



Chillgard® NH₃ Gas Monitor

[World-class design for ammonia detection]

Detection
down to
-40°C

The MSA Chillgard NH₃ Gas Monitor uses reliable, electrochemical sensing technology to detect parts-per-million (ppm) levels of ammonia. World-class design and engineering offer a single-board design for ultimate reliability and serviceability in an economical package.

Applications

The Chillgard NH₃ Gas Monitor is part of the MSA family of Chillgard products designed to monitor for the loss of refrigerant gases in a variety of applications:

- Mechanical equipment rooms
- Propellant-filling operations
- Solvent-cleaning stations
- Cold storage and transport facilities
- Meat packing plants
- Supermarkets and refrigerant storage locations
- Other specialty applications using halocarbons

The full-scale range of the unit is 0-1000 ppm with the capability of measuring a

leak as low as 10 ppm, well below the established threshold limit values for ammonia. The Chillgard NH₃ Gas Monitor provides fast, reliable detection for low-level leaks of ammonia, thus preventing a major loss of gas. The unit's standard 4-20mA output can be connected directly to any existing Building Automation System (BAS) or other controller to provide indication of a leak prior to a worker entering the room. Additionally, with the integral display and status LEDs, workers can have a visual indication of the ammonia level in their work area.

Features

- Internal heater option - For operation down to -40°C (-40°F)
- Fast Response - The electrochemical sensor is located directly under the calibration cap, providing fast response to ammonia leaks
- Water- and corrosion-resistant NEMA 4X enclosure
- Interchangeable Smart Sensors - Pre-calibrated sensor modules are

ready for installation out of the box. Sensors can be replaced in the field without the use of tools

- State-of-the-art display - Liquid crystal display (LCD) conveniently alternates between sensor reading and gas type and features scrolling messaging, indicating ongoing diagnostic checks such as sensor "end-of-life" condition
- Onboard LEDs and relays - Optional "quick-check" LEDs and four relay outputs allow for increased indication of alarm and fault conditions. Quick-check LEDs, viewable from afar, indicate NORMAL (green) and ALERT (red) status conditions

MSA

Installation and Operation

Installation is both simple and flexible. The Chillgard NH₃ Gas Monitor:

- Operates in diffusion mode, with factory-calibrated sensors ready to perform immediately after installation
- Can operate completely stand-alone with a large LCD display, optional quick-check LEDs and four relay outputs (three alarm and one fault), or connected with a standard 4-20mA output to a control system (PLC, DCS, etc)
- Has adjustable full-scale range
- Provides for easy installations with the two-piece, field-wiring connectors

Calibration

As with all gas monitors, Chillgard NH₃ Gas Monitors must be calibrated periodically with the gas of interest to ensure proper operation. The calibration process offers:

- Easy-to-follow calibration instructions displayed on monitor
- Automatic adjustments
- Date stamping
- Selectable lockout of output signal during calibration
- Ability to calibrate at the installation location, or remotely without systems interruptions (using another base unit)
- No need to open the enclosure during set-up and calibration when using accessory calibrator or controller

Specifications:

Range	0-1000 ppm
Temperature Range	-40°C to +40°C (-40°F to +104°F)
Drift	
Zero Drift	<5%/year, typical
Span Drift	<10%/year, typical
Noise	<1% full scale
Accuracy	
Repeatability	10 ppm, typical
Linearity	10 ppm
Response Times	
T ₂₀	<6 seconds
T ₅₀	<12 seconds
Humidity	15%-95% RH, non-condensing
Sensor Life	2 years, typical 1 year warranty
Power Input	7-30 VDC
Wiring Requirements	2-wire - no heater or relays; 3-wire - with heater or relays
Signal Output	4-20mA
Relay Contact Rating	5 amp @ 220 VAC; 5 amp @ 30 VDC
Physical	Polycarbonate; 1.5 lbs (0.68 kg) 5.1"W x 2.9"D x 9.4"L (130 x 76 x 239 mm)
Approval Ratings	Nema 4X rating

Ordering Information

Part Number	Description
10065560	0-1000 ppm NH ₃ , no heater, relays or LEDs
10064883	0-1000 ppm NH ₃ , with heater
10064882	0-1000 ppm NH ₃ , with heater and relays
10064484	0-1000 ppm NH ₃ , with heater, relays and LEDs

Note: This Data Sheet contains only a general description of the product shown. While uses and performance capabilities are described, under no circumstances should the product be used except by qualified, trained personnel, and not until the instructions, labels or other literature accompanying the product have been carefully read and understood and the precautions therein set forth followed. Only they contain the complete and detailed information concerning this product.



Data Sheet 07-2096
Dec 2005 (L)
© MSA 2005 Printed in U.S.A.

Instrument Division:
P.O. Box 427, Pittsburgh
PA 15230 U.S.A.
www.MSAGasDetection.com

In U.S.:
Phone: 1-800-MSA-INST
Fax: 1-724-776-3280

In Canada:
Phone: 1-800-MSA-INST
Fax: 1-905-238-4151

In Mexico:
Phone: 52-55 2122-5770
Fax: 52 (5) 3 59 43 30

MSA International:
Phone: 412-967-3228
Fax: 412-967-3373

Offices and representatives worldwide

For further information:

