SEC Millenium

Infrared Hydrocarbon Gas Detector

CSA Performance Approved

Features

- *Infrared sensing technology*
- *Virtually maintenance free*
- *Low cost of ownership, over five years operating life*
- *Immune to poisoning and etching*
- *Designed for harsh environments*
- *Explosion proof*
- *Compact & lightweight*
- *Fast response time*
- *Smart calibration*
- *Self-compensating optical bench*
- *No moving parts*
- *Heated optical chamber*
- *Low power consumption*
- *Operates in constant hydrocarbon background*
- *Operates in anaerobic atmospheres*
- *Fault indications for all failure states*
- *Routine calibrations are not required*
- *4 to 20 mA output*
- *0 to 100% LFL detection range*
- *Can be coupled with SEC transmitter for network applications*
- *RS-485 communication link available*
- *Digital Display option available*

Applications

The **SEC Millenium** hydrocarbon detectors are designed to be used in the same applications where catalytic bead sensors have been applied.

- Refineries
- Drilling and production platforms
- Fuel loading facilities
- Oil well logging
- LNG/LPG processing and storage facilities
- Gas turbines
- Chemical plants
- Compressor stations
- Wastewater treatment facilities
- Transportation facilities

Operation / Description

SEC Millenium hydrocarbon detector is a single source dual wavelength instrument. The sensing and reference elements are self-compensating for optical integrity and other signal inhibitors. The industry standard 4 - 20 mA analog output provides remote alarm, fault and calibration signals.

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Infrared Gas Detector

Specifications

Model: Sensor Electronics Corporation
SEC MILLENIUM Infrared Hydrocarbon Gas Detector

Available gases:

Methane	Propane	Propylene
Octane	n-Butane	Diesel
Ethylene	Ethanol	Isopropyl Alcohol
	Methanol	DF 2000
	Ethylene Oxide	Green Earth

Please note *that this list is not all-inclusive. The SEC MILLENIUM can be calibrated for most hydrocarbons, provided a calibration gas is available. For more information please contact Sensor Electronics Corporation.*

Part Number: 1420280

Detection Method: Diffusion - Optional sample draw (requires a miinimum of 1 liter per minute flow rate.)

Output (analog):
4-20 mA (Source type),
max. 1000 Ohm load at 24 VDC supply voltage

Response Time:
T50 < 5 seconds
T90 < 10 seconds

Construction:
316 stainless steel.
Class 1, Division 1, Groups B, C and D

Accuracy:
+/- 3% LFL, 0 to 50% LFL (Lower Flammable Limit)
+/- 5% LFL, 51 to 100% LFL

Operating Temperature Rating:
-40˚ to +70˚C at 0 to 99% RH (non-condensing)

Operating Range:
18 to 32 VDC measured at the detector head

Power Consumption:
5 Watts Max

Max Current Draw: (at 24VDC)
Average: 210 mA Peak: 400 mA

Approvals: C22.2 No. 152-M1984 (R1997)

Installation Category: Cat. I, Pollution Degree 2

Weight: 5 lbs. (2.3 kg.)

Unit Status Chart

Current Output	Status
4-20 mA	Normal measuring mode
0.0 mA	Unit Fault
0.2 mA	Reference channel fault
0.4 mA	Analytical channel fault
0.8 mA	Unit warm up
1.0 mA	Optics fault
1.2 mA	Zero drift fault
1.6 mA	Calibration fault
2.0 mA	Unit spanning
2.2 mA	Unit Zeroing
4.0 mA	Zero gas level
5.6 mA	10% LEL
8.0 mA	25% LEL
12 mA	50% LEL
16 mA	75% LEL
20 mA	100% LEL
20.1 – 23 mA	Over range (>100%)

Other Products Available

Gas Detectors – Explosion proof
Gas Detectors – Non-explosion proof
Fire Suppression - Aerosol Generators
Portable Fire Suppression Systems:
Dry Chemical
Halotron
Twin Agent
Stationary Fire Suppression Systems

Sensor Electronics Corporation
5500 Lincoln Drive, Minneapolis, Minnesota 55436 U.S.A. • (800) 285-3651 • (952) 938-9486 • FAX: (952) 938-9617
Email: sensor@minn.net • website: www.sensorelectronic.com