

MR-2300 SERIES

Fire Alarm Control Units



Description

Secutron's MR-2300 Series fire alarm control panels consist of six and twelve zone models which are equipped with a two line by 20 character back-lit LCD display, numerical keypad and an integrated UDACT/Digital Communicator. The MR-2300 family also includes a twelve zone model that is equipped with an LED display and an integrated UDACT/Digital Communicator. In addition the MR-2300 Series family includes remote LCD annunciators, LED annunciators and remote smart relay modules.

The MR-2300 Series panels are ideal for both new and retrofit applications. Designed for small to medium commercial, institutional and industrial occupancies, these panels are powerful enough to meet today's installation demands. The MR-2300 Series panels are configurable by the keypad for onsite programming or by a PC for both onsite and remote programming. Easy to install and simple to operate and configure, the MR-2300 Series panels enable the installer to configure the system to meet their specific requirements.

The MR-2300 Series panels are equipped with a 5 Amp power supply, 4-wire resettable smoke power supply (300mA max.) and an RS-485 interface for remote LCD annunciators, LED annunciators and Remote Smart Relay modules.

All MR-2300 Series panels come complete with a red door, black enclosure, durable CAT-30 lock and key and space to mount up to 12 AH batteries. Optional trim rings are available for semi-flush mounting.

Features

- Listed to UL 864, 9th edition• Available in six and twelve zone models
- Available in LED and LCD Display configurations
- LCD Display versions are equipped with a 2 line by 20 character back-lit LCD display and numerical keypad
- Integrated UDACT/Digital Communicator on select models
- Front panel and PC programmable
- LED Display versions are front panel (using CFG-300 configuration tool) and PC programmable
- Remote upload/download capabilities
- Base panel is equipped with Class "B" (Style "B") initiating circuits which may be configured as Class "A" (Style "D") using a Class "A" converter module
- Initiating circuits may be configured as Alarm, Verified Alarm, Waterflow Alarm, Sprinkler Alarm, Latching or Non-Latching Supervisory, Monitor and Trouble-Only
- Base panel is equipped with Class "B" (Style "Y") indicating circuits which may be configured as Class "A" (Style "Z") using a Class "A" signal converter module
- Audible signals may be configured for Steady, Temporal Code, California Code and March Time
- Indicating Circuits may be configured as Silenceable or Non-Silenceable for both signals and strobes
- Built-in sync protocols for the following strobe manufacturers: Mircom, Amseco, System Sensor, Gentex, Faraday and Wheelock
- Relay contacts for Common Alarm, Auxiliary/Alarm (Disconnectable), Common Supervisory and Common Trouble
- Configurable Signal Silence Inhibit, Auto Signal Silence and One-Man Walk Test
- Subsequent Alarm, Supervisory, and Trouble operation
- RS-485 Interface for Remote LED Annunciators, LCD Annunciators and Remote Smart Relay Modules
- Two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events
- 5 Amp Power Supply
- Optional modules for additional internal relay circuits and City Tie/Polarity Reversal
- Optional trim rings for semi-flush mounting



SECUTRON INC.

Canada 25 Interchange Way, Vaughan (Toronto), Ontario L4K 5W3 Tel: (905) 695-3545 Fax: (905) 660-4113
U.S.A. 4575 Witmer Industrial Estates, Niagara Falls, NY 14305 Tel: (888) 695-3545 Fax: (888) 660-4113
Web Page: www.secutron.com • Email: mail@secutron.com



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Features

Initiating Circuits

The MR-2300 Series panels are equipped with Class “B” (Style “B”) initiating circuits. The initiating circuits may be configured as Class “A” (Style “D”) using an MR-2300-A Class “A” converter adder module.

Each Initiating circuit may be configured for one of the following modes of operation:

- Alarm (Without smoke detector verification)
- Verified Alarm (With smoke detector verification)
- Waterflow Alarm (Water flow sensors)
- Sprinkler Alarm (Sprinkler flow sensors)
- Latching Supervisory
- Non-Latching Supervisory
- Monitor (non-latching input used mainly for correlating to a relay circuit)
- Trouble-Only (for monitoring a trouble condition from an external device)

i3 Series Protocol

The MR-2300 Series panels have the i3 Series protocol built-in. The panels support the two-wire i3 Series smoke detectors (2W-B/2WT-B). These i3 series detectors communicate with the MR-2300 to provide the following status information:

Open circuit trouble

This trouble indicates that loop is broken.

Communication trouble

This trouble indicates that there is a fault in the line or the line is too noisy, the panel cannot communicate with the devices.

Dirty device

This trouble indicates that one or more device on the i3 zone is dirty.

Out of sensitivity

This trouble indicates that one or more device on the i3 zone is out of sensitivity range and cannot detect an alarm condition.

Freeze trouble

This trouble indicates that a device on the i3 zone has detected a freeze condition, e.g. the temperature is below 41°F / 5 °C (available only on model 2WT-B).

The built-in protocol removes the need for the 2W-MOD Maintenance Module.

Indicating Circuits

The MR-2300 Series panels are equipped with equipped with Class “B” (Style “B”) indicating circuits. The indicating circuits may be configured as Class “A” (Style “Z”) using an MR-2300-NC4 or MR-2300-NC2 Class “A” signal converter adder module. The audible signals may be configured for Steady, Temporal Code, California Code and March Time.

Each of the indicating circuits may be configured for one of the following modes of operation:

- Silenceable Signal
- Non-Silenceable Signal
- Silenceable Strobe
- Non-Sileneceable Strobe

The MR-2300 has built-in sync protocols for the following strobe manufacturers; Secutron, Amseco, System Sensor, Gentex, Faraday and Wheelock.

UDACT/Digital Communicator

The MR-2300 Series panels are equipped with a fully integrated UDACT/Digital Communicator which allows for the reporting of events to a monitoring facility. The UDACT/Digital Communicator can be configured for single or dual line operation and uses the Security Industry Association (SIA) and Ademco Contact ID protocols. The UDACT/Digital Communicator is configured via the main display and keypad on the main panel.

In addition to its reporting functions, the integrated UDACT/Digital Communicator can be used to connect to the MR-2300 panel from remote computers for uploading and downloading of configuration data. It also allows for the viewing of the event history logs. The MR-2300 series panels have two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events.

The integrated UDACT/Digital Communicator can be configured for either DACT or UDACT operation. In DACT mode the Digital Communicator reports common alarm, trouble and supervisory information. In UDACT mode the Digital Communicator reports point specific information.

Remote Annunciators



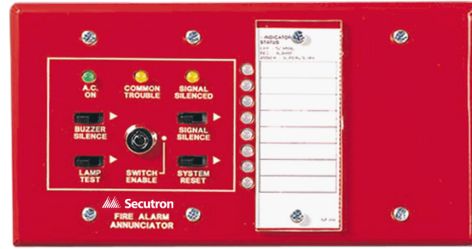
MR-2300-LCDR Remote LCD Annunciator

The MR-2300-LCDR provides LCD remote annunciation through a 2 line by 20 character LCD display. The MR-2300-LCDR provides control switches for System Reset, Signal Silence, Fire Drill and Acknowledge as well as a numeric keypad to access the menu functions. The common control functions can be disabled on a per function basis. The MR-2300-LCDR has LED indicators for A.C. On, Alarm, Supervisory, Trouble and CPU Fail. The MR-2300-LCDR comes complete with a red enclosure and a CAT-30 Lock and key. *Note: ULC Listed as an Ancillary Device.*



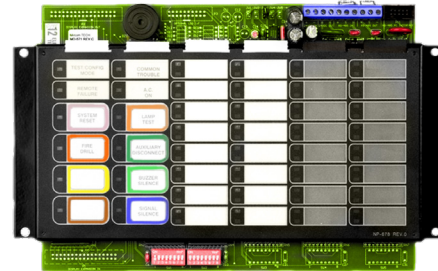
MR-2312-SR12 Smart Relay Module

The MR-2312-SR12 provides twelve configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). Each circuit can be configured as a Normally Open (N.O.) or Normally Closed (N.C.) contact. Each relay is equipped with an LED that is lit when the relay is energized. The relays can be configured as relay per zone (1 to 1), Common on Alarm, Common on Supervisory or programmable for a logical or adjacent zone configuration. An adjacent zone configuration will turn on an adjacent zone when the configured zone is active. A chaining configuration allows for multiple relays to turn on. The MR-2312-SR12 is DIP switch configurable and connects to the RS-485 bus. The MR-2312-SR12 comes complete with a red enclosure and a CAT-30 lock and key.



MR-2306-ATR/MR-2312-ATR Remote LED Annunciators

The MR-2306-ATR and MR-2312-ATR provide 8 or 16 points of LED annunciation. Both models feature bi-coloured LEDs which are auto-configurable for either Alarm (red) or Supervisory (amber). The LED annunciators have indicators for A.C. On, Common Trouble and Signal Silence and control switches for System Reset, Signal Silence, Lamp Test and Buzzer Silence. The MR-2306-ATR and MR-2312-ATR are equipped with a keyswitch which allows for enabling and disabling of the Common Control functions. Both models are available in a red finish and mount in a 4-gang electrical box. *Note: ULC Listed as an Ancillary Device.*



RAM-1016TZDS Remote LED Annunciator

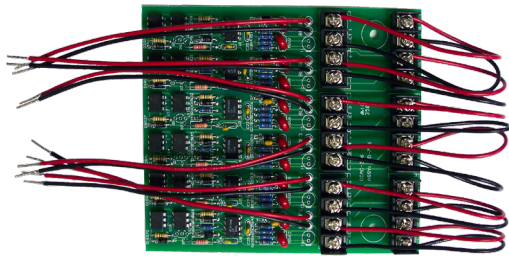
The RAM-1016TZDS Remote LED Annunciator provides 16 points of LED annunciation. The RAM-1016TZDS comes standard with bi-coloured LEDs which are automatically configured for either Alarm (Red) or Supervisory (Amber) and individual trouble LEDs. The RAM-1016TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. In addition it allows for the control switches to be disabled on a per function basis. The RAM-1016TZDS mounts in a MMX-BB-1001R enclosure.



CFG-300 Configuration Tool

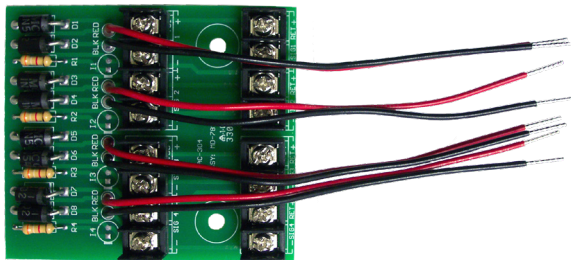
The CFG-300 Configuration Tool is required for onsite front panel programming of the MR-2312-LDR panel. The CFG-300 plugs into the MR-2312-LDR main board to provide a two line by 20 character LCD display. The MR-2312-LDR panel is configured using the CFG-300 and push buttons on the main board. In configuration mode, the initiating and indicating circuit disconnect buttons act as function keys. Removing the zone labels reveals the programming function buttons. The CFG-300 tool is used for configuration purposes only and not for normal operation.

Adder Modules



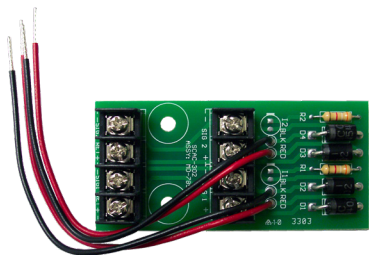
MR-2300-A Six Initiating Circuit Class “A” Converter Module

The MR-2300-A converts six Class “B” (Style “B”) initiating circuits on the MR-2300 main board to Class “A” (Style “D”) circuits. The MR-2300-A is equipped with wire leads to connect to the MR-2300 main board. It mounts to the right of the main board Class “B” (Style “B”) initiating circuits. Two MR-2300-A modules are required to convert all twelve initiating circuits on an MR-2312 series panel.



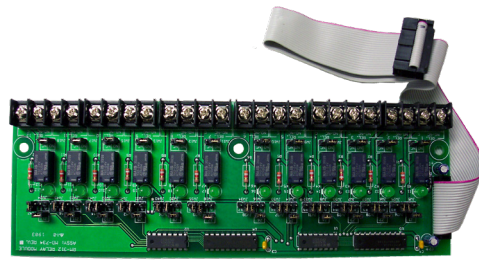
MR-2300-NC4 Four Indicating Circuit Class “A” Converter Module

The MR-2300-NC4 converts four Class “B” (Style “Y”) indicating circuits on the MR-2300 main board to Class “A” (Style “Z”) circuits. The MR-2300-NC4 is equipped with wire leads to connect to the MR-2300 main board. It mounts to the right of the main board Class “B” (Style “Y”) indicating circuits and is used with the MR-2312 series panels.



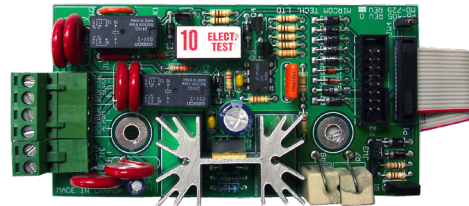
MR-2300-NC2 Two Indicating Circuit Class “A” Converter Module

The MR-2300-NC2 converts two Class “B” (Style “Y”) indicating circuits on the MR-2300 main board to Class “A” (Style “Z”) circuits. The MR-2300-NC2 is equipped with wire leads to connect to the MR-2300 main board. It mounts to the right of the main board Class “B” (Style “Y”) indicating circuits and is used with the MR-2306 series panels.



MR-2306-R6/MR-2312-R12 Relay Circuit Adder Modules

The MR-2306-R6 provides six configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). The MR-2312-R12 provides twelve Form C configurable relay circuits, rated @ 28 VDC, 1 amp (resistive). On both models each circuit can be configured as a Normally Open (N.O.) or Normally Closed (N.C.) contact. Each relay is equipped with an LED that is lit when the relay is energized. The relays can be configured as relay per zone (1 to 1), Common on Alarm, Common on Supervisory or programmable for logical or adjacent zone configuration. An adjacent zone configuration will turn on adjacent zone when configured zone is active. A chaining configuration allows for multiple relays to turn on.



MR-2300-PR Polarity Reversal/City Tie Module

The MR-2300-PR provides outputs for city box and polarity reversal applications. As a city tie module the MR-2300-PR provides an interface between the control panel indicating circuits and a master box. It provides off-premises signal transmission for systems that must comply with NFPA requirements for Auxiliary Protective Systems. As a polarity reversal module the MR-2300-PR provides an interface between the control panel and a reverse polarity receiver. It provides off-premises signal transmission for systems that must comply with NFPA requirements.



MR-2300-X Active End-of-Line Resistors

The MR-2300-X are power saving End-of-Line resistors which eliminates the need for an additional battery cabinet or larger batteries in order to meet the 60 hour standby requirement. (*Please refer to Battery Calculation Chart in manual for more details.*) The MR-2300-X can also be used when larger batteries than can fit in the cabinet are required.

Specifications

AC Input
120VAC @ 60Hz
Standby Power
24VDC standby batteries
Charging Capability
4 to 12 AH
Indicating Circuits
Power limited / 24VDC unfiltered / 1.7A @ 49°C per circuit. Maximum 5 Amps.
Aux supply (non resetable)
Power limited / 22.3VDC regulated / 500mA max
4-wire smoke supply (resetable)
Power limited/22.3VDC regulated / 300mA max

Unfiltered supply (full wave rectified)		
Power limited / 24VDC unfiltered / 1.7A max at 49°C		
Auxiliary Relays (Common alarm/supv/trb/ and auxiliary second alarm)		
FormC / 28VDC / 1A max		
Current Consumption		
Model	Standby	Alarm
MR-2306-DDR	142 mA (112 mA*)	312 mA (282 mA*)
MR-2312-DDR	174mA (104 mA*)	444mA (394 mA*)
MR-2312-LDR	164mA (104 mA*)	424mA (364 mA*)

Ordering Information

Model	Description
Control Units	
MR-2306-DDR*	Six Zone LCD Display Fire Alarm Control Unit with built-in UDACT/Digital Communicator
MR-2312-DDR*	Twelve Zone LCD Display Fire Alarm Control Unit with built-in UDACT/Digital Communicator
MR-2312-LDR	Twelve Zone LED Display Fire Alarm Control Unit with built-in UDACT/Digital Communicator
Remote Annunciators and modules	
MR-2300-LCDR	Remote LCD Annunciator (Red enclosure) (Note: ULC Listed as an Ancillary Device.)
MR-2300-LCDW	Remote LCD Annunciator (White enclosure) (Note: ULC Listed as an Ancillary Device.)
MR-2306-ATR	Eight zone Remote LED Annunciator (Note: ULC Listed as an Ancillary Device.)
MR-2312-ATR	Sixteen zone Remote LED Annunciator (Note: ULC Listed as an Ancillary Device.)
RAM-1016TZDS	Sixteen zone Remote LED Annunciator with individual Trouble LEDs
MR-2312-SR12	Remote Relay Module with red enclosure
MMX-BB-1001R	Red enclosure for RAM-1016TZDS
Adder Modules	
MR-2300-A	Six Initiating Circuit Class "A" Converter Module
MR-2300-NC4	Four Indicating Circuit Class "A" Converter Module
MR-2300-NC2	Two Indicating Circuit Class "A" Converter Module
MR-2306-R6	Six Relay Circuit Adder Module
MR-2312-R12	Twelve Relay Circuit Adder Module
MR-2300-PR	Polarity Reversal/City Tie Module
MR-2300-X	Active End-of-Line Resistor
Accessories	
MR-2306-FT	Black Semi-Flush Trim Ring for MR-2306 enclosures
MR-2312-FT	Black Universal Semi-Flush Trim Ring for MR-2312 enclosures
CFG-300	Configuration Tool for MR-2312-LCDR
UIMA	Universal Programming Tool

* Note: Not ULC Listed