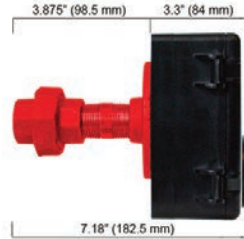
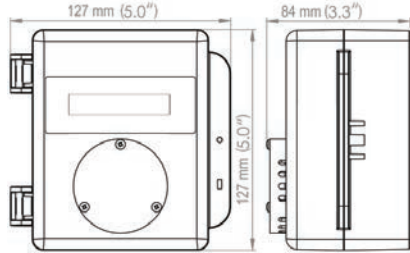


cGas Ammonia Vent Line Transmitter



TECHNICAL DRAWING



The cGas Ammonia Vent Line Detector is designed for continuous monitoring of ammonia levels in the vent line of refrigeration systems, including the detection of equipment failure in ammonia plant vent stack applications. Using a 3/4" cast steel coupler, the cGas Ammonia Vent Line Detector is to be mounted indoors on the ammonia vent relief stack above the pressure relief valve.

With the optional relay, it can be configured to 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.

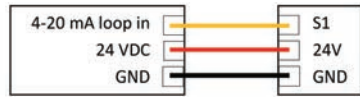
Powered by 24 VDC or ground referenced AC, the CGAS Detector has an LCD display and the firmware and configuration can be upgraded in the field using the USB connection. The Plug & Play Smart Sensor comes precalibrated and is easy to replace.

It comes standard with a water / dust tight, corrosion resistant ABS / polycarbonate enclosure with a hinged, secured door. A factory installed splash guard protects the device against water ingress. If installed outside, additional protection from the elements is recommended.

NOTE: This device is not designed to monitor ammonia in applications requiring human health safety levels detection. A large release of a high concentration of ammonia may burn out the sensor and it will require replacement.

WIRING

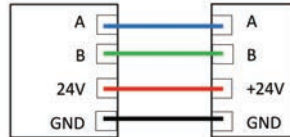
Analog: VDC (or ground referenced AC) 3-wire



Control Panel

CGAS-A-VLT-NH3-S

Digital: VDC or VAC (ground referenced) 4-wire daisy-chain



Control Panel

CGAS-D-VLT-NH3-S

KEY FEATURES

- » Single channel, internal catalytic Ammonia sensor
- » 4-20 mA analog output or user configurable in the field, BACnet® MS/TP (version 1 rev 14) RS-485 or Modbus® RTU (version 1.1b3) RS-485
- » 24 VDC or VAC power (ground referenced)
- » Pre-calibrated, easy Plug & Play Smart Sensor replacement at end of life
- » Bright LCD display
- » USB port for configuration changes and firmware upgrades
- » Optional 2A SPDT dry contact relay (Option -RLY)
- » Optional low temperature operation package (Option -LT)
- » 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



cGas Ammonia Vent Line Transmitter

FIXED SYSTEMS

TECHNICAL SPECIFICATIONS

GAS TYPE

Ammonia (NH₃) 0 - 3.00% volume range (catalytic)
 Tolerant to 17% volume. *NOTE: Ammonia is flammable between 15% (LEL) and 28% (UEL) volume in air.*

MECHANICAL

Enclosure	Black ABS / Polycarbonate, copper coated interior to reduce RF interference, IP54 rated with splash guard installed
Weight	825 g (29 oz)
Size	
Gas Detector only	127 x 127 x 84 mm/5.0 x 5.0 x 3.3 in
Complete Assembly	127 x 127 x 182.5 mm/5.0 x 5.0 x 7.18 in
Coupler Length	19.5 mm (3/4 in) NPT, cast steel
Sensor Holder	98.5 mm (3.875 in)
Assembly length	includes coupler length

USER INTERFACE

Display (standard)	2-line by 16 character graphic LCD Operating Temp: 0°C to 40°C / 32°F to 104°F
Display (low temp) (Option -LT)	2-line by 16 character OLED display Operating Temp: -40°C to 40°C / -40°F to 104°F
Push Buttons	Initiate calibration and menu options with internal UP, DOWN and ENTER push buttons
USB Port	Internal port for USB memory stick for field configuration updated / firmware upgrades

INPUT / OUTPUT

Analog Output (CGAS-A-VLT)	Linear 4 - 20 mA analog Maximum 216 ohm load (wiring plus termination resistor) @ 12 VDC Maximum 316 ohm load (wiring plus termination resistor) @ 12 VAC
Digital Output (CGAS-D-VLT)	User configurable in the field, BACnet® MS/TP (version 1 rev 14) RS-485 or Modbus® RTU (version 1.1b3) RS-485
Relay (Option -RLY)	1 SPDT dry contact relay, rated 30 volts, 2 amps max

SENSOR

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

ELECTRICAL

Power Requirement	3-wire: 16-30 VDC, 3W, Class 2 4-wire: 12-27 VAC, 50-60 Hz, 3 VA, Class 2 24V recommended
Analog Wiring (CGAS-A-VLT)	VDC (or ground referenced AC): 3-conductor 18 AWG (or larger) shielded, stranded within conduit VAC 4-conductor shielded 18 AWG stranded within conduit

TECHNICAL SPECIFICATIONS

Digital Wiring (CGAS-D-VLT)	VDC or VAC (ground referenced) 4-conductor shielded 16 AWG stranded within conduit, network wiring (daisy-chain)
Fuse(s)	Automatic resetting thermal

ENVIRONMENTAL

Operating Temperature	0°C to 40°C (32°F to 104°F) temperatures below 0°C / 32°F requires Option-LT
Operating Humidity	15 - 90% RH non-condensing

CERTIFICATION

Conforms to: CSA-C22.2 No. 205-12, UL508 (Edition 18):2018
 Conforms to: EMC Directive 2014/30/EU
 EN 50270:2015, Type 1, EN61010
 Conforms to: FCC. This device complies with Part 15 of the FCC Rules.



PRODUCT CODES

CGAS-A-VLT-NH3-S	Ammonia (NH ₃) sensor 0 - 3.00% volume range analog 4-20 mA output
CGAS-D-VLT-NH3-S	Ammonia (NH ₃) sensor 0 - 3.00% volume range field configurable Modbus® RTU RS-485 or BACnet® MS/TP output

OPTIONS (Factory installed)

-LT	Low temperature package with OLED display and internal heater for cold environment applications down to -40°C / -40°F
-RLY	1 SPDT dry contact relay rated 30 volts, 2 amps max

ACCESSORIES

CET-715A-CK1	Calibration Kit for 17, 34, 58, 74, 100 L cylinders, 0.5 LPM flow regulator & adapter to fit 17 L cylinder
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