

Platinum Resistance Temperature Detector

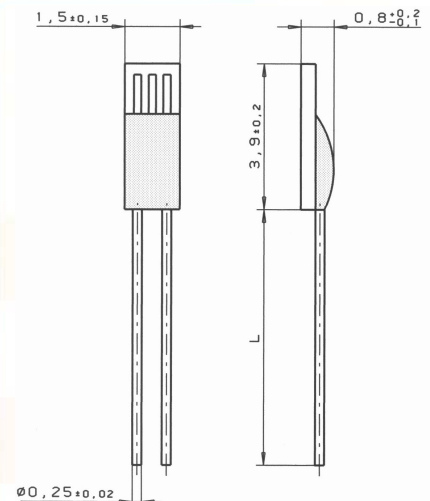
C 416

The C series thin-film PRTDs combine the ideal curve characteristics of ceramic wire-wound RTDs with the vibration resistance of glass wire-wound RTDs and represent an excellent alternative to wire-wound RTDs. They are characterized by high long-term stability, excellent temperature shock resistance and a wide temperature range of -196°C to +500°C. The deviation from the DIN EN 60751 (according to IEC 751) characteristic curve is minimal over the entire temperature range, they show no hysteresis. These features make them best suited for applications in aerospace, chemical and power generation plants and analytical equipment.

| Nominal Resistance R0 | Tolerance DIN EN 60751 1996-07 | Tolerance DIN EN 60751 2009-05 | Order Number Plastic Box |
|-----------------------|--------------------------------|--------------------------------|--------------------------|
| 100 Ohm at 0°C | Class B | F 0.3 | 32 208 519 |

The measuring point for the nominal resistance is defined at 8mm from the end of the sensor body.

| | | |
|---------------------------------|---|--|
| Specification | DIN EN 60751 | |
| Nominal resistance | 100Ω at 0°C | |
| Temperature range | -196°C to +500°C Tolerance Class B: -196°C up to +500°C | |
| Temperature coefficient | TCR = 3850 ppm/K | |
| Leads | AuPd- wire | |
| Lead lengths (L) | 10mm ±1mm | |
| Long-term stability | max. R ₀ -drift 0.03% after 1000 h at 500 °C | |
| Environmental conditions | unhoused for dry environments only | |
| Vibration resistance | at least 40g acceleration at 10 to 2000 Hz, depends on installation | |
| Shock resistance | at least 100g acceleration with 8ms half sine wave, depends on installation | |
| Self heating | 0.4 K/mW at 0°C | |
| Insulation resistance | > 100 MΩ at 20°C; > 2 MΩ at 500°C | |
| Response time | water current (v= 0.4m/s): | t _{0,5} = 0.07s t _{0,9} = 0.25s |
| | air stream (v= 2m/s): | t _{0,5} = 3.2s t _{0,9} = 14.0s |
| Measuring current | 100Ω: 0.3 to 1.0 mA (self heating has to be considered) | |
| Note | Other tolerances, values of resistance and wire lengths are available on request. | |



For brazing and soldering of the leads only brazing/solder alloys should be used which are specified for brazing/soldering to gold alloys.

We reserve the right to make alterations and technical data printed. All technical data serves as a guideline and does not guarantee particular properties to any products.

Heraeus Sensor Technology GmbH, Reinhard- Heraeus- Ring 23, 63801 Kleinostheim, Germany
Phone: +49 (0) 6181/35-8098, Fax: +49 (0)6181/35-8101, E-Mail: info.HSND@Heraeus.com Web: www.heraeus-sensor-technology.com