

Platinum Resistance Temperature Detector

C 420

The C series thin-film PRTDs combine the ideal curve characteristics of ceramic wire-wound RTDs with the vibration resistance of glass wire-wound RTDs and represent an excellent alternative to wire-wound RTDs. They are characterized by high long-term stability, excellent temperature shock resistance and a wide temperature range of -196°C to +150°C. The deviation from the DIN EN 60751 (according to IEC 751) characteristic curve is minimal over the entire temperature range, they show no hysteresis. These features make them best suited for applications in aerospace, chemical and power generation plants and analytical equipment.

Nominal Resistance R_0	Tolerance	Order Number Plastic box
1000 Ohm at 0°C	DIN EN 60751, class B	32 207 502

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

Specification DIN EN 60751

Nominal resistance 1000 Ω at 0 °C

Temperature range -196°C to +150°C

Temperature coefficient TCR = 3850 ppm/K

Leads AgPd

Long-term stability tbd

Environmental conditions unhoused for dry environments only

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

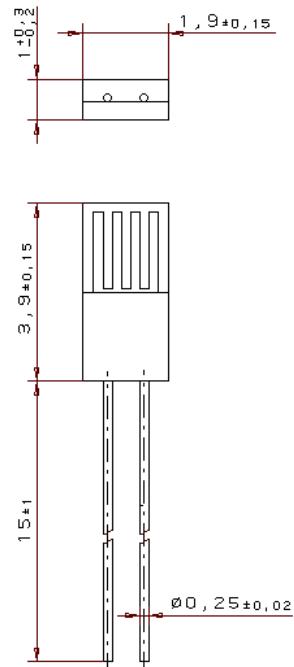
Insulation resistance > 100 M Ω at 150 °C

Self heating 0.3 K/mW at 0 °C

Response time water current ($v = 0.4$ m/s): $t_{0.5} = 0.08$ s;
 $t_{0.9} = 0.25$ s
air stream ($v = 2$ m/s): $t_{0.5} = 3.5$ s; $t_{0.9} = 15.0$ s

Measuring current 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.

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