## Heraeus

## 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	<b>Tolerance</b> DIN EN 60751 1996-07	<b>Tolerance</b> DIN EN 60751 2009-05	Order Number Plastic Box
100 Ohm at 0°C	Class B	F 0.3	32 208 721
1000 Ohm at 0°C	Class B	F 0.3	32 208 723
100 Ohm at 0°C	Class A	F 0,15	32 208 725
1000 Ohm at 0°C	Class A	F 0,15	32 208 727

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 ope (temporary use to 550°C possible Tolerance Class B: -70°C up to + Tolerance Class A: -50°C up to +	e) -500°C	1+0,15	0,8:8;ž	
Temperature coefficient	TCR = 3850 ppm/K				
Leads	Pt clad Ni- wire Recommend connection technolo Welding, Crimping and Brazing	ogy:			
Lead lengths (L)	10mm ±1mm			Î .	
Long-term stability	Max. R <sub>0</sub> drift 0.04% after 1000h at 500°C				
Vibration resistance	At least 40g acceleration at 10 to 2000 Hz, depends on installation				
Shock resistance	At least 100g acceleration with 8 wave, depends on installation				
Ambient conditions	Use unprotected only in dry environments		Ø0,15±0,02	T	
Insulation resistance	> 100 M $\Omega$ at 20°C; > 2 M $\Omega$ at 50				
Self heating	0.4 K/mW at 0°C				
Response time	Water current (v= 0.4m/s):	$t_{0.5} = 0.04s$		110	
	Air flow (v= 2m/s):	$\begin{array}{l} t_{0.9} = 0.12s \\ t_{0.5} = 2.5s \\ t_{0.9} = 8.0s \end{array}$		oHS nform	
Measuring current	100 $\Omega$ : 0.3 to 1.0 mA 1000 $\Omega$ : 0.1 to 0.3 mA (self heating has to be considere	d)			
Note	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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