DET-TRONICS®

SPECIFICATION DATA

PointWatch™ Infrared Hydrocarbon Gas Detector PIR9400

APPLICATIONS

The PointWatch Detector is a diffusion-based point-type infrared gas detector that provides continuous monitoring of combustible hydrocarbon gas concentrations in the range of 0 to 100% LFL. The detector provides a 4 to 20 milliampere output signal, corresponding to the detected gas concentrations.

YEAR 5 WARRANTY

PointWatch provides superior performance in applications where catalytic sensors have traditionally been applied for the detection of hydrocarbon gases:

— Confined spaces where gas/vapor leaks can concentrate to explosive levels (storage rooms, ducts).
— Known high risk leak locations (turbine enclosures, compressor buildings).
— General open area coverage (landfills, storage areas).

Applications for which PointWatch is the only choice are those in which catalytic detectors cannot perform satisfactorily or applications in which the performance of catalytic detectors is compromised.

BENEFITS AND FEATURES

IR TECHNOLOGY BENEFITS

- Reduced maintenance costs – routine calibration is not required.
- Continuously self-tests and automatically signals fault and fouled optics conditions.
- Immune to poisoning by silicone and hydrides.
- Impervious to etching by halogen compounds.
- Performance unimpaired in presence of high concentrations or prolonged exposure to hydrocarbons as well as in oxygen depleted atmospheres.

UNIQUE DESIGN

- Compact and lightweight.
- Built to withstand harsh environments.
- Multi-layered filter system protects optics from dirt and water.
- Optics heated to prevent condensation.

COST FLEXIBILITY

- Buy only what you need to best protect your facility.
- Use as a standalone unit, linked with a DCS or PLC, or retrofit to many existing gas detection systems.
- Fully compatible with Det-Tronics' R8471 Controller, Infiniti™ Transmitter or Eagle 2000™ and Eagle Quantum™ Systems.

FM APPROVED

Printed in USA (8/00)
90-1074-02

SPECIFICATIONS

Input Voltage 24 vdc. Operating range is 18 to 32 vdc including ripple.

Power Consumption 5 watts nominal, 7 watts maximum.

Current Output Linear 4 to 20 ma current source (non-isolated)

4 to 20 ma output indicates 0 to 100% LFL detection range (standard)

23.2 ma indicates over-range condition (120% LFL)

0 to 2.4 ma levels indicate calibration, fault and fouled optics conditions.

Detection Range 0 to 100% LFL.

Gases Methane, Ethane, Propane, Butane, Ethylene, Propylene

All devices are shipped with 0 to 100% LFL linear output for methane.

0 to 100% LFL outputs for the above standard gases are switch-selectable and can be set in the field.

Response to other gases/vapors available.

Accuracy * ±3% LFL from 0 to 50% LFL, ±5% LFL from 51% to 100% LFL.

Stability (Temp) ** Zero: ±2% LFL from –40°F to +167°F (–40°C to +75°C).

Span: ±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) ** (12 months) ±2% LFL.

Repeatability * Zero: ±1% LFL.

Span: ±2% LFL at 50% LFL.

Temperature Range Operating: –40°C to +75°C (–40°F to +167°F).

Storage: –40°C to +85°C (–40°F to +185°F).

Humidity 0 TO 99% relative humidity (non-condensing)

* Based on a 0 to 100% LFL methane calibration at room temperature.

**Based on a 0 to 100% LFL methane calibration.

Response Time (seconds)

	T50	T90
Multilayered aluminum weather baffle and hydrophobic filter	9	21
Polyphthalamide (PPA) weather baffle	2	5

Certification* CENELEC: EEx d IIB + H_2 T6 (Tamb –40°C to +40°C) T5 (Tamb –40°C to +75°C).

FM: Explosion-proof for Class I, Div. 1, Groups B, C & D per FM 3615. Performance per FM 6320.

CSA: Explosion-proof for Class I, Div. 1, Groups B, C & D per CSA C22.2 No. 30. Performance per CSA C22.2 No. 152.

* Always ensure sensor hazardous (classified) location rating is applicable for the intended use.

Ingress Protection IP66, NEMA 4.

Wiring Five 22 AWG wires, 20 inches (50.8 cm) long.

RFI/EMI Protection EN50081-1. Class B, EN50082-1 (IEC 801-2, 3, 4).

Operates properly with 5 watt walkie talkie keyed at 1 meter.

Shipping Weight Aluminum: 3 pounds (1.3 kilograms).

Stainless Steel: 4.8 pounds (2.2 kilograms).

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.

Dimensions Aluminum: 8.95 inches (227 mm) long, 2.5 inches (64 mm) diameter

Stainless Steel: 9.5 inches (241 mm) long, 3.25 inches (82.6 mm) diameter.

Junction Boxes Tall Cover/Window Junction Box for one person, non-intrusive calibration.

Short Cover Junction Box requires two people to accomplish non-intrusive calibration.

Junction Box Terminals UL/CSA rated for 14 to 22 AWG wire; DIN/VDE rated for 2.5 mm^2 wire.

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Specifications subject to change without notice.