



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 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

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
	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

S series

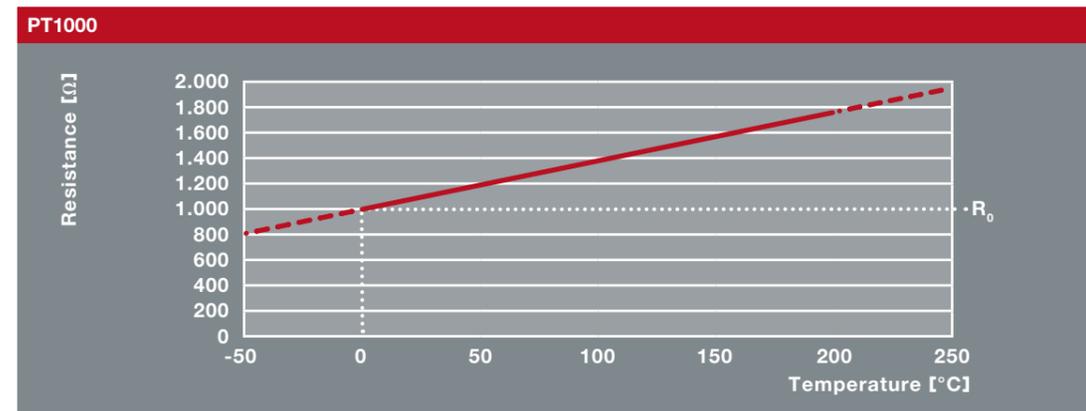
Technical specifications

Specifications

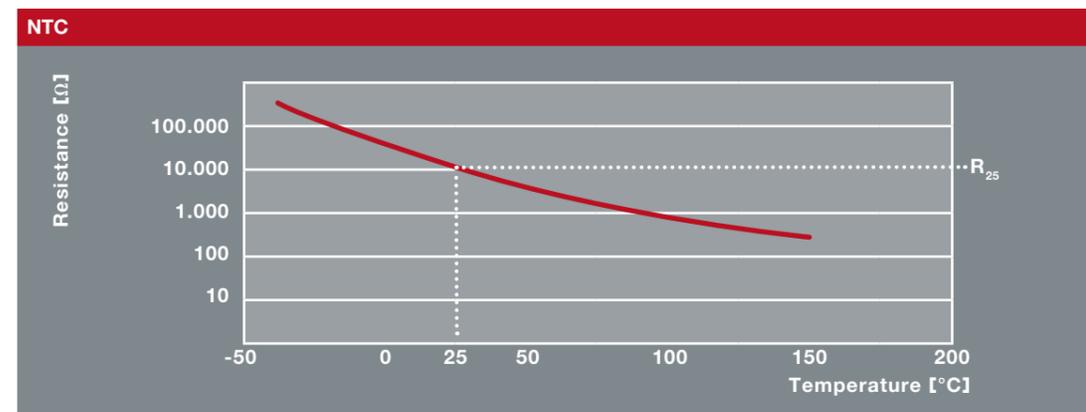
Type	S2	S6
Sensor	PT1000	NTC
Measuring range	0 °C ... 200 °C	0 °C ... 150 °C
R_0	1.000 Ω	
Temperature tolerance	+/-5K (B)*	
R_{25}		10 k Ω ... 100 k Ω
Tolerance R_{25}		$\pm 5 \%$
$B_{25/85}$		3.920 ... 4.100 K
Tolerance $B_{25/85}$		$\pm 1 \%$
Wiring	2 wire	
Wire colours	blue/white	white/white
Recommended measuring current	< 1 mA	
Dielectric strength of insulation	2 kV	

* equal to A = +/-2,5K over the entire temperature range
B = +/-5K

Curves



$R_0 = 1.000 \Omega$



$R_{25} = 10.000 \Omega$

Resistance tables

PT1000		NTC				
Temp. [°C]	R [Ω]	Temp. [°C]	R [Ω]			
0	1000	0	32.666	106.459	151.917	339.343
25	1097	25	10.000	33.000	47.000	100.000
50	1194	50	3619	12.063	17.038	34.897
75	1290	75	1503	5.030	7.022	13.954
100	1385	100	699	2.334	3.216	6.236
125	1480	125	358	1.183	1.607	3.055,8
150	1573	150	198	646	865	1.617,5
175	1666					
200	1759	$B_{25/85}$ [K]	3.940	3920	3.960	4100

Versions

Version B	Screw-in housing	Stainless steel housing
Sensor insulated Mylar-Nomex-Kappe	Sensor insulated	Sensor insulated
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 resp. 0,14 mm ²
Operating voltage		300 V

Alternative wires on request.

Ordering example for PT1000

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