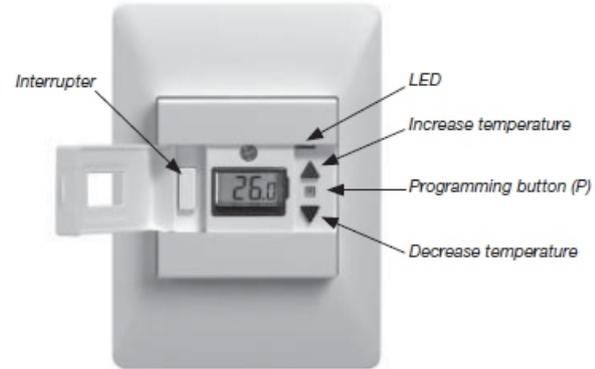


### User Manual - easy reference

The MTD2-1999 is a manual thermostat with the ability to measure either the room temperature(sensor is in the unit) or the floor temperature via floor sensor (floor probe sensor is installed during the floorheating installation).

The thermostat is able to be mounted on the wall vertically or it can be mounted horizontally.

The thermostat can be fitted off on a wall, in a cupboard or even back in the switch board cupboard. Should the thermostat be placed in an area that is not in the heated room, the wiring can be extended up to 100m.



**The thermostat must only be installed by an authorised electrician.**

#### Thermostat Settings

The thermostat settings give you the option to

- ◆ set the max & min controlling temperature(SCA function)
- ◆ adjust the max & min limiting temperature (Li function)
- ◆ Measure the floor or room temperature.
- ◆ Set the application(AFP).

- A - Room seensor \*1
- F - Floor sensor \*2
- AF-Room with floor limitsensor \*2
- C - Controller(if A,F,AF don't work)

To set parameter values, press and hold the programming button for 3 seconds. SCA → Hi → 40 will be shown on the display. Firstly, SCA will be displayed for 1 second, followed by Hi, and finally 40. The required value can then be set using the arrow buttons. To access the next parameter, press the programming button again. If no buttons are pressed for 30 seconds, the program returns to the initial display.

	Parameter	Shown on display	Factory setting OJ standard
#1	Max. temperature	SCA → Hi → 40	40°C (0-40°C)
#2	Min. temperature	SCA → Lo → 0	0°C (0-40°C)
#3	Max. limit temperature FLOOR	Li → Hi → 28	28°C (15-55°C)
#4	Min. limit temperature FLOOR	Li → Lo → 15	15°C (5-30°C)
#5	Measure floor temperature	FLO → 24.5	
#6	Measure room temperature	ro → 21.5	
#7	Application	APp → A : room sensor *1	
		→ F : floor sensor *2	
		→ AF : room with limit sensor *2	
		→ C : controller	
	Offset	oFF →	0 0 (+/-3°C)
	Night setback/Eco	nSb →	5 5°C (+/- 2-8°C)
*1 : Only available if floor sensor is NOT connected			
*2 : Only available if floor sensor is connected			

#1&2 : This is the max/min temp the thermostat can be set at when using the red & blue buttons.

#3&4 : These are floor temp limitation settings that are only applicable when set in AF mode.

#5 : The floor temperature when set in F(floor) or AF(room with limit) mode.

#6 : The air temperature when set in A(room sensor) mode.

#7 : Application A measures the air temperature of the area it is in.(floor probe needs to be disconnected)  
 F measures the floor temperature at floor sensor.(floor probe needs to be connected)  
 AF measures room temperature but limits the floor temp to what it has been set.(floor probe needs to be connected)

C If A & F are non functioning, the thermostat then works as a % mode  
 i.e. 0 = 0%, 5 = 50%, 10 = 100%

If Controller (C) is selected under Application, the floor and room sensors are disconnected and heating is controlled on a scale of 0-10, corresponding to 0-100% activated

<b>Sensor</b>	
Temp. (°C)	Value (ohms)
-10	64000
0	38000
10	23300
20	14800
30	9700

### The Floor Sensor

The floor sensor works by means of the thermostat measuring the resistance of the sensor & converting this to a temperature.

The probe can be checked by testing for ohms with a multi meter.

See table to the left.

If your floor is approx. 25degrees & the sensor is tested and you get a reading of around 19000ohms. Then it is still working correctly. But if you get a ohm reading of about 2000ohms, then there could be an issue with the floor sensor.

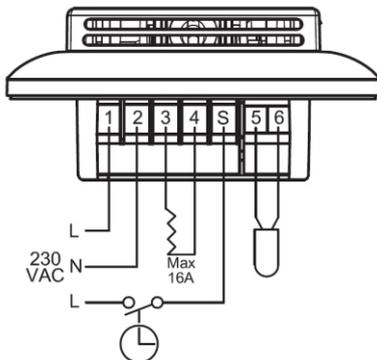
### Error codes

E1 - Sensor error. The sensor is short-circuited or disconnected.  
The LED is flashing red once.

E2 - Limit error. The temperature on the floor has surpassed max. limit temperature.  
The thermostat switch off the heating and the LED is flashing red twice.

E5 - Overheating. The temperature is too high in the thermostat and switch off the heating.  
The LED is flashing 5 times.

If the floor sensor cannot be removed & replaced and alternative option is to put it into room sensor mode(not ideally suited if thermostat is in a cupboard) or put it into control mode.



### CONNECTING UP YOUR THERMOSTAT

#### Terminal

- #1 Line active in
- #2 Line neutral in
- #3 heater neutral in
- #4 Heater active in
- #5 only used in conjunction with a timer.
- #5&6 Floor sensor, not pole sensitive.

### Classification

The product is a Class II appliance (with reinforced insulation) and must be connected as follows:

- Term. 1: Live (L1) 230 V ±15%, 50/60 Hz
- Term. 2: Neutral (L2)
- Term. 3–4: Max. load 16 A, 3600 W

### Technical data

Voltage .....	230 V AC ±15% 50 Hz
Max. pre-fuse .....	16 A
Built-in circuit breaker .....	2-pole, 16 A
Output relay .....	Make contact - SPST -NO
Output .....	Max. 16 A / 3600 W
Control principle.....	ON/OFF
Temperature range .....	+0/+40°C
Difference/hysteresis .....	0.4°C
Economy temperature .....	5°C (2-8°C OTD2)
- control voltage signal .....	230 VAC
Frost protection temperature .....	5°C absolute
- control voltage signal via rectifier diode .....	230 V AC
Range limits.....	min./max.
Sensor fault protection .....	-20°C
Ambient operating temperature .....	0/+40°C
Dimensions .....	H/115, W/84, D/40 mm
Enclosure rating .....	IP 21