

**Volumetric Infrared Hydrocarbon Gas
Process Monitor
PIRVOLLT****DESCRIPTION**

PIRVOLLT is a point-type infrared hydrocarbon gas process monitor. It provides a continuous 4-20 milliampere (mA) output signal that is proportional to methane vapor concentrations from 0 to 100% by volume.

PIRVOLLT is designed for use in extractive vapor sampling systems where the vapor concentration is likely to be above the lower flammability limit (LFL). Typical applications for the PIRVOLLT include hydrocarbon well logging and petroleum exploration where a volumetric measurement of the target gas is required.

PIRVOLLT is furnished with a sealed aluminum or stainless steel vapor sampling enclosure. Brass compression-type tubing fittings on the enclosure (for use with 0.25 inch O.D. tubing) allow easy connection to the inlet and exhaust lines of the vapor sample extraction system.

PIRVOLLT is CSA certified for use in Class I, Division 1, Groups B, C and D; and Class I, Division 2, Groups A, B, C and D areas.

FEATURES AND BENEFITS**IR TECHNOLOGY BENEFITS**

- Routine calibration not required.
- Continuous self-test automatically indicates a fault or fouled optics condition.
- Performs well in the presence of high concentrations or constant background levels of hydrocarbons and in oxygen depleted atmospheres.
- There are no known poisons, e.g. silicones or hydrides, that compromise the integrity of the measurement.
- Analog 4 to 20 milliampere signal output (current source).
- Hydrophobic screen provides superior optics protection.

UNIQUE DESIGN

- Compact, lightweight and explosion-proof.
- Built to withstand harsh environments.
- Optics heated to prevent condensation.
- Factory calibrated.

SPECIFICATIONS

Input Voltage	24 Vdc nominal. Operating range is 18 to 32 Vdc including ripple.
Power Consumption	4.6 watts nominal @ 24 Vdc 5.5 watts maximum @ 24 Vdc 7.0 watts maximum @ 32 Vdc
Detection Range	0 to 100% by volume methane.
Current Output	4 to 20 mA output indicates 0 to 100% by volume. 0 to 2.2 mA levels indicate calibration, fault and fouled optics conditions.
Detectable Gases	PIRVOLLT responds to most hydrocarbon gases, however, the signal processing program is only accurate for methane.
Accuracy (Det-Tronics Verified)	±2% v/v from 0 to 10% v/v ±3.5% v/v from 10 to 50% v/v ±6% v/v from 50 to 90% v/v ±7% v/v from 90 to 100% v/v.
Temperature Range	Operating: (-40°F to +167°F) -40°C to +75°C. Storage: (-40°F to +185°F) -40°C to +85°C.
Humidity	0 to 99% relative humidity (Det-Tronics verified). 5 to 95% relative humidity (CSA verified).
Wiring	Five 22 AWG wires, 20 inches (50 cm) long.
Enclosure Materials	Copper-free aluminum (clear anodized) or 316 Stainless Steel enclosure.

Certification



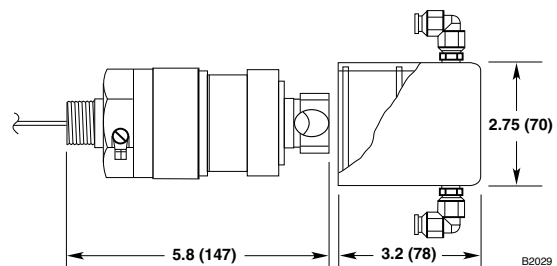
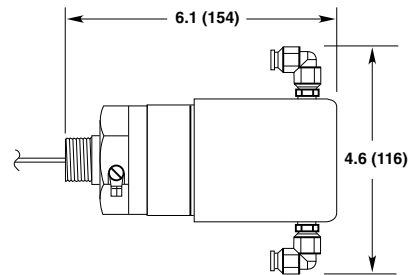
CSA: Class I, Div. 1, Groups B, C and D;
Class I, Div. 2, Groups A, B, C and D (T3C).

ATEX/CE: **CE** 0539 **Ex** II 2 G
Ex d IIB+H₂ T4-T6
DEMKO 09 ATEX 148373X
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

Sample Draw Cup	Material: Aluminum or Stainless Steel. Fittings: Nickel-plated Brass. Tubing Size: 1/4 inch O.D.
Junction Boxes	Det-Tronics junction box, available in a tall cover (with window) or a short cover version, is recommended for optimum ease of installation. PIRVOLLT can be threaded into any approved junction box suitable for the specific application. Junction box thread options: • 3/4 inch NPT • M 25.
Junction Box Terminals	UL/CSA rated for 14 to 22 AWG wire; DIN/VDE rated for 2.5 mm ² wire.
Shipping Weight (Approximate)	Aluminum: 1.9 pounds (0.9 kilogram). Stainless Steel: 5.0 pounds (2.3 kilograms).
Dimensions	Dimensions in Inches (mm).



Specifications subject to change without notice.

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