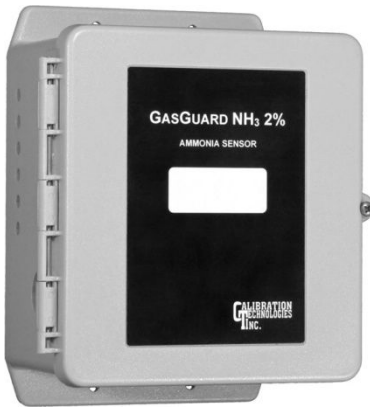


GASGUARD NH₃-2% HIGH-RANGE AMMONIA SENSOR



Key Features

- Ammonia selective catalytic bead sensor technology
- Useful for activation of electrical shunt-trip up to 20,000 ppm
- Low cost compared to pricey infrared type ammonia sensors
- Industry standard linear 4/20 mA output
- Absolutely no Zero drift compared to other catalytic bead type sensors
- Sensing element designed for long life in harsh industrial environments
- Designed to perform in temperatures of -40°F to +150°F
- Accurately monitor explosive NH₃ levels for emergency response situations
- Real-time continuous monitoring
- Use with GasGuard NH₃ low-ppm sensor for complete compressor room protection

Ammonia compressor room explosion prevention. High-range sensor at a low-range price.

The GasGuard NH₃-2% is designed to detect and monitor potentially explosive levels of ammonia vapors in the event of a catastrophic failure. Codes specify an electrical shunt-trip of the mechanical room at a level not higher than 25% LEL to remove potential ignition sources in the event of a serious ammonia leak. The GasGuard NH₃-2% allows for an earlier trip level of 12.5%LEL.

The GasGuard NH₃-2% utilizes an ammonia selective catalytic bead sensor technology with a matched pair of detector elements. When ammonia vapors enter the sensor, the passive bead remains unchanged while the active detector bead catalyzes the oxidation of gas, generating heat and changing its resistance. The resulting change in resistance is accurately measured across the bridge circuit.

The GasGuard NH₃-2% provides an industry standard linear 4/20 mA output signal proportional to 0-2% (0-20,000 ppm) of ammonia. The totally potted transmitter is compatible with most gas detection systems and PLCs. Long sensor life with minimal span adjustment can be expected in most mechanical room applications. The sensor is designed for simple calibration and is field replaceable.

Applications

- Compressor Rooms
- Electrical shutdown
- Heat Treatment
- Tank Rooms
- Sea Vessels
- Refrigeration Systems
- Cold Storage
- Pulp and Paper
- Chemical Plants
- Breweries
- Refineries

Benefits

- Low cost explosion protection
- Long sensor life (5+ yrs typical)
- Simple operation & calibration

GASGUARD NH₃-2%

Since low-ppm sensors can't detect high enough and high-ppm sensors can't detect accurately at low levels, the use of the **GasGuard NH₃-2%** sensor in conjunction with low-ppm GasGuard NH₃ sensors ensures a second-stage line of defense in the event of a serious ammonia leak. Intended for electrical shutdown, the **GasGuard NH₃-2%** provides protection against potentially explosive situations.

From hot mechanical rooms, to acid washdowns of processing areas, the **GasGuard NH₃-2%** is prepared to survive in just about any harsh industrial condition. Every circuit board is sealed forever in potting compound, protecting sensitive electronic components and copper tracing from corrosion. A specially vented chemical-resistant polycarbonate enclosure protects the sensor from accidental damage, weather and direct hose-hits from clean-up crews.

Typical sensor life is 5-7 years, with minimal to no cross-sensitivity to most other gases. Field replaceable sensor element keeps long term maintenance simple and low cost.

Ordering Information

The **GasGuard NH₃-2%** is delivered calibrated and ready to install. The assembly includes sensor and potted transmitter mounted inside the hinged polycarbonate enclosure. Use the model numbers below to order.

GG-NH₃-2%
GG-NH₃-2%-RS (replacement sensor)



SPECIFICATIONS

DUE TO ONGOING RESEARCH AND PRODUCT IMPROVEMENT, SPECIFICATIONS ARE SUBJECT TO CHANGE

DETECTION PRINCIPLE:

Catalytic Bead

DETECTION METHOD:

Diffusion

GASES:

Ammonia (NH₃)

RANGES:

0-2% (20,000 ppm)

OUTPUT SIGNAL:

Linear 4/20 mA (max input impedance: 700 Ohms)

POWER SUPPLY:

+24 VDC, 250 mA

SENSITIVITY:

200 ppm with 1,000 ppm zero deadband

RESPONSE TIME:

T₅₀ = less than 30 seconds

T₉₀ = less than 90 seconds

ACCURACY:

+/- 5% of value, but dependant on calibration gas accuracy

ZERO DRIFT:

Less than 0.01% of full-scale per month

SPAN DRIFT:

Application dependant, but generally less than 2% per month

REPEATABILITY:

+/- 1% of full-scale

LINEARITY:

+/- 0.5% of full-scale

TEMPERATURE RANGE:

-40°F to +150°F (-40°C to +66°C)

WIRING CONNECTIONS:

3 conductor, shielded, stranded, 20 AWG cable (Belden 8772 or equivalent) up to 1500 ft.

ENCLOSURE:

Injection-molded NEMA 4X polycarbonate Hinged lid. For non-classified areas.

HUMIDITY RANGE:

5% to 100% condensing

DIMENSIONS:

7.5" high x 6.5" wide x 3.75" deep

WEIGHT:

3 lbs