

L 220, Platinum Resistance Temperature Detector according to DIN EN 60751

Temperature range -50 °C to +400 °C

L series PRTDs are designed for large volume applications where long-term stability, interchangeability and accuracy over a large temperature range are vital. Typical applications are HVAC, Energy management, Medical and Industrial equipment.

Nominal Resistance R_0	Tolerance	Order Number	Packaging
100 Ohm at 0 °C	F 0.1 (Class 1/3 B)	32 207 588	VCI-plastic bag
	F 0.15 (Class A)	32 207 584	
	F 0.3 (Class B)	32 207 400	
1000 Ohm at 0 °C	F 0.3 (Class B)	32 207 733	VCI-plastic bag
	F 0.15 (Class A)	32 207 738	

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

Temperature and tolerance range

Tolerance class F 0.3 (B): -50 °C to +400 °C
 Tolerance class F 0.15 (A): -50 °C to +300 °C
 Tolerance class F 0.1 (1/3 B): 0 °C to +150 °C
 Continuous operation

Temperature coefficient

TCR = 3850 ppm/K

Response time

Water current ($v = 0.4\text{m/s}$): $t_{0.5} = 0.06\text{ s}$
 $t_{0.9} = 0.20\text{ s}$
 Air stream ($v = 2\text{m/s}$): $t_{0.5} = 3.0\text{ s}$
 $t_{0.9} = 13.0\text{ s}$

Measuring current

100 Ω : 0.3 to 1.0 mA
 1000 Ω : 0.1 to 0.3 mA
 (self-heating has to be considered)

Long-term stability

R_0 -Drift 0.04 % after 1000 hours at +400 °C

Self-heating

0.4 K/mW at 0 °C

Insulation resistance

> 100 M Ω at +20 °C
 > 2 M Ω at +400 °C

Vibration resistance

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

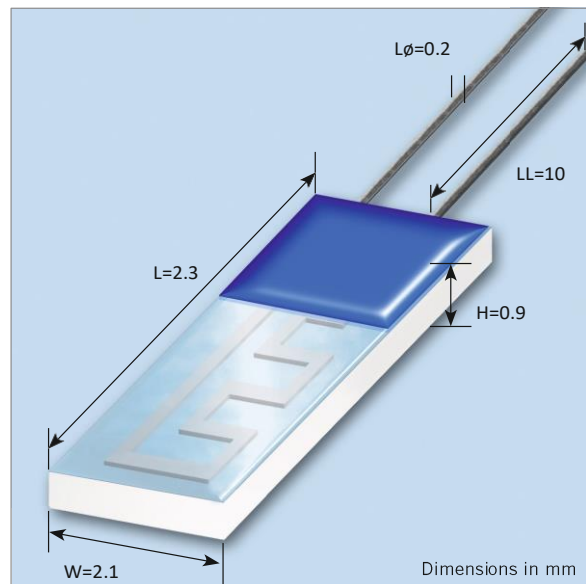


Image for illustration purposes only



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Shock resistance

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

Leads

AgPd-wire

Lead lengths (LL)

10 mm \pm 1 mm

Connection technology

Suitable for soft soldering (note, application temperature of the solder)

Tensile strength of leads

\geq 8 N

Packaging

Alternative packaging forms on request.

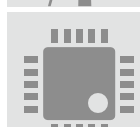
Storage life

At least 12 months (after manufacture), when stored under the recommended conditions. Longer shelf life may be possible, depending upon actual storage conditions, after requalification by customer.

Nitrogen atmosphere recommended

Note

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



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