

ANALYZER SOLUTIONS FOR YOUR PROCESS!

## CG1100-GS Oxygen Gas Analyzer

*Improves process efficiency by detecting ppm to 100% level oxygen in air separation and cryogenic processes.*

### PRODUCT DESCRIPTION

The CG1100-GS is a smart sensor designed specifically for use in air separation and other applications where fast response over a wide range of oxygen is required. It uses a zirconium oxide sensor that provides quick response, is non-depleting, and will not fail to zero reading, thereby protecting your process.

### APPLICATIONS

- Air Separation
- Blanket /Purge Gases
- Welding Atmospheres
- Food Packaging
- Glove Box Applications
- Inert Gas Purity
- Nitrogen Purity
- Oven/Furnace Atmospheres



CG1100-GS Oxygen Analyzer

### KEY FEATURES

- **Fast Response over a Wide Operating Range**  
Your system will respond rapidly over an operating range of 0.1 ppm to 100% oxygen.
- **Easy to Integrate into Your Host Controller and Data Acquisition System**  
The CG1100-GS is equipped with an RS-232 and two RS-485 ports. It comes with configurator software for initial setup of operating parameters and accepts user-provided software for efficient integration with a host controller, or Dycor System 2000 software to record and process data.
- **Mechanical Flow Meter**  
Automatically controls flow maintaining 150 sccm.
- **Remote Calibration Unit Available**
- **Optional System 2000 Software Available**  
Provides enhanced interface and process monitoring with graphical user interface for Windows 95/NT format.
- **Zirconium Oxide Sensor**  
Your system will not fail to zero oxygen reading. It is always protected - something not possible with other sensor technologies.
- **Compact**  
8" x 8" x 8" cube houses all electronics, RS-232 port, (2) RS-485 ports, I/O port and analog output (4-to-20 mA) isolated.

# SPECIFICATIONS

## Operating Range:

0.1 ppm O<sub>2</sub> to 100% O<sub>2</sub>

## Accuracy:

± 2% of reading or .05% O<sub>2</sub> absolute (0.5 ppm O<sub>2</sub> absolute for ppm range), whichever is greater.

## Response Time (for sensor):

Less than 5 seconds at 150 sccm over one decade.

## Repeatability:

± 0.5% of reading or 0.1% O<sub>2</sub> absolute (0.1 ppm O<sub>2</sub> absolute for ppm range), whichever is greater.

## Maximum Inlet Temperature:

160°F (70°C)

## Environment:

For Indoor Use Only

Ambient Temperature: 0°C to 40°C (32°F to 104°F).

IEC Installation Category II  
IEC Pollution Degree 2

Maximum Altitude: 2000 meters

Relative Humidity: 10% to 90%, non-condensing

## Sample Flow:

Fixed at 150 sccm. A mechanical flow meter is used to automatically maintain a constant sample and calibration gas flow.

## Inlet Pressure Range:

25 PSIG to 120 PSIG or optionally, 5 to 10 PSIG. Inlet pressure requirements are noted on the label below the sample inlet port on the back of the analyzer.

## Outlet Pressure:

Vents to atmosphere.

## Calibration Gases:

**Zero Gas:** From 0.1 ppm to 10% O<sub>2</sub>, balance N<sub>2</sub>.

**Span Gas:** At least one decade above zero gas (10 times greater) recommended.

## Port Connections:

1/8" Swagelok compression fittings on inlet and calibration ports.  
1/4" tube on the exhaust port.

## Sampling System:

Stainless steel components and tubing are used in the sample path.



CG1100-GS Rear View

## Indicators:

LEDs for status of power, communications, and fault conditions.

## Software:

Configurator software to configure and calibrate the analyzer. Runs on a PC with Windows 95, 98 or NT with an RS-232 serial port. Communicates with a single analyzer using either an RS-232 cable or multiple units over an RS-485 network.

## Communications:

Optically isolated RS-232 (one DB-9F connector) and RS-485 (two DB-9F connectors). RS-232 selected if RTS signal is set. Multiple units can be networked on an RS-485 network. RS-485 node address is set via externally accessible selector switch. Baud rate is software selectable to 9600 or 19200 baud.

## I/O:

DB-15F connector. Software configurable alarm for oxygen. Two additional outputs for System Fault and Watchdog alarms. Optically isolated analog output, 4-20 MA (optionally 0-5V, 0-10V) for oxygen.

## Power Requirements:

24 VDC ±5%, 2.5A, less than 100 mv noise or ripple. An optional external 24V power supply is available with 100-250 VAC, 47-63 Hz input (AMETEK PN: 25446JE). When using an external power supply, a power connector plug (AMETEK # 19675JE) is required.

## Enclosure:

8"H x 8"W x 8"D. Powder coat black finish. A clearance of at least 1/4" is required on sides and bottom of unit for air circulation.

## CE Compliance:

EN61326 EMC Directive and EN61010-1 Low Voltage Directive.