

T15FCT-4RS-IR-485 FAN COIL THERMOSTAT

Application: Cool/Heat, 3speed fan, Room Card, External Sensor, Remote controller

Installation and operation instructions

SPECIFICATION:

Electrical Rating.....100~240VAC 50/60HZ

Fan Relay Amps inductive.....8 (5) A

Heat/Cool Relay Amps inductive.....3 (2) A

Accuracy..... $\pm 0.5^{\circ}\text{C}$ (1 $^{\circ}\text{F}$)

Set point Temperature Range..... 5°C to 50°C

Dimensions.....120.9mm $\times$ 82.9mm $\times$ 28mm

FEATURES:

- New vertical design, crosswise installation or vertical installation
- Temperature adjustments are simple
- Display shows both set points and room temperature simultaneously
- Maintains the temperature to within 1 degree set point
- Auto fan with adjustable 3-fan speed.
- Permanent user setting retention during power loss, no batteries are required
- External sensor
- RS485 communication function

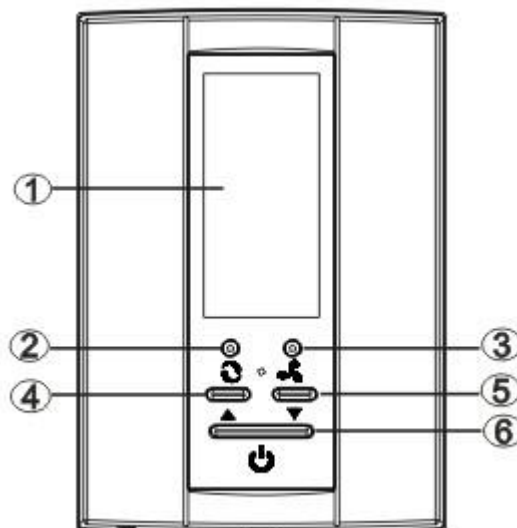
IMPORTANT SAFETY INFORMATION:

- Always turn off power at the main power source by unscrewing fuse or switching circuit breaker to the off position before installing, removing, cleaning, or servicing this thermostat.
- Read all of the information in this manual before installing this thermostat.
- Only a professional contractor should install this thermostat.
- All wiring must conform to local and national building and electrical codes and ordinances.

OPERATION

Thermostat Buttons and Switches

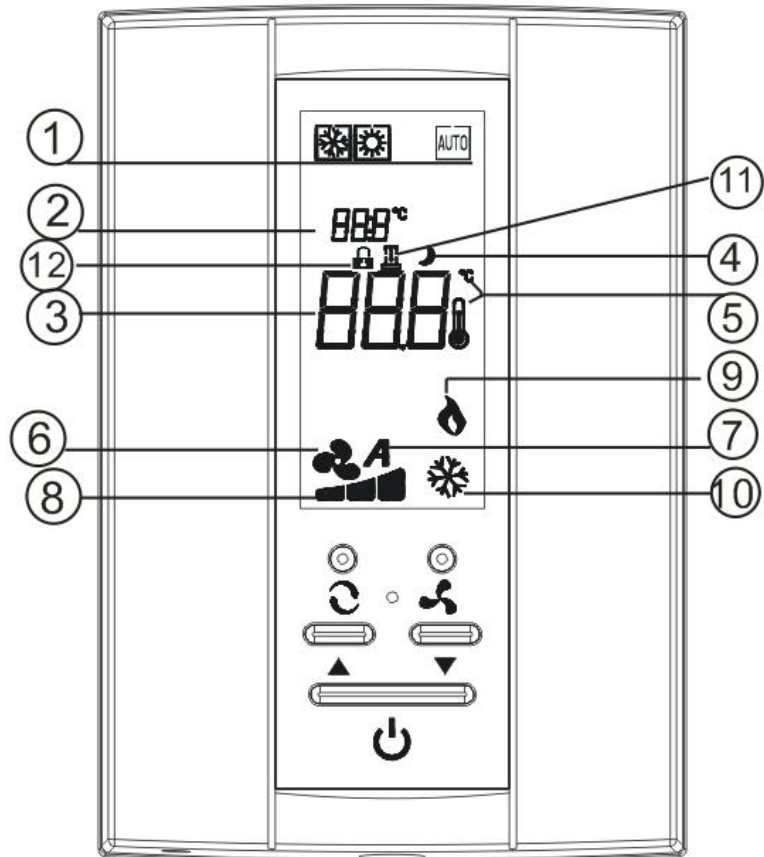
- ① Display area
- ② System button (COOL, HEAT)
In switch on state, long press this button for 3 seconds, can start or close sleep mode
In switch off state, long press this button for 3 seconds, can enter to menu setting
- ③ Fan speed option button (HI MED LOW AUTO)
In switch on state, long press this button for 3 seconds, will enter to switch off timer mode;
In switch off state, long press this button for 3 seconds, will enter to switch on timer mode
- ④ Raises temperature setting
- ⑤ Lowers temperature setting



- ⑥ Power button(In the control mode of two pipe , switch on and connect the external sensor, long press Power button for 3 seconds enter to query the external temperature)

The Display

- ① Shows working mode
- ② Shows setting temperature
- ③ Shows measure temperature
- ④ Shows sleep mode
- ⑤ Temperature unit mark
- ⑥ Shows fan speed option
- ⑦ Shows fan rotate in Auto speed
- ⑧ Shows fan speed option
- ⑨ Shows heating output
- ⑩ Shows cooling output
- ⑪ Shows room card mode



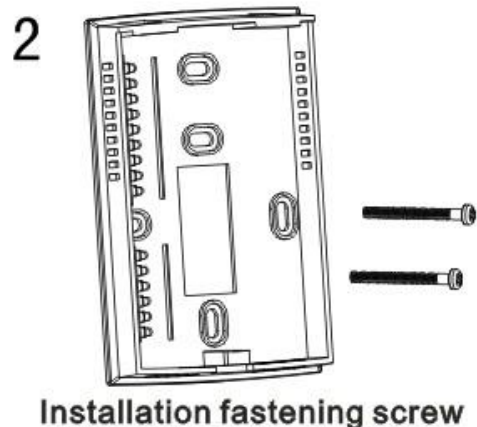
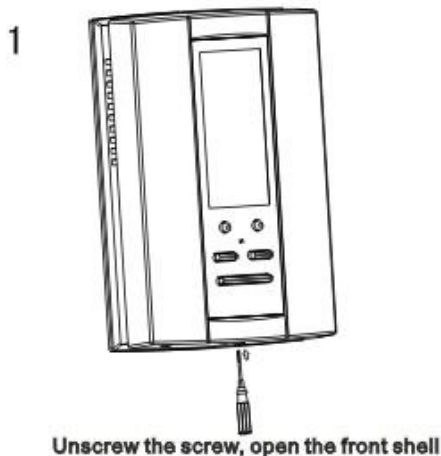
- ⑫ Shows child lock mark(At the same time hold down the“▲” “▼”button more than 3 seconds, the keypad locking, conversely, unlock.)

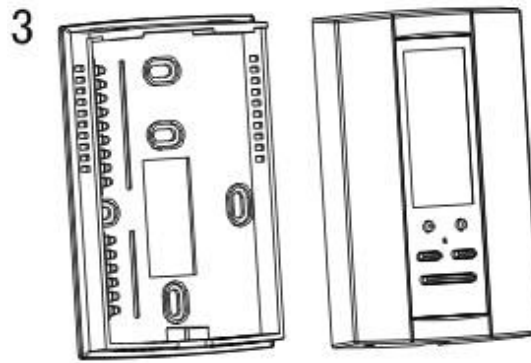
INSTALL THE THERMOSTAT

ATTACH THERMOSTAT BASE TO WALL

WARNING: ELECTRICAL SHOCK HAZARD

- **Turn off power at the main service panel by removing the fuse or switching the appropriate circuit breaker to the OFF position before removing the existing thermostat.**

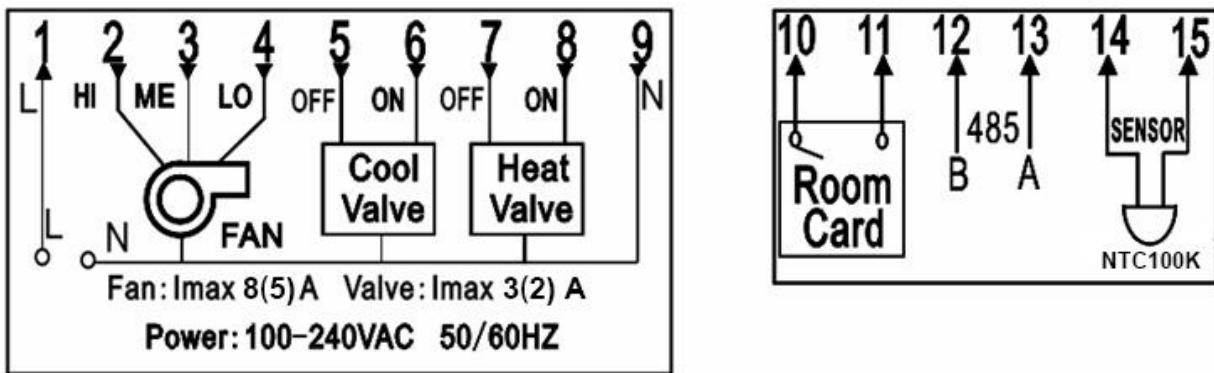




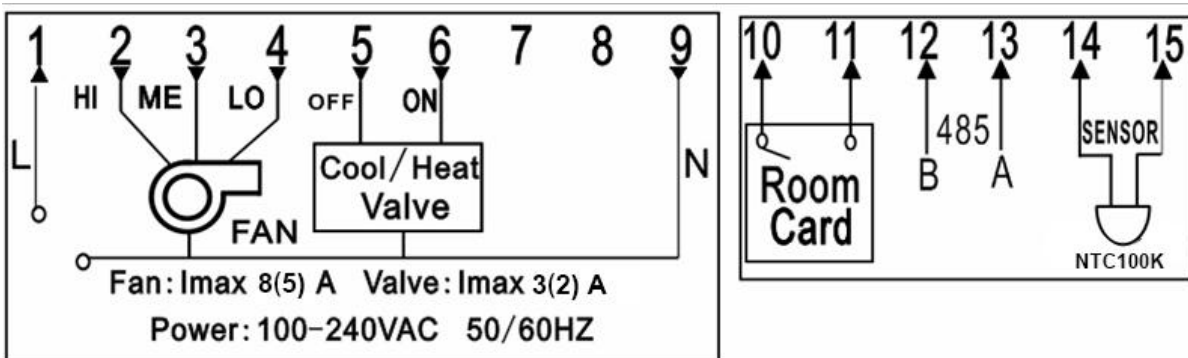
Close to front cover

WIRING DIAGRAM

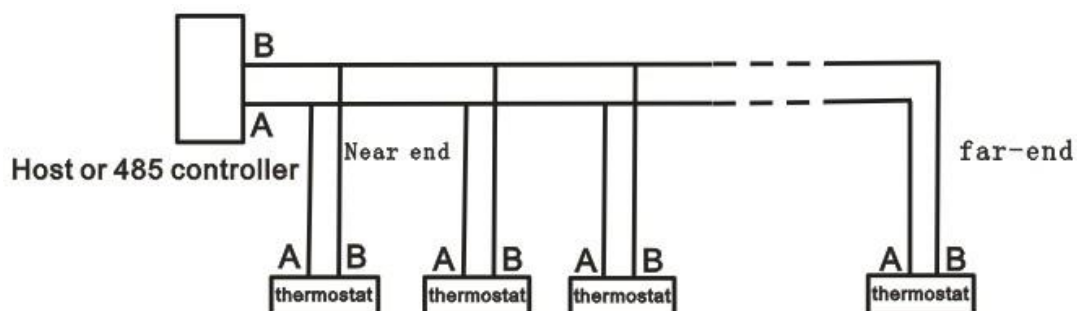
Four control wiring diagram



Two control wiring diagram



485 Communication Function Instruction



When 485 communication distance is more than 300m, need to increase terminal resistance in 485 the beginning of the communication terminal and end. Especially, if communication equipment quantity is less in trunk(less than 22pcs). When increase terminal resistance, only short circuit the terminal resistance jumper J5 of thermostat.

CONFIGURATION

The configuration menu allows you to set certain thermostat operating characteristics to your system or personal requirements. Switch off the thermostat , long press button ② over 4 seconds, till power on again means you have entered the first configuration menu item. There are 6 menu items. Press button ② to change to the next item and press button ④ or ⑤ to select.

In implicit parameter menu mode, long press button ⑥ for 3 seconds, all parameter will back to the initial value.

Step	Press buttons	Displayed (factory default)	Press ▲ 、 ▼ to select	Descriptions
1	② 4 seconds	CL (0)	-4—+4	Adjust temperature coefficient
2	②	HH (35℃)	20℃—50℃	Select maximum setting temperature for heating
3	②	HL (5℃)	5℃—20℃	Select minimum setting temperature for cooling
4	②	FC (℃)	℃/°F	Temperature unit option
5	②	BL (2)	1、 2、 3	Display backlight option
6	②	re (rd)	rd, rE	Memorize option before power loss
7	②	LA (On)	OFF/On	Fan stop option
8	②	CH (4)	4/2	Control system option
9	②	Ad (1)	1--255	Communication address
10	②	CR (18℃)	10—18℃	Heating mode without room card temperature
11	②	CC (25℃)	25—30℃	Cooling mode without room card temperature
12	②	LE (SC)	SC/OC/00	Activate Room Card function mode option

1) Adjust temperature coefficient 5 LO to 5 HI

You can adjust the room temperature display up to 3 higher or lower. Your thermostat was accurately calibrated at the factory but you have the option to change the display temperature to match your previous thermostat.

2) Select maximum temperature for heating

This feature provides a maximum setpoint temperature for heat. The default setting is 35℃, It can be changed between 20℃to 35℃.

3) Select minimum temperature for cooling

This feature provides a minimum setpoint temperature for cooling. The default setting is 5℃, It can be changed between 5℃ to 20℃.

4) Select temperature unit

°C or °F, the factory default is °C

5) Display backlight mode option

1: The light will keep the light off continuously.

2: The display will be on when any button of the thermostat is touched, light off automatically after 10 seconds

3: The display will keep the light on continuously

The factory default is 2

6) Memorize switch on/off option before power loss

Using button ④ or ⑤ to select “rE” or “rd”. “rd”: The thermostat is switched on or off before power loss, after the power supply comes to normal again the thermostat will keep switch off; “rE”: The thermostat will Memorize its ON or OFF status before power loss. The factory default is “rd”

7) Fan stop option

Using button ④ or ⑤ to select “ON” or “OFF”. If you select “ON” the thermostat will turn on the fan at a speed provided by the Fan Switch and will not stop the fan when there is no call for heat or cool. If you select “OFF”, the thermostat will stop the fan when there is no call for heat or cool.

8) Select control system

Press button ④ or ⑤ to select 4 or 2. 4 means four pipe; 2 means two pipe. The factory default is 4.

9) 485 communication address

The setting range is 1—255, the factory default is 1, press button ④ or ⑤ to select.

10) Select energy saving setpoint for heating

This feature allows you to set energy saving setpoint temperature for heating. The default setting is 18°C, It can be changed between 10°C to 18°C.

11) Select energy saving setpoint for cooling

This feature allows you to set energy saving setpoint temperature for cooling. The default setting is 25°C, It can be changed between 25°C to 30°C.

12) Activate Window Card function mode option

This feature allows you to select the way to activate the energy saving mode.

Select OC to activate the energy mode by open circuit.

Select SC to activate the energy mode by close circuit.

Select 00 to cancel the energy mode.

Timer switch on/off function and relay delay protection function

In switch off state, long press button  for 3 seconds, will enter into set the automatically switch on time, press button ④ or ⑤ to set the time, the time value will raise or lower 0.5; In switch on state, long press button  for 3 seconds, will enter into set the automatically switch off time, similarly press the raise button or lower button to set the time value.

In timer switch on/off mode, the setting value is the countdown value. For example: when you set the time value is 3.5 in switch on state, your thermostat will switch off automatically after three and a half hours. If the time value is 0, means you have closed the timer switch on/off function. In switch on state, if you have open the timer switch off function, the LCD will display the timer mark and the remaining time.

The thermostat also have relay delay protection, remote control and 485 communication function.

Auto mode introduction:

1: When system selected 2 pipe which the parameter CH of 8) is 2, then the exter-connected NTC10K temperature sensor could enter the Auto mode, in the Auto mode, the ER4 will alert when external probe happen to open circuit (no connection), the ER3 will alert when external probe happen to short circuit (wrong connection).

When the mode key is effective and in the normal functional state of Auto mode, only works with the heating/cooling mode selection:

It will be switched to Auto-cooling mode automatically when external probe's temperature get less than or equal to 18°C.

It will be switched to Auto-heating mode automatically when external probe's temperature get greater than or equal to 22°C.

The introduction of Fan output in the Auto mode:

The Fan operate normally in the Auto-cooling mode, and only external temperature get greater than or equal to 25°C, then the Fan will function.

2: When system selected 4 pipe which the parameter CH of 8) is 4, then the external probe will be ineffective.

In the normal functional state of Auto mode:

It will be switched to Auto-cooling mode automatically when room temperature get greater than or equal to setpoint temperature's +2°C.

It will be switched to Auto-heating mode automatically when room temperature get less than or equal to setpoint temperature's -2°C.

In the normal functional state of Auto-cooling mode:

The cooling output will get started when room temperature get greater than or equal to setpoint temperature's +2°C, and the cooling output will get closed when room temperature get less than or equal to setpoint temperature's +1°C.

In the normal functional state of Auto-heating mode:

The heating output will get started when room temperature get less than or equal to setpoint temperature's -2°C, and the heating output will get closed when room temperature get greater than or equal to setpoint temperature's -1°C.

Example:

If setpoint temperature is 21°C, then

when room temperature get greater than or equal to 23°C, it will be switched to the Auto-cooling mode automatically and the cooling output will get started; and the cooling output will get closed when room temperature get less than or equal to 22°C.

when room temperature get less than or equal to 19°C, it will be switched to the Auto-heating automatically and the heating output will get started; and the heating output will get closed when room temperature get greater than or equal to 20°C.

Keylock description

The system function normally, and when you push add-subtract key more than 3 seconds at the same time, it will get into the state of Keylock, there is going to display an icon of lock, at this point, only add-subtract key works, they could adjust setpoint temperature. When you want to unlock then just push add-subtract key more than 3 second at the same time.

Alert description

E1: Room Sensor get open circuit;

E2: Room Sensor get short circuit;

E3: External Sensor get short circuit ;(only in the Auto mode of 2 pipe)

E4: External Sensor get open circuit ;(only in the Auto mode of 2 pipe)

Note: in the control mode of four pipe, connect the external sensor, namely to replace the built-in sensor.

CUSTOMER ASSISTANCE

After reading this guide, if you have any question about the operation of your thermostat, please contact your installer or Energy Utility company or service provider.

