Honeywell

# Midas® SENSOR CARTRIDGE SPECIFICATIONS

## Hydrogen Cyanide (HCN)
## MIDAS-S-HCN, MIDAS-E-HCN

| Gas Measured | Hydrogen Cyanide (HCN) |
|---|---|
| **Cartridge Part Number** | MIDAS-S-HCN 1 year standard warranty<br>MIDAS-E-HCN 2 year extended warranty |
| **Sensor Technology** | 3 electrode electrochemical cell |
| **Measuring Range (ppm)** | HCN 0 – 20ppm |
| **Minimum Alarm 1 Set Point** | 2.4ppm |
| **Repeatability** | < ± 2% of measured value |
| **Linearity** | < ± 4% of measured value |
| **Response Time $t_{62.5}$** | < 15 seconds |
| **Sensor Cartridge Life Expectancy** | ≥ 24 months under typical application conditions |
| **Operating Temperature** | 0°C to +40°C (32°F to 104°F) |
| **Effect of Temperature** | < ± 0.008ppm / °C (0°C to 20°C) |
| Zero | < ± 0.03ppm / °C (20°C to 40°C) |
| Sensitivity | < ± 2.5% of measured value / °C |
| **Operating Humidity (continuous)** | 15 – 90% rH |
| **Effect of Humidity** | |
| Zero | TBA |
| Sensitivity | < ± 1% of measured value / % rH |
| **Operating Pressure** | 90 – 110kPa |
| **Effect of Position** | No effect in typical application |
| **Long Term Drift** | |
| Zero | No effect |
| Sensitivity | < ± 2% of measured value / month |
| **Calibration Gas** | Hydrogen Cyanide (HCN) |
| **Challenge Gas (Bump Test)** | Sulphur Dioxide ($SO_2$) |
| **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

**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 (ppm HCN) |
|---|---|---|---|
| Carbon Monoxide | CO | 300 | < 15 |
| Hydrogen Sulphide | $H_2S$ | 15 | 90 |
| Ethylene | $C_2H_4$ | 100 | < 25 |
| Nitrogen Dioxide | $NO_2$ | 5 | -20 to <-10 |
| Nitric Oxide | NO | 35 | -17.5 to 0 |
| Sulphur Dioxide | $SO_2$ | 20 | 40 to 75 |

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**

www.honeywellanalytics.com
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