# TITAN

## FIXED BENZENE DETECTOR


THE WORLD'S FIRST CONTINUOUS,
BENZENE SPECIFIC MONITOR.

ION


# DESIGNED TO SPECIFICALLY DETECT BENZENE IN PETROCHEMICAL ENVIRONMENTS, PROVIDING THE ULTIMATE SAFETY MONITOR FOR PLANT & WORKFORCE.

## The only truly selective wall-mounted benzene monitor

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- Fast and accurate detection of benzene down to 0.1 ppm
- Minute by minute sampling providing continuous real-time data
- Robust separation method ensures benzene specific readings
- Internally regulated heating for stable operation at extreme temperatures

## Best available photoionisation (PID) detection

- PID independently verified as best performing on the market
- In-built humidity resistance with no need to compensate
- Anti-contamination design for extended field operation
- 2 year warranty when instrument registered online

## Safety

- Clear display & visual alarms for indication of benzene levels
- Two user-definable independent alarm levels including optional real-time STEL calculation
- Two relay outputs provide an immediate warning alarm
- Meets ATEX & IECEx, UL and CSA standards

## Ease of use & service

- Modular design for ease of installation and servicing
- Service-free six months operation
- Simple two button interface for menu navigation
- No consumables


# Research

Following extensive research and development, Ion Science brings to market the world's first fixed, continuous, real-time benzene specific monitor.

Set to change the game in refinery applications, Titan is the first truly selective wall-mounted monitor ranging dynamically from 0.1 ppm to 20 ppm in petrochemical and chemical environments.

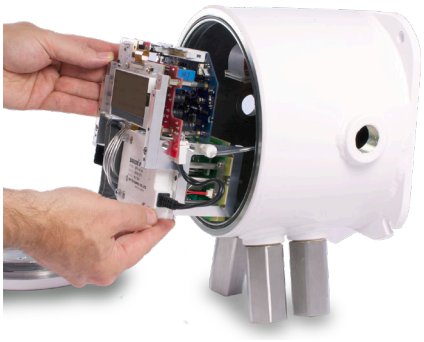
Titan receives a sample of gas from the local environment once per minute. Within 60 seconds, the sample is conditioned to enable precise benzene measurement and signal communcations.

Titan's continuous, real-time measurement allows trends over time to be monitored and communicated over 4-20 mA or RS485. Data is stored internally for a minimum of two years and can be downloaded remotely toa PC via USB or RS485 for analysis.

Titan provides an immediate warning alarm system with two operator configurable levels, ensuring workers are kept safe and protected to the standards required on site. The instrument incorporates two relay outputs allowing the user to install their own required alarm system.

Titan is designed to be easily installed and serviced. Its modular design allows the Ex d case to be installed well in advance of commissioning. The service module can be removed and replaced as a remotely serviceable plug-and-play cartridge.

Titan incorporates Ion Science's market-leading MiniPID technology with proven resistance to humidity and contamination, ensuring optimal performance whatever the environment.



## Applications include

- Oil & gas
- Petrochemical
- Chemical
- Health & safety
- Offshore

## Accessories

Titan is supplied with an exclusive range of accessories, for more information visit: www.ionscience.com/titan for more info.

# Technical specifications

**Sensor type**
- PID, 10.6 eV lamp coupled with selective filtering

**Selectivity**
- Benzene specific within typical petrochemical matrix

**Range**
- 0 - 20 ppm

**Measuring frequency**
- One minute

**Lower limit of detection**
- 0.1 ppm

**Accuracy**
- ± 0.1 ppm or ± 10%, whichever is greater

**Temperature stability**
- Internally heated

**Sample flow**
- 200 ml/min

**Display**
- Graphical BW LCD 64 x 128 pixels with back light Bright LEDs for normal operation, fault and alarm
- Two magnetic switches for menu operation

**Approvals***
- Ex II 2G Ex d II B+H2 T4 Gb Tamb. = -20 °C to +55 °C
- IECEx FTZU 140030X
- ATEX, EMC
- Conforms to UL 61010-1, UL 60079-0, UL 60079-1
- Certified to CAN/CSA-C22.2

**Ingress protection rating**
- Designed to IP65 (cable gland dependant)

**Humidity**
- 0 - 100 % RH

**Minimum service period**
- 6 months – Hydrophobic & carbon filter replacement
- 12 months – PID Lamp, Electrode stack, pump and column replacement

**Cable entry**
- Two 3/4 NPT gland threads

**Power**
- Vin (nom) 24 V DC @ 3.2 A (recommended)
- Vin (max) 32 V DC @ 2.4 A
- Vin (min) 19 V DC @ 4.0 A

**Communication**
- Isolated 4-20 mA output
- Isolated RS 485 Modbus (simplex/half duplex or fully duplex)
- USB when lid removed with PC software

**Data storage**
- On board MMC, minimum of six months

**Relay output**
- Two isolated outputs, voltage free, 24 V DC @ 1.25 A

**Weight and dimensions**
- 15 kg (33 lbs)
- 219 x 219 x 172 mm (8.6 x 8.6 x 6.8" approx.)

**Gas sample line**
- 10 m max length, PTFE, 6 mm OD, 4 mm ID

*Full technical details can be found in the product manual.



Gas-Detection
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