Sensor Data Sheet

SENSALERT® PLUS

SENSIDYNE®

FM H_2 Compatible Combustible Gas – Catalytic Bead
(0 - 100 %LEL)
Part No. 823-0211-32

Minimum Indicated Concentration	3 %LEL
Repeatability	± 2% of Reading
Accuracy[1,2]	± 10% of Reading
Span Drift	< 10% change per year (typical)
Response Time (Rise)[3]	T_{60}: < 5 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
Humidity Range (intermittent)	0–99 %RH, non-condensing
Pressure Range	Ambient atmospheric, ± 1 psi
Expected Sensor Life[4]	3 years from Shipping Date
Recommended Calibration Flow Rate	500 to 1000 cc/min
Oxygen Requirement	10% by volume, minimum
SensAlert 4-Channel Controller	Compatible

[1]For both Hydrogen and Propane.

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

[3] Room Temperature, hydrogen gas.

[4] Sensor life will be shortened by overexposure to combustible gases.

Gas Interference Note: This sensor is optimized for use with hot burning gases such as hydrogen, acetylene, and ethylene oxide, it is not hydrogen specific. This sensor has approximately the same gas interferences as listed in the propane k-factor data of the regular SensAlert*Plus* catalytic bead combustible sensor specification.

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Special Calibration Considerations:

H_2 Compatible Catalytic Bead Combustible Sensor (PN° 823-0211-32)

Zeroing The Sensor

There are no special zeroing considerations for this sensor. Complete zeroing instructions are provided in the SensAlert Plus User Manual.

Span Calibration

It is recommended that this sensor be calibrated at the half-scale concentration of 50 %LEL hydrogen gas, 50%LEL of the target gas, or 50%LEL propane if propane is used as a surrogate gas. Complete span calibration instructions are provided in the SensAlert Plus User Manual. It is not recommended that this sensor be calibrated or tested with methane.

Note: *The SensAlert^{Plus} transmitter must be set for "Other" as gas type, and "None" as k-factor when calibrating with hydrogen.*

Test-on-Demand Cell

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

Inhibition & Poisoning

Inhibition and poisoning occur when the combustion by-products from some compounds are deposited onto the catalytic device within the sensor assembly. These depositions will deactivate the sensor. The degree of deactivation may be either partial or complete, and may be either reversible or irreversible, depending upon the concentration and duration of exposure to the interfering compound. The sensor assembly should never be exposed to any of the following substances known to inhibit and poison the catalytic device:

- Silicon-containing compounds, such as silicone oils and greases
- Phosphorous-containing compounds, such as pesticides
- Sulfur-containing compounds, such as carbon disulfide and hydrogen sulfide
- Halogen-containing compounds, such as fluorocarbons and chlorocarbons
- Lead -containing compounds, such as anti-knock petroleum additives

Following exposure to a poisonous substance, the transmitter must be re-calibrated in order to assure that the sensor assembly has not been damaged. If calibration is not successful, the catalytic device has been damaged and the sensor assembly must be replaced.