

Oxygen (O₂) Analog Gas Transmitters



ITS-1310

DESCRIPTION

Analog gas transmitters for the detection of oxygen (O₂) in the ambient air.

APPLICATION

To sense oxygen (O₂), depletion or escalation, in a wide variety of commercial and industrial applications such as unoccupied mechanical or chiller rooms, and ventilation systems, etc. and transmit to any compatible electronic analog control, DDC/PLC control or automation system.

FEATURES

- Continuous monitoring
- 4-20 mA analog signal output
- Electrochemical gas sensor, gas specific
- Long-life sensor, 8-10 years
- RFI/EMI protected
- Easy maintenance



SPECIFICATIONS

Electrical

| | |
|--------------------|---------------------------------|
| Power supply | 24 VDC (12-36 VDC) |
| Protection | One (1) 0.5A socketed pico fuse |
| Power consumption | 25 mA max. |
| RFI/EMI protection | 4.0 W @ 1 ft. (0.31 m) radiated |

Sensor Performance

| | |
|------------------------|--|
| Gas detected | Oxygen (O ₂) |
| Sensor element | Electrochemical, micro-fuel cells, non-consuming |
| Range | 0-25%, air by volume O ₂ |
| Accuracy / Resolution | ± 2.5% of reading |
| Repeatability | ± 1% |
| Long term output drift | < 2% of full scale/month |
| Response time | 60 sec. to 90% of step change |
| Calibration | |
| - interval recommended | 3 to 12 months |
| - adjustment | Simple 2-point settings, applying calibration gas standards |
| Sensor life expectancy | 8-10 years, normal operating environment |
| Sensor coverage | 2,500 sq. ft., max. 5,000 sq. ft. (232 m ² , max. 464 m ²) under "ideal conditions" |

Installation Location

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|-----------------|---------------------------------------|
| Mounting height | 4 to 6 ft. (1.2 to 1.8 m) above floor |
|-----------------|---------------------------------------|

Type of Control

| | |
|---------------|---|
| General | Continuous proportional analog sensor signal output |
| Analog output | 4-20 mA, 2-wire configuration, mA DC into 700 Ω at 24 VDC |

Environmental

| | |
|------------------------|-------------------------------|
| Permissible ambient | |
| - working temperature | 41°F to 104°F (5°C to 40°C) |
| - storage temperature | -4°F to 122°F (-20°C to 50°C) |
| - humidity, continuous | 0 to 90% RH, non condensing |
| - working pressure | Atmospheric ± 10% |

Physical

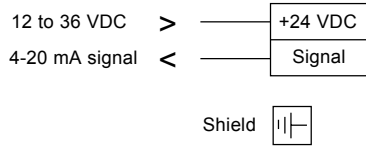
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|------------------------|---|
| Enclosure | |
| - material | Heavy duty ABS, fire retardant, UL 94-V-0 |
| - color | Light beige |
| - cover | Snap-on, secured by (4) screws |
| - protection | NEMA 1, general purpose |
| - installation | Wall (surface) mounted, or single gang electrical box |
| Dimensions (H x W x D) | 6.6 x 4.2 x 2.6 in. (167 x 107 x 66 mm) |
| Cable entry | 1 hole for 1/2 in. conduit for wall (surface) mounting and 1 hole on back side of enclosure base for single gang electrical box |
| Wire connection | Terminal blocks, screw type for lead wire |
| Wire size | Min. 24 AWG (0.25 mm ²), Max. 14 AWG (2.5 mm ²) |
| Weight | 2.0 lbs. (0.9 kg) |
| Approvals/Listings | CSA, C22.2 |
| Warranty | 12 months material and workmanship |

ORDERING INFORMATION

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|-------------|--|
| ITS-13101-C | Oxygen transmitter, 0-25% v/v range, 4-20 mA signal, 2-wire, 24 VDC loop-powered surface mount, NEMA 1 |
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WIRING CONFIGURATION

**ITS-1310
24 VDC, 2-wire configuration**



Note: Twisted, shielded wire is recommended.

