FALCO 2 11.7 eV

High-energy fixed PID detection for challenging VOC applications



11.7 eV Fixed VOC Gas Detector

Not every VOC can be detected using conventional PID technology. Some compounds require a higher-energy UV source to achieve ionisation, creating a need for a more specialised approach to VOC monitoring. FALCO 2 11.7 eV combines high-energy PID technology with continuous fixed monitoring, providing a focused solution for VOCs that require greater ionisation energy.

The 11.7 eV lamp extends PID detection to higher-ionisation-energy compounds such as formaldehyde and methanol, enabling applications where these substances cannot be effectively detected using a conventional 10.6 eV PID.

As a fixed detector, FALCO 2 11.7 eV provides a permanent monitoring point for applications where these compounds need to be measured over time. Pumped and diffused configurations offer further flexibility when deciding where and how sampling should take place.

FALCO 2 11.7 eV is intended for demanding industrial applications where fixed VOC detection forms part of a wider monitoring strategy. Typhoon technology helps protect the PID from the effects of high humidity, supporting operation in environments where moisture can otherwise present a challenge to PID performance.

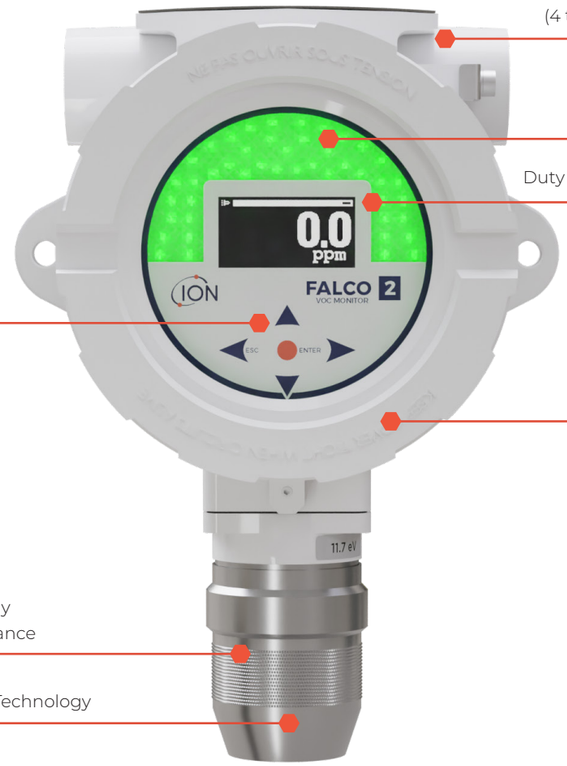
The detector is also ATEX-certified, making it suitable for appropriate hazardous-area applications where potentially explosive atmospheres may be present.

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 11.7 eV VOC Detector



- Digital (RS485 Modbus) and analogue (4 to 20 mA) communication protocols
- Multi-coloured status display visible from 20 metres in direct sunlight
- Duty cycle indicator with lamp on/off icon
- Tamper-proof 5 magnetic switch interface
- Dual IS and ExD certification for ease of maintenance
- Built-in Typhoon Technology for optimal sensor performance
- Patented Fence Electrode Technology



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Specialist Fixed Monitoring

Two important applications for 11.7 eV PID technology are formaldehyde and methanol monitoring. Formaldehyde is used in a variety of industrial processes, including the manufacture of resins and other chemical products. Where formaldehyde is handled or generated, monitoring may be required at specific points around a process or facility.

FALCO 2 11.7 eV provides a fixed formaldehyde gas detector option for applications where continuous measurement is required. A permanent detector can be positioned close to the relevant process or sampling location, providing ongoing visibility without relying solely on manual measurements.

Methanol is used extensively as an industrial feedstock, solvent and process chemical. Storage, transfer and processing activities can all present opportunities for vapour release. With its 11.7 eV PID, FALCO 2 provides a fixed methanol gas detector solution for applications requiring ongoing measurement of methanol concentrations.

The FALCO 2 11.7 eV Maintenance Programme makes routine servicing easier to plan, with one-, three- and five-year options available. Each maintenance kit includes an 11.7 eV replacement lamp, white electrode stack and PTFE filter disc, with kits supplied every three months throughout the selected programme. The programme can also provide up to 25% savings on maintenance costs, helping keep essential replacement components readily available and the detector operating reliably.

Range Overview

Detection ranges (ppm)	Stack	Lamp	Calibration point	Sensitivity (ppm)
0-200	White	11.7 eV	2-point	0.1



Common Applications

- Chemical manufacturing
- Pharmaceutical manufacturing
- Resin and polymer production
- Solvent handling
- Industrial manufacturing
- Process monitoring



Spares & Accessories



Falco 2 MiniPID 2 Sensor (11.7 eV, 6-Pin)

Replacement PID sensor for the Falco 2 11.7 eV.

P/N MP6SX7FWXU2



Falco PID Lamp (11.7 eV)

Replacement 11.7 eV PID lamp for the Falco 2 11.7 eV.

P/N LA4FW700

MiniPID Electrode Stack (White)

Replacement white electrode stack for the Falco 2 11.7 eV PID sensor.

P/N A-846627



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 11.7 eV lamp
Detection range and sensitivity	200 ppm, 0.1 ppm
Response time (T90)	60 seconds (one full cycle)
Accuracy	± 12% or ± 1 digit
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
PID Lamp Lifetime	Up to 4 months from date of delivery [1] [2]
Environmental specification	Operational temperature: -20 °C to +50 °C, 0 to 99% RH non-condensing Storage temperature: -40 °C to +60 °C
Ingress protection	Main unit: IP65 Sensor head: IP65
Power	Working voltage: 8 to 40 Vdc Typical 2 W, Max. 7 watts
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. Specifications are based on isobutylene calibration at 20 °C and 1000 mBar.

[1] Lamp operation hours may vary depending on application and environmental conditions.

[2] 4 months from date of delivery based on 1 month of storage and 3 months of use.

Modbus® is a registered trademark of Schneider Electric.

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