



FALCO 2 11.7

Pioneering Gas Sensing Technology.
ionscience.com





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FALCO 2 11.7 offers broad VOC detection capabilities with guaranteed accuracy and reliability, making it a trusted choice for use in a diverse range of environments.



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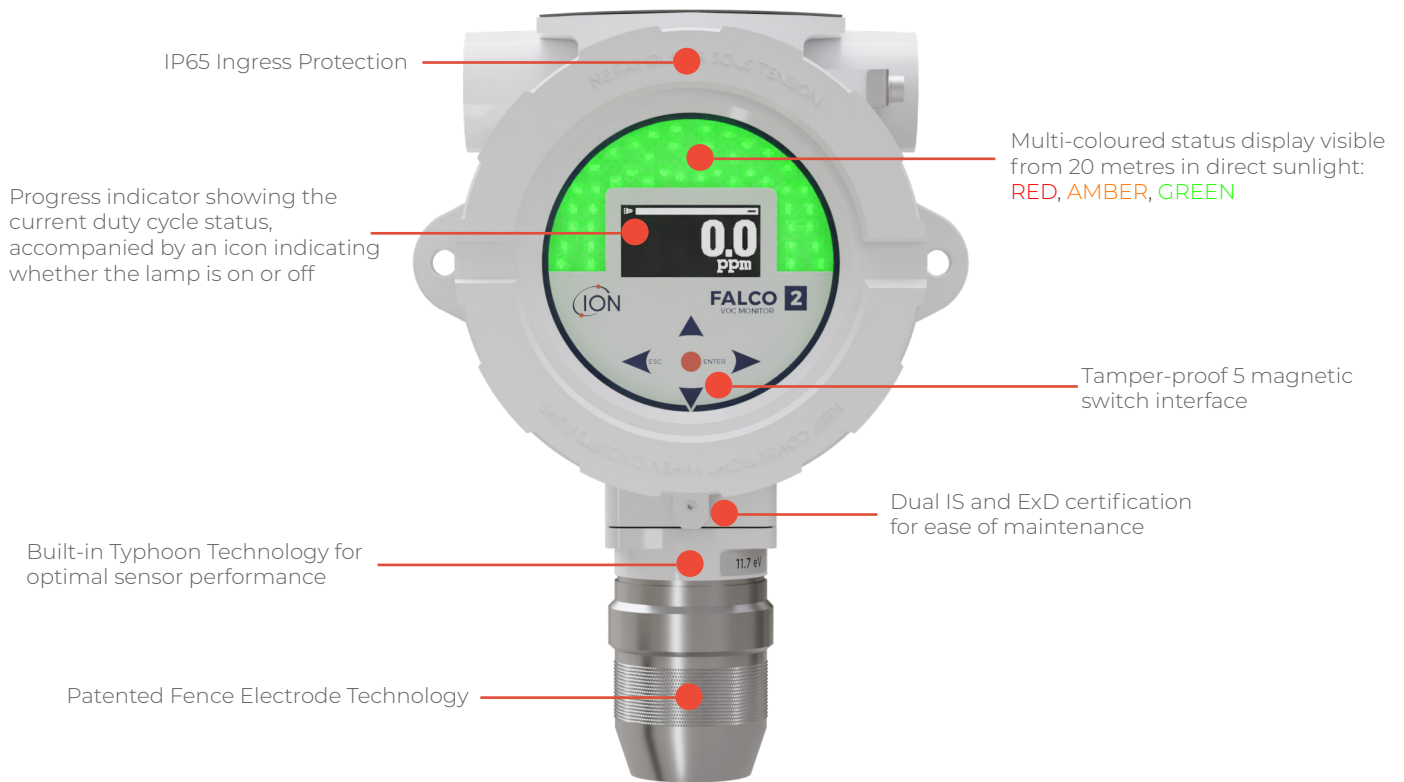
FALCO 2 11.7 is ION Science's latest innovation in fixed Volatile Organic Compound (VOC) monitoring. With a diffusion sampling method, FALCO 2 11.7 has been specifically engineered to deliver precision and reliability in monitoring VOCs. Equipped with the market-leading MiniPID 2 sensor, FALCO 2 11.7 features ION Science's patented Fence Electrode Technology and Anti-Contamination design to ensure reliable and accurate performance, even in harsh environments. These innovations prevent common issues such as sensor contamination and condensation, which compromise the accuracy and longevity of competing sensor technologies. This enables consistent measurement in challenging conditions, including high humidity, while prolonging sensor performance and ensuring dependable results every time.

This cutting-edge instrument is capable of detecting a wide range of VOCs, including those with high ionisation potentials, such as methylene chloride, ethylene oxide, and dichloromethane. With prolonged 11.7 eV lamp life thanks to duty cycling, FALCO 2 11.7 ensures best in class performance whilst minimising maintenance requirements, reducing overall ownership costs.

Key Features

- >> IP65 Ingress Protection**
Protection against harsh conditions and weather temperatures
- >> Optimised Sensor Performance**
Duty cycling enhances sensor efficiency and extends lamp lifetime
- >> Robust ExD Housing**
ExD housing offers ease of installation and product protection
- >> Typhoon Technology**
Prevents condensation forming within the PID sensor
- >> Certifications**
Meets ATEX, IECEx, and **EX North American Certification (TBA)**
- >> Flexible Communication Protocols**
Digital (RS485) and analogue (4 - 20 mA) options available





Additional Features

Equipped with a 60-second duty cycle to optimise lamp performance and increase longevity, FALCO 2 11.7 eV ensures superior operational efficiency and a maximised lamp lifetime.

The device simplifies calibration processes by requiring only a Two-Point calibration, a design aspect which reduces additional costs, simplifies maintenance, and enhances accuracy due to its sensor linearity within the 0 to 200 ppm range. Operators can easily calibrate the sensor, as well as replace lamps and filters within the device, further enhancing its practicality and user-friendly design.

For applications requiring precise detection of specific volatile organic compounds (VOCs), FALCO 2 11.7 offers customisable response factors. Additionally, customisable response factors allow precise adjustments for specific VOCs. The sensor response can be entered to a particular VOC relative to isobutylene. By multiplying the displayed concentration by the VOC's response factor, users can determine the actual concentration.

Engineered for durability and cost effectiveness, FALCO 2 11.7 excels in even the most demanding environments. It operates seamlessly under high humidity conditions, ranging from 0-99% RH, and remains reliable in challenging industrial settings. Its advanced technology guarantees precise and consistent VOC detection, making it the perfect solution for industries that prioritise trustworthy, efficient, and cost-effective monitoring systems.

Common Applications

- Solvent and Chemical Storage
- Li-ion Battery Manufacturing and Storage
- Leak Detection
- Occupational Health and Safety
- Indoor Air Quality Monitoring
- Fenceline Monitoring
- Air Handling Performance
- Process Monitoring Specification

FALCO 2 11.7 eV PID Sensor

FALCO 2 11.7 features ION Science's advanced MiniPID 2 11.7 eV PID sensor, celebrated for delivering continuous precision and stability even under challenging conditions.

It reliably detects a broad spectrum of VOCs, including formaldehyde, methanol, and ethylene, with exceptional sensitivity. The patented Fence Electrode technology effectively minimises humidity and contamination, ensuring continued superior performance.

The fully serviceable MiniPID 2 is designed to support convenient and efficient maintenance, ensuring minimal downtime and extended device life. Both the lamp and electrode stack can easily be accessed and replaced, allowing for quick maintenance and calibration to sustain optimal performance and accuracy over time.

This modular design reduces the need for specialised service interventions, making it a practical solution for long-term monitoring applications.



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)

PID lamp lifetime

- Up to 4 months from date of delivery ^[1] ^[2]

Accuracy

- $\pm 12\%$ 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

- Tri-colour: RED, AMBER, GREEN visible up to 20 metres away

Output

- 4 - 20 mA
- 2 programmable relays
- RS 485 Modbus

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

Electrical

- Working voltage: 8 to 40 Vdc
- Typical 2 W, Max. 8 watts

Mechanical interface

- 2 x cable entry points with M25 threads (left and right)

Mounting points

- 2 x M8

Weight & Dimensions

- 2.5 kg
- 223(h) x 192(w) x 115 (d) mm

EMC

- EMC Directive 2014/30/EU

Certification

- **ATEX:** II 2G Ex db ib IIC T4 Gb
- **IECEX:** Ex db ib IIC T4 Gb
- **US/NORTH AMERICAN TBA**

Warranty

Unit Warranty

- 1 year (standard)
- 2 years (extended)

Lamp Warranty

- 3 months from date of sale by ION Science

FALCO 2 11.7 V1.0 UK This publication is not intended to form the basis of a contract and specification can change without notice.

All specifications are quoted 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

Manufactured by:

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