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 R_0	Tolerance	Order No. Blister reel	Order No. Plastic bag
100 Ohm at 0°C	DIN EN 60751, Klasse B DIN EN 60751, Klasse A DIN EN 60751, Klasse 1/3 DIN	32 208 280 32 208 429 32 208 428	32 208 180
500 Ohm at 0°C	DIN EN 60751, Klasse B	32 208 285	32 208 201
1000 Ohm at 0°C	DIN EN 60751, Klasse B DIN EN 60751, Klasse A DIN EN 60751, Klasse 1/3 DIN	32 208 286 32 208 439 32 208 483	32 208 191

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

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

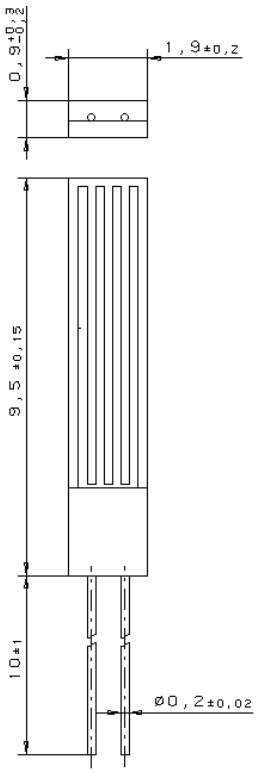
Insulation resistance > 100 MΩ at 20 °C; > 2 MΩ at 500 °C

Self heating 0.2 K/mW at 0 °C

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

Measuring current
100 Ω: 1.0 to 3.0 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.



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