

MIDAS S2

SULFUR DIOXIDE (SO₂)

Sensor Cartridge Specifications

Selectable gases	Sulfur Dioxide (SO ₂)
Cartridge Part Number	MIDAS S2-E-SO2 2-year extended warranty
Sensor Technology	Electrochemical sensor
Measuring Range	SO ₂ 0 - 8ppm
Default Alarm 1	SO ₂ 1ppm
Default Alarm 2	SO ₂ 2ppm
LDL, LAL	SO ₂ 0.7ppm
Resolution	SO ₂ 0.05ppm
Accuracy	≤ ± 5% of measured value
Response Time t _{62:5}	Typical 2 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	80 – 120kPa
Calibration Gas	SO ₂ 4ppm
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 SO₂ 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 SO ₂)
Phosphine	PH ₃	0.6	1.5
Hydrogen Cyanide	HCN	10	4.4
Nitrogen Dioxide	NO ₂	6	0 (Negative Drift)
Silane	SiH ₄	10	8 (Over Range)
Carbon Monoxide	CO	300	0 (Negative Drift)
Hydrogen Chloride	HCl	4	0
Hydrogen	H ₂	500	0
Chlorine	Cl ₂	1	0
Ammonia	NH ₃	50	0
Ozone	O ₃	0.2	0
Hydrogen Fluoride	HF	6	0
Ethylene Oxide	C ₂ H ₄ O	20	0
Hydrogen Sulfide	H ₂ S	20	0
Nitric Oxide	NO	50	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

**Honeywell Process
Measurement and Control**

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