

Platinum temperature sensor in thin-film technology

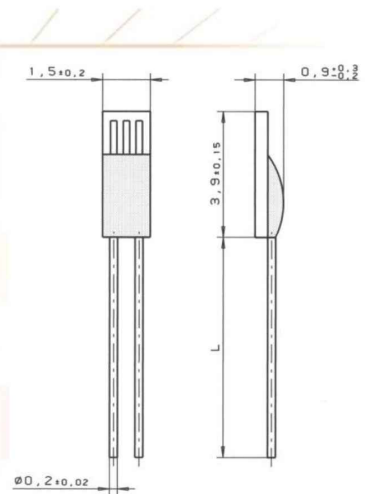
M 416

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 Bag	Order Number Blister reel
100 Ohm at 0°C	Class 1/3 B	F 0.1	32 208 217	32 208 701
	Class A	F 0.15	32 208 216	32 208 279
	Class B	F 0.3	32 208 213	32 208 278

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 to +500°C Tolerance Class A: -50°C to +300°C Tolerance Class 1/3 B: 0°C to +150°C	
Temperature coefficient	TC = 3850 ppm/K	
Leads	Pt clad Ni- wire Recommend connection technology: Welding, Crimping and Brazing	
Lead lengths (L)	10mm ±1mm	
Long-term stability	Max. R ₀ 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 8ms half sine wave, depends on installation	
Ambient conditions	Use unprotected only in dry environments	
Insulation resistance	> 100 MΩ at 20°C; > 2 MΩ at 500°C	
Self heating	0.4 K/mW at 0°C	
Response time	Water current (v= 0.4m/s):	t _{0,5} = 0.06s t _{0,9} = 0.18s
	Air flow (v= 2m/s):	t _{0,5} = 3.1s t _{0,9} = 10.5s
Measuring current	100Ω: 0.3 to 1.0mA (self heating has to be considered)	
Note	Other tolerances, values of resistance and wire lengths are available on request.	



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