

# Data Sheet

## Zirconia O<sub>2</sub> Sensors Flange Installation Series

### characteristic

- . Zirconia (ZrO<sub>2</sub>) sensing element
- . Long life, non-consumable technology
- . Integrated heating element
- . High precision
- . External interface board is required to run<sup>1</sup>



<p><b>response time</b></p> <p>&lt; 4 secs</p>	<p><b>heater voltage</b></p> <p>4.35 V VOLTAGE</p>	<p><b>Gas temperature</b></p> <p>-100°C to +400°C TEMPERATURE</p>	<p><b>terminal</b></p> <p>4-PIN 5-PIN</p>
--	--	---	---

### merit

- No reference gas
- No temperature stability required
- . Flange installation

### technical specifications

Heating voltage<sup>2</sup>  
working  
standby

Pump impedance at 700°C allowable gas temperature gas flow rate

Repetition allows acceleration accidental allows acceleration

4.35V<sub>DC</sub> ± 0.1V<sub>DC</sub> (1.85A)  
2V<sub>DC</sub> (0.85A)  
< 6kΩ  
-100°C ~ +400°C  
0—10 m/s  
5g  
30g

### output value

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

Additional sensor options may be provided upon request. Please email us at:

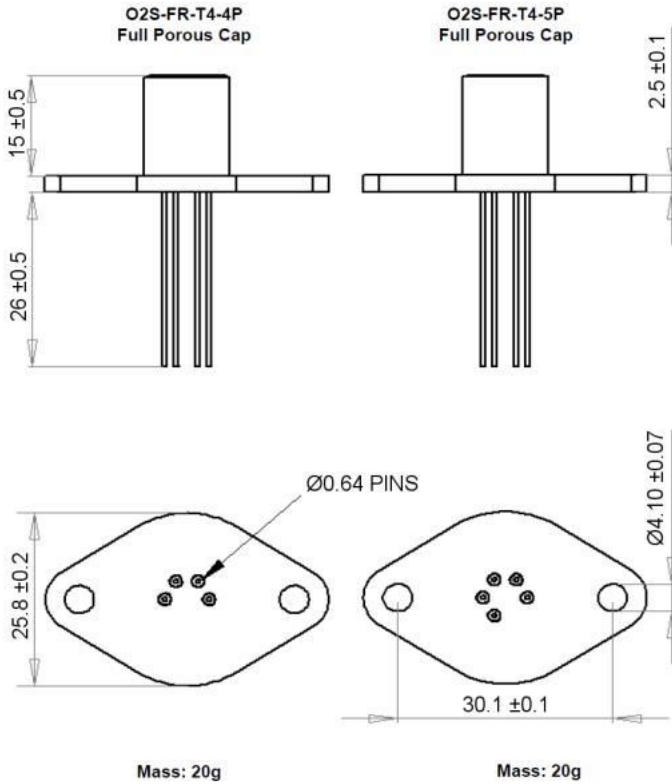
[technical@sstsensing.com](mailto:technical@sstsensing.com)

**Need help? For expert advice, call + 44 (0) 1236 459 020 and seek "technical" assistance**

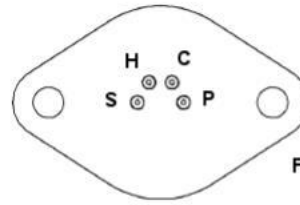


1) The interface board is sold separately; please contact us for details.  
2) Due to the voltage drop in the power cable, it is necessary to measure the heating voltage as close as possible to the sensor. The constant current source used in the pump circuit should be designed to drive loads up to 6kΩ.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

All dimensions are in mm.

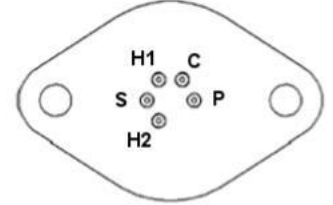


**O2S-FR-T4-4P**



lead	definition
P	pump
C	public
H	calorifier
S	sense
F	Heater connection (grounding) on flange

**O2S-FR-T4-5P**



Wire	definition
P	pump
C	public
H1	Heater (1)
S	sense
H2	Heater (2)

**pay attention to :**

1. Sensor pins must not be welded. The connection should be pressed onto the pins.
2. Installation holes of Ø4.1mm shall be used for the second heater connection (only 4pin products) and shall be grounded.

 **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 4 - X P

terminal
4 4-pin
5 5-pin

 **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 AN 0043 Operating Principle and Construction of Zirconium Dioxide Oxygen Sensors. **For technical assistance or advice, please email: [technical@sstsensing.com](mailto: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.



**深圳市杰晟兴电子有限公司 JM Components Limited**

地址：深圳市福田区中航路7号鼎诚国际大厦南座2007室  
手机：13662266995 马少良 电话：0755-83951311  
官网：cn-sensor.com

邮编：518031  
传真：0755-83952401  
电邮：jackson@jmcomponents.com