GREE
Change for life

Owner's Manual

Original Instructions

Commercial Air Conditioners

Vertical Exposed Fan Coil Unit

Models:
FP-22LM/D-K
FP-34LM/D-K
FP-51LM/D-K
FP-68LM/D-K
FP-85LM/D-K
FP-102LM/D-K
FP-119LM/D-K
FP-136LM/D-K
FP-170LM/D-K
FP-204LM/D-K

Thank you for choosing commercial air conditioners. Please read this Owner’ s Manual carefully before operation and retain it for future reference.

If you have lost the Owner's Manual,please contact the local agent or visit www.gree.com or send an email to global@cn.gree.com for the electronic version.

GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI

To users

Thank you for selecting Gree's product. Please read this instruction manual carefully before installing and using the product, so as to master and correctly use the product. In order to guide you to correctly install and use our product and achieve expected operating effect, we hereby instruct as below:

(1) This equipment should be installed, operated or maintained by the qualified servicemen who have had specific training. During operation, all safety issues covered in the labels, User's Manual and other literature should be followed strictly. This equipment 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. Children should be supervised to ensure that they do not play with the appliance.

(2) This product has gone through strict inspection and operational test before leaving the factory. In order to avoid damage due to improper disassembly and inspection, which may impact the normal operation of unit, please do not disassemble the unit by yourself. You can contact our designated dealer or local service center for professional support if necessary.

(3) When the product is faulted and cannot be operated, please contact our designated dealer or local service center as soon as possible by providing the following information.

- Contents of nameplate of product (model, cooling/heating capacity, product No., ex-factory date).
- Malfunction status (specify the situations before and after the error occurs).

(4) All the illustrations and information in the instruction manual are only for reference. In order to make the product better, we will continuously conduct improvement and innovation without further notice.

Contents

Safety notices (please be sure to abide)

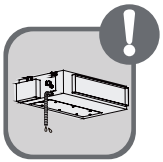
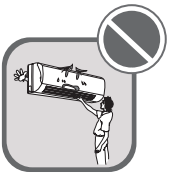
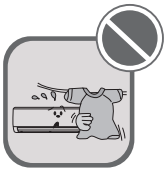
⚠ **WARNING**: If not abide strictly, it may cause severe damage to the unit or the people.

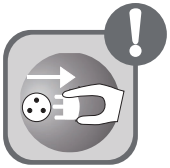
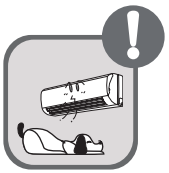
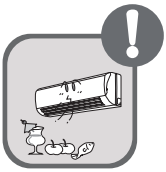
⚠ **NOTE**: If not abide strictly, it may cause slight or medium damage to the unit or the people.

This sign indicates that the operation must be prohibited. Improper operation may cause severe damage or death to people.

This sign indicates that the items must be observed. Improper operation may cause damage to people or property.

⚠WARNING			
	Please perform installation in accordance with this manual and read it carefully prior to startup and service.		Installation should be done by sales agents or qualified servicemen. Do not do it personally, as incorrect installation would lead to water leakage, electrocution, fire hazards etc.
	Before installation, check for power supply and see if it complies with that on the nameplate. Besides, check for safety of the power supply.		This unit should be grounded and there should be grounding lines for the power socket so as to prevent electrocution. Do not connect the grounding lines to the gas lines, water lines, lightning rod or telephone lines.
	Specialized components and parts should be used for installation; otherwise it would lead to water leakage, electrocution, fire hazards etc.		Size of the power lines should be large enough. Power lines and other electric connection lines should be replaced by specialized cables.
	When wiring of power lines is finished, remember to install a electric box to prevent safety accidents.		When installation is finished, check for connection of drain lines, water lines and electric lines, as incorrect connection would lead to water leakage, electrocution, fire hazards etc.
	Do not start or stop the unit by drawing out or plugging in the power plug.		Do not let the children play with this unit.
	Do not operate this unit with wet hands.		Do not clean this unit until the unit is turn off and the power supply is cut off, otherwise it would lead to electrocution or personal injury.

	Do not spray or rinse this unit with water, as it would lead to malfunction or electrocution.		Do not let this unit exposed to moist, wet or corrosive environment.
	Volatile liquid like thinner or petroleum would damage appearance of this unit. (Only soft dry cloth and cloth with neutral detergent can be used to clean the outer casing of this unit.)		Do not make the set point too low under the cooling mode.
	Entering and leaving water lines, condensate lines and valves should be thermal insulated so as to prevent from dewing in summer.		Do not repair this unit by yourself, as incorrect repair would lead to electrocution or fire hazards. Please contact GREE after-sales center and repair should be done by the qualified servicemen.
	Never splice the power cord or use an extended cord. It can cause overheating or fire.		Don’t insert your hands or stick into the air intake or outlet vents.
	Don't block the air intake of the FCU.It can decrease the FCU capacity or cause a malfunction.		Keep combustilble spray away from the units more than 1.5m. It can cause a fire or explosion.

⚠NOTE			
	During operation, do not insert fingers or other objects into the moving parts, which would lead to unnecessary injuries.		Please cut off the power supply when this unit is not used for long time in consideration of safety.
	When there is something unusual (like unusual smell, burning smell, smoke etc.), please turn off the unit and cut off the main power supply at once, and then contact GREE after-sales servicemen. If unusual conditions go on, this unit would burn out, or even it would lead to electrocution or fire hazards.		Wiring of power lines and electric connection lines should be secure enough. Terminals also should be tightly fastened. The connection line should not suffer external forces. For the unit equipped with the wired controller, the controller would be powered on firstly; otherwise it would be out of normal use.
	The filter should be cleaned periodically in case that heat exchanging effect would be affected.		Please do freeze protection in winter to prevent copper tubes from cracking.
	Don’ t leave windows and doors open for a long time while operating the FCU. It can decrease the FCU capacity.		Don’t blow the wind to animals and plants directly. It can cause a bad influence to them.
	Don’t use the FCU for other purposes, such as drying clothes, preserving foods, etc.		Don’t place a space heater near the FCU.

This appliance is intended to be used by expert or trained users in shops, in light industry and on farms, or for commercial or household use by lay persons.

Installing the unit in the following places may cause malfunction. If it is unavoidable,please consult the local dealer:

(1) The place with strong heat sources,vapors, flammable or explosive gas,or volatile objects spread in the air.

(2) The place with high-frequency devices (such as welding machine,medical equipment).

(3) The place near coast area.

(4) The place with oil or fumes in the air.

(5) The place with sulfureted gas.

(6) Other places with special circumstances.

(7) Do not use the unit in the immediate surroundings of a laundry, a bath, a shower or a swimming pool.

DISPOSAL: This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

1 Product introduction

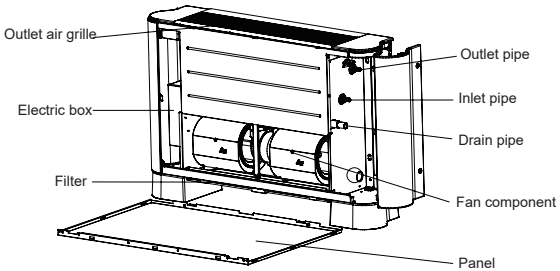
1.1 Working principle

The cold (hot) water entering the heat exchanger will do heat exchanging with air passing through the surface of the heat exchanger to condition the air temperature and humidity. There is no (cold) hot source for this product itself. The running mode depends on the environment temperature and the running mode of the main unit.

Memory function

Upon power failure, some statuses can be memorized, including: mode setting, fan speed setting, fan swing setting, temperature setting etc.

1.2 Main parts



1.3 Working conditions

(1) The entering water temperature for cooling is suggested to be no less than 5°C, otherwise it would lead to condensate; the entering water temperature for heating is suggested to be not higher than 65°C (normally 60°C), otherwise it would lead to corrosion of copper tubes or abnormal noise.

(2) The suggested working environment temperature for cooling ranges 16~40°C and ranges 10~35°C for heating. Besides, the relative humidity is or less than 80%. The maximum allowable pressure is 1.6MPa.

(3) This product is a kind of comfort air conditioning, and is not allowed to be installed where there are corrosive, explosive and inflammable substances or smog; otherwise it would lead to operation failure, shortened service life, fire hazard or even severe injuries. Special air conditions are required for where mentioned above.

2 Unit installation

2.1 Installation environment

(1) There should be no direct sunlight.

(2) The hanger, ceiling and the building structure should be capable of supporting the weight of the unit.

(3) The drain pipe can be easily led out.

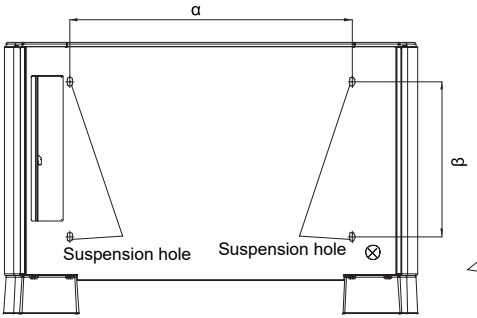
(4) The inlet and outlet air flow will not be blocked.

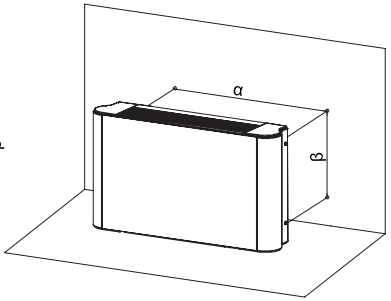
(5) There should be no inflammable and explosive substances.

(6) There should be no corrosive gas, heavy dust, salt fog, smog or moisture.

2.2 Precautions for installation

Drill four holes on the wall for suspending the unit in accordance with the the table below.

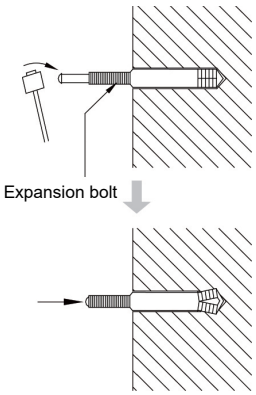




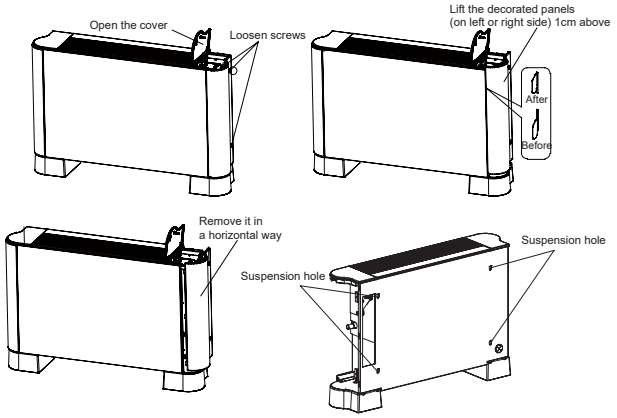
Unit: mm

Model	α	β
FP-22LM/D-K	555	390
FP-34LM/D-K		
FP-51LM/D-K	710	
FP-68LM/D-K		
FP-85LM/D-K		
FP-102LM/D-K	1010	
FP-119LM/D-K		
FP-136LM/D-K		
FP-170LM/D-K	1433	
FP-204LM/D-K		

Insert user-provided M10 expansion bolts into the holes on the wall and fix them as shown in the picture below.

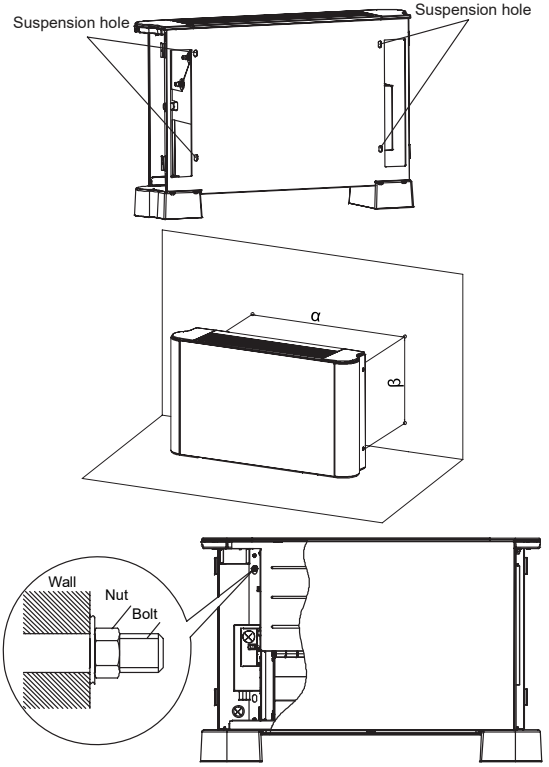


Open the cover. Loosen three screws and lift the decorated panels (on left or right side) 1cm above and remove them in a horizontal way.

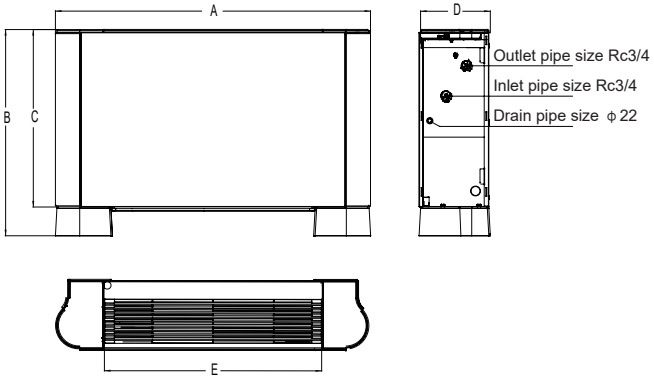


Hang the unit by fiting the holes into expansion bolts.

Regulate the unit position to slightly tilt the drain pipe and tighten bolts with nuts.



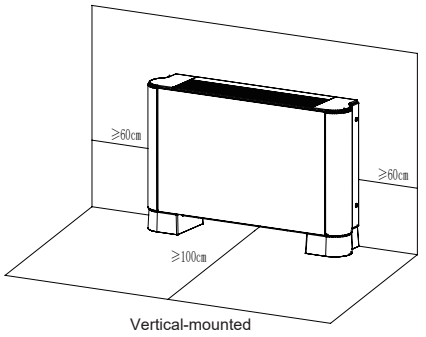
2.3 Outline dimensions



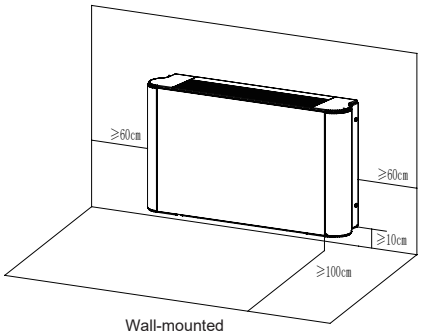
Unit: mm

Model	A	B	C	D	E
FP-22LM/D-K	895	680	585	230	568
FP-34LM/D-K	895	680	585	230	568
FP-51LM/D-K	1050	680	585	230	723
FP-68LM/D-K	1050	680	585	230	723
FP-85LM/D-K	1050	680	585	230	723
FP-102LM/D-K	1350	680	585	230	1023
FP-119LM/D-K	1350	680	585	230	1023
FP-136LM/D-K	1350	680	585	230	1023
FP-170LM/D-K	1773	680	585	230	1446
FP-204LM/D-K	1773	680	585	230	1446

2.4 Installation and maintenance space



Vertical-mounted



Wall-mounted

2.5 Installation of inlet and outlet pipes

(1) Open the panel. Loosen three screws and lift the decorated panels (on left or right side) 1cm above and remove them in a horizontal way.

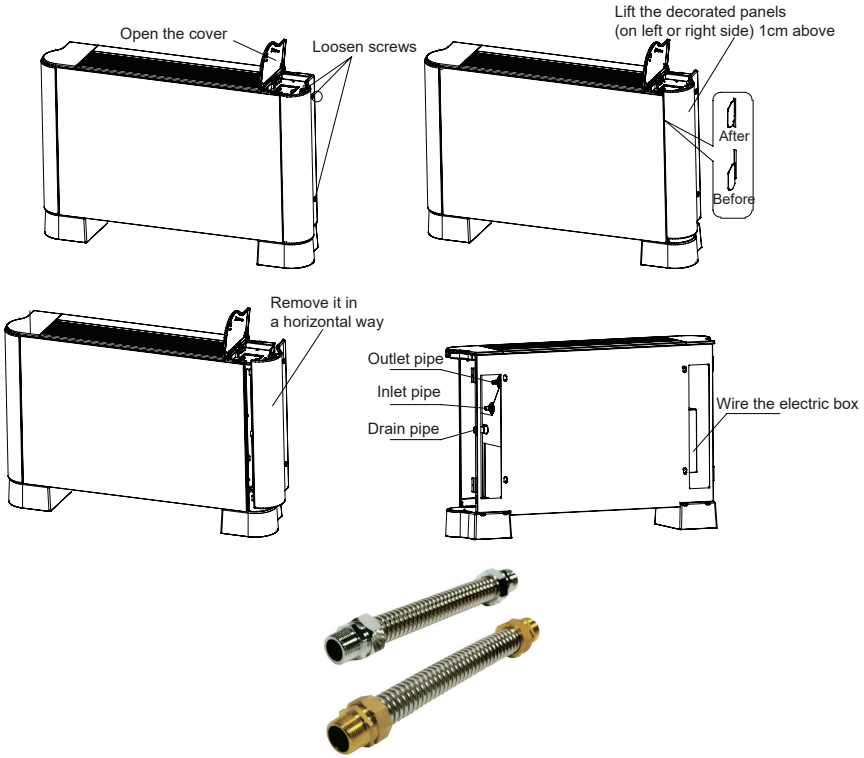
(2) Install water valves and pipes and get wires in.

(3) Metallic hoses similar to the picture below are recommended for inlet and outlet pipes.

(4) Pipe connectors and electric valve threads should be bounded with teflon tapes

(5) Fixing all water pipes tightly, start the water pump and check if there is leakage. Use the exhaust valve to release all the gases inside pipes.

(6) Wrap with sponge the insulating sleeves that connect inlet and outlet pipes.



2.6 Installation of the drain hose

2.6.1 Precautions for the drain hose

(1) The drain hose outlet is mounted at the right rear side of the unit.

(2) The diameter of the drain hose should be equal to or greater than the diameter of the connecting pipe

(3) Keep at least 1/100 inclination for the drain hose.

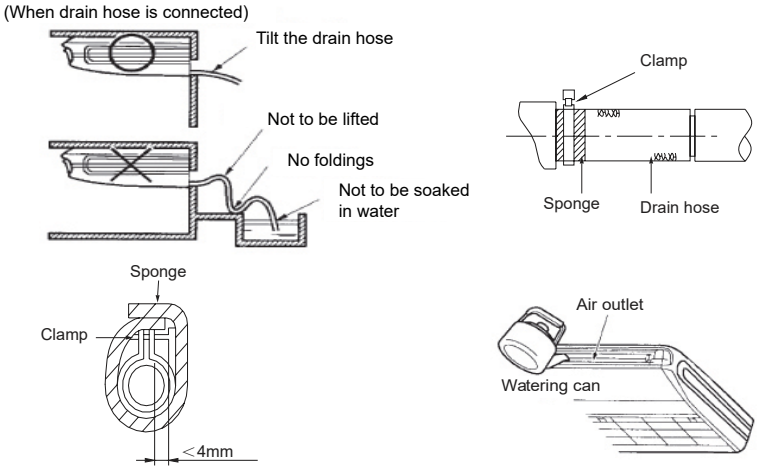
(4) Connect drain hoses and wrap the pipes and connectors with sponge and tighten them with clamps.

(5) Wrap clamps and drain pipes with sponge.

(6) Do not bend drain pipes.

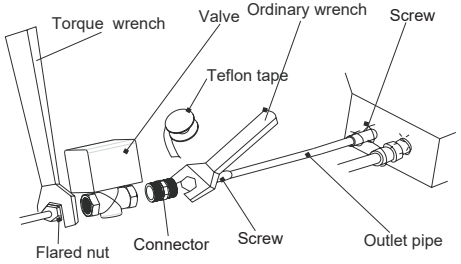
(7) Charge 600cc water from the air outlet to the drain pan to check the drainage effect.

2.6.2 Installation steps of the drain pipe



2.7 Installation of the water valve

2.7.1 Precautions

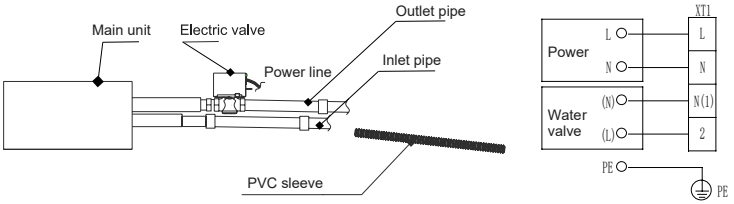


(1) See the figure above for installation of the water valve. Firstly, connect one end of the water pipe to the water inlet of the unit, and then connect the other end to water valve. During installation, both the torque wrench and ordinary wrench should be used. For the former, the torque should be less than 90N.m.

(2) The pipe connectors and the water valve are G3/4 threaded. In order for better sealing effect, before connection they should be wrapped with Teflon tape.

(3) After the connector, the water valve and the water pipes have been finished, start the water pump and see if they leak or not.

(4) Insulate the water valve and the pipe with sponge.

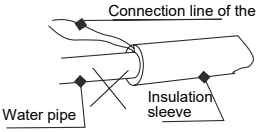
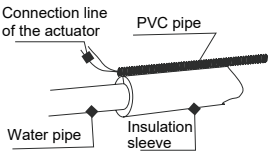
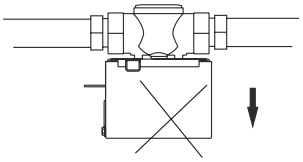
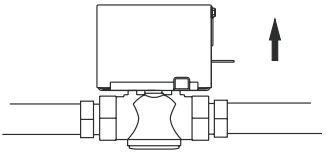
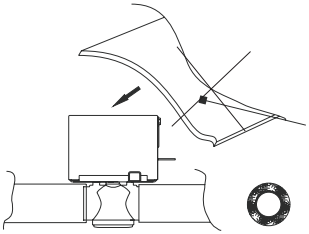


(5) When the water pipe and water valve have been installed, connect the connection line of the valve to the wiring board of the unit.

(6) Check the wiring carefully and then start the water pump and unit to see if they work normally.

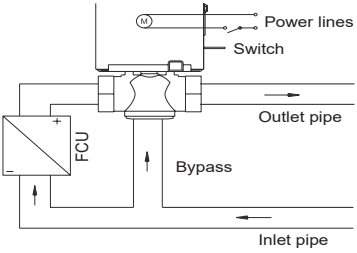
2.7.2 Requirements on installation

(1) The water valve should be installed as the following statement; otherwise it would affect the normal operation.

<table>
<tr>
<td>⃠ It is not allowed to directly insulate the connection line of the actuator and the water pipe together, otherwise it would lead to shortcutting of the water valve which would affect its service life.
 
</td>
<td>❗ Put the connection line through the PVC pipe and then bind them with the insulation sleeve.
 
</td>
</tr>
<tr>
<td>⃠Never install the valve downwards, otherwise the condensate would flow into the valve and damage the valve or then would lead to shortcutting or fire hazards.
  </td>
<td>❗ The main body of the valve should be installed upwards and the power lines should be arranged above the water pipe.
  </td>
</tr>
<tr>
<td colspan="2"> 

Do not cover fully the valve with the insulation sponge; otherwise it would lead to poor heat radiation and even fire hazards.</td>
</tr>
</table>

(2) There are direct pass and bypass for the water valve and they can be selected based on actual conditions. See the figure below for the working principle for the water valve.



2.8 Electric wiring

2.8.1 Precautions for electric wiring

(1) All electric wiring should be performed by the qualified technical in accordance with local standards, regulations and this manual.

(2) The specialized electric circuit with rated voltage should be used for the power supply.

(3) Do not pull the power supply lines by force. It is recommendable to use YZW 3x1.0 power supply lines.

(4) The power lines should be sized sufficiently. The damaged power lines and connection lines should be replaced by specialized lines.

(5) The unit should be connected to the specialized grounding device by the qualified servicemen. For the fixed lines, there should be the breaker and air switch with sufficient capacity. The air switch should be of the magnetic or electric trip-off functions so as for shortcutting and overloading protection.

(6) The unit should be grounded reliably. The yellow-green line is the grounding line. Do not put it into other use, or cut it. The grounding line cannot be fixed with self-tapping screws; otherwise it would lead to electric shock. The grounding line cannot be connected to the running water line, the gas line, the drain line and where it is not approved.

(7) A fuse (250VAC, T3.15AH) should be used for the unit.

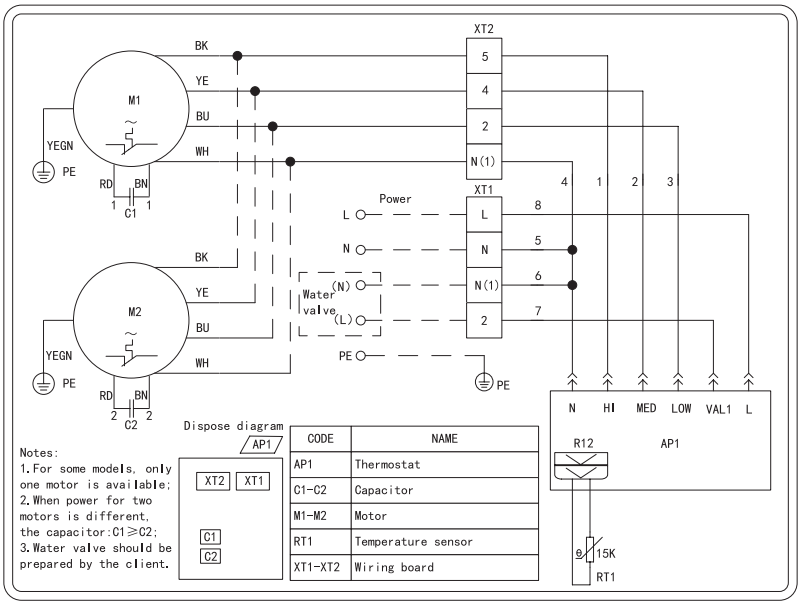
2.8.2 Steps for electric wiring

(1) Open the electric box and pull the power lines and connection lines of the electric water valve through the rubber rings. Then, fix them with the wire clamps.

(2) Perform wiring in accordance with the electric wiring diagram.

(3) Fix the lines with the wire clamps.

2.8.3 External wiring diagram

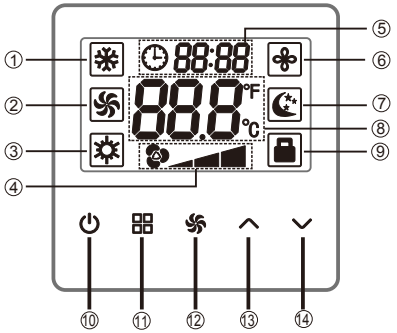


CODE	NAME
AP1	Thermostat
C1-C2	Capacitor
M1-M2	Motor
RT1	Temperature sensor
XT1-XT2	Wiring board

Note: The wiring diagrams as shown above are just for reference. Those struck to the main body of the unit always prevail for repair and maintenance.

3 Thermostat guide

3.1 Thermostat panel and keys



①	Cooling mode	⑧	Temperature or failure codes
②	Air supplying mode	⑨	Child lock
③	Heating mode	⑩	ON/OFF
④	Fan speed	⑪	MODE
⑤	Timer	⑫	SPEED
⑥	Drying function	⑬	UP
⑦	Sleep function	⑭	DOWN

3.2 Technical parameters

Item	Description
Supply voltage	AC85~265V 50/60Hz
Temperature setting	16~30°C
Operation temperature	0~50°C
Humidity	Relative humidity 5~95% (no condensate)
Load current	2A (resistive load); 1A (inductive load)
Connecting terminal	Wires of less than 2.5mm^2
Outline dimensions	86×86×10mm (width x height x thickness)
Protection class	IP 30
Installation requirement	An 86x86 unconcealed or concealed standard junction box with more than 40mm interior height and standard 60mm hole spacing

3.3 Thermostat operations

The thermostat backlight will be off after 20 continuous seconds without a key press on the panel or the remote controller. Then, any key press on the panel will enable the backlight (that will flash once if the user operates the remote controller) indicating that the user can begin to use the thermostat.

3.3.1 ON/OFF

As shown in Figure 1, press (ON/OFF) to start or stop the unit. If it is on, the screen provides the operation mode, temperature and fan speed, among which only temperature appears if it is off.

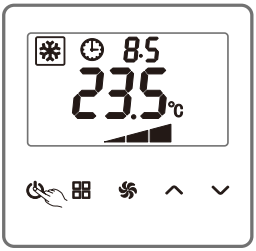
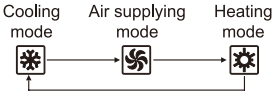


Figure 1

3.3.2 Mode setting

As shown in the Figure 2, press (MODE) to switch between three modes after starting the unit.

Switch sequence:



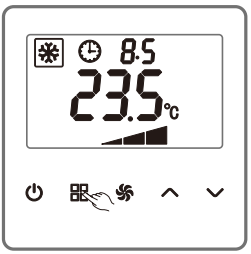
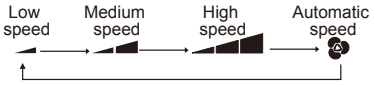


Figure 2

3.3.3 Fan speed

As shown in the Figure 2, press (SPEED) to switch between four speeds of the fan after starting the unit.

Switch sequence:



3.3.4 Temperature setting

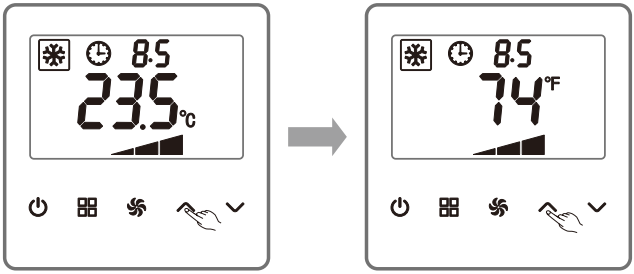
(1) During the operation of the unit, press ∧ (UP) or ∨ (DOWN) to raise or lower the temperatures.

(2) When the temperature unit is Celsius, one press of the UP key or the DOWN key causes a 0.5°C increase or decrease within 16°C~30°C.

(3) When the temperature unit is Fahrenheit, one press of the UP key or the DOWN key causes a 1°F increase or decrease within 61°F~86°F.

(4) When keeping pressing the UP key or the DOWN key, the temperature varies every 0.5 second.

(5) As shown in Figure 3, the indoor ambient temperature display, if activated, will appear by default after the unit is started. A desired temperature being set appears temporarily. Later, the default temperature will reappear without any operation in 5 seconds.



Celsius Fahrenheit

Figure 3

3.3.5 Timer

(1) The unit is timed to start or stop, ranging from 0.5 to 24 hours.

(2) As shown in the Figure 4, after starting the unit, to keep pressing (SPEED) for about 5 seconds (press keeping hereinafter lasts 5 seconds) can disable or enable the timer. When enabling the timer, the symbol flashes. A press of ∧ (UP) or ∨ (DOWN) increases or reduces 0.5 hour in the amount of time. A press of (SPEED) ensures saving the timer setting. The symbol stops flashing and continue to be visible, which means the timer has been working and the countdown is displayed.

(3) After a stoppage of the unit, the unit is specified a time to start in the way to stop. The countdown will be displayed.

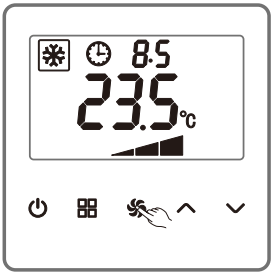


Figure 4

Notes:

During the timing process, the homepage is shown by default after 5 continuous seconds without a key press. In this case, press keeping of ∧ (UP) or ∨ (DOWN) adjusts the amount of time every 0.5 second.

3.3.6 Child lock

After a start or stop of the unit, press keeping of both ∧ (UP) or ∨ (DOWN) enables or disables the child lock that will recover after the power failure.

As shown in the Figure 5, the symbol 🔒 that appears will be activated to flash for 3 seconds by a press of any other keys, reminding the user of the child lock functioning. The symbol 🔒 is not displayed when the child lock is off.

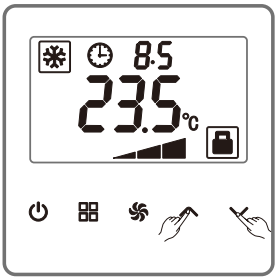


Figure 5

3.3.7 Sleep function

As shown in the Figure 6, during the operation of the unit, press keeping of ⊞ (MODE) enables or disables the function. When it is enabled, the homepage displays the symbol 🌙.

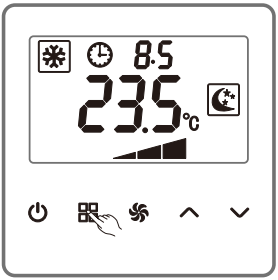


Figure 6

Notes:

In the cooling mode, using the sleep function, the set temperature will rise 1°C after operating in 1 hour and another 1°C in another 1 hour. The set temperature will rise 2°C at most and be steady at 28°C with the function automatically disabled.

In the heating mode, using the sleep function, the set temperature will drop 1°C after operating in 1 hour and another 1°C in another 1 hour. The set temperature will drop 2°C at most and be steady at 16°C with the function automatically disabled.

The fan automatically runs at the low speed.

3.3.8 Parameter setting

After a stop of the unit, press keeping of both ✲ (SPEED) and ∧ (UP) is an access to parameter setting page. Set the serial numbers of parameters by tapping ⊞ (MODE) and decide the parameter values by ∧ (UP) or ∨ (DOWN).

Next, press keeping of both ✲ (SPEED) and ∧ (UP) ensures saving all the parameter values. Then, the parameter setting page automatically exits. Whereas, the parameter setting page automatically exits, not saving all values without any operation in 20 seconds.

Parameter list:

S.N	Name	Description
01	Power failure memory	ON: enable (by default); OFF: disable
02	Energy saving function	ON: enable; OFF: disable (by default)
03	Drying function	ON: enable; OFF: disable (by default)
04	Temperature unit setting	F: Fahrenheit; C: Celsius (by default)
05	Fan operation at temperature set points	00: the fan works as to the set speed; 01: the fan works at the low speed; 02: the fan stops (by default)
06	Temperature calibration	Adjustable range: -5°C~+5°C (a precision of 0.5°C, 0°C by default)
07	Temperature control range	1: narrow ; 2: medium (by default); 3: wide
08	Cooling temperature set in the energy saving mode	Adjustable range: 16°C~30°C (a precision of 0.5°C, 16°C by default); When the temperature unit is Fahrenheit, the adjustment range of the temperature is 61°F~86°F (a precision of 1°F).
09	Heating temperature set in the energy saving mode	Adjustable range: 16°C~30°C (a precision of 0.5°C, 30°C by default); When the temperature unit is Fahrenheit, the adjustment range of the temperature is 61°F~86°F (a precision of 1°F).
10	Ambient temperature display	ON: enable; OFF: disable (by default)
11	Factory data reset	ON: enable; OFF: disable (by default)

Below are instructions for setting the parameters.

(1) Power failure memory

When the function is enabled, if a power failure occurs while the unit is working or stopped, the last screen of data that was collected will be displayed upon restoration of power.

When the function is disabled, if a power failure occurred while the unit was stopped, it will automatically restart with a unit stop display when power is restored.

As shown in the Figure 7 (the function has been disabled), on the parameter setting page, press ⊞ (MODE) to switch the option number to 01. ∧ (UP) or ∨ (DOWN) is provided to allow a switch between ON and OFF (—enable or disable the function).

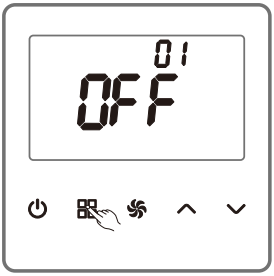


Figure 7

(2) Energy saving function

The unit is allowed to cool or heat in the energy saving mode (08, 09 in the list). Energy will be saved when the air conditioner operates within a small range by limiting the cooling and heating temperatures.

- The sleep mode is also available upon the energy saving mode.
- If a power failure occurs, the energy saving mode will restart upon the restoration of power.
- If the set temperature in any other modes exceeds the limit of energy saving mode, the temperature will be adjusted to the limit value.

As shown in the Figure 8, on the parameter setting page, press (MODE) to switch the option number to 02. (UP) or (DOWN) is provided to allow a switch between ON and OFF.

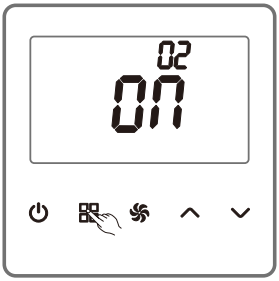


Figure 8

(3) Drying function

If it is enabled while the unit is working in the cooling condition, the symbol will be displayed. Pressing ON/OFF key to stop the unit, the interior fan will cease after 2-minute running. Then, the symbol will not be displayed if drying is done.

The function is not available in the air supplying and heating modes. The symbol will not be displayed.

As shown in the Figure 9, on the parameter setting page, press (MODE) to switch the option number to 03. (UP) or (DOWN) is provided to allow a switch between ON and OFF.

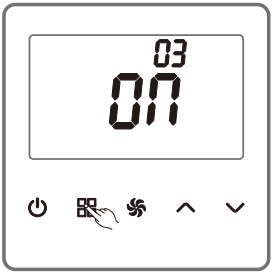


Figure 9

(4) Temperature unit setting

Celsius (°C) or Fahrenheit (°F) is available. As shown in the Figure 10, on the parameter setting page, press (MODE) to switch the option number to 04. (UP) or (DOWN) is provided to allow a switch between Celsius (°C) and Fahrenheit (°F).

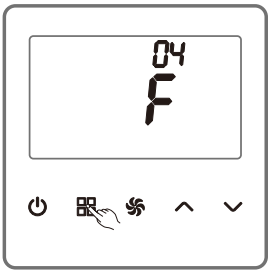


Figure 10

(5) Fan operation at temperature set points

The fan is able to run at the set speed, low speed or stop working when the indoor ambient temperature reaches the specific temperature point.

As shown in the Figure 11 on the parameter setting page, pressing (MODE) activates a switch to the option number 05. (UP) or (DOWN) is provided to allow a switch between “00”, “01” and “03”, adjusting the fan operation.

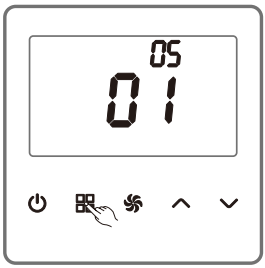


Figure 11

(6) Temperature calibration

The ambient temperature is allowed to calibrated between -5°C and +5°C with a precision of 0.5°C.

As shown in the Figure 12, on the parameter setting page, press (MODE) to switch the option number to 06. (UP) or (DOWN) is provided to a 0.5°C increase or decrease within -5°C~+5°C.

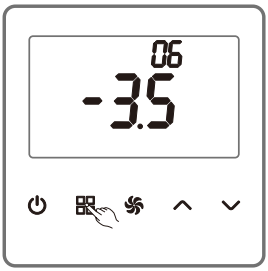


Figure 12

(7) Temperature variation range

With the narrow range, the temperature features a small amount of variation for great comfort, but the fan and water valve will operate more frequently causing loss of service life. Whereas, the wide range does good to duration of the fan and water valve with a large amount of temperature variation and low frequency operation. The medium range (“2”) is adopted by default which is advisable. The three ranges above are available.

As shown in the Figure 13, on the parameter setting page, press (MODE) to switch the option number to 07. (UP) or (DOWN) is provided to a switch between “1”, “2” and “3” (the three ranges).

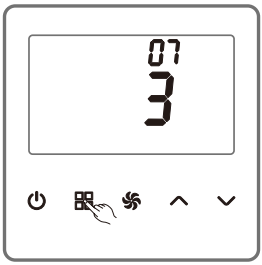


Figure 13

(8) Cooling temperature set in the energy saving mode

It is available when energy saving function is enabled. The cooling temperature is limited between 16°C and 30°C (61°F~86°F).

As shown in the Figure 14, on the parameter setting page, press (MODE) to switch the option number to 08. (UP) or (DOWN) is provided to allow a rise or drop on the temperature. If the temperature unit is Celsius, the adjustment range is 16°C~30°C with a precision of 0.5°C. If the temperature unit is Fahrenheit, the adjustment range is 61°F~86°F with a precision of 1°F.

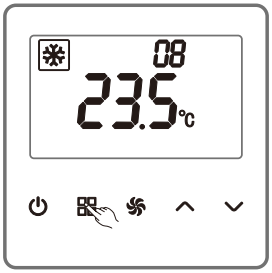


Figure 14

(9) Heating temperature set in the energy saving mode

It is available when energy saving function is enabled. The heating temperature is limited between 16°C and 30°C (61°F~86°F).

As shown in the Figure 15, on the parameter setting page, press (MODE) to switch the option number to 09. (UP) or (DOWN) is provided to allow a rise or drop on the temperature. If the temperature unit is Celsius, the adjustment range of the temperature is16°C~30°C with a precision of 0.5°C. If the temperature unit is Fahrenheit, the adjustment range of the temperature is 61°F~86°F with a precision of 1°F.

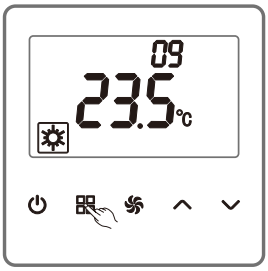


Figure 15

(10) Ambient temperature display

If the user enables the indoor ambient temperature display after the start-up of the unit, the indoor ambient temperature will be displayed by default. While the user is setting a desirable temperature, the screen provides the desirable temperature. The screen will display the indoor ambient temperature after 5 continuous seconds without a key press.

The screen will not display the indoor ambient temperature that was disabled but the set temperature.

As shown in the Figure 16, on the parameter setting page, press (MODE) to switch the option number to 10. (UP) or (DOWN) is provided to allow a switch between ON and OFF.

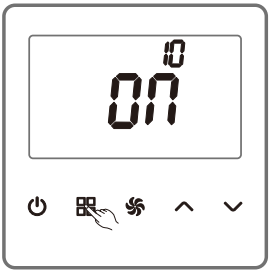


Figure 16

(11) Factory data reset

All parameters (3.3.8) can be reset to factory defaults.

As shown in the Figure 17, on the parameter setting page, press (MODE) to switch the option number to 11. (UP) or (DOWN) is provided to allow a switch between ON and OFF.

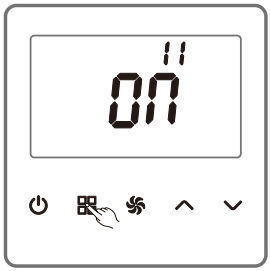


Figure 17

3.4 Ambient temperature sensor failure

As shown in the Figure 18, if the ambient temperature sensor fails to work, the screen will not display the ambient temperature or the set temperature but “F5”. In this case, the unit continues to work at 24°C, an ambient temperature. The user is allowed to adjust the set temperature.

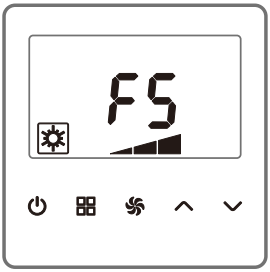


Figure 18

No.	Code	Description
1	F5	Indoor ambient temperature sensor failure

3.5 Failure handling

The product maintenance is performed by qualified technicians only.

Status	Maintenance approaches
Start-up failure	1. Check if L/N lines work well and wiring is safe. 2. Check if ON/OFF key is effective. 3. Try to replace the main control panel first. If it does not work, replace the power panel.
Unrecognizable code on the LCD	Loosen the fixing screws as the panel is not fitted properly.
Blown fuses	1. Check if wiring is correct. 2. Replace the power panel.
Abnormal output with a normal display	Try to replace the main control panel first. If it does not work, replace the power panel.

4 Commissioning and maintenance

4.1 Inspection after installation

Item	Possible consequence	Inspection
Is the main unit installed securely?	The unit may fall down, vibrate or generate noise.	
Is the leak test performed?	The unit fails to work normally.	
Is the unit insulted properly?	It may generate condensate and water drops.	
Does drainage go smoothly?	It may generate condensate and water drops.	
Does the power voltage comply with the nameplate?	Errors may rise or some component may be damaged.	
Are wiring and piping performed properly?	Errors may rise or some component may be damaged.	
Is the unit grounded reliably?	It would lead to electric leak.	
Are the electric lines sized properly?	Errors may rise or some component may be damaged.	
Is there foreign matter at the air inlet or outlet?	It would lead to poor cooling capacity.	

4.2 Trial run

(1) Preparation before trial run

- Do not power the unit on until all installation has been finished.
- Control and power lines are connected correctly and tightly.
- All cut-off valves should be opened.
- All odds and ends should be removed .

(2) Trial run method

- Power on it and press the ON/OFF button.
- Press the “Mode” button to select the desired running mode, cooling, heating or supply. Then, observe it to see if it can work normally.

4.3 Maintenance requirement

(1) Unplug the unit before cleaning; otherwise it would lead to electric shock or injures.

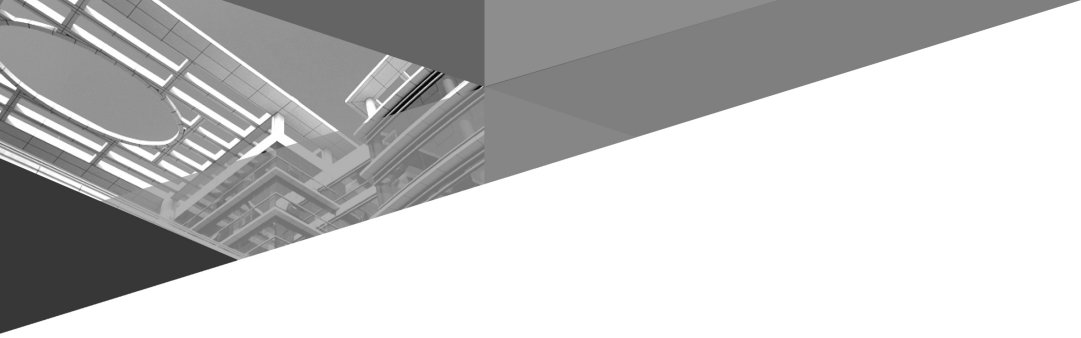
(2) Do not rinse the unit with water; otherwise it would lead to electric shocks.

(3) The volatile liquid, like thinner or petrol, would damage the outer casing of the unit, therefore the outer casing should be cleaned with the soft dry cloth or wet cloth with neutral detergent.

(4) Do not open the filter of the unit except the qualified servicemen.

5 Troubleshooting

No.	Symptoms	Possible causes	Corrective measures
1	The unit does not run.	There is no power supply.	Repower the unit when power supply is available.
		The power plug is loosened.	Tighten the power plug.
		The motor is burnt out.	Replace the motor and check for the wiring
2	There is abnormal noise.	The volute or blade is deformed, or the volute contacts the blade.	Replace the volute or the blade.
		The air filter is clogged.	Clean the filter.
		There are foreign matters at the inlet/outlet or inside the duct.	Remove foreign matters.
		There is abnormal noise from the motor.	Replace the motor.
		The fastening screws are loosened.	Tighten them.
3	The airflow rate is too low.	The air filter is clogged.	Clean the air filter.
		There are foreign matters at the return inlet and air outlet.	Clear foreign matters.
		The duct resistance exceeds the design value.	Lower the duct resistance or reselect the unit.
4	The cooling or heating effect is poor.	The air filter is clogged.	Clean the air filter.
		The dampers are not opened.	Open the dampers.
		The fins are clogged or damaged.	Clean or repair fins.
		The entering water temperature cooling is too high and too low for cooling.	Adjust the entering water temperature.
5	Water leaks.	The condensate pipe is clogged.	Clean the drain pipe.
		The unit is not installed as required.	Adjust the unit and let the unit keep a certain inclination degree.
		The environmental air humidity is too high.	Do humidification and do not let the high-temperature and high-humidity air coming into the room.
		The fan stops but cold water is supplied continuously.	Close the water dampers or run the unit.
		The discharge valve is not tightened.	Tighten the discharge valve.



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