

SPECIFICATION DATA

PointWatch® Infrared Hydrocarbon Gas Detector Model PIR9400



APPLICATIONS

Y E A R
5
WARRANTY

The PointWatch® detector is a diffusion-based point-type infrared gas detector approved to provide continuous monitoring of methane gas concentration in the range of 0 to 100% LFL. The detector provides a 4-20 mA output signal, corresponding to the detected gas concentration. The detector has Division and Zone explosion-proof ratings and is suitable for use in indoor and outdoor applications.

PointWatch is ideally suited for use in harsh environments and where the cost of required maintenance for conventional catalytic detectors is prohibitive. The PointWatch IR detector will perform reliably in the presence of silicone and other catalytic poisoning agents and can also operate in oxygen free environments or where high background gas levels are present. There are no known poisons that affect this technology.

The PointWatch detector is globally certified for use in Class 1, Divisions 1 and 2, and Zones 1 and 2 hazardous areas. It is also approved as a stand alone gas detector, and complies with global approvals when connected to a stand-alone approved controller for life safety. The approved Det-Tronics controllers are the FlexVu® UD10, Ininiti® U9500, R8471, and Eagle Quantum Premier® (EQP).

FEATURES AND BENEFITS

- Compliance to ANSI/ISA 12.13.01-2000 performance standard.
- Requires no routine calibration to ensure proper operation.
- Fail-safe operation.
- Continuous self-test automatically indicates a fault or fouled optics condition.
- Unique multi-layered filtering system protects optics from dirt and water ingress.
- Internal heating system minimizes condensation, allowing reliable operation through temperature extremes.
- There are no known poisons, e.g. silicones or hydrides, that compromise the integrity of the measurement.
- Performs well in the presence of high concentrations or constant background levels of hydrocarbons, and in oxygen depleted atmospheres.
- Standard 4–20 mA output (current source).
- Compact, lightweight, explosion-proof housing is designed for duty in harsh environments.
- Standard 0 to 100% LFL detection range.

SPECIFICATIONS

Input Voltage	24 Vdc nominal. Operating range is 18 to 32 Vdc.			
Power Consumption (Watts)	Input Voltage:	18 Vdc	24 Vdc	32 Vdc
	Nominal	3.5	4.6	6.2
	Maximum	4.0	5.5	7.0
Detection Range	0 to 100% LFL.			
Gases	The PointWatch detector is approved to methane, but most flammable hydrocarbon vapors (ethane, ethylene, propane, butane, and propylene) are also detectable.			
Current Output	Linear 4 to 20 mA current source 4 to 20 mA output indicates 0 to 100% LFL detection range (for linearized gases) 23.2 mA indicates over-range condition (120% LFL) 0 to 2.4 mA levels indicate calibration, fault and fouled optics conditions.			
Accuracy (Room Temperature)	±3% LFL from 0 to 50% LFL, ±5% LFL from 51% to 100% LFL.			
Response Time (seconds)		<u>T50</u>	<u>T90</u>	
	Multilayered aluminum weather baffle			
	With hydrophobic screen	7	14.4	
	Without hydrophobic screen	5	10	
	Polyphthalamide (PPA) weather baffle			
	With hydrophobic screen	6	16	
	Without hydrophobic screen	2	3	
Stability (Temp)	<u>Zero:</u> ±2% LFL from -40°F to +167°F (-40°C to +75°C). <u>Span:</u> ±5% LFL at 50% LFL from -13°F to +167°F (-25°C to +75°C) ±10% LFL at 50% LFL from -40°F to -13°F (-40°C to -25°C).			
Stability (Time)	(10 months) ±2% LFL.			
Repeatability (Room Temperature)	<u>Zero:</u> ±1% LFL. <u>Span:</u> ±2% LFL at 50% LFL.			
Wiring	Five 22 AWG wires, 20 inches (50.8 cm) long.			
Temperature Range	<u>Operating:</u> -40°C to +75°C (-40°F to +167°F). <u>Storage:</u> -40°C to +85°C (-40°F to +185°F).			
Humidity	0 to 99% relative humidity (non-condensing)			
RFI/EMI Protection	Operates properly with 5 watt walkie talkie keyed at 1 meter.			
Ingress Protection	IP66, NEMA 4.			

Certification



FM / CSA: Class I, Div. 1, Groups B, C & D (T5)
Class I, Div. 2, Groups A, B, C & D (T3C)
Performance per FM 6310/6320 & CSA 22.2 #152.



ATEX: **CE** 0539 II 2 G
Ex d IIB+H₂ T4-T6
EN 60079-29-1
DEMKO 09 ATEX 147301X
T6 (T_{amb} -55°C to +50°C)
T5 (T_{amb} -55°C to +60°C)
T4 (T_{amb} -55°C to +75°C)
IP66.

EN Standards: EN 50270: 2006
EN 60079-0: 2006
EN 60079-1: 2007
EN 60529-1991+A1: 2000
EN 60079-29-1: 2007.



IECEX: IECEx ULD 10.0017X
Ex d IIB+H₂ T4-T6
T6 (T_{amb} -55°C to +50°C)
T5 (T_{amb} -55°C to +60°C)
T4 (T_{amb} -55°C to +75°C)
IP66.



Russian: GOST R Certificate of Compliance
Pattern Approval Certificate of Measuring Instruments.

Enclosure Materials

Aluminum (clear anodized) enclosure and weather protection baffles. Content: 0.8% to 1.2% Mg, 0.15% to 0.40% Cu.
Stainless Steel (316 electropolished) enclosure, polyphthalamide (PPA) weather protection baffle.

Shipping Weight

AL: 2 pounds (0.95 kilograms)
SS: 4 pounds (1.8 kilograms).

Dimensions

See Figures 1 and 2.

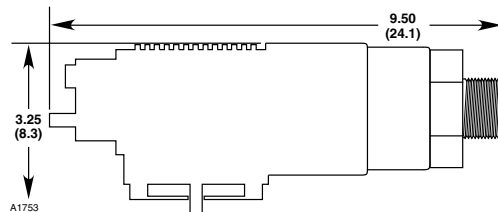


Figure 1—Aluminum PointWatch Unit Dimensions in Inches (cm)

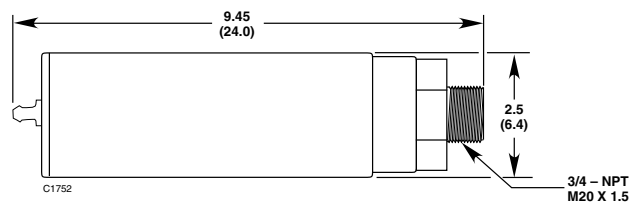


Figure 2—Stainless Steel PointWatch Unit Dimensions in Inches (cm)

Specifications subject to change without notice.

Det-Tronics, the DET-TRONICS logo, PointWatch, FlexVu, Infniti, and Eagle Quantum Premier are registered trademarks or trademarks of Detector Electronics Corporation in the United States, other countries, or both. Other company, product, or service names may be trademarks or service marks of others.

©Copyright Detector Electronics Corporation 2011. All rights reserved.



Detector Electronics Corporation

6901 West 110th Street • Minneapolis, Minnesota 55438 USA

Operator: (952) 941-5665 or (800) 765-FIRE

Customer Service: (952) 946-6491 • Fax (952) 829-8750

http://www.det-tronics.com • E-mail: det-tronics@det-tronics.com