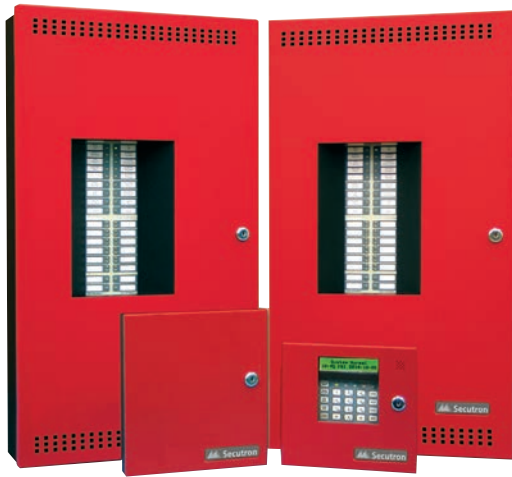


## MR-2300 SERIES LED Display Fire Alarm Control Units



### Description

Mircom's MR-2300 Series fire alarm control panels consist of eight and twelve zone models and equipped with an LED display and an integrated UDACT/Digital Communicator on select models. The MR-2300 Series family also includes remote LED and LCD annunciators as well as remote 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.

Mircom's MR-2300 Series panels are configurable by the keypad (using the CFG-300 Configuration Tool) 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.

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

The 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. An optional trim ring is available for semi-flush mounting.

### Features

- Listed to UL 864, 10th edition and ULC S527 Ed 4.
- Available in eight and twelve zone configurations with an integrated UDACT/Digital Communicator on select models
- 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 "B") indicating circuits which may be configured as Class "A" (Style "Z") using a Class "A" signal converter module
- Individual disconnect buttons for both initiating and indicating circuits
- 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
- Interface for a Remote Trouble Indicator (RTI)
- 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
- Support i3 Series Smoke Detectors
- 5 Amp Power Supply
- Optional modules for additional internal relay circuits and City Tie/Polarity Reversal
- Optional trim ring for semi-flush mounting
- Any combination of remote annunciators or smart relays can be used as long as the number does not exceed 6.



## Features

### Initiating Circuits

The MR-2300 Series panels are equipped with Class “B” (Style “B”) initiating circuits with individual disconnect buttons. The initiating circuits may be configured as Class “A” (Style “D”) using an MR-2300-A Class “A” converter adder module. Each initiating circuit has two LEDs; one dual colour (Red/Amber) for Alarm and Supervisory and one Trouble LED (Amber).

Each initiating circuit may be configured as:

- Alarm
- Verified Alarm
- Waterflow Alarm
- Sprinkler Alarm
- Latching or Non-Latching Supervisory
- Property, and
- Building Safety or Trouble-Only circuits

### 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**

The devices on the i3 zone are dirty.

#### **Out of sensitivity**

The devices on the i3 zone is out of sensitivity and cannot detect an alarm condition.

#### **Freeze trouble**

The device 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.

## Specifications

**AC Input:** 120VAC @ 60Hz / 240VAC @ 50Hz

**Standby Power:** 24VDC standby batteries

**Charging Capability:** 10 AH

**Current Consumption:**

Model	Standby	Alarm
MR-2308-L(D)R	136mA (96mA*)	366mA (326 mA*)
MR-2312-L(D)R	164mA (104 mA*)	424mA (364 mA*)

\* Using Active End of Line Resistors (Refer to the installation and operation manual for more information).

### Indicating Circuits

The MR-2300 Series panels are equipped with equipped with Class “B” (Style “B”) indicating circuits with individual disconnect buttons. 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. Each indicating circuits has an individual trouble LED (Amber).

The audible signals may be configured for Steady, Temporal Code, California Code and March Time.

Each of the indicating circuits may be configured as:

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

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

### UDACT/Digital Communicator

Select 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.

#### **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.



### MR-2308-LR / MR-2308-LDR Eight Zone LED Display Fire Alarm Control Panels

The MR-2308-LR and MR-2308-LDR are equipped with eight Class “B” (Style “B”) initiating circuits and four Class “B” (Style “Y”) indicating circuits rated @ 1.7 Amps maximum. (Total of 5 Amps) The MR-2308-LDR is equipped with a built-in UDACT/Digital Communicator. Two MR-2300-A Six Initiating Circuit Class “A” Converter Modules may be used for Class “A” (Style “D”) wiring of the initiating circuits. One MR-2300-NC4 Four Indicating Circuit Class “A” Converter Module may be used for Class “A” (Style “Z”) wiring of the indicating circuits. The MR-2308-LR and MR-2308-LDR are configurable by the keypad (using the CFG-300 Configuration Tool) for onsite programming or by a PC for both onsite and remote programming. The cabinet will support up to 12 AH batteries. The panels can be semi-flush mounted with the optional MR-2312-FT trim ring.

#### Dimensions

MR-2308-LR: 26”H x 14.5”W x 4.5”D  
 MR-2308-LDR: 26”H x 14.5”W x 4.5”D  
 MR-2312-FT: 28.5”H x 17”W



### MR-2312-LDR Twelve Zone LED Display Fire Alarm Control Panels

MR-2312-LDR are equipped with twelve Class “B” (Style “B”) initiating circuits and four Class “B” (Style “Y”) indicating circuits rated @ 1.7 Amps maximum. (Total of 5 Amps) The MR-2312-LDR is equipped with a built-in UDACT/Digital Communicator. Two MR-2300-A Six Initiating Circuit Class “A” Converter Modules may be used for Class “A” (Style “D”) wiring of the initiating circuits. One MR-2300-NC4 Four Indicating Circuit Class “A” Converter Module may be used for Class “A” (Style “Z”) wiring of the indicating circuits. The MR-2312-LR and MR-2312-LDR are configurable by the keypad (using the CFG-300 Configuration Tool) for onsite programming or by a PC for both onsite and remote programming. The cabinet will support up to 12 AH batteries. The panels can be semi-flush mounted with the optional MR-2312-FT trim ring.

#### Dimensions

MR-2312-LDR: 26”H x 14.5”W x 4.5”D  
 MR-2312-FT: 28.5”H x 17”W

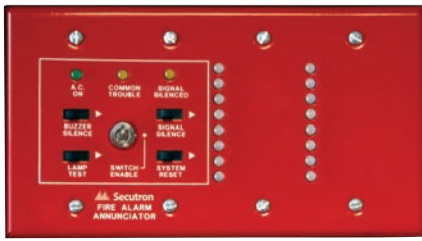


### MMX-BB-1001WP(R)A Outdoor Weather Protected Enclosure

The MMX-BB-1001WP(R)A is a complete enclosure that comes with either a RED or WHITE door, a black back-box, two keys and a durable lock at the top of the door. The door comes hinged to the bottom side of the box for added weather protection. The box is capable of handling one RAM-1032TZDS-CC Main Annunciator Chassis which provides up to 32 points of annunciation. RAM-1032TZDS-CC is ordered separately conform with the UL, ULC installation requirements.

**Note: there is no need for thermostat or heater. RAM-1032TZDS-CC must be ordered separately to match UL, ULC installation requirements.**

## Remote Annunciators



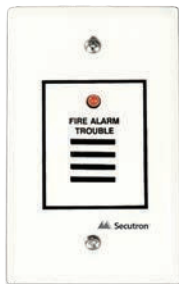
### MR-2312-ATR Remote LED Annunciators

MR-2312-ATR provide 16 points respectively of LED annunciation. Both models feature bi-coloured LEDs which are 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-2312-ATR are equipped with a keyswitch which allows for enabling and disabling of the Common Control functions. Available in a red finish and mount in a 4-gang electrical box.



### MR-2312-SR12 Smart Relay Module

The MR-2312-SR12 provides twelve Form C 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 come complete with a red enclosure and a CAT-30 lock and key.



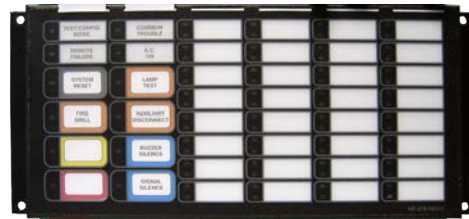
### MR-2300T Remote Trouble Indicator

Mircom's Remote Trouble Indicator provides remote annunciation of fire alarm troubles. The MR-2300T mounts onto a standard single gang electrical box.



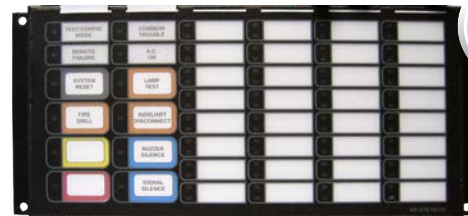
### MR-2300-LCDR/MR-2300-LCDW Remote LCD Annunciator

The MR-2300-LCD provides remote LCD annunciation through a two line by 20 character LCD display. The MR-2300-LCD 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-LCD is available in a red (MR-2300-LCDR) or white (MR-2300-LCDW) enclosure and comes complete with a CAT-30 lock and key.



### RAM-1032TZDS Main Remote LED Annunciator

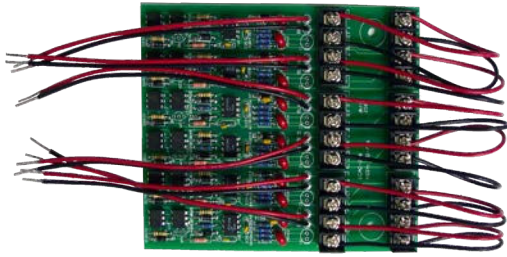
The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. The RAM-1032TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. The RAM-1032TZDS occupies one display position in the MMX-BB-1000 Series enclosures.



### RAM-1032TZDS-CC Conformal Coated Main Remote LED Annunciator

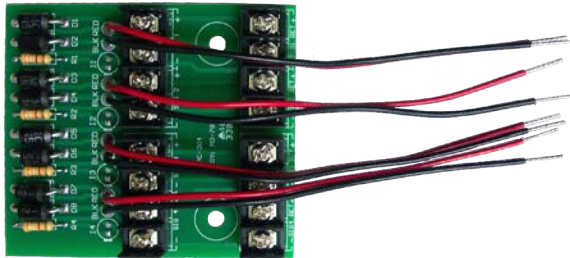
The RAM-1032TZDS-CC Conformal Coated Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. The RAM-1032TZDS-CC has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. Each display point can be identified by the slide-in label that slides in beside the LED. The RAM-1032TZDS-CC occupies one display position in the MMX-BB-1001WP(R)A or MMX-BB-1002WP(R)A enclosures.

## 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-LDR panel.



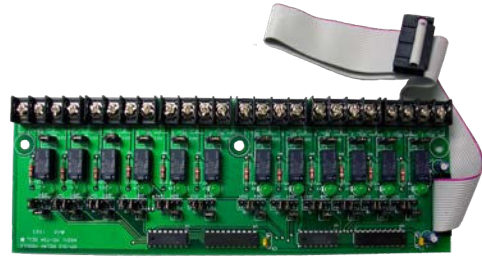
### MR-2300-NC4 Four Indicating Circuit Class "A" Converter Module

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.



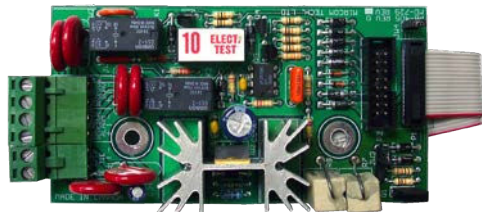
### CFG-300 Configuration Tool

The CFG-300 Configuration Tool is required for onsite front panel programming of the MR-2300 Series LED version panels. The CFG-300 plugs into the MR-2300 main board to provide a two line by 20 character LCD display. The MR-2300 Series LED version panels are 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.



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

The MR-2306-R6 provides six Form C 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. The MR-2300-X are available with or without a mounting plate.

## Ordering Information

Model	Description
<b>Control Panels</b>	
MR-2308-LR	Eight Zone LED Display Fire Alarm Control Panel (Red door)
MR-2308-LDR	Eight Zone LED Display Fire Alarm Control Panel with UDACT/Digital Communicator (Red door)
MR-2312-LDR	Twelve-Zone LED Display Fire Alarm Control Panel with UDACT/Digital Communicator (Red door)
<b>Remote Annunciators and modules</b>	
MR-2300-LCDR	Remote LCD Annunciator (Red enclosure)
MR-2300-LCDW	Remote LCD Annunciator (White enclosure)
MR-2312-ATR	Sixteen zone Remote LED Annunciator
RAM-1032TZDS	32 zone Remote LED Annunciator with individual Trouble LEDs
RAM-1032TZDS-CC	Conformal Coated 32 Point Remote Main Annunciator with 32 Trouble and Alarm LEDs
MR-2312-SR12	Remote Relay Module
MR-2300T	Remote Trouble Indicator
MMX-BB-1001DR	Red Semi-Flush Enclosure for RAM-1032TZDS
MMX-BB-1001WPRA	Red Semi-Flush Weather Protected Enclosure for RAM-1032TZDS-CC
<b>Adder Modules</b>	
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
MR-2300-XR	Active End-of-Line Resistor with red mounting plate
<b>Accessories</b>	
MR-2312-FT	Black Universal Semi-Flush Trim Ring
UIMA4	Universal Programming Tool