Chlorine (H₂S Tolerant)
(0 – 5.00 ppm)
Part No. 823-0202-42

Minimum Indicated Concentration .............. 0.15 ppm
Repeatability² .............................................. ± 5% of Reading
Accuracy¹ .................................................... ± 10% of Reading
Span Drift .................................................... < 12% change per 6 months (typical)
Response Time (Rise)²,³ ............................ T₉₀: < 45 seconds
Recovery Time (Fall)² ............................. T₁₀: < 60 seconds
Temperature Range .............................. -20° to 50°C (-4° to 122°F)
Humidity Range (continuous)⁴ .............. 15–90 %RH, non-condensing
Humidity Range (intermittent)⁴ ......... 0–99 %RH, non-condensing
Pressure Range ........................................ Ambient atmospheric, ± 1 psi
Expected Sensor Life .................................. 3 years from Shipping Date
Recommended Calibration Flow Rate ...... 500 to 1000 cc/min
Oxygen Requirement ................................... 1% by volume, minimum
SensAlert 4-Channel Controller .............. Compatible

¹ When unit is calibrated and serviced at recommended intervals.
² Room Temperature, seasoned system, repeat exposures.
³ Response to dry gas after dry air equilibration, the response to a dry gas after moist air will appear to take longer due to a humidity transient.
⁴ Sensor is subject to moisture transients on sudden changes in moisture level. Note that transients are positive for increasing moisture and vice versa.

Cross-Interferences*

<table>
<thead>
<tr>
<th>Gas</th>
<th>Gas Exposure</th>
<th>Sensor Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Dioxide</td>
<td>5000 ppm</td>
<td>None</td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>300 ppm</td>
<td>None</td>
</tr>
<tr>
<td>Chlorine Dioxide</td>
<td>0.3 ppm</td>
<td>+1 ppm</td>
</tr>
<tr>
<td>Hydrogen Cyanide</td>
<td>10 ppm</td>
<td>None</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>4 ppm</td>
<td>-1 ppm¹</td>
</tr>
<tr>
<td>Nitrogen Dioxide</td>
<td>1 ppm</td>
<td>+1 ppm</td>
</tr>
<tr>
<td>Sulfur Dioxide</td>
<td>100 ppm</td>
<td>-1 ppm</td>
</tr>
</tbody>
</table>

* Interference factors may differ from sensor to sensor, it is not advisable to calibrate with interferent gases.
¹ Negative interferent, highly variable
Special Calibration Considerations:
Chlorine (H₂S Tolerant) (PN° 823-0202-42)

Zeroing The Sensor
It is recommended that the sensors be zeroed in clean ambient air. If zero air is used, it should be moisturized to ambient conditions and a pre-zeroing exposure of 2 to 5 minutes is recommended to overcome possible moisture transients. If dry zero air is used, a 45 to 60 minute pre-exposure is recommended prior to zeroing. The sensor will undergo a negative moisture transient when dry air is applied, possibly indicating “Sensor Fail” at the transient onset.

Span Calibration
For best accuracy, it is recommended that this sensor be calibrated at a full scale concentration of 5 ppm Cl₂. It is recommended that the sensor undergo a 3 to 5 minute pre-calibration exposure in order to overcome moisture transients and season the calibration system. This pre-exposure ensures that the gas reaches the sensor at full concentration. The use of Teflon™ tubing is recommended with this gas to prevent gas absorption into the tubing walls. Complete span calibration instructions are provided in the SensAlertPlus User Manual or SensAlert ASI User Manual. The sensor will undergo a positive moisture transient when the (dry) calibration gas is removed.

Test-on-Demand Cell
Test-On-Demand cell available for this sensor: 821-0204-02 (Type C).

Moisture Effects & Moisture Barrier Use
These sensors exhibit a positive moisture transient when exposed to a rapid increase in ambient moisture. Transient magnitudes ranged from 1 to 2 ppm when sensors were suddenly exposed to moist air (23°C, 99%RH) after sitting in room air (23°C, 55 – 60%RH). The sensors underwent a negative transient of -1 to -2 ppm when suddenly exposed to dry air (23°C, 0%RH) after sitting in room air (23°C, 55 – 60%RH). These transients took from 30 to 40 minutes to rise above -0.3ppm. Note that this negative transient could cause the transmitter to display “Sensor Fail”.

The use of a SensAlertPlus moisture barrier, p/n 821-0201-01, is not recommended with these sensors. The barrier blocks almost all of the Cl₂ gas from the sensor (at 5 to 10 ppm levels).