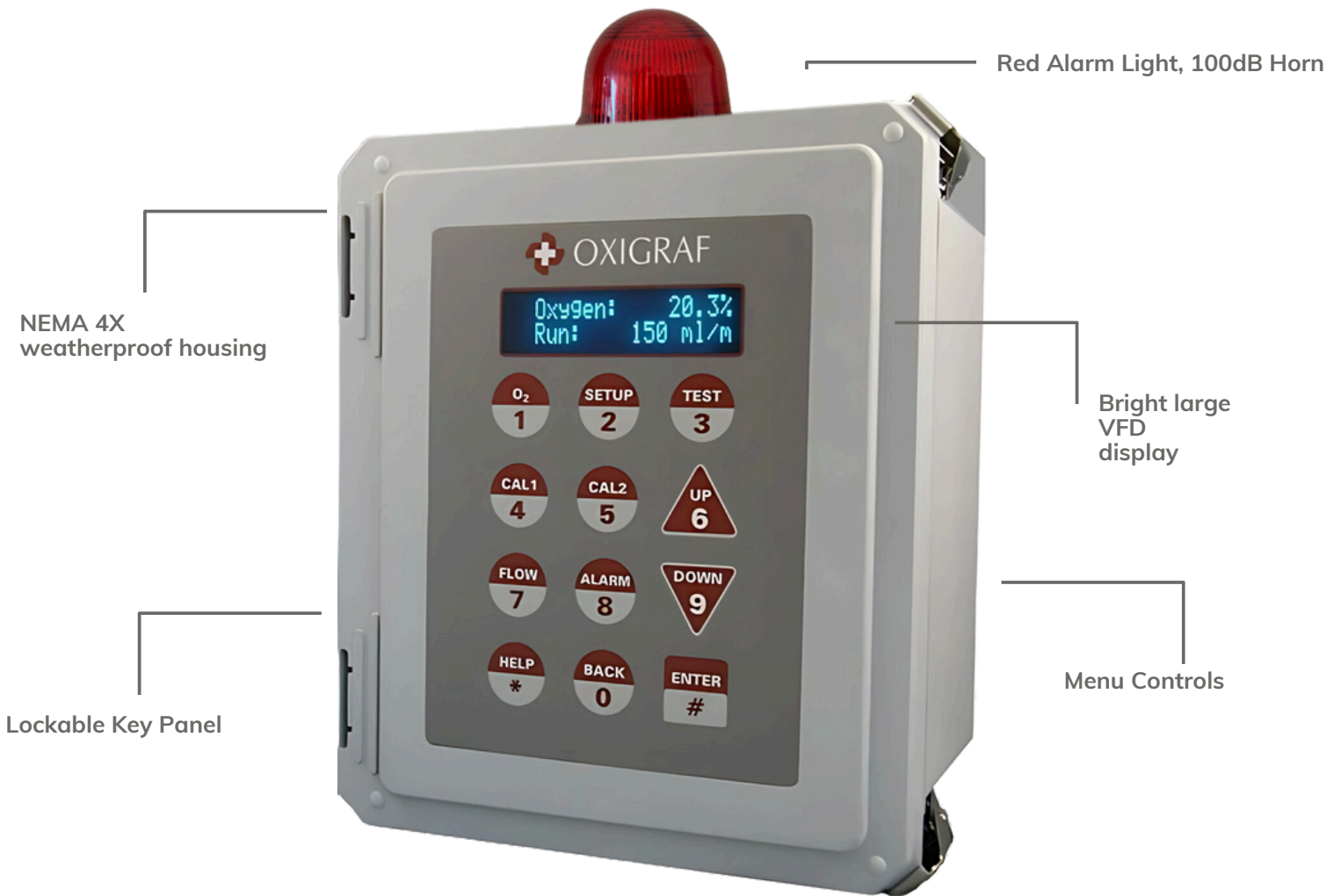




## Item # 07-0180, Model O2iM Oxygen Deficiency Monitor

The Model O2iM is a state-of-the-art oxygen deficiency monitor, engineered for fast, accurate, and reliable safety monitoring in environments where oxygen displacement poses a risk. Designed for laboratories, industrial facilities, cryogenic storage, and more, the Model O2iM uses solid-state laser diode technology to provide rapid response times, long-term stability, and automated calibration. With optional multiport sampling and a high-speed pump for fast detection across greater distances, the O2iM ensures quick and reliable oxygen monitoring while keeping the analyzer itself in a safe location. It integrates seamlessly with alarm systems, HVAC controls, and facility management networks, making it an essential solution for oxygen safety in a wide range of critical environments.



# Features

## **Fast, Reliable Oxygen Deficiency Detection**

The Model O2iM continuously monitors oxygen levels, ensuring instant detection of oxygen displacement events caused by nitrogen, helium, argon, CO<sub>2</sub>, or other inert gases. The internal sampling pump provides a fast response time, detecting oxygen changes in seconds and reducing the risk of delayed alarms in hazardous environments.

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## **Advanced Multiport Sampling for Expanded Coverage**

With an optional four-port sampling system, the O2iM can monitor multiple locations using a single analyzer, including both floor and ceiling levels in a hazardous area. This feature allows for comprehensive coverage without requiring multiple sensors, reducing installation and maintenance costs while improving facility safety.

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## **Long-Distance Fast Sampling for Safer Monitoring**

Unlike conventional monitors that require placement at the sampling location, the O2iM can draw samples from farther distances without sacrificing speed, allowing for quick oxygen level detection while keeping the analyzer in a safe location. This is ideal for facilities with hazardous areas, confined spaces, or locations that require minimal human exposure, ensuring fast response times while protecting personnel and equipment.

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## **Temperature & Pressure Compensation for Accurate Readings**

Unlike traditional oxygen monitors that may generate false alarms due to environmental changes, the Model O2iM includes built-in compensation for temperature and pressure fluctuations. This is particularly important in facilities with open doors or varying ambient conditions, ensuring stable and accurate readings at all times.

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## **Automated Calibration for Maintenance-Free Operation**

The O2iM is equipped with an automatic/programmable calibration system, reducing the need for routine maintenance and eliminating manual calibration downtime. The solid-state sensor is designed for long-term reliability, further minimizing operational costs and disruptions.

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## **Seamless Integration with Safety & Building Systems**

The Model O2iM is designed to integrate effortlessly into alarm and facility management systems, featuring:

- User-programmable high and low alarm levels
  - Multiple alarm outputs, including 100dB horn and red alarm light (optional blue Xenon light)
  - Five standard relays for system warnings and critical alerts
  - RS-232/485 Digital Output and 4-20mA analog output for connection to HVAC controls, automatic dialers, and external monitoring systems
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## **Industrial-Grade Durability & Hazardous Area Compliance**

Built for demanding environments, the Model O2iM features a NEMA 4X/IP66-rated enclosure for weatherproof and dustproof protection. Optional Class 1 Div. 2 and Class 2 Div. 2 hazardous area purging is available for use in regulated industrial and laboratory settings.

# Options or Accessories

## Multiport Sampling



Now optional on the O2iM safety monitor is multiport sampling. Up to four (4) sample locations can be monitored by a single O2iM unit through an internal sample port multiplexer. The O2iM will automatically sample and switch sample input ports and internal valves and fittings are added to the standard housing equipped with the 5-relay board option which contains the required circuitry for this feature.

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## 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.

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## Z-Purge



The O2iM unit features a Z-Purge system for use in Class 1 Div 2 hazardous areas, requiring a nitrogen gas source for inerting. It includes a purge indicator and gas regulator with remote status output. Additionally, the OxiPurge option allows for enclosure purging in non-hazardous situations to prevent contamination and maintain dryness, with a VFD display to notify if the purge is lost.

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## 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



### Blue Xenon Light,

Replace the existing red light assembly with a blue lens that incorporates a xenon strobe. Ensure that the new assembly meets NEMA 4X standards for environmental protection, providing durability and reliability in various conditions. This upgrade will enhance visibility while maintaining compliance with safety and performance requirements.



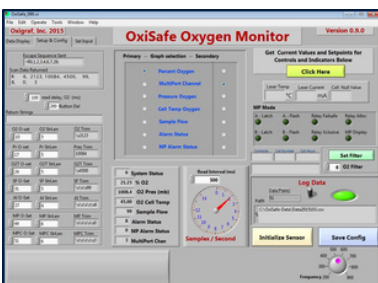
### Calibration Kit

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

## Model O2iM Oxygen Deficiency Monitor

| Measurement Performance         |   |
|---------------------------------|---|
| Sample Ports                    | Standard: One (1), Optional: Up to Four (4)   |
| Measurement Range               | 5-100%  |
| Accuracy                        | ±0.5%   |
| 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 °C 14 to 122 °F   |
| Ambient Temperature (Storage)   | -20 to 60 °C -2 to 140 °F   |
| Gas Inlet Temperature           | -10 to 50 °C 14 to 122 °F   |
| Gas Pressure                    | 750 to 1150 mbar  |
| 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% O <sub>2</sub>   |
| 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)<br>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<br>(Excluding horn, light, fittings.)                            |
| Weight Instrument               | Instrument 8 lbs (3.2 3Kg)  |

