

## Oxygen Deficiency Monitor

### Features

- ✓ 10 + Years No Calibration Sensor
- ✓ Two-Alarm Relays for 19.5% and 18.0%
- ✓ No Maintenance Required
- ✓ Ultra Loud Built-in audible alarm 90 db
- ✓ Remote sensor capability up to 10 feet
- ✓ 3 Year Warranty
- ✓ Digital Display, 4-20mA Analog Output
- ✓ Low 450°C temperature Zirconium Oxide Sensor
- ✓ Operates in Freezers at - 40 °C
- ✓ No Drift due to Thunderstorms or barometric pressure changes
- ✓ Wall mounting brackets
- ✓ Ce approved EMC EN 61326-1:2006



Made in  
USA

The **Air check ✓ O<sub>2</sub>** Deficiency Monitor is a compact gas monitoring system that's ideal for the continuous monitoring of inert gas storage areas, freezers, confined spaces, and other locations where low oxygen levels may pose a hazard to personnel. Unlike electrochemical sensor cells the **Air check ✓ O<sub>2</sub>** zirconium cell provides stable oxygen readings even in areas where temperature, barometric pressure and humidity levels are changing. The PureAire **Air check ✓ O<sub>2</sub>** Deficiency Monitor is suitable for either indoor or outdoor use.

The heart of the monitoring system is a long lasting zirconium sensor, which responds to low oxygen conditions within seconds and provides accurate measurements over a wide temperature and humidity range. The zirconium O<sub>2</sub> sensor cell will operate continuously for 10 or more years and requires an absolute minimum of maintenance. There are no zero or span calibration pots to adjust and when compared to disposable type sensors, our long life zirconium O<sub>2</sub> sensor can save up to \$475 annually and will pay for itself in just over 3 years!

Ideal for continuously monitoring oxygen levels in confined spaces or areas where inert gases are used, the **Air check ✓ O<sub>2</sub>** Deficiency Monitor does not drift or lose sensitivity when the weather or temperature changes. The electronics are housed in a Nema 4X housing or optional EX for hazardous areas.

### Connects to SCADA and PLC Controls

The **Air check ✓ O<sub>2</sub>** Deficiency Monitor is 24VDC powered and transmits continuous oxygen concentration levels to any system control data acquisition system, or programmable logic controller. The PureAire's Oxygen Deficiency Monitor can also be operated remote up to 1,000 meters or 0.6 miles from centralized controllers.

### PureAire's Oxygen Sensor Cell

The **Air check ✓ O<sub>2</sub>** Deficiency Monitor uses an exclusive Current Limiting Zirconium Oxide Oxygen sensor that never requires a reference gas. Unlike concentration type zirconium cells that must have a reference gas, PureAire's O<sub>2</sub> monitor can operate in 100% nitrogen environments. Capable of detecting 0% up to 25% oxygen levels, the current limiting O<sub>2</sub> sensor operates at a lower temperature

than competitive concentration type cells. The average life of PureAire's O<sub>2</sub> sensor is over 10 years in most environments.

The **Air check ✓ O<sub>2</sub>** Deficiency Monitor never needs calibration. The earth is a wonderful source of calibrated oxygen and under ambient levels; PureAire's O<sub>2</sub> monitor is continuously being challenged to 20.9%. There are no zero or span adjustments to make; the only optional response test required is to subject the O<sub>2</sub> system to nitrogen periodically.

## **O<sub>2</sub> Monitor System Features**

The **Air check ✓ O<sub>2</sub>** Deficiency Monitor is available in many different configurations. PureAire uses a sophisticated built-in CPU that is flexible to provide users with a low cost basic display only monitor or a full featured monitor with dual level, user selectable alarm relays. Other options available are Modbus digital communications or full Wireless radio communications.

## **Specifications**

Sampling Method & Range	Diffusion, 0-25% O <sub>2</sub>
Accuracy	± 1% of full scale
Operating Temperature	-40 to + 55 C
Display	3/4" backlit LCD digital display
Sensor Type	Long life zirconium oxide sensor cell (lower temp operation) No heat fatigue.
Sensor Life	10+ years under normal conditions
Signal Outputs	Standard: 4-20 mA analog output Optional: Dual User Selectable Relays (2amp 30VDC / 240VAC) Audible alarm Digital RS-232
Power Requirements	24VDC 100mA without relays; 500mA with relays
Dimensions	5.5 (W) x 10.5 (H) x 3.25 (D) inches; (140 x 267 x 83 mm)
Weight	1.6 lbs. (.8 kg)
Enclosure	Nema 4X
Approvals	Ce approval & factory calibrated against a NIST traceable reference standard
Required calibration	None (no zero or span pots supplied)



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