

piD-TECH® eVx™ OEM PHOTOIONIZATION SENSORS



Eight (8) different detection levels between two lamp energies offer a broad range of detection capabilities

Applications

- Industrial Hygiene & Safety Monitoring
- Confined Space Entry
- Soil Contamination and Remediation
- Hazmat Sites & Spills
- Low Concentration Leak Detection
- Indoor Air Quality
- Fenceline Monitoring
- EPA Method 21

The #1 PID sensor of choice by OEMs for over 15 years

As one of the most widely used gas detection techniques, the Photoionization Detector (PID), in general, is commonly applied in both portable and fixed instruments for detection of a wide variety of organic compounds and some inorganic gases in ambient air.

MOCON's patented, award-winning piD-TECH eVx plug-in sensor provides complete photoionization detection capabilities and is designed to be mechanically similar with major brands of electrochemical sensors using the 4P cell platform*. Outstanding features make the piD-TECH line of sensors the right choice for OEM manufacturers looking to include VOC detection capabilities in their handheld, mobile, or fixed devices.

Offering better value and design flexibility for OEM markets, and incorporating state of the art technology that cannot be matched in the marketplace, the piD-TECH eVx detection capabilities and minimum detection quantity (MDQ) come in eight ranges depending upon lamp energy and application requirements.

Our dedicated sensor engineers will assist you in integrating our intrinsically safe PID sensor into your products, reducing the time and high cost associated with product development.

*Verify height dimensions for designs that enclose the sensor, or seal on the top surface.

Features & Benefits

- Designed for use in intrinsically safe circuits: UL, CAN/CSA, ATEX, IECEx certified
- Integral shielding
- 4P cell platform compatible
- Lamp re-ignition circuit for fast, repeatable and dependable startup
- Reliable long lamp life: guaranteed 6,000 continuous hours
- Internal, input voltage regulation for greater signal stability
- Dual filter technology protects from aerosols and particulates
- Negligible temperature response
- Guard electrode curtails humidity effects
- Rapid response & greater baseline stability
- Easily cleaned and field serviced
- Out of warranty Sensor Exchange Program

10.6 eV	Green	Purple	Red	Yellow	Blue
Part Number	045-010	045-011	045-012	45-013	045-014
Range**	10,000 ppm	2,000 ppm	200 ppm	20 ppm	2 ppm
MDQ**	500 ppb	100 ppb	10 ppb	1.5 ppb	0.5 ppb
T90 Response Factor	≤ 2 sec (typical)	≤ 2 sec (typical)	≤ 2 sec (typical)	≤ 4 sec (typical)	≤ 4 sec (typical)

10.0 eV	Purple	Red	Yellow
Part Number	045-017	045-015	045-018
Range**	6,000 ppm	600 ppm	60 ppm
MDQ**	500 ppb	50 ppb	5 ppb
T90 Response Factor	≤ 2 sec (typical)	≤ 2 sec (typical)	≤ 4 sec (typical)

**Range and MDQ (Minimum Detectable Quantity) are based on isobutylene.

OEM PHOTOIONIZATION SENSORS

Physical Characteristics *All sensors calibrated with Isobutylene*

Complete sensing unit includes detector cell, UV lamp, lamp driver, amplifier and sample filter

Weight	< 8 grams
Package Type	4P cell dimensional profile
Serviceable Parts	Lamp, detector cell, filters (2), cap, spacer
Lamp Life	Guaranteed 6000 hours (typical life significantly longer)
Onboard Filters	Removes liquids / particles
Warranty Period	18 months

Electrical Characteristics

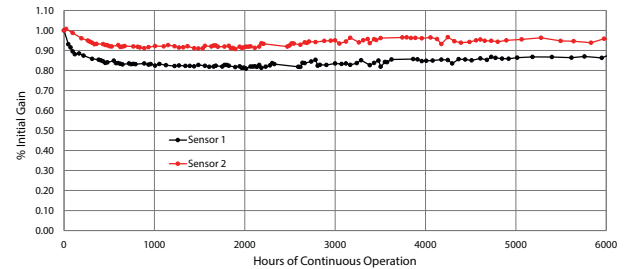
Supply Voltage	3.2 V to 5.5 V (input voltage regulator included)
Current	24 mA to 36 mA
Power Consumption	80 mW to 200 mW (dependent upon supply voltage)
Output Signal	0.045 V to 2.5 V linear

Operating Specifications

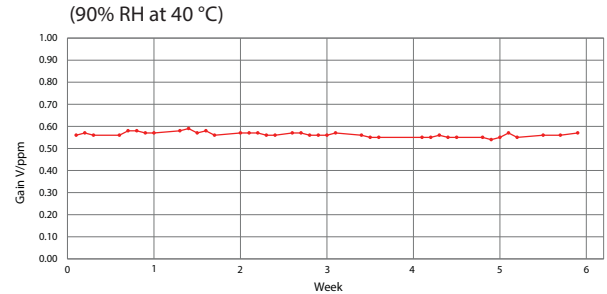
Temperature Range	-20 °C to 60 °C (-4 °F to 140 °F)
Relative Humidity Range	0 to 90% non-condensing
Humidity Response	≤ 1% @ 90% relative humidity
Humidity Quenching Effect	≤ 15% @ 90% relative humidity
Accuracy	± 3% of reading, with constant temperature and pressure

Designed for Continuous Use

Long-life in continuous operation



Stable Gain in High Humidity Environments (90% RH at 40 °C)

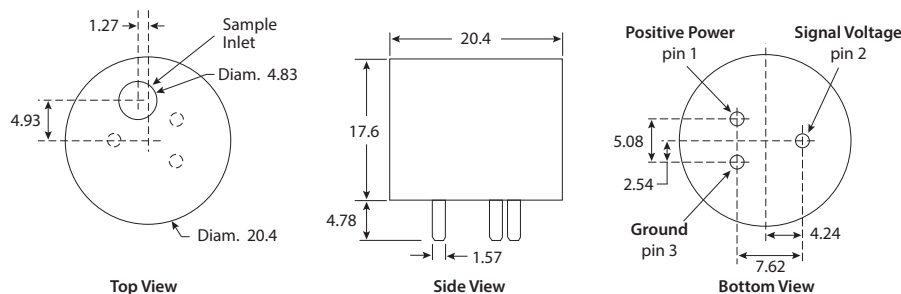


Certifications & Approvals*

piD-TECH eVx is a UL certified component; Intrinsically safe - no external components required.

USA	UL 913, 8 th Edition. Intrinsically Safe Apparatus and Associated Apparatus for use in Class I, Div 1, Groups A, B, C, D locations.
Europe	ATEX directives: EN 60079-0:2012, A11:2013; EN 60079-11:2012; II 1 G Ex ia IIC T4, -20 °C – 60 °C ATEX certificates: DEMKO 13 ATEX 1304446U Rev. 1; 0539
Other	IECEX Standards: 60079-0 Ed. 6; 60079-11, Ed. 6; Certificate IECEX UL 13.0050U Issue: 1; CAN/CSA C22.2 No. 157-92
Patents	US Pat 6,646,444; Japan Pat 3,793,757

* Detailed documentation for specific certification is available upon request. Above certifications are issued for piD-TECH eVx sensor only and are not applicable to the equipment in which it is incorporated.



Mechanical Specifications

Dimensions are in millimeters (± 0.1).

Use of socketed connection is required. Soldering or cutting the connection pins may permanently damage the sensor and void the warranty.



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