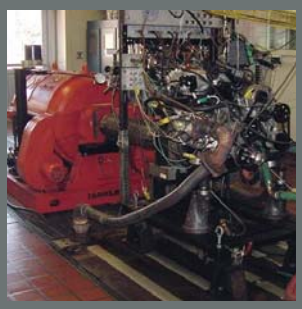
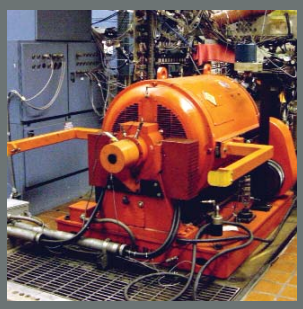
MSA Gas Detection
in the Automotive Industry




www.msagasdetection.com

MSA
The Safety Company™

A Passion for Safety

MSA designs and manufactures a complete line of world-class gas and flame detection products for automotive industry gas monitoring.

Our passion shows through in our rugged, permanent gas detection products.

We are dedicated to designing and manufacturing the highest-quality gas monitoring instruments for our customers to ensure that men and women may work in safety and that they, their families and their communities may live in health throughout the world.

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

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Sensor Technology for Dynamometer Test Cells, Laboratories and Fuel Storage | Code-Compliant, Class 1 Division 1 Approval

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. Ultima XIR and XE Gas Monitors feature a single-board design in a stainless steel enclosure for maximum serviceability and ease of installation.

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, a highly convenient feature in hydrocarbon detection, allowing sensor change-out ***without declassifying*** a hazardous area.

- Interchangeable Smart Sensors are pre-calibrated and ready for installation
- Ultima X Series Sensor X-change™ Program provides replacement calibrated sensor modules when needed, on demand
- Operates stand-alone or connected with standard 4-20mA output to control system (PLC, DCS, etc.)
- Modbus RTU digital communication protocol available
- Large liquid crystal display, quick-check LEDs and relay outputs (three alarms and one fault)
- Multi-sensing allows for up to three different gas sensors per transmitter (such as CO, NOx and LEL) for greater coverage

Ultima® X Series Gas Monitors with X³® Technology offer an excellent fit for many automotive industry applications. Modbus RTU output provides significant savings, reducing the cost of hardwiring by as much as 60%. Ultima X³ Technology allows up to three sensors to be inputted per monitor. Electrochemical, catalytic, and infrared sensors are available in any combination. Typical gas detection configurations needed for test cells, laboratories and fuel storage areas are CO, NO2, LEL, and often NOx and SO2 as well.

- Multi-sensing
- A system can handle up to 31 monitors with up to three sensors inputted per monitor for a total of 93 sensors
- Scrolling display – monitor scrolls through type and reading for all sensors attached
- Ultima X Series Gas Monitor with X³ Technology operates as a network slave device
- Each sensor can be observed remotely up to 3,000ft. from the monitor
- Modbus RTU output
- Industry-standard format
- Provides an RS-485 half-duplex communication interface
- Integration into PLC/DCS systems

The 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 on dual-wavelength, heated-optics technology
- IR technology eliminates the need for frequent calibrations

The Ultima XE Gas Monitor provides continuous monitoring of combustible and toxic gases and oxygen deficiency, using catalytic and electrochemical technologies. This unit features a 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
- Quick-check LEDs are easily viewable from afar
- Operates on a stand-alone basis or can be connected to a control system

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. These units can be configured to monitor from up to eight remote areas and to detect a specific refrigerant or a group 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, three alarm levels, four relays and 4-20mA & 0-10V outputs.

- Operates over a wide temperature range
- Complies with ANSI/ASHRAE 15-2004
- 2-line x 20-character vacuum fluorescent display
- Three alarm levels
- Relay outputs for each alarm level
- Password protection
- Expandable with Multipoint Sequencer to monitor up to 8 locations

The 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 a variety of gases.

- Three 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 showing gas concentrations and alarms
- Three alarm levels with relay output
- UL 2075 approval

Flame Detection for Paint Spray Booths

The Flamegard® Flame Detector is an extremely sensitive, self-contained instrument that incorporates ultraviolet or infrared sensor technology to quickly detect flames while reducing false alarms. This rugged 316 aluminum or stainless-steel, stand-alone unit can detect fire at 200 feet in less than five seconds.

- Standalone operation or easy connection to fire control panels
- Detects virtually any hydrocarbon fire with enhanced immunity to false alarms
- Onboard relays, sensitivity selection and built-in-test capabilities
- Three-year warranty

Controllers for MSA Instruments

The Suprema® Control System offers the new standard in gas- and flame-detection technology. This system features modular redundancy for the monitoring of 4-20mA output sensors, smoke detectors, heat sensors, manual alarm call points, pull stations and more.

- Signal processing for up to 256 inputs and 512 outputs per controller
- Modular, intelligent field-configurable safety system ensures fail-safe internal data transfer
- Easy installation, commission and reconfiguration
- ATEX approvals, TUV approval for up to SIL3 systems and NFPA 72 compliance

The Gasgard™ Monitor is designed to work with any 2- or 3-wire 4-20mA input signal and offers expanded features and options, selectable through user-friendly software.
Each monitor uses microprocessor-based technology and monitors for toxic and combustible gases and for oxygen deficiency. Each monitor's measuring range includes ppm, % LEL and % volume. Compact size and versatility makes the MSA Gasgard 8 Monitor suitable for virtually any application.

- Field expandable and programmable
- Common alarm and fault LED indicators and relay outputs
- Alarm time delay for each channel
- RS-232 and RS-485 output
- CE approval

The ModCon™ 75 Controller is a pre-programmed and self-configuring controller for monitoring up to 25 Ultima X Series Gas Monitors with X^3 Technology (75 sensors total). This 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 X^3 Gas Monitors
- Modbus RTU input/output
- Modbus-over-Ethernet interface
- View and control of up to 25 Ultima X^3 Transmitters (75 total sensors)
- Seven-year battery backup supports memory and real-time clock
- cUL-listed

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Gas Detection Selection Chart

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			●			●

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