

GG-NH<sub>3</sub>

## AMMONIA SENSOR



## Key Features

- 2-year warranty, including replacement sensor element
- SAFECELL technology checks electrical viability of the electrochemical cell
- Electronics are potted to completely eliminate corrosion in wet environments
- Ammonia specific electrochemical sensor technology. No false alarms
- 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 +122°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 GG-NH<sub>3</sub> goes anywhere.

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

Every GG-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 GG-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. SAFECELL checks the electrical viability of the electrochemical cell and drops signal to 0.5 mA when the cell is failed or missing.

## 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	

Curious about how the latest ammonia gas detection codes apply to your application? Click on this hyperlink for up-to-date requirements:  
[NH3 detection codes and design specs](#)

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

The standard **GG-NH3** 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 blast cells to engine rooms, to chemical washdowns of processing areas, the **GG-NH3** 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 **GG-NH3** 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-xxx-DM](#) (duct mount)

[GG-NH3-RC](#) and [GG-NH3-HRRC](#) (replacement cells)



Stainless steel  
enclosure option

Circuit board and  
components potted  
to completely  
prevent corrosion

SAFECELL technology  
checks electrical  
viability of the  
electrochemical cell

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 (NH3)

**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:**  
+/- 0.5% of full-scale

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

**Response Time:**  
T50 = less than 30 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 +122°F (-46°C to +50°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:**  
2.15 lbs

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

**Warranty:**  
2-years (including sensor element)

