MUNDOCLIMA®

SUPER DC INVERTER

CASSETTE SERIE H3

Installation and user's manual

MUCSR-H3

www.mundoclima.com

CL20842 to CL20849
English

CONTENTS

Installation manual

1. Safety Precautions

⚠ **WARNING!**	This mark indicates procedures which, if improperly performed, might lead to the death or serious injury of the user.
⚠ **CAUTION!**	This mark indicates procedures which, if improperly performed, might possibly result in personal harm to the user, or damage to property.

⚠ WARNING!
(1). Installation should be left to the dealer or another professional. Improper installation may cause water leakage, electrical shock, or fire.
(2). Install the air conditioner according to the instructions given in this manual. Incomplete installation may cause water leakage, electrical shock, or fire.
(3). Be sure to use the supplied or specified installation parts. Use of other parts may cause the unit to come to lose, water leakage, electrical shock, or fire.
(4). Install the air conditioner on a solid base that can support the weight of the unit. An inadequate base or incomplete installation may cause injury in the event the unit falls off the base.
(5). Electrical work should be carried out in accordance with the installation manual and the national electrical wiring rules or code of practice. Insufficient capacity or incomplete electrical work may cause electrical shock or fire.
(6). Be sure to use a dedicated power circuit. Never use a power supply shared by another appliance.
(7). For wiring, use a cable length enough to cover the entire distance with no connection. Do not use an extension cord. Do not put other loads on the power supply, use a dedicated power circuit. (Failure to do so may cause abnormal heat, electric shock or fire.)
(8). Use the specified types of wires for electrical connections between the indoor and outdoor units. Firmly clamp the interconnecting wires so their terminals receive no external stresses. Incomplete connections or clamping may cause terminal overheating or fire.
(9). After connecting interconnecting and supply wiring be sure to shape the cables so that they do not put undue force on the electrical covers or panels. Install covers over the wires. Incomplete cover installation may cause terminal overheating, electrical shock, or fire.
(10). If any refrigerant has leaked out during the installation work, ventilate the room. (The refrigerant produces a toxic gas if exposed to flames.)
(11). After all installation is complete, check to make sure that no refrigerant is leaking out. (The refrigerant produces a toxic gas if exposed to flames.)
(12). When installing or relocating the system, be sure to keep the refrigerant circuit free from substances other than the specified refrigerant (R410A), such as air. (Any presence of air or other foreign substance in the refrigerant circuit causes an abnormal pressure rise or rupture, resulting in injury.)
(13). During pump-down, stop the compressor before removing the refrigerant piping. If the compressor is still running and the stop valve is open during pump-down, air will be sucked in when the refrigerant piping is removed, causing abnormal pressure in the freezer cycle which will lead to breakage and even injury.

(14). During installation, attach the refrigerant piping securely before running the compressor. If the compressor is not attached and the stop valve is open during pump-down, air will be sucked in when the compressor is run, causing abnormal pressure in the freezer cycle which will lead to breakage and even injury.

(15). Be sure to establish an earth. Do not earth the unit to a utility pipe, arrester, or telephone earth. Incomplete earth may cause electrical shock, or fire. A high surge current from lightning or other sources may cause damage to the air conditioner.

(16). Be sure to install an earth leakage breaker. Failure to install an earth leakage breaker may result in electric shocks, or fire.

(17). This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

(18). Children should be supervised to ensure that they do not play with the appliance.

(19). If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

⚠ CAUTION!

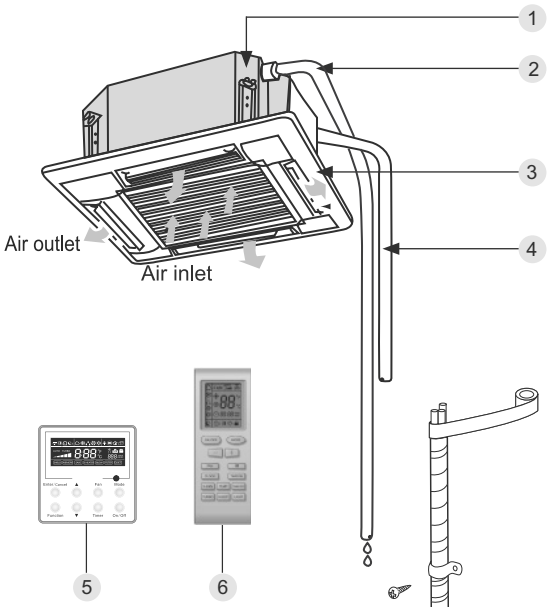
(1). Do not install the air conditioner in a place where there is danger of exposure to inflammable gas leakage. If the gas leaks and builds up around the unit, it may catch fire.

(2). Establish drain piping according to the instructions of this manual. Inadequate piping may cause flooding.

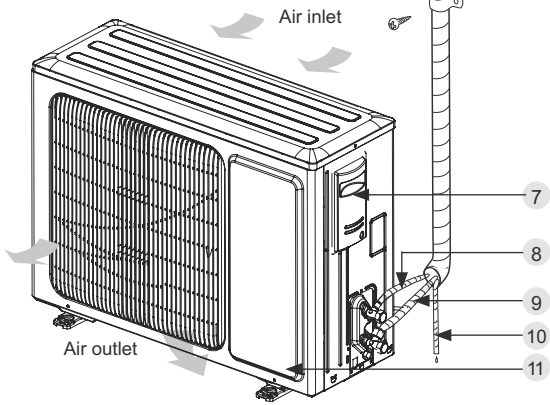
(3). Tighten the flare nut according to the specified method such as with a torque wrench. If the flare nut is tightened too hard, the flare nut may crack after a long time and cause refrigerant leakage.

2. Outline of the Unit and Main Parts

Indoor



Outdoor



1. Drainage device
2. Drainage pipe
3. Air flow flap
4. Connection pipe
5. Wireless Controller
6. Wired Controller
7. Big handle
8. Liquid Pipe
9. Gas pipe
10. Drainage pipe
11. Front Board

Fig.1

3. Preparative for Installation

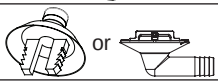
3.1 Standard Accessory Parts

The standard accessory parts listed below are furnished and should be used as required.

Table 1

Indoor Unit Accessories				
No.	Name	Appearance	Q'ty	Usage
1	Drain Hose		1	To connect with the hard PVC drain pipe
2	Nut with Washer		4	To fix the hook on the cabinet of the unit.
3	Washer		10	To be used together with the hanger bolt for installing the unit.
4	installation paperboard		1	used for ceiling drilling
5	Gasket mounting board		4	Used to prevent gasket from falling off
6	Wireless Controller +Battery		1+2	To control the indoor unit
7	sealing plaster		1	
8	Fastener		4	To fasten the sponge
9	Insulation		1	To insulate the gas pipe
10	Insulation		1	To insulate the liquid pipe
11	Sponge		4	To insulate the drain pipe
12	Nut		1	To connect gas pipe
13	Nut		1	To connect liquid pipe
14	Enswathement		2	

Table 2

Outdoor Unit Accessories				
No.	Name	Appearance	Q'ty	Usage
1	Drain Plug		3	To plug the unused drain hole.
2	Drainage Connecter	 or	1	To connect with the hard PVC drain pipe

3.2 Selection of the Installation Location

⚠ WARNING!
The unit must be installed where strong enough to withstand the weight of the unit and fixed securely, otherwise the unit would topple or fall off.
⚠ CAUTION!
① . Do not install where there is the danger of combustible gas leakage.
② . Do not install the unit near heat source of heat, steam, or flammable gas.
③ . Children under 10 years old must be supervised not to operate the unit.

Decide the installation location with the customer as follows:

3.2.1 Indoor Unit

Select an installation site where the following conditions are fulfilled and that meets your customer's approval.

(1). Obstruct should be put away from the intake or outlet vent of the indoor unit so that the airflow can be blown through all the room.

(2). Make sure that the installation meets the requirement of the schematic diagram of installation spaces.

(3). Select the place where can stand 4 times of the weight of the indoor unit and would not increase the operating noise and vibration.

(4). The horizontality of the installation place should be guaranteed.

(5). Select the place where is easy to drain out the condensate water, and connect with outdoor unit.

(6). Make sure that there are enough space for care and maintenance, and the height fall between the indoor unit and ground is above 1800mm.

(7). When installing the suspension bolt, check if the installation place can stand 4 times of the weight of the unit. If not, reinforce it before installation.

Note: There will be large amount of greasy dirt accumulated on the fan, heat exchanger and water pump located in the dinning room and kitchen, which would reduce the capacity of the heater exchanger, lead to leakage and abnormal operation of the water pump.

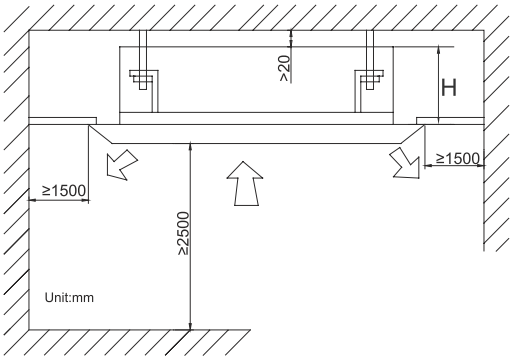


Fig.2

Table 3

Models	H(mm)
MUCSR-12	255
MUCSR-18	
MUCSR-24	260
MUCSR-30	340
MUCSR-36	
MUCSR-42	
MUCSR-48	320
MUCSR-60	

⚠ WARNING!

① . Install the unit where it will not be tilted by more than 5°.

② . During installation, if the outdoor unit has to be exposed to strong wind, it must be fixed securely.

If possible, do not install the unit where it will be exposed to direct sunlight. (If necessary, install a blind that does not interfere with the air flow.)

(1). Install the outdoor unit in a place where it will be free from being dirty or getting wet by rain as much as possible.

(2). Install the outdoor unit where it is convenient to connect with the indoor unit.

(3). Install the outdoor unit where the condensate water can be drained out freely during heating operation.

(4). Do not place animals and plants in the path of the warm air.

(5). Take the air conditioner weight into account and select a place where noise and vibration are small.

(6). Install the outdoor unit where is capable of withstanding the weight of the unit and generates as less noise and vibration as possible.

(7). Provide the space shown in Fig.3, so that the air flow is not blocked. Also for efficient operation, leave three of four directions of peripheral constructions open.

Units: mm

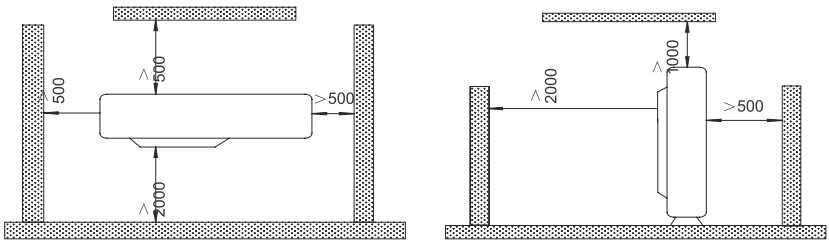


Fig.3

3.3 Connection Pipe Requirement

CAUTION!
The maximum length of the connection pipe is listed in the table below. Do not place the units between which the distance exceeds the maximum length of the connection pipe.

Table 4

Item / Model	Size of Fitting Pipe(Inch)		Max. Pipe Length (m)	Max. Height Difference between Indoor Unit and Outdoor Unit (m)	Drainage pipe(Outer Diameter × wall thickness) (mm)
	Liquid	Gas			
MUCSR-12	1/4	3/8	20	15	Φ25×1.5
MUCSR-18		1/2	20	15	
MUCSR-24	3/8	5/8	30	15	
MUCSR-30			30	15	
MUCSR-36			50	15	
MUCSR-42			50	30	
MUCSR-48			50	30	
MUCSR-60	3/8	3/4	50	30	

The connection pipe should be insulated with proper water-proof insulating material.

The pipe wall thickness shall be 0.5-1.0mm and the pipe wall shall be able to withstand the pressure of 6.0 MPa. The longer the connecting pipe, the lower the cooling and heating effect performs.

3.4 Electrical Requirement

Electric Wire Size and Fuse Capacity.

Table 5

Indoor Units	Power Supply	Fuse Capacity	Breaker Capacity	Min. Power Supply Cord
	V/Ph/Hz	A	A	mm^2
12K~60K	220-240V~ 50Hz	3.15	6	1.0

Table 6

Model	Power Supply	Capability of Air Switch(A)	Minimum Sectional Area of Power Cable and Earth line (mm^2)
MUCSR-12	220-240V~ 50Hz	13	1.5
MUCSR-18		16	1.5
MUCSR-24		20	2.5
MUCSR-30		20	2.5
MUCSR-36		25	2.5
MUCSR-42		25	2.5
MUCSR-48		40	6.0
MUCSR-60	380-415V 3N~ 50Hz	25	2.5

Notes:

①. The fuse is located on the main board.

②. Install the disconnect device with a contact gap of at least 3mm in all poles nearby the units (Both indoor unit and outdoor unit).The appliance must be positioned so that the plug is accessible.

③. The specifications of the breaker and power cable listed in the table above are determined based on the maximum power (maximum amps) of the unit.

④. The specifications of the power cable listed in the table above are applied to the conduit-guarded multi-wire copper cable (like, YJV copper cable, consisting of PE insulated wires and a PVC cable jacket) used at 40°C and resistible to 90°C(see IEC 60364-5-52). If the working condition changes, they should be modified according to the related national standard.

⑤. The specifications of the breaker listed in the table above are applied to the breaker with the working temperature at 40°C. If the working condition changes, they should be modified according to the related national standard.

⑥. Take 2 pieces of power cord of 0.75mm^2 as the communication lines between indoor and outdoor unit, with their longest lengths of 50m. Please select the appropriate line length as per the actual installation conditions. The communication lines can not be twisted together. For the unit (≤30K), it's recommended to use 8m long communication line.

⑦. Take 2 pieces of power cord of 0.75mm^2 as the communication lines between the wired controller and the indoor unit, with their longest lengths of 30m. Please select the appropriate line length as per the actual installation conditions. The communication lines can not be twisted together. It's recommended to use 8m long communication line.

⑧. The wire size of the communication line should be no less than 0.75mm^2. It's recommended to take 0.75mm^2 power cords as the communication line.

4. Installation of the Unit

4.1 Installation of the Indoor Unit

4.1.1 Indoor unit dimension

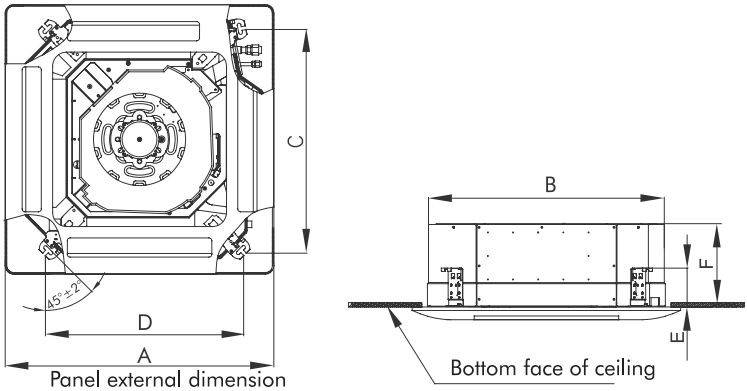


Fig.4

Table 7

Item / Model	A	B	C	D	E	F
MUCSR-12	670	596	592	571	145	240
MUCSR-18						
MUCSR-24	950	840	780	680	160	240
MUCSR-30	950	840	892	980	160	320
MUCSR-36						
MUCSR-42						
MUCSR-48	1040	910	842	788	170	290
MUCSR-60						

4.1.2 Installing the Main Body Unit

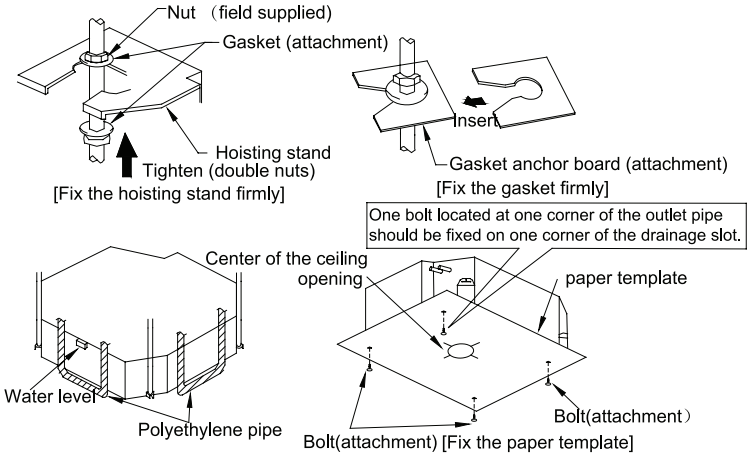


Fig.5

(1). Install the hoisting stand on the hoisting screw by using nuts and gaskets at both the upper and lower sides of the hoisting stand. To prevent the gasket from breaking off, a gasket anchor board can be helpful.
(2). Install the paper template on the unit, and fix the drain pipe at the outlet vent.
(3). Adjust the unit to the best position.
(4). Check if the unit is installed horizontally at four directions. If not, the water pump and the float switch would function improperly and even lead to water leakage.
(5). Remove the gasket anchor board and tighten the nut remained.
(6). Remove the paper template.

4.1.3 Installing the Suspension Bolts

(1). Using the installation template, drill holes for bolts (four holes). (Fig. 6)
(2). Install the bolts to the ceiling at a place strong enough to hang the unit. Mark the bolt positions from the installation template. With a concrete drill, drill for 12.7mm (1/2") diameter holes. (Fig.7)
(3). Insert the anchor bolts into the drilled holes, and drive the pins completely into the anchor bolts with a hammer. (Fig.8)

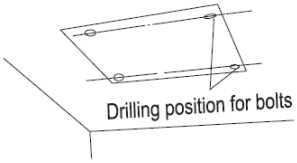


Fig.6

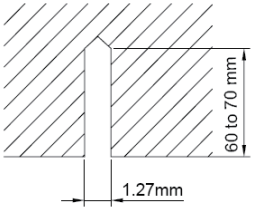


Fig.7

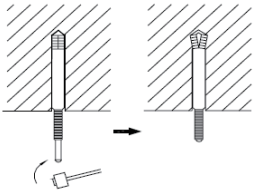


Fig.8

4.1.4 Leveling

The water level test must be done after installing the indoor unit to make the unit is horizontal, as shown below.

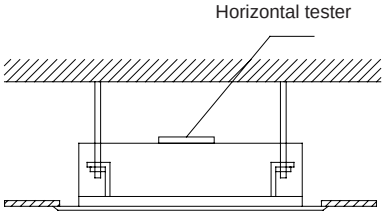


Fig.9

4.2 Installation of the Outdoor Unit

⚠ WARNING!
①. Install the unit where it will not be tilted by more than 5°.
②. During installation, if the outdoor unit has to be exposed to strong wind, it must be fixed securely.

4.2.1 Outdoor unit dimension

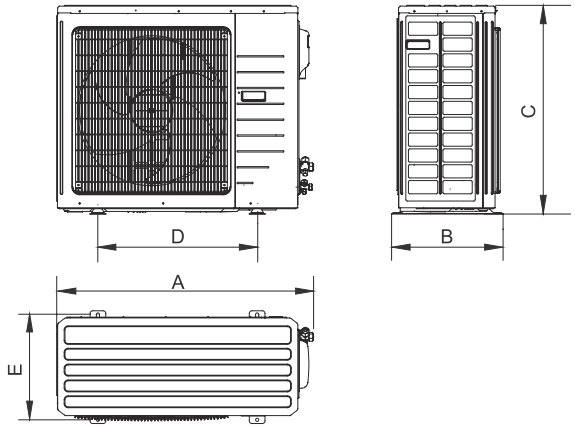


Fig.10

Table 8 Unit: mm

Item / Model	A	B	C	D	E
MUCSR-12	848	320	540	540	286
MUCSR-18	955	396	700	560	360
MUCSR-24	980	427	790	610	395
MUCSR-30					
MUCSR-36	1107	440	1100	631	400
MUCSR-42	958	412	1349	572	376
MUCSR-48					
MUCSR-60	1085	427	1365	620	395

4.2.2 Condensate Drainage of the Outdoor Unit(Only for the heat pump unit) (Fig.11)

(1). It is required to install a drain pipe for the outdoor unit to drain out the condensate water during heating operation. (only for the heat pump unit)

(2). When installing the drain pipe, apart from the drain pipe mounting hole, all other holes should be plugged so as to avoid water leakage. (only for the heat pump unit)

(3). Installation Method: Insert the pipe joint into the hole φ25 located at the base plate of the unit and then connect the drain pipe to the pipe joint.

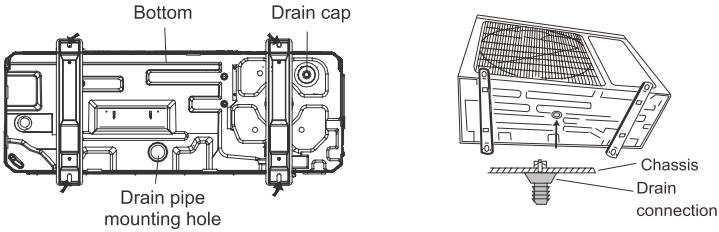


Fig.11

4.3 Installation of the Connection Pipe

4.3.1 Flare Processing

(1). Cut the connection pipe with the pipe cutter and remove the burrs.

(2). Hold the pipe downward to prevent cuttings from entering the pipe.

(3). Remove the flare nuts at the stop valve of the outdoor unit and inside the accessory bag of the indoor unit, then insert them to the connection pipe, after that, flare the connection pipe with a flaring tool.

(4). Check if the flare part is spread evenly and there are no cracks (see Fig.12).

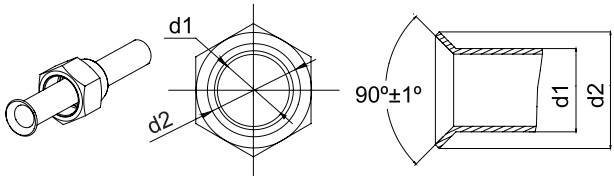


Fig.12

4.3.2 Bending Pipes

(1). The pipes are shaped by your hands. Be careful not to collapse them.

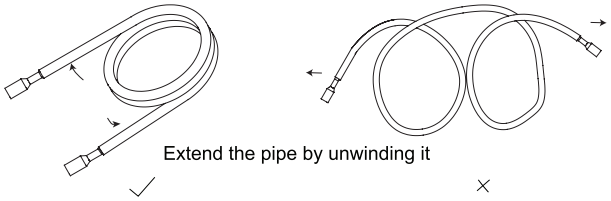


Fig.13

(2). Do not bend the pipes in an angle more than 90°.

(3). When pipes are repeatedly bent or stretched, the material will harden, making it difficult to bend or stretch them any more. Do not bend or stretch the pipes more than three times.

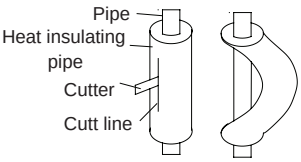


Fig.14

(4). When bending the pipe, do not bend it as is. The pipe will be collapsed. In this case, cut the heat insulating pipe with a sharp cutter as shown in Fig.14, and bend it after exposing the pipe. After bending the pipe as you want, be sure to put the heat insulating pipe back on the pipe, and secure it with tape.

CAUTION!
①. To prevent breaking of the pipe, avoid sharp bends. Bend the pipe with a radius of curvature of 150 mm or over.
②. If the pipe is bent repeatedly at the same place, it will break.

4.3.3 Connecting the Pipe at the Indoor Unit Side

Detach the caps and plugs from the pipes.

CAUTION!
①. Be sure to apply the pipe against the port on the indoor unit correctly. If the centering is improper, the flare nut cannot be tightened smoothly. If the flare nut is forced to turn, the threads will be damaged.
②. Do not remove the flare nut until the connection pipe is to be connected so as to prevent dust and impurities from coming into the pipe system.

When connecting the pipe to the unit or removing it from the unit, please do use both the spanner and the torque wrench.(Fig.15)

When connecting, smear both inside and outside of the flare nut with refrigeration oil, screw it hand tight and then tighten it with the spanner.

Refer to Table 9 to check if the wrench has been tightened properly (too tight would mangle the nut and lead to leakage).

Examine the connection pipe to see if it leaks, then take the treatment of heat insulation, as shown in the Fig.15.

Use the medium-sized sponge to insulate the coupler of the gas pipe.

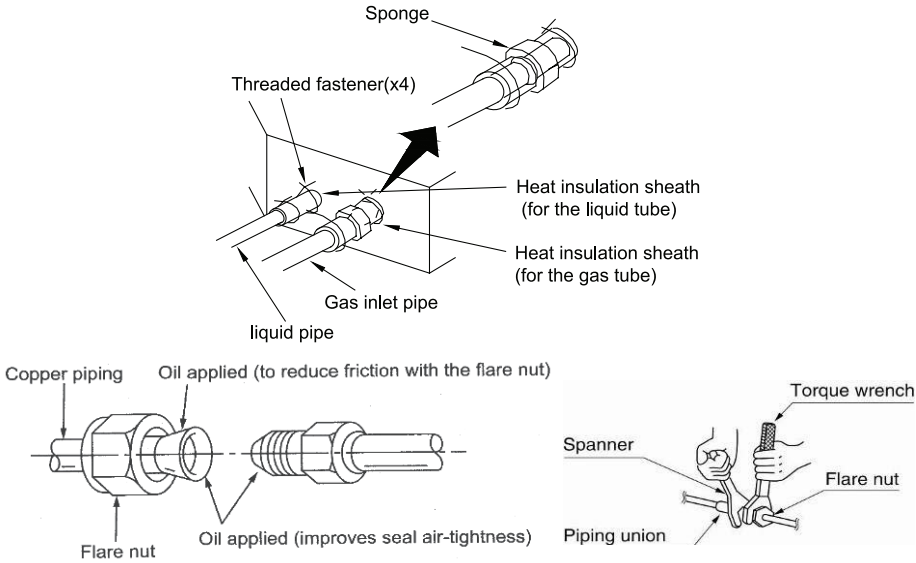


Fig.15

Table 9 Flare nut tightening torque

Pipe Diameter	Tightening Torque
1/4″(Inch)	15-30 (N·m)
3/8″(Inch)	35-40 (N·m)
5/8″(Inch)	60-65 (N·m)
1/2″(Inch)	45-50 (N·m)
3/4″(Inch)	70-75 (N·m)
7/8″(Inch)	80-85 (N·m)

⚠ CAUTION!
Be sure to connect the gas pipe after connecting the liquid pipe completely.

4.3.4 Connecting the Pipe at the Outdoor Side Unit

Tighten the flare nut of the connection pipe at the outdoor unit valve connector. The tightening method is the same as that as at the indoor side.

4.3.5 Checking the Pipe Connections for Gas Leaking

For both indoor and outdoor unit side, check the joints for gas leaking by the use of a gas leakage detector without fail when the pipes are connected.

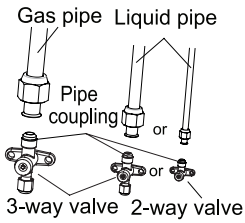


Fig.16

4.3.6 Heat Insulation on the Pipe Joints (Indoor Side Only)

Stick coupler heat insulation (large and small) to the place where connecting pipes.

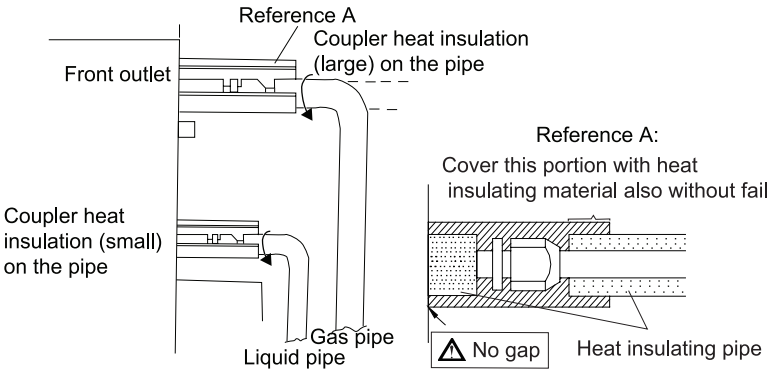


Fig.17

4.3.7 Liquid Pipe and Drain Pipe

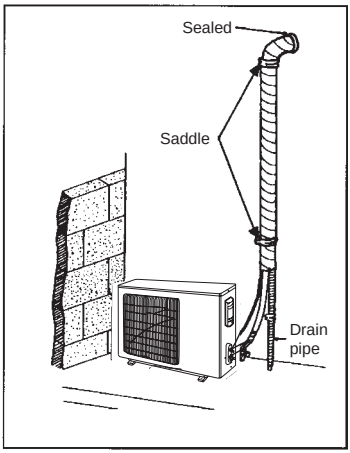
If the outdoor unit is installed lower than the indoor unit (See Fig.18)

(1). A drain pipe should be above ground and the end of the pipe does not dip into water. All pipes must be restrained to the wall by saddles.

(2). Taping pipes must be done from bottom to top.

(3). All pipes are bound together by tape and restrained to wall by saddles.

Fig.18



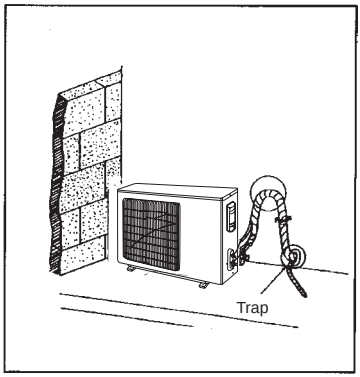
If the outdoor unit is installed higher than the indoor unit (See Fig.19)

(1). Taping should be done from lower to the upper part.

(2). All pipes are bound and taped together and also should be trapped to prevent water from returning to the room.

(3). Restraint all pipes to the wall with saddles.

Fig.19



4.4 Vacuum and Gas Leakage Inspection

⚠ CAUTION!
Do not purge the air with refrigerants but use a vacuum pump to vacuum the installation! There is no extra refrigerant in the outdoor unit for air purging!

4.4.1 Vacuum

(1). Remove the caps of the liquid valve, gas valve and also the service port.

(2). Connect the hose at the low pressure side of the manifold valve assembly to the service port of the unit's gas valve, and meanwhile the gas and liquid valves should be kept closed in case of refrigerant leak.

(3). Connect the hose used for evacuation to the vacuum pump.

(4). Open the switch at the lower pressure side of the manifold valve assembly and start the vacuum pump. Meanwhile, the switch at the high pressure side of the manifold valve assembly should be kept closed, otherwise evacuation would fail.

(5). The evacuation duration depends on the unit's capacity, generally, 15 minutes for the 12K units, 20 minutes for the 18K units, 30 minutes for the 24/30/36K units, 45 minutes for the 42/48/60 units. And verify if the pressure gauge at the low pressure side of the manifold valve assembly reads -1.0Mp (-75cmHg), if not, it indicates there is leak somewhere. Then, close the switch fully and then stop the vacuum pump.

(6). Wait for some time to see if the system pressure can remain unchanged, 3 minutes for the units less than 18K, 5 minutes for the 18K~24K units, 10 minutes for the units more than 42K. During this time, the reading of the pressure gauge at the low pressure side can not be larger than 0.005Mp (0.38cmHg).

(7). Slightly open the liquid valve and let some refrigerant go to the connection pipe to balance the pressure inside and outside of the connection pipe, so that air will not come into the connection pipe when removing the hose. Note that the gas and liquid valve can be opened fully only after the manifold valve assembly is removed.

(8). Place back the caps of the liquid valve, gas valve and also the service port.

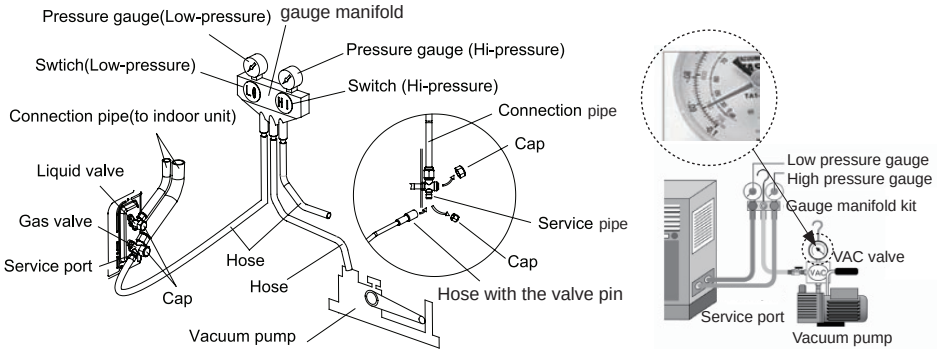


Fig.20

Note: For the large-sized unit, it has the service port for both the gas valve and the liquid valve. During evacuation, it is available to connect two hoses of the manifold valve assembly to two service ports to quicken the evacuating speed.

4.4.2 Additional Charge

Refrigerant suitable for a piping length of 5m or 7.5m is charged in the outdoor unit at the factory.
When the piping is longer than 7,5m or 9.5m, additional charging is necessary.
For the additional amount, see Table 10.

Table 10

Item / Model	Standard pipe lenght	Charged until:	Additional charge
09~18K	5m	≤ 7.5m	30 g/m
24~42K	5m	≤ 7.5m	60 g/m
48~60K	7.5m	≤ 9.5m	60 g/m

When the height difference between the indoor unit and outdoor unit is larger than 10 meters, an oil bend should be employed for every 6 meters.

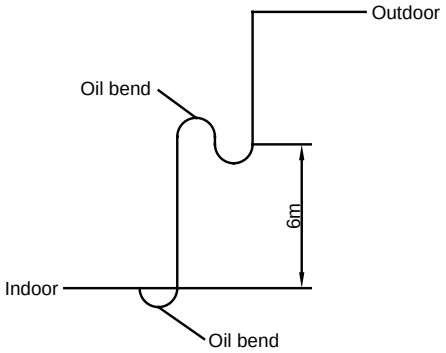


Fig.21

4.5 Installation of the Drain Hose

4.5.1 Installationof Drain Piping

(1). Keep piping as short as possible and slope it downwards at a gradient of at least 1/100 so that air may not remain trapped inside the pipe.

(2). Keep pipe size equal to or greater than that of the connecting pipe.

(3). Install the drain piping as shown and take measures against condensation. Improperly rigged piping could lead to leaks and eventually wet furniture and belongings.

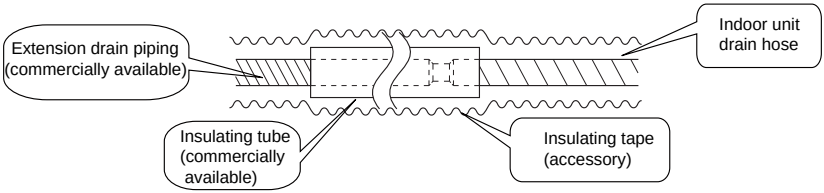
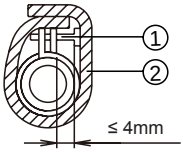
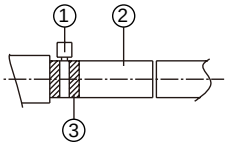


Fig.22

4.5.2 Installing the Drain Pipes

(1). Insert the drain pipe to the drain outlet of the unit and then tighten the clamp securely with tape.

(2). Connect the extension drain pipe to the drain pipe and then tighten the clamp with tape.

	
Tighten the clamp until the screw head is less then 4mm from the hose. Metal clamp Drain hose (accessory) Grey tape (accessory)	Insulate the pipe clamp and the drain hose using heat insulation sponge. Metal clamp (accessory) Insulation sponge (accessory)

(3). When unifying multiple drain pipes, install the pipes as Fig.23. Select converging drain pipes whose gauge is suitable for the operating capacity of the unit.(take the cassette type unit for example)

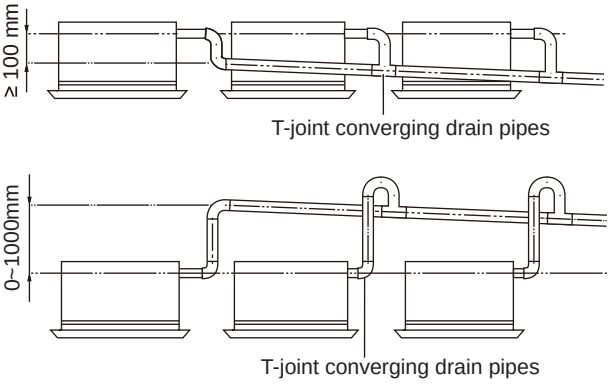


Fig.23

(4). When the drain hose cannot keep a sufficient gradient, it is necessary to fit a riser pipe (field supplied) to it.

(5). If the air flow of indoor unit is high, this might cause negative pressure and result in return suction of outdoor air. Therefore, U-type water trap shall be designed on the drainage side of each indoor unit.(Fig.24)

(6). Install one water trap for each unit.

(7). Installation of water trap shall consider easy cleaning in the future.

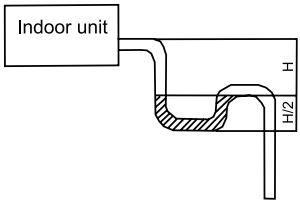


Fig.24

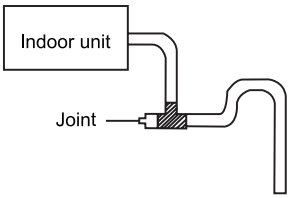


Fig.25

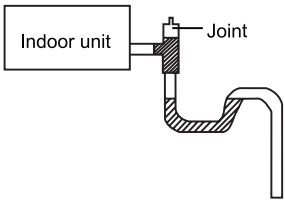


Fig.26

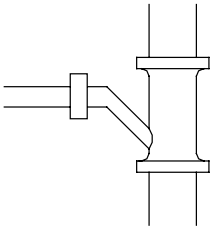
(8). Connection of drainage branch pipe to the standpipe or horizontal pipe of drainage main pipe

The horizontal pipe cannot be connected to the vertical pipe at a same height. It can be connected in a manner as shown below:

NO.1: Attach the 3-way connection of the drainage pipe joint as shown in Fig.27.

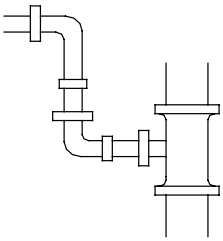
NO.2: Attach the drain elbow as shown in Fig.28.

NO.3: Attach the horizontal pipe as shown in Fig.29.



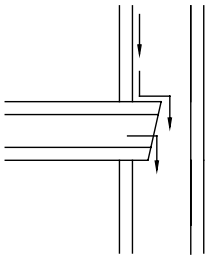
3-way connection
of drainage pipe joint

Fig.27



Connection of drain elbow

Fig.28



Connection of horizontal pipe

Fig.29

4.5.3 Precautions When Doing Riser Piping Work

(1). Make sure that heat insulation work is executed on the following 2 spots to prevent any possible water leakage due to dew condensation.

1). Connect the drain hose to the drain lift pipe, and insulate them.

2). Connect the drain hose to the drain outlet on the indoor unit, and tighten it with the clamp.

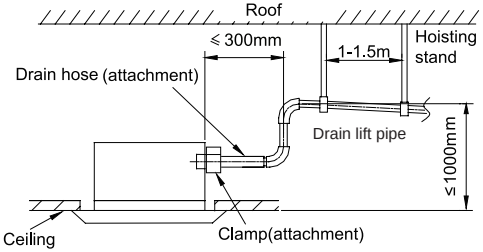


Fig.30

(2). Make sure the lift pipe is at most 280mm.

(3). Stand the lift pipe vertically, and make sure it is not further than 300mm from the base of the drain outlet.

(4). Secure a downward gradient of 1/100 or more for the drain pipe. To accomplish this, mount supporting brackets at an interval of 1 -1.5 m.

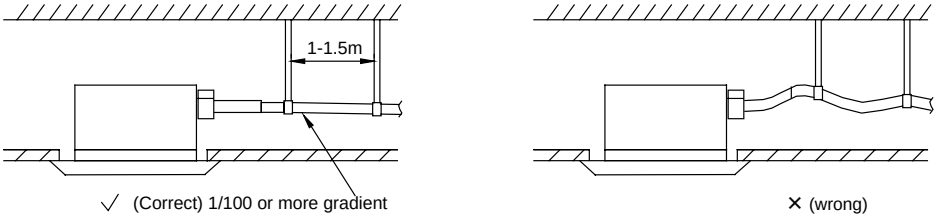


Fig.31

(5). The incline of attached drain hose should be 75mm or less so that the drain outlet does not have to withstand additional force.

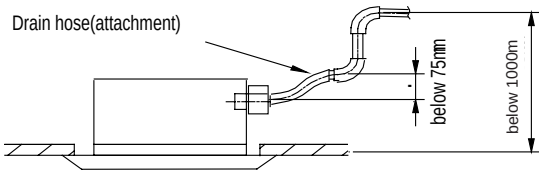


Fig.32

4.5.4 Testing of Drain Piping

After piping work is finished, check if drainage flows smoothly.

Shown in the Fig.33, Add approximately 1liter of water slowly into the drain pan and check drainage flow during COOL running.

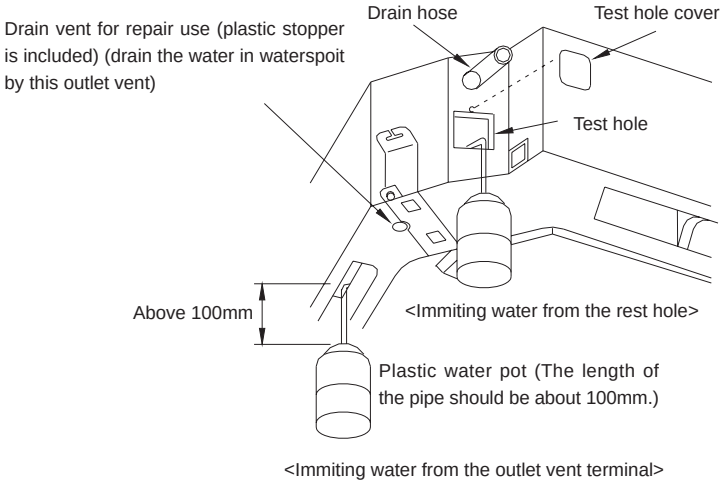


Fig.33

4.6 The Panel Installation

4.6.1 Precautions

(1). See the figure below for the relationship of the front panel and the connecting pipe.

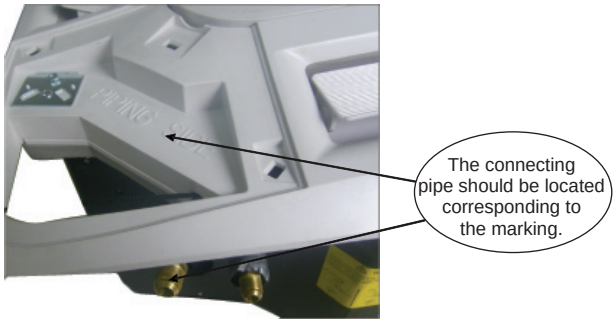


Fig.34

(2). Improper screwing of the screws may cause the troubles shown in Fig.35.

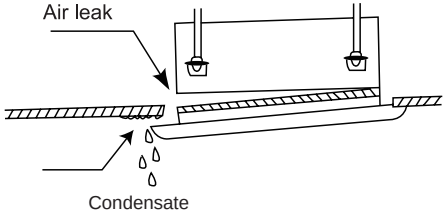


Fig.35

(3). If gap still exists between ceiling and decoration panel after tightening the screws, readjust the height of the indoor unit. (Fig.36)

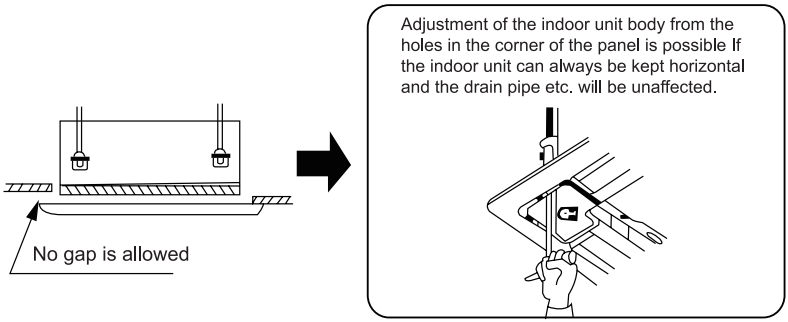


Fig.36

(4). Wire the swing flap motor as shown in Fig.37.

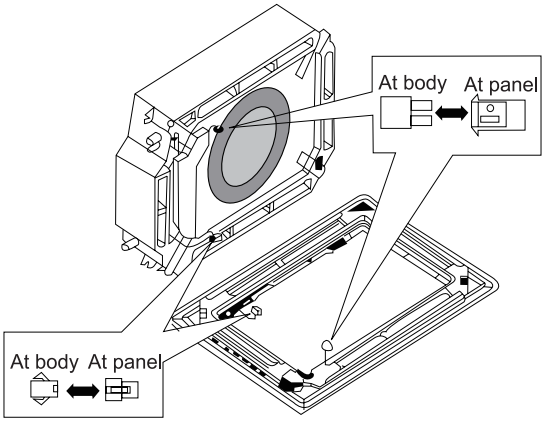


Fig.37

4.6.2 Installing the Panel

(1). Place the panel at the unit, and latch the hooks beside and opposite the swing flap motor.

(2). Latch other two hooks.

(3). Tighten four hexagonal screws under the latches about 15mm.

(4). Adjust the panel along the direction indicated by the arrow as shown in Fig.38.

(5). Tighten the screws until the thickness of the sealing material between the panel and the indoor unit reduces to 5-8cm.

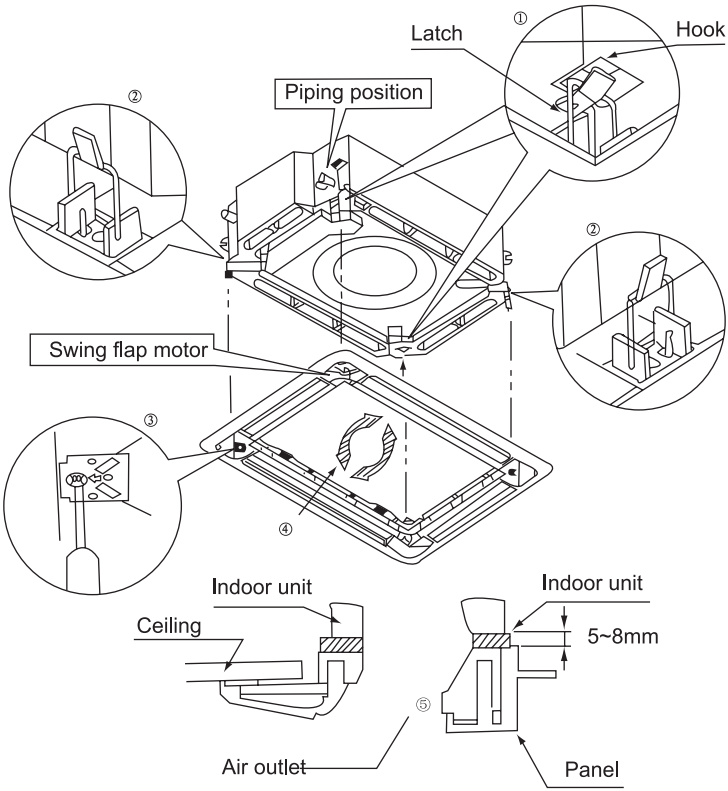


Fig.38

4.7. Electrical Wiring

4.7.1 Wiring Precautions

⚠ WARNING!
①. Before obtaining access to terminals, all supply circuits must be disconnected.
②. The rated voltage of the unit is as shown as Table 5 and Table 6
③. Before turning on, verify that the voltage is within the 198~264V range(for single phrase unit) or 342~457V range (for three-phrase unit).
④. Always use a special branch circuit and install a special receptacle to supply power to the air conditioner.

⑤ . Use a special branch circuit breaker and receptacle matched to the capacity of the air conditioner.
⑥ . The special branch circuit breaker is installed in the permanent wiring. Always use a circuit that can trip all the poles of the wiring and has an isolation distance of at least 3mm between the contacts of each pole.
⑦ . Perform wiring work in accordance with standards so that the air conditioner can be operated safely and positively.
⑧ . Install a leakage special branch circuit breaker in accordance with the related laws and regulations and electric company standards.

CAUTION!
① . The power source capacity must be the sum of the air conditioner current and the current of other electrical appliances. When the current contracted capacity is insufficient, change the contracted capacity.
② . When the voltage is low and the air conditioner is difficult to start, contact the power company to raise the voltage.

4.7.2 Electrical Wiring

(1). For solid core wiring (Fig.39)

1). Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation about 25 mm (15/16") .

2). Using a screwdriver, remove the terminal screw(s) on the terminal board.

3). Using pliers, bend the solid wire to form a loop suitable for the terminal screw.

4). Shape the loop wire properly, place it on the terminal board and tighten securely with the terminal screw using a screwdriver.

(2). For strand wiring (Fig.39)

1). Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation about 10 mm (3/8") .

2). Using a screwdriver, remove the terminal screw (s) on the terminal board.

3). Using a round terminal fastener or pliers, securely clamp a round terminal to each stripped wire end.

4). Position the round terminal wire, and replace and tighten the terminal screw with a screwdriver.(Fig.40)

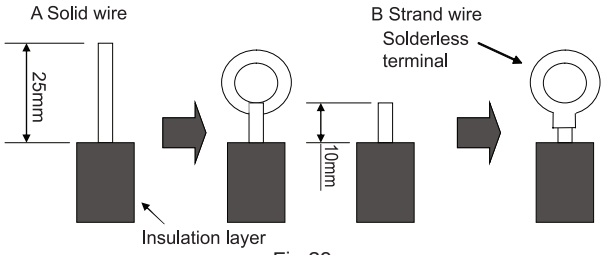


Fig.39

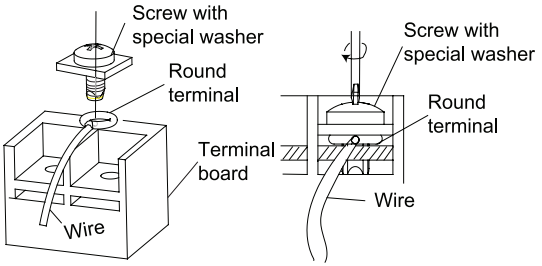


Fig.40

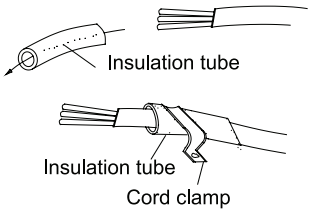


Fig.41

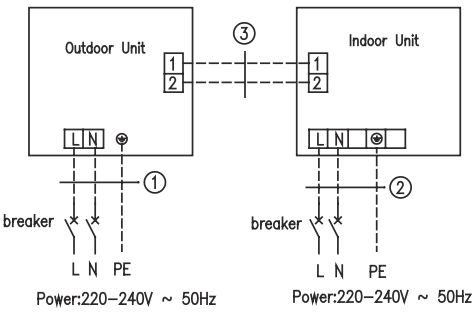
(3). How to fix connection cord and power cord by cord clamp

After passing the connection cord and power cord through the insulation tube, fasten it with the cord clamp.(Fig.41)

⚠ WARNING!
①. Before starting work, check that power is not being supplied to the indoor unit and outdoor unit.
②. Match the terminal block numbers and connection cord colors with those of the indoor unit side. ③. Erroneous wiring may cause burning of the electric parts.
④. Connect the connection cords firmly to the terminal block. Imperfect installation may cause a fire.
⑤. Always fasten the outside covering of the connection cord with cord clamps. (If the insulator is not clamped, electric leakage may occur.)
⑥. Always connect the ground wire.

(4). Electric wiring between the indoor and outdoor units

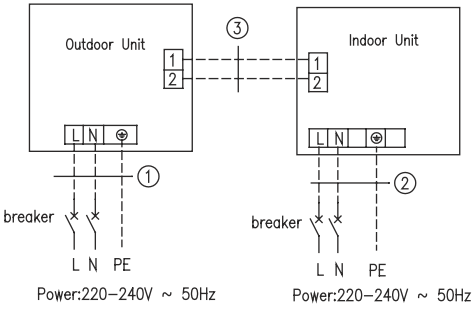
Single-phase units(12K~30K)



MUCSR-09
MUCSR-12
MUCSR-18
①. Power cord 3×1.5mm^2(H07RN-F)
②. Power cord 3×1.0mm^2(H05RN-F)
③. Communication Cords 2×0.75mm^2(H05RN-F)

MUCSR-24
MUCSR-30
①. Power cord 3×2.5mm^2(H07RN-F)
②. Power cord 3×1.0mm^2(H05RN-F)
③. Communication Cords 2×0.75mm^2(H05RN-F)

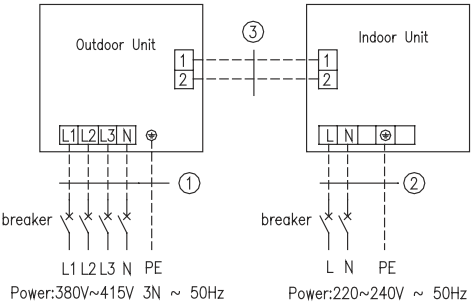
Single-phase units(36K~48K)



MUCSR-36
MUCSR-42
① . Power cord 3×2.5mm^2(H07RN-F)
② . Power cord 3×1.0mm^2(H05RN-F)
③ . Communication Cords 2×0.75mm^2(H05RN-F)

MUCSR-48
① . Power cord 3×6.0mm (H07RN-F)
② . Power cord 3×1.0mm^2(H05RN-F)
③ . Communication Cords 2×0.75mm^2(H05RN-F)

Three-phase units

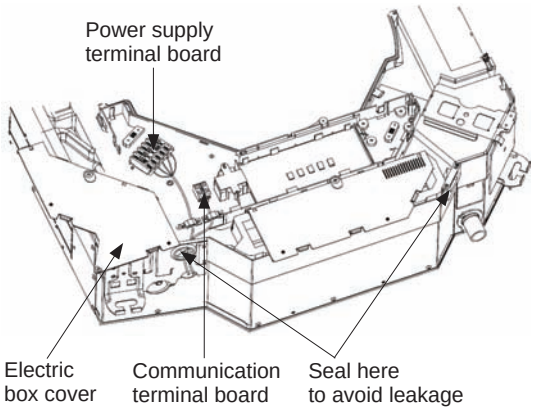


MUCSR-60
① . Power cord 3×2.5mm (H07RN-F)
② . Power cord 3×1.0mm^2(H05RN-F)
③ . Communication Cords 2×0.75mm^2(H05RN-F)

Fig.42

(5). Electric wiring of indoor unit side

Remove the electric box cover from the electric box sub-assy and then connect the wire.



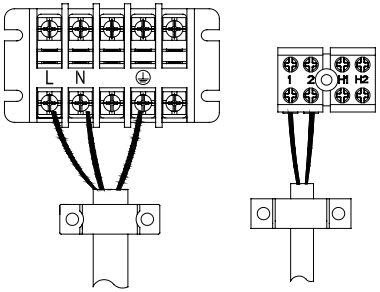


Fig.43

⚠ CAUTION!
①. The power cord and the wire of the fresh air valve are high-voltage, while the communication cord and connection wire of the wired controller are low-voltage. They should run separately against electromagnetic interference.
②. The high-voltage and low-voltage lines should pass through the rubber rings at different electric box covers.
③. Do not bundle the connection wire of the wired controller and the communication cord together, or arrange them in parallel, otherwise improper operation would occur.
④. The high-voltage and low-voltage lines should be fixed separately and securely, with internal big clamps for the former and small clamps for the latter.
⑤. Tighten the indoor/outdoor connection cord and power cord respectively on the terminal boards with screws. Faulty connection may cause a fire.
⑥. If the indoor unit connection cord (to the outdoor unit) and power supply are wired incorrectly, the air conditioner may be damaged.
⑦. Connect the indoor unit connection cord properly based on the corresponding marks as shown in Fig.42.
⑧. Ground both the indoor and outdoor units by attaching a ground wire.
⑨. Unit shall be grounded in compliance with the applicable local and national codes.

(6). Electric wiring of outdoor unit side

Note: When connecting the power supply cord, make sure that the phase of the power supply matches with the exact terminal board. If not, the compressor will rotate reversely and run improperly.

Remove the big handle (09~42K) /front board(48/60K) of the outdoor unit and insert the end of the communication cord and the power cable into the terminal board.

Single phase:

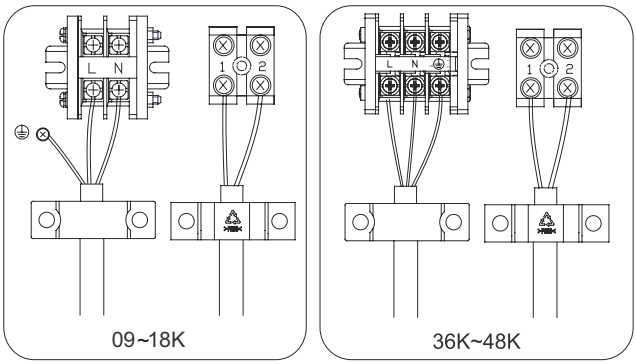


Fig.44

Three-phase:

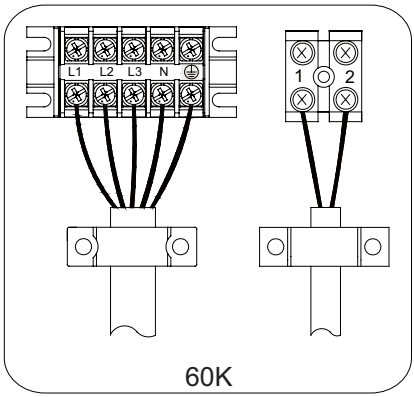


Fig.45

5. Installation of Controllers

Refer to the Installation Manual of the controller for more details.

6. Test Running

6.1 Trial Operation and Testing

(1). The meaning of error codes as shown below:

Table 11

Number	Error code	Error	Remarks
1	E1	Compressor high pressure protection	
2	E2	Indoor anti-freeze protection	
3	E3	Compressor low pressure protection, refrigerant lack protection and refrigerant colleting mode	
4	E4	Compressor high discharge temperature protection	
5	E6	Communication error	
6	E8	Indoor fan motor error	
7	E9	Full water protection	
8	F0	Indoor ambient temperature sensor error	
9	F1	Evaporator temperature sensor error	
10	F2	Condenser temperature sensor error	
11	F3	Outdoor ambient temperature sensor error	
12	F4	Discharge temperature sensor error	
13	F5	Temperature sensor error of wired controller	
15	C5	Capacity code error	
16	EE	Outdoor memory chip error	
17	PF	Electric box sensor error	
18	H3	Compressor overload protection	
19	H4	Overloading	

20	H5	IPM protection	
21	H6	DC fan motor error	
22	H7	Drive desynchronizing protection	
23	Hc	Pfc protection	
25	Lc	Activation failure	
26	Ld	Compressor phase sequence protection	
27	LE	Compressor stalling protection	
28	LF	Power protection	
29	Lp	Indoor and outdoor mismatch	
30	U7	4-way valve direction changing protection	
31	P0	Drive reset protection	
32	P5	Over-current protection	
33	P6	Communication error between main control and drive	
34	P7	Drive module sensor error	
35	P8	Drive module over temperature protection	
36	P9	Zero passage protection	
37	PA	AC current protection	
38	Pc	Drive current error	
39	Pd	Sensor connecting protection	
40	PE	Temperature drift protection	
41	PL	Bus low voltage protection	
42	PH	Bus high voltage protection	
43	PU	Charge loop error	
44	PP	Input voltage abnormality	
45	ee	Drive memory chip error	

Note: When the unit is connected with the wired controller, the error code will be simultaneously shown on it.

(2). Instructions to the Error Indicating Lamps on the Panel of the Cassette Type Unit.

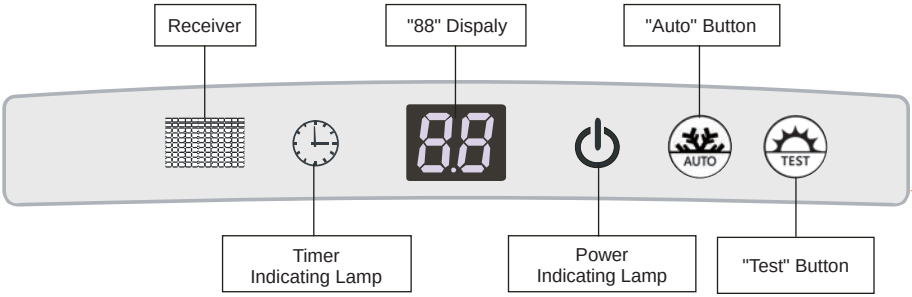


Fig.46

◆ Power and ON/OFF Indicating Lamp:

It goes red when the unit is powered on while it goes white when the unit is started.

◆ Timer Indicating Lamp:

It goes on when the timer is set and goes off when it is not. Its display is in yellow.

◆ “88” Display:

When there is no error, and it receives valid remote control information. It will display the temp setup for 5s, then display the temp of indoor. When the unit has error, It will display the error code. When there are more than one error, the error code will be displayed alternately.

After the grille of the front panel is opened, the front panel is still allowed to realize the following functions by pressing the “Auto” button and the nearby “Test” button simultaneously for five seconds when the unit is “Off”.

6.2 Working Temperature Range

Table12

Test Condition	Indoor Side		Outdoor Side	
	DB(°C)	WB(°C)	DB(°C)	WB(°C)
Nominal Cooling	27	19	35	24
Nominal Heating	20	–	7	6
Rated Cooling	32	23	48	–
Low Temp. Cooling	21	15	-15	–
Rated Heating	27	–	24	18
Low Temp. Heating	20	–	-10	-11

Note:

① . The design of this unit conforms to the requirements of EN14511 standard.

② . The air volume is measured at the relevant standard external static pressure.

③ . Cooling (heating) capacity stated above is measured under nominal working conditions corresponding to standard external static pressure. The parameters are subject to change with the improvement of products, in which case the values on nameplate shall prevail.

④ . In this table, there are two outside DB values under the low temp cooling conditions, and the one in the brackets is for the unit which can operate at extreme low temperature.

7. Troubleshooting and Maintenance

7.1 Troubleshooting

If your air-conditioning unit suffers from abnormal operation or failure, please first check the following points before repair:

Table 13

Failure	Possible Reasons
The unit cannot be started.	①. The power supply is not connected. ②. Electrical leakage of air-conditioning unit causes tripping of the leakage switch. ③. The operating keys are locked. ④. The control loop has failure.
The unit operates for a while and then stops.	①. There is obstacle in front of the condenser. ②. The control loop is abnormal. ③. Cooling operation is selected when the outdoor ambient temperature is above 48°C.
Poor cooling effect.	①. The air filter is dirty or blocked. ②. There is heat source or too many people inside the room. ③. The door or window is open. ④. There is obstacle at the air intake or outlet. ⑤. The set temperature is too high. ⑥. There is refrigerant leakage. ⑦. The performance of room temperature sensor becomes worse
Poor heating effect	①. The air filter is dirty or blocked. ②. The door or window is not firmly closed. ③. The set room temperature is too low. ④. There is refrigerant leakage. ⑤. The outdoor ambient temperature is lower than -5°C. ⑥. Control loop is abnormal.

Note: After carrying out the check of the above items and taking relevant measures to solve the problems but the air-conditioning unit still does not function well, please stop the operation of the unit immediately and contact the local service agency designated by Gree. Only ask professional serviceman to check and repair the unit.

7.2 Routine Maintenance

Only a qualified service person is allowed to perform maintenance.

Before accessing to terminal devices, all power supply circuits must be disconnected.

Do not use water or air of 50°C or higher for cleaning air filters and outside panels.

Notes:

①. Do not operate the air conditioner with the filter uninstalled, otherwise dust would come into the unit.

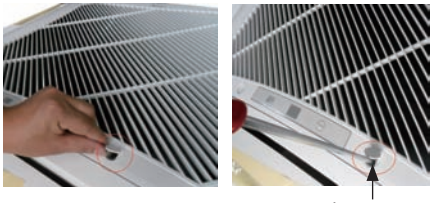
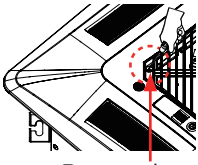
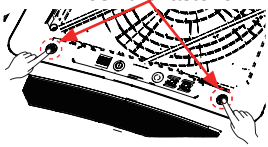
②. Do not remove the air filter except for cleaning. Unnecessary handling may damage the filter.

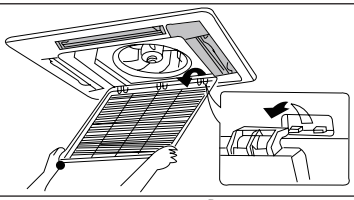
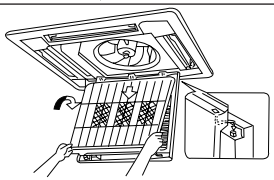
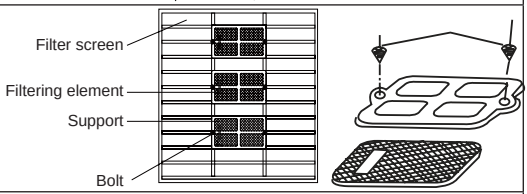
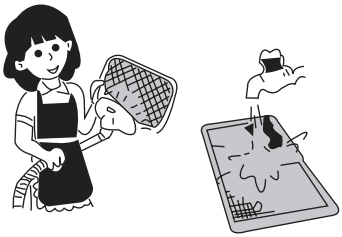
③. Do not clean the unit with gasolene, benzene, thinner, polishing powder or liquid insecticide, otherwise it would cause discoloration and deformation of the unit.

④. Do not wet the indoor unit in case of electric shock or fire hazard.

Increase the frequency of cleaning if the unit is installed in a room where the air is extremely contaminated.(As a yardstick for yourself, consider cleaning the filter once a half year.)

If dirt becomes impossible to clean, change the air filter.

<table>
<tr><th colspan="2">How to clean the air filter</th></tr>
<tr><td rowspan="2">1. Open the air inlet grille
(1). How to open the panel grille of the 24K~42K cassette type unit
①. Push the buckle as shown in the figure.
②. Release the screws under buckles by a screwdriver.
③. Push the fastener and open the panel grille.</td><td> 
Remove the screw</td></tr>
<tr><td> 
Push the fastener</td></tr>
<tr><td rowspan="2">(2). How to open the panel grille of the 12K\18K\48K\60K cassette type unit
①. Remove the screws by a screwdriver as shown in the picture.
②. Push those two fasteners and open the panel grille.</td><td> 
Remove the screw</td></tr>
<tr><td>Push the fastener
  </td></tr>
</table>

2. Disassemble the air inlet grille Open the air inlet grille at 45°, raise it and remove the grille.	
3. Disassemble the filter screen Draw out the filter screen and remove it.	
4. Disassemble the air purifier Remove the air purifier after removing the fixed screws on it.	
5. Clean the filer screen Clean the filer screen by a vacuum cleaner or wash it by flashing water. If the oil stain on the filter can not be removed or cleaned up, wash it by warm water meld with the detergent. Dry the filer in the shadow. Note: Never use hot water over 45°C in case of color fading or turning yellow. Never dry it by fire so as to prevent the filter caught fire or deformation.	
6. Reset the filer	The same as step 3
7. Install the grille well	The same as step 1 and 2

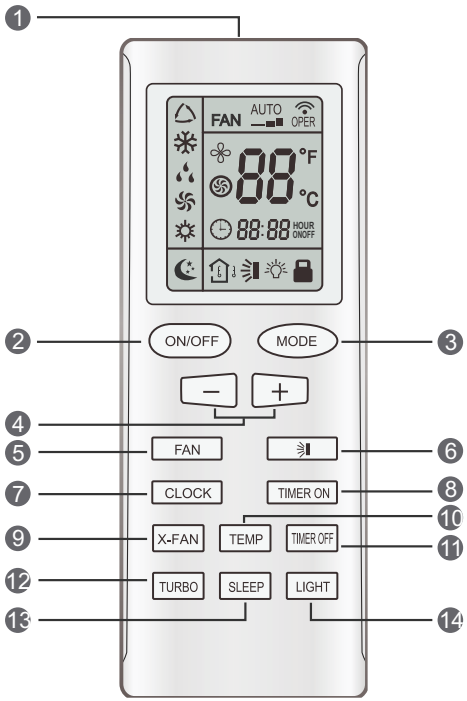
Users manual

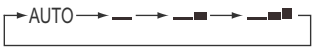
1. Wireless remote controler YB1F

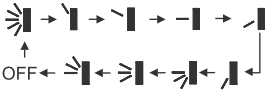
1.1 User notice

CAUTION !
① Make sure there is no obstruction between the wireless remote controller and the signal receiver.
② The signal receiving distance of the wireless remote controller can be up to 10 metres.
③ Never drop or throw the wireless remote controller.
④ Never let any liquid flow into the wireless remote controller.
⑤ Never expose the wireless remote controller under the sunlight directly or where it is very hot.
⑥ This is a general remote control, it could be used for multiple types (functions) of air conditioners. For some models without the functions specified here, we preserve the right to not to inform exclusively.

1.2 Control panel of the wireless remote controller



No.	Name	Function Description
1	Signal transmitter	• Signal transmitter
2	ON/OFF button	• Press this button, and the unit will be turned on; press it once more, and the unit will be turned off. When turning off the unit, the Sleep function will be canceled, but the presetting time is still remained.
3	MODE button	• By pressing this button, Auto, Cool, Dry, Fan, Heat mode can be selected circularly. Auto mode is default after power on. Under the Auto mode, the setting temperature will not be displayed; Under the Heat mode, the initial value is 28°C (82°F);Under other modes, the initial value is 25°C(77°F).  AUTO ; COOL; DRY; FAN; HEAT (only for cooling and heating unit)
4	- button	• Preset temperature can be decreased by pressing this button. Pressing and holding this button for more than 2 seconds can make the temperature changed quickly until release this button and then transmit this order. The temperature adjustment is unavailable under the Auto mode, but the order can be sent by pressing this button. Centigrade setting range: 16-30; Fahrenheit scale setting range 61-86.
	+ button	• Preset temperature can be increased by pressing this button. Pressing and holding this button for more than 2 seconds can make the temperature changed quickly until release the button and then transimit this order. The temperature adjustment is unavailable under the Auto mode, but the order can be sent by pressing this button. Centigrade setting range: 16-30; Fahrenheit scale setting range 61-86.
5	FAN button	• By pressing this button, Auto, Low, Middle, High speed can be circularly selected. After power on, Auto fan speed is default. •  Low speed Middle speed High speed Note: Under the DRY mode, the fan will be kept running at the low speed and the fan speed isn't adjustable.

6	SWING UP/DOWN button	• Press this button to set up the swing angle, which circularly changes as below:  • When the guide louver starts to swing up and down, if SWING funtions is canceled, the air guide louver will stop and remains at the current position. • indicates the guide louver swings up and down among those five directions.(Simplified SWING function applicable for some Fan Coil Units: When the wireless remote controller is energized initially with the unit under the OFF status, it should be set by pressing the + button and the SWING button simultaneously, with the symbol blinking twice. Then, after the unit is turned on, this function can be activated by pressing the SWING button, with the displayed symbol indicating swing function is on and without this displayed symbol indicating swing function is off.)
7	CLOCK button	• By pressing this button, the clock is allowed to be set, with blinking, and then press the +/- button to adjust the clock within 5 seconds. If the +/-button is pressed down constantly for more than 2 seconds, the clock setting will be increased or decreased 10 minutes every 0.5 seconds. After that, another press on the CLOCK button accepts the setting. 12:00 is the default, when the wireless remote controller is energized.
8	TIMER ON button	• When TIMER ON is activated, ON will blink while the symbol will disappear. Within 5 seconds it is allowed to set the ON time by pressing the +/- button. Each press will make the time increase or decrease one minute. Besides, the time can also be set by pressing the +/- button constantly. that is, in the early 2.5 seconds, the time will increase/ decrease quickly per single minute, and in the late 2.5, the time will increase/decrease per ten minutes. After the desired time value is set, press TIENE ON again to conform the setting within five seconds. After that, another press on TIMER ON will cancel the setting. Prior to this setting, the clock shall be set to the actual time.
9	X-FAN button	• Pressing this button can activate or deactivate the X-FAN function. In Cool or Dry mode, by pressing this button,if " " is displayed, it indicates the X-FAN function is activated. By repressing this button, if " " disappears, it indicates the X-FAN function is deactivated. After energization, X-FAN OFF is defaulted. If the unit is turned off, X-FAN can be deactivated but can't be activated.

⑩	TEMP button	• By pressing this button it is allowed to select displaying the indoor setting temperature or the indoor ambient temperature. • Indoor setting temperature is default after the indoor unit is energized initially. • By pressing the TEMP button, when the temperature symbol is displayed, the indoor displayer will show the indoor setting temperature; when is displayed, it will show the indoor ambient temperature; when is invalidation, If current displays indoor ambient temperature, if received the other remote control signal, it will display presetting temperature, 5s later, will back to display the ambient temperature. (This function is applicable to partial of models)
⑪	TIMER OFF button	• By pessing this button it is available to go to the TIMER OFF settting state with the same setting method as that of the TIMER ON, in which case the OFF symbol blinks.
⑫	TURBO button	• In the Cool or Heat mode, pressing this button can activate or deactivate the TURBO function.When the TURBO fucntion is activated, its symbol will be displayed; when the running mode or the fan speed is changed, this function will be canceled automatically.(This function is applicable to partial of models).
⑬	SLEEP button	• By pressing this button, Sleep On and Sleep Off can be selected. After powered on, Sleep Off is defaulted. Once the unit is turned off, the Sleep function is canceled. When Sleep is set to On, the symbol of SLEEP will display.Under the Fan and Auto modes, this function is not available.
⑭	LIGHT button	• Press this button to select LIGHT on or off in the displayer. When the LIGHT is set to on, the icon will be displayed and the indicating light in the displayer will be on. When the LIGHT is set to off, the icon will be disappeared and the indicating light in the displayer will be off.

1.3 Introduction for special function

• **About X-FAN function** (This function is applicable to some special models)

This function indicates that moisture on evaporator of indoor unit will be blowed after the unit is stopped to avoid mould.

This function indicates that moisture in the evaporator of the indoor unit will be blew out after the unit is stopped so as to avoid mould.

① With X-FAN function ON: After turning off the unit by pressing ON/OFF button indoor fan will continue running for severval minutes at low speed. In this period, press X-FAN button to stop indoor fan directly.

② With X-FAN function OFF:After turning off the unit by pressing ON/OFF button, the complete unit will be off directly.

• **About TURBO function** (This function is applicable to some special models)

If the TURBO function is activated, the unit will run at high fan speed to perform cooling or

heating quickly so that the ambient temperature will approach the preset temperature as soon as possible.

- **About lock**

Press **+** and **-** buttons simultaneously to lock or unlock the keyboard. If the wireless remote controller is locked, the icon will be displayed on it, in which case, any press will get no response but with the mark blinking for three times. If the keyboard is unlocked, the mark will disappear.

- **About SWING UP/DOWN**

① Press the Swing Up/Down button for more than 2 seconds and then the louvre will swing up and down. After releasing the button, the louvre will stop swinging and keep the current status.

② When the louvre starts swinging, by pressing the Swing Up/Down button 2 seconds later, the louvre will stop swinging directly; while, by pressing the Swing Up/Down button within 2 seconds, the louver will keep swinging.

- **About Change over switch between Fahrenheit and Centigrade**

Under the OFF state of the unit, press MODE and - buttons simultaneously to switch between °C and °F.

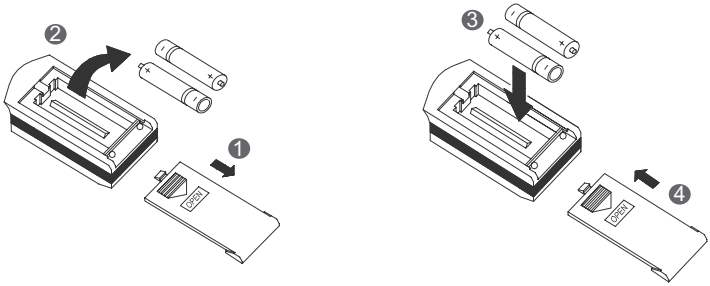
1.4 Replacement of batteries

❶ Slightly press the place with OPEN along the arrowhead direction and push the back cover of the wireless remote controller.

❷ Take out the used batteries.

❸ Insert two new AAA 1.5V dry cell batteries and pay attention to their polarity.

❹ Put back the cover of the wireless remote controller.



⚠ Notes!

① When changing the batteries, do not use the used or different-type batteries, otherwise, it would cause some malfunction to the wireless remote controller.

② If the wireless remote controller will not be used for a long time, please take them out, and don't let the battery liquid damage the wireless remote controller.

③ The operation should be within the signal receiving range.

④ It should be placed 1m away from the TV set or stereo sound sets.

⑤ If the wireless remote controller can not operate normally, please take batteries out for 30s. If the anomaly persists, please change them.

⑥ The battery must be removed from the appliance before it is scrapped.The batteries is to be disposed of safely.

2. Wired remote controler XK60

2.1 Introduction to the Wired Controller

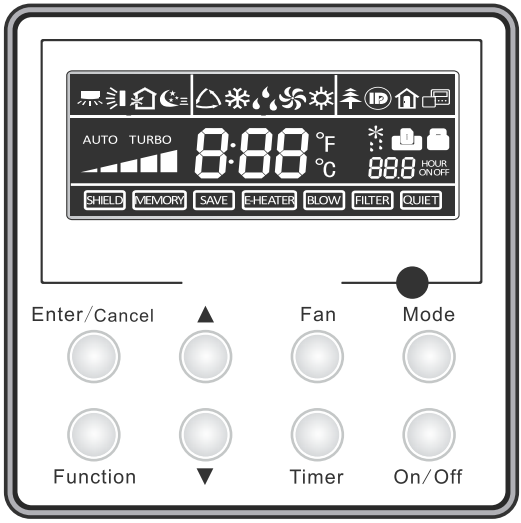


Fig.1 Apariencia del termostato

2.1.1 Appearance and LCD Icons

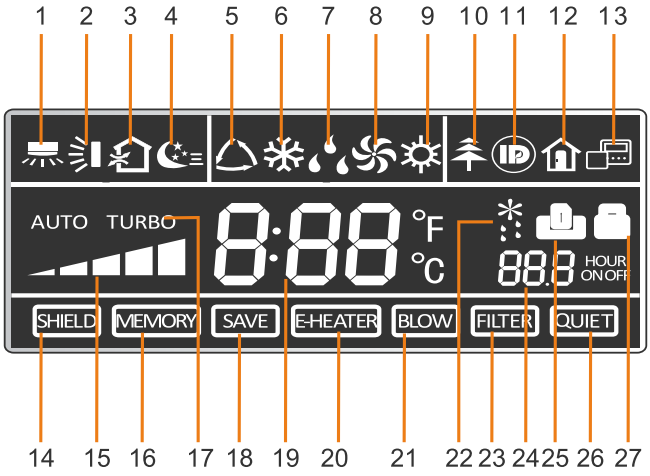


Fig.2 Appearance of the LCD

2.1.2 Introduction to the LCD Icons

Table 1

No.	Icons	Introduction
1		Left and right swing function
2		Up and down swing function
3		Air exchange function
4		Sleep function
5		Auto mode
6		COOL mode
7		DRY mode
8		FAN mode
9		HEAT mode
10		Health function
11		I-Demand function
12		Vacation function
13		Status display of master and slave wired controller
14		Shield function The button operation, temperature setting, "On/Off" operation, "Mode" setting, and "Save" setting are disabled.
15		Fan speed
16		Memory function The unit will resume the original setting state after power recovery.
17		Turbo function
18		Energy-saving function
19		Ambient/setting temperature

20		Electric heater
21		Blow function
22		Defrosting function
23		Filter cleaning
24		Timer Setting
25		Keycard control / Detected status sensed by human body
26		Quiet function
27		Lock function

2.2 Press Buttons

2.2.1 Buttons

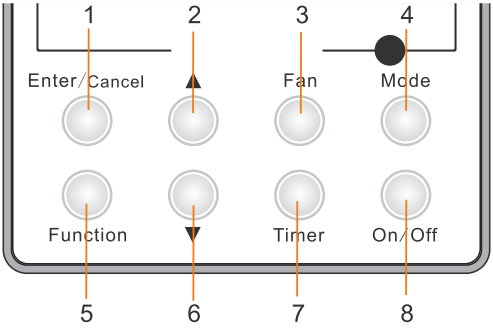


Fig.3 Press Buttons

2.2.2 Instruction to the Function of Press Buttons

Table 2

No.	Press Buttons	Function Introduction
1	Enter/Cancel	①. Function selection and canceling; ②. Press it for 5s to enquiry the outdoor and indoor ambient temperature.
2	▲	①. Running temperature setting of indoor unit, range :16~30°C ②. Timer setting, range:0.5-24hr ③. Air function setting ④. Save setting ⑤. Clean setting
6	▼	
3	Fan	Select fan speed from high, mid-high, middle, mid-low, low and auto levels.
4	Mode	Selection of the COOL, HEAT, FAN or DRY mode.
5	Function	Switchover among these functions of SWING/AIR/SLEEP/HEALTH/ I-DEMAND/VACATION/TURBO/SAVE/E-HEATER/BLOW/QUIET
7	Timer	Timer setting
8	On/Off	Turn on/off indoor unit
4 mode and 2 ▲	Memory	Press Mode and ▲ at the same time for 5s under the OFF state of the unit to activate/deactivate memory function (If memory is set, indoor unit will resume original setting state after power recovery. If not, indoor unit is defaulted to be OFF after power recovery. Memory function is defaulted to be ON)
2 ▲ and 6 ▼	Lock	Under the ON state of the unit without any malfunction or under the OFF state of the unit, press ▲and ▼ buttons at the same time for 5s to go to the lock state. In this case, any other buttons won't respond the press. Repress ▲ and ▼ again for 5s to quit the lock state.
4 mode and 6 ▼	°F/°C	Under the OFF state of the unit, press the Mode and ▼ at the same time for 5s to switch the temperature scale between Celsius and Fahrenheit.

2.3 Operation instructions

2.3.1 On/Off

Press the On/Off button to turn on or off the unit.

Notes:

① The state shown in Fig.4 indicates the OFF state of the unit after energization.

② The state shown in Fig.5 indicates the ON state of the unit after energization.

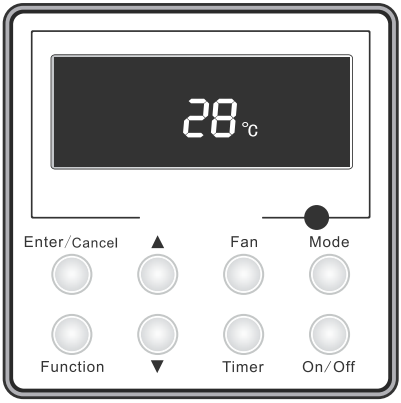


Fig.4 OFF State of the Unit

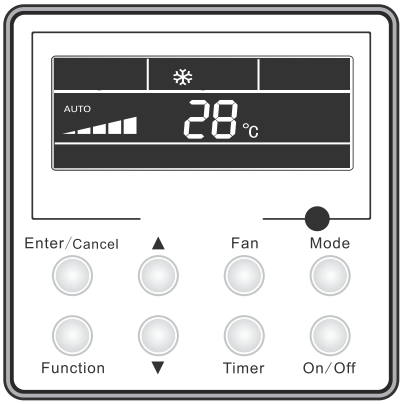


Fig.5 ON State of the Unit

2.3.2 Mode Setting

Under the ON state of the unit, press the Mode button to switch the operation modes as the sequence shown in Fig.6:

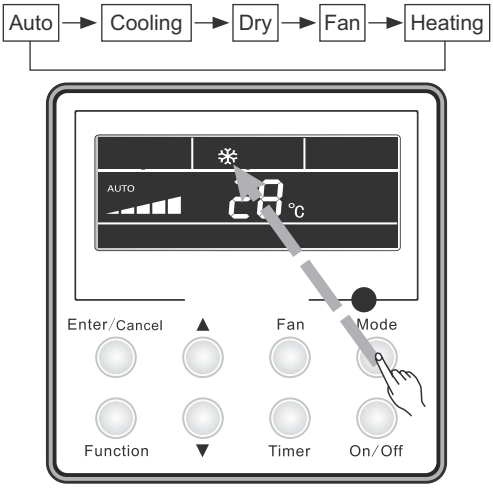


Fig.6

2.3.3 Temperature Setting

Press ▲ or ▼button to increase or decrease setting temperature under on-state of the unit. If press either of them continuously, temperature will be increased or decreased by 1°C every 0.5s.

In Cooling, Dry, Fan and Heating mode, temperature setting range is 16°C~30°C.

In Auto mode, the setting temperature is un-adjustable.

As shown in Fig.7:

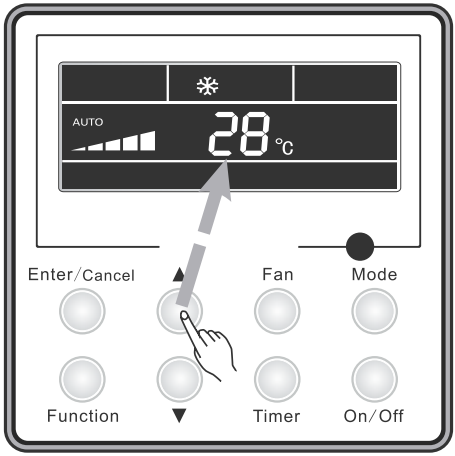
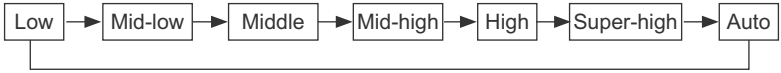


Fig.7 Temperature Setting

2.3.4 Fan Speed Setting

Press Fan button, fan speed of indoor unit will change as the sequence shown in Fig.8:



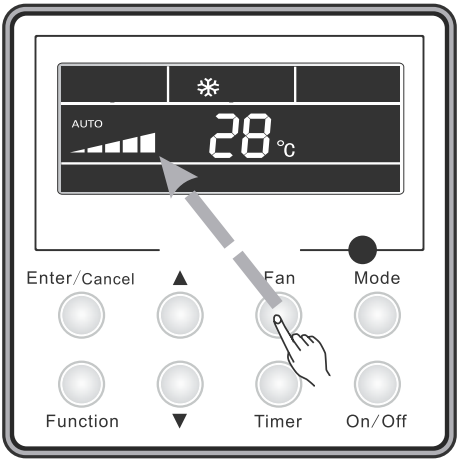


Fig.8 Fan Speed Setting

2.3.5 Right and Left Swing

Under the ON state of unit, press the Function button to select the “Right and Left Swing” function option and then press the Enter/Cancel button to activate it.

When the Swing function is activated, press the Function button to select the "Right and Left Swing" function option and then press the Enter/Cancel button to deactivate it.

Right and Left Swing function setting is as shown in Fig.9.

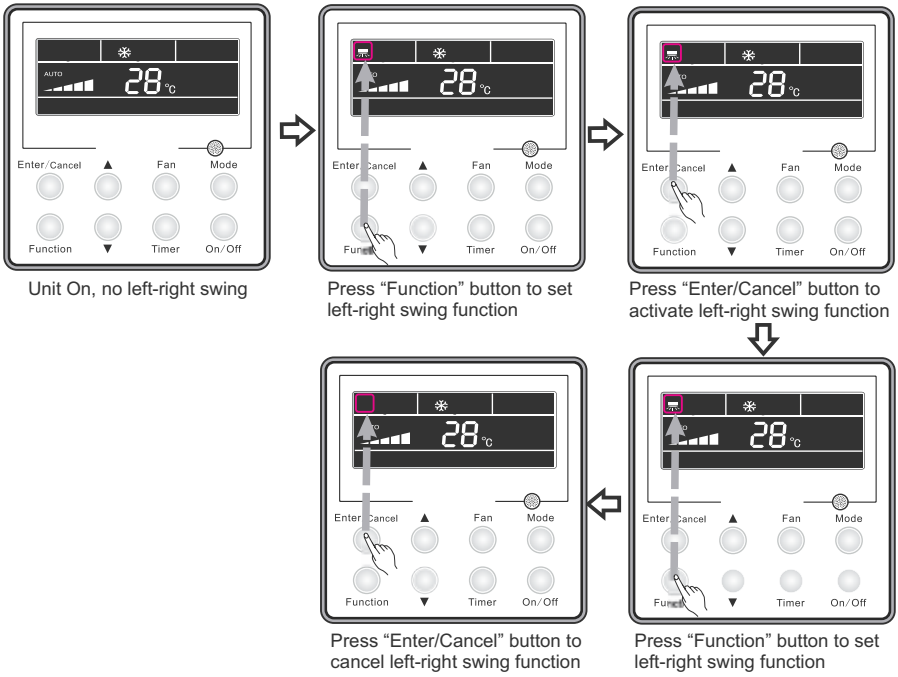


Fig.9 Right and Left Swing Setting

2.3.6 Up and Down Swing

Under the ON state of unit, press the Function button to select the "Up and Down Swing" function option and then press the Enter/Cancel to activate it.

When the Swing function is activated, press the Function button to select the "Up and Down Swing" function option and then press the Enter/Cancel button to deactivate it.

Up and Down Swing function setting is as shown in Fig.10.

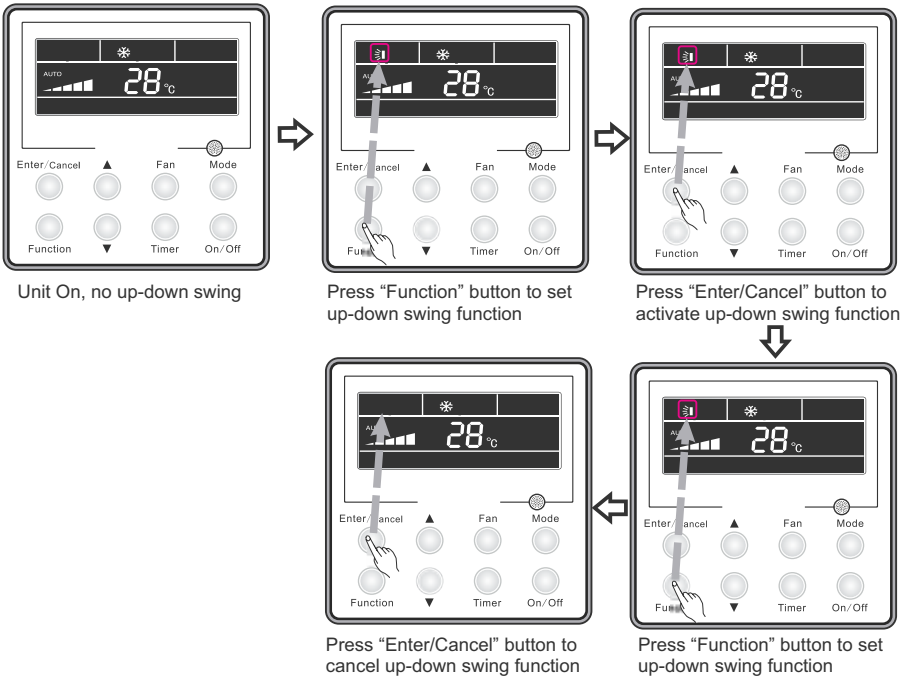


Fig.10 Up and Down Swing Setting

2.3.7 Timer Setting

Timer “On” Setting:

It is intended to set when to start the unit. When the unit is OFF, press the Timer button, with xx. Hour displayed and ON blinking, then press ▲/▼to adjust the timer, after that, press the Timer button again to make a confirmation. If the Mode button is pressed prior to the confirmation, it will switch to the Timer Off setting. After the timer Off setting, the LCD displays xx. Hour ON OFF,xx. Hour indicating the time to start the unit, while the time to stop the unit won’t be displayed.

Timer “Off” Setting:

It is intended to set when to stop the unit. When the unit is On, press the Timer button, with xx. Hour displayed and OFF blinking, then press ▲/▼to adjust the timer, after that, press the Timer button again to make a confirmation. If the Mode button is pressed prior to the confirmation, it will switch to the Timer On setting. After the timer On setting, the LCD displays xx. Hour ON OFF,xx. Hour indicating the time to stop the unit, while the time to start the unit won’t be displayed.

Cancellation of Timer Setting: The timer setting can be canceled by press “Timer”. Then , xx. Hour won’t be displayed.

Timer Setting under the ON state of the Unit is as shown in Fig.11:

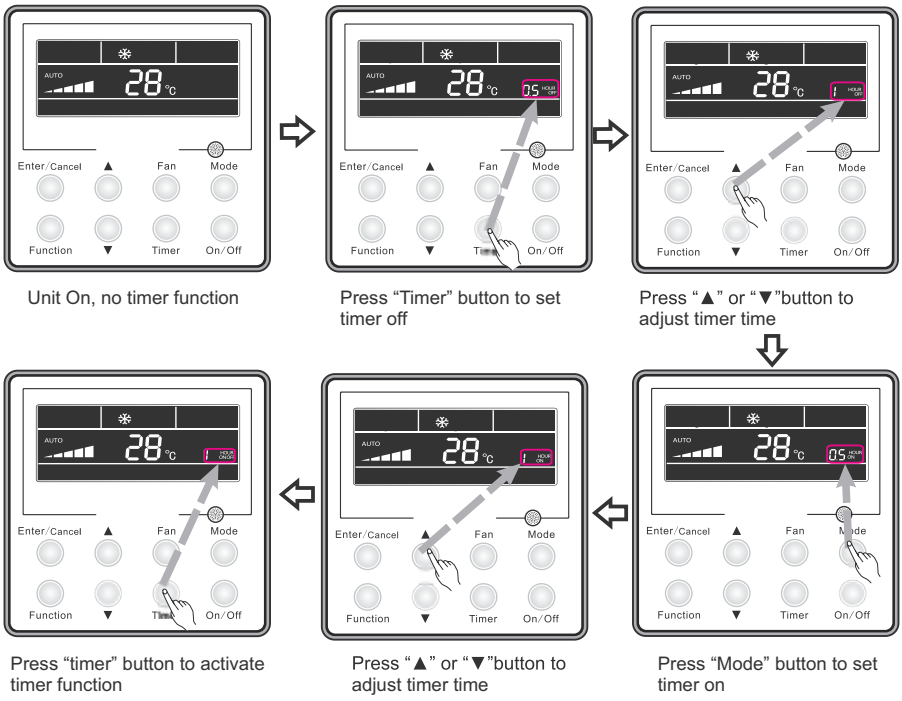


Fig.11 Timer Setting under the ON state of the Unit

Timer range: 0.5-24hr. Every press of the ▲ or ▼ button will make the setting time increased or decreased by 0.5hr.If press either of them continuously, the setting time will automatically increase/ decrease by 0.5hr every 0.5s.

Notes:

① . When Timer On and Timer Off both are set, the displayed time is the Timer On setting for the unit under the OFF state , or is the timer Off setting for the unit under the ON state .

② . Timer On setting starts when the unit under the ON state is turned off; Timer Off setting starts when the unit under the OFF state is turned on.

2.3.8 Air Exchange Setting

How to activate the air exchange function:

Under the ON state of the unit, press the Function button to select the “AIR” function, with the function symbol flashing, and then press ▲ or ▼ to adjust the “AIR” type, after that, press the Enter/Cancel button to activate this function. When this function is activated, the symbol will be displayed. Type 1 is the defaulted “AIR” type.

There are 10 “AIR” function types , but only 1-2 types are for the wireless remote controller.

1. The unit continuously runs for 60min, and fresh air valve runs for 6 min.
2. The unit continuously runs for 60min, and fresh air valve runs for 12 min.
3. The unit continuously runs for 60min, and fresh air valve runs for 18 min.
4. The unit continuously runs for 60min, and fresh air valve runs for 2 4 min.
5. The unit continuously runs for 60min, and fresh air valve runs for 30 min.
6. The unit continuously runs for 60min, and fresh air valve runs for 36 min.
7. The unit continuously runs for 60min, and fresh air valve runs for 42 min.
8. The unit continuously runs for 60min, and fresh air valve runs for 48 min.
9. The unit continuously runs for 60min, and fresh air valve runs for 54 min.
10. The unit continuously runs for 60min, and fresh air valve always runs.

How to deactivate the air exchange function:

When the “Air” function is activated, it can be deactivated in the way by firstly pressing the Function button to select the “Air” function option with the “Air” symbol flashing, and then pressing the Enter/Cancel button with the “Air” symbol disappeared.

Air Exchange setting is shown as in Fig.12:

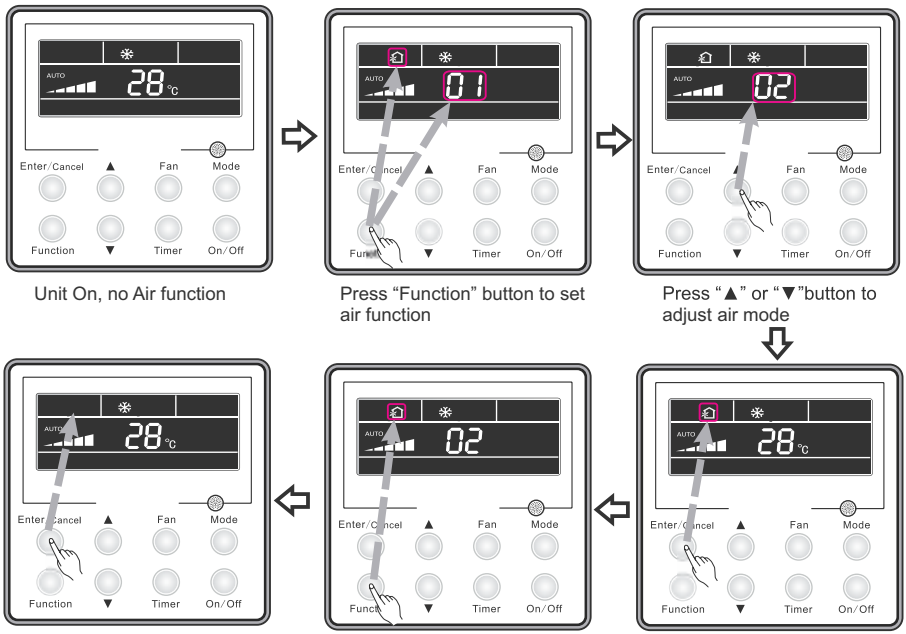


Fig.12 Air Exchange Setting

2.3.9 Sleep Setting

Sleep on: Press the Function button under the ON state of the unit to select the “Sleep” function option and then press the Enter/Cancel button to activate it.

Sleep off: When the Sleep function is activated, press the Function button to select the Sleep function option and then press the Enter/Cancel button to deactivate this function.

Sleep setting is as shown in Fig.13 :

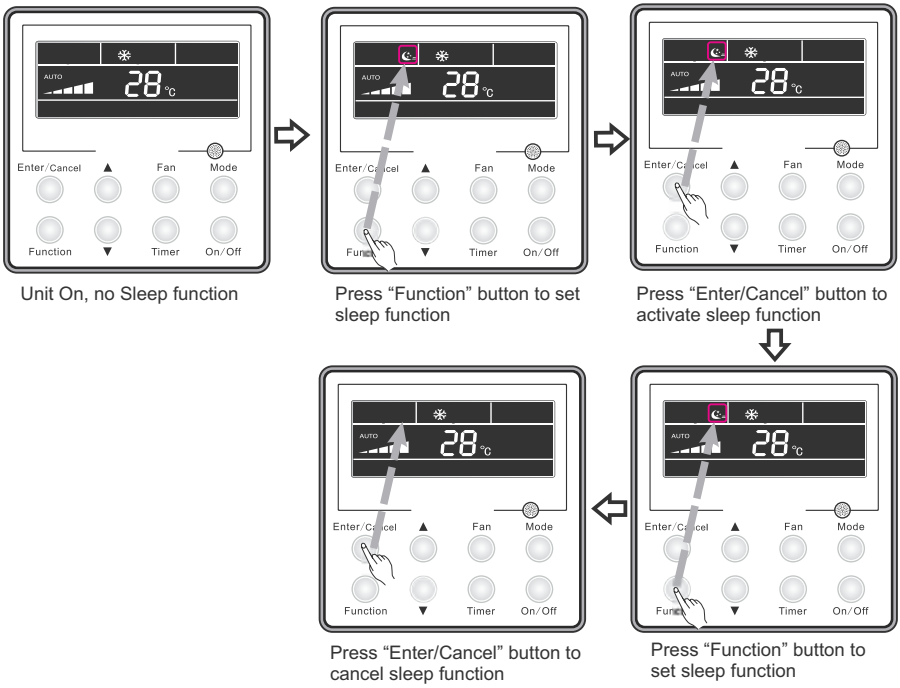


Fig.13 Sleep Setting

Notes:

① The Sleep function is defaulted to be OFF after power recovery.

② The Sleep function is unavailable under the Fan mode.

③ When the Quiet function is activated, the Quiet function will always keep ON no matter if the Sleep function is activated or deactivated.

④ Under the Cool mode, the Sleep function is ON, the setting temperature range can be 16~23°C, 24~27°C, 28~29°C or 30°C. Each of them has a different curve as shown in Fig.14.

e.g. If the setting temperature is 25°C, the temperature will rise by 1°C in each hour until it reaches 27°C. 7 hours later, the temperature will drop to 26°C. After that, the unit will run at this temperature.

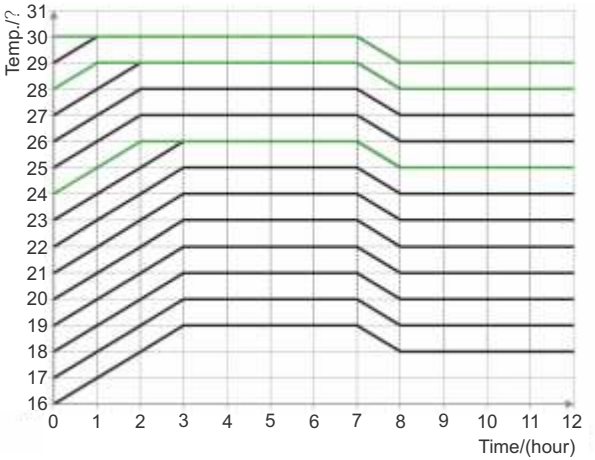


Fig.14 Sleep Curve under the COOL Mode

Under the Heat mode, the Sleep function is ON, the setting temperature range can be 16°C, 17~20°C, 21~27°C or 28~30°C. Each of them has a different curve as shown in Fig.15.

e.g. If the setting temperature is 22°C, the temperature will drop by 1°C in each hour until it reaches 20°C. Then, the unit will run at this temperature

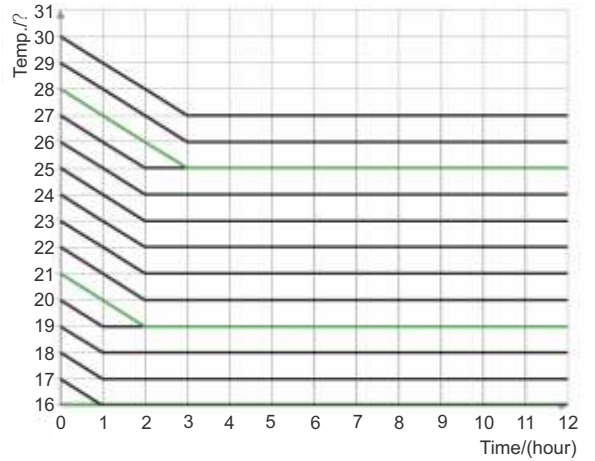


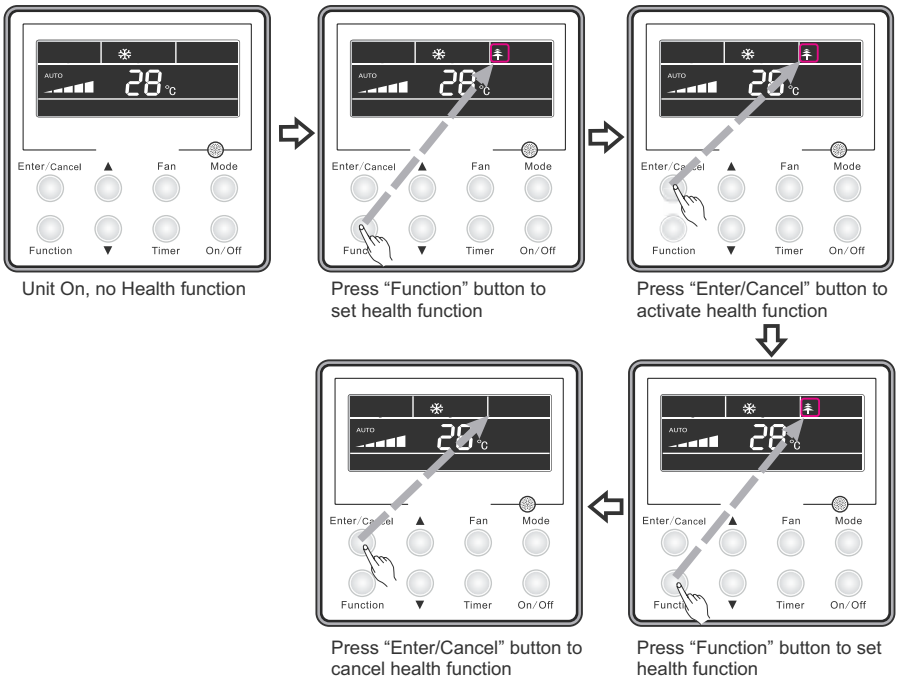
Fig.15 Sleep Curve under the HEAT Mode

2.3.10 Health Setting

Under unit on status, press “Function” button to select health function with “Health” icon flashing. Press “Enter/Cancel” button to activate health function.

When health is on, press “Function” button to set function, with “health” icon flashing. Then press the “Enter/Cancel” button to cancel health function.

How to set health function is shown in the Fig.16:



Unit On, no Health function

Press “Function” button to set health function

Press “Enter/Cancel” button to activate health function

Press “Enter/Cancel” button to cancel health function

Press “Function” button to set health function

Fig.16 Health Setting

Note:

① The health function can be cancelled by turning off the unit.

② The health function can not be cancelled by mode switching.

③ After the unit is resumed, health function will be maintained.

2.3.11 I-Demand Setting

Under cooling mode, press “Function” button to select I-Demand function with “I-Demand” icon flashing. Press “Enter/Cancel” button to activate I-Demand function.

When I-Demand is on, press “Function” button to set function, with “I-Demand” icon flashing. Then press the “Enter/Cancel” button to cancel I-Demand function.

How to set I-Demand function is shown in the Fig.17:

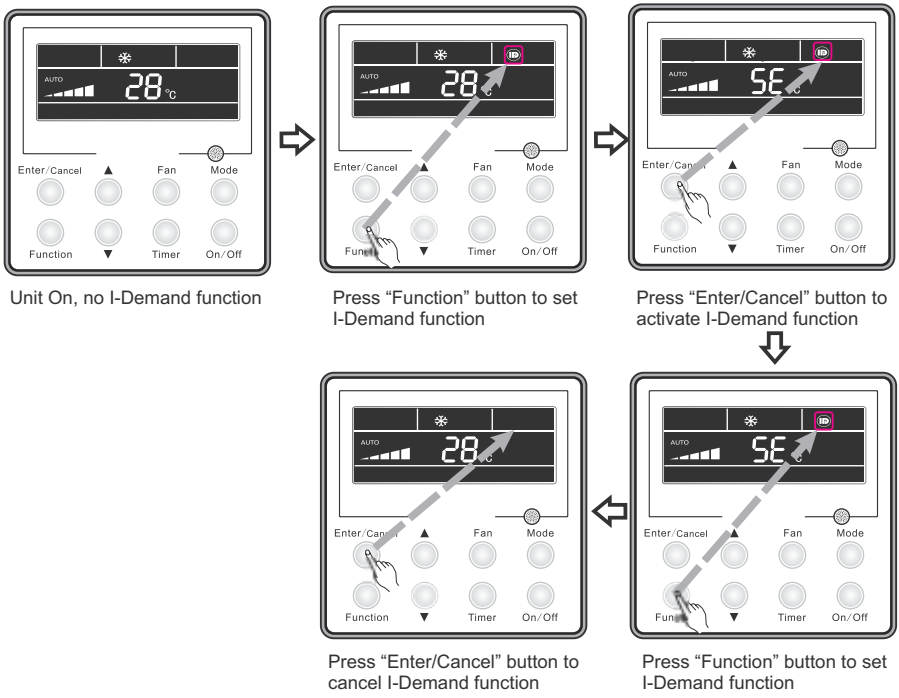


Fig.17 I-Demand Setting

Note:

① The I-Demand function can be cancelled by mode switch and unit ON/OFF.

② After the unit is resumed, I-Demand function will be maintained.

③ The I-Demand function can not be simultaneously set and can be cancelled by Sleep/Quiet function.

④ When the I-Demand function is set, the unit will run as per Auto fan speed. The Turbo fan speed is not available.

⑤ When the I-Demand function is set, the setting temperature 27°C can not be changed.

⑥ When the setting temperature is shielded by the distant control, I-Demand function can not be entered.

2.3.12 Vacation Setting

Vacation function: It’s used to keep the indoor ambient temperature and activate fast heating.

Under heating mode, press “Function” button to select Vacation function with “Vacation” icon flashing. Press “Enter/Cancel” button to activate Vacation function.

When Vacation is on, press “Function” button to set function. Then press the “Enter/Cancel” button to cancel Vacation function with no icon flashing.

How to set vacation function is shown in the Fig.18:

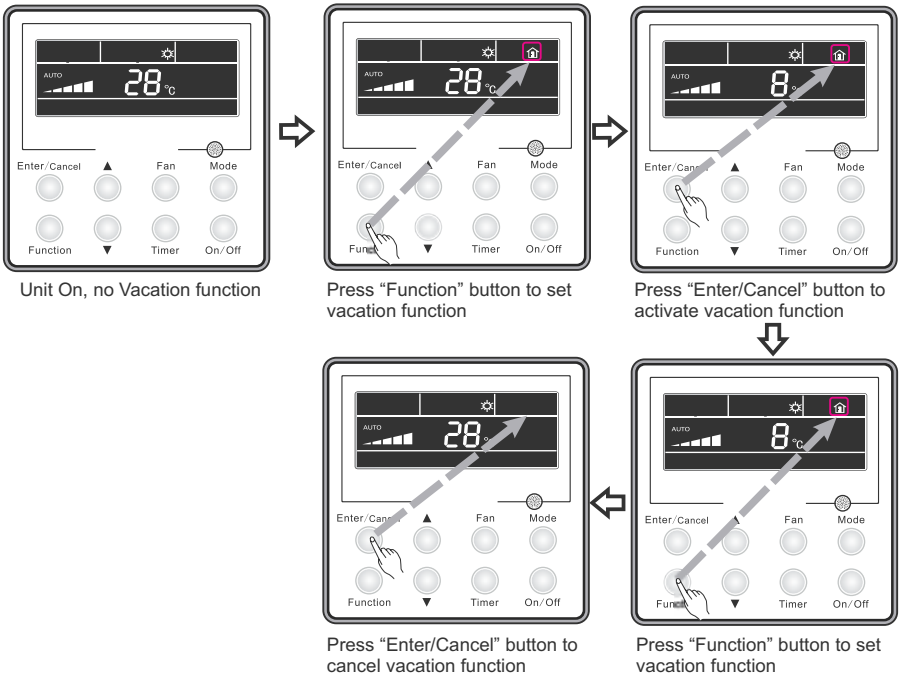


Fig.18 Vacation Setting

Note:

① The vacation function can be only set under heating mode.

② The turbo function will be cancelled when the vacation function is set.

③ The Sleep and Quiet function will be cancelled when the vacation function is set.

④ After the unit is resumed, the vacation function will be maintained.

⑤ When the vacation function is set, the setting temperature can not be shielded by the distant control. In reverse, the vacation function can not be set when the distant shielding is taking into effect.

⑥ When the vacation function is set, the setting temperature shown on the wired controller is 8°C. The indoor fan will automatically run as per Auto fan speed.

⑦ The vacation function can be cancelled when there is mode switching. The temperature will go back to the original setting temperature prior to vacation function.

⑧ Unit ON/OFF will not cancel the vacation function.

2.3.13 Turbo Function Setting

TURBO function: The unit at the highest fan speed can realize quick cooling or heating so that room temperature can quickly approach the setting temperature.

In the COOL or HEAT mode, press the Function button to select the "Turbo" function option and then press the Enter/Cancel button to activate it.

When the "Turbo" function is activated, it can be deactivated by firstly pressing the Function

button to select the "Turbo" option and then pressing the Enter/Cancel button.

Turbo function setting is as shown in Fig.19:

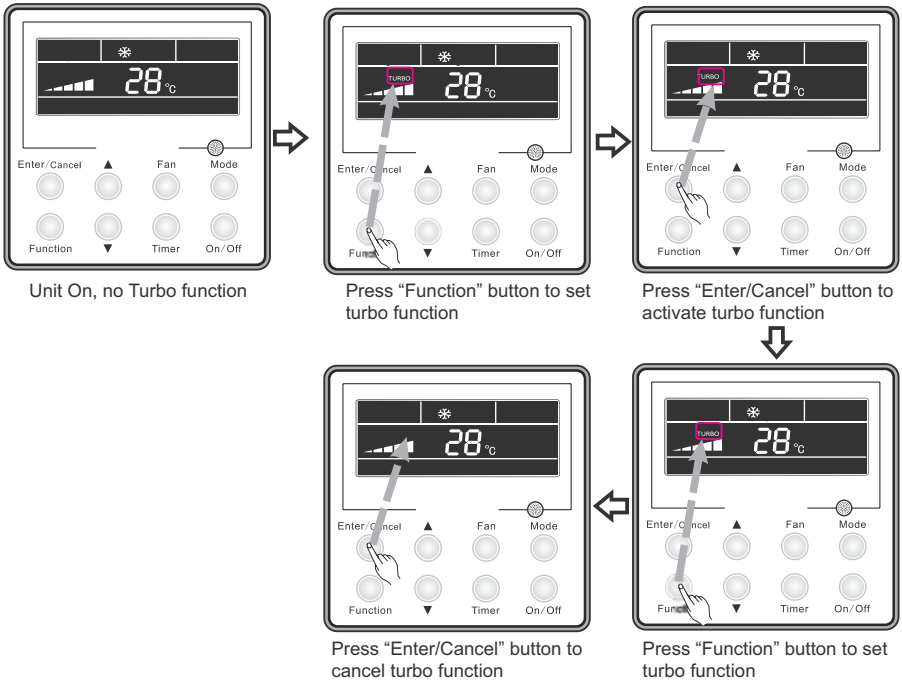


Fig.19 Turbo Function Setting

Notes:

① The Turbo function will not be deactivated due to power failure. In DRY, FAN and AUTO modes, the Turbo function is unavailable and the function symbol won't be displayed.

② The Turbo function will be automatically deactivated as the Quiet function is activated.

③ The FAN button can also be used to adjust Turbo function.

2.3.14 SAVE Function Setting

Energy Saving Function: Energy saving can make the air conditioner runs in a smaller temperature range by setting lower limited value of setting temperature in the COOL or DRY mode and upper limited value in the HEAT mode.

(1). Energy Saving Setting for Cooling

When the unit runs under the COOL or DRY mode, press the Function button to select the “SAVE” function option, with “SAVE” flashing, and then press ▲ or ▼ to adjust the lower limit, after that, press the Enter/Cancel button to activate this function.

(2). Energy Saving Setting for Heating

When the unit runs under the HEAT mode, press the Function button to select the “SAVE” function option, with “SAVING” flashing, then press the Mode button to switch to the “SAVE” setting for the HEAT mode and then press ▲ or ▼ to adjust the upper limit, after that, press the Enter/

Cancel button to activate this function.

The activated SAVE function can be deactivated by firstly pressing the “Function” button to select the “SAVE” option and then pressing the “Enter/Cancel” button.

The energy saving setting is as shown in the Fig.20:

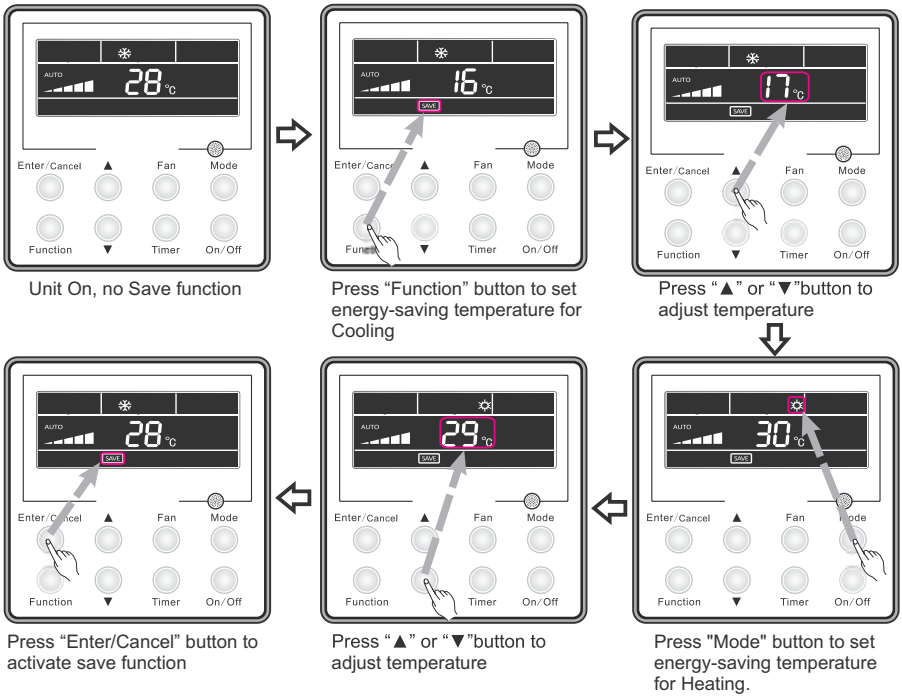


Fig.20 SAVE Function Setting

Notes:

① Under the Auto mode, when the “SAVE” function is activated, the unit will forcibly quit the Auto mode and change to the current operation mode. Further, the “Sleep” function will be deactivated when the “SAVE” function is activated.

② During the “SAVE” setting, if the Function button is pressed down or there is not any operation within 5s after the last button operation, the system will quit the “SAVE” setting with the current setting data not saved.

③ The “SAVE” function setting will be memorized in case of power failure.

④ The lower limit for cooling is 16 °C and the upper limit for heating is 30°C.

⑤ During the “SAVE” setting, if the expected setting temperature is out of the limit, then the limit temperature always prevail.

2.3.15 E-HEATER Setting

E-HEATER: in the HEAT mode, “E-HEATER” function is allowed to be activated to improve the heating efficiency. Generally, it will be activated automatically as the unit goes into the HEAT mode through any button operations .

Activation of the “E-HEATER” Function: firstly press the Function button to select the “E-HEATER” option, with the symbol “E-HEATER” flashing, and then press the Enter/Cancel button to activate it. After the activation, the symbol “E-HEATER” will always be displayed.

Deactivation of the “E-HEATER” Function: firstly press the Function button to select the “E-HEATER” option, with the symbol “E-HEATER” flashing, and then press the Enter/Cancel button to deactivate it.

“E-HEATER” Function setting is as shown in Fig.21:

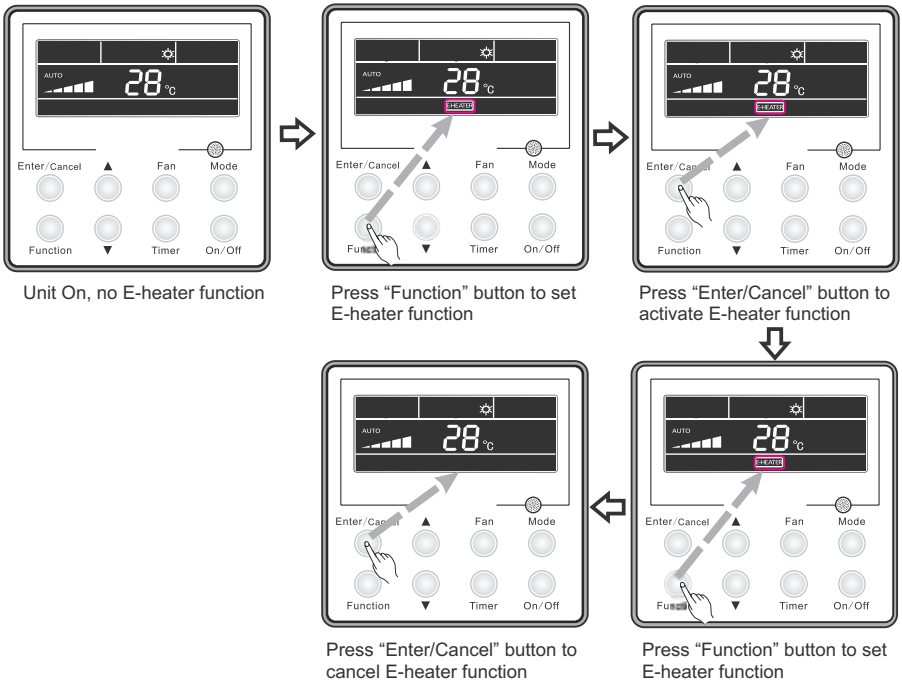


Fig.21 “E-HEATER” Function Setting

Note: The “E-HEATER” function is not available in the COOL, DRY, and FAN modes, with the symbol “E-HEATER” not displayed.

2.3.16 Blow Function Setting

BLOW function: After the unit is turned off, water in evaporator of indoor unit will be automatically evaporated to avoid mildew.

Activation of the “Blow” Function: in the COOL or DRY mode, press the Function button to select the “Blow” option, with the symbol “BLOW” flashing, and then press the Enter/Cancel button to activate it.

Deactivation of the “Blow” Function: The activated “Blow” function can be deactivated by firstly pressing the Function button to select the “Blow” option and then pressing the Enter/Cancel button.

BLOW function setting is as shown in Fig.22:

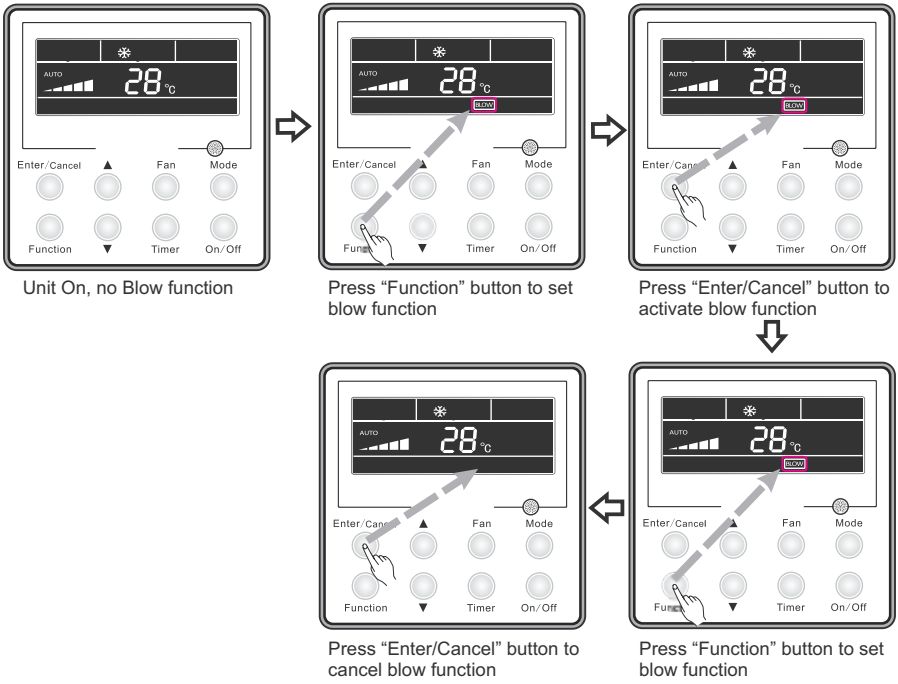


Fig.22 Blow Function Setting

Notes:

① When the “Blow” function is activated, if the unit is turned off through the On/Off button, the indoor fan will still run at low fan speed for another 10 minutes. When the “Blow” function is deactivated, the indoor fan will stop directly as the unit is turned off.

② The “Blow” function is not available in the FAN and HEAT modes.

2.3.17 Filter Setting

Under On status, press “Function” button to set “Filter” function with “Filter” icon flashing. The setting pollution level will be shown at the Timer area. Press “▲” and “▼” to adjust pollution level and press “Enter/Cancel” button to activate Filter function.

When the Filter function is set, press “Function” button to set with “Filter” icon flashing. Press “▲” and “▼” to adjust till “00” is shown on the timer area. Then press “Enter/Cancel” button to cancel the Filter function.

How to set Filter function is shown in the Fig.23:

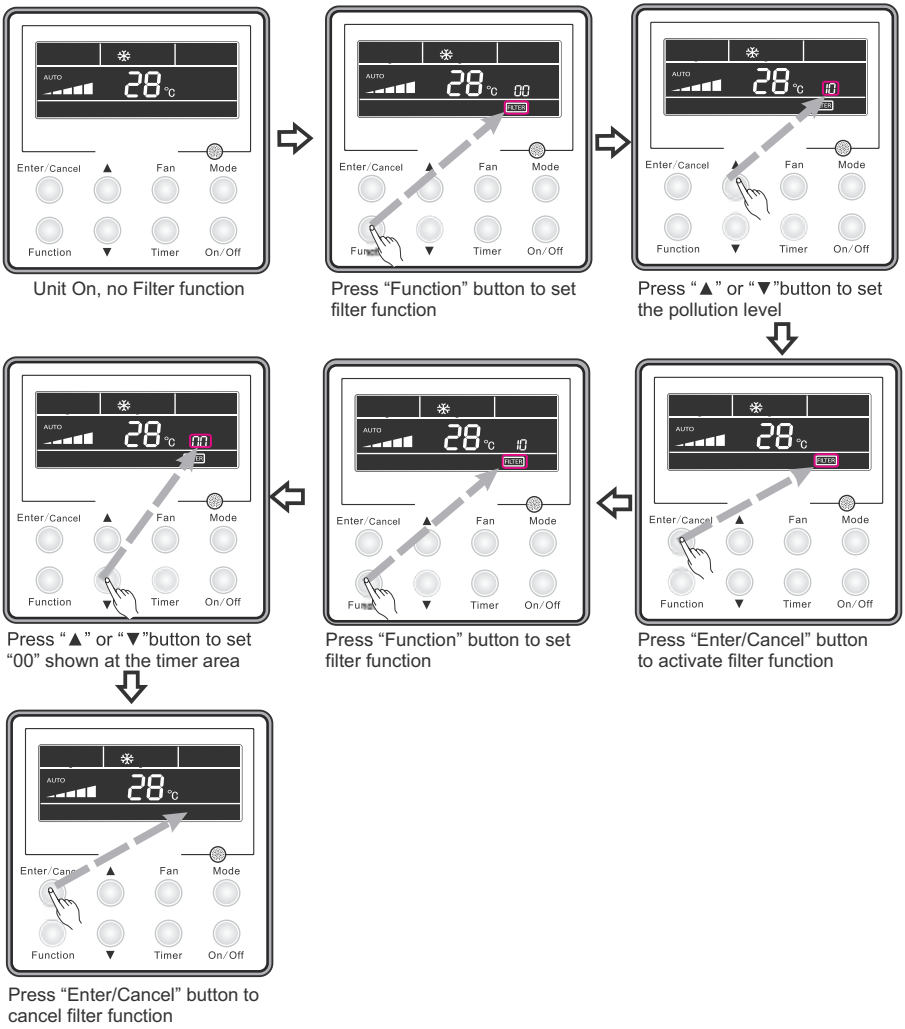


Fig.23 Filter Setting

While setting Filter, two numbers will be shown on the timer area. The first number represents the pollution level. The second number shows the accumulated operating time of the indoor fan. There are four statuses in total:

① . No Filter function setting (“00” shown at the timer area)

② . When the filter reaches light-level pollution, “1” will be shown at the first place, When “0” shows up at the second place, the accumulated operating hour reaches 5500h. Every increase of the number means another 500h is accumulated. When “9” shows up, it means the operating hour reaches 10000h.

③ . When the filter reaches middle-level pollution, “2” will be shown at the first place, When

"0" shows up at the second place, the accumulated operating hour reaches 1400h. Every increase of the number means another 400h is accumulated. When "9" shows up, it means the operating hour reaches 5000h.

④. When the filter reaches serious-level pollution, "3" will be shown at the first place, When "0" shows up at the second place, the accumulated operating hour reaches 100h. Every increase of the number means another 100h is accumulated. When "9" shows up, it means the operating hour reaches 1000h.

Pollution level with corresponding operating hour:

Table 3

Pollution level	Accumulated operating time (h)	Pollution level	Accumulated operating time (h)	Pollution level	Accumulated operating time (h)
10	5500	20	1400	30	100
11	6000	21	1800	31	200
12	6500	22	2200	32	300
13	7000	23	2600	33	400
14	7500	24	3000	34	500
15	8000	25	3400	35	600
16	8500	26	3800	36	700
17	9000	27	4200	37	800
18	9500	28	4600	38	900
19	10000	29	5000	39	1000

Note:

①. If the Filter function is effectively set, the FILTER icon will light up.

②. If it is not necessary to clean the filter, no matter whether the setting is changed or not, the unit will not restart to timing while pressing "Enter/Cancel" button.

③. If the filter should be cleaned, under On/OFF status, the FILTER icon will blink once every 0.5s so as to remind user to clean the filter. Press "Function" button to set with icon FILTER flashing. Press "▲" and "▼" to adjust pollution level, and then press "Enter/Cancel" button to activate it. If the setting pollution level is lighter than before, the icon FILTER will keep flashing. If the setting pollution level is more serious, the icon FILTER will go out, and the Filter function will keep on working.

④. The only method to cancel Filter function is, when the function is set with icon FILTER flashing, let "00"shown at the timer area, at this time, the accumulated time will be zero clearing.

2.3.18 Quiet Function Setting

Press "Function" button to set Quiet function with its icon flashing. Press "Enter/Cancel" button to activate Quiet function.

When the quiet function is On, press "Function" button to set with Quiet icon flashing, press "Enter/Cancel" button to cancel Quiet function.

How to set Quiet function is set in the Fig. 24:

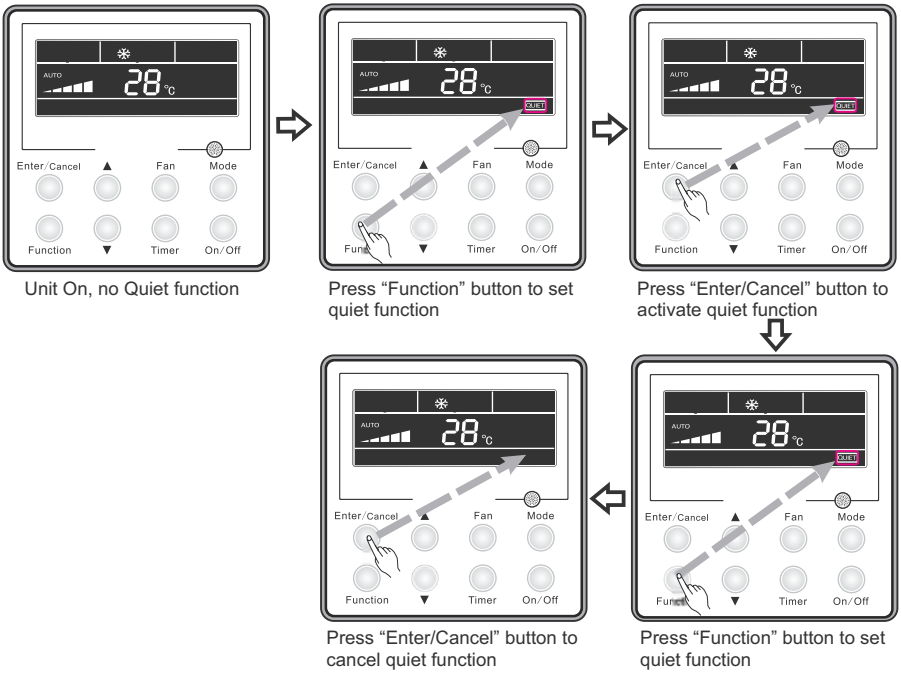


Fig.24 Quiet function setting

Notes:

① "QUIET" function is unavailable in Fan or Dry mode. Owing to power failure, the "Quiet" function is defaulted to be deactivated.

② If quite function is set, turbo function will be canceled.

2.3.19 Ultra-Dry Setting

Under Dry mode, when the setting temperature is 16°C, press “▼” button twice and the setting temperature will be changed to 12°C, at this time, the unit enters the Ultra-Dry function.

When the Ultra-Dry function is activated, it can be cancelled by pressing “▲” button or pressing “Mode” button to switch mode.

2.3.20 Other Functions

2.3.20.1 Lock Function

Under the ON state of the unit without any malfunction or under the OFF state of the unit, press ▲ and ▼buttons at the same time for 5s till the wired controller enters the lock state. In this case, LCD displays . After that, repress these two buttons at the same time for 5s to quit the lock state.

Under the lock state, no response will be given to the other button operation.

2.3.20.2 Memory Function

Memory switchover: Under the OFF state of the unit, press the Mode and ▲ buttons at the same time for 5s to switch memory modes. When setting the memory mode, “MEMORY” will be displayed. If this function is deactivated, the unit will go to the OFF state after power recovery.

Memory recovery: If the memory function is On, the wired controller after power failure will resume its original running state upon power recovery.

Note: It will take about 5 seconds to save data. Therefore, please do not cut down the power at this time, or data will fail to be saved.

2.3.20.3 Selection of Centigrade and Fahrenheit

Under the OFF state of the unit, press the Mode and ▼ buttons at the same time for 5s, Centigrade and Fahrenheit scales will be switched alternately.

2.3.20.4 Ambient Temperature Enquiry

Under On/Off status, press “Confirm” button for 5s, it will enter Enquiry interface. At this time, what shows on the timer area is the ambient temperature type: 01 or 02 and the temperature will be shown. “01” means the outdoor ambient temperature and “02” represents the indoor ambient temperature. Press “Mode” button to switch between those two types. Press any other button except Mode button or receive the signal from the remote controller will quit from the Enquiry function. If there is no operation in 20s, the unit will quit from this function automatically.

Note:

① If the unit is not connected with the ambient temperature sensor, after 12h electrification, the display of the ambient temperature sensor will be shielded.

② If the outdoor temperature sensor has error, after 12h electrification, the display of the ambient temperature sensor will be shielded.

2.3.20.5 Indoor fan shutdown mode setting

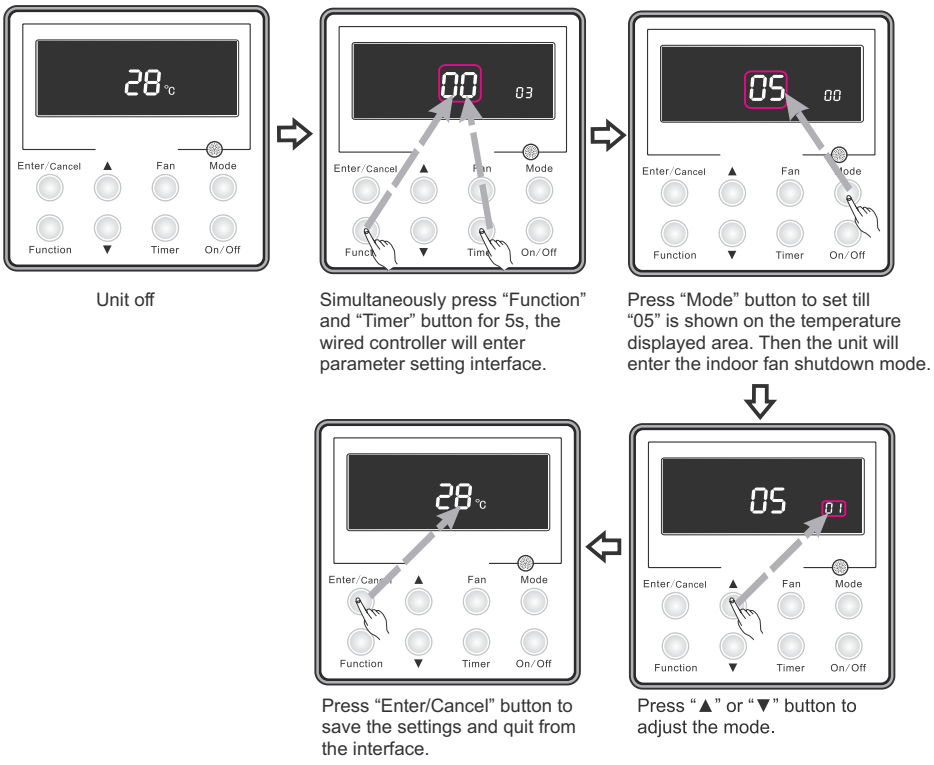
Under unit OFF status, simultaneously press “Function” and “Timer” button for 5s, the wired controller will enter parameter setting interface. Press “Mode” button to set till “05” is shown on the temperature displayed area. Then the unit will enter the indoor fan shutdown mode.

Two options are available for the indoor fan shutdown mode:

Mode 1: When the temperature reaches certain value, the indoor fan will not be shut down at any mode except heating mode. After the unit is shut down, for the duct type unit and the floor ceiling type unit, the indoor fan will blow the extra heat for 60s and then stop running. For the cassette type unit, its indoor fan will operate at low fan speed and blow the extra heat for 60s only when error happens to it.

Mode 2: No matter the unit is under which mode, the indoor fan will keep running for 10s after the temperature reaches certain value, then it will stop.

Press “▲” or “▼” button to adjust the mode. Under Mode 1/2, “00”/ “01” will show up in the timer area. Then press “Enter/Cancel” button to save the settings. The setting procedures are shown as Fig.25:



Unit off

Simultaneously press “Function” and “Timer” button for 5s, the wired controller will enter parameter setting interface.

Press “Mode” button to set till “05” is shown on the temperature displayed area. Then the unit will enter the indoor fan shutdown mode.

Press “Enter/Cancel” button to save the settings and quit from the interface.

Press “▲” or “▼” button to adjust the mode.

Fig.25 Indoor fan shutdown mode setting

Note: In the parameter setting interface, only when “05” shown on it, the indoor fan shutdown mode can be set. Other parameters are not allowed to be modified and our company is not responsible for the unit damage or property loss due to parameter changed by customers.

2.4 Installation of the Wired Controller

2.4.1 Standard Parts

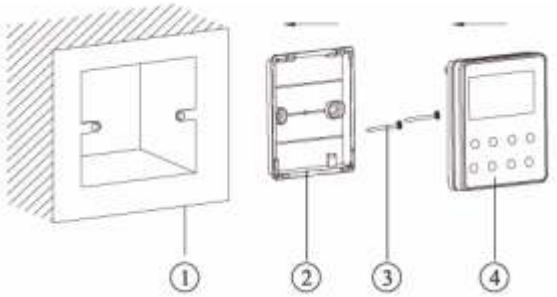


Fig.26 Standard Parts of the Wired Controller

Table 4 Standard Parts

No.	Description	Quantity
1	Base Box	1
2	Soleplate	1
3	Screw M4×25	2
4	Front Panel	1

2.4.2 Installation Location and Installation Requirements

(1). Do not install the wired controller in the damp place or under direct sunlight.

(2). Do not install the wired controller close to the hi-temperature object or place where the wired controller is likely to suffer water spray.

(3). Do not install the wired controller directly opposite to the window so as to avoid improper operation caused by the interference of the neighbor's same model wired controller.

(4). Please cut off the power supply of wires embedded in the wall. No operation is allowed with electricity.

(5). To avoid abnormal operation caused by electromagnetic interference or other causes, please take notice of the following statements during wiring.

①. Be sure the communication line is wired into the correct port, otherwise it would result in communication fault.

②. The communication line (wired controller) and power line must be separated with the minimal distance of 20cm, otherwise it would result in communication fault.

③. Suppose that the air conditioner is installed where likely to suffer electromagnetic interference, the communication line of the wired controller must be shielded twisted pair.

2.4.3 How to Install the Wired Controller

First of all, the selection and connecting method of the communication line is shown as follows:

(1). Select appropriate communication line of the wired controller: 2-core signal line (wire size≥0.75mm^2, length<30m, recommended length: 8m).

(2). After the indoor unit is de-energized, fix the communication line on the indoor terminal board by screws.

Then, the specific installation steps is shown in the Fig.27:

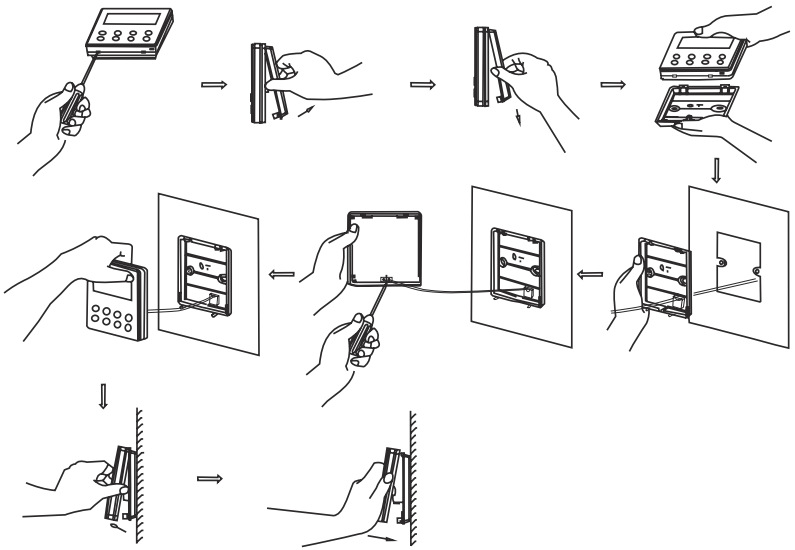


Fig.27 Installation of the Wired Controller

Brief instructions:

① Pull out the 2-core signal line from the mounting hole and pass this line through the round hole located at the bottom of the wired controller.

② Use M4×25 screws to fix the soleplate of the wired controller on the wall.

③ Fix the signal line on the copper tabs X1 and X2. Make sure the line is tightly fixed and with no short-circuit potential.

④ Set the panel and the bottom together by clasps.

2.4.4 How to Remove the Wired Controller

The wired controller can be easily removed as shown in Fig.28

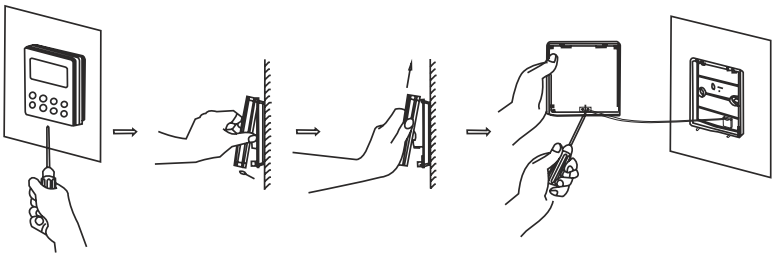


Fig.28 Removal of the Wired Controller

2.5 Error Display

When error happens to the unit, the error code will be shown on the wired controller. When multiple errors simultaneously happen, the error codes will circularly show up.

When error occurs, please immediately shut down the unit and contact professional personnel.

As shown in the Fig.29 means the high pressure protection.

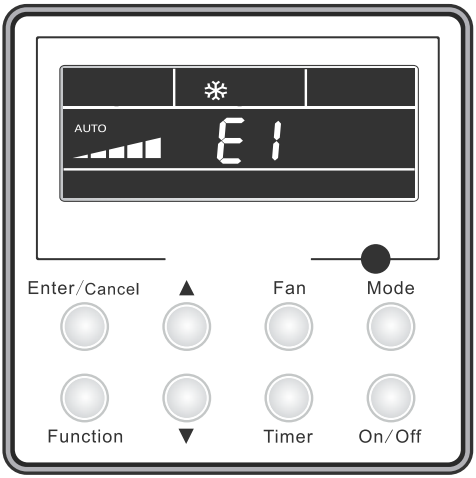


Fig.29

Error codes and their meanings:

Table 5

Number	Error code	Error
1	E1	Compressor high pressure protection
2	E2	Indoor anti-freeze protection
3	E3	Compressor low pressure protection, refrigerant lack protection and refrigerant colleting mode
4	E4	Compressor high discharge temperature protection
5	E6	Communication error
6	E8	Indoor fan motor error
7	E9	Full water protection
8	F0	Indoor ambient temperature sensor error
9	F1	Evaporator temperature sensor error
10	F2	Condenser temperature sensor error
11	F3	Outdoor ambient temperature sensor error
12	F4	Discharge temperature sensor error
13	F5	Temperature sensor error of wired controller
14	C5	Capacity code error
15	EE	Outdoor memory chip error
16	PF	Electric box sensor error
17	H3	Compressor overload protection
18	H4	Overloading
19	H5	IPM protection
20	H6	DC fan motor error
21	H7	Drive desynchronizing protection
22	Hc	Pfc protection
23	L1	Humidity sensor error
24	Lc	Activation failure
25	Ld	Compressor phase sequence protection
26	LF	Power protection
27	Lp	Indoor and outdoor mismatch
28	U7	4-way valve direction changing protection
29	P0	Drive reset protection
30	P5	Over-current protection
31	P6	Communication error between main control and drive
32	P7	Drive module sensor error

33	P8	Drive module over temperature protection
34	P9	Zero passage protection
35	PA	AC current protection
36	Pc	Drive current error
37	Pd	Sensor connecting protection
38	PE	Temperature drift protection
39	PL	Bus low voltage protection
40	PH	Bus high voltage protection
41	PU	Charge loop error
42	PP	Input voltage abnormality
43	ee	Drive memory chip error

Notes:

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