

# 580 SERIES EXPLOSION PROOF O<sub>2</sub> DEFICIENCY MONITOR



The 580 Series Explosion Proof Oxygen Deficiency Monitor is a self-contained sample draw oxygen deficiency detection system designed for continuous monitoring of environments where low oxygen levels and the risk of explosion pose a hazard. The enclosure is specifically designed to prevent the ignition of an explosion and is essential in various industries where combustible gases and dust or ignitable fibers are present. Unlike electrochemical sensor cells, the explosion proof O<sub>2</sub> zirconium cell responds to low oxygen levels within seconds and provides stable oxygen readings even in areas where temperature and humidity levels are changing. With the built-in alarm relay, any cell degradation or complete failure will immediately be detected. The CONCOA 580 Series Explosion Proof O<sub>2</sub> Deficiency Monitor may be used as a stand-alone gas detector, linked to optional CONCOA single or multi-point controllers, or connected to an existing centralized monitoring system.

## Typical Applications

- Medical and Pharmaceutical Settings
- Chemical Manufacturing
- Oil and Gas Industries
- Powder Coating Plants
- Water and Wastewater Treatment Processes



580 3025 shown

## Features

- Non-depleting Long Life Sensor Cell** provides 10+ years of operation under normal conditions
- Zirconium Oxide Sensor** runs reliably without a reference gas
- No Calibration Sensor** requires no scheduled maintenance (periodic span adjustment as needed)
- Internal Sample Pump** draws oxygen levels from up to 100 feet away
- Inlet Dust Filter** protects the sample pump from dust and particles
- Flow Control Microprocessor** continually monitors and controls sample flow to the monitor
- Smart Electronics** monitor sensor operation continuously and alerts user to sensor faults
- Two User-adjustable Alarm Setpoints** permit flexible system integration
- Built-in Non-latching Alarm** resets automatically when oxygen levels return to above the alarm threshold
- Optional Remote Digital Alarm Indicator** mirrors the monitor's display to provide remote system status and alarm information

## Materials and Specifications

- Sampling Method:** Sample draw
- Gas Detected:** Oxygen
- Range:** 0 - 25%
- Accuracy:** ±1% of full range
- Operating Temperature:** -40°F to 140°F (-40°C to 60°C)
- Sampling Tube:** Polypropylene, 1/4 in OD x 3/16 in ID, length 3 - 100 ft. (not included)
- Max Sample Draw Distance:** 100 ft (30.5 m)
- Particulate Filter Replacement:** Every 12 months
- Display:** 3/4 in LCD digital display, back lit
- Sensor Type:** Zirconium oxide sensor cell
- Integral Flash Arrestor:** Stainless steel, Class I

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## Materials and Specifications

**Response Time:** Within two seconds per foot of sampling tube

**Sensor Life:** Eight to ten plus years under normal conditions

**Power Requirement:** 24 VDC (250mA)

**Analog Output:** 4-20mA

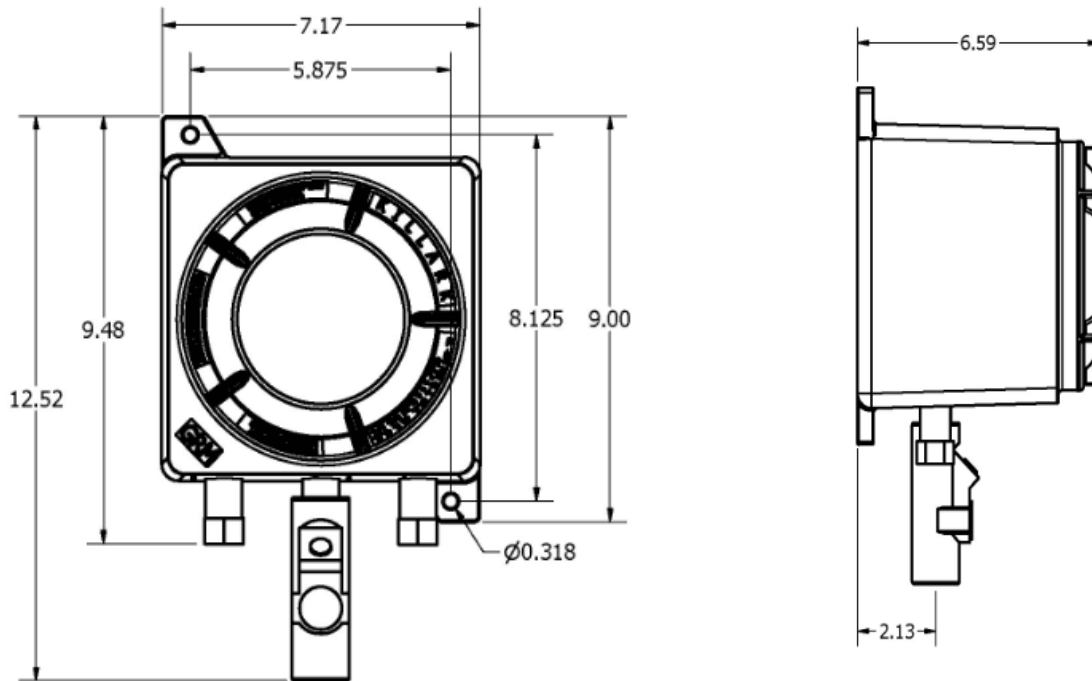
**Relay Outputs:** Two user-settable alarm relays and one fault relay rated 2A @ ≤ 24 VAC or 24 VDC

**Alarm:** Built-in 90 dB horn and LED indicators

**Enclosure:** Explosion proof class 1, groups B, C, and D hazardous environments

**Weight:** 12.0 lbs. (5.5 kg)

## Installation Dimensions



## Ordering Information

Part No.	Description	Housing	Weight
580 3025	Explosion Proof Oxygen Deficiency Monitor with 110 VAC / 24 VDC Power Supply (CONCOA recommends using 1/4 in OD by 3/16 in ID polypropylene sampling tube no longer than 100 ft. (30.5 m) for optimal results) Sampling Tube Not Included	Polycarbonate	12.0 lbs (5.5 kg)

## Related Options

Part No.	Description	Housing	Weight
580 3005	Remote Display Alarm Indicator for Explosion Proof Oxygen Deficiency Monitor 5803025	PC/ASA Plastic	0.5 lbs (0.23 kg)
580 3006	Horn and Strobe, Red, 82-100 dB @ 10 ft (92-110 dB @ 1 m)	ABS Plastic	0.8 lbs (0.45 kg)
580 3006-A	Horn and Strobe, Amber, 82-100 dB @ 10 ft (92-110 dB @ 1 m)	ABS Plastic	0.8 lbs (0.45 kg)
580 3006-B	Horn and Strobe, Blue, 82-100 dB @ 10 ft (92-110 dB @ 1 m)	ABS Plastic	0.8 lbs (0.45 kg)