FALCO 2 10.6 eV

Fixed VOC gas detector for continuous monitoring of volatile organic compounds



Diffused & Pumped Models

When VOC concentrations need to be monitored continuously, FALCO 2 10.6 eV provides a reliable fixed detection solution for industrial environments. Its 10.6 eV photoionisation detector (PID) offers broad-spectrum VOC detection, making it suitable for applications where a wide range of volatile organic compounds may be present.

FALCO 2 10.6 eV is available in four factory-configured measurement ranges (0-10, 0-50, 0-1000 and 0-3000 ppm), in both pumped and diffused models. Each unit is set up and calibrated by ION Science to match your order, so you receive an instrument matched to your application.

Not every monitoring point presents the same installation challenge. FALCO 2 is therefore available in two configurations, allowing the sampling method to be selected according to the application.

With a diffused configuration, VOCs reach the PID directly from the surrounding atmosphere. The detector can therefore be positioned at the point where VOC concentrations need to be measured. This provides a straightforward solution for fixed monitoring locations where the instrument can be installed directly within the area of interest.

The pumped configuration draws a sample through a sample line to the detector. This allows the instrument to be positioned separately from the sampling point and can be useful when direct installation is impractical.

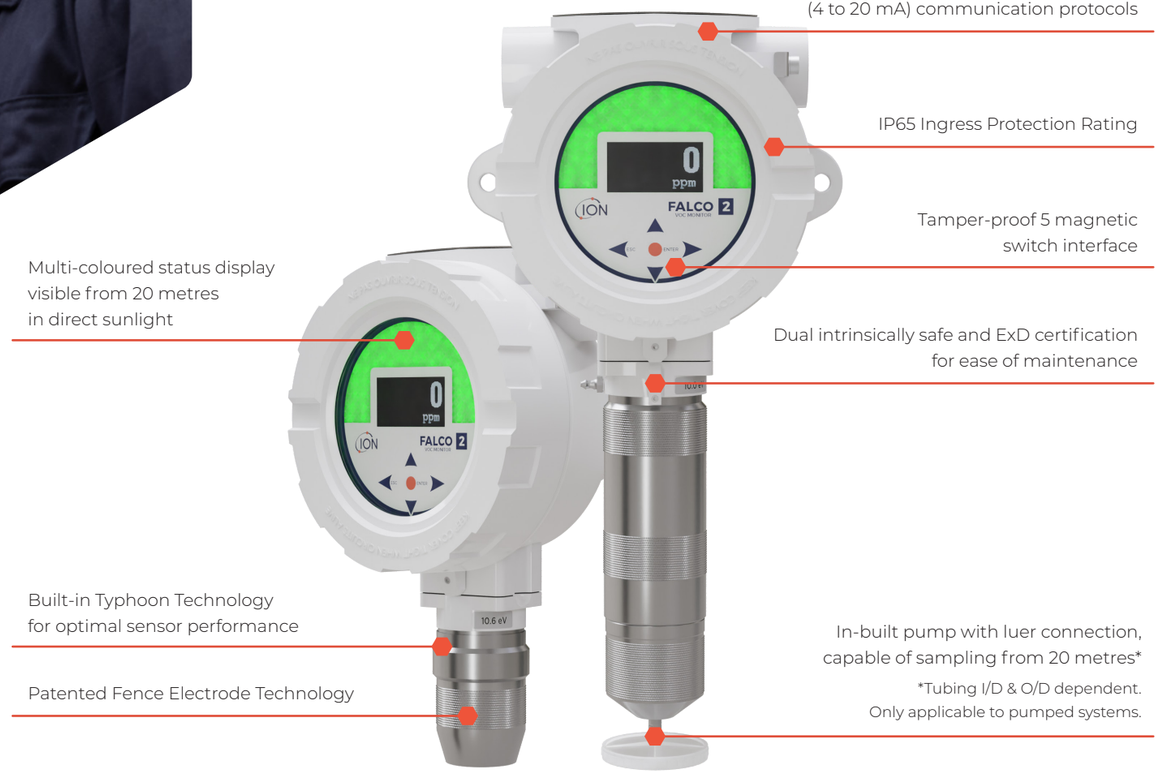
Pumped sampling can also provide greater flexibility when monitoring remote, confined or difficult-to-access areas.

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 10.6 eV VOC Detector





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Additional Features

FALCO 2 offers both analogue (4 to 20 mA) and digital (RS485 Modbus) signal outputs, enabling seamless integration into a wide range of systems and allowing for efficient data collection and monitoring. This dual output capability ensures flexibility in connecting to various control and monitoring systems, making it ideal for complex industrial setups.

FALCO 2 is equipped with two programmable relays that can be configured for either Normally Open (N/O) or Normally Closed (N/C) contacts, which provides users with versatile control options, allowing for customised configurations based on specific application needs.

FALCO 2 stands out for its cost-effective performance with a low total cost of ownership, while delivering high durability and reliability. It is specifically designed to operate in high humidity environments, from 0 to 100% relative humidity, ensuring reliable functionality even in challenging conditions. Its advanced technology allows for accurate and dependable detection of Volatile Organic Compounds (VOCs), making it ideal for industries that require consistent and trusted VOC detection.

Aligned with ION Science's mission to protect health and the environment, FALCO 2 combines reliability, flexibility, and environmental responsibility, making it a vital tool for safety and environmental protection across various sectors.

Range Overview

Detection ranges (ppm)	Stack	Lamp	Calibration point	Sensitivity (ppm)
0-10	White	10.6 eV	2-point	0.001
0-50	Orange	10.6 eV	2-point	0.01
0-1000	White	10.6 eV	3-point	0.1
0-3000	Orange	10.6 eV	3-point	1



Common Applications

- Petrochemical processing
- Chemical manufacturing
- Pharmaceutical manufacturing
- Solvent handling and recovery
- Paint and coating processes
- Industrial manufacturing



Spares & Accessories



Falco MiniPID 2 Sensor (White)

Replacement white PID sensor for Falco 2 10.6 eV Diffused and Pumped instruments configured for the 0-10 ppm or 0-1,000 ppm measurement range.

P/N MP6SM6FWXU2



Falco MiniPID 2 Sensor (Orange)

Replacement orange PID sensor module for Falco 2 10.6 eV Diffused and Pumped instruments configured for the 0-50 ppm or 0-3,000 ppm measurement range.

P/N MP6SM6FOXU2



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

Replacement long-life 10.6 eV PID lamp for Falco 2 10.6 eV Diffused and Pumped instruments across the 0-10, 0-50, 0-1,000 and 0-3,000 ppm ranges.

P/N LA4SFL3.2



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 options
Detection ranges and sensitivity with 10.6 eV lamp fitted*	0-10 ppm (0.001 ppm sensitivity) 0-50 ppm (0.01 ppm sensitivity) 0-1000 ppm (0.1 ppm sensitivity) 0-3000 ppm (1 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 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	Ex 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.

** When set to continuous measurement.

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

Modbus® is a registered trademark of Schneider Electric.

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