

CG1100-GS Oxygen Analyzer

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

BENEFITS

- ▶ Fast response over a wide operating range
Responds 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
Provides enhanced interface and process monitoring with graphical user interface for Windows XP and Vista format.
- ▶ Zirconium oxide sensor
Will not fail to a 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.

DESCRIPTION

The CG1100-GS is 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
- ▶ Inert gas purity
- ▶ Nitrogen purity



The CG1100-GS oxygen analyzer uses a mechanical flow meter to automatically control flow maintaining 150 sccm.

PERFORMANCE SPECIFICATIONS

Operating Range:

0.1 ppm O₂ to 100% O₂

Accuracy:

± 2% of reading or .05% O₂ absolute (0.5 ppm O₂ 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% O₂ absolute (0.1 ppm O₂ 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% O₂, balance N₂.

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.

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 XP or Vista 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
UL Classified and c-UL Classified



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One of a family of innovative process analyzer solutions from AMETEK Process Instruments.
Specifications subject to change without notice.

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