

Product Information

Sensors and Instrumentation

Head Transmitter / Transmitter RT420



- For head or rail mounting
- 2-, 3- and 4- wire
- Error signaling in case of sensor break or short-circuit

Characteristics

The RT420 is a installation resistance thermometer with transmitter. Pt100 temperature probes can be connected (2-, 3- or 4- wire technology). The device has a linearized 4..20 mA current output. The RT420 is fully potted, robust, shakeproof and durable. This makes it particularly suitable for stressing industrial application as well as outdoor usage.

The transmitter is factory preset, but can also be configured by the customer via programming tool. This makes customers' warehousing easier and has the advantages of a freely programmable measuring range.

The RT420 is suitable for head or rail mounting depending on design type. The device provides error signaling in case of sensor break or sensor short-circuit.

Technical data

Measuring input	: Pt100
Measuring range	: -200...+850 °C, programmable
Measuring span	: 25 to 1050 K
Lower range limit	: -200...+825 °C
Sensor connection	: 2-, 3- or 4- wire connection
Measuring rate	: < 700 ms
Output signal	: 4..20 mA, 2-wire technology
Accuracy	: ±0.25 °C or ±0.1 % of meas. span (higher value applicable)
Accuracy (output)	: < ±0.1 % of current signal
Power supply U_B	: 8..35 V DC
Permissible burden R_A	: $R_A \leq (U_B - 8 \text{ V}) / 0.023 \text{ A}$ (R_A in Ohm)
Power-on time	: 10 s
Working temperature	: -40...+85 °C
Electrical connection	: via screw terminals
Protection class	: housing: IP40 terminals: IP10

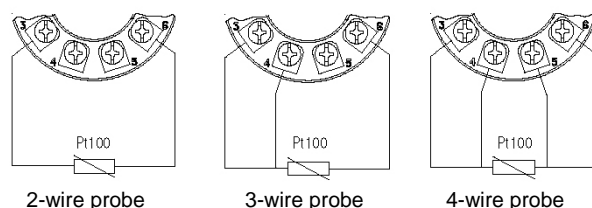
Design types

	RT420	RT420 - SG
Housing / mounting	Head transmitter, suitable for head mounting	Head transmitter in snap-on housing, suitable for rail mounting

Dimensions

	RT420	RT420 - SG
Housing	Ø 44 mm x 19 mm	22.5 x 78 x 105 mm

Connection diagram



Ordering code

RT420 - ☐ / WE - ☐ - ☐ - ☐

1. Design type	
00	head transmitter
SG	head transmitter in snap-on housing
2. Sensor connection	
P2	Resistance thermometer Pt100, 2-wire
P3	Resistance thermometer Pt100, 3-wire
P4	Resistance thermometer Pt100, 4-wire
3. Measuring range	
MBx	state desired measuring range e.g.: MB -50...+400 °C (max. possible measuring range: -200...+850 °C)
4. Sensor break signal	
FBU	3.5 mA
FBO	> 23 mA

Accessories

Rail adapter

(for snapping the RT420-00 onto a top-hat rail)



Programming tool for RT420

The programming tool contains a multilingual configuration software, Programmer, USB connection cable. Configuring without computers is possible.