

Proven Performance
Proven Technology
Proven Support

Information Technology (IT) at the component level! An infrared (IR) Combustible Gas sensor module with the brilliance to provide 4-20 mA and Modbus output. A stand alone module with the intelligence to provide integral alarms. A base model already loaded with features you need. A gas detector that is **Factory Mutual** approved and ready to **Manage Your Gas Risk**. The IR Gas Sensor Module provides all the built-in features desired by instrumentation and safety professionals, including:

- **FM Approval for performance and safety**
- **SIL Certified - SIL-1**
- **Aluminum or 316 Stainless Steel enclosure**
- **Integral alarm relays – High, Low, Trouble**
- **Integral scrolling LED display**
- **4-20 mA output**
- **Modbus RTU RS-485 interface**
- **Option for non-Methane gas configuration**
- **Annual calibration frequency**
- **Interface to multiple protocols**
- **Remote alarm reset**
- **Optional remote sensor**
- **Optional integral 8 amp relays**

The IR Gas Sensor Module utilizes Non-Dispersive Infrared technology to monitor for combustible gases (Methane and others). Output range is either 0-100% of LEL (default) or percent (%) by volume. This Module requires minimal maintenance with a calibration check once a year. Internal continuous self-diagnostics will automatically indicate any fault or optics problems. The IR Gas Sensor Module interfaces



with devices using a serial output or a 4-20 mA analog output signal.

Factory Mutual (FM) Approval for performance, electrical safety and environmental parameters including Class I, Div. 1, Groups B, C, D and Class I, Zone 1, Group IIB+H2 IP66. The IR Gas Sensor Module is also SIL Certified and meets NFPA-72 requirements for gas detectors.

How It Works

Most combustible gases absorb infrared light energy at defined wavelengths, providing an absorption signature for that gas. The principle of an infrared detector is based upon the absorption of the infrared light at a specific wavelength as it passes through the gas. The more of the absorbing gas that is present, the more light is absorbed. The detector measures the energy from an infrared light beam at a wavelength that is absorbed by the gas and compares it to the energy emitted by the source. The difference in energy received by the detector indicates the level of gas in the in the atmosphere.

Features

- **Local scrolling display**
- **Non-intrusive calibration, menu driven system**
- **FM Approved for performance and hazardous area operation, Class I, Div. 1, Group B, C, D. NEMA 4X rated for -40° to 176°F areas**
- **Flexible Modbus, 4-20mA, Sentry bus, relay interface**
- **SIL Certified**

Benefits

- Ease of calibration and easy access to gas concentration, relay status and diagnostics
- Able to easily and quickly calibrate module without declassifying the area
- For safe and reliable operation in hazardous areas
- Easy to install in a variety of field applications plus easy to obtain critical safety information wherever needed
- Meets long term reliability design standards

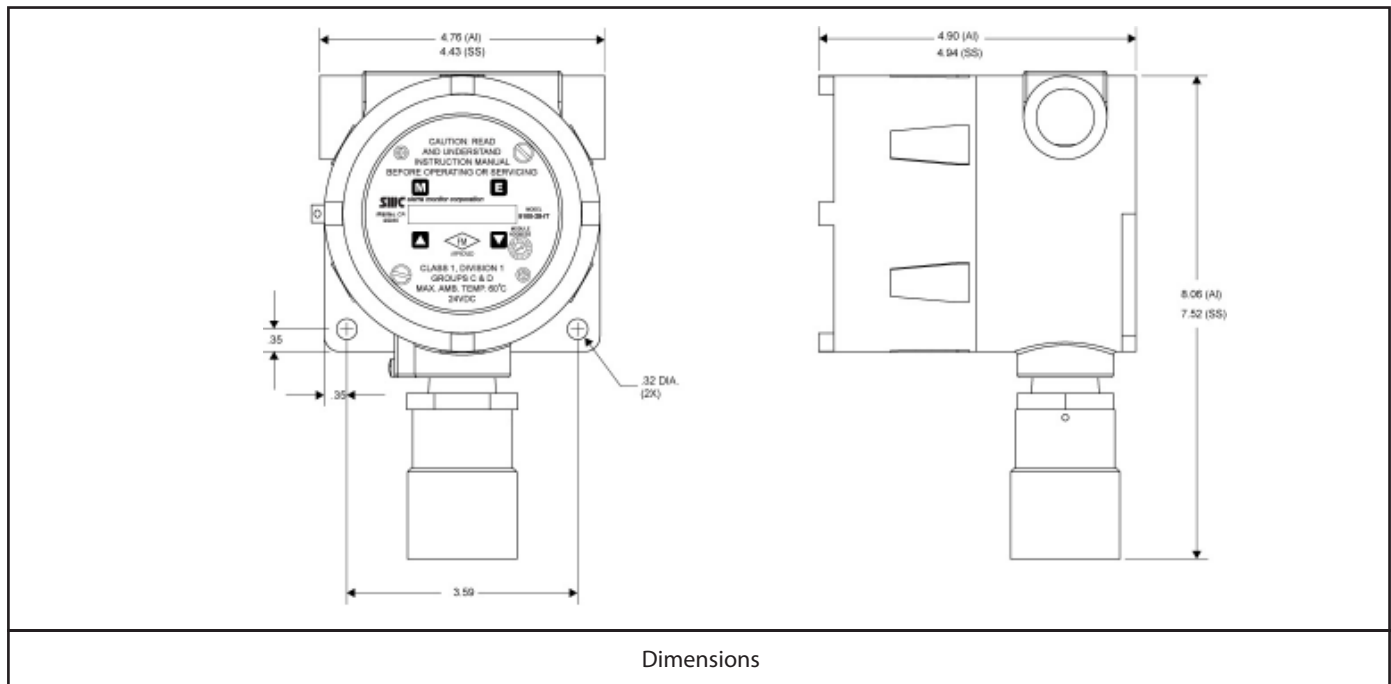
Infrared Combustible Gas Sensor Module

P/N 150930

Sensor type:	Infrared, Dual Wavelength
Performance:	
Dual Range:	
Default:	0-100% LEL Methane or Propane
User Setting:	0-100% by vol. Methane
Other gases:	%LEL Ethanol, Ethylene, Hexane, Butane, Propane, Pentane
Repeatability:	±1% LEL
Response time:	<10 sec to 60% full scale
Accuracy:	±1% for 0-50% LEL range ±2% for 51-100% LEL range
Sensor Life:	Typically >5 years
Output:	
Display:	Fixed and Scrolling LED
Relay:	0.25 Amp. High Alarm, Low Alarm, Trouble, all SPDT
Signal Output:	Analog 4-20 mA (Trouble, 0 mA)
Optional Relays:	Serial RS-485 Modbus RTU 8 amp high, low

Electrical Data:	
Power consumption:	3 watts
Connection type:	3 or 4 wire
Input voltage:	24 VDC nominal: 10-30VDC
Operating Range:	
Ambient Temp Range:	-4° to 140°F (-20° to 60°C)
Relative Humidity:	5-99%
Construction:	
Dimensions:	(Al) 8.1 x 4.8 x 4.9 in. (21 x 12 x 12 cm) (SS) 7.5 x 4.4 x 4.9 in. (19 x 11 x 12 cm)
Weight:	(Al) 2.7 lb. (1.3 Kg) — (SS) 5.4 lb. (2.6 Kg)
Housing:	Standard: Epoxy coated Aluminum Optional: 316 Stainless Steel
Hazardous Area Classification:	Explosion proof, Class I, Div. 1, Groups B, C, D Class I, Zone 1 Group IIB+H2 IP66, IP65
Warranty:	90 days
Approvals:	
FM Approval 6320	Combustible Gas Detector Performance
FM Approval 3600SIL Certified	Class I Div. 1, Groups B, C, D
NFPA72 Compliant	FMEDA data for SIL-1

Specifications subject to change without notice



www.questcontrols.com
Tel: (941) 729-4799, Fax: (941) 729-5480
208 9th Street Drive West, Palmetto, Florida 34221

