

# EX Series

## Explosion Proof Gas Detectors

*Reliable, Exceptional Performance, Effortless Interface*



The **Macurco EX Series of Explosion Proof Gas Detectors** are used for Class 1 Division 1 applications or harsh environments. A brilliant digital display indicates STEL, TWA and peak daily value concentrations as well as relay status. A three-color backlight will flash depending on the level of alarm for operator safety. Set-up and calibration is accomplished via non-intrusive magnetic interface that allows programming of all parameters. A remote sensor option is available for difficult or remote monitoring applications. Compatible sensor types include electrochemical and catalytic bead options to provide monitoring solutions for a wide variety of toxic and combustible gas applications. Standard outputs include Modbus RS-485, 4-20 mA and three user programmable relay contacts.

### FEATURES & BENEFITS

- RS-485 Communication
- Three Onboard Relays
- 4-20 mA Output
- Non-Intrusive Magnetic Calibration
- Status Indicating Warning Screens
- Display of TWA, STEL, Peak Daily Value
- Electrochemical & Catalytic Bead Sensor Technologies
- Built-in Clock

### APPLICATIONS

- Chemical / Petrochemical
- Food & Beverage
- General Industry
- Oil & Gas Upstream
- Oil & Gas Midstream
- Oil & Gas Downstream
- Extraction Facilities
- Environmental Monitoring
- Pharmaceutical
- Power Generation
- Pulp & Paper
- Water & Wastewater
- Cold Storage / Warehousing
- Alcohol Distilleries

## GENERAL SPECIFICATIONS

Size: 5.7 x 7.5 x 5.1 in. (14.5 x 19.1 x 13 cm)

Weight: 4.2 lb. (1.95 kg)

Operating Temp: -40° to 158° F (-40° to 70°C)  
\*Consult Factory for Sensor Specification

Ambient Humidity: 5-95% RH Non-Condensing

Sensor Type: Combustible Gases: Catalytic  
Toxic Gases & Oxygen: Electrochemical

## ELECTRICAL SPECIFICATIONS

Input Power: 24 VDC nominal, range 18 to 30 VDC, 0.3 A DC Total Max.  
24 VAC nominal, range 12 to 24 VAC, 0.3 A AC Total Max.  
(AC must not be grounded)

Fuse: F2 on Main Board: Polyswitch 750 mA  
Polyswitch device resets after fault is cleared and power to the circuit is removed

Relays: Three Relays, SPDT, Dry Contacts

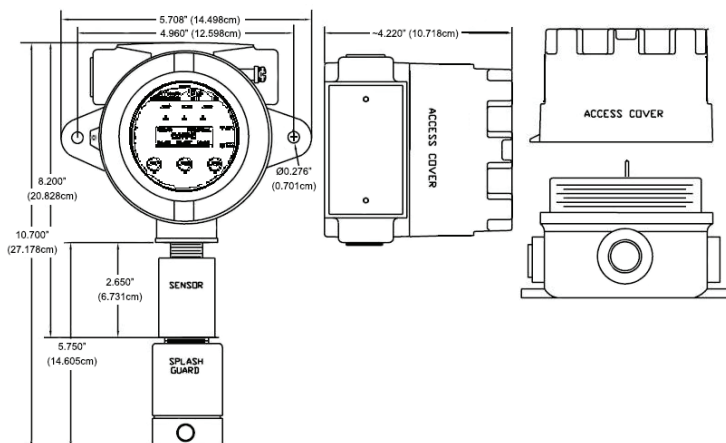
- 1.0 A maximum at 30 VDC (resistive load)
- 0.3 A maximum at 125 VAC (resistive load)

## ACCESSORIES

Combustible Splash Guard EX-28030-012

Cal-Adaptor EX Comb. Gas EX-79030-103

Cal-Adaptor EX Toxic Gas EX-6395-0003



## MECHANICAL SPECIFICATIONS

Display: LCD graphic display with backlight

Keypad: Three Non-Intrusive Magnetic switches - F1, F2, F3

Enclosure: Aluminium Pressure Die-Casting  
Entries: 2 x 3/4" NPT

Certificate: FM 3615, CSA C22.2 No.30  
Class I, Groups A, B, C, D, Class II, Groups E, F, G; Class III  
Enclosure Type: 4X, Division 1 Division 2  
ANSI/ISA 12.22.01  
Class I, Zone 1 AExd II C, IP66 Zone 1  
CSA E60079-1 Ex d II C, Class I, Zone 1, IP66

Status Indicators: Five Status LED's

- RS-485 TX Status (Green)
- RS-485 RX Status (Green)
- Relay 1 Status (Red)
- Relay 2 Status (Red)
- Relay 2 Status (Red)

## GAS OPTIONS

| Gas Type , Technology, Span Range            | Model #         |
|--|-----------------|
| Acetone, Catalytic Bead, 0-100%LEL           | EX-CH3CO-100L-O |
| Ammonia, Electrochemical, 0-1000PPM          | EX-NH3-1000P-O  |
| Ammonia, Electrochemical, 0-100PPM           | EX-NH3-100P-O   |
| Benzene, Catalytic Bead, 0-100%LEL           | EX-C6H6-100L-O  |
| Butanol, n-Butane, Catalytic Bead, 0-100%LEL | EX-BUTAN-100L-O |
| Carbon Monoxide, Electrochemical, 0-1000PPM  | EX-CO-1000P-O   |
| Carbon Monoxide, Electrochemical, 0-250PPM   | EX-CO-250P-O    |
| Chlorine Dioxide, Electrochemical, 0-2PPM    | EX-CLO2-2P-O    |
| Chlorine, Electrochemical, 0-5PPM            | EX-CL2-5P-O     |
| Combustibles, Catalytic Bead, 0-100%LEL      | EX-GENL-100L-O  |
| Ethylene, Catalytic Bead, 0-100%LEL          | EX-C2H4-100L-O  |
| Hydrogen Chloride, Electrochemical, 0-30PPM  | EX-HCL-30P-O    |
| Hydrogen Cyanide, Electrochemical, 0-50PPM   | EX-HCN-50P-O    |
| Hydrogen Sulfide, Electrochemical, 0-25PPM   | EX-H2S-25P-O    |
| Hydrogen, Catalytic Bead, 0-100%LEL          | EX-H2-100L-O    |
| Hydrogen, Electrochemical, 0-1000PPM         | EX-H2-1000P-O   |
| Hydrogen, Electrochemical, 0-2000PPM         | EX-H2-2000P-O   |
| Iso-Butane, Catalytic Bead, 0-100%LEL        | EX-C4H10-100L-O |
| Iso-Pentane, Catalytic Bead, 0-100%LEL       | EX-C5H12-100L-O |
| Methane, Catalytic Bead, 0-100%LEL           | EX-CH4-100L-O   |
| Methanol, Catalytic Bead, 0-100%LEL          | EX-CH3OH-100L-O |
| Nitric Oxide, Electrochemical, 0-100PPM      | EX-NO-100P-O    |
| Nitrogen Dioxide, Electrochemical, 0-10PPM   | EX-NO2-10P-O    |
| Oxygen, Electrochemical, 0-25%VOL            | EX-O2-25V-O     |
| Ozone, Electrochemical, 0-1PPM               | EX-O3-1P-O      |
| Propane, Catalytic Bead, 0-100%LEL           | EX-C3H8-100L-O  |
| Sulfur Dioxide, Electrochemical, 0-6PPM      | EX-SO2-6P-O     |

\*Substitute "R" in place of "O" at the end of the model # for remote sensor option