LG
Life's Good

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.

TYPE : Ceilling Concealed Duct



P/NO : MFL40910628

www.lg.com

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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

Always perform grounding.

- Otherwise, it may cause electrical shock.

Don't use a power cord, a plug or a loose socket which is damaged.

- Otherwise, it may cause a fire or electrical shock.

For installation of the product, always contact the service center or a professional installation agency.

- Otherwise, it may cause a fire, electrical shock, explosion or injury.

Securely attach the electrical part cover to the indoor unit and the service panel to the outdoor unit.

- If the electrical part cover of the indoor unit and the service panel of the outdoor unit are not attached securely, it could result in a fire or electric shock due to dust, water, etc.

Always install an air leakage breaker and a dedicated switching board.

- No installation may cause a fire and electrical shock.

Do not keep or use flammable gases or combustibles near the air conditioner.

- Otherwise, it may cause a fire or the failure of product.

Ensure that an installation frame of the outdoor unit is not damaged due to use for a long time.

- It may cause injury or an accident.

Do not disassemble or repair the product randomly.

- It will cause a fire or electrical shock.

Do not install the product at a place that there is concern of falling down.

• Otherwise, it may result in personal injury.

Use caution when unpacking and installing.

• Sharp edges may cause injury.

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 share the outlet with other appliances.

• It will cause an electric shock or a fire due to heat generation.

Do not use the damaged power cord.

• Otherwise, it may cause a fire or electrical shock.

Do not modify or extend the power cord randomly.

• Otherwise, it may cause a fire or electrical shock.

Take care so that the power cord may not be pulled during operation.

• Otherwise, it may cause a fire or electrical shock.

Unplug the unit if strange sounds, smell, or smoke comes from it.

• Otherwise, it may cause electrical shock or a fire.

Keep the flames away.

• Otherwise, it may cause a fire.

Take the power plug out if necessary, holding the head of the plug and do not touch it with wet hands.

• Otherwise, it may cause a fire or electrical shock.

Do not use the power cord near the heating tools.

• Otherwise, it may cause a fire and electrical shock.

Do not open the suction inlet of the indoor/outdoor unit during operation.

• Otherwise, it may electrical shock and failure.

Do not allow water to run into electrical parts.

• Otherwise, it may cause the failure of machine or electrical shock.

Hold the plug by the head when taking it out.

• It may cause electric shock and damage.

Never touch the metal parts of the unit when removing the filter.

• They are sharp and may cause injury.

Do not step on the indoor/outdoor unit and do not put anything on it.

• It may cause an injury through dropping of the unit or falling down.

Do not place a heavy object on the power cord.

• Otherwise, it may cause a fire or electrical shock.

When the product is submerged into water, always contact the service center.

• Otherwise, it may cause a fire or electrical shock.

Take care so that children may not step on the outdoor unit.

• Otherwise, children may be seriously injured due to falling down.

⚠CAUTION

■ Installation

Install the drain hose to ensure that drain can be securely done.

• Otherwise, it may cause water leakage.

Install the product so that the noise or hot wind from the outdoor unit may not cause any damage to the neighbors.

• Otherwise, it may cause dispute with the neighbors.

Always inspect gas leakage after the installation and repair of product.

• Otherwise, it may cause the failure of product.

Keep level parallel in installing the product.

• Otherwise, it may cause vibration or water leakage.

■ Operation

Avoid excessive cooling and perform ventilation sometimes.

• Otherwise, it may do harm to your health.

Use a soft cloth to clean. Do not use wax, thinner, or a strong detergent.

• The appearance of the air conditioner may deteriorate, change color, or develop surface flaws.

Do not use an appliance for special purposes such as preserving animals vegetables, precision machine, or art articles.

• Otherwise, it may damage your properties.

Do not place obstacles around the flow inlet or outlet.

• Otherwise, it may cause the failure of appliance or an accident.

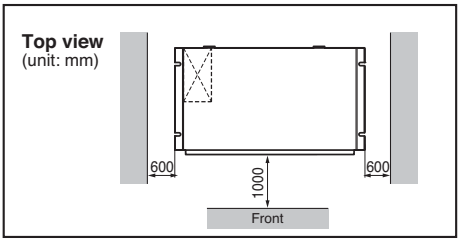
Installation of Indoor

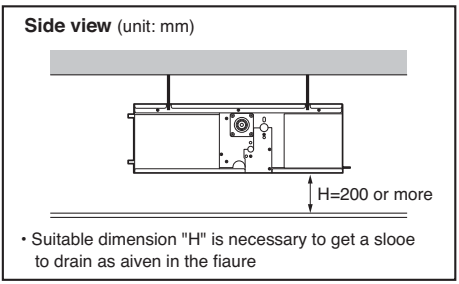
Selection of the best location

Indoor unit

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 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



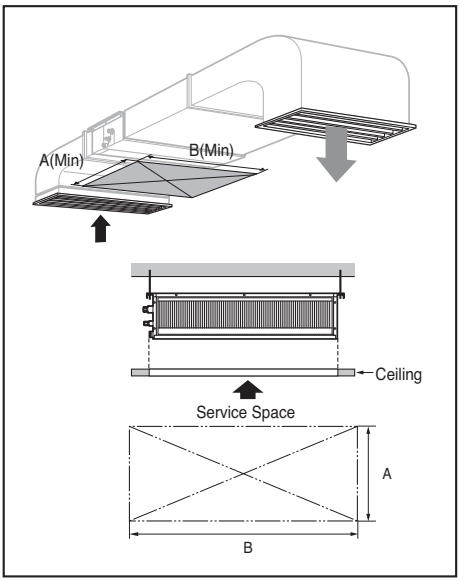


Confirm the positional relationship between the unit and suspension bolts.

- Installation the ceiling opening to clean the filter or service under the product.

(Length: mm)

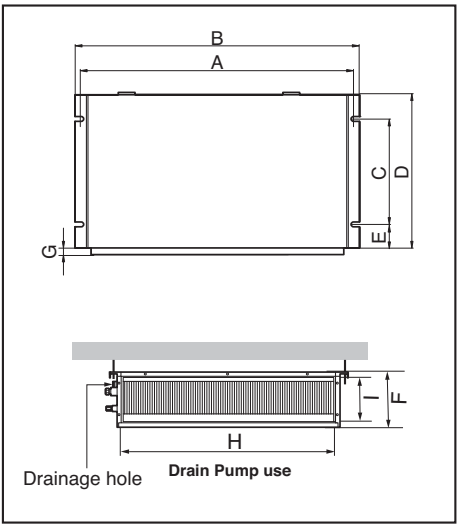
Model	A	B
ABNW0962SA0(B09AWYN6LS) ABNW1262SA0(B12AWYN6LS) ABNW1862SA0(B18AWYN6LS)	600	1700



Ceiling dimension and hanging bolt location

Installation of Unit

Install the unit above the ceiling correctly.



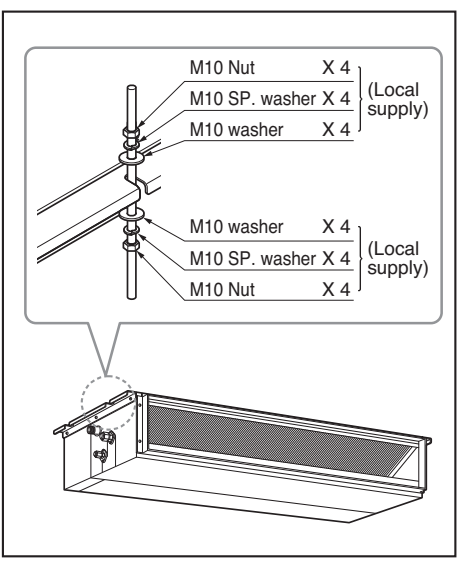
CASE 1

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.

(Unit:mm)

Model \ Dimension	A	B	C	D	E	F	G	H	I
ABNW0962SA0 (B09AWYN6LS) ABNW1262SA0 (B12AWYN6LS) ABNW1862SA0 (B18AWYN6LS)	1130	1180	383	570	93.5	190	20.2	1070	163



CASE 2

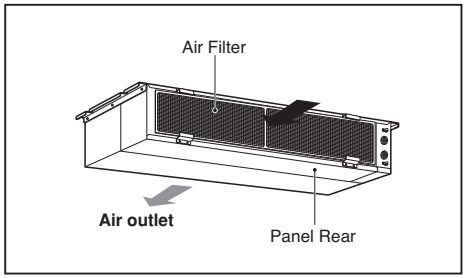
- Install the unit leaning to a drainage hole side as a figure for easy water drainage.

POSITION OF CONSOLE BOLT

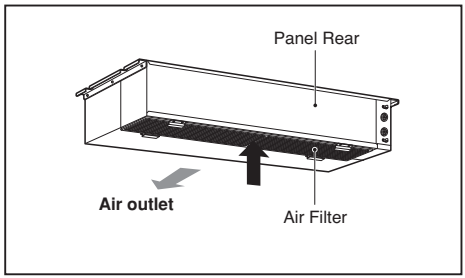
- A place where the unit will be leveled and that can support the weight of the unit.
- A place where the unit can withstand its vibration.
- A place where service can be easily performed.

Part name and functions

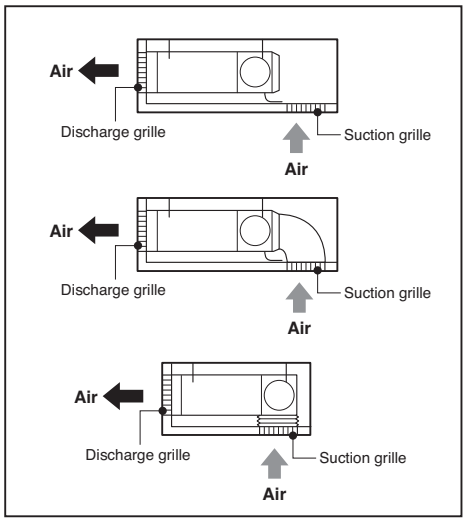
• Low static duct type in case of suction from back side.



• Low static duct type in case of suction from bottom side



• Low static duct type application-3Way



⚠ 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 5mm.

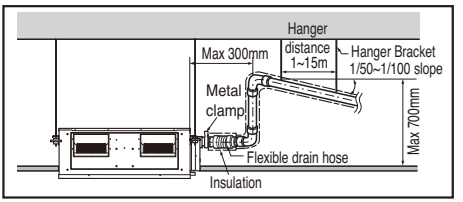
Front of view

CAUTION FOR GRADIENT OF UNIT AND DRAIN PIPING

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

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.



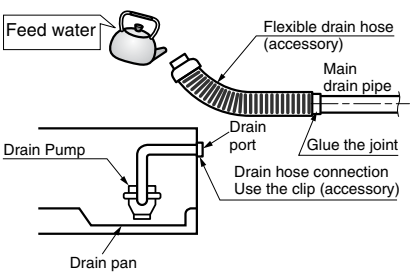
Piping material: Polyvinyl chloride pipe VP-25 and pipe fittings

Be sure to execute heat insulation on the drain piping.

- Install the drain raising pipes at a right angle to the indoor unit and no more than 300mm from the unit.

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

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.

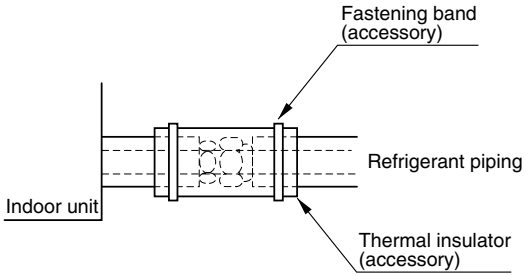
⚠CAUTION

The supplied flexible drain hose should not be strained. A strained hose may cause leakage of water.

Heat insulation

1. Use the heat insulation material for the refrigerant piping which has an excellent heat-resistance (over 120°C).

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



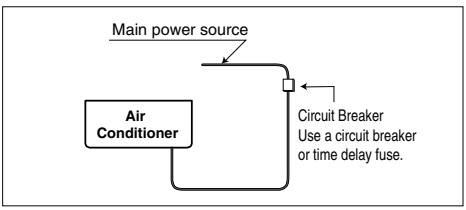
- Heat insulation material to be prepared... Adiabatic glass wool with thickness 10 to 20mm.
- Stick glass wool on all air conditioners that are located in ceiling atmosphere.

Wiring Connection

Connect the cable to the indoor unit by connecting the wires to the terminals on the control board individually according to the outdoor unit connection. (Ensure that the color of the wires of the outdoor unit and the terminal No. are the same as those of the indoor unit.)
The earth wire should be longer than the common wires.
The circuit diagram is not subject to change without notice.
When installing, refer to the circuit diagram behind the panel front of Indoor Unit the wiring diagram on the Control Cover Inside Outdoor Unit.

CAUTION:
- **The circuit diagram is not subject to change without notice.**
- **Be sure to connect wires according to the wiring diagram.**
- **Connect the wires firmly, so that not to be pulled out easily.**
- **Connect the wires according to color codes by referring the wiring diagram.**

CAUTION: Provide a circuit breaker between power source and the unit as shown below.

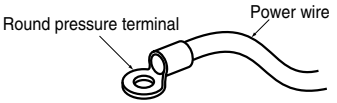


CAUTION

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

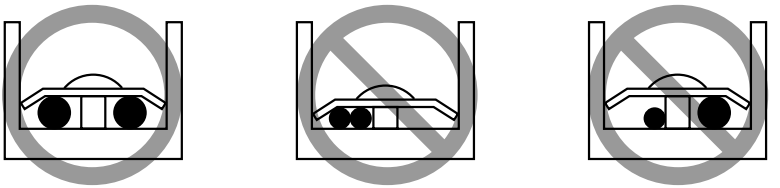
Precautions when laying power wiring

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.



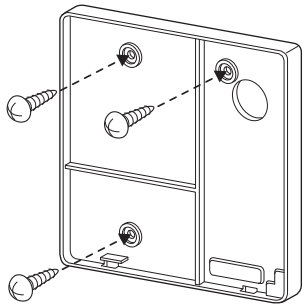
WARNING

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

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.

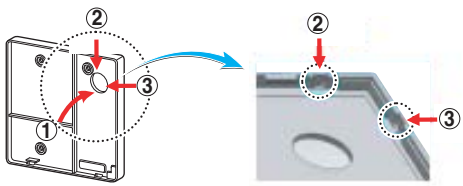
- Setup direction: the surface of wall reclamation, upper, right
- If setting up remote controller cable into upper and right side, please set up after removing remote controller cable guide groove.

❊ Remove guide groove with long nose.

① Reclamation to the surface of the wall

② Upper part guide groove

③ Right part guide groove

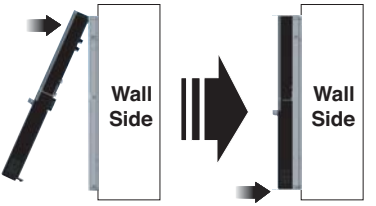


<Wire guide grooves>

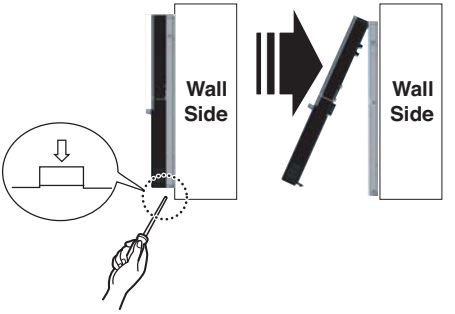
3. Please fix remote controller upper part into the setup board attached to the surface of the wall, as the picture below, and then, connect with setup board by pressing lower part.

- 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>



<Separating order>

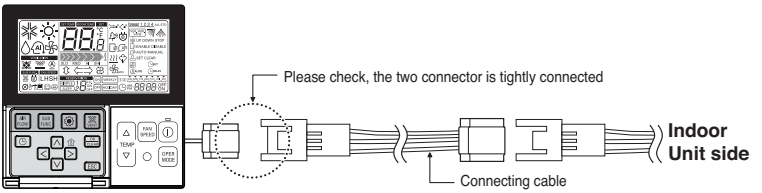


When separating remote controller from setup board, as the picture below, after inserting into the lower separating hole using screw driver and then, spinning clockwise, remote controller is separated.

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

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

12V	Red
Signal	Yellow
GND	Black



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

⚠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 50m 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.)

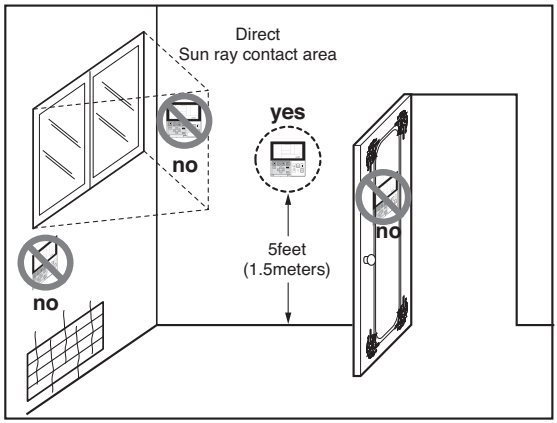
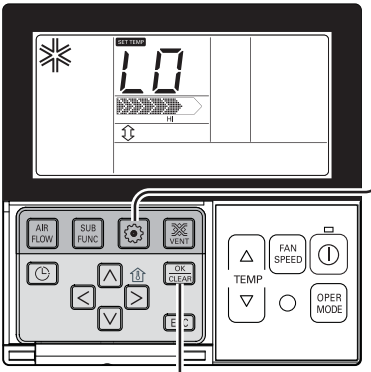


Fig.1 Typical locations for remote controller

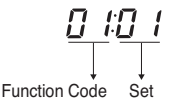
Optional Operation

Installer Setting -Test Run Mode

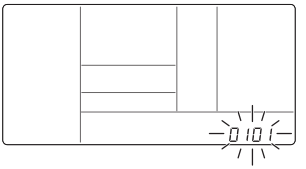
After installing the product, you must run a Test Run mode.
For details related to this operation, refer to the product manual.



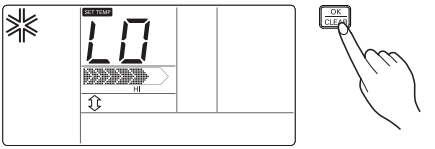
1 If pressing ⚙ button long for 3 seconds, it enters into remote controller setter setup mode.
- If pressing once shortly, it enters into user setup mode. Please press more than 3 seconds for sure.
- Please cancel the right and left of wind direction for RAC product.



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



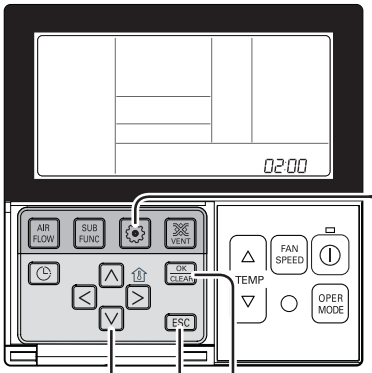
3 Press OK CLEAR button to start.



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

Installer Setting - Setting Address of Central Control

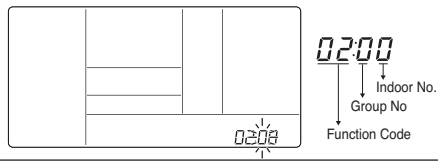
It's the function to use for connecting central control.
Please refer to central controller manual for the details



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

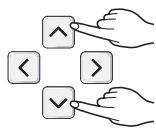


2 If entering into address setup mode by using ⚙ button, it indicates as picture below.



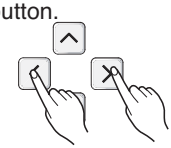
3 Set Group No. by pressing ∧ ∨ button.(0~F)

02:F0



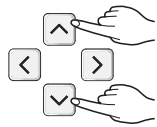
4 Move to Indoor No. setting option by pressing < > button.

02:F0



5 Set Indoor No. by pressing ∧ ∨ button.

02:F5



6 Press OK CLEAR button to save.

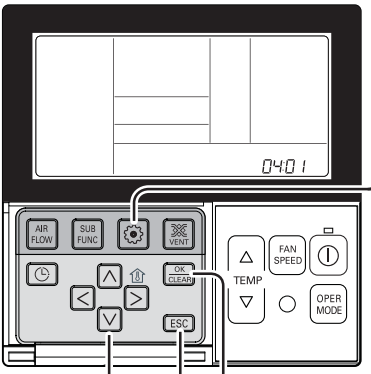
02:F5



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

Installer Setting -Thermistor

This is the function to select the temperature sensor to judge the room temperature.



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

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

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

0401

Function Code — Thermistor setting

4 Press OK CLEAR button to save.

0401

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

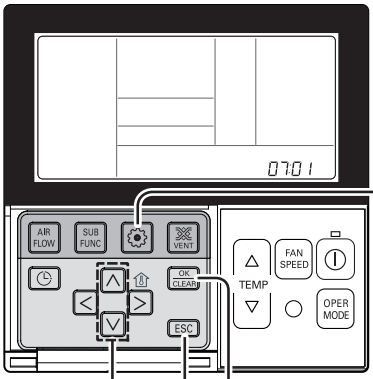
<Thermistor Table>

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

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

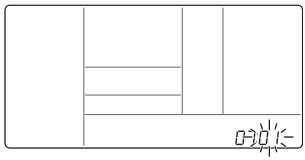
Installer Setting-Group Setting

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



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

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



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

07:01

Function Code — Master/Slave value

4 Press OK CLEAR button to save.

07:01

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

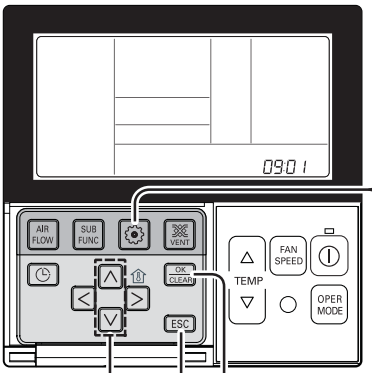
Remote controller	Function
Master	Indoor unit operates based on master remote controller at group control. (Master is set when delivering from the warehouse.)
Slave	Setup all remote controllers except one master remote controller to slave at group control

❊ Refer to the 'group control' part for details

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

Installer Setting-Dry Contact Mode Setting

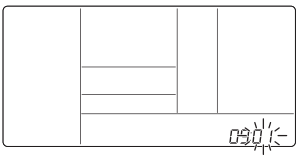
Dry contact function is the function that is possible to use only when dry contact equipment is separately purchased/setup.



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

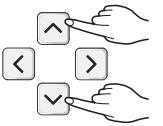


2 If pressing ⚙ button repeatedly, it moves to remote controller dry contact mode setup menu as picture below.



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

09:0 1
Function Code — Dry Contact setting value



4 Press OK CLEAR button to save.

09:0 1



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

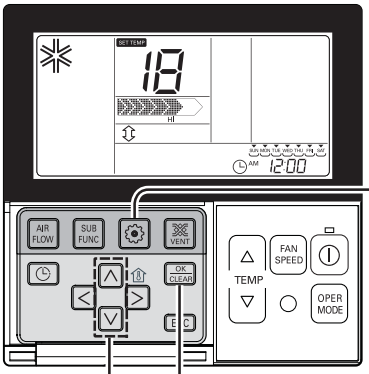
▶ What is Dry Contact?

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

• Please refer to dry contact manual for more details.

Installer Setting-Celsius / Fahrenheit Switching

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



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



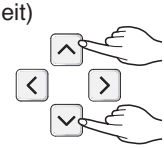
2 Repeat pressing ⚙ button to select Function code 12.

12:00
Function Code conversion mode value

Ex) Fahrengeit Setting

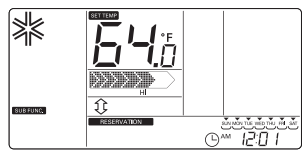
3 Select Temperature unit mode by pressing ∧ ∨ button.
(00: Celsius, 01: Fahrenheit)

12:01



4 Press OK CLEAR button to save or release.

12:01





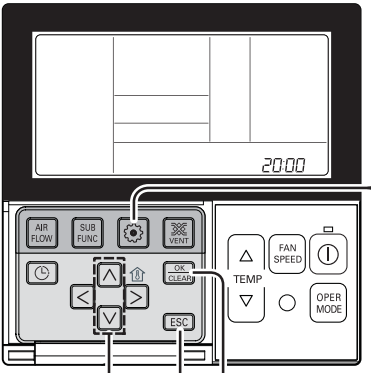
5 Press ESC button to exit or system will automatically exit after 25 seconds without any input.



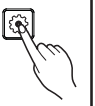
❊ Whenever press ∧ ∨ button in Fahrenheit mode, the temperature will increase/drop 2 degrees.

Installer Setting -Optional Function Setting

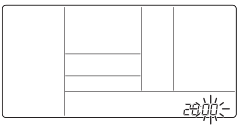
Setting feature for indoor unit when air cleaning / heater / humidifier / Up/down grill / Ventilation KIT /Auxiliary Heater is newly installed, or installed unit is removed.



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

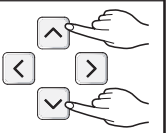


2 If pressing ⚙ button repeatedly, it moves to the selected option function code as picture below.



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

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





Function Code Existing condition

4 Press OK CLEAR button to save.



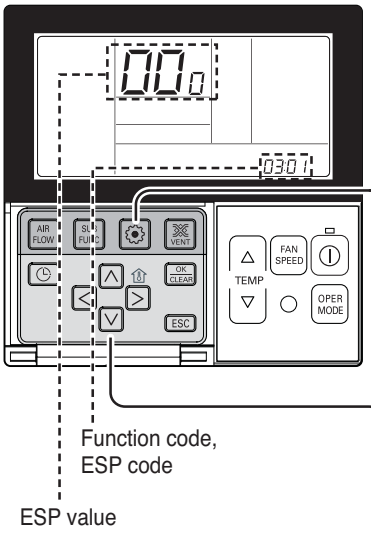
5 Pressing ESC button will exit settings mode.
- ❊ After setup, it automatically gets out of setup mode if there is no button input for 25 seconds.
- ❊ When exiting without pressing set button, the manipulated value is not reflected.

How to Set E.S.P?

Installer Setting -E.S.P.

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

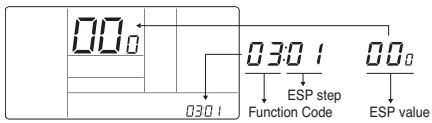
- **If you set ESP incorrectly, the air conditioner may malfunction.**
- **This setting must be carried out by a certificated-technician.**



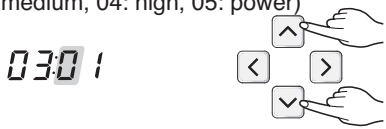
1 If pressing ⚙ button long for 3 seconds, it enters into remote controller setter setup mode.
- If pressing once shortly, it enters into user setup mode. Please press more than 3 seconds for sure.



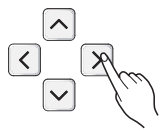
2 If entering into ESP setup mode by using ⚙ button, it indicates as the picture below.



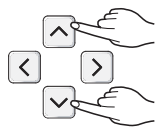
3 Select ESP fan step by pressing ∧ ∨ button. (01: very low, 02: low, 03: medium, 04: high, 05: power)



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



5 Press ∧ ∨ button to setup ESP value.
(It is possible to setup ESP value from 1 to 255, and 1 is the smallest and 255 is the biggest.)



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

(Unit: CMM)

Static Pressure[mmAq(Pa)]		0(0)	1.02(10)	2.04(20)	2.5(25)	3.06(30)	4.08(40)
Model	Step(Hi/Med/Low)	Setting Value					
ABNW1862SA0(B18AWYN6LS)	14 CMM	95	102	112	118	120	127
	12 CMM	84	95	103	108	113	122
	10 CMM	72	84	95	102	107	117
ABNW0962SA0(B09AWYN6LS) ABNW1262SA0(B12AWYN6LS)	12 CMM	84	95	103	110	113	120
	10 CMM	72	84	95	102	107	117
	8 CMM	61	77	91	96	102	113

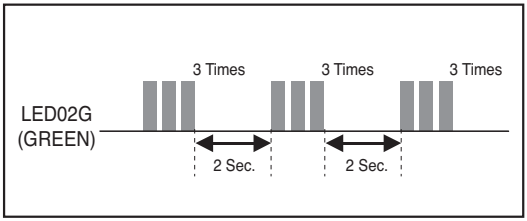
NOTICE : 1. Be sure to set the value refering table 1. Unexpected set value will cause mal-function.

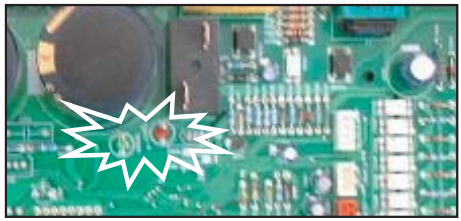
2. Table 1 is based at 230V. According to the fluctuation of voltage, air flow rate varies.

Self-diagnosis Function

Indoor Unit Error

Ex) Error 03 (Remote controller error)



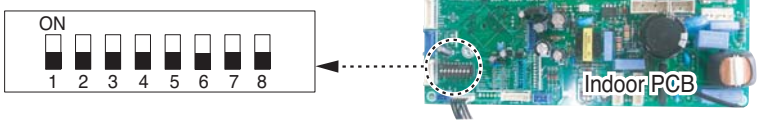


Error Code	Description	LED 1 (Red)	LED 2 (Green)	Indoor status
01	Indoor Room sensor error	0	1time ◑	OFF
02	Indoor in-pipe sensor error	0	2times ◑	OFF
03	Remote controller error	0	3times ◑	OFF
04	Drain pump error	0	4times ◑	OFF
05	Communication error indoor and outdoor	0	5times ◑	OFF
06	Indoor out-pipe sensor error	0	6times ◑	OFF
09	EEPROM error (indoor)	0	9times ◑	OFF
10	BLDC motor fan lock (indoor)	1time ◑	0	OFF
12	Pipe Middle Sensor Error	1time ◑	1time ◑	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
SW1	Communication	Communication Between Indoor & Outdoor	Communication	Non Communication	Off
SW2	Cycle	Cooling or Heating Model	Heating	Cooling	Off
SW3	Group Control	Selection of Master or Slave	Master	Slave	Off
SW4	Dry Contact Mode	Selection of Dry Contact Mode	Wired/Wireless remote controller Selection of Manual or Auto operation Mode	Auto	Off
SW5	Installation	Fan continuous operation	Continuous operation Removal	Working	Off


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