

Platinum Resistance Temperature Detector

MR 828 and 845

MR series elements are designed for applications where high vibration resistance as well as high temperature stability are vital. Typical industrial applications include analytical and medical equipment, chemical plants and mechanical equipment. Small tolerances on diameter allow problem free installation in protective tubes.

Type	Tolerance DIN EN 60751 1996-07	Tolerance DIN EN 60751 2009-05	Order Number	Diameter D in mm
1 Pt 100 MR 828	Class B	F 0.3	32 209 340	2,8 $\pm 0,3$
1 Pt 500 MR 828			32 209 341	2,8 $\pm 0,3$
1 Pt 1000 MR 828			32 209 342	2,8 $\pm 0,3$
2 Pt 100 MR 828			32 209 343	2,8 $\pm 0,3$
2 Pt 1000 MR 828			32 209 345	2,8 $\pm 0,3$
1 Pt 100 MR 845			32 209 346	4,5 $\pm 0,3$
1 Pt 500 MR 845			32 209 347	4,5 $\pm 0,3$
1 Pt 1000 MR 845			32 209 348	4,5 $\pm 0,3$
2 Pt 100 MR 845			32 209 349	4,5 $\pm 0,3$
2 Pt 500 MR 845			32 209 350	4,5 $\pm 0,3$
2 Pt 1000 MR 845			32 209 351	4,5 $\pm 0,3$

The measuring point for the basic value is situated at 8 mm from the end of the sensor body

Specification

DIN EN 60751

Nominal resistance

100 Ω ; 500 Ω and 1000 Ω at 0°C

Temperature range

-70°C to +500°C (continuous operation)
Temporary use to 550°C possible
Tolerance Class B: -70°C up to +500°C

Temperature coefficient

TCR = 3850 ppm/K

Leads

Pt clad Ni- wire

Lead lengths (L)

6 mm +2 / -1mm

Longterm stability

max. R₀-drift 0.1% after 1000h at 500°C

Vibration resistance

according to DIN EN 60751

Environmental conditions

unhoused for dry environments only

Insulation resistance

> 100 M Ω at 20°C; > 2 M Ω at 500°C

Measuring current

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

Response time

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

Self heating

MR 828 (Pt 100/500/1000): 0.05 K/mW at 0°C
MR 828 (2 Pt 100/1000): 0.16 K/mW at 0°C
MR 845 (Pt 100/500/1000): 0.04 K/mW at 0°C
MR 845 (2 Pt 100/1000): 0.08 K/mW at 0°C

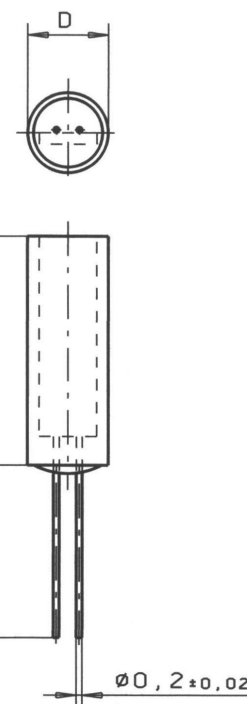
Packaging

blister reel

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.



Heraeus Sensor Technology USA

1901 Route 130
North Brunswick, NJ 08902
Phone 732-940-4400 Fax 732-940-4445
Email info.hst-us@heraeus.com
www.hst-us.com

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AMEYA360

Components Supply Platform

Authorized Distribution Brand :



Website :

Welcome to visit www.ameya360.com

Contact Us :

➤ Address :

401 Building No.5, JiuGe Business Center, Lane 2301, Yishan Rd
Minhang District, Shanghai , China

➤ Sales :

Direct +86 (21) 6401-6692

Email amall@ameya360.com

QQ 800077892

Skype ameyasales1 ameyasales2

➤ Customer Service :

Email service@ameya360.com

➤ Partnership :

Tel +86 (21) 64016692-8333

Email mkt@ameya360.com