

M500M Monitor Module and M500CH Control Module

Before Installing

This information is included as a quick reference installation guide. Refer to the control panel installation manual for detailed system information. If the modules will be installed in an existing operational system, inform the operator and local authority that the system will be temporarily out of service. Disconnect power to the control panel before installing the modules.

NOTICE: This manual should be left with the owner/user of this equipment.

General Description

M500M Monitor Modules provide a two-wire, or fault-tolerant, initiating circuit for normally open contact fire alarm and supervisory devices, or either normally open or normally closed security devices. The LED indicator can be latched on or returned to the normal mode by code command from the panel. Convenient rotary decade switches are used to set the address of each module.

M500CH Control Modules allow a compatible control panel to switch discrete contacts by code command. The control module has a status LED that can be latched on or returned to the normal mode by code command from the panel. Rotary decade switches are used to set the address of each module.

The control module offers two modes of switching operation. As shipped, the module is configured for switching an external power source to notification appliances. The external power source can be a DC power supply or an audio amplifier (up to 70.7 Vrms). In this mode, the module reports supervision status of the connected loads to the control panel. Load circuit status is reported as a NORMAL, OPEN, or SHORTED circuit. Two pairs of output termination points are available for fault-tolerant wiring. The second mode of switching operation allows the panel to control one Form-C (SPDT) set of contacts. Circuit connections to the contacts are not supervised by the module. This mode is enabled by breaking two external tabs on the module.

Compatibility Requirements

To insure proper operation, these modules shall be connected to listed compatible system control panels only.

Mounting M500M and M500CH Devices

M500M and M500CH modules mount directly to 4" square electrical boxes as shown in Figure 2A. The box must have a minimum depth of 2 1/8".

Wiring

NOTE: All wiring must conform to applicable local codes, ordinances and regulations. When using control modules in nonpower limited applications, the System Sensor CB500 Module Barrier must be used to meet UL requirements for the separation of power-limited and nonpower-limited terminals and wiring. The barrier must be inserted in a 4"x4"x2 1/8" junction box, and the control module

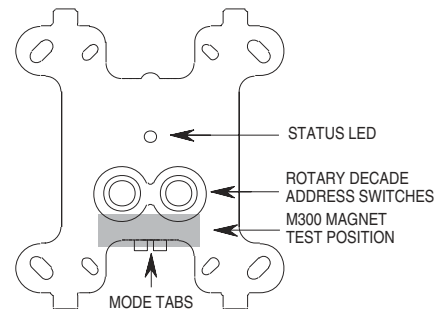
must be placed into the barrier and attached to the junction box (Figure 2A). The power-limited wiring must be placed into the isolated quadrant of the module barrier (Figure 2B).

1. Install module wiring in accordance with the job drawings and appropriate wiring diagrams (Figures 3 - 9).
2. Set the address on the module per job drawings.
3. Secure module to electrical box (supplied by installer), as shown in Figure 2A.

Magnet Test

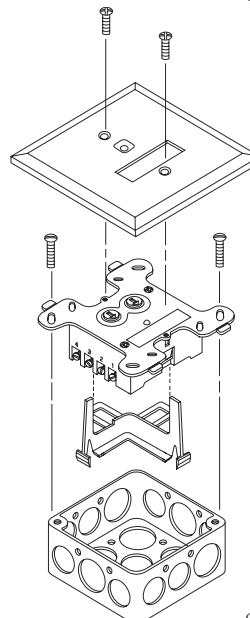
The monitor and control modules can be tested with a test magnet available from System Sensor (M02-04-01, see Figure 1). The magnet test checks the module electronics and connections to the control panel. Interfaced initiating and indicating devices must be tested independently.

Figure 1. Monitor and control module controls and indicators:



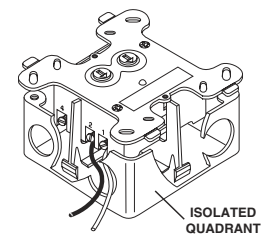
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Figure 2A. Module mounting with barrier:



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Figure 2B:



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M500M Monitor Module Wiring Diagrams

Figure 3. Typical 2-wire initiating circuit configuration, NFPA Style A or B:

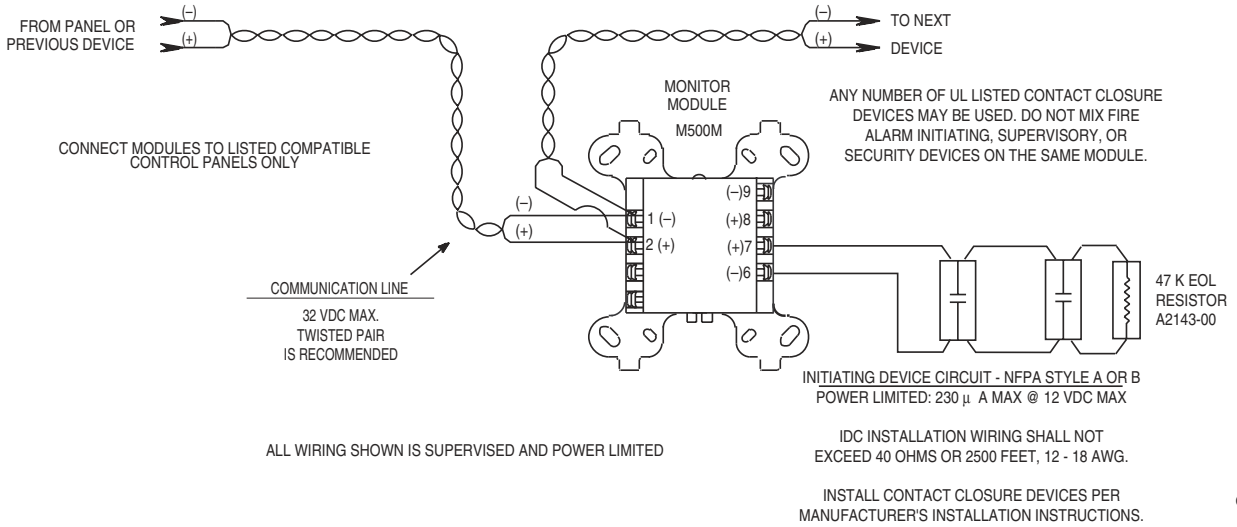
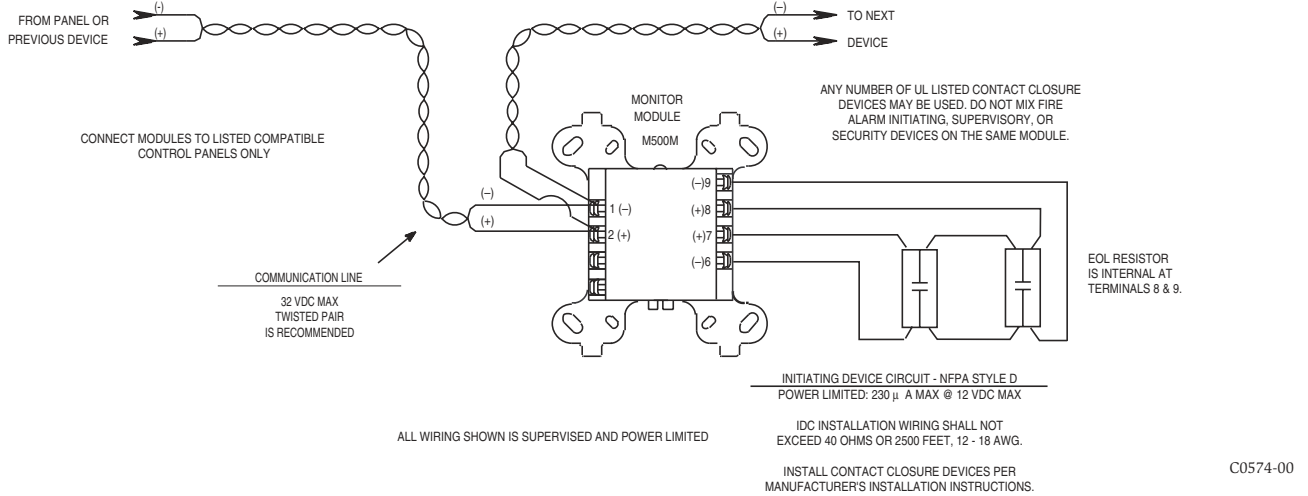


Figure 4. Typical fault tolerant initiating circuit configuration, NFPA Style D:



M500CH Control Module Wiring Diagrams

Figure 5. Typical indicating circuit configuration, NFPA Style W:

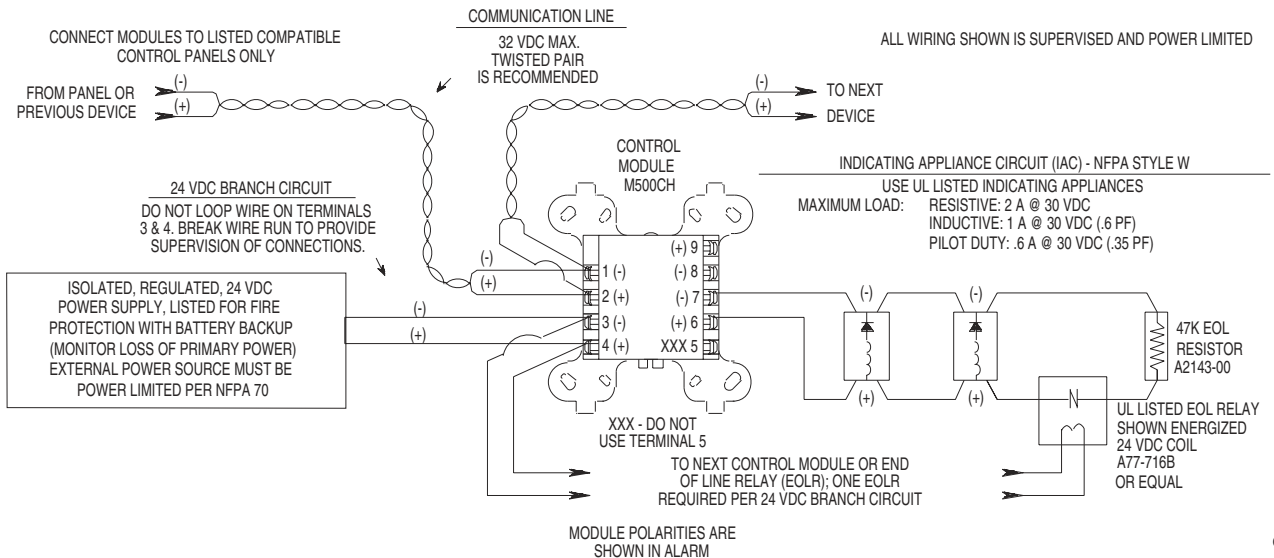
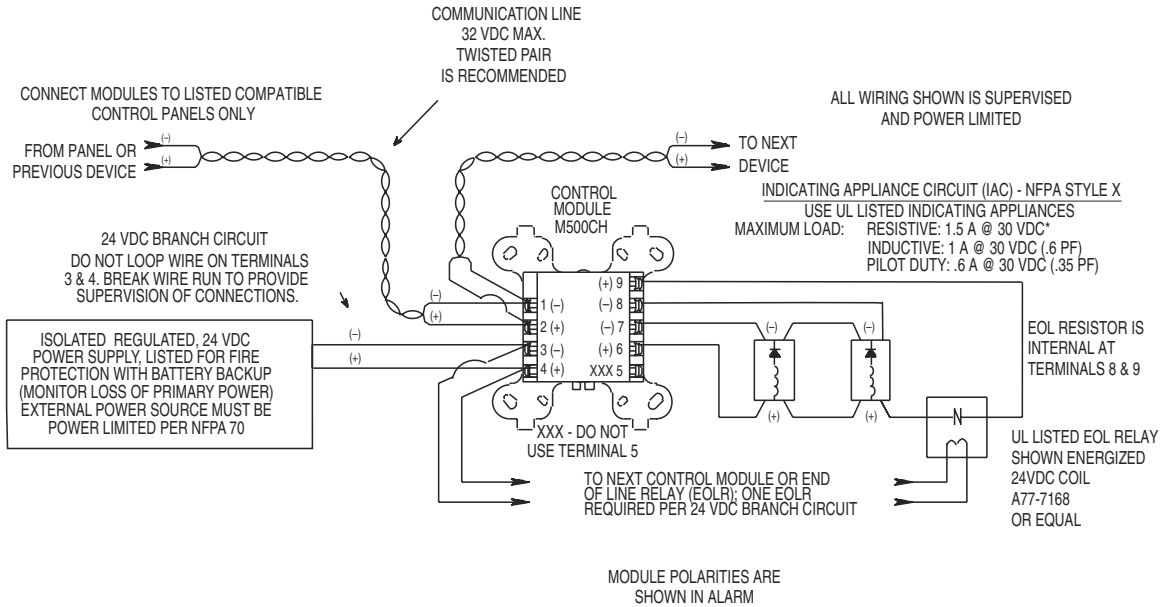
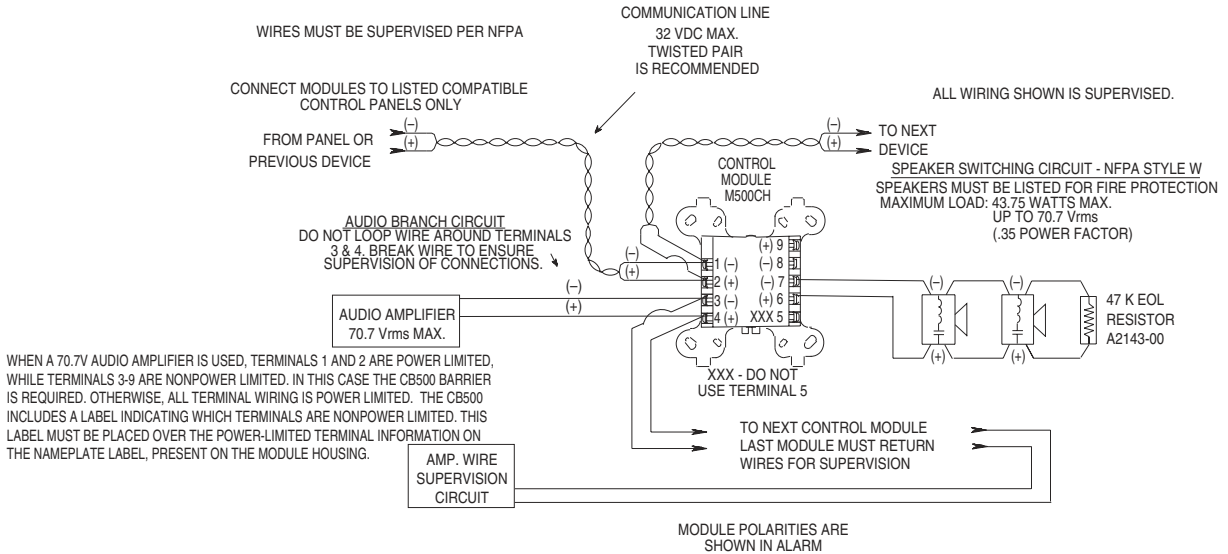


Figure 6. Typical fault tolerant indicating circuit configuration, NFPA Style X:



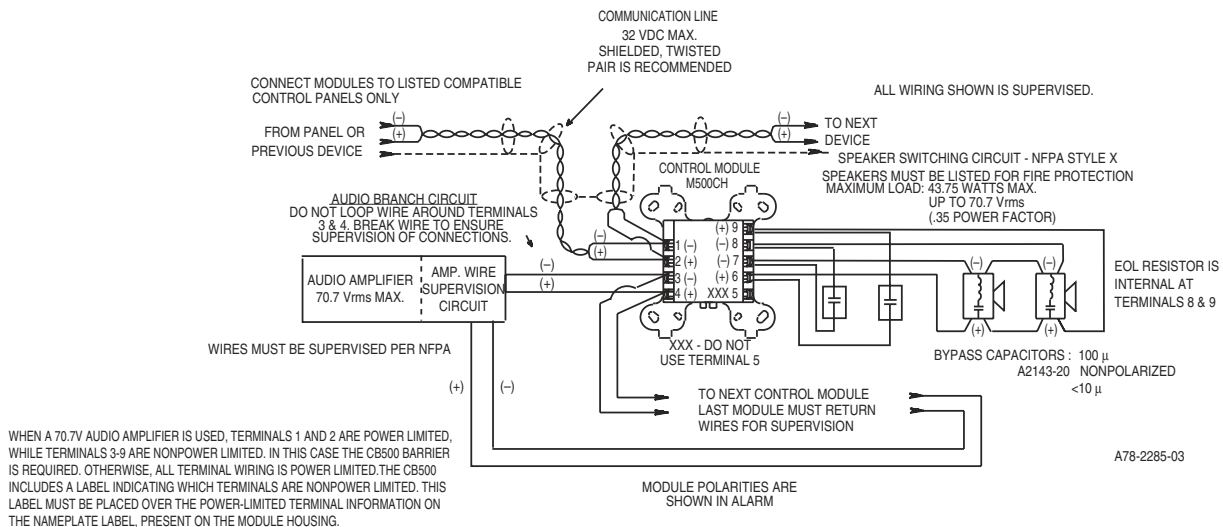
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Figure 7. Typical wiring for speaker supervision and switching, NFPA Style W:



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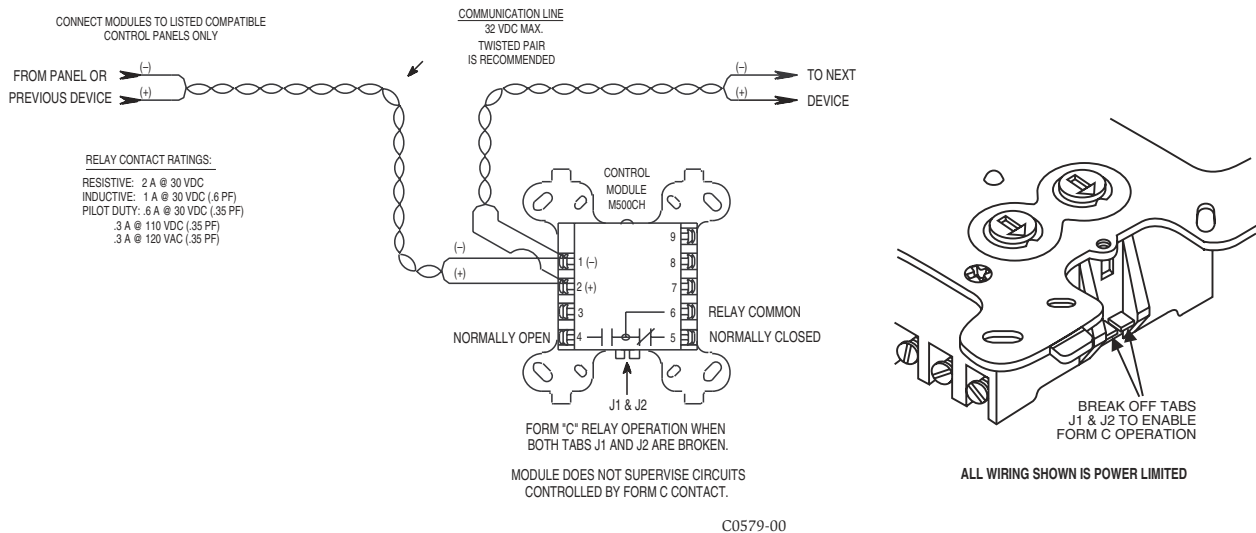
Figure 8. Typical fault tolerant wiring for speaker supervision and switching, NFPA Style X:



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Figure 9. Control module in relay output mode:



WARNING

Control Module switch contacts are shipped in the standby state (open). Contacts may have transferred to the activated state (closed) during shipping.

The module utilizes a mechanical latching-type relay that can change states due to shock or jarring. The control panel controls this relay with "STANDBY" and "ALARM" control commands. To insure that the switch contacts are in the standby state, control modules must be made to communicate with the panel before connecting circuits controlled by the module.