

# LPT-A-VLT Ammonia Vent Line Transmitter



The LPT-A-VLT Ammonia Vent Line Transmitter monitors ammonia levels in the vent line/stack of refrigeration systems for the detection of equipment failure. Using the 3/4" cast steel coupler, it can be mounted indoors on the ammonia vent relief stack above the pressure relief valve or mounted outside on the relief header above the roofline. It can be configured to alarm at user specified concentration levels and send an analog signal to the controller or PLC to activate the emergency ventilation system or shut down the equipment depending on the level of alarm.

It offers 3-wire VDC or 4-wire VAC power, jumper selectable 4 - 20 mA or 0 - 10 VDC analog output, one SPDT dry contact relay, thermal resetting fuse, temperature compensation, back lit LCD display and audible alarm, all in a RoHS compliant package.

It comes standard with a water / dust tight, corrosion resistant ABS / polycarbonate enclosure with a hinged, secured door. Calibration and other maintenance procedures are simple and easily performed in the field.

**NOTE: This device is not designed to monitor ammonia in applications requiring human health safety levels detection. In addition, a large release of a high concentration of ammonia may burn out the sensor, requiring replacement of the sensor.**

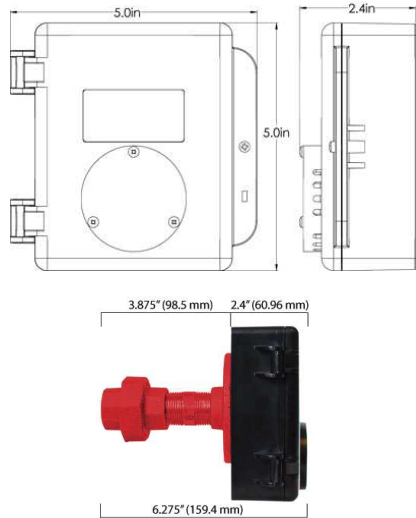
## KEY FEATURES

- » Single channel, internal catalytic Ammonia sensor
- » Linear 4 - 20 mA or 0 - 10 volt output signal
- » 3-wire VDC or 4-wire VAC power
- » 24 volt DC or AC power (nominal)
- » LCD display (with user selectable function)
- » One 2A SPDT dry contact relay
- » Internal audible alarm
- » Standard water / dust tight, corrosion resistant enclosure (drip proof)
- » Thermal resetting fuses
- » RoHS compliant circuit board

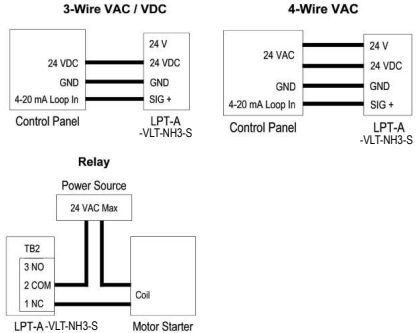
## APPLICATIONS

- » Ammonia Refrigeration Plants
- » Processing Plants
- » Cold Storage / Freezer Rooms
- » ...and many more

## TECHNICAL DRAWING



## WIRING



## TECHNICAL SPECIFICATIONS

### GAS TYPE

Ammonia (NH<sub>3</sub>) 0 - 3.00% volume range (catalytic)  
Tolerant to 15% volume. *NOTE: Ammonia is flammable between 15% (LEL) and 28% (UEL) volume in air.*

### MECHANICAL

|                         |  |
|-------------------------|--|
| Enclosure               | ABS / Polycarbonate, IP54 rated. Copper coated interior to reduce RF interference. |
| Weight                  | 825 g (29 oz)  |
| Size (transmitter only) | 127 x 127 x 60.96 mm (5.0 x 5.0 x 2.4 inches)                                      |



# LPT-A-VLT Ammonia Vent Line Transmitter

**TECHNICAL SPECIFICATIONS continued**

|  |                                  |
|--|----------------------------------|
| Coupler                                    | 19.5 mm (3/4 in) NPT, cast steel |
| Sensor Assembly length (including coupler) | 98.5 mm (3.875 in)               |

**USER INTERFACE**

|         |                          |
|---------|--------------------------|
| Display | Graphic LCD, grey border |
|---------|--------------------------|

**INPUT / OUTPUT**

|               |   |
|---------------|---|
| Output        | <ul style="list-style-type: none"> <li>- Linear 4 - 20 mA analog</li> <li>- Maximum 216 <math>\Omega</math> load (wiring plus termination resistor) @ 12 VAC</li> <li>- Maximum 316 <math>\Omega</math> load (wiring plus termination resistor) @ 12 VAC</li> <li>- Voltage 0 - 10 volt</li> <li>- Minimum 1k ohm load</li> </ul> |
| Relay         | One dry SPDT contact, rated 30 volts, 2 amps max  |
| Audible Alarm | Standard internal buzzer; enable/disable  |

**SENSOR**

|                               |                           |
|-------------------------------|---------------------------|
| Type                          | Catalytic NH <sub>3</sub> |
| Range                         | 0 - 3.00% volume          |
| Response Time T <sub>90</sub> | < 30 seconds              |

**ELECTRICAL**

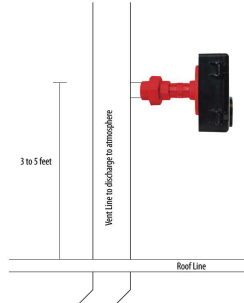
|                   |   |
|-------------------|---|
| Power Requirement | <ul style="list-style-type: none"> <li>3-wire mode 16-30 VDC, 3 W, Class 2</li> <li>4-wire mode 12-27 VAC, 50-60 Hz, 3 VA, Class 2</li> </ul>                                     |
| Wiring            | <ul style="list-style-type: none"> <li>- VDC (or ground referenced AC) three conductor shielded 18 awg stranded</li> <li>- VAC four conductor shielded 18 awg stranded</li> </ul> |
| Fuses             | Thermal, resetting  |

**ENVIRONMENTAL**

|                       |   |
|-----------------------|---|
| Operating Temperature | -20°C to 40°C (-4°F to 104°F), lower temperature option available |
| Humidity              | 0 - 80% RH non-condensing   |

**PRODUCT CODES**

|                        |   |
|------------------------|---|
| <b>LPT-A-VLT-NH3-S</b> | Ammonia (NH <sub>3</sub> ) sensor<br>0 - 3.0% volume range) |
|------------------------|---|

**TYPICAL MOUNTING LOCATION****ACCESSORIES**

|                     |  |
|---------------------|--|
| <b>CET-715A-CK1</b> | Calibration Kit for 17, 34, 58, 74, 100 L cylinders, 0.5 LPM flow regulator & adapter to fit 17 L cylinder |
| <b>RSH-24VDC</b>    | Remote Strobe and Horn combo, mounted, 24 VAC/VDC, rated 100 dB @ 3 m (10 ft)                              |

**CERTIFICATION**

|  |
|--|
| Conforms to: CSA-C22.2 No. 205-12, UL508 (Edition 17):2007               |
| Conforms to: EMC Directive 2004/108/EC<br>EN 50270:2006, Type 1, EN61010 |
| Conforms to: FCC. This device complies with Part 15 of the FCC Rules.    |

