Sensor Data Sheet

SENSALERT® PLUS

SENSIDYNE®

Germane
(0 – 1.00 ppm)
Part No. 823-0230-21

Minimum Indicated Concentration	0.03 ppm
Repeatability[2]	± 5% of Reading
Accuracy[1]	± 10% of Reading
Span Drift	< 5% change per 6 months (typical)
Response Time (Rise)[2]	T_{90}: < 30 seconds
Recovery Time (Fall)[2]	T_{10}: < 90 seconds
Temperature Range	-20° to 45°C (-4° to 113°F)
Humidity Range (continuous)[3]	10–95 %RH, non-condensing
Humidity Range (intermittent)[3]	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

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

[2] Room Temperature, seasoned system.

[3] Sensor is subject to minor moisture transients on sudden changes in moisture level. Note that transients are positive for increasing moisture and vice versa.

Cross-Interferences*

Gas	Gas Exposure	Sensor Output
Carbon Monoxide	85 ppm	None
Chlorine	3 ppm	-1 ppm
Hydrogen Cyanide	18 ppm	+1 ppm
Hydrogen	3,100 ppm	None
Hydrogen Sulfide	1.7 ppm	+1 ppm
Sulfur Dioxide	3.3 ppm	+1 ppm

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

Hydride Cross-Interferences*

Gas	Gas Exposure	Sensor Output
Arsine	0.7 ppm	+1 ppm
Diborane	0.8 ppm	+1 ppm
Germane	1.0 ppm	+1 ppm
Phosphine	0.4 ppm	+1 ppm
Silane	1.1 ppm	+1 ppm

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

Special Calibration Considerations:
Germane (PN° 823-0230-21)

Zeroing The Sensor

It is recommended that the sensors be zeroed in clean ambient air or bottled Zero Air. If zero air is used, a pre-zeroing exposure of 2 to 5 minutes is recommended to overcome possible moisture transients.

Span Calibration

It is recommended that this sensor be calibrated at 0.5 ppm GeH_4 if possible. If accuracy is not an issue, PH_3 gas may be used as a span gas with a 43% cross-interference factor. 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: 821-0204-06 (Type S). The user should minimize the ToD cell intensity for a particular application to reduce the chance of the transmitter breaking out of ToD test mode while gas is still present. Otherwise, it could take 10 to 15 minutes for the gas levels to fall below alarm concentrations.

Moisture Effects

These sensors exhibit a minor positive moisture transient when exposed to a rapid increase in ambient moisture. The sensors underwent a minor negative transient when suddenly exposed to dry air (23ºC, 0%RH) after sitting in room air (23ºC, 55 – 60%RH). These transients took from 0.5 to 2 minutes to fall below zero suppression. Note that this gas will hydrolyze with moisture, reducing the apparent gas concentration.