

# SURFACE TEMPERATURE SENSOR



Temperature sensors have a well-defined relationship between electrical resistance and temperature, allowing them to measure temperature precisely. The sensor body is made of a thermally conductive material and is as small as possible to produce a rugged device which gives an accurate measurement of temperature with a fast response.

This sensor is small enough to install in traditional thermocouple locations, but has the advantage of straightforward Pt1000 interfacing.

### Electrical

- Sensing element Pt1000, surface mount
- Nominal resistance 1000ohm @ 0°C
- Accuracy:  
Standard part O 030 300 021 064  
±0.4K typ, ±1.0K max (0 to +100°C)  
±1.0K typ, ±1.5K max (+100 to +150°C)  
±1.5K typ, ±2.0K max (+150 to +200°C)<sup>1</sup>  
High temp part O 030 300 021 074
- Accuracy:  
±0.8K typ, ±1.5K max (0 to +100°C)  
±1.3K typ, ±2.0K max (+100 to +200°C)  
±1.8K typ, ±2.5K max (+200 to +250°C)<sup>1</sup>
- Response time 4sec typ, 10sec max in still air

### Cable and Connection Definition

- 28AWG un-screened cable
- Cable length is shown on the order details but any length is available on request
- Various automotive and military standard connectors are available
- Connection
 

White wire	Signal +
Black wire	Signal -

### Application

Temperature measurement

### Mechanical

- Aluminium alloy body, hard anodised and dyed black
- Weight less than 15g (including cable)
- Internal joints made with high melting point solder

Design and manufacture is in-house, so if our existing designs do not suit your application, we can provide cost effective customised parts to suit even the most demanding application. No engineering charges are made for simple modifications such as customer specific connectors, cable protection and cable lengths. Please contact our technical consultancy service who will be pleased to help.

### Environmental

- Resistant to standard motorsport fluids
- Maximum humidity 100%
- Vibration 50 to 2500Hz @ 40g 8hrs per axis

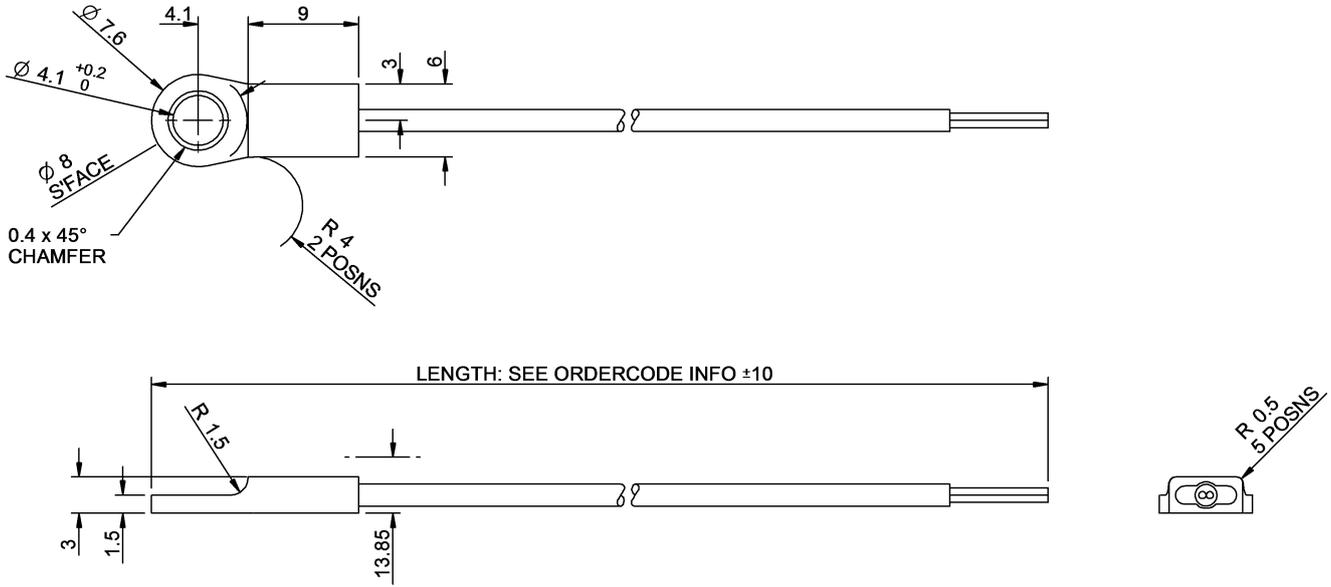
- O 030 300 021 064 Standard part
- Operating temperature -25 to +200°C<sup>1</sup>
  - DR25 jacketed cable (150°C)

- O 030 300 021 074 High temperature part
- Operating temperature -25 to +250°C<sup>2</sup>
  - RW200 jacketed cable (200°C)

<sup>1</sup> Characterised to 150°C

<sup>2</sup> Characterised to 180°C

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Description	Element	Cable Length	Order Code
Standard part	Pt1000	1000mm	O 030 300 021 064
High temp part	Pt1000	1000mm	O 030 300 021 074