

# Chillgard® NH<sub>3</sub> Gas Monitor

World-class design for ammonia detection



*MSA's Chillgard NH<sub>3</sub> Gas Monitor uses reliable electrochemical sensing technology to detect parts-per-million (ppm) levels of ammonia. World-class design and engineering offer single-board design for ultimate reliability and serviceability in an economical package.*



## Applications

The Chillgard NH<sub>3</sub> Gas Monitor is part of MSA's family of Chillgard Monitor products designed to monitor for loss of refrigerant gases in many 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.

## Features

- Internal heater option—for operation as low as -40°C (-40°F).
- Fast response—electrochemical sensor located directly under calibration cap provides fast ammonia leak response.
- Water- and corrosion-resistant NEMA 4X enclosure.
- Interchangeable **smart** sensors—pre-calibrated sensor modules are ready for out-of-box installation. Sensors can be field-replaced without tools.
- 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.

*Because every life has a **purpose...***

## Installation and Operation

Installation is both simple and flexible.

Unit's standard 4-20 mA output can be connected directly to any existing Building Automation System (BAS) or other controller to provide leak indication prior to workers entering the room. Additionally, with integral display and status LEDs, workers have visual indication of ammonia level within their work area.

Unit's full-scale range is 0-1000 ppm with capability of measuring leaks as low as 10 ppm, well below established threshold limit values for ammonia. The Chillgard NH<sub>3</sub> Gas Monitor provides fast, reliable detection for low-level ammonia leaks, thus preventing major loss of gas.

### The Chillgard NH<sub>3</sub> Gas Monitor:

- Operates in diffusion mode, with factory-calibrated sensors ready to perform immediately after installation.
- Can operate as stand-alone monitor with large LCD display, optional quick-check LEDs and 4 relay outputs (3 alarm and 1 fault), or connected with standard 4-20 mA output to control system (PLC, DCS, etc).
- Has adjustable full-scale range.
- Provides for easy installations with 2-piece, field-wiring connectors.

Specifications	
<b>RANGE</b>	0-1000 ppm
<b>TEMPERATURE RANGE</b>	-40° C to +40° C (-40° F to +104° F)
<b>DRIFT</b> ZERO DRIFT SPAN DRIFT	< 5% / year, typical < 10% / year, typical
<b>NOISE</b>	< 1% full scale
<b>ACCURACY</b> REPEATABILITY LINEARITY	10 ppm, typical 10 ppm
<b>RESPONSE TIMES</b> T20 T50	< 6 seconds < 12 seconds
<b>HUMIDITY</b>	15% - 95% RH, non-condensing
<b>SENSOR LIFE</b>	2 years, typical. 1 year warranty
<b>POWER INPUT</b>	7-30 VDC
<b>WRITING REQUIREMENTS</b>	2-wire—no heater or relays; 3-wire—with heater or relays
<b>SIGNAL OUTPUT</b>	4-20 mA
<b>RELAY CONTACT RATING</b>	5 amp @ 220 VAC; 5 amp @ 30 VDC
<b>PHYSICAL</b>	Polycarbonate; 15 lbs (0.68 kg) 5.1" W x 2.9" D x 9.4" L (130 x 76 x 239 mm)
<b>APPROVAL RATINGS</b>	NEMA 4X rating
Ordering Information	
P/N	Description
10065560	0-1000 ppm NH <sub>3</sub> , no heater, relays or LEDs
10064883	0-1000 ppm NH <sub>3</sub> , with heater
10064884	0-1000 ppm NH <sub>3</sub> , with heater, relays and LEDs

## Calibration

As with all gas monitors, Chillgard NH<sub>3</sub> Gas Monitors must be calibrated periodically with gas of interest to help ensure proper operation.

### The calibration process offers:

- Easy-to-follow calibration instructions displayed on monitor.
- Automatic adjustments.
- Date stamping.
- Output signal selectable lockout during calibration.
- Ability to calibrate at installation location or remotely without systems interruptions (using another base unit).
- No need to open enclosure during setup and calibration when using accessory calibrator or controller.

**Note:** This bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products.



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