



GENERAL MONITORS
Protection for life.

MODEL 480A

Single-Channel Combustible Gas Monitor



Features

- Continuous diffusion, electro-catalytic sensor
- High visibility LED status indicators
- Adjustment-free calibration
- Low power consumption—7 watts
- Wide variety of relay options
- Two year warranty

Benefits

- Stable operation over wide ambient temperature and humidity ranges
- Provides visual indication of fault and alarm status at the detector location
- Lower calibration costs
- Lower operating costs
- Provides choice to meet specific customer requirements
- User protection

Description

The General Monitors Model 480A is a single-channel system specifically designed for continuous monitoring of combustible gas concentrations. The system consists of a remote sensing assembly and solid-state controller. The controller can be wall, panel or rack mounted in a non-hazardous area.

The system operates in the range of 0-100% LEL (Lower Explosive Limit) and is calibrated to a particular gas or vapor. User interfaces are provided so that the operator may interpret and direct the Model 480A in the performance of its various functions. User interfaces consist of a digital display, status indicators, a mode button, and a reset button.

The system operates on 117 VAC, 50-60 Hz (optional 220 VAC, 50-60 Hz), or 24 VDC primary input power with the capability of 24 VDC battery backup. Nominal power consumption is 7 watts.

Applications

- Fuel Loading Facilities
- Compressor Stations
- LNG Processing and Storage
- Oil Well Logging
- Sewage Plants
- Gas Turbines
- Drilling Platforms and Rigs
- Gas and Oil Production Platforms
- Solvent Vapors



MODEL 480A

System Specifications

- Digital Readout:** 0-99% LEL
- Accuracy:** ±3% LEL ≤ 50% LEL gas
5% LEL > 50% LEL gas
- Electrical Classification:** General purpose for mounting in non-hazardous areas, indoors.
- Warranty:** Two years
- Approvals:** CSA

Environmental Specifications

- Temperature Range:** 32°F to 140°F (0°C to 60°C)
- Storage Temperature:** -4°F to 149°F (-20°C to 65°C)
- Humidity:** 15-95%, non-condensing

Mechanical Specifications

- Mounting:** Panel or wall
- Dimensions:** 2.1" W x 6.9" H x 11.5" D
(53mmW x 175mmH x 292mmD)
- Weight:** 3.8 lbs. (1.8 kg)

Electrical Specifications

- Power:** 105-130 VAC (205-255 VAC optional), 50-60 Hz, 22-30 VDC, 7 watts nominal (117 VAC)
- Output:** Analog 4-20mA (300 ohm load max.)
Accuracy ±5%, 1.5-20mA
- Alarm Circuits:** 4A/117 VAC, resistive
- LED Status Indicators:** AO - Analog output malfunction
SE - Sensor malfunction
HI - High line voltage
LO - Low line voltage
- Standard Configuration:** 480A-1-1-01-1
(110 VAC / 24 VDC, latch alarm, non-latch warn, de-energized, standard sensor, 1-active channel)

Sensor Elements

General Monitors' sensors are designed for reliable performance and long life. Each sensor must undergo extensive burn-in and rigid quality control procedures before shipment.

The sensors consist of two catalytic bead elements in a balanced Wheatstone bridge circuit. These low temperature catalytic bead-sensing elements require minimal sensor excitation current, greatly increasing sensor life.

Sensor Specifications

- Type:** Continuous diffusion, low temperature catalytic bead. Standard Industrial Hydrocarbon Sensor. High Temperature Standard Industrial Hydrocarbon Sensor.
- Temperature Range:** -65°F to +200°F (-55°C to +93°C)
High Temperature Sensor to 400°F (200°C)
- Response Time:** T₅₀ typical 6 seconds
- Zero Drift:** Less than 5% per year
- Life:** 3 to 5 years, normal service
- Electrical Classification:** Class I, Division 1 and 2, Groups B, C and D
- Cable Length:** Three conductor cable. Maximum length of cable between controller and sensor assembly with loop resistance of 20 ohms NOTE: Shielded cable is recommended
- | Wire Size
AWG | Length | |
|------------------|----------|--------|
| | (Meters) | (Feet) |
| 14 | 2,320 | 7,600 |
| 16 | 1,460 | 4,800 |
| 18 | 910 | 3,000 |
| 20 | 580 | 1,900 |
- Warranty:** Two years
- Approvals:** CSA and/or FM

Specifications subject to change without notice.

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