

# Sensor Data Sheet

# SENSALERT PLUS

## SENSIDYNE



### Nitrogen Dioxide (0 – 10.0 ppm) Part No. 823-0221-21

|                                         |                                                      |
|-----------------------------------------|------------------------------------------------------|
| Minimum Indicated Concentration .....   | 0.3 ppm                                              |
| Repeatability .....                     | ± 2% of Reading                                      |
| Accuracy <sup>1</sup> .....             | ± 10% of Reading                                     |
| Span Drift .....                        | < 12% change per 6 months (typical)                  |
| Response Time (Rise) <sup>2</sup> ..... | T <sub>50</sub> : < 10 seconds                       |
|                                         | T <sub>90</sub> : < 40 seconds, successive exposures |
| Recovery Time (Fall) <sup>2</sup> ..... | T <sub>10</sub> : < 120 seconds                      |
| Temperature Range .....                 | -20° to 50°C (-4° to 122°F)                          |
| Humidity Range (continuous) .....       | 15–90 %RH, non-condensing <sup>3</sup>               |
| Humidity Range (intermittent).....      | 0–99 %RH, non-condensing                             |
| Pressure Range .....                    | Ambient atmospheric, ± 1 psi                         |
| Expected Sensor Life .....              | 24 months from Shipping Date                         |
| Recommended Calibration Flow Rate ..... | 500 to 1000 cc/min                                   |
| Oxygen Requirement .....                | 1% by volume, minimum                                |
| SensAlert 4-Channel Controller.....     | Compatible                                           |

<sup>1</sup>When unit is calibrated and serviced at recommended intervals.

<sup>2</sup>Room Temperature, seasoned system.

<sup>3</sup>Rapid changes in humidity can cause output transients

#### Cross-Interferences\*

| Gas              | Gas Exposure | Sensor Output |
|------------------|--------------|---------------|
| Ammonia          | 100 ppm      | None          |
| Carbon Monoxide  | 300 ppm      | None          |
| Chlorine         | 1 ppm        | +1            |
| Hydrogen Cyanide | 10 ppm       | None          |
| Hydrogen Sulfide | 10 ppm       | -1 ppm        |
| Nitric Oxide     | 35 ppm       | None          |
| Sulfur Dioxide   | 100 ppm      | -1 ppm        |

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

## Special Calibration Considerations:

### **Nitrogen Dioxide (PN° 823-0221-21)**

#### Zeroing The Sensor

Application of dry gas will cause a slight negative output transient on this sensor. Dry zero air or zeroing gas should be allowed to flow over the sensor for 5 minutes prior to zeroing. Complete zeroing instructions are provided in the SensAlert Plus User Manual.

#### Span Calibration

It is recommended that this sensor be calibrated 5 ppm NO<sub>2</sub>. It is recommended that the sensor undergo a 3 to 5 minute pre-calibration exposure in order to season the calibration system and overcome moisture transients. 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<sup>Plus</sup> User Manual.

#### Test-on-Demand Cell

Test-On-Demand cell available for this sensor: 821-0204-02 (Type C).