

MSA Fixed Gas & Flame Detection for the HVAC Industry



A Passion for Safety

The HVAC industry presents a wide variety of gas detection needs. From boiler rooms, battery rooms, engineering and research labs, and transportation maintenance facilities to many other industrial building and facility applications, each environment has its own monitoring needs. To enable personnel to work safely within these environments, monitoring of toxic gases, oxygen enrichment and deficiency and combustible gases is necessary. Versatile gas monitors are absolutely essential to answering this challenge.

Providing the best products, service and support in the industry. *That's the MSA passion.*

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

Chillgard® RT Photoacoustic Infrared Refrigerant Monitor

Chillgard RT Photoacoustic Infrared Refrigerant Monitors provide economical, low-level monitoring of refrigerant gases used in most refrigeration systems or chillers. Chillgard RT Monitors use very stable and highly-selective photoacoustic infrared (PIR) technology to sense refrigerant gases. Unit has high immunity to interferants commonly found in mechanical equipment rooms, such as cleaning agents and solvents. Monitors are compliant with ANSI/ASHRAE 15 and certified to UL 2075 for fire, shock and performance.

- Ease of use—easy to install, operate and maintain
- Sensitivity—detection down to 1 ppm
- Flexibility—detects virtually any refrigerant
- Expandability—monitors up to eight locations
- Stability—operates for months with virtually no zero drift



Chillgard L Series Monitoring Systems

Chillgard L Series Refrigerant Monitoring Systems feature the latest advancements in micro-machined component technology for optimal reliability. Units can be configured for virtually any refrigerant monitoring need. The Chillgard LS Sensor Module uses MSA's market-leading photoacoustic infrared technology to sense refrigerant gases. The Chillgard LC Control Module can communicate with up to eight sample points from Chillgard LS Refrigerant Monitors and can remotely display gas concentration, alarm status, calibration, and fault diagnostics. The Chillgard LE Refrigerant Monitor contains sensor and control module within one enclosure.

- Detect five most common refrigerants down to 20 ppm
- Expandable to up to four points of detection
- Wide choice of power options available
- Compliant with ANSI/ASHRAE 15 and are UL-certified for fire and shock



Chillgard NH₃ Gas Monitor

Chillgard NH₃ Gas Monitors offer the latest in mechanical, electrical and gas sensing technologies for continuous gas monitoring of ammonia. Reliable electro-chemical sensing technology is used to detect ppm levels of ammonia. Single-board design for ultimate reliability and serviceability. Other advanced features of the Chillgard NH₃ Gas Monitor include:

- Integral heating element—optional heating control system allows sensor to operate continuously down to -40° C.
- Interchangeable **smart** sensors—pre-calibrated sensor modules are ready for installation out of the box. Sensors can be field-replaced without tools.
- State-of-the-art display—liquid crystal display conveniently alternates between sensor reading and gas type and features scrolling messaging, indicating ongoing diagnostic checks such as sensor end-of-life condition.



Toxgard® II Gas Monitors

Toxgard II Gas Monitors are simple, stand-alone units that satisfy many gas detection applications for safety and ventilation control. Popular applications include oxygen depletion in lab space where cryogenics are used and MRI suites where large amounts of liquid helium can deplete the atmosphere. Many sensors are available to monitor gas storage closets or other areas where toxic or combustible gases may be present.

- Rugged metal NEMA 4X enclosure
- Easy sensor replacement
- Three levels of alarm with large LED alarm indicators
- Large, four-digit LED display
- Internal relay contacts for FAULT, CAUTION, WARNING, and ALARM
- 4-20 mA output



PrimaX® Gas Monitors

PrimaX Gas Monitors offer proven quality and reliability for toxic gas, oxygen or combustible gas detection, as well as SIL 2-certification and HART digital communication option. Innovative enclosure design, ease of use, fast installation, and options to suit both indoor and outdoor installations make the PrimaX Gas Monitor your choice for versatile gas detection. Monitors are available in explosion-proof and intrinsically-safe versions.

PrimaX I Gas Monitor

Intrinsically-safe detection of toxic gases or oxygen

- Robust, anti-static, reinforced nylon, IP66-rated housing
- Integral mounting plate for quick, easy installation
- Large, easy-to-read LCD display

PrimaX P Gas Monitor

Explosion-proof detection of combustibles, toxic gases or oxygen

- Powder-coated aluminum enclosure (IP66)
- Integral mounting plate for fast, easy installation
- Easy menu navigation using integrated four-way keypad
- Large, easy-to-read LCD display, three LED status indicators



Ultima® XL/XT Series Gas Monitors

Ultima XL/XT Series Gas Monitors are high-performance continuous gas monitors. Single-sensor units use catalytic, electrochemical or infrared gas detection technologies for combustible and toxic gases and for oxygen deficiency. HART Field Communications Protocol running over 4-20 mA output provides convenient setup, calibration and diagnostics. Hand-held HART communicator, controller or laptop provides display; local calibration employs LEDs and pushbutton. The Ultima XL Gas Monitor is explosion-proof with stainless steel enclosure; Ultima XT Gas Monitor enclosed within general purpose plastic housing.

- Sensor disconnect-under-power without declassifying hazardous area
- Interchangeable **smart** sensors; no reconfiguration required
- One circuit board for increased reliability and easier serviceability
- Calibrate, set up or perform diagnostics with HART from any point along 4-20 mA line
- Easy installation with two-piece field wiring connectors
- Asset management using HART interface
- Adjustable full-scale range



Z-Gard® Gas Monitoring Products

Z-Gard S and DS Sensors are reliable gas sensors for commercial applications. The Z-Gard S Sensor detects carbon monoxide, nitrogen dioxide and combustible gases in air. Z-Gard DS Sensors detect carbon monoxide and nitrogen dioxide gases in parking garages and vehicle storage areas, among other locations. Z-Gard DS Sensors offer two detection points within one enclosure.

- Two sensor output options: 4-20 mA analog output or RS-485 digital signal
- Easy, non-intrusive one-person calibration of zero and span
- Sensor status is shown by green OK LED, indicating proper device operation
- Switch drive output to percentages of full-scale—useful for testing remote devices that may connect to sensor output

Z-Gard Controllers are microprocessor-based monitoring systems designed for a variety of alarm and control applications. Z-Gard Controllers interface with MSA Z-Gard Sensors, providing real-time target gas readings. All Z-Gard Controllers provide easy installation and configuration, audible and visual feedback and seamless integration with commercial and building automation systems. Z-Gard Controllers accept either 4-20 mA or RS-485 serial input from remote sensors.

Z-Gard C Controller

- Accepts eight Z-Gard Sensor inputs
- 4-20 mA signal input

Z-Gard C 485 Controller

- Accepts up to eight, 16 or 24 Z-Gard Sensor inputs
- Digital RS-485 serial communication protocol

Z-Gard CX II Controller

- Hosts series of Z-Gard S Gas Sensors with RS-485 digital output
- Communicates to building automation system through Modbus or BACnet
- Supports customized applications via programmable operating parameters organized by menu interface keyboard



Gas Detection Selection Chart

Hazard Location	Halogenated Refrigerants	Ammonia	Carbon Monoxide	Nitrogen Dioxide	Carbon Dioxide	Combustible Gas	Oxygen Deficiency	Hydrogen Sulfide
MECHANICAL EQUIPMENT ROOMS	■	■				■	■	
FOOD STORAGE		■			■		■	
BOILER ROOMS	■		■		■	■	■	
PARKING GARAGES			■	■		■	■	
OCCUPIED BUILDINGS					■	■	■	
RESEARCH LABS	■	■	■	■	■	■	■	
TUNNELS			■	■		■	■	
MAINTENANCE GARAGES	■	■	■	■		■	■	
VENTILATION DUCTS			■	■	■	■	■	
MEAT PACKING PLANTS	■	■			■		■	
SUPERMARKETS	■	■			■		■	
BUS GARAGES			■	■		■	■	■

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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