NOTIFIER® by Honeywell

12 Clintonville Road
Northford, CT 06472-1653
Phone: 203.484.7161

FCM-1 Supervised Control Module

SPECIFICATIONS

Normal Operating Voltage: 15 to 32 VDC
Maximum Current Draw: 6.5 mA (LED on)
Average Operating Current: 375µA (LED flashing - in group poll mode) 350µA (LED flashing - in direct poll mode); 485µA Max. (LED flashing, NAC shorted)
Maximum NAC Line Loss: 4 VDC
External Supply Voltage (between Terminals T10 and T11)
Maximum (NAC): Regulated 24 VDC
Maximum (Speakers): 70.7 V RMS, 50 W
Drain on External Supply: 1.7 mA Maximum using 24 VDC supply; 2.2 mA Maximum using 80 VRMS supply
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: 4.675" 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 (102 mm) by 2⅛" (54 mm) deep box.
Accessories: SMB500 Series Electrical Box; CB500 Barrier

POWER INPUT/OUTPUT RATINGS

CURRENT RATING	MAXIMUM VOLTAGE	LOAD DESCRIPTION	APPLICATION
2 A	25 VAC	PF = 0.35	Non-coded
3 A	30 VDC	Resistive	Non-coded
2 A	30 VDC	Resistive, NAC, and Door Holder	Coded
0.46 A	30 VDC	(L/R = 20ms)	Non-coded
0.7 A	70.7 VAC	PF = 0.35	Non-coded
0.9 A	125 VDC	Resistive	Non-coded
0.5 A	125 VAC	PF = 0.75	Non-coded
0.3 A	125 VAC	PF = 0.35	Non-coded

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

FCM-1 Supervised 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 switch an external power supply, which can be a listed, regulated, supervised, power-limited DC power supply or an audio amplifier (up to 80 VRMS), to notification appliances. It also supervises the wiring to the connected loads and reports their status to the panel as NORMAL, OPEN, or SHORT CIRCUIT. The FCM-1 has two pairs of output termination points available for fault-tolerant wiring and a panel-controlled LED indicator. This module can be used to replace a CMX-2module that has been configured for supervised wiring operation.

COMPATIBILITY REQUIREMENTS

To ensure proper operation, this module shall be connected to a compatible Notifier system control panels only (list available from Notifier).

MOUNTING

The FCM-1 mounts directly to 4-inch square electrical boxes. (See Figure 2A.) The box must have a minimum depth of 2⅛ inches (54 mm). Surface mounted electrical boxes (SMB500 Series) are available. The module can also mount to the DNR(W) duct housing.

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 into a 4" × 4" × 2⅛" (102 mm × 102 mm × 54 mm) junction box, and the control module must be placed into the barrier and attached to the junction box. (See Figure 2A.) The power-limited wiring must be placed into the isolated quadrant of the module barrier. (See Figure 2B.)

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

Wire should be stripped to the appropriate length (recommended strip length is ¼" to ⅜") (6 mm to 10 mm). Exposed conductor should be secured under the clamping plate and should not protrude beyond the terminal block area.

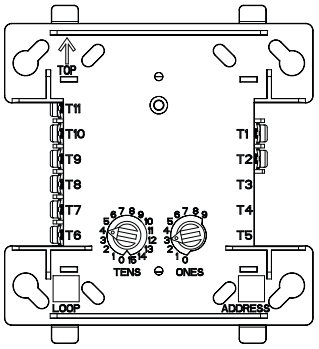
CAUTION: Do not loop wire under terminals. Break wire run to provide supervision of connections.

IMPORTANT: When using the FCM-1 for audio applications, remove Jumper (J1) and discard. The Jumper is located on the back as shown in Figure 1B.

J1 must be removed whenever power supply monitoring feature is not required.

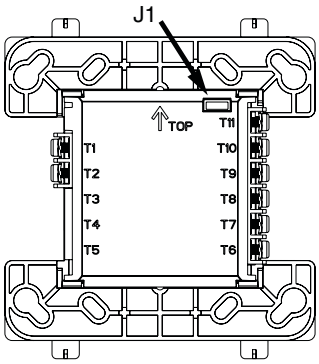
NOTE: All references to power limited represent "Power Limited (Class 2)". All references to Class A also include Class X.

FIGURE 1A. CONTROLS AND INDICATORS



C1059-00

FIGURE 1B. JUMPER LOCATION



C0910-00

FIGURE 2A. MODULE MOUNTING WITH BARRIER

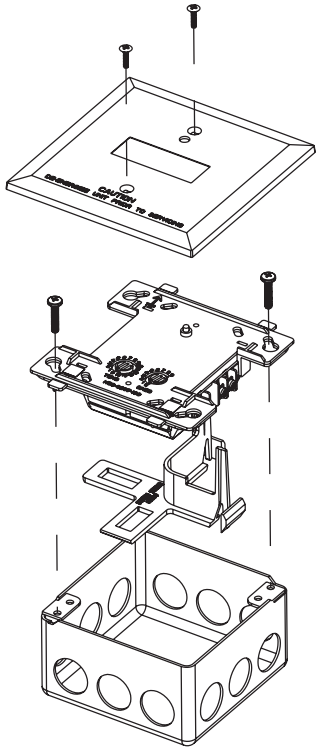
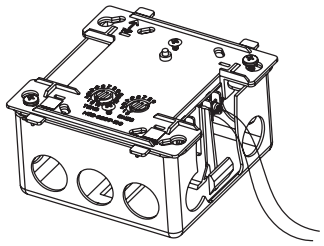
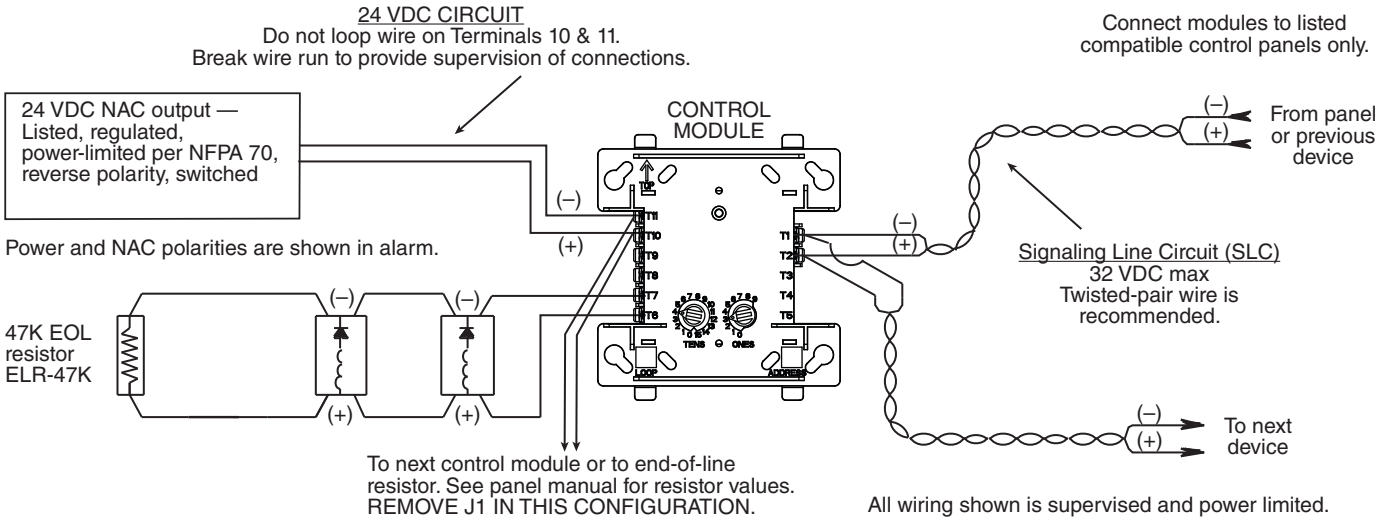


FIGURE 2B



C1070-00

FIGURE 3. TYPICAL NOTIFICATION APPLIANCE CIRCUIT CONFIGURATION, NFPA CLASS B

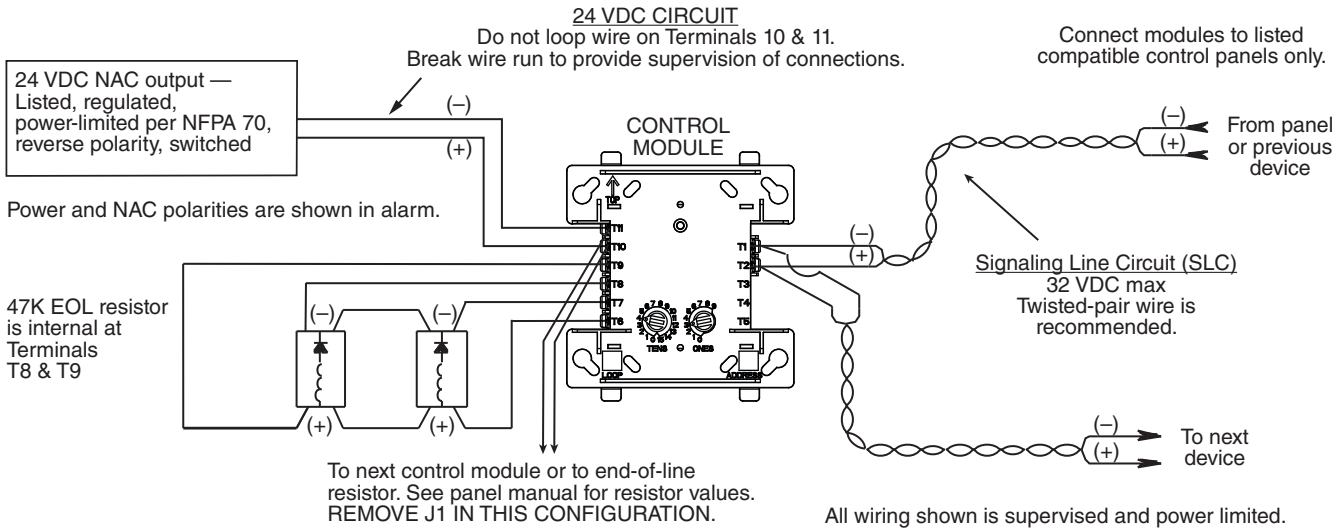


NOTE 1: Any fault on Terminals T7 and T8 is limited to that zone and does not result in a fault on another zone when multiple control modules are interconnected.

NOTE 2: For multiple control modules to serve more than one notification zone, 24 VDC reverse polarity NAC output wiring to T10 & T11 must be within 20ft in conduit, and wiring of T10 and T11 between control modules must be mechanically protected.

C1017-01

FIGURE 4. TYPICAL FAULT TOLERANT NOTIFICATION APPLIANCE CIRCUIT CONFIGURATION, NFPA CLASS A



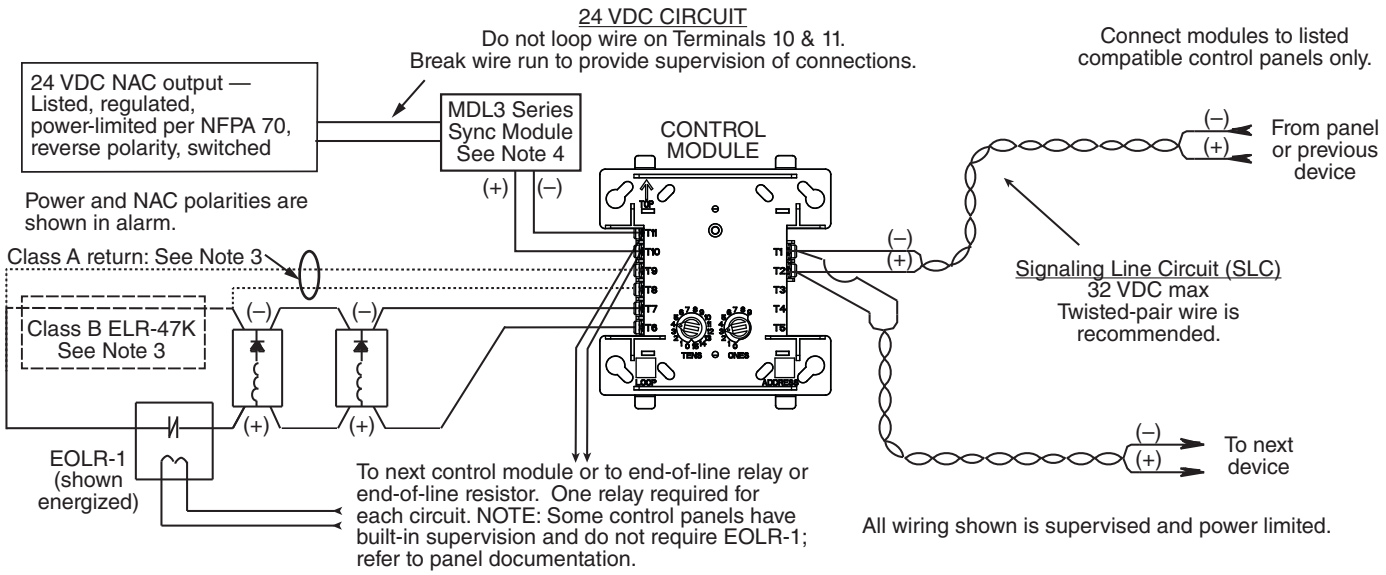
NOTE 1: Any fault on Terminals T7 and T8 is limited to that zone and does not result in a fault on another zone when multiple control modules are interconnected.

NOTE 2: For multiple control modules to serve more than one notification zone, 24 VDC reverse polarity NAC output wiring to T10 & T11 must be within 20ft in conduit, and wiring of T10 and T11 between control modules must be mechanically protected.

NOTE 3: EOLR-1 is required on T6&T7 if host FACP/power supply does not support supervision of control module.

C1018-01

FIGURE 5 TYPICAL NAC WIRING TO MDL3 SERIES SYNC MODULE, NFPA 72 CLASS B/CLASS A



NOTE 1: Any fault on Terminals T7 and T8 is limited to that zone and does not result in a fault on another zone when multiple control modules are interconnected.

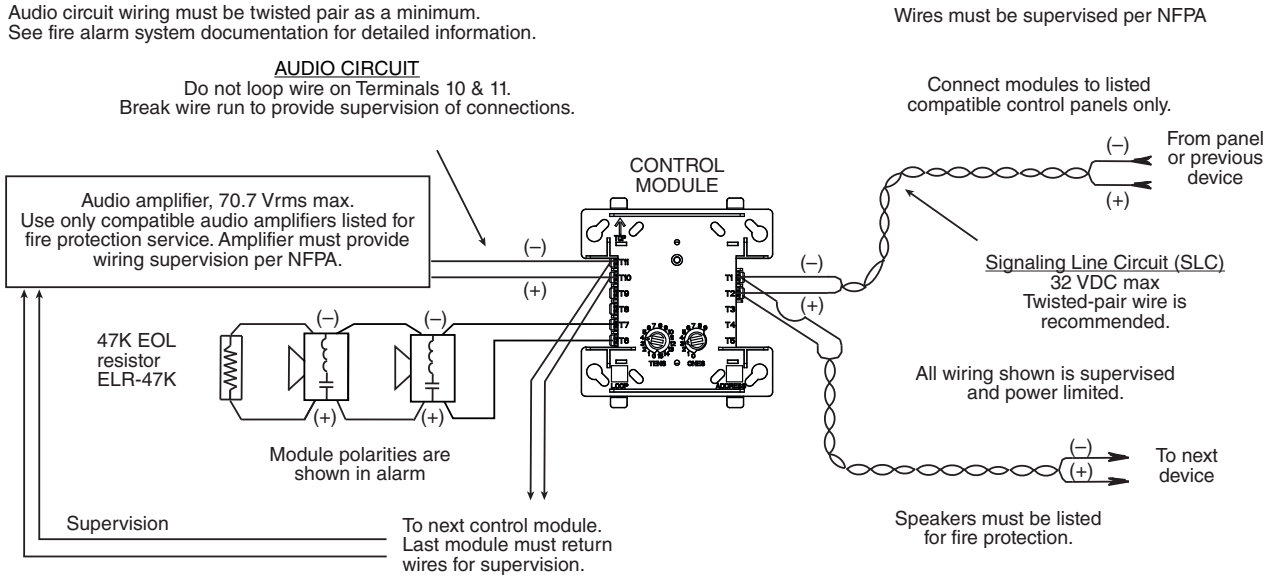
NOTE 2: For multiple control modules to serve more than one notification zone, 24 VDC reverse polarity NAC output wiring to T10 & T11 must be within 20ft in conduit, and wiring of T10 and T11 between control modules must be mechanically protected.

NOTE 3: CLASS B: Install a 47k EOL resistor and do not loop wires back to T8/T9.
CLASS A: Do not install EOL-47K; resistor is internal at Terminals T8 & T9.

NOTE 4: MDL3 not required if FACP NAC is listed to produce the System Sensor Synchronization Protocol

C2242-04

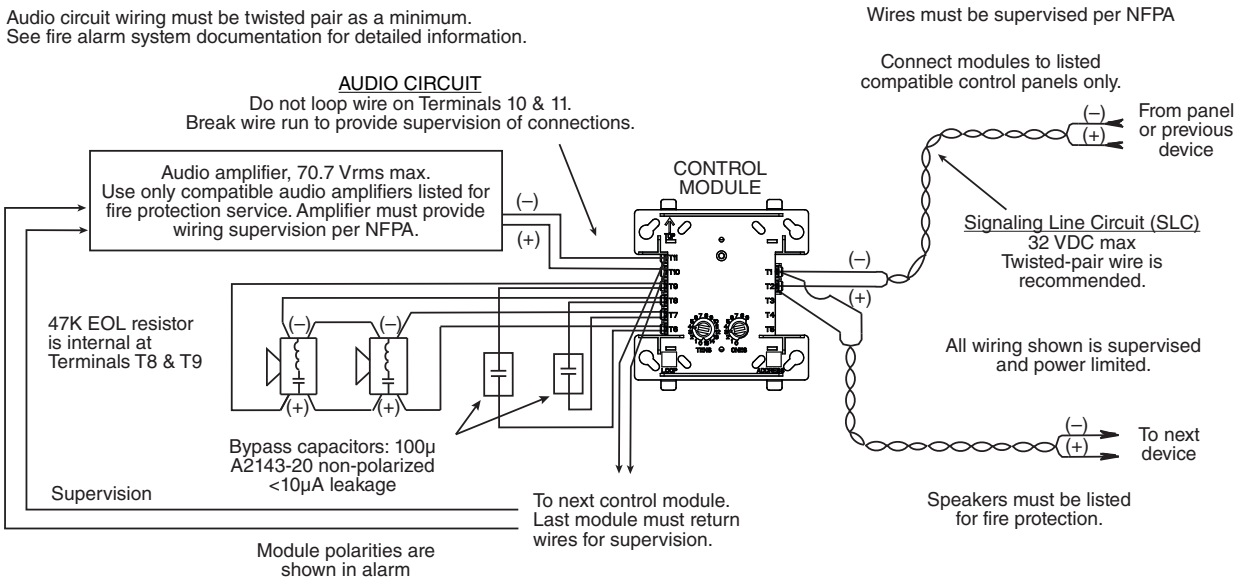
FIGURE 6. TYPICAL WIRING FOR SPEAKER SUPERVISION AND SWITCHING, NFPA CLASS B



NOTE: Any fault on Terminals T7 and T8 is limited to that zone and does not result in a fault on another zone when multiple control modules are interconnected.

C1016-02

FIGURE 7. TYPICAL FAULT TOLERANT WIRING FOR SPEAKER SUPERVISION AND SWITCHING, NFPA CLASS A



NOTE: Any fault on Terminals T7 and T8 is limited to that zone and does not result in a fault on another zone when multiple control modules are interconnected.

C1024-03

⚠WARNING

All relay switch contacts are shipped in the standby state (open) state, but may have transferred to the activated (closed) state during shipping. To ensure that the switch contacts are in their correct state, modules must be made to communicate with the panel before connecting circuits controlled by the module.