



PHOCHECK+

**World's Most
Advanced,
Humidity
Resistant PID
for VOCs**



PhoCheck+, independently verified to be the most sensitive, most accurate and most reproducible PID available today.

Features:

- Detects VOCs from 1ppb - 10,000 ppm
- Detects all major industrial VOCs - data available for over 450 gases
- Intrinsically safe for use in flammable areas
- Health & Safety mode for STEL and TWA
- Choice of readouts - numbers or real-time graph
- Universal graphical interface and icon menu
- Continuous data logging (stores over 130,000 individual readings)
- Traceable results and data download via IRDA link
- Fully interactive Ion PC software
- Upgradeable throughout PhoCheck+ and FirstCheck+ range

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

Advanced Gas Sensing Technologies
www.ionscience.com



Proven PID Technology

PhoCheck+ is the most advanced handheld humidity resistant photoionisation detector (PID) for volatile organic compounds (VOCs), providing rapid response and accurate detection. Its unique patented Fence Electrode Technology incorporates a three-electrode format enabling proven resistance to humidity and contamination, giving optimal performance in the field.

Dynamic Range

The PhoCheck+ 5000+ is the only instrument on the market capable of detecting VOCs all the way from 1 ppb up to 10,000 ppm.



PhoCheck 1000

A basic, low-cost unit, PhoCheck 1000 has a detection range of 0.1 - 4,000 ppm and is ideal for use in non-hazardous environments including indoor air quality and soil contamination assessment and offers "push-to-log" data logging.

PhoCheck+ 1000Ex (upgradeable)

Intrinsically safe with a detection range of 0.1 - 4,000 ppm, the 1000Ex has user set single point alarms and gas table of over 450 gases (including response factors for all four available lamps (11.7, 10.6, 10.2 and 8.3 eV).

PhoCheck+ 2000Ex (upgradeable)

In addition to the 1000Ex features the 2000Ex has added data logging capability. The 2000Ex allows storage of over 37 hours of data logged readings taken every second (over 130,000 individual readings!) 2000Ex has a date and time stamp for download to a PC via an IRDA link for detailed analysis.

PhoCheck+ 3000Ex (upgradeable)

In addition to the features of the 2000Ex, PhoCheck 3000Ex has an extended detection range of 0.1 to 10,000 ppm, and operating mode for health and safety monitoring with pre-programmed STEL and TWA values.

PhoCheck+ 5000Ex (upgradeable to FirstCheck+)

The most sophisticated PID, the 5000Ex provides full features and a dynamic detection range of 1 ppb to 10,000 ppm. Dangerous toxic gases can be detected at low ppb levels where hazardous to health, as well as flammable gases at LEL thresholds. Ideal for the First Responder, the sensitivity of the 5000Ex is a potential life saving instrument in the most hazardous environments.

Flexible Upgradeability Options

A highly flexible instrument, PhoCheck+ is available in a number of versions from the basic, low-cost 1000, to the sophisticated 5000+ with advanced features and extended detection range.

The versatile PhoCheck+ can be upgraded from the 1000Ex right up to the revolutionary FirstCheck+ multi-gas PID range of instruments.

PhoCheck+ Applications

The Ion Science range of PhoCheck+ instruments provide the ideal choice across a vast array of industries and applications in both non-hazardous and hazardous environments.

Applications include

- Soil headspace analysis
- Indoor air quality
- STEL and TWA monitoring
- Atmosphere monitoring
- Environmental clean-up
- Petrochemical
- Confined space entry
- First response HazMat/WMD
- Arson investigation
- Leak detection

Features and upgradeability options

Key: Standard feature = ■ Upgradeable = □

Feature	1000	1000Ex	2000Ex	3000Ex	5000Ex
Detection range 0.1 - 4000 ppm	■	■	■	■	■
Detection range 0.1 - 10,000 ppm				■	
Detection range 1 ppb - 10,000 ppm					■
Intrinsically safe		■	■	■	■
Health & 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		□	■	■	■
Interactive Ion PC software for instrument configuration and data handling			■	■	■
Easy-to-use graphical 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/m ³ or ppm/ppb		■	■	■	■
Upgradeable to FirstCheck+ range to include O ₂ , CO, H ₂ S and LEL		□	□	□	□

Note: Ion PC software runs on Windows XP and Vista

Accessories

Ion Science provides an exclusive range of accessories to compliment the PhoCheck+.

Contact us for more details or visit our website.

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

*model and gas dependent

All specifications are against isobutylene calibration at 20 °C, 90% RH and up to 3000 ppm
 Note: Fence Electrode Technology is produced by Ion Science Ltd, and protected by
 U.S. Patent No. 7,046,012.. EP 1474681, other patents pending.

TECHNICAL SPECIFICATION

DETECTOR

Ion Science photoionisation cell fitted with patented 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 refer to accessories for details)

INTRINSICALLY SAFE APPROVALS

Ex II 2 G Baseefa 03ATEX0742
 Ex ia II T4 (-20 °C ≤ Ta ≤ 60 °C)
 IECEx BAS 04.0033 (world standard)

ACCURACY*

± 5% display reading ± one digit

LINEARITY*

± 5%

DATA LOGGING*

Automatically recording readings every second including date and time stamp
 8 Mb 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

ALARM

Flashing LED and 90 dBA (10cm) audible sounder
 Pre-programmed TWA and STEL*
 Pre-programmed 450 gas and gas cocktails*

INSTRUMENT RANGE*

Maximum range: 1 ppb to 10,000 ppm
 Maximum range: 0.001 to 10,000 mg/m³

FLOW RATE

220 ml/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 x 60 x 49 mm (13.5 x 2.3 x 1.9")
 Standard case
 420 x 320 x 97 mm (16.5 x 12.5 x 3.8")
 Instrument 0.58 kg - 1.3 Lb. Packed 3.0 kg - 6.6 Lb
 Packed 3.045 kg (6.7 Lb)

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ION SCIENCE is ISO9001:2000 certified
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PhoCheck+ incorporates the world's most advanced detector system due to its patented Fence Electrode Technology.

Fence Electrode Technology virtually eliminates at source the drift, erratic and inaccurate readings and signal loss that typically occur at high humidity with other PIDs. The net result is you consistently get the right readings, the best sensitivity, the fastest response, the fastest clear down. Even up to 99%RH. PhoCheck+ is designed with field use in mind.

Universal graphical interface and icon menu

Free from translation difficulties and language barriers, PhoCheck+ incorporates a unique graphical interface and icon driven menu for use within global markets.



Choice of user readouts

The choice of read-outs allows the operator to select between a large numerical display or real-time graph for an instant overview of readings.



Easy operation

The instrument's simplicity and easy-to-use menu icons allow for fast, effective operator use without the need for extensive training.



Personalised adjustable features

PhoCheck+ can be easily personalised to accommodate user specific needs through the on-screen menu or via a PC using the Ion PC software. Adjustable features include zone references, alarm levels, custom calibration settings and the ability to add gases to the instrument's gas table.



Its sensitive pump shut-off eliminates accidental water ingestion, it can run for hours at high humidity and its detector cell requires much less maintenance due to its contamination resistant design.

Other PIDs suffer the impact of high humidity and typically lose 30-50% of their signal. Some try to compensate for that loss but the results can be inconsistent at best and compensation does not address drift due to contamination.

Too good to be true?

No way, it's independently verified to perform as advertised!

Continuous data logging and fully interactive software

The enhanced 8Mb memory capacity of PhoCheck+ (2000+, 3000+ and 5000+) allows for continuous data logging of readings every second with the ability to store over 130,000 individual readings. The unique memory saving feature only logs a value if the detector senses a changes in the detected level of gas.

IRDA communication

Stored data can be viewed on-screen for an instant overview of results, or easily downloaded to a PC via an IRDA link using Ion PC software for detailed analysis. (Ion PC software is compatible with Windows XP or VISTA.)

Security setting

The security setting allows the instrument to have its features set by a PC and 'locked' so they cannot be adjusted manually. This feature gives control over specific user settings. Settings can also be stored on a PC and later downloaded to any number of instruments giving identical features to all, saving time.

