



TVOC

FIXED VOC MONITOR

FIXED PID MONITOR FOR VOLATILE ORGANIC COMPOUNDS.

ionscience.com

Unrivalled Gas Detection.





CONTINUOUS DETECTION OF VOLATILE ORGANIC COMPOUNDS (VOCS) WITH MULTIPLE RANGE FROM JUST ONE INSTRUMENT.

Best available photoionisation (PID) detection

- PID independently verified as best performing on the market
- Range: 0 to 10, 0 to 100 or 0 to 1000 ppm from just one instrument
- In-built humidity resistance with no need to compensate
- Anti-contamination design for extended field operation
- Variable duty cycle prolongs run time
- Reliable diffusive monitoring - no pump required

Safety

- Accurate results over all environmental conditions
- Rugged and robust design withstands harsh environments
- Large LCD display for clear readings
- ATEX and IECEx approved

Ease of use

- Simple to use - minimal training required
- Easy access PID sensor for fast, simple servicing
- Simple calibration procedure
- Easily integrated into a control system

Low cost operation

- Inexpensive consumables and parts
- 2 year warranty when instrument registered online





TVOC is a fixed photoionisation detector (PID) for the continuous measurement of total volatile organic compounds (VOCs). TVOC accurately measures over three different detection ranges from just one instrument.

TVOC has a variable duty cycle set to 1 minute as standard. The user can adjust this between 5 seconds and 5 minutes.

TVOC utilises a diffusive sample technique resulting in less contamination issues compared to pumped systems, reducing lamp cleaning and servicing requirements. The 4-20 mA analogue output enables TVOC to be integrated into a DCS control system to give warning or control of high VOC levels in the working environment.

ATEX approvals enable a 3 wire TVOC system to be used in Zone 2 hazardous areas, without safety barriers. ATEX and IECEx approvals allow TVOC to be used in Zone 1 hazardous areas, with safety barriers.

Simple to install, service and calibrate, TVOC requires no hot work permit and the PID sensor is accessible and changeable in a matter of seconds.

TVOC SystemPlus comes complete with a pumped sample system for applications where a sample needs to be drawn to the unit from as far away as 30 meters. SystemPlus incorporates a TVOC unit together with pump, sample preconditioning with flow cut off switch, optional USB data logger and power supply all contained in a water proof housing.

Extend your instrument warranty

Your TVOC instrument warranty may be extended by simply registering your product on the Ion Science website within one month of purchase. Visit www.ionscience.com/instrument-registration to take advantage of this offer.

Applications include:

- Manufacturing
- Processing
- Offshore
- Refineries & petrochemical
- Chemical
- Waste water treatment
- Pulp & paper
- Pharmaceutical
- Indoor air quality
- Solvent recovery systems
- Industrial painting & coating

Accessories

TVOC is supplied with an exclusive range of accessories. Visit www.ionscience.com/tvoc for more info.



Technical specifications

Sensor (PID)

- 10.6 eV lamp with Ion Science patented Fence Electrode Technology*

Hazardous area safety approvals

- ATEX: II 3 G Ex nA IIC T4 (-40°C ≤ Ta ≤ 50°C)
- ATEX / IECEx: II 2 G EEx ia IIC T4 (-20°C ≤ Ta ≤ 50°C)

Ingress protection rating

- Designed to IP65
- Dependent on cable glands fitted sensor to IP53

Power

- 5-28 VDC Max 65 mA

Output

- 4-20 mA requires a 8-35 VDC power supply
- For IS requirements 8-30 VDC power supply

Range

- 0 to 10 ppm, 0 to 100 ppm, 0 to 1000 ppm (user selectable)

Sampling

- Diffusion (can be pumped if required using an adaptor)

Display

- 7 segment, 4 digit LCD, 4 color LEDs

Response

- Sensor - T90 < 5 sec**

Accuracy

- 0 to 100 ppm : +/- 2% or +/- 1 ppm (whichever is greater)
- 100 to 1000 ppm: +/-10%

Linearity

- 0 to 1000 ppm: >75%

Calibration

- Magnetically accessed 100 ppm Isobutylene via calibration kit
- accessory

Temperature

- Operating: -20 to 50 °C (-4 - 122 °F) Humidity: 0-95% 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")

4-20 mA alarm levels

- Selectable 2 mA & 3.5 mA options

TVOC V2.1. This publication is not intended to form the basis of a contract and specifications can change without notice.

NB: All specifications are based upon isobutylene calibration at 20°C (68°F), up to 100 ppm at atmospheric pressure.

* The Fence Electrode technology referred to in this document is produced by Ion Science Ltd, and protected by patents, U.S. Patent No. 7,046,012, EP 1474681, other patents pending. ** TVOC has a variable duty cycle set to 1 minute as standard. The user can adjust this between 5 seconds and 5 minutes. TVOC is a registered trademark of Ion Science Ltd.

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