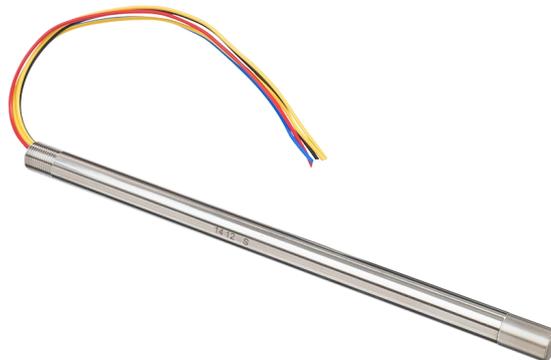


# DATA SHEET

## Zirconia O<sub>2</sub> Sensors Probe Series—Long Housing

### FEATURES

- Zirconium dioxide (ZrO<sub>2</sub>) sensing elements
- Long life, non-depleting technology
- Integral heating element
- High accuracy
- Requires an external interface board to operate<sup>1</sup>



#### Response Time



#### Heater Voltage



#### Gas Temp



#### Termination



### BENEFITS

- No reference gas required
- No need for temperature stabilisation
- Two lengths available; 220mm and 400mm

### TECHNICAL SPECIFICATIONS

Heater voltage <sup>2</sup>	
Operating	4V <sub>DC</sub> ± 0.1V <sub>DC</sub> (1.7A)
Standby	1.65V <sub>DC</sub> (0.7A)
Pump impedance at 700°C <sup>3</sup>	< 6kΩ
Permissible gas temperature	
Standard temperature	-100°C to +250°C
High temperature	-100°C to +400°C
Gas flow rate	0—10 m/s
Repetitive permissible acceleration	5g
Incidental permissible acceleration	30g

### OUTPUT VALUES

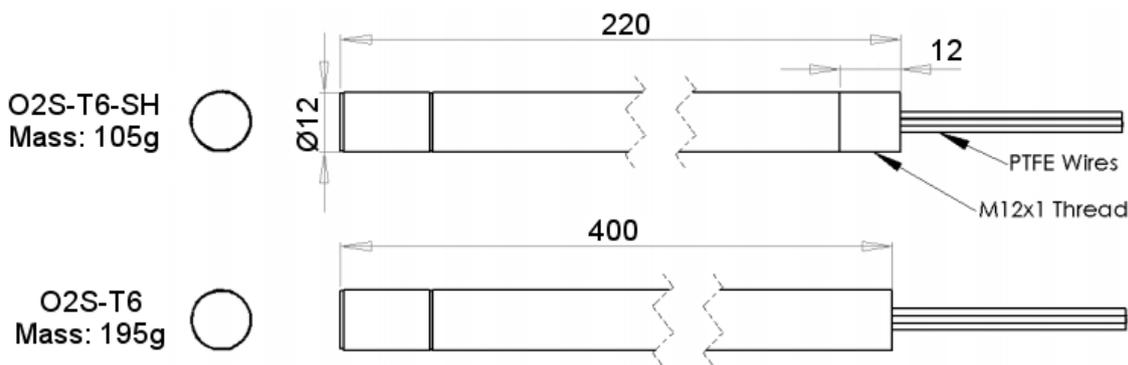
Oxygen pressure range	2mbar—3bar max
Accuracy	5 mbar max
Internal operational temperature	700°C
Response time (10—90% step)	< 15s
Warm up time (prior to sensor operation)	100s
Warm up time (from stand by)	20s
Output stabilisation time	~ 180s



- 1) Interface board sold separately; contact
- 2) It is important to measure the heater voltage as close to the sensor as possible due to voltage drops in the supply cable.
- 3) The constant current source used in the pump circuit should be designed to drive a load of up to 6kΩ.

 **OUTLINE DRAWING**

All dimensions shown in mm.



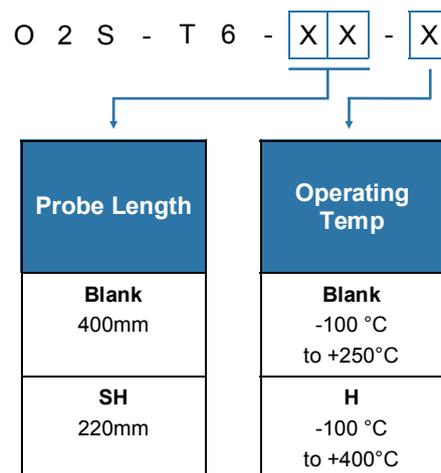
 **ELECTRICAL INTERFACE**

**Lead Wires**

Wire	Designation
Red	Pump
Black	Common
Yellow	Heater (1)
Blue	Sense
Yellow	Heater (2)

 **ORDER INFORMATION**

Generate your specific part number using the convention shown below. Use only those letters and numbers that correspond to the sensor options you require — omit those you do not.



 **CAUTION**

Do not exceed maximum ratings and ensure sensor(s) are operated in accordance with their requirements.  
 Carefully follow all wiring instructions. Incorrect wiring can cause permanent damage to the device.  
 Zirconium dioxide sensors are damaged by the presence of silicone. Vapours (organic silicone compounds) from RTV rubbers and sealants are known to poison oxygen sensors and MUST be avoided.  
 Do NOT use chemical cleaning agents.

**Failure to comply with these instructions may result in product damage.**

 **INFORMATION**

As customer applications are outside of SST Sensing Ltd.'s control, the information provided is given without legal responsibility. Customers should test under their own conditions to ensure that the equipment is suitable for their intended application.  
 For detailed information on the sensor operation refer to application note AN0043 Operating Principle and Construction of Zirconium Dioxide Oxygen Sensors.

**General Note:** SST Sensing Ltd. reserves the right to make changes to product specifications without notice or liability. All information is subject to SST Sensing Ltd.'s own data and considered accurate at time of going to print.

