

# GG-VL2-NH<sub>3</sub>

## VENT LINE AMMONIA SENSOR



### Key Features

- New ammonia-selective cat-bead sensor technology prevents false alarms
- Continuous monitoring of refrigeration system relief valves
- Rugged, long life, and low power catalytic-bead sensor
- Designed for harsh environments (-40°F to +140°F)
- Sensor and preamp in one assembly
- 0-1% NH<sub>3</sub> (0-10,000 ppm) detection range
- Ability to detect “weeping valves” to prevent refrigerant loss over time
- Sensor housing allows for easy sensor replacement and calibration
- 316 stainless steel 18 gauge enclosure
- Industry standard 24 VDC, linear 4-20 mA output

From unlikely high-pressure releases to the inevitable “weepers”, the CTI Vent Line sensor will notify you ... before your neighbors do.

The GG VL2 utilizes a rugged ammonia-selective catalytic bead sensor technology for fast leak detection and long life. The standard 0-1% NH<sub>3</sub> detection range of the GG-VL2-NH<sub>3</sub> provides real-time continuous monitoring of ammonia concentrations in your high-pressure relief vent header.

High concentrations of ammonia gases in your vent line are usually indications of a leaking valve or system overpressure. This could mean costly repairs or plant downtime, not to mention loss of refrigerant and regulatory fines. Early detection can save money while also protecting equipment, product, and personnel.

The GG-VL2-NH<sub>3</sub> provides an industry standard linear 4-20 mA output signal compatible with most gas detection systems and PLCs. Expect long sensor life and no zero-signal drift over time.

### Applications

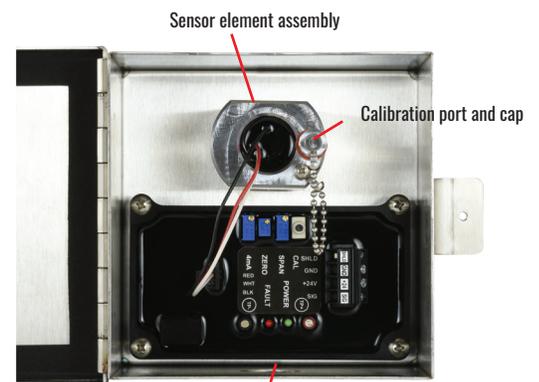
- Ammonia Refrigeration System Vent Lines

### Benefits

- Low cost
- Simple sensor replacement
- Rugged and reliable
- Typical sensor life 5 to 7 years



*The new design allows for easy and safe calibration, plus component replacement from inside the enclosure. Gone are the days of breaking apart the piping!*



The **GG-VL2-NH3** is designed for outdoor mounting. We recommend that the sensor be mounted 3' to 5' above the roof line on the relief discharge to atmosphere. The 1/2" pipe nipple of the supplied mounting kit should be welded or threaded into the relief discharge. The new enclosure design allows for an easier and safer way to calibrate the sensor and replace the sensor element or transmitter in the future.

**Reliable & robust**

The stainless steel enclosure provides ultimate protection against weather and will stay corrosion free. Every transmitter circuit board is sealed forever in potting compound, protecting electronic components and copper tracing from corrosion.

Since the catalytic-bead sensor is designed to endure the coldest of winters and hottest of summers, the output signal is not affected by extreme temperature variations. The life of the sensor is also not affected by the occasional exposure to high concentrations of ammonia gas.

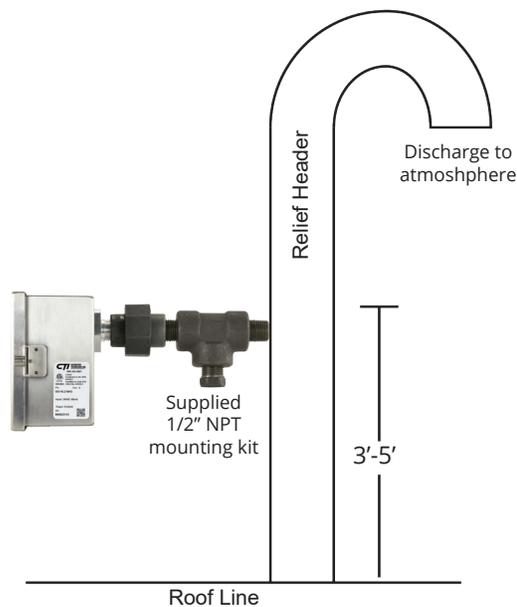
**Ordering Information**

The **GG-VL2-NH3** sensor kit is delivered calibrated and ready to install. The kit includes the transmitter/sensor/enclosure assembly and mounting kit. Use the model numbers below to order.

**Order #:** [GG-VL2-NH3](#)  
[GG-VL2-NH3-RS](#) (replacement sensor)



replacement sensor element



**SPECIFICATIONS**

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

**Input Power:**  
+24 VDC, 80 mA

**Detection Principle:**  
Catalytic Bead (NH3 selective)

**Detection Method:**  
Diffusion

**Gases:**  
Ammonia (NH3)

**Ranges:**  
0/1% (0 - 10,000 ppm) with 0.25% NH3 deadband

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

**Linearity:**  
+/- 2% of full-scale

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

**Response Time:**  
T90 = less than 30 seconds

**Accuracy:**  
+/- 2% of full-scale, 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:**  
Less than 1% of full-scale per month, non-cumulative

**Temperature Range:**  
-40°F to +140°F (-40°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 4X 316 stainless steel (316) gasketed housing. Captive screw in hinged lid. For non-classified areas

**Dimensions:**  
4.8" high x 4.72" wide x 3.35" deep

**Weight:**  
5 lbs (includes mounting kit)

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

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

