



RAEGuard IR

Fixed Hydrocarbon Gas Monitor, 4-20 mA transmitter

The **RAEGuard IR** is a permanently mounted (fixed) hydrocarbon gas transmitter that operates from 9 to 36 VDC power source and provides a 4-20mA analog output in the range of 0-100%LEL hydrocarbon equivalent or ppm concentration of CO₂. The **RAEGuard IR** is based on RAE's patented technology of non-dispersive infrared (NDIR) for methane, hydrocarbon, or carbon dioxide measurement. The microprocessor based circuit is housed in an explosion-proof enclosure, the **RAEGuard IR** is equipped with a local digital display of the gas concentration and function keys for performing calibration. The **RAEGuard IR** is operated with a standard 4-20mA controller or as a stand-alone sensor module.

Key Features

- Non-dispersive infrared technology with built-in temperature compensation
- 4-20mA analog output of 0-100%LEL hydrocarbons including methane, acetylene, propane or 0-50,000 ppm of CO₂
- No poison problem on catalytic beads
- Explosion-proof enclosure for hazardous environment application
- Magnetic key interface eliminates need to open explosion-proof housing when making calibration or other minor adjustments
- Long life infrared source and detector
- Operation at 9 to 36 VDC
- Dry contact output (<30V, 2A)

Applications:

- Refineries
- Oil production
- Chemical plants
- Industrial safety
- Waste water treatment plants
- Shipyard and maritime
- Power plants
- Steel mills

Hazardous Location Classification:

- UL: Class I, Division 1, Groups B, C and D
- Temperature CodeT6



ATEX

Specifications

Default Sensor Settings

Gas	Range (ppm)	Resolution (ppm)	Response Time (T ₉₀)
Carbon Dioxide (CO ₂)	0-50,000	10	<30s
Methane (CH ₄)	0-100%LEL	1%	<30s
Hydrocarbons (HC)	0-100%LEL	1%	<30s

Detector Specifications

Size	12.7cmx12.7cmx11.5cm (5.0"Lx5.0"Wx4.5"H)
Weight	2.5kg (5.5 lbs)
Detector	7R-sized HC Sensor, NDIR detector with built-in temperature compensation
Range	0-100% LEL
Resolution	1% LEL for HC, Resolutions to other gases is specified to the target gas
Accuracy	+/-2% LEL or +/-10% of reading
Hazardous Location Classifications	UL: Class I, Division 1, Group B,C,D Temperature Code T6
Power	9-36 VDC max 160mA 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 (t₉₀)	30 seconds to 90% of reading to 50%LEL hydrocarbon
User Interface	Magnetically accessed keys for calibration
Calibration	Two point field calibration
Temperature	-20 to +55 °C (-4 to +131 °F)
Humidity	0-95% relatively humidity (non-condensing)
Pressure	700-1,300hPa
Dry Contact	Max 30V, 2A
Mounting	2 holes 133mm (5.25") from center to center
Wiring	3 or 4 wires

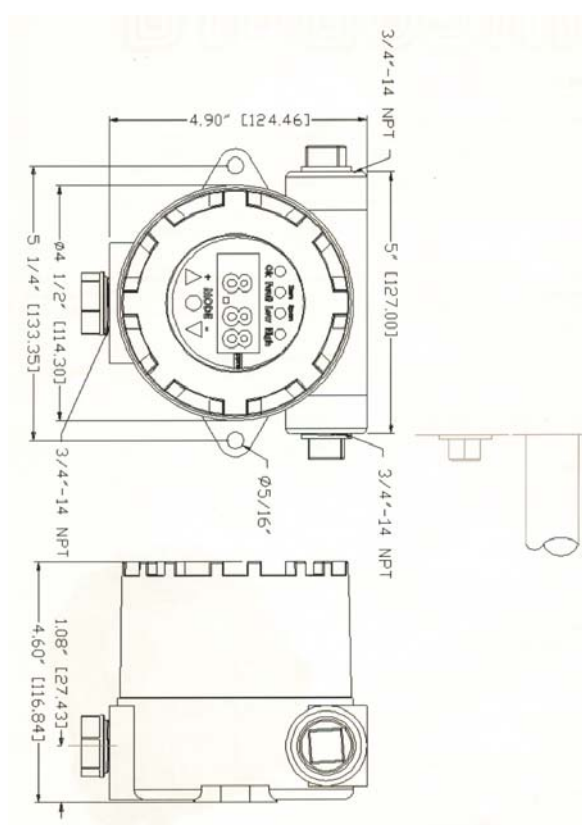
*Ongoing projects to enhance our products means that these specifications are subject to changes

RAEGuard IR Ordering Information

RAEGuard IR Basic Kit FGM-12XX

- RAEGuard IR detector with 7R-size NDIR sensor
- Installation, operation and maintenance manual
- Magnetic key
- Calibration adapter

Installation Drawing





Thank you for reading this data sheet.

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



UK Office

Keison Products,

P.O. Box 2124, Chelmsford, Essex, CM1 3UP, England.

Tel: +44 (0)1245 600560

Fax: +44 (0)1245 600030

Email: sales@keison.co.uk

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