

Platinum Temperature Sensor in Thin Film Technology

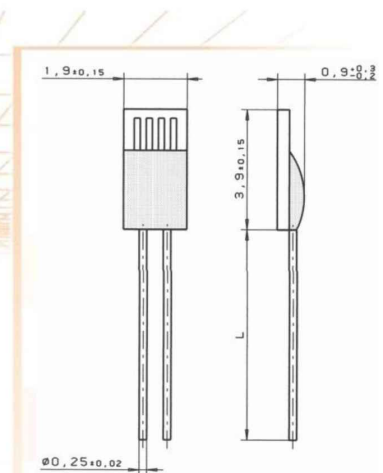
MN 420

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 R0	Tolerance DIN EN 60751 1996-07	Tolerance DIN EN 60751 2009-05	L ±1mm	Order Number Plastic Bag
100 Ohm at 0°C	Class 2B	F 0.6	150 mm	32 207 620
1000 Ohm at 0°C	Class B	F 0.3	75 mm	32 207 635

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	
Temperature coefficient	TC = 3850 ppm/K	
Leads	Ni- leads Recommend connection technology: Welding, Crimping and Brazing	
Lead lengths (L)	10mm ±1mm	
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= 0.4m/s):	t _{0.5} = 0.07s t _{0.9} = 0.20s
	Air flow (v= 2m/s)	t _{0.5} = 3.2s t _{0.9} = 11s
Measuring current	100Ω: 0.3 to 1.0mA 1000Ω: 0.1 to 0.3mA (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	



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