

## Platinum temperature sensor in thin-film technology

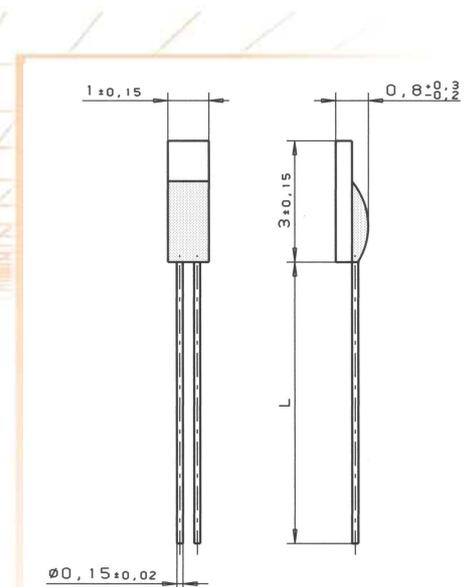
M 310

M-series platinum temperature sensors are characterized by long-term stability, excellent precision over a wide temperature range and compatibility. They are used particularly for applications with high consumption volumes, typically 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	Order Number Plastic Bag
100 Ohm at 0°C	Class B	F 0.3	32 208 721	50 142 52
1000 Ohm at 0°C	Class B	F 0.3	32 208 723	50 142 53
100 Ohm at 0°C	Class A	F 0,15	32 208 725	50 142 54
1000 Ohm at 0°C	Class A	F 0,15	32 208 727	50 142 55

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

<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 up to +500°C Tolerance Class A: -50°C up to +300°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>	10mm ±1mm	
<b>Long-term stability</b>	Max. R <sub>0</sub> drift 0.04% after 1000h at 500°C	
<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 8 ms 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>Response time</b>	Water current (v= 0.4m/s):	t <sub>0,5</sub> = 0.04s t <sub>0,9</sub> = 0.12s
	Air flow (v= 2m/s):	t <sub>0,5</sub> = 2.5s t <sub>0,9</sub> = 8.0s
<b>Measuring current</b>	100Ω: 0.3 to 1.0 mA 1000Ω: 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.

Heraeus Sensor Technology GmbH, Reinhard- Heraeus- Ring 23, 63801 Kleinostheim, Germany  
Phone: +49 (0) 6181/35-8098, Fax: +49 (0)6181/35-8101, E-Mail: [info.HSND@Heraeus.com](mailto:info.HSND@Heraeus.com) Web: [www.heraeus-sensor-technology.com](http://www.heraeus-sensor-technology.com)