

Platinum Resistance Temperature Detector

M 222

M 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 DIN EN 60751 1996-07 | Tolerance DIN EN 60751 2009-05 | Order Number Plastic Bag | Order Number Blister Reel |
|-----------------------|--------------------------------------|--------------------------------------|-----------------------------|------------------------------|
| 100 Ohm at 0°C | Class 1/3 B | F 0.1 | 32 208 551 | 32 208 719 32 208 718 |
| | Class A | F 0.15 | 32 208 550 | |
| | Class B | F 0.3 | 32 208 548 | |
| | Class 2B | F 0.6 | 32 208 573 | |
| 500 Ohm at 0°C | Class B | F 0.3 | 32 208 706 | |
| | Class A | F 0.15 | 32 208 712 | |
| 1000 Ohm at 0°C | Class 1/3 B | F 0.1 | 32 208 707 | |
| | Class A | F 0.15 | 32 208 572 | |
| | Class B | F 0.3 | 32 208 571 | |
| | Class 2B | F 0.6 | 32 208 557 | |

The measuring point for the nominal resistance is defined at 8mm from the end of the sensor body (4mm from the end of the sensor body for part numbers 32208573 and 32208557).

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 2B: -70°C to +500°C
Tolerance Class B: -70°C to +500°C
Tolerance Class A: -50°C to +300°C
Tolerance Class 1/3 B: 0°C to +150°C

Temperature coefficient

TCR = 3850 ppm/K

Leads

Pt clad Ni- wire
Recommend connection technology:
Welding, Crimping and Brazing

Lead lengths (L)

10mm ±1mm
(6mm ±1mm for p/n 32208573 and 32208557)

Long-term stability

max. R₀-drift 0.04% after 1000h at 500°C

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

Environmental conditions

unhoused for dry environments only

Insulation resistance

> 100 MΩ at 20°C; > 2 MΩ at 500°C

Self heating

0.4 K/mW at 0°C

Response time

water current (v= 0.4m/s):

t_{0.5} = 0.05s

t_{0.9} = 0.15s

air stream (v= 2m/s):

t_{0.5} = 3.0s

t_{0.9} = 10.0s

Measuring current

100Ω: 0.3 to 1.0mA

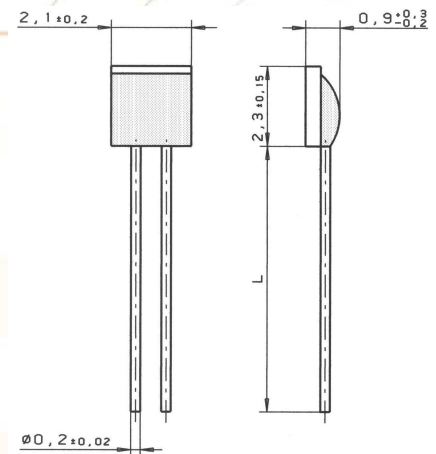
500Ω: 0.1 to 0.7mA

1000Ω: 0.1 to 0.3mA

(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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