



MTC 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 mounted and has a 2pole isolator with 16A output relay.

MTC - The MTC 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.



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:	Vertically/Flush mounted

INSTRUCTIONS

Type MTC with air sensor or floor sensor



67303 06/14 - (LOA)



English

MTC is an electronic heating thermostat designed to be vertically installed in a standard electrical wall box. Once installed, it requires no maintenance.

An LED illuminates to indicate „call“ for heating, this also aids in system testing. An ON/OFF interrupter on the front of the cover makes system operation extremely simple.

PRODUCTS

Type	Product
MTC-1991	with floor sensor
MTC-1999	with built-in air sensor

CLASSIFICATION

The product is a class II device (enhanced insulation) and the product must be connected to the following leads,

Term. 1:	Phase (L) 230 V $\pm 10\%$, 50/60 Hz
Term. 2:	Neutral (N)
Term. 3-4:	Load max. 14 A, 3.200 W

WARNING

The system may not be energized unless the system is installed according to this instruction and the installation meets all applicable codes. Warranty is void if not installed according to this instruction and proper procedure.

TECHNICAL DATA

Power supply 230 V AC $\pm 10\%$, 50-60 Hz
Output relay, SPST (resistive load) 14 A
Built-in switch 2 pole, 14 A
Ambient operating temperature. 0-50 °C
Scale limitation minimum and maximum
Scale range 10-50 °C
Temperature setback. not available
On/Off differential 0.4 °C
Enclosure. IP21
Dimensions (HxWxD). 115x84x50 mm

MOUNTING OF FLOOR SENSOR

The floor sensor is used for temperature regulation in floor surfaces. For easy replacement the sensor can be mounted in a tube which is placed between 2 heating cables. The tube is ended towards the floor surface and sealed. If required, the sensor cable can be extended up to about 100 m with a standard installation cable. 2 leads in a multi lead cable, which is used as supply cable for the heating cable, must not be used. Voltage signals may occur which may

disturb the thermostat function. If a screened cable is used, the screen must not be earthed but must be connected to terminal 6.

PLACEMENT OF THERMOSTAT WITH BUILT-IN AIR SENSOR

The thermostat is to be mounted on the wall with free air circulation around it. Furthermore it has to be placed where it is not influenced by any other heating sources (e.g. the sun), draft from doors or windows, or by the temperature of an exterior wall.

ERROR DETECTION

The MTC has built-in error detection which will de-energize the heating circuit if the sensor is damaged or if it detects an open or shorted sensor circuit.

CAUTION!

Disconnect all electrical power prior to installing or servicing this unit.

THERMOSTAT INSTALLATION (FIG. 1-2)

1. Remove thermostat knob, noting the position (A).
2. Loosen screw to remove frame and cover (B).
3. Attach wiring from the rear of the thermostat according to the wiring diagram.
4. The thermostat is mounted vertically in a standard single gang electrical box. Please note that the adapter plate is properly clipped on the thermostat.
 - re-install frame and cover
 - re-install the knob in the proper position

MAXIMUM/MINIMUM TEMPERATURE LIMITATIONS

Behind the knob there are red and blue locking rings held in position by a screw. To set the limitations, loosen the screw (C) and adjust the red limit ring to the desired maximum, set the blue ring to the desired minimum temperature, then retighten the screw. The knob must be re-installed exactly as it was removed.

Installation of the thermostat and adjustment of the max and min temperature adjustment must be done by an authorised electrician.

CE MARKING

According to the following directives:
EN 61000-6-2, EN 61000-6-3,
EN 60730-1 and EN 61730-2-9.



ENVIRONMENT AND RECYCLING

Please help us to protect the environment by disposing of the packaging in accordance with national regulations for waste processing.

RECYCLING OF OBSOLETE APPLIANCES



Appliances with this label must not be disposed of with general household waste. They must be collected separately and disposed of in compliance with local regulations.

Fig. 1

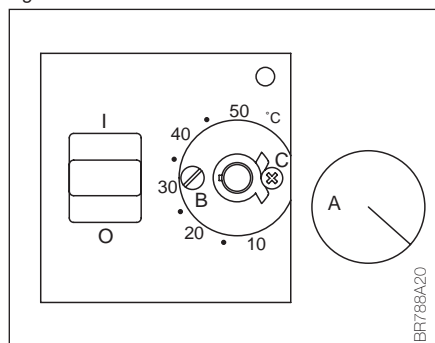


Fig. 2

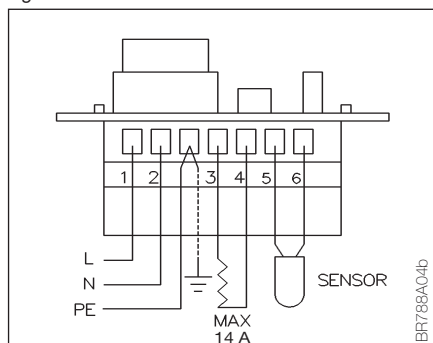


Fig. 3

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

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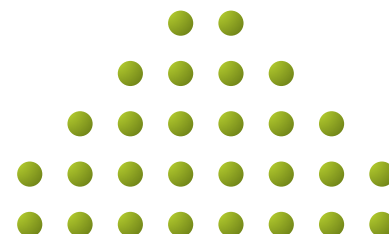
MTC/MTD



Scale in °F



Scale in °C



THERMOSTATS FOR UNDERFLOOR HEATING



Manual Thermostat

Recommended for control of underfloor heating and electrical heating.

- Flush mounting in a standard wall socket.
- With built-in 2-pole interrupter for convenient switching off.
- On/off control up to 16A.
- With graduated scale, making it easy to set the required floor or room temperature. If required the scale can be adjusted and further limited for max. or min. temperature.
- Electronic thermostat for accurate temperature control ensuring a high comfort of the floor surface or the room temperature.
- Type MTD: With limitation sensor for optimal comfort avoiding cold tiles during spring and autumn, or as protection against damaging wooden floors.

PRODUCT PROGRAM

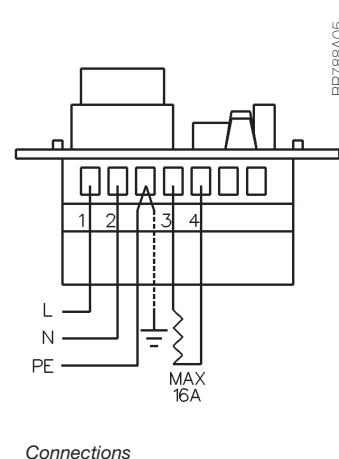
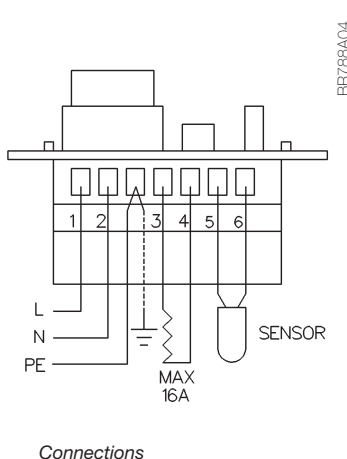
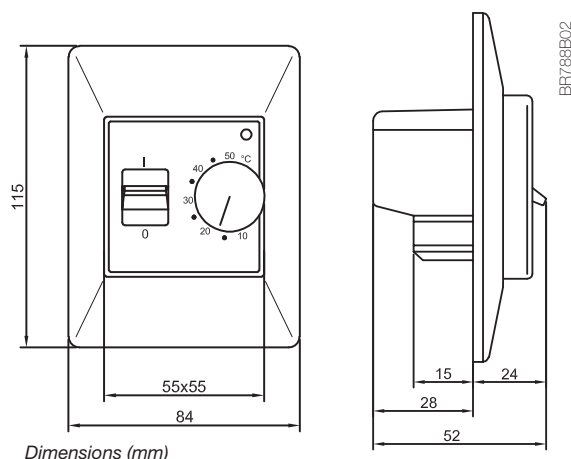
	THERMOSTATS WITH SCALE IN °F	THERMOSTATS WITH SCALE IN °C
WITH FLOOR SENSOR:		
Supply 120 V	MTC-2991-UFH	MTC-2991-UCH
Supply 240 V	MTC-1991-UFH	MTC-1991-UCH
WITH AIR SENSOR:		
Supply 120 V	MTC-2999-UFH	MTC-2999-UCH
Supply 240 V	MTC-1999-UFH	MTC-1999-UCH
WITH AIR SENSOR & WITH FLOOR SENSOR:		
Supply 120 V	MTD-2999-UFH	MTD-2999-UCH
Supply 240 V	MTD-1999-UFH	MTD-1999-UCH
ACCESSORIES		
ETF-144/99A	Floor sensor, 3 m/10 ft Remote room sensor for surface wall mounting Protective cover	
ETF-944/99-H		
MTC-AH		

Temperature Limitation

The MTD is delivered with a floor sensor which can be used for:

Max. temperature limitation: Protection of i.e. wooden floors

Min. temperature limitation: For better heating comfort



THERMOSTAT CONTROL

The thermostat is an electronic on/off thermostat with control of temperature by means of an NTC sensor. The heat output is switched on and off with a differential of only 0.4 °C/0.7 °F. Red LED indicates when heating is on.

Adjustment of the Thermostat

A wide temperature range with graduated scale in either °F or °C for easy setting of the required temperature. With the locking rings behind the thermostat button the min./max. temperature setting can be selected.

APPROVALS

The thermostats with 120/240 V AC, 60 Hz are UL and cUL Listed and meet UL8730-1 and UL8730-2-9 standards for temperature indicating and regulating equipment.

CE: All types

Classification

The product is class II device according to UL 8730-1.

TECHNICAL DATA

Supply voltage	230 V AC +10 %-15 %, 120 V AC ±15 %
Output relay	16 A SPST
Built-in interrupter	2-pole
Temperature range	MTC: +10/+50 °C / +50/+122 °F MTD: +5/+40 °C / +40/+104 °F
On/off differential	0.4 °C/0.7 °F
Housing	IP20
Ambient temperature	0/+50 °C / +32/+122 °F
Dimensions	115 x 84 x 52 mm / 4.5 x 3.3 x 2.3 inch.

MOUNTING

Mounting of Floor Sensor

Floor sensor is used for comfort heating of floor. The sensor can be mounted in conduit of consideration to replacement. The conduit is mounted between the heating cables and ended towards the floor surface.

Mounting of limitation sensor

Max. temperature limitation is used for protection of installation or construction against excessive temperature. The sensor is mounted at a place where excessive temperature may arise.

Min. temperature is used for better heating comfort. The sensor is mounted as floor sensor.

If required, the floor sensor and limitation sensor can be extended up to 100 m / 300 ft. with a standard installation cable.

Mounting of Air Sensor

Air sensor is used for room heating. Thermostat with internal air sensor is mounted approx. 1.6 m / 5 ft. above the floor.

Mounting of Remote Room Sensor

Thermostat incl. floor sensor is used, but remote room sensor is mounted instead of floor sensor.