

T13FHL-7(EN)  
T13FHL-7-WIFI(EN)



*Digital Thermostat  
Installation and User Guide*



T13FHL-7(EN) is a stylish appearance digital thermostat designed for electronic floor heating systems, which can be operated more convenient with 360° freewheeling button to choose the menu option, as well as add or reduce the setting temperature you required.

T13FHL-7-WIFI(EN) has an extra function, can be remotely controlled by phone though the internet.

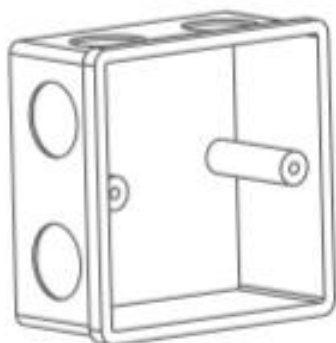
## ■ Main Features

- Remotely control from a phone [Only in T13FHL-7-WIFI(EN)]
- TFT colour display screen with backlight
- 360° Freewheeling, easily operate
- Energy monitoring function
- Frost protection function
- English/Chinese OSD menu optional
- Support Holiday mode

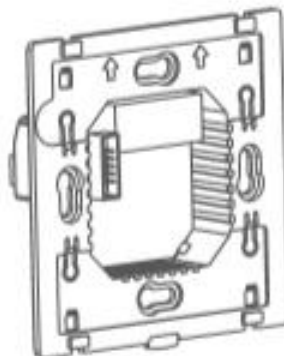
## ■ Technical Specification

- Operation voltage: 100~240VAC 50/60HZ
- Maximum Load: 250VAC 16A
- Room temperature limit: 5°C (41°F) ~35°C (95°F)
- Floor temperature limit: 5°C (41°F) ~45°C (113°F)
- Ambient temperature-operation: 0°C (32°F) ~50°C (122°F)
- Ambient temperature-transport: -10°C (14°F) ~60°C (140°F)
- Accuracy: ±1°F or ± 0.5°C
- Dimensions: 86(L)\*86(W)\*18(H)(mm)
- Colour: White
- IP class: IP21

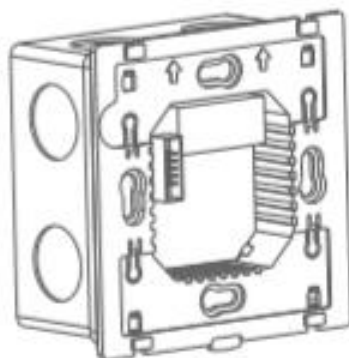
## Installation



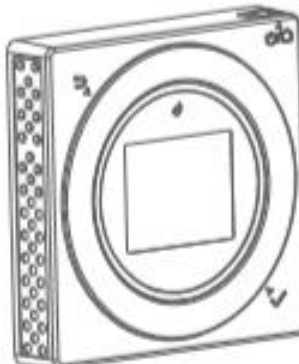
a. Install the back cover



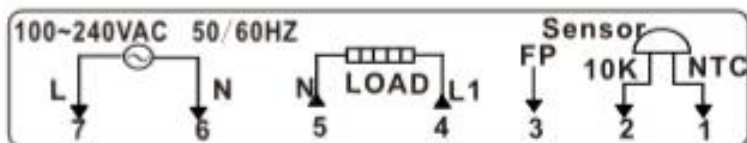
b. Install the tight screw



c. Install the thermostat



## WIRING DIAGRAM



- Item 1-2: Connect with floor sensor
- Item 3: Pilot wire signal
- Item 4-5: Connected with heat
- Item 6: Neutral Wire
- Item 7: Live Wire



## Please observe the following guidelines:

- Do not cover the thermostat. This will affect the thermostat performance
- Do not spill any kind of liquids into the thermostat
- Do not disassemble, or tamper thermostat in any way
- If the thermostat is placed in a place easy touch for child, please use the child lock
- The installation of the thermostat must be done by an authorized and qualified installer

## First time setting

When you open the thermostat first time, it will require you to do the following setting:

Date setting



Time setting



Mode setting



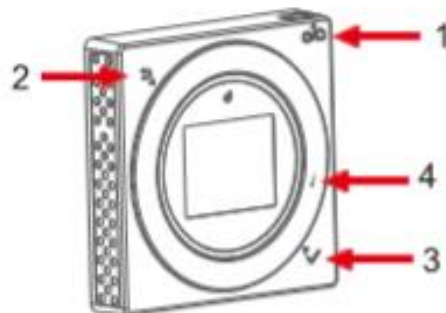
Voltage setting



Power setting



## 1. Key description



1	On/Off button: press it turn the thermostat on; long-press it to close the thermostat or into frost mode when running; short press it to lock the screen or unlock the screen when running; Press it to quick back to the main operation interface whenever you are making any settings.
2	Back button: press it back to previous menu in program running mode
3	Menu/OK button: press it shortly into the menu option in program running interface, confirm when use the menu option
4	Adjust button: turn it clockwise to raise, anticlockwise to lower, turn it into manual mode when program running, turn it freely to select the menu option

When the indicator light is green, it means remain the temperature, when it is red, it means the power is output of heating.

## ■ 2. Operation mode

The factory mode is Permanent Hold mode. You can also select other operation mode according to the following settings.

### ■ 2.1 Program operation mode

In Program operation mode, thermostat will run according to the program schedule.

### ■ 2.2 Temporary hold mode

In Temporary hold mode, the new temperature will be maintained only until the next programmed time period begins.

### ■ 2.3 Permanent hold mode

In Permanent hold mode, the new temperature will be maintained until you manually change it.

### ■ 2.4 Mode switching

In the main operation interface, turn the adjust button to set the temporary/permanent temperature you need. If you want to cancel these two modes, press the back button, then an option shows up on the screen, choose "Yes", press "OK".

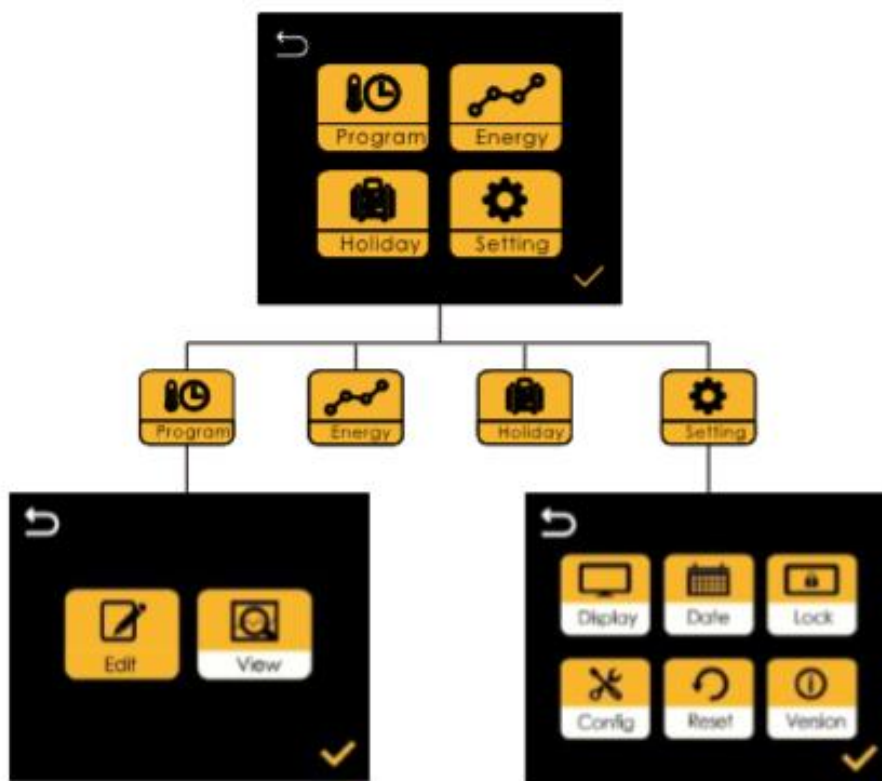
## ■ 3. Frost mode

Press the "ON/OFF" button at the top right corner of the Thermostat, don't release until the screen shows a message, choose what you want to do. In Frost mode, Screen will shows as picture on the right.



## Menu description

### Menu



### 1. Program schedule

#### 1.1 Program schedule setting

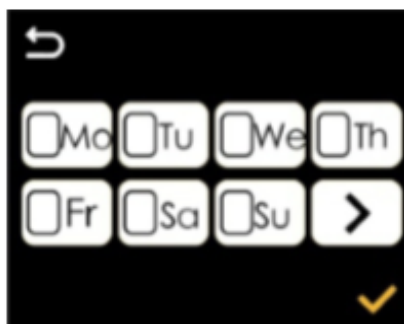
Turn the "Adjust" button to select the days (Monday-Sunday) you want to edit, press "OK" button, then turn the "Adjust" button to choose "Next", press "OK" again, now begin the temperature and time setting, if you want to cancel the select the date, press "OK" button again.

There are total 6 time periods in one day, get up in the morning, and go out in the morning, back home at the noon, go out in the afternoon, back home in the evening, and sleep at night.





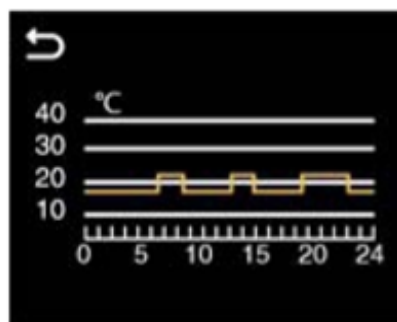
You can make the same settings of 7-day (Monday to Sunday), or make each day different, when you finished the one day's setting, the zone will be blue, it means that you cannot set again.



	Time	Temp	Time	Temp	Time	Temp	Time	Temp	Time	Temp	Time	Temp
All 7 days	6:00	21°C	8:00	16.5°C	12:00	21°C	14:00	16.5°C	18:00	21°C	22:00	16.5°C

### 1.2 View the program

Turn the "Adjust" button to select the day you want to view.  
e.g. Monday-Sunday, press "OK" button.  
If you want to back to previous menu, press the "Exit" button.



## 2. Energy Use History

The history show the summary of temperature and energy consumption during the periods of programming, such as: today, yesterday, this week, this month, and this year.

Turn the "ADJUST" button to select a time period you want to view, press "OK" button into the diagram display.

The diagram shows the energy consumption summary of the selected period. Press the "EXIT" button back to the period option.

## 3. Holiday setting

You may choose the holiday mode for your vacation, during your absence need to set a lower temperature, so as to save energy.

In Holiday mode, the screen will shows



Press "OK" to set the holiday start date, now the year begin to flash;  
Turn the dial to set the month, Press "OK", and the month begin to flash;  
Turn the dial to set the date, press "OK", then the date begin to flash;  
Turn the dial to set the date, press "OK", and continue to press "Next" into the holiday end date setting.

The same way to set the year, month, date with the holiday start date.  
Finally, turn the dial to set the holiday temperature, and press "OK".

This temperature will be maintained all the time till the holiday date end.



## ■ 4. Settings

### ■ 4.1 Display setting

#### Brightness

Turn the dial to select the brightness of the LCD screen between 1(dimmet) and 6(brightest).The default of operating backlight is 6, the standby backlight is 1.

#### Language

Turn the dial to select the operation language which you prefer to. There are two languages available(Chinese,English). The factory default is English.

#### Temperature unit

Turn the dial to select the "°C" or "°F"according to your preference. The factory default is "°C" .

#### Time format

Turn the dial to select time format(12Hr clock or 24Hr clock). The factory default is 12Hr clock.





## ■ 4.2 Date setting

Press "OK" into the date option, the year with flash first, turn the dial to set it.

Press "OK" again, then the month begin to flash, turn the dial to set it.

Press "OK" again, then the date begin to flash, turn the dial to set it.

Press it again to edit the time setting(Hour, Minute, Second).

The factory default is 2012.01.01, 12:00AM.

## ■ 4.3 Child Lock

The child lock is used for locking the screen, in order to prevent some false change by mistake. Turn the dial to select "ON", the symbol will appear on the top of the display screen, if you want to turn it off, just turn the dial to select "OFF". The factory default is "ON".

## ■ 4.4. Config setting

### 4.4.1 Control mode select

Turn the dial to select the control object, there are three modes: Room Mode, Floor Mode, Room temperature with floor limit. The factory default is Room temperature mode.

#### Room temperature mode

The thermostat will use the temperature reading from the room sensor (inside thermostat housing) to decide whether heating is required to achieve the setpoint.

#### Floor temperature mode

The thermostat will use the temperature reading from the floor sensor to decide whether heating is required to achieve the setpoint.

### 4.4.2 Floor sensor setting

#### Set floor sensor type

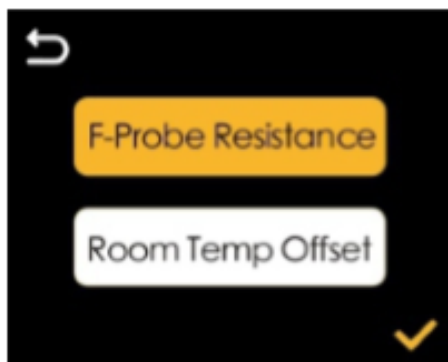
The thermostat is compatible with these floor sensor:  
NTC10K, NTC15K, NTC100K.

The factory default is NTC10K.

#### Set temperature offset

If you feel the temperature is not very comfortable, you can set the offset temperature, the maximum limit of the offset temperature is -4°C ~ 4°C.

The factory default is 0°C.



#### 4.4.3 Floor temperature limit

In order to protect the floor not to be damaged, you should set the floor temperature upper limit, turn the dial to set the temperature according to your floor material.

The factory default floor temperature is 35°C (20°C ~70°C optional).



- 5. Revert to factory default  
Press RESET button, this will reset the thermostat to factory default setting. Press "YES" to confirm.
- 6. Version information  
This shows the version of the software.

### Error Message

#### Error Code

- E1 flashing in the display: Floor sensor short circuit in type F or AF. Thermostat shut down all output.
- E2 flashing in the display: Floor sensor not installed or broken in type F or AF. Thermostat shut down all output.
- E3 flashing in the display: Room sensor short circuit. Thermostat shut down all output.
- E4 flashing in the display: Room sensor broken. Thermostat shut down all output.

## Communication mode of Thermostat

### ■ Communication mode of thermostat

#### WIFI hotspot mode


When WIFI status shows , the thermostat is in WIFI hotspot mode. Mobile phone can directly connect with thermostat and field control the thermostat.

#### WIFI remote mode

When WIFI status shows , the thermostat is in WIFI remote mode. Mobile phone can connect with thermostat via internet server, and remote control the thermostat.

### ■ Switching operation in these two modes

Factory default mode is WIFI hotspot mode.

WIFI hotspot mode: In any mode, long press Back button enter WIFI hotspot mode, and  shows when success.

WIFI remote mode: After you successfully add thermostat in the APP, thermostat will switch to WIFI remote mode automatically, and  shows when success.

NOTE: The thermostat can be local controlled by most 2 phones, and can be remote controlled by several phones. Can not use local control and remote control at same time.

■ Safety ■ Comfort ■ Energy saving



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