

## HD421, Pt Temperature Sensor according to DIN EN IEC 60751

Temperature range -70 °C to +850 °C

- Large operation window up to 850 °C
- High accuracy over a wide temperature range
- High vibration and shock resistance
- Optimized for welding and brazing

HD 421 Pt-RTDs are characterized by long-term stability, precision over a broad temperature range and compatibility. HD421 elements are used to monitor high temperature processes in Energy&Power generation, PetroChemistry and others. In principle, the products can also be used in automotive applications, in this case YAGEO Nexensos will check upon the request of the customer, whether additional requirements can be met (e.g. IMDS, PPAP).

Nominal Resistance $R_0$ [Ω]	Tolerance Class	Order Number	Packaging
Pt100	F 0.6 (2B)	32208228	Slide blister

The measuring point for the nominal resistance is 4 mm from the end of the sensor body.

### Temperature Range of Tolerance Class

Validity of Class F 0.6 (2B) -70 °C to +850 °C

Explanation:

Tolerance F 0.3 (B) -70 °C to +650 °C

Tolerance F 0.6 (2B) +650 °C to +850 °C

### Temperature Coefficient

TCR = 3850 ppm/K

### Response Time

Water ( $v = 0.4$  m/s):  
 $t_{0.5} = 0.05$  s  
 $t_{0.9} = 0.17$  s

Air ( $v = 2$  m/s):  
 $t_{0.5} = 3.3$  s  
 $t_{0.9} = 13$  s

### Measuring Current

Pt100 Ω: -70 °C to 20 °C max. 1 mA,  
 above 20 °C max. 1 mA  
 (self-heating has to be considered)

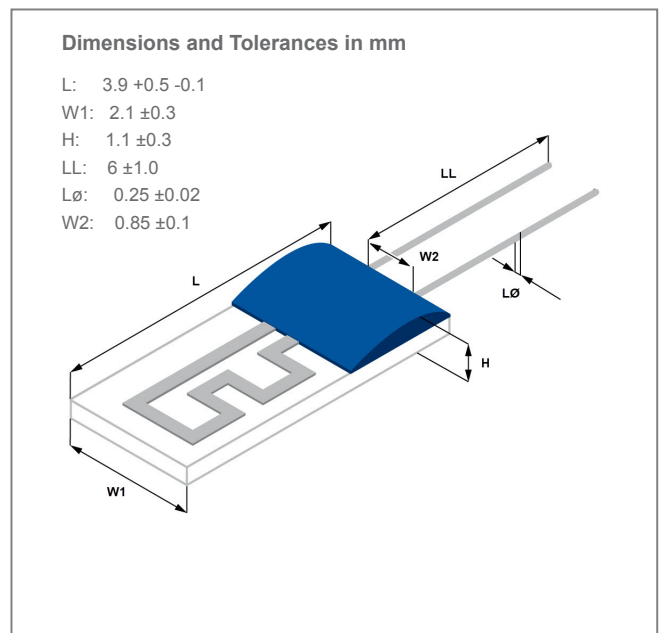


Image for illustration purposes only  
 Color, shape and forming of fixing drop may vary

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### Long-Term Stability

$R_0$ -drift < then the allowed deviation according to DIN F 0.3 (B) after 1000 hours at 850 °C (energized, open)

$R_0$ -drift < then the allowed deviation according to DIN F 0.3 (B) after 1000 hours at 650 °C (under current as clean MI-type)

### Self-Heating

0.2 K/mW at 0 °C

### Insulation Resistance

> 100 MΩ at 20 °C

> 2 MΩ at 650 °C

### Vibration Resistance

Depends on installation

### Shock Resistance

Depends on installation

### Connection Technology

Welding, Brazing

### Lead Type

Platinum

### Tensile Strength of Leads

≥ 9 N

### 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.



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