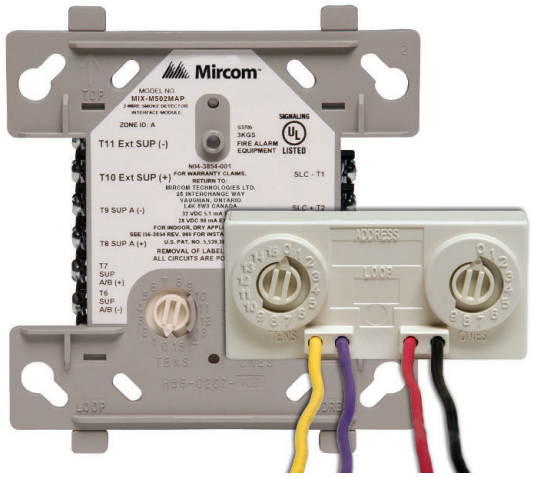
INTELLIGENT CONTROL AND RELAY MODULES

MIX-M500 SERIES



Features

- Designed to meet a wide range of applications
- SEMS screws for easy wiring
- Panel controlled status LED
- Rotary switches for direct-dial entry of address. Each unit can have address set for 01-159 for Advanced Protocol mode and 01-99 for CLIP mode.
- Low standby current
- Mount in 4” square junction box
- Provides two independent 2-wire initiating device circuits (IDC)
- Up to 99 modules can be connected to compatible panels in CLIP mode
- Up to 159 modules can be connected to compatible panels in AP mode

Description

Mircom’s intelligent control and relay modules are designed to meet a wide range of applications. The control modules can be used to supervise and activate Notification Appliances while the relay modules provide the system with dry contact outputs for activating a variety of auxiliary devices. The control and relay modules are addressed with easy-to-use rotary code switches.

Mircom’s Advanced Protocol (AP) devices use a high-speed communication protocol that greatly increases the speed of communication between the intelligent devices. Mircom’s Advanced Protocol uses a superior group polling method as well as an interrupt feature that provide for a faster response to an alarm condition. In addition, the Advanced Protocol allows for greater system capacity with support for up to 159 devices per SLC circuit. The AP devices are backwards compatible to operate in CLIP mode for legacy system applications.

Note: Modules MIX-M500MAP, MIX-M501MAP, and MIX-M50ORAP have been investigated in accordance with UL 864, 10th Edition, and ULC S527.

NYC Fire Dept

CATALOG NUMBER

5896

NOT TO BE USED FOR INSTALLATION PURPOSES.
THIS INFORMATION IS FOR MARKETING PURPOSES ONLY AND NOT INTENDED TO DESCRIBE THE PRODUCTS TECHNICALLY.

M500X(A) Isolator Module

The M500X(A) Isolator Module is an automatic switch that opens when the line voltage drops below four volts. Isolator modules should be spaced between groups of sensors or modules in a loop to protect the rest of the loop. If a short occurs between any two isolators, then both isolators immediately switch to an open circuit state and isolate the devices between them. The remaining units on the loop continue to fully operate. No more than 25 devices are recommended for each group.

MIX-M500DMAP(A) Dual Monitor Module

The MIX-M500DMAP(A) Dual Monitor Module is intended for use in intelligent, two wire systems. It provides two independent 2-wire initiating device circuits (IDC), at two separate, consecutive addresses. It is capable of monitoring normally open contact fire alarm and supervisory devices, or either normally open or normally closed security devices.

MIX-M500MAP(A) Monitor Module

The MIX-M500MAP(A) Monitor Module is intended for use in intelligent, two wire systems, where the individual address of each module is selected using the built-in rotary decade switches. It provides either a 2-wire or 4-wire fault tolerant initiating circuit for normally open contact fire alarm, supervisory, or security devices. The module has a panel-controlled LED indicator.

MIX-M501MAP(A) Monitor Module

The MIX-M501MAP(A) monitor module can be installed in a single gang junction box directly behind the monitored unit. Its small size and light weight allow it to be installed without rigid mounting (see Figure 1). The MIX-M501MAP(A) is intended for use in intelligent, two-wire systems where the individual address of each module is selected using rotary decade switches. It provides a two-wire initiating circuit for normally open contact fire alarm and security devices.

MIX-M502MAP(A) Interface Module

The MIX-M502MAP(A) Interface Module is intended for use in intelligent, two-wire systems, where the individual address of each module is selected using the built-in rotary decade switches. This module allows intelligent panels to interface and monitor two-wire conventional smoke detectors. It transmits the status (normal, open, or alarm) of one full zone of conventional detectors back to the control panel. All two-wire detectors being monitored must be UL compatible with this module (see systemsensor.com for complete list). The MIX-M502MAP(A) has a panel-controlled LED indicator.

MIX-M500FP(A) Fire phone Control Module

MIX-M500FP(A) Fire phone Control Modules are intended for use in intelligent, two-wire systems, where the individual address of each module is selected using the built-in rotary switches. This module is used to connect a remote firefighter telephone to a centralized telephone console. A ringing sound is provided at each off-hook handset until it is connected to the console. Wiring to individual telephone jacks and handsets is supervised, and status is reported to the panel as NORMAL, TROUBLE, or TELEPHONE. The MIX-M500FP(A) has two pairs of output termination points available for fault-tolerant wiring and includes a panel-controlled LED indicator.

MIX-M500RAP(A) Relay Control Module

The MIX-M500RAP(A) Relay Control Module contains two isolated sets of Form-C contacts, which operate as a DPDT switch to provide the system with outputs for activating a variety of auxiliary devices, such as fans, dampers, control equipment, etc. The module allows the control panel to switch these contacts on command. No supervision is provided for the relay contacts.

MIX-M500SAP(A) Supervised Control Module

The MIX-M500SAP(A) Supervised Control Module provides supervised monitoring of wiring to load devices that require an external power supply to operate, such as horns, strobes, or bells. It is capable of Styles Y and Z supervision. Upon command from the control panel, the MIX-M500SAP(A) will disconnect the supervision and connect the external power supply across the load device. The disconnection of the supervision provides a positive indication to the panel that the control relay turned on. The external power supply is always relay isolated from the communication loop, so that a trouble condition on the power supply will never interfere with the rest of the system. Full analog measurement of the supervised wiring is transmitted back to the panel and can be used to detect impedance changes or other special test functions.

Specifications

M500X	
Normal Operating Voltage	15 - 32 VDC
Stand-by Current	450 µA (not isolating)
Maximum Current Draw	17mA (device in isolation)
Temperature Range	32°F to 120°F (0°C to 49 °C)
Humidity	10 to 93% Non-condensing
Dimensions	4.5" H × 4" W × 0.25" D (114.3 mm H x 101.6 mm W x 6.35 mm D) (Mounts to a 4" square by 2.125" deep box)
MIX-M500DMAP	
Normal Operating Voltage	15 to 32 VDC
Maximum Current Draw	6.4 mA (LED on)
Average Operating Current	750 µA (LED flashing)
EOL Resistance	47K Ohms
Maximum SLC wiring resistance	40 Ohms.
Maximum IDC wiring resistance	1,500 Ohms
Maximum IDC Voltage	11 Volts
Maximum IDC Current	240µA
Temperature Range	32°F to 120°F (0°C to 49°C)
Humidity	10% to 93% non-condensing
Dimensions	4.5" H x 4.275" W x 1.4" D (114.3 mm H x 108.58 mm W x 315.56 mm D) (Mounts to a 4" square by 2.125" deep box.)
Accessories	SMB500 Electrical Box
Isolator Load Factor	0.06
MIX-M500MAP	
Normal Operating Voltage	15 to 32 VDC
Maximum Alarm Current (LED on)	5.0mA (LED on)
Average Operating Current	400 µA, 1 communication every 5 seconds, 47k EOL
EOL Resistance	47K Ohms
Maximum IDC wiring resistance	40 Ohms
Maximum IDC Voltage	11 Volts
Maximum IDC Current	400µA
Temperature Range	32˚F to 120˚F (0˚C to 49˚C)
Humidity	10% to 93% Non-condensing
Dimensions	4.5" H x 4" W x 1.25" D (114.3 mm H x 101.6 mm W x 31.75 mm D) (Mounts to a 4" square by 2.125" deep box.)
Accessories	SMB500 Electrical Box
MIX-M501MAP	
Nominal Operating Voltage	15-32 VDC
Maximum Alarm Current	600 uA
Average Operating Current	400 µA, 1 communication every 5 seconds, 47k EOL
EOL Resistance	47K Ohms
Maximum IDC Wiring Resistance	40 Ohms
Maximum IDC Voltage	11 Volts
Maximum IDC Current	400µA
Temperature Range	32°F to 120°F (0°C to 49°C)
Humidity	10% to 93% Non-condensing
Dimensions	1.3" H × 2.75" W × 0.65" D (33.02 mm H x 69.85 mm W x 16.51 mm D)
Wire Length	6" minimum

MIX-M502MAP	
Normal Operating Voltage	15 to 32 VDC
Maximum Alarm Current	5.1mA (LED on)
Average Operating Current	400µA, 1 communication and 1 LED flash every 5 seconds, 3.9k eol
EOL Resistance	3.9K Ohms
Maximum IDC wiring resistance	25 Ohms
IDC Supply Voltage (between Terminals T3 and T4)	
Regulated DC Voltage	24 VDC power limited
Ripple Voltage	0.1 Volts RMS maximum
Current	90mA per module
Temperature Range	32˚F to 120˚F (0˚C to 49˚C)
Humidity	10% to 93% Non-condensing
Dimensions	4.5" H x 4" W x 1.25" D (114.3 mm H x 101.6 mm W x 31.75 mm D) (Mounts to a 4" square by 2.125" deep box.)
Accessories	SMB500 Electrical Box
MIX-M500FP	
Normal Operating Voltage	15 to 32 VDC
Maximum Current Draw	7.5mA (LED on).
Average Operating Current	2.4mA (LED flashing).
Handset Offhook Resistance	400 to 1,500 Ohms
External Supply Voltage (between Terminals T3 and T4)	
Maximum	28 Volts DC
Temperature Range	32˚F to 120˚F (0˚C to 49˚C)
Humidity	10% to 93% Noncondensing
Dimensions	4.5" H x 4" W x 1.25" d (114.3 mm H x 101.6 mm W x 31.75 mm D) (Mounts to a 4" square by 2.125″ deep box.)
Accessories	SMB500 Electrical Box; CB500 Barrier
MIX-M500RAP	
Normal Operating Voltage	15 to 32 VDC
Maximum Current Draw	6.5mA (LED on)
Average Operating Current	230 µA direct poll; 255 µA group poll
EOL Resistance	Not used
Temperature Range	32˚F to 120˚F (0˚C to 49˚C)
Humidity	10% to 93% Non-condensing
Dimensions	4.675" H x 4.275" W x 1.4" D (119 mm H x 108 mm W x 36 mm D) (Mounts to a 4" square by 2.125" deep box.)
Accessories	SMB500 Series Electrical Box

MIX-M500SAP	
Normal Operating Voltage	15 to 32 VDC
Maximum Alarm Current	6.5mA (LED On)
Average Operating Current	400 µA max., 1 communication every 5 seconds 47k EOL resistor, 485 uA max. (Communicating, NAC shorted).
Maximum NAC Line Loss	4 VDC
External Supply Voltage (between Terminals T3 and T4)	
Maximum (NAC)	Regulated 24VDC
Maximum (Speakers)	70.07 V RMS, 50 W
Max. NAC Current Ratings	For class B wiring system, the current rating is 3A; For class A wiring system, the current rating is 2A
Temperature Range	32˚F to 120˚F (0˚C to 49˚C)
Humidity	10% to 93% Non-condensing
Dimensions	4.5" H × 4" W × 1.25” D (114.3 mm H x 101.6 mm W x 31.75 mm D) (Mounts to a 4" square by 2.125" deep box.)
Accessories	SMB500 Electrical Box; CB500 Barrier

Ordering Information

Model	Description
M500X	Isolator Module, UL
M500XA	Isolator Module, ULC
MIX-M500DMAP	Dual Monitor Module, UL
MIX-M500DMAPA	Dual Monitor Module, ULC
MIX-M500MAP	Monitor Module, UL
MIX-M500MAPA	Monitor Module, ULC
MIX-M501MAP	Monitor Module, UL
MIX-M501MAPA	Monitor Module, ULC
MIX-M502MAP	Interface Module, UL
MIX-M502MAPA	Interface Module, ULC
MIX-M500FP	Firephone Control Module, UL
MIX-M500FPA	Firephone Control Module, ULC
MIX-M500RAP	Relay Control Module, UL
MIX-M500RAPA	Relay Control Module, ULC
MIX-M500SAP	Supervised Control Module, UL
MIX-M500SAPA	Supervised Control Module, ULC

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