Bromine
(Moisture Tolerant)
(0 – 1.00 ppm)
Part No. 823-0222-22

Minimum Indicated Concentration .......... 0.03 ppm
Repeatability .................................. ± 5% of Reading
Accuracy1 ........................................ ± 10% of Reading
Span Drift ..................................... < 10% change per 6 months (typical)
Response Time (Rise)2 ....................... T90: < 80 sec, successive exposures
Recovery Time (Fall)2 ....................... T90: < 90 sec
Temperature Range .......................... -20° to 50°C (-4° to 122°F)
Humidity Range (continuous)3 .......... 15–90 %RH, non-condensing
Humidity Range (intermittent) ........... 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 ............ Not Compatible.

1 When unit is calibrated and serviced at recommended intervals.
2 Room Temperature, repeats exposures
3 High humidity can result in Bromine gas absorption and adsorption.

Cross-Interferences1

<table>
<thead>
<tr>
<th>Gas</th>
<th>Gas Exposure</th>
<th>Sensor Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Monoxide</td>
<td>100 ppm</td>
<td>none</td>
</tr>
<tr>
<td>Chlorine</td>
<td>0.65 ppm</td>
<td>+1 ppm</td>
</tr>
<tr>
<td>Hydrogen</td>
<td>10,000 ppm</td>
<td>None</td>
</tr>
<tr>
<td>Hydrogen Chloride</td>
<td>100 ppm</td>
<td>+1 ppm</td>
</tr>
<tr>
<td>Hydrogen Cyanide</td>
<td>100 ppm</td>
<td>-1 ppm</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>20 ppm</td>
<td>None2</td>
</tr>
<tr>
<td>Nitric Oxide</td>
<td>500 ppm</td>
<td>+1 ppm</td>
</tr>
<tr>
<td>Nitrogen Dioxide</td>
<td>5 ppm</td>
<td>+1 ppm</td>
</tr>
</tbody>
</table>

1 Interference factors may differ from sensor to sensor, it is not advisable to calibrate with interferent gases.
2 Prolonged exposure to H2S can kill the sensor.
**Special Calibration Considerations:**  
Bromine Sensor (PN° 823-0222-22)

**Zeroing The Sensor**

If possible, the sensor should be zeroed in clean ambient air. If Zero Air is used, a 2 to 5 minute exposure is recommended to ensure the sensor is clear of gas. Complete zeroing instructions are provided in Section 3.1 of the SensAlert\textsuperscript{Plus} User Manual or SensAlert ASI User Manual.

**Span Calibration**

It is recommended that this sensor be calibrated with 1 ppm bromine gas. A 2 to 5 minute pre-exposure is recommended prior to calibration. This pre-exposure helps to "season-in" the calibration equipment so that gas reaches the sensor at full concentration. Complete span calibration instructions are provided in Section 3.2 of the SensAlert\textsuperscript{Plus} User Manual or SensAlert ASI User Manual. The sensor may be bump tested with 2, 5, or 10 ppm chlorine gas (standard disposable cylinder mixtures). Although chlorine at these levels will drive the sensor off scale, neither the sensor nor its calibration will be harmed by these overexposures. Regular routine bump testing is recommended for this sensor since such exposures will "clean" the sensor electrolyte and result in better long term performance.

**Test-on-Demand Cell**

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