Thermostat for Floor Heating TH-0503B
OWNER'S MANUAL

APPLICATION

TH-0503 is a programmable thermostat designed for floor warming applications or helping to limit floor temperatures. This thermostat can be used for hot water radiant heating systems and electric heating cable systems. Please take a few moments to read through this manual before you begin to install or operate your thermostat.

INSTALLATION

Warning: Wiring work can be dangerous!
Please consult with a qualified electrician or a contractor.

Specification

1.Power source： LR03 AAA size 1.5V ALKALINE Battery x 2
2.Power consumption： 180mW
3.Relay CONTACT Rating ： 230V AC, Max. 16A
4.Storage temperature： -10℃~60℃
5.Degree of protection： IP20
6.Temperature display range： 0℃~50℃
7.Room temperature setting range： 5℃~35℃
8.Floor temperature control range： 10℃~45℃
9.Temperature Accuracy：±1℃
10.On/off differential： 0.5℃
11.Selection of control modes： Room sensor/mixed Room sensor and Floor sensor
12.Temperature adjustment： 1℃ steps

Thermostat location

For a new installation, choose a mounting location about 1.5 meters (five feet) above the floor in an area with good air circulation and away from.
1.Drafts of dead air sports.
2.Air ducts.
3.Radiant heat from the sun or appliances.
4.Concealed pipes and chimneys.

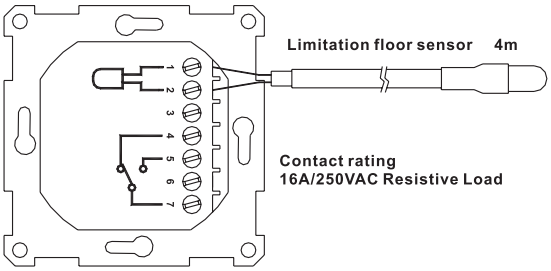
Packing list

Thermostat unit.....1
Self-tapping screw # 5- ¾" 2
Plastic anchor ø4 mm x 20 mm 2
Operation manual.....1
Floor Sensor.....4m

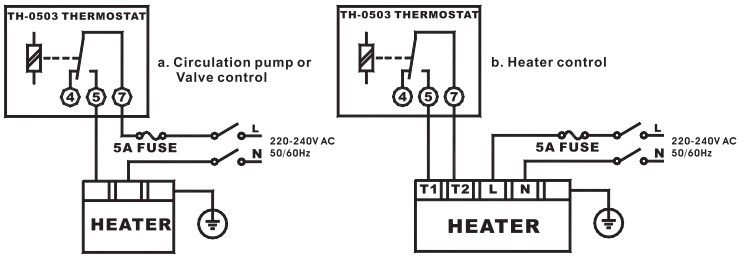
Required Material
Hammer
Masking tape
Screw driver
Drill and drill bit (if not installed on a junction box)

Wiring diagram

1.Floor heating system



2. Standard heating system



Mounting and installation

The thermostats are designed for mounting in standard wall socket.

How to Detach thermostat body and base, upon Wiring or replacing Batteries

Disconnect the front cover by using a screw driver to press a hook on the bottom of the front cover. (Figure 1/Figure 2/ Figure 3/Figure 4/Figure 5)

Figure 1
Using screw-driver push hook backward

Figure 2
Lean screw-driver upward

Figure 3
Holding two side of body, to take body off base part

Move frame off base part

Figure 4

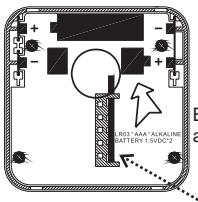


Figure 5

To position body part on base after Wiring finished

Follow illustration below (Figure 6/Figure 5/Figure 7/Figure 8/Figure 9)

Be certain, the frame is positioned properly in place before positioning body on top of the base part.

The frame must be tightly in touch with the base part.

Figure 7
Prior to placing body on top of base part, check position of socket, must ensure both male & female parts of socket are pointed to each other.

Figure 6
Socket, male part

Figure 8
Be sure to position "HOOK" inside "body part" upon positioning "body of thermostat back on top of "base part".

Figure 9
Be sure the "body part "is tightly attached to base part.

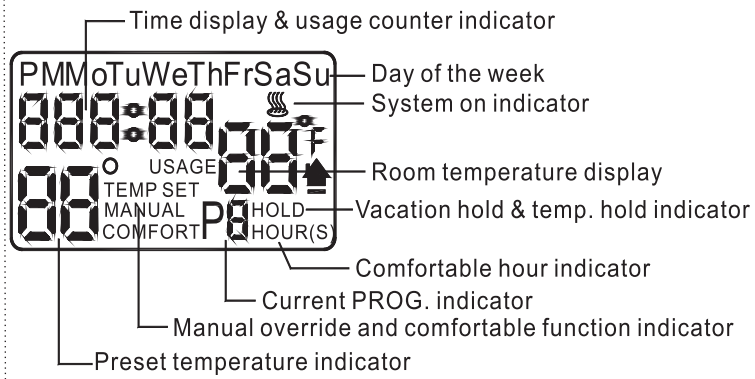
Selecting Type of Heating System

This thermostat can be used as a conventional room thermostat or as a controller for an under floor heating system.
When used with an under floor heating system the floor sensor must be connected to terminals No. 1 and No. 2. The thermostat will automatically check if the floor sensor is installed and the floor sensor acts as a limitation sensor.

Attention

If the floor sensor is not installed, floor temperature detecting function will not be able to use. Whenever the sensor is installed, reset the unit to enable this function.

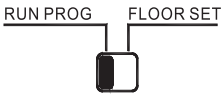
Data displayed in the screen



INSTRUCTIONS

Caution!

The system switch must be switch on **RUN PROG** position to set the programming.



Setting operation mode

You have the choice among three operation modes: **7d** (Factory default setting)**7d : S** and **5 : 2d**

Mode 5:2D

When you choose the 5:2d mode weekdays will be recognized as a single program zone, Saturday and Sunday are considered as two program zones.

Mode 7d

When you select the 7d mode, Weekdays, Saturday and Sunday will be recognized as the same program zones.

Mode 7d : S

When you select 7d:S mode, Weekdays, Saturday and Sunday will be recognized as independent program zones.

When you connect the front cover and base of the thermostat then press **RESET** button, the LCD screen will display all symbols for about 20 seconds, and then the LCD screen will display **" 7d "** (standard procedure).

The screen will light up for another 10 seconds. By pressing the △or▽button you can change the setting to **7d : S** or **5 : 2d**. The setting done, press the **SET** button or wait for about 10 seconds, then your operation mode will be saved.
However, the mode can be reset at any time by pressing **RESET** button.

Be careful, once the mode has been changed, the previous schedule you selected will be deleted and the data cannot be recovered.

After selecting the operation mode, you can press **SET** button or wait for 10 seconds, then the thermostat automatically set the day and time to **SUNDAY**, **0:00** shows the current room temperature.

Clock setting

1. Press the **SET** button to go to the main screen.
2. Press the **TIME** button, the day of the week starts flashing.
3. With the keys △or ▽adjust the day
4. Press the **TIME** button, the hour starts flashing.
5. With the keys △or ▽adjust the hour.
6. Press the **TIME** button, the minute starts flashing.
7. With the keys △or ▽adjust the minutes.
8. Press the **SET** button to finish the programming and go back to the main screen.

Review Programs

To review the built-in programs press △or ▽or **PROG** button repeatedly; when you are done press **SET**.

FACTORY PRE-SET TIME AND TEMPERATURE PROGRAM:

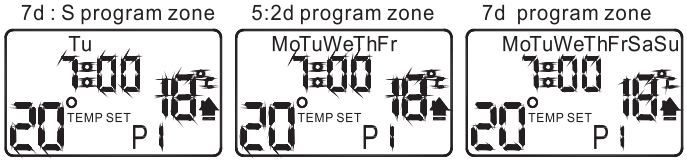
PROGRAM	PERIOD	TIME	TEMPERATURE
MONDAY	P1	7:00	20℃
	P2	9:00	17℃
	P3	12:30	20℃
	P4	15:00	19℃
	P5	17:30	22℃
SUNDAY	P6	23:00	17℃

You can use the built-in programs as shown, or change them as you wish.
Each program zone is divided into six periods.
Each period has its own starting time and temperature.

Change the program setting

The thermostat has three programming zones to suit your schedules by your initial MODE setting.

7d : S program zone　5:2d program zone　7d program zone



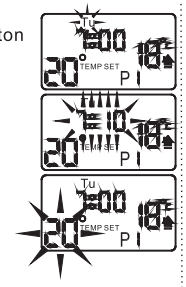
7d ..... The 7 days programs are the same from Monday to Sunday.
In this mode you have only one programming block.

7d: S ..... The individual programming of each day can be changed.
In this mode you have seven different programming blocks.

5:2d ..... means that it has the same program from Monday to Friday. Saturday and Sunday are the different programs.
In this mode you have three different programming blocks.

Programming:

1. Press the **SET** button to go to the main screen.
2. Press the **SET** button and keep pressing it, then press **PROG** button to go to the programming.
3. Press △or ▽to confirm the programming block.
4. Press the **PROG** buttonto change the start hour setting for the displayed period **P1**.
   The hour of the first slot P1 start flashing.
5. Press △or ▽button set the start hour of the first period. The time can be set in step of 10 minutes.
6. Press the **PROG** button to change the temperature setting for the displayed period **P1**.
   The consignment temperature of the first slot P1 start flashing.
7. With the help of the △or ▽keys set the desired temperature. The temperature can be set in steps of 1 degree.
8. Press **PROG** button to confirm the programming and going to the next period **P2**.
9. Repeat the steps 3 to 8 until you have programmed the 6 period.
10. Finish the programming by pressing the **SET** button.



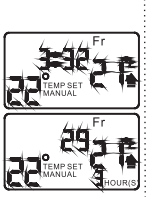
MANUAL MODE

The MANUAL MODE may be done in four different ways:

- **Until the next period.**
- **During a certain number of hours (selectable from 1 to 9 hours).**
- **During a certain number of days (selectable from 1 to 99 days).**
- **Permanently**

TEMPORARY OVERRIDE

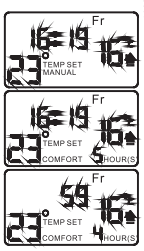
1. Press the **SET** button to go to the main screen.
2. Press △or ▽to change the current temperature setting. The override indicator will light up just beside the set temperature (Temp Set).
3. To cancel the temperature manual variation function press the **SET** button.



NOTE:
When the temporary override function in done, the display will begin to alternate between the current time and the number of hours and minutes until the start of the next program period. This is the amount of time your override will be in effect.

COMFORT OVERRIDE

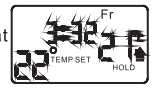
1. Press the **SET** button to go to the main screen.
2. Press △or ▽to change the current temperature setting. The override indicator will light up just beside the set temperature (Temp Set).
3. Press the **TIME** button to enter the number of hours, (from 1 to 9 hours) during which you want to modify the programming. The display indicator will now change to **COMFORT** and the hours will flash.
4. To cancel the comfort override function press the **SET** button.



NOTE:
When the comfort override function in done, the display will begin to alternate between the current time and the number of hours and minutes your override will be in effect.

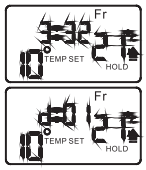
TEMPERATURE HOLD

By simply pressing the **HOLD** button you can place you new thermostat into a MANUAL operation mode, where you set the desired temperature and it is maintained. The **HOLD** Indicator will light on the display confirming that you have entered hold mode.
The △and ▽buttons are used to adjust the temperature.
At any time you can return to the program controlled mode by pressing **SET** button.



OPERATION DURING THE HOLIDAYS (VACATION HOLD)

1. When yon press the **HOLD** button the hold Indicator will light on the LCD confirming that you have entered hold mode.
2. Press △or ▽to change the desired temperature.
3. Press the **HOLD** button and keep pressing it, until the LCD screen displays the d:01 and the number of days are flashing.
4. Press △or ▽to select the number of days (from 1 to 99 days) during which you want to modify the programming.
5. To cancel the hold function press the **SET** button.



USAGE MONITOR

The thermostat includes different historical reports of system with the operating times:

- **Operating time during today.**
- **Operating time during yesterday.**
- **Operating time during this week.**
- **Operating time during last week.**
- **Operating time during total amount.**

1. Each press of the **USAGE** button cycles the display to show one of the five available period.
2. The usage monitor can be accumulated to 99999 hours.

1st press / today　2nd press / yesterday

3rd press / this week　4th press / last week　5th press / total amount

3. To reset usage counter to zero, press and hold **USAGE** button until the LCD display changes to 000:00

LOW BATTERY INDICATOR

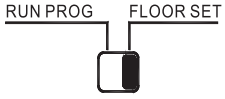
When the batteries inside the thermostat begin ton weaken, the LCD display begins to dim. The thermostat will continue to function properly. However, it is time to have the batteries replaced.
When the symbol "Lo" appears the batteries of the thermostat should be replaced. The display will begin to alternate between the current time and the low battery indicator.
The time, date and all modifications you have made, the temperature fluctuation, etc. are all controlled by the batteries. From the moment you remove the batteries from the thermostat, you will have approx. 25 seconds to install fresh ones without data loss. However, the programs stored will be saved on a memory device.

FLOOR LIMITATION TEMPERATURE SETTING

This thermostat can be used for floor heating system. If the thermostat is to be fitted with a floor heating system the floor sensor cable must be installed to the terminal block No. 1 No. 2.

Attention!

If the floor sensor is not installed, floor temperature detecting function will not be able to use.
Whenever the sensor is installed, reset the unit to enable this function. Set limitation temperature and select control mode the system switch must be switched to FLOOR SET position.



System switch is at the FLOOR SET position. The LCD display will change to actual floor temperature and current floor heating control mode **FL:O**.
There are two operation mode which can be selected.

1. Room temperature mode: **FL : O**
   The unit will be controlled via air sensor.
   If mode FL:O is selected, the thermostat will determine to activate / deactivate the floor heating system by comparing set temperature with room temperature.
2. Floor temperature mode: **FL : A**
   The unit will be controlled via air and floor sensor.
   If mode FL:A is selected, the thermostat will determine to activate / deactivate the floor heating system by comparing set temperature with room temperature and preset floor temperature and actual floor temperature.
3. Press the **MODE** button to select control mode **FL : A** or **FL : O**.
   The Factory default is **FL : O**

Set Floor limitation temperature

Firstly, make sure the unit is at **FL : A** mode.
Press the △or ▽button to set your desired floor limitation temperature. Here the setting range of limitation temperature is 10℃~45℃.

NOTE

If you should encounter any difficulties in the use of this thermostat, please contact the company who selected this thermostat for you. This would most likely be the contractor who installed your heating systems. Beside, you maybe able to get help from any local heating contractors if you purchased this thermostat yourself.