Rapidox 1100-OPT Optical Oxygen Analyser

The Rapidox 1100-OPT uses the latest state-of-the-art optical oxygen gas sensor that has unparalleled performance in speed, accuracy, drift and sensor life for measurements in the 0-100% oxygen range.

Optical oxygen sensors are virtually drift free and factory calibrated for life, which is up to ten years meaning the lifetime cost of ownership is much more economical compared with a traditional electrochemical sensor. These sensors are ideal for demanding high oxygen applications where VOC's, flammable gases, CO, H2 or He are present in the gas sample. The Rapidox 1100-OPT is ideal for applications such as oxygen concentrators, incubators and glove boxes. Configuration of the analyser allows for the instrument to be panel mounted with the gas fittings at either the front or rear.

The optical oxygen sensor is based on luminescence quenching of a sensor dye. The dye is excited with red light, and the properties of the resulting luminescence are measured in the near infrared. The presence of molecular oxygen quenches the luminescence, changing its intensity and lifetime fully reversibly.

This principle is very robust. It shows virtually no interferences to other gases, has a very low drift, and the sensor is fully solid-state. It does not deplete over time, unlike galvanic oxygen sensors with their limited shelf life. Optics and electronics are hermetically sealed from the measured gas. For typical indoor environmental conditions a 10 year operating life is expected.

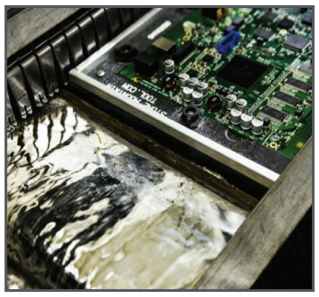
Please contact Cambridge Sensotec for further information or to discuss your requirements.

Though highly configurable to suit individual customer requirements, the Rapidox 1100 range possesses a number of standard features to enhance functionality.

- High-accuracy measurement
- Low drift
- Factory calibrated
- Long life
- Fast response (t63<2s)

- Digital output of oxygen partial pressure
- Temperature compensation
- Low power consumption
- Lead free, ROHS compliant

Applications



- Chemicals
- Gas
- Food
- Medical
- Glove Boxes
- Manufacturing
- Emissions
- Inert Gas Blanketing
- Research & Development

Accessories

1 Calibration Kit

2 Multiplex Sampling System

3 Gas Recovery Bag

4 Thermal Printer

5 Calibration Service

6 Gas Filters

Specification

O2 Sensor Range	0-100%
O2 Sensor Accuracy / Response	±0.02% O_2 at 1% O_2, ±0.5% O_2 at 20% O_2, ±2% O_2 at 100% O_2 / < 2 secs for a 90% response
O2 Sensor Life Expectancy	Up to 10 years
Ambient Operating Pressure	800-1200mbar absolute
Ambient Operating Temperature	-0°C to 60°C
Max. Sample Gas Pressure	500-1500mbar absolute
Max. Sample Gas Temperature	50°C
Warm-up Time	3-5 minutes as standard
Supply Voltage	90-260 VAC, 50/60Hz
Voltage Outputs	0-10V, user programmable
Current Outputs	4-20mA user programmable
Digital Outputs	RS232 (RS485 option available) Data streamed on demand. Modbus RTU/Ethernet
Calibration	Factory calibrated - near zero drift
Sample Connections	4mm ID/6mm OD nipple type. Rectus or Swagelok. Front or rear positioning
Display	20 x 4 character OLED
Analyser Dimensions	Bench: 150mm(H) x 247mm(W) x 250mm(D), Panel: 4U 177mm(H) x 300mm(W)
Weight	3.5kg (4kg with bezel)
Pump Option	Main type diaphragm pump. Variable speed 0-1.2 litres per minute
Ejector Option	Vacuum ejector fitted, running off 2 bar inlet pressure
Alarms	Relay circuits. Fully user programmable

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