



TPS31 Thermostat



Heat Mat

Underfloor Heating

Call 01444 247020
to find out more or
visit our website at
www.heatmat.co.uk

TPS31 Features

- Lot20 Compliant simple on/off controller
- Easy to use, digital display
- User friendly temperature settings and buttons
- Monitors air and floor temperature
- Stylish polar white frame
- Supplied with extendable floor sensor (up to 30m)
- Controls up to 16 Amp / 3,600W of underfloor heating directly without the need for a contactor
- Physical on/off switch
- Covered by a three year warranty for peace of mind
- Can be used to control any other brands main voltage UFH
- Made for Heat Mat in Denmark by OJ Electronics

Compatible with



Heating mats



Undertile heating cables



6mm heating cables



Combymat heating mats



Mirror heaters

TPS31 Manual Thermostat

Lot20 Compliant Simple electronic on/off thermostat

Heat Mat's TPS31 thermostat is a simple to use electric underfloor heating controller, perfect for controlling any of Heat Mat's electric underfloor heating systems.

The TPS31 features straightforward temperature buttons concealed behind a door, a digital display showing the current temperature reading and a simple to use physical on/off button.

The temperature is easily adjusted and increased using the red arrow or decreased using the blue arrow while an LED light indicates when the heating is active. All new electric heating systems in the UK must now be Lot20 compliant to ensure energy efficiency. The TPS31 thermostat is unique amongst 'manual' underfloor heating controllers by achieving Lot20 compliance through a built-in automatic mode to reduce temperatures overnight.

The TPS31 thermostat monitors ambient room and floor temperatures, and you can choose which of these to control. When you choose the ambient temperature the floor sensor still ensures the floor doesn't overheat.

This simple thermostat is ideal for use when a programmable timer thermostat is not required; for instance in rooms that are used on an ad-hoc basis.

The TPS31 has 'setback' and 'frost protection' features which can be operated remotely to lower the target temperature.

The floor sensor can be extended by up to 30m if required allowing the thermostat to be mounted remotely from the area to be heated. The thermostat is suitable for directly controlling any brand of mains-voltage underfloor heating and can also be used to control other types of electric heaters of up to 3,600W.



The TPS31 is simple to install and designed for UK back boxes.



TPS31 Thermostat Modes

Setback mode - Lot20 compliance

The thermostat includes a built-in setback mode and timer that automatically drops the systems target temperature overnight. As standard this function drops the temperature by 5°C, but it can be set to anywhere between 2-8°C.

This setback mode can also be triggered by an external input, and in most circumstances this feature is used to lower the room temperature at certain times to save on running costs; for instance when a room will be unoccupied in a hotel. The signal is usually sent from an external timer or building management system (BMS), but in the case of hotels, can be a signal sent from reception when the room is unoccupied.

The mode is activated when a 230/240V signal is registered on terminal S of the thermostat.

Frost protection mode

The frost protection mode turns off the heating but protects the floor from freezing, by ensuring the floor maintains a temperature of 5°C to prevent risk of frost damage. This mode can be used in hotels to effectively turn off the rooms heating.

Frost protection mode is activated when a 230/240V signal is sent to terminal S of the thermostat via a rectifier diode. This signal can be sent from an external timer, a BMS or simple wired switch.

A compliant 'manual' controller

The recent ECO Directive and Lot20 legislation requires many energy efficient features on electric heating systems, effectively banning simple on/off controllers unless they are paired with a timer unit.

At Heat Mat we fully support energy efficiency, but we also understand that there are numerous users and applications where a simple on/off controller with a basic up and down temperature choice is all that is needed; therefore we introduced the TPS31.

This controller is very simple to use with the only buttons being to increase or decrease temperature and a simple on/off switch. However, hidden behind the main screen is a menu system that allows the controller to operate via a timer function to pre-set schedules automatically dropping the temperature down every night to save on energy.



TPS31 Thermostat Technical Specification:

Supply Voltage	230V AC + 10% 50/60Hz
Output relay	SPST 16A, resistive load or 1A inductive load
Interrupter	2-pole, 16A
Temperature range	+0/+40°C
Floor limit range	+5/+40°C
On/Off differential	0.5°C
Regulation principle	PWM/PI
IP Rating	IP21
Output relay	16A, 3600W
Floor sensor	NTC 12k0hm (extends to 30m)
Dimensions (H/W/D)	84/84/40mm
Display	21mm x 21mm digital display
Warranty	3 years
Product code	TPS31-345-0031

Wiring

Heating systems must always be controlled by a suitable electric underfloor heating thermostat with floor temperature limitation. Heat Mat thermostats are rated to 16 Amps, and if a system exceeds this loading a suitably rated contactor should be used. The circuit must be protected by a 30mA RCD and suitably rated fuse or circuit breaker.



About Heat Mat

With more than 1,400,000m² of underfloor heating installed, 22 years' experience of the UK underfloor heating market and a wealth of knowledge on Scandinavian ice and snow melting systems, you can rely on Heat Mat to understand your needs and supply the products to satisfy your requirements.

This is why we are the Professional's Choice, the number one supplier of electric underfloor heating and ice and snow melting systems to the UK's professional installation market.



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Heat Mat

Underfloor Heating



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