

L 416, Platinum Resistance Temperature Detector according to DIN EN 60751

Temperature range -50 °C to +400 °C

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 HVAC and energy industries as well as in medical and industrial appliances and machinery.

Nominal Resistance R ₀	Tolerance	Order Number
	DIN EN 60751 2009-05	Plastic box
100 Ohm at 0 °C	F 0.15 (Class A) F 0.3 (Class B)	32 207 583 32 207 440

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

Temperature and tolerance range

-50 °C to +400 °C (continuous operation)

tolerance class F 0.3 (B): -50 °C to +400 °C

tolerance class F 0.15 (A): -50 °C to +300 °C

Temperature coefficient

TCR = 3850 ppm/K

Response time

Water current (v= 0.4m/s): t_{0.5} = 0.07 s
t_{0.9} = 0.25 s

Air stream (v= 2m/s): t_{0.5} = 3.2 s
t_{0.9} = 14.0 s

Measuring current

100 Ω: 0.3 to 1.0 mA

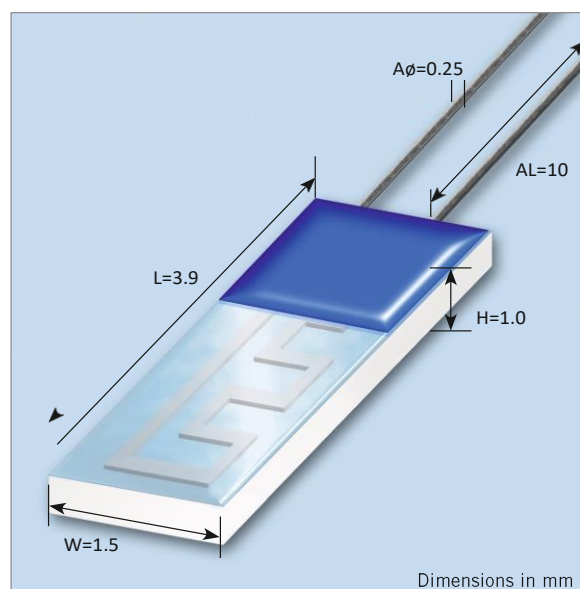
(self-heating has to be considered)

Long-term stability

R₀-Drift 0.04 % after 1000 hours at 400 °C

Self-heating

0.4 K/mW at 0 °C



Dimensions in mm

Insulation resistance

> 100 MΩ at 20 °C

> 2 MΩ at 400 °C

Vibration resistance

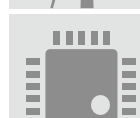
At least 40 g acceleration at 10 to 2000 Hz, depends on installation



The information provided in this data sheet regarding the technical characteristics of the product describe the quality of the product, but shall not be qualified or construed as quality guarantees (Beschaffenheitsgarantie) in the meaning of sections 443 and 444 German Civil Code. The information provided in this data sheet regarding measurement values (response time, long-term stability, vibration and shock resistance, insulation resistance and self-heating) are average values that have been obtained under laboratory conditions in tests of large numbers of the product; measurements in productive use may very significantly depending on the specific conditions of use.

The customer is solely responsible to check whether the product is suited for the intended use; in this respect Heraeus cannot assume any liability. The sale of any products of Heraeus is exclusively subject to the General Terms of Sale and Delivery of Heraeus in their current version, which is available under www.heraeus.com/gtc. This data sheet is subject to changes without prior notice.

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L 416, Platinum Resistance Temperature Detector according to DIN EN 60751

Temperature range -50 °C to +400 °C

Shock resistance

At least 100 g acceleration with 8 ms half sine wave, depends on installation

Leads

AgPd-wire

Lead lengths (L)

10 mm \pm 1 mm

Connection technology

Suitable for soft soldering

(note application temperature of the solder)

Tensile strength for leads

\geq 8 N

Packaging

VCI-plastic bag

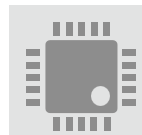
Storage life

Min. 12 month (in original packaging)

nitrogen atmosphere recommended

Note

Other tolerances, values of resistance and wire lengths are available on request.



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