

## MR828, Pt Temperature Sensor according to DIN EN IEC 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 DIN EN IEC 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

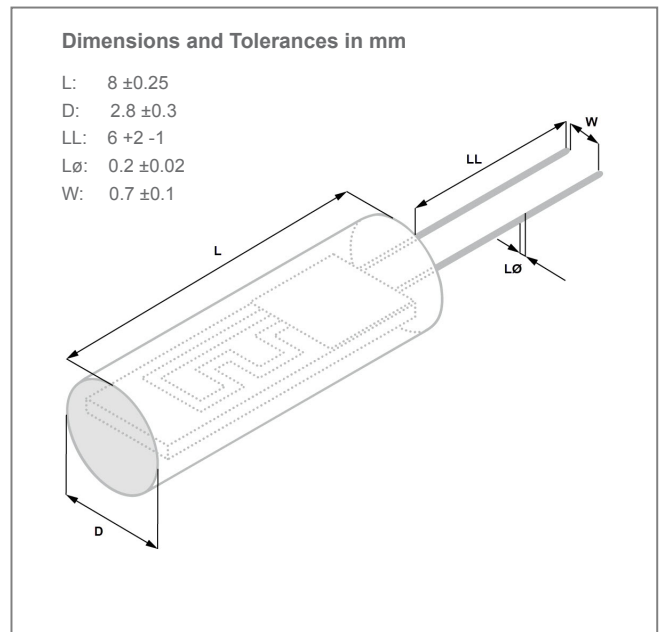


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### Insulation Resistance

> 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](http://www.p65warnings.ca.gov)

**RoHS**  
compliant

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