

## Platinum Resistance Temperature Detector

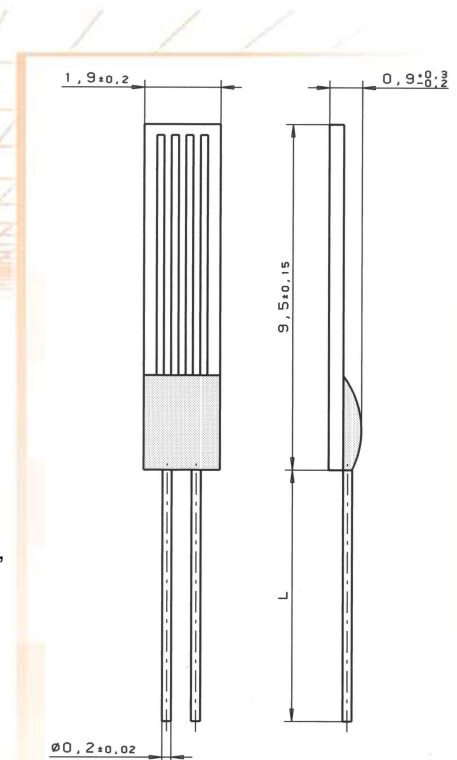
## M 1020

M series PRTDs are designed for large volume applications where long term stability, interchangeability and accuracy over a large temperature range are vital. Typical applications are Automotive, White Goods, HVAC, Energy Management, Medical and Industrial equipment.

Nominal Resistance $R_0$	Tolerance	Order No. Blister reel	Order No. Plastic bag
100 Ohm at 0°C	DIN EN 60751, Class B	32 208 280	32 208 180
	DIN EN 60751, Class A	32 208 429	
	DIN EN 60751, Class 1/3 DIN	32 208 428	
500 Ohm at 0°C	DIN EN 60751, Class B	32 208 285	32 208 201
1000 Ohm at 0°C	DIN EN 60751, Class B	32 208 286	32 208 191
	DIN EN 60751, Class A	32 208 439	
	DIN EN 60751, Class 1/3 DIN	32 208 483	

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

<b>Specification</b>	DIN EN 60751 (according to IEC 751)	
<b>Temperature range</b>	- 70°C to + 500°C (continuous operation) (temporary use to 550 °C possible) Tolerance class B: - 70 °C to + 500 °C Tolerance class A: - 50 °C to + 300 °C Tolerance class 1/3 DIN: 0 °C to + 150 °C	
<b>Temperature coefficient</b>	TCR = 3850 ppm/K	
<b>Leads</b>	Pt clad Ni wire Recommend connection technology: Welding, Crimping and Brazing	
<b>Lead lengths (L)</b>	10 mm +- 1 mm	
<b>Long-term stability</b>	max. $R_0$ -drift 0.04% after 1000 h at 500 °C	
<b>Vibration resistance</b>	at least 40 g acceleration at 10 to 2000 Hz, depends on installation	
<b>Shock resistance</b>	at least 100 g acceleration with 8ms half sine wave, depends on installation	
<b>Environmental conditions</b>	unhoused for dry environments only	
<b>Insulation resistance</b>	> 100 MΩ at 20 °C; > 2 MΩ at 500 °C	
<b>Self heating</b>	0.2 K/mW at 0 °C	
<b>Response time</b>	water current (v = 0.4 m/s):	$t_{0.5} = 0.10$ s $t_{0.9} = 0.30$ s
	air stream (v = 2 m/s):	$t_{0.5} = 4.0$ s $t_{0.9} = 12.0$ s
<b>Measuring current</b>	100 Ω: 0.3 to 1.0 mA 500 Ω: 0.1 to 0.7 mA 1000 Ω: 0.1 to 0.3 mA (self heating has to be considered)	
<b>Note</b>	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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