



**Flexible, comprehensive
monitoring backed up by
high performance functionality**



Flexible solution that adapts to meet needs

- Five sensor slots offering up to six channels of detection
- Sixteen sensor choices
- Detection of flammable, toxic and Oxygen gas hazards and also VOCs
- Device can be configured for almost any application use
- Optional external pump

Suited to many application uses

- Sixteen sensor choices including catalytic bead, ECC, IR and PID
- Fourteen toxic gas sensors
- IR CO₂ sensor option is ideal for breweries and wineries
- PID sensor option for the detection of hundreds of VOCs
- IR CH₄ sensor option provides poison-proof technology for use in situations where a catalytic bead sensor cannot be used

Tough durable housing

- Small, lightweight design
- Robust, shock-resistant housing
- Ultra clear backlit display
- Fully illuminated backlit LCD
- Easy to read with clear data display
- Continuous, real-time gas readings
- Peak, STEL and TWA readings

Easy to use

- Easy read icons show device status clearly
- Heartbeat icon pulses when in use, providing confidence to the user that the device is online and working correctly
- Intuitive menu system with easy configuration set up

Effective gas alarm indication

- Highly visible bright LED visual alarms (red and yellow)
- Distinctive loud two-tone audible alarm
- Vibration alarm that demands attention in high noise environments

Designed for tough environments

- IP65 rating
- Alarms that demand attention in all hazard locations

Cost-effective solution

- One unit can be used in many different applications
- Long-life, interchangeable Li-ion and Alkaline battery packs deliver up to 22 hour run times meaning that fewer devices are potentially required on site
- Built-in IrDA Port for easy data download to a PC
- When used with the optional IQ6™ Dock, the ongoing cost of portable maintenance can be reduced by up to 60%

Added value extras supplied with each PHD6™ device

- Belt clip
- Calibration adapter
- Hand aspirated sample draw kit with 3m tubing
- Sample probe
- Replacement filters
- Reference manual
- Laminated quick reference card
- Training CD ROM

When it comes to flexible, comprehensive monitoring backed up by high performance functionality, the PHD6™ multi-gas portable is the ideal solution for environments where workers are exposed to a range of gas hazards, or where different detection principles need to be employed.

With PHD6™, no hazard goes undetected. Complete with five sensor slots that offer up to six channels of detection in total, PHD6™ adapts easily to meet changing application needs. The device provides comprehensive sensor types, allowing sites to implement the most suitable principle of detection required with catalytic bead, electrochemical cell, PID and IR sensors available.

With 16 sensor options, PHD6™ can monitor a wide range of flammable, toxic and Oxygen gas hazards as well as PID for the detection of Volatile Organic Compounds (VOCs). The device also offers extended performance, with up to 22 hours battery life.



General Specification



Housing	
Material	Polycarbonate with tough rubber overmold
Weight (Alkaline)	499 g (1.1 lbs/17.6 oz) (five sensors)
Weight (Alkaline) + pump	635 g (1.4 lbs/22.4 oz) (five sensors)
Weight (Lithium-ion)	454 g (1.0 lbs/16 oz) (five sensors)
Weight (Lithium-ion) + pump	590 g (1.3 lbs/20.8 oz) (five sensors)
Dimensions w/o std belt clip	16.83 x 7.94 x 5.08 cm (6.63 x 3.13 x 2 in.)
Dimensions with std belt clip	16.83 x 7.94 x 6.35 cm (6.63 x 3.13 x 2.5 in.)
Dimensions w/o std belt clip, with pump	21.59 x 7.94 x 6.03 cm (8.5 x 3.13 x 2.38 in.)
Dimensions with std belt clip and pump	21.59 x 7.94 x 6.66 cm (8.5 x 3.13 x 2.63 in.)
Power	
Type	Rechargeable Lithium-ion or Alkaline (3 x AA size) battery pack options
Environmental ratings	
Dust and water resistance rating	IP65
Drop testing	Dropped 100+ times from one metre to concrete floor
RF immunity	Conforms to EN 50270
RF emissions	Conforms to IEC 61000-6-4
ESD immunity	Conforms to IEC 61000-4-2
Certifications (All certifications include pump, charger and IQ docks (with approved chgr bds))	
	SGS/USTC Class I, Division 1, Groups A,B,C,D Temp Code T3C SGS/USTC Class II, Division 1, Groups E,F,G, Class III CSA Class I, Division 1, Groups A,B,C,D Temp Code T3C (CSA approval does not include IR sensor) ATEX (EPS) Ex ia d IIC 170C (T3) IECEx Ex ia d IIC 170C (T3) CE Mark
Capabilities	
Controls	Three buttons
Sensor Channels	Maximum of six
Gas types	
Available sensors	O ₂ , LEL, PID, Duo-Tox, CO, H ₂ S, CO-H, SO ₂ , Cl ₂ , NO, NO ₂ , NH ₃ , PH ₃ , HCN, IR-CO ₂ , IR-CH ₄
User adjustable alarms	Oxygen: Danger Low/Danger High; Combustible: Warning/Danger; PID and Toxic: TWA/STEL/Warning/Danger
Calibration	Fresh air and gas calibration with one button
Calibration dates	Most recent for full instrument calibration and for each sensor
Motorised pump	Optional external pump, standard length 3 m (10 ft.), maximum length 30 m (100 ft.)
Security beep	User adjustable interval from five seconds to 60 minutes
Latching peak alarms	User enabled
Datalogging	Black box datalogger that can be upgraded to a full datalogger at any time. Activation code and BioTrak PC software required. Full datalogger has user adjustable interval from one second to 60 minutes
Datalogging capacity	See table
Computer interface	IrDA
Event logger	Twenty events including max, min, and average for all sensors, time and duration
Alarms	
Visual	Bright red LED alarm visible from top and sides
Audible	Dual Piezoelectric audible alarm, 92 dbA @ 30.5 cm (1 ft) PHD6 Alarm Loudness Test
Vibrating	Optional

General Specification



Sensors

	O ₂	LEL	IR CH ₄ (%)	IR CO ₂ (%)	PID (PPM)	CO	H ₂ S	Duo-Tox CO	Duo-Tox H ₂ S
Ranges	0-30 % by vol.	0-99 %	0-5.00%	0-5.00%	0-2000 ppm	0-999 ppm	0-200 ppm	0-999 ppm	0-200 ppm
Resolution	0.1%	1% LEL	0.05% CH ₄	0.01%	0.1 ppm	1 ppm	1 ppm	1 ppm	1 ppm
Warning low alarm	19.5%*	10%	0.5	0.5	50	35	10	35	10
Danger high alarm	23.5%	20%	1.0	3.0	100	100	20	100	20
STEL alarm	N/A	N/A	N/A	N/A	25	100	15	100	15
TWA alarm	N/A	N/A	N/A	N/A	10	35	10	35	10
T₉₀	<15 sec	<20 sec (methane)	<30 sec	<30 sec	<10 sec (isobut)	<20 sec	<20 sec	<20 sec	<20 sec
	CO-H	SO₂	Cl₂	NO₂	NO	NH₃	PH₃	HCN	
Ranges	0-999	0-25	0-50	0-100	0-250	0-100	0-20	0-100	
Resolution	1 ppm	0.1 ppm	0.1 ppm	0.1 ppm	1 ppm	1 ppm	0.1 ppm	0.2 ppm	
Warning low alarm	35	2	0.3	0.5	12.5	12.5	0.3	2.4	
Danger high alarm	100	5	0.5	1	25	25	1	4.7	
STEL alarm	100	5	1	1	25	35	1	4.7	
TWA alarm	35	2	0.5	1	25	25	0.3	4.7	
T₉₀	<20 sec								

*Danger low alarm for O₂

Battery life

Alkaline @ 70°F/22°C	17 hours
Li-ion @ 70°F/22°C	22 hours
Alkaline (with PID & LEL) @ 70°F/22°C	13 hours
Li-ion (with PID & LEL) @ 70°F/22°C	15.5 hours
Pump added to above	Subtract 4 to 6 hours
Charger (all models) @ 68°F (20°C)	5 hours maximum

Shelf life

Alkaline	60 days
Li-ion	60 days

Datalogger capacity

	Maximum sessions = 60 One sensor = 15,296 datapoints = 254 hours 56 min @ one minute intervals Two sensors = 7,648 datapoints = 127 hours 28 min @ one minute intervals Three sensors = 7,648 datapoints = 127 hours 28 min @ one minute intervals Four to six sensors = 3,824 datapoints = 63 hours 44min @ one minute intervals
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Instrument

Pump tubing length	30.5 m (100 ft) PhD6 Extended-length Tubing Test
Display	Front mounted graphic LCD, 1.4 in. x 1.4 in., simultaneously displays readings for all gases being monitored
Display backlight	Bright white LED backlight. User adjustable: to be always on, on in dark environments, or activated by Mode button for an interval adjustable from five seconds to 60 minutes
Temperature range	Operating: 0 to 110°F/-18 to 43°C, Intermittent: -20 to 120°F/-29 to 49°C
Temperature range (certification)	-20 to +50°C
Humidity range	15 - 95% RH, non-condensing (0-95% <= 4 hours)
Pump flow rate	1 LPM nominal



Total hazard protection

Highly visible bright red LEDs effectively warn users of dangerous conditions, whilst the PHD6™'s optional vibration alarm ensures workers are alerted to dangers even in high noise environments. The device is also optimised for use in the toughest locations with durable, robust housing and an IP65 rating.

Providing real-time Peak, STEL and TWA readings on a clear backlit LCD display, PHD6™ includes a black box recorder feature that allows the device to automatically datalog atmospheric conditions, whilst in operation.

When used with the IQ6™ docking station, the ongoing calibration and bump testing of PHD6™ can be reduced by up to 60%. The IQ6™ docking station is able to deliver fully automated bump test, calibration, meter diagnostics and data download, providing considerable savings over product life and reducing the time spent carrying out ongoing maintenance activities.



Accessories

IQ6™ docking station

Managing your portable fleet has never been easier with the IQ6™ docking station. IQ6™ is designed for use with PHD6™, offers a range of automated tasks, helping to reduce ongoing device maintenance costs and dramatically improve compliance record-keeping and reporting activities

- Automatically identifies the device, upon being docked
- Performs a full battery test of the device
- Performs an audible alarm test
- Performs a visual alarm test
- Performs a vibration alarm test
- Performs a full device bump test (using up to four cylinders of gas)
- Performs a fresh air calibration (when the device fails a bump test, this aspect is automatically initiated)
- Automatically downloads all device data to a PC

Reducing maintenance time and costs with IQ6™

IQ6™ can help to save notable time and money regarding ongoing portable device use and maintenance:

- Automatic test and calibration in under two minutes (compared with five minutes manually)
- Efficient use of test gas, helping to reduce test gas used for testing and calibration
- Automatic downloading of data helps to reduce fleet management activities, assisting with legal compliance
- When used with IQ Management System™ software, automatic reports and trending can be produced, helping to reduce fleet management activities

Optional Accessories

- Rechargeable battery upgrades

Our Product Range



Fixed Gas Monitoring

Honeywell Analytics offers a wide range of fixed gas detection solutions for a diverse array of industries and applications including: Commercial properties, industrial applications, semiconductor manufacturers, energy plants and petrochemical sites.

- » Detection of flammable, Oxygen and toxic gases (including exotics)
- » Innovative use of four core sensing technologies – paper tape, electrochemical cell, catalytic bead and infrared
- » Capability to detect down to Parts Per Billion (ppb) or Percent by Volume (%v/v)
- » Cost effective regulatory compliance solutions

Portable Gas Monitoring

When it comes to personal protection from gas hazards, Honeywell Analytics has a wide range of reliable solutions ideally suited for use in confined or enclosed spaces.

These include:

- » Detection of flammable, Oxygen and toxic gases
- » Single gas personal monitors – worn by the individual
- » Multi-gas portable gas monitors – used for confined space entry and regulatory compliance
- » Multi-gas transportable monitors – used for temporary protection of area during site construction and maintenance activities

Technical Services

At Honeywell Analytics, we believe in the value of great service and customer care. Our key commitment is providing complete and total customer satisfaction. Here are just a few of the services we can offer:

- » Full technical support
- » Expert team on hand to answer questions and queries
- » Fully equipped workshops to ensure quick turnaround on repairs
- » Comprehensive service engineer network
- » Training on product use and maintenance
- » Mobile calibration service
- » Customised programmes of preventative/corrective maintenance
- » Extended warranties on products

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