

Sensor Elements with Ni-Lead Extensions

Temperature range -70 °C to +500 °C

- Excellent long term stability and low drift
- High accuracy and interchangeability
- High vibration and shock resistance
- Broad range of applications

Sensor elements with lead extensions helps to reduced development times in your processes. Elements with stranded wire extensions are available in standard lengths and can be customized to your optimum length for larger requests.

Nominal Resistance R_0 [Ω] (Element)	Tolerance (Element)	Type	Lead Length LL (mm)	Order Number	Packaging
Pt100	F 0.3 (B)	M222	200	5157675	Plastic bag
Pt1000	F 0.3 (B)	M222	200	30200145	Plastic bag
Pt1000	F 0.3 (B)	M310	60	5157677	Plastic bag
Pt1000	F 0.3 (B)	M310	200	5157676	Plastic bag

Temperature Range of Tolerance Class

Tolerance Class F 0.3 (B) -70 °C to +500 °C
 Temporary up to +550 °C (up to 50 hours)

Temperature Coefficient

TCR = 3850 ppm/K

Response Time

M222:

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

M310:

Water ($v = 0.4$ m/s) $t_{0.5} = 0.04$ s
 $t_{0.9} = 0.12$ s
 Air ($v = 2$ m/s) $t_{0.5} = 2.5$ s
 $t_{0.9} = 8$ s

Measuring Current

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

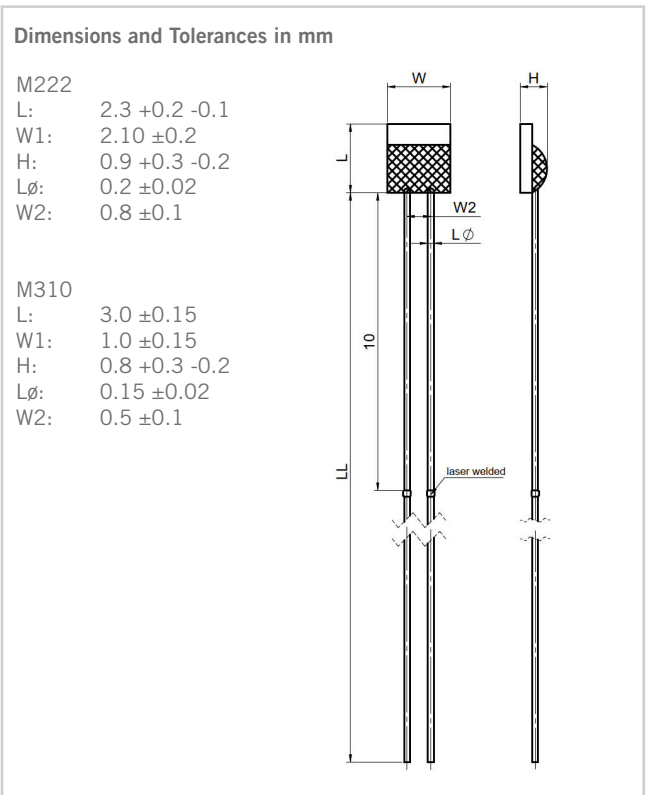


Image for illustration purposes only

Sensor Elements with Ni-Lead Extensions

Temperature range -70 °C to +500 °C

Long-Term Stability of the Sensor Element

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 +500 °C.

Self-Heating of the Sensor Element

0.4 K/mW at 0 °C

Connection Technology

Crimping, Welding, Soft Soldering, Brazing, Clamping

Wire

Nickel lead extension

Wire Resistance

0.003 Ω/m (0.025 Ω/ft)

Pull Force

M222: 9 N

M310: 7 N

Customized Options available for High Volume Applications

- Extension length
- Sensor element: size and resistance
- Lead wire material

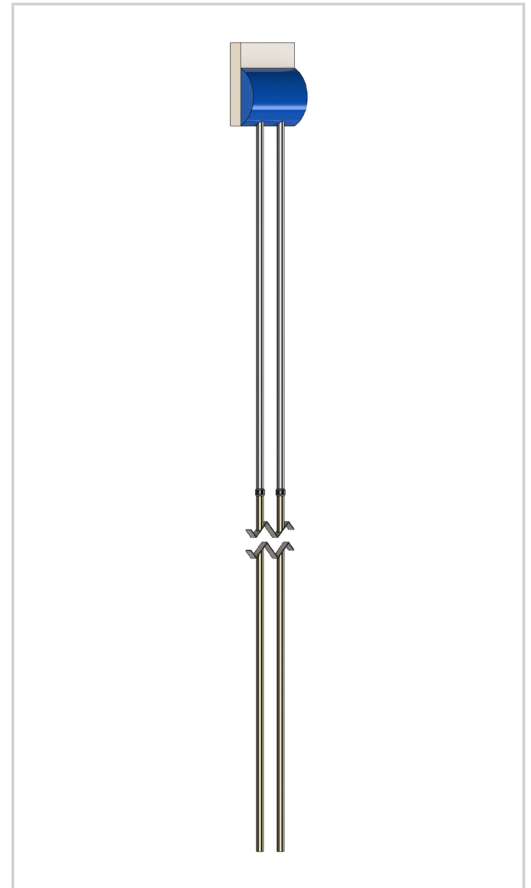


Image for illustration purposes only



The information provided in this data sheet describes certain technical characteristics of the product, but shall not be qualified or construed as quality guarantee (Beschaffheitsgarantie) 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. The customer is solely responsible to determine whether the product is suited for the customer's intended use; in this respect Heraeus cannot assume any liability. The sale of any products by Heraeus is exclusively subject to the General Terms of Sale and Delivery of Heraeus in their current version at the time of purchase, which is available under www.heraeus.com/gtc or may be furnished upon request. This data sheet is subject to changes without prior notice.

Heraeus Nexensos GmbH, Reinhard-Heraeus-Ring 23, 63801 Kleinostheim, Germany

Heraeus Nexensos GmbH, Germany
 Web: www.heraeus-nexensos.com
 Contact: nexensos.america@heraeus.com

Document: 20004178339 Part 001 Version 00 | Status: 12/2021

Page 2 of 2