

# MSA Flame and Gas Detection

[ for the Oil, Gas and Petrochemical Industries ]



# ***A PASSION FOR SAFETY***



MSA's passion for safety comes from almost a full century of manufacturing the best-of-breed, highest-quality gas-monitoring instruments.

MSA designs and manufactures a complete line of world-class flame- and gas-detection products for the oil, gas and petrochemical industries.

Our passion shows through in our all-stainless, globally approved flame- and gas-detection permanent instruments and our reliable, easy-to-use and durable single- and multi-gas portable instruments. We are proud to offer the only TUV-approved SIL3 and NFPA72 compliant control system, ensuring the ultimate in reliability and safety. We also offer smoke detectors, heat sensors, manual alarm call points, pull stations and more, providing you with a complete solution for your needs.

We are dedicated to designing and manufacturing the highest-quality flame- and 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.



## ***THE MSA ADVANTAGE***

### **GLOBAL REACH**

MSA is the largest company in the world dedicated solely to producing a complete range of equipment and systems for worker and plant protection. With headquarters located in Pittsburgh, Pennsylvania, our operations extend around the world. Our vast resources ensure that an MSA affiliate is never far away and help to maintain our commitment to protecting lives in more than 120 countries, on all continents around the globe.

### **LOCAL PRESENCE**

MSA-authorized representatives comprise one of the largest distribution networks, providing comprehensive sales, service and support. MSA field sales representatives and service technicians are thoroughly trained in the use, application and servicing of our products. With MSA, you have access to a dedicated and highly trained staff in the field as well as support within our Customer Service Center. Engineers, architects and operators will find flame- and gas-detection products to suit their every need, with the superior reliability, durability and design excellence that you expect from MSA.

# MSA offers a full-line of permanent gas-detection instruments to meet your needs and those of everyone in your organization

## Suprema® Control System

The MSA Suprema Control System offers the new standard in flame- and gas-detection technology. This state-of-the-art system features modular redundancy for the monitoring of 4-20mA output sensors, smoke detectors, heat sensors, manual alarm call points, pull stations and more. Designed to meet a wide range of safety needs, the Suprema Controller offers:

- Signal processing for up to 256 inputs and 512 outputs per controller.
- A modular, intelligent safety system that is field configurable and provides a distributed bus technology architecture to ensure fail-safe internal data transfer.



- Easy installation, commission and reconfiguration.
- Minimal maintenance, keeping the cost of ownership low.
- ATEX safety approvals and TUV approval for up to SIL3 systems and NFPA72 compliance.

## Flamegard® Flame Detector



The MSA Flamegard Flame Detector is an extremely sensitive, self-contained instrument that incorporates patented triple IR sensor technology and ensures the greatest degree of spectral matching. This rugged 316 stainless-steel, stand-alone unit

can detect a gasoline pan fire at 60 meters in less than five seconds and offers:

- Heated optics to eliminate window icing and condensation.

- Detects virtually any hydrocarbon fire including gasoline, kerosene, diesel fuel, aviation jet fuels, hydraulic fluids, paints, solvents, monomers, polymers, natural gas (LNG), town gas, liquefied petroleum gas (LPG) and hydrocarbon gases.
- Programmable functionality using a handheld unit.
- Onboard relays, sensitivity selection and built-in-test capabilities.
- High immunity to false alarms.
- MTBF minimum of 100,000 hours plus an outstanding 3-year warranty on the entire detector.
- ATEX approvals.

## SafEye® 700 Open-Path Gas Detector

The MSA SafEye 700 Open-Path Gas Detector uses advanced Xenon Flash Source technology to offer high sensitivity and fast response to hydrocarbon gases C1-C8. This self-contained optical gas-detection system detects combustible gases below the lower explosion (LEL) range over an open path up to 450 feet long. Xenon Flash Source and its integrated electronics are housed in a low-profile 316 stainless-steel housing for easy installation and alignment, with an integral, segregated terminal enclosure.

The SafEye 700 Gas Detector also offers:

- A 3mA “maintenance call” and an intrinsically safe hand-held diagnostic/calibration unit.

- Immunity to false alarms and poisoning.
- Heated optics to eliminate icing, condensation and snow as well as provide total immunity to solar radiation, hydrocarbon flames and other external radiation sources. Automatic gain control performs in extreme environmental conditions while maintaining operational integrity in up to 90% obscuration.
- ATEX approvals.



For more information call MSA at 1-800-MSA-INST  
or visit us at [www.msagasdetection.com](http://www.msagasdetection.com).

### Ultima® XE Gas Monitor

The Ultima XE Gas Monitor offers the latest in mechanical and electrical technologies for the continuous gas monitoring of combustible and toxic gases, as well as oxygen deficiency. Advanced features of the Ultima XE Monitor include:

- World-class design features one electronics board for maximum reliability and serviceability. The 316 stainless-steel, multiple-entry mounting enclosure enables problem-free installation and servicing.
- Disconnect under power, allowing for replacement of sensors in hazardous areas.

- Interchangeable smart sensors, making installation and replacement extremely easy. New sensors are recognized, triggering automatic alarm and relay setting reconfiguration.
- State-of-the-art display conveniently alternates between sensor reading and gas type, and features scrolling diagnostic messaging.
- Onboard LEDs and relays provide increased indication of alarm and fault conditions.
- UL, CSA and ATEX approvals.



### Ultima® XIR Infrared Gas Monitor



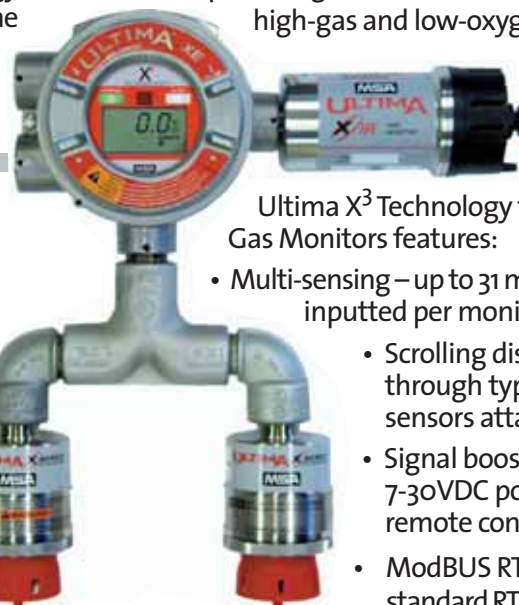
The Ultima XIR Gas Monitor provides a microprocessor-based, infrared-point gas detector for continuous monitoring of combustible and carbon dioxide

gases and vapors. The Ultima XIR Monitor utilizes dual-wavelength heated-optics technology, providing definitive compensation for temperature, humidity and aging effects. The IR technology offers excellent long-term stability, eliminates the need for frequent calibrations and reduces the overall cost of ownership. The Ultima XIR Monitor offers the same features as

the Ultima XE Gas Monitor plus advanced features including:

- Field-selectable algorithms for a variety of hydrocarbon-based gases.
- “Fail to safety” operation — designed without a sintered disk.
- UL, CSA and ATEX approvals.

The Ultima XIR Monitor eliminates the need for gas calibration—a simple zero adjustment provides reliable accuracy. It operates over extended temperature ranges, has a rapid response time and is immune to sensor poisoning. The Ultima XIR Monitor functions in both high-gas and low-oxygen environments and contains no moving parts, jumpers, switches or pots.



### Ultima® X Series Gas Monitors with X<sup>3</sup>™ Technology

Ultima X Series Gas Monitors with X<sup>3</sup> Technology provides continuous monitoring of combustible and toxic gases and oxygen deficiency. X<sup>3</sup> Technology is “X to the Power of 3” and brings multi-sensing, signal boost and ModBus output to the Ultima X Series Gas Monitors. The technology allows three sensors to be inputted into one Ultima X Gas Monitor and provides a ModBus RTU output. Each sensor can be remotored up to 3,000 feet from the monitor. Any combination of electrochemical, catalytic, and infrared-type sensor is available, making it a perfect match for all applications and industries.

Ultima X<sup>3</sup> Technology for the Ultima X Series Gas Monitors features:

- Multi-sensing – up to 31 monitors with up to 3 sensors inputted per monitor for a total of 93 sensors.
- Scrolling display – monitor scrolls through type and reading for all sensors attached.
- Signal boost - universal 85-256VAC or 7-30VDC power supply available at remote conduit.
- ModBUS RTU Output - industry-standard RTU format, RS-485 half-duplex communication interface, integration into PLC/DCS systems.

## MSA offers a full-line of portable gas-detection instruments to meet your needs and those of everyone in your organization

### Pulsar® Single Gas Detector

The Pulsar Single-Gas Detector provides maintenance-free personal protection from one of several toxic gases, or an oxygen-deficient atmosphere.

Features of the Pulsar Detector include:

- Two years of continuous operation with the instrument lifetime remaining clearly displayed on the unit.
- Truly maintenance free – no instrument calibration, battery or sensor replacement required – ever.
- Utilizes state-of-the-art, patented button-cell technology — available only from MSA — for the reliable detection of targeted gases.

- Water and dust resistant. The Pulsar Detector is IP54 rated against liquid and particulate ingress, helping to ensure that the product will stand up in the most challenging environmental conditions.



### Pulsar+® Single-Gas Detector

The Pulsar+ Single-Gas Detector is based on the highly successful MSA Pulsar Detector platform. Additionally, the Pulsar+ Detector offers a concentration display and replaceable battery and sensor. Advanced features of the Pulsar+ Detector include:

- Fully adjustable warning, peak, STEL and TWA alarm levels, as well as an adjustable calibration gas-concentration value.
- Long-life replaceable battery to power the unit for up to two years under normal (non-alarming) conditions.
- IP54 rated

### Solaris® Multigas Detector

The Solaris Multigas Detector is extremely compact and lightweight, making it the ideal choice for individual worker safety. Weighing less than 8 ounces, this pocket-sized product provides simultaneous detection of combustible, toxic-gas and oxygen-deficient atmospheres. Other features of the Solaris Detector include:

- Durable housing with integrated rubberized armor provides superior protection against liquid and particulate dust ingress (IP65 rated) while helping to protect the unit from impact damage if it is accidentally dropped.
- World-class, triple-alarm system with 100+ decibel audible alarm, multiple high-intensity visual alarm lights and a strong vibrating alarm.

- Long-life rechargeable lithium battery provides 14+ hours of continuous run-time and recharges in less than four hours.
- Optional powered sampling pump built into the probe assembly to facilitate remote sampling applications while keeping the overall size of the basic detector to a minimum.



For more information call MSA at 1-800-MSA-2222  
or visit us at [www.msanet.com](http://www.msanet.com).

## Galaxy™ Automated Test System

The new MSA Galaxy™ Automated Test System has all the features needed in an automated, record keeping, and calibration test system – including low cost, ease of use, versatility, and durability. The Galaxy Automated Test System operates without the touch of a single button. After setup, users place their instrument in the test stand and the Galaxy System will automatically perform the test. The Galaxy System is stand-alone, requiring no computer, controller or network interface. This new system from MSA offers ease of use with minimal training needed, as all gas tubing and electrical connections are pre-connected. The Galaxy Automated Test System is compatible with the MSA Solaris® Multigas Detector (datalogging version), the MSA Sirius® Multigas Detector, and the MSA Orion® Multigas Detector (datalogging version).

Other features include:

- Wireless or wired network interface available.
- Instrument charging capability, memory card and test receipt printer options. Standard web browser accessibility for data retrieval and reporting. In-line gas cylinder holster available to keep the work area orderly.
- Expandable; up to 10 systems can be interconnected.



## Orion® Multigas Detector

With over 25,000 units sold, the Orion Multigas Detector is practically the industry standard for a durable and reliable 4-gas monitor. The Orion Detector utilizes proven technology for the simultaneous detection of combustible and toxic gases, as well as oxygen-deficient atmospheres.

Features of the Orion Detector include:

- A built-in sampling pump for remote gas sampling.
- The Orion Detector accommodates interchangeable rechargeable or replaceable alkaline battery packs.
- With one of the largest displays of any 4-gas monitor on the market, the Orion Detector is easy to read and has exceptional color contrast for use in low light conditions.
- Impact resistant carbon-filled nylon housing helps to make the Orion Detector an excellent choice for use in the toughest conditions, as well as for use in corrosive environments.

## Sirius® Multigas Detector

The Sirius Multigas Detector provides users outstanding multifunctional capabilities by integrating a high-performance photoionization (PID) detector into a 4-gas detector. Users are able to simultaneously monitor for volatile organic compounds while measuring for combustible, toxic and oxygen-deficient atmospheres within one reliable, easy-to-use unit.

- MSA's innovative PID design (patent pending) provides users with superior PID performance including humidity resistance, stable zero readings and fast response times.

- Interchangeable rechargeable and disposable battery options can keep the instrument running practically 24 hours-a-day, 7 days-a-week.
- One-button auto calibration makes calibration simple for any user. The Sirius Multigas Detector is also compatible with MSA's TIM® System for automated calibration and recordkeeping.



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.



ID #07-2078/April 2005  
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