

Sheathed Resistance Thermometer

TPtMi

With connection cable or plug connector

Application

The sheathed resistance thermometer models TPtMiL, TPtMiD and TPtMiSt consist of a temperature sensor, made of sheathed, mineral insulated cable, and a connection cable and/or plug connector. They are versatile for temperature measurements.

For all models, we offer various measuring resistors according to DIN EN 60 751, plug connectors as well as connection cables.

Standard Versions

Version

TPtMiL:	with connection cable
TPtMiD:	with connecting wires
TPtMiSt:	plug connector LEMO series S

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 Range¹⁾

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

Ambient Temperature Ranges²⁾

Models TPtMiL, TPtMiD: -40 °C to +120 °C (-40 °F to +248 °F)
Model TPtMiSt: -55 °C to +200 °C (-67 °F to +392 °F)

Accuracy

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

Temperature Sensor

Made of sheathed, mineral insulated cable

Sheath material:	stainless steel 316L (1.4404)
Insulation:	MgO
Diameter (dF):	3 ^{±0.05} or 6 ^{±0.06} mm (0.12 ^{±0.002} or 0.24 ^{±0.0024} ")
Min. bending radius ³⁾ :	5-fold diameter (dF)
Spring travel:	approximately 7 mm (0.28")

Connection Cable

Material	Temperature range
PFA	-200 / +250 °C (-328 / +482 °F)
silicone	-50 / +180 °C (-58 / +356 °F)

Degree of Protection (DIN EN 60 529)

IP65



Ordering Information

See page 3

Special Versions (Upon Request)

- Measuring insert diameter 4.5 or 8 mm (0.18 or 0.31")
- Other basic values (e.g. Pt500, Pt1000) and limited tolerances (e.g. 1/3 cl. B, 1/5 cl. B)
- Measuring resistor wire-wound in ceramic -200 °C to +800 °C (-328 °F to +1472 °F)
- Other connection cables
- Special sheath materials

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

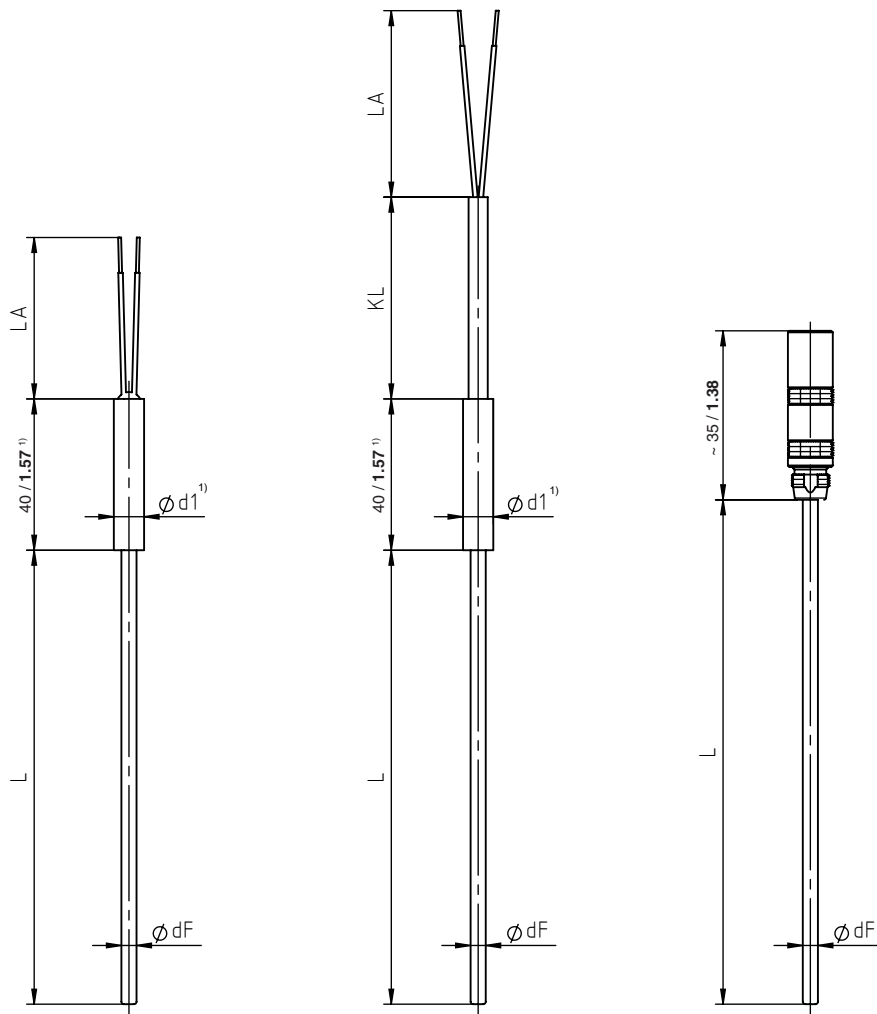
²⁾ max. permissible temperature at the cable sleeve

³⁾ the bottom 50 mm (1.97") of the temperature sensor must not be bent

Dimensional Data (mm/inches)

Dimensional Data			
Version:	TPtMiD	TPtMiL	TPtMiSt

\varnothing dF	\varnothing d1 ¹⁾
3	6
0.12	0.24
6	8
0.24	0.31



¹⁾ The dimensions of the cable sleeve may vary from the drawing for versions with special cables or with shielded cables such as spiral protection hose.

Ordering Information

Basic Model: Sheathed Resistance Thermometer		TPtMi
Version:	with connection cable	L
	with connecting wires	D
	with plug connector LEMO series S	St
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 ²⁾	2L
	3-wire connection	3L
	4-wire connection ¹⁾	4L
Sheath Ø dF:	3.0 mm (0.12")	dF = 3 mm
	6.0 mm (0.24")	dF = 6 mm
Sheath length:	L in mm	e.g. L = 250 mm
Length of the connection cable:	KL in mm	e.g. KL = 5000 mm
Length of the connecting wires:	LA in mm	e.g. LA = 50 mm
Connection cable termination:	free connecting wires	D
	with plug connector LEMO series S	St
Size of the plug connector:	size 0 ³⁾	0
	size 1 ³⁾	1
	size 2 ³⁾	2
Gender of the plug connector:	male, plug	M
	female, coupling	F

Example: TPtMiL, A, 1, 2L, dF = 3 mm, L = 250 mm, KL = 5000 mm, LA = 50 mm, D, 0, F

Special Versions: Please describe your requirements in cleartext!

¹⁾ For model TPtMiSt and a dual measuring resistor, a 4-wire connection is not applicable.
²⁾ Only applicable for accuracy class B.
³⁾ Only for version TPtMiSt or TPtMiL with termination St.