



TVOC

Intrinsically Safe, Fixed PID for Continuous VOC Monitoring



Designed for fixed continuous monitoring **TVOC** is ideal for use in manufacturing and process industries where VOCs are typically present.



Features:

- Patented Fence Electrode Technology for high sensitivity, humidity and contamination resistant operation
- Intrinsically Safe for use in hazardous areas - no need for explosion proof enclosure
- 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
- Operates at 5 to 28 V
- -20 to 50 °C operating temperature
- LED and 4-20 mA output fault indication
- Includes a 10.6 eV lamp
- Digital numerical display
- 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 the first Intrinsically Safe, fixed photoionisation detector (PID) of its kind for continuous detection and measurement of total volatile organic compounds (VOCs). With a 4-20 mA analogue output **TVOC** can be integrated into a DCS control system to give warning or control of high VOC levels in the working environment.

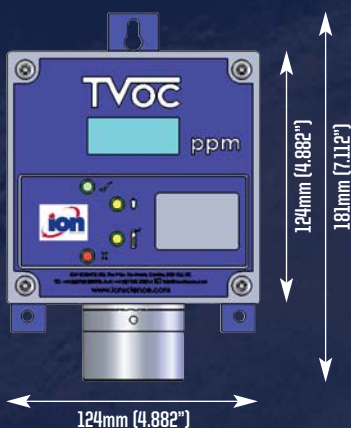
TVOC utilises a diffusive sample technique resulting in less contamination issues compared to pumped systems, reducing lamp cleaning and servicing requirements. Simple to install, service and calibrate, **TVOC** requires no hot work permit and the PID sensor is accessible and changeable in a matter of seconds.

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

Accessories

Ion Science provide an exclusive range of **TVOC** accessories. Contact Ion Science for more information.



TECHNICAL SPECIFICATION

SENSOR (PID)

10.6 eV lamp with Ion Science patented Fence Electrode technology*

INTRINSICALLY SAFE APPROVALS

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

INGRESS PROTECTION RATING

IP65 - dependent on cable glands fitted Sensor - IP54

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

0.1-100 ppm 1-1,000 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

0-100 ppm ≤ 2% 100 - 1,000 ≤ 5%

LINEARITY

0-100 ppm > 98%

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: 1.3 kg (2.9 lb) Packed: 1.47 kg (3.2 lb)

Dimensions: 120 x 160 x 70 mm (4.7 x 6.3 x 2.8")

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 TVOC1.2. This publication is not intended to form the basis of a contract and specifications can change without notice.



ION SCIENCE is ISO9001:2000 certified (December 2003)

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