

Platinum temperature sensor in thin-film technology

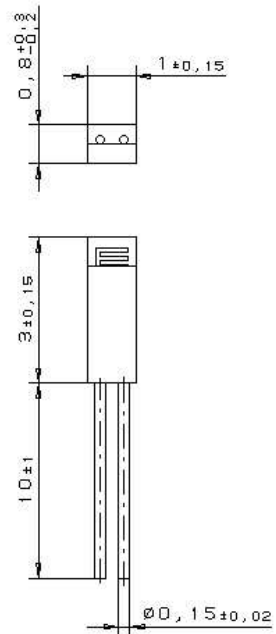
M 310

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 R_0	Tolerance	Order No. Blister box
100 Ohm at 0°C	DIN EN 60751, class B	32 208 721
1000 Ohm at 0°C	DIN EN 60751, class B	32 208 723

The measuring point for the nominal resistance is defined at 8 mm 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)
Temperature coefficient	TCR = 3850 ppm/K
Leads	Pt clad Ni wire
Long-term tests	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 8 ms half sine wave, depends on installation
Ambient conditions	Use unprotected only in dry environments
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): $t_{0.5} = 0.04$ s; $t_{0.9} = 0.12$ s Air flow ($v = 2$ m/s): $t_{0.5} = 2.5$ s; $t_{0.9} = 8.0$ s
Measuring current	100 Ω : 0.3 to 1.0 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.
Status	preliminary



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.

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Status: 06/2005