

Platinum Temperature Sensor in Thin Film Technology

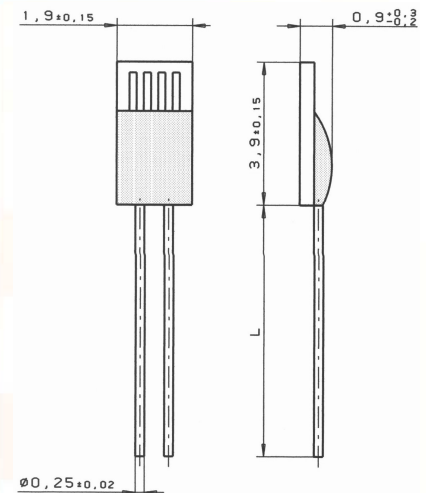
MN 420

M series platinum temperature sensors are characterized by long-term stability, precision over a broad temperature range and compatibility. They are used in particular for applications with high consumption volumes, typically in the automotive, white goods, ventilation, heating and energy generation sectors as well as in medical and industrial equipment. The type of connection technology facilitates the construction of elements with leads up to 200 mm in length.

Nominal Resistance R_0	Tolerance	$L \pm 1$	Order no. Plastic tube
100 Ohm at 0°C	DIN EN 60751, class 2B	150 mm	32 207 620
1000 Ohm at 0°C	DIN EN 60751, class B	150 mm	32 207 635

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	TC = 3850 ppm/K	
Leads	Ni-leads Recommend connection technology: Welding, Crimping and Brazing	
Lead lengths (L)	150 mm +/- 1 mm	
Ambient conditions	Unhoused for dry environments only	
Insulation resistance	> 100 MΩ at 20°C; > 2 MΩ at 500°C	
Connection resistance	1.3 mΩ/mm	
Self heating	0.3 K/mW at 0°C	
Response time	Moving water (v = 0.4 m/s):	$t_{0.5} = 0.07$ s $t_{0.9} = 0.20$ s
	Air flow (v = 2 m/s)	$t_{0.5} = 3.2$ s $t_{0.9} = 11$ 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)	
Application advice	<ol style="list-style-type: none"> To avoid shear forces on the connection area, the connection wires may be neither split or bent. The bending may only take place 3 mm after the element, using a bending or splitting tool. Other nominal values, lengths and temperature coefficients on request. Due to a production-caused oxide layer coating the leads, soft-soldering is restricted. 	
Note	Other tolerances, values of resistance 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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