HDA420, Pt Temperature Sensor

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

- Large operation window up to 900 °C
- Automotive certified
- High accuracy and stability
- High vibration resistance
- Optimized for welding and brazing

HDA 420 Pt-RTDs are designed and tested to measure high temperatures with great performance and long life-time. The HDA 420 is setting standards for temperature detection in automotive exhaust gas systems. In addition HDA420 elements are used to monitor high temperature processes in industry, wood burning and other areas.

Nominal Resistance R_0 [Ω]	Tolerance Class	Order Number	Packaging
Pt200	-40 °C to +278 °C: ±2.5 K >+278 °C to +900 °C: ±0.9 % of temperature	32208775 5052797	Plastic bag Blister reel

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

Specification
YNE (YAGEO Nexensos)

Temperature Range of Tolerance Class
-40 °C to +900 °C, temporary up to 950 °C
The specified tolerance range refers to the delivery condition of the sensor.

Temperature Coefficient
TCR = 3770 ppm/K

Response Time

Water (v = 0.4 m/s):	t0.5 = 0.05 s
	t0.9 = 0.17 s
Air (v = 2 m/s):	t0.5 = 3 s
	t0.9 = 11 s

Measuring Current
Pt200 Ω: -40 °C to 20 °C max. 5.0 mA;
above 20 °C max. 2.8 mA
(self-heating has to be considered)

Dimensions and Tolerances in mm

L: 3.9 ±0.15
W1: 1.9 ±0.2
H: 1.0 ±0.3
LL: 3.7 ±0.5
Lø: 0.25 ±0.02
W2: 0.85 ±0.1

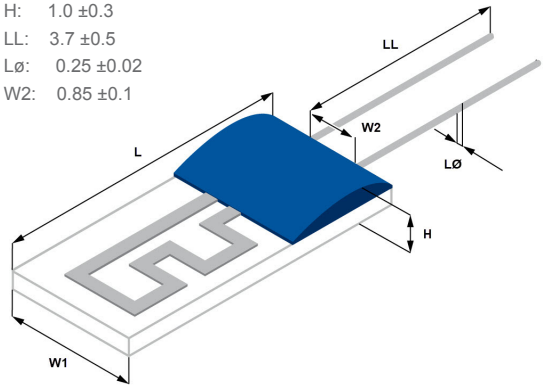


Image for illustration purposes only
Color, shape and forming of fixing drop may vary

HDA420, Pt Temperature Sensor

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

Long-Term Stability
500 hours at +900 °C (5V, pullup resistor 1000 Ω) or 500 cycles at +900 °C/< 40 °C:

32208775:
Post test tolerance -40 °C to +278 °C: ±5 K
>+278 °C to +900 °C: ±1.8 % of temperature

32208771:
Post test tolerance -40 °C to +278 °C: ±9 K
>+278 °C to +900 °C: ±3.6 % of temperature

Self-Heating
0.2 K/mW at 0 °C

Insulation Resistance
> 100 MΩ at 20 °C

Vibration Resistance
Depends on installation

Shock Resistance
Depends on installation

Lead Type
Platinum

Tensile Strength of Leads
≥ 9N

Connection Technology
Brazing, Welding

Environmental Conditions
Unhoused for dry environment only. Up to 650 °C in housings also as MI-cable type possible, above 650 °C no reducing atmosphere, free air admission necessary

Packaging
Blister reel, Plastic bag

Storage Life
Min. 48 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.

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. YAGEO Nexensos does not recommend the use of standard catalogue products or automotive grades for aerospace applications or manned space flight. The customer is solely responsible to determine whether the product is suited for the customer's intended use; in this respect YAGEO Nexensos cannot assume any liability. The sale of any products by YAGEO Nexensos is exclusively subject to the General Terms of Sale and Delivery of YAGEO Nexensos in their current version at the time of purchase, which is available under www.yageogroup.com/SalesResources/ResourceLibrary or may be furnished upon request. This data sheet is subject to changes without prior notice.

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