



# Fixed Gas and Flame Detection

## MSA & General Monitors® Portfolio Upgrade Guide



***Time for an upgrade?***

Is time on your side? If you've been thinking about updating your installed MSA and General Monitors equipment with the latest technological improvements in gas and flame detection, now may be the perfect time to do so. Many current models are backwards-compatible with discontinued models, making retrofitting easy. Plus, when you upgrade to our latest models, not only do you acquire the newest technology, but you also receive a new warranty for added peace of mind.

**SAFEGUARDING PEOPLE,  
PLACES & THE PLANET.**

# Gas Detectors/Gas Monitors

Retired Model #	Product Description	Replacement Model #	UPGRADE ADVANTAGES					
			Same Footprint	Potentially Use Existing Wiring <sup>1</sup>	Same Sensor	Digital Display	AutoCal	Self Calibration / Monitoring
S4000C	Combustible Gas Detector, Catalytic Bead Sensor	General Monitors S5000	■	■	■	■	■	
IR700	Carbon Dioxide Infrared Sensor	ULTIMA X5000 with XIR Plus		■		■	■	
IR5000	Combustible Infrared Open Path Detector	General Monitors IR5500 <sup>2</sup>	■	■	■	■		
Observer-H UltraSonic EX-5	Ultrasonic Gas Leak Detector	Observer-i	■	■		■		■*
Surveyor / UltraSonic IS-5	Ultrasonic Gas Leak Detector	Observer-i				■		■*
S4000TH / ULTIMA MOS-5	Hydrogen Sulphide Gas Detector, MOS Sensor	General Monitors S5000	■	■	■	■	■	■**
S4000T / ULTIMA MOS-5E	Hydrogen Sulphide Gas Detector, MOS Sensor	General Monitors S5000	■	■	■	■	■	■**
TS4000H	Toxic Gas Detector, Electrochemical Sensor	General Monitors S5000	■	■		■	■	■**
ULTIMA XE / ULTIMA XEH	Combustible, Toxic and Oxygen Gas Detector	ULTIMA X5000	■	■		■	■	■**
ULTIMA XIR	Combustible and Carbon Dioxide Gas Detector, Infrared Sensor	ULTIMA X5000	■	■		■	■	
ULTIMA XL	Combustible, Toxic and Oxygen Gas Detector, No Display	ULTIMA X5000		■		■	■	■**
ULTIMA XT	General Purpose Combustible, Toxic and Oxygen Gas Detector	PrimaX P		■		■	■	
ULTIMA XA	General Purpose Combustible, Toxic and Oxygen Gas Detector, Remote sensor option	PrimaX P		■		■	■	
ULTIMA XI	Combustible Gas Detector, Infrared Sensor	PrimaX IR / PrimaX IR+		■		■***	■	
DF 7100	Combustible Gas Detector, Catalytic Bead Sensor	PrimaX P		■		■	■	
DF 7010	Combustible Gas Detector, Catalytic Bead Sensor	PrimaX P		■		■	■	
D 7100 / D 7010	Combustible Gas Sensor, Passive	PrimaX P		■		■	■	
Toxgard II	Self Contained Gas Monitor, Combustible, Toxic and Oxygen gases	TG5000	■	■		■	■	■**
Chillgard RT	Gas Analyzer for Refrigerants, Photoacoustic IR sensor, up to 8 point sequencer	Chillgard 5000 Chillgard 5000 Ammonia		■		■		

\* Sensonic™ self-test function

\*\* H<sub>2</sub>S and CO TruCal sensors only

\*\*\* Available with PrimaX IR+

<sup>1</sup> Verify product manuals for differences in electrical specification

<sup>2</sup> Laser-based open path gas detector is available for Methane, Ethylene and various toxic gases (see Senscient ELDS on the upgrade benefits page)

## Upgrade Benefits: Gas Detectors



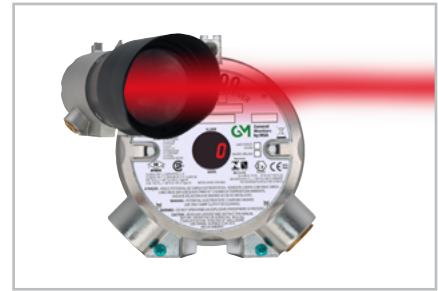
### ULTIMA® X5000 Gas Monitor

- Multi-lingual, touch OLED display
- Detects combustible, toxic gases and oxygen
- XCell® and TruCal® sensor technology
- Dual sensing capability
- 4-20 mA and HART, Bluetooth



### General Monitors® S5000 Gas Monitor

- Ideal for extreme conditions
- Detects combustible, toxic gases and oxygen
- XCell® and TruCal® sensor technology
- Dual sensing capability
- 4-20 mA (sink or source) and HART, Modbus, Bluetooth



### General Monitors® IR5500 Open Path Gas Detector

- Increased detection range
- Detects small (ppm.m) and large (LEL.m) gas leaks
- Reduced power consumption
- Increased fog immunity
- 4-20 mA and HART, Modbus



### Senscient ELDS™ Open Path Gas Detector

- Enhanced laser diode spectroscopy
- Harmonic fingerprint identifies target gas
- Available for detection of combustible and toxic gases
- SimuGas™ daily self-testing
- 4-20 mA and HART, Modbus, Bluetooth



### Observer® i Ultrasonic Gas Leak Detector

- ANN technology distinguishes real gas leaks
- Detects leaks from 2 bar (29 psi) pressure, up to 28 m (92 ft.) range
- Patented Senssonic™ self-test
- Does not require in-field training
- HART, Modbus communication options



### TG5000 Gas Monitor\*

- Detects combustible, toxic gases and oxygen
- Available as single or dual gas monitoring unit
- Organic LED (OLED) and bright status LEDs
- XCell® and TruCal® sensor technology
- Bluetooth to check status and modify settings



### PrimaX® IR / PrimaX® IR+\* Gas Detectors

- Hydrocarbon detection in LEL range
- Redundant infrared dual source technology
- Setup, calibration, and maintenance via HART
- Gas level and status via the 4-20 mA (PrimaX IR)
- Display with indicators and relays (PrimaX IR+)



### PrimaX® P Gas Transmitter\*

- Detects combustible, toxic gases or oxygen
- Flameproof coated aluminum enclosure
- LCD display, 3 LED status indicators and optional HART
- Easy menu navigation using the integrated keypad



### Chillgard® 5000 Refrigerant Leak Monitor

- Photoacoustic infrared (PAIR) detects small leaks
- Intuitive, multi-lingual touchscreen user interface
- Predictive maintenance and diagnostics
- Modular design for easy maintenance and expansion
- BACnet and Modbus communication options
- Ammonia specific version available

\*available in select regions

# Flame Detectors

Retired Model #	Product Description	Replacement Model #	UPGRADE ADVANTAGES				
			Same Footprint	Potentially Use Existing Wiring <sup>1</sup>	Increased False Alarm Immunity	Enhanced Performance	Test with Existing Lamp
FL3100/FL3100H FlameGard 5 UV/IR	Flame Detector, UV/IR	<b>FL500</b>		■	■	■*	■
FL3110 FlameGard 5 UV/IR-E	Flame Detector, UV/IR, European market	<b>FL500</b>	■	■	■	■*	■
FL3100H-H2 / FlameGard 5 UV/IR-H2	Flame Detector, UV/IR, Hydrogen-specific	<b>FL500-H2</b>		■	■	■*	■
FL4000H/ FlameGard 5 MSIR	Flame Detector, Multi-Spectral IR (MSIR)	<b>FL5000</b>	■	■***	■	■**	■

\* Improved Field of View and detection range  
 \*\* Improved detection range for majority of tested fuels  
 \*\*\*The flyer on electrical differences, "Upgrading from the FL4000H to the FL5000," is available.  
<sup>1</sup> Verify product manuals for differences in electrical specification

## Upgrade Benefits: Flame Detectors



### FL5000 MSIR Flame Detector

- False alarm immunity with Enhanced ANN
- Detects fires up to 95 m (310 ft.) away
- 22 fuel sources FM performance approved
- Bluetooth for configuration and diagnostics



### FL500 UV/IR Flame Detector

- Wider field of view and longer detection range
- LED status indicators
- Six fuel sources FM performance approved
- 4-20 mA (sink or source) and HART, Modbus



### FL500-H2 UV/IR Flame Detector

- Specifically designed to detect hydrogen fires
- Wide field of view and longer detection range
- LED status indicators
- FM performance approved
- 4-20 mA (sink or source) and HART, Modbus

**Upgrade now to the new General Monitors® FL5000 Flame Detector!**

Upgrade from the FL4000H / FlameGard 5 MSIR Flame Detectors to the advanced FL5000 Flame Detector with an easy-to-use Upgrade Kit (P/N 10242703) and take advantage of its advanced features.

**Why Upgrade to the FL5000 Flame Detector?**

- ✓ **Enhanced Performance:** Innovative technology and features.
- ✓ **User Satisfaction:** Proven reliability and advanced functionality.
- ✓ **Future-Proof:** Prepare for the future with the latest upgrades.

# Controllers

Retired Model #	Product Description	Replacement Model #	UPGRADE ADVANTAGES			
			Same Footprint	Potentially Use Existing Wiring <sup>1</sup>	Connect Same Sensor or Detector <sup>1</sup>	Display
Suprema	Gas and Fire Detection System	<b>SUPREMATouch</b>	■*	■	■	Touch
GasGard XL <sup>2</sup>	Wall Mount Controller, 8 points	<b>SENTRY io</b>		■	■**	Touch
9010/9020 LCD <sup>3</sup>	Rack Mount Controller, up to 20 points	<b>9010/9020 SIL</b>	■***	■	■	LCD
9010/9020 LCD <sup>3</sup>	Wall Mount Controller, 1 or 2 points	<b>9010/9020 SIL</b>	■	■	■	LCD
General Monitors Controllers & Modules	Various gas and flame detection controllers, modules and auxiliary hardware: MC600, 580A, FL802, DT210, MD002, ZN002, DC110, 2280A, 2602A, PS002	<b>MSA Controllers Portfolio:</b> <b>SUPREMATouch</b> <b>HazardWatch</b> <b>SENTRY io</b> <b>9010/9020 SIL</b>	Consult MSA			

\* Various upgrade kits available

\*\* Not available for passive sensors

\*\*\* New rack may be required

<sup>1</sup> Verify product manuals for differences in electrical specification

<sup>2</sup> Scheduled for phase-out in select regions

<sup>3</sup> The 9010/9020 LCD controller remains available in the North American and Chinese markets, whereas the 9010/9020 SIL has replaced it elsewhere.

## Upgrade Benefits: Controllers



### SUPREMATouch

- Processes up to 256 inputs and 512 outputs
- Multi-lingual touchscreen enabling intuitive operation
- SIL3 capable with redundant input cards
- Options for Modbus RTU and TCP/IP, Profibus and Profinet



### SENTRY io<sup>®</sup>

- Monitors up to 16 inputs and 56 outputs
- Modern multi-lingual touchscreen HMI
- SmartStart setup process saves valuable time
- EZ-ID pre-populates HART-enabled MSA detectors
- Modbus TCP/IP, Modbus RTU (optional), EtherNet/IP/DLR



### General Monitors HazardWatch<sup>®4</sup>

- Highly scalable (small systems version HazardWatch FX-12)
- Both fire and gas functions are certified to NFPA 72 by FM
- Connect multiple HazardWatch systems together
- Touchscreen provides graphical interface and supports plot plans
- FM certified ControlNet, Ethernet, or Modbus output



### 9010/9020 SIL<sup>4</sup>

- Monitors up to 20 channels independently
- 9" rack or wall-mount box (one or two channels)
- Large LCD display and LEDs
- Modbus RTU and TCP/IP communication options

<sup>4</sup>available in select regions

Note: This Bulletin contains only a general description of the products shown. While product uses and performance capabilities are generally described, the products shall not, under any circumstances, be used by untrained or unqualified individuals. The products shall not be used until the product instructions/user manual, which contains detailed information concerning the proper use and care of the products, including any warnings or cautions, have been thoroughly read and understood. Specifications are subject to change without prior notice. MSA is a registered trademark of MSA Technology, LLC in the US, Europe, and other Countries. For all other trademarks visit <https://us.msasafety.com/Trademarks>.

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