TVOC 2

Continuous detection of volatile organic compounds with multiple ranges from just one instrument.



Continuous VOC Gas Detector

TVOC 2 is a fixed photoionisation detector (PID) designed for the continuous monitoring of total volatile organic compounds (VOCs) in industrial and workplace environments. It provides reliable, real-time measurement of VOC concentrations across three detection ranges, with measurement data continuously updated every second for responsive monitoring of changing VOC levels.

Using a diffusion sampling technique, TVOC 2 draws VOCs naturally into the sensor without the need for a pump. This helps reduce contamination and condensation issues commonly associated with pumped sampling systems, while also minimising lamp cleaning and servicing requirements. The result is a low-maintenance solution for continuous VOC monitoring.

TVOC 2 features a 4–20 mA analogue output, allowing straightforward integration with a Distributed Control System (DCS) or other site control and monitoring infrastructure. This enables the system to provide warnings when VOC concentrations exceed configured alarm levels and, where required, support automatic control measures in response to elevated VOC levels.

With ATEX approval, the three-wire TVOC 2 can be installed in Zone 2 hazardous areas without the need for safety barriers. ATEX and IECEx approvals also allow TVOC 2 to be installed in Zone 1 hazardous areas when used with the appropriate safety barriers, providing flexibility across a range of hazardous industrial environments.

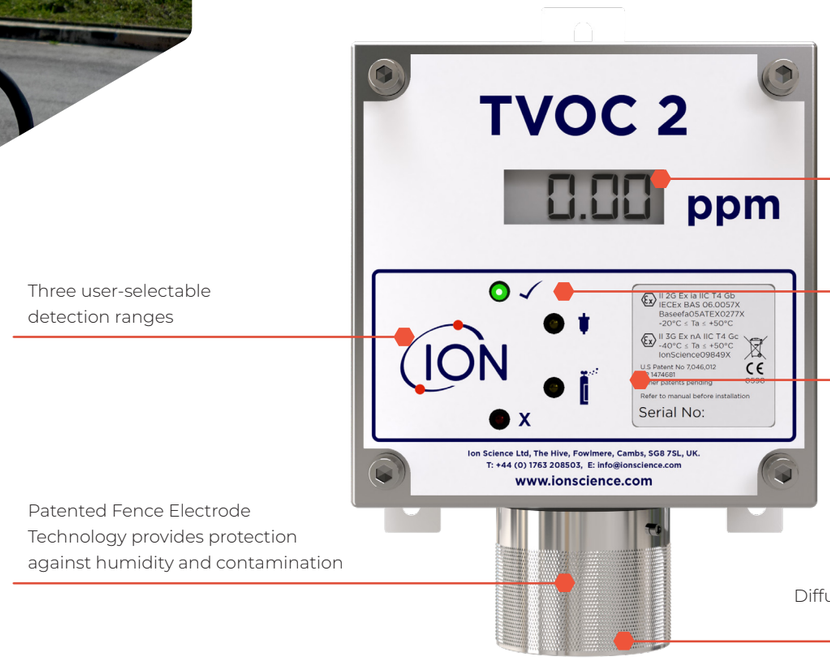
Designed with simplicity in mind, TVOC 2 is straightforward to install, service and calibrate. The unit can be installed without requiring hot work, helping to simplify maintenance activities in operational environments. Its PID sensor is readily accessible and can be replaced quickly, reducing downtime and making routine servicing quick and efficient.

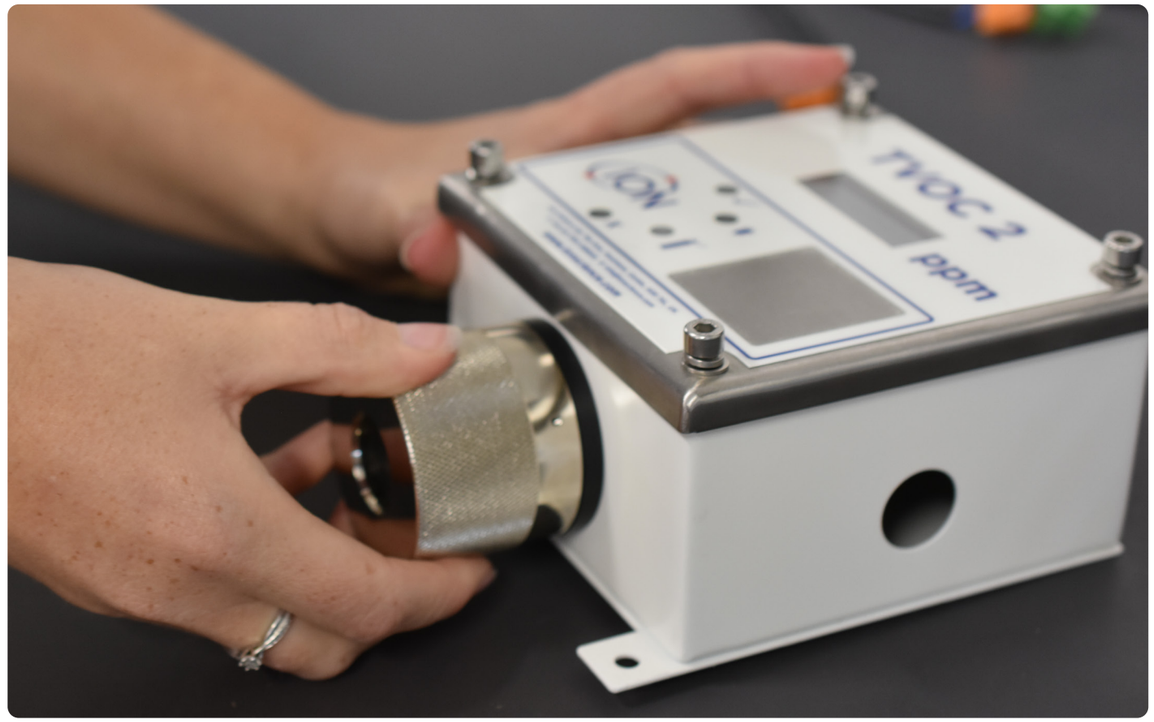
Combining continuous real-time monitoring, low-maintenance diffusion sampling, flexible hazardous-area approvals and simple integration with existing control systems, TVOC 2 provides a practical solution for the ongoing detection and monitoring of VOCs.

Key Features

- **IP65 Ingress Protection**
  Protection against harsh conditions and temperature extremes
- **User-Selectable Detection Ranges**
  Choose from 0 to 10, 0 to 100, or 0 to 1000 ppm
- **Robust ExD Housing**
  Continuous accuracy and reliability due to rugged and robust design, withstanding harsh conditions
- **Maximum flexibility**
  Easily integrated into a control system
- **Simple to use**
  Minimal training required for operation







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Additional Features

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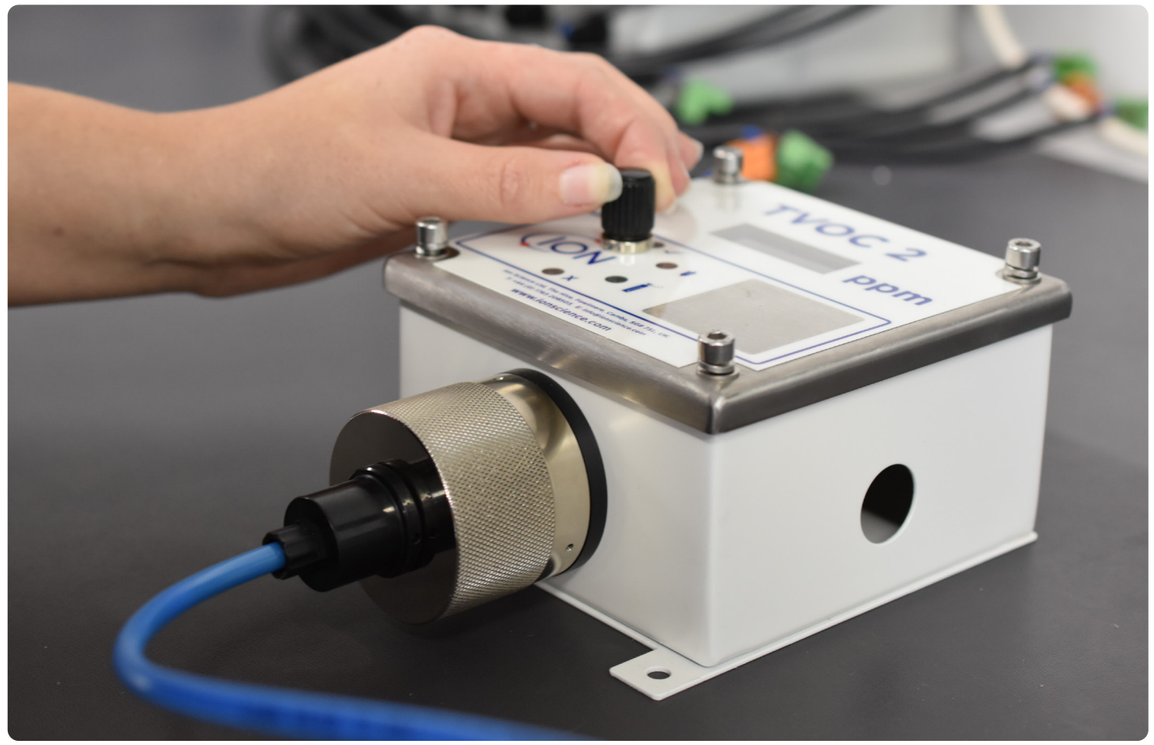
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TVOC 2 combines high-performance PID detection with reliable operation in demanding environments. TVOC 2 provides selectable. 0-10, 0-100 or 0-1000 ppm measurement ranges from a single instrument. Built-in humidity resistance eliminates the need for compensation, while an anti-contamination design supports extended field operation.

Reliable diffusion sampling eliminates the need for a pump, with an optional sensor cap available for pipe connection. A rugged design withstands harsh environments, while ATEX and IECEx approvals enable use in hazardous areas.

Range Overview

Detection range (ppm)	Sensitivity (ppm)	Recommended Application	Key benefits
0-10	0.01	Low-level VOC and occupational exposure monitoring	High sensitivity for detecting small changes in VOC concentrations
0-100	0.1	General workplace, environmental and process monitoring	Versatile range providing balance between sensitivity and measurement range
0-1000	1	Industrial process monitoring and elevated VOC detection	Greater measurement headroom for environments where higher VOC concentrations may occur



Common Applications

- Workplace and occupational VOC monitoring
- Industrial process monitoring
- VOC leak detection
- Solvent handling and recovery
- Refining and petrochemical processes
- Chemical manufacturing and processing



Spares & Accessories



TVOC 2 MiniPID 2 Sensor (10.6 eV, 6-Pin, Orange)

Replacement PID sensor for the TVOC 2.

P/N MP6SDL6XU2



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

Replacement 10.6 eV PID lamp for the TVOC 2.

P/N LA4SFL3.2



MiniPID Electrode Stack (Orange)

Replacement orange electrode stack for the TVOC 2 PID sensor.

P/N A-846496



TVOC Calibration Magnet

Calibration magnet used to access calibration functions on TVOC instruments.

P/N A-849219



TVOC 2 Flow Adaptor Cap Assembly

Flow adaptor cap assembly for connecting sample tubing to TVOC 2.

P/N A-900218



TVOC Tool Kit

Calibration and serivice kit for TVOC 2

P/N A-849214

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Technical Specifications

Sensor	Photoionisation detector with 10.6 eV lamp
Detection ranges and sensitivity	0 to 10 ppm (0.01 ppm sensitivity) 0 to 100 ppm (0.1 ppm sensitivity) 0 to 1000 ppm (1.0 ppm sensitivity)
Ingress protection	Enclosure ingress protection: IP65 Sensor ingress protection IP54
Response time (T90)	<35 seconds
Accuracy	0 to 100 ppm: ± 5% at calibration point 100 to 1000 ppm: ± 10% at calibration points
Display	7 segment, 4 digit LCD, 4 coloured LEDs
Power	5 to 28 Vdc Max 130 mA
Output	4 to 20 mA requires an 8-35 Vdc power supply For IS requirements 8-30 Vdc power supply
4-20 mA alarm levels	Selectable 2 mA & 3.5 mA options
Calibration	Accessed via magnetic switch 100 ppm Isobutylene via calibration kit accessory
Sampling	Diffusion (can be pumped if required using an adaptor)
Temperature	Operating: -20 °C to 50 °C (-4 °C to 122 °F) Humidity: 0 to 95% RH (non-condensing)
Weight & dimensions	Instrument: 1.4 kg (3.1 lb) Packed: 1.6 kg (3.5 lb) Dimensions: 188 x 126 x 78 mm (7.4 x 4.9 x 3 in)
Certification	Ⓔx II 2G Ex ia IIC T4 Gb (-20 °C ≤ Ta ≤ +50 °C) Baseefa05ATEX0277X IECEx BAS 06.0057X
Warranty	12 months (standard) 24 months (extended)

This publication is not intended to form the basis of a contract and specifications 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.

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