

## Platinum temperature sensor in thin-film technology

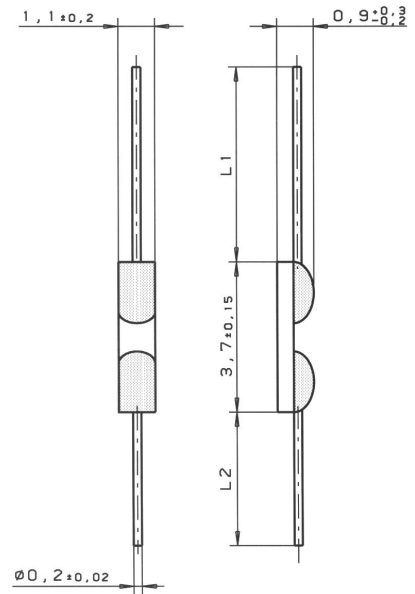
**M 411 ax**

M 411ax platinum temperature sensors have axial leads. They are characterized by their small design, short contact times, long-term stability and excellent precision over a wide temperature range and compatibility. They are typically used in the automotive, white goods, HVAC and energy generation industries as well as in medical and industrial appliances and machinery.

Nominal Resistance R0	Tolerance DIN EN 60751 1996-07	Tolerance DIN EN 60751 2009-05	Order Number Plastic Box
100 Ohm at 0°C	Class B	F 0.3	32 208 209

The measuring point for the nominal resistance is defined at 8/13 mm from the end of the sensor

<b>Specification</b>	DIN EN 60751
<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
<b>Temperature coefficient</b>	TCR = 3850 ppm/K
<b>Leads</b>	Pt clad Ni- wire
<b>Lead lengths (L)</b>	L1: 15mm ±1mm L2: 10mm ±1mm
<b>Vibration resistance</b>	At least 40g acceleration at 10 to 2000 Hz, depends on installation
<b>Shock resistance</b>	At least 100g acceleration with 8ms half sine wave, depends on installation
<b>Ambient conditions</b>	Use unprotected only in dry environments
<b>Insulation resistance</b>	> 100 MΩ at 20°C; > 2 MΩ at 500°C
<b>Self heating</b>	0.4 K/mW at 0°C
<b>Contact time</b>	Water current (v= 0.4m/s): Air flow (v= 2m/s):
	$t_{0.5} = 0.06s$ $t_{0.9} = 0.17s$ $t_{0.5} = 3.0s$ $t_{0.9} = 10.0s$
<b>Measuring current</b>	100Ω: 0.3 to 1.0mA (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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