Heraeus

Platinum temperature sensor in thin-film technology M 310

M-series platinum temperature sensors are characterized by long-term stability, excellent precision over a wide temperature range and compatibility. They are used particularly for applications with high consumption volumes, typically in the automotive, white goods, HVAC and energy generation industries as well as in medical and industrial appliances and machinery.

Nominal Resistance R0	Tolerance DIN EN 60751 1996-07	Tolerance DIN EN 60751 2009-05	Order Number Plastic Box	Order Number Plastic Bag
100 Ohm at 0°C	Class B	F 0.3	32 208 721	50 142 52
1000 Ohm at 0°C	Class B	F 0.3	32 208 723	50 142 53
100 Ohm at 0°C	Class A	F 0,15	32 208 725	50 142 54
1000 Ohm at 0°C	Class A	F 0,15	32 208 727	50 142 55

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

Specification DIN EN 60751

Temperature range -70°C to +500°C (continuous operation)
(temporary use to 550°C possible)
Tolerance Class B: -70°C up to +500°C
Tolerance Class A: -50°C up to +300°C

Temperature coefficient TCR = 3850 ppm/K

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

Lead lengths (L) 10mm ±1mm

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 8 ms half sine wave, depends on installation

Ambient conditions Use unprotected only in dry environments

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

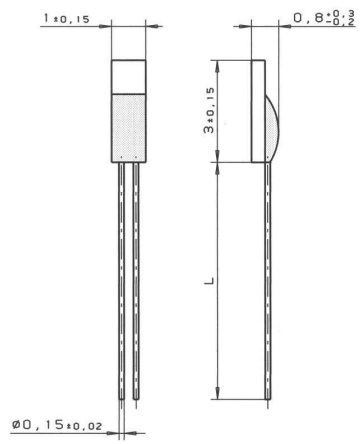
Self heating 0.4 K/mW at 0°C

Response time

Water current (v= 0.4m/s):	$t_{0.5}$ = 0.04s
	$t_{0.9}$ = 0.12s
Air flow (v= 2m/s):	$t_{0.5}$ = 2.5s
	$t_{0.9}$ = 8.0s

Measuring current
100Ω: 0.3 to 1.0 mA
1000Ω: 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.



RoHS conform

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