

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	$\pm 15\%$ 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	$\pm 15\%$ 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 ₂ S	15	20 (Over Range)
Ethylene	C ₂ H ₄	100	20 (Over Range)
Nitrogen Dioxide	NO ₂	5	0 (Negative Drift)
Nitric Oxide	NO	35	0 (Negative Drift)
Sulfur Dioxide	SO ₂	20	20 (Over Range)
Hydrogen Chloride	HCl	4	5.3
Silane	SiH ₄	10	20 (Over Range)
Hydrogen	H ₂	500	7.5
Chlorine	Cl ₂	1	0
Ammonia	NH ₃	50	0
Phosphine	PH ₃	0.6	10.8
Ozone	O ₃	0.2	0
Hydrogen Fluoride	HF	6	0
Carbon Dioxide	CO ₂	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

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