

Platinum Resistance Temperature Detector

M 422

M series PRTDs are especially robust and are designed for large volume applications where long term stability, interchangeability and accuracy over a large temperature range are vital. Typical applications are Automotive, White Goods, HVAC, Energy Management, Medical and Industrial Equipment.

Nominal Resistance R ₀	Tolerance DIN EN 60751 1996-07	Tolerance DIN EN 60751 2009-05	Order Number Plastic Bag	Order Number Blister reel
100 Ohm at 0°C	Class 1/3 B	F 0.1	32 208 500	32 208 522
	Class A	F 0.15	32 208 498	32 208 521
	Class B	F 0.3	32 208 392	32 208 520
500 Ohm at 0°C	Class 1/3 B	F 0.1	32 208 502	32 208 525
	Class A	F 0.15	32 208 501	32 208 524
	Class B	F 0.3	32 208 414	32 208 523
1000 Ohm at 0°C	Class 1/3 B	F 0.1	32 208 537	32 208 527
	Class A	F 0.15	32 208 503	32 208 526
	Class B	F 0.3	32 208 499	

The measuring point for the nominal resistance is defined at 8mm from the end of the sensor body.

Specification

DIN EN 60751 (according to IEC 751)

Temperature range

-70°C to +500°C (continuous operation)
(temporary use to 550°C possible)
Tolerance Class B: -70°C to +500°C
Tolerance Class A: -50°C to +300°C
Tolerance Class 1/3 B: 0°C to +150°C

Temperature coefficient

TC = 3850 ppm/K ; 3750 ppm/K available
on request

Leads

Pt clad Ni-wire
Recommend connection technology:
Welding, Crimping and Braze

Lead lengths (L)

10mm ±1mm

Longterm stability

max. R₀-drift 0.04% after 1000 h 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

Environmental conditions

unhoused for dry environments only

Insulation resistance

> 100 MΩ at 20°C; > 2 MΩ at 500°C

Self heating

0.3 K/mW at 0°C

Response time

water current (v= 0.4m/s): t_{0.5} = 0.07s
t_{0.9} = 0.20s
air stream (v= 2m/s): t_{0.5} = 3.2s
t_{0.9} = 11s

Measuring current

100Ω: 0.3 to 1.0mA
500Ω: 0.1 to 0.7mA
1000Ω: 0.1 to 0.3mA
(self heating has to be considered)

Note

Other tolerances, values of resistance and wire lengths are
available on request.

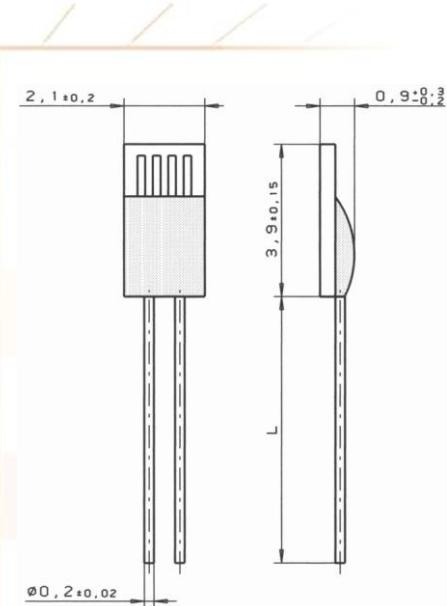
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particular properties to any products.

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