

# 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, H<sub>2</sub>S, O<sub>2</sub>, SO<sub>2</sub>
- 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

ATEX

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## SPECIFICATIONS\*

### Default Sensor Settings

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

[www.raesystems.com](http://www.raesystems.com)

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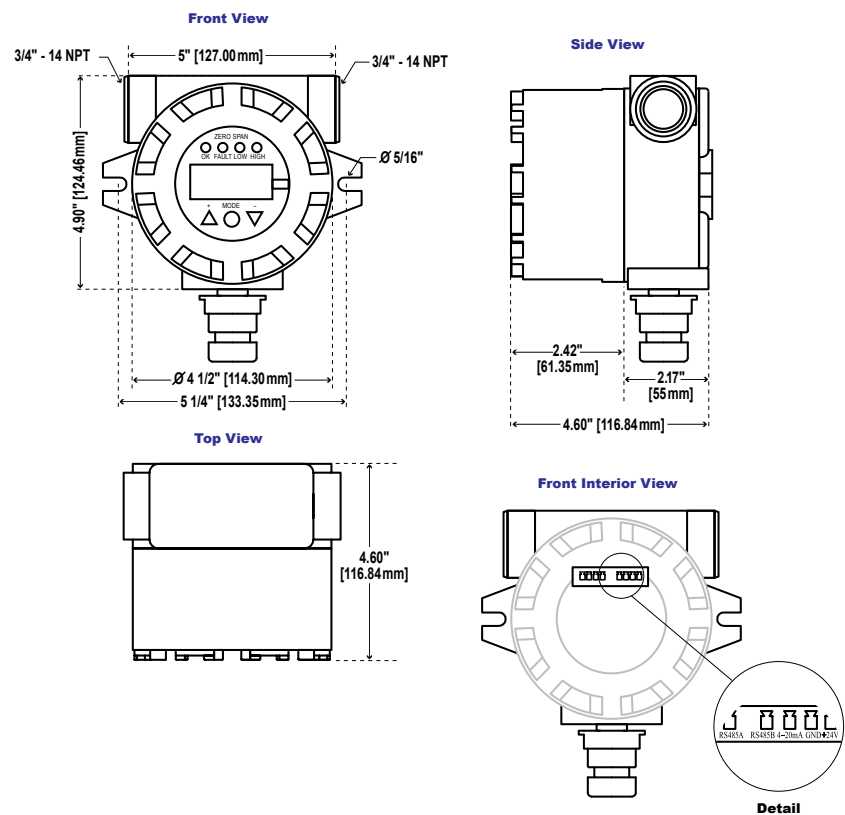
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## RAEGUARD EC ORDERING INFORMATION

### RAEGuard EC Basic Kit FGM-13XX

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

## INSTALLATION DRAWING



Measurement & Data Capture  
**ICOdata GmbH**  
Messtechnik & Datenerfassung

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