Room thermostat

for four-pipe applications

The room thermostat is suitable for individual room temperature control or for zone control in four-pipe systems. The room thermostat can be used a system in residential or office buildings. Room temperature control is based on two proportional outlets, one for heating and one for cooling. Switching between the two modes is based on the deviation of the room temperature from the setpoint.

Features

- Setpoint adjustment
- Setpoint limitation
- Frost protection
- Adjustable dead zone

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Product Details

The setpoint is used to set the desired temperature.
If the actual temperature is below the setpoint, the room thermostat is in heating mode and voltage is applied to the heating output. If the actual temperature is 1.5 Kelvin below the setpoint, the maximum voltage of 10 volts is applied to the heating output. The voltage drops proportionally to 1.5 volts as the temperature rises. 1.5 volts means that the actual temperature has reached the setpoint temperature. If the setpoint temperature is exceeded, a voltage value of almost 0 volts is produced at the output (see also Fig. “Function diagram”).

If the actual temperature is above the setpoint, the room thermostat is in cooling mode and voltage is applied to the cooling output. If the actual temperature is 1.5 Kelvin above the setpoint, the maximum voltage of 10 volts is applied to the cooling output. The voltage drops proportionally to 1.5 volts as the temperature falls. 1.5 volts means that the actual temperature has reached the setpoint temperature. If the temperature falls below the setpoint temperature, a voltage value of almost 0 volts is produced at the output (see also Fig. “Function diagram”).

Neither heating nor cooling takes place within the dead zone in order to avoid frequent switching of the components.

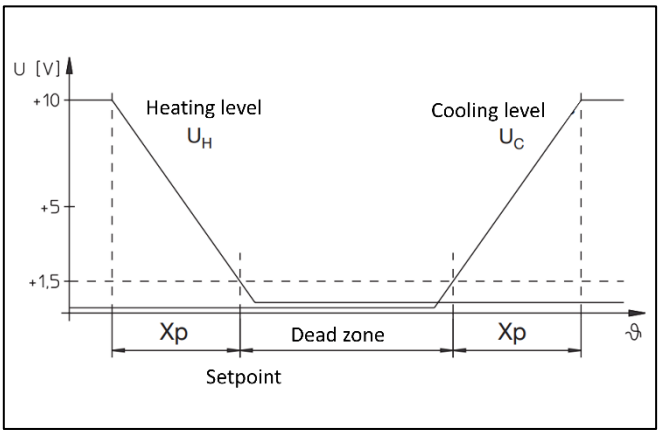
It is possible to limit the setpoint setting. This is done via adjustment rings positioned behind the rotary knob.

Functions

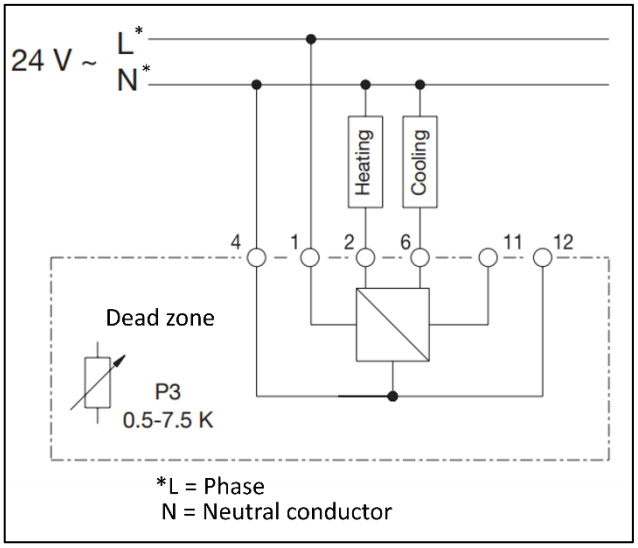
- Rotary knob for setting the setpoint temperature
- Zone control possible
- Thermal feedback

Technical Data

Temperature range	5 °C...30 °C
Operating voltage	24 V AC/DC, 50/60 Hz
Power consumption	0.35 W at 24 V
Dead zone	2 K (0.5...7.5 K infinitely adjustable)
Temperature sensor	NTC (internal)
Proportional outputs:	
Heating	0...10 V DC
Cooling	0...10 V DC
Max. current load	3 mA (max. of 12 motorised, max. of 20 thermal actuators)
Proportional band	1.5 K
Mounting	Surface-mounted
Protection class	II
Protection type	IP 30
Colour	White



Function diagram



Wiring diagram

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Accessories

Aktor T ST thermal actuator

0 – 10 V control, 24 V AC, normally closed, connection thread M 30 x 1.5.

	Suitable for	Item no.
	• ClimaCon F	1012953

Safety temperature limiter

For limiting the surface heating temperature.

	Suitable for	Item no.
	• FloorCon F	1344583
	• Electrical connecting block	1143000

Sensor GA FD dew point monitor

Is required in conjunction with room thermostats to protect against condensation on cooling surfaces.

	Suitable for	Item no.
	• Connecting block • ClimaCon 24 V • Room thermostats	1141951

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