Platinum Resistance Temperature Detector M 1020

M series 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 R0	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 Class A Class B	F 0.1 F 0.15 F 0.3	 32 208 180	32 208 428 32 208 429 32 208 280
500 Ohm at 0°C	Class B	F 0.3	32 208 201	32 208 285
1000 Ohm at 0°C	Class 1/3 B Class A Class B	F 0.1 F 0.15 F 0.3	 32 208 191	32 208 483 32 208 439 32 208 286

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 DIN: 0°C to +150°C

Temperature coefficient TC = 3850 ppm/K

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

Lead lengths (L) 10mm ±1 mm

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

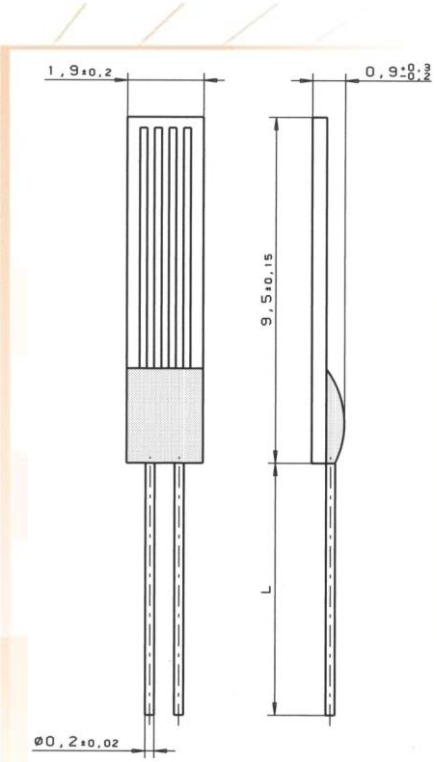
Shock resistance at least 100g acceleration with 8ms half sine wave, depends on installation

Environmental conditions unhoused for dry environments only

Insulation resistance > 100 MΩ at 20°C; > 2 MΩ at 500°C

Self heating 0.2 K/mW at 0°C

Response time
water current (v= 0.4m/s): $t_{0.5}$ = 0.10s, $t_{0.9}$ = 0.30s
air stream (v= 2m/s): $t_{0.5}$ = 4.0s, $t_{0.9}$ = 12.0s



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)

RoHS conform

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

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: 30910024 Index B
Status: 06/2010