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Sensor Data Sheet

Carbon Dioxide - Infrared
(0 – 5.00 %Vol)
Part No. 823-0205-53
FM Performance Certified

Minimum Indicated Concentration .............. 0.15 %Vol
Repeatability ............................................. ± 5% of Reading
Accuracy2 .................................................... ± 10% of Reading
Baseline Drift ......................................... < 0.6 %Vol change per year (typical)
Response Time (Rise)3 .................................. T60: < 15 seconds
Response Time (Rise)3 .................................. T90: < 30 seconds
Recovery Time (Fall)3 ................................. T10: < 30 seconds
Temperature Range ................................. -20° to 50°C (-4° to 122°F)
Humidity Range (continuous) ................. 0–90 %RH, non-condensing
Expected Sensor Life ................................. 5 years from Shipping Date
Recommended Calibration Flow Rate .......... 500 to 1000 cc/min

1 For use in an FM Approved SensAlert™ Transmitter.
2 When unit is calibrated and serviced at recommended intervals.
3 Room Temperature.

Special Calibration Considerations:
Infrared Carbon Dioxide Sensor (PN 823-0205-53)

Zeroing The Sensor
It is recommended that zero-air or zero-nitrogen be used to calibrate the zero on this sensor. Ambient air typically contains 0.04 to 0.07 %Vol CO₂, zeroing in ambient air will reduce the sensor accuracy. It is important that the zero-gas be at the same temperature as the sensor, zeroing with the gas and sensor at different temperatures will significantly affect both the baseline value and sensor accuracy. Complete zeroing instructions are provided in the SensAlert™ User Manual or SensAlert ASI User Manual. A 3 to 5 minute pre-exposure is recommended prior to zeroing the sensor.

Span Calibration
It is recommended that this sensor be calibrated at the half scale concentration of 2.5 %Vol CO₂. It is important that the span gas be at the same temperature as the sensor, calibrating with the gas and sensor at different temperatures will significantly affect the sensor accuracy. Complete span calibration instructions are provided in the SensAlert™ User Manual or SensAlert ASI User Manual.

NOTE: Due to the sensor CO₂ IR absorption characteristics, it is highly recommended that the baseline and span be calibrated in tandem. Zeroing the sensor without a subsequent span calibration can affect the sensor accuracy.

Test-on-Demand Cell
There is no Test-On-Demand cell available for this sensor.
**Sensor Gasket Installation Instruction**

Remove Sensor by sliding it off the two Interface Pins. Remove and discard old Sensor Gasket.

*Note: If no gasket is found on Sensor, check inside the Sensor Holder.*

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**Caution: Handle Sensor with care and keep Sensor Cavity clean.**

Install new Sensor Gasket over Sensor until flush with Sensor face as shown.

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**Caution: Do not touch face of Sensor.**