

MIDAS S2

ARSINE (AsH_3)

GERMANE (GeH_4)

Sensor Cartridge Specifications

Selectable gases	Arsine (AsH_3) Germane (GeH_4)
Cartridge Part Number	MIDAS S2-E-ASH 2-year extended warranty
Sensor Technology	Electrochemical sensor
Measuring Range	AsH_3 0 – 200ppb GeH_4 0 – 800ppb
Default Alarm 1	AsH_3 5ppb GeH_4 100ppb
Default Alarm 2	AsH_3 10ppb GeH_4 200ppb
LDL, LAL	AsH_3 5ppb GeH_4 70ppb
Resolution	AsH_3 1ppb GeH_4 5ppb
Accuracy	$\leq \pm 5\%$ of measured value
Response Time $t_{62.5}$	Typical 10 seconds
Sensor Cartridge Life Expectancy (Expiration Period)	24 months under typical application conditions Extendable for 1 year through calibration after 24 months
Operating Temperature Effect of Temperature Sensitivity	0°C to +40°C (32°F to 104°F) $\leq \pm 25\%$ of measured value at 20°C
Operating Humidity	10 to 90% non-condensing
Operating Pressure	90 – 110kPa
Calibration Gas	AsH_3 100ppb GeH_4 400ppb
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 AsH_3 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.

Midas S2 Arsine (AsH₃), Germane (GeH₄) Sensor Cartridge Specifications

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 (ppb AsH ₃)
Ammonia	NH ₃	108	<100
Carbon Dioxide	CO ₂	5000	0
Carbon Monoxide	CO	85	0
Chlorine	Cl ₂	0.85	0 (Negative Drift)
Diborane	B ₂ H ₆	0.1	50
Disilane	Si ₂ H ₆	0.27	12
Germane	GeH ₄	0.27	50
Hydrogen	H ₂	3100	0 (Negative Drift)
Hydrogen Chloride	HCl	7.9	0
Hydrogen Cyanide	HCN	3.6	200 (Over Range)
Hydrogen Fluoride	HF	7.2	0
Hydrogen Selenide	H ₂ Se	0.8	200 (Over Range)
Hydrogen Sulfide	H ₂ S	18.2	0
Iso Propanol	C ₃ H ₈ O	20000	0
Methane	CH ₄	18000	0
Nitrogen Dioxide	NO ₂	10	0 (Negative Drift)
Phosphine	PH ₃	0.1	120
Silane	SiH ₄	0.3	50
Sulfur Dioxide	SO ₂	17.8	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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