

INSTALLATION MANUAL

AIR CONDITIONER

Please read this installation manual completely before installing the product.

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

Please retain this installation manual for future reference after reading it thoroughly.

Ceiling Cassette - 1Way



MFL67737202
Rev.01_102618

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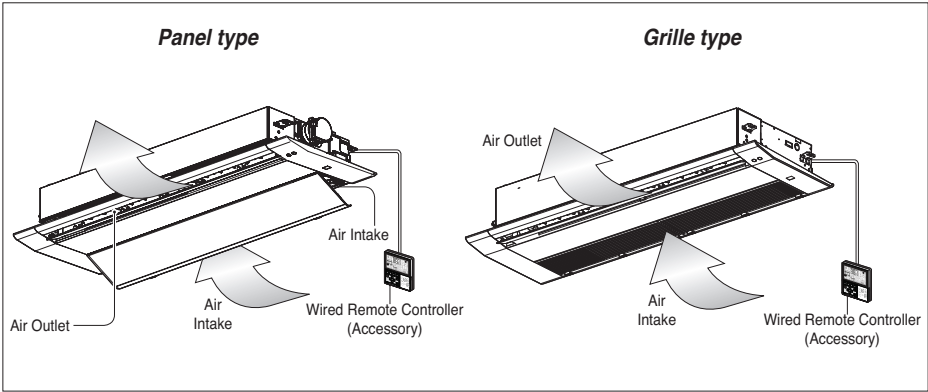
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Installation Parts



Installation Tool

Name	Drain hose	Clamp metal	Washer for hanging bracket	Plastic band	Insulation for fitting
Quantity	1 EA	2 EA	8 EA	4 EA	1 SET
Shape					 for gas pipe  for liquid pipe

- Screws for fixing panels are attached to decoration panel.

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.
 - LG Electronics is not responsible for Product's malfunction or damage which caused by improper installation or misuse of operation guide.

 **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 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.

- For installation, always contact the dealer or an Authorized Service Center.
 - There is risk of fire, electric shock, explosion, or 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

- Do not store or use flammable gas or combustibles near the product.
 - There is risk of fire or failure of product.

⚠ CAUTION

Installation

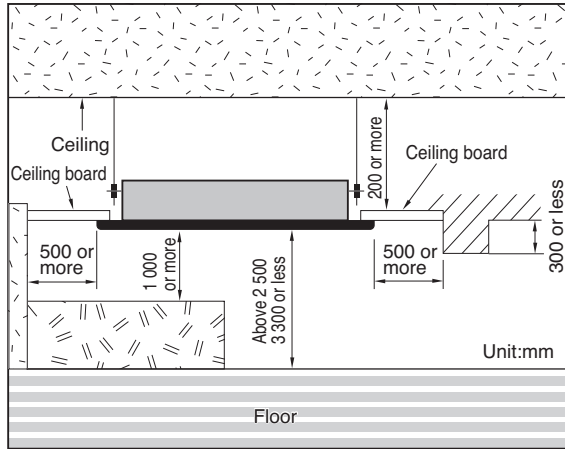
- Install the drain hose to ensure that water is drained away properly.
 - A bad connection may cause water leakage.
- Do not install the product where it will be exposed to sea wind (salt spray) directly.
 - It may cause corrosion on the product. Corrosion, particularly on the condenser and evaporator fins, could cause product malfunction or inefficient operation.
- 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

Read completely, then follow step by step.

Selection of the Best Location

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

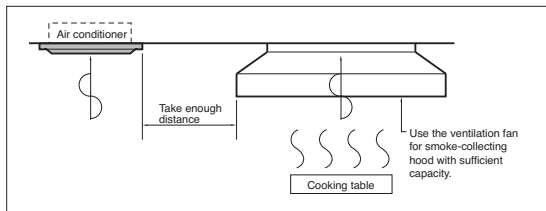


CAUTION

In case that the unit is installed near the sea, the installation parts may be corroded by salt. The installation parts (and the unit) should be taken appropriate anti-corrosion measures.

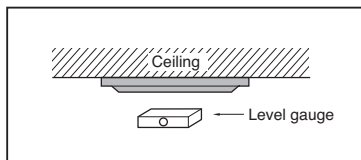
NOTICE

- Avoid the following installation location.
1. Such places as restaurants and kitchen where considerable amount of oil steam and flour is generated. These may cause heat exchange efficiency reduction, or water drops, drain pump mal-function. In these cases, take the following actions;
 - Make sure that ventilation fan is enough to cover all noxious gases from this place.
 - Ensure enough distance from the cooking room to install the air conditioner in such a place where it may not suck oily steam.
 2. Avoid installing air conditioner in such places where cooking oil or iron powder is generated.
 3. Avoid places where inflammable gas is generated.
 4. Avoid place where noxious gas is generated.
 5. Avoid places near high frequency generators.



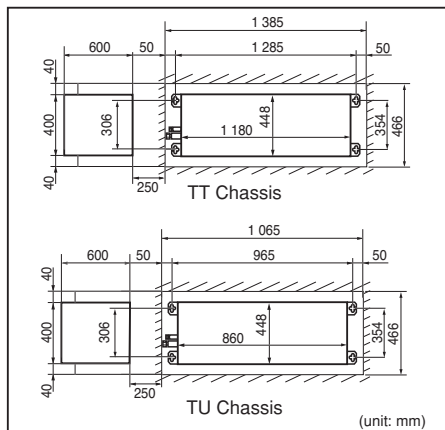
Ceiling Dimension and Hanging Bolt Location

- The dimensions of the paper model for installation are the same as those of the ceiling opening dimensions.

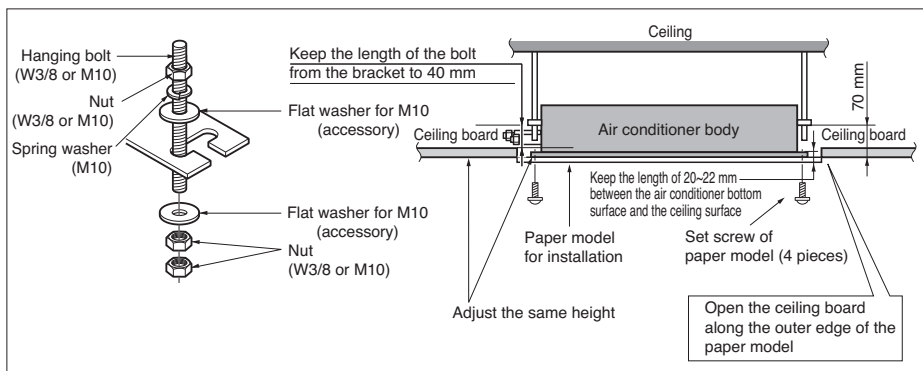
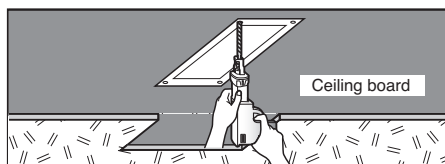


CAUTION

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



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



- The following parts are local purchasing.

- ① Hanging bolt - W 3/8 or M10
- ② Nut - W 3/8 or M10
- ③ Spring washer - M10
- ④ Plate washer - M10

CAUTION

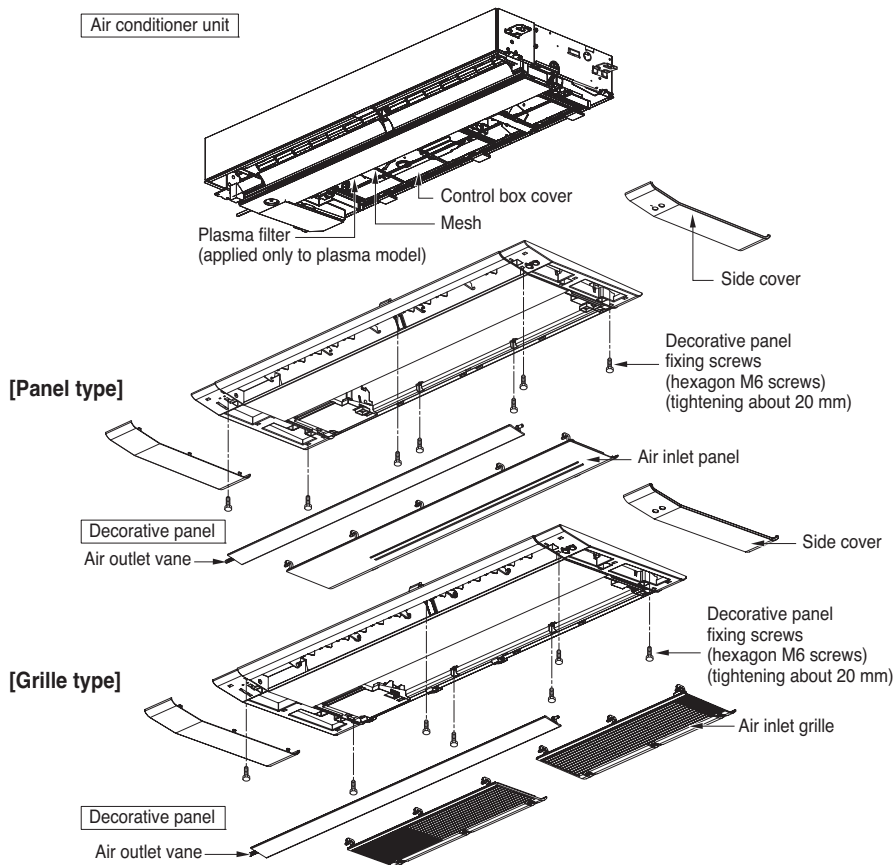
Tighten the nut and bolt to prevent unit from falling off.

Installation of Decoration Panel

The decoration panel has its installation direction.

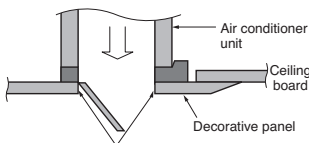
Before installing the decoration panel, always remove the paper template.

1. Open the air outlet vane, and extract side covers.
2. Remove the air inlet grille from the decoration panel.
3. Hook decoration panel to indoor unit, using hooks attached at the backside of both side of decoration panel.
4. Arrange wires not to get caught between decoration panel and indoor unit.
5. Screw 7 fixing screws. (9, 12 kBTu/h : 6 screws)
6. Connect the vane motor connector and display connector. (Plasma connector for plasma model)
7. Install the air inlet grille (including the air filter) and side covers.



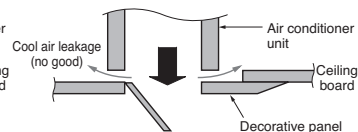
CAUTION
 Install certainly the decoration panel.
 Cool air leakage causes sweating.
 Waterdrops fall.

Good example



Fit the insulator (this part) and be careful for cool air leakage

Bad example



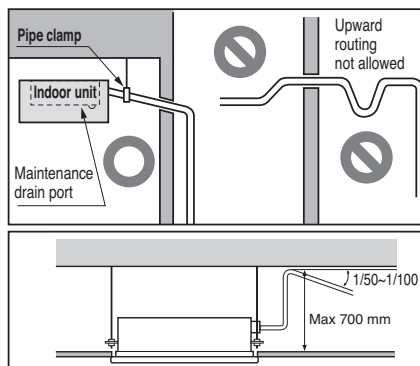
Drain Piping

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

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

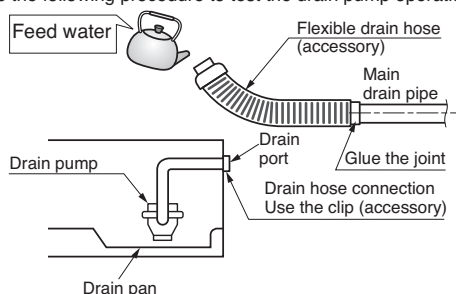
- Be sure to install heat insulation on the drain piping.

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



Drain Test

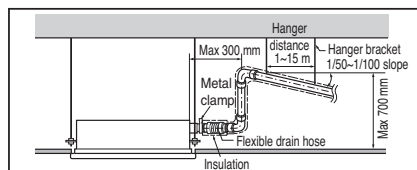
The air conditioner uses a drain pump to drain water.
Use the following procedure to test the drain pump operation:



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

CAUTION

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

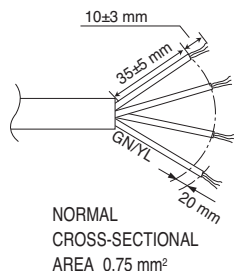


Wiring Connection

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

CAUTION

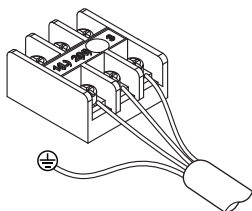
The connecting cable connected to the indoor and outdoor unit should be complied with the following specifications (This equipment shall be provided with a cord set complying with the national regulation).



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

CAUTION

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



Precautions when laying power wiring

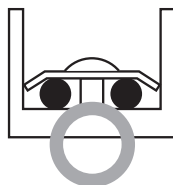
Use round pressure terminals for connections to the power terminal block.



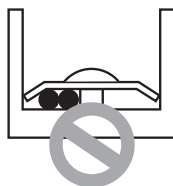
When none are available, follow the instructions below.

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

Connect same thickness wiring to both sides.



It is forbidden to connect two to one side.



It is forbidden to connect wiring of different thicknesses.

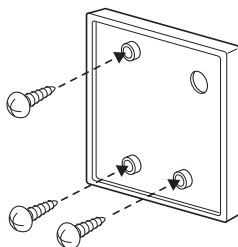


- For wiring, use the designated power wire and connect firmly, then secure to prevent outside pressure being exerted on the terminal block.
- Use an appropriate screwdriver for tightening the terminal screws. A screwdriver with a small head will strip the head and make proper tightening impossible.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

Installation of Wired Remote Controller

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

- Please set it up not to bend because poor setup could take place if setup board bends.
Please set up remote controller board fit to the reclamation box if there is a reclamation box.

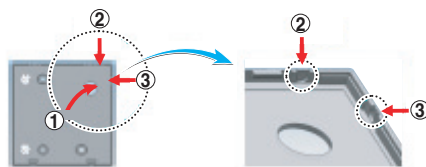


2. Can set up Wired remote controller cable into three directions.

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

※ Remove guide groove with long nose.

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

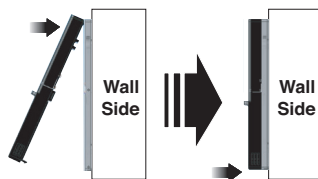


<Wire guide grooves>

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

- Please connect not to make a gap at the remote controller and setup board's upper and lower, right and left part.

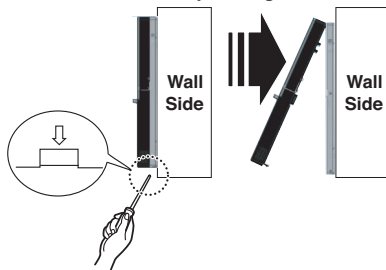
<Connecting order>



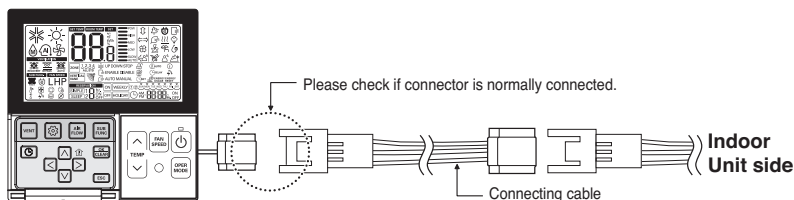
When separating remote controller from setup board, as the picture below, after inserting into the lower separating hole using screw driver and then, spinning clockwise, remote controller is separated.

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

<Separating order>



4. Please connect indoor unit and remote controller using connection cable.



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

⚠ CAUTION

When installing the wired remote controller, do not bury it in the wall.

(It can cause damage in the temperature sensor.)

Do not install the cable to be 50 m or above.

(It can cause communication error.)

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

Wired Remote Controller Installation

- Since the room temperature sensor is in the remote controller, the remote controller box should be installed in a place away from direct sunlight, high humidity and direct supply of cold air to maintain proper space temperature.

Install the remote controller about 5ft(1.5m) 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.)

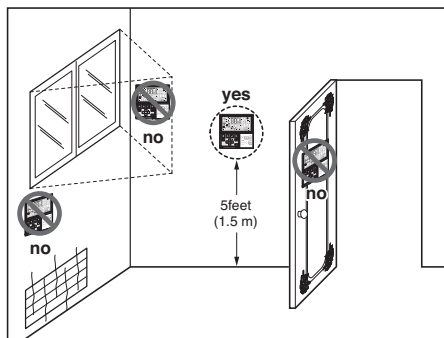
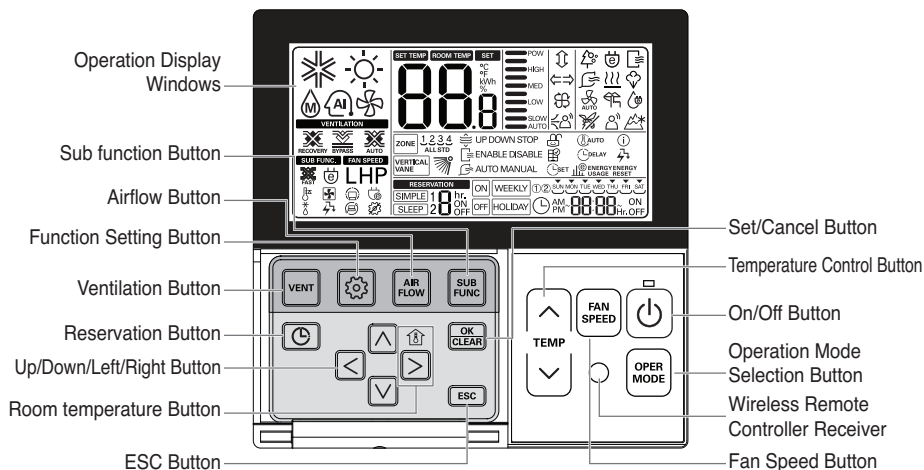


Fig.1 Typical locations for remote controller

Name and function of wired remote controller(Accessory)



Operation Display Windows : Displays the status of operation and settings

Ventilation Button : For interlocking operations of air-conditioner and ventilator

Function Setting Button : To select the additional operations function

Airflow Button : To select the airflows

Sub function Button : To select the additional operations function

Reservation Button : To program the schedule

Up/Down/Left/Right Button : To change the settings in the menu

Room temperature Button : To check the indoor temperature

ESC Button : To exit from the menu

Set/Cancel Button : To save the settings in the menu

Temperature Control Button : To change the desired temperature

Fan Speed Button : To select the fan speed

On/Off Button : To turn on/off with a remote controller

Mode Selection Button : To select the operating mode

Wireless Remote Controller Receiver

* Some functions may not be operated and displayed depending on the product type.

NOTE

- * Display temperature can be different from actual room temperature if the remote controller is installed at the place where sun-rays are falling directly or the place nearby heat source.
- * The actual product can be different from above contents depending upon model type.
- * When using simultaneous operation system, whenever press remote controller button, system will approximately operate after 1~2 minutes.

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 Removal	-	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

Model Designation

Indoor Units

Model Name	AMN	W	12	G	S	J	A	A
No	1	2	3	4	5	6	7	8
1	A*N : Indoor units using R410A M : Multi Room Air conditioner							
2	Model type W : DC Inverter Heat pump							
3	Nominal Capacity Ex) 9 000 Btu/h Class → '09', 18 000 Btu/h Class → '18'							
4	Electrical rating G : 1 Ø, 220-240 V, 50 Hz / 1 Ø, 220 V, 60 Hz							
5,6	Chassis name							
7	Functions A : Basic (Standard)							
8	Serial number							

Outdoor Units

Model Name	A2U	W	18	G	F	A	A
No	1	2	3	4	5	6	7
1	Indicates that this is multi system outdoor unit using R410A Ex) A2U : Connectable max. 2 indoor units						
2	Model type W : DC Inverter Heat pump						
3	Cooling/Heating Capacity Ex) 24 000 Btu/h Class → '24', 40 000 Btu/h Class → '40'						
4	Electrical rating G : 220 - 240 V, 1 Ø, 50 Hz / 220 V, 1 Ø, 60 Hz L : 380 - 415 V, 3 Ø, 50 Hz / 380 V, 3 Ø, 60 Hz						
5	F : Fixed multi type						
6	Functions A : Basic (Standard)						
7	Serial number						

Airborne Noise Emission

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

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

The figures quoted are emission level and are not necessarily safe working levels. Whilst there is a correlation between the emission and exposure levels, this cannot be used reliably to determine whether or not further precautions are required. Factor that influence the actual level of exposure of the workforce include the characteristics of the work room and the other sources of noise, i.e. the number of equipment and other adjacent processes and the length of time for which an operator exposed to the noise. Also, the permissible exposure level can vary from country to country. This information, however, will enable the user of the equipment to make a better evaluation of the hazard and risk.

Limiting concentration

Limiting concentration is the limit of Freon gas concentration where immediate measures can be taken without hurting human body when refrigerant leaks in the air. The limiting concentration shall be described in the unit of kg/m³ (Freon gas weight per unit air volume) for facilitating calculation

Limiting concentration: 0.44 kg/m³ (R410A)

■ Calculate refrigerant concentration

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



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