

## 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 R <sub>0</sub>	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. R<sub>0</sub>-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<sub>0.5</sub> = 0.05s  
t<sub>0.9</sub> = 0.15s  
air stream (v= 2m/s):  
t<sub>0.5</sub> = 3.0s  
t<sub>0.9</sub> = 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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