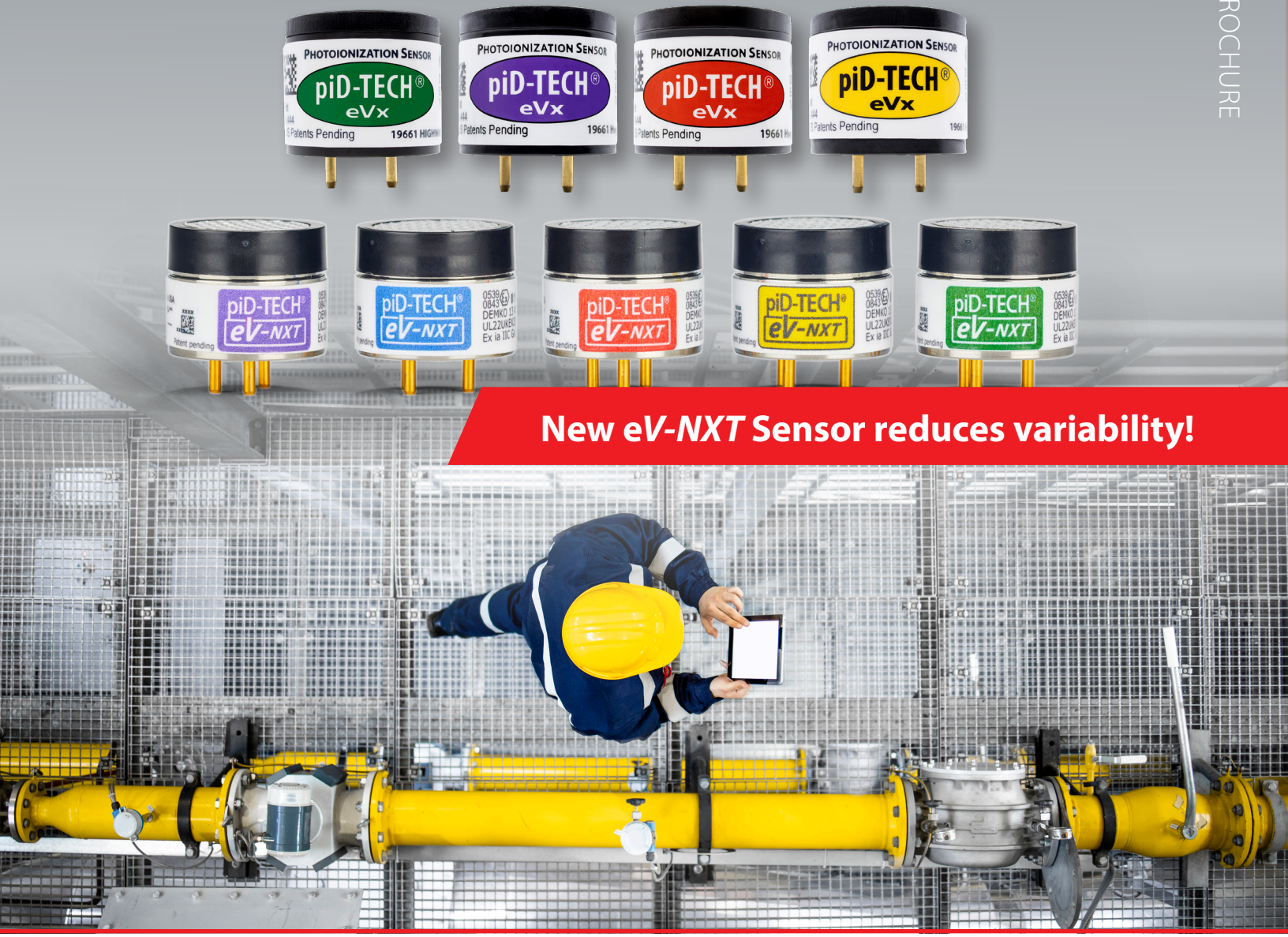
mocon®
AMETEK®

PRODUCT BROCHURE



New *eV-NXT* Sensor reduces variability!

piD-TECH® FAMILY:
PHOTOIONIZATION SENSORS

Measurement of total volatile organic compounds for safety, compliance and environmental applications.

THE INDUSTRY STANDARD FOR VOC MEASUREMENT

Photoionization Detector (PID) is the most widely-used gas detection technique to measure total volatile organic compounds (tVOC). The PID sensor is a small and accurate sensor for measurements of VOC in industrial safety and environmental air quality applications. The MOCON® piD-TECH line of sensors is a proven solution for handheld, portable and fixed gas analysis devices.

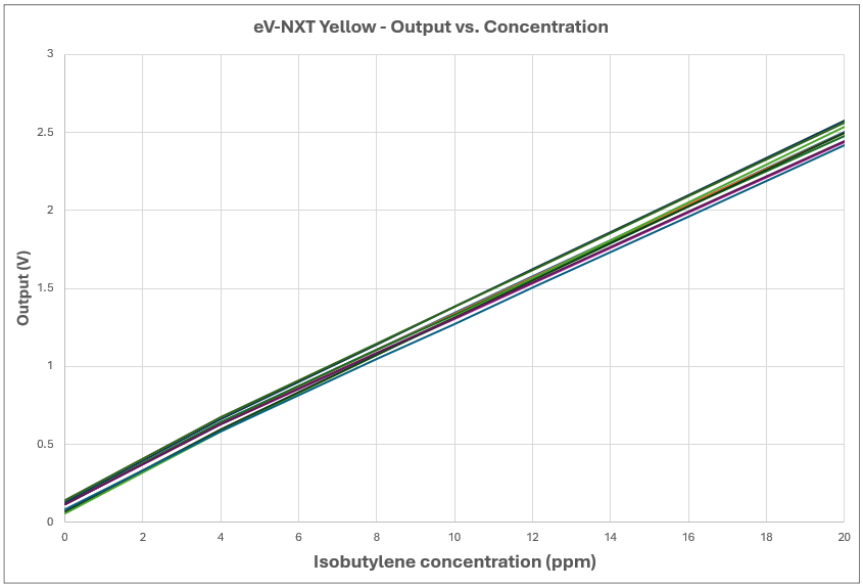
Reliable technology from an industry-approved brand.

The piD-TECH family from AMETEK MOCON is the most complete line of photoionization sensors for your VOC measurement needs. Trusted by many companies for more than two decades, piD-TECH sensors provide the right solution for personal and fixed safety devices, fenceline monitoring, and environmental air quality assessment.

Designed to simplify your life.

All piD-TECH sensors are designed with accurate responses and simple integration in mind. With a total of 9 available models, and detection ranges from low (0-4 ppm) to high (0-10000 ppm), you'll find the correct sensor for your unique VOC monitoring needs.

piD-TECH sensors are intrinsically safe (IS), providing straightforward integration into your current system, all IS components included in the sensor for the easiest certification of your device. The piD-TECH sensors are the most accurate and easiest to integrate reducing development times while meeting specifications.



New!

The *eV-NXT* removes variability from your PID.

THE RIGHT FIT FOR YOUR APPLICATION.

The right detection range for your needs.

The piD-TECH family is available as two core product lines: eVx and e*V-NXT*. Between them, the two lines feature a variety of detection ranges, price points and specialized features to suit many different needs.

IF YOU NEED...

- ✓ **An industry-tested and trusted workhorse**
- ✓ **Affordable sensor technology for safety, compliance and air quality monitoring**
- ✓ **Reliable data output for peace of mind**

STANDARD SENSORS – eVx

Our core line of piD-TECH sensors has served many industries and companies for years and is a tested and trusted solution for VOC monitoring.

Affordable, easy to integrate, and intrinsically safe, these sensors are ideal for OEMs looking to include VOC detection capabilities in their handheld, mobile, or fixed devices.

- ✓ **Enhanced sensor-to-sensor repeatability for true plug-and-play integration**
- ✓ **Data stability over a wide temperature and humidity operating range**
- ✓ **Low power draw for extended battery life**
- ✓ **Low concentration detection range for outdoor air quality monitoring**

PREMIUM SENSORS – e*V-NXT*

This line of sensors was developed for specialized, high-requirement applications.

It features a significant improvement in sensor -to-sensor repeatability, uniform temperature response and stable baselines over wide humidity ranges, lower power and operating voltage.

In addition to its intrinsically safe rating, this line features onboard fault detection for enhanced safety and confidence in your VOC reading.

Unlimited Applications

- Industrial hygiene & safety
- Environmental air quality
- Fenceline monitoring

Easy Integration

- Intrinsically safe
- 4P cell platform compatible
- Internal voltage regulation

High Performance

- Stable baseline over varying temperature & humidity
- High sensor-to-sensor repeatability
- Easy cleaning and field service

piD-TECH® FAMILY:
OEM PHOTOIONIZATION SENSORS

PRODUCT BROCHURE

Performance Specifications

	eVx				eV-NXT				
	Green 045-010	Purple 045-011	Red 045-012	Yellow 045-013	Green 045-110	Purple 045-111	Red 045-112	Yellow 045-113	Blue 045-114
Sensor Ranges									
Range	10,000 ppm	2,000 ppm	200 ppm	20 ppm	10,000 ppm	2,000 ppm	200 ppm	20 ppm	4 ppm
Detection limit	500 ppb	100 ppb	10 ppb	1.5 ppb	500 ppb	100 ppb	10 ppb	1.0 ppb	0.5 ppb
T90	< 2 sec			< 4 sec	< 3.5 sec			< 6.5 sec	
Typical sensitivity	0.20 to 0.30 mV/ppm	0.60 to 1.24 mV/ppm	8.75 to 14.00 mV/ppm	78.8 to 104.00 mV/ppm	0.6 mV/ppm	2.4 mV/ppm	12.0 mV/ppm	118 mV/ppm	545 mV/ppm
Test conditions	2000 ppm	100 ppm	100 ppm	10 ppm	2000 ppm	100 ppm	100 ppm	10 ppm	1 ppm
Operating Specifications									
Temperature range	-20°C to 60°C (-4°F to 140°F)				-20°C to 60°C intrinsically safe (-40°C to 65°C operating temperature)				
Relative humidity	0 to 90% non-condensing				0 to 99% non-condensing				
Humidity baseline sensitivity	<1% full scale at 90% RH				Near zero to 95% RH				
Temperature dependence	Follows ideal gas law				Follows ideal gas law				
Fault detection	None				Continuous monitoring of lamp intensity for lamp not lit fault detection				
Electrical Characteristics									
Supply voltage	3.2 V to 5.5 V (input voltage regulator included)				3.2 V to 5.5 V DC				
Current	24 mA to 38 mA				Typical 28 mA				
Operating power	80 mW to 200 mW (dependent upon supply voltage)				92 mW				
Output signal	0.045 V to 2.5 V				0.04 V to 2.85 V				
Physical Characteristics									
Weight	< 8 grams				<12 grams				
Dimensions	20.4 mm Dia. x 17.6 mm H (pins 4.78 mm H)				20.0 mm Dia. x 16.5 mm H (pins 4.83 mm H)				
Serviceable parts	Lamp, detector cell, filters, cap, spacer				Lamp, detector cell, cap/filter				
Typical lamp life	10,000 hours				10,000 hours				
Onboard filters	Prevents sensor contamination from liquids and particles				Prevents sensor contamination from liquids and particles				
Warranty period	2 years, not including consumables				2 years, not including consumables				
Certifications and approvals									
USA	UL 913, 8th Edition. Intrinsically Safe Apparatus and Associated Apparatus for use in Class I, II, and III, Division 1, Hazardous (Classified) Locations				UL 913, 8th Edition. Intrinsically Safe Apparatus and Associated Apparatus for use in Class I, II, and III, Division 1, Hazardous (Classified) Locations				
Europe	ATEX directives: EN 60079-0:2018, EN 60079-11:2012; Ⓔx II 1 G Ex ia IIC Ga, -20 ºC - 60 ºC ATEX certificates: DEMKO 13 ATEX 1304446U Rev. 8; C E 0539				ATEX directives: EN 60079-0:2018, EN 60079-11:2012; Ⓔx II 1 G Ex ia IIC Ga, -20 ºC - 60 ºC ATEX certificates: UL 23 ATEX 2970U Rev. 0; C E 0539				
Other	IECEx Standards: 60079-0 Ed. 7; 60079-11 Ed. 6; IECEx UL 13.0050U Issue: 8; CAN/CSA C22.2 No.157-92				IECEx Standards: 60079-0 Ed. 7; 60079- 11 Ed. 6; IECEx UL 23.0018U Issue 0; CAN/CSA C22.2 No.157-92				
Patents	US Pat 6,646,444 Japan Pat 3,793,757				Pending				

mocon® / AMETEK®

D045.6-PB-SENS-PID piD-TECH Family-0924

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