

580 SERIES UNIVERSAL LEL DETECTOR



The 580 Series Universal LEL Detector continuously monitors toxic gas levels and the lower explosive limit (% LEL) of combustible gases in laboratories, chemical plants, industrial and research facilities, and other areas where poisonous or hazardous gases are present. Using advanced Molecular Property Spectrometry (MPS) technology, the monitor accurately detects over 14 gases including hydrogen, methane, propane, and butane, with no false alarms or cross-sensitivity. Built-in algorithms quickly classify the detected gases into categories: hydrogen, hydrogen mixtures, natural gas, and light, medium, or heavy gas / mixtures. A large LCD display indicates real-time gas concentrations, and audible and visual alarms alert personnel when alarm thresholds are exceeded. Two factory-set alarm set-points, configured at 20% and 40% LEL, ensure notification before an emergency. The monitor includes analog and digital outputs for integration with a CONCOA 585 Series Emergency Shut-Off Controller, remote display, 4- or 8-channel controller, horn and strobe, or building monitoring system.



5803020-01-1 shown

Typical Applications

- Oil and Gas Industries
- Refineries and Petrochemical Plants
- Chemical Manufacturing/Research Facilities

Features

Molecular Property Spectrometry (MPS) Sensor detects over 14 gases and gas mixtures with a single sensor

Automatic Self-testing Circuitry ensures fail-safe operation and maintenance and cost savings

Factory Calibration provides 15+ years of reliable performance without requiring any field calibration

Built-in Environmental Compensation maintains accuracy regardless of varying environmental conditions

Rugged Explosion-proof Enclosure prevents internal explosion from escaping the instrument

User-adjustable Dual Alarm Relays allow user to modify alarm thresholds and latching settings (automatic or manual)

Materials and Specifications

Gases Detected: Hydrogen; Methane; Deuterium; and most hydrocarbons

Display: Back-lit LCD

Response Time: < 20 seconds

Sensor Type: Molecular Property Spectrometry (MPS) sensor

Sensor Life: 15+ years under normal conditions

Communication Interface: RS-485, half duplex

Analog Output: 4-20 mA

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

Power Requirement: 24 VDC, 250mA

Enclosure: NEMA 4 Explosion-proof enclosure class I and II, division 1, groups B, C, D, E, F, and G

Operating Temperature: -40°F to 167°F (-40°C to 75°C)

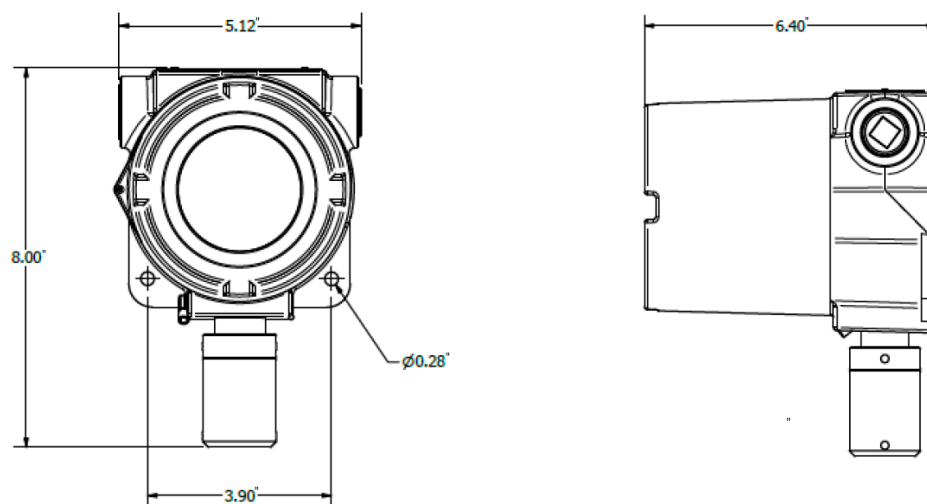
Weight: 6.5 lbs. (3 kg)

Conformances: UL/cUL; IP66 (enclosure)

580 SERIES UNIVERSAL LEL DETECTOR



Installation Dimensions



Ordering Information

Part No.	Description
580 3020-01-1	580 Series Universal LEL Detector/Transmitter (power supply cable required, not included)
580 3046-01-1	Sulfur Hexafluoride (SF ₆) PPM Detector/Transmitter
580 3047-01-1	Nitrous Oxide (N ₂ O) PPM Detector/Transmitter
580 3048-01-1	Nitric Oxide (NO) PPM Detector/Transmitter
580 3049-01-1	Butadiene (C ₄ H ₆) / Isobutane (i-C ₄ H ₁₀) LEL Detector/Transmitter
835-5205-01-1	Power Supply Cable (24 VDC, 250mA) for 580 3020-01-1 and 580 3021-01-1 Detector/Transmitters
835-5206-01-1	Extender Cable for 580 3020-01-1 and 580 3021-01-1 Detector/Transmitters
835-5207-01-1	Signal Cable Assembly for 580 3020-01-1 and 580 3021-01-1 Detector/Transmitters

Related Options

Part No.	Description
580 3006	Horn and Strobe; red light; 82-100 dB @ 10 ft (92-110 dB @ 1 m)
580 3006-A	Horn and Strobe; amber light; 82-100 dB @ 10 ft (92-110 dB @ 1 m)
580 3006-B	Horn and Strobe; blue light; 82-100 dB @ 10 ft (92-110 dB @ 1 m)
580 3058-01-1	8-channel Controller for 580 Series Gas Detectors and Oxygen Monitors
580 3099-01-1	Calibration Gas Cap (for use with 580 3020 Universal LEL Gas Detector only)