

Resistance Thermometers for Ambient Temperature Measurement

TPtRA
TPtRAT

Application

The resistance thermometers TPtRA and TPtRAT are designed for measuring ambient temperatures in harsh environments. The mounting part with connection head can be wall-mounted with a gauge holder bracket. For this construction type, there is no replaceable measuring insert available.

For both models, we offer various connection heads and measuring resistors according to DIN EN 60 751. In addition, model TPtRAT is available with several fitted transmitters with analogue or digital output.

Standard Versions

Measuring Element

Platinum thin-film measuring resistor Pt100 according to DIN EN 60 751 in 2-, 3- or 4-wire connection as single or dual measuring resistor

Operating Temperature Ranges¹⁾

Model TPtRA: -40 °C to +100 °C (-40 °F to +212 °F)

Model TPtRAT: -40 °C to +85 °C (-40 °F to +185 °F)

Accuracy

Class AA, A or B according to DIN EN 60 751

Temperature Sensor

For ambient temperature measurements

With clamping surface for gauge holder brackets according to DIN 16 281

Material: aluminum or stainless steel²⁾

Connection Heads

Types B, BUZ or BEG²⁾

Degree of Protection (DIN EN 60 529)

IP65

Output Signal

Model TPtRA: resistance according to DIN EN 60 751

Model TPtRAT: 4...20 mA, HART® or PROFIBUS® PA/
FOUNDATION™ Fieldbus



Ordering Information

See page 3

Special Versions (Upon Request)

- Low temperature version from -60 °C to +75 °C (-76 °F to +167 °F) (without transmitter)
- High temperature version from -40 °C to +120 °C (-40 °F to +248 °F) (without transmitter)
- Other basic values (e.g. Pt500, Pt1000) and limited tolerances (e.g. 1/3 cl. B, 1/5 cl. B)
- Other head-mount transmitters, also with voltage output
- Version for the subsequent mounting of transmitters
- Other connection heads
- Higher degree of protection up to IP68

Accessories

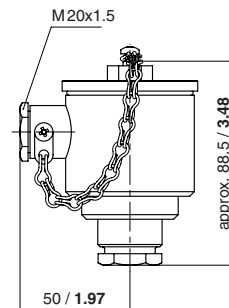
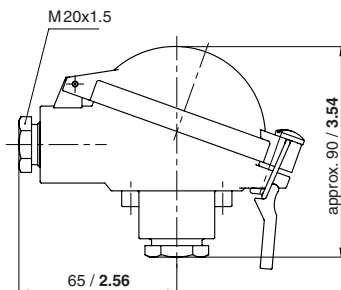
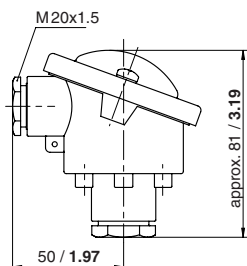
- Transmitters for rail mounting
- Digital displays for switch panel mounting or wall mounting
- Connection cables

¹⁾ permissible operating and storage temperature at the connection head

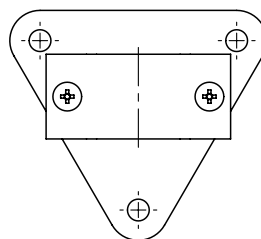
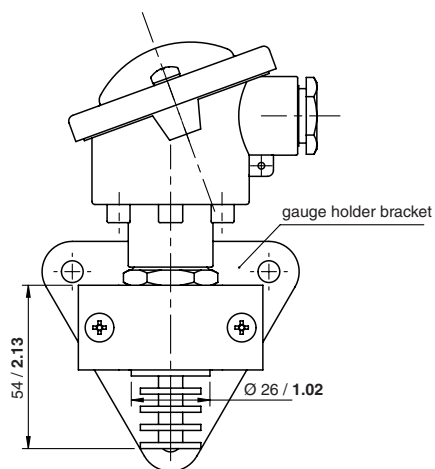
²⁾ when selecting connection head BEG, the gauge holder bracket and the temperature sensor are supplied as stainless steel version as well

Connection Heads, Process Connection, Dimensional Data (mm/inches)

Connection Heads			
	Head B	Head BUZ	Head BEG
Material:	die-cast aluminum	die-cast aluminum	stainless steel 1.4401
Lid:	flanged lid with screws	hinged lid	screw-on lid
Degree of protection:	IP65	IP65	IP65
No. of transmitters:	1	1	1
Max. installation dimensions:	Ø 44 x 21 mm (1.73 x 0.82")	Ø 45 x 40 mm (1.77 x 1.57")	Ø 45 x 20 mm (1.77 x 0.79")



Dimensional Data (in mm / inch)



Ordering Information

Basic Model:		Resistance Thermometer for Ambient Temperature Measurement	TPtRA
Transmitter:	without		without code letter
	with fitted transmitter		T
Measuring resistor:	Pt100 DIN EN 60 751, class AA		AA
	Pt100 DIN EN 60 751, class A		A
	Pt100 DIN EN 60 751, class B		B
No. of measuring resistors:	1		1
	2 ¹⁾		2
Connection method:	2-wire connection		2L
	3-wire connection		3L
	4-wire connection ¹⁾		4L
Connection head:	type B, aluminum, with screws		B
	type BUZ, aluminum, hinged lid		BUZ
	type BEG, stainless steel, screw-on lid ²⁾		BEG
With fitted transmitter:	TT5331: 4...20 mA		5331-A, 5331-D
	TT5333: 4...20 mA ³⁾		5333-A, 5333-D
	TT5337: 4...20 mA + HART 7		5337-A, 5337-D
	TT5350: PROFIBUS® PA/FOUNDATION™ Fieldbus		5350-A, 5350-B
Gauge holder bracket:	with gauge holder bracket made of aluminum black ²⁾		without code letter
	without gauge holder bracket		oMgh
Measuring range:	scaling of the 4...20 mA signal to the temperature range	e.g.	0 °C to +50 °C
Options:	instrument tag	stainless steel plate 12 x 55 mm (0.47 x 2.17")	
		sticker on the case	

Example: TPtRAT, B, 1, 3L, BUZ, 5331-A, 0 °C to +50 °C

Special Versions: Please describe your requirements in cleartext!

¹⁾ For the dual measuring resistor, a 4-wire connection is not applicable.
²⁾ When selecting connection head BEG, the gauge holder bracket and the temperature sensor are supplied as stainless steel version as well.
³⁾ Only 3-wire connection applicable.