

GEN2 SERIES FIRE ALARM CONTROL PANEL

Expandable Emergency Evacuation System

The GEN2 Series fire alarm control panel is a flexible modular emergency evacuation fire system.

GENERAL

The GEN2 Series Expandable Emergency Evacuation System by TRIGA is in the forefront of the latest generation of fire alarm control panels. The GEN2 Series System is designed for use in virtually any application because it features a modular assembly that is configured per project requirements. Employing the new high-speed GEN2 sensors, the GEN2 Series provides previously unattainable polling speed and response together with the flexibility demanded by today's emergency evacuation systems. In addition to the sensors' high-speed polling rate, the GEN2 Series of sensors feature bipolar LEDs that flash green for normal polling, and light red steadily to indicate an alarm.

The GEN2 Series is equipped with an 80-character TR-LCD-E3 alphanumeric LCD display or 4.3" color touchscreen TR-LCD-SLP display. Up to six keyboard LCD displays may be remotely located. The displays show instant system status information and can be Connected in any desired area of an installation.



**GEN2 Series with
TR-LCD-SLP Display**

**GEN2 Series with
TR-LCD-E3 Display**

FEATURES & BENEFITS

- Offers Class B, Class A or Class X* signaling line circuits
- IBC Seismic Certified
- Listed under UL® Standard 864, 10th Edition
- Listed under UL Standard UL 2572 for Mass Notification
- UL Listed for smoke control (dedicated and non-dedicated) when properly configured
- UL Listed and FM Approved for Pre-action/ Deluge and Agent Releasing
- Provides 2 to 10 SLCs, each supporting 159 sensors and 159 modules.
- 625K bits per second ARCNET communications using wire, fiber, or mixed configurations for installation flexibility
- High-speed 32 bit processor and 8100 event history log
- Advanced Boolean logic-based programming such as AND, OR, NOT, time delay and calendar functions configurable via computer programming
- Supports up to (16), TR-ASM-16 addressable switch or TR-ANU-48 LED driver modules per TR-ILI-MB-E3
- Two Class A or Class B, notification appliance circuits rated at 2.0 amps. per circuit
- Integral city connection
- Up to 9 levels of sensitivity adjustment
- Flexible 115,200 baud high speed RS-232 interface
- 40 character user-defined text per device
- Supports the following:
 - 15 TR-LCD-SLP displays/annunciators
 - 6 TR-LCD-E3 displays/annunciators per TR-ILI-MB-E3
- Polls 318 devices in less than two seconds
- Activate up to 159 outputs in less than five seconds
- LED's blink associated device address during Walk Test.
- Fully digital, high-precision protocol
- Drift compensation
- Pre-Alarm adjustable between 15 levels for both Alert and Action
- Day/night automatic sensing adjustment
- Sensitivity windows:
 - Ion 0.05 - 2% obscuration
 - Photo 1 - 3% obscuration
 - Laser 0.02 - 2% obscuration
- TR-MCS Acclimate 2.5 -4%, also self-adjustable options:
 - 1-2%
 - 2-3%
 - 3-4%
- HARSH 1-3% obscuration
- Each Loop Card has its own integral processor providing maximum survivability on loss of any other component. SLC provides full response on loss of any other system processor
- Optional programmable switches can be configured to enable, disable or group any combination of output devices
- Integrated point or Grouped Cross Zoning allows for numerous devices installed at any location to cooperate and determine alarm condition
- Automatic detector sensitivity testing
- Signals DIRTY and VERY DIRTY detector maintenance alerts



Note: Specifications are subject to change without notice.

GENERAL

A high-speed 32-bit processor can easily implement a wide array of applications used in small office buildings or used in multi-complex, high-rise installations. The 64 node networking is made possible by 625K bits per second ARCNET communications using twisted-pair copper cable, fiber-optic cable, or a combination of both. In addition, the Addressable Node Expander (ANX) board expands the network to 122 nodes. The basic GEN2 Series is equipped with the following modules:

- TR-PM-9G Power Supply and Battery charger
- TR-ASM-16 (Addressable Switch Module)
- TR-ILI-MB-E3 (Intelligent Loop Interface-Main Board)
- TR-ILI-S-E3 (Intelligent Loop Interface-Expansion Board)
- TR-LCD-E3 (LCD Keypad Display)

The TR-ASM-16 features 16 software programmable switches, each accompanied by red, green and yellow LEDs that can be programmed to indicate the operation of the switches. Additional TR-ASM-16 modules may be added to expand the operation to a plateau previously unimagined.

The Intelligent Loop Interface - Expansion Board (TR-ILI-S-E3) provides the GEN2 Series control panel with two additional electrically isolated signaling line circuits. The layout is similar to the TR-ILI-MB-E3 with the exception that a number of components are omitted. It occupies one node on the Broadband network.

Each TR-ILI-MB-E3 can support as many as sixteen TR-ANU-48 LED Driver modules supporting hundreds of LEDs on a third party graphic annunciator to use for remote annunciation. The TR-ANU-48 modules may be installed in any Listed remote annunciator. It can be remotely located via an RS-485 serial interface. An array of cabinets allows for neat, compact, attractive installations.

INSTALLATION

The GEN2 Series Expandable Emergency Evacuation System offers four cabinet size options. A typical cabinet includes a backbox, an inner door, and an outer door. The GEN2 Series cabinet assembly is a compact 19 3/8" (49 cm) wide, wall-mounted enclosure.

- Cabinet A includes the following four options:
 - Cabinet A1 inner door mounted to the backbox. The backbox houses one TR-NGA module.
 - Cabinet A2 inner door mounted to the backbox. The backbox houses one TR-LCD-E3 module.
 - Two or three-bay inner door mounted to the backbox. The backbox typically houses one TR-LCD-E3, or one TR-NGA, and one or two TR-ASM-16 modules.
- Cabinet B contains a space for the following modules installed inside the backbox:
 - TR-ILI-MB-E3 - TR-PM-9G

Additional module options mounted on the backbox include the following:

- TR-ANX
- TR-ILI-S-E3
- TR-RPT-E3-UTP

The 2-bay inner door houses one TR-LCD-E3 module and one TR-ASM-16 module.

- Both Cabinets C and D include the following:
 - Pre-assembled outer door that provides visibility to the fire fighter's phone handset and a microphone voice messaging system.
 - Two inner door panel selections that may contain optional modules to meet the facility operation requirements.

In the Cabinet B, C and D backboxes, the TR-ANX appears in the same place as the TR-ILI-MB-E3 and TR-PM-9G.

STANDARDS

The GEN2 Series fire alarm control panel is designed to comply with the following standards:

UL STANDARDS

UL 864 10th Edition:

Automatic Fire Detector Alarm	Manual Fire Alarm
Waterflow Alarm	Supervisory
Releasing Device Service	Releasing/Pre-Action Deluge
Releasing/Agent Releasing	Automatic Smoke Alarm,
Non-coded and Master Coded Operation	

UUKL for Smoke Control

UL 2572, 2nd Edition for Mass Notification Systems

NFPA STANDARDS

NFPA 13 - Standard for Installation of Sprinkler Systems

NFPA 16 - Standard for Foam-Water Sprinkler and Foam Water Spray Systems

NFPA 72 - National Fire Alarm Code:

Central Station Fire Alarm Systems

Auxiliary Fire Alarm Systems

Proprietary Fire Alarm Systems

Local Fire Alarm Systems

Remote Station Fire Alarm Systems

NFPA 13 Sprinkler

NFPA 12A Halon 1301

NFPA 15 Water Spray

NFPA 16 Foam Water

NFPA 750 Water Mist

NFPA 2001 Clean Agent

NFPA 12 CO2 Carbon Dioxide

NFPA 17 Dry Chemical/17A Wet Chemical

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Seismic Codes

International Building Code

IBC 2013

IBC 2009

IBC 2006

IBC 2003

IBC 2000 (Seismic)

California Building Code CBC 2007 (Seismic)

UL STANDARDS

The GEN2 Series Control Panel is designed to comply with the following standards:

UL 864 10th Edition

UL 2572, 2nd Edition for Mass Notification

Technical Specifications

SPECIFICATIONS

Operating Voltage: 24 VDC

Operating Temperature: Not to exceed the range of 32°-120°F (0 -49°C)

Relative Humidity: Not to exceed 93%, non-condensing at 90°F (32°C)

Primary Power Supply: 9 amps @ 55 AH capacity

SEISMIC BATTERY BRACKET KITS

For information on the types of Seismic Battery Bracket Kits that are available, the Seismic Battery Bracket Kit Part Numbers and the Installation Instructions, refer to the following documents:

- Seismic Battery Bracket Installation Guide, TR-TDS-53839
- GEN2 Series Cabinets Data Sheet, TR-TDS-013

ORDERING INFORMATION

TR-ILI-MB-E3: Intelligent Loop Interface-Main Board

TR-ILI-S-E3: Intelligent Loop Interface-Expansion Board

TR-ANX2-MR: Addressable Node Expander

TR-LCD-E3: LCD-E3, LCD Keypad Display

TR-LCD-SLP: LCD Color Touchscreen with five programmable switches

TR-RPT-E3-UTP: Network Repeater, unshielded, twisted-pair

TR-FML-E3: Multi-Mode Fiber-Optic Module

TR-FSL-E3: Single-Mode Fiber-Optic Module

TR-ANU-48: TR-ANU-48 LED Driver Module

TR-ASM-16: Addressable Switch Module

TR-NGA: LCD Network Graphic Annunciator

TR-PM-9G: Power Supply Module, 220/240 VAC

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