

# Data Sheet

## O2S-FR-T5 Oxygen Sensors - Flange Mounted

### FEATURES

- Oxygen pressure range 2 mbar - 3bar
- Zirconium dioxide (ZrO<sub>2</sub>) sensing elements
- Non-consumption technology
- Integral heating element
- No need for temperature stabilisation
- No reference gas required
- High accuracy
- Linear output signal
- Operates with external interface boards



### SPECIFICATIONS

Heater Voltage*	
Porous Cap (15mm)	4.35V <sub>DC</sub> ± 0.1V <sub>DC</sub> (1.85A)
Stand by	2V <sub>DC</sub> (0.85A)
Pump resistance @ 700°C**	< 6kΩ
Permissible gas temperature	-100 to 250°C
Gas flow rate	0 to 10 m/s
Repetitive permissible acceleration	5 g
Incidental permissible acceleration	30 g

### ELECTRICAL CONNECTION

- 1: Pump (Red)
- 2: Common (Black)
- 3: Heater (Yellow)
- 4: Sense (Blue)
- 5: Heater (Yellow)

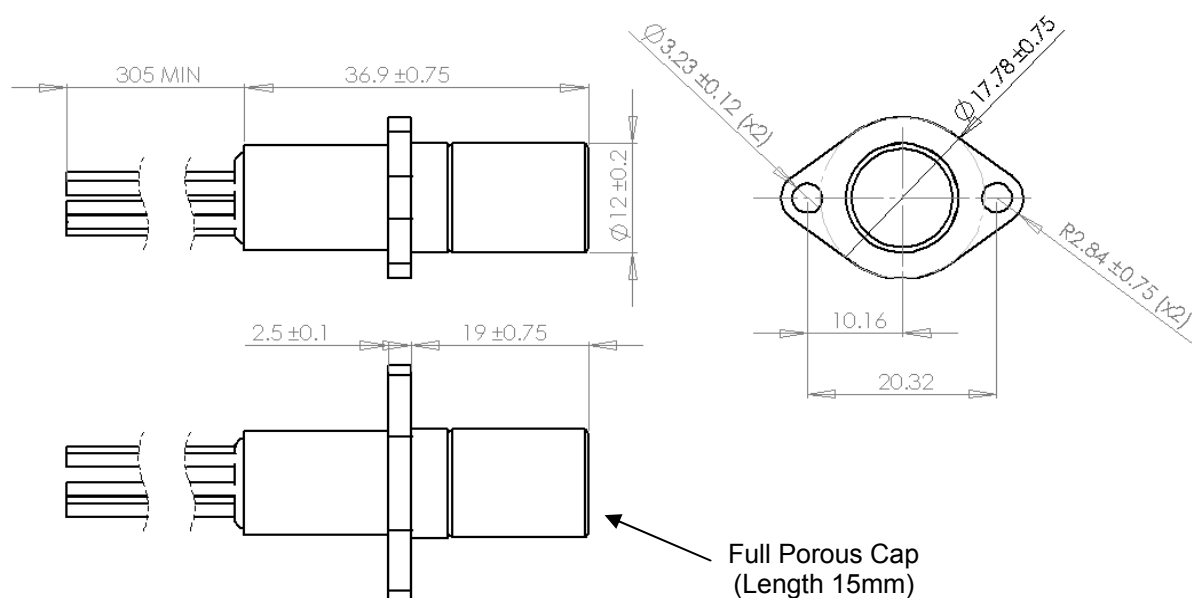
\* It is important to measure the heater voltage as close to the sensor as possible due to voltage drops in the supply cable. Heater can also be operated with an equivalent a.c. or PWM signals.

\*\* The constant current source used in the pump circuit should be designed to drive a load of up to 6kΩ

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### OUTLINE DRAWING



Mass: 35g

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### PERFORMANCE CHARACTERISTIC

Characteristics	Min.	Typ.	Max.	Unit
Oxygen pressure range	2		3000	mbar
Accuracy			5	
Internal operational temperature (full porous cap)		700 (4.35V <sub>DC</sub> )		°C
Response time (10-90% step, full porous cap)			4	s
Warm up time (prior to sensor operation)			100	
Warm up time (from stand by)			20	
Output stabilisation time		~180		

### ORDERING INFORMATION

Part number	Termination
O2S-FR-T5	0.4m Cable

#### WARNING

##### Personal Injury

DO NOT USE these products as safety or Emergency Stop devices or in any other application Where failure of the product could result in Personal injury.

**Failure to comply with these instructions could Result in death or serious injury.**

#### CAUTION

Do not exceed maximum ratings and ensure sensor is operated in accordance with all requirements of AN0043  
**Failure to comply with these instructions may result in product damage.**