



TVOC

Fixed PID Monitor for Continuous VOC Detection



New ATEX certification and 3 wire option allows TVOC to be used in Zone 2 hazardous areas, without safety barriers.



Features:

- Independently verified as best performing PID technology
- Patented Fence Electrode Technology for fast, accurate humidity resistant operation
- ATEX: Zone 2 hazardous areas without safety barriers (3 wire option)
- ATEX & IECEx: Zone 1 hazardous areas with safety barriers (4 wire option)
- 3 wire option allows direct replacement of an existing PID area monitor (Zone 2 ATEX)
- Selectable detection range of 0 - 10 ppm, 0 - 100 ppm or 0 - 1000 ppm
- Diffusive monitoring - no pump required
- Scaled 4-20 mA analogue output
- Includes a 10.6 eV lamp
- Easy access PID sensor allows simple servicing
- Simple calibration procedure

TVOC is registered in the U.K. Patent and Trademark Office.

Advanced Gas Sensing Technologies
www.ionscience.com

TVOC is a fixed photoionisation detector (PID) designed for continuous measurement of total volatile organic compounds (VOCs). New 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.

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.

TVOC utilises a diffusive sample technique resulting in less contamination issues compared to pumped systems, reducing lamp cleaning and servicing requirements. 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.

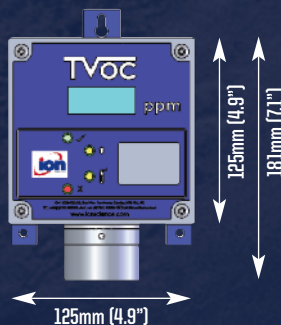
TVOC SystemPlus comes complete with a pumped sample system for applications where a sample needs to be drawn to the unit from as far away as 30 meters. SystemPlus incorporates a TVOC unit together with pump, sample preconditioning with flow cut off switch, optional USB data logger and power supply all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



Applications include:

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

Dimensions



Accessories

TVOC is available with an exclusive range of accessories. Contact Ion Science for more information.

TECHNICAL SPECIFICATION

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 (-20°C ≤ Ta ≤ 50°C)

IECEx: II 2 G Ex ia IIC T4 (-20°C ≤ Ta ≤ 50°C)

INGRESS PROTECTION RATING

Designed to - IP65

Dependent on cable glands fitted Sensor - 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

0-10 ppm, 0-100 ppm, 0-1000 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. Detector - 1 minute as standard**

ACCURACY

0-100ppm +/- 1ppm or ≤2%, 0-1000ppm +/- 2ppm or ≤25%

LINEARITY

0-1000ppm > 25%

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: 181 x 125 x 76 mm (7.1 x 4.9 x 3")

4-20 mA ALARM LEVELS

Selectable 2 mA & 3.5 mA options

NB: All specifications are against an isobutylene calibration at 20 °C, 90% RH and up to 100 ppm.
* 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 to between 5 seconds and 5 minutes.

Part number TVOC1A. This publication is not intended to form the basis of a contract and specifications can change without notice.



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