MSA Fixed Gas & Flame Detection **for the Automotive Industry**

MSA
The Safety Company

A Passion for Safety

Automotive facilities may be comprised of research and development laboratories, and engine testing and environmental chambers. Associated potential hazards to those working within these environments include combustible gases, oxygen deficiency/enrichment and various toxic gases such as SO_2 and NO. These potential hazards necessitate gas detection and monitoring solutions for fast response. Rely upon MSA for a complete line of world-class gas detection products for automotive facilities monitoring.

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

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

Sensor Technology for Dynamometer Test Cells, Laboratories and Fuel Storage

Code-Compliant, Class 1 Division 1 Approval

Ultima® X Series Gas Monitors

Ultima X Series Gas Monitors offer continuous gas monitoring of combustible gases, toxic gases and oxygen deficiency. Ideal for roll chassis or engine dynamometer test cells and in research and engineering laboratories, these monitors offer advanced sensing technology choices: catalytic bead LEL, electrochemical toxic and infrared LEL gas detection methods.

Fuel storage applications require LEL gas detection for gasoline distribution facilities, fuel blending areas and tank farms. Microprocessor-based Ultima X Series Gas Monitors offer sensor-disconnect-under-power, allowing sensor change-out without declassifying hazardous areas. HART Field Communications Protocol provides increased sensor data, part of cost-effective asset management. HART Protocol also provides convenient setup, calibration and diagnostics.

- Pre-calibrated, interchangeable smart sensors are ready for installation
- Ultima X Series Sensor X-change™ Program provides replacement calibrated sensor modules when needed, on demand
- Multi-sensing allows for up to 3 different gas sensors per transmitter (such as CO, NOx and LEL) for greater coverage
- SIL 2-certified products

Ultima X Series Gas Monitors with X3® Technology offer an excellent fit for many automotive industry applications. Modbus RTU output provides significant savings, reducing cost of hardwiring by as much as 60%. Ultima X3 Technology allows for up to 3 sensors to be connected per monitor. Electrochemical, catalytic and infrared sensors are available in any combination.

System handles up to 31 monitors with up to 3 sensors inputted per monitor for total of 93 sensors. Monitor display scrolls through type and reading for all attached sensors. Each sensor can be observed remotely up to 3000 ft. from monitor. System provides RS-485 half-duplex communication interface, integration into PLC/DCS systems and multi-sensing capability.

Ultima XIR Gas Monitor provides microprocessor-based, infrared point gas detection for continuous monitoring of combustible gases and vapors. Providing definitive compensation for temperature, humidity and aging effects, Ultima XIR Gas Monitors are IP67-rated to withstand tough environments.

- Response time t90 ≤ 2 seconds
- 316 stainless steel with multiple-entry mounting enclosure
- Operation based upon dual-wavelength, heated optics technology
- IR technology eliminates the need for frequent calibrations

Ultima XE Gas Monitor provides continuous monitoring of combustible and toxic gases and oxygen deficiency using catalytic and electrochemical technologies. Unit features 316 stainless steel enclosure for explosion-proof monitoring.

- Interchangeable **smart** sensors are extremely easy to install and replace
- Onboard LEDs and relays provide increased indication of alarm and fault conditions
- Operates on stand-alone basis or can be connected to control system

Wireless Communication System is an ideal solution for gas detection needs at locations where no infrastructure exists. Combustible and toxic gases can leak virtually anywhere, and leaks may not occur near a facility's gas detection instrument installation area.

- 900 MHz radio that communicates to a gateway provides reliable real-time detection data at distances of up to 1 mile with clear line of sight
- Accepts either Analog or Modbus inputs
- Power options include solar panel, battery and charger to help ensure up to 2 weeks of autonomous operation
- Wireless HART adapter can be added to any MSA HART-enabled field device to communicate with any existing wireless HART network

PrimaX® Gas Monitor

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-rated)
- 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

Chillgard® RT Photoacoustic Infrared Refrigerant Monitors

Chillgard RT Photoacoustic Infrared Refrigerant Monitors provide economical, low-level monitoring of refrigerant gases used in most refrigeration systems or chillers down to 1 ppm. Units can be configured to monitor from up to 8 remote areas and to detect specific refrigerants or groups of refrigerants.

The Chillgard RT Monitor is easy to install, operate and maintain, and can operate for months with virtually no zero drift. Standard features include vacuum fluorescent display, audio alarm, 3 alarm levels, 4 relays, and 4-20 mA and 0-10 V outputs.

- Operates over wide temperature range
- Complies with ANSI/ASHRAE 15-2004
- 2-line X 20-character vacuum fluorescent display
- 3 alarm levels
- Relay outputs for each alarm level
- Password protection
- Expandable with multipoint sequencer to monitor up to 8 locations

Chemgard® Photoacoustic InfraRed Gas Monitor

Chemgard Photoacoustic InfraRed Gas Monitor is a flexible platform for monitoring toxic and combustible gases for many applications including Dowtherm J detection. Featuring advanced PIR low-cost sensing technology, this monitor offers virtually no zero drift, greatly reducing background gases and humidity interference.

The Chemgard Monitor detects nearly 100 major industrial compounds, including heat transfer fluids, petrochemicals, solvents, halons, intermediates, fuel vapors, cleaning agents, and many other common chemical agents. Monitoring ranges from as low as 0-10 ppm (with detection sensitivity as low as 10 ppb for some applications) to as much as 100% by volume are possible for many gases.

- 3 enclosure styles; explosion-proof, NEMA 4 or rack-mounted configurations
- Data logging capability provides date-stamped information for gas readings, alarms and fault conditions
- Easy-to-read display shows gas concentrations and alarms
- 3 alarm levels with relay output
- UL 2075 approval

Controllers for MSA Instruments

GasGard®100 Control System

New **GasGard 100 Control System** provides easy user interface, intelligent architecture and innovative functionality. System offers a scalable, high performance data acquisition/data logging platform with an intelligent approach to data acquisition and control.

Form a complete gas detection solution by equipping GasGard 100 Systems fully integrated measurement, display and recording platforms with MSA's extensive line of transmitters and sensors.

- Open Ethernet connectivity with Web-based configuration and data monitoring functions lets controller handle many monitoring and historical logging function
- See real time trends with your Web browser from any PC without specialized software
- Data monitoring and reporting functions allows for customized reports and layout configurations for viewing trending analysis and more. Use email alert feature to view continuous plant status updates for times when you can't be physically present
- Flexible, modular architecture manages anywhere from one to six measurement modules on the backplane—each GasGard 100 Controller serves as a measurement node, avoiding long, dense sensor leads throughout machines or processes

GasGard XL Controller

GasGard XL Controller is a multi-channel, wall-mounted, economical controller for monitoring toxic and combustible gases and oxygen deficiency. The GasGard XL Controller offers compact, durable, fire-retardant ABS plastic housing, large and clear multi-language LCD display, full system diagnostics, and individual LEDs per channel with common relays and internal buzzer.

The GasGard XL Controller is easily configured to accept up to 8 remote gas sensors. With 2 alarm levels per channel, the GasGard XL Controller operates in conjunction with MSA's remote gas sensors (combustible, toxic or oxygen 4–20 mA).

- Fully-configurable via USB or RS485 Modbus connection
- Event log upload through isolated Ethernet RS 485 or USB
- Dedicated keys make all functions accessible from front panel
- Large graphic display with intuitive icons shows all channels at a glance

SUPREMAtouch® Controller

SUPREMAtouch Controller offers modular design to meet many application requirements and complies with all relevant global safety standards, including redundant systems with up to SIL 3 rating (IEC 61508). This custom product features large color touchscreen display, enhanced processing capabilities and optional integration of addressable fire and smoke detectors. Unit is compatible with many detectors, including combustible and toxic gas, oxygen, smoke, fire, and heat. Output options include relay, and analog and digital communication between racks, allowing interface to external systems using Modbus or Profibus.

- Compact modular design requires fewer cabinets, saving space
- Decentralized configuration through use of satellites minimizes wiring
- Digital bus technology provides reliable communication to external bus systems
- Connections for 3 system power supplies enable automatic switchover to backup supply

ModCon® 75 Controller

ModCon 75 Controller is a pre-programmed and self-configuring controller for monitoring up to 25 Ultima X Series Gas Monitors with X3 Technology (75 sensors total). Compact unit allows for remote control of many features as well as Modbus RTU input/output and Modbus-over-Ethernet capability.

- Self-configuring to Ultima X3 Gas Monitors
- Modbus RTU input/output
- Modbus-over-Ethernet interface
- View and control of up to 25 Ultima X3 Transmitters (75 total sensors)

Flame Detection for Paint Spray Booths

FlameGard® 5 Series Flame Detectors

FlameGard 5 Series of Flame Detectors includes 3 models:

- **FlameGard 5 MSIR Flame Detector**
  Combines precision multi-spectral infrared (MSIR) sensing array with highly intelligent neural network processors for high accuracy through superior false alarm immunity.
- **FlameGard 5 UV/IR Flame Detector**
  Uses ultraviolet and infrared technologies for flame detection.
- **FlameGard 5 UV/IR-H2 Flame Detector**
  Uses ultraviolet and infrared technologies to detect hydrogen fires.

Features that set the FlameGard 5 Series apart:

- Wide field of view
- SIL 3-suitable products
- Continuous Optical Path Monitoring (COPM) checks optical path integrity and electronic circuitry once every minute

FlameGard 5 Test Lamp provides easy means to verify functionality of any FlameGard 5 Detector.

Hazard Location	Carbon Monoxide	Nitrogen Dioxide	Combustible Gas	Nitrogen Oxides	Sulfur Dioxide	Flame
ROLL CHASSIS DYNO TEST CELLS	■	■	■	■	■	
ENGINE DYNO TEST CELLS	■	■	■	■	■	
R & E LABS	■	■	■	■	■	
GASOLINE DISTRIBUTION			■			■
FUEL BLENDING			■			■
TANK FARMS			■			■
PAINT SPRAY BOOTHS			■			■

Trust & Durability

For nearly 100, years our passionate mission of safety empowers MSA "The Safety Company" to protect lives. We are commited to providing the latest in inovative, best-in-class safety solutions that feature integrated systems capability and allow our customers to return safely to their families and friends.

Every day our customers place their lives in our hands. In response, we provide them with protection they can trust, and their stories become our stories. Hand in hand, we partner with our customers to earn that trust.

MSA: Because every life has a purpose.

ID 07-2151-MC / December 2013

MSA Corporate Center
1000 Cranberry Woods Drive
Cranberry Township, PA 16066 USA
Phone 724-776-8600
www.MSAsafety.com

U.S. Customer Service Center
Phone 1-800-MSA-INST
Fax 1-800-967-0398

MSA Canada
Phone 1-800-672-2222
Fax 1-800-967-0398

MSA Mexico
Phone 01 800 672 7222
Fax 52 - 44 2227 3943

MSA International
Phone 724-776-8626
Toll Free 1-800-672-7777
Fax 724-741-1559
Email msa.international@msasafety.com

Offices and representatives worldwide
For further information: