

Platinum Resistance Temperature Detector

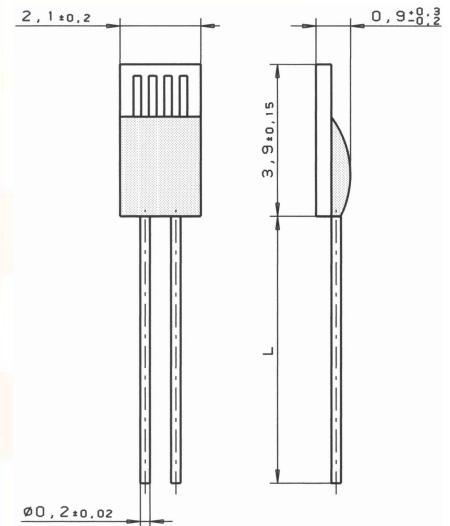
M 422

M series PRTDs are especially robust and are designed for large volume applications where long term stability, interchangeability and accuracy over a large temperature range are vital. Typical applications are Automotive, White Goods, HVAC, Energy Management, Medical and Industrial Equipment.

| Nominal Resistance R_0 | Tolerance | Order No. Plastic bag | Order No. Blister reel |
|--------------------------|-----------------------------|-----------------------|------------------------|
| 100 Ohm at 0°C | DIN EN 60751, class B | 32 208 392 | 32 208 520 |
| | DIN EN 60751, class A | 32 208 498 | 32 208 521 |
| | DIN EN 60751, class 1/3 DIN | 32 208 500 | 32 208 522 |
| 500 Ohm at 0°C | DIN EN 60751, class B | 32 208 414 | 32 208 523 |
| | DIN EN 60751, class A | 32 208 501 | 32 208 524 |
| | DIN EN 60751, class 1/3 DIN | 32 208 502 | 32 208 525 |
| 1000 Ohm at 0°C | DIN EN 60751, class B | 32 208 499 | 32 208 526 |
| | DIN EN 60751, class A | 32 208 503 | 32 208 527 |
| | DIN EN 60751, class 1/3 DIN | 32 208 537 | |

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

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|---------------------------------|---|--|
| Specification | DIN EN 60751 (according to IEC 751) | |
| Temperature range | -70°C to +500°C (continuous operation) (temporary use to 550 °C possible) Tolerance class B: - 70 °C to + 500 °C Tolerance class A: - 50 °C to + 300 °C Tolerance class 1/3 DIN: 0 °C to + 150 °C | |
| Temperature coefficient | TC = 3850 ppm/K ; 3750 ppm/K available on request | |
| Leads | Pt clad Ni wire Recommend connection technology: Welding, Crimping and Brazing | |
| Lead lengths (L) | 10 mm +- 1 mm | |
| Longterm stability | max. R_0 -drift 0.04% after 1000 h 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 8ms half sine wave, depends on installation | |
| Environmental conditions | unhoused for dry environments only | |
| Insulation resistance | > 100 M Ω at 20 °C; > 2 M Ω at 500 °C | |
| Self heating | 0.3 K/mW at 0 °C | |
| Response time | water current (v = 0.4 m/s): | $t_{0.5} = 0.07$ s $t_{0.9} = 0.20$ s |
| | air stream (v = 2 m/s): | $t_{0.5} = 3.2$ s $t_{0.9} = 11$ s |
| Measuring current | 100 Ω : 0.3 to 1.0 mA 500 Ω : 0.1 to 0.7 mA 1000 Ω : 0.1 to 0.3 mA (self heating has to be considered) | |
| Note | Other tolerances, values of resistance and wire lengths are available on request. | |



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.

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