

## Platinum Resistance Temperature Detector

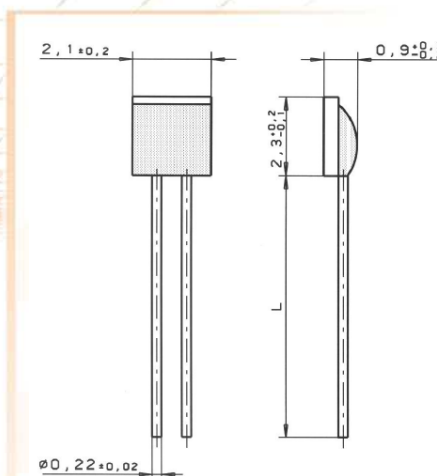
MN 222

MN- series PRTDs 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 R0 | Tolerance<br>DIN EN 60751<br>1996-07 | Tolerance<br>DIN EN 60751<br>2009-05 | Order Number<br>Plastic Bag |
|-----------------------|--------------------------------------|--------------------------------------|-----------------------------|
| 100 Ohm at 0°C        | Class A                              | F 0.15                               | 32 207 759                  |
|                       | Class B                              | F 0.3                                | 32 207 758                  |
|                       | Class 2B                             | F 0.6                                | 32 207 757                  |
| 500 Ohm at 0°C        | Class A                              | F 0.15                               | 32 207 761                  |
|                       | Class B                              | F 0.3                                | 32 207 756                  |
|                       | Class 2B                             | F 0.6                                | 32 207 755                  |
| 1000 Ohm at 0°C       | Class A                              | F 0.15                               | 32 207 754                  |
|                       | Class B                              | F 0.3                                | 32 207 753                  |
|                       | Class 2B                             | F 0.6                                | 32 207 751                  |

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

|                                |                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Specification</b>           | DIN EN 60751 (according to IEC 751)                                                                                                                                                                                                                                                                                                                                       |
| <b>Temperature range</b>       | Tolerance Class A: -50°C to +300°C<br>Tolerance Class B: -70°C to +500°C<br>Tolerance Class 2B: -70°C to +500°C<br>(temporary use at Cl. B and 2B to 550°C possible)                                                                                                                                                                                                      |
| <b>Temperature coefficient</b> | TCR = 3850 ppm/K                                                                                                                                                                                                                                                                                                                                                          |
| <b>Leads</b>                   | Ni- wire<br>Recommend connection technology:<br>Welding and Brazing                                                                                                                                                                                                                                                                                                       |
| <b>Lead lengths (L)</b>        | 10mm ±1mm                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Ambient conditions</b>      | Unhoused for dry environments only                                                                                                                                                                                                                                                                                                                                        |
| <b>Insulation resistance</b>   | > 100 MΩ at 20°C; > 2 MΩ at 500°C                                                                                                                                                                                                                                                                                                                                         |
| <b>Self heating</b>            | 0.4 K/mW at 0°C                                                                                                                                                                                                                                                                                                                                                           |
| <b>Response time</b>           | water current (v= 0.4m/s): $t_{0.5} = 0.05s$<br>$t_{0.9} = 0.15s$<br>air stream (v= 2m/s): $t_{0.5} = 3.0s$<br>$t_{0.9} = 10.0s$                                                                                                                                                                                                                                          |
| <b>Measuring current</b>       | 100Ω: 0.3 to 1.0mA<br>500Ω: 0.1 to 0.7mA<br>1000Ω: 0.1 bis 0.3mA<br>(self heating has to be considered)                                                                                                                                                                                                                                                                   |
| <b>Application advice</b>      | 1. To avoid shear forces on the connection area, the connection wires may be neither split or bent. The bending may only take place 3 mm after the element, using a bending or splitting tool.<br>2. Other nominal values, lengths and temperature coefficients on request.<br>3. Due to a production-caused oxide layer coating the leads, soft-soldering is restricted. |
| <b>Note</b>                    | Other tolerances, values of resistance 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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