

Sensor Data Sheet

SENSALERT PLUS



Chlorine (H₂S Tolerant) (0 – 100 ppm) Part No. 823-0202-43

Minimum Indicated Concentration	3 ppm
Repeatability ²	± 5% of Reading
Accuracy ¹	± 5% 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 : < 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 minor moisture transients on sudden changes in moisture level. Note that transients are positive for increasing moisture and vice versa. Transients may not break out of zero suppression.

Cross-Interferences*

Gas	Gas Exposure	Sensor Output
Carbon Dioxide	5000 ppm	None
Carbon Monoxide	300 ppm	None
Chlorine Dioxide	0.3 ppm	+1 ppm
Hydrogen Cyanide	10 ppm	None
Hydrogen Sulfide	4 ppm	-1 ppm [◊]
Nitrogen Dioxide	1 ppm	+1 ppm
Sulfur Dioxide	100 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:

Chlorine (H₂S Tolerant) (PN° 823-0202-43)

Zeroing The Sensor

It is recommended that the sensors be zeroed in clean ambient air. If zero air is used, a pre-zeroing exposure of 2 to 5 minutes is recommended to overcome possible moisture transients. The sensor may exhibit a minor positive moisture transient when dry zero air is removed.

Span Calibration

It is recommended that this sensor be calibrated at 50 ppm Cl₂. It is recommended that the sensor undergo a 2 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 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).

The use of a SensAlert^{Plus} moisture barrier, p/n 821-0201-01, is not recommended with these sensors.