

MIDAS S2 SILANE LOW LEVEL (SiH₄)

Sensor Cartridge Specifications

Selectable gases	Silane (SiH ₄)
Cartridge Part Number	MIDAS S2-E-SHL 2-year extended warranty
Sensor Technology	Electrochemical sensor
Measuring Range	SiH ₄ 0 - 2ppm
Default Alarm 1	SiH ₄ 0.25ppm
Default Alarm 2	SiH ₄ 0.5ppm
LDL, LAL	SiH ₄ 0.18ppm
Resolution	SiH ₄ 0.01ppm
Accuracy	≤ ± 5% of measured value
Response Time t _{62.5}	Typical 1 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	≤ ± 10% of measured value at 20°C
Operating Humidity	15 to 90% non-condensing
Operating Pressure	90 – 110kPa
Calibration Gas	SiH ₄ 1ppm
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 SiH₄ 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 SiH ₄)
Ammonia	NH ₃	100	0
Arsine	AsH ₃	1	1
Carbon Monoxide	CO	2000	0.1
Chlorine	Cl ₂	5	0 (Negative Drift)
Diborane	B ₂ H ₆	1	0.7
Ethanol	C ₂ H ₅ OH	500	0
Hydrogen	H ₂	5000	0.2
Hydrogen Chloride	HCl	8.7	1.6
Hydrogen Fluoride	HF	10	0
Hydrogen Sulfide	H ₂ S	5	1.8
Iso Propanol	C ₃ H ₇ OH	500	0
Nitrogen Dioxide	NO ₂	50	0 (Negative Drift)
Silane	SiH ₄	1	1.4
Sulfur Dioxide	SO ₂	50	1.4

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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