



## Midas® Sensor Cartridge Specifications

### Flammable Group (Hydrogen, Methane)

### MIDAS-E-LEL, MIDAS-E-LEL

Gas Measured	Hydrogen (H <sub>2</sub> )
<b>Cartridge Part Number</b>	MIDAS-S-LEL 1 year standard warranty MIDAS-E-LEL 2 year standard warranty
<b>Sensor Technology</b>	Pellistor (catalytic bead)
<b>Measuring Range</b>	H <sub>2</sub> 0 – 100%LEL
<b>Minimum Alarm 1 Set Point</b>	10%LEL
<b>Lower Detection Limit</b>	4.5%LEL
<b>Linearity</b>	< ± 10% of measured value
<b>Repeatability</b>	< ± 10% of measured value
<b>Resolution</b>	1%LEL
<b>Response Time t<sub>62.5</sub></b>	≤ 5 seconds
<b>Sensor Cartridge Life Expectancy</b>	≥ 60 months under typical application conditions
<b>Operating Temperature</b>	0°C to +40°C (32°F to 104°F)
<b>Effect of Temperature</b>	
Zero	< ± 1% fsd
Sensitivity	< ± 3% fsd
<b>Operating Humidity</b>	10 to 90% RH
<b>Effect of Humidity</b>	
Zero	< ± 1% fsd
Sensitivity	< ± 2% fsd
<b>Operating Pressure</b>	90 – 110kPa
<b>Effect of Position</b>	No effect in typical application
<b>Long Term Drift</b>	
Zero	< 3% fsd / year
Sensitivity	< 3% fsd / year
<b>Calibration Gas</b>	Hydrogen (H <sub>2</sub> ), Methane (CH <sub>4</sub> )
<b>Bump Test Gas</b>	Hydrogen (H <sub>2</sub> ), Methane (CH <sub>4</sub> )
<b>Warm Up Time</b>	< 30 minutes
<b>Storage Temperature</b>	+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.

#### Other Detectable Gases

The following additional gases can be detected with this sensor cartridge. Sensor performance and characteristics will be representative of the data as tabulated above. Consult the Technical Manual to set up the Midas® transmitter with the designated identification code for each of the following gas types.

Detectable Gas	Chemical Formula	Measuring Range
Methane	CH <sub>4</sub>	0 – 100%LEL
Ethylene	C <sub>2</sub> H <sub>4</sub>	0 – 100%LEL
Propylene	C <sub>3</sub> H <sub>8</sub>	0 – 100%LEL
Ethylcyclohexane	C <sub>8</sub> H <sub>16</sub>	0 – 9000ppm

#### 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 (H <sub>2</sub> )
Ammonia	NH <sub>3</sub>	10	0
Carbon Dioxide	CO <sub>2</sub>	10	0
Carbon Monoxide	CO	10	0
Chlorine	Cl <sub>2</sub>	10	0
Ethylene	C <sub>2</sub> H <sub>4</sub>	1.35%v	43
Hydrogen Chloride	HCl	10	0
Hydrogen Sulfide	H <sub>2</sub> S	10	0
Iso Propanol	C <sub>3</sub> H <sub>7</sub> OH	1.0%v	31
Methane	CH <sub>4</sub>	2.5%v	55
Nitric Oxide	NO	10	0
Nitrogen Dioxide	NO <sub>2</sub>	10	0
Propane	C <sub>3</sub> H <sub>8</sub>	1.0%v	35
Sulfur Dioxide	SO <sub>2</sub>	10	0
Acetylene	C <sub>2</sub> H <sub>2</sub>	1.2%v	26

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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