

June 25, 2018

## Ammonia Vent Line Gas Detector

Critical Environment Technologies Canada Inc. (CETCI) is pleased to introduce our Ammonia (NH<sub>3</sub>) vent line gas detector.

The LPT-A Vent Line Ammonia Transmitter (P/N: LPT-A-VLT-NH3-S) is designed for continuous monitoring of ammonia levels in the vent lines of refrigeration systems caused by equipment failure or system overpressurization. Slow leaks of refrigerant can be costly over time and a dangerous situation could present itself if a high-pressure release were to occur. Typically, normal vapour flow is handled by the ammonia compressor, but a vapour flow in excess of the compressor's capacity will enter the vent stack and can cause a large amount of the gas to travel up the vent line and discharge. In addition, higher than normal concentrations of ammonia can be caused by faulty valves, damaged or worn equipment, contaminants and/or equipment failure or system overpressure. Without safety precautions in place, hazardous levels of ammonia from equipment failure or over pressurization could cause an explosion and seriously jeopardize the health of workers and people in the surrounding area.

The VLT provides continuous, real-time monitoring of the levels of ammonia in the relief vent line. It can be configured to alarm at a pre-determined set point (0.5% / 5,000 ppm is recommended) and send an analog signal to activate a remote strobe or horn or communicate with a controller or PLC to activate or shut down equipment as required.

The catalytic NH<sub>3</sub> sensor has a range of 0 to 3% volume (0 – 30,000 ppm) and is potted into a 2" pipe fitting protruding from the back of the enclosure which connects to a coupler that is used to secure the device to a mounting pipe. The LPT-A-VLT-NH3-S may be mounted on the vent relief stack above the pressure relief valve using the 3/4" cast steel coupler. Or it can be mounted outside on the relief header, 3 to 5 feet above the roofline. Unless exposed to very high concentrations of ammonia for a prolonged period of time, the sensor should last 3+ years.

The circuitry is housed in a durable, copper coated, ABS/polycarbonate enclosure that is water / dust tight (drip proof) and corrosion resistant. The factory installed splash guard on the (unused) front vent protects the interior from water entering the enclosure. A water tight gland provides a water tight conduit entry for the cable.



The VLT is virtually maintenance free, but removal from the pipe extension will be required to access the sensor during calibration. A full calibration conducted every six months is recommended (unless a significant exposure incident occurs, after which additional bump tests and/or calibrations are

required to ensure the device is working properly and the sensor has not been poisoned).

Vent line systems should always be treated with extreme caution and workers should assume a relief valve could release at any time. Take necessary safety precautions and follow industry standard practices when installing, servicing and calibrating the VLT.

### **About Critical Environment Technologies Canada Inc.**

Critical Environment Technologies designs and manufactures indoor air quality and fixed gas detection systems including self-contained systems, controllers and transmitters (analog, digital and wireless). Applications include commercial HVAC, institutional, municipal and light industrial markets worldwide. Many of these applications are for vehicle exhaust, but areas of specialization include refrigeration, food processing plants, manufacturing plants, wastewater treatment plants, commercial swimming pools and many more.

For more information about our products, check out our website at [www.critical-environment.com](http://www.critical-environment.com) or to discuss a tailored gas detection solution for your application, contact us at 1-877-940-8741.

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