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 that provides both an analog (4-20mA) and digital (RS-485, ModBus RTU) output signal. The RAEGuard S uses a smart sensor that can be pre-calibrated offline. An explosion-proof stainless-steel enclosure and non-intrusive magnetic key 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 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

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SPECIFICATIONS

Sensor Specifications

Gas	Range	Resolution
Hydrogen Sulfide (H_2S)	0 to 300 ppm	1 ppm
Carbon Dioxide (CO_2)	0 to 50,000 ppm	10 ppm
Methane (CH_4)	0 to 100% LEL	1% LEL
Hydrocarbons (HC)	0 to 100% LEL	1% LEL
Carbon Monoxide (CO)	0 to 1000 ppm	1 ppm
Oxygen (O_2)	0 to 30% VOL	0.1% VOL

*Other sensors: contact manufacturer
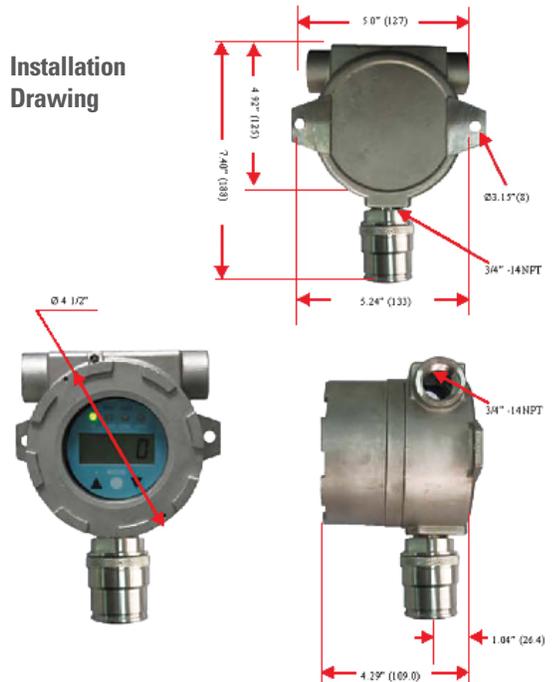
Detector Specifications

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	ATEX: Ex II 2 G Ex d II C T6 China Certification: Ex d II C T6
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 10x)
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 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_2, 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 O_2, FGM-1300S	0 to 30% VOL	036-0805-E70
RAEGuard S EC H_2S, FGM-1300S	0 to 300 ppm 036	036-0805-E10

*Calibration adapter and adjustment magnet are included