Zero Two Series

Modular Gas and Flame Detection System

General Monitors

The Zero Two Series is ideal for a wide range of safety monitoring applications such as oil/gas production and petrochemical processing.

MSA
The Safety Company

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

The capabilities of a custom monitoring system plus modular flexibility

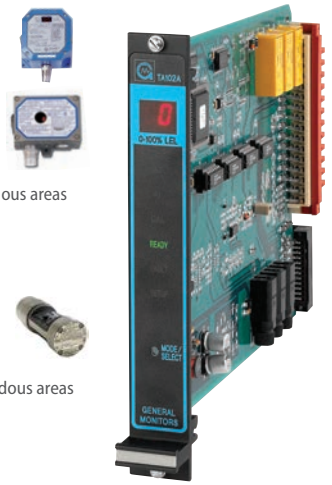
Over fifty years of experience has gone into the development of this fully integrated fire and gas detection system. Depending on how it is configured, a General Monitors Zero Two Series system can monitor any combination of the following:

- **Combustible gases**
- **H_2S**
- **Flame**
- **Toxic gases**
- **O_2 deficiency**

In addition, its open architecture allows the system to accommodate other sensing devices for tasks such as smoke detection, heat detection, and manual call points. Each Zero Two Series control module is connected to a remote sensor or detector and continuously displays the status of that location. Because the system is modular, it can easily be reconfigured or expanded as sensing requirements change. An existing module can be replaced by one of another type. A new module can be plugged into an open slot, or the system can be expanded by adding an additional 4, 8, or 16-channel chassis. A facilities module can also be included in each of the chassis. Its features include a master reset switch, an accept/acknowledge switch, an LED test feature, and common alarm and fault outputs.

Zero Two Series systems are extremely easy to install. The only field connections required are inputs from the sensors to the card modules and the outputs from the control/shutdown system, DCS, PLC, beacons, horns etc. Zero Two Series components come with a two year warranty.

*A 16 -channel chassis with assorted monitors, facilitating module and optional 24 VDC power supply.**



Intelligent Addressable Transmitters
Application Combustible Gas
Type Catalytic bead
Locations Certified for use in hazardous areas

IR400 Addressable Transmitter
Application Combustible Gas
Type Infrared Point
Locations Certified for use in hazardous areas

Model TA102A

A single-channel trip amplifier which monitors the 0 to 22 mA output from a General Monitors combustible gas detector/transmitter.

Features include:

- Digital display scaled 0-99% LEL
- LED status indicators
- Discrete A1, A2, fault relays and open collector outputs
- Power-on, card and LED test modes
- User setup and setup check modes

Catalytic Bead Sensor
Application Combustible Gas
Type Catalytic bead
Locations Certified for use in hazardous areas

Model 4802A

A single-channel control module which processes the output signal from a General Monitors' cost-effective catalytic bead sensor.

Features include:

- Digital display scaled 0-99% LEL
- LED status indicators
- Discrete A1, A2, fault relays and open collector outputs
- Power-on, card and LED test modes
- Adjustable calibration level
- Adjustment-free calibration

Intelligent Addressable Transmitters
Application H_2S
Type Metal Oxide Semiconductor (mos)
Locations Certified for use in hazardous areas

Model TA202A

A single-channel trip amplifier which monitors the 0 to 22 mA output from a General Monitors H_2S gas detector/transmitter.

Features include:

- Digital display scaled 0-20, 0-50 or 0-99 ppm
- LED status indicators
- Discrete A1, A2, fault relays and open collector outputs
- Power-on, card and LED test modes

MOS Sensor
Application H_2S
Type Metal Oxide Semiconductor (MOS)
Locations Certified for use in hazardous areas

Model 2602A

A single-channel control module which processes the input from a General Monitors' cost-effective solid-state MOS (metal oxide semiconductor) type H_2S sensor.

Features include:

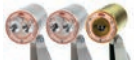
- Digital display scaled 0-20, 0-50 or 0-99 ppm
- LED status indicators
- Discrete A1, A2, fault relays and open collector outputs
- Power-on, card and LED test modes
- Adjustment-free calibration

FL4000H Flame Detector

Application Flame Detection
Type Multi-Spectral Infrared (MSIR)
Locations Certified for use in hazardous areas

FL3100 Series Flame Detectors

Application Flame Detection
Type UV/IR, UV, IR
Locations Certified for use in hazardous areas

FL3110 Series Flame Detectors

Application Flame Detection
Type UV/IR, UV, IR
Locations Certified for use in hazardous areas

Model TA402A

A single-channel trip amplifier designed for use with any General Monitors flame detector.

Features include:

- Digital display for set-up
- LED status indicators
- Discrete A1, A2, fault relays and open collector outputs
- Power-on, card and LED test modes

Model ZN002A

A three-zone control module expands the Zero Two system for applications requiring voting and zoning logic by providing three separate, eight input-zones with single and dual voting outputs for each zone.

Third Party Field Devices

Type Horns, Beacons, Heat Detectors, etc.

Model IN042

A four-zone input module for use with two-wire field devices such as smoke or heat detectors, pull switches and manual call-points. It provides alarm, fault and inhibit status indication and open collector outputs for each zone.

Features include:

- Four microprocessor controlled zones
- LED status indicators
- Alarm, fault and inhibit output options available per zone
- Power-on, card and LED test modes
- Reset and inhibit push buttons per zone

Third Party Field Devices

Type Horns, Beacons, Heat Detectors, etc.

Model MD002

A monitored driver output module designed for use on outputs requiring monitoring of devices in their non-active state, such as extinguishant solenoids and electronic beacons and horns. Each driver output is independent and has circuitry to detect short and open circuits in the field wiring.

TS4000H Sensor Transmitter

Application	Toxic Gas
Type	Electro-chemical cell
Locations	Certified for use in hazardous areas

IR5500 Monitoring System

Application	Open path Hydrocarbon Gas
Type	Infrared Absorption
Locations	Certified for use in hazardous areas

Model TA502A

A single-channel generic trip amplifier designed for use in Zero Two Series gas and flame detection systems. This model is used to process the 0-22mA signal from any field-mounted transmitter and may also be used to provide power to such a device.

Model FM002A

A facilities module which provides common alarm and fault outputs for all modules in its chassis. Also included are switches for resetting latched alarms and accepting (acknowledging) alarms.

Features include:

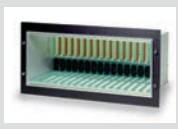
- LED test feature
- Discrete relays for A1, A2, fault, unaccept
- Open collectors for A1, A2, fault, calibration

Model RL002

The RL002* relay module accepts open collector inputs from other modules and provides four additional DPDT relay contacts, as well as a 2 amp solenoid driver for expanded output capabilities.

4-channel chassis

8-channel chassis



16-channel chassis

Model CC02A

The CC02A Communications Card allows an external host computer to communicate with a General Monitors Zero Two system. The Module acts as a bridge between the 02A system bus and the RS-485 based MODBUS RTU host interface, implementing the necessary protocol conversions and error check routines. Front and rear RS-232 based ports allow ease of set-up and maintenance independent of host traffic. The RS-232 port can interface to a local (host) computer for set-up and monitoring purposes, with a future possibility to add a port for data logging. Additional CC02A devices may be used in a system to increase fault tolerance.

** Not available in Europe.*

General Monitors—**by MSA**

Over 100 years of experience and capability in comprehensive safety solutions have made MSA a modern and forward-looking company for the protection of people, facilities, and the environment. MSA is one of the few suppliers of fixed gas and flame detection (FGFD) measurement technology that develops and manufactures a complete range of products and integrates them into safety solutions.

With the acquisition of General Monitors in September 2010, the MSA FGFD product portfolio expanded even further. As two unmatched experts in gas and flame detection joined forces, we are proving that the right mix of durable products and innovative technology can increase safety while driving operational efficiency.

Together MSA and General Monitors have the widest range of sensing technologies for gas and flame detection. We can create solutions that will not only provide worker safety and protect facilities, but will also decrease overall cost of ownership. While our customers still have access to the great products and service that they have come to rely on in the past, they now have access to so much more: superior service, improved support, a wider range of technology, and unique solutions enhanced by the combined strength of MSA and General Monitors.

Our Mission

MSA's mission is to see to it that men and women may work in safety and that they, their families, and their communities may live in health throughout the world.

MSA: Because every life has a purpose.

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