

Baseline - MOCON, Inc.

piD-TECH *plus*™

Photoionization Sensor



Sensor

The “piD-TECH *plus*™” Plug-In Photoionization Sensor is designed to be installed in portable and stationary gas monitors that accept City Technology™ - 4P cells. It provides complete photoionization detection capability in a package that has the same dimensional and electrical profile as these cells.

This gives many gas monitors new and powerful detection capability that was previously unavailable. It opens up an incredible variety of environmental and safety applications in industrial, commercial and residential markets.

The piD-TECH *plus*™ sensor is offered in two models. They are virtually insensitive to humidity changes, providing unparalleled performance in a variety of applications. The piD-TECH *plus*™ Black Label has a linear dynamic range of 0.1ppm to 2,000ppm. The piD-TECH *plus*™ Silver Label has a linear dynamic range of <0.01ppm to 20ppm.

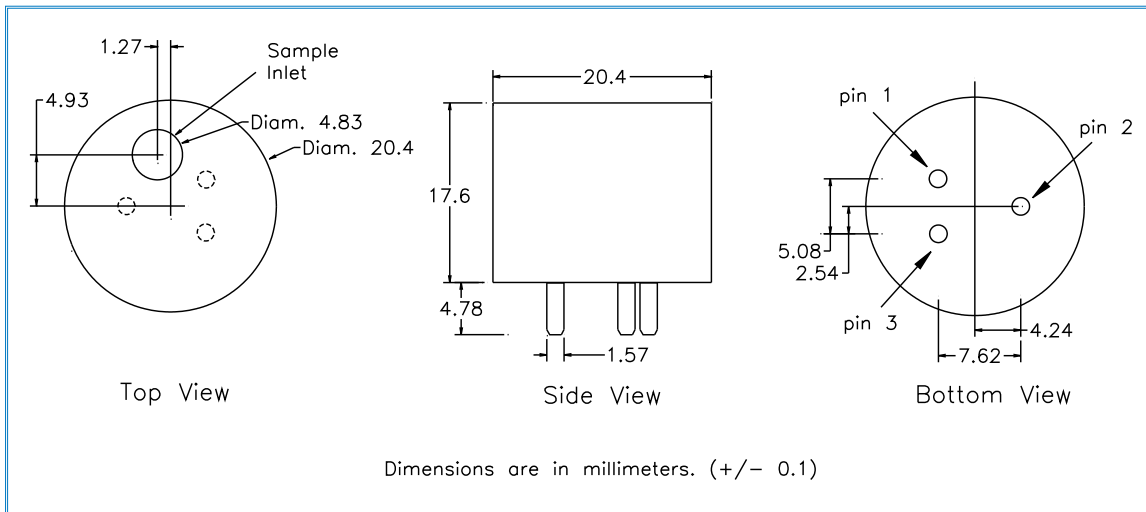
The sensor is based on a photoionization detector (PID). The sample gas is exposed to an ultraviolet light from a lamp. The light emitted by the lamp ionizes the targeted gases in the sample so they can be detected by the instrument and reported as a concentration. Chemicals such as VOCs with an ionization potential <10.6 eV will be detected by photoionization. Contact Baseline for a comprehensive ionization potential list.

Applications

- **Industrial hygiene & safety monitoring**
- **Soil contamination and remediation**
- **Hazmat sites and spills**
- **Low concentration leak detection**
- **EPA Method 21 and emissions monitoring**
- **Arson investigation**

Features

- City Technology™ - 4P cell platform compatible
- Complete Sensor including:
 - Detector Cell
 - UV Lamp
 - Lamp Driver
 - Amplifier
 - Sample Filter
- Lamp energy = 10.6 eV
- Intrinsically Safe



Performance Characteristics

Target Gases: VOCs and other gases with Ionization Potential <10.6 eV - An ionization potential list is available upon request.

Lamp Energy: 10.6 eV

Range:

- PN ZPP6018001 (Black Label) 2000 ppm Isobutylene
- PN ZPP6018002 (Silver Label) 20 ppm Isobutylene

Minimum Detectable Quantity:

- PN ZPP6018001 (Black Label) 0.1 ppm Isobutylene
- PN ZPP6018002 (Silver Label) <0.01ppm Isobutylene

T90 Response Time: < 20 seconds (diffusion mode)

Temperature Range: -20°C to 40°C

Relative Humidity Range: 0 to 90% non-condensing

Humidity Response: < 1ppm @ 90% r.h.

Humidity Quenching Effect: < 15% @ 90% r.h.

Onboard Filter: To remove liquids/particles

Electrical Characteristics

Supply Voltage: 3.2V – 10V

Current: 20mA - 30mA

Power Consumption: 64mW - 300mW, dependent on supply voltage.

Output Signal: 0.05V – 2.5V

Physical Characteristics

Weight: <8g

Package Type: City Technology™ 4p

Position Sensitivity: None

Servicable Parts: Lamp, detector cell, filters

Warranty Period: 18 months from date of shipment or 12 months from date of installation, whichever ever comes first

Certifications

USA: UL 913 (Sixth Edition), For use in Class I, Division 1, Groups A, B, C, D Locations.

Europe: ATEX directives EN50014: 1997 E and EN50020:2002 E, II 2 G EEx ia IIC, Tamb -20C to +60C

Other: IECEx Standards IEC60079-0: 2004 and IEC60079-11: 1999, Ex ia IIC Tamb = -20C to + 60C. Detailed documentation for specific certification is available upon request. Above certifications are issued for piD-TECH *plus*™ sensor only and are not applicable to the equipment in which it is incorporated.

Patents: US Pat 6,646,444, Japan Pat 3,793,757

P.O. Box 649, 19661 Highway 36 • Lyons, CO 80540

P: 1.800.321.4665 • 1.303.823.6661 F: 303.823.5151 E: Sales@BaselineIndustries.com