M300(A) MONITOR MODULE, C304(A) CONTROL MODULE, AND I300(A) FAULT ISOLATOR MODULE INSTALLATION INSTRUCTIONS

This information is included as a quick reference installation guide. Refer to the appropriate Fire-Lite 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

M300(A) 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. Rotary decade switches are used to set the address of each module.

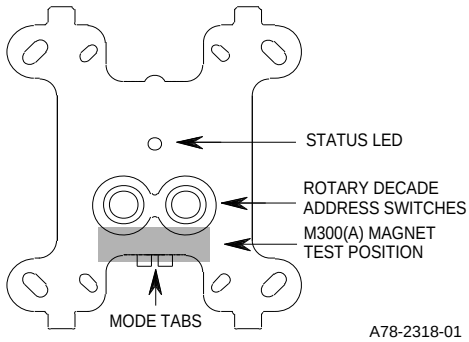

Figure 1. Montior and Control Module Conrols and Indicators

C304(A) CONTROL MODULES allow a compatible control panel to switch discrete contacts by code command. The control module offers 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.

I300(A) FAULT ISOLATOR MODULES enable part of the communications loop to continue operating when a short circuit occurs on it. An LED indicator blinks in the normal condition and turns on during a short circuit condition. The module will automatically restore the entire communications loop to the normal condition when the short circuit is removed. (The isolator module does not have decade switches.)

COMPATIBILITY REQUIREMENTS

To insure proper operation, these modules must be connected to addressable, listed compatible Fire-Lite control panels only.

MOUNTING M300(A), C304(A), AND I300(A) DEVICES

M300(A), C304(A), and I300(A) modules mount directly to 4 inch square electrical boxes as shown in Figure 2A. The box must have a min. 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 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"x$2^1/_8$" 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 - 10).
2. Set the address on the M300 and C304 per job drawings. Record this address and loop on the front of the module, if desired.
3. Secure module to electrical box (supplied by installer), as shown in Figure 2A.

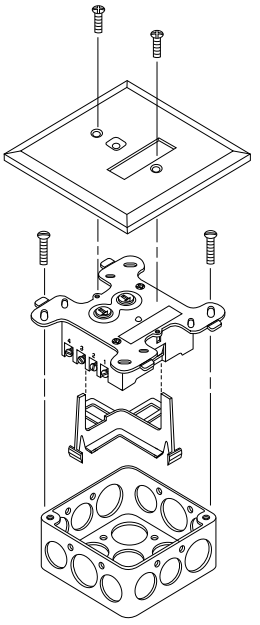

Figure 2A. Module Mounting with Barrier

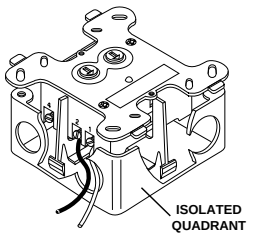

Figure 2B.

M300(A) MAGNET TEST

The M300(A) Monitor module can be tested with Fire-Lite's M02-04-01 Test Magnet (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.

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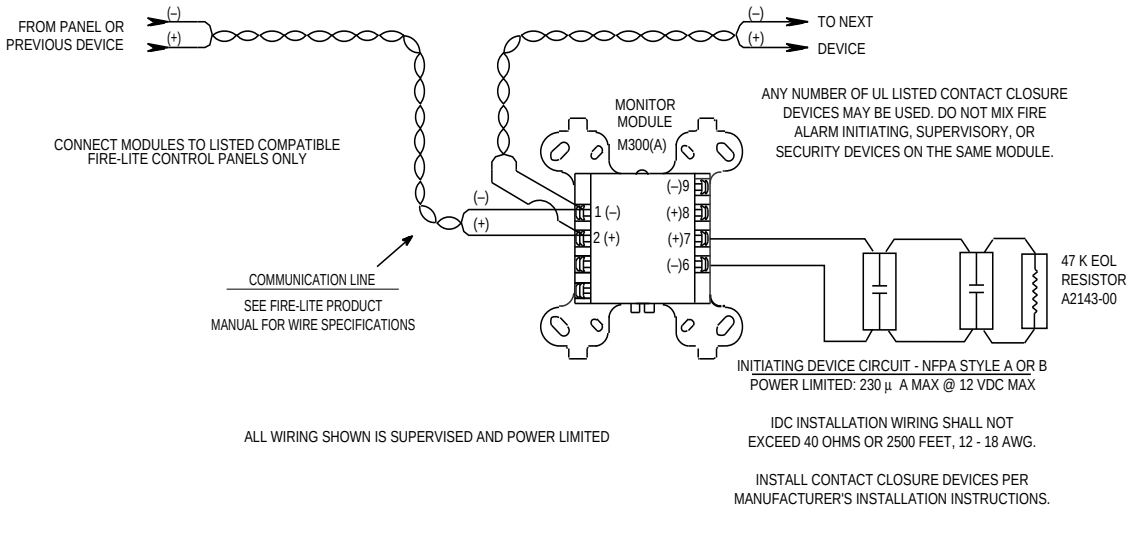


FIGURE 3. TYPICAL M300 2-WIRE INITIATING CIRCUIT CONFIGURATION, NFPA STYLE A OR B

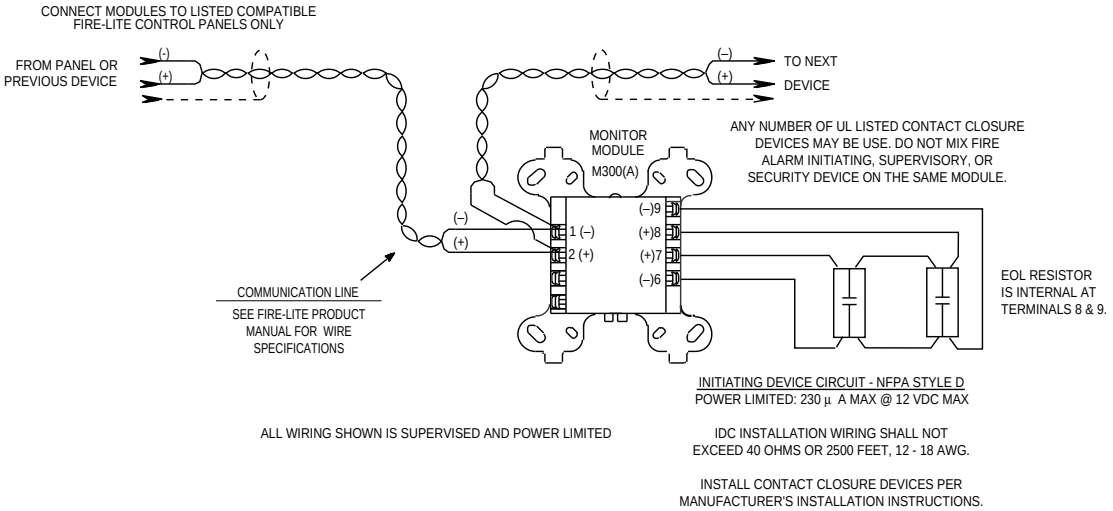


FIGURE 4. TYPICAL M300 FAULT TOLERANT INITIATING CIRCUIT CONFIGURATION, NFPA STYLE D

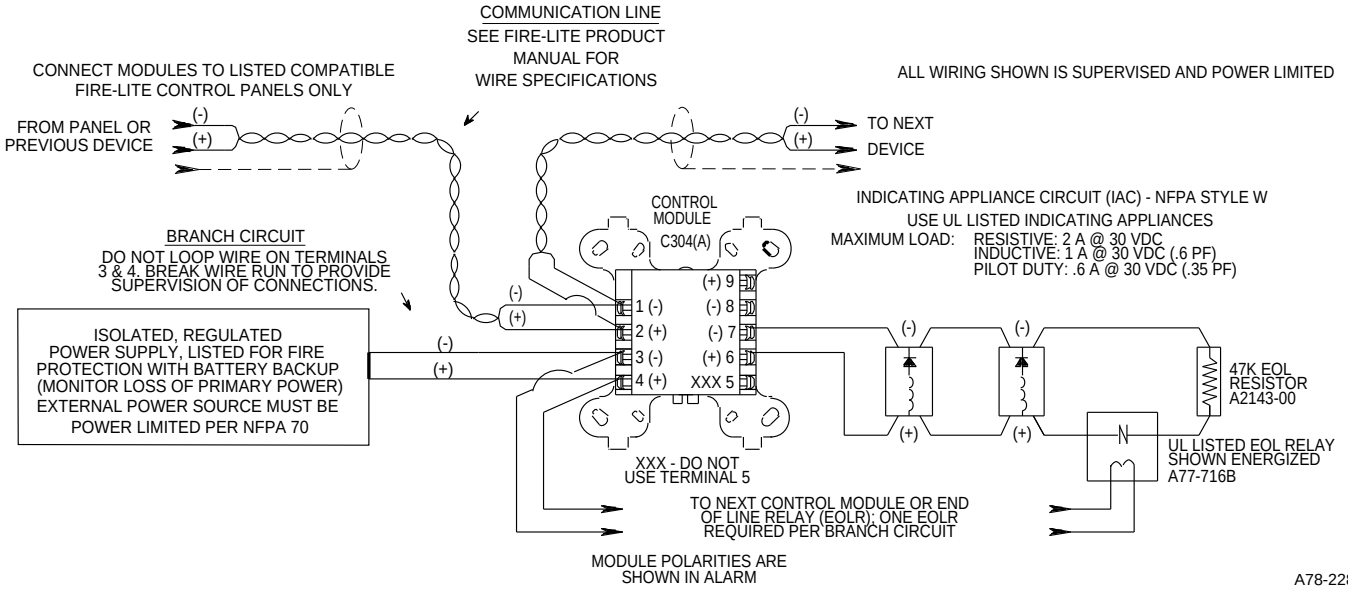
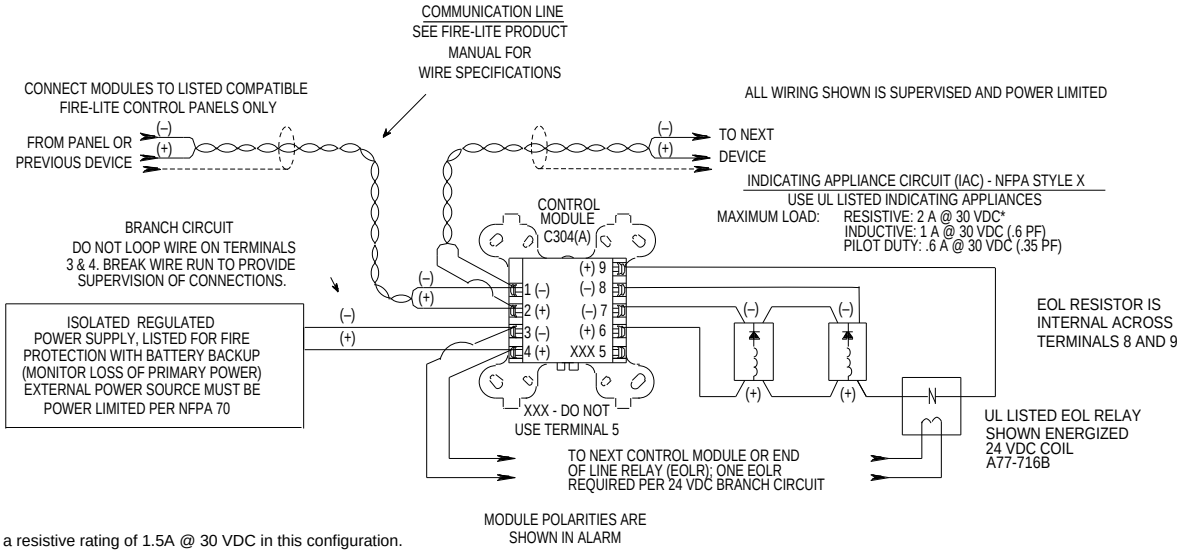


FIGURE 5. TYPICAL C304 INDICATING CIRCUIT CONFIGURATION, NFPA STYLE W



*Canadian models have a resistive rating of 1.5A @ 30 VDC in this configuration.

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FIGURE 6. TYPICAL C304 FAULT TOLERANT INDICATING CIRCUIT CONFIGURATION, NFPA STYLE X

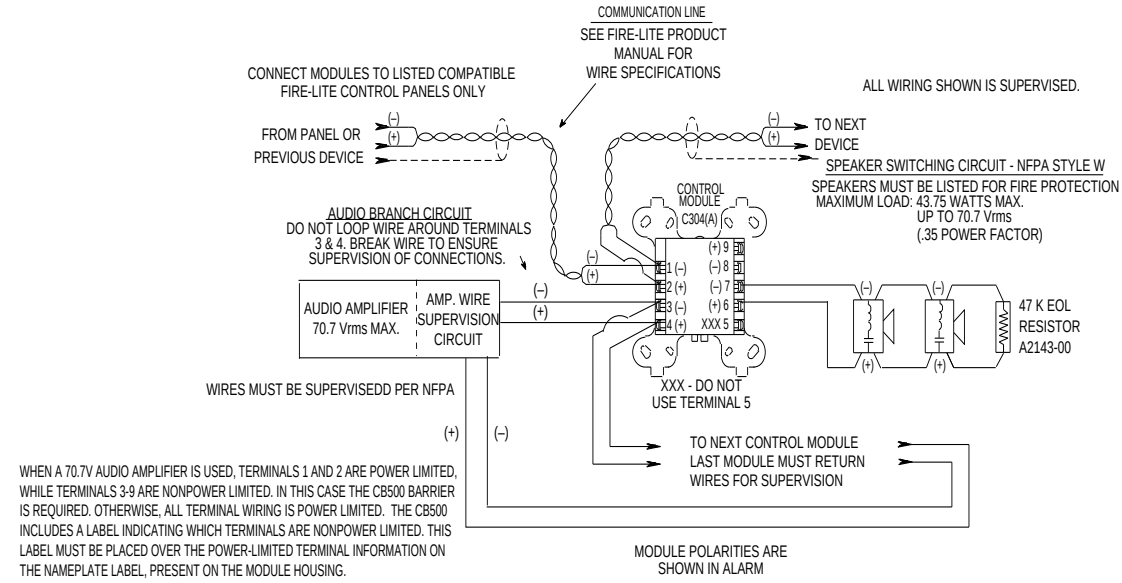

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FIGURE 7. TYPICAL C304 WIRING FOR SPEAKER SUPERVISION AND SWITCHING, NFPA STYLE W

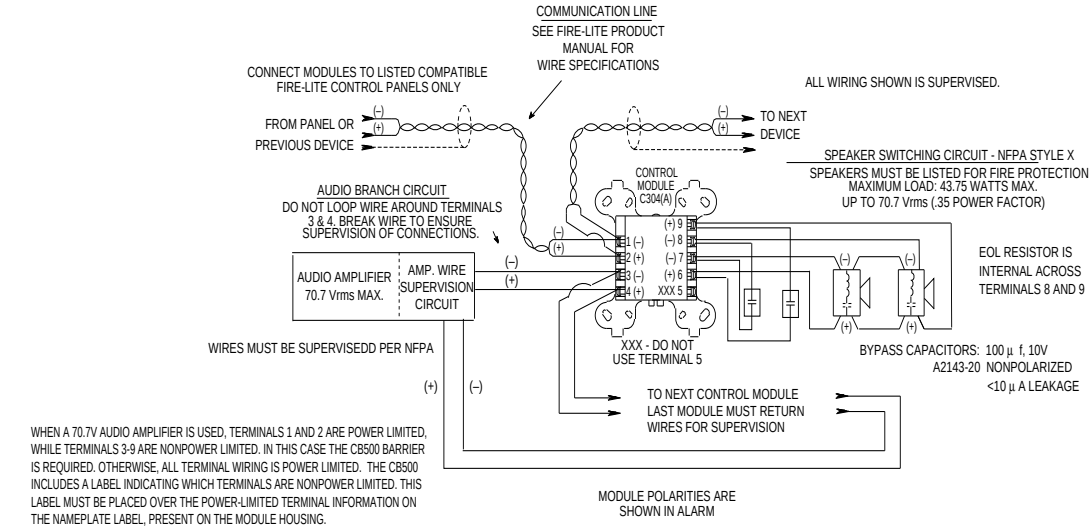

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FIGURE 8. TYPICAL C304 FAULT TOLERANT WIRING FOR SPEAKER SUPERVISION AND SWITCHING, NFPA STYLE X

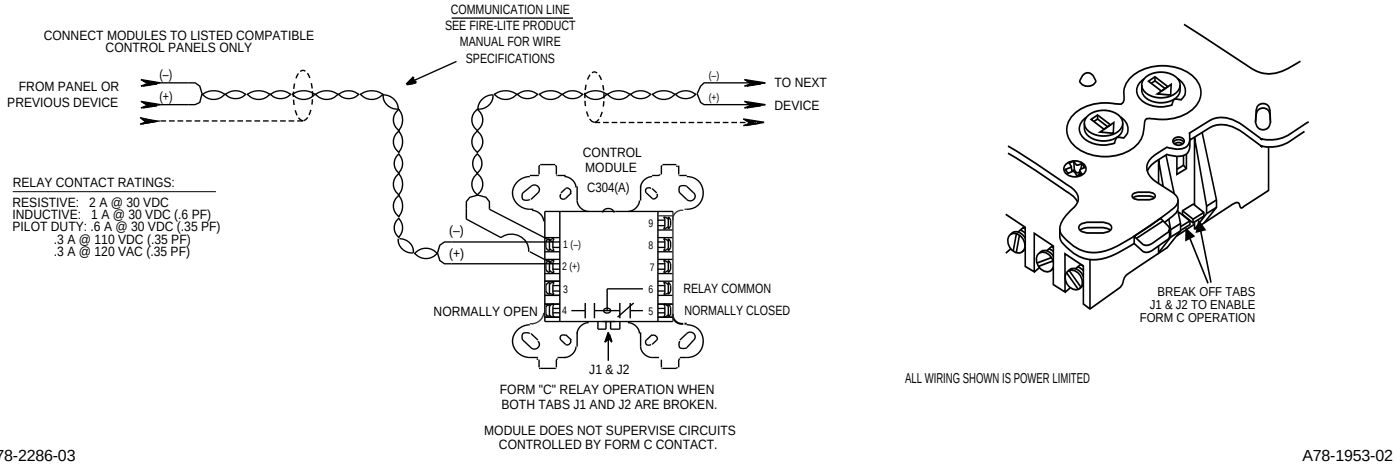

FIGURE 9. C304 CONTROL MODULE IN RELAY OUTPUT MODE

INSTALLATION WARNINGS AND NOTES

Control and isolator modules use a latching relay that can change states if it is subjected to mechanical shocks or jarring. As a result, although modules are shipped with their relays in the open state, the contacts may have closed during shipment. Connecting an auxiliary control circuit to closed relay contacts in a control module can cause an unexpected, and possibly dangerous, activation of that circuit. Therefore, do NOT connect an auxiliary control circuit to the relay contacts before ensuring that they are in their open (standby) state. Make sure that the contacts are open by allowing the control panel to poll the module at least once, as indicated when the LED blinks.

If the contacts of several isolator modules are closed when system power is initially applied, it increases the load on upstream modules, causing their relays to open. This prevents the proper application of power to the entire system. To correct this, connect a temporary jumper between terminals 2 and 3 on all isolator modules whose LEDs are continuously lit OR interrupt the signal line circuit after the last open isolator. The panel must delay communications for at least one minute after power is applied to allow all system devices to power up past the 7 volt threshold.

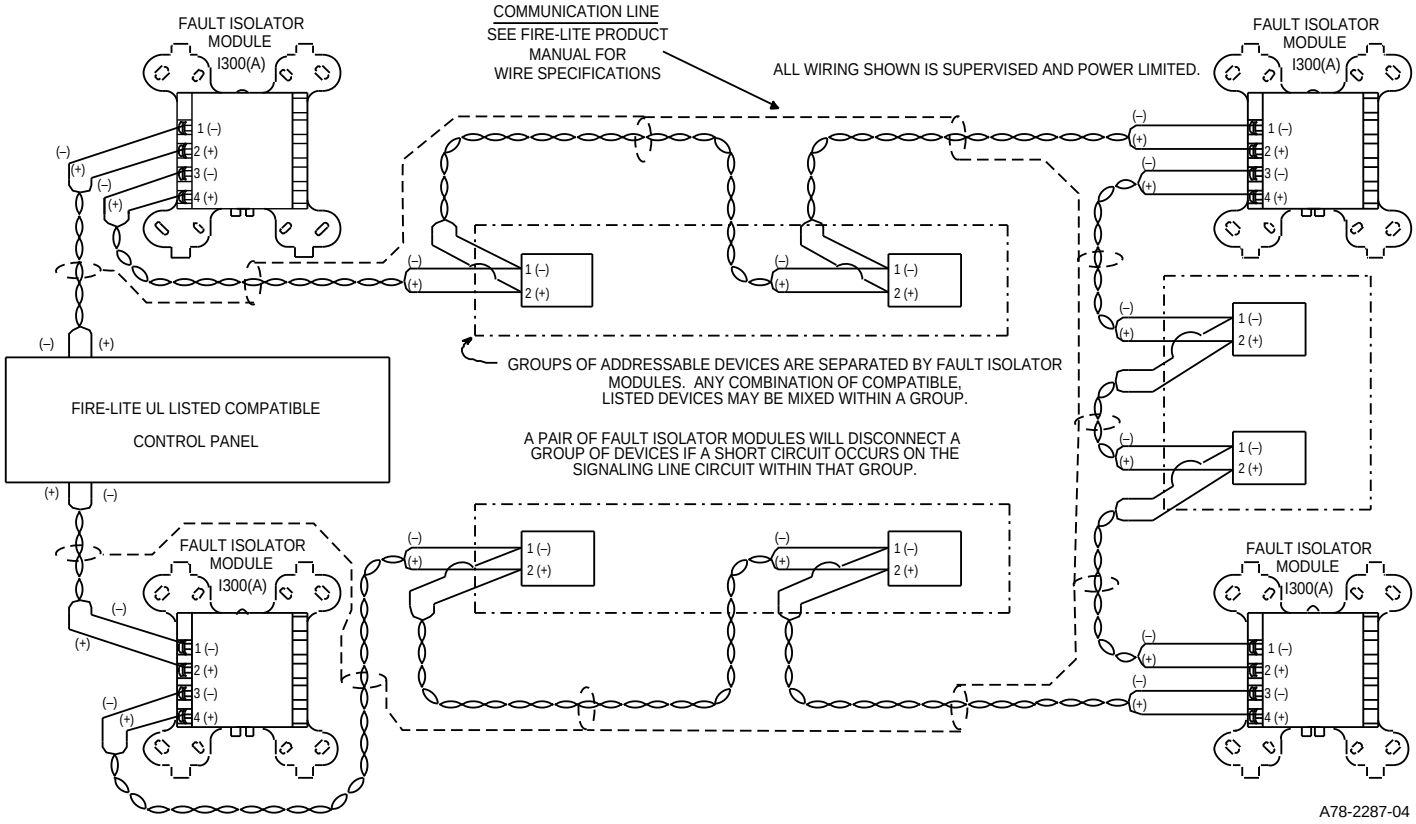

FIGURE 10. I300 FAULT ISOLATOR MODULE WIRING