



## Rapidox 1100E Electrochemical Sampling Oxygen Gas Analyser



### Description

Cambridge Sensotec is launching its latest new analyser in 2009: the 1100E which is our lowest-ever priced industrial oxygen analyser.

The Rapidox 1100E oxygen analyser allows accurate oxygen analysis over the range 0 to 100% O<sub>2</sub> in steps of 0.1% . The analyser provides continuous on-line oxygen analysis, with a typical response time of 10 seconds for a 90% response to a step change in gas compositions.

At the heart of the Rapidox 1100E is a Yuasa electrochemical oxygen sensor, which has a five year life expectancy and can be used in a wide range of gases such as nitrogen, argon, helium, carbon dioxide. The sensor is not affected by the presence of hydrocarbons.

The analyser contains a powerful diaphragm pump that constantly draws a gas sample at a flow rate of approximately 1 litre per minute. An on-board pressure sensor compensates for any pressure fluctuations in the sample gas

The analyser includes fully programmable alarm circuits (alarm LOW and HIGH), programmable analogue outputs (0-10V and 4-20mA), easy calibration (user selectable gases), RS232 communications and a full set of communications / data-logging software.

### Features

- Continuous gas sampling via powerful internally located pump.
- Fast measurement response (around 10 seconds for a 90% response).
- Measurement range available 0% to 100% oxygen.
- Accuracy  $\pm 1\%$  of full scale with a stability better than  $\pm 2\%$  full scale per month.
- Easy to calibrate by the user using A SINGLE gas such as air.
- 0-10V and 4-20mA current loop outputs (both user programmable).
- RS232 / RS485 data-output.
- Windows data logging software with MS-Excel compatible graphing.
- Programmable alarms (low and high condition) with relay outputs, audible and visual warning.
- Up to five years sensor life expectancy.

### Applications

- Laboratory scale experiments where the control and monitoring of residual oxygen is critical.
- Air separation plants
- Medical Monitoring
- Industrial processes using low oxygen environments. E.g. wave soldering under nitrogen, vacuum welding, testing nitrogen generators
- Glove Boxes
- Control of critical oxygen atmospheres where high partial pressures are required.
- Food production
- Testing the purity of oxygen gas cylinders

### Technical Data: Analyser

Voltage	110 / 220V ac 50/60 Hz
Analyser dimension	250mm X 263mm X 150mm
Weight	3.5 kg
Display	16 X 2 character (9mm) back lit
Warm up time	3-4 minutes at 20°C
Sample pump	Mains powered diaphragm pump
Normal operating temperature	5-35°C
Outputs	0-10V linear (user programmable)
	4-20mA linear (user programmable)
	RS232 : data every 0.1 second
Calibration	Requires a user-selectable gas composition (air is the default)

### Technical Data: Sensor & Pump

Maximum free air displacement	1.3 litres per minute
Noise level	<44dB at 1 meter
Maximum inlet temperature	55°C
Sensor life expectancy	Up to five years
Range of measurement	0% to 100% oxygen
Response time (gas flow rate 1ltr.min <sup>-1</sup> )	approximately 10 secs for a 90% step
Accuracy	$\pm 1\%$ of full scale
Precision of measurement	$\pm 2\%$ full scale per month
Sample connections	6mm ID / 4mm OD nipple type

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