



Halogen Group (Cl₂ F₂)
MIDAS-S-HAL
MIDAS-E-HAL

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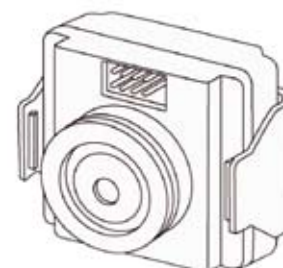
MIDAS-S-HAL

MIDAS-E-HAL



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.

The Midas[®] Halogen Group (Cl₂ F₂) electrochemical sensor is specifically designed to directly detect similar molecular species in the halogen group; namely Chlorine (Cl₂) and Fluorine (F₂). See details below regarding other detectable gases. Consult the Technical Manual to configure the Midas[®] transmitter to read the desired gas type.



Gas Measure	Chlorine (Cl ₂)
Cartridge Part Number	MIDAS-S-HAL 1 year standard warranty MIDAS-E-HAL 2 year extended warranty
Sensor Technology	3 electrode electrochemical cell
Measuring Range (ppm)	Cl ₂ 0 – 2ppm
Minimum Alarm 1 Set Point	0.25ppm
Lower Detectable Limit (LDL)	0.18ppm
Repeatability	< ± 5% of measured value
Linearity	< ± 3% of measured value
Response Time t_{92.5}	≤ 5 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	No effect (0°C to 20°C)
Zero	< ± 0.005ppm / °C (20°C to 40°C)
Sensitivity	< ± 1.8% of measured value / °C
Operating Humidity (continuous)	20 – 75% rH
Effect of Humidity	
Zero	< 0.003ppm / % rH
Sensitivity	< ± 0.3% of measured value / % rH
Operating Pressure	70 – 110kPa
Effect of Position	No effect in typical application
Long Term Drift	
Zero	< ± 2ppm / year
Sensitivity	< 10% of measured value / year
Calibration Gas	Chlorine (Cl ₂)
Challenge Gas (Bump Test)	Chlorine (Cl ₂)
Warm Up Time	< 10 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.

All data refers to representative electrochemical sensor as tested with Cl₂ gas from an approved source.

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.

Other Detectable Gases

The following additional gases can be detected with this sensor cartridge. Sensor performance and characteristics will be representative of the data as tabulated above. Consult the Technical Manual to set up the Midas® transmitter with the designated identification code for each of the following gas types.

Detectable Gas	Chemical Formula	Measuring Range
Fluorine	F ₂	0-4ppm

Cross Sensitivities

Each Midas® sensor is potentially cross sensitive to other gases and this may cause a gas reading when exposed to gases other 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 Cl ₂)
Ammonia	NH ₃	50	-1.9
Carbon Monoxide	CO	20000	0
Hydrogen Chloride	HCl	9	1.25
Hydrogen Sulphide	H ₂ S	25	-16.3
Nitrogen Dioxide	NO ₂	50	1.25 (transient)
Sulphur Dioxide	SO ₂	50	9.1

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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