

PID Photoionization Sensor Module



Article Overview

A PID sensor module detects volatile organic compounds (VOCs) and other ionizable gases using ultraviolet (UV) light, providing rapid, sensitive, and real-time measurements.

Overview

A Photoionization Detector (PID) sensor module is designed to detect volatile organic compounds (VOCs) and certain inorganic gases at very low concentrations, typically in the parts-per-billion (ppb) to parts-per-million (ppm) range . These sensors are widely used in industrial safety, environmental monitoring, and chemical processing due to their high sensitivity and fast response .

Working Principle

- **UV Ionization:** The sensor uses a UV lamp (commonly 10.0 eV, 10.6 eV, or 11.7 eV) to ionize gas molecules whose ionization potential (IP) is below the lamp energy .
- **Ion Current Generation:** Ionized molecules release electrons, forming positive ion-electron pairs.
- **Charge Collection:** An electric field drives these charges to electrodes, producing a measurable ion current proportional to the gas concentration.
- **Signal Conversion:** The ion current is converted to a concentration reading, often calibrated against a reference gas like isobutylene, with response factors (RFs) applied for other compounds .

Detectable Compounds...

Article Content

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Photoionization Detector | PID Gas Monitor

Sift through the options below to find our list of photoionization detectors for sale. Some of these detectors are multi-gas with PID

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Guide Photoionization Detectors (PID), A Comprehensive

A Photoionization Detector (PID) is a type of gas sensor that uses ultraviolet (UV) light to ionize gas molecules in order to detect and

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Photoionization Detectors (PIDs)

PIDs effectively detect and monitor for numerous hazardous substances, providing maximum benefit and safety to users. While many

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PID (Photoionization Detector) Sensors

Despite potential vulnerabilities, PID sensors remain trusted for their fast response times and ability to

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Photoionization Detectors (PID) | Honeywell

Lightweight and user-friendly, our PIDs are ideal for fieldwork and provide a reliable solution for ensuring

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Photoionisationsdetektoren (PID) | Honeywell

Photoionisationsdetektoren (PID) Unsere Photoionisationsdetektoren (PIDs) sind für die Erkennung flüchtiger organischer

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PID (Photoionization Detector) Sensors

PID sensors offer high accuracy in detecting VOCs, making them a reliable choice for industries where gas leaks or VOC emissions

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Introduction to Photoionization Detectors

A Photoionization Detector (PID) measures real-time concentrations of organic and inorganic vapors in low levels from parts-per

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PHOTO-IONIZATION DETECTION (PID) TECHNOLOGY

How does a PID work? TSI measures Volatile Organic Compounds (VOCs) in air by Photo-Ionization Detection (PID). A PID uses an

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piD-TECH eV-NXT PID & Photoionization Sensors | AMETEK MOCON

The piD-TECH eV-NXT photoionization (PID) sensor is the newest solution for OEMs needing VOC gas detection capabilities in

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PID Sensor (Photoionization Detector) — Complete Guide for High ...

PID Sensor (Photoionization Detector) — Complete Guide for High-Sensitivity VOC Monitoring What Is a PID Sensor? A PID

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Photoionization (PID) Sensors

The piD-TECH eVx photoionization (PID) sensor is the solution for OEMs needing VOC gas detection capabilities to their portable or

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A Basic Guide To Photo-Ionisation Detectors

PID stands for “Photo-Ionisation Detector”. A PID is a sensor that can be incorporated into a hand-held, personal, or fixed detector

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Photoionization PID Sensor 4R-PID

4R-PID is a high-performance photoionization PID sensor. It has the characteristics of high sensitivity, wide

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Photoionization Detector (PID) Sensors

4-Series PID ATEX and IECEx Certified Version Senovol PID sensors are designed for the detection of a wide variety of volatile

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RAEGuard 2 PID | Honeywell

RAEGuard 2 PID is a fixed photoionisation detector (PID) that measures a broad range of volatile organic

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The Application of Photoionization Detector (PID)

The Application of Photoionization Detector (PID) Photoionization Detector (PID) The photoionization detector (PID)

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Photoionisation Detectors

A Basic Guide to Photoionisation Detectors PID stands for “Photo-Ionisation Detector”. A PID is a sensor that can be incorporated

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Understanding PID Sensors: Principles, Technology, and Selection

Understanding PID Sensors: Principles, Technology, and Selection Tech Note 250203 Overview This article explains the concept,

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(PID) photoionization detector

The PID operates by using ultraviolet (UV) light to ionise gas molecules, which are then detected by the

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China PID Sensor | Advanced Photoionization Detection Technology

PID Sensor Module PID Sensor The Photoionization Detector (PID), also known as PID, is one of the most widely used technologies

Contact Us

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