ION Science Inc.

2023 CATALOG

ionscience.com/usa

Pioneering Gas Sensing Technology.

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FALCO

FIXED VOC DETECTOR

Overview

FALCO and FALCO TAC are part of the latest generation of fixed photoionization detectors (PIDs) from ION Science that continuously detect a wide range of volatile organic compounds (VOCs).

Designed for working in the most extreme conditions, its unique Typhoon Technology safeguards the sensor from condensing humidity while its anti-contamination design allows maintenance free operation for extended periods, in the harshest environments. FALCO also incorporates ION Science's patented Fence Electrode Technology for the most accurate PID performance in humid environments.

FALCO can operate as a standalone detector with its bright multi-colored status display, and can also be easily integrated into any system via analogue 4-20 mA, Modbus RS-485 and relays.

For ease of maintenance, FALCO can be serviced without the need for removing power or using a hot work permit with no tools. FALCO's easy to navigate with a 5 magnetic switch interface and LED confirmation, ensuring installation, setup and servicing is quick and simple.

FALCO is supplied with a 10.6 eV lamp, allowing the instrument to detect a wide range of VOC gases. The FALCO TAC utilizes a 10.0 eV lamp to detect Total Aromatic Compounds (TACs), which helps focus on benzene.

The FALCO and FALCO TAC pumped instruments are ideal for detecting VOCs and TACs in difficult locations, such as underground or in confined spaces. The pumped model uses a sample line to draw a sample from a fixed location. The pumped variant can also be used to sample VOCs from industrial processes.

Extreme Conditions

- Specifically designed for extreme weather
- Built-in Typhoon Technology to stop condensation forming within the PID sensor
- Anti-contamination design
- Ingress protection rating IP65

Ultimate Safety

- Patented fence electrode gives best in class performance over all humidities
- Anti-contamination design provides long term accurate results
- Multi-colored status display visible from 65 feet in direct sunlight
- High visibility OLED display

Ease of Maintenance & Low Cost of Ownership

- Easy to navigate with its unique 5 magnetic button interface
- No tools required for field servicing
- Dual certification allows access to serviceable areas in hazardous zones
- Warranted 10,000 hour lamp life
- Easy to replace electrode stack

Applications

- Safety
- Industrial Hygiene
- Fugitive Emissions
- Fence Line Monitoring
- Air Quality Monitoring
- Fertility Labs
- Glove Boxes
- Fume Cupboards
- Process Control
- HVAC
- Plant Shut Down & Turnaround

Duel Certification

Dual IS and ExD certification allows FALCO to be serviced in hazardous environment without using a hot work permit.

Certification	
ATEX	Ⓔx II 2G db ib IIC T4 Gb
UL/CSA	Class 1, Div 1 Groups ABCD T4

Four Detection Ranges

FALCO and FALCO TAC pumped have four detection ranges.

Range (ppm)	0-10	0-50.0	0-1000	0-3000
Sensitivity (ppm)	0.001	0.01	0.1	1
FALCO (10.6 eV)	✔	✔	✔	✔
FALCO TAC (10.0 eV)		✔		

Extend your FALCO warranty

Registering your product online within one month of purchase will extend its warranty.

Pumped 10.6 eV model

Pumped TAC (10.0 eV) model

FALCO

SPECIFICATIONS

SENSOR
Photoionization detector

FALCO DETECTION RANGES AND SENSITIVITY WITH 10.6eV LAMP FITTED*
- 10.0 ppm, 0.001 ppm
- 50.0 ppm, 0.01 ppm
- 1000 ppm, 0.1 ppm
- 3000 ppm, 1 ppm

FALCO DETECTION RANGES AND SENSITIVITY WITH 10.0eV LAMP FITTED*
- 50.0 ppm, 0.01 ppm

RESPONSE TIME (T90)
- Pumped Models: <10 seconds**

ACCURACY
- ± 5% or ± 1 digit

USER INTERFACE
- OLED high contrast white on black: 128 x 64 pixels
- Screen size: 35 mm (w) x 17.5 mm (h)
- 5 magnetic switches with LED confirmation (up, down, left, right & enter)

STATUS INDICATOR
- Bright visible status indicator: RED, AMBER, GREEN

OUTPUT
- 4 - 20 mA
- 2 programmable relays
- RS 485 Modbus

FALCO PUMPED ENVIRONMENTAL SPECIFICATION
- Operational temperature: -4ºF to 122ºF 0-100% RH and condensing humidity
- Storage temperature: -4ºF to 140ºF

INGRESS PROTECTION
- Main unit: IP65
- Sensor head: IP65

POWER
- Working voltage: 12 to 40 Vdc
- Typical 2 W, Max. 7 watts

MECHANICAL INTERFACE
- 2 x cable entry points with 3/4” NPT threads (left and right)

MOUNTING POINTS
- 2 x M8

WEIGHT & DIMENSIONS (WITH PUMP)
- 3.3 kg
- 291 (h) x 191 (w) x 125 (d) mm

EMC
- 2 x M8

CERTIFICATION
- Ex II 2G db ib IIC T4 Gb
- Class 1, Div 1 Groups ABCD T4
- ISO9001:2015

TVOC 2

FIXED VOC MONITOR

Best Available Photoionization (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

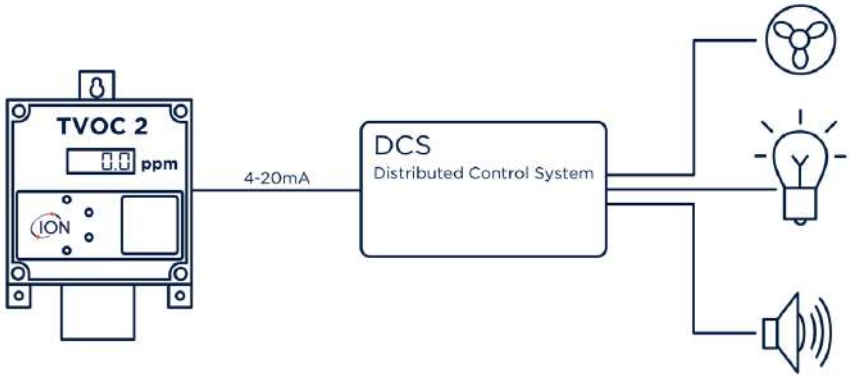
- Accurate results over all environmental conditions
- Rugged and robust design withstands harsh environments
- Large LCD display for clear readings
- ATEX and IECEx approved

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 photoionization 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 utilizes a diffusive sample technique resulting in less contamination issues compared to pumped systems, reducing lamp cleaning and servicing requirements. The 4-20 mA analog 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:

- 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.

TVOC 2

SPECIFICATIONS

APPROVALS
- Ex II 2G Ex ia IIC T4 Gb (-4°F ≤ Ta ≤ +122°F)
- Ex II 3G Ex nA IIC T4 (-40°F ≤ Ta ≤ +122°F)
- Baseefa05ATEX0277X
- IECEx BAS 06.0057X

INGRESS PROTECTION RATING
- Designed to IP65
- Sensor Ingress Protecting 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: -4°F to +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

TITAN

FIXED BENZENE DETECTOR

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

The Only Truly Selective Wall-mounted Benzene Monitor

The only truly selective wall-mounted benzene monitor

- 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 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
- 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 & IECE, 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 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.

TITAN

SPECIFICATIONS

SENSOR TYPE
• PID, 10.6 eV lamp coupled with s elective 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

FLOW RATE
• ≥ 160 ml/min in ambient conditions

DISPLAY
• Graphical BW LCED 64 x 128 pixels with backlight
• Bright LEDs for normal operation, fault and alarm
• Two magnetic switches for menu operation

APPROVALS
• 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 dependent)

HUMIDITY
• 0 - 99% 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 dulplex 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 & 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

GASCLAM 2

GROUND GAS MONITOR

A UNIQUE IN-BOREHOLE GAS MONITORING MONITORING SYSTEM DEVELOPED FOR UNATTENDED COLLECTION OF LONG-TERM, REAL-TREND GROUND-GAS DATA.

Key Features

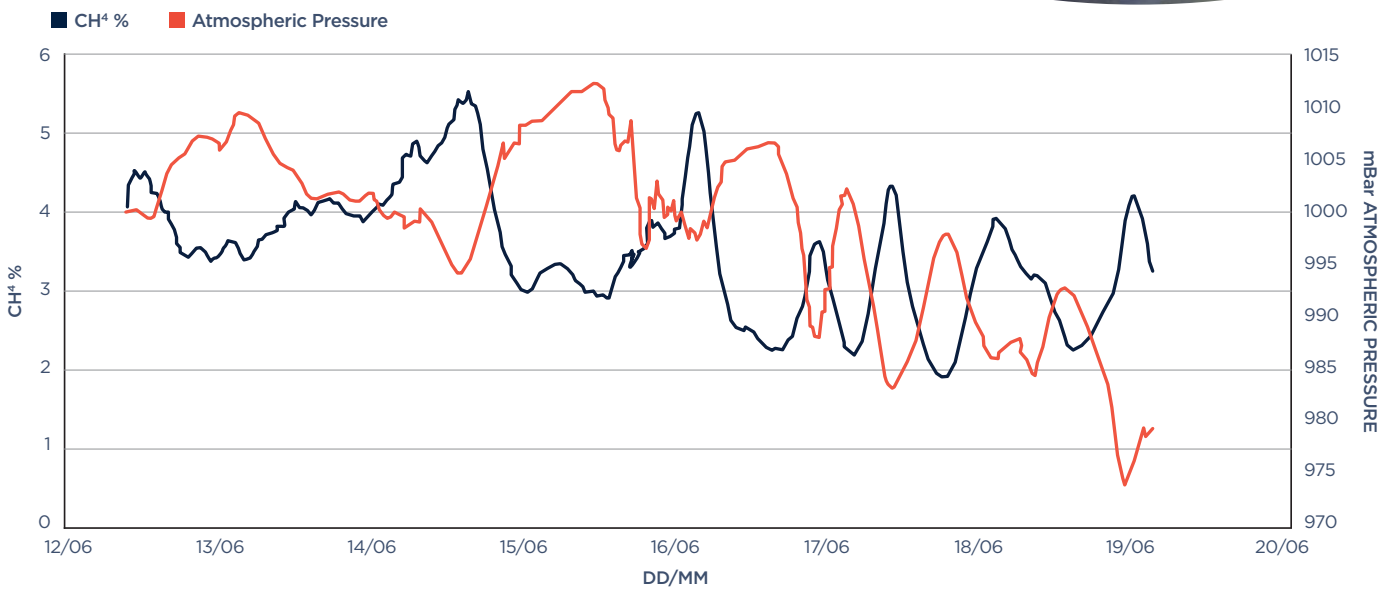
- Continuous gas (methane, carbon dioxide, oxygen, hydrogen sulfide and VOC) monitoring with configurable logging intervals.
- Continuous atmospheric and borehole pressure monitoring with configurable logging intervals.
- Battery powered deployment for over 3 months (dependent on logging frequency)
- External power option for extended deployments.
- Intrinsically safe for use in explosive atmospheres.
- Discrete installation.

Key Benefits

- Optimized site management with insights from continuous monitoring.
- Improved site characterization and event flagging helps reduce risks.
- Demonstrates regulatory compliance and due diligence.
- Supports an industry recognized best practice approach to ground-gas monitoring.
- Aids selection of cost-effective solutions.

Ease of Use

- Fits into a standard 50 mm/2" borehole.
- Reduces number of site visits.
- Simple PC software to download and analyze data.



Continuous ground gas monitoring

Using spot measurements to understand ground-gas behavior can lead to uncertain or misleading results. Uncertainty exists as concentration changes over time and spot sampling only provides a snap shot of the ground gas in that instant.

Considerable published material from experts who measure ground-gas and perform risk assessments question whether traditional methods of collecting data are adequate. The need for real time of data was the reason for developing the patented GasClam 2.

GasClam 2 continuously measures and collects ground gas concentration data as well as parameters that are known to control it, such as subsurface pressure, atmospheric pressure, water level and temperature.

In combination, this data reduces uncertainty by providing the full picture of what is happening below ground. Also, by observing the process controlling the ground gas regime, you can predict how it will change in the future.

Using GasClam 2, therefore, provides multiple financial benefits. The first saving comes from reducing the number of site visits by a field engineer.

The second saving comes from reducing the overall length of monitoring programs as legislative data requirements can be met quicker.

The third and largest saving is made by designing appropriate, rather than over engineered, solutions based on complete and robust data.

Applications

- Brownfield Site Investigation
- Landfill Perimeter Monitoring and Control
- Shale and Coal Bed Methane/ Seam Gas Site Monitoring
- Vapor Intrusion Studies
- Waste Management
- Refineries and Petroleum
- Storage Monitoring

Accessories

- External power supply cable
- External power supply / communication adaptor
- External level sensor

GASCLAM 2

SPECIFICATIONS

GAS	METHOD/TYPE	RANGE	RESOLUTION	ACCURACY
CH4**	Infrared	0-100% 0-5%	1% above 50% 0.5% below 50% 0.05% above 2.5% 0.025% below 2.5%	± 2% FSD ± 2% FSD
CO2**	Infrared	0-100% 0-5%	1% above 50% 0.5% below 50% 0.05% above 2.5% 0.025% below 2.5%	± 2% FSD ± 2% FSD
O2	Electrochemical	0-25%	0.1%	± 5% of reading ± 1 digit
CO*	Electrochemical	0-2000 ppm	1 ppm	<± 3 ppm at 0 ± 5% at 250 ppm ± 10% full scale
H_2S*	Electrochemical	0-100 ppm	1 ppm	± 1 ppm at 0 ± 2.5% at 50 ppm
DUAL CO/H2S				
CO*	Electrochemical	0-500 ppm	1 ppm	± 3 ppm at 0 ± 3% at 250 ppm
H2S*	Electrochemical	0-200 ppm	1 ppm	± 1 ppm at 0 ± 2% at 100 ppm
SINGLE				
VOC*	PID	0-4000 ppm	1 ppm	± 5% of reading ± 1 digit

ENVIRONMENTAL	METHOD/TYPE	RANGE	RESOLUTION
Barometric Pressure	Piezoelectric	800 to 1250 mBar	1mBar
Borehole Pressure	Piezoelectric	800 to 1200 mBar	1mBar
Temperature	Internal Chip	22ºF to 122ºF (-5ºC to 50ºC)	1ºF (0.1ºC)
Water Depth	Piezoelectric	0-25 m (various available)	0.01 m

POWER OPTIONS
- **Internal**: Option of Lithium primary cells or Duracell Alkaline D-Cells or Rechargeable battery pack
- **External**: Accepts intrinsically safe external power supply for extended and/or rapid monitoring

TYPICAL BATTERY LIFE (HOURLY SAMPLING)
- Lithium primary cells: 3 months
- Alkaline cells: 1 month
- Rechargeable battery pack: 3 weeks

CASE
- High quality stainless steel

WEIGHT
- 7.5 kg (16.8 lbs)

DIMENSIONS
- **Overall length**: 90 cm (34.5 in)
Borehole tube length: 83 cm (32.6 in)
- **Head diameter**: 11 cm (4.3 in)
Borehole tube diameter: 4.7 cm (1.85 in)

PROTECTION
- IP68 rated (continuous submersion)

OPERATION TEMPERATURE
- -4°F to 122°F (-20°C to +50°C)

APPROVALS
- EMC, ATEX 0105 X
- CE
- Ex II 2G Ex d ib [ib] IIB T4 Gb
- IECEx Ex d ib [ib] IIB T4 Gb
- CSA C (US & Canadian approvals)
- Class 1, Zone 1 (A)Ex d id IIB T4

PATENTS
- European and Worldwide patented

OPERATING SYSTEM
- Windows XP SP 2, 7, 8.0, 8.1 and 10

TIGER XTL

HANDHELD VOC DETECTOR

Ultimate Performance

The Tiger XTL is a ground breaking, low-cost entry level VOC detector with all the essential functions you need to detect VOCs. The instrument has the lowest running costs on the market with inexpensive, disposable parts, lamps, and filters. This variant of the hugely popular Tiger XT VOC detector is low on cost but high on performance. Its revolutionary, patented PID sensor technology with resistance and anti-contamination design provides market leading accuracy and run time. Combined with 24-hour battery life, these features maximize field time by minimizing erroneous readings in high humidity and drift in hard environments.

The Tiger XTL portable VOC gas detector is ETL (Electrical Testing Laboratories), KGS (Korean Gas Safety), IECEx (International Electro-technical Commission System for Certification to Standards Relating to Equipment for Use in Explosive Atmospheres) certified. It is also ATEX approved meaning the instrument is intrinsically-safe.

Key Features

>> **Improved Robust Design**
The instruments rugged body can withstand harsh environments

>> **Long Rechargeable Battery Life**
When fully charged, the lithium-ion battery can last up the 24 hours

>> **IP65 Ingress Protection**
Protection against a range of conditions and weather temperatures

>> **Fast Reponse Time & Clear Down**
<2 second response time, one of the fastest and most accurate on the market

>> **Instantaneous Alarms**
Bright visible alarms: **RED** & **AMBER** with loud sounder (95 dBA at 300 mm (12”))

>> **Humidity Resistant and Anti-Contamination Design**
Patented Fence Electrode Technology ensures optimal performance and extends run time

Minimal Instrument Downtime

The Tiger XTL has been designed with the user in mind for ease of use and servicing. Batteries can be replaced in potentially explosive environments due to the innovative intrinsically safe design. Low cost filters and lamps can be easily changed in minutes, minimizing instrument downtime.

Typical Applications

Typical applications for the Tiger XTL include: Environmental Monitoring, Soil Contamination Detection, VOCs in Landfill, Confined Space Entry, Emergency Response, Wing Tank Entry, Fumigation Gases & Medical Gases.

2 Year Extended Warranty

The Tiger XTL can be registered online which extends warranty to up to 2 years. Register your instrument online within one month of purchase to extend the warranty.

TIGER XTL

SPECIFICATIONS

MINIMUM RESOLUTION
- 0.1 ppm

MAXIMUM READING
- 5,000 ppm

RESPONSE TIME
- T90 < 2 seconds

ACCURACY
- ± 5% display reading ± one digit

LINEARITY
- ± 5% display reading ± one digit

INTRINSICALLY SAFE APPROVALS
- II 1G Ex ia IIC T4 Ga
- Tamb = 5º F ≤ Ta ≤ 113ºF (with Lithium-ion battery pack)
- Tamb = 5º F ≤ Ta ≤ 104ºF (with Alkaline battery pack)
- ITS-I22ATEX35111X
- IECEx ITS 22.0025X
- ITS22UKEX0635X
- 3193491 conforms to UL Std. 913, 61010-1 Certified to CAN/CSA Std. C22.2 No. 61010-1

BATTERY LIFE
- Li-ion: life up to 24 hours of continual use

LAMPS
- 10.6 eV Krypton PID lamp (standard)

DATA LOGGING
- Push-to-log: 128 zones, 80,000 data points

CALIBRATION
- Standard calibration: 100 ppm Isobutylene
- Custom calibration capability

ALARM
- Flashing LED and 95 dBA at 300 mm (12”) audible sounder
- Selectable vibrating alarm

FLOW RATE
- ≥ 220 ml/min (with blocked flow alarm)

TEMPERATURE
- Operating: -4ºF to 140ºF
- Humidity: 0-99% RH (non-condensing)

PROTECTION
- Designed to IP65
- EMC tested to EN61326-1:2013 & EN50270:2015 & CFR 47:2008 Class A

WEIGHT & DIMENSIONS
- 370 mm (H) x 91 mm (W) x 60 mm (D)
- Instrument weight 870 g

TIGER XTL

KITS

Standard Kit

- Tiger XTL Instrument with Rubber Boot
- Rechargeable Battery (Li-ion)
- Battery Charger
- Mains Adaptor
- Compact Case
- PTFE Filter Discs
- Removal Tool MiniPID Stack
- PID Lamp Cleaning Kit
- USB Cable
- Quick Start Guide

Premium Kit

- Tiger XTL Instrument with Rubber Boot
- Rechargeable Battery (Li-ion)
- Battery Charger
- Mains Adaptor
- Rugged Case
- Carbon Zero Filter Assembly
- Calibration Adaptor
- PTFE Filter Discs
- Removal Tool MiniPID Stack
- PID Lamp Cleaning Kit
- Lanyard
- USB Cable
- Quick Start Guide

TIGER XT

HANDHELD VOC DETECTOR

Ultimate Performance

The Tiger XT's photoionization detection (PID) technology has been independently verified as best performing on the market for speed, accuracy, resistance to humidity, and contamination, thanks to its patented Fence Electrode Technology. Its patented Fence Electrode Technology and anti-contamination design ensures optimal performance within humid and heavily contaminated atmospheres, extending run time in the field.

The Tiger XT is the most advanced handheld VOC detector on the market with the widest measurement range, accurately detecting gases down to 1 part per billion (ppb) up to 20,000 part per million (ppm). Tiger XT detector has the fastest response time on the market of just two seconds, and is as quick to clear down. The Tiger XT handheld VOC gas detector can detect over 750 VOCs and toxic compounds!

Key Features

>> **Improved Robust Design**
The instrument's rugged body can withstand harsh environments

>> **Large Internal Gas Table**
Internal gas table has over 750 VOCs & toxic compounds

>> **IP65 Ingress Protection**
Protection against a range of conditions and weather temperatures

>> **Fast Response Time & Clear Down**
<2 second response time, one of the fastest and most accurate on the market

>> **Instantaneous Alarms**
Bright visible alarms: **RED** & **AMBER** with loud sounder (95 dBA at 300 mm (12"))

>> **Humidity Resistant and Anti-Contamination Design**
Patented Fence Electrode Technology ensures optimal performance and extends run time

Upgradeable Features

The Tiger XT is fully upgradeable, allowing users to add further functionality if required. Upgradeable features include Health & Safety mode, PPB Sensitivity, Data Logging, Single Log Only (Push to Log), and Multi Log Only. Tiger XT is fully upgradeable without having to return the instrument to the factory.

Typical Applications

Typical applications for the Tiger XT include: Environmental Monitoring, Soil Contamination Detection, VOCs in Landfill, Confined Space Entry, Emergency Response, Wing Tank Entry, Medical Gases within Hospitals, and Fugitive Emissions.

5 Year Extended Warranty

The Tiger XT can be registered online which extends warranty to up to 5 years. Register your instrument online within one month of purchase to extend the warranty.

TIGER XT

SPECIFICATIONS

MINIMUM SENSITIVITY***
- **10.6eV**: 1 ppb or 0.001 mg/m^3
- **11.7eV**: 0.6 ppm (600 ppb)[3]

MAXIMUM READING (RANGE)**
- **10.6eV**: 20,000 ppm or 20,000 mg/m3***
- **11.7eV**: 9,000 ppm***

RESPONSE TIME
- **10.6eV**: < 2 seconds
- **11.7eV**: < 6 seconds

ACCURACY***
- **10.6eV**: 5% or ± one digit*
- **11.7eV**: ± 12% display reading

LAMP LIFETIME
- **10.6eV**: 10,000 hours
- **11.7eV**: ≥ 500 hours

TEMPERATURE RANGE
- **10.6eV**: -4°F to 140°F
- **11.7eV**: 32°F to 140°F

INTRINSICALLY SAFE APPROVALS
- II 1G Ex ia IIC T4 Ga
- Tamb = 5°F ≤Ta ≤ +113°F (with lithium ion battery pack)
- Tamb = 5°F ≤Ta ≤ 104°F (with alkaline battery pack)
- ITS-I22ATEX35111X
- IECEx ITS 22.0025X
- ITS22UKEX0635X
- 3193491 conforms to UL Std. 913, 61010-1
- Certified to CAN/CSA Std. C22.2 No. 61010-1
- Class 1 Division 1. Approval for Groups A, B, C & D, T4

HUMIDITY
- 0-99% RH (non condensing)

BATTERY LIFE
- Li-ion: Typical battery life up to 24 hours, charge time typically 8 hours
- Alkaline: 3 x AA, typically 8.5 hours life

LAMPS
- 10.6 eV Krypton PID lamp (standard) 10.0 eV and 11.7 eV lamps available

DATA LOGGING*
- 120,000 points including date and time stamp

COMMUNICATION
- Direct USB 1.1 connection

CALIBRATION
- 2 and 3 point calibration (via calibration kit accessory)

FLOW RATE
- ≥ 220 ml/min (with blocked flow alarm)

TEMPERATURE
- Operating: -4ºF to 140ºF (-20ºC to 60ºC); non-Intrinsically Safe
- Humidity: 0-99% RH (non-condensing)

PROTECTION
- Designed to IP65
- EMC tested to EN61326-1:2013 & EN50270:2015 & CFR 47:2008 Class A

WEIGHT & DIMENSIONS
- Instrument (with probe): Width: 91 x Height: 370 x Depth: 60 mm
- Instrument Weight: 870g

TIGER XT

KITS

Premium Kit

- Tiger XT Instrument with Rubber Boot
- Rechargeable Battery (Li-ion)
- Battery Charger
- Mains Adaptor
- Rugged Case
- Carbon Zero Filter Assembly
- Calibration Adaptor
- PTFE Filter Discs
- Removal Tool MiniPID Stack
- PID Lamp Cleaning Kit
- Lanyard
- USB Cable
- Quick Start Guide

TIGER XT FIRE INVESTIGATION KIT

FIRE INVESTIGATION KIT

The Fire Investigation Kit provides fast, accurate detection of VOCs with exceptional resistance to humidity and contamination!

Ultimate Performance

The ION Science Fire Investigation Kit with Tiger XT VOC Detector has been specifically designed to provide you with all the tools for a convenient, easy-to-use solution for the detection of volatile organic compounds (VOCS) within fire and arson investigation applications.

Fire investigation teams are responsible for the examination and assessment of suspected arson related sites, and further analysis of suspicious samples. Investigators require a solution for the fast discovery of protential arson incident accelerants, and initial crime scene VOC assessment.

What's in the case?

- >> **Tiger XT or Tiger XTL VOC Detector** for rapid, accurate response to VOCs
- >> **1m Flexi Probe** for versatile, practical detection of VOCs in hard to reach places
- >> **Bump Test Pen** for simple, quick reassurance that your detector is responding to the presence of volatiles prior to use
- >> **AA Tiger Battery Pack** as an emergency power source during long shifts or when access to a charging point is not available
- >> **Charging Cradle & Travel Charge Adaptor** for remote charging of your instrument on-the-go
- >> **Rugged Carry Case** for easy, secure and robust transportation of Tiger XT and the accessories
- >> **USB Cable** for fast data download
- >> **Mains Adaptor** allows charging worldwide
- >> **Exhaust Barb** which can be connected to a collection bag to allow users to collect samples for further lab analysis
- >> **PTFE Filters (pack of 10)** spares are provided for quick and simple Tiger XT maintenance
- >> **Quick Start Guide** for ease of use and no specialised training required

FIRE INVESTIGATION KIT

SPECIFICATIONS

TIGER XTL

MINIMUM RESOLUTION
• 0.1 ppm

MAXIMUM READING
• 5,000 ppm

RESPONSE TIME
• T90 < 2 seconds

ACCURACY
• ± 5% display reading ± one digit

LINEARITY
• ± 5% display reading ± one digit

INTRINSICALLY SAFE APPROVALS
• II 1G Ex ia IIC T4 Ga
• Tamb = 5º F ≤ Ta ≤ 113ºF (with Lithium-ion battery pack)
• Tamb = 5º F ≤ Ta ≤ 104ºF (with Alkaline battery pack)
• ITS-I22ATEX35111X
• IECEx ITS 22.0025X
• ITS22UKEX0635X
• 3193491 conforms to UL Std. 913, 61010-1 Certified to CAN/CSA Std. C22.2 No. 61010-1

BATTERY LIFE
• Li-ion: life up to 24 hours of continual use

LAMPS
• 10.6 eV Krypton PID lamp (standard)

DATA LOGGING
• Push-to-log: 128 zones, 80,000 data points

CALIBRATION
• Standard calibration: 100 ppm Isobutylene
• Custom calibration capability

ALARM
• Flashing LED and 95 dBA at 300 mm (12”) audible sounder
• Selectable vibrating alarm

FLOW RATE
• ≥ 220 ml/min (with blocked flow alarm)

TEMPERATURE
• Operating: -4ºF to 140ºF
• Humidity: 0-99% RH (non-condensing)

PROTECTION
• Designed to IP65
• EMC tested to EN61326-1:2013 & EN50270:2015 & CFR 47:2008 Class A

WEIGHT & DIMENSIONS
• 370 mm (H) x 91 mm (W) x 60 mm (D)
• Instrument weight 870 g

TIGER XT

MINIMUM SENSITIVITY***
• 10.6eV: 1 ppb or 0.001 mg/m3
• 11.7eV: 0.6 ppm (600 ppb)3

MAXIMUM READING (RANGE)**
• 10.6eV: 20,000 ppm or 20,000 mg/m3***
• 11.7eV: 9,000 ppm***

RESPONSE TIME
• 10.6eV: < 2 seconds
• 11.7eV: < 6 seconds

ACCURACY***
• 10.6eV: 5% or ± one digit*
• 11.7eV: ± 12% display reading

LAMP LIFETIME
• 10.6eV: 10,000 hours
• 11.7eV: ≥ 500 hours

TEMPERATURE RANGE
• 10.6eV: -4°F to 140°F
• 11.7eV: 32°F to 140°F

INTRINSICALLY SAFE APPROVALS
• II 1G Ex ia IIC T4 Ga
• Tamb = 5°F ≤Ta ≤ +113°F (with lithium ion battery pack)
• Tamb = 5°F ≤Ta ≤ 104°F (with alkaline battery pack)
• ITS-I22ATEX35111X
• IECEx ITS 22.0025X
• ITS22UKEX0635X
• 3193491 conforms to UL Std. 913, 61010-1
• Certified to CAN/CSA Std. C22.2 No. 61010-1
• Class 1 Division 1. Approval for Groups A, B, C & D, T4

HUMIDITY
• 0-99% RH (non condensing)

BATTERY LIFE
• Li-ion: Typical battery life up to 24 hours, charge time typically 8 hours
• Alkaline: 3 x AA, typically 8.5 hours life

LAMPS
• 10.6 eV Krypton PID lamp (standard) 10.0 eV and 11.7 eV lamps available

DATA LOGGING*
• 120,000 points including date and time stamp

COMMUNICATION
• Direct USB 1.1 connection

CALIBRATION
• 2 and 3 point calibration (via calibration kit accessory)

FLOW RATE
• ≥ 220 ml/min (with blocked flow alarm)

TEMPERATURE
• Operating: -4ºF to 140ºF (-20ºC to 60ºC); non-Intrinsically Safe
• Humidity: 0-99% RH (non-condensing)

PROTECTION
• Designed to IP65
• EMC tested to EN61326-1:2013 & EN50270:2015 & CFR 47:2008 Class A

WEIGHT & DIMENSIONS
• Instrument (with probe): Width: 91 x Height: 370 x Depth: 60 mm
• Instrument Weight: 870g

TIGER XTS

HANDHELD BENZENE DETECTOR

Ultimate Performance

Utilizing the high output ION Science 10.0eV lamp, the Tiger XT Select (XTS) portable benzene gas detector is capable of detecting Total Aromatic Compounds (TACs) including Benzene, Toluene and Acetone. The instrument is supplied with a pack of benzene pre-filter tubes to detect benzene selectively. The tube can be easily attached to ensure rapid detection and selective measurement of benzene. Throughout the measurement process, Tiger XT Select benzene gas detector continuously displays real time data. Tiger XT Select can also provide 15 minute short term exposure limits (STELs) and 8 hour time weighted averages (TWAs) for Total Aromatic Compounds (TACs).

The Tiger XT Select handheld benzene gas detector can be used in standard operational mode without the use of a benzene pre-filter tube to deliver active indications of volatile organic compounds (VOCs).

Key Features

>> **Improved Robust Design**
The instrument's rugged body can withstand harsh environments

>> **Long Rechargeable Battery Life**
When fully charged, the lithium-ion battery can last up the 24 hours

>> **IP65 Ingress Protection**
Protection against a range of conditions and weather temperatures

>> **Fast Response Time & Clear Down**
<2 second response time, one of the fastest and most accurate on the market

>> **Instantaneous Alarms**
Bright visible alarms: **RED** & **AMBER** with loud sounder (95 dBA at 300 mm (12"))

>> **Humidity Resistant and Anti-Contamination Design**
Patented Fence Electrode Technology ensures optimal performance and extends run time

Basic & Advanced Modes

For simplicity and ease of use, the Tiger XT Select has been split into two, user-friendly modes: **Basic** & **Advanced**. Basic mode is designed to only offer the core functions for the detection of benzene and other TACs. In advanced mode, all operational modes are available including standard running, TAC and Tube mode.

Typical Applications

Typical applications for the Tiger XT Select include: Confined Space Entry, Plant Maintenance, Marine Down-Stream Monitoring, Hazardous Material Response, and TAC detection at loading docks and barge operations.

5 Year Extended Warranty

The Tiger XT Select can be registered online which extends warranty to up to 5 years. Register your instrument online within one month of purchase to extend the warranty.

TIGER XTS

SPECIFICATIONS

MINIMUM SENSITIVITY (PPM model)
- Standard running mode: 0.1 ppm
- TAC mode: 0.01 ppm
- Tube mode 0.01 ppm (res. 0.001 ppm)

MINIMUM SENSITIVITY (PPB model)
- Standard running mode: 0.001 ppm
- TAC mode: 0.001 ppm
- Tube mode: 0.01 ppm (res. 0.001 ppm)

MAXIMUM READING**
- Standard mode up to 20,000 ppm or 20,000 mg/m^3*
- Tube mode 200 ppm or 639 mg/m^3* benzene

RESPONSE TIME
- 130 seconds at 68oF (variable) Progressive indication of benzene breakthrough is displayed in real time

ACCURACY***
- ± 10% display reading ± one digit Benzene (tube mode

INTRINSICALLY SAFE APPROVALS
- II 1G Ex ia IIC T4 Ga
- Tamb = 5 oF ≤Ta ≤ 113oF (with lithium ion battery pack)
- Tamb = 5 oF ≤Ta ≤ 104oF (with alkaline battery pack)
- ITS-I22ATEX35111X
- IECEx ITS 22.0025X
- ITS22UKEX0635X
- 3193491 conforms to UL Std. 913, 61010-1
- Certified to CAN/CSA std. C22.2 No. 61010-1
- Class 1 Division 1. Approval for Groups A, B, C & D, T4

BATTERY LIFE
- Li-ion: life up to 24 hours, charge time 8 hours
- Alkaline: 3 x AA, typically 8.5 hours life

LAMPS
- 10.0 eV Krypton PID lamp

DATA LOGGING*
- 120,000 data log points including date and time stamp

COMMUNICATION
- Direct USB 1.1

CALIBRATION
- 2 and 3 point calibration (via calibration accessory kit)

ALARM
- Flashing LEDs Amber (low alarm) Red (high alarm)
- Sounder 95 dBA at 300 mm (12”)
- Vibration on alarm
- Pre-programmed TWA and STEL*

FLOW RATE
- ≥ 220 ml/min (with blocked flow alarm)

TEMPERATURE
- Operating: -4ºF to 140ºF
- Humidity: 0-99% RH (non-condensing)

PROTECTION
- Designed to IP65
- EMC tested to EN61326-1:2013 & EN50270:2015 & CFR 47:2008 Class A

WEIGHT & DIMENSIONS
- 370 mm (H) x 91 mm (W) x 60 mm (D)
- 870g

TIGER XTS

KITS

Premium Kit

- Tiger XTS Instrument with Rubber Boot
- Rechargeable Battery (Li-ion)
- Battery Charger
- Mains Adaptor
- Rugged Case
- Carbon Zero Filter Assembly
- Calibration Adaptor
- PTFE Filter Discs
- Benzene Pre-Filter Tubes (Pack of 10)
- Benzene Pre-Filter Tube Opener
- Benzene Pre-Filter Tube Probe
- Probe Tube (60 mm)
- Removal Tool MiniPID Stack
- PID Lamp Cleaning Kit
- Lanyard
- USB Cable
- Quick Start Guide

CUB

PERSONAL VOC DETECTOR

THE WORLD'S SMALLEST, LIGHTEST MOST SENSITIVE PERSONAL PID MONITOR FOR HAZARDOUS AND TOXIC COMPOUNDS FOR PLANT AND WORKFORCE.

Best Available Photoionization (PID) Detection

- PID independently verified as best performing on the market
- Unrivaled sensitivity detects down to ppb levels
- Widest range detects gases ppb – 5,000 ppm
- In-built humidity resistance with no need to compensate
- Anti-contamination design for extended field operation
- Measures over 480 selectable compounds (10.6 eV lamp)

Ease of Use

- Smallest, lightest personal PID monitor available
- Simple one button operation
- Intuitive software and simple calibration routine
- Easy to service
- Easily upgrade your instrument

Safety

- Fast (<13 seconds) response to hazardous gases & vapors
- Clear audio, visual and vibrating alarms
- Large LCD display for clear readings
- Battery life up to 12 hours
- Meets ATEX, IECEx appoval standards.

Low Cost Operation

- Inexpensive consumables and parts
- 2 year warranty when instrument registered online

Cub is the world's smallest, lightest personal PID monitor for the accurate detection of volatile organic and total aromatic compounds. With market leading parts-per-billion (ppb) sensitivity, Cub gives an early warning of hazardous gases, including benzene, before they reach levels which are harmful.

Cub is available in three distinct variants: ppm, ppb and TAC mode. Choose a ppb or ppm instrument with 10.6 eV lamp for accurately detecting a wide range of VOCs dependent on your sensitivity requirements. CubTAC with 10.0 eV lamp gives accurate detection of total aromatic compounds (TACs) down to ppb levels.

Small, compact and lightweight Cub is robust yet comfortable and unobtrusive to wear. Cub has a dynamic range of 1 ppb to 5000 ppm, the widest on the market measuring over 480 selectable compounds.

When worker exposure exceeds pre-set limits the instrument's audible, vibrating and flashing LED alarms alert you to the gases present. Readings are displayed in ppb and ppm on its bright, back-lit LCD display with selectable data logging time.

Upgradeable ppb sensitivity can be purchased quickly and easily. CubDoc docking stations are available for USB communication, charging and calibrating your instrument, dependent on your requirements.

The instrument's PID sensor technology has been independently verified as best performing for speed, accuracy and humidity resistant operation. Its unique anti-contamination and patented Fence Electrode Technology provide extended run time in the most challenging environments, giving you accurate results you can truly rely on.

Applications

- Industrial Hygiene
- Chemical and Petrochemical
- Oil & Gas
- Pharmaceuticals
- Health & Safety
- Hazardous Materials
- First Response
- Environmental

Accessories

Cub is supplied with an exclusive range of accessories and replacement parts. Visit the ION Science website for more info.

CUB

SPECIFICATIONS

SENSITIVITY
- 0.001 ppm (isobutylene equivalent)*
- 0.002 mg/m^3 (isobutylene equivalent)*

ACCURACY
- ± 5% display reading ± one digit

RESPONSE
- < 13 seconds (T90)

APPROVALS
- Il 1 G Ex ia llC T4 Ga (-4ºF ≤ Ta ≤ 131ºF)
- Baseefa11ATEX0027 IECEx BAS 11.0014
- US and Canadian approvals: Class I, II and III, Division I, Hazardous (Classified) Locations

BATTERY
- Battery life up to 12 hours
- Battery charge time: 4 hours

PID LAMP OPTIONS
- 10.6eV, 10.0eV

DATA LOGGING
- 30,000 readings

COMMUNICATION
- USB 2.0

ALARM
- LEDs, audio and vibrate
- Sounder 95 dB @ 300mm
- Pre-programmed TWA & STEL.
- Work exposure alarm levels on all models.

TEMPERATURE
- Operating: -4 to 140 °F
- Certified: -4 to 131 °F

RESOLUTION
- ppm 0.1 ppm
- ppb 0.001 ppm
- TAC 0.01 ppm

RANGE
- 0-5000 ppm

CALIBRATION
- 2 point calibration via docking station

FLOW RATE
- N/A (no pump)

UPGRADEABLE
- Upgrade ppm to ppb

IP RATING
- Designed to IP65 (heavy rain)

LCD DISPLAY
- Backlit, multi-colored

WEIGHT & DIMENSIONS
- Weight: 111 g (2.91 oz)
- Dimensions: 61 x 66 x 59 mm (2.4 x 2.6 x 2.3”)

GASCHECK G

GAS LEAK DETECTOR

GASCHECK G RAPIDLY AND ACCURATELY DETECTS ALMOST ANY GAS OR GAS MIXTURE DOWN TO HIGHLY SENSITIVE LEVELS.

Best Available Leak Detection

- Fast, accurate leak detection at highly sensitive levels
- Detects almost any known gas or gas mixture.
- Particularly sensitive to ammonia, argon, butane, helium, hydrogen, and SF6
- Reliable, stable, repeatable readings

Ease of Use

- Simple, one handed operation
- Large, clear LCD back lit display for easy viewing
- Graphical icon menu
- Conveniently calibrated against helium

Flexibility

- Choice of readings in cc/sec, g/yr, mg/m^3
- Easily upgradeable throughout the range

Low Cost Operation

- Inexpensive consumables and parts
- 2 year warranty when instrument registered online

Designed for the search and location of gas leaks, GasCheck G has an advanced micro thermal conductivity sensor for fast, effective detection of almost any gas or gas mixture.

Robust and reliable, GasCheck G provides stable, repeatable readings of the detected gas. The instrument's LCD display, LED indicator and audible sounder clearly indicate the leak present.

GasCheck G automatically zeros to the ambient air around it when switched on and is ready to detect immediately. The instrument's easy to use graphical interface and intuitive keypad allows simple function, selection and adjustment.

Upgradeable throughout the range, GasCheck G is available in three distinct versions: G1, G2 and G3 with varied capabilities. Features can be easily added to upgrade the instrument without it having to be returned to the factory.

FEATURE	G1	G2	G3
Rapid detection of gas leaks	✔	✔	✔
Measure gas leaks (single gas)		✔	
Measure gas leaks (up to 20 gases)			✔
Audible sounder	✔	✔	✔
Flashing back-lit display	✔	✔	✔
Peak hold readings		✔	✔
Factory or custom calibration available		✔	✔
Data logging (store up to 10 readings)			✔
Readings displayed in cc/sec,g/yr,ppm or mg/m^3			✔
Selectable battery type			✔
Upgradeable	✔	✔	

Extend Your Instrument Warranty

Your GasCheck G instrument warranty may be extended by simply registering your product on the ION Science website within one month of purchase. Visit the ION Science website to take advantage of this offer.

Applications

- Industrial
- Quality Assurance
- Manufacturing
- Laboratory
- Medical
- Research

Accessories

GasCheck G is supplied with an exclusive range of accessories. Visit the ION Science website for more information.

GASCHECK G

SPECIFICATIONS

DETECTOR
• Micro thermal conductivity detector (MTCD)
• Sensor is poison resistant with over range protection

OPERATION
• Battery Type: 4 x alkaline AA size or NiMH (rechargeable)
• Typically 40 hours life

SENSITIVITY (CC/SEC)
• He 1 x 10-5, CH4 5 x 10-5, R12 5 x 10-5, Ar 1 x 10-4

ACCURACY
• + 5% Displayed reading one digit

RESPONSE
• T90 = 1 second rise and clear down

SOUND
• Flashing LED and 90 dBA (at 10 cm) audible sounder

CALIBRATION
• Factory calibrated to fully documented procedures in accordance with our ISO 9001:2008 Quality Management System

DATA LOGGING
• 10 data points (available for G3 only)

TEMPERATURE
• Operating: -32ºF to 122ºF
• Storage: -13ºF to 158ºF
• Humidity: 0-99% RH (non-condensing)

FLOW RATE
• 2 cc/min

WEIGHT & DIMENSIONS
• Instrument with probe: 390 x 60 x 39 mm (15.5 x 2.3 x 1.9”)
• Case: 420 x 320 x 97 mm (16.5 x 12.5 x 3.8”)
• Instrument: 0.45 kg (1 lb)
• Packed: 1.6 kg (3.5 lb)

MVI

MERCURY DETECTOR

ACCURATELY DETECT MERCURY VAPORS IN JUST 3 SECONDS. MVI DOES NOT SATURATE OR NEED REGENERATING ELIMINATING INSTRUMENT DOWNTIME.

Best available detection

- Fast 3 second response
- Highly accurate
- Range: 0.1 - 199 & 1 - 1999 microgram / cubic meter
- Fast indication and recovery

Minimal downtime

- No saturation, no regeneration - eliminates downtime
- Ready to detect within minutes
- Continuous >4.5 hour operation

Convenience

- Large, clear digital display
- Portable simple one handed operation
- Easy to use - minimal training required
- Robust and withstands harsh environments
- Audible alarm gives clear indication of mercury vapors

Low cost operation

- Inexpensive consumables and parts
- 2 year warranty when instrument registered online

The Mercury Vapor Indicator (MVI) is a revolutionary instrument accurately detecting hazardous mercury vapors in just 3 seconds! The instrument's unique advantage is its dual beam UV absorption technology and ability to measure high concentrations of mercury without saturating; requiring no regeneration between readings, eliminating downtime.

Fast and accurate, MVI gives a real time response and is ready to detect in minutes. MVI provides continuous readings and offers two detection ranges: 0.1 to 199 and 1 to 1999 microgram/cubic meter, ideal for time weighted average (TWA) monitoring.

MVI is a portable mercury vapor detector that utilizes a high performance pump for fast indication and recovery. The instrument's audible alarm and large digital display clearly indicate the levels of mercury present.

Ergonomically designed with simple, one handed operation MVI is the ideal survey unit for rapid and accurate mercury detection, screening for mercury spills and monitoring for exposure limits.

Extend Your Instrument Warranty

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

Service and Calibration

MVI requires annual calibration to maintain best accuracy, instrument performance, and to maintain its extended warranty. Contact ION Science or a local service center for more information.

Applications

- Manufacturing
- Recycling
- Fluorescent Lamp Reprocessing Plants
- Mining
- Petroleum
- Hydrocarbon
- Refining
- Bioremediation

Accessories

MVI is supplied with an exclusive range of accessories. Visit ION Science website for more information.

MVI

SPECIFICATIONS

DETECTOR
• Dual beam ultraviolet absorption module

ACCURACY
• ± 5 micrograms or ± 10% reading

OPERATION
• After warm up, MVI gives real time mercury vapor concentrations

ALARM
• Audible alarm factory pre-set to 20 microgram/cubic meter

INSTRUMENT RANGE
• 0.1 to 199 and 1 to 1999 microgram/cubic meter

TEMPERATURE
• 50ºF to 122ºF

BATTERY
• NiMH - last up to >4.5 hours from full charge

POWER
• NiMH

RESPONSE
• 3 seconds

REPEATABILITY
• +/- 5% FSD @ 1g/m3

WEIGHT & DIMENSIONS
• Weight: 6 lbs and 10 oz
• Dimensions: 145 x 295 x 80 mm (5.71 x 11.61 x 3.15”)

SF6 LEAKMATE

SF6 LEAK DETECTOR

THE SF6 LEAKMATE IS AN EASY TO USE COST EFFECTIVE LEAK DETECTOR WITH SELECTABLE SENSITIVITY AND AUTOMATIC ZERO.

Overview

The SF6 LEAKMATE leak detector is a great device for mobile SF_6 leak detection. In practical use, it has a detection threshold of 1 x 10E-6 mbar l/s, which makes it perfectly suitable for simple leak detection applications on SF_6 switchgear.

The easy to use, processor controlled instrument features both an audible alarm and an LED bar graph display, allowing estimation if a small, medium or big leak is being detected.

The leak detector automatically compensates all ambient influences like temperature changes or movement of air in the room. Intelligent control sets up the instrument appropriately for the ambient situation.

It then uses the present gas concentration as its zero line and begins to look for even higher gas concentrations, which by all means occur when a leak is approached. This will again be indicated audibly and visually. It is possible to determine leaks even in seriously contaminated areas.

Key Features

- Cost effective
- Easy to use
- Leakrates down to 1 x 10E-6 cc/s
- Selectable sensitivity
- Automatic zero
- Battery test display
- Audio alarm

Applications

- Leak detection on SF_6 switchgear
- Service and maintenance in SF_6 switchgear production
- Mobile leak detection on test equipment for differential pressure, mass flow, etc

SF6 LEAKMATE

SPECIFICATIONS

DETECTOR
- High voltage ionization

SENSITIVITY
- 1 x 10E-6 mbar l,s for SF_6

RESPONSE TIME
- Approx. 1 s

AUDIO
- Sound pitch proportionally follows leak rate

DISPLAY
- 7 position LED bar graph

SNIFFING PROBE
- 355 mm flexible probe

OPERATING TEMPERATURE RANGE
- -4ºF to 122ºF

EMC RATING
- CE declaration of conformity

DIMENSIONS
- 330 x 280 x 125 including transport case

WEIGHT
- 4.63 lbs including accessories

SF6 P1:P

SF6 LEAK DETECTOR

THE SF6 LEAKCHECK P1:P IS AN AWARD WINNING SF6 LEAK DETECTOR, ENSURING FAST AND ACCURATE DETECTION AT ULTRA SENSITIVE LEVELS.

Best Available SF6 Leak Detection

- Ultra high sensitivity with a 1 x 10^{-8} ml/sec*
- Award winning Negative Ion Capture (NIC) technology
- 1 second rise and clear down for rapid leak detection
- Unaffected by large leaks and 100% SF6 meaning no frustrating delays between searches
- Choice of display units cc/sec, gm/yr and ppm for monitoring conformance to leak minimization targets

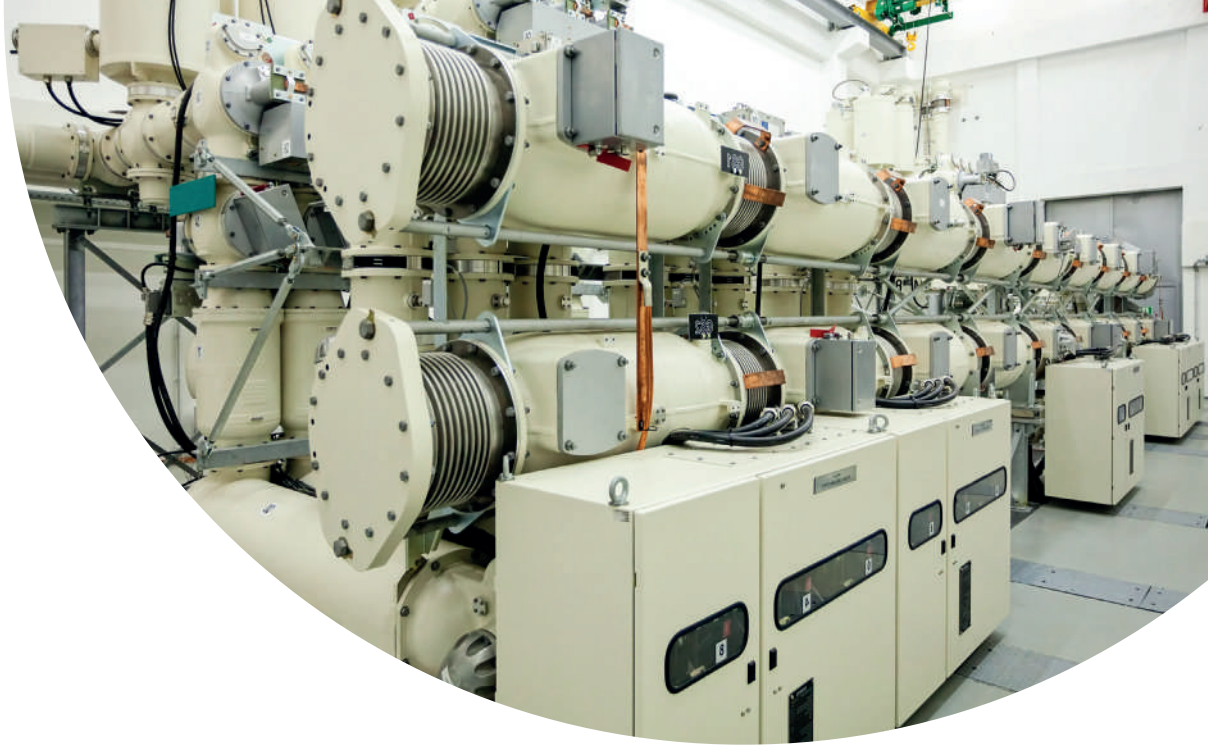
Ease of Use

- Non radioactive source for easy storage and transportation
- No training required - switch on and go
- Lightweight, ergonomically designed handgun
- Touch screen for easy navigation menus
- Simple data storage and printing for analysis

Low Cost

- No argon or other pressurized gases required for reduced cost of ownership
- 2 year warranty when instrument registered online

*Highsense option



SF6 LeakCheck P1:p is a revolution in SF6 leak detection, ensuring incredibly fast searching at ultra sensitive levels. Even the smallest of leaks can be detected and located swiftly with a minimum detection level of 1 x 10^{-7}ml/sec or optional 1 x 10-8ml/sec, equivalent to a grain of rice per year!

Designed for SF6 gas leak testing and measurement in high voltage electrical SF6 switchgear, the instrument also detects other gases with a high affinity for electrons, such as refrigerant R12.

A unique advantage of the instrument is that it is unaffected by exposure to large leaks. Even after saturation or exposure to leaks of 100%, clear down remains rapid (<1s). The SF6 gas leak detector also benefits from having a non-radioactive source, eliminating registration, storage and transportation issues found with traditional radioactive ECD SF6 gas leak detectors.

Additional features of the SF6 gas leak detector include data-logging, alarms; both audio and visual, and a robust portable case. The instrument requires no consumables, such as Argon, reducing the ongoing costs of operation. There are no items requiring maintenance or service in the handgun or console.

The P1:p SF6 gas leak detector meets the demands for quality and traceability to international standards as required by today's industry. It is designed for the location, leak testing and measurement of SF6 leaks in high voltage electrical switchgear.

The instrument's award winning Negative Ion Capture (NIC) technology with non-radioactive source eliminates problems of registration, storage and transportation.

Extend Your Instrument Warranty

Your SF6 P1:p instrument warranty may be extended by simply registering your product on the ION Science website within one month of purchase.

Applications

- SF6 leak testing and measurement in high voltage switchgear (GIS)
- Breathing apparatus testing
- Medical device testing
- Leak integrity testing on medical, refrigeration and air conditioning equipment containing SF6 and (H)CFCs

SF6 P1:P

SPECIFICATIONS

MEASUREMENT PRINCIPLE
• Negative Ion Capture (NIC): a non-radioactive, non-restricting carriage and no licensing required

SENSITIVITY
• Standard SF6 GasCheck P1 and LeakCheck P1:p: 1 x 10-7 ml/sec, 1 ppm, 0.01 gm/yr SF6
• Highsense option: 1 x 10-8 ml/sec, 0.1 ppm, 0.001 gm/yr SF6

RESPONSE
• T90 = < 1 second rise and clear down

OPERATION
• Lead acid battery, internal and fully protected
• Recharge between 85-265 AC V, 50/60Hz

ALARM
• Audio and visual with an optional headset alarm

MEASUREMENT UNITS
• Measures in ml/sec, gm/yr and ppm
• Range: each unit 1:500
• Accuracy: ± 5% of displayed leak rate or ± 2 digits
• Repeatability: ± 1 digit

CALIBRATION
• Via CalCheck calibration accessory

DATA LOGGING
• Over 500 data points with date and time stamp
• Download via RS232 to a PC

TEMPERATURE
• Storage: 14ºF to 140ºF (-10ºC to 60ºC)
• Operating: 32ºF to 122ºF (0ºC to 50ºC)

WEIGHT & DIMENSIONS
• Consol: 500 x 400 x 190 mm (19.7 x 15.7 x 7.5”)
• Shipped: 520 x 430 x 210 mm (20.5 x 16.9 x 8.3”)
• Shipped weight: 15 kg (33 lb)

SF6 AREACHECK P2

FIXED SF6 MONITOR

DESIGNED FOR CONTINUOUS SF6 AREA MONITORING, THE AREACHECK P2 RAPIDLY DETECTS LOW-LEVEL SF6 LEAKS, PROTECTING WORKERS AND THE ENVIRONMENT.

Best Proven SF6 Leak Detection

- Award-winning Negative Ion Capture (NIC) technology
- Fast, accurate detection down to highly sensitive levels
- No cross sensitivity with other gases or moisture in air

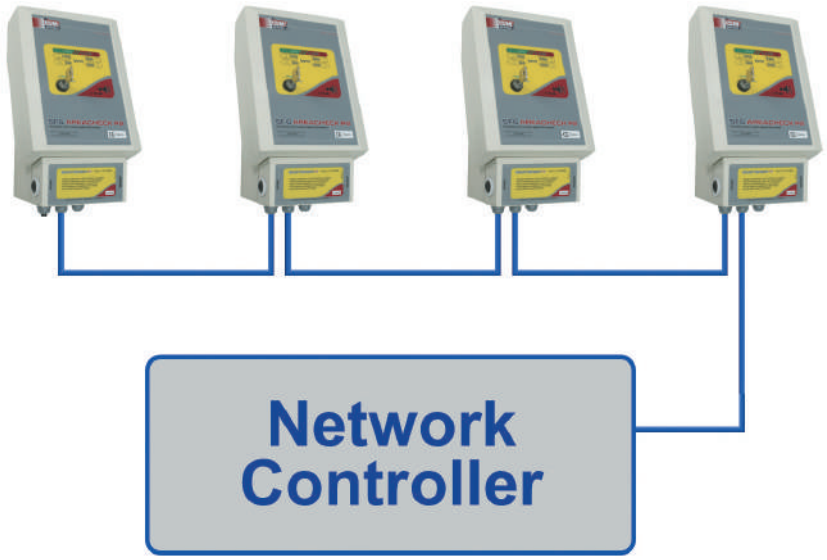
Safety

- Relay output for immediate awareness of leaks detected
- Audio and visual alarms provide clear indication of SF6 leaks
- Complete safe set up via PC or the Network Interface protects from unauthorized access
- Built in low flow alarm and diagnostics test*

Flexibility

- Can be used on an RS485 network, it also outputs RS232 and has relay outputs for standalone functionality
- Exchangeable SmartSensor (12 month lifetime)
- Maintenance free operation

*will alarm due to mechanical failures



Designed for fixed continuous SF6 area monitoring, the AreaCheck P2 rapidly detects low-level SF6 leaks. AreaCheck P2 utilizes relay output for immediate awareness of detected leaks, and presents no cross sensitivity with any other gas or moisture in the air.

Instrument setup is carried out easily via a computer or network interface, allowing optimal protection from unauthorized access. The SF6 AreaCheck P2 has a built-in low flow alarm and self-diagnostic testing.

The instrument's serviceable components are comprised in the user exchangeable SmartSensor, with a lifetime of up to 12 months. Measuring stations are maintenance-free, ensuring instrument downtime is minimized.

AreaCheck P2 has no filter problems due to its minimum air intake (compared to pump operated systems).

Can be used on an RS485 network, it also outputs RS232 and has relay outputs for standalone functionality.

Why monitor SF6?

The award-winning technology of the SF6 AreaCheck P2 can rapidly detect low level SF6 leaks ensuring worker safety, help protect the environment, and save costs.

Suffocation Risk

SF6 is a colorless, odorless gas that can easily go undetected by workers and create a suffocation risk. SF6 has a Maximum Allowable Concentration (MAC) of 1000 ppm.

Harmful to the Environment

SF6 is a greenhouse gas and leakages are extremely harmful to the environment. SF6 leaks have been targeted for reduction under the Kyoto Protocol.

Expensive

An expensive gas, SF6 leakages from indoor gas insulated switchgear (GIS) are very costly.

Applications

- SF6 leak testing and measurement in high voltage switchgear (GIS)
- Leak integrity tesing on medical, refrigeration and air conditioning equipment containing SF6 and (H)CFCs
- Breathing apparatus testing
- Medical device testing

SF6 AREACHECK P2

SPECIFICATIONS

DETECTION PRINCIPLE
- SF6: NIC

RANGE
- 0 - 2000 ppm SF6

RESOLUTION
- 500 ppm SF6 / 10 ppm

MAINS POWER
- 100 - 240 VAC, 50/60Hz

POWER CONSUMPTION
- 18VA

OPERATING TEMPERATURE
- 23ºF to 113ºF (-5ºC to 45ºC)

STORAGE TEMPERATURE
- -4ºF to 140ºF (-20ºC to 60ºC)

OPERATING HUMIDITY TEMPERATURE
- 10-90% RH (non-condensing)

MAX LOAD / RELAY OUTPUT
- 2.5 A / 230 VAC

DIMENSIONS
- H 280 x B 165 x T 125 mm

PROTECTION CLASS
- IP 52

ALARM
- > 75 dBA, 1m

FUSE
- T 1A (Slow Blow)

WEIGHT
- 3.31 lbs without wall mounting bracket

ARA

SINGLE GAS DETECTION

THE ARA IS A PERSONAL, DISPOSABLE SINGLE GAS DETECTOR FOR H_2S, CO, SO_2, O_2 THAT PROVIDES INSTANTEOUS ALARMS FOR LIFE-CRITICAL SAFETY SCENARIOS

Features

- 24 month or 36 month battery life options
- Easy to use with single button operation
- Live readings & instantaneous alarms to protect a users workforce in hazardous environments
- Event logging download
- Adjustable low & high alarms
- User-configurable calibration and bump test reminders
- Lifetime remaining countdown helps users to plan for future projects and site shutdowns

Ara IR Link*

The IR Link enables ARA to communicate with a PC using infrared. The ARA PC allows users to download 30 recent event logs and configure user settings including:

- User ID
- Low alarm
- High alarm
- Displayed data (live reading or lifetime remaining)
- Calibration interval
- Bump Test interval
- Self Test interval

Self Test

ARA's self-test feature tests the audio, visual & vibrating alarms, giving users confidence that they are in safe hands. Easy to perform in a single button press and with user-configurable reminders, the self-test reassures users that their device is in safe working condition.

Industries

- Oil & Gas
- Manufacturing
- Government & Defence
- Water
- Aerospace
- Power Generation

Applications

- Site Wide Safety
- Confined Space Entry
- Plant Shutdown Processes
- First Response Safety

*ARA IR link sold separately

ARA models available

The ARA has 6 different models

ARA Models	Model Number
Hydrogen Sulfide (H_2S)	ARA100
Carbon Monoxide (CO)	ARA200
Oxygen (O_2)	ARA300
Sulfur Dioxide (SO_2)	ARA400
Hydrogen Sulfide (H_2S) Hibernation Option	ARA100H
Carbon Monoxide (CO) Hibernation Option	ARA200H

*ARA DOCK4 sold separately

ION ARA DOCK4*

The ARA DOCK4 is a bump test and calibration station that can test up to 4 ARA Single Gas Detectors, simultaneously reducing gas usage and testing time. The ARA DOCK4 is simple to operate and records calibration and bump test readings, along with the serial number, date and time.

ARA

SPECIFICATIONS

SENSOR TYPE
- Single plug-in electrochemical cell

DETECTION RANGE
- H_2S: 0 to 100 ppm
- CO: 0 to 300 ppm
- SO_2: 0 to 50 ppm
- O_2: 0 to 25%

EVENT LOG STORAGE
- Last 30 events

BATTERY
- 3.6 VDC, 1.65 Ah, lithium battery

BATTERY LIFE
- Standard models: 24 months of operation (2 mins alarm per day)
- Hibernation models: 36 months of operation (2 mins alarm per day and using sleep function)

APPROVALS
- Ratings: Class I, Division 1, Groups A, B, C and D, T4; Class I, Zone 0, AEx ia IIC T4 Ga; Ex ia IIC T4 Ga; -40 °F ≤ Ta ≤ +140 °F: ARA100, ARA200, ARA400, ARA100H, ARA200H
  -30 °F ≤ Ta ≤ +140 °F: ARA300
- Applicable Standards: CAN/CSA C22.2 No. 60079-0:19 CAN/CSA C22.2 No. 60079-11:14 ANSI/UL 60079-0 7th ed. ANSI/UL 60079-11 6th ed

USER OPTIONS
- User ID
- Low alarm
- High alarm
- Displayed data (live reading or lifetime remaining)
- Bump-Test interval
- Calibration interval
- Self-Test interval

TEMPERATURE
- H_2S, CO, SO_2: -40 ºF to +140 ºF
- O_2: -22 ºF to +140 ºF
- Humidity: 5 - 95 % RH

INGRESS PROTECTION
- IP67

DISPLAY
- Liquid Crystal Display (LCD)

WEIGHT & DIMENSIONS
- Weight: 92 g (0.20 lbs)
- Dimensions:
  87 (h) x 50 (b) x 29 (t) mm
  (3.4 x 2.0 x 1.1”)

ALARMS
- Audio Alarm: (95dB @ 10 cm)
- Visual Alarm: LED
- Vibrating Alarm: Vibrator (Operates at ±50 °F)

CALIBRATED LEAK

STANDARD LEAKS

EXCEPTIONAL LONG TERM STABILITY. CALIBRATED LEAKS PRODUCED TO YOUR PRECISE PRESSURE AND FLOW REQUIREMENTS.

ION Science calibrated leaks are produced in order for a known leak to be presented to a test system. Should the leak be detected by your gas/leak detector at the correct value then the system is within calibration, giving you confidence in the accuracy of the instruments upon which you depend.

At ION Science we produce calibrated leaks that are made to your individual pressure and leak rate specification. Each leak is supplied in its own storage box with a certificate of calibration in accordance with our ISO9001:2008 procedures. By ensuring our own quality standards we can help you to meet yours.

For exceptional stability over time and resistance to corrosion and contamination, all leaks are made from stainless steel. The body has a standard 1/8 BSP inlet and outlet thread and can be supplied with a quick fit staubli fitting, for use with leak testers. The simple screw in screw out functionality of the calibrated leak is ideal when returning your leak to ION Science for annual calibration as the leak can be easily removed, placed in its storage box and sent in the post.

Features:

- **Factory calibrated** to procedures in accordance with our ISO 9001:2008
- quality management system
- **Calibration certificate** and storage box included
- **Stainless steel body** corrosion and contamination resistant
- **Various leak rates** from 1 x 10^{-4}ml/s to 10L/min
- **Wide range of gases** and inlet pressures available

ION Science calibrated leaks are also used within the ION Science CalCheck, an easy to use bump test and calibration standard. Both standard leak and gas bottle can be changed by the user offering flexibility to calibrate or bump test a variation of products using one device.

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