

# TEMPERATURE SENSOR FLUID



Temperature sensors have a well-defined relationship between electrical resistance and temperature, allowing them to measure temperature precisely. Pt100, Pt1000 or NTC elements are available. We recommend the Pt1000 element because its higher resistance makes it less sensitive to the resistance of harness wires and connector contacts. Control units and data loggers support Pt1000 as standard, but can be modified to support Pt100 and NTC. 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.

Please request our installation datasheet for further details.

## Electrical

- Nominal resistance:
 

NTC	5000 ohm	@25°C
Pt100	100 ohm	@0°C
Pt1000	1000 ohm	@0°C
- Accuracy:
  - ±0.4K typ, ±1.0K max (-10 to +100°C)
  - ±1.0K typ, ±1.5K max (+100 to +150°C)
  - ±1.5K typ, ±2.0K max (+150 to +200°C)
- Response time 4sec typ, 10sec max in still air

## Cable and Connection Definition

- 22 AWG 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	Pin A	Pin 1	Signal+
Black wire	Pin B	Pin 2	Signal-

## Application

- Oil, water, fuel temperature measurement

## Mechanical

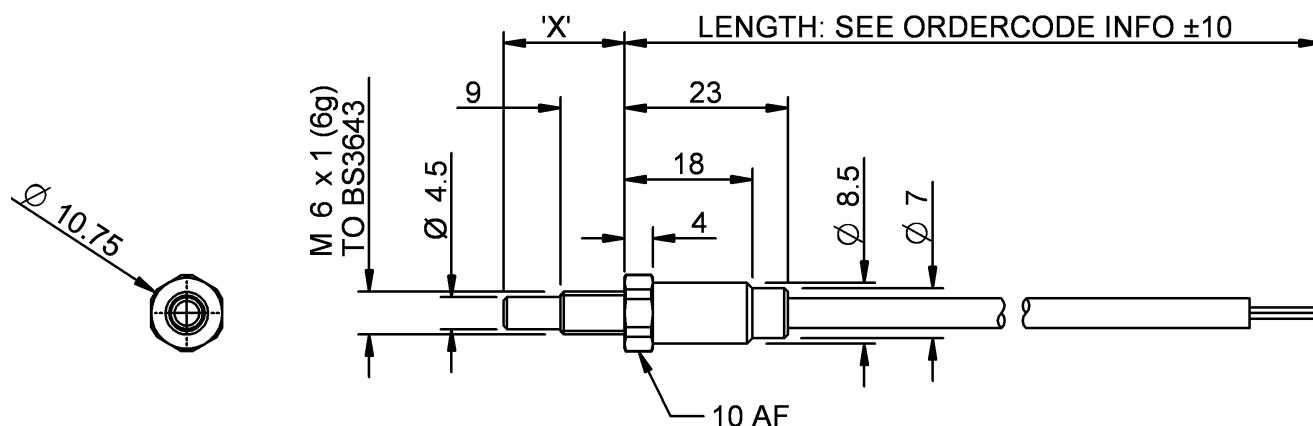
- Body material Titanium 318
- Weight less than 40g (including cable)
- Polyester cable boss or Elastomer boot for strain relief to the sensor body

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.

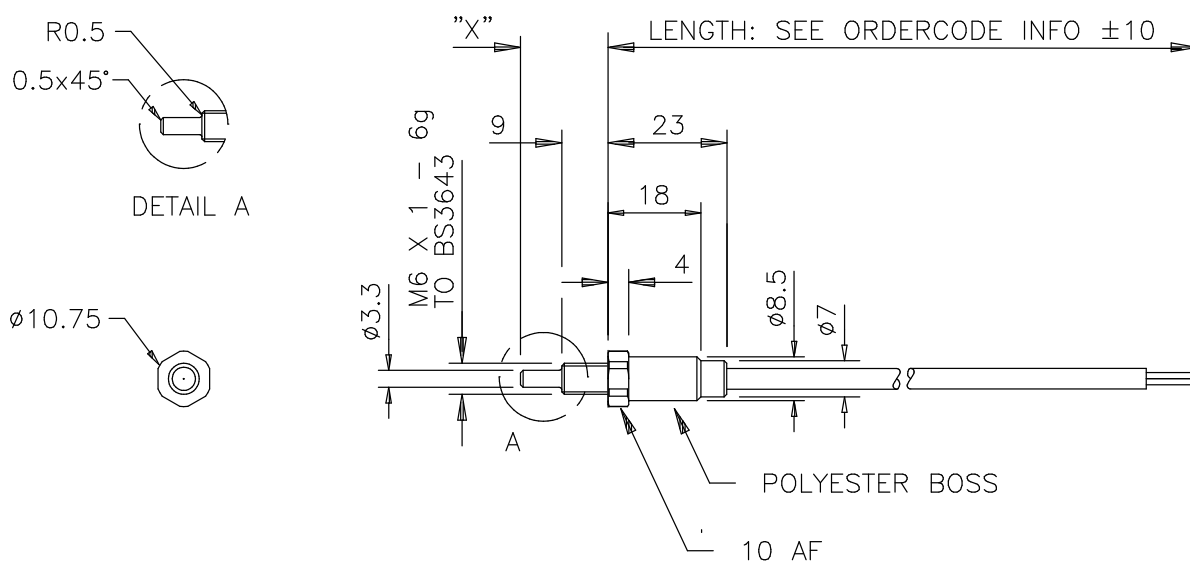
## Environmental

- Resistant to standard motorsport fluids (Titanium can be attacked by Methanol and some cleaning fluids)
- Maximum humidity 100%
- Sensor housing and element operating temperature range -25°C to +200°C (sensor characterised to 150°C)
- Cable boss/shrink boot maximum operating temperature 150°C
- Viton jacketed cable maximum operating temperature 200°C
- Vibration 50 to 2500Hz @ 40g 8hrs per axis

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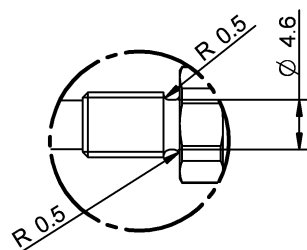


Element	Dim "X"	Cable Length	Order Code
NTC	17mm	1000mm	O 030 300 010 030
Pt1000	17mm	1000mm	O 030 300 010 035
<b>Accessories</b>		Bonded Seal	O 030 300 990 000

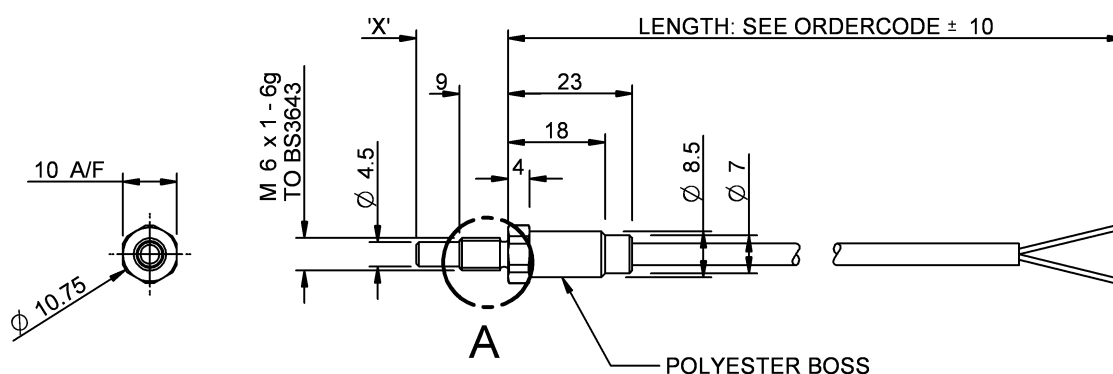


Element	Dim "X"	Cable Length	Order Code
Pt1000	17mm	1000mm	O 030 300 010 040
NTC	17mm	1000mm	O 030 300 010 041
<b>Accessories</b>		Bonded Seal	O 030 300 990 000

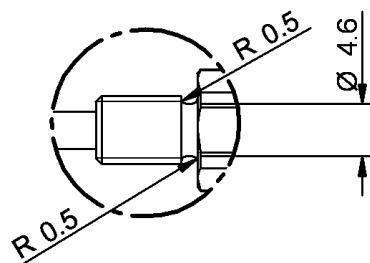
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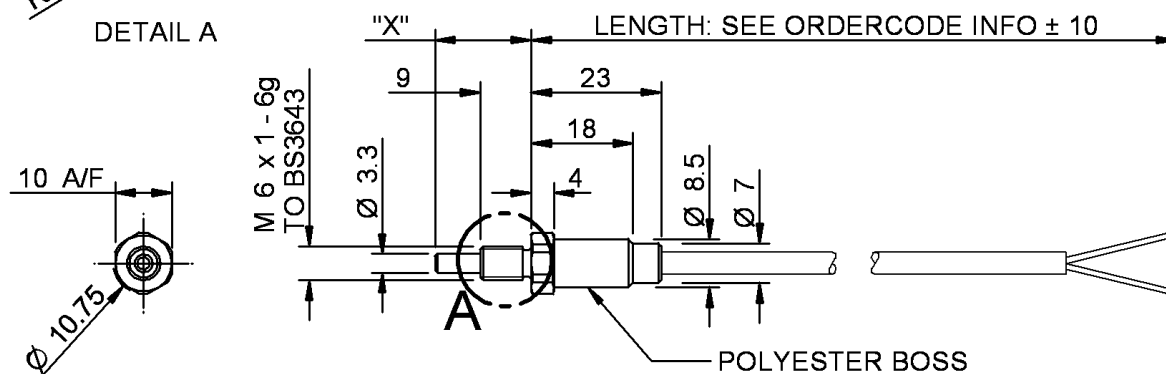
DETAIL A



<b>Element</b> Pt1000	<b>Dim "X"</b> 17mm	<b>Cable Length</b> 1000mm	<b>Order Code</b> O 030 300 010 039
<b>Accessories</b>		Viton O ring	O 030 300 990 006



DETAIL A



<b>Element</b> Pt1000	<b>Dim "X"</b> 17mm	<b>Cable Length</b> 1000mm	<b>Order Code</b> O 030 300 010 046
<b>Accessories</b>		Viton O ring	O 030 300 990 006

12/11/09