Sensor Data Sheet

SENSALERT PLUS

SENSIDYNE

FM APPROVED
C US

Carbon Dioxide - Infrared
(0 – 5.00 %Vol)
Part No. 823-0205-53
FM Performance Certified [1]

Minimum Indicated Concentration .... 0.15 %Vol

Repeatability .... ± 5% of Reading

Accuracy[2] .... ± 10% of Reading

Baseline Drift .... < 0.6 %Vol change per year (typical)

Response Time (Rise)[3] .... T_{60}: < 15 seconds

Response Time (Rise)[3] .... T_{90}: < 30 seconds

Recovery Time (Fall)[3] .... T_{10}: < 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* *Plus* *Transmitter.*

[2] *When unit is calibrated and serviced at recommended intervals.*

[3] *Room Temperature.*

SensAlert 4-Channel Controller................... Compatible with software version 1.17 or later

CAUTION: *Use of this sensor with earlier software versions will result in erroneous and unsafe readings.*

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 CO_2, 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*Plus* 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 CO_2. 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*Plus* User Manual or SensAlert ASI User Manual.

NOTE: Due to the sensor CO_2 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.
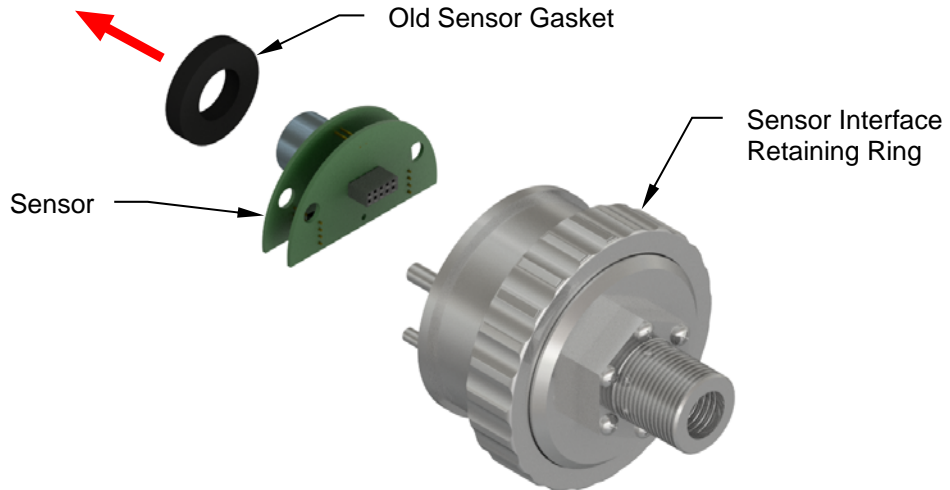
Test-on-Demand Cell

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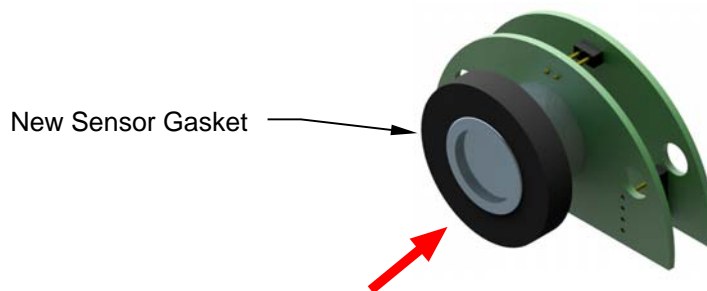
Sensor Gasket Installation Instruction

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.

Old Sensor Gasket

Sensor Interface
Retaining Ring

Sensor

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

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

New Sensor Gasket

Caution: Do not touch face of Sensor.