

GG-O₂-C

OXYGEN SENSOR

**Key Features**

- Oxygen specific electrochemical sensor technology
- 3-year cell life typical
- Industry standard linear 4/20 mA output
- Corrosion, weather, and chemical resistant polycarbonate sensor enclosure
- Temperature and moisture control for improved cell life
- Temperature compensated
- Sensor designed to adapt to any harsh environment from -30°F to +125°F
- Accurately monitor oxygen deficiency or enrichment levels
- Real-time continuous monitoring for early leak detection
- Detection ranges of 0-25% or 15-25% O₂ (volume)

Industrial oxygen level monitoring.
Designed “food industry tough” with a 3-year sensor.

The GG-O₂-C utilizes a proven oxygen sensor with a typical life-span of 3 years. With a large capacity electrolyte reservoir for exceptional cell life, the GG-O₂-C electrochemical cell is designed with excellent chemical durability and is not affected by pressure changes or interference gases such as carbon dioxide.

Every GG-O₂-C sensor comes equipped with an internal temperature control designed to perform in the harshest of areas. The controlled environment provides temperature and moisture control for extended cell life. The high-quality injection-molded polycarbonate enclosure offers excellent chemical corrosion protection and high impact resistance.

The GG-O₂-C provides an industry standard linear 4/20 mA output signal compatible with most gas detection systems and PLCs. The output signal is not affected by drastic temperature variations such as washdown and defrost cycles, and is minimally affected by barometric pressure changes.

Applications

- Air Quality Monitoring
- Refrigeration Systems
- Confined Space
- Tank Rooms
- Food Processing
- Breweries

Benefits

- Low cost of ownership
- Simple operation
- Rugged and reliable



Durability and long life

The standard **GG-O2-C** sensor is designed to work anywhere, and at a lower base-model price than most competing models. With the rugged extended life cell, the **GG-O2-C** sensor will give you years of trouble-free operation resulting in an extremely low cost of ownership. Typical alarm setpoints include a 19.5% alarm setpoint for oxygen deficiency monitoring for personnel protection, and 23.5% for oxygen enrichment situations.

Designed "Food Industry" tough

From hot mechanical rooms, to acid washdowns of processing areas, the **GG-O2-C** is prepared to survive in just about any harsh industrial condition. Every circuit board is sealed forever in potting compound, protecting electronic components and copper tracing from corrosion. A specially vented chemical-resistant polycarbonate enclosure protects the sensor from accidental damage, weather, and direct hose-hits from clean-up crews. A stainless steel enclosure is also available for applications that require it.

Ordering Information

The **GG-O2-C** is delivered calibrated and ready to install. Use the model numbers below to order.

- Order #:** [GG-O2-C0 \(0/25%\)](#) (standard)
[GG-O2-C15 \(15/25%\)](#)
[GG-O2-Cxx-ST](#) (stainless steel enclosure)
[GG-O2-Cxx-DM](#) (duct mount)
[GG-O2-C-RC](#) (replacement cell)



Stainless steel enclosure option

Circuit board and components potted to completely prevent corrosion

Intelligent heater for temperature and moisture control



Internal splash guard re-directs water from high-pressure hose-hits

Washdown-duty polycarbonate or stainless steel enclosure options

SPECIFICATIONS

Due to ongoing research and product improvement, specifications are subject to change

Input Power:

+24 VDC, 350 mA

Detection Principle:

Electrochemical

Detection Method:

Diffusion

Gases:

Oxygen (O₂)

Ranges:

0/25% (volume)
15/25% (volume)

Output Signal:

Linear 4/20 mA (max input impedance: 700 Ohms)

Pressure Limits:

0.5 to 1.5 Atmosphere

Linearity:

+/- 1% of full-scale

Repeatability:

+/- 1% of full-scale

Response Time:

T50 = less than 30 seconds
T90 = less than 60 seconds

Accuracy:

+/- 2% of value, but dependent on calibration gas accuracy and time since last calibration

Zero Drift:

Less than 0.1% of full-scale per month, non-cumulative

Span Drift:

Application dependent, but generally less than 3% per month

Temperature Range:

-30°F to +125°F (-34°C to +52°C)

Humidity Range:

5% to 100% condensing

Wiring Connections:

3 conductor, shielded, stranded, 20 AWG cable (General Cable C2525A or equivalent) up to 1500 ft

Terminal Block Plugs: (Field Wiring)

12-26 AWG, torque 4 lbs-in

Enclosure:

NEMA 3RX injection-molded, washdown-duty polycarbonate sensor housing with hinged lid and captive screw. For non-classified areas. Optional 316 18 GA, NEMA 3RX washdown-duty stainless steel housing with hinged lid and captive screw. For non-classified areas

Dimensions:

7.5" high x 6.5" wide x 3.75" deep

Weight:

3 lbs

Certification:

ETL listed to UL standard 61010-1, and CSA standard C22.2 No. 61010-1-12

Warranty:

2 years (including sensor element)

