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(3) MAPEI®

# MAPEHEAT THERMO TOUCH

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# Description

The **Mapeheat Thermo Touch** thermostat is a programmable thermostat designed for electrical floor heating. The thermostat is designed to control electrical floor heating in order to give the best possible comfort and the lowest possible energy usage.

The thermostat can work in 3 different temperature sensing modes:

- · Floor Sensing mode
- · Room Sensing mode
- · Room Sensing mode with floor temperature limiter

The thermostat has 2 programmes to choose from:

- Manual ON/OFF (Constant single temperature)
- Timer programme (4 timer events/day)

The programme is changed by touching the intelligent leaf button "O".



### Certification





# Navigation Principal

The Mapeheat Thermo Touch is a thermostat with a touch display.

- 1. ON/OFF/ Home button
- 2. Day
- 3. Active sensor display
- 4. Time
- 5. Heating display
- 6. Programme mode
- 7. Clock
- 8. (Installer) menu
- 9. Navigation arrows





### THE DISPLAY

### Display in manual ON/OFF programme

The following icons are visible in the Manual ON/OFF:



### Active sensor display

- Floor sensing mode (1)
- · Room sensing mode (^)
- · Room sensing mode with floor temperature limiter (1)

### **Heating display**

The heating display is flashing when the heating is on.

### **Temperature**

The temperature on the display depends on the selected sensing mode.

- Floor sensing mode => Actual floor temperature on the display
- Room sensing mode => Actual room temperature on the display
- Room sensing with floor temperature limiter mode => Actual room temperature on the display

**Note:** When pushing on the "**<**" or "**>**" button, the set point temperature appears on the display blinking for 5 seconds

### Installer Menu

· Touch the M button for 5 seconds to enter the Installer Menu

### The display in timer programme

The following icons are visible in the Timer Programme:



### Time and day

The actual day is displayed on the screen with the 3 letters (MON-TUE-WED-THU-FRI-SAT-SUN).

The time can be set in 24H or 12AM/PM mode (see INSTALLER MENU).

### **4 Event display**

The 4 events are displayed with the symbols:

Event 1

Event 2

Event 3

Event 4



### MANUAL ON/OFF PROGRAMME

When switching on the thermostat for the first time (touching the Green Leaf button for 2 seconds), it will start in MANUAL ON/OFF programme using the floor sensing mode as a standard (see INSTALLER MENU to change the sensing mode).

You will see the following screen:



Touch "**<**" or "**>**" to show the set point temperature. It will blink for 5 seconds.

- 1. Touch "**<**" to decrease the temperature.
- 2. Touch ">" to decrease the temperature.

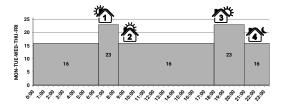
To switch from Manual ON/OFF to Timer Programme, touch the "O" button once.

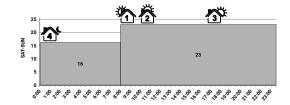
To switch off the thermostat, touch the " $\bigcirc$ " button for 2 seconds.

### **TIMER PROGRAMME**

The **Mapeheat Thermo Touch** can be programmed with 4 events per day. Different temperatures can be maintained for each event of the day. The days can be programmed independently or per cluster of days.

The default Timer Programme is shown on the graph below. The user can easily adapt the programme to their needs (see PROGRAMMING THE TIMER PROGRAMME).



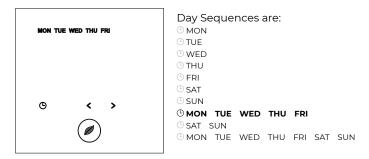


- $\cdot$  Touch the " $\odot$ " button to set the hour and day of the week
- · Touch the "O" button for 3 seconds to programme the timer programme
- $\cdot$  Touch the "M" button for 5 seconds to enter the Installer Menu
- · Touch the "O" button to switch from Timer to Manual ON/OFF mode
- Touch the "O" button for 2 seconds to put the thermostat into OFF (standby) mode
- · Touch " $\P$ " or " $\P$ " to show the set point temperature. It will blink for 5 seconds
- 1. Touch "<" to decrease the temperature.
- 2. Touch ">" to increase the temperature.

**Note:** The adapted temperature is valid until the next Timer Event.

### PROGRAMMING THE TIMER PROGRAMME

- · Touch the "O" button for 3 seconds to programme the Timer Programme
- · Touch the "O" button to validate



### **EVENT PROGRAMMES**

### For Event 1

- · Touch "

  " or "

  " to change hours of Event 1
- · Touch the "O" button to validate
- · Touch "

  " or "

  " to change the minutes of Event 1
- $\cdot$  Touch the " $\bigcirc$ " button to validate
- · Touch "**<**" or "**>**" to change the temperature for Event 1
- · Touch the "O" button to validate

### For Event 2, 3 and 4

Repeat the actions for event 1 for the Events 2, 3 and 4.

Touch the "O" button, at any time during the programming, to save changes and return to the Timer Programme.

If needed, it is possible to repeat the complete procedure to programme other days or sequences of days.



### **INSTALLER MENU**

Touch the " $\mathbf{M}$ " button for 5 seconds to enter the Installer Menu.

	Description	Range	Default Setting
1.	Sensing mode selection	Floor sensing mode Room sensing mode Room sensing mode with floor temperature limiter	Floor Sensing mode
2.	12 vs 24 hours display	12 / 24	24
3.	Motion sensor. When getting close to the thermostat (5cm range) the display lights up automatically	ON/OFF	ON
4.	Offset for floor sensor calibration	Offset of 0 to +10°C	+4°C
5.	Room sensor calibration	Measured sensor temperature +/- 5°C	Measured sensor temperature
6.	Minimum temperature set point for the floor sensor	Floor sensing mode: +5 +15°C Room sensing mode: OFF Room sensing mode with floor temperature limiter: OFF	+5°C OFF
	Maximum temperature	Floor sensing mode: Minimum temperature set point floor sensor (installer menu 6) to +35°C	+35°C
7.	set point for the floor sensor	Room sensing mode: OFF	OFF
	Room sensing mode with floor temperature limiter: +10 to +35°C	+27°C	

	Description	Range	<b>Default Setting</b>
8.	Minimum temperature	Floor sensing mode: OFF Room sensing mode: +5 to +15°C	OFF +5°C
0.	set point for the Room Sensor	Room sensing mode with floor temperature limiter: +5 to +15°C	+5°C
		Floor sensing mode: OFF	OFF
9.	Maximum temperature set point for the Room	Room sensing mode: Minimum temperature set point room sensor (installer menu 8) to +40°C	+40°C
	Sensor	Room sensing mode with floor temperature limiter: Minimum temperature set point room sensor (installer menu 8) to +40°C	+40°C
10.	Adjustable hysteresis	0.5 to 2.0°C	1.0°C

### **SETTING THE CLOCK**

- $\cdot$  Touch the " $\odot$ " button to set the hour and day of the week
- · Touch "**<**" or "**>**" to change the hours
- · Touch the "O" button to validate
- · Touch "**<**" or "**>**" to change the minutes
- · Touch the "O" button to validate
- · Touch "**<**" or "**>**" to change the day of the week
- · Touch the "O" button to validate

**Remark:** In case of battery drainage after long period of power failure, the user might have to re-programme the clock

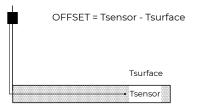


### Sensor Calibration

### Floor sensor calibration

The temperature of the floor surface can differ from the temperature measured by the floor sensor due to the floor construction, the floor type and the position of the floor sensor. In order to calibrate your thermostat to this difference the user can use the floor sensor calibration OFFSET in installer menu 4.

After the temperature on the floor is stabilised, place a thermometer on the floor surface in order to sense the real temperature on the surface (Tsurface). Read the floor sensor temperature (Tsensor) on the thermostat and adjust the OFFSET according to the formula:



### Room sensor calibration

If the value measured by the room sensor in the thermostat differs from the real room temperature, it is possible to calibrate the room sensor using the installer menu 5.

After the temperature in the room is stabilised, place a thermometer close to the wall in order to sense the real room temperature. If this value differs from the one shown by the thermostat, adjust Menu 5 using the "\( \bigcirc\)" until the thermostat shows the same value as the reference thermometer.



## Trouble Shooting

In the event of damage or malfunction of one of the temperature sensors, the heating output cuts off (fail safe) and an error code is displayed.

Error Code	Description
ERI	Short circuit on floor sensor
ER2	Open circuit on floor sensor / Missing floor sensor
ER3	Short circuit on room sensor
ER4	Open circuit on room sensor
ER5	Check sensing mode

The floor sensor can be replaced by a new sensor. In the event of malfunction of the room sensor, the entire thermostat must be replaced (Error 3 or Error 4).

Error 5 occurs if the thermostat is set in Room Sensing Mode and the floor sensor is installed.

To resolve the error change the sensing mode in Floor sensing or Room sensing with floor temperature limiter. Otherwise, remove the floor sensor to work in room sensing mode. The floor sensor has got the following temperature/resistance values:

Temperature	Resistance
+15°C	15.8 kΩ
+20°C	12.5 kΩ
+25°C	10.0 kΩ
+30°C	8.0 kΩ
+35°C	6.5 kΩ





# Technical Specification

Supply voltage	230VAC 10%, -15%, 50Hz
Power consumption (stand by)	3 VA
Method of mounting	Wall bracket mounted
Relay output	230V, max. 13A
Protection class	IP 21
Terminals	2.5 mm <sup>2</sup>
Floor sensor with 3m cable	NTC, 10kΩ / +25°C
Maximum length of floor sensor cable	100 m, 2 x 1.5 mm² (230VAC cable)
Control modes	Floor Sensing
	Room Sensing
	Room Sensing with floor temperature limiter
Temperature control	Manual ON/OFF Timer Programme
Ambient temperature – operation	0 +40°C, 5-95% RH (non condensing)
Ambient temperature – transport	−10 +60°C
Temperature range, floor sensor	+5 +35°C
Temperature range, room sensor	+5 +40°C
Type of action	1.B. (39)*
Control pollution	Degree 2 (49)*

Rated impulse voltage	4kV (75)*
Temperature for the ball pressure test	+125°C (77)*
SELV limits realised	22 VDC (86)*
Switching hysteresis	+1°C (Factory settings adjustable between 0.5-2.0°C)

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