

E51...FCU Thermostat with LCD

Multi-functional intelligent digital thermostats are designed for controlling a 3-speed fan and an on/off valve actuator in 2-pipe/4-pipe FCU system, to meet up the adjusted indoor temperature.

Selection table:

Model	Application
E51.42	2-pipe FCU thermostat with LCD
E51.50	4-pipe FCU thermostat with LCD





Paramater :

- Voltage:AC230V(AC110V/AC24V available)
- Load:Imax 3A
- Power consumption:2W
- Setting range:5~45℃
- Switching differential:± 1℃ ,Adjustable
- Ambient temperature:5-45℃
- Protective housing:IP20
- Housing material:Anti-flammable PC





Daily use of the thermostat

1.ON/OFF and Timing ON function:

ON:Press  to trun ON/OFF.

Timing ON:Press  key and release then enter the timing setting,Press  key or  key to modify the timing (0~24 hour),Press  key again to quit setting.

2.User basic operation:


- 1)Modify the set temperature:Press the  key to modify the temperature value,setting range:5~45℃ .
- 2)Menu mode:Press  key to enter menu mode set under the ON mode,Press the  key in menu model or press  key after one cycle to quit the menu mode

4 Sub-menu in Menu mode:

- 1.Fan set
- 2.Sleeping set
- 3.Cooling,heating and themostatic mode
- 4.Timing OFF



1.Fan set:

Press  key to modify the fan operation mode and relative to the fan dependent control in advanced menu.
Speed:1)Manual fan(High,Mid,Low);
2)Auto fan

When the sensor in Err,the fan will close after keep last operation for 30s.When the sensor operate well,the fan speed operates as below:

- a.Fan independent control(3 fan is OFF in advanced menu)
Manual fan: Keep the set speed operation,do not affected by the temperature.
Auto fan: When closed the actuator valve,it will in low speed operation.The fan speed will be affected by the temperature when open the actuator valve.

- b.Fan dependent control(3 fan is ON in advanced menu)
When the actuator valve closed,fan will close after keep the last operation for 30s,the LCD display Auto when in Auto fan.Manual mode display the original set speed.The manual fan keeping the set speed when actuator valve open,the operation will not be affected by the temperature.
The auto fan speed will be affected by the temperature.

c.Actuator valve and Temperture




Cooling:(t for switch differential of room temperature)
Room temperature>set temperture +t,open the cooling valve and start cooling.
Room temperature<set temperature -t,close the cooling valve and stop cooling.
Heating:
Room temperature< set temperature-t,open the heating valve and start heating.
Room temperature>set temperature+t,close the heating valve and stop heating.
When in thermostatic,the cooling/heating valve will open/close automaticly with the change of the set temperature and room temperture.

d.Auto speed and Temperature

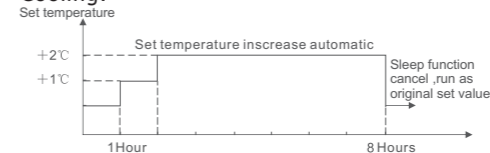
Set the switch differential 1℃ in advanced menu 1ADJ
Cooling:
High:Room temperature>set temperture +3℃
Mid:Room temperature>set temperture+2℃
Low:Room temperture<set temperture+1℃
None:Fan dependent control,room temperture< set temperture-1℃
Heating:
High:Room temperature<set temperature-3℃
Mid:Room temperature<set temperature-2℃
Low:Room temperature>set temperature-1℃
None:Fan dependent control,room temperature>set temperature+1℃

Thermostatic:When the thermostat works in cooling,the fan speed is as same as cooling.When the thermostat works in heating,the fan speed is as same as heating.

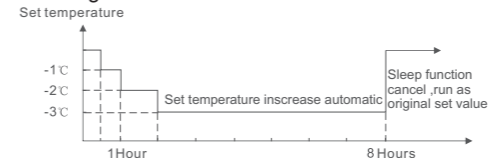


2.Sleeping set:Press  key to modify the sleeping mode,the sleeping function will not be activated when  flashing,the sleep function will be activated when  stop flashing,and the sleeping time is 8 hours.

Cooling:




Heating:








Installation

3.Cooling,Heating or Thermostatic:


Press  key to modify the operation mode.






-  ,Cooling mode,only cooling.
-  ,Heating mode,only heating.
-  Thermostatic mode ,which can heating and cooling at the same time,

 Flashing when cooling, Flashing when heating (Only 4-pipe FCU thermostat has thermostatic function)

4.Timing ON/OFF:

Press  key to modify the timing OFF,when the setting is not 0.0h,the timing open and display with temperature alternately.When the set is 0.0h,timing function closed,and do not display with temperture.(time modify range:0.0h-24h)

Advanced setting:(qualified person preferred)

Usually finish this operation in mounting.
Entering:Press key simultaneously press ON/OFF key when in OFFmode,then press key to enter the advanced menu.
Press  key can quit the current work mode in advenced menu.The modified parameter will save automaticly after 1 second the paremeter modified without operating.

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1. Adj temperature Measure and modify
Press ▲▼ to modify the current temperature, range:-5~5°C



2. DIF Switch differential set
Press ▲▼ to modify the current switch differential, rang:0.5~5°C,one step is 0.5°C



3. FAn Fan select
Press ▲▼ key to modify the current fan whether dependent control or not,fan dependent shows On,fan independent control shows OFF.The difference is that fan dependent control shows the fan will close the output when actuator valve closed.



4. PoF ON/OFF mode
Press ▲▼ to modify the ON/OFF mode, Display On shows entering ON mode when connecting power,OFF for close mode.

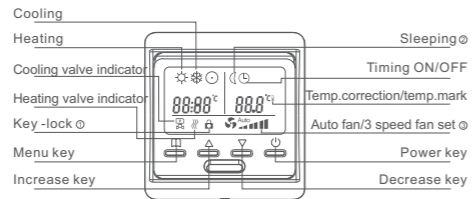


5. FAC Reset to factory setting
Press ▲ key for 3 seconds,the LCD display "----" shows reset the factory successful. The setting temperature is 25°C,work mode is cooling,sleeping function closed,timing fuction closed,connecting power enter OFF mode,switch differential is 1°C.

Function and display Specification

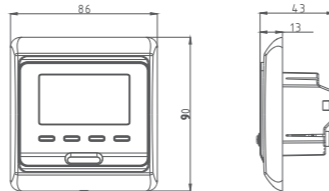
Sensor Err tips

When LCD display Err,the sensor brock circuit or short circuit,fan keeps the last operation for 30 seconds then turnoff.



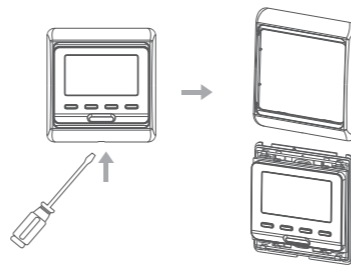
- ① Key-lock function:
Press ▲▼ key for 5 seconds at the same time,for key-lock or key-unlock
- ② Sleeping mode:
According to the comfort requirement of human,it will adjust temperature value automaticly,more detail please reference to the sleeping function.
- ③ Auto fan/3 speed fan set:
According to the temperture differential of measure and set temperture,it will adjust the speed automatic (fan dependent control reference to the advanced menu set)

Dimension:mm

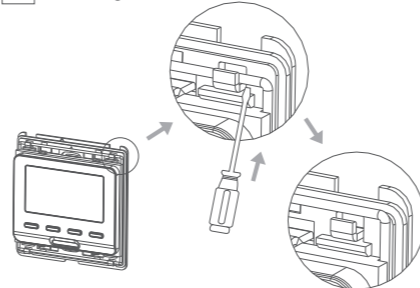


Mounting steps:

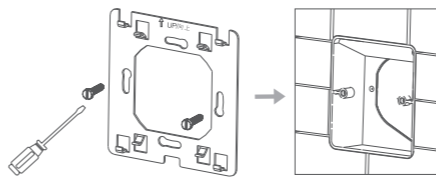
- 1 Release the front cover by screwdriver into bottom crack.



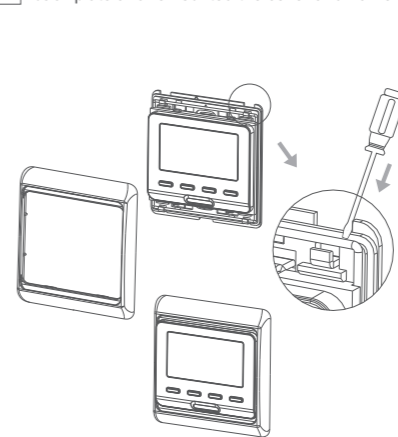
- 2 Take the back plate apart according to the blew diagram.



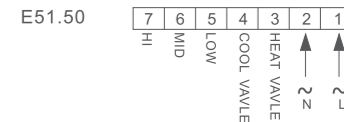
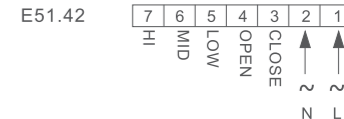
- 3 Mounted the back plate in the wall socket by screwdriver.



- 4 After connect the wires,the thermostat mounted on the back plate and remounted the cover and frame.



Connecting diagram.



Attention:
The thermostat is apply to the full load work mode at 2500m height above sea level,and the rated power of external load should be less than or equal to 80% rated power when between 2500m to 4200m height.

Installation