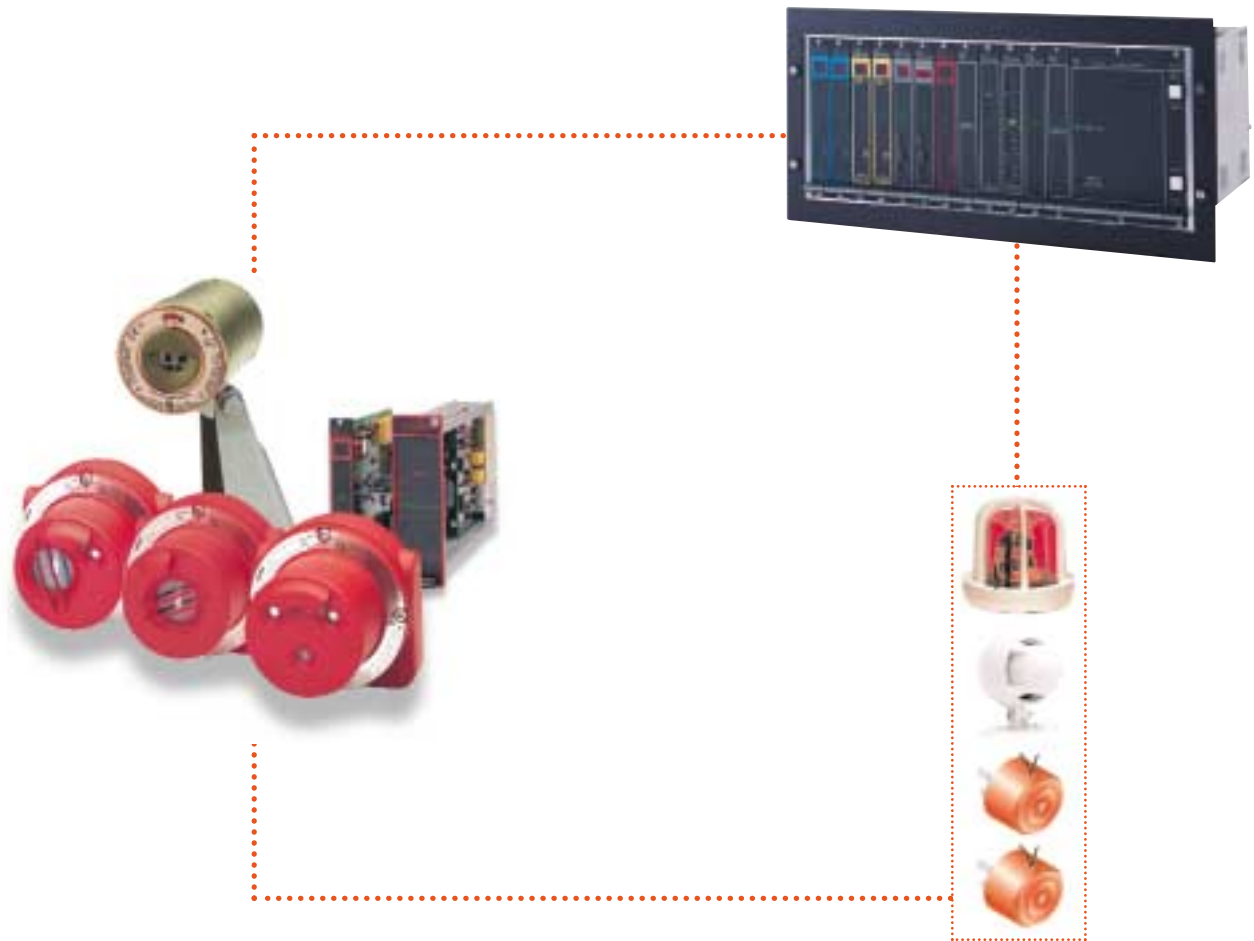




# NFPA 72 Compliant Fire Monitoring Detectors and Systems from General Monitors



**GENERAL MONITORS**  
*Protection for life.*

# NFPA 72 Compliant Flame Monitoring System

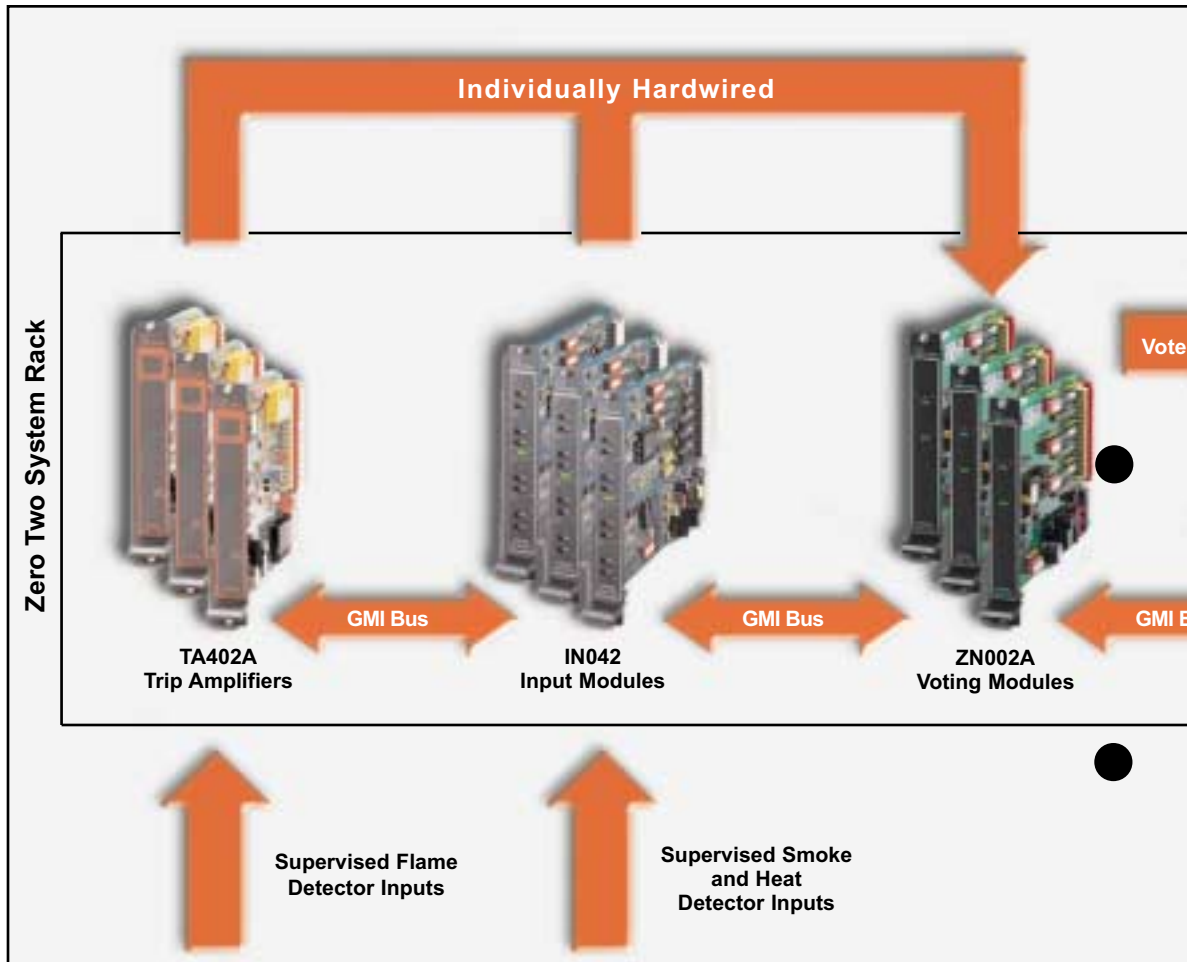
## NFPA 72 Safety and Protection

NFPA 72, the *National Fire Alarm Code*, is an ANSI-approved document that sets requirements for fire alarm components and systems. From initiation devices like smoke and flame detectors, to audible and visible alarms, to monitoring systems, NFPA 72 covers equipment application, installation, location, performance and maintenance.

With decades of experience in safety monitoring, General Monitors offers a wide array of modular flame detectors and system components that are NFPA 72 compliant. Our highly reliable equipment is found in mission critical applications around the globe. In hazardous environments such as oil/gas production and chemical refining, our products offer superior protection and value.

We are in fact so concerned with protecting your people and facilities, that many of our products exceed NFPA 72 requirements. The portions of the NFPA 72 standard that apply to our products are as follows:

- Field device monitoring for open circuit, short-to-ground, and wire-to-wire short circuit
- Power supplies monitored for presence of voltage
- Battery backup of the power supply
- Elimination of single point of failures



## Compliance With NFPA 72

To meet the rigorous safety requirements of NFPA 72, General Monitors developed its rugged open-architecture Zero Two Monitoring System. The modular system combines state-of-the-art flame detectors, a 16-channel rack and various control amplifiers and cards in a MODBUS-compatible system. It offers ease-of-use, superior protection, high reliability, long-life and reduced maintenance; the result is a lower total cost of maintenance and ownership. The system can be configured from small and simple to large and complex systems. No matter the

system size, we are committed to the safety of people and property.

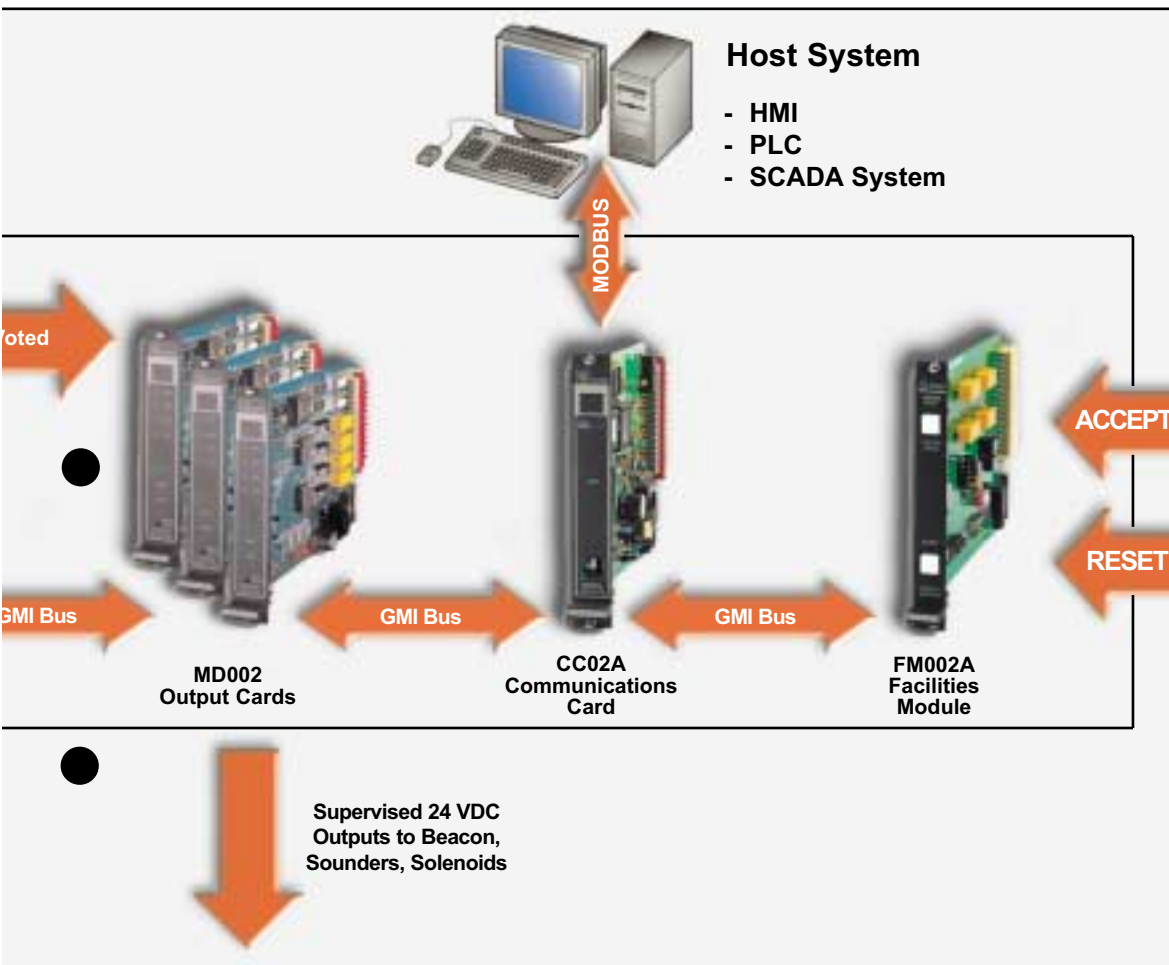
## FL3100 Flame Detectors

The versatile FL3100 Flame Detector Series is designed for a wide variety of flame detection applications. Developed with advanced ultraviolet (UV) and infrared (IR) sensing technology, the microcontroller-based FL3100 Series represents the state-of-the-art in secure flame monitoring. Choose from interchangeable UV, UV/IR or Digital Frequency Infrared (DFIR) detectors to meet an individual applications requirement. Highly accurate built-in flicker discrimination circuitry and self-checking Continuous

Optical Path Monitoring (COPM) ensures the FL3100 Series offers exceptional fire protection free from the worry of false alarms.

## Zero Two Monitoring System

The Zero Two Monitoring System is a modular system, offering three distinct safety protection schemes: (1) a stand-alone fire protection system, (2) a stand-alone gas system, or (3) an integrated fire and gas system. The Zero Two System, when configured as a stand-alone fire system, meets the rigorous requirements of NFPA 72. By utilizing the Zero Two System's Model RK02-Rack Chassis, along with the



monitoring in their non-active state, such as extinguishing solenoids, beacons, horns, or any other alarm devices that require line monitoring capability. If an open circuit, short-to-ground or wire-to-wire short occurs, the MD002 card will display a fault condition and activate the fault output. The MD002 also has the capability of manual release and abort features.

The Model ZN002A Voting Card is designed with 3 independent sets of 8 inputs each. Each voting set includes a 1-of-N and a 2-of-N (where N is equal to the number of inputs in the set) open-collector output, which can be used to interface with the Model MD002 Driver Output Card. By cascading several voting sets, complex voting schemes can be easily achieved without intricate internal wiring.

### Distributed Control Capabilities

Model TA402A Single-Channel Trip Amplifier, the Model IN042 Four Zone Input Module, and the Model MD002 Monitored Driver Output Module, the Zero Two System meets all the requirements of NFPA 72. All cards monitor the input voltage for a low voltage/power short condition and are fuse protected. If a low voltage condition occurs, the card displays the appropriate fault diagnostic, activates the fault contact and illuminates the fault LED. It will not have any affect on the other cards or system. The Model RK02 rack that houses the modules contains terminal blocks for 24 VDC battery backup connection.

The Model TA402A Trip Amplifier is a single-channel input card for the FL3100 Series Flame Detectors. This control card features LED indication, discrete relays, 0-20mA output, fault diagnostics, and open collector outputs. The TA402A monitors the 0-20mA signal from the FL3100 flame detectors. If this signal is lost because of an open circuit, short-to-ground, wire-to-wire short, or severed cable, the TA402A control card will indicate a fault condition by activating the fault relay and the fault LED.

The Model IN042 Four Zone Input Module is a four-channel input card designed for use with two-wire field devices,

such as smoke and/or heat detectors, manual alarm call points, or any contact inputs that are required to be line monitored. Each detector or contact contains an end-of-line resistor and is connected to one of the four channels of the IN042. Each channel of the IN042 provides alarm and fault outputs, alarm and fault LED indicators, inhibit and reset switches. In the Detector and Call Point Normally Open mode, the Model IN042 provides open circuit, short-to-ground and wire-to-wire short faults.

The Model MD002 Monitored Driver Output Card is designed for four independent outputs requiring

The FL3100 Flame Detector Series in combination with our Zero Two Monitoring System provides the necessary supervised inputs and outputs to meet NFPA 72 requirements. With our CC02A Communications Card, the Zero Two Monitoring System also connects to PLC, DCS, HMI and SCADA systems via MODBUS protocol to provide control zoning and voting.

### System Approvals

In support of applications worldwide, the FL3100 Flame Detector Series and the Zero Two Monitoring System feature universal approvals: CSA, ULC, CENELEC and/or CE Marking approved.

# Global Service Anytime, Anywhere

No matter where you are, 24-hour technical service and support is available from General Monitors. We have two manufacturing and six sales and service facilities located strategically worldwide for efficient support:

- Lake Forest, California
- Houston, Texas
- Republic of Ireland
- Singapore
- United Arab Emirates
- United Kingdom

## Quality Commitment

All of General Monitors' sensors and equipment stand on a solid reputation earned for continuous quality and reliability in the fire monitoring market. We are ISO9001 certified, utilizing continuous process improvement (CPI) quality programs.



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