

# CMF-300 Control Module

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**SPECIFICATIONS**

Normal Operating Voltage: 15 to 32VDC  
 Maximum Current Draw: 6.5 mA (LED on)  
 Average Operating Current: 375µA (LED flashing - group poll mode) 350µA (LED flashing - direct poll mode); 485 µA Max. (Communicating, NAC Shorted)  
 Maximum NAC Line Loss: 4 VDC  
 External Supply Voltage (between Terminals T10 and T11)  
     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: 4.675" H x 4.275" W x 1.4" D (Mounts to a 4" square by 2 1/8" deep box.)  
 Accessories: SMB500 Electrical Box; CB500 Barrier

**RELAY CONTACT 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	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**

CMF-300 Supervised Control Modules are intended for use in addressable, 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 DC power supply, 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 CMF-300 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 C304 module that has been configured for supervised wiring operation.

**COMPATIBILITY REQUIREMENTS**

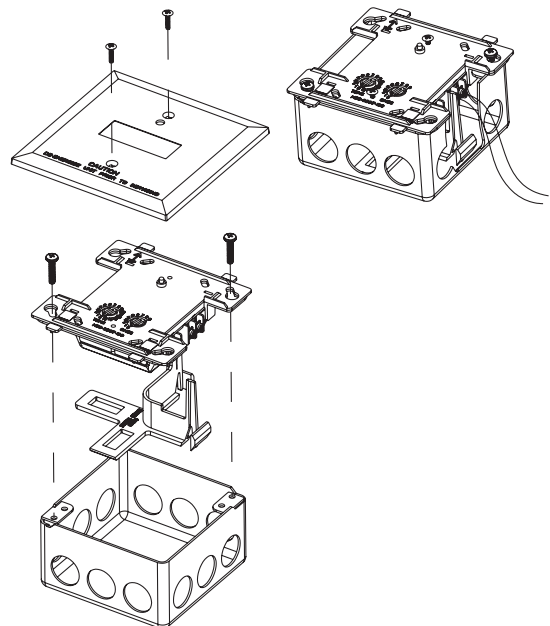
To ensure proper operation, these modules shall be connected to listed compatible system control panels only.

**MOUNTING**

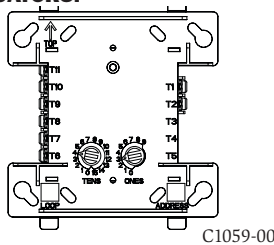
The CMF-300 mounts directly to 4-inch square electrical boxes (see Figure 2A). The box must have a minimum depth of 2 1/8 inches. Surface mounted electrical boxes (SMB500) are available. The module can also mount to the D355PL or DNR(W) duct housing.

**FIGURE 2A. MODULE MOUNTING**

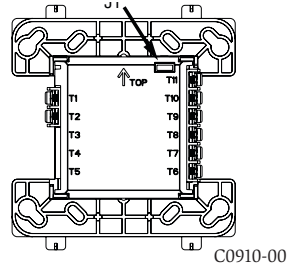
**FIGURE 2B: WITH BARRIER:**



**FIGURE 1A. CONTROLS AND INDICATORS:**



**FIGURE 1B. JUMPER LOCATION**



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**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" x 4" 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.
2. Set the address on the module per job drawings.
3. Secure module to electrical box (supplied by installer), as shown in Figure 2A.

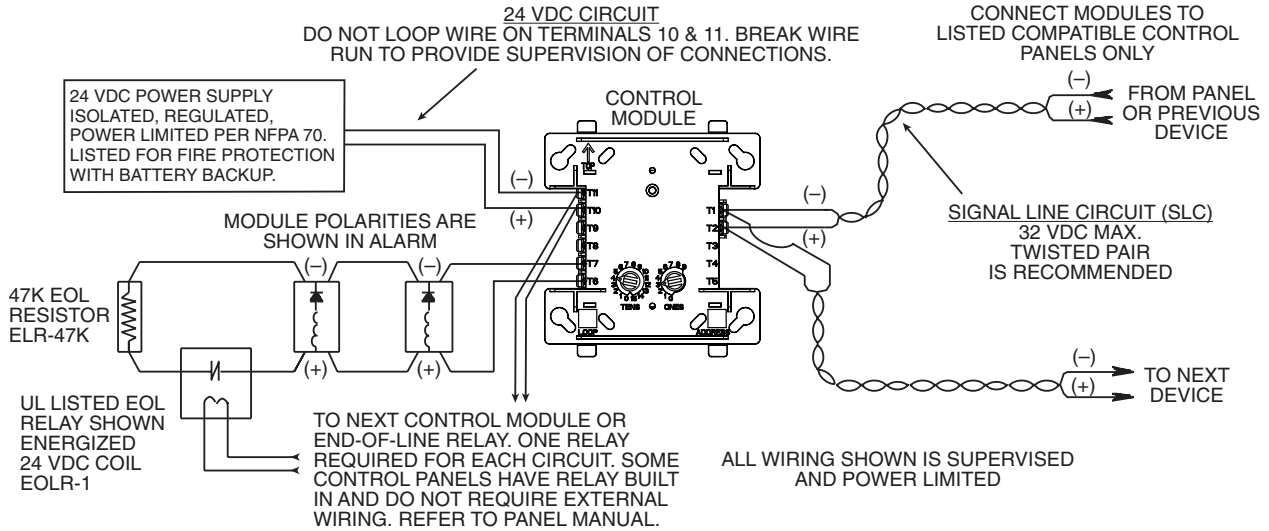
Wire should be stripped to the appropriate length (recommended strip length is 1/4" to 3/8"). Exposed conductor should be secured under the clamping plate and should not protrude beyond the terminal block area. Caution: Do not loop wire under terminals. Break wire run to provide supervision of connections.

**IMPORTANT:** When using the CMF-300 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.

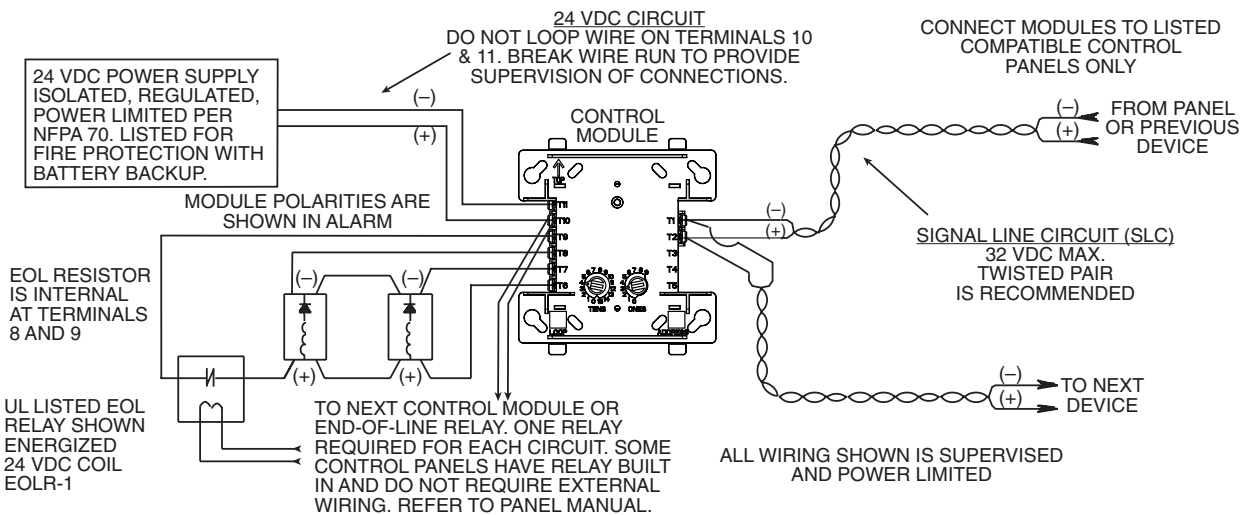
**FIGURE 3. TYPICAL NOTIFICATION APPLIANCE CIRCUIT CONFIGURATION, NFPA STYLE Y (CLASS B):**



\*NOTE: ANY FAULT IN THE POWER SUPPLY IS LIMITED TO THAT ZONE AND DOES NOT RESULT IN A FAULT IN A SEPARATE ZONE.

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**FIGURE 4. TYPICAL FAULT TOLERANT NOTIFICATION APPLIANCE CIRCUIT CONFIGURATION, NFPA STYLE Z (CLASS A):**



\*NOTE: ANY FAULT IN THE POWER SUPPLY IS LIMITED TO THAT ZONE AND DOES NOT RESULT IN A FAULT IN A SEPARATE ZONE.

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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.