

Resistance Thermometers Compact Design

TPtMfA
TPtMfAT

Application

The resistance thermometer models TPtMfA and TPtMfAT are manufactured in a very compact design and are suitable for all applications where temperature sensors need to be installed in constricted rooms.

These resistance thermometers can be mounted directly into the process. The measuring insert is not replaceable.

For both models, we offer various measuring resistors according to DIN EN 60 751. In addition, model TPtMfAT 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⁾

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

–100 °C to +250 °C (–148 °F to +482 °F)

Ambient Temperature Ranges²⁾

Model TPtMfA: –40 °C to +100 °C (–40 °F to +212 °F)

Model TPtMfAT: –40 °C to +85 °C (–40 °F to +185 °F)

Accuracy

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

Temperature Sensor

Material: stainless steel 316Ti (1.4571)

Max. static

operating pressure: 25 bar

Stem Ø dF: 6 mm (0.24")

Connection Head

Type J

Degree of Protection (DIN EN 60 529)

IP65

Output Signal

Model TPtMfA: resistance according to DIN EN 60 751

Model TPtMfAT: 4...20 mA



Ordering Information

See page 3

Special Versions (Upon Request)

- Other basic values (e.g. Pt500, Pt1000) and limited tolerances (e.g. 1/3 cl. B, 1/2 cl. B)
- Measuring resistor wire-wound in ceramic –200 °C to +800 °C (–328 °F to +1472 °F)
- Deviating tube diameters, connection threads

Accessories

- Transmitters for rail mounting
- Digital displays for switch panel mounting or wall mounting
- Compression fittings for thermowell form 2
- Connection cables

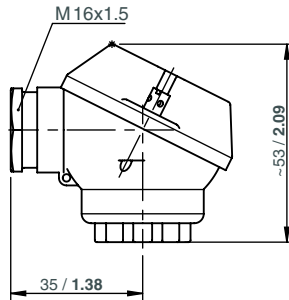
¹⁾ for accuracy class AA, the operating temperature range is reduced to –70 °C to +550 °C (–94 °F to +1022 °F)

²⁾ permissible operating and storage temperature at the connection head

Connection Head, Process Connections, Dimensional Data (mm/inches)

Connection Head

Head J
Material: die-cast aluminum
Lid: flanged lid with 2 screws
Degree of protection: IP65
No. of transmitters: 1
Max. installation dimensions: Ø 25 x 20 mm (0.98 x 0.79")

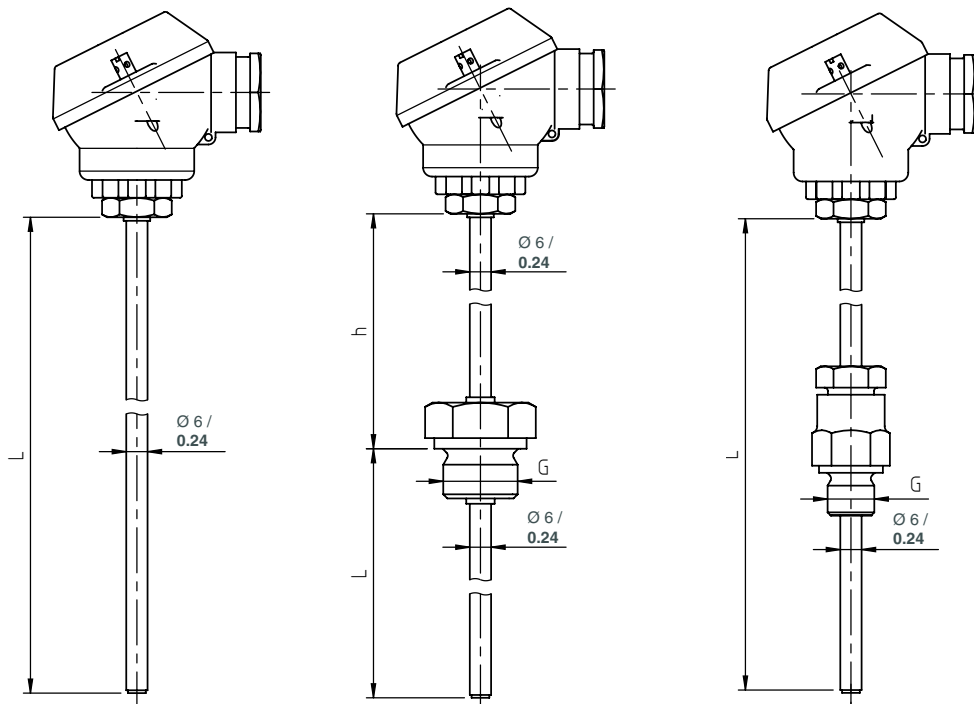


Dimensional Data

Process connections:	Without screw fitting, plain stem (E1)	Thread spigot (E4.1)	Male thread, compression fitting (E5)
Stem material:	stainless steel 1.4571	stainless steel 1.4571	stainless steel 1.4571
Screw fitting material:	–	stainless steel 1.4571	stainless steel 1.4571
Order length:	L	L, h	L
Suitable thermowell models: (data sheet)	SK1 (8.8140), SK2 (8.8141)	SF4 (8.8110), SF4F (8.8112) SF5 (8.8120), SF6, SF7 (8.8121)	SF4 (8.8110), SF4F (8.8112) SF5 (8.8120), SF6, SF7 (8.8121)

Connection thread:

G	SW	i	G	SW1	SW2	i	Lk
G ½B	27	14	G ½B	27	22	14	42
½" BSP	1.06	0.55	½" BSP	1.06	0.87	0.55	1.65
G ¾B	32	16	G ¾B	32	22	16	42
¾" BSP	1.26	0.63	¾" BSP	1.26	0.87	0.63	1.65
½" NPT	27	19	½" NPT	27	22	19	42
	1.06	0.75		1.06	0.87	0.75	1.65
¾" NPT	27	19	¾" NPT	27	22	19	42
	1.06	0.75		1.06	0.87	0.75	1.65
M18x1.5	24	14	M20x1.5	27	22	14	42
	0.94	0.55		1.06	0.87	0.55	1.65
M20x1.5	27	14					
	1.06	0.55					



Ordering Information

Basic Model:		Resistance Thermometer, Compact Design	TPtMfA
Transmitter:	without		without code letter
	with fitted transmitter		T
Operating temperature range:	-200 / +600 °C (-328 / +1112 °F)		HT
	-100 / +250 °C (-148 / +482 °F)		NT
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
Process connection:	without screw fitting, plain stem		E1
	thread spigot		E4.1
	male thread, compression fitting		E5
Connection thread:	see page 2	e.g.	G 1/2 B
Installation length:	L in mm	e.g.	L = 200 mm
Measuring range:	scaling of the 4...20 mA signal to the temperature range	e.g.	0 °C to +250 °C
Options:	instrument tag	stainless steel plate 12 x 55 mm (0.47 x 2.17")	
		sticker on the case	

Example: TPtMfAT, HT, B, 1, 2L, E1, G 1/2 B, L = 250 mm, 0 °C to +250 °C

Special Versions: Please describe your requirements in cleartext!

¹⁾ For the dual measuring resistor, a 4-wire connection is not applicable.