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	Order No. Plastic bag	Order No. Blister reel
100 Ohm at 0℃	DIN EN 60751, class B DIN EN 60751, class A DIN EN 60751, class 1/3 DIN	32 208 392 32 208 498 32 208 500	32 208 520 32 208 521 32 208 522
500 Ohm at 0℃	DIN EN 60751, class B DIN EN 60751, class A DIN EN 60751, class 1/3 DIN	32 208 414 32 208 501 32 208 502	32 208 523 32 208 524 32 208 525
1000 Ohm at 0℃	DIN EN 60751, class B DIN EN 60751, class A DIN EN 60751, class 1/3 DIN	32 208 499 32 208 503 32 208 537	32 208 526 32 208 527

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

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

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

Lead lengths (L) 10 mm +- 1 mm

Longterm stability max. R_0-drift 0.04% after 1000 h at 500 ℃

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

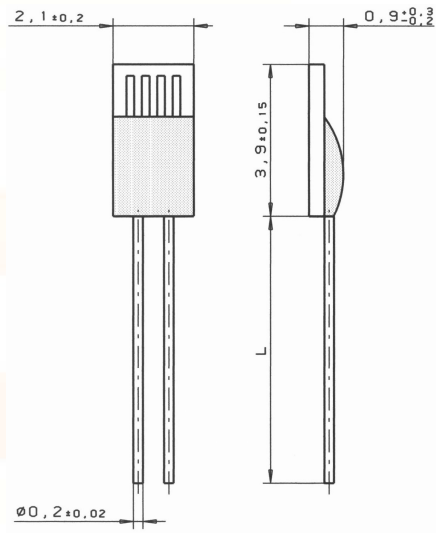
Insulation resistance > 100 MΩ at 20 ℃; > 2 M Ω at 500 ℃

Self heating 0.3 K/mW at 0 ℃

Response time
water current (v = 0.4 m/s): $t_{0.5}$ = 0.07 s, $t_{0.9}$ = 0.20 s
air stream (v = 2 m/s): $t_{0.5}$ = 3.2 s, $t_{0.9}$ = 11 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 GmbH, Reinhard- Heraeus- Ring 23, 63801 Kleinostheim, Germany
Phone: +49 (0) 6181/35-8098, Fax: +49 (0)6181/35-8101, E-Mail: info.HSND@Heraeus.com Web: www.heraeus-sensor-technology.com

name of document: 30910021 Index A
Status: 09/2008