



Phosphine (PH₃)

MIDAS-S-PH3

MIDAS-E-PH3

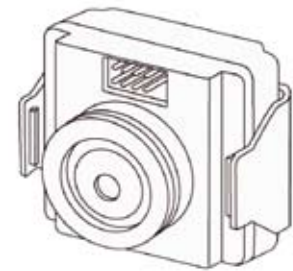
Phosphine (PH₃)

MIDAS-S-PH3

MIDAS-E-PH3



Midas® sensor cartridges are intended for use only with Honeywell Analytics' Midas® gas detector system. Please refer to the Midas® Technical Manual for further details.



Gas Measured	Phosphine (PH ₃)
Cartridge Part Number	MIDAS-S-PH3 1 year standard warranty MIDAS-E-PH3 2 year extended warranty
Sensor Technology	3 electrode electrochemical cell
Measuring Range (ppm)	PH ₃ 0 – 1.2ppm
Minimum Alarm 1 Set Point	0.15ppm
Lower Detectable Limit (LDL)	0.11ppm
Repeatability	< ± 5% of measured value
Linearity	< ± 10% of measured value
Response Time $t_{62.5}$	≤ 2 seconds
Sensor Cartridge Life Expectancy	≥ 24 months under typical application conditions
Operating Temperature	0°C to +40°C (32°F to 104°F)
Effect of Temperature	< ± 0.001ppm / °C (0°C to 20°C)
Zero	< ± 0.003ppm / °C (20°C to 40°C)
Sensitivity	< ± 0.6% of measured value / °C
Operating Humidity (continuous)	10 – 90% rH
Effect of Humidity	< 0.0015ppm / % rH
Zero	< ± 1% of measured value / % rH
Sensitivity	
Operating Pressure	90 – 110kPa
Effect of Position	No effect in typical application
Long Term Drift	
Zero	< ± 0.02ppm / year
Sensitivity	< ± 10% of measured value / year
Calibration Gas	Phosphine (PH ₃)
Challenge Gas (Bump Test)	Phosphine (PH ₃)
Warm Up Time	< 20 minutes
Storage Temperature	+5°C to +25°C (+41°F to +77°F)

The sensor data listed is based on ideal test environment; observed performance may vary based on the actual monitoring system and the sampling conditions employed

General Specification



Midas® is a registered trademark of Honeywell Analytics.

As with all electrochemical sensor cells, dramatic output changes in reported concentrations can be expected under rapidly changing environmental conditions. Please ensure sensors are located in areas not prone to sudden changes in humidity and temperature.

Actual readings may be affected by flow rates (although Midas® automatically controls flow rates within specified ranges) and absorption on tubing and other gas path surfaces.

All sensors are shipped pre-calibrated to traceable national standards. Dependent on actual operating conditions and overall exposure to gases, each sensor may not require in-field calibration for up to 24 months subject to any requirements to calibrate from local regulations or site practices.

Calibration and challenge gases should be from a certified and reliable source.

Cross Sensitivities

Each Midas® sensor is potentially cross sensitive to other gases and this may cause a gas reading when exposed to other gases than those originally designated. The table below presents typical readings that will be observed when a new sensor cartridge is exposed to the cross sensitive gas (or a mixture of gases containing the cross sensitive species).

Gas / Vapour	Chemical Formula	Concentration Applied (ppm)	Reading (ppm PH ₂)
Ammonia	NH ₃	100	1.05
Arsine	AsH ₃	1	0.68
Carbon Monoxide	CO	2000	< 0.01
Chlorine	Cl ₂	1	- 0.07
Diborane	B ₂ H ₆	1	0.45
Ethanol	C ₂ H ₅ OH	2000	< 0.01
Germane	GeH ₄	1	0.45
Hydrogen	H ₂	5000	< 0.01
Hydrogen Chloride	HCl	10	< 0.01
Hydrogen Fluoride	HF	10	< 0.01
Hydrogen Sulphide	H ₂ S	0.5	0.07
Iso Propanol	C ₃ H ₇ OH	2000	0
Nitrogen Dioxide	NO ₂	8	- 0.86
Silane	SiH ₄	1	0.36
Sulphur Dioxide	SO ₂	50	0.55

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 4 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

Find out more

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