

## **Platinum Resistance Temperature Detector**

**HM 220** 

HM 220 type platinum sensors are characterised by long-term stability, precision over a broad temperature range and compatibility. The main feature is the small design. They are used in particular for applications with high consumption volumes, e.g. white goods and heating power.

Nominal Resistance R0	<b>Tolerance</b> DIN EN 60751 1996-07	<b>Tolerance</b> DIN EN 60751 2009-05	Order Number Plasticbag
100 Ohm at 0°C	Class B	F 0.3	32 208 787
	Class A	F 0.15	32 208 788

The measuring point for the nominal resistance is defined at 6mm from the end of the sensor body.

Specification DIN EN 60751

Temperature range -70°C up to +600°C

Tolerance Class B: -70°C up to 600°C Tolerance Class A: -50°C up to 300°C

Temperature coefficient TCR = 3850 ppm/K

Leads Pd alloy with Pt coating wire

Lead lengths (L) 8mm ±1mm

Long-term tests R₀- Drift after 1000h at 600°C (energized) < 0,24%

(Unhoused chip in standard atmosphere.)

Environmental conditions Unhoused for dry environmental only

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

**Insulation resistance** > 100 M $\Omega$  at 20°C; > 1 M $\Omega$  at 600°C

Self heating 0.2 K/mW

**Response time** Water current (v= 0.4m/s):  $t_{0.5} = 0.05$ s

 $t_{0.9} = 0.14s$ 

Air stream (v=2 m/s):  $t_{0.5} = 3.0s$ 

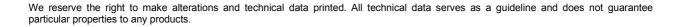
 $t_{0.9} = 10s$ 

Measuring current 0.1 to 1mA

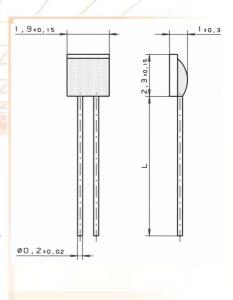
(self heating has to be considered)

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

available on request.



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 http://heraeus-sensor-technology-us.com





Name of document: 30910061 Index B

Status: 08/2010