FALCO 2 10.0 eV



Continuous monitoring for aromatic volatile organic compounds and total aromatic compounds

Diffused & Pumped Models

FALCO 2 10.0 eV is a fixed aromatic VOC gas detector designed for continuous monitoring of volatile organic compounds (VOCs) in industrial environments. Using a 10.0 eV photoionisation detector (PID), FALCO 2 provides reliable detection of aromatic compounds and total aromatic compounds (TAC), helping operators identify changing VOC concentrations and maintain control of potentially hazardous atmospheres.

Designed for fixed installation, FALCO 2 provides continuous VOC monitoring in applications where dependable, around-the-clock measurement is required. Its 10.0 eV PID is particularly suited to detecting aromatic hydrocarbons, including BTEX compounds such as benzene, toluene, ethylbenzene and xylenes.

FALCO 2 10.0 eV provides a dedicated solution where aromatic VOC concentrations need to be monitored continuously rather than measured periodically with a portable instrument. Installed at a defined monitoring point, the detector can provide ongoing measurement of VOC concentrations, supporting rapid identification of changes in atmospheric conditions.

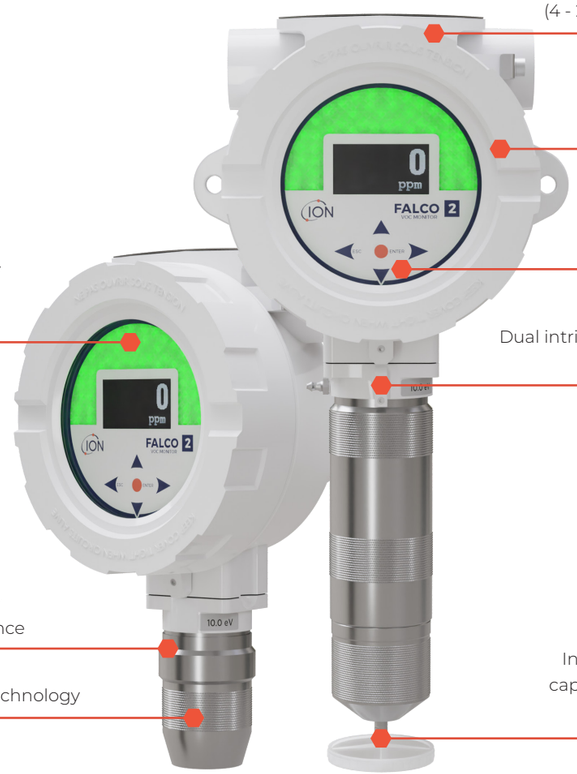
As an aromatic VOC monitor, FALCO 2 is particularly suitable for processes where benzene and other aromatic hydrocarbons are a concern. Its 10.0 eV PID technology provides targeted detection for applications requiring continuous measurement of these compounds.

Key Features

- **IP65 Ingress Protection**
  Protection against harsh conditions and weather temperatures
- **Live Readings & Instantaneous Alarms**
  Bright visible status indicator: RED, AMBER, GREEN
- **Robust ExD Housing**
  ExD housing offers ease of installation and product protection
- **Typhoon Technology**
  Prevents condensation forming within the PID sensor
- **Diffused or Pumped Model Variants**
  Pumped model to bring the sample to the detector, with the diffused model monitoring the air around the detector



FALCO 2 10.0 eV Fixed Gas Detector



- Digital (RS485 Modbus) and analogue (4 - 20 mA) communication protocols
- IP65 Ingress Protection Rating
- Tamper-proof 5 magnetic switch interface
- Dual intrinsically safe and ExD certification for ease of maintenance
- Multi-coloured status display visible from 20 metres in direct sunlight
- Built-in Typhoon Technology for optimal sensor performance
- Patented Fence Electrode Technology
- In-built pump with luer connection, capable of sampling from 20 meters*
  *Tubing I/D & O/D Dependent



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Additional Features

Aromatic VOCs can be released during processing, storage, transfer and handling of hydrocarbon-based materials. Continuous monitoring provides greater visibility of changing concentrations and can help identify potential releases before they develop into more significant issues.

FALCO 2 10.0 eV combines fixed VOC detection with PID technology specifically suited to aromatic compounds, providing a practical BTEX gas detector and aromatic hydrocarbon detector for industrial environments.

The 10.0 eV PID lamp is particularly appropriate for detecting many aromatic hydrocarbons. This makes FALCO 2 10.0 eV a focused solution for applications where aromatic VOCs and TAC are the primary monitoring requirement.

Photoionisation detection uses ultraviolet (UV) light to ionise VOC molecules. The resulting ions generate an electrical current that can be measured and converted into a gas concentration.

The energy of the PID lamp determines which compounds can be ionised and detected. FALCO 2 10.0 eV uses a 10.6 eV lamp with a gold spot electrode stack to give a 10.0 eV response that is particularly suited to aromatic hydrocarbons, making it a focused solution for TAC and BTEX monitoring.

The FALCO 2 10.0 eV uses ION Science MiniPID technology, incorporating an electrode design intended to reduce the effects of humidity and contamination on PID performance.

Range Overview

Detection ranges (ppm)	Stack	Lamp	Calibration point	Sensitivity (ppm)
0-50 (TAC)	White + gold spot	10.6 ev*	2-point	0.01

* The lamp is 10.6 eV. When used with the white + gold spot electrode stack, it operates as a 10.0 eV PID.



Common Applications

- Petrochemical processing
- Chemical manufacturing
- Hydrocarbon processing
- Fuel storage and handling
- Solvent handling
- Storage and loading facilities



Spares & Accessories



Falco TAC MiniPID 2 Sensor

Replacement PID sensor module for the Falco 2 10.0 eV Diffused and Pumped.

P/N MP6SXLFTXU2



Falco Long-Life PID Lamp (10.6 eV, 3.2 - 3.6 V)

Replacement 10.6 eV PID lamp for the Falco 2 10.0 eV Diffused and Pumped, (operates as 10.0 eV with the TAC stack).

P/N LA4SFL3.2



Falco TAC MiniPID Electrode Stack (White + gold spot)

Replacement electrode stack for the Falco 2 10.0 eV Diffused and Pumped PID sensor.

P/N A-846767



Falco Weather Guard

FALCO Weather Guard protects Falco instruments in outdoor and ATEX environments.

P/N 932221



Falco Diffused Splash Guard

Splash guard for protecting the inlet of Falco and Falco 2 diffusion models.

P/N 932254



Falco Diffused Model Flow Adaptor Kit

This kit provides the mechanical interface needed to temporarily deliver and regulate gas flow directly to the diffused sensor head

P/N A-873230

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Technical Specifications

Sensor	Photoionisation detector with 10.6 eV lamp and white + gold spot electrode stack (10.0 eV response)*
Detection range and sensitivity (10.0 eV configuration)*	0-50 ppm (0.01 ppm sensitivity)
Response time (T90)	Pumped models: <10 Seconds** Diffused models: <30 Seconds**
Accuracy	± 5% or ± 1 digit (whichever is greater)
User interface	OLED high contrast white on black: 128 x 64 pixels Screen size: 35 mm (w) x 17.5 mm (h) 5 magnetic switches with LED confirmation (up, down, left, right & enter)
Status indicator	Bright visible status indicator: RED, AMBER, GREEN
Output	4 to 20 mA 2 programmable relays RS485 Modbus
FALCO 2 Pumped environmental specification	Operational temperature: -20 °C to +50 °C, 0 to 99% RH (non-condensing) Storage temperature: -20 °C to +60 °C
FALCO 2 Diffused environmental specification	Operational temperature: -40 °C to +50 °C, 0 to 99% RH (non-condensing) Storage temperature: -20 °C to +60 °C
Ingress protection	Main unit: IP65 Sensor head: IP65
Power	Working voltage: 8 to 40 Vdc Typical 2 W, Max. 7 W
Mechanical interface	2 x cable entry points with M25 threads (left and right)
Mounting points	2 x M8
Weight & dimensions (Pumped)	2.9 kg 325 (h) x 192 (w) x 115 (d) mm
Weight & dimensions (Diffused)	2.5 kg 223 (h) x 192 (w) x 115 (d) mm
EMC	EMC Directive 2014/30/EU
Certification	Ⓔx II 2G ATEX/IECEx: Ex db ib IIC T4 Gb North American: Ex db ib IIC T4 Gb Class I, Zone 1, AEx db ib IIC T4 Gb
Warranty	12 months (standard) 24 months (extended)

This publication is not intended to form the basis of a contract and specification can change without notice.

All specifications quoted are at calibration point and under the same ambient conditions.

* The lamp is 10.6 eV. When used with the white + gold spot electrode stack, it operates as a 10.0 eV PID.

** When set to continuous measurement.

Specifications are based on isobutylene calibration at 20 °C and 1000 mBar.

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