

Sensor Data Sheet

SENSALERT PLUS



Methyl Alcohol (0 – 500 ppm) Part No. 823-0253-21 FM Performance Certified ¹



- Minimum Indicated Concentration 15 ppm
- Repeatability ± 5% of Reading
- Accuracy² ± 10% of Reading
- Span Drift < 5% change per year (typical)
- Response Time (Rise)³ T₅₀: < 15 seconds
T₉₀: < 60 seconds, successive exposures
- Recovery Time (Fall)³ T₁₀: < 140 seconds
- Temperature Range -20° to 50°C (-4° to 122°F)
- Humidity Range (continuous) 15–90 %RH, non-condensing³
- 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 For use in an FM Approved SensAlert Plus Transmitter.

² When unit is calibrated and serviced at recommended intervals.

³ Room Temperature, seasoned system.

Cross-Interferences*

Gas	Gas Exposure	Sensor Output
Acrylonitrile	2.5 ppm	+1 ppm
Alcohols	ppm levels	Yes**
Ammonia	100 ppm	None
Ethylene	1.1 ppm	+1 ppm
Carbon Disulfide	1.7 ppm	+1 ppm
Carbon Monoxide	2.11 ppm	+1 ppm
Hydrogen Sulfide	0.2 ppm	+1 ppm
Nitrogen Dioxide	9.3 ppm	+1 ppm
Nitric Oxide	2.1 ppm	+1 ppm
Ozone	0.8 ppm	-1 ppm
Sulfur Dioxide	2.1 ppm	+1 ppm
Vinyl Chloride	1.2 ppm	+1 ppm

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

**Ethanol and Isopropyl alcohols will result in a positive output near a 1:1 interference

Special Calibration Considerations:

Methyl Alcohol (PN° 823-0253-21)

Zeroing The Sensor

Where possible, it is recommended that these sensors be zeroed in known clean (interferent free) ambient air. If bottled zero air is used to preclude interferences, it should be flowing for several minutes to allow minor moisture transients to equilibrate (these transients are at levels below the sensors zero suppression). Complete zeroing instructions are provided in 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 250 ppm methyl alcohol. The sensor should undergo a 4 to 5 minute pre-calibration exposure in order to season the gas delivery system. This pre-exposure ensures that the gas reaches the sensor at full concentration. The use of Teflon™ tubing or equivalent is required 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

There is no Test-On-Demand cell available for this sensor.

Biased Sensor Note

This sensor has a +300 mV bias applied between its reference and sensing electrodes. For this reason, this sensor is shipped on a (non-intrinsically safe) battery bias board. If the sensor is unplugged from the bias board or the transmitter (or the transmitter loses power) this bias is lost and the sensor will produce an elevated baseline. The time needed for the baseline to fall to zero depends on how long the sensor was without a bias voltage. A loss of bias voltage for 1 minute could result in up to 15 minutes or more of elevated baseline while a 24 hour loss of bias could take over 72 hours for the baseline to recover to zero.

Bias Battery Board Note

The battery on the bias board contains approximately 0.5 g of lithium metal. A risk of fire or explosion exists if this battery is improperly handled. Do not puncture or force open. Do not heat or dispose of in fire. Do not attempt to recharge this battery.