Sensor Data Sheet

SENSALERT® PLUS

SENSIDYNE®

Bromine
(0 – 1.00 ppm)
Part No. 823-0222-41

Minimum Indicated Concentration	0.03 ppm
Repeatability[2]	± 5% of Reading
Accuracy[1]	± 10% of Reading
Span Drift	< 12% change per 6 months (typical)
Response Time (Rise)[2,3]	T_{90}: < 45 seconds
Recovery Time (Fall)[2]	T_{10}: < 90 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 1500 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, seasoned system.

[3] Response to moisture containing gas, the response to a dry gas 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*

Gas	Gas Exposure	Sensor Output
Carbon Monoxide	300 ppm	None
Chlorine	1.5 ppm	+1 ppm
Chlorine Dioxide	4	+1 ppm
Hydrogen Cyanide	11 ppm	-1 ppm
Hydrogen Sulfide	5 to 9 ppm	-1 ppm◊
Nitrogen Dioxide	1.5 ppm	+1 ppm
Sulfur Dioxide	50 ppm	-1 ppm

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

◊ Negative interferent, highly variable

Special Calibration Considerations:
Bromine (PN° 823-0222-41)

Zeroing The Sensor

It is recommended that the sensors be zeroed in clean ambient air. If zero air is used, it should be moisturized and a pre-zeroing exposure of 2 to 5 minutes is recommended to overcome possible moisture transients.

Span Calibration

It is recommended that this sensor be calibrated at 1 ppm Br_2. 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.

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 0.5 ppm to off-scale when sensors were suddenly exposed to moist air (23ºC, 99%RH) after sitting in room air (23ºC, 55 – 60%RH). The sensors took 2 to 3 minutes for the transient to fall below 0.1ppm while moist air exposure continued. The sensors underwent a negative transient of -0.3 to -0.5ppm when suddenly exposed to dry air (23ºC, 0%RH) after sitting in room air (23ºC, 55 – 60%RH). These transients took from 3 to 4 minutes to rise above -0.1ppm. Note that this negative transient could cause the transmitter to display “Sensor Fail”. In addition to transients, moisture levels can cause a shift in the baseline level. Sensors zeroed after stabilizing under dried air displayed a 0.09 to 0.1ppm baseline when exposed to room ambient air (23ºC, 55 – 60%RH). This shift was still apparent 24 to 72 hours later.

The use of a SensAlert*Plus* moisture barrier, p/n 821-0201-01, is not recommended with this sensor.