



BANNING
TEMPERATURE SENSOR
BN700-102AAC-B00

BANNING

DESCRIPTION

BN700-102AAC-B00 series Pt-RTDs are designed for large volume applications where competitive cost, long term stability, interchangeability and accuracy over a larger temperature range is vital. Typical applications include pyrolytic ovens, HVAC and others. In principle, the products can also be used in automotive applications, in this case Heraeus will check upon the request of the customer, whether additional requirements can be met (e.g. IMDS, PPAP)

CHARACTERISTICS

- TCR = 3750
- Excellent long term stability and low drift
- High accuracy and interchangeability
- High vibration and shock resistance
- Optimized for welding, brazing and crimping

PREFORMANCE

Parameter	BN700-102AAC-B00
Nominal Resistance R_0 [Ω]	Pt1000
Tolerance Class	F 0.6 (Class 2B)
Tolerance Class F 0.6 (2B)	-70°C to +500°C (temporary up to +550°C)
Characteristics	DIN EN 60751
Temperature Coefficient	TCR = 3750 ppm/K
Response Time	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
Measuring Current	Pt1000 Ω : 0,1 to 0,3 mA (self-heating has to be considered)
Long-Term Stability	Typical drift of $R(0^\circ\text{C})$ is 0.04 % after 1000 hours at +500°C.
Self-Heating	0.5 K/mW at 0°C
Insulation Resistance	> 100 M Ω at 20 °C > 2 M Ω at 500 °C
Vibration Resistance	At least 40 g acceleration at 10 to 2000 Hz, depends on installation
Shock Resistance	At least 100 g acceleration with 8 ms half sine wave, depends on installation
Connection Technology	Welding, Crimping, Brazing
Lead Type	Pt clad Ni-wire
Tensile Strength of Leads	≥ 9 N
Storage Life	Min. 12 months (in original packaging).

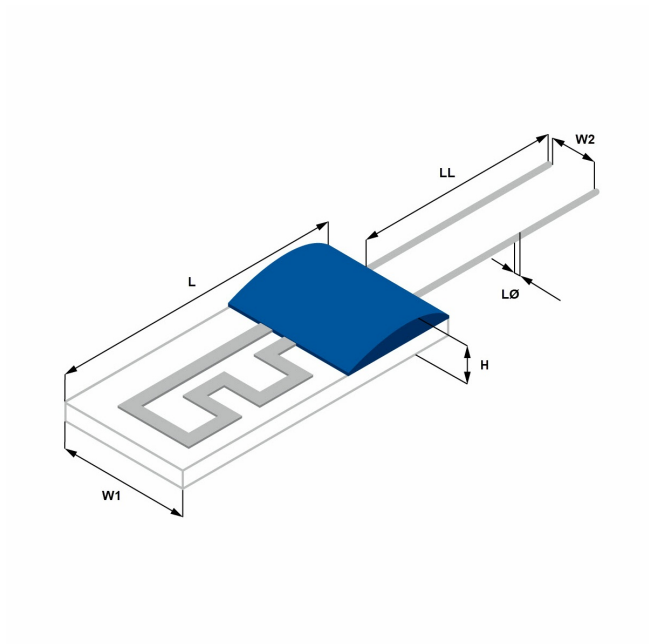
Note

- The measuring point for the nominal resistance is 6 mm from the end of the sensor body.
- 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.

DIMENSIONS

Dimensions and Tolerances in mm

- L: $2.1 +0.2 -0.1$
- W1: 1.9 ± 0.2
- H: $0.9 +0.3 -0.2$
- LL: 7 ± 1.0
- $L\varnothing$: 0.2 ± 0.02
- W2: 0.7 ± 0.1



DISCLAIMER

⚠ Warning

LIFE OR PROPERTY RISK

- Please ensure that this product has been designed as part of whole system and already considered related risks, make sure the product has the correct ratings and is designed based on the entire system. It must not be used when applications related to serious life or property damage risks.

Failure to follow this instruction can result in death or serious injury.

⚠ Warning

PERSONAL INJURY

- DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to follow this instruction can result in death or serious injury.

⚠ Warning

MISUSE OF DOCUMENTATION

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

Failure to follow this instruction can result in death or serious injury.

Warranty/Remedy

Banning warrants goods of its manufacture as being free of defective materials and faulty workmanship during the applicable warranty period. Banning's standard product warranty applies unless agreed to otherwise by Banning in writing; please refer to your order acknowledgment or consult your local sales office for specific warranty details. If warranted goods are returned to Banning during the period of coverage, Banning will repair or replace, at its option, without charge those items that Banning, in its sole discretion, finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Banning be liable for consequential special, or indirect damages.**

While Banning may provide application assistance personally, through our literature and the Banning web site, it is buyer's sole responsibility to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this writing. However, Banning assumes no responsibility for its use.

SALES & SERVICE

Banning serves its clients through a worldwide network of sales offices, agents and distributors. For application assistance specifications, prices or names with the nearest authorized dealer, please contact your sales specialist or contact us directly:

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