



RAEGuard EC

Fixed Toxic Gas Monitor, 4-20 mA Transmitter



The RAEGuard EC is a permanently mounted (fixed) toxic gas or oxygen sensor/transmitter that operates from a 9 to 36 VDC power source and provides an analog (4 to 20mA) and digital (RS-485) signal output. Housed in an explosion-proof enclosure, the RAEGuard EC is equipped with a local digital display of the gas concentration and function keys for performing calibration. The RAEGuard EC is operated with a standard 4 to 20mA/RS-485 controller or as a stand-alone sensor module.

- Fast and accurate response to flammable gasses
- Non-intrusive calibration via magnetic wand
- Two dry contacts (<30V, 2A) for low and high alarm limits
- Easy to operate
- Explosion-proof design
- Long-life detector and sensor

KEY FEATURES

Versatile

- Available sensors: CO, H₂S, O₂, SO₂
- 4 to 20mA analog and RS-485 digital output of specified sensor
- Operation at 9 to 36 VDC

Durable

- Explosion-proof 7R electrochemical sensor
- Explosion-proof enclosure for hazardous locations

Easy to Use

- Local displays with adjustment keys
- Non-intrusive calibration
- Magnetic key interface eliminates need to open explosion-proof housing when making calibrations or other minor adjustments
- Dry-contact output (<30V, 2A)

APPLICATIONS

- Refineries and oil production
- Chemical plants
- Industrial safety
- Pulp and paper
- Heavy industry
- Waste water treatment plants
- Power plants
- Steel mills

RAEGuard EC



Fixed Toxic Gas Monitor, 4-20 mA Transmitter

SPECIFICATIONS*

Default Sensor Settings

| Gas | Range (ppm) | Resolution (ppm) | Response Time (T ₉₀) |
|-------------------------------------|-------------|------------------|----------------------------------|
| Oxygen (O ₂) | 0 to 30% | 0.1% | <20s |
| Carbon Monoxide (CO) | 0 to 1000 | 1 | <30s |
| Hydrogen Sulfide (H ₂ S) | 0 to 300 | 1 | <20s |
| Sulfur Dioxide (SO ₂) | 0 to 150 | 0.1 | <30s |

Detector Specifications

| | |
|------------------------------------|---|
| Size | 5.0" L x 5.0" W x 4.5" H (12.7 cm x 12.7 cm x 11.5 cm) |
| Weight | 5.5 lbs (2.5 kg) |
| Detector | Explosion-proof 7R Electrochemical sensor |
| Accuracy | ± 5% |
| Hazardous Location Classifications | cUL: Class I, Division 1, Groups B, C, D, Temperature code ATEX: Ex II 2 G EExd II B T6 |
| Power | 9-36 VDC max 40mA at 24V |
| Signal Output | 4-20mA with 12V compliance at 24V power |
| Sampling | Internal diffusion |
| Display | 7-segment, 4-digit LCD with 4 color-coded fault LEDs |
| Response Time (t ₉₀) | 20-200 seconds to 90% of reading, depending on target gas |
| User Interface | Magnetically accessed keys for calibration |
| Calibration | Two-point field calibration |
| Temperature | -4 to +131° F (-20 to +55° C) |
| Humidity | 0-95% relative humidity (non-condensing) |
| Pressure | 700-1,300 hPa |
| Dry Contact | Max 30V, 2A |
| Mounting | 2 holes 5.25" (133mm) from center to center |
| Wiring | 3 or 4 wires |

* Specifications are subject to change

RAEGUARD EC ORDERING INFORMATION

RAEGuard EC Basic Kit FGM-13XX

- RAEGuard EC detector with sensor as specified
- Installation, operation and maintenance manual
- Magnetic key
- Calibration adapter

INSTALLATION DRAWING

