Product description:
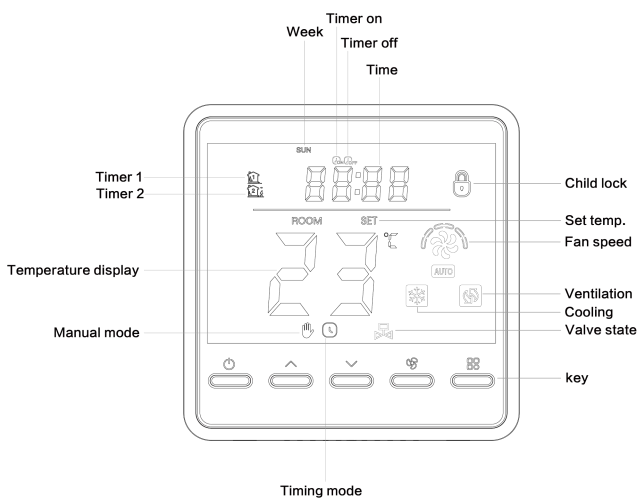
KF-700B-WK thermostat is suitable for indoor temperature control of central air conditioning fan coil systems or air duct systems. By comparing the indoor temperature with the set temperature, it controls the opening and closing of the fan coil units, underfloor heating valves, or water valves at the end of the air conditioning system, achieving the goal of regulating indoor temperature, comfort, and energy conservation.

Buttons function description:

⌁ Key: fan speed key
⊞ Key: mode key
⌃ Key: parameter up key
⌄ Key: parameter down key
⏻ Key: On/off key

Display description:


Operating instructions:

1. Power on/off: press the ⏻ button to turn on the controller, and press the ⏻ button again to turn off the controller.

2. Switching between cooling and ventilation: Short press the "⊞" button to switch between cooling mode and ventilation mode (choose one of them). Cooling mode ❄ is displayed, and ventilation mode ⌁ is displayed.

3. Fan speed adjustment: Short press the "⌁" button to adjust the fan speed, including low speed, medium speed, high speed, and automatic (there's

no automatic fan speed in ventilation mode). Under automatic fan speed, when the indoor temperature differs from the set temperature by less than 1 ℃, the fan operates at low speed; When the indoor temperature differs from the set temperature by 2 ℃, the fan operates at medium speed; When the indoor temperature differs from the set temperature by 3 ℃ or more, the fan will operate at high speed.

4. Set temperature adjustment: Short press the "⌃" or "⌄" keys to adjust the set temperature. Adjust the temperature by 1 ℃ for each press, and the set range is 15-30 ℃.

5. Switching between manual and programming modes: Press and hold the "⊞" key for 3 seconds to switch between manual mode and programming mode. The manual mode displays "🖐" and the programming mode displays "🕐"; The manual mode operates continuously at the current set temperature, while the programming mode operates automatically at the set on/off time and temperature.

6. Programming mode parameter settings: Press and hold the "⊞" key for 5 seconds to enter the time and programming mode parameter settings. Short press ⊞ to switch in sequence between the current week, current hour, current minute, scheduled startup hour, scheduled startup minute, scheduled shutdown hour, scheduled shutdown minute, and temperature setting within the scheduled time period. There are three time periods in total, Monday to Friday (MON-FRI), Saturday (SAT), and Sunday (SUN). Each time period can be set with two sets of on/off times. Working logic: The current time is equal to the startup time, and the controller automatically starts up; The current time is equal to the shutdown time, and the controller automatically shuts down. The startup time is equal to the shutdown time, and the timer function is invalid. If the current time is within the scheduled time (between the start time and the shutdown time), the machine will run at the temperature set in the time period. If the current time is outside the scheduled time, the machine will run at the temperature set in the manual mode.

For example:

From	Timer 1			Timer 2		
Mon.	On time	Off time	Set temp.	On time	Off time	Set temp.
To Fri.	8:00	12:30	25℃	14:10	22:00	26℃

If it is Monday, when the time is counted from 7:59 to 8:00, the controller will automatically turn on, operate at 25℃ between 8:00-12:30, automatically shut down at 12:30, be shut down between 12:30-14:10 (can be turned on manually), automatically turn on again at 14:10, operate at 26℃ between 14:10-22:00, and automatically shut down at 22:00.

7. Child lock function: Press the "∧" and "∨" keys simultaneously for 3 seconds to turn on or off the child lock function. The "🔒" icon will light up when the child lock is opened, and the buttons function will be invalid when the child lock is turned on.

8. Screen saver time: When there is a button operation, the backlight will light up. If there is no button operation for more than 50 seconds, the backlight will automatically turn off.

9. Valve output logic:

Cooling mode: If the current temperature ≥ the set temperature + Hysteresis value, the valve will open and the "⛋" icon will light up. If the current temperature < the set temperature - Hysteresis value, the valve will close.
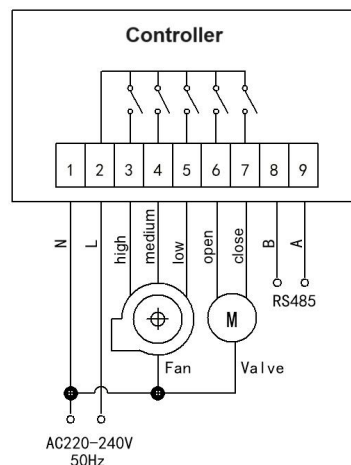
Ventilation mode: valve closed.

9. Advanced option settings: In shutdown mode, press and hold the "🌀" and "🔢" keys for 5 seconds to enter advanced option settings. Short press "🌀" to switch settings, and adjust corresponding parameters through the "∧" and "∨" keys.

Set Items	S/N	Parameter range	Meaning	Default
Software version	1	100-999	V1.00-9.99	103
RS485 address	2	1-250	communication address	1
Temp. calibration value	3	-5℃-+5℃	-5℃-+5℃	0
Hysteresis value	4	1℃-2℃	1℃-2℃	1
Fan status after temperature reaches	5	0-1	0: close 1: maintain	1
Power on status	6	0-2	0:off 1:on 2:memory	2

Specification：

* Dimension: 86×86×40mm
* Storage temperature: -10℃ --- +60℃
* Fixing hole distance: 60mm(standard)
* Storage humidity: ≤60％RH
* Standby Power: ≤3.0W
* Temperature display range: 0℃ -- +50℃
* Rated voltage: 100—240VAC 50/60Hz
* Operating temperature: 0℃ -- +50℃
* Life : ≥ 5 years
* Wiring terminal: Max 2.5 mm² wire
*Operating humidity: 5%RH——90%RH (Non-condensing)

Wiring diagram:

Communication interface:RS485 MODBUS RTU

1. Communication serial port configuration: 8-bit data bit, 1-bit stop bit, no verification, baud rate: 9600bit/s

2. Support instructions: 0X03   0X06   0X10, default device address: 0x01

3. Register address

Name	Register address (2 bytes)	Register value range (2 bytes)	Attribute	Remarks
Power on/off	0x0000	0x00 power off 0x01 power on	read/write	
Modes	0x0001	0x00 cooling 0x02 ventilation	read/write	
Manual/Programming	0x0002	0x00 Manual 0x01 Programming		
Set fan speed	0x0003	0x01 Low 0x02 Medium 0x03 High 0X04 Auto	read/write	
Set temperature	0x0004	15-30℃	read/write	
Child lock	0x0005	0x00 turn off 0x01 turn on	read/write	
Indoor temp.	0x0006	0-50℃	Only read	
Current actual fan speed	0x0007	0x00 Stop 0x01 Low	Only read	
Valve status	0x0008	0x00 closed 0x01 opened	Only read	