OM10 ppm Oxygen Monitor



Description

The OM10 Oxygen monitor allows fast and accurate analysis over the range 1ppm to 100% O_2. The analyser provides continuous on-line oxygen analysis, with a typical response time of approximately 5 seconds for a 90% response to a step change in gas compositions.

At the heart of the OM10 is a Zirconia Oxygen sensor that requires heating to 650°C before it will conduct Oxygen ions. The analyser supplies heat to the sensor, which is controlled very accurately by a regulated power supply incorporated within the instrument. An internal pressure sensor compensates for small changes in gas pressure to keep the readings stable.

A powerful long-life pump draws a gas sample at a flow rate set by the user between 0-1 litres per minute. Alternatively the pump can be independently switched off and operated under flowing gas conditions.

Standard features include two fully programmable alarm circuits (volt free contacts), programmable analogue outputs (0-10V and 4-20mA), easy calibration (user selectable gases), RS232 / RS485 communications and complete data-logging software.

Optional printer, Peli case and gas sample filters are available.

Features

- **Measurement response: approximately 5 seconds for a 90% response**
- **Measurement range: 1ppm to 100% O_2**
- **Accuracy ±1% of reading or 0.5ppm, whichever is the greater**
- **Easy calibration procedure requiring any two or three gas mixtures (ordinary room air is a default)**
- **Low maintenance sensor, life expectancy typically greater than 17,500 hours**
- **Long-life variable speed pump fitted for sampling the gas**
- **Unique sensor cleaning facility which can be operated at any time during use**
- **Large back-lit LCD display**
- **Two fully programmable alarm settings: high and low, open or closed relays**
- **0-10V and 4-20mA analogue communications (both fully programmable)**
- **Digital RS232 output (RS485 available upon request)**
- **Software package includes live graphing and MS Excel compatible data-logging**
- **PIN code protection**
- **Operates on any worldwide mains voltage (90-260VAC)**

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Weldlogic Europe Ltd, Blackstone Road , Huntingdon, Cambridgeshire, PE29 6EF, UK

Email: weld@weldlogic.co.uk Telephone:+44(0)1480 437478 website: www.weldlogic.co.uk

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Technical Data: Analyser	
Operating temperature	5°C to 35°C
Warm up time	3-4 minutes at 20°C
Voltage	90-260VAC, 50/60Hz
Voltage outputs	0-10V linear, user programmable
Current outputs	4-20mA linear, user programmable
Digital outputs	RS232 (RS485 option available): data streamed on demand
Calibration	Requires 2 or 3 user selectable gas mixtures (air is a default)
Sample connections	4mm ID / 6mm OD nipple type Gas fittings on the rear
Display	16 x 2 character (9mm) back-lit LCD
Analyser dimensions	250mm x 263mm x 150mm
Weight	3.5 kg

Technical Data: Sensor & Pump	
O_2 sensor range	1ppm to 100%
O_2 sensor accuracy	±1% of reading or 0.5ppm, whichever is the greater
O_2 sensor response time (gas flow rate 1lt.min^{-1})	Approximately 5 sec for a 90% step change
O_2 sensor stability	±2% of reading per month
O_2 sensor life expectancy	> 17,500 hours
Pump flow rate	0-1 litres per minute, user selectable
Max gas inlet temperature	60°C
Max inlet pressure	1 Bar gauge

Applications

- **Glove box welding environments**
- **Low Oxygen critical welding**
- **Titanium welding**
- **Inert gas**
- **Aerospace welding**
- **Medical device manufacture**
- **Electronics encapsulation**



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