

TR03 RTD Screw-In Temperature Sensor

The TR03 series is a Screw-In RTD temperature sensor which is perfectly suitable for temperature measurements in precision instruments, medical equipment, portable instruments, constant temperature equipment, fluid pipelines and others. The measuring insert is usually fitted with a PT100, PT500 and PT1000 temperature sensor as standard.



Features

- Screw-In type
- For temperatures from -50 to 500 °C
- Single/double RTD platinum resistance
- Two-wire and three-wire circuit available

Applications

- Precision instruments
- Portable instruments
- Medical equipment
- Constant temperature equipment
- Fluid pipelines

Advantages

- Fast measurement
- Packed in stainless steel sheel
- Compact size
- Reliable preformance, and high flexibility

Standards

- DIN EN IEC 60751
- DIN EN 60529
- DIN EN 60068-2-6
- DIN EN 60068-2-27

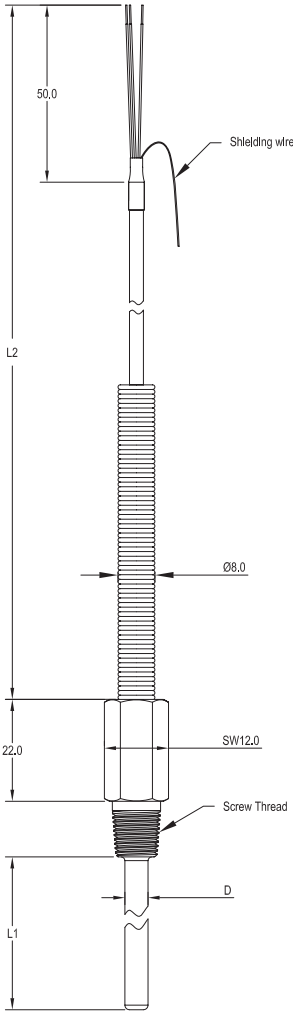
Specifications

Parameter	Value	Comment	
RTD resistance options	PT100		
	PT500		
	PT1000		
Tolerance options	Class A	-50...150 °C	
	Class B		
	Class A	-50...250 °C	
	Class B		
	Class A	-50...300 °C	
	Class B		
	Class B	-50...500 °C	
Temperature coefficient	TC = 3850 ppm/K		
Measuring current	PT100: 0.3 to 1 mA	(Self heating has to be considered, overcurrent situations may cause sensor damage)	
	PT500: 0.1 to 0.7 mA		
	PT1000: 0.1 to 0.3 mA		
Housing material	AISI 304		
Response time	Water current (V= 0.4m/s): t0.5 = 1s t0.9 = 1.5s		
	Air stream (V= 2m/s): t0.5 = 5.0s t0.9 = 12.0s		
Self heating	0.4 K/mW at 0°C		

Environmental test conditions

Test condition	Long-term stability	max. R ₀ -drift 0.04% after 1000h at 500°C
	Vibration resistance	at least 40g acceleration at 10 to 2000 Hz, depends on installation
	Shock resistance	at least 100g acceleration with 8ms half sine wave, depends on installation

Dimension (mm)



Name Guide Description

TR03 - PXX - X - DXX - XXX/XXX - X/X/X - XXX - X - XX - X

Series

TR03: Screw-In RTD temperature probe

RTD insert

P100: PT100
P500: PT500
P1000: PT1000

Tolerance class according to DIN EN 60751:2009

A: Class A
B: Class B

Insert diameter D in mm

D5: Ø 5 mm
D6: Ø 6 mm

Probe length L1 in mm / Lead wire length L2 in mm

Probe length:
50: 50 mm; 80: 80mm; 100: 100mm
Lead length:
1000: 1000; 2000: 2000; 3000: 3000
Customized is possible

Lead wire structure (wire/type/shield)

Wire:
2: 2 wires; 3: 3 wires
Type:
P: PTFE; S: Silicon
Shield:
N: no Shield; S: Shield

Temperature Range (°C)

150: -50 to 150 °C
250: -50 to 250 °C
300: -50 to 300 °C
500: -50 to 500 °C

Lead wire terminal

C: Crimp terminal
T: Tinplate

Thread Spec

10: M10x1.5; 12: M12x1.5; 27: 1/8"-27 NPT; 18: 1/4"-18 NPT
Customized

Extra codes

Notes

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