



# MODEL 221R OXYGEN DEFICIENCY MONITOR

WITH *REMOTE PROBE*



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## Because the ***SAFETY*** of your Employees is a Top Priority.

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Oxygen depletion or asphyxiation should be taken very seriously at facilities that store pressurized gas in cylinders or cryogenically-liquefied gases in dewers. A leak in any of these containers within an enclosed space can quickly and unexpectedly displace the level of oxygen in the area, immediately creating an unsafe and dangerous situation for everyone in the vicinity.

The **MODEL 221R** has long established itself as the leading choice among companies, laboratories or universities, looking to protect their personnel from the risk of oxygen depletion or asphyxiation. The unit not only provides accurate, real-time oxygen monitoring, but it can differentiate between an actual drop in oxygen levels versus a false alarm. Through utilizing a zirconium oxide sensor, the Monitor can operate unfazed, even when exposed to sudden temperature changes or a downscale temperature drift. The zirconium oxide sensor has a 10-year product life, which drastically lowers maintenance costs – as users no longer have to replace sensors every 6 months or perform monthly calibrations.

The features and default settings of the **MODEL 221R** are optimized for safety. There are 2 pre-loaded alarm set points – one is set at the OSHA standard of 19.5% with an audible 95dB alarm for DANGER, while the other is set at 20.0% for CAUTION. The alarms will also trigger if the oxygen levels exceed 23.5%. All settings on the unit can be adjusted through the [Command Center Electronics Platform™](#). This incredible platform is available for use with the **MODEL 221R** and provides users with advanced software-based tools for collecting and managing data.

When it comes to ensuring safety and protection for your employees, no other option can outperform the **MODEL 221R**.

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Performance with Maximum ***STABILITY***

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# MODEL 221R

## TECHNICAL SPECIFICATIONS & FEATURES

### PHYSICAL

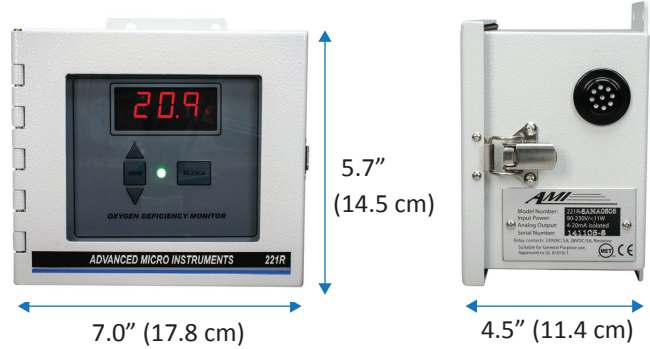
Dimensions: 7.0"W x 5.7"H x 4.5"D (compact size)  
(17.8 cm x 14.5 cm x 11.4 cm)  
Weather-tight NEMA 4X package

Weight: 4.0 lbs (1.8 kg)

Digital Display: 4-digit LCD (reads full scale from 0.0% to 25.0%)

Mounting: Wall mount or 2.0" pipe

Gas Connections: Diffusion screen. No pump, sample tubing or fittings required



2 - year warranty for Parts & Labor for any defects in materials or workmanship

### TECHNOLOGY

Method of Measurement: Zirconium Oxide Sensor (10-year life expectancy)

**Command Center Electronics Platform™** (accessed through the **Command Center User Interface Software**)

- includes:
- Datalogger for Oxygen Readings, includes graph of complete readings over a 15-day period or Excel file containing raw numerical data for custom analysis
  - Error Status Display alerts users to any error(s) detected by the Monitor
  - Brown-out history stores the last 5 brown-out incidents and recoveries
  - Power-up history stores the last 10 times the unit was powered-up
  - Modbus bi-directional RS485 communication to interface with advanced features

### PERFORMANCE

Minimum detection limit: 0.05% of Oxygen

90% full scale response times for following specified range:  
<12 sec for 0.0% – 25.0%

Repeatability:  $\pm 0.1\%$  of range or  $\pm 0.1\%$  of oxygen, whichever is greater

Diurnal Temperature Specification:  $< \pm 1\%$  of scale over temperature range

Data Collection Capacity provides 15 days of data recording @1 datapoint per minute

RFI-protected

### ALARMS

2 Oxygen Concentration Alarms with Relay Contacts (3A @24 VDC/115VAC)

Preset Alarm Setpoints (OSHA standard of 19.5% for Danger and 20% for Caution)

95dBa Danger Alarms: Preset for 19.5% and 23.5%

Alarm delays are programmable from 0 – 300 minutes

Alarm hold-off / bypass is programmable from 0 – 120 min

### POWER

Requirements: 100 –240 VAC <115 Watts.

Battery back-up provides 1 hour of power

### OPERATION

Measurement Range: 0 –25.0%

Ambient Operating Temperature Range: 0°F to 130°F  
(17.8°C to 54.4°C)

4 – 20mA isolated analog output signals

Status LED indicates Power, Safe Operation, Alarm Conditions and Loss of AC Power

### REMOTE SENSING PROBE

Remote probe comes standard with a 12 ft (3.6m) cable

User can extend probe cable for mounting up to 300 ft (91.4m) from control unit

### AREA CLASSIFICATION

Approved to meet General Purpose UL 61010-1 Standard and IP 65 Requirements.

CE Mark

