

# **POINT HYDROCARBON** — **INFRARED**Reliable, explosion proof infrared point gas detector for harsh high priority applications.



The Point Hydrocarbon – IR has a straight-forward design and rugged 316 stainless steel construction to withstand the most demanding applications.

### **Dual Wavelength NDIR Technology**

The sensing and reference elements are self-compensating for optical integrity and other signal inhibitors.

### Operates in Anaerobic Atmospheres and Constant Hydrocarbon Background

The self-contained optics fully function in applications where there is no oxygen or hydrocarbons are regularly present. The Point Hydrocarbon – IR optics are also immune to poisoning and etching.

### No Routine Calibration and Virtually Maintenance Free

There is no scheduled calibration programs required for the operation of this instrument and maintenance is limited to an annual zeroing.

### 3-Wire 4-20 mA Linear Output

These point detectors can be installed in new construction or retrofit situations using using 3-wires. The detectors communicate faults and special functions using signals below 4 mA.

See reverse for detailed specifications



## POINT HYDROCARBON — INFRARED

Using a solid state collimated Infrared light source and self compensating heated optics, the Point Hydrocarbon NDIR LEL detector is ideally suited for use in very harsh and hazardous environments demanding low-maintenance gas detectors. The 316ss explosion proof housing has no mirrors or beam splitters and the optics are sealed from dirt and water ingress. With a 100 mm plus optical path, response time is <5 seconds.

The Point Hydrocarbon Infrared gas detector performs reliably in the presence of silicone and other catalytic poisoning agents and operates in Oxygen-free environments or background LEL levels. There are no known poisons that affect the sensor technology. The advanced processor-based electronics are sealed and have no user access or adjustments. The recommended maintenance interval is one year.

### **Common Applications:**

- Fire & Gas Applications
- Drilling
- Production
- FPSO
- · Oil Refining
- · Gas Processing

- LNG/LPG Processing
- Loading Racks
- Compressor Stations
- Gas Turbines
- Chemical Plants
- Waste Treatment

Point Hy	drocarbon—IR Specifications
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Types:	Combustibles
Technology:	Infrared
Detection Method	Diffusion
Min. Detectable Change.	± 1 %LEL
Repeatability	± 2 % of reading
Accuracy	± 3 % LEL, 0 to 50% LEL
	± 5 % LEL, 51 to 100% LEL
Response Time (Rise)	T50 ≤ 5 seconds
	T90 ≤ 10 seconds
Oxygen Requirement	None

#### **Electrical**

Power:	18-32 Vdc, measured at detector
	5 Watts max
Termination Resistance	:< 500 Ω @ 24 VDC
Outputs:	3-wire, 4-20 mA

### **User Interface**

Controls:Zero	
Interface:4 mA level and activator	
Environmental	
Temperature:40° to 158°F (-40° to 70°C)	
Humidity:0-99 % RH, non-condensing	
Enclosure	
Material:316 Stainless Steel	
Ingress:IP54	
Weight:5 lbs (2.3 kg)	
Approvals	
CSA:Class 1, Div. 1 Groups B, C & I	D
EMI Protection	
ISAS12.13.01-2000	

Note: Refer to certification documents and datasheets for specific approval and configuration information.

Available Gases
(0-100% LEL)
Cyclopentane
DF 2000
Diesel
Ethanol
Ethylene
Ethylene Oxide
Gasoline
Isobutane
Isopropyl Alcohol
Jet A
Methane
Methanol
n-Butane
Pentane
Propane
Propylene

Other gases may be available. Please call factory.

Output Signals	
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 mA	Over range

Ordering Information (Gas)	Junction Box & Sensor	Sensor Only
Acetone Sensor	820-9902-01	820-9903-01
Ammonia Sensor	820-9906-01	820-9907-01
Carbon Dioxide 0-5% by Volume	820-9902-02	820-9903-02
Cyclopentane Sensor	820-9902-03	820-9903-03
DF 2000 Sensor	820-9902-04	820-9903-04
Diesel No. 1 Sensor	820-9902-05	820-9903-05
Ethane Sensor	820-9902-06	820-9903-06
Ethanol Sensor	820-9902-07	820-9903-07
Ethylene Oxide Sensor	820-9902-08	820-9903-08
Ethylene Oxide Sensor	820-9902-09	820-9903-09
Gasoline Sensor	820-9902-10	820-9903-10
Isobutane Sensor	820-9902-11	820-9903-11
Isopropyl Alcohol Sensor	820-9902-12	820-9903-12
Jet A Sensor	820-9902-13	820-9903-13
Methane Sensor	820-9902-14	820-9903-14
Methane 0-100% Sensor	820-9902-15	820-9903-15
Methanol Sensor	820-9902-16	820-9903-16
n-Butane Sensor	820-9902-17	820-9903-17
Pentane Sensor	820-9902-18	820-9903-18
Propane Sensor	820-9902-19	820-9903-19
Propane 0-100% Sensor	820-9902-20	820-9903-20
Propylene Sensor	820-9902-21	820-9903-21