

MR 828 and 845, Platinum Resistance Temperature Detector according to DIN EN 60751 Temperature range -70 °C to +500 °C, short-term up to +550 °C

MR series elements are designed for applications where high temperature stability and shock resistance are vital. Typical industrial applications include analytical and medical equipment, chemical plants and mechanical equipment.

Nominal Resistance R0	Tolerance	Type	Order number
	DIN EN 60751 2009-05		Blister box
100 Ohm at 0 °C	F 0,3 (Class B)	1 Pt 100 MR 828 2 Pt 100 MR 828 1 Pt 100 MR 845 2 Pt 100 MR 845	32 209 340 32 209 343 32 209 346 32 209 349
500 Ohm at 0 °C	F 0,3 (Class B)	1 Pt 500 MR 828 1 Pt 500 MR 845	32 209 341 32 209 347
1000 Ohm at 0 °C	F 0,3 (Class B)	1 Pt 1000 MR 828 1 Pt 1000 MR 845 2 Pt 1000 MR 845	32 209 342 32 209 348 32 209 351

The measuring point for the nominal resistance is defined at 2 mm from end of the wire.

Temperature und tolerance range

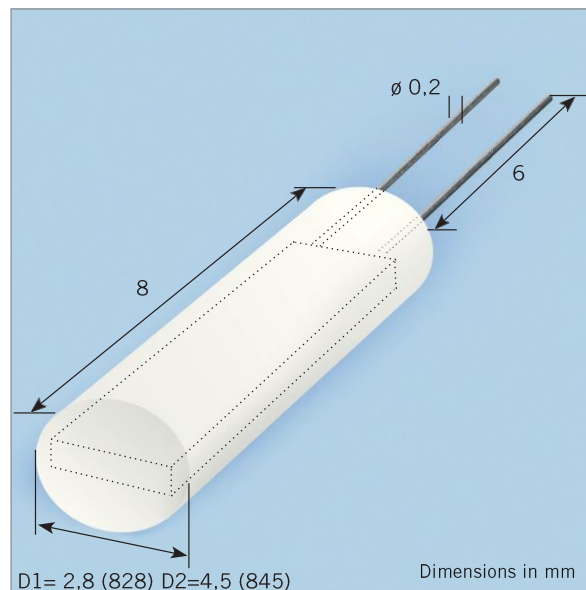
-70 °C to +500 °C (continuous operation)
(temporary use to +550 °C possible)
Tolerance class F 0.3 (B): -70 °C to +500 °C

Temperature coefficient

TCR = 3850 ppm/K

Response time

MR 828:
Water current (v= 0.4m/s): t_{0,5} = 0.9 s
t_{0,9} = 2.7 s
Air stream (v= 2m/s): t_{0,5} = 12.3 s
t_{0,9} = 39.5 s
MR 845:
Water current (v= 0.4m/s): t_{0,5} = 1.5 s
t_{0,9} = 4.6 s
Air stream (v= 2m/s): t_{0,5} = 24.8 s
t_{0,9} = 78.8 s



Measuring current

100 Ω: 0.3 bis 1.0 mA
500 Ω: 0.1 bis 0.7 mA
1000 Ω: 0.1 bis 0.3 mA
(self-heating has to be considered)

Self-heating

MR 828 (Pt100/500/1000) 0.05 K/mW at 0 °C
MR 828 (2 Pt100/500) 0.16 K/mW at 0 °C
MR 845 (Pt100/500/1000) 0.04 K/mW at 0 °C
MR 845 (2 Pt100/500) 0.08 K/mW at 0 °C

Long-term stability

RO-Drift 0.1 % after 1000 h at 500 °C

Insulation resistance

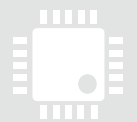
> 100 MΩ at 20 °C
> 2 MΩ at 500 °C



The information provided in this data sheet regarding the technical characteristics of the product describe the quality of the product, but shall not be qualified or construed as quality guarantees (Beschaffenheitsgarantie) in the meaning of sections 443 and 444 German Civil Code. The information provided in this data sheet regarding measurement values (response time, long-term stability, vibration and shock resistance, insulation resistance and self-heating) are average values that have been obtained under laboratory conditions in tests of large numbers of the product; measurements in productive use may vary significantly depending on the specific conditions of use.

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Vibration resistance

According to DIN EN 60751

Leads

Pt clad Ni- wire

Lead length (L)

6 mm +2 mm/-1 mm

Connection technology

Suitable for welding, hard soldering and crimping

Tensile strength of leads

≥ 9 N

Packaging

Blister box

Storage life

Min. 12 months (in original packaging)

Note

Other tolerances, values of resistance are available on request.

California Proposition 65



WARNING:

This product can expose you to chemicals including lead oxide, which is known to the State of California to cause cancer and birth defects or other reproductive harm, and including cobalt oxide, nickel and cobalt, which are known to the State of California to cause cancer. For more information go to www.p65warnings.ca.gov.



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