



Technical & Service Manual

Fan coil unit

Slim FCU



Technology Leads Intelligent Life

Version 6 (2026.05)

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1. Product Line

Series	Models	Photos
Slim FCU	AFC-100CO/4A1	
	AFC-200CO/4A1	
	AFC-300CO/4A1	
	AFC-400CO/4A1	

2. Features

The fan coil units mainly consist of centrifugal fan, coil heat exchanger, etc., they are the terminal devices of central air conditioning system, which are widely used in buildings with multi-rooms or industrial and household air conditioning occasions, for example: hotels, restaurants, factories, hospitals, exhibition halls, markets and office buildings, etc. These units can meet many requirements, like cooling, fan, and heating etc., and make a clean, quiet, and comfortable working and living environment.

Application occasions:

This is our new improved ultra-thin exposed fan coil unit, only 132mm thickness, but at the same time ensured the good performance of the cooling and heating. What's more, the kind of ultra-thin fan coil unit have the low noise and can be ceiling suspended, wall mounted or floor standing, which is suitable for residential use.

Features:

- ◇WIFI function: Slim FCU standard TUYA WIFI, control through mobile APP, more convenient.
- ◇The Slim FCU has a built-in Modbus interface, which can be connected to the centralized controller or BMS for centralized control.
- ◇Thermostat control: Standard LCD screen thermostat, can display water temperature, switch degrees Fahrenheit and Celsius, timing function.
- ◇Drainage pan design: Add a small drain pan to the connecting side of the pipe to prevent water from falling to the floor.
- ◇Three ways of installation: It can be installed horizontally or vertically. Ceiling mounted, floor standing, wall mounted three options.
- ◇Removable side panel: open the side panel, increase the installation space, and make the piping installation more convenient.
- ◇Low noise: Motor we adopted is the DC motor with low noise and add silencer foam insulation to the air duct inside the unit to reduce the air flow noise.
- ◇The unit have an auto-restart function.
- ◇The unit is equipped with failure auto-check function. If it gets failure, the light will blink and failure code will display on the thermostat, which makes troubleshooting easier.

3. Function

3.1 Function chart

● Indicates standard ● Indicates optional

Type	Function	Q series	Details refer to
Basic function	DC inverter	●	/
	Cooling mode	●	3.2.2
	Heating mode	●	3.2.3
	Fan mode	●	3.2.4
	Auto fan mode	●	3.2.1
	°C/°F switch	●	9.2
	5 Fan speed	●	9.1
Comfort Health Energy saving	Sleep mode	●	9.1
	Anti-cold air	●	9.2
	Anti-freezing	●	9.2
Controls	Timer	●	9.2
	Screen display	●	9.1
	Auto-restart function	●	9.2
	Child lock	●	9.2
	Error code indicates	●	9.2
	Dry contact	●	9.2
Communication	WIFI	●	9.4
	Modbus	●	10
	Centralized control	●	/
	RS485	●	/

3.2 Function Introduction

3.2.1 Auto fan mode control

1. Starting condition:

Start in auto fan mode for operation.

2. Control content:

The user sets the desired operating mode (cooling or heating) and target temperature. The program then calculates the difference between the current room temperature and the set temperature. A larger difference results in a higher operating gear, while a smaller difference

results in a lower gear. The machine stops running once the room temperature reaches the set temperature. and air supply modes according to ΔT ($\Delta T = T_A - T_S$) (T_S sets the temperature range to 8-39°C):

- 1) When $\Delta T \geq 5^\circ\text{C}$, enter max fan mode;
- 2) When $4^\circ\text{C} \leq \Delta T < 5^\circ\text{C}$, enter the high fan mode;
- 3) When $3^\circ\text{C} \leq \Delta T < 4^\circ\text{C}$, enter the medium fan mode;
- 4) When $2^\circ\text{C} \leq \Delta T < 3^\circ\text{C}$, enter the low fan mode;
- 5) When $\Delta T < 2^\circ\text{C}$, enter min fan mode.

3. End condition:

Turn off this mode.

3.2.2 Cooling operation

1. Starting condition:

Turn on the cooling mode or switch from other modes to cooling mode.

2. Control content:

The temperature control range is 8°C~39°C, and the fan speed offers multiple options including Auto, Maximum, High, Medium, Low and Minimum fan speed.

3. End condition:

Turn off this mode or switch to another mode.

3.2.3 Heating mode control

1. Starting condition:

Start the heating mode or switch from other modes to heating mode.

2. Control content:

The temperature control range is 8°C~39°C, and the fan speed offers multiple options including Auto, Maximum, High, Medium, Low and Minimum fan speed.

3. End condition:

Turn off this mode or switch to another mode.

3.2.4 Fan mode control

1. Starting condition:

Turn on the fan mode or switch to fan mode for operation.

2. Control content:

In the fan mode, the internal fan operates at the set fan speed.

3. End condition:

Turn off this mode or switch to another mode.

3.2.5 Timing control function

1. Starting condition:

When receiving a "timed on" or "timed off" signal from the thermostat.

2. Control content:

- 1) After setting the timing function, the mode change does not cancel the timing function. If there is a timing light after setting the timing, the light panel will display the timing symbol.
- 2) The thermostat controls the timing.
- 3) The timed-off function can only be set when the unit is running, and the unit will automatically turn off once the set time has elapsed.
- 4) The timed-on function can only be set when the unit is turned off, and it will automatically turn on when the timed time is up.
- 5) After setting the timer, turn it on or off again, and the original timer will be automatically canceled.

3. End condition:

Thermostat on/off operation.

3.2.6 Sleep control function

1. Starting condition:

When receiving a "sleep" signal from the remote controller.

2. Control content:

Effective sleep function during cooling, and heating;

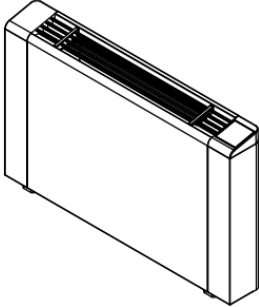
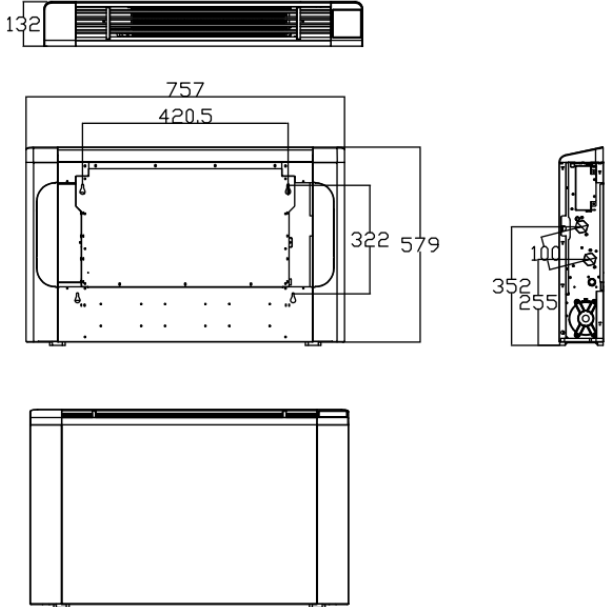
The sleep function is invalid in fan modes.

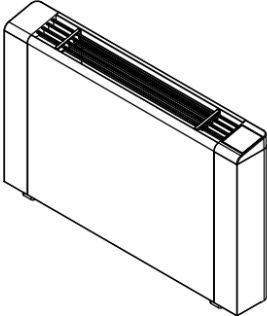
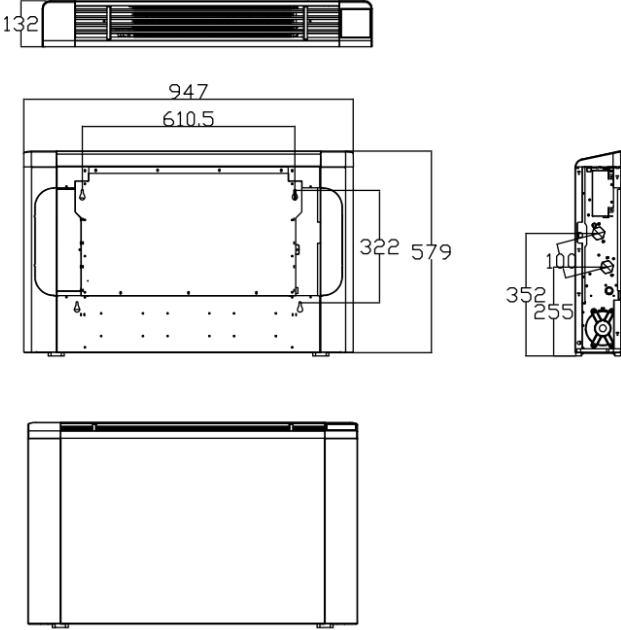
After startup, the fan speed is reduced to the lowest setting while the operating mode and set temperature remain unchanged.

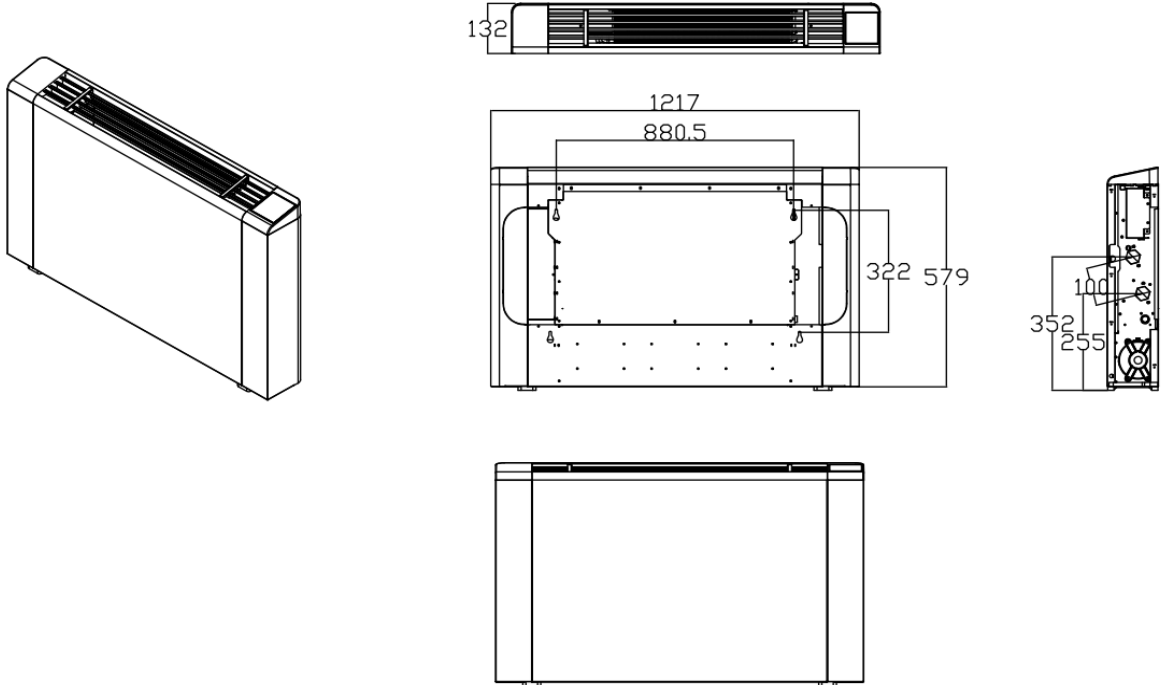
3. End condition:

Turn off this mode or switch to another fan mode.

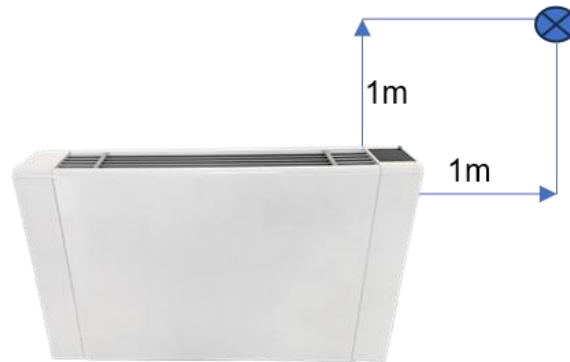
4. Dimension

Model	AFC-100CO/4A1
	

Model	AFC-200CO/4A1
	

Model	AFC-300CO/4A1 AFC-400CO/4A1
	

5. Sound level



Note: No requirement for distance from the ground

5.1 Test value

Series	Models	Noise level under four speeds of fan (dB(A))				
		Max	H	M	L	Min
Slim FCU	AFC-100CO/4A1	38	37	35	33	32
	AFC-200CO/4A1	40	39	36	34	33
	AFC-300CO/4A1	41	40	38	36	35
	AFC-400CO/4A1	45	44	40	38	37

6. Product selection

6.1. Precautions of product selection

- a. At given airflow and temperature of a fan coil unit, when water supply changes, so does the cooling capacity. Based on statistics of the performance of some products, when water supply temperature is 7°C at 80% water supply, the cooling capacity is about 92% of the original level, indicating slow effect of the water supply change to cooling capacity.
- b. At given temperature difference between the water supply and water return of a fan coil, the cooling capacity decreases with as the water supply temperature increases. According to statistics, if water supply temperature is increased by 1°C , the cooling capacity will decrease by about 10%, the higher the water temperature is, the greater decrease the cooling capacity will suffer, with lowered humidity capacity.
- c. At given water supply condition, when the airflow of a fan coil changes, so do its cooling capacity and enthalpy difference of air treatment, which usually increases as cooling capacity decreases, without much change in power consumption of unit cooling capacity.
- d. When the temperature difference between inlet and outlet water of a fan coil increases, the water flow will decrease, so will the heat transfer coefficient of the heat exchange coil. The heat transferring temperature will also change, as a result, the cooling capacity of a fan coil increases as the temperature difference between supply and return water increases. According to statistics, when water supply temperature is at 7°C , and the temperature difference between supply and return water has increased from 5°C to 7°C , the cooling capacity may decrease about 17%.

The water supply, water supply temperature, temperature difference between supply and return water, water flow and inlet air temperature and humidity interact with one another, with the performance of the fan coil changed by the variation of any one of them.

- e. When a fan coil runs at standard condition, the final point of air treatment depends on the enthalpy difference of air treatment and the cooling capacity is related to the humidity load of the room, in that the greater the heat-humidity ratio, the smaller the cooling capacity is, as shown in Figure 1. So, the air treatment enthalpy difference of the fan coil can be determined by heat-humidity ratio curve, final point parameters of air treatment and air parameters, and then the cooling capacity of the fan coil can be calculated based on the air treatment enthalpy of the room at different heat-humidity ratio...

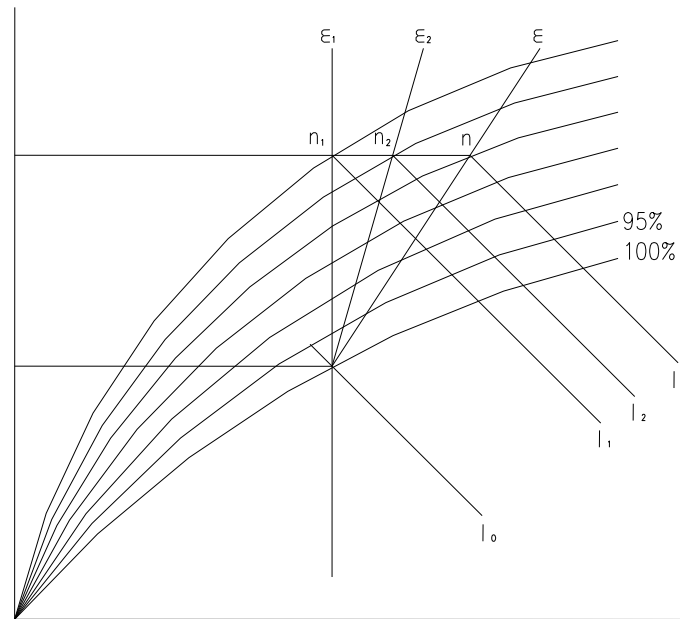


Figure 1 Air treatment temperature process of a fan coil

6.2. Methods of product selection

Enthalpy difference correction

Make corrections-based on the ratio between the enthalpy difference during actual operation and that at standard condition and calculate the actual cooling capacity of the fan coil, then select the correct fan coil based on actual cooling capacity.

$$Q' = QH (\Delta I_m / \Delta I_H) = mQH$$

where: Q' —Actual cooling capacity of a fan coil (W).

QH —— Rated cooling capacity at of a fan coil at standard condition (W).

ΔI_m —— Actual air treatment enthalpy difference of a fan coil (W/kg)

ΔI_H ——Air treatment enthalpy difference of a fan coil at standard condition (W/kg)

m —— Correction Coefficient

Airflow based type selection

Select a fan coil based on the air conditioning flow calculated by the cooling load of air conditioning and the actual air treatment enthalpy difference of the fan coil.

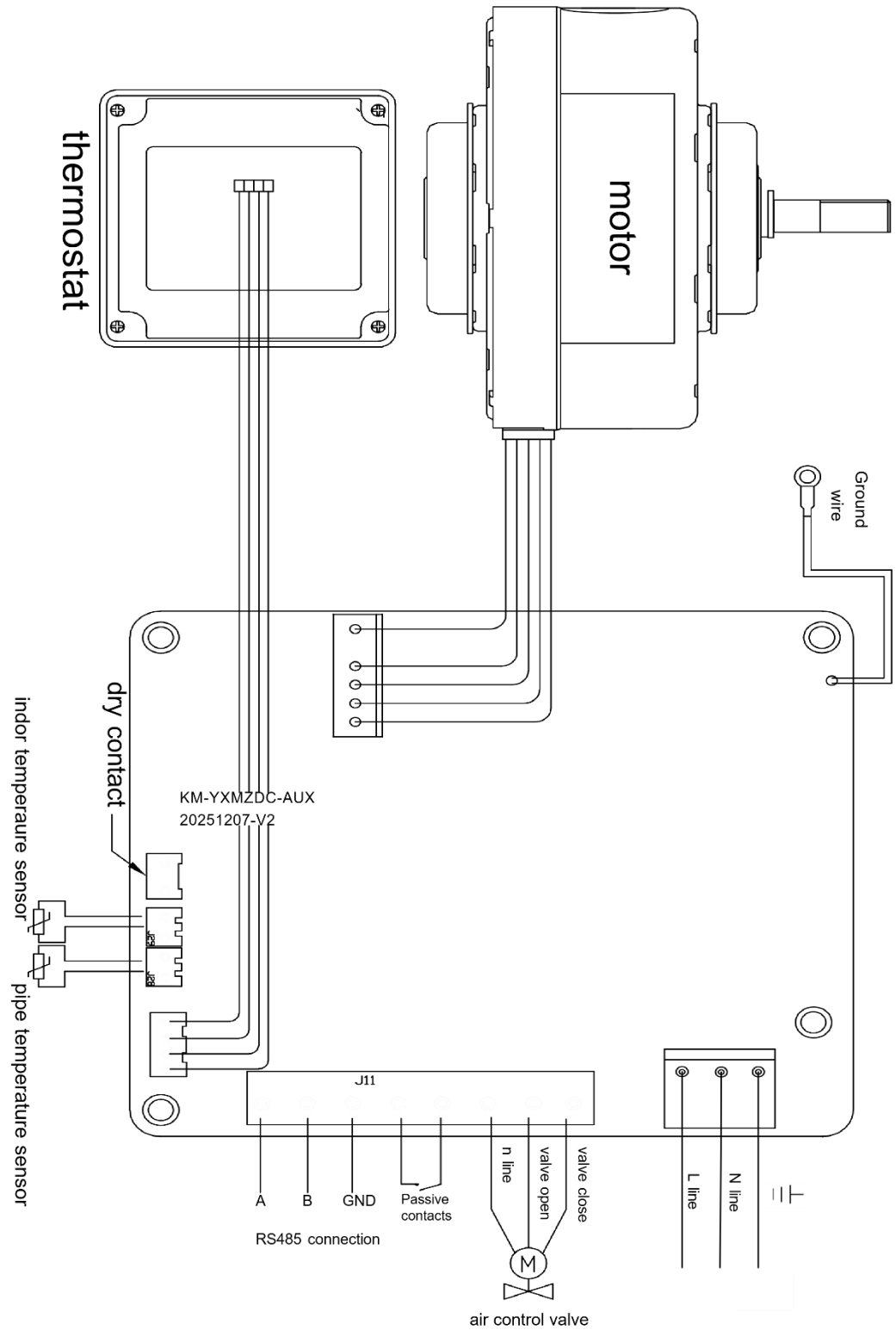
$$G = Q / \Delta I_m \cdot (W)$$

Where: G ——Air conditioning flow kg/h

Besides, when the water supply temperature, temperature difference of supply and return water, water supply and inlet air temperature are different than those of the standard condition, further correction is required based on the information.

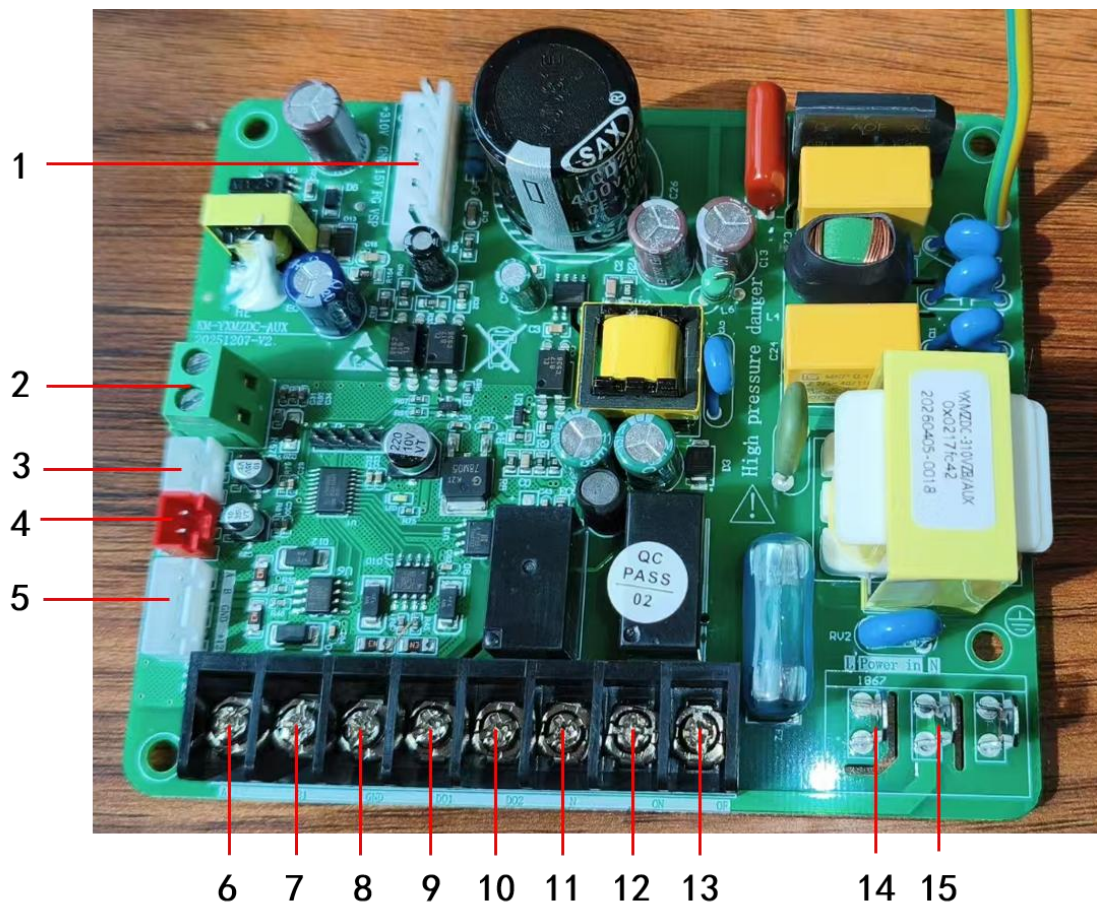
7. Wiring diagram

AFC-100CO/4A1, AFC-200CO/4A1, AFC-300CO/4A1, AFC-400CO/4A1



8. PCB Port Introduction

AFC-100CO/4A1, AFC-200CO/4A1, AFC-300CO/4A1, AFC-400CO/4A1



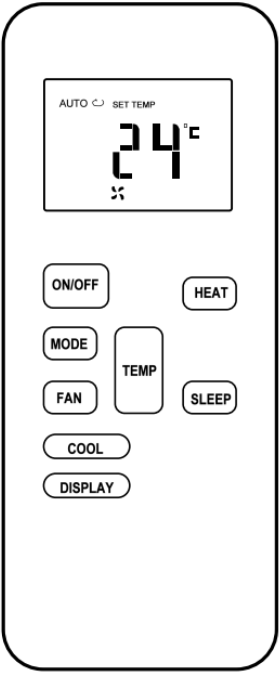
1	Fan motor	9	D01
2	Dry contact (optional)	10	D02
3	Indoor temperature sensor	11	N
4	Pipe temperature sensor	12	Valve open
5	Thermostat	13	Valve close
6	A	14	L line
7	B	15	N line
8	GND	9+10	Passive contacts

Please note: If the Dry Contact function is not optional, the PCB has no port for it.

9. Controller

IDU Type	Standard	
AFC-100CO/4A1 AFC-200CO/4A1 AFC-300CO/4A1 AFC-400CO/4A1	Remote controller	Thermostat
		

9.1 Remote controller



Buttons Description

1. ON/OFF Button

* Press this button to turn on/off the unit.

2. TEMP Button

* Temperature increase or decrease.

Note: The temperature cannot be set in fan mode.

Cooling mode temperature is adjustable from a minimum of 8°C up to room temperature.

Heating mode temperature is adjustable from a maximum of 39°C down to room temperature.

3. HEAT Button

* Press this button to enter “HEAT” mode quickly.

After pressing, it directly enters heating mode at 39°C with auto fan speed.

4. COOL Button

* Press this button to enter “COOL” mode quickly.

After pressing, it directly enters cooling mode at 16°C with auto fan speed.

5. MODE Button

* Press this button, you can select operation mode as follows:

Fan→Cool→Heat→Fan

6. FAN Button

* With the unit on, press this button to adjust the fan speed of the unit.

Low, medium, high, corresponding to the fan speed of the thermostat 1/3/5 on the FCU.

7. DISPLAY

* When the thermostat light is on, press this button to turn off the screen.

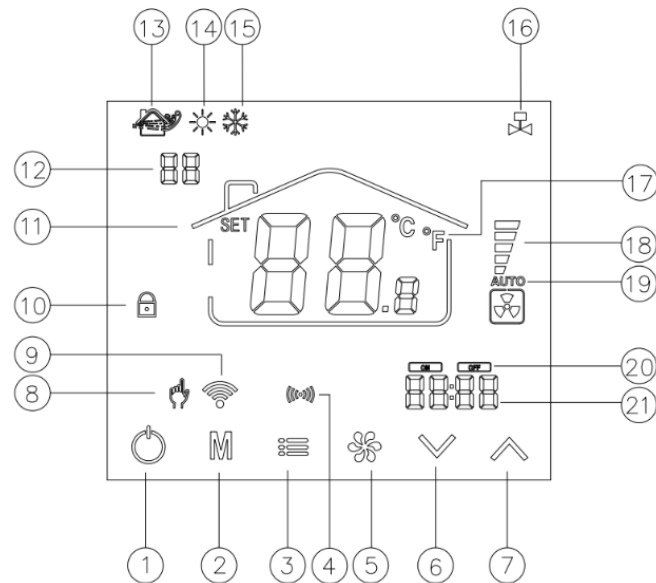
8. SLEEP Button

* Press this button, the set temperature and mode will remain unchanged, and the fan speed will be reduced to the lowest setting.

Note:

The sleep function cannot be activated in fan mode.

9.2 Thermostat



No.	Function	No.	Function
1	Power	12	Fault code display zone
2	Mode	13	Fan mode
3	Timer	14	Heat mode
4	Communication icon	15	Cool mode
5	Fan speed (long press lock the display)	16	Valve open icon
6	Down	17	°C/°F
7	Up	18	Fan speed display area, more cell faster speed
8	Manual mode icon	19	Auto fan icon
9	WIFI icon	20	Timer icon
10	Lock icon	21	Time display area
11	Temperature display area		

◇Key Description

1.Power button

Press this button to turn on/off the unit.

2.Mode key

Short press the M key to switch working modes, fan, cooling and heating mode. Press and hold the M key to enter time setting.

3.Timing key

Long press to activate or deactivate the auto timer, short press to set the timer duration.

4.Down key

adjust the set temperature, it is minus.

5.Up key

adjust the set temperature, it is plus.

6.Fan speed key

Short press to adjust the wind speed and automatically control the wind speed status. Long press the wind speed key to lock or unlock the keyboard.

9.3 Parameter setting

In the shutdown state, press and hold the **M** key to start the standard parameter setting items.

(As following form)

No.	Function	Data	Function	Default	Note
1F	485 communication address	0-99		1	
2F	Temperature sensor location selection	0-1		0	Selection is not supported
3F	Set max temperature	0-55°C		39°C	
4F	Set min temperature	0-55°C		8°C	
5F	Temperature Calibration	+9°C	+: for up -: for down	0°C	
6F	Temperature control differential	1-5°C		1°C	
7F	anti-cold wind temperature	0-50°C		28°C	
8F	Anti-freeze	0-1	0: off 1: on	0	After turning on antifreeze, The unit start when the water temperature is $\leq 4^{\circ}\text{C}$ and stop when the water temperature is $\geq 7^{\circ}\text{C}$
9F	Cooling mode with anti-heat air	0-25°C	0: close function	15	
10F	Standby backlight brightness	0-100	0: close 100: total bright	20	
11F	Screen off selection	0-1	0: Keep the screen on 1: after 30s screen off	0	
12F	Fan start time at set temp interval	1-240 min		5	
13F	Intermittent start-up fan running time	0-30 min	0:close this function	1	

14F	Dry contact mode selection	0-2	0: Disable this function 1: On/off control 2: Cool/Heat mode switching	0	Optional
15F	Dry contact logic selection	0-1	0: Closed = Power On / Cool mode 1: Closed = Power Off / Heat mode	0	Optional

After shutting down, long press the **power** button + **up** button to start the function setting.

No.	Function	Data	Function	Default
01E	Show EE reminder			
02E	Time function selection	0-1	0: No time function 1: Timed on/off switch	1
03E	Fan off selection	0-2	0. When the set temperature is reached, the fan and valve will both be turned off 1. When the set temperature is reached, the fan will not be turned off for cooling and only the valve will be turned off. The fan will be turned off for heating and the valve will be turned off. 2. When the set temperature is reached, the fan will not be turned off, only the valve will be closed.	0
04E	Powered on, on/off selection	0-2	0. Restores pre-power state 1. Auto turn On 2. Stay turn Off	0
05E	Switch °C/°F	0-1	0 show °C, 1 show °F	0

9.4 WIFI connection

1.App download

The control software can be downloaded and installed as follows.

- ①For mobile devices such as smart phones and tablets, search and download "Smart Life" from Google Play or App Store and install it.
- ②You can also scan the "QR code" below, which will automatically direct you to the download interface for installing the software.
- ③Follow the instructions on the app step by step.

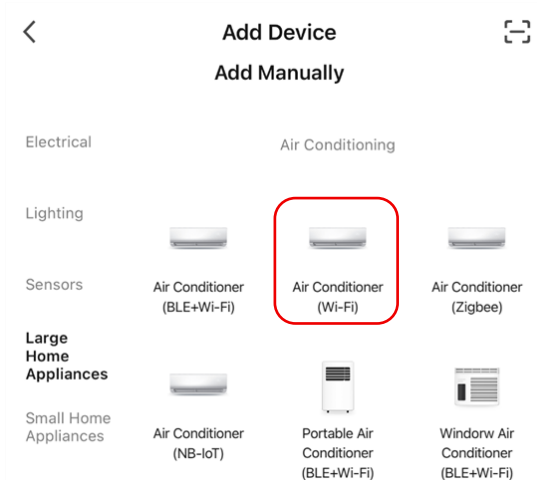
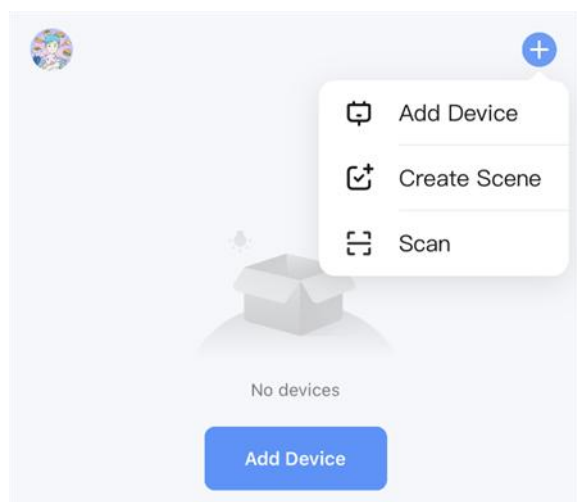


2.Connection

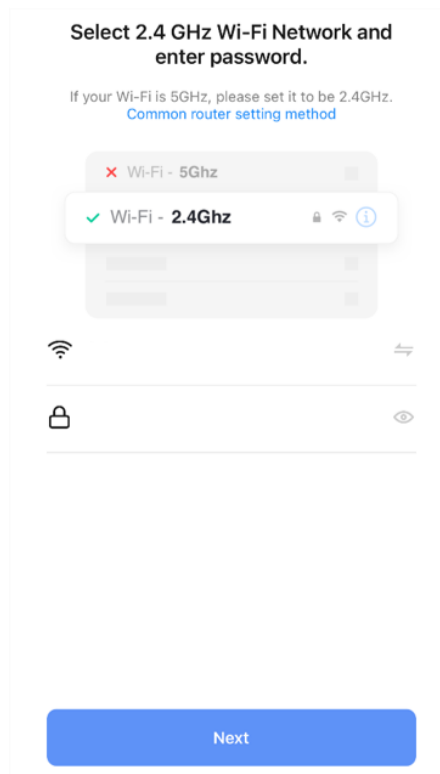
- ①Place the device next to your WIFI router. Connect your smart phone to Wi-Fi.

Note: This device can only be used with a 2.4GHz router.

- ②Open the "Smart Life" APP and log into your account.
- ③Access the main interface of the application. Press '+' you can directly select 'Add device' and then select the 'air conditioner (Wi-Fi)' in 'Large home appliances'.



④Set the 2.4GHz Network, enter the Wi-Fi password and click "Next"

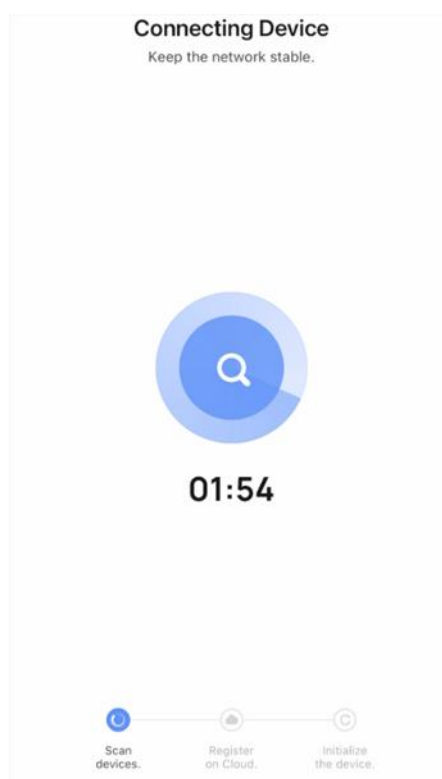
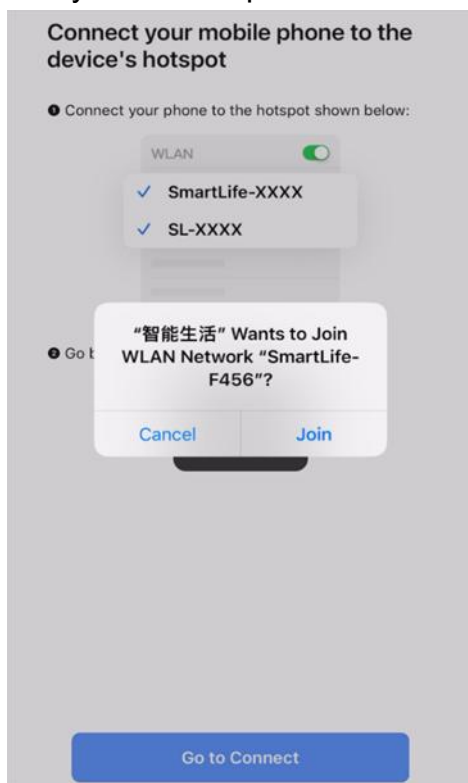


⑤Reset WIFI: When the unit is running, press and hold the "Power" key and "up" key at the same time, When the WIFI icon flashes quickly (the WIFI icon flashes twice in 1 second), reset successfully.

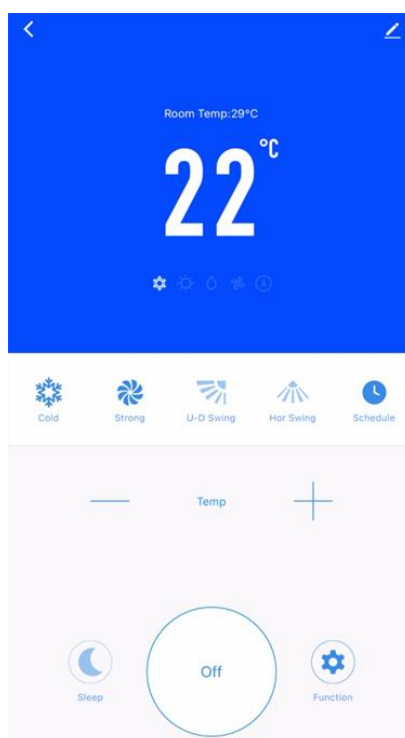
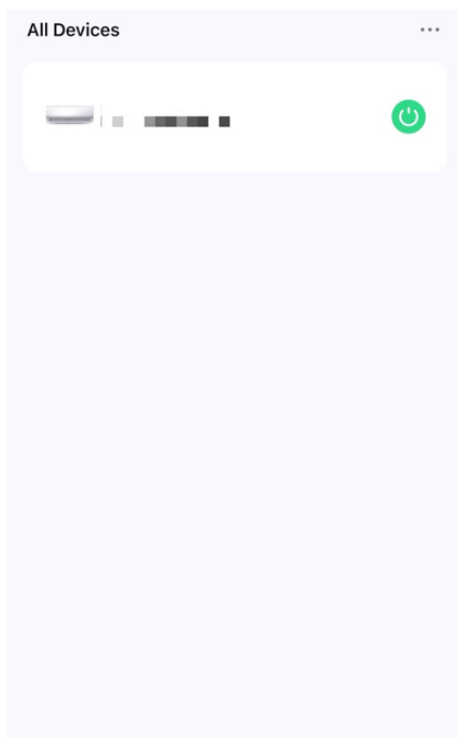


Press and hold both buttons at the same time

- ⑥ Connect your mobile phone to the device's hotspot, then back to the APP.



- ⑦ Set up successfully, you can now use the APP to control the unit.

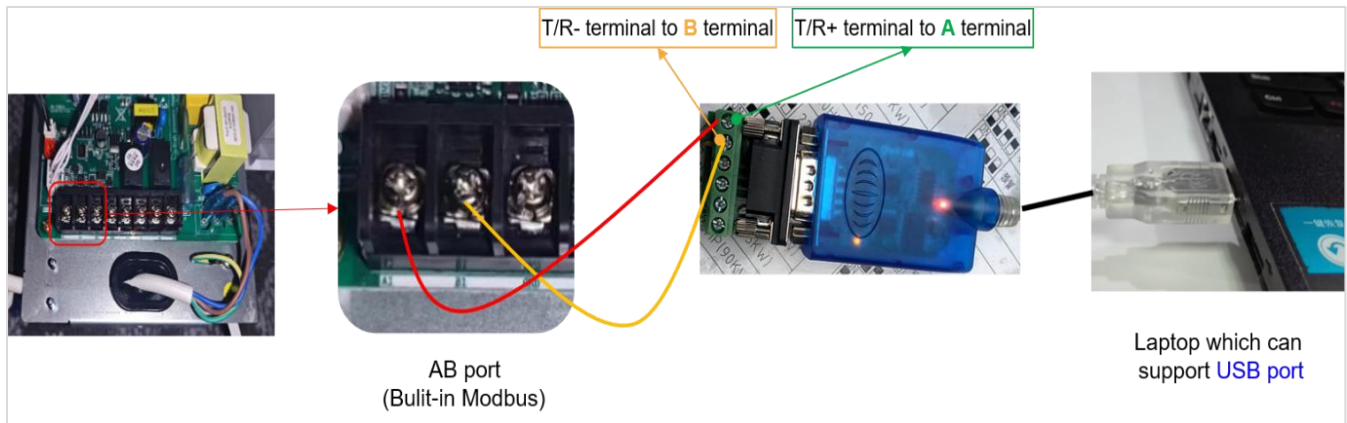


10.Modbus

10.1 Modbus connection

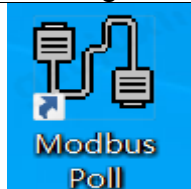
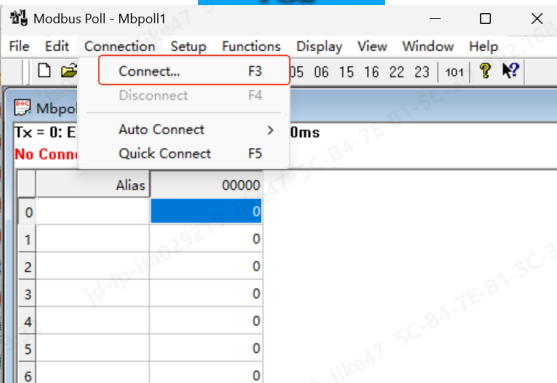
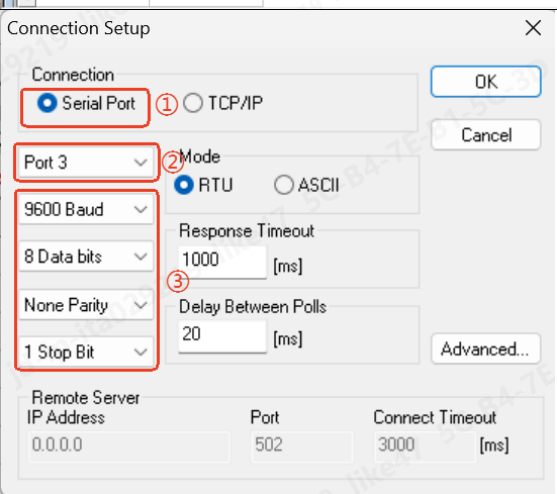
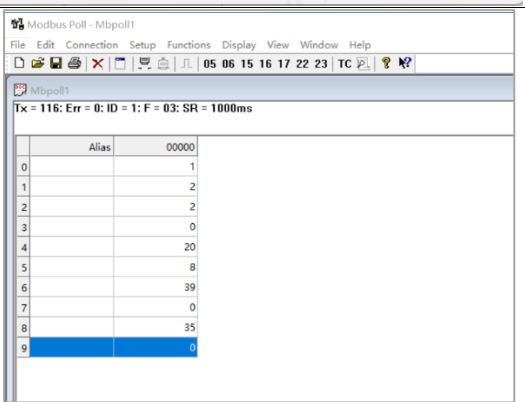
As shown in the figure, Modbus is built-in the AB port. You can connect one end of the RS485 converter to the AB port and the other end to the computer.

Note: Connect A to T/R+ and B to T/R-.



10.2 Modbus software test

You can use the Modbus Poll software to test its functionality.

Steps	Description	Images
1	Open the test software of Modbus Poll	
2	Choose 'Connect ...' Button, Then enter 'Connection Setup'.	
3	①. Choose the “Serial Port”; ②. Input the correct port number; ③. Confirm the protocol setting. Then, press 'OK'.	
4	We can see that Modbus data is being read. For example, address 0 has a value of 1, meaning the unit is turn on. For more information, please see the table below – Modbus Protocol.	

10.3 Modbus protocol

Communication Settings: 9600,n,8,1

Minimum Interval: >200 ms

Supported Function Codes: 0x03 (Read Holding Registers), 0x06 (Write Single Register), 0x10 (Write Multiple Registers)

Address	Readable	Writable	Data	Definition	Note
0(0x0000)	0x03	0x06 0x10	0-1	0: OFF 1: ON	
1(0x0001)	0x03	0x06 0x10	0-3	0: Cooling 1: Heating 2: Fan	
2(0x0002)	0x03	0x06 0x10	1-5	1: Maximum 2: High 3: Medium 4: Low 5: Minimum	
3(0x0003)	0x03	0x06 0x10	0-1	0: Manual Fan Speed 1: Auto Fan Speed	
4(0x0004)	0x03	0x06 0x10	5-55	Set Temperature	Between the upper and lower limits
5(0x0005)	0x03	0x06 0x10	5-55	Lower Limit of set temperature	Must be less than the upper limit
6(0x0006)	0x03	0x06 0x10	5-55	Upper Limit of set temperature	Must be greater than the lower limit
7(0x0007)	0x03	0x06 0x10	0-2	Anti-freeze: 0: Off, 1: On	
8(0x0008)	0x03	0x06 0x10	0-50	anti-cold wind temperature	
9(0x0009)	0x03	0x06 0x10	0-2	0: Stops the fan when the set temperature is reached 1: when the set temperature is reached, stops the fan in Heating mode only 2: when the set temperature is reached, the fan continues to run	
10(0x000a)	0x03	0x06 0x10	0-18	Ambient temperature deviation correction	9=0, Correction value: ±9
11(0x000b)	0x03	0x06 0x10	0-1	Child Lock: 0: Off, 1: On	

12(0x000c)	0x03	0x06 0x10	1-5	Temperature control return difference	
13(0x000d)	0x03	0x06 0x10	0-2	0. Restores pre-power state 1. Auto turn On 2: Stay turn Off	
14	0x03	0x06 0x10	0-99	RS485 address	
15	0x03	0x06 0x10	0-200	Set Speed to Level 1	A setting of 200 results in an actual operating speed of 2000 RPM. The recommended setting range is between 30 and 140
16	0x03	0x06	0-200	Set Speed to Level 2	
17	0x03	0x10	0-200	Set Speed to Level 3	
18	0x03	0x06	0-200	Set Speed to Level 4	
19	0x03	0x10	0-200	Set Speed to Level 5	
20	0x03		0-90	Ambient temp	
21	0x03		0-90	Pipe temp	
22	0x03		0- 2000	Current speed	
23	0x03		0- 2000	Target Speed	
24	0x03		0- 65535	Bit0: Ambient Temperature Sensor Fault Bit1: Pipe Temperature Sensor Fault Bit2: Valve Output Status Bit3: Dry Contact Closure Status Bit4: Anti-freeze Protection Active Bit5: Anti-Cold wind Prevention Active Bit6: Fan Fault	
25	0x03		0-5	Current Fan Speed Level	

11. Installation

11.1 Equipment acceptance check

Each unit is individually packaged in cartons to prevent damage during transportation, loading and unloading, and installation on the construction site. To ensure that no damage occurred during shipping, please check the following steps upon receipt:

1. Before signing for receipt, please check whether there are any abnormalities in each unit, whether the corners of the carton are intact, and whether there are any obvious signs of damage;
2. If there are obvious signs of damage to the carton, please open it immediately and check the condition of the unit itself. If the main body is indeed damaged, please indicate the actual situation on the receipt and reject the goods. Also check out other accessories;
3. Check whether there is any hidden damage to the unit;
4. If hidden damage is found, please do not move the unit at the receiving site. The recipient is obliged to prove that the hidden damage did not occur after delivery. If hidden damage is found, stop unloading and take photos to keep the record;
5. If any damage is found, please notify the carrier and ask the carrier and recipient to conduct a joint inspection;
6. Please do not repair by yourself before inspection and confirmation by the carrier's representative;
7. After confirming that there is indeed damage, contact the relevant personnel for replacement.

11.2 Installation Precautions

To ensure smooth installation and operation, please check the following items before installing the unit:

1. The unit must have enough space for installation and maintenance. Please refer to the overall dimension drawing for unit dimensions. An inspection space must be left for routine maintenance;
2. Please confirm the location of pipelines and electrical wiring before installation;
3. Please check whether the lifting position structure can bear the weight of the unit;
4. All units must be installed horizontally to ensure smooth drainage and normal operation;
5. The insulation of water valves and pipelines must be provided by the installation contractor.

Note: When adjusting the level, you need to refer to the casing of the fan coil because its coil and water tray have been designed to be horizontal to the casing to facilitate drainage.

11.3 Water Pipe Connection

◇Chilled water pipe connection

1. Use a 3/4" external threaded joint to connect the chilled water pipe to the unit. It is recommended to use a flexible connecting pipe to connect and seal it with a raw material tape. The water inlet of the fan coil is at the bottom and the water outlet is at the top. Double wrenches must be used when taking over the pipe. Operate to avoid excessive force, which may cause the copper pipe to deform, crack, or leak. The dimensions of the coil interface are shown in the overall dimension diagram.
2. If the unit is installed in a high temperature and high humidity environment, an electric valve linked to the thermostat must be installed on the water inlet pipe of the unit to prevent condensation on the unit.
3. A water filter should be installed at the inlet of the chilled water pump and the water inlet pipe of the unit to avoid dirt and blockage.

◇Condensate water pipe connection

The condensate water pipe can be made of PVC material or steel. The condensate water pipe should be connected flexibly. The length of the hose should not be more than 300mm. The material should be transparent rubber hose, and it should be tightened tightly with a hose hoop to prevent leakage. The slope of the drain pipe is recommended to be at least 1:50.

Note: Chilled water pipes and condenser water pipes must be insulated, and special attention should be paid to the end treatment of the insulation material to prevent condensation during refrigeration operation.

11.4 Electrical wiring

Please connect the power supply strictly in accordance with the requirements.

The grounding point provided by the unit must be connected to the building's grounding system. All electrical connections must comply with local electrical installation codes.

Before servicing the unit, disconnect the power supply to prevent personal injury.

The material of the connecting wire should be copper, other conductors may cause overheating and damage to the unit.

11.5 Installation check and startup

Installation check

Next, check and confirm the previous installation steps. The installer must check and confirm again according to the following requirements.

Before unit inspection, the power supply needs to be disconnected to prevent personal injury.

1. The connection between the unit, the expansion hook and the wall is firm;
2. The water pipes are connected, and the valves and inlet and outlet pipes have strict insulation measures and no leaks;
3. The drainage pipes are connected, strict insulation measures are in place, and there is no leakage;
4. There is no fallen debris in the unit;

5. The electrical connection is completed, and there are no bad contacts, missed connections, wrong connections, etc.;
6. If other building decorations are still under construction, the appearance of the unit must be protected;
7. Have read the instructions, are basically familiar with the unit, and can operate it.

Start running

1. Before operating the unit, please remove debris from the condensate water pan, the fan volute and around the unit.
2. Before running the unit, please reconfirm whether the power supply specifications meet the machine requirements.
3. Before the first operation, the water inlet and outlet valves of the unit should be closed, and after cleaning the pipeline system, the water inlet and outlet valves should be opened again.

Exhaust

When the system is first supplied with water, some gas may remain in the coil piping system, and the remaining gas will be concentrated at the top of the coil. The water outlet joint of the coil is equipped with a manual exhaust valve. When air remains in the coil, it will make abnormal noise. Turn the exhaust valve knob to release the air. When the knob is too tight, you can use pliers or a flat-blade screwdriver to twist it and turn counterclockwise until a steady stream of water flows out of the exhaust valve, then tighten the knob.

Unit application and operation precautions

1. The temperature of the cold water entering the unit should not be lower than 5°C, otherwise it may cause condensation in the unit. The temperature of the incoming hot water should not be higher than 80°C (60°C is commonly used), otherwise it may cause corrosion of the copper tubes of the unit's heat exchanger.
2. This product is only used as a comfort air conditioner. It should not be used in special occasions or installed in areas with corrosive gases.
3. Do not stop the unit while continuously supplying cold water (except if the unit is equipped with an electric valve), otherwise it may cause condensation on the surface of the unit and nearby objects. If the unit stops running for more than 8 hours, please close the inlet and outlet valves and stop water supply.
If the water supply cannot be stopped, please adjust the unit to low speed.
4. When the unit is installed and used in an environment with a humidity greater than 80%, the unit should be insulated, otherwise water may drip from the unit.
5. Please install the unit away from frequently opening and closing doors, open ventilation windows and places where steam is generated.

Note: For more information, please refer to the installation manual

12. Trouble shooting

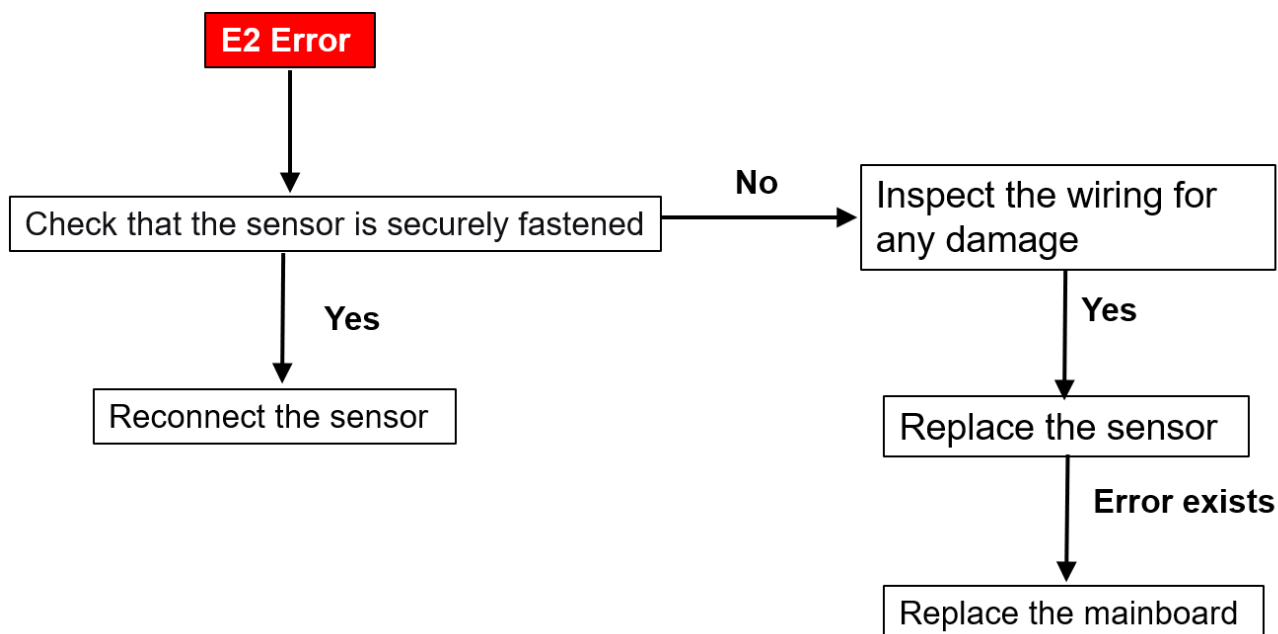
12.1 Failure code

When the FCU is faulty, the thermostat will display corresponding error codes in accordance with the specific condition.

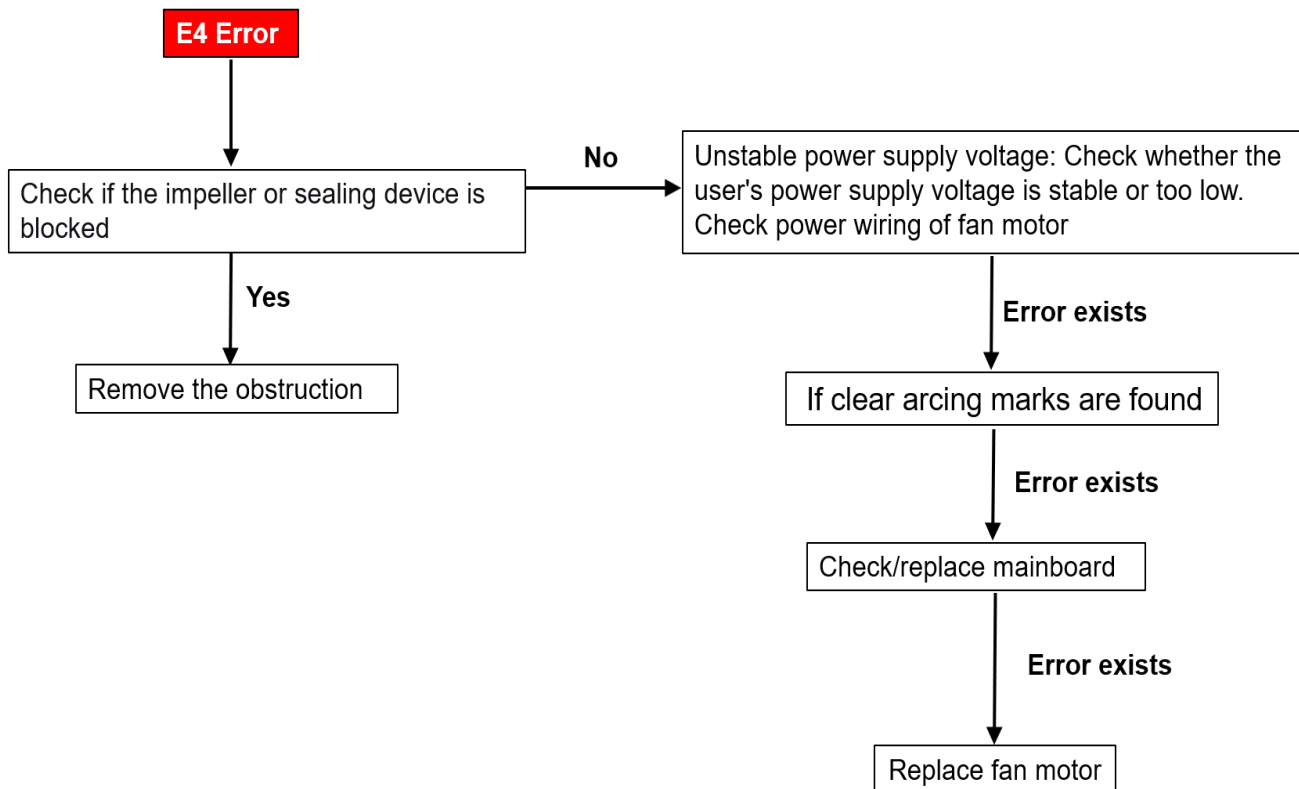
Failure cause	Display code
Room temperature sensor fault	E1
Coil temperature sensor fault	E2
Communication failure	E3
Fan motor fault	E4

1.E2 Trouble shooting

Logic: The main board cannot detect the coil temperature, or the detected value exceeds the allowable limit.



2.E4 Trouble shooting



12.2 Fault Handling

Problem	Cause	Solve
Does not work	Power outage or no power on	Wait for power supply or turn on power
	Power plug is loose	Plug in the power plug
	Motor broken	Change motor
Abnormal noise or vibration from the unit	Damaged fan bearings	Replace motor
	Fan motor fixing screw loose	Fastening screws
	Damaged volute or fan	Replace volute and fan
	There is foreign matter in the air duct or at the air outlet.	Remove foreign matter
	The air outlet is blocked	Remove blockage
Water Leakage	The water outlet of the drain pan is clogged	Remove blockage
	Pipes and fittings are not tightly insulated	Insulation
	Uneven installation	Leveling
	Heat exchanger freeze crack	Repair or replace
	The fan stops running but the unit continues to provide cold water	Turn off the electric valve of the unit or set the unit to low speed.
	High ambient air humidity	Dehumidify and prevent hot and humid air from entering the room
	Exhaust valve loose	Tighten the exhaust valve
Insufficient cooling (heating)	The electric valve of the unit does not open	Start the electric valve of the unit
	The circulating water pump is not turned on and cold or hot water does not flow.	Turn on the circulation pump
	Heat exchanger fins clogged or reversed	Clean and repair heat exchanger
	The set temperature of the cold water of the unit is high or the set temperature of hot water is low	Adjust the set temperature of the external unit
	Water inlet valve filter dirty	Clean or replace

Update record

Version	Modification	Date
V1	New content: Slim FCU	2025.09
V2	Modify the function description	2025.09
V3	Dimensions and parameters modified	2025.11
V4	Add optional: Dry contact function	2026.01
V5	Add instructions for the Modbus connection	2026.04
V6	Modify the wiring diagram and PCB drawing: Add dry contact port description	2026.05