

# RAEGuard S

## Permanently Installed Gas Detector



The RAEGuard S is a permanently installed gas detector for hydrocarbon combustible gases, carbon dioxide and a wide range of toxic gases. It is a flexible detector which provides both an analog (4-20mA) and digital (RS-485, ModBus RTU) output signal. The RAEGuard S uses a smart sensor which can be off-line pre-calibrated. An explosion-proof stainless steel enclosure and magnetic key non-intrusive operation make the RAEGuard S ideal for use in hazardous environments. The RAEGuard S is equipped with a local digital display and LEDs for viewing of gas concentration and alarm conditions.

**Stainless-steel enclosure**

**Offline calibration**

**Non-intrusive calibration**

**Analog and digital communication**

**Local display**

### Key Features

- **Easy to Use**
  - Magnetically accessed keys for non-intrusive calibration
  - Designed for easy access to sensor
  - Local digital display with alarm indication
- **Flexible**
  - RS-485 digital communication in ModBus protocol
  - Adjustable 4-20mA analog output
  - Operation at 9 to 36VDC
  - 2 programmable alarm relays
- **Durable**
  - Long-life sensor
  - Explosion-proof stainless-steel enclosure
- **Advanced Technology**
  - Smart NDIR, Catalytic or Electrochemical sensors
  - Offline calibration
  - Quick response sensors

### Applications

- Waste water treatment plants
- Petroleum and natural gas fields
- Marine and off-shore oil wells
- Refineries and petrochemical plants
- Pulp and paper plants
- Chemical plants
- Power plants
- Steel mills



ATEX



# RAEGuard S

## Specifications

### Sensor Specifications

Gas	Range	Resolution
Hydrogen Sulfide (H <sub>2</sub> S)	0 to 300 ppm	1 ppm
Carbon Dioxide (CO <sub>2</sub> )	0 to 50,000 ppm	10 ppm
Methane (CH <sub>4</sub> )	0 to 100% LEL	1% LEL
Hydrocarbons (HC)	0 to 100% LEL	1% LEL
Carbon Monoxide (CO)	0 to 1000 ppm	1 ppm
Sulfur Dioxide (SO <sub>2</sub> )	0 to 20 ppm	0.1 ppm
Oxygen (O <sub>2</sub> )	0 to 30% VOL	0.1% VOL
Chlorine (Cl <sub>2</sub> )	0 to 50 ppm	0.1 ppm

\*Other sensors: contact manufacturer

### Detector Specifications

Size	6.6" L x 5.9" W x 4.3" H (16.8cm x 15cm x 10.9cm)
Weight	7.7 lbs (3.5 kg)
Detector	Protected, Off-line pre-calibrated, interchangeable smart NDIR sensor
Calibration	Two-point calibration
Accuracy	≤ ± 5% FS
Response Time (T90)	≤ 30 seconds to 90% of reading to span gas
Enclosure Rating	UL/CSA: Class I, Division 1 & 2, Group B, C, D, T6 (Pending) ATEX: Ex II 2 G EEx d II C T6 China Certification: Ex d II C T6 (Pending)
IP Rating	IP-65
Power	9 to 36VDC, max 60mA at 24V or 1.5W
Output	4-20mA, RS-485 ModBus RTU (Baud rate of 4.8, 9.6, or 19.2 Kb/s)
Sampling	Internal diffusion
Display	7-segment, 4-digit LCD (if the reading digits are more than 4, LCD will display "X.XEX" for X.X x 10 <sup>x</sup> )
User Interface	4 color-coded alarm LEDs Magnetically accessed keys for non-intrusive calibration and adjustment
Operating Temperature	-40° F to 140° F (-40° C to 60° C)
Humidity	0 to 95% relative humidity (non-condensing)
Pressure	0.9 to 1.1 ATM
Dry Contacts	Max 30V, 2A, normally open (or normally closed), one for low and high alarm, and another for faults
Terminal	AWG24-12
Mounting	2 holes 5.25" (13.3cm) from center to center

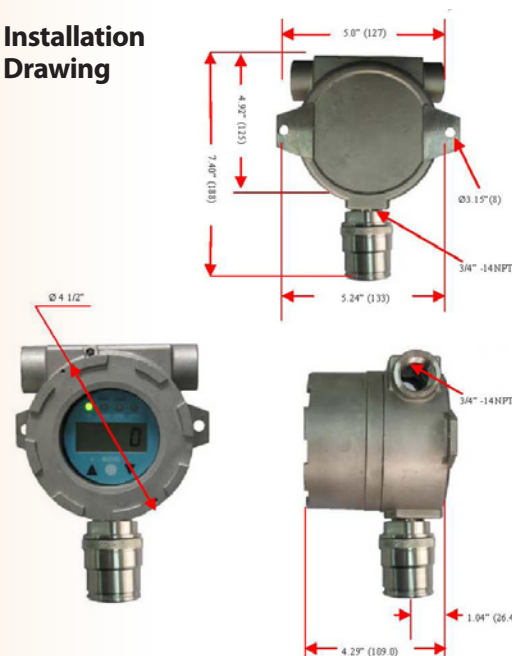
Specifications are subject to change

## RAEGuard S Ordering Information

### RAEGuard S Basic Kit

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

### Installation Drawing



## Ordering Information

### Part Numbers

Kit Description	Range	Part Number
RAEGuard S IR CO <sub>2</sub> , FGM-1200S	0 to 50,000 ppm	036-0807-000
RAEGuard S IR LEL, FGM-1200S	0 to 100% LEL	036-0806-000
RAEGuard S Catalytic LEL, FGM-1100S	0 to 100% LEL	036-0805-E00
RAEGuard S EC CO, FGM-1300S	0 to 1000 ppm	036-0805-E20
RAEGuard S EC SO <sub>2</sub> , FGM-1300S	0 to 20 ppm	036-0805-E50
RAEGuard S EC O <sub>2</sub> , FGM-1300S	0 to 30% VOL	036-0805-E30
RAEGuard S EC CL <sub>2</sub> , FGM-1300S	0 to 50 ppm	036-0805-E60
RAEGuard S EC H <sub>2</sub> S, FGM-1300S	0 to 300 ppm	036-0805-E10

\*Calibration adapter and adjustment magnet are included.



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



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Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.