LG
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ENGLISH
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.

Ceilling Concealed Duct
Original instruction

MFL67939921
Rev.00_062818

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Safety Precautions

To prevent the injury of 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.

- The meanings of the 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.

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 turn on the breaker or power under condition that front panel, cabinet, top cover, control box cover are removed or opened.

- Otherwise, it may cause fire, electric shock, explosion or death.

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 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.

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 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 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.

⚠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.

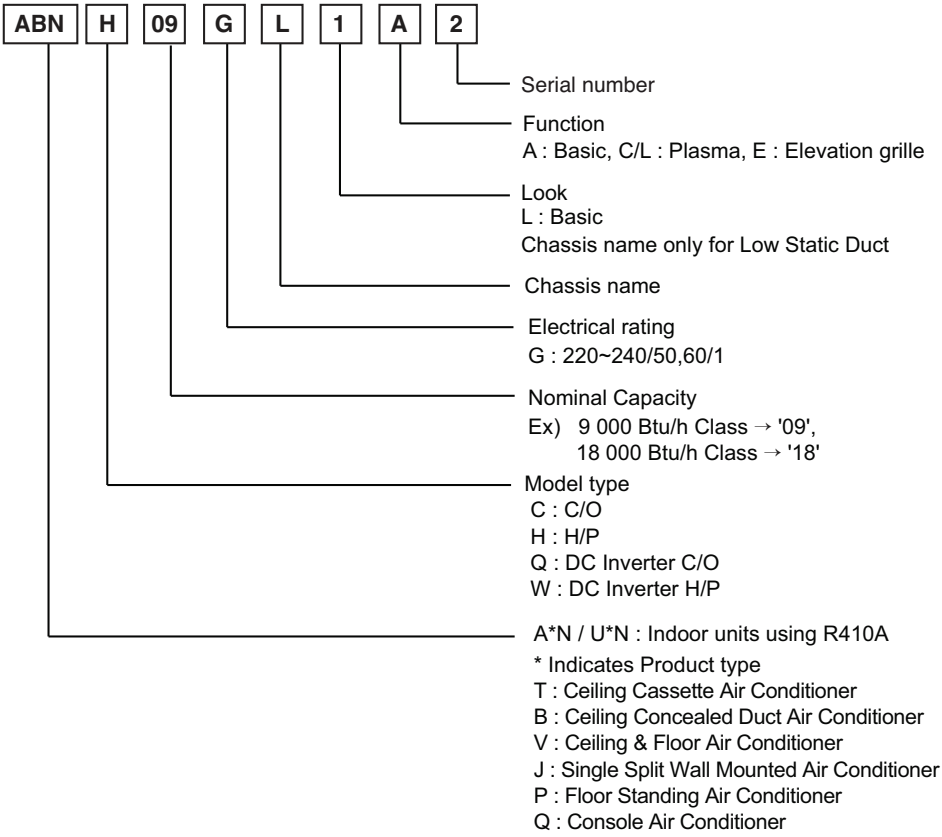
The plug accessible have to be accessible. Or means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.

- In case of abnormal situation, plug should be able to be pulled out or circuit breaker should be available.

Model Designation

Product information

- Product Name : Air conditioner
- Model Name :



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

Airborne Noise Emission

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

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

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

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

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

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

Limiting concentration

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

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

■ Calculate refrigerant concentration

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

External Appearance

- **Ceiling Concealed Duct – Low static pressure**
  L1/L2/L3 Chassis



- **Ceiling Concealed Duct – Mid static pressure**
  M1/M2/M3 Chassis



- **Ceiling Concealed Duct – H-INV**
  BR Chassis



- **Celling Concealed Duct – High static pressure**
  B9 Chassis



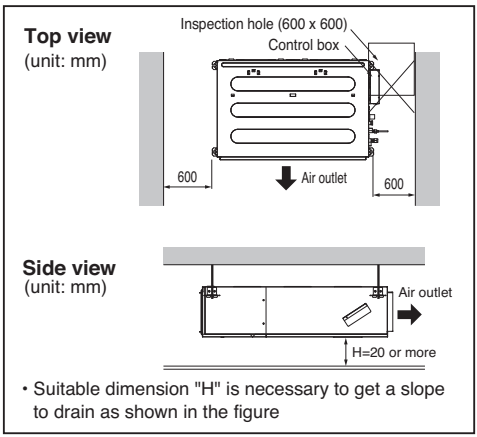
Installation Places

Selection of the best location

Install the air conditioner in the location that satisfies the following conditions.

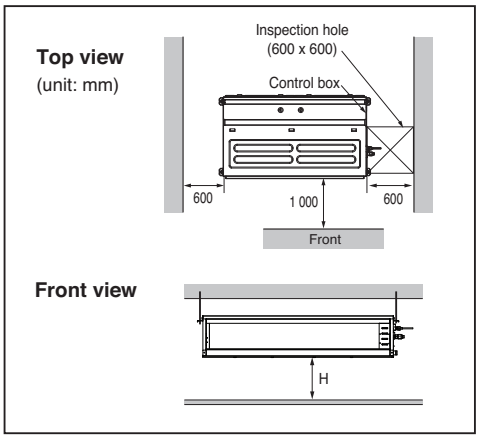
- The place shall easily bear a load exceeding four times the indoor unit's weight.
- The place shall be able to inspect the unit as the figure.
- The place where the unit shall be leveled.
- The place shall allow easy water drainage.
  (Suitable dimension "H" is necessary to get a slope to drain as figure.)
- 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.

Ceiling Concealed Duct – Low Static

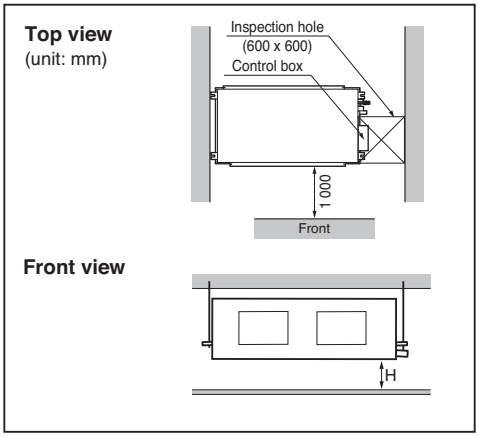


• Suitable dimension "H" is necessary to get a slope to drain as shown in the figure

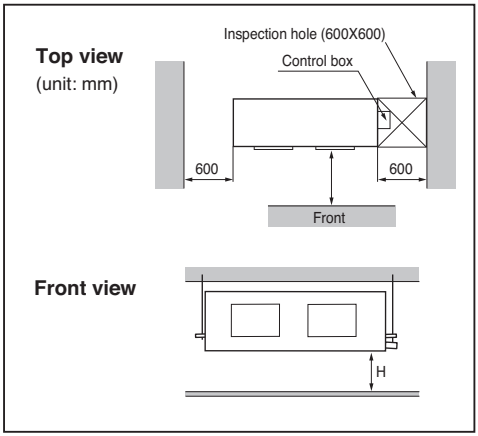
Ceiling Concealed Duct – Mid Static



Ceiling Concealed Duct – H-INV



Ceiling Concealed Duct – High Static



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.

[Inspection Hole Standard]

Number of Inspection hole	Distance between False ceiling & Actual ceiling	Remarks
1	More than 100 cm	Sufficient space in the ceiling for servicing.
2	20 cm to 100 cm	Insufficient space. Difficult for servicing
Hole size should be more than the size of IDU.	Less than 20 cm	Minimum height for motor replacement.

The indoor unit installation

Installation of Unit

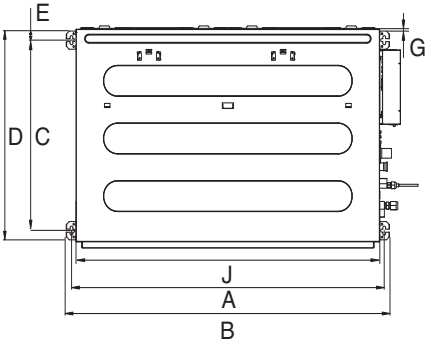
Install the unit above the ceiling correctly.

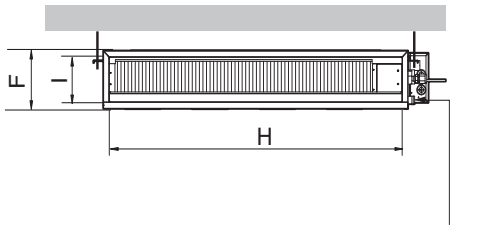
CASE 1

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.

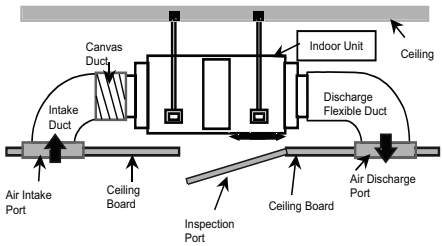
Ceiling Concealed Duct – Low Static



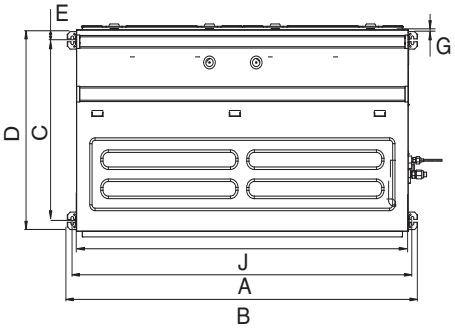


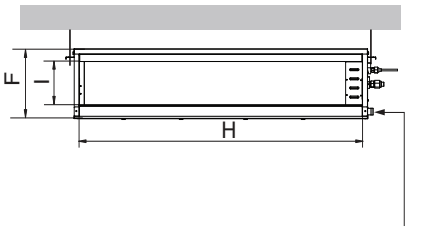
(Unit: mm)

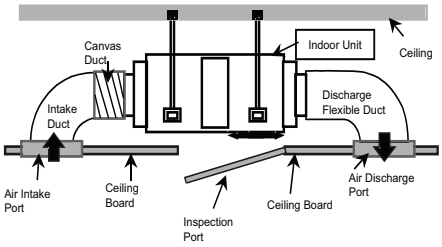
Dimension / Capacity (kBtu/h)	A	B	C	D	E	F	G	H	I	J
9	733	772	628	700	36	190	20	660	155	700
12/18	933	972	628	700	36	190	20	860	155	900
24	1 133	1 172	628	700	36	190	20	1 060	155	1 100



Ceiling Concealed Duct – Mid Static



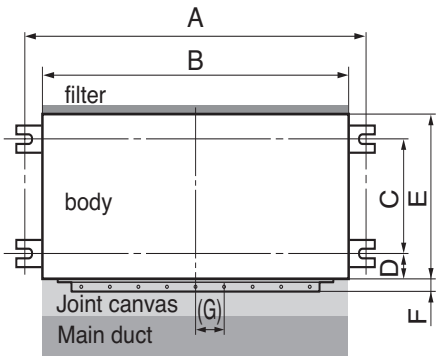


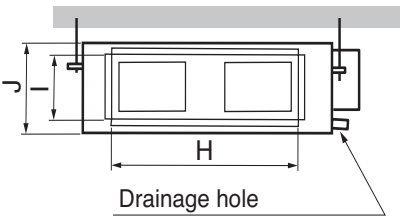


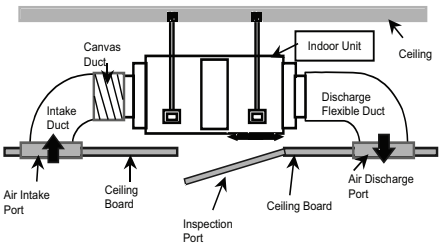
(Unit:mm)

Dimension / Capacity (kBtu/h)	A	B	C	D	E	F	G	H	I	J
18 / 24 / 30	933.4	971.6	619.2	700	30	270	15.2	858	201.4	900
36 / 42	1 283.4	1 321.6	619.2	689.6	30	270	15.2	1 208	201.4	1 250
48 / 60	1 283.4	1 321.6	619.2	689.6	30	360	15.2	1 208	291.4	1 250

Ceiling Concealed Duct – H-INV



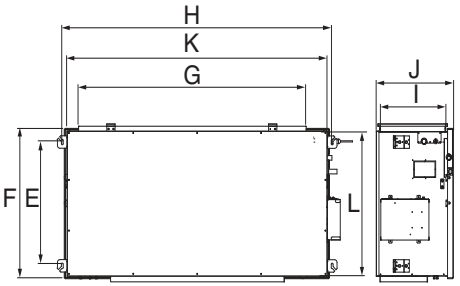


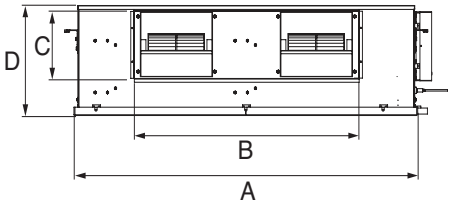


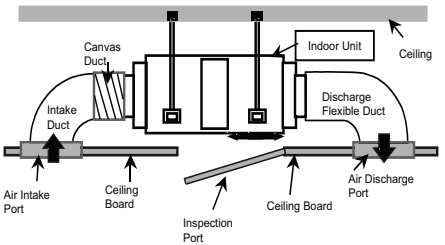
(Unit:mm)

Dimension / Capacity (kBtu/h)	A	B	C	D	E	F	(G)	H	I	J
36 / 42 / 46	1 290	1 230	447	56	590	30	120	1 006	294	380

Ceiling Concealed Duct – High Static







(Unit:mm)

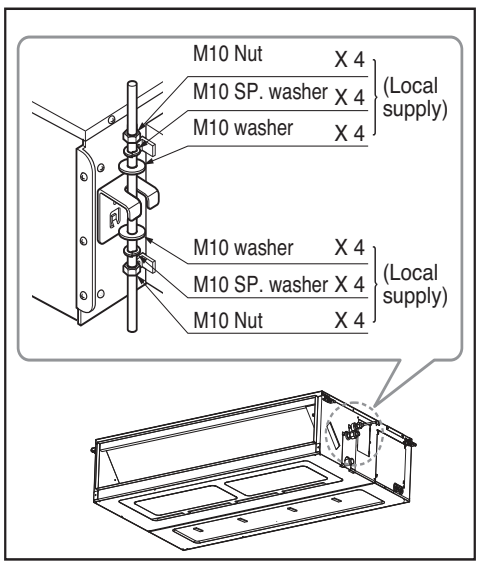
Dimension / Capacity (kBtu/h)	A	B	C	D	E	F	G	H	I	J	K	L
70 85	1 594	1 044	286	464	657	821	1 368	1 622	392	458	1 563	791

CASE 2

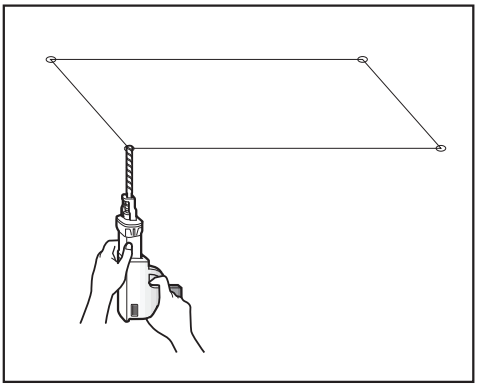
- Install the unit leaning to a drainage hole side as a figure for easy water drainage.

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.

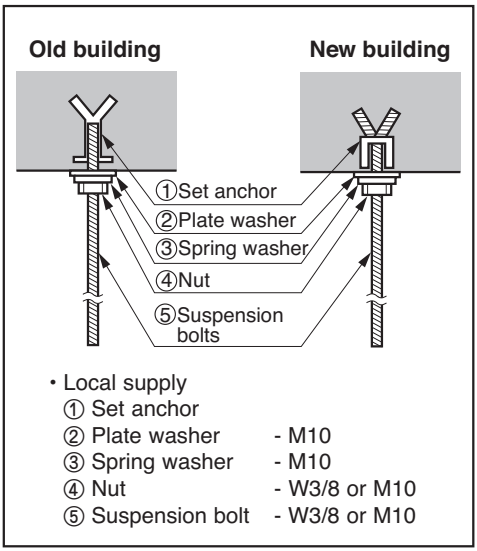


- Select and mark the position for fixing bolts.
- Drill the hole for set anchor on the face of ceiling.



- 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.

CAUTION: Tighten the nut and bolt top revent unit falling.



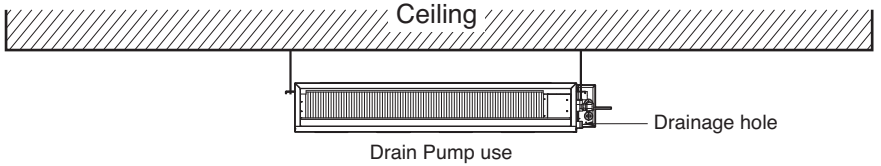
- Local supply
  - ① Set anchor
  - ② Plate washer - M10
  - ③ Spring washer - M10
  - ④ Nut - W3/8 or M10
  - ⑤ Suspension bolt - W3/8 or M10

⚠ CAUTION

1. **Install declination** of the indoor unit is very **important for the drain** of the duct type air conditioner.
2. Minimum thickness of the insulation for the connecting pipe shall be 10 mm.

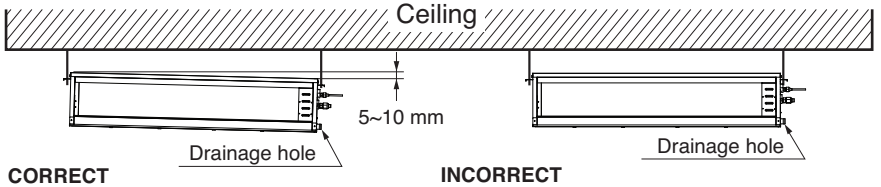
FRONT OF VIEW

• The unit must be horizontal or declined to the drain hose connected when finished installation.

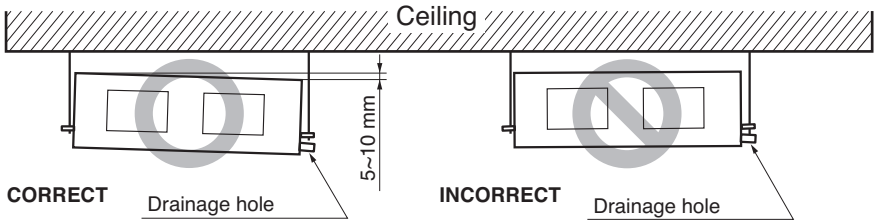


Ceiling Concealed Duct – Low static

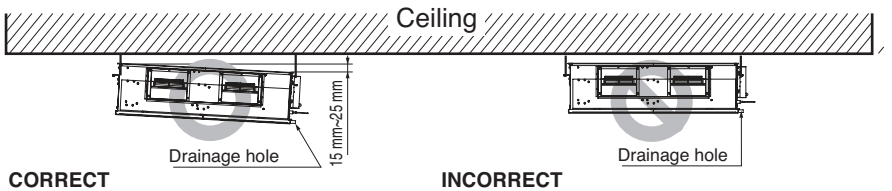
• The unit must be declined to the drain hose connected when finished installation.



Ceiling Concealed Duct – Mid static



Ceiling Concealed Duct – H-INV

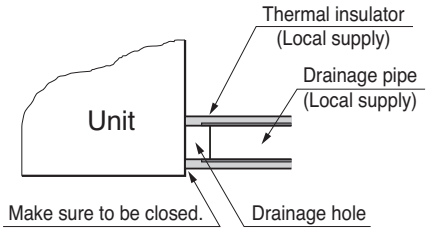


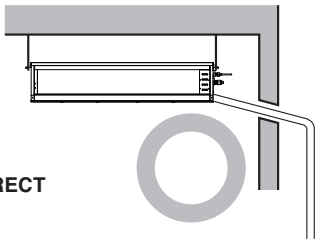
Ceiling Concealed Duct – High static

CAUTION FOR GRADIENT OF UNIT AND DRAIN PIPING

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

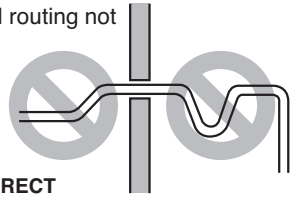
- Always lay the drain with downward inclination.
  Prevent any upward flow or reverse flow in any part.
- 10 mm or thicker formed thermal insulator shall always be provided for the drain pipe.





CORRECT

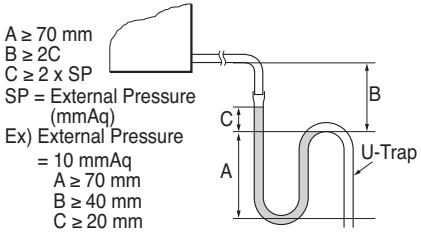
- Upward routing not allowed



INCORRECT

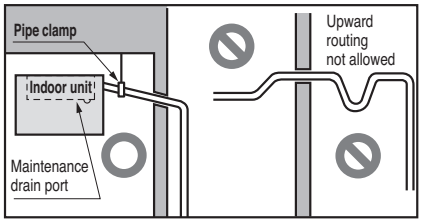
- Install the P-Trap (or U-Trap) to prevent a water leakage caused by the blocking of intake air filter.

Applied U-Trap Dimension



Indoor Unit Drain Piping

- Drain piping must have down-slope : be sure not to provide up-and-down slope to prevent reversal flow.
- During drain piping connection, be careful not to exert extra force on the drain port on the indoor unit.
- The outside diameter of the drain connection on the indoor unit is 32 mm.
  (Ceiling Concealed Duct – High static: 65 mm)

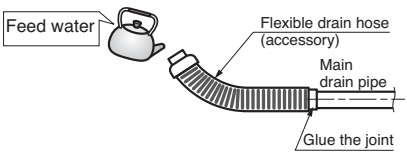


Piping material: Polyvinyl chloride pipe VP-25 and pipe fittings

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

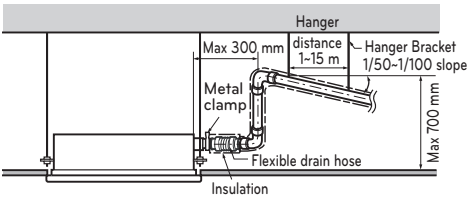
Heat insulation material: Polyethylene foam with thickness more than 10 mm.

Drain test

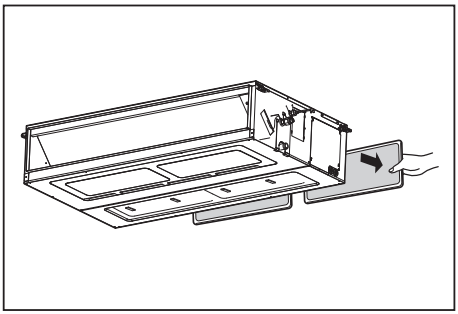


- Connect the main drain pipe to the exterior and leave it provisionally until the test comes to an end.
- Feed water to the flexible drain hose and check the piping for leakage.
- When the test is complete, connect the flexible drain hose to the drain port on the indoor unit.

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

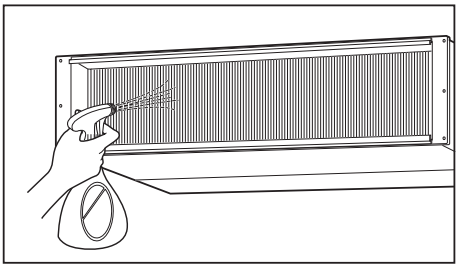


1) Remove the Air Filter.



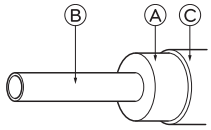
2) Check the drainage.

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



Heat Insulation

Be sure to give insulation work to refrigerant piping by covering liquid pipe and gas pipe separately with enough thickness heat-resistant polyethylene, so that no gap is observed in the joint between indoor unit and insulating material, and insulating materials themselves. When insulation work is insufficient, there is a possibility of condensation drip, etc. Pay special attention to insulation work to ceiling plenum.



Ⓐ Heat insulation material

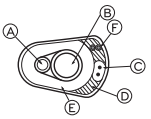
Ⓑ Pipe

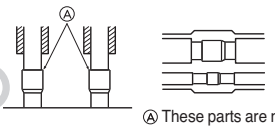
Ⓒ Outer covering(Wind the connection part and cutting part of heat insulation material with a finishing tape.)

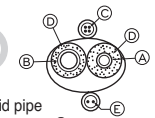
Heat insulation material	Adhesive + Heat - resistant polyethylene foam + Adhesive tape	
Outer covering	Indoor	Vinyl tape
	Floor exposed	Water-proof hemp cloth + Bronze asphalt
	Outdoor	Water-proof hemp cloth + Zinc plate + Oily paint

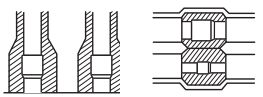
Note :

When using polyethylene cover as covering material, asphalt roofing shall not be required.

<table>
<tr>
<td>Bad example</td>
<td>• Do not insulate gas or low pressure pipe and liquid or high pressurepipe together.


Ⓐ Liquid pipe
Ⓑ Gas pipe
Ⓒ Power cables
Ⓓ Finishing tape
Ⓔ Insulating material
Ⓕ Communication cables</td>
<td>• Be sure to fully insulate connecting portion.


Ⓐ These parts are not insulated.</td>
</tr>
<tr>
<td>Good example</td>
<td>

Power cables Communication cables
Separ -ation
Ⓐ Liquid pipe
Ⓑ Gas pipe Ⓓ Insulating material
Ⓒ Power cables Ⓔ Communication cables</td>
<td></td>
</tr>
</table>

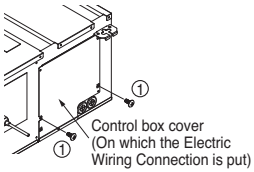
CAUTION: Cutting line of insulation must look upper direction. Thickness of insulation is 15 mm(Gas pipe) and 19 mm(Liquid pipe) or over.

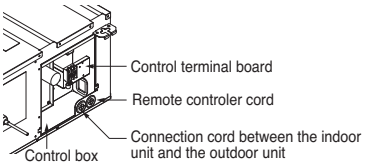
Note :

Recommended Insulation material
Material : EPDM
Thickness : 15 mm(Gas pipe) and 19 mm(Liquid pipe) or over.
Density : less than 0.032 ± 0.005(g/cm^2)
Thermal conductivity : less than 0.03(kcal/m.hr.°C)

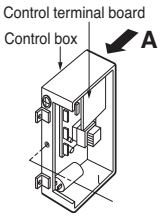
Wiring Connection

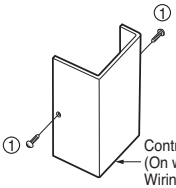
- Open the control box cover and connect the Remote controller cord and Indoor power wires.
- Remove the control box cover for electrical connection between the indoor and outdoor unit. (Remove screws ①.)
- Use the cord clamper to fix the cord.

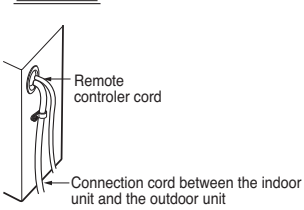




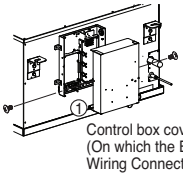
Ceiling Concealed Duct – Low Static, Mid Static

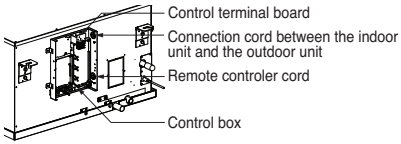






Ceiling Concealed Duct – H-INV

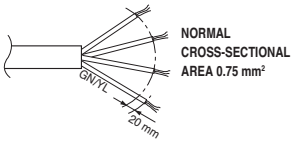




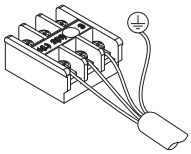
Ceiling Concealed Duct – High static

⚠ 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).

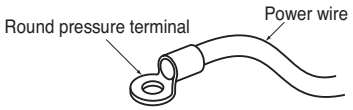


If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer of its service agent. When the connection line between the indoor unit and outdooor unit and outdoor unit is over 40 m, connect the telecommunication line and power line separately.



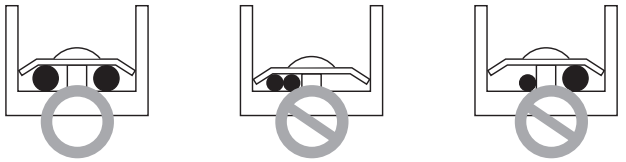
◆ Precautions when laying power wiring

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.



- 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.

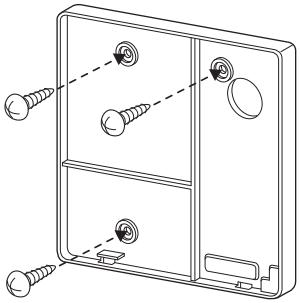
HAND OVER

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

Remote Controller Installation

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.
- Install the product so as not to make a gap with the wall side and to prevent shaking after the installation.

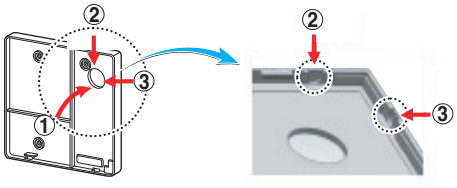


2. Can set up Wired remote controller cable into three directions.

- 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

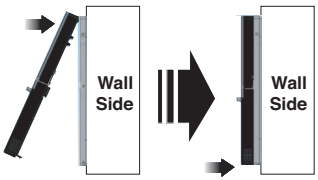


<Wire guide grooves>

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.
- Before assembly with the installation board, arrange the Cable not to interfere with circuit parts.

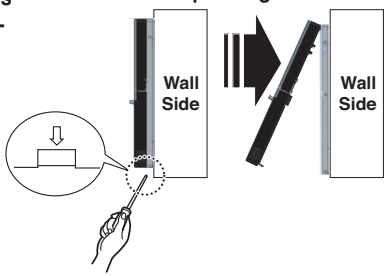
<Connecting order>



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

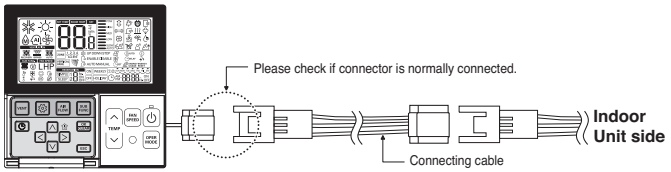
- There are two separating holes. Please individually separate one at a time.
- Please be careful not to damage the inside components when separating.

<Separating order>



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

12 V	Red
Signal	Yellow
GND	Black



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 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.)

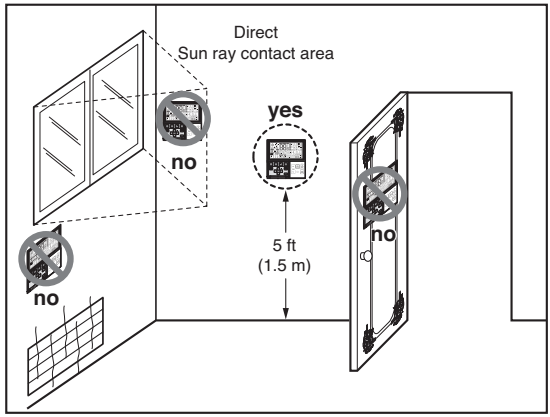
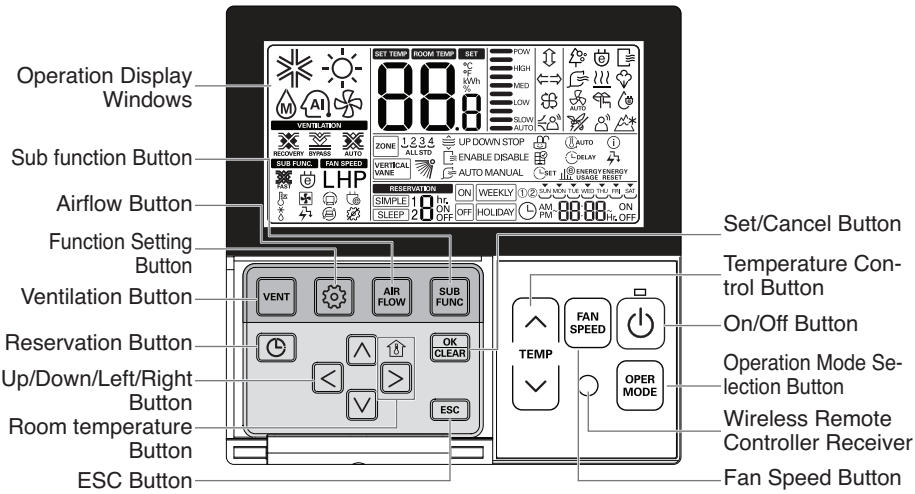


Fig.1 Typical locations for remote controller

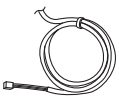
Wired Remote Controller

PART DESCRIPTION



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

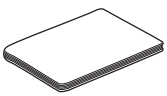
Accessories



Connecting Cable 1 EA, 10 m



Screw (4 EA)



Owner's / Installation manual

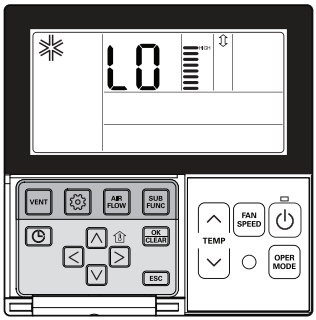


Inform label (8 EA-8Languages)

Optional Operation

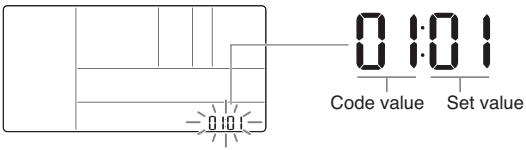
Installer Setting -Test Run Mode

A test run must be performed after installation.
See the product manual for more details about test run.

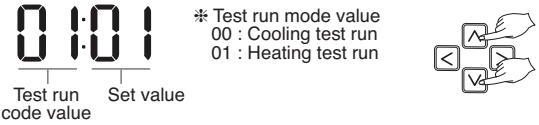


Press and hold ⚙ button for more than 3 seconds to enter the installer settings mode.
- If pressing only once briefly, it will enter the user settings mode.
  Make sure to press and hold for more than 3 seconds.
- For the wall-mount product, cancel the wind direction left/right.

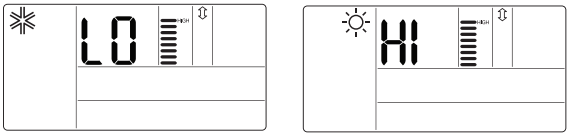
The set value '01' will blink in the lower part of display window.



Select the test run mode using ∧ ∨ button.



Press OK CLEAR button to start test run.

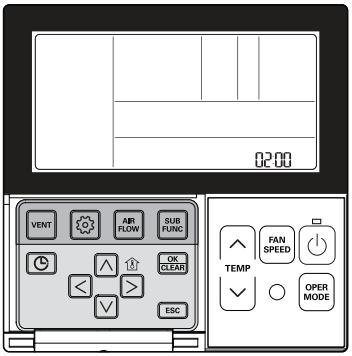


<When cooling> <When heating>

During a test run, press the button below to cancel the test run.
- Operation selection, temperature up/down, fan speed, Airflow, run/stop button

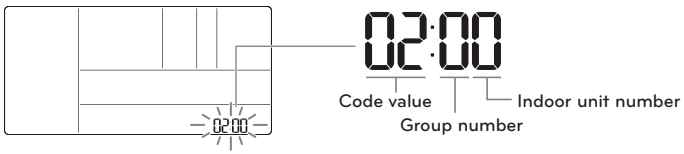
Installer Setting - Setting Address of Central Control

This function is to be used when connecting to a central controller.
See the central controller manual for more detailed functions.



Press and hold ⚙ button for more than 3 seconds to enter the installer settings mode.
- If pressing only once briefly, it will enter the user settings mode.
  Make sure to press and hold for more than 3 seconds.

Once entered the address setting mode using ⚙ button, it displays as below.



Set the group No. using ∧ ∨ button. (0~F)



Move to the indoor unit No. set value using < > button.



Set the indoor unit No. value using ∧ ∨ button. (0~F)



Press OK CLEAR button to complete the address setting.

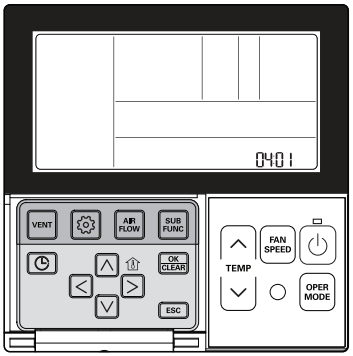
Press ESC button to exit.

❉ If no button is selected for about 25 seconds after setup, it exits the setup mode automatically.

❉ If the OK CLEAR button is not selected before you exit, the changes will not apply.

Installer Setting -Thermistor

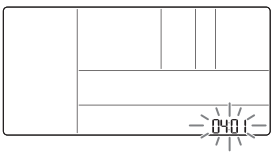
This function is to select a temperature sensor to determine the indoor temperature.



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

- If pressing only once briefly, it will enter the user settings mode.
  Make sure to press and hold for more than 3 seconds.

Move to the Selection of Indoor Temperature Sensor (Thermistor) in the menu using ⚙ button and then, it displays as below.



Select the location of indoor temperature sensor (Thermistor) using △ ▽ button.



Code value for Room temperature sensor (Thermistor)

Set value

❊ Set value for sensor location
01 : Remote control
02 : Indoor unit
03 : 2TH

Press OK CLEAR button to save the setting.

Press ESC button to exit.

❊ If no button is selected for about 25 seconds after setup, it exits the setup mode automatically.

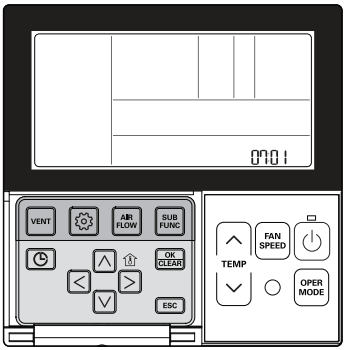
❊ If the OK CLEAR button is not selected before you exit, the changes will not apply.

Temperature sensor selection location			Function
01	Remote control		Operating by a temperature sensor in Remote controller
02	Indoor unit		Operating by a temperature sensor in the indoor unit
03	2TH	Cooling	Operating at a higher temperature after comparing the temperatures between indoor unit and cable remote control (Some product may operate at a lower temperature.)
		Heating	Operating at a lower temperature after comparing the temperatures between indoor unit and cable remote control

❊ 2TH functions/features vary according to the product.

Installer Setting-Remote Controller Master/Slave Setup

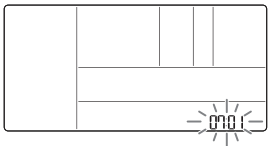
This function is the settings when controlling 2-remote controls or group control.



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

- If pressing only once briefly, it will enter the user settings mode.
  Make sure to press and hold for more than 3 seconds.

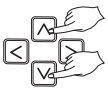
Move to the Master/slave selection in the menu using ⚙ button and then it displays as below.



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



❊ Set value for remote control
00 : Slave
01 : Master



Press OK CLEAR button to save the setting.

Press ESC button to exit.

❊ If no button is selected for about 25 seconds after setup, it exits the setup mode automatically.

❊ If the OK CLEAR button is not selected before you exit, the changes will not apply.

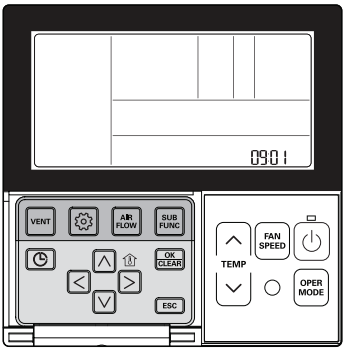
Remote control		Function
01	Master	The Indoor Unit run by master remote controller in case of group control. (Set as a master by default)
02	Slave	Set all the remote controllers as slaves except one master remote control for group control.

❊ See the 'Group control' section for more information about master/slave.

• Some functions may not be available during a group control except basic operation settings, fan speed low/med/high, remote control lock setting, time setting.

Installer Setting-Dry Contact Mode Setting

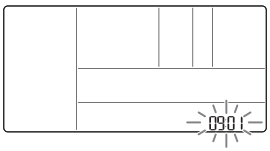
This function is available only for the products with dry contact device.



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

- If pressing only once briefly, it will enter the user settings mode.
  Make sure to press and hold for more than 3 seconds.

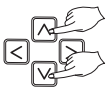
Move to the Dry Contact Mode Settings in the menu using ⚙ button and then it displays as below.



Select the Dry Contact Mode using ∧ ∨ button.



❊ Set value for dry contact
00 : Manual
01 : Auto



Press OK CLEAR button to save the setting.

Press ESC button to exit.

❊ If no button is selected for about 25 seconds after setup, it exits the setup mode automatically.

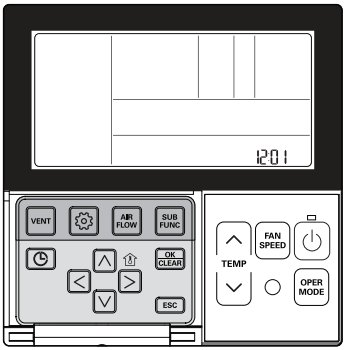
❊ If the OK CLEAR button is not selected before you exit, the changes will not apply.

• See the Dry Contact manual for more detailed functions about dry contact mode.

▶ **What is Dry Contact?**
It means a contact signal received when an air conditioner runs interlocking with hotel key card or sensor.

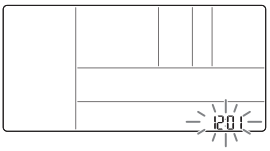
Installer Setting-Celsius / Fahrenheit Switching

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



Press and hold ⚙ button for more than 3 seconds to enter the installer settings mode.
- If pressing only once briefly, it will enter the user settings mode.
  Make sure to press and hold for more than 3 seconds.

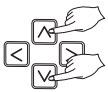
Move to the Celsius/Fahrenheit Switching in the menu using ⚙ button and then it displays as below.



Select the Celsius/Fahrenheit Switching using ∧ ∨ button.

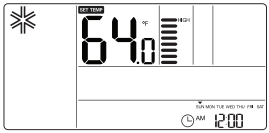


❊ Fahrengeit Setting
00 : Celsius
01 : Fahrenheit



Press OK CLEAR button to save the setting.

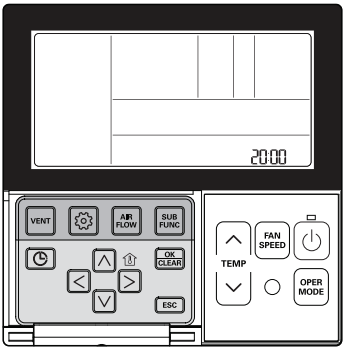
Press ESC button to exit.
❊ If no button is selected for about 25 seconds after setup, it exits the setup mode automatically.



Whenever press ∧ ∨ button in Fahrenheit mode, the temperature will increase/drop 2 degrees.

Installer Setting -Optional Function Setting

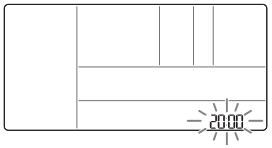
This function is used when air Cleaner, heater, humidifier, elevation grill, ventilation KIT are installed additionally or the installed KIT is removed.



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

- If pressing only once briefly, it will enter the user settings mode.
  Make sure to press and hold for more than 3 seconds.

Press ⚙ button repeatedly to move to the applicable Function in the menu as below.



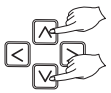
Function	Code
Plasma purification	20
Electric heater	21
Humidifier	22
Elevation grill	23
Ventilation kit	24
Auxiliary heater	25

Select the code value and set value for each function using ∧ ∨ button.



Code value Set value

❊ Set value for each function
00 : Not installed
01 : Installed



❊ In case of indoor unit that has one more additional stage in the Aux heater setting.
00: not installed
01: installed - general
02: installed - duct type

Press OK CLEAR button to save the setting.

Press ESC button to exit.

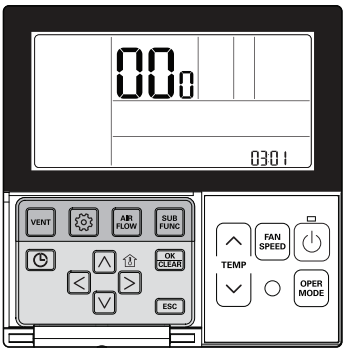
❊ If no button is selected for about 25 seconds after setup, it exits the setup mode automatically.

❊ If OK CLEAR button is not selected before you exit, the changes will not apply.

How to Set E.S.P?

Installer Setting -E.S.P.

This function is to facilitate the installation by assigning a fan speed value to each speed.

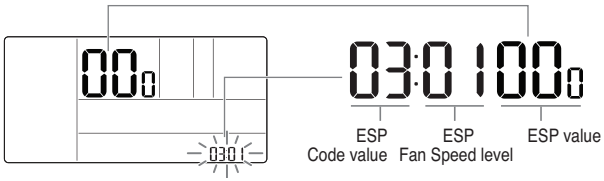


- If the ESP is set improperly, it can cause an air conditioner malfunction.
- This function must be set by a certified/qualified installer.

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

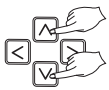
- If pressing only once briefly, it will enter the user settings mode.
  Make sure to press and hold for more than 3 seconds.

Once entered the ESP setting mode using ⚙ button, it displays as below.



Select the level of ESP Fan Speed using ∧ ∨ button. There are 5 levels in the fan speed, SLOW → LOW → MED → HIGH → POW.





ESP level	Fan Speed
01	SLOW
02	LOW
03	MED
04	HIGH
05	POW.

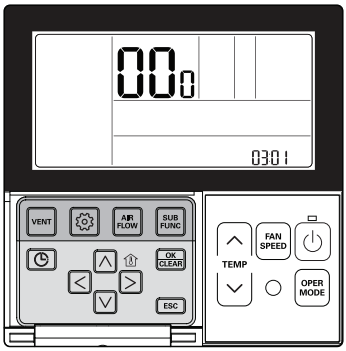
❉ The ESP set value can be programmed 0~225.

Move to the ESP value settings using < > button.
The ESP value numbers will blink.
(It is set 000 by default.)





- If a fan speed ESP value is set for the product without very weak wind or power wind, the system may not operate.



Set the ESP value using ∧ ∨ button.



(The ESP value can be set from 1 up to 255,
and 1 is the smallest value and 255 is the largest value.)

Select a fan speed again using ∧ ∨ button, and set the ESP value for each speed.

Ex) 120 set for Breeze  (ESP value for Breeze : 120)

Ex) 230 set for High  (ESP value for High : 230)

Press OK CLEAR button to save the setting.

Press ESC button to exit.

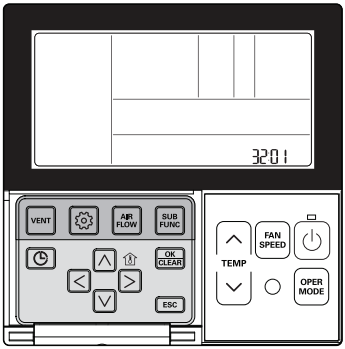
❊ If no button is selected for about 25 seconds after setup, it exits the setup mode automatically.

❊ If the OK CLEAR button is not selected before you exit, the changes will not apply.

- Pay special attention not to mix the ESP values for each speed.
- Some product may not allow you to program for Breeze and Power speed.
- The programmable ESP value may vary according to the product and capacity.
- When a power failure compensation is completed after power is on (at least 1 minute), Please set or check the ESP value.

Installer Setting - Static Pressure Step Setting

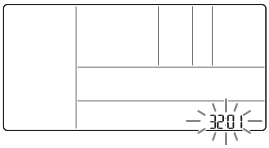
This function is applied to only duct type. Setting this in other cases will cause malfunction.
This function is only available on some models.
This is the function that static pressure of the product is divided in 11 steps for setting.



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

- If pressing only once briefly, it will enter the user settings mode.
  Make sure to press and hold for more than 3 seconds.

Press ⚙ button repeatedly to move to the Settings for Static Pressure Step in the menu as below.

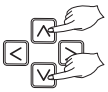


Select the code value and set value for each function using ∧ ∨ button.



Code value Set value

❊ Set value for static pressure step
00 : use static pressure(code 06) set value
01~ 11 : static pressure step (code 32) set value



Press OK CLEAR button to save the setting.

Press ESC button to exit.

❊ If no button is selected for about 25 seconds after setup, it exits the setup mode automatically.

❊ If OK CLEAR button is not selected before you exit, the changes will not apply.

- Static Pressure (Code 06) setting will not be used if Static Pressure Step (Code 32)setting is being used.
- For the static pressure value for each step, refer to the indoor unit in the product manual.

Ceiling Concealed Duct – Low static

Table 1

Model	Step	CMM [m^3/min]	Static Pressure [mmAq (Pa)]					
			0(0)	1(10)	2(20)	3(29)	4(39)	5(49)
			Setting Value					
			32:01	32:02	32:03	32:04	32:05	32:06
ABNH09GL1A2	LOW	5.5	69	76	83	91	101	111
	MID	7	81	87	94	101	109	117
	HIGH	9	97	103	108	117	124	131

Model	Step	CMM [m^3/min]	Static Pressure [mmAq (Pa)]					
			0(0)	1(10)	2(20)	3(29)	4(39)	5(49)
			Setting Value					
			32:01	32:02	32:03	32:04	32:05	32:06
ABNH12GL2A2	LOW	7	78	82	87	93	100	107
	MID	8.5	87	91	94	100	108	116
	HIGH	10	96	100	103	109	117	125

Model	Step	CMM [m^3/min]	Static Pressure [mmAq (Pa)]					
			0(0)	1(10)	2(20)	3(29)	4(39)	5(49)
			Setting Value					
			32:01	32:02	32:03	32:04	32:05	32:06
ABNH18GL2A2	LOW	10	96	100	103	109	117	125
	MID	12.5	109	113	117	123	130	137
	HIGH	15	120	124	129	134	141	147

Model	Step	CMM [m^3/min]	Static Pressure [mmAq (Pa)]					
			0(0)	1(10)	2(20)	3(29)	4(39)	5(49)
			Setting Value					
			32:01	32:02	32:03	32:04	32:05	32:06
ABNH24GL3A2	LOW	12	89	95	102	106	120	130
	MID	16	102	108	115	125	131	139
	HIGH	20	125	131	136	141	144	147

Note :

1. The above table shows the correlation between the air rates and E.S.P.
2. Be sure to set the value refering table 1. Unexpected set value will cause mal-function.
3. Table 1 is based at 230 V. According to the fluctuation of voltage, air flow rate varies.

Ceiling Concealed Duct – Mid static

Table 2

Model	Step	CMM [m³/min]	Static Pressure[mmAq(Pa)]										
			2(20)	2.5(25)	3(29)	4(39)	6(59)	8(78)	10(98)	12(118)	13(127)	14(137)	15(147)
			Setting Value										
			32:01	32:02	32:03	32:04	32:05	32:06	32:07	32:08	32:09	32:10	32:11
ABNW18GM1A0	LOW	13	73	74	77	88	93	103	111	117	120	125	128
	MID	14.5	76	77	85	91	97	107	114	121	125	128	131
	HIGH	16.5	85	87	90	94	103	110	118	125	128	131	134
ABNW24GM1A0	LOW	14.5	76	77	85	89	97	107	114	121	125	128	131
	MID	16.5	85	87	90	94	103	110	118	125	128	131	134
	HIGH	18	90	92	95	99	108	115	122	129	132	135	138

Model	Step	CMM [m³/min]	Static Pressure[mmAq(Pa)]										
			2.5(25)	4(39)	5(49)	6(59)	7(69)	8(78)	9(88)	10(98)	11(108)	13(127)	15(147)
			Setting Value										
			32:01	32:02	32:03	32:04	32:05	32:06	32:07	32:08	32:09	32:10	32:11
ABNW30GM1A0	LOW	18	96	102	107	110	114	118	122	125	127	132	134
	MID	20	102	110	114	118	121	125	127	130	133	135	137
	HIGH	22	110	117	121	124	127	130	133	136	137	138	140

Model	Step	CMM [m³/min]	Static Pressure[mmAq(Pa)]										
			4(39)	5(49)	6(59)	7(69)	8(78)	9(88)	10(98)	11(108)	12(118)	13(127)	15(147)
			Setting Value										
			32:01	32:02	32:03	32:04	32:05	32:06	32:07	32:08	32:09	32:10	32:11
ABNW36GM2A0	LOW	24	88	91	95	100	101	108	113	115	118	121	128
	MID	28	93	97	101	105	108	115	118	120	124	127	134
	HIGH	32	101	105	109	112	115	119	123	126	128	133	137

Model	Step	CMM [m³/min]	Static Pressure[mmAq(Pa)]										
			5(49)	6(59)	7(69)	8(78)	9(88)	10(98)	11(108)	12(118)	13(127)	14(137)	15(147)
			Setting Value										
			32:01	32:02	32:03	32:04	32:05	32:06	32:07	32:08	32:09	32:10	32:11
ABNW42GM2A0	LOW	28	100	103	106	110	114	118	121	125	128	133	136
	MID	33	108	111	114	118	122	125	128	131	134	138	141
	HIGH	38	117	120	124	127	130	133	135	138	141	144	147

Model	Step	CMM [m³/min]	Static Pressure[mmAq(Pa)]										
			4(39)	5(49)	6(59)	7(69)	8(78)	9(88)	10(98)	11(108)	12(118)	13(127)	15(147)
			Setting Value										
			32:01	32:02	32:03	32:04	32:05	32:06	32:07	32:08	32:09	32:10	32:11
ABNW48GM3A0	LOW	28	74	76	79	82	89	92	94	96	99	102	107
	MID	34	78	82	84	89	94	96	98	101	104	106	112
	HIGH	40	83	89	92	94	98	100	102	105	108	110	116

Model	Step	CMM [m³/min]	Static Pressure[mmAq(Pa)]										
			4(39)	5(49)	6(59)	7(69)	8(78)	9(88)	10(98)	11(108)	12(118)	13(127)	15(147)
			Setting Value										
			32:01	32:02	32:03	32:04	32:05	32:06	32:07	32:08	32:09	32:10	32:11
ABNW60GM3A0	LOW	40	82	89	92	94	98	100	102	105	108	110	113
	MID	45	90	92	96	98	102	104	106	109	112	114	117
	HIGH	50	94	97	100	104	107	109	112	115	117	119	121

NOTE

1. Be sure to set the value refering table 2. Unexpected set value will cause mal-function.
2. Table 2 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)
ABNW18GM1A0	6(59)
ABNW24GM1A0	
ABNW30GM1A0	
ABNW36GM2A0	
ABNW42GM2A0	
ABNW48GM3A0	
ABNW60GM3A0	

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

Model	Maximum value
ABNW18GM1A0	115
ABNW24GM1A0	
ABNW30GM1A0	120
ABNW36GM2A0	
ABNW42GM2A0	
ABNW48GM3A0	98
ABNW60GM3A0	

Ceiling Concealed Duct – H-INV

Table 3

Model	Step	CMM [m³/min]	Static Pressure [mmAq (Pa)]					
			4(39)	5(49)	6(59)	8(78)	10(98)	12(118)
			Setting Value					
			32:01	32:02	32:03	32:04	32:05	32:06
ABNW36GBRH0	LOW	21	68	72	78	84	91	97
	MID	28	75	79	84	89	95	101
	HIGH	34	81	85	88	94	100	105

Model	Step	CMM [m³/min]	Static Pressure [mmAq (Pa)]					
			4(39)	5(49)	6(59)	8(78)	10(98)	12(118)
			Setting Value					
			32:01	32:02	32:03	32:04	32:05	32:06
ABNW42GBRH0	LOW	24		75	79	86	93	98
	MID	31		81	85	91	98	103
	HIGH	37		88	91	97	102	107

Model	Step	CMM [m³/min]	Static Pressure [mmAq (Pa)]					
			4(39)	5(49)	6(59)	8(78)	10(98)	12(118)
			Setting Value					
			32:01	32:02	32:03	32:04	32:05	32:06
ABNW48GBRH0	LOW	28		79	84	89	95	101
	MID	34		85	88	94	100	105
	HIGH	40		91	93	99	105	110

NOTE

Be sure to set the value referring table 3. Unexpected set value will cause mal-function.

As far as possible do not set ESP 82,83

Table 3 is based at 230 V. According to the fluctuation of voltage, air flow rate varies.

Ceiling Concealed Duct – High static

Table 4

Model	Step	CMM [m³/min]	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
ABNW70GB9A0	LOW	60	70	72	74	76	78	81	82	85	86	88	91
	MID	65	74	76	78	80	82	85	86	89	90	92	95
	HIGH	70	78	80	82	84	86	90	91	93	94	96	99

Model	Step	CMM [m³/min]	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
ABNW85GB9A0	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 4. Unexpected set value will cause mal-function.
2. Table 4 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)
ABNW85GB9A0 ABNW70GB9A0	13 (127)

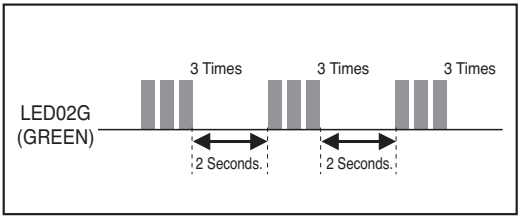
* If it is zero static pressure, please set value below Maximum value.

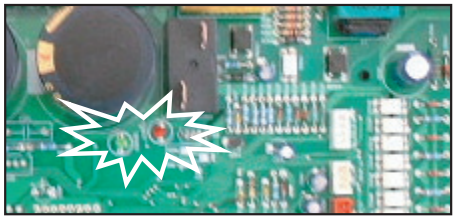
Model	Maximum value
ABNW85GB9A0 ABNW70GB9A0	105

Self-diagnosis Function

Indoor Unit Error

Ex) Error 03 (Remote controller error)



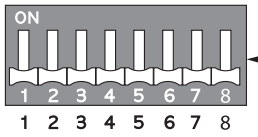


Error Code	Description	LED 1 (Red)	LED 2 (Green)	Indoor status
01	Indoor Room sensor error	0	1time ◑	OFF
02	Indoor in-pipe sensor error	0	2times ◑	OFF
03	Remote controller error	0	3times ◑	OFF
04	Drain pump error	0	4times ◑	OFF
05	Communication error indoor and outdoor	0	5times ◑	OFF
06	Indoor out-pipe sensor error	0	6times ◑	OFF
09	EEPROM error (indoor)	0	9times ◑	OFF
10	BLDC motor fan lock (indoor)	1time ◑	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 LED1 is turned on and off as the Error code number of tens digit, LED2 is turned on and off as the Error code number of single-digit.

Dip Switch Setting





Function		Description	Setting Off	Setting On	Default
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


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