

LN222, Pt Temperature Sensor according to DIN EN 60751

Temperature range -50 °C to +400 °C

- Excellent long term stability and low drift
- High accuracy and interchangeability
- High vibration and shock resistance
- Optimized for soldering connection

LN series Pt-RTDs are designed for high volume applications where long term stability, interchangeability and accuracy over a large temperature range are vital. Typical applications include HVAC, Appliance, Food and Beverage, Medical and Industrial equipment.

Nominal Resistance R_0 [Ω]	Tolerance Class	Order Number	Packaging
Pt100	F 0.15 (Class A) F 0.3 (Class B)	32207771 32207770	VCI-Plastic bag VCI-Plastic bag
Pt1000	F 0.15 (Class A) F 0.3 (Class B)	32207773 32207772	VCI-Plastic bag VCI-Plastic bag

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

Temperature Range of Tolerance Class

Tolerance Class F 0.15 (A) -50 °C to +300 °C

Tolerance Class F 0.3 (B) -50 °C to +400 °C

The specified tolerance classes refer to continuous operation.

Temperature Coefficient

TCR = 3850 ppm/K

Response Time

Water ($v = 0.4$ m/s):
 $t_{0.5} = 0.05$ s
 $t_{0.9} = 0.15$ s

Air ($v = 2$ m/s):
 $t_{0.5} = 3$ s
 $t_{0.9} = 10$ s

Measuring Current

Pt100 Ω : 0.3 to 1 mA

Pt1000 Ω : 0.1 to 0.3 mA

(self-heating has to be considered)

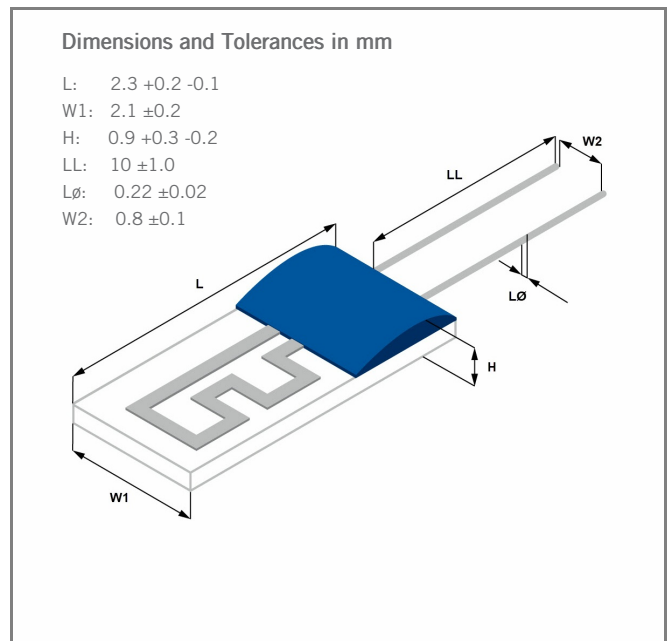


Image for illustration purposes only
 Color, shape and forming of fixing drop may vary

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Long-Term Stability

The drift of the resistance value at 0 °C after a storage for 1000 hours in air at the declared upper temperature limit is not more than the tolerance value of the declared tolerance class according DIN EN 60751.

Typical drift of R(0 °C) is 0.04 % after 1000 hours at +400 °C.

Self-Heating

0.4 K/mW at 0 °C

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

Shock Resistance

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

Connection Technology

Crimping, Soft Soldering

Lead Type

Ni-silvercoated

Tensile Strength of Leads

≥ 10N

Packaging

VCI-Plastic bag

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.

Due to random sample measurements, a bending of connection wires may occur (called V-shape). This bending is batch-dependent and has no influence on the functionality of the platinum measuring resistor.

California Proposition 65



WARNING

WARNING: This product can expose you to chemicals including nickel and cobalt, which are known to the State of California to cause cancer.

For more information go to www.p65warnings.ca.gov



The information provided in this data sheet describes certain technical characteristics of the product, but shall not be qualified or construed as quality guarantee (Beschaffenheitsgarantie) in the meaning of sections 443 and 444 German Civil Code. The information provided in this data sheet regarding measurement values (including, but not limited to, 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. Product results or measurements achieved by customer or any other person in any production, test, or other environment may vary depending on the specific conditions of use.

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