



Description

In view of the option to specify the trigger value and the reset value in steps of 1°C within a wide measuring range (this must be specified explicitly when ordering), these thermostats (temperature sensors) or the 8434 series are especially suitable for applications that place high requirements concerning switching accuracy and reproducibility.

The robust construction permits reliable use at the rail as a precision thermostat for points heater controllers. The compact construction allows, for example, use as a two-step controller for switch cabinet heaters or as an overtemperature detector.

The temperature sensor is available in two different electrical versions. The two-core cable version in connection with suitable evaluation equipment (for example, the type 8582) as as a three-core cable version that triggers relays directly.

The new type of electrical quick-connection technology allows simple inventory without needing to worry about various cable lengths.

Function

The heart of the sensor is the temperature sensor whose digitized measured value is permanently compared with the one specified by the user and the switching thresholds that had been specified by the manufacturer. The switching state of the sensor changes if the measured temperature reaches the higher one of the two switching thresholds. This state is held until the temperature once again reaches the value of the lower switching threshold.

This change of switching state leads to a change in the power circuit in the version with a two-core cable and to a change in the switching state of the third core in the version with a three-core cable.

Installation notes

Remove about 15 mm of the cable insulation (see the technical data), push on the PG coupling ring, crown and sealing rubber piece (up to the edge of the insulation). Push the ends of the wires into the cutouts in the splicing ring (note the numbers, see the back of the ring), cut off the ends of the wires so that they are flush with the splicing ring. Guide the cable that has been prepared in this way into the contact holder and tighten up the coupling ring – done!

See the complete brochure folder for additional temperature monitors, evaluation equipment and accessories.

Technical data

Dimensions	$\varnothing 27 \text{ mm}$, L approx. 155 mm; see figure
Housing	Stainless steel / PA; protection type: IP 67
El. connection	Quick-connection system
Wire cross-section	1 to 1.5 mm^2 (strands $\varnothing 0.2 \text{ mm}$)
Wire insulation	PVC or PE is permissible
Wire external diameter	
Two-core cable sensor	permitted 5.6 - 8.0 mm (PG 11)
Three-core cable sensor	permitted 5.6 - 8.5 mm (PG 13.5)
Ambient temperature	-30°C to +80°C
Switching point temperature	-30°C to +80°C
Hysteresis	1°C
Note	The switching point temperature and the hysteresis can be programmed in steps of 1°C (please specify when ordering)
Measuring error	max.: $\pm 0.5^{\circ}\text{C}$
Function: Two-core cable sensor	$I = 20 \text{ mA}$ if δ \geq switching point temperature $I \leq 2 \text{ mA}$ if δ \leq switching point temp. – hysteresis $\rightarrow 8434 \text{ 0-}$ $I \leq 2 \text{ mA}$ if δ \geq switching point temperature $I = 20 \text{ mA}$ if δ \leq switching point temp. – hysteresis $\rightarrow 8434 \text{ 1-}$
Three-core cable sensor	Output = H if δ \geq switching point temperature Output = L if δ \leq switching point temp. – hysteresis $\rightarrow 8434 \text{ 0-}$ Output = L if δ \geq switching point temperature Output = H if δ \leq switching point temp. – hysteresis $\rightarrow 8434 \text{ 1-}$
Two-core cable sensor $\rightarrow 8434 \text{ 02}$ $\rightarrow 8434 \text{ 12}$	Supply voltage: 8 - 12 V DC (e.g.: Type 8582) Quiescent current: 2 mA Signal current: 20 mA $\pm 2 \text{ mA}$ (smaller values on request)
Three-core cable sensor $\rightarrow 8434 \text{ 03}$ $\rightarrow 8434 \text{ 13}$	Supply voltage: 24 V DC ($\pm 20\%$), quiescent current: < 7 mA Output: positive-switching Voltage: H: Supply voltage - 1 V; L: 0.5 V ($RL = 10 \text{ k}\Omega$) Current: 100 mA, resistant to short circuits and overloads; Ik max. 1.5
Accessories: Rail attachment adapter Evaluation relay	Type 913001, part No. 110404 see brochure sheet No. 8582

Ordering information

Type	Part No.
8434-RKS	110503



