

# Sensor Data Sheet

# SENSALERT PLUS

## SENSIDYNE®



**Fluorine**  
**(0 – 25.0 ppm)**  
**Part No. 823-0215-22**

Minimum Indicated Concentration .....	0.8 ppm
Repeatability .....	± 5% of Reading
Accuracy <sup>1</sup> .....	± 10% of Reading
Span Drift .....	< 10% change per 6 months (typical)
Response Time (Rise) <sup>2</sup> .....	T <sub>50</sub> : < 10 seconds
	T <sub>90</sub> : < 30 seconds, successive exposures
Recovery Time (Fall) <sup>2</sup> .....	T <sub>10</sub> : < 60 seconds
Temperature Range .....	-20° to 50°C (-4° to 122°F)
Humidity Range (continuous) <sup>3</sup> .....	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

<sup>1</sup> When unit is calibrated and serviced at recommended intervals.

<sup>2</sup> Room Temperature.

<sup>3</sup> High humidity can result in Chlorine & Fluorine gas absorption and adsorption.

**Cross-Interferences\***

Gas	Gas Exposure	Sensor Output
Carbon Monoxide	100 ppm	none
Bromine	2.5 ppm	+1 ppm
Chlorine Dioxide	5 ppm	+1 ppm
Hydrogen	10,000 ppm	None
Hydrogen Chloride	250 ppm	+1 ppm
Hydrogen Cyanide	250 ppm	-1 ppm
Hydrogen Sulfide	20 ppm	None
Nitric Oxide	1250 ppm	+1 ppm
Nitrogen Dioxide	12.5 ppm	+1 ppm

\* Interference factors may differ from sensor to sensor, it is not advisable to calibrate with interferent gases.

## Special Calibration Considerations:

### **Fluorine Sensor (PN° 823-0215-22)**

#### Zeroing The Sensor

There are no special zeroing considerations for this sensor. Complete zeroing instructions are provided in Section 3.1 of the SensAlert<sup>Plus</sup> User Manual or SensAlert ASI User Manual.

#### Span Calibration

It is recommended that this sensor be calibrated at the half-scale concentration of 10 – 12 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 5 to 10ppm Cl<sub>2</sub> with the calibration level set to 2.5 times the span concentration (i.e. 5 ppm Cl<sub>2</sub> would be spanned to 12.5 ppm F<sub>2</sub>). Complete span calibration instructions are provided in Section 3.2 of the SensAlert<sup>Plus</sup> User Manual or SensAlert ASI User Manual.

#### Test-on-Demand Cell

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