piD-TECH® *eVx*
OEM Sensors

Product Specifications

piD-TECH®*eVx* Photoionization Sensor

A new level of photoionization technology

New piD-TECH® eVx photoionization detector (PID) with improved performance capabilities

Introducing the new piD-TECH eVx sensors. Incorporating state of the art technology and upgrades that cannot be matched in the marketplace.

New attributes are included without compromising the outstanding and award-winning features that make the piD-TECH line of sensors the right choice for OEM manufacturers.

The piD-TECH eVx's new features offer better value and design flexibility for OEM markets. Providing new and powerful gas detection capabilities while reducing the high cost and time in the product development process.

Upgrades include:

- Minimum detection limits down to 0.5 ppb
- Negligible temperature response
- Minimal humidity response
- Integral shielding
- Reduced dead volume
- Reduced and improved response time
- Lower pricing

Intrinsically safe design and 4P platform make installation in portable or stationary gas monitors a snap.

With over four decades of experience, Baseline® provides an award winning sensor that is utilized in a wide variety of VOC (volatile organic compounds) monitoring applications.

Five (5) different detection levels with two lamp energies offer a broad range of detection capabilities

10.6 eV	Green	Purple	Red	Yellow	Blue
Part Number	045-010	045-011	045-012	045-013	045-014
Range *	10,000 ppm	2,000 ppm	200 ppm	20 ppm	2 ppm
MDQ *	1,000 ppb	500 ppb	50 ppb	5 ppb	0.5 ppb

10.0 eV	Purple	Red	Yellow
Part Number	045-017	045-015	045-018
Range *	6,000 ppm	600 ppm	60 ppm
MDQ *	1500 ppb	150 ppb	15 ppb

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

Features and Benefits

- Intrinsically safe
- Saves time and money in R&D and product design
- 4P cell platform compatible
- Variety of ranges and lamp energies
- Quick start lamp ignition circuit
- Long lamp life
- Input voltage regulation for greater stability
- Easily cleaned and field serviced
- Out of warranty Sensor Exchange Program

Applications

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

Baseline®
a mocon company

Physical Characteristics

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

Weight	< 8 gr
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

All sensors calibrated with Isobutylene

Warranty Period: 1st of 18 months from ship date or 12 months from install date

Electrical Characteristics

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

Operating Conditions

Temperature Range	-20° C to 60° C (-4° F to 104° F)
Relative Humidity Range	0 to 90% non-condensing
Humidity Response	≤ 1 % @ 90% relative humidity
Humidity Quenching Effect	≤ 15% @ 90% relative humidity

Certifications & Approvals*

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

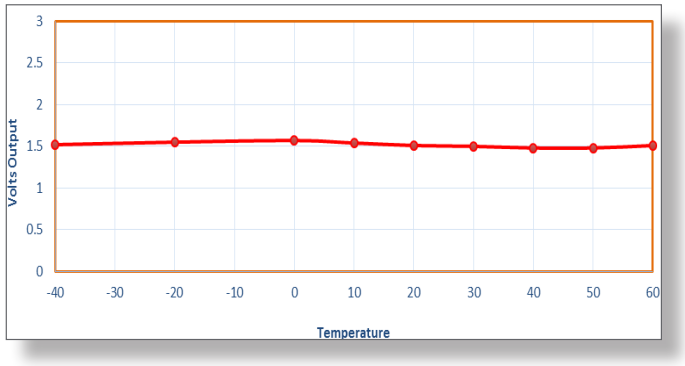
USA	UL 913 (Eighth Edition), For use in Class I, Division 1, Groups A, B, C, D Locations.
Europe	ATEX directives EN 60079-0:2012, EN 60079-11:2012 and EN 60079-26:2007, Ⓔx II 1 G Ex ia IIC Ga T4, Tamb = -20C to +60C ATEX Certificate DEMKO 13 ATEX 1304446U Rev. 0 CE 0539
Other	IECEx Standards, EN60079-0, 6th Edition; EN60079- 11, 6th Edition; and EN60079-26, 2nd Edition Ⓔx II 1 G Ex ia IIC Ga, Ex ia IIC Ga IECEx UL 13.0050U Tamb = -20C to +60C
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.

Temperature & Humidity Effects

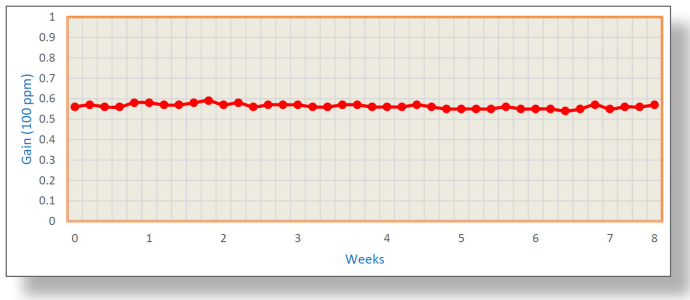
Temperature Response

(10 ppm isobutylene)

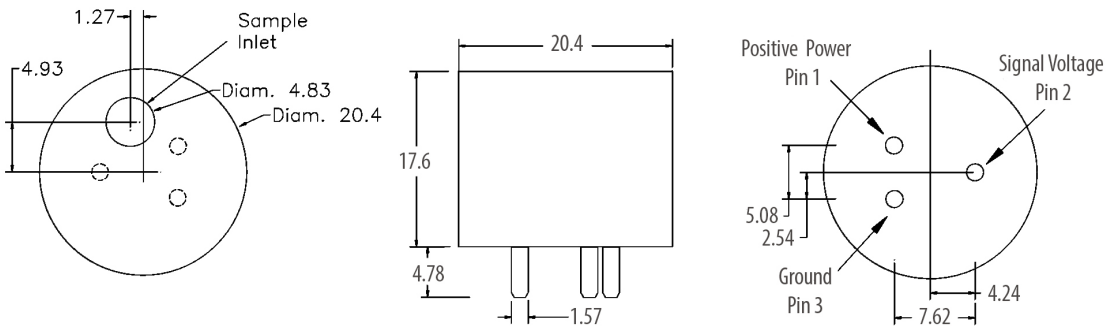


RH Conditioning

(90% RH at 40C)



Mechanical Specifications



Top View **Side View** **Bottom View**

Dimensions are in mm (+/-0.1)

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

Contact Baseline for a complete ionization potential list.

Baseline® a mocon company

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