

Midas[®] SENSOR CARTRIDGE SPECIFICATIONS

Flammable Group (Hydrogen, Methane) MIDAS-S-LEL, MIDAS-E-LEL



| Gas Measured | Hydrogen (H ₂) |
|---|--|
| Cartridge Part Number | MIDAS-S-LEL 1 year standard warranty MIDAS-E-LEL 2 year extended warranty |
| Sensor Technology | Pellistor (catalytic bead) |
| Measuring Range | 0 – 100% LEL ¹ |
| Minimum Alarm 1 Set Point | 9% LEL |
| Repeatability | < ± 10% of measured value |
| Linearity | < ± 10% of measured value |
| Response Time t_{62.5} | < 5 seconds |
| Sensor Cartridge Life Expectancy | ≥60 months under typical application conditions |
| Operating Temperature | 0°C to +40°C (32°F to 104°F) |
| Effect of Temperature | |
| Zero | < ± 1% fsd |
| Sensitivity | < ± 3% fsd |
| Operating Humidity (continuous) | 20 – 90% RH |
| Effect of Humidity | |
| Zero | < ± 1% fsd |
| Sensitivity | < ± 2% fsd |
| Operating Pressure | 90 – 110kPa |
| Effect of Position | No effect in typical application |
| Long Term Drift | |
| Zero | < ± 3% fsd / year |
| Sensitivity | < ± 3% fsd / year |
| Calibration Gas | Hydrogen (H ₂), Methane (CH ₄) |
| Challenge Gas (Bump Test) | Hydrogen (H ₂), Methane (CH ₄) |
| Warm Up Time | < 10 minutes |
| Storage Temperature | +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
It is recommended that the calibration and bump test gas should be the same as measuring gas

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 ₄ | 0 – 100% LEL ¹ |

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 / Vapor | Chemical Formula | Concentration applied (ppm) | Reading (% LEL) |
|-------------------|----------------------------------|-----------------------------|-----------------|
| Ammonia | NH ₃ | 10 | 0 |
| Carbon Dioxide | CO ₂ | 10 | 0 |
| Carbon Monoxide | CO | 10 | 0 |
| Chlorine | Cl ₂ | 10 | 0 |
| Ethylene | C ₂ H ₄ | 1.35%v | 43 |
| Hydrogen Chloride | HCl | 10 | 0 |
| Hydrogen Sulphide | H ₂ S | 10 | 0 |
| Iso Propanol | C ₃ H ₇ OH | 1.0%v | 31 |
| Methane | CH ₄ | 2.5%v | 55 |
| Nitric Oxide | NO | 10 | 0 |
| Nitrogen Dioxide | NO ₂ | 10 | 0 |
| Propane | C ₃ H ₈ | 1.0%v | 35 |
| Sulphur Dioxide | SO ₂ | 10 | 0 |
| Acetylene | C ₂ H ₂ | 1.2 | 26 |

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