

Room thermostat

**Electro-mechanical
room thermostat
for thermal actuators**



To be precise.



Room thermostat

Description



The room thermostat is an electro-mechanical controller with two-point behaviour and is used in connection with e. g. thermal actuators to control the room temperature.

The setting value can be set at between 5°C (41°F) and 30°C (86°F). This range can be adjusted as required by two setting rings in the setting value adjuster, e. g. min. 8°C (46°F), max. 23°C (73°F).

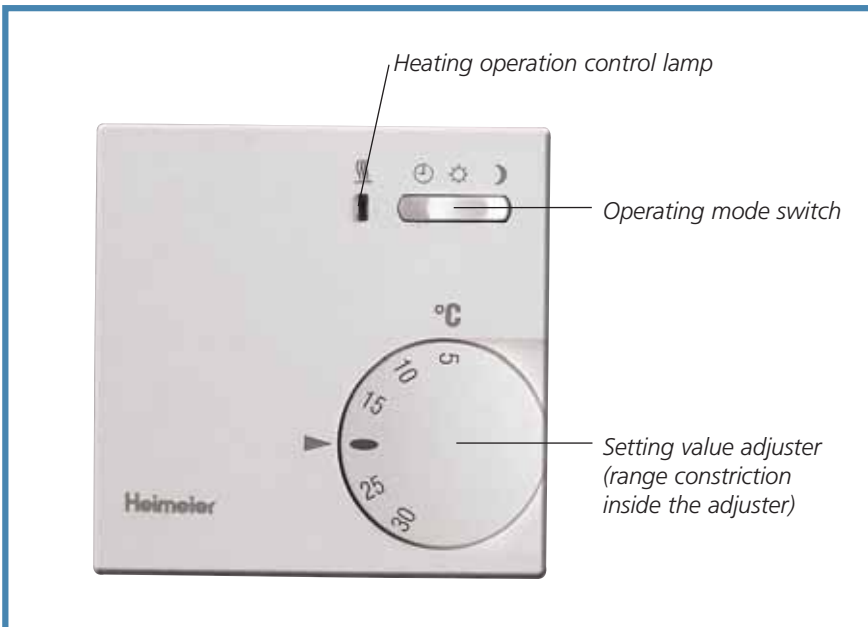
Models with an operating voltage of 230 V and 24 V, with and without temperature set-back, each with change-over contact and thermal recirculation.

For the model with temperature set-back (approx. 5 K (9°F)), a connection to the HEIMEIER thermostat P or an external switch clock is possible. An operating mode switch makes it possible to select from day, set-back or automatic mode. A control lamp indicates whether heating or cooling mode is active.

The room thermostat is designed for installation on the wall and on switch boxes.

Assembly

Room thermostat with temperature set-back



- Accurate control due to thermal recirculation
- Adjustable restriction of the setting range
- Multi-purpose use due to change-over contact
- Model with temperature set-back and operating mode switch

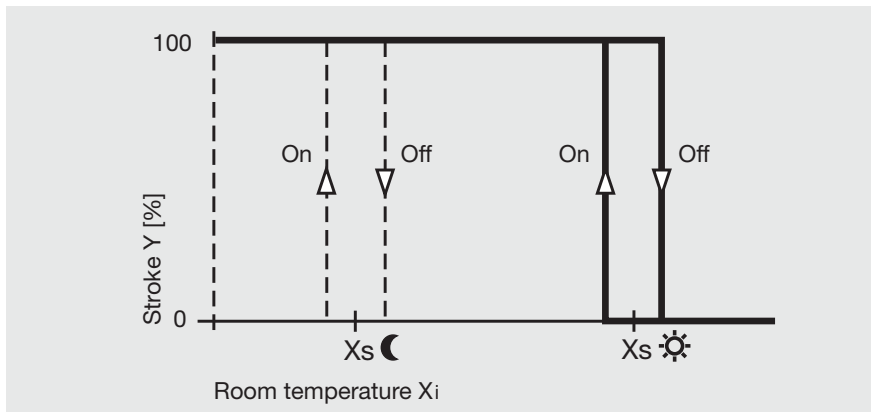
Function

The measured room temperature (x_i) is compared to the setting value (x_s). The resulting deviations are converted into a two-point signal by rapid change in the bimetallic change-over contact. The heating or cooling operating modes

are triggered depending on the change-over contact configuration. In heating or cooling operating modes, the thermal recirculation (RC) causes the setting value (x_s) to be reached prematurely, and therefore minimises the

effective switch hysteresis of the bimetallic change-over contact. For the model with a temperature set-back (TR), e. g. an external switch clock reduces the room temperature by approx. 5 K (only heating mode).

Action chart



Action chart for heating operating mode with actuator in the model, closed and currentless

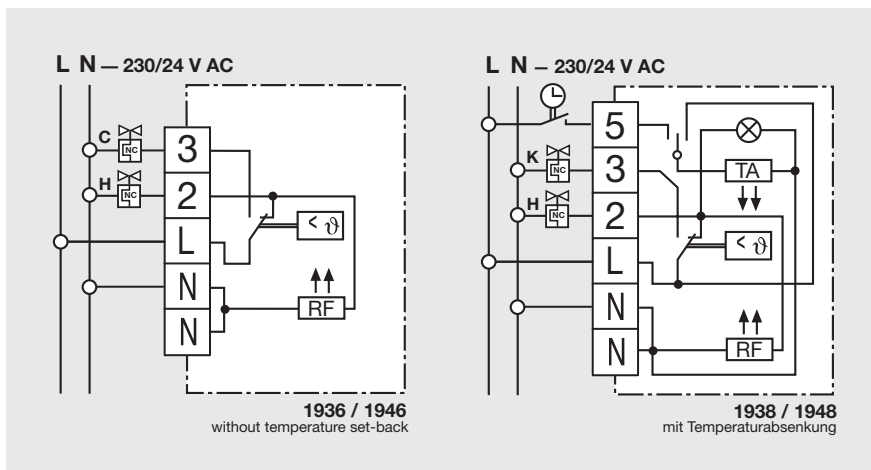
Application

The room thermostat is used in connection with the corresponding actuators (e. g. HEIMEIER EMO T/EMOtec) in the fields of heating, ventilation and air-conditioning technology.

The room thermostat can be used for time-dependent individual room temperature control in e. g. residential and commercial buildings with radiators, floor heating systems, ceil cooling systems or fan-coil units etc.

It can also be used e. g. to switch pumps or wall-mounted gas fired heaters on or off.

Connection diagram



Note

The connection diagram shows the heating or cooling operating mode when connected to thermal actuators in the model, closed and currentless (NC). When connecting to actuators in the model open and currentless (NO), the heating operating mode changes to cooling, or cooling operating mode changes to heating operating mode. In heating or cooling operating mode, the RF thermal recirculation should be connected. The max. number of thermal actuators which can be connected can be calculated from the max. switch current of the room thermostat and the switch-on current of the thermal actuators (max. number of HEIMEIER EMO T/EMOtec actuators – see technical data). For the model with temperature set-back, the switch clock output of the HEIMEIER thermostat P, or an external switch clock, can be connected to terminal 5.

Room thermostat

Technical data

Room thermostat	Model 230 V	Model 24 V
Operating voltage:	230 V AC (+10%/-15%)	24 V AC (+25%/-10%)
- Frequency	50/60 Hz	50/60 Hz
Switch contact:	1 change-over contact	1 change-over contact
- Voltage	Max. 250 V AC	Max. 30 V AC
- Current (heating / cooling)	h 10 (4) A / c 5 (2) A	h 10 (4) A / c 5 (2) A
- Number of EMO T/EMOtec actuators	h max. 10 pieces. / c max. 5 pieces	h max. 20 pieces / c max. 10 pieces
Function switch (only type 1938/48):	TA operating modes (night/auto/day)	TA operating modes (night/auto/day)
Control lamp (only type 1938/48):	Heating mode on	Heating mode on
Temperature range:	5°C – 30°C (41°F - 86°F) day mode	5°C – 30°C (41°F - 86°F) day mode
- Set-back mode (only type 1938/48)	Approx. 5 K fixed for day mode (only heating)	Approx. 5 K fixed for day mode (only heating)
Control response:	Two-point controller	Two-point controller
Switch hysteresis:	Approx. 0.5 K (with RF, for h/c)	Approx. .0.5 K (with RF, for h/c)
Operating modes:	Heating or cooling	Heating or cooling
Type of protection:	IP 30, according to EN 60529	IP 30, according to EN 60529
Safety class:	II, according to EN 60730	II, according to EN 60730
- <input type="checkbox"/> according to VDE 0100	Through appropriate installation	Through appropriate installation
CE certified (EMV and NS):	EN 60730	EN 60730
Ambient temperature:	0°C to +55°C (32°F - +131°F) in operation	0°C to +55°C (32°F - +131°F) in operation
Storage temperature:	-25°C to +60°C (-13°F - +140°F)	-25°C to +60°C (-13°F - +140°F)
Body, color:	ABS, white RAL 9010	ABS, white RAL 9010
Connection diameter:	1 x 2.5 mm ² or 2 x 1.5 mm ²	1 x 2.5 mm ² or 2 x 1.5 mm ²
Installation:	Installed on the wall or on a UP box	Installed on the wall or on a UP box

Article numbers

Without temperature set-back
1936-00.500

With temperature set-back
1938-00.500

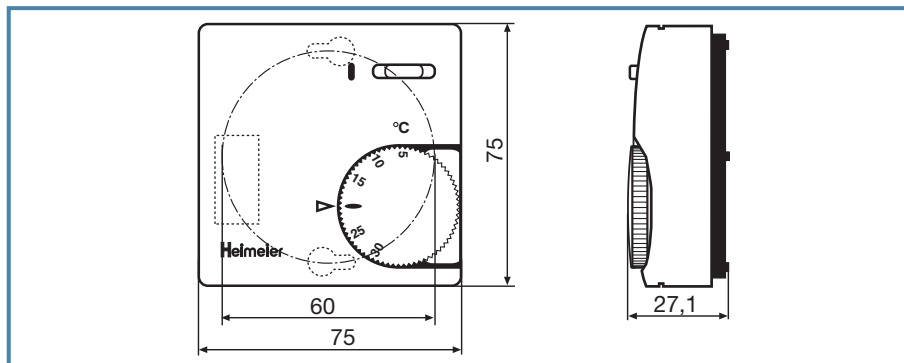
Without temperature set-back
1946-00.500

With temperature set-back
1948-00.500

Accessories

Distance plate white RAL 9010, for installing the room thermostat onto UP boxes,
83 mm x 83 mm x 8 mm (W x H x D) Article number: **1936-00.433**

Dimensions



1 mm = 0,0394 inch



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