

MR828, Pt Temperature Sensor according to DIN EN 60751

Temperature range -70 °C to +500 °C, temporary up to +550 °C

- Pt element encapsulated in protective ceramic sleeve
- Excellent long term stability and low drift
- High vibration and shock resistance
- Optimized for welding, brazing and crimping

Ceramic housed Pt-RTDs are designed for applications where high temperature stability and shock resistance is vital. Typical industrial applications include analytical and medical equipment, chemical plants and mechanical equipment.

Nominal Resistance R_0 [Ω]	Tolerance Class	Order Number	Packaging
Pt100	F 0.3 (B)	32209340	Slide blister
Pt1000	F 0.3 (B)	32209342	Slide blister
2Pt100	F 0.3 (B)	32209343	Slide blister

The measuring point for the nominal resistance is 2 mm from the end of the sensor body.

Temperature Range of Tolerance Class

Validity of Class F 0.3 (B) -70 °C to +500 °C

The specified tolerance classes refer to continuous operation.

Class F 0.3 also applies up to +550 °C for short periods.

Temperature Coefficient

TCR = 3850 ppm/K

Response Time

Water ($v = 0.4$ m/s):
 $t_{0.5} = 0.9$ s
 $t_{0.9} = 2.7$ s

Air ($v = 2$ m/s):
 $t_{0.5} = 12.3$ s
 $t_{0.9} = 39.5$ s

Measuring Current

Pt100 Ω : 0.3 to 1 mA
 Pt1000 Ω : 0.1 to 0.3 mA
 2Pt100 Ω : 0.3 to 1 mA
 (self-heating has to be considered)

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 to DIN EN 60751.

Typical drift of $R(0$ °C) is 0.01 % after 1000 hours at +500 °C.

Self-Heating

Pt100/1000: 0.05 K/mW at 0 °C
 2Pt100: 0.16 K/mW at 0 °C

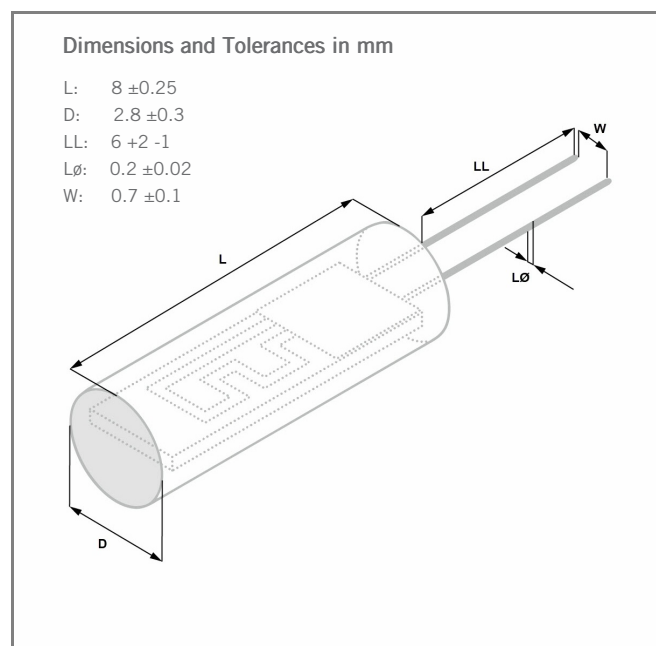


Image for illustration purposes only

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Insulation Resistance

> 100 MΩ at 20 °C

> 2 MΩ at 500 °C

Vibration Resistance

According to DIN EN 60751

Lead Type

Pt clad Ni-wire

Connection Technology

Welding, Crimping, Brazing

Tensile Strength of Leads

≥ 9N

Packaging

Slide blister

Alternative packaging forms on request

Storage Life

Min. 12 months (in original packaging)

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 lead oxide, which is known to the State of California to cause cancer and birth defects or other reproductive harm, and including cobalt oxide, 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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