

Platinum Resistance Temperature Detector

M 222

Mseries PRTDs 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	Order No. Plastic bag
100 Ohm at 0°C	DIN EN 60751, class B	32 208 548
	DIN EN 60751, class A	32 208 550
	DIN EN 60751, class 1/3 DIN	32 208 551
500 Ohm at 0°C	DIN EN 60751, class B	32 208 706
1000 Ohm at 0°C	DIN EN 60751, class B	32 208 571
	DIN EN 60751, class A	32 208 572
	DIN EN 60751, class 1/3 DIN	32 208 707

The measuring point for the nominal resistance is defined at 8 mm 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 DIN: 0 °C to + 150 °C

Temperature coefficient

TCR = 3850 ppm/K

Leads

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

Lead lengths (L)

10 mm +/- 1 mm

Long-term stability

max. R_0 -drift 0.04% after 1000 h at 500°C

Vibration resistance

at least 40 g acceleration at 10 to 2000 Hz,
depends on installation

Shock resistance

at least 100 g acceleration with 8ms half sine
wave, depends on installation

Environmental conditions

unhoused for dry environments only

Insulation resistance

> 100 M Ω at 20°C; > 2 M Ω at 500°C

Self heating

0.4 K/mW at 0°C

Response time

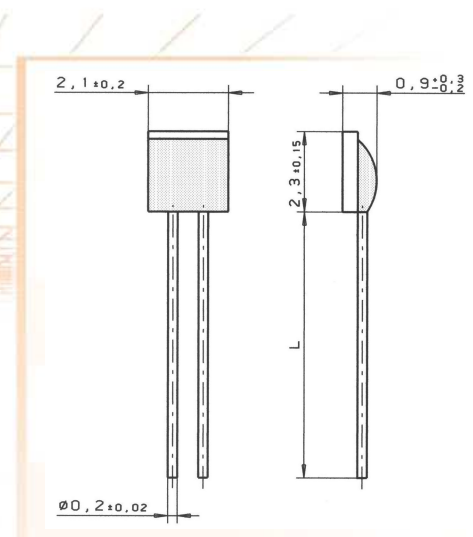
water current ($v = 0.4$ m/s): $t_{0.5} = 0.05$ s
 $t_{0.9} = 0.15$ s
air stream ($v = 2$ m/s): $t_{0.5} = 3.0$ s
 $t_{0.9} = 10.0$ s

Measuring current

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

Note

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



We reserve the right to make alterations and technical data printed. All technical data serves as a guideline and does not guarantee particular properties to any products.

Heraeus Sensor Technology USA

1901 Route 130
North Brunswick, NJ 08902
Phone 732-940-4400 Fax 732-940-4445
Email info.hst-us@heraeus.com
www.hst-us.com