

MIDAS S2

FLAMMABLE GROUP (CH₄, H₂, C₂H₄, C₃H₆)

Sensor Cartridge Specifications

Selectable gases	Methane (CH ₄) Hydrogen (H ₂) Ethylene (C ₂ H ₄) Propylene (C ₃ H ₆)
Cartridge Part Number	MIDAS S2-E-LEL 2-year extended warranty
Sensor Technology	Catalytic bead sensor
Measuring Range	CH ₄ 0 - 100%LEL H ₂ 0 - 100%LEL C ₂ H ₄ 0 - 100%LEL C ₃ H ₆ 0 - 100%LEL
Default Alarm 1	CH ₄ 10%LEL H ₂ 10%LEL C ₂ H ₄ 10%LEL C ₃ H ₆ 10%LEL
Default Alarm 2	CH ₄ 20%LEL H ₂ 20%LEL C ₂ H ₄ 20%LEL C ₃ H ₆ 20%LEL
LDL, LAL	CH ₄ 3%LEL H ₂ 3%LEL C ₂ H ₄ 3%LEL C ₃ H ₆ 3%LEL
Resolution	CH ₄ 0.5%LEL H ₂ 0.5%LEL C ₂ H ₄ 0.5%LEL C ₃ H ₆ 0.5%LEL
Accuracy	≤ ± 5% of measured value
Response Time t ₆₂₋₅	Typical 5 seconds
Sensor Cartridge Life Expectancy (Expiration Period)	60 months under typical application conditions Extendable for 1 year through calibration after 60 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	0 to 99% non-condensing
Operating Pressure	90 – 110kPa
Calibration Gas	CH ₄ 50%LEL H ₂ 50%LEL C ₂ H ₄ 50%LEL C ₃ H ₆ 50%LEL
Warm Up Time	< 30 minutes
Storage Temperature	+5°C to +25°C (+41°F to +77°F)



The sensor data listed is based on the test data with CH₄ 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.

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 (%LEL CH₄)
Iso Propanol	C ₃ H ₇ OH	10000	37.5
Propane	C ₃ H ₈	10000	20.5
Acetylene	C ₂ H ₂	12000	26.5
Ammonia	NH ₃	50	0
Carbon Dioxide	CO ₂	10000	0
Carbon Monoxide	CO	100	0
Chlorine	Cl ₂	10	0
Hydrogen Chloride	HCl	10	0
Hydrogen Sulfide	H ₂ S	20	0
Nitric Oxide	NO	50	0
Nitrogen Dioxide	NO ₂	10	0
Sulfur Dioxide	SO ₂	10	0
Silane	SiH ₄	10	0
Phosphine	PH ₃	0.6	0
Ozone	O ₃	0.2	0
Hydrogen Fluoride	HF	6	0
Ethylene Oxide	C ₂ H ₄ O	20	0
Hydrogen Cyanide	HCN	10	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

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**Honeywell Process
Measurement and Control**

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