

# GASGUARD NH<sub>3</sub> AMMONIA SENSOR



## Key Features

- 2-year warranty, including replacement sensor element
- Electronics are potted to completely eliminate corrosion in wet environments
- Ammonia specific electrochemical sensor technology. Absolutely no false alarms
- No more special-order guesswork or added costs for heated enclosures
- Industry standard linear 4/20 mA output
- Corrosion, weather, and chemical resistant polycarbonate sensor enclosure
- Intelligent-design temperature controlled enclosure for improved cell life
- Sensor designed to adapt to any harsh environment from -50°F to +140°F
- Accurately monitor OSHA's PEL, STEL, and IDLH setpoints
- Real-time continuous monitoring for early leak detection
- Any sensor can be field calibrated to any range listed

Finally, one sensor designed to perform in all environments.  
The intelligently adaptive GasGuard NH<sub>3</sub> goes anywhere.

The GasGuard NH<sub>3</sub> utilizes proven electrochemical sensor technology for fast and accurate leak detection. The standard detection range of the GasGuard NH<sub>3</sub> provides real-time continuous monitoring of ammonia concentrations accurately down to 5 ppm, with no false alarms.

Every GasGuard NH<sub>3</sub> sensor comes equipped with an intelligent internal temperature control designed to perform in the harshest areas. The controlled environment provides optimum moisture control for extended cell life. The high-quality injection-molded polycarbonate enclosure offers excellent chemical corrosion protection and high impact resistance.

The GasGuard NH<sub>3</sub> provides an industry standard linear 4/20 mA output signal compatible with most gas detection systems and PLCs. The output signal is not affected by drastic temperature variations such as washdowns, defrost cycles, etc.

## Applications

- Food Processing areas
- Tank Rooms
- Refrigeration Systems
- Heat Treatment
- Cold Storage
- Ventilation Ducts
- Perimeter Monitoring
- Breweries
- Compressor Rooms
- Sea Vessels
- Pulp and Paper
- Chemical Plants

## Benefits

- Versatile for any application
- Simple operation
- Easy to order
- Rugged and reliable
- Low cost

**CALIBRATION  
TECHNOLOGIES  
INC.**



## One sensor for any environment (low cost & easy ordering)

The standard **GasGuard NH<sub>3</sub>** sensor is designed to work anywhere, and at a lower base-model price than most competing models. With only one electrochemical sensor for any application; designing, ordering, and maintaining your ammonia detection system is easy. We typically recommend a 0/100 ppm range for all personnel and product protection areas. Higher ranges (0/250, 0/500, 0/1000) are an option to suit higher alarm setpoint areas such as engine rooms.

## Designed "Food Industry" tough

From -50°F blast cells to +140°F engine rooms, to chemical washdowns of processing areas, the **GasGuard NH<sub>3</sub>** is prepared to survive in just about any harsh industrial condition. Every circuit board is sealed forever in potting compound, protecting electronic components and copper tracing from corrosion. A specially vented chemical-resistant polycarbonate enclosure protects the sensor from accidental damage, weather, and even direct hose-hits from clean-up crews. Stainless steel enclosures are available for applications which require them.

## Ordering Information

The **GasGuard NH<sub>3</sub>** is delivered calibrated and ready to install. Use the model numbers below to specify your factory calibrated range. Keep in mind, each sensor can be field calibrated to any range listed below.

- Order #:** [GG-NH3-100](#) (standard)  
[GG-NH3-250](#)  
[GG-NH3-500](#)  
[GG-NH3-1000](#)  
[GG-NH3-xxx-ST](#) (stainless enclosure)  
[GG-NH3-RC](#) (replacement cell)  
[GG-NH3-100-DM](#) (duct mount)



Stainless steel enclosure option



Circuit board and components potted to completely prevent corrosion

Intelligent heater for temperature and moisture control

Internal splash guard re-directs water from high-pressure hose-hits

Washdown-duty polycarbonate or stainless steel enclosure options

## SPECIFICATIONS

Due to ongoing research and product improvement, specifications are subject to change

**Input Power:**  
+24 VDC, 350 mA

**Detection Principle:**  
Electrochemical

**Detection Method:**  
Diffusion

**Gases:**  
Ammonia (NH<sub>3</sub>)

**Ranges:**  
0/100 ppm (standard)  
0/250 ppm  
0/500 ppm  
0/1000 ppm  
*Custom ranges available. Call for more information*

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

**Linearity:**  
+/- 1% of full-scale

**Repeatability:**  
+/- 1% of full-scale

**Response Time:**  
T50 = less than 20 seconds  
T90 = less than 60 seconds

**Accuracy:**  
+/- 5% of value, but dependent on calibration gas accuracy and time since last calibration

**Zero Drift:**  
Less than 0.1% of full-scale per month, non-cumulative

**Span Drift:**  
Application dependent, but generally less than 3% per month

**Temperature Range:**  
-50°F to +140°F (-46°C to +60°C)

**Humidity Range:**  
5% to 100% condensing

**Wiring Connections:**  
3 conductor, shielded, stranded, 20 AWG cable (General Cable C2525A or equivalent) up to 1500 ft

**Terminal Block Plugs (Field Wiring):**  
12-26 AWG, torque 4 lbs-in

**Enclosure:**  
NEMA 3RX injection-molded, washdown-duty polycarbonate sensor housing with hinged lid and captive screw. For non-classified areas. Optional 316 18 GA, NEMA 3RX washdown-duty stainless steel housing with hinged lid and captive screw. For non-classified areas

**Dimensions:**  
7.5" high x 6.5" wide x 3.75" deep

**Weight:**  
3 lbs

**Certification:**  
ETL listed to UL standard 61010-1, and CSA standard C22.2 No. 61010-1-12

**Warranty:**  
2 years (including replacement cell)

