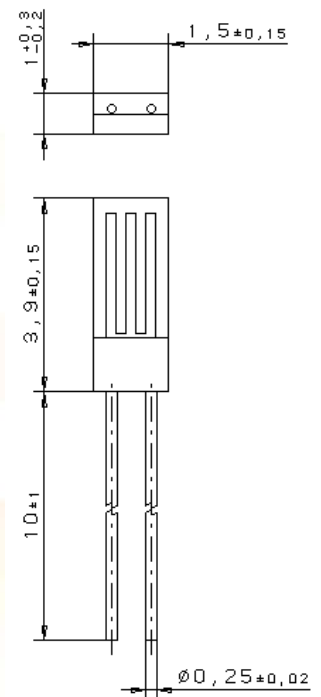# Platinum temperature sensor in thin-film technology   L 416

L-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 R_0	Tolerance	Order no. Plastic bag
100 Ohm at 0°C	DIN EN 60751, class B	32 207 440
	DIN EN 60751, class A	32 207 583
	DIN EN 60751, class 1/3 DIN	32 207 700

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

Specification	DIN EN 60751
Temperature range	-50°C to + 400°C (continuous operation) Tolerance class B: - 50 °C to + 400 °C Tolerance class A: - 50 °C to + 300 °C Tolerance class 1/3 DIN: 0 °C to + 150 °C
Temperature coefficient	TCR = 3850 ppm/K
Leads	AgPd
Long-term stability	Max. R_0 drift 0.04% after 1000 h at 400°C
Vibration resistance	at least 40 g acceleration at 10 to 2000 Hz, depends on installation
Shock resistance	at least 100 g 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 = 0.4 m/s): $t_{0.5}$ = 0.07 s; $t_{0.9}$ = 0.25 s Air flow (v = 2 m/s): $t_{0.5}$ = 3.2 s; $t_{0.9}$ = 14.0 s
Measuring current	0.3 to 1.0 mA (self heating has to be considered)
Note	Other tolerances, values of resistance and wire lengths are available