

Indoor RTD Probe (Transmitter) BTS(O)R

- ◆ Low cost
- ◆ Ptx sensitive element
- ◆ 2-wire 4...20 mA output available
- ◆ Easy & Fast connection plug
- ◆ Ready to use - no adjustments
- ◆ DIN-rail accessory available

The indoor temperature probes BTSR and BTSOR measure temperature by means of a Ptx sensitive element mounted in a copper sheath for faster reaction. The BTSOR model, in addition, converts the measured temperature into standard 4...20 mA 2-wire signal. Both models are enclosed in a freely mountable small plastic IP44 box that may also be mounted on a DIN rail when an optional mounting clamp is installed, and are equipped with a 3-pin plug-in terminal that allow fast and easy electrical decoupling. Five different temperature measurement ranges from -50 °C and up to 100 °C as well as customer specified ranges are available. Thanks to their simplicity, small size, and affordable price, BTSR and BTSOR are applicable for various indoor applications, room temperature control, control board temperature measurement, etc.



Technical specifications

Input

Incorporated RTD	Pt100 or Pt1000 (w=1.385)
Measurement range	-50...50 °C; 0...50 °C; -20...60 °C; 0...100 °C ⁽¹⁾ ; -50...100 °C ⁽¹⁾
Range on request	minimum span 50 °C

Output

Signal type	4...20 mA, 2-wire
Linearity proportional to	measured value
Output at sensor burnout	32 mA
Output at sensor shorted	0.2 mA

Accuracy

Electronic measurement error	0.2% from span or 0.2 °C ⁽²⁾
RTD measurement error	according to accuracy class
Non-linearity	within measurement error
Self-heating error	0.02%/mA at 24 V
Temperature drift	0.02% from span for 1 °C

⁽¹⁾ Not available for BTSR

⁽²⁾ Which is greater

⁽³⁾ DIN-rail mounting accessory is also available (see 'Accessories')

Power supply

Loop voltage	10...32 VDC
Admissible variations	1 Vp-p at 50 Hz
Maximum line load	750 Ω at 24V/20mA

Operating conditions

Ambient temperature	-30...65 °C
Ambient humidity	5...85 %RH
EM compatibility	according to EN 61326

Design and materials

Sensor sheath	copper
Housing material	plastic
Wiring	plug-in terminal
Mounting	free ⁽³⁾
Dimensions	40x75x26 mm (w/o terminal)
Weight	max. 45 g
Protection class	IP44 (excl. terminal)

Ordering code BTS(O)R - G2.G3.G11

Code	Feature or option	Code values
G2	Sensor ⁽⁴⁾	RD - Pt100, RG - Pt1000
G3	Temperature range	T10 - -20...60 °C, T17 - -50...50 °C, T18 - 0...50 °C, T19 - 0...100 °C ⁽¹⁾ , T12 - -50...100 °C ⁽¹⁾ , TZ - other (specify, ΔT ≥ 50 °C)
G11	Accuracy class	A - 'A', B - 'B', C - '2xB'

⁽⁴⁾ Do not code for BTSOR