

# TVOC 2

FIXED VOC MONITOR



FIXED PID MONITOR FOR VOLATILE  
ORGANIC COMPOUNDS.

[ionscience.com](http://ionscience.com)

Unrivalled Gas Detection.



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

## Best available photoionisation (PID) detection

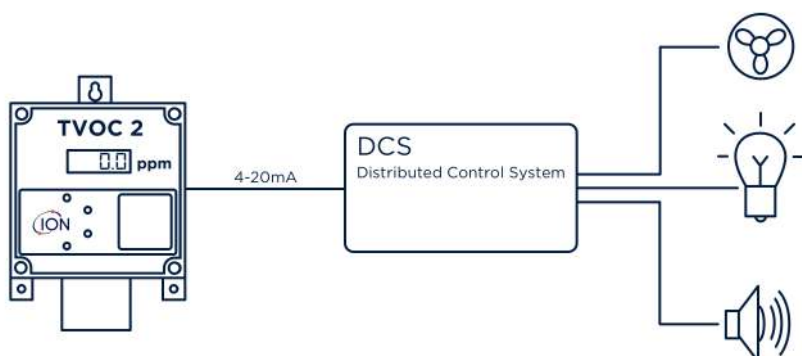
- PID independently verified as best performing on the market
- Range: 0 to 10, 0 to 100 or 0 to 1000 ppm from just one instrument
- In-built humidity resistance with no need to compensate
- Anti-contamination design for extended field operation
- Reliable diffusive monitoring - no pump required
- An optional sensor cap allows a pipe connection

## 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 is registered online



MiniPID 2 sensor



TVOC 2 is a fixed photoionisation detector (PID) for the continuous measurement of total volatile organic compounds (VOCs). TVOC 2 can accurately measure three detection ranges.

TVOC 2 continually measures and updates the output every second.

TVOC 2 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 2 requires no hot work permit and the PID sensor is accessible and changeable in a matter of seconds.

### Extend your instrument warranty

Your TVOC 2 instrument warranty may be extended by simply registering your product on the Ion Science website within one month of purchase.

### 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 2 is supplied with an exclusive range of accessories



## Technical specifications

### Approvals

-  II 2G Ex ia IIC T4 Gb  
(-20°C ≤ Ta ≤ +50°C)
-  II 3G Ex nA IIC T4  
(-40°C ≤ Ta ≤ +50°C)
- Baseefa05ATEX0277X
- IECEx BAS 06.0057X

### Ingress protection rating

- Designed to IP65
- Sensor Ingress Protection IP54

### Power

- 5-28 VDC Max 130 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: ± 5% at calibration point.  
100 to 1000 ppm: ± 10% at calibration points.

### Calibration

- Accessed via magnetic switch
- 100 ppm Isobutylene via calibration kit accessory

### Temperature

- Operating: -20 °C to 50 °C (-4 °C- 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 2 V1.0 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.


\* 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 2 is a registered trademark of Ion Science Ltd.

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