

# MIDAS S2 HALOGEN GROUP (Cl<sub>2</sub>, F<sub>2</sub>)

## Sensor Cartridge Specifications

Selectable gases	Chlorine (Cl <sub>2</sub> ) Fluorine (F <sub>2</sub> )
Cartridge Part Number	MIDAS S2-E-HAL 2-year extended warranty
Sensor Technology	Electrochemical sensor
Measuring Range	Cl <sub>2</sub> 0 – 2ppm F <sub>2</sub> 0 – 4ppm
Default Alarm 1	Cl <sub>2</sub> 0.25ppm F <sub>2</sub> 0.5ppm
Default Alarm 2	Cl <sub>2</sub> 0.5ppm F <sub>2</sub> 1ppm
LDL, LAL	Cl <sub>2</sub> 0.18ppm F <sub>2</sub> 0.23ppm
Resolution	Cl <sub>2</sub> 0.01ppm F <sub>2</sub> 0.02ppm
Accuracy	≤ ± 5% of measured value
Response Time t <sub>62-5</sub>	Typical 2 seconds
Sensor Cartridge Life Expectancy (Expiration Period)	24 months under typical application conditions Extendable for 1 year through calibration after 24 months
Operating Temperature Effect of Temperature Sensitivity	0°C to +40°C (32°F to 104°F) ≤ ± 10% of measured value at 20°C
Operating Humidity	15 to 90% non-condensing
Operating Pressure	70 – 110kPa
Calibration Gas	Cl <sub>2</sub> 1ppm F <sub>2</sub> 2ppm
Warm Up Time	< 20 minutes
Storage Temperature	+5°C to +25°C (+41°F to +77°F)

The sensor data listed is based on the test data with Cl<sub>2</sub> gas under normal Lab test conditions (20-25 C, 0 - 60%RH, normal atmosphere pressure); observed performance may vary based on the actual monitoring system and the sampling conditions employed.



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### CROSS SENSITIVITIES

Each Midas S2 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 Measured	Chemical Formula	Concentration Applied(ppm)	Reading (ppm Cl <sub>2</sub> )
Ammonia	NH <sub>3</sub>	50	0.28
Hydrogen Chloride	HCl	9	1.25
Hydrogen Fluoride	HF	6	1.13
Hydrogen Sulfide	H <sub>2</sub> S	25	0 (Negative Drift)
Nitrogen Dioxide	NO <sub>2</sub>	6	2 (Over Range)
Ozone	O <sub>3</sub>	0.2	0.24
Sulfur Dioxide	SO <sub>2</sub>	50	2 (Over Range)
Carbon Monoxide	CO	20000	0
Silane	SiH <sub>4</sub>	10	0
Hydrogen	H <sub>2</sub>	500	0
Phosphine	PH <sub>3</sub>	0.6	0
Sulfur Dioxide	SO <sub>2</sub>	4	0
Ethylene Oxide	C <sub>2</sub> H <sub>4</sub> O	20	0
Nitric Oxide	NO	50	0
Carbon Dioxide	CO <sub>2</sub>	10000	0
Hydrogen Cyanide	HCN	10	0

Interference differs from cartridge to cartridge and over cell life. It is not recommended to calibrate with cross sensitivity factors. The target gas should be used for calibration.

**For more information**

[automation.honeywell.com](https://automation.honeywell.com)

**Honeywell Process  
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