OEM-Thermostat 230 V

The OEM-Thermostat is an electronic room temperature thermostat for an optimal control of thermal actuators. The range of application is mainly focussed on individual room control of floor heating systems.

The OEM-Thermostat has been specially designed for the customer-specific use in OEM businesses. Apart from a precise controlling behaviour by pulse width modulation, it is characterised by a straight and modern design. A further differentiation can be obtained by customised versions. The product can be extended with a switching output indicator per LED, as well as with a range limitation of the adjustable set temperature.

Installation may be performed on a flush-type box as well as directly to the wall. The connection and mounting works is intuitively and installation-friendly.

Features

- OEM design
- Version in 230 V for actuators – normally-closed
- Rotary temperature control with 1/4 degree soft clicks
- Automatic temperature setback (4K at 20°C) by external switching signal
- Quick and easy installation
- Precise control response
- Patented set value adjustment
- Direct wall mounting
- Installation on flush-type box (D/CH)
- Limitation of set temperature range (optional)
- Indication of the switching output per LED (optional)

Application

The OEM-Thermostat serves for the control of thermal actuators in surface and radiator heating systems.

General Information

Type

R 2012: Version 230 V – normally closed
R 2022: Version 230 V – normally closed, with switching output indicator

Scope of Supply

1 x OEM-Thermostat R2...
1 x Installation instruction

Customer-specific Version

Following differentiations are possible:

- Own article number
- Logo (also multicoloured)
- Own casing colour
- Own casing
- Own scaling

Ordering Information

Our staff will be glad to assist you in finding the OEM-Thermostat fitting your application.
Call us at: +49 - 53 41 - 84 75 - 0

Function

Standard

Control Response

The OEM-Thermostat is an electronic on/off controller, offering an optimal control of thermoelectric actuators on the basis of pulse width modulation.

Output pulses are adapted depending on the difference between the room temperature measured by the thermostat (actual value) and the desired temperature (set value). The bigger the difference between set value and actual value, the longer the actuator is switched on. When the room temperature approaches the set temperature, the pulses become shorter and shorter due to a thermal feedback.

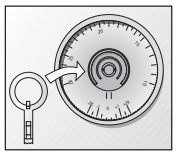
Pulse width modulation in combination with a thermal feedback guarantees precise control response and prevents excessive overshoot during the heat-up phase. In settled condition, few switch-on pulses per hour will be sufficient to maintain the desired temperature.

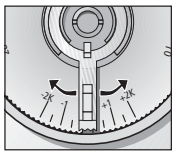
Temperature Setback

If an external switching signal for temperature setback is given by a timer, the set temperature is reduced automatically by approximately 4K.

Set Value Adjustment

According to the given conditions of rooms, or of constructional structures, it is possible to adjust a possible control deviation to the room temperature, by -2 K ... 2 K. For this purpose, there is a set adjustment rider underneath the turning knob.

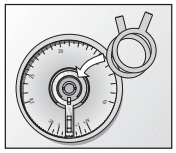


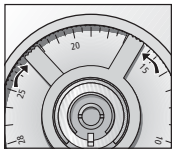


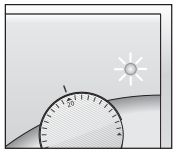
Optional

Limitation of set temperature range

The adjustment range of the turning knobs can be selected individually by using riders. The corresponding riders are inserted underneath the turning knob.







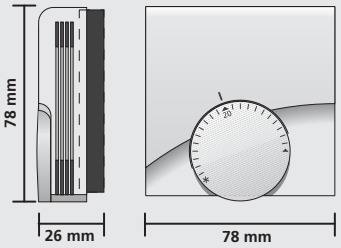
LED for switching output

The status of the switching output can be indicated by an LED. If the LED is on, it indicates that the switching output "HEATING" is active.

Room Thermostats

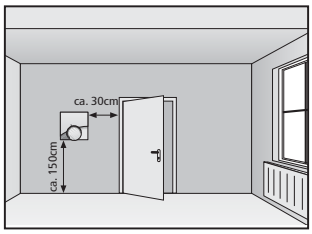
Technical Data

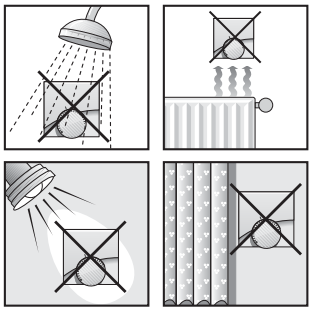
Type	R 2012	R 2022
Operating voltage	230 V±15%, 50/60 Hz	230 V±15%, 50/60Hz
Switched current	max. 1,8 A (ohmic load)	max. 1,8 A (ohmic load)
Contact rating	max. 10 actuator a 3W	max. 10 actuator a 3W
Switching output	Relay	Relay
Fuse	2 A, slow, high breaking capacity	2 A, slow, high breaking capacity
Temperature setback	approx. 4 K / 20°C	approx. 4 K / 20°C
max. set value deviation	± 0.5 K	± 0,5 K
Storage temperature	-20 to +70°C	-20 bis +70°C
Ambient temperature	0 to +50°C	0 bis +50°C
Relative humidity	max. 80%, not condensing	max. 80%, not condensing
Degree of protection	IP 30	IP 30
Protection class	II	II
CE conformity according to	EN 60730	EN 60730
Housing material	ABS	ABS
Housing color	pure white	pure white
Connection terminal	5-pole screwed terminal	5-pole screwed terminal
Weight	69 g	70 g
Adjustment of set value	±2 K / ¼ degree soft clicks	±2 K / ¼ degree soft clicks
Indication of switching output (LED)	no	yes



Planning and Installation Notes

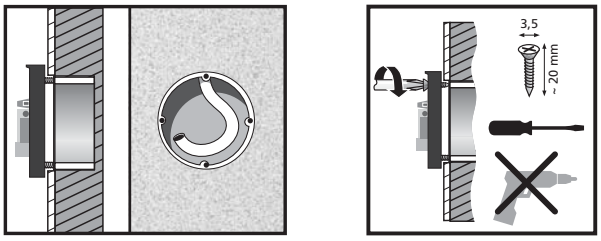
Mounting Location



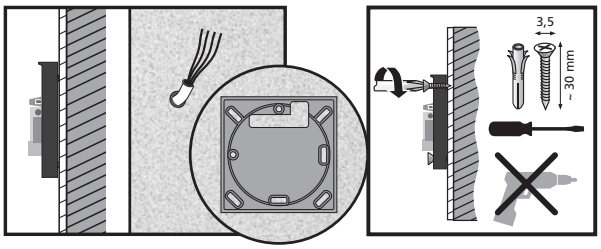


Note!
In order to ensure a trouble-free and thus optimal operation of the thermostat, this device should be located behind a door in a calm zone – free of ambient influences as e. g. draught, direct sunlight or other sources of heat; it must not be covered by curtains nor be exposed to humidity. Otherwise, there is a danger of not reaching or exceeding the adjusted room temperature, depending on the respective ambient condition.

Installation

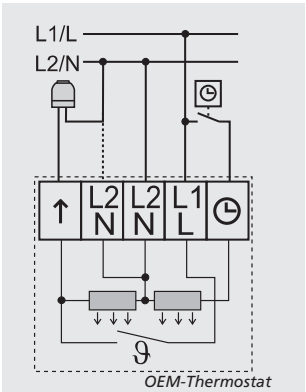


Installation can be performed on a common flush-type box (D/CH) with a bore spacing of 60 mm.



In case of direct wall mounting, the bore specifications in the bottom of the controllers must be observed.

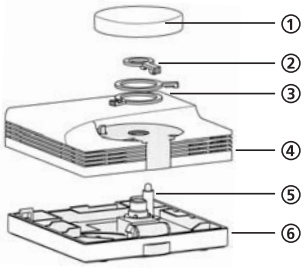
Electric Installation



Electric connection at 5-pole screwed terminal for "automatic temperature setback" with external timer.

The thermostat is connected to a 5 x1,5² NYM line, via the 5-pole screwed terminal, directly to the thermal actuators, or to a special cabling unit in the heating circuit distribution cabinet of a floor heating system. For this, only one of the N- or L2-terminals is needed (these are provided 2 times each). The protective conductor is not used.

Device Overview



1-Temperature turning knob
2-Set value balance
3-Range limitation rides (optional)
4-Upper part of casing
5-Switch Indicator Heating (optional)
6-Lower part of casing

Möhlenhoff Wärmetechnik GmbH
Museumstraße 54a
D-38229 Salzgitter / Germany

Phone +49 53 41 · 8475-0
Fax +49 53 41 · 8475-99

Email: contact@moehlenhoff.de
www.moehlenhoff.de

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