



# TITAN

**The world's first  
continuous,  
benzene specific  
monitor.**



**Designed to specifically detect benzene in  
petrochemical environments, providing the  
ultimate safety monitor for plant & workforce.**

**The only truly selective wall-mounted benzene monitor**

- Fast and accurate detection of benzene down to 100 ppb
- 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

## **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 approvals (UL/CSA approval pending)

## **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

## **Best available photoionization (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



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 100 ppb 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 communications.

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 to a 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.

Visit [www.ionscience.com/titan](http://www.ionscience.com/titan) for more info.

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## TITAN TECHNICAL SPECIFICATION

### 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

100 ppb

### ACCURACY

± 0.05 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

### HAZARDOUS AREA SAFETY APPROVALS

ATEX/IECEx:  II 2G Ex d II B+H2 T4 Gb (-20 °C to +55 °C)

### INGRESS PROTECTION RATING

Designed to IP65 (cable gland dependant)

### HUMIDITY

0 - 100 % RH

### MINIMUM SERVICE PERIOD

Selective filter six months  
PID lamp one year

### 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 max

### 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

Titan V1.0. This publication is not intended to form the basis of a contract and specifications can change without notice.

