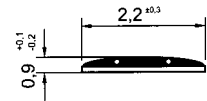


Platinum Resistance Temperature Detector

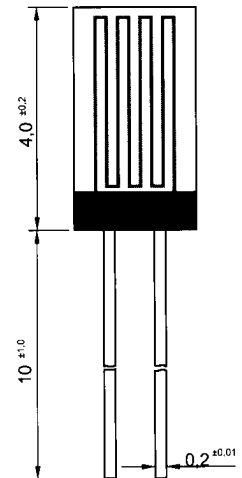
M-FK 422

F 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 Number Bulk Vacuum Packing | Order Number Blister Reel |
|--|---------------------------|----------------------------------|---------------------------|
| 100 Ohm at 0°C for M-FK 422 1 Pt 100 | 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 B | 32 208 500 | 32 208 522 |
| | ± 0,5% | 32 208 513 | |
| 500 Ohm at 0°C for M-FK 422 1 Pt 500 | DIN EN 60751, class B | 32 208 414 | 32 208 523 |
| | DIN EN 60751, class A | 32 208 501 | 32 208 524 |
| | ± 0,5% | 32 208 514 | |
| 1000 Ohm at 0°C for M-FK 422 1 Pt 1000 | DIN EN 60751, class B | 32 208 499 | 32 208 526 |
| | DIN EN 60751, class A | 32 208 503 | 32 208 527 |
| | ± 0,5% | 32 208 515 | |

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



- Specification** : DIN EN 60751 (according to IEC 751)
- Temperature range** : -70°C to +500°C (continuous operation)
 Tolerance ± 0,5 % - 70 °C to + 500 °C
 Tolerance class B - 70 °C to + 500 °C
 Tolerance class A - 30 °C to + 350 °C
 Tolerance class 1/3 B 0 °C to + 100 °C
- Temperature coefficient** : $T_c = 3850 \text{ ppm/K}$; 3750 ppm/K available on request
- Terminal leads** : platinum clad nickel wire
- 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
- Shock resistance** : at least 100 g acceleration with 8ms half sine wave
- Environmental conditions** : unboxed for dry environments only
- Insulation resistance** : > 10 M Ω at 20 °C: > 1 M Ω at 500 °C
- Self Heating** : 100 Ω : 0,3 K/mW; 500 Ω : 0,2 K/mW; 1000 Ω : 0,3 K/mW at 0 °C
- Response time** : water current ($v = 0,4 \text{ m/s}$): $t_{0,5} = 0,2 \text{ s}$; $t_{0,9} = 0,5 \text{ s}$
 air stream ($v = 1 \text{ m/s}$): $t_{0,5} = 3,4 \text{ s}$; $t_{0,9} = 10,7 \text{ s}$
- Measuring current** : 100 Ω : 0,3 to 1,0 mA
 500 Ω : 0,3 mA
 1000 Ω : 0,1 to 0,3 mA

11 / 1998