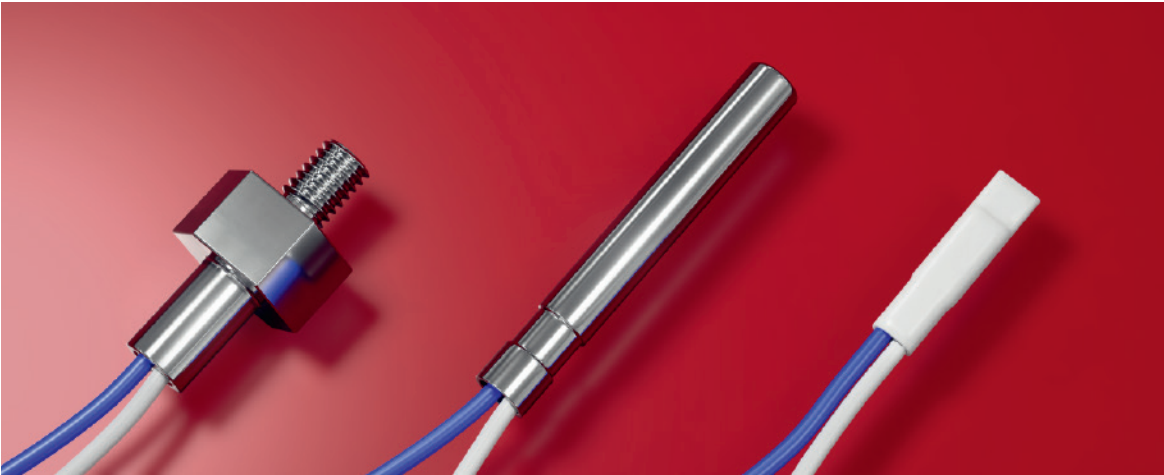


Temperature sensor  
Pt100 / Pt1000  
NTC



Technical specifications | TMC S series  
Version 2.1 EN 2025  
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Description

The characteristic of the series S is the standard carrier for mounting one of the various sensor types. This series is perfectly suited for the use in electrical windings and therefore the ideal choice for the temperature measurement in electric motors, transformers and chokes. It also offers the required measuring precision for other applications. The modular design allows a fully automated production and guarantees a consistent high quality of the product.

Customer specific solutions

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

Consistent dimensions

due to modular construction independently from the sensor type

Temperature range up to 200 °C

depending on sensor type and version

Resistance values conforming to standards

according to DIN 60751 for Pt100 / Pt1000

High mechanical and chemical resistancy

by a thermal conductive protection layer

Consistent high quality level

due to automated production

Cost efficient special versions

for further automated processing

Internationally applicable

because of UL-Wiring Harness

TMC product range overview

Temperature limiter:

Product design	Feature	Application	Series
	automatic reset	up to 250 mA	F
	automatic reset	up to 6,3 A	C
	selfhold	up to 10 A	R
	automatic reset	up to 12 A	H

Temperature sensors:

Product design	Version	Features	Series
	PTC	sudden change of resistance	M
	Pt100 / Pt1000 NTC	consistent dimensions	S
	Platinum sensor	extremely precise	PT

Imprint

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Companies register: HRB240551

VAT ID: DE174308309

Tax No: 30045/35304

**Subject to change without notice.** Errors and omissions excepted. No liability for improper use of the products or violation of third-party rights. With publication of this data sheet all previous versions are invalid.  
Edition 07/25



Temperature sensor

S series

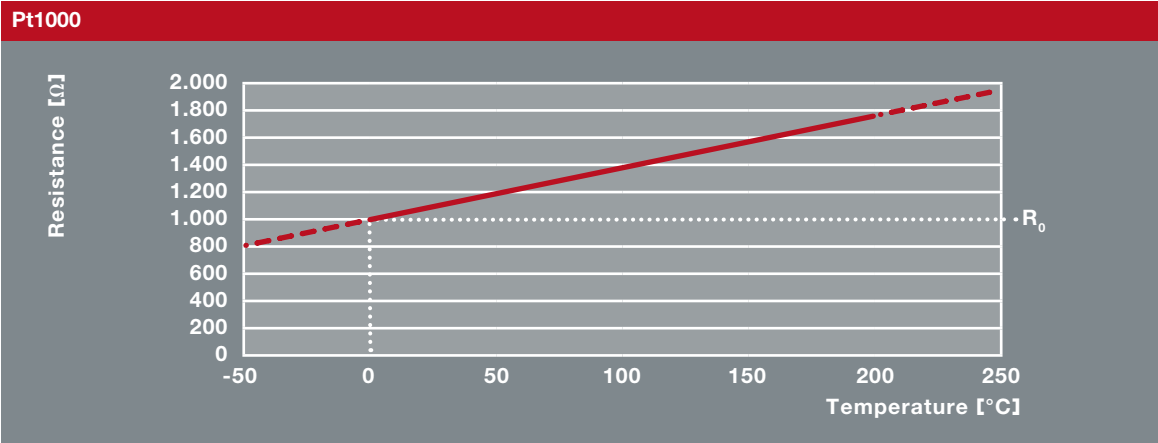
Technical specifications

Specifications

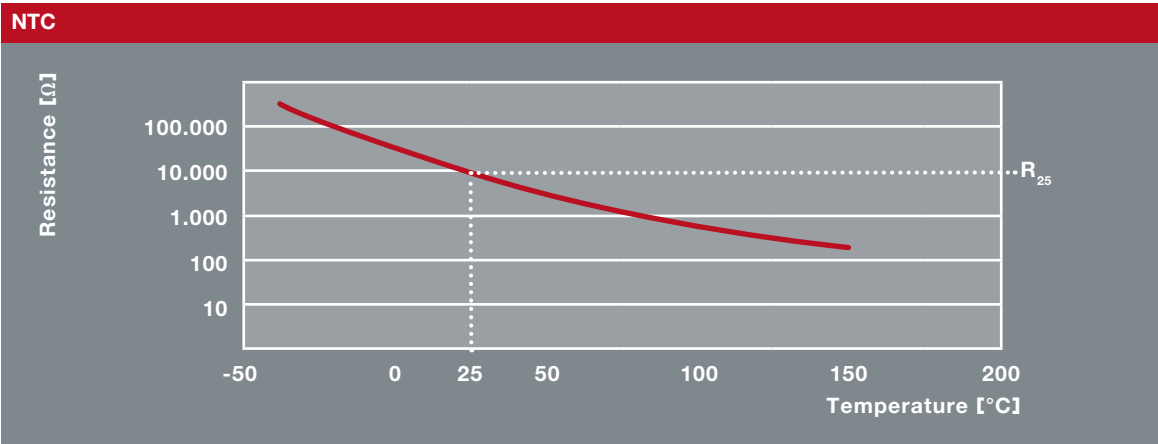
Type	S2		S6
Sensor	Pt100	Pt1000	NTC
Measuring range	0 °C ... 200 °C		0 °C ... 150 °C
R <sub>0</sub>	100 Ω	1.000 Ω	
Accuracy class	C*	C*	
R <sub>25</sub>			10 kΩ ... 100 kΩ
Tolerance R <sub>25</sub>			± 5 %
B <sub>25 / 85</sub>			3.920 ... 4.100 K
Tolerance B <sub>25 / 85</sub>			± 1 %
Wiring	2 wire		
Wire colours	red/white	blue/white	white/white
Recommended measuring current	< 1 mA		
Dielectric strength of insulation	2 kV		

\* additional accuracy classes available upon request

Curves



R<sub>0</sub> = 1.000 Ω



R<sub>25</sub> = 10.000 Ω

Resistance tables

Sensor	Pt100	Pt1000
Temp. [°C]	R [Ω]	
0	100	1000
25	109,7	1097
50	119,4	1194
75	129	1290
100	138,5	1385
125	148	1480
150	157,3	1573
175	166,6	1666
200	175,9	1759

NTC				
Temp. [°C]	R [Ω]			
0	32.666	106.459	151.917	339.343
25	10.000	33.000	47.000	100.000
50	3619	12.063	17.038	34.897
75	1503	5.030	7.022	13.954
100	699	2.334	3.216	6.236
125	358	1.183	1.607	3.055,8
150	198	646	865	1.617,5
B <sub>25/85</sub> [K]	3.940	3920	3.960	4100

Versions

Version B	Version N	Screw-in housing	Stainless steel housing
Sensor insulated Mylar-Nomex-Cap	Sensor insulated Mylar-Nomex-Bullnosecap	Sensor insulated	Sensor insulated
Leads: stranded, solid	Leads: stranded, solid	Leads: stranded, solid	Leads: stranded, solid

Dimensions in mm. Further options on request.

Wires

Standard		
Type (Insulation)	up to 150 °C: ISO F over 155 °C: ISO H	
Length	500 mm	
Stripped length	5 mm	
Cross section	AWG26 rsp. 0,14 mm²	

Alternative wires on request.

Ordering example for Pt1000

S2B - 1K0B - 500/500	
	Wire length (500 mm / 500 mm) Accuracy (Class B) Class (1k0 = PT1000) Version (B = insulated with Mylar-Nomex-Cap) S series, type S2 (2 = Pt)