Honeywell

Midas® Sensor Cartridge Specifications



Hydrogen ppm (H_2)
MIDAS-E-H2X, MIDAS-S-H2X

Gas Measured	Hydrogen (H_2)
Cartridge Part Number	MIDAS-S-H2X MIDAS-E-H2X
Sensor Technology	3 electrode electrochemical cell
Measuring Range	H_2 0 – 1000ppm
Minimum Alarm 1 Set Point	120ppm
Lower Detection Limit	90ppm
Linearity	<± 5% of measured value
Repeatability	<± 5% of measured value
Resolution	5ppm
Response Time $t_{62.5}$	≤ 50 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	
Zero	<± 0.17ppm / °C
Sensitivity	<± 3% of measured value / °C
Operating Humidity	10 to 90% RH
Effect of Humidity	
Zero	No effect
Sensitivity	No effect
Operating Pressure	90 – 110kPa
Effect of Position	No effect in typical application
Long Term Drift	
Zero	No effect
Sensitivity	<± 10% of measured value / 6 months
Calibration Gas	Hydrogen (H_2)
Bump Test Gas	Hydrogen (H_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.

Cross Sensitivities

Each Midas® 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_4H_7OH	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_2H_4O	20	0
Hydrogen Sulfide	H_2S	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.

Find out more
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