Chlorine (H₂S Tolerant)
(0 – 10.0 ppm)
Part No. 823-0202-41

Minimum Indicated Concentration .............. 0.3 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 ppm</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.
◊ Negative interferent, highly variable
**Special Calibration Considerations:**  
**Chlorine (H₂S Tolerant) (PN° 823-0202-41)**

**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**  
It is recommended that this sensor be calibrated at 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 SensAlert™ Plus 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 SensAlert™ Plus 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).