TRM-FH-Silver
Quick Start Guide

Heating Cables
Supply & Design

ETL Intertek 5023804

Programmable Radiant Floor Thermostat

Warnings:

- Installation or replacement of this product should only be done by qualified personnel.
- To avoid risk of electric shock, turn OFF the power source from the main service panel prior to installation of the thermostat.
- Keep thermostat air vents clean and free from obstructions.
- Electric floor heating cable/mat must be in accordance with the thermostat supply voltage.
- All wiring must conform to local as well as national electrical codes and ordinances.
- Power and Load terminals (L/N/L1/N1) are designed to handle a cross-section of wire measuring 12-22AWG.
- Sensor terminals (A/B/C/D) are designed to handle a cross-section of wire measuring 18-22AWG.

Installation:

1. Loosen the bottom screw using a Phillips screwdriver, then open the thermostat from the below as shown in figure 1:

   Note: The bottom screw does not need to be removed to detach the faceplate.

2. Wire the thermostat as shown in figure 2:

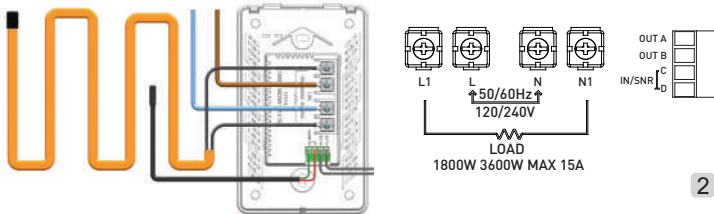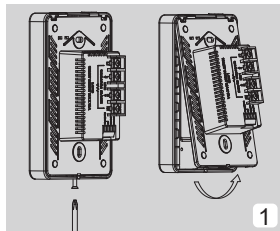   L/N (Line): Connect incoming power supply to the terminal block.
   L1/N1 (Load): Connect the heating load wires to the terminal block
   (Above wiring screws should be torqued between 0.7-1.0 N.m)
   Ensure the junction box is grounded, and attach the heating cable ground to this location.

   IN/SNR Terminal (C/D) (Floor Sensor):Connect the floor sensor to this location on the thermostat there is no polarity to this connection.
   If a spare (redundant) probe has been installed in the floor, tape this to the other probe wire in the junction box, but ONLY CONNECT (1) SENSOR to the thermostat at any one time.

   OUT Terminal (A/B) (External relay communication): Connect to IN/SNR on the Relay power module (sold separately); *used to expand a floor heating system beyond the 15 amp thermostat capacity.*

OUT A
OUT B
IN/SNR C D
L1 L N N1
↑ 50/60Hz ↑
120/240V
LOAD
1800W 3600W MAX 15A

3. Install the power base into the junction box and secure it using the supplied set screws as shown in Figure 3.
(Screws should be torqued to approx 0.1-0.2 N.m)
Refer to figure 4 for Junction box dimensions

4. Install the thermostat faceplate on the power base; start by aligning the top of the units, then swing the faceplate down so it comes to rest on top of the power base, with the screw holes lined up; tighten the screw to secure the faceplate to the power-base.
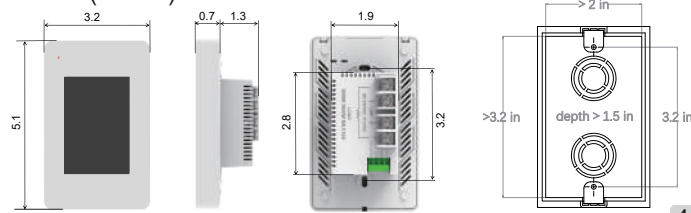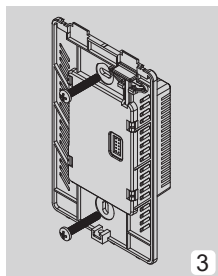
5. Turn ON the power source (feed breaker).

6. Turn ON the thermostat and wait for the operating screen to be displayed.

7. Test the thermostat GFCI by pressing the top button marked 'Test'; a Ground Fault message will be displayed on the thermostat screen.

8. Reset the thermostat GFCI by pressing the top button marked 'Reset'; the Ground Fault message will disappear and the thermostat operating screen will be displayed.

If the thermostat does not reset, and continues to display a Ground Fault message, contact your installer for troubleshooting support.

Dimensions (inches):

3.2
0.7 1.3
1.9
2 in
5.1
2.8
3.2
>3.2 in
depth > 1.5 in
3.2 in

Technical specification:

Supply voltage:	120V/208V/240V 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
Temp Tolerance:	Default 1°C /2°F

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 is functioning normally; the following testing process should be done monthly:

GFCI Testing steps:
1. Confirm that the thermostats is turned ON.
2. Press the [Test] button. If a red light appears in the upper left corner of the thermostat and GROUND FAULT appears on the screen, the GFCI is functioning normally. If there is no response, contact your installer for troubleshooting assistance.
   Note: Do not press and hold the test button
3. Press the [Reset] button.The red light will turn OFF and the thermostat will display the operating screen.

Note: In daily use, if the RED light is ON and the "Ground Fault" message appears on the screen, you need to check if the ground fault is actually present by pressing the [Reset] button.If the red light is off and the screen display returns to the operating menu the unit has nuisance tripped, or been manually tested. If the ground fault message persist when you attempt to heat up the floor, you may have an actual fault. Contact your installer for troubleshooting support.
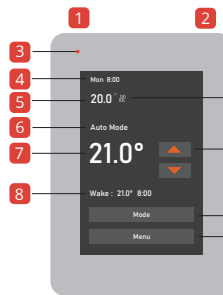
Operation:

The thermostat controls your floor heating system based on built-in weekly program, running in 4 or 2 stages per day, 7 days a week.
The default weekly program parameters satisfies most usage scenarios, however you can also modify the weekly program parameters in the thermostat.
When there is no one in the house, it is recommended to reduce the temperature set-point to save energy.
The thermostat also has built-in adaptive function. When this function is active, 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 the Adaptive function ON, the thermostat will require a few days of normal operation to learn the time required to achieve the heating targets selected.
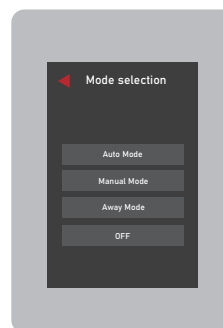
Functions:

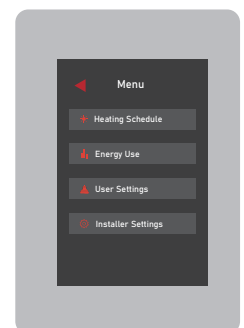|	
1 GFCI Reset Button	7 Setting Temperature
2 GFCI Test Button	8 Next Schedule
3 GFCI Test Light	9 Heating
4 Time	10 Up and Down Regulation
5 Temperature	11 Mode Selection
6 Operating Mode	12 Menu Selection

Temporary temperature setting

Please press [▲▼] the button for temporary temperature setting

Mode

Mode selection
Auto Mode
Manual Mode
Away Mode
OFF

Menu

Menu
Heating Schedule
Energy Use
User Settings
Installer Settings

Mode selection

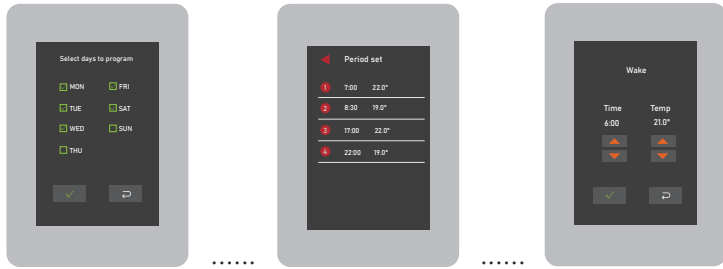This thermostat provides three operating modes:

- **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.
- **Away mode:**
  This mode is used when you want to keep your room at a lower temperature when you are away for an extended period of time.This operating mode prevents damage to household/office equipment caused by sudden exposure to cold temperatures.
  The set-point temperature Range is set to maintain from 41°F to 59°F(5°C -15°C) in this mode.
- **OFF:**
  Manually turn off all functions of the thermostat. When the device needs to be started, Press and hold the on/off button in screen for 3s.

Menu selection
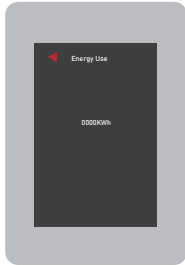
☀ Heating Schedule

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.

Note:Multiple days can be selected and programmed at the same time.

Select days to program

☐ MON   ☐ FRI
☐ TUE   ☐ SAT
☐ WED   ☐ SUN
☐ THU

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Period set

1 7:00   22.0°
2 8:30   19.0°
3 17:00 22.0°
4 22:00 19.0°
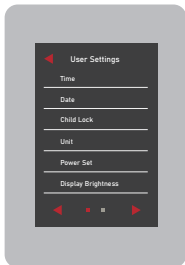
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Wake

Time   Temp
6:00   21.0°

ⅠⅠ Energy Use

This option is used to calculate data on energy usage.The user sets the power in the Power Set.
The thermostat will automatically count the heating time and calculate the energy consumption.

Energy Use

0000KWh

♨ User Settings

User Settings
Time
Date
Child Lock
Unit
Power Set
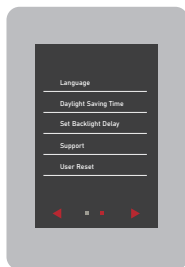Display Brightness

Time: Set Time.

Date: Set date.

Child lock: Lock all keys to prevent the setting from being changed.
(Hold the up button on the main interface for 3s to unlock)

Unit: °F/°C.

Power Set: 0W-4500W.

Display Brightness: 1-9.

Language
Daylight Saving Time
Set Backlight Delay
Support
User Reset

Language: English/Francais

Daylight Saving Time:
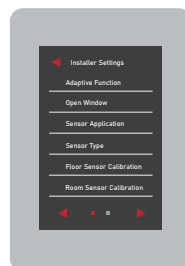When enabled,the thermostat will adjust automatically in daylight saving time.

Set Backlight Delay: 5-60

Support: Scan the QR code to view the electronic manual.
For further support, please contact your installer.

User Reset: This will reset the users settings to factory default.

⚙ Installer Settings

Installer Settings
Adaptive Function
Open Window
Sensor Application
Sensor Type
Floor Sensor Calibration
Room Sensor Calibration

Adaptive Function: When this feature is enabled, the room will have reached the target/set temperature when the event begins.
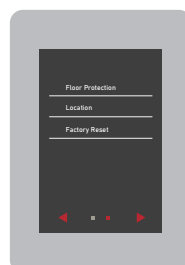
Open Window: Thermostat can detect an open window and will shut off heating temporarily to save energy.

Sensor Application: 1.Room 2.Floor 3.Room and Floor Protection

Sensor Type: B3950-10K/B3380-10K/B3700-10K/B3600-12K/15K

Floor Sensor Calibration: Measure the temperature by adjusting the calibration. ±5℃

Room Sensor Calibration: Measure the temperature by adjusting the calibration. ±5℃

Floor Protection
Location
Factory Reset

Floor Protection: Floor protection is enabled only when the sensor type is selected for room and floor simultaneously.If the floor temperature exceeds the set protection value, the thermostat will display alarm information and stop working.
Reference value：Laminate-max.28°C(82.4°F)/Tile-max.40°C（104°F）
The value ranges from 20°C(68°F)to 50°C(122°F).

Location: Home/Office.

Factory Reset: This will reset the thermostat to factory settings, Personal settings will be lost.

Trouble shooting：

Problem	Solution
No display	1.Check the you have 120V/208V or 240V supplied to the junction box. 2.Ensure power supply is connected to the Line side of the thermostat (L/N). 3.Contact your installer for troubleshooting support.
GFCI is tripped	1. Refer to the GFCI Testing steps noted above. 2. Contact your installer for troubleshooting support.
Heating occurs at wrong times	1. Check the scheduled times are set correctly AM/PM. 2. Confirm thermostat is set to the correct date/time. 3. Contact your installer for troubleshooting support.
Floor sensor error	1. Check the floor sensor is connected to IN/SNR terminals. 2. Check the floor sensor has a good ohms reading. 3. Contact your installer for troubleshooting support.
Air sensor error	1.Contact your installer for troubleshooting support