

MIDAS S2 HYDROGEN (H₂)

Sensor Cartridge Specifications

Selectable gases	Hydrogen (H ₂)
Cartridge Part Number	MIDAS S2-E-H2X 2-year extended warranty
Sensor Technology	Electrochemical sensor
Measuring Range	H ₂ 0 – 1000ppm
Default Alarm 1	H ₂ 125ppm
Default Alarm 2	H ₂ 250ppm
LDL, LAL	H ₂ 90ppm
Resolution	H ₂ 5ppm
Accuracy	≤ ± 5% of measured value
Response Time t ₆₂₋₅	Typical 30 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	≤ ± 40% of measured value at 20°C
Operating Humidity	15 to 90% non-condensing
Operating Pressure	90 – 110kPa
Calibration Gas	H ₂ 500ppm
Warm Up Time	< 10 minutes
Storage Temperature	+5°C to +25°C (+41°F to +77°F)

The sensor data listed is based on the test data with H₂ 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 H ₂)
Carbon Monoxide	CO	100	150
iso-Propanol	C ₄ H ₇ OH	1100	Yes
Nitrogen Dioxide	NO ₂	10	0 (Negative Drift)
Ammonia	NH ₃	100	0
Arsine	AsH ₃	0.2	0
Carbon Dioxide	CO ₂	10000	0
Chlorine	Cl ₂	1	0
Chlorine Dioxide	ClO ₂	1	0
Hydrogen Cyanide	HCN	20	0
Methane	CH ₄	10000	0
Ozone	O ₃	0.25	0
Sulfur Dioxide	SO ₂	5	0
Hydrogen Chloride	HCl	4	0
Silane	SiH ₄	10	0
Phosphine	PH ₃	0.6	0
Hydrogen Fluoride	HF	6	0
Ethylene Oxide	C ₂ H ₄ O	20	0
Hydrogen Sulfide	H ₂ S	20	0
Nitrogen Dioxide	NO ₂	6	0
Nitric Oxide	NO	50	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

**Honeywell Process
Measurement and Control**

2101 CityWest Blvd
Houston, TX 77042
www.honeywell.com

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