Fluorine
(0 – 10.0 ppm)
Part No. 823-0215-21

Minimum Indicated Concentration .................. 0.3 ppm
Repeatability ............................................. ± 5% of Reading
Accuracy\(^1\) ............................................. ± 10% of Reading
Span Drift .................................................. < 10% change per 6 months (typical)
Response Time (Rise)\(^2\) .............................. \(T_{50}: < 10\) seconds
Recovery Time (Fall)\(^2\) ............................... \(T_{10}: < 60\) seconds
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.

\(^3\) High humidity can result in Chlorine & Fluorine gas absorption and adsorption.

---

Cross-Interferences*

<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>Bromine</td>
<td>2.5 ppm</td>
<td>+1 ppm</td>
</tr>
<tr>
<td>Chlorine Dioxide</td>
<td>5 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>250 ppm</td>
<td>+1 ppm</td>
</tr>
<tr>
<td>Hydrogen Cyanide</td>
<td>250 ppm</td>
<td>-1 ppm</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>20 ppm</td>
<td>None</td>
</tr>
<tr>
<td>Nitric Oxide</td>
<td>1250 ppm</td>
<td>+1 ppm</td>
</tr>
<tr>
<td>Nitrogen Dioxide</td>
<td>12.5 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.
Special Calibration Considerations:
Fluorine Sensor (PN° 823-0215-21)

Zeroing The Sensor
There are no special zeroing considerations for this sensor. Complete zeroing instructions are provided in Section 3.1 of the SensAlert® Plus User Manual or SensAlert ASI User Manual.

Span Calibration
It is recommended that this sensor be calibrated at the half-scale concentration of 5 ppm Fluorine gas. Where possible, 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. Due to the difficulties in working with low ppm fluorine gas, chlorine gas may be used as a surrogate span gas. The sensor should be spanned with 2 to 4ppm Cl₂ with the calibration level set to 2.5 times the span concentration (i.e. 2 ppm Cl₂ would be spanned to 5 ppm F₂). Complete span calibration instructions are provided in Section 3.2 of the SensAlert® Plus User Manual or SensAlert ASI User Manual.

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