

DATA SHEET

Zirconia O₂ Sensors OXY-Flex Oxygen Analyser



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FEATURES

- High accuracy linear output
- Externally triggered automatic or manual calibration
- Can be calibrated in fresh air (20.7% O₂) or to any other known O₂ concentration
- Selectable output filtering allows adaptive, fast and dynamic or slow and stable output

Housing COMPACT ROBUST	Supply Voltage 24 V VOLTAGE	Gas Temp -100°C to +250°C TEMPERATURE -100°C to +400°C TEMPERATURE	Digital Output RS232	Analogue Output 0 - 10 V VOLTAGE 4-20mA CURRENT	Response Time < 15 secs
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BENEFITS

- Cycling 3.3V_{DC} logic output allows direct monitoring of the O₂ sensor pump cycle for diagnostic purposes
- No reference gas required

OUTPUT VALUES

Oxygen range (analogue output) ²	0.1 ¹ —25% O ₂
	or 0.1 ¹ —100% O ₂
Oxygen range (RS232 output)	0.1 ¹ and 100% O ₂
Accuracy after calibration ^{3, 4}	1% O ₂
Repeatability after calibration ³	0.5% O ₂
Output resolution	
Analogue 4—20mA	0.01mA
Analogue 0—10V _{DC}	0.01V
Digital RS232	0.01% O ₂
Response time	< 15s
Warm up time (prior to sensor operation)	60s
Output stabilisation time	~ 180s

TECHNICAL SPECIFICATIONS

Supply voltage	24V _{DC} ± 10%
Supply current	500mA max. at 24V _{DC}
Digital output	RS232
Analogue output	4—20mA; load 600Ω max. or 0—10V _{DC} ; load 10kΩ min.
Housing temperature limits	
Storage:	-10°C to +85°C
Operating:	-10°C to +85°C
Permissible gas temperatures (probe tip)	
Standard:	-100°C to +250°C
High:	-100°C to +400°C
Gas flow rate	0 to 10 m/s
Permissible acceleration	
Repetitive	5g
Incidental	30g

NOTES

- 1) Prolonged operation below 0.1% O₂ can damage the sensing element.
- 2) Range selectable by altering the position of the jumper links on the PCB; refer to PCB Layout on page 3.
- 3) Assuming barometric pressure (BP) remains constant.
- 4) As the O₂ sensor measures the partial pressure of oxygen (PPO₂) within the measurement gas deviations in the BP from that present during calibration will cause readout errors proportional to the change. EG. if the sensor reads 21% O₂ at 1013.25mbar and the BP increases by 1%, the sensor readout will also increase by 1% to 21.21% O₂.

OUTLINE DRAWING AND MOUNTING INFORMATION

All dimensions shown in mm. Tolerances = ± 1 mm.

