fracture, deformity and wound.
Should not be mixed with contaminations such as dust, moisture.



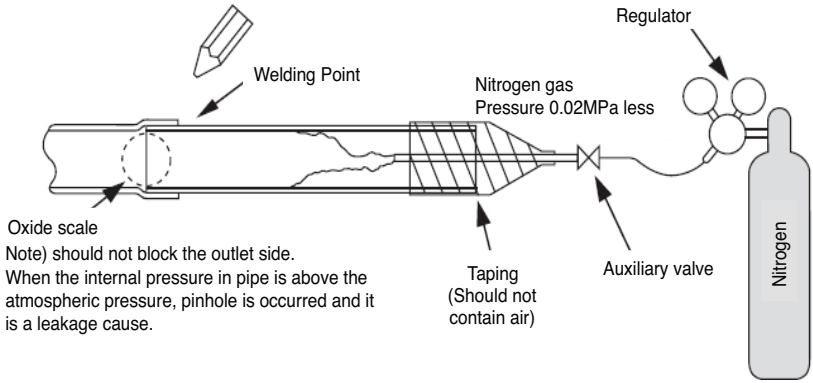
Refrigerant piping on three principles

	Drying	Cleanliness	Airtight
	Should be no moisture inside	No dust inside.	There is no refrigerant leakage
Items			
Cause failure	- Significant hydrolysis of refrigerant oil - Degradation of refrigerant oil - Poor insulation of the compressor - Do not cold and warm - Clogging of EEV, Capillary	- Degradation of refrigerant oil - Poor insulation of the compressor - Do not cold and warm - Clogging of EEV, Capillary	- Gas shortages - Degradation of refrigerant oil - Poor insulation of the compressor - Do not cold and warm
Countermeasure	- No moisture in the pipe - Until the connection is completed, the plumbing pipe entrance should be strictly controlled. - Stop plumbing at rainy day. - Pipe entrance should be taken side or bottom. - When removal burr after cutting pipe, pipe entrance should be taken down. - Pipe entrance should be fitted cap when pass through the walls.	- No dust in the pipe. - Until the connection is completed, the plumbing pipe entrance should be strictly controlled. - Pipe entrance should be taken side or bottom. - When removal burr after cutting pipe, pipe entrance should be taken down. - Pipe entrance should be fitted cap when pass through the walls.	- Airtightness test should be. - Brazing operations to comply with standards. - Flare to comply with standards. - Flange connections to comply with standards.

Nitrogen substitution method

Welding, as when heating without nitrogen substitution a large amount of the oxide film is formed on the internal piping.
The oxide film is a caused by clogging EEV, Capillary, oil hole of accumulator and suction hole of oil pump in compressor.
It prevents normal operation of the compressor.
In order to avoid this problem, Welding should be done after replacing air by nitrogen gas.
When welding plumbing pipe, the work is required.

◆How to work

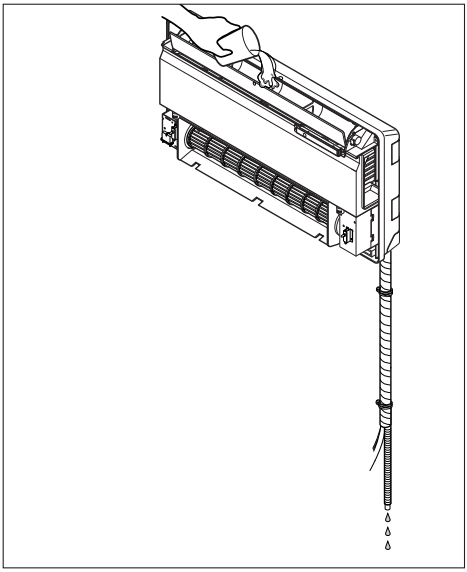


CAUTION :

1. Always use the nitrogen.(not use oxygen, carbon dioxide, and a Chevron gas):
   Please use the following nitrogen pressure 0.02MPa
   Oxygen --------- Promotes oxidative degradation of refrigerant oil.
   Because it is flammable, it is strictly prohibited to use
   Carbon dioxide --- Degrade the drying characteristics of gas
   Chevron Gas ---- Toxic gas occurs when exposed to direct flame.
2. Always use a pressure reducing valve.
3. Please do not use commercially available antioxidant.
   The residual material seems to be the oxide scale is observed.
   In fact, due to the organic acids generated by oxidation of the alcohol contained in the anti-oxidants, ants nest corrosion occurs. (causes of organic acid → alcohol + copper + water + temperature)

Checking the Drainage

1. Set the air direction louvers up-and-down to the position(horizontally) by hand.



To check the drainage.

1. Pour a glass of water on the evaporator using a kettle.
2. Ensure the water flows through the drain hose of the indoor unit without any leakage and goes out the drain exit.

■ **Checking the Drainage**

1. Remove the Air Filter.

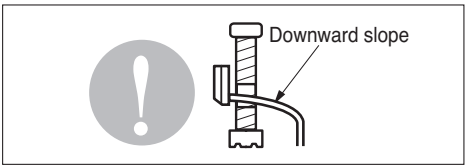
- To remove air filter, take hold of tab and pull slightly upwards.

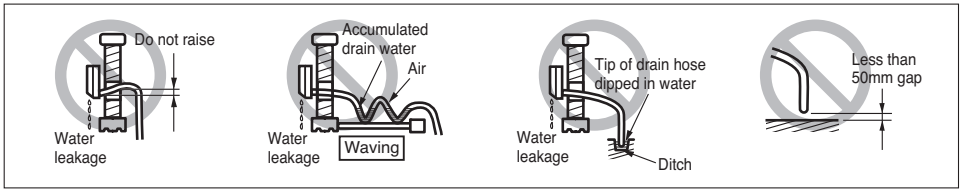
2. Check the drainage.

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

Drain piping

1. The drain hose should point downward for easy drain flow.
2. Do not make drain piping like the following.



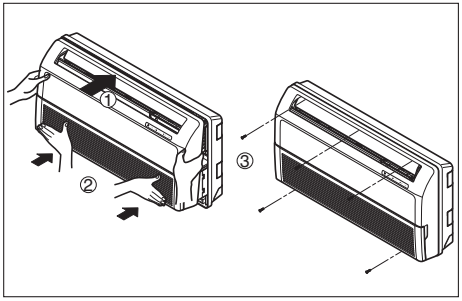


Panel Front Assembly

1. Suspend the hook of panel front in the groove.

2. Press the panel front.

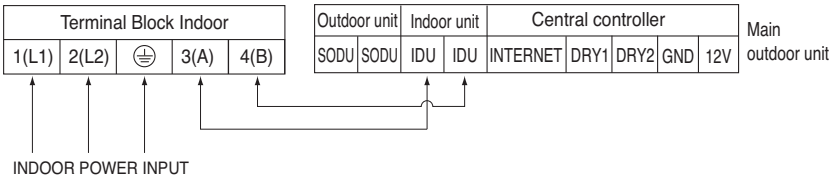
3. Screw up panel front.



Wiring Connection

Connect the wires to the terminals on the control board individually according to the outdoor unit connection.

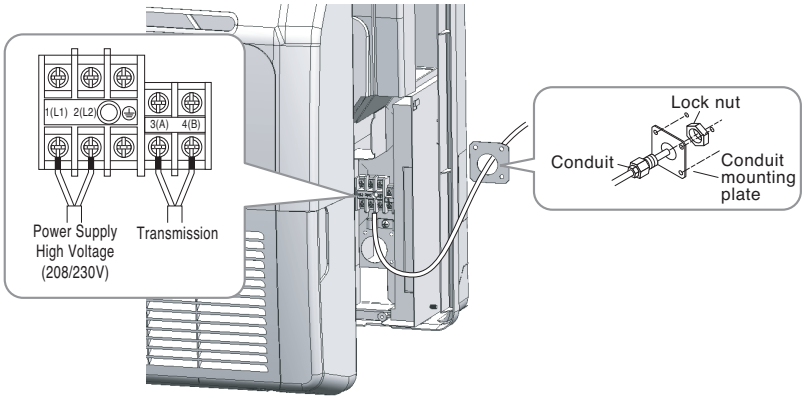
- Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.



⚠WARNING

Make sure that the screws of the terminal are free from looseness.

Connection method of the connecting cable(Example)

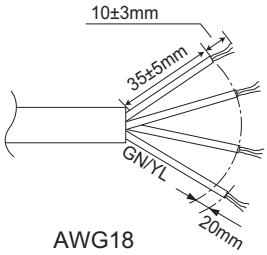


⚠CAUTION

Loose wiring may cause the terminal to overheat or result in unit malfunction.
A fire hazzard may also exist.
Therefore, be sure all wiring is tightly connected.

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).

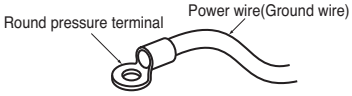


AWG18

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

◆ Precautions when laying power and ground wiring

Use round pressure terminals for connections to the power terminal block.
When laying ground wiring, you must use round pressure terminals.



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.



- 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.

Dip Switch Setting

	Function	Description	Setting Off	Setting On	Default
SW1	Communication	N/A (Default)	-	-	Off
SW2	Cycle	N/A (Default)	-	-	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 Removall	-	Off
SW6	Heater linkage	N/A	-	-	Off
SW7	Ventilator linkage	Selection of Ventilator linkage	Linkage Removal	Working	Off
	Vane selection (Console)	Selection of up/down side Vane	Up side + Down side Vane	Up side Vane Only	
	Region selection	Selection tropical region	General model	Tropical model	
SW8	Etc.	Spare	-	-	Off

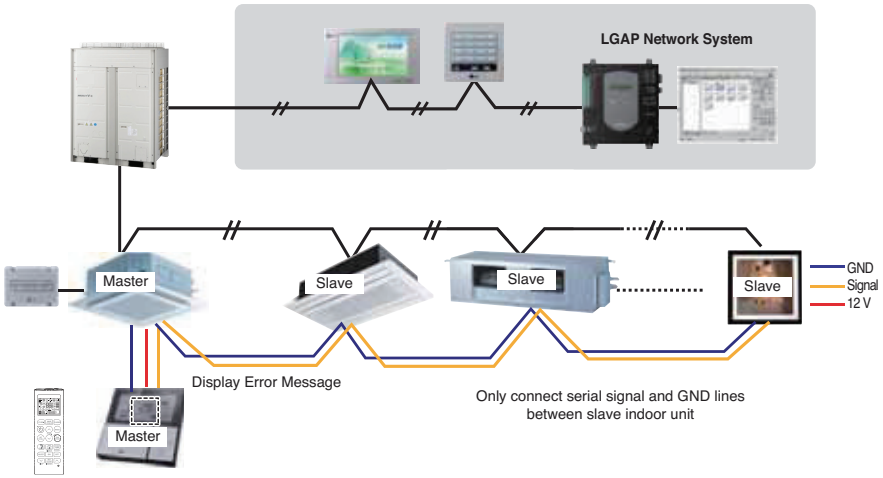
⚠ CAUTION

For Multi V Models, Dip switch 1, 2, 6, 8 must be set OFF.

Group Control Setting

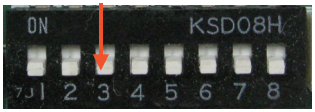
1. Group Control 1

■ **Wired remote controller 1 + Indoor units**

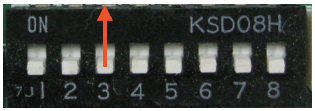


■ **Dip Switch in PCB (Cassette and Duct Type indoor units)**

① **Master Setting**
- No. 3 Off



② **Slave Setting**
- No. 3 On



1. It is possible to 16 indoor units(Max) by one wired remote controller.
Set only one indoor unit to Master, set the others to Slave.

2. It is possible to connect with every type of indoor units.

3. It is possible to use wireless remote controller at the same time.

4. It is possible to connect with Dry Contact and Central controller at the same time.

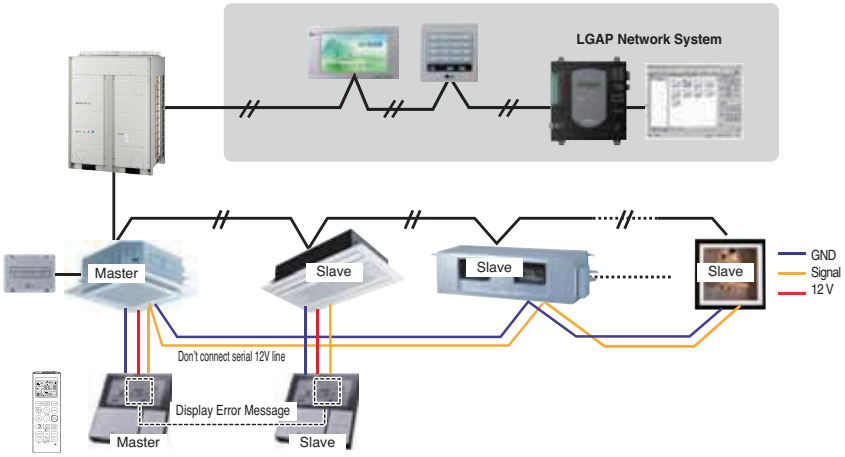
- The Master indoor unit is possible to recognize Dry Contact and Central Controller only.
- In case of Central controller and Group controller at the same time, it is possible to connect standard 2series indoor units or later since Feb. 2009.
- In case of Central controller setting, the Central controller can control indoor units after setting only the address of master indoor unit.
- Slave indoor unit will be operated like master indoor unit.
- Slave indoor unit can not be individually controlled by Central controller.
- Some remote controller can't perform with Dry Contact and Central controller at the same time. So contact us further information about it.

5. In case of any error occurs at indoor unit, display on the wired remote controller.
Exception of the error indoor unit, an individual indoor unit control possibility.

6. In case of Group Control, it is possible to use following functions.
- Selection of operation options (operation/stop/mode/set temperature)
- Control of flow rate (High/Middle/Low)
- It is not possible at some functions.

❉ Master/Slave setting of indoor units be set possible using a PCB Dip Switch.
❉ It is possible to connect indoor units since Feb. 2009. In the other cases, please contact LGE.
❉ It can be the cause of malfuctions when there is no setting of master and slave.

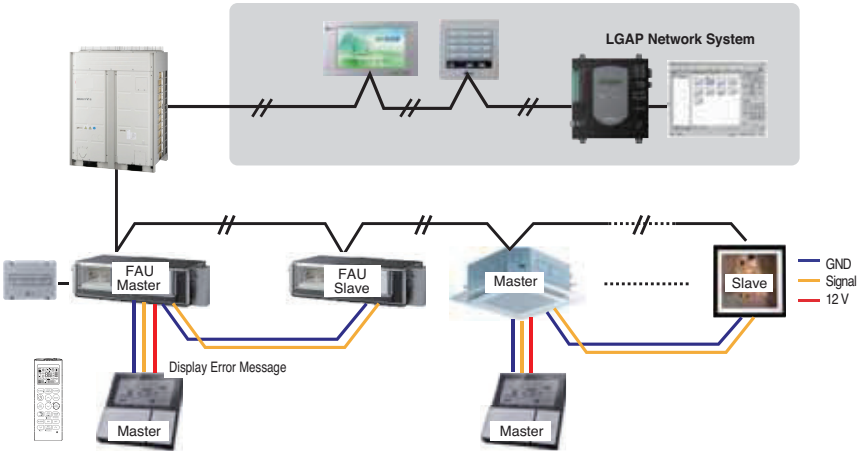
2. Group Control 2



❉ **It is possible to control N indoor units by wired remote controller M units. (M + N ≤ 17 Units)**
Set only one indoor unit to Master, set the others to Slave.
Set only one wired remote controller to Master, set the others to Slave.
Other than those, it is same with the Group Control 1.

3. Group Control 3

■ **Mixture connection with indoor units and Fresh Air Intake Unit**



❋ **In case of connecting with standard indoor unit and Fresh Intake Unit, separate Fresh Air Intake Unit with standard units.** (Because setting temperature are different.)

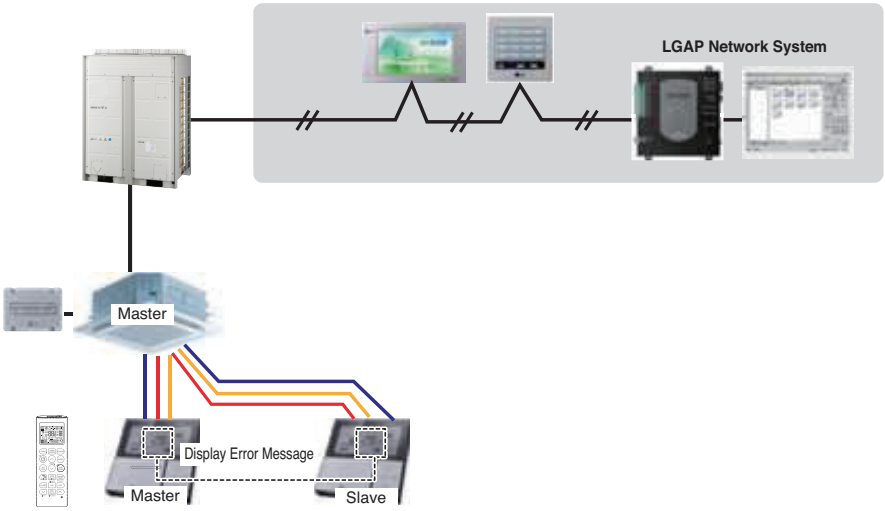
❋ **Other than those, it is same with Group Control 1.**



* FAU : Fresh Air Intake Unit
Standard: Standard Indoor Unit

4. 2 Remote Control

■ **Wired remote controller 2 + Indoor unit 1**



1. It is possible to connect two wired remote controllers with one indoor unit.

2. Every types of indoor unit is possible to connect two remote controller.

3. It is possible to use wireless remote controller at the same time.

4. It is possible to connect with Dry Contact and Central controller at the same time.

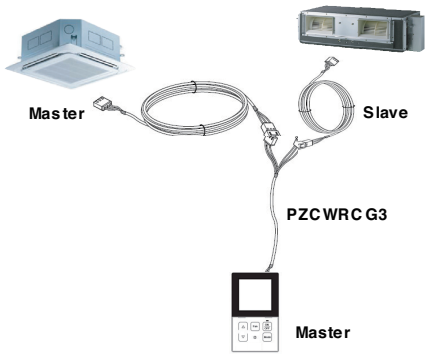
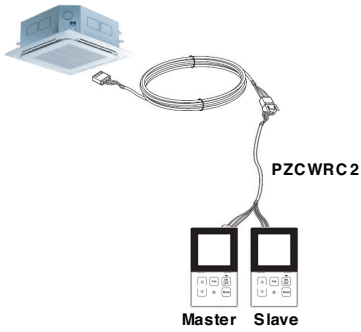
5. In case of any error occurs at indoor unit, display on the wired remote controller.

6. There isn't limits of indoor unit function.

❊ Maximum 2wired remote controllers can be connected with 1 indoor unit.

5. Accessories for group control setting

It is possible to set group control by using below accessories.

Indoor unit 2 EA +Wired remote controller	Indoor unit 1 EA +Wired remote controller 2EA
❉ PZCWRCG3 cable used for connection	❉ PZCWRC2 cable used for connection
	

⚠ CAUTION

- Apply totally enclosed noncombustible conduit in case of local building code Requiring plenum cable usage.



US	Please call the installing contractor of your product, as warranty service will be provided by them.
CANADA	Service call Number # : (888) LG Canada, (888) 542-2623 Numéro pour les appels de service : LG Canada, 1-888-542-2623