The world's most advanced PID

...*Just got better!!*

VOC's from ppb up to 10,000 ppm in one instrument

Applications include:

- **STEL and TWA monitoring**
- **Atmosphere monitoring**
- **Environmental clean-up**
- **Landfill surveillance**
- **Petrochemicals**
- **Confined space entry**
- **First response HazMat/WMD**
- **Industrial painting**
- **Arson Investigation**
- **Leak detection**
- **Indoor air quality**
- **Soil contamination**

PhoCheck is registered in the U.S. Patent and Trademark Office.

PhoCheck 1000

– the simplest handheld PID on the market.

PhoCheck 1000 is a low price entry level photoionisation detector ideal for use in non hazardous environments for indoor air quality monitoring or soil contamination assessment with a detection range of 0.1 – 4,000 ppm.

PhoCheck+ 1000Ex (upgradeable)

– an upgradeable PID to grow with your needs.

PhoCheck+ 1000Ex is the first in our new line of fully upgradeable PID's. It is entry priced with simple functioning giving you the ability to upgrade throughout the entire PhoCheck+ and FirstCheck+ ranges, as your business needs change. The 1000+ is ATEX approved as intrinsically safe and has a detection range of 0.1 – 4,000 ppm. With user set single point alarms and gas table of over 250 gases including their unique response factors the 1000Ex is equipped to detect a wide range of VOC's.

PhoCheck+ 2000Ex (upgradeable)

– a data logging PID with PC download for easy data analysis.

PhoCheck+ 2000Ex in addition to the above features benefits from data logging capability. Allowing you to store a minimum of 37 hours worth of data logged readings taken every second (over 130,000 individual readings!) with a date and time stamp for download to a PC via our IRDA link for detailed analysis with windows style Ion PC software. An ideal instrument for indoor air quality and perimeter monitoring applications.

PhoCheck+ 3000Ex (upgradeable)

– a PID with Health and Safety mode for STEL and TWA monitoring.

PhoCheck+ 3000Ex, in addition to the features of the 2000Ex, benefits from an extended detection range of 0.1 to 10,000 ppm and an additional operating mode for personnel health and safety monitoring with pre-programmed STEL and TWA values for the protection of workers.

PhoCheck+ 5000Ex (upgradeable)

– the most advanced PID on the market.

PhoCheck+ 5000Ex is Ion Science's most sophisticated PID, and is the only instrument available on the market with a dynamic detection range of 1 ppb up to 10,000 ppm. This versatility allows the instrument to detect a greater range of dangerous toxic gases at low ppb levels where they are hazardous to health, as well as flammable gases at LEL thresholds. The 5000Ex is ideal for the first responder due to its sensitivity coupled with the advanced features of the 3000Ex, making this instrument a potential life saver in many environments. The PhoCheck+ 5000Ex benefits from being upgradeable to the FirstCheck+ range to include additional sensors, please see the FirstCheck brochure for further details.

At the heart of the PhoCheck is a highly sensitive patent pending photoionisation detector (PID) with a dynamic detection range capable of 1 ppb up to 10,000 ppm, making it the only sensor on the market able to detect Volatile Organic Compounds (VOC's) at their very low ppb toxic thresholds and lower explosive limits.

With new improved features PhoCheck+ is now a fully upgradeable instrument enabling you to upgrade from the basic PhoCheck+ 1000Ex version all the way up to our revolutionary FirstCheck+ 6000Ex multigas instrument, please see our FirstCheck literature or our website (www.ionscience.com) for further details. With increased memory capacity for data logging results every second (over 130,000 individual readings can be stored) and improved PC communication via IRDA technology the PhoCheck+ is the ideal PID for giving you truly traceable results.

- **Fully upgradeable** throughout the entire PhoCheck+ and FirstCheck+ ranges giving you ultimate flexibility in gas detection
- **1 ppb ~ 10,000 ppm** for ultimate detection capability
- Rapid response and recovery for faster detection
- A choice of two viewing modes - large numbers or real time graph
- Unique 'fence electrode' technology for humidity compensation
- View stored readings graphically on screen for an overview of results
- Intrinsically safe for use in flammable areas
- Data upload and download to a PC via IRDA for analysis with easy to use software
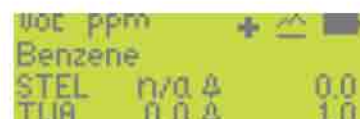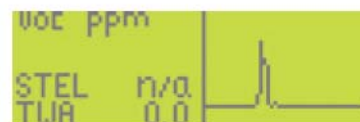- Health and Safety mode for STEL and TWA monitoring

Easy to use graphical interface and icon menu

PhoCheck+ is free from translation difficulties and language barriers experienced by others due to its unique graphical interface and icon driven menu. The user friendly icons make PhoCheck+ a truly global product for meeting global needs.

There is a choice of viewing screen allowing the user to select between a large numerical display and a useful real time graph for an instant overview of readings. When in a viewing screen additional data such as alarm level, either user set or STEL and TWAs, selected gas, peak readings and battery status can be viewed by pressing and holding the Enter key.

PhoCheck+'s menu icons allow the user to master the instrument functions and capabilities very quickly, ensuring rapid and effective operator training. The instrument can be easily personalised to the users specific needs either through the on-screen menu with adjustable features including zone references and alarm levels or via the PC software which allows the personalisation of additional features.
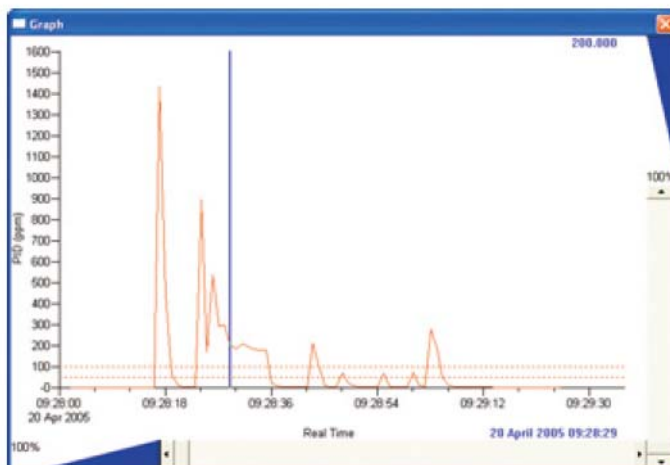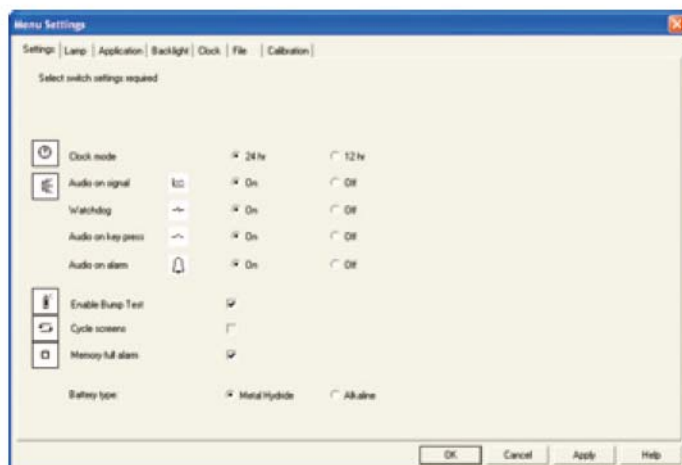
Continuous data logging and fully interactive software

PhoCheck+ automatically continuously data logs the instruments readings every second and stores the results ready for download, ensuring truly traceable results (available on the 2000Ex, 3000Ex and 5000Ex, upgradeable on the 1000Ex). The instrument benefits from an increased 8 Mb memory which incorporates a memory saving feature only logging a value if the detector senses a change in the detected level of gas. Therefore the minimum number of recorded readings if the PhoCheck+ sensed a change every second is more than 130,000 or 37 hours worth of readings.

The logged readings are easily downloaded via an IRDA link to an Ion PC software enabled computer for your detailed analysis. Your data logged readings are downloaded in both tabular and graph format to give you an instant overview of your results.

All PhoCheck+ instruments are equipped with an IRDA port to enable communication with a PC not only to allow the download of data logged information but to allow the adjustment of the various instrument features. Adjustable features include zone references, alarm settings, custom calibration settings and also the facility to add additional gases to the gas table.

The software also has a security setting whereby the instrument can be 'locked' so that features can be set by the PC then 'locked' so that they can not be adjusted manually. This is useful for example when a supervisor sets alarm levels and then hands the instrument to an operator for use. Specific settings can be stored on the PC and later downloaded to any number of instruments giving them identical features such as alarms and zone references saving time.

Technical Specification

DETECTOR

Ion Science Photoionisation Cell**

Fitted with unique 'Fence Electrode' technology**
- Greater measurement stability, accuracy and linearity
- Improved resistance of relative humidity effects
- T90 ~ 1 second rise and clear-down

LAMPS

10.6 eV Krypton PID lamp supplied as standard

Other lamps available please see accessories for details

INTRINSICALLY SAFE APPROVALS

⟨Ex⟩ II 2 G Baseefa 03ATEX0742

EEx ia II T4 (-20 °C ≤ Ta ≤ 60 °C)

IECEx BAS 04.0033 (world standard)

ACCURACY

± 5% displayed reading ± one digit

LINEARITY

± 5%

DATA LOGGING*

Automatically recording readings every second including date and time stamp.

8 Mb data memory

Incorporates a secure storage algorithm to reduce stored data corruption

CALIBRATION

Via calibration kit accessory

OPERATION

Dry Cell: Alkaline 4 x AA - 20 hours

Rechargeable NIMH: 20 hours

ALARM

Flashing LED and 90 dBA (10 cm) audible sounder

Pre-programmed TWA and STEL*

Pre-programmed 250 gas and gas cocktails*

INSTRUMENT RANGE*

Maximum range: 1 ppb to 10,000 ppm

Maximum range: 0.01 to 10,000 mg/m³

FLOW RATE

220 ml/min or 220 cc/min with flow fail alarm

TEMPERATURE

Operating: -20 to 60 °C, -4 to 140 °F

Humidity: 0-99% RH (non condensing)

WEIGHT & DIMENSIONS

Instrument without probe

340 mm (13.5") L x 60 mm (2.3") W x 49 mm (1.9") H

Standard case

420 mm (16.5") x 320 mm (12.5") x 97 mm (3.8")

Instrument 0.58 kg - 1.3 lb. Packed 3.0 kg - 6.6 lb

EMC tested to EN61000-6-3 & EN61000-6-1 2001

All specifications are against isobutylene calibration at 20 °C, 90% RH and up to 3000 ppm

* model and gas dependent

** PCT Application WO 03/046535

ION SCIENCE is
ISO9001:2000 certified
(December 2003)

PhoCheck features and upgrade options

Key

Standard feature = ■   Upgradeable = □

Feature	1000	1000Ex	2000Ex	3000Ex	5000Ex
Intrinsically safe ATEX Approval		■	■	■	■
Health and Safety mode for STEL and TWA monitoring		□	□	■	■
IRDA for wireless communications with a PC		■	■	■	■
Auto range ppm/ppb		□	□	□	■
Real-time graph display on screen		■	■	■	■
Simple data store	■				
Data logging		□	■	■	■
Date and Time stamp		□	■	■	■
Ion PC software for instrument configuration and data handling		■	■	■	■
Easy to use icon based interface	■	■	■	■	■
Zone name creator		□	■	■	■
Audible alarm 90 dBA	■	■	■	■	■
Visual alarm (LED)	■	■	■	■	■
Gas table of 250+ gases and their individual response factors		■	■	■	■
Selectable mg/m³ or ppm/ppb		■	■	■	■
Upgradeable to FirstCheck+ range to include O₂, CO. H₂S and LEL		□	□	□	□

Accessories

Ion Science has developed an exclusive range of high quality accessories to compliment all the PhoCheck models. Please see a selection of these below, for a full list see a member of our sales team.

Part No.	Accessories
A-830206	IS protective cover ⟨Ex⟩ II 1 G EEx ia IIC T4 Baseefa02ATEX0093X, Baseefa03ATEX0742X, Pk of 10
A-845213	Calibration kit
A-31063	PID lamp cleaning kit
A-31057	Carbon filter (Zero filter)
A-31064	25 mm (1") diameter 0.5 micron probe filters, PK of 5
A-31066	Std probes attachment PK of 5
30618	PID lamp 8.4 eV Xenon
30619	PID lamp 10.2 eV Deuterium
30620	PID lamp 10.6 eV Krypton
30621	PID lamp 11.7 eV Argon
31052	Leather instrument jacket
40052	Leather instrument jacket with magnetic attachment
4/VH-01	Instrument chest harness for hands free operation
A-30555	5 m (16 ft) flexible extension hose
A-30556	10 m (33 ft) flexible extension hose
A-31153	Exhaust barb, Tedlar bag connector

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

Part number PCV 2.0