

OEM-Thermostat Heating/Cooling

The OEM Thermostat Heating/Cooling is a digital room thermostat to control the room temperature of heating and cooling systems with external switch.

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 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 installation-friendly.



Features

- OEM design
- Valve protection function (only NC)
- Version: normally-open (NO) or normally-closed (NC)
- CO input
- 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
- Set value adjustment
- Direct wall mounting
- Installation on flush-type box (D/CH)
- Limitation of set temperature range (optional)

Application

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

General Information

Type

R HK 2012 2: Version 230 V – normally closed
R HK 2112 2: Version 230 V – normally open
R HK 4012 2: Version 24 V – normally closed
R HK 4112 2: Version 24 V – normally open

Scope of Supply

1 x OEM-Thermostat R HK ..12 2
1 x Installation instruction within 11 Languages

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

Thermostat characteristics

The OEM Thermostat Heating/Cooling is a PI thermostat for the control of thermoelectric actuators (e. g. OEM actuator), in particular for floor heating systems.

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.

Valve protection function (only NC)

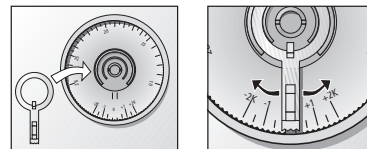
If an actuator is not triggered for more than 24 hours of normal operation, the electronic system switches the actuator for 6 minutes once every 24 hours. This prevents the thermostat valves from seizing outside the heating season.

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

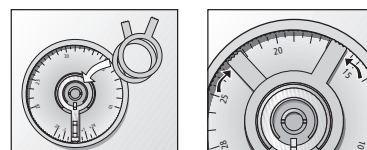
According to the given conditions of rooms, or of constructional structures, it is possible to adjust a possible control deviation to the room temperature, by -2 K ... 2 K. For this purpose, there is a set adjustment rider underneath the turning knob.



Optional

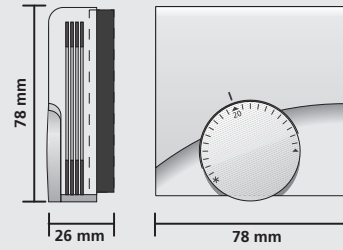
Limitation of set temperature range

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



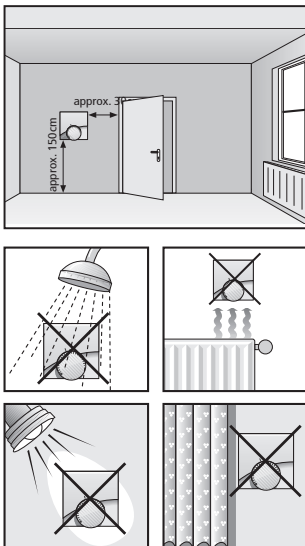
Technical data

Type	R HK 2x12 2	R HK 4x12 2
Operating voltage	230 V ± 10%, 50 Hz	24 V (19,2 – 35 V) 50/60Hz
Switched current	0,25 A (ohmic load), max.	1 A (ohmic load), max.
Contact rating	10 actuator a 3W, max.	5 actuator a 3W, max.
Switching output	Relay	Triac
Fuse	2 A slow	1 A slow
Temperature setting	10 - 28°C	10 - 28°C
Adjustment of set value	±2 K / ¼ degree soft clicks	±2 K / ¼ degree soft clicks
Temperature setback	approx. 4 K / 20°C	approx. 4 K / 20°C
Max. set value deviation	approx. ± 0,5 K	approx. ± 0,5 K
Hunting	< 0,3 K	< 0,3 K
Storage temperature	-25 to +70°C	-25 to +70°C
Ambient temperature	0 to +50°C	0 to +50°C
Relative humidity	80% max., not condensing	80% max., not condensing
Degree of protection	IP 30	IP 30
Protection class	II	III
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	100 g	100 g



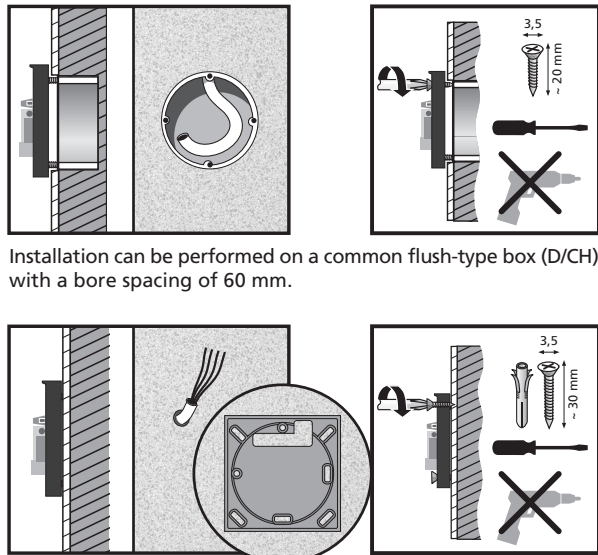
Planning and Installation Notes

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.

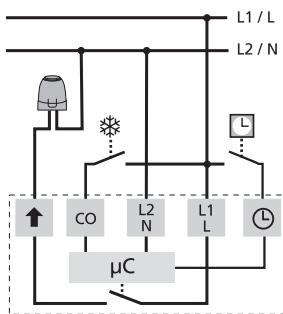
Installation



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.

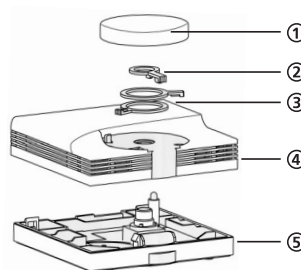
Electric installation



Electric connection at 5-pole screwed terminal. For the reduced operation mode and switching between heating and cooling mode a potential free contact is used.

The thermostat is connected 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. We recommend to use 5 core cable.

Device Overview



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