

# MIDAS S2

# HYDROGEN

# CYANIDE (HCN)

## Sensor Cartridge Specifications

Selectable gases	Hydrogen Cyanide (HCN)
Cartridge Part Number	MIDAS S2-E- HCN 2-year extended warranty
Sensor Technology	Electrochemical sensor
Measuring Range	HCN 0 – 20ppm
Default Alarm 1	HCN 2.5ppm
Default Alarm 2	HCN 4.7ppm
LDL, LAL	HCN 1.8ppm
Resolution	HCN 0.1ppm
Accuracy	$\leq \pm 15\%$ of measured value
Response Time $t_{62.5}$	Typical 40 seconds
Sensor Cartridge Life Expectancy (Expiration Period)	24 months under typical application conditions Extendable for 1 year through calibration after 24 months
Operating Temperature	0°C to +40°C (32°F to 104°F)
Effect of Temperature Sensitivity	$\leq \pm 15\%$ of measured value at 20°C
Operating Humidity	15 to 95% non-condensing
Operating Pressure	90 – 110kPa
Calibration Gas	HCN 10ppm
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 HCN 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 HCN)
Carbon Monoxide	CO	300	15
Hydrogen Sulfide	H <sub>2</sub> S	15	20 (Over Range)
Ethylene	C <sub>2</sub> H <sub>4</sub>	100	20 (Over Range)
Nitrogen Dioxide	NO <sub>2</sub>	5	0 (Negative Drift)
Nitric Oxide	NO	35	0 (Negative Drift)
Sulfur Dioxide	SO <sub>2</sub>	20	20 (Over Range)
Hydrogen Chloride	HCl	4	5.3
Silane	SiH <sub>4</sub>	10	20 (Over Range)
Hydrogen	H <sub>2</sub>	500	7.5
Chlorine	Cl <sub>2</sub>	1	0
Ammonia	NH <sub>3</sub>	50	0
Phosphine	PH <sub>3</sub>	0.6	10.8
Ozone	O <sub>3</sub>	0.2	0
Hydrogen Fluoride	HF	6	0
Carbon Dioxide	CO <sub>2</sub>	10000	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)

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