

# Resistance Thermometers with Fabricated Thermowell

Without neck tube, replaceable measuring insert

TPtHoSrA  
TPtHoSrAT

## Application

The resistance thermometer models TPtHoSrA and TPtHoSrAT are equipped with a fabricated thermowell and can be mounted directly into the process. The connection head is fixed with two lateral retaining screws as a reasonably priced alternative to the thermowell with M24 screw fitting (form 2 according to DIN 43 772).

For both models, we offer various connection heads and measuring resistors according to DIN EN 60 751. In addition, model TPtHoSrAT 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 Range<sup>1)</sup>

-200 °C to +600 °C (-328 °F to +1112 °F)

### Ambient Temperature Ranges<sup>2)</sup>

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

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

### Accuracy

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

### Measuring Insert

According to DIN 43 735

Spring-loaded in the connection head

Spring travel approximately 7 mm (0.28")

Insertion tube made of sheathed, mineral insulated cable

### Sheath Material

Material: stainless steel 316L (1.4404)

Insulation: MgO

### Measuring Insert Diameter

Depending on the diameter of the thermowell

### Thermowell

For clamping into connection heads

Process connection thread spigot (E4.1)

Material stainless steel 316Ti (1.4571)

### Connection Heads

Types B, BUZ or BUZ-H

### Degree of Protection (DIN EN 60 529)

IP54

### Output Signal

Model TPtHoSrA: resistance according to DIN EN 60 751

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



## Ordering Information

See page 4

## Special Versions (Upon Request)

- Other basic values (e.g. Pt500, Pt1000) and limited tolerances (e.g. 1/3 cl. B, 1/3 cl. B)
- Measuring resistor wire-wound in ceramic -200 °C to +800 °C (-328 °F to +1472 °F)
- Other head-mount transmitters, also with voltage output
- Version for the subsequent mounting of transmitters
- Other connection threads

## Accessories

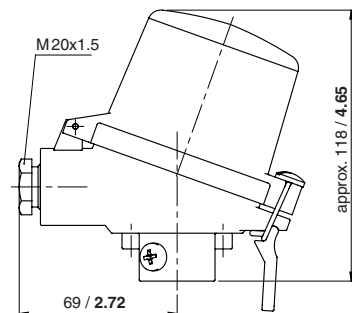
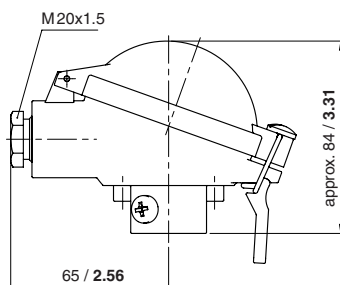
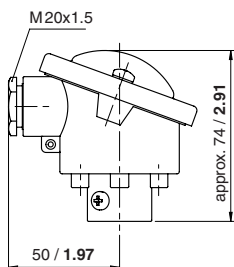
- Thermowells, see data sheets 8.8110 ff.
- Transmitters for rail mounting
- Digital displays for switch panel mounting or wall mounting
- Connection cables
- For models with thermowell and with neck tube see data sheet 8531

<sup>1)</sup> for accuracy class AA, the operating temperature range is reduced to -70 °C to +550 °C (-94 °F to +1022 °F)

<sup>2)</sup> permissible operating and storage temperature at the connection head

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

Connection Heads			
	Head B	Head BUZ	Head BUZ-H <sup>1)</sup>
<b>Material:</b>	die-cast aluminum	die-cast aluminum	die-cast aluminum
<b>Lid:</b>	flanged lid with screws	hinged lid	high lid, hinged
<b>Degree of protection:</b>	IP54	IP54	IP54
<b>No. of transmitters:</b>	1	1	2
<b>Max. installation dimensions:</b>	Ø 44 x 21 mm (1.73 x 0.82")	Ø 45 x 40 mm (1.77 x 1.57")	lid Ø 60 x 40 mm (2.36 x 1.57") base Ø 45 x 16 mm (1.77 x 0.63")



<sup>1)</sup> For connection head BUZ-H, the transmitter is fitted in the lid and the measuring insert is assembled with ceramic terminal block. Moreover, the head BUZ-H offers the possibility of installing two transmitters.

# Process Connection, Dimensional Data (mm/inches)

## Dimensional Data

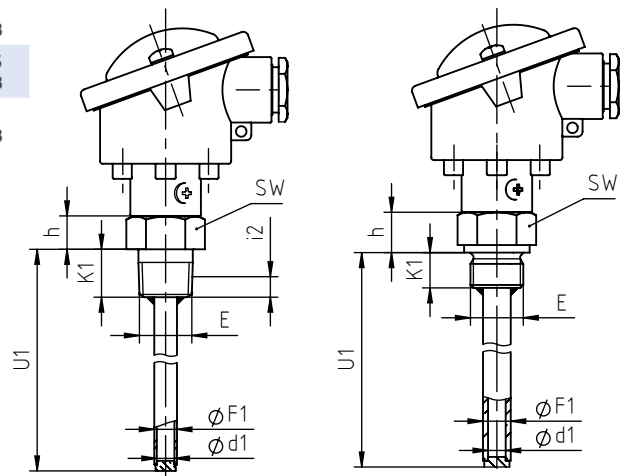
Process connection: Thread spigot (E4.1)

Installation length U1: 30 – 2000 mm (1.18 – 78.74")

Measuring insert length: U1 + h + 25 mm (0.98")

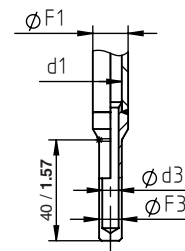
Connection thread:	E	K1	i2	SW	h
G 1/2 B (1/2" BSP)	14 0.55	–	–	27 1.06	16 0.63
1/2" NPT	19 0.75	–	8.13 0.32	27 1.06	13.5 0.53
G 3/4 B (3/4" BSP)	16 0.63	–	–	32 1.26	16 0.63

F1	d1	Measuring insert Ø
6 0.24	4 0.16	3 0.12
9 0.35	7 0.28	6 0.24
11 0.43	7 0.28	6 0.24
12 0.47	7 0.28	6 0.24
14 0.55	9 0.35	6 0.24 <sup>1)</sup>



## Tapered measuring tip

F1	d1	F3	d3	Measuring insert Ø
9 0.35	7 0.28	6 0.24	3.5 0.14	3 0.12
11 0.43	7 0.28	6 0.24	3.5 0.14	3 0.12
12 0.47	7 0.28	6 0.24	3.5 0.14	3 0.12
14 0.55	9 0.35	9 0.35	6.5 0.26	6 0.24



<sup>1)</sup> With crimped-on sleeve Ø 8 x 50 mm (0.31 x 1.97") in the sensor range. Measuring insert with a consistent diameter of 8 mm (0.31") upon request.

