



MTD2 Operations Manual

A Comfort Heat floor heating system has been installed in your floor. Under floor heating will warm from the floor up giving you unparalleled feeling of comfort. This heating system is controlled by an electronic thermostat that uses a floor sensor for optimum temperature control.

PROIR TO TURNING ON

The sub-floor and screed have to be fully cured before turning the heating on. For sand & cement screeds you must wait at least 3 weeks before turning on. With Ultra-thin installations, you must wait 2-3 days for the tile glue to cure. When turning on the floor for the first time, increase the floor temperature gradually over 2-3 days.

PRODUCT WARRANTY

TILE CABLE - 10 years
SLAB CABLE - 10 years
CARPET MATS - 5 years
TIMBER MATS - 5 years
THERMOSTAT & SENSOR - 2 years

SUGGESTED TEMPERATURE SETTINGS

BATHROOM - 24 ~ 28°C
LARGE TILED AREA - 21 ~ 22°C
CARPET - 19 ~ 21°C
TIMBER - 24°C
SLAB - 21°C

The MICROTEMP RANGE of electronic thermostats are specifically designed for underfloor heating systems. The thermostat is vertically or horizontally mounted and has a 2pole isolator with 16A output relay.

MTD2 - The MTD2 thermostat is a manual thermostat. You simply switch it on, and set the desired temperature. When the red light is on, the floor is heating. If there is no light, the floor is either off or at selected temperature. A flashing light means there is an error.



MTD2

TECHNICAL DATA

Supply Voltage:	240Vac, 50/60hz
Output Relay:	16A SPST, 3600W max
Switching Differential:	0.4 degC
Built-in Switch:	2 pole 16A
Temperature Range:	0/+50 degC
Housing/protection:	IP20 & IP21
Dimensions (HxWxD):	115mm x 84mm x 58mm
Sensor Length:	3m
Warranty:	2 years
Mounted:	Vertical/Horizontal/ Flush mounted



Type MTC2 / MTD2 with room or floor sensor

67039 02/10 (DJU)
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English

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Introduction

MICROLINE electronic thermostat for installation in standard wall box. The thermostat allows the required temperature to be set within the range 0-40°C. An LED indicates whether heating is active. The thermostat is suitable for ELKO and NORWESCO systems S-16, RS-16 and UNI-10.

Product programme

MTC2-1991 with floor sensor
MTC2-1999 with built-in room sensor
MTD2-1999 with built-in room sensor and external limitation sensor

CE marking

Applied standards
EN 61000-6-3, EN 61000-6-2, EN 60 730-1 and EN 60730-2-9.

The product may only be used if the complete installation complies with current directives.

The thermostat must only be installed by an authorised electrician.

If the product has been damaged in any way, e.g. during transport, it must be inspected and checked by authorised personnel before being connected to the power supply.

The product carries a manufacturer's warranty if installed in accordance with these instructions and applicable regulations.

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 V AC
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

The thermostat is maintenance free.

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

Pollution class: 2

Pollution class 2, representative of air circulation in typical homes.

Overvoltage category: III

Pulse voltage 4 kV to IEC 60664-1.

Sensor installation

Floor sensor:

The floor sensor should be installed in standard conduit embedded in the floor. The conduit should be sealed and positioned as close to the floor surface as possible.

Room sensor:

The room sensor should be installed in a standard wall box or mounted direct on the wall. Sensor cables can be extended up to a maximum of 50 m in length using power cable. Two wires in a multi-wire cable must, however, not be used if the cable is also used to supply power to heating cables. The best result is achieved if a separate cable, installed in a separate conduit, is used for the sensor.

Installation of thermostat

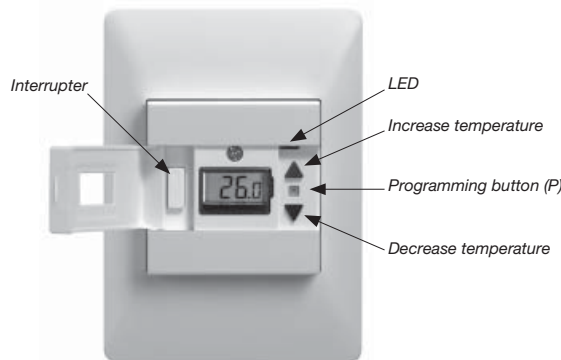
Built-in or external room sensor

The thermostat or external room sensor should be mounted on a wall in such a way as to allow free air circulation around it. It must also be positioned so as to prevent it from being affected by direct heat sources (e.g. the sun), draughts from doors and windows, or outside temperature (i.e. do not mount on outer walls). The thermostat has a built in fault circuit which switches the heating off if the sensor is disconnected or short-circuited.

Thermostat installation

- Open cover.
- Unscrew cover and remove.
- Connect wires from rear as shown in wiring diagram.
- Mount thermostat in wall box - fit frame and cover. Please note that the adapterplate is properly clipped on the thermostat.

Temperature setting



The thermostat has a temperature setting range of 0-40°C. Set the wanted temperature with the arrow buttons, the set temperature shows in the display. The thermostat will calculate the best way to control the heating system in order to achieve the desired temperature. If necessary, fine adjustment can be performed after 1 or 2 days.

Night setback

The night setback/economy temperature function is activated via a 230 V signal from an external timer connected to terminal S. The function is factory set to 5°C (2-8° OTD2). The LED lights green when the economy signal is active and red when heating is active.

Frost protection

If the signal is connected via a rectifier diode, the thermostat will maintain a floor/room temperature of 5°C.

Settings

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	OTD2 -1999	OTN2 -1991	OTN2 -1999
Max. temperature	SCA ⇨ Hi ⇨ 40	40°C (0-40°C)	•	•	•
Min. temperature	SCA ⇨ Lo ⇨ 0	0°C (0-40°C)	•	•	•
Max. limit temperature FLOOR	Li ⇨ Hi ⇨ 28	28°C (15-55°C)	•		
Min. limit temperature FLOOR	Li ⇨ Lo ⇨ 15	15°C (5-30°C)	•		
Measure floor temperature	FLo ⇨ 24.5		•		
Measured room temperature	ro ⇨ 21.5		•		
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 installed

*2 : Only available if floor sensor is installed

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

Error codes

- E1** - Sensor error. 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.

Environment protection/recycling

Help protect the environment by disposing of the packaging and redundant products in a responsible manner.

Product disposal

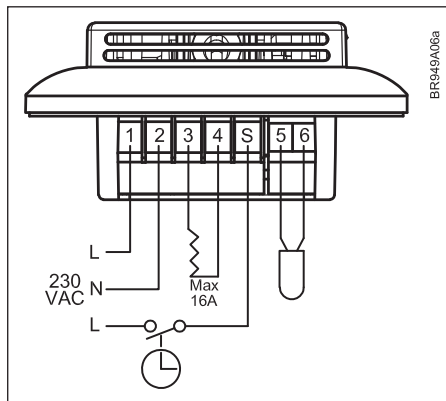


Products marked with this symbol must not be disposed of together with household refuse but must be delivered to a waste collection centre in accordance with current local regulations.

Sensor	
Temp. (°C)	Valor (ohmios)
-10	64000
0	38000
10	23300
20	14800
30	9700

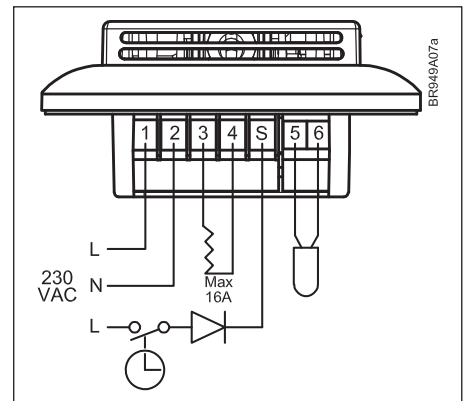
BR929A08-E

Sensor table



BR949A06a

Night setback



BR949A07a

Frost protection