

Data Sheet

Zirconia O₂ Sensors

Probe Series - Threaded Mounting Housing



Characteristic

Help zirconia (ZrO₂) sensing element

Long life, non-consumable technology

Help integrate heating elements

Help high precision

Need external interface board to run 1



response time < 4 secs	heater voltage 4.35 V VOLTAGE	Gas temperature -100°C to +250°C TEMPERATURE	Terminal 0.15m CABLE 0.3m CABLE 1.1m CABLE
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merit

help No reference gas is required

help No temperature stability required

help Multiple probe mounting positions are available; 28mm, 45mm & 55mm

help M18x1.5 threaded installation

output value

Accuracy of oxygen pressure range	2mbar—3bar max
Internal operating temperature	5mbar max 700°C
Response time (10-90% step)	< 4s
Preheat time (before sensor operation)	60s
Preheat time (standby wake up)	20s ~
Output stability time	180s

technical specifications

Heating voltage² operation

Pump impedance at standby 700°C³

Allow gas temperature gas flow rate

Repetition allows acceleration accidental allows acceleration installation thread

4.35V_{DC} ± 0.1V_{DC} (1.85A) 2
V_{DC} (0.85A)
< 6kΩ
-100°C ~ +250°C
0—10 m/s
5g
30g M18
x 1.5

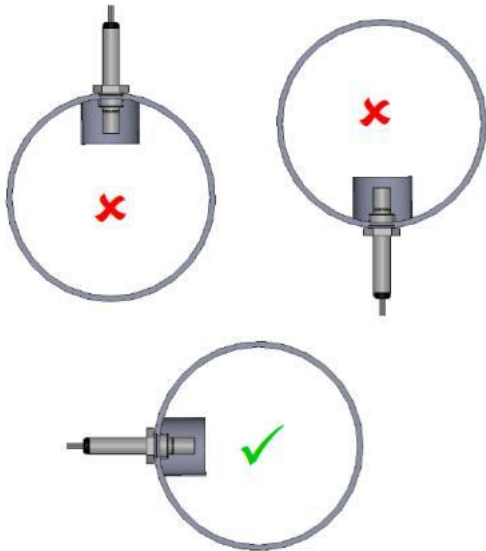
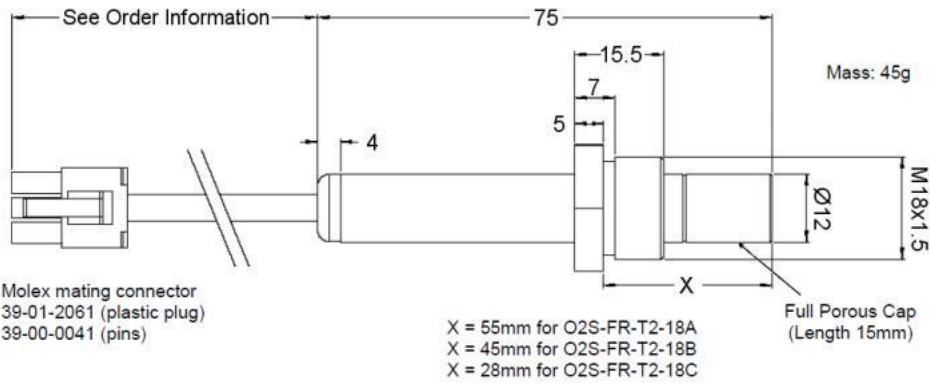
Other sensor options can be provided upon request. Please email to:
technical@sstsensing.com

Need help? Call + for expert advice
44 (0) 1236 459 020 and Seek
Technical assistance

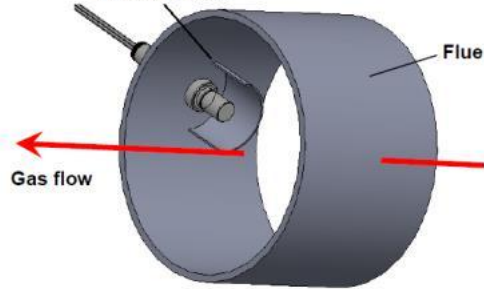


1) The interface board is sold separately; please contact technical@sstsensing.com for details.
2) Due to voltage drop in the power cable, it is necessary to measure heating voltage as close as possible to the sensor. The constant current source used in the pump circuit should be designed to drive loads up to 6kΩ.
3)

All dimensions are in mm.

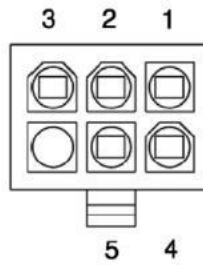


Baffle to protect sensor from direct gas flow and possible contamination



Electrical interface

Molex connectors



Pin	definition
1	Pump (red)
2	Public (black) heater (1) (yellow)
3	Sensing (blue)
4	Heater (2) (yellow)
5	

Order Information

Use the following model definition rules to generate your specified model. Use only the letters and numbers that correspond to the sensors and output options you need-ignore the letters and numbers you don't need.

O 2 S - F R - T 2 - 1 8 X - X X X

Probe length
A 55mm
B 45mm
C 28mm

terminal
Blank 0.15m cable
002 0.3m cable
003 1.1m cable

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. **For technical assistance or advice, please email: technical@sstsensing.com**

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.

