

CMF-300-6

Six Circuit Supervised Control Module and SYNC-1 Accessory Card



Addressable Devices

General

FireLite's **CMF-300-6 six-circuit supervised control module** provides intelligent alarm systems with supervised monitoring of wiring to load devices that require an external power supply to operate, such as horns, strobes, or bells. Each module is intended for switching applications involving AC or DC which require wiring supervision. Upon command from the control panel, the CMF-300-6 will disconnect the supervision and connect the external power supply across the load device.

The first module is addressed from 01 to 154 (MS-9600 series only) while the remaining modules are automatically assigned to the next five higher addresses. On an MS-9050UD, MS-9200, or MS-9200UDLS, the addressing would be 01 to 94. Each CMF-300-6 module has terminals for connection to an external supply circuit for powering devices on its notification appliance circuit (NAC). One or multiple power supplies may be used.

NOTE: Provisions are included for disabling a maximum of three unused addresses.

Each CMF-300-6 module features a short-circuit-protection monitor to protect the external power supply against short-circuit conditions on the NAC. When an alarm condition occurs, the relay which connects the external supply to the NAC will not be allowed to close if a short-circuit condition currently exists on the NAC. Additionally, an algorithm is incorporated to find shorts when the module is active. The CMF-300-6 module will close all circuits that are not shorted to find the NAC with the problem.

Each CMF-300-6 module has panel-controlled green LED indicators. The panel can cause the LEDs to blink, latch on, or latch off.

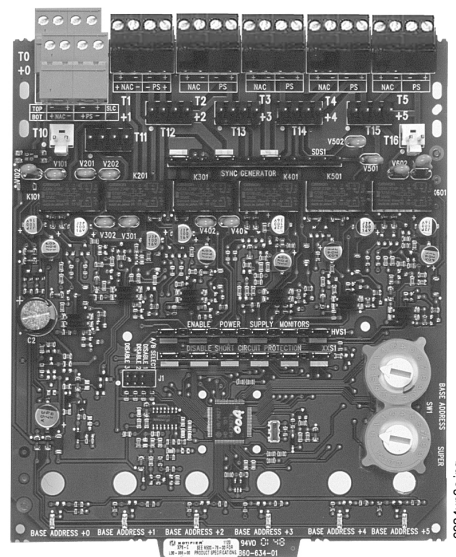
The **SYNC-1 accessory card** provides the CMF-300-6 with additional functionality with compatible System Sensor SpectrAlert® and SpectrAlert Advance® audio/visual devices.

Features

- Six addressable Style B (Class B) or three addressable Style D (Class A) outputs that function as notification appliance circuits.
- Removable 12 AWG (3.31 mm²) to 18 AWG (0.821 mm²) plug-in terminal blocks.
- Status indicators for each point.
- Unused addresses may be disabled.
- Rotary address switches.
- LiteSpeed or CLIP operation.
- Optional SYNC-1 accessory card for SpectrAlert and SpectrAlert Advance devices.
- Mount one or two modules in a BB-2F cabinet (optional).
- Mount up to six modules on a CHS-6 chassis in a BB-6F or BB-25 cabinet (optional).
- Mounting hardware included.

Specifications

Standby current: 2.25 mA (SLC current draw with all addresses used; if some addresses are disabled, the standby current decreases).



Alarm current: 35 mA (assumes all six NACS have been switched once and all six LEDs solid ON).

Temperature range: 32°F to 120°F (0°C to 49°C) for UL applications; -10°C to +55°C for EN54 applications.

Humidity: 10% to 85% noncondensing for UL applications; 10% to 93% noncondensing for EN54 applications.

Dimensions: 6.8" (172.72 mm) high x 5.8" (147.32 mm) wide x 1.25" (31.75 mm) deep.

Shipping weight: 1.1 lb. (0.499 kg) including packaging.

Mounting options: CHS-6 chassis, BB-6F cabinet, BB-25 cabinet, BB-2F cabinet.

Wire gauge: 12 AWG (3.31 mm²) to 18 AWG (0.821 mm²), grounded.

CMF-300-6 is shipped in Class B position; remove shunt for Class A operation.

Maximum SLC wiring resistance: 40 ohms on MS-9600 series, MS-9200UDLS, MS-9050UD, and MS-9200.

Maximum NAC wiring resistance: 40 ohms.

Relay contact ratings: 30 VDC, 110 VAC.

Current ratings:

- 3.0 A @ 30 VDC maximum, resistive, non-coded.
- 2.0 A @ 30 VDC maximum, resistive, coded.
- 1.0 A @ 30 VDC maximum, inductive (L/R = 2 ms), coded.
- 0.5 A @ 30 VDC maximum, inductive (L/R = 5 ms), coded.
- 0.9 A @ 70.7 VAC maximum, resistive, non-coded.
- 0.7 A @ 70.7 VAC maximum, inductive (PF = 0.35), non-coded.

Compatible devices: See the documentation for your panel, and the Fire-Lite Device Compatibility document. Contact Fire-Lite. See also list of devices compatible with SYNC-1 below.

SYNC-1 Accessory Card

The SYNC-1 accessory card is designed to operate with the CMF-300-6. It works with the SpectrAlert and the SpectrAlert Advance series of horns, strobes, and horn/strobes to provide a means of synchronizing the temporal-coded horns; synchronizing the one-second flash timing of the strobe; and silencing the horns of the horn/strobe combination over a two-wire circuit while leaving the strobes active. Each SYNC-1 accessory card is capable of synchronizing six Class B circuits or three Class A circuits.

Maximum load on a loop: 3 A.

Operating temperature: 32°F to 120°F (0°C to 49°C).

Wire size: 12 to 18 AWG (3.31 to 0.821 mm²).

Operating voltage range: 11 to 30 VDC FWR, filtered or unfiltered. Refer to notification appliance installation instructions for number of notification appliances and wire size.

Compatible A/V devices: The SYNC-1 Accessory Card is compatible with all System Sensor SpectrAlert and SpectrAlert Advance Audio Visual Devices that have synchronization capability. Other manufacturers may be supported as well. Please refer to the latest Device Compatibility Document, PN 15384.

NOTE: *SpectrAlert and SpectrAlert Advance products utilizing SYNC-1 module below.

Product Line Information

CMF-300-6: Six-circuit supervised control module.

CMF-300-6A: Same as above with ULC Listing.

SYNC-1: Optional accessory card for synchronization of compatible System Sensor SpectrAlert horns, strobes, and horn/strobes.

BB-2F: Optional cabinet for one or two modules. **Dimensions, DOOR:** 9.234" (23.454 cm) wide (9.484" [24.089 cm] including hinges), x 12.218" (31.0337 cm) high, x 0.672" (1.7068 cm) deep; **BACKBOX:** 9.0" (22.860 cm) wide (9.25" [23.495 cm] including hinges), x 12.0" (30.480 cm) high x 2.75" (6.985 cm); **CHASSIS (installed):** 7.150" (18.161 cm) wide overall x 7.312" (18.5725 cm) high interior overall x 2.156" (5.4762 cm) deep overall.

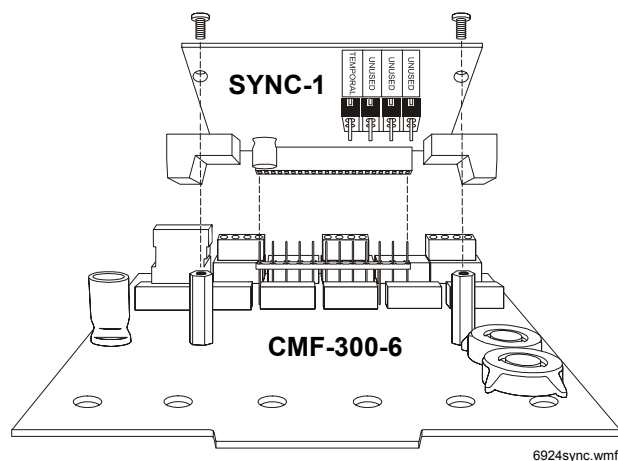
BB-6F: Optional cabinet for up to six modules mounted on CHS-6 chassis (*below*). **Dimensions, DOOR:** 24.0" (60.96 cm) wide x 12.632" (32.0852 cm) high, x 1.25" (3.175 cm) deep, hinged at bottom; **BACKBOX:** 24.0" (60.96 cm) wide x 12.550" (31.877 cm) high x 5.218" (13.2537 cm) deep.

CHS-6: Chassis, mounts up to six modules in the BB-6F cabinet.

Agency Listings and Approvals

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL Listed:** S2424
- **ULC Listed:** S2424
- **MEA Listed:** 55-02-E / 226-03-E (SYNC-1)
- **FM Approved** (Local Protective Signaling)
- **CSFM:** 7300-0075:205 7300-1209:219 (SYNC-1)
- **Maryland State Fire Marshal:** Permit # 2106 (CMF-300-6)



Module setup: Before installing the accessory card on the CMF-300-6 module, add the shunt to the board where indicated if any horns are required to sound in temporal pattern.

Parts included with SYNC-1: Two shunts, four screws, and two standoffs. See installation instructions for details on mounting and wiring the accessory card and module.

Figure 1 Mounting the SYNC-1 accessory card to the CMF-300-6 module

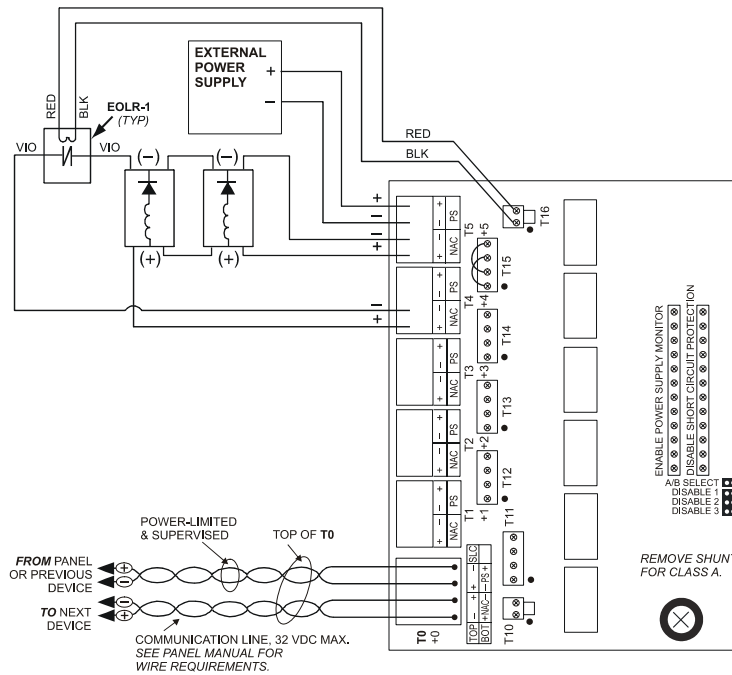


Figure 4 Example of Class A, Style Z NAC configuration with a single supply dedicated to a single NAC

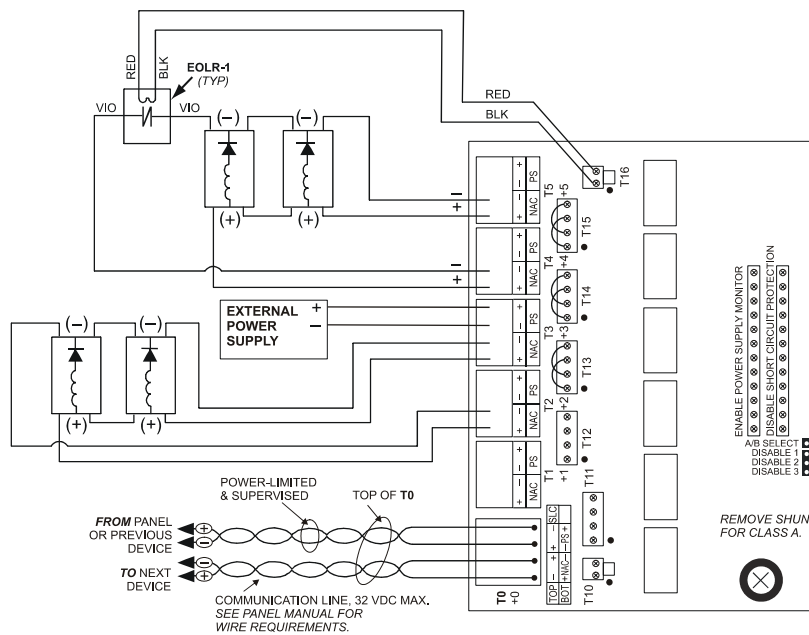
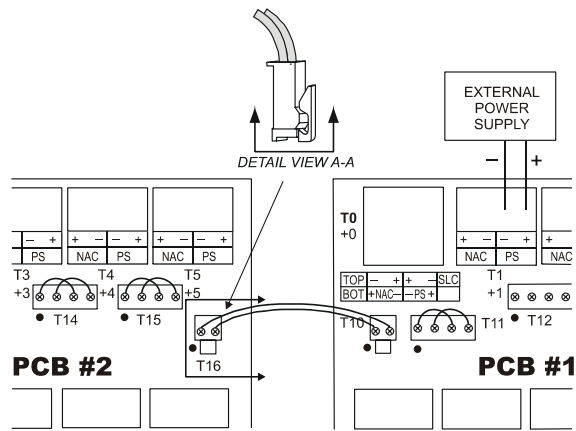


Figure 5 Example of Class A, Style Z NAC configuration with a single supply shared by 2 NACs

6924-wir3.wmf

6924-wir4.wmf



6924wir7.wmf

NOTE: Supply is shared by NACs +0 and +1 (on PCB #1) as well as +3, +4, and +5 (on PCB #2). Refer to Figure 2 through Figure 5 for typical NAC wiring. Make certain that the lip on the long power supply jumper engages the retaining tab on T10 or T16 as shown in detail view A-A.

Figure 6 Example of multiple boards sharing the same external power supply

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