

Temperature sensor
Platinum element
up to 250 °C



Technical specifications | TMC PT series
Version 2.0 EN 2016
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Description

Temperature sensors of the series PT are made from high-precision platinum temperature elements. They are suitable for a wide range of applications. Various housing options guarantee long term stable and reliable measurements even in rough environments. Depending on the required accuracy they can be supplied as 2 wire, 3 wire or 4 wire version.

Customer specific solutions

Our creative R&D team turns your ideas into innovative products. Please contact us.



High-precision measuring

due to an almost linear resistance curve

Wide measuring range

from -50 °C up to 250 °C

Resistance values conforming to standards

according to DIN 60751

Various possible applications

by different optional housings

High response sensitivity

due to smallest dimensions by use of a thin layer Platinum element



TMC product range overview

Temperature limiters:

Product design	Feature	Application	Series
	automatic reset	up to 250 mA	F
	automatic reset	up to 6,3 A	C
	automatic reset	up to 16 A	G
	selfhold	up to 10 A	R
	normally open	up to 1 A	O

Temperature sensors:

Product design	Version	Features	Series
	PTC	sudden change of resistance	M
	PT1000 NTC	consistent dimensions	S
	Platinum sensor	extremely precise	PT

Imprint

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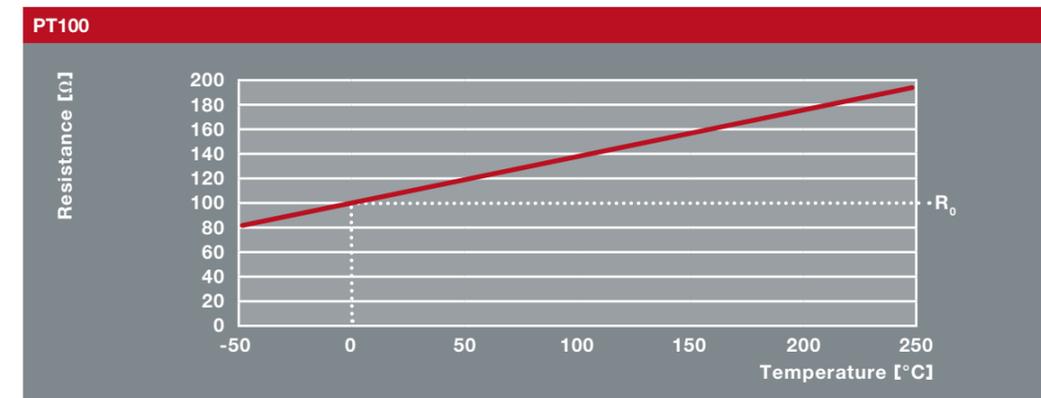
Temperature sensor PT series Technical specifications

Specifications

	PT100	PT1000
R_0	100 Ω	1000 Ω
Accuracy	Class B*	
Measuring range	-50 °C ... 250 °C	
Connector (standard)	2 wire	
Connector (option)	3 wires, 4 wires	
Dielectric strength of insulation	2 kV	
Temperature class	H*	
Recommended measuring current	< 1 mA	

* different values on request

Curve



$R_0 = 100 \Omega$

Resistance table

Temperature [°C]	PT100	PT1000
	R [Ω]	
-50	80,3	803,1
-25	90,2	901,9
0	100	1.000
25	109,7	1.097,3
50	119,4	1.194,0
75	129,0	1.289,9
100	138,5	1.385,1
125	147,9	1.475,5
150	157,3	1.573,3
175	166,6	1.666,3
200	175,8	1.758,6

For further details please see www.tmc.eu

Versions

Options

Standard	Polymer ceramic	Screw-in housing	Stainless steel housing
Sensor insulated with PTFE-tubing	Sensor insulated	Sensor insulated	Sensor insulated $\varnothing D$
 $\varnothing 4$ 21,0	 $\varnothing 3,5$ 15,0	 B L	 $\varnothing D$ L
Leads: stranded, solid	Leads: stranded, solid	Leads: stranded, solid	Leads: stranded, solid

Dimensions in mm. Further options on request.

Wires

Standard		
Type (Insulation)	PTFE	PT100 = red/white PT1000 = blue/white
Length	500 mm	
Stripped length	7 mm	
Cross section	0,25 mm ²	
Operating voltage	600 V	

Alternative and UL listed wires on request.

Ordering example for standard version

PT100 - 2 - 500/500	
	Wire length (500 mm / 500 mm)
	Wiring (2 wire)
	PT series, Type PT100