Oxigraf

Models O2iL/C – High-Performance Oxygen Deficiency Monitor

The Models O2iL and O2iC are precision oxygen process analyzers designed for combustion control, process gas analysis, nitrogen purge monitoring, and other industrial applications. Using laser diode absorption technology, these analyzers provide fast response times (less than 1 second), long-term stability, and automatic environmental compensation for pressure, temperature, and gas cross-sensitivity. Both models support XC and LN measurement modes for optimized accuracy across different applications and offer two programmable alarms and a 4-20mA programmable analog output for seamless integration into process control systems.

NEMA 4X weatherproof housing

Bright large VFD display

Lockable Key Panel

Menu Controls

Oxigraf. Precision–Crafted Oxygen Monitoring

Features

Fast and Accurate Oxygen Measurement

The O2iL and O2iC analyzers offer a measurement range of 2% to 100% oxygen, ensuring precise and real-time monitoring. For applications requiring full-range measurement, an optional extended range mode allows for 0% to 100% oxygen detection, making it ideal for inert gas applications and complete oxygen depletion monitoring.

Pressure, Temperature, and Cross-Sensitivity Compensation

Built-in environmental compensation ensures that oxygen readings remain stable and reliable, even under fluctuating process conditions. This minimizes false alarms and inaccuracies caused by pressure changes, temperature variations, or the presence of interfering gases.

Model O2iL – Integrated Pump for Low-Pressure Sampling

The O2iL includes a diaphragm sampling pump with flow display/controller, accommodating inlet pressures from 0.03 to 1.03 psig. This makes it ideal for applications where an active sample draw is needed, ensuring consistent flow and accurate measurements in low-pressure environments.

Model O2iC – Designed for High-Pressure Sampling

The O2iC features an integrated pressure regulator, allowing it to handle inlet pressures from 1 to 75 psig, with a flow display for precise control. This model is best suited for high-pressure applications where stable and regulated sample intake is required.

Swagelok® Fittings for Secure Connections

Both models are available with stainless steel or PFA Swagelok® fittings, ensuring leak-free gas pathways for high-purity applications and reliable long-term operation.

Optional Upgrades & Features

- Extended Range to 0% Oxygen: Expands measurement range to 0-100% (LN mode only), ideal for applications requiring complete oxygen depletion monitoring.
- Four-Port Sampling Option.- Four-way valve assembly with programmable multiplexer. Enables relay identification of alarm sites.
- Two-Point Autocalibration: Two-gas autocalibration option for more precise accuracy and system validation.
- Battery Backup: 90-minute battery backup with battery charging controller to maintain continuous operation.
- Purge Indicator for Hazardous Areas: Converts the NEMA 4X "weatherproof" safe area enclosure to a Class 1 or 2, Div 2 hazardous area enclosure using Type Z purging with nitrogen or compressed air monitoring.

Options or Accessories
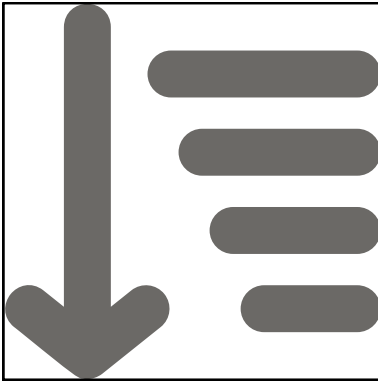
Extended O2-Concentration Range

The O2 sensor has a range of 0-100%, effectively expanding its capabilities to measure even zero percent oxygen levels. In LN mode, the sensor exclusively provides two specific ranges: 0-10% and 0-100%. This versatility ensures precise monitoring of oxygen levels across a broad spectrum, catering to various applications and environments.

Remote Display

Your safety is assured when you have both local and remote indication of oxygen deficiency. Oxigraf offers advanced communication capabilities with the Safety Monitor giving you options in setting up your oxygen alarm system.

- RS-232 & RS-485 (Modbus) communication on our Enhanced Relay Board option
- Sealed Box multi-channel status indicator.
- Hazardous Area LED multi-color status indicator.
- Control Room LED multi-light status indicator.
- Rack-Mount LED multi-light status indicator.

Two-point Autocalibration

The system features advanced two-gas autocalibration, which is efficiently managed through program control. This innovative capability ensures accurate and reliable measurements by automatically adjusting the calibration for two different gases, streamlining the process and enhancing overall performance.

Remote Indicator

Wall mount status indicator in 8.7" high x 3.6" wide white ABS with 90 db at 1 meter sounder. Indoor and Outdoor use. NEMA-4X rated. Four-color 50,000 hour LEDs, red for Alarm, amber for Fault, blue for Calibration Recommended, green for System OK.

Accessories

Optional Red Light

A Bright red warning light that provides clear visual alerts, making it effective even from a distance and in noisy environments can be added. Additionally, it features a powerful horn with dual-volume settings: 80 dB for moderate alerts and 100 dB for urgent situations. This combination significantly enhances safety and awareness across a range of applications.
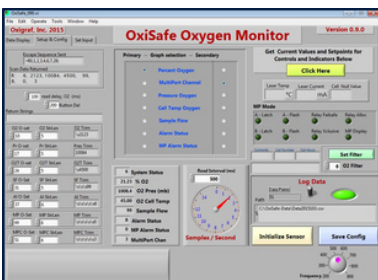
Calibration Kit

Two Regulator Valves, two tanks of calibrating gases (21.00 and 99.99% +/- 0.05%) with Cal Kit Tubing Assembly and hard plastic carry case. (35 Liter bottles: approx 100 calibrations.

Sensor Inlet Filter

 PTFE moisture barrier/dust barrier for sensor, no fittings . (Package of 5). 25MM (package of 1)

OxiSafe Software

Oxisafe is a control and status monitoring application for the Oxigraf Model O2iM Oxygen Deficiency Monitor. Useful in control room applications, Oxisafe provides a complete remote monitoring and control suite for the single or multiple O2iM units. Oxisafe provides a graphical interface for displaying O2 levels, unit status, and control of the O2iM units from a remote location over the RS-232/485 interface.

Technical Data
Models O2iL/C – High-Performance Oxygen Deficiency Monitor

Measurement Performance	
Sample Ports	Standard: One (1), Optional: Up to Four (4)
Measurement Range	2-100% (O-100% optional)
Accuracy	±0.2%
Cross Sensitivity	0.2% (XC mode)
Response Time	500 ms at 200 ml/min flow rate, additional low pass filtering programmable.
Ambient Temperature (Operating)	-10 to 50 °C14 to 122 °F
Ambient Temperature (Storage)	-20 to 60 °C-2 to 140 °F
Gas Inlet Temperature	-20 to 60 °C
Gas Pressure	200 to 1150 Mb
Humidity	0 to 95%, non-condensing
Warm-up for Full Accuracy	5 minutes
Filter (Inlet)	0.45 micron Hydrophobic PTFE inlet filter blocks any condensates.
Pump Sampling Rate	Diaphragm pump up to 250 ml/min at 1010 mbar
User Interface	
Display Resolution	0.1% O2
Display	16 x 2 character VFD, 8 mm character size
Strobe	Red lens flashing strobe
Horn	100 dB
Enclosure	NEMA 4X rated non-metallic box with Lexan window, wall mounted.
Electrical Specifications	
Power Requirements	100 to 230 VAC, 50/60 Hz, 50 watts maximum (optional 20-32 VDC, 1.4A max) Voltage (AC)- 100 to 230 V
External Power Supply	
Mechanical Specifications	
Dimensions (W x H x D)	9.8 x 11.8 x 6.3 in 250 x 300 x 160 mm (Excluding horn, light, fittings.)
Weight Instrument	Instrument 8 lbs (3.2 3Kg)

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