

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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## Platinum temperature sensor in thin-film technology

M 310

M-series platinum temperature sensors are characterized by long-term stability, excellent precision over a wide temperature range and compatibility. They are used particularly for applications with high consumption volumes, typically in the automotive, white goods, HVAC and energy generation industries as well as in medical and industrial appliances and machinery.

| Nominal<br>Resistance R0 | <b>Tolerance</b> DIN EN 60751 1996-07 | <b>Tolerance</b> DIN EN 60751 2009-05 | Order Number<br>Plastic Box |
|--------------------------|---------------------------------------|---------------------------------------|-----------------------------|
| 100 Ohm at 0°C           | Class B                               | F 0.3                                 | 32 208 721                  |
| 1000 Ohm at 0°C          | Class B                               | F 0.3                                 | 32 208 723                  |
| 100 Ohm at 0°C           | Class A                               | F 0,15                                | 32 208 725                  |
| 1000 Ohm at 0°C          | Class A                               | F 0,15                                | 32 208 727                  |

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

Specification DIN EN 60751

**Temperature range** -70°C to +500°C (continuous operation)

(temporary use to 550°C possible)

Tolerance Class B: -70°C up to +500°C

Tolerance Class A: -50°C up to +300°C

Temperature coefficient TCR = 3850 ppm/K

Leads Pt clad Ni- wire

Recommend connection technology: Welding, Crimping and Brazing

Lead lengths (L) 10mm ±1mm

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 8 ms half sine

wave, depends on installation

Ambient conditions Use unprotected only in dry environments

**Insulation resistance** > 100 M $\Omega$  at 20°C; > 2 M $\Omega$  at 500°C

Self heating 0.4 K/mW at 0°C

**Response time** Water current (v= 0.4m/s):  $t_{0.5} = 0.04$ s

 $\begin{array}{c} t_{0.9} = 0.12s \\ \text{Air flow (v= 2m/s):} \\ \end{array}$ 

 $t_{0.9} = 8.0s$ 

**Measuring current** 100 $\Omega$ : 0.3 to 1.0 mA

1000Ω: 0.1 to 0.3 mA

(self heating has to be considered)

**Note** Other tolerances, values of resistance and wire

lengths are available on request.

0,8:0,3 0,8:0,3 80,15:0.02

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**

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