

## Oxygen and Carbon Dioxide Analyzer



FEATURES	BENEFITS
State-of-the-Art IR Sensor Technology	High Precision Measurement
Wide Range	Provides Greater Instrument Versatility
User Scalable Analog Outputs	Better Defines the Concentrations of Interest
Rapid Speed of Response	Quickly Senses Changes in Gas Composition
Dual Adjustable Alarm Set points	Set Critical Process Limits
Advanced Digital Electronics	Helps to Ensure Accurate Measuring Values
Minimum Maintenance	Low Cost of Ownership
4 Line Back-lit LCD	Easy to Read in a Variety of Ambient Conditions

## System Description

The Series 9600 Oxygen and Carbon Dioxide Analyzer is designed to provide continuous, unattended monitoring of both oxygen and carbon dioxide simultaneously. The focal point of the Series 9600 is its state-of-the-art sensor technologies. The oxygen sensor is an extended life electrochemical sensor with EES (enhanced electrolyte system). This sensor provides exceptional accuracy and stability. EES retards passivation of the sensor anode by allowing the products of oxidation to dissolve in the electrolyte. In effect, the sensor is renewed continuously resulting in a significant increase in sensor life. In addition, the enhanced mechanical design of the sensor helps to ensure long life and virtually eliminates leakage of electrolyte, a nagging (and expensive) problem associated with other types of sensors.

Alpha Omega Instruments has complemented its oxygen measuring capabilities with a next generation NDIR (non-dispersive infrared) sensor. The carbon dioxide sensor incorporates closed-loop control for enhanced long-term calibration stability. The control signal is generated by means of an optical referencing element that monitors source intensity. This methodology, coupled with a novel source homogenizing gas sampling chamber, yields a system with greatly improved tolerance to changes in the infrared source outputs.

## Options/Accessories

RS232 & RS485 Serial Communications

Sample Pumps

Sample Filters

Pressure Regulators

Flow Meters

Built-in Data Logger

Remote Sensors

## Applications

Food Processing

Pharmaceutical Manufacturing

Environmental Monitoring

Chemical/Petrochemical

R&D

Laboratory Growth Chambers

Glove Box/Dry Box

Incubators

### SPECIFICATIONS

	<b>OXYGEN</b>	<b>CARBON DIOXIDE</b>
Ranges:	Percent: 0-100	Percent: 0-20% / 0-100% (optional) Trace: 0-5,000 Parts Per Million (PPM)
Error Band:	± 1% of full scale	Percent Range: 0.1% or ± 5.0% of reading, whichever is greater Trace Range: ± 30 ppm or ± 2% of reading, whichever is greater (error stated at 77°F(25°C) and 14.7 psig (1.03 kg/cm <sup>2</sup> ))
Response Time:	90% of full scale in < 20 seconds	<35 seconds to 63% of step change @ a sample flow rate of 200 ml/minute (recommended sample flow rate)
Sensor Type:	Long-life Electrochemical Sensor with EES	Non-dispersive infrared (NDIR)
Operating Humidity Range:	0-99% RH non-condensing	0-99% RH non-condensing
Ambient Temperature Range:	40 to 100°F (5 to 38°C)	40 to 100°F (5 to 38°C)
Sample Delivery:	Pressurized sample or optional pump	Pressurized sample or optional pump

### GENERAL SPECIFICATIONS

Warranty:	Two years electronics and sensors	Display:	4 line x 20 character LCD for both O <sub>2</sub> and CO <sub>2</sub>
Power Requirements:	90-264 VAC, 50-60 Hz	Analog Outputs:	Two 4-20 mA DC outputs that are range configurable. Either or both outputs can be set to provide 0-20 mA DC
Audible Alarm Canceling:	Individual front panel buttons	Audible Alarms:	User configurable internal audible alarm
Sample Pressure Limits:	<2.0 psig (> 0.1406 kg/cm <sup>2</sup> )	Max. Sample Flow Rate:	1.0 to 2.0 standard cubic feet per hour (SCFH). 0.1-0.5 liters per minute (SLPM) optimum
Enclosure:	NEMA 1, Powder coated, painted aluminum	Gas Sample Connections:	1/4" stainless steel compression fitting
Enclosure Dimension:	10.76 in. (273.30 mm) Width 6.3 in. (160.02 mm) Height 13.10 in. (332.74 mm) Depth Note: All dimensions are without optional equipment	Weight:	<10 pounds (4.536 kg)



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