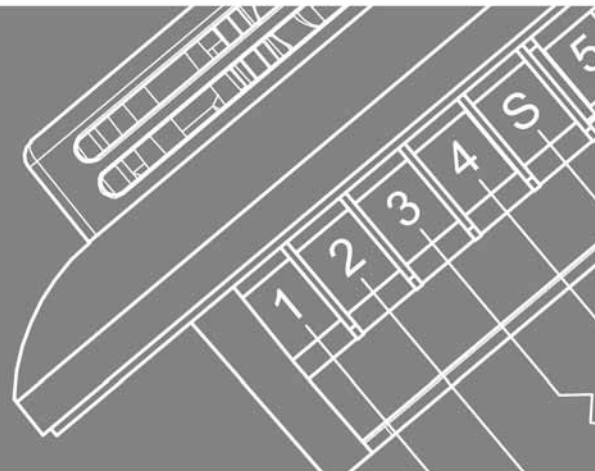


Type TPS-345-0030
with room and
floor sensor



English





HEAT-MAT 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. An extra frame is supplied with the unit.

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	PWM regulation
Temperature range	+0/+40°C
Economy temperature	2-8°C
- 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/84, 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.

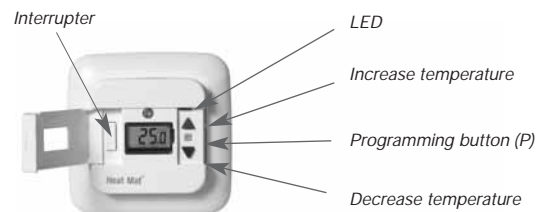
Installation of thermostat with built-in or external room sensor

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). HEAT-MAT 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.

Temperature setting



HEAT-MAT has a temperature setting range of 0-40°C. To help set the temperature correctly, the thermostat has an LED, which lights red when heating is activated. Set the thermostat to max. temperature until the required room or floor temperature is reached. Then reduce the temperature setting until the LED goes out. 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 2-8°C. 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
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 (+/- 3°C)
Night setback/ECO	nSb //	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 switches off the heating and the LED is flashing red twice.
- E5** - Overheating. The temperature is too high in the thermostat and switches 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.

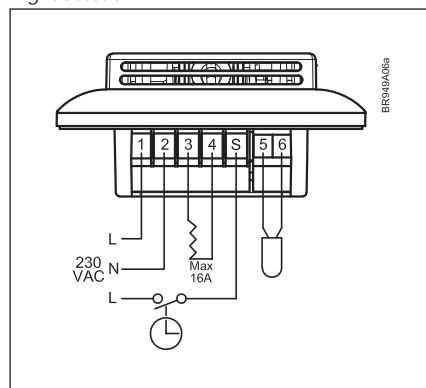
Heat Mat Limited

8, Ashwyn Business Centre
 Marchants Way, Burgess Hill
 West Sussex RH15 8QY
 Tel: 01444 247020 · Fax: 01444 247121

Sensor table

Sensor		BR929A08
Temp.(°C)	Value (ohm)	
-10	64000	
0	38000	
10	23300	
20	14800	
30	9700	

Night setback



Frost protection

