

# USER MANUAL

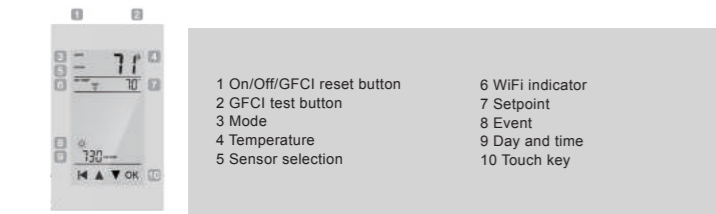


THERMAEGH English V1.2

## Instruction

The THERMAEGH thermostat controls the floor heating system based on built-in weekly program. The weekly program runs in 4 or 2 stages per day, 7 days a week. The default weekly program parameters can satisfy most usage scenarios. If your living habits are different, you can also modify the weekly program parameters in the thermostat or APP. When there is no one in the house, it is recommended to set the temperature down to save energy. Besides, the thermostat has built-in adaptive function. When this function acts, the thermostat heats or stops heating in advance of next stage to bring the room temperature to the set temperature of the next stage. Please note that after turning adaptive on, the thermostat takes a few days to learn the time required.

## Symbols



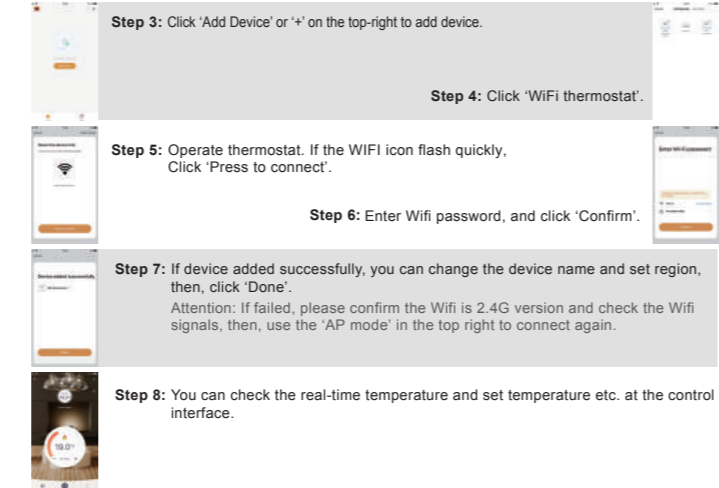
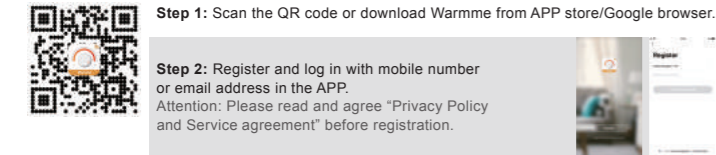
## Ground Fault Circuit Interrupter (GFCI)

This thermostat has a built-in GFCI function that protects people from electric shock. It is very important to check whether the GFCI function is normal or not every month. Here are the check steps:

1. Confirm that the thermostat is turned on.
2. Press the [Test Monthly] button. If a red light appears in the upper left corner of the thermostat and GROUND FAULT appears on the screen, the GFCI function is normal. If there is no response, it means the function is invalid, please contact the dealer or electrical installer.
- Note: Do not press and hold the [Test Monthly] button.
3. Press the [Reset] button. The red light is off and the screen shows the power off state.
4. Press the [Reset] button again. The thermostat is turned on.

If in daily use, the red light is on and the screen appears GROUND FAULT. Then you need to check if the ground fault is present by pressing the [Reset] button. If the red light is off and the screen shows the shutdown status, it is nuisance tripping. If not, it means that ground fault has occurred. Please contact your dealer or professional technician immediately.

## WiFi connection(Only for THERMAEGH)



## Functions and operation

### On/Off

The GFCI Reset button is also the switch button. Press the [Reset] button to switch on and off.

### Temporary Override Temperature

This function is enabled in the automatic intelligent mode, when the temperature demand changes at this moment, the setting temperature is enabled, but the parameters in the Event are not changed.

**Operation method:**  
Under the interface showing the real-time temperature, tap ▲ or ▼ to modify the set temperature. Tap OK to confirm and return to the interface showing the real-time temperature.

### Mode selection

This thermostat provides three operating modes:

**Automatic mode:** According to the weekly program, the thermostat automatically adjusts the set temperature operation.

**Manual mode:** The thermostat runs continuously according to the set temperature.

**Frost protection mode:** The temperature controller runs at a lower set temperature. The temperature range is set from 41°F to 59°F in this mode. This mode is used when you want to keep your room at a lower temperature when you are on vacation.

**How to set the mode selection:**  
In the interface displaying the real-time temperature, tap OK to enter the first level menu, and Mode is flashing.  
Tap OK to enter the mode selection.  
Tap ▲ or ▼ to change the mode.  
Tap OK to confirm your selection.  
If you select manual mode or freeze protection mode, you also need to tap ▲ or ▼ to set the temperature.  
Tap OK to return to the interface showing the real-time temperature.

### Key lock

The thermostat provides a key lock function to prevent the thermostat setting parameters from being incorrectly modified.

Note: the [Reset] button and the [Test Monthly] button can still operate normally so as to response to an emergency.

**Set the key lock mode:**  
1. Under real-time temperature interface, press and hold ◀ until the lock symbol appears.  
2. Under real-time temperature interface, tap OK to enter the first level menu, and Mode is flashing.  
Tap ▲ or ▼ to select Key Lock.  
Tap OK to enter the key lock setting.  
Tap OK to confirm.  
Tap OK to return to the interface showing the real-time temperature.  
Cancel the key lock mode:  
Under real-time temperature interface, press and hold ▶ until the lock mark on the screen disappears.

### Weekly program parameter setting

In the automatic mode, the thermostat runs automatically according to the setting parameters of the weekly program. The weekly program parameters contain two parameters: Schedule and Event.

**1. Schedule**  
Assign seven days a week to the following two schedules:  
**5+1+1:** The Event parameter is the same from Monday to Friday, with separate Event parameters on Saturday and Sunday.  
**7:** With separate Event parameters every day.

**Schedule parameter setting method:**  
Under real-time temperature interface, tap OK to enter the first level menu, and Mode is flashing.  
Tap ▲ or ▼ to select Schedule.  
Tap OK to enter the parameter settings.  
Tap ▲ or ▼ to select a parameter.  
Tap OK to confirm.  
Tap OK to return to the real-time temperature interface.

### 2. Event

In the Home scenario, the day is divided into four events: Wake--☀ Leave--☺ Return--☺ Sleep--☾ (In the Office scene, the day is divided into two phases: on work--☀ off work--☾ ). The set temperature for each stage can be set separately.

**Event parameter setting method:**  
Under real-time temperature interface, tap OK to enter the first level menu, and Mode is flashing.  
Tap ▲ or ▼ to select Event.  
Tap OK to enter the week selection.  
Tap ▲ or ▼ to select the day you want to modify the parameters.  
Tap OK to enter the stage selection for the day.  
Tap ▲ or ▼ to select the stage that you want to modify the parameters.  
Tap OK to enter the temperature setting of the current phase.  
Tap ▲ or ▼ to select the temperature value you want to set.  
Tap OK to enter the hour setting for the start time of the current phase.  
Tap ▲ or ▼ to select the hour of the start time.  
Tap OK to enter the minute setting for the start time of the current phase.  
Tap ▲ or ▼ to select the minute of the start time.  
Tap OK to return to the stage selection for the day.  
Note: Return to the interface of the real-time temperature and tap ◀ multiple times.

### Event default parameter list

Home								
Week	Wake ☀		Leave ☺		Return ☺		Sleep ☾	
	Start time	Temperature	Start time	Temperature	Start time	Temperature	Start time	Temperature
Mon--Fri	6:00	78°F	8:00	69°F	17:00	78°F	22:00	69°F
Sat--Sun	8:00	78°F	8:30	79°F	17:30	78°F	22:00	69°F
Office								
Week	on-work ☀		off-work ☾					
	Start time	Temperature	Start time	Temperature				
Mon--Fri	7:00	78°F	18:00	69°F				
Sat--Sun	7:00	68°F	18:00	69°F				

## Settings

In addition to the above common functions, the thermostat also provides a number of settings for more occasions. It should be noted that such settings need to be set by professional technicians to avoid damage caused by abnormal settings.

**Settings access method:**  
Under real-time temperature interface, tap OK to enter the first level menu, and Mode is flashing. Tap ▲ or ▼ to select Settings.  
Tap OK to enter Settings.  
Settings contains the following items:

### 1. Time

Set the current real time and day of the week.

Note: The WiFi version of the thermostat will automatically update to local time after networking.

**Time setting method:**  
After entering Settings, tap ▲ or ▼ to select Time.  
Tap OK to enter the hour setting for the time.  
Tap ▲ or ▼ to select the hour value for the current time.  
Tap OK to enter the minute setting for the time.  
Tap ▲ or ▼ to select the minute value for the current time.  
Tap OK to enter the day of the week setting.  
Tap ▲ or ▼ to select the day of the week.  
Tap OK to enter the hour setting for the time.  
Tap ◀ multi times to return to the real-time temperature interface.

### 2. Temp unit

°F or °C can be selected as the temperature unit.

**Temp Unit setting method:**  
After entering Settings, tap ▲ or ▼ to select °F/°C.  
Tap OK to enter the selection.  
Tap ▲ or ▼ to select the desired temperature unit.  
Tap OK to confirm.  
Tap OK to return to the real-time temperature interface.

### 3. Sensor type

This thermostat can be connected not only to the floor sensor but also to two other commonly used floor sensors. When replacing the old thermostat, there is no need to replace the floor sensor for easy installation.

**Sensor Type setting method:**  
After entering Settings, tap ▲ or ▼ to select Sensor Type.  
Tap OK to enter the selection.  
Tap ▲ or ▼ to select the type of floor sensor you are currently using.  
Tap OK to confirm.  
Tap OK to return to the real-time temperature interface.

No.	Sensor Type	Parameters
00	3950(default)	
01	3600	R(25°C)=12kΩ R(10°C)=22.2kΩ
02	3700	R(25°C)=10kΩ R(10°C)=19.1kΩ

### 4. Sensor selection

In addition to the floor sensor, this thermostat has built-in sensors to detect room temperature. Therefore, three sensor applications are available:

**Room:** Controls room temperature based solely on built-in sensors.

**Floor:** Controls the floor temperature based solely on the floor sensor.

**Room.Limit:** Controls the room temperature based on the built-in sensor while monitoring the floor temperature not to exceed the upper limit. This application, like Floor, can be used in places such as wood floors where floor temperature is critical.

**Sensor Selection setting method:**  
After entering Settings, tap ▲ or ▼ to select Sensor Selection .  
Tap OK to enter the selection.  
Tap ▲ or ▼ to select the sensor application type.  
Tap OK to confirm.  
Tap OK to return to the real-time temperature interface.  
Note: If Room.Limit is selected, you need to set the maximum temperature that the floor can accept.

### 5. Calibration

This thermostat has built-in probe and floor sensor calibration function. In the case of demand for higher precision

**Calibration setting method:**  
After entering Settings , tap ▲ or ▼ to select Calibration .  
Tap OK to go to select Room or Floor .  
Tap ▲ or ▼ to select Compensate Built-in Probe or Floor Sensor.  
Tap OK to enter the compensation setting.  
Tap ▲ or ▼ to adjust the real-time temperature to match the displayed temperature value of the calibration instrument.  
Tap OK to return to the setting item selection.

### 6. Location

This thermostat is suitable for use in both homes and offices. For the office, a set of weekly program parameters is built in. See the Weekly Program Parameters section for details.

**Location setting method:**  
After entering Settings, tap ▲ or ▼ to select Location.  
Tap OK to go to select Office or Home.  
Tap ▲ or ▼ to select one.  
Tap OK to confirm.  
Tap OK to return to the real-time temperature interface.

### 7. Adaptive

This thermostat has an adaptive function. When this function is enabled, the thermostat heats up or stops heating in advance so that the next stage comes and the temperature just reaches the set temperature.

**Adaptive setting method:**  
After entering Settings, tap ▲ or ▼ to select Adaptive.  
Tap OK to enter the selection.  
Press ▲ or ▼ to get Yes or No.

Tap OK to confirm.  
Tap OK to return to the real-time temperature interface.

### 8. Readout

This thermostat has the function of calculating the percentage of heating time over a period of time. The relevant parameters can be queried through the Readout item.

**Readout query method:**  
After entering Settings, tap ▲ or ▼ to select Readout.  
Tap OK to enter the selection.  
Tap ▲ or ▼ to select 1Day, 30Days or 365Days to query.  
Tap OK to return to the setting item selection.

### 9. Factory reset

This thermostat has the function of restoring factory parameters.

**Factory Reset setting method:**  
After entering Settings, tap ▲ or ▼ to select Factory Reset.  
Tap OK to enter the selection.  
Tap ▲ or ▼ to select Yes or No.  
Tap OK to confirm.  
Tap OK to return to the real-time temperature interface.

### Settings default parameter list

NO.	Name	Default Parameter	Setting Range
1	Time	/	/
2	°F/°C	°F	°F °C
3	Sensor Type	00 3950	00 3950 01 3600 02 3700
4	Sensor Selection	Floor	Room FLoor Room.Limit
5	Calibration	0°F	-9°F -- 9°F
6	Location	Home	Home Office
7	Adaptive	No	Yes No
8	Readout	/	/
9	Factory Reset	No	Yes No

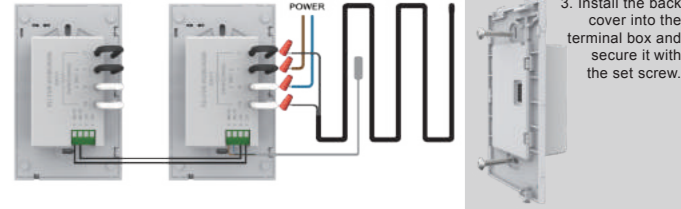
## Troubleshooting

E1: Built-in probe failure, please contact your dealer or professional technician.  
E2: External probe failure, please contact your dealer or professional technicia

## Installation

1. Loosen the bottom screw by a Phillips screwdriver. Then open the thermostat from the upper right side as shown.  
Note: Screw the nut out of the groove and do not need to unscrew it.

2. Wire as shown:  
**L/N lead:** Connect the power cord using the terminal block.  
**L1/N1 lead:** Use a terminal block to connect the load line.  
**IN/SNR terminal:** Connect the floor sensor.  
**OUT terminal:** Connect to IN/SNR of Power Module.  
Note: Disconnect the main power supply before wiring.  
If an electric floor heating cable or mat system requires more than 15 Amps, install a power module.  
Wiring diameter: 12 to 22 AWG.



4. Fit the left side of the front and rear covers as shown. Rotate to the right again and press the upper half of the right border until you hear a click. Use a screwdriver to secure the bottom screw. Turn on the power and test the GFCI function.

## WARNINGS

To avoid risk of electric shock, disconnect all power coming to heater at main service panel before installation of the thermostat. Keep air vents of thermostat clean and free from obstructions. All wiring must conform to local and national electrical codes and ordinances. Installation must be carried out by qualified personnel.

## Classification

The thermostat is a Class II device (reinforced insulation) and used for controlling electrical floor heating. The product must be connected to the following leads:  
**L/N lead:** Connect the power cord using the terminal block.  
**L1/N1 lead:** Use a terminal block to connect the load line(Max 15A).  
Note:  
Electric floor heating cable/mat must be in accordance with the supply voltage.  
The terminals are designed to handle a cross-section of wire measuring 12-22AWG.

## Technical specification

Supply voltage:	120/240 VAC 50/60 Hz	Load:	max.15 A (resistive load)
GFCI:	Class A (5 mA trip level)	Setpoint range:	+5 to +40°C / +41 to +104°F
Temperature range:	+5 to +45°C / +41 to +113°F		

## Dimension(Inch)

