



HDA 420, Platinum Temperature Sensor

Temperature range -40 °C to +900 °C, short-term up to +950 °C

HDA 420 platinum temperature sensors are characterized by long-term stability, precision over a broad temperature range and compatibility. Main application areas are applications within the automotive industry. For measuring high temperatures you should use a sensor, which reliably works in rough environments, has a long expectancy of life and ideally comes up with the space-saving concepts of the automotive industry.

Nominal Resistance R_0	Tolerance	Order Number	Packaging
200 Ohm at 0 °C	-40 °C to +278 °C: ± 2.5 K >+287 °C to +900 °C: ± 0.9 % of temperature	50 52 797 32 208 775	Blister reel Plastic bag
200 Ohm at 0 °C	-40 °C to +278 °C: ± 4.5 K >+287 °C to +900 °C: ± 1.8 % of temperature	32 208 771	Plastic bag

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

Specification

HNE (Heraeus Nexensos)

Temperature and tolerance range

-40 °C to +900 °C, short-term up to 950 °C

Temperature coefficient

TCR = 3770 ppm/K

Response time

Water current ($v = 0.4$ m/s):
 $t_{0.5} = 0.05$ s
 $t_{0.9} = 0.17$ s
 Air stream ($v = 2$ m/s):
 $t_{0.5} = 3.0$ s
 $t_{0.9} = 11.0$ s

Measuring current

20 °C max. 5.0 mA; 900 °C max. 2.8 mA
 (self-heating has to be considered)

Long-term stability

500 hours at +900 °C (5V, pullup resistor 1000 Ω), ΔR_0 typical < 2.5 K
 500 cycles: room temperature (25 °C) to +900 °C (5V, pullup resistor 1000 Ω), ΔR_0 typical < 2.5 K

Self-heating

0.2 K/mW at 0 °C

Insulation resistance

> 100 M Ω at 20 °C

Vibration resistance

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

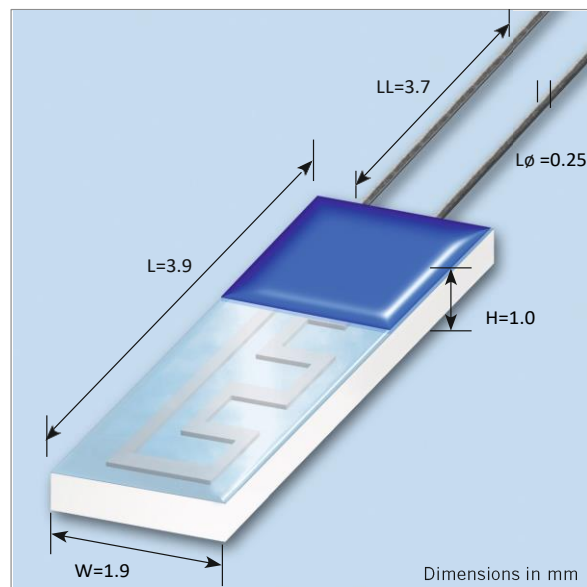


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Shock resistance

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

Environmental conditions

Unhoused for dry environment only. Up to $650\text{ }^{\circ}\text{C}$ in housings also as MI-cable type possible, above $650\text{ }^{\circ}\text{C}$ no reducing atmosphere, free air admission necessary

Leads

Pt-wire

Lead lengths (L)

3.7 mm

Connection technology

Suitable for welding and brazing

Process instructions

No reducing atmosphere, free air admission necessary

Tensile strength of leads

$> 9\text{ N}$

Storage life

Min. 12 months (in original packaging)

Note

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



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