



Field Charger/Power Supply
FCPS-2404

Fire Alarm System Limitations

An automatic fire alarm system—typically made up of smoke detectors, heat detectors, manual pull stations, audible warning devices, and a fire alarm control with remote notification capability—can provide early warning of a developing fire. Such a system, however, does not assure protection against property damage or loss of life resulting from a fire.

The Manufacturer recommends that smoke and/or heat detectors be located throughout a protected premise following the recommendations of the current edition of the National Fire Protection Association Standard 72 (NFPA 72), manufacturer's recommendations, State and local codes, and the recommendations contained in the Guide for Proper Use of System Smoke Detectors, which is made available at no charge to all installing dealers. A study by the Federal Emergency Management Agency (an agency of the United States government) indicated that smoke detectors may not go off in as many as 35% of all fires. While fire alarm systems are designed to provide early warning against fire, they do not guarantee warning or protection against fire. A fire alarm system may not provide timely or adequate warning, or simply may not function, for a variety of reasons:

Smoke detectors may not sense fire where smoke cannot reach the detectors such as in chimneys, in or behind walls, on roofs, or on the other side of closed doors. Smoke detectors also may not sense a fire on another level or floor of a building. A second-floor detector, for example, may not sense a first-floor or basement fire.

Particles of combustion or "smoke" from a developing fire may not reach the sensing chambers of smoke detectors because:

- Barriers such as closed or partially closed doors, walls, or chimneys may inhibit particle or smoke flow.
- Smoke particles may become "cold," stratify, and not reach the ceiling or upper walls where detectors are located.
- Smoke particles may be blown away from detectors by air outlets.
- Smoke detectors may be drawn into air returns before reaching the detector.

The amount of "smoke" present may be insufficient to alarm smoke detectors. Smoke detectors are designed to alarm at various levels of smoke density. If such density levels are not created by a developing fire at the location of detectors, the detectors will not go into alarm.

Smoke detectors, even when working properly, have sensing limitations. Detectors that have photoelectronic sensing chambers tend to detect smoldering fires better than flaming fires, which have little visible smoke. Detectors that have ionizing-type sensing chambers tend to detect fast-flaming fires better than smoldering fires. Because fires develop in different ways and are often unpredictable in their growth, neither type of detector is necessarily best and a given type of detector may not provide adequate warning of a fire.

Smoke detectors cannot be expected to provide adequate warning of fires caused by arson, children playing with matches (especially in bedrooms), smoking in bed, and violent explosions (caused by escaping gas, improper storage of flammable materials, etc.).

While a fire alarm system may lower insurance rates, it is not a substitute for fire insurance!

Heat detectors do not sense particles of combustion and alarm only when heat on their sensors increases at a predetermined rate or reaches a predetermined level. Rate-of-rise heat detectors may be subject to reduced sensitivity over time. For this reason, the rate-of-rise feature of each detector should be tested at least once per year by a qualified fire protection specialist. *Heat detectors are designed to protect property, not life.*

IMPORTANT! Smoke detectors must be installed in the same room as the control panel and in rooms used by the system for the connection of alarm transmission wiring, communications, signaling, and/or power. If detectors are not so located, a developing fire may damage the alarm system, crippling its ability to report a fire.

Audible warning devices such as bells may not alert people if these devices are located on the other side of closed or partly open doors or are located on another floor of a building. Any warning device may fail to alert people with a disability or those who have recently consumed drugs, alcohol or medication. Please note that:

- Strobes can, under certain circumstances, cause seizures in people with conditions such as epilepsy.
- Studies have shown that certain people, even when they hear a fire alarm signal, do not respond or comprehend the meaning of the signal. It is the property owner's responsibility to conduct fire drills and other training exercise to make people aware of fire alarm signals and instruct them on the proper reaction to alarm signals.
- In rare instances, the sounding of a warning device can cause temporary or permanent hearing loss.

A fire alarm system will not operate without any electrical power. If AC power fails, the system will operate from standby batteries only for a specified time and only if the batteries have been properly maintained and replaced regularly.

Equipment used in the system may not be technically compatible with the control. It is essential to use only equipment listed for service with your control panel.

Telephone lines needed to transmit alarm signals from a premise to a central monitoring station may be out of service or temporarily disabled. For added protection against telephone line failure, backup radio transmission systems are recommended.

The most common cause of fire alarm malfunction is inadequate maintenance. To keep the entire fire alarm system in excellent working order, ongoing maintenance is required per the manufacturer's recommendations, and UL and NFPA standards. At a minimum, the requirements of Chapter 7 of NFPA 72 shall be followed. Environments with large amounts of dust, dirt or high air velocity require more frequent maintenance. A maintenance agreement should be arranged through the local manufacturer's representative. Maintenance should be scheduled monthly or as required by National and/or local fire codes and should be performed by authorized professional fire alarm installers only. Adequate written records of all inspections should be kept.

Installation Precautions

WARNING - Several different sources of power can be connected to the fire alarm control panel. Disconnect all sources of power before servicing. Control unit and associated equipment may be damaged by removing and/or inserting cards, modules, or interconnecting cables while the unit is energized. Do not attempt to install, service, or operate this unit until this manual is read and understood.

CAUTION - *System Reacceptance Test after Software Changes.* To ensure proper system operation, this product must be tested in accordance with NFPA 72 Chapter 7 after any programming operation or change in site-specific software. Reacceptance testing is required after any change, addition or deletion of system components, or after any modification, repair or adjustment to system hardware or wiring.

All components, circuits, system operations, or software functions known to be affected by a change must be 100% tested. In addition, to ensure that other operations are not inadvertently affected, at least 10% of initiating devices that are not directly affected by the change, up to a maximum of 50 devices, must also be tested and proper system operation verified.

This system meets NFPA requirements for operation at 0-49° C/32-120° F and at a relative humidity of 85% RH (non-condensing) at 30° C/86° F. However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and all peripherals be installed in an environment with a nominal room temperature of 15-27° C/60-80° F.

Verify that wire sizes are adequate for all initiating and indicating device loops. Most devices cannot tolerate more than a 10% I.R. drop from the specified device voltage.

Adherence to the following will aid in problem-free installation with long-term reliability:

Like all solid state electronic devices, this system may operate erratically or can be damaged when subjected to lightning-induced transients. Although no system is completely immune from lightning transients and interferences, proper grounding will reduce susceptibility. *Overhead or outside aerial wiring is not recommended, due to an increased susceptibility to nearby lightning strikes.* Consult with the Technical Services Department if any problems are anticipated or encountered.

Disconnect AC power and batteries prior to removing or inserting circuit boards. Failure to do so can damage circuits.

Remove all electronic assemblies prior to any drilling, filing, reaming, or punching of the enclosure. When possible, make all cable entries from the sides or rear. Before making modifications, verify that they will not interfere with battery, transformer, and printed circuit board location.

Do not tighten screw terminals more than 9 in-lbs. Over-tightening may damage threads, resulting in reduced terminal contact pressure and difficulty with screw terminal removal.

Though designed to last many years, system components can fail at any time. This system contains static-sensitive components. Always ground yourself with a proper wrist strap before handling any circuits so that static charges are removed from the body. Use static-suppressive packaging to protect electronic assemblies removed from the unit.

Follow the instructions in the installation, operating, and programming manuals. These instructions must be followed to avoid damage to the control panel and associated equipment. FACP operation and reliability depend upon proper installation by authorized personnel.

FCC Warning

WARNING: This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for class A computing device pursuant to Subpart B of Part 15 of FCC Rules, which is designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user will be required to correct the interference at his own expense.

Canadian Requirements

This digital apparatus does not exceed the Class A limits for radiation noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

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Notes

It is imperative that the installer understand the requirements of the Authority Having Jurisdiction (AHJ) and be familiar with the standards set forth by the following regulatory agencies:

- Underwriters Laboratories Standards
- NFPA 72 National Fire Alarm Code

Before proceeding, the installer should be familiar with the following documents.



NFPA Standards

NFPA 72 National Fire Alarm Code
NFPA 70 National Electrical Code



Underwriters Laboratories Documents:

UL 464 Audible Signaling Appliances
UL 864 Standard for Control Units for Fire Protective Signaling Systems
UL 1638 Visual Signaling Appliances
UL 1971 Signaling Devices for Hearing Impaired

Other:

NEC Article 250 Grounding
NEC Article 300 Wiring Methods
NEC Article 760 Fire Protective Signaling Systems
Applicable Local and State Building Codes
Requirements of the Local Authority Having Jurisdiction (LAHJ)

Other Fire•Lite Documents:

Device Compatibility Document Document #15384

SECTION 1

System Overview

The FCPS-2404 is a compact, cost-effective, remote power supply and battery charger. This remote power supply consists of a filtered 24 VDC output that can be used to provide up to 4.0 amps of current to drive one NAC (Notification Appliance Circuit), Style Y (Class B) only. The input circuit, which controls the power supply operation, is triggered by the reverse polarity of an NAC and is compatible with 12 VDC and 24 VDC control panels.

1.1 General

The FCPS-2404 can be used as a remotely mounted power supply and battery charger to power one noncoded or coded NAC. The Main FACP (Fire Alarm Control Panel) NAC is connected to the remote power supply input circuit. When the control input circuit activates due to reverse polarity of the NAC from the FACP, the power supply will activate its Notification Appliance Circuit.

During the inactive or nonalarm state, the host FACP supervises its NAC field wiring and the FCPS-2404 NAC field wiring for short and open conditions. AC fail, battery and charger troubles will also be monitored via the NAC. If an NAC fault is detected, the FACP will generate a trouble condition at the control panel.

If an alarm condition occurs and the NAC is activated, the supervision is disabled and the Notification Appliance Circuit is no longer supervised. Supervision of other power supply faults such as low battery, AC loss and battery charger trouble will continue and may be monitored via the corresponding trouble relay contacts.

Note that a maximum of four FCPS-2404 power supplies can be daisy-chained from the FACP Notification Appliance Circuit. All power supplies and their NACs are supervised by the host FACP.

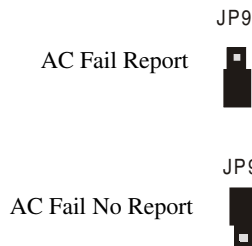
1.2 Features

- Self-contained in a lockable cabinet
- One 24 VDC Style Y (Class B) NAC
- 4.0 amps total of continuous current available
- Output is completely power-limited
- Output is filtered
- One optically-isolated input/control circuit, compatible with 12 VDC and 24 VDC control panel NACs
- Integral supervised battery charger for lead acid or gel type batteries
- Uses only 7.0 AH (Amp Hour) batteries - can be accommodated in the power supply cabinet
- Fully supervised battery and charger
- NAC supervised by host FACP
- External Strobe Synchronization
- Earth fault detection by host FACP
- Fixed terminal blocks for field wiring capable of accepting 12 - 22 AWG wire
- AC fail Form-C relay contacts (fail-safe)
- Battery/Charger trouble Form-C relay contacts (fail-safe)
- Optional hardware kit #90273 to be used when installing addressable or synchronization modules

1.3 Jumpers

1.3.1 Jumper JP9 - AC Loss Reporting Delay

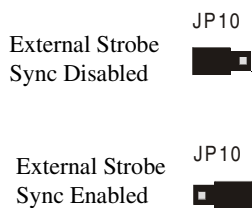
Jumper JP9 is used to configure the power supply to operate with an FACP which is capable of delaying AC loss reporting. It is important to note that the FCPS-2404 is not capable of delaying AC loss reporting on its own. This jumper determines whether or not the FCPS-2404 will include AC fail in trouble signals to the NAC.



- When the host FACP is configured to not delay AC loss reporting, the jumper on JP9 must either be completely removed or positioned as shown in the illustration to the left (factory default setting)
- When the host FACP is configured to delay AC loss reporting, the jumper on JP9 must be positioned as shown in the illustration to the left

Refer to Figure 1.1 on page 11 for location and orientation of jumper JP9.

1.3.2 Jumper JP10 - Strobe Sync Enable



Notification appliances, connected to multiple FCPS-2404 power supplies, can be synchronized by using a UL listed synchronization module. When employing synchronization, Jumper JP10 which is located near the center of the main circuit board, must be positioned for External Strobe Sync Enable by positioning the jumper so that the right two pins are connected. Refer to the appropriate synchronization module documentation for information on wiring the module.

1.4 LED Indicators

- AC power on (green) LED
- Battery/Charger trouble (yellow) LED

1.5 Specifications

Primary AC Power - TB1

- 120 VAC, 50/60 Hz, 1.45 amps maximum
- Wire size: minimum #14 AWG with 600V insulation

Control Input Circuit - TB3, Terminals 1 (+) & 2 (-) alarm polarity

- Trigger Input Voltage: 9 to 32 VDC
- Input Current Draw in Alarm Polarity:
 - ✓ 16 to 32 volts, 10 mA maximum
 - ✓ 9 to 16 volts, 4 mA maximum

Important: Do not use shielded wire for Control Input Circuit.

NAC Output Circuit - TB3, Terminals 3 (+) and 4 (-) alarm polarity

- Voltage Rating: 24 VDC
- Current: 4.0 amps maximum total continuous current
- Style Y (Class B) - requires End-of-Line Resistor from circuit connected to input
- Refer to Fire•Lite Device Compatibility Document for listed compatible devices

Important: Do not use shielded wire for NAC Output Circuit.

AC Fail Relay Contact Rating - TB6

- Fail-safe relay (normally energized, transfers with loss of power)
- 1.0 amps @ 30 VDC

Battery/Charger Trouble Relay Contact Rating - TB5

- Fail-safe relay (normally energized, transfers with loss of power)
- 1.0 amps @ 30 VDC

Secondary Power (battery) Charging Circuit

- Support lead acid and gel type batteries only
- Float Charge Voltage: 27.6 VDC
- Maximum Charge Current: 750 mA
- Maximum Battery Capacity: use only 7.0 AH batteries
- FCPS-2404 draws maximum standby current of 40 mA from batteries (includes End-of-Line Relay current if installed)

Auxiliary Power Connector - P3

- Used for powering modules inside cabinet, such as control modules
- Voltage Rating: 24 VDC
- Current: 30 mA maximum

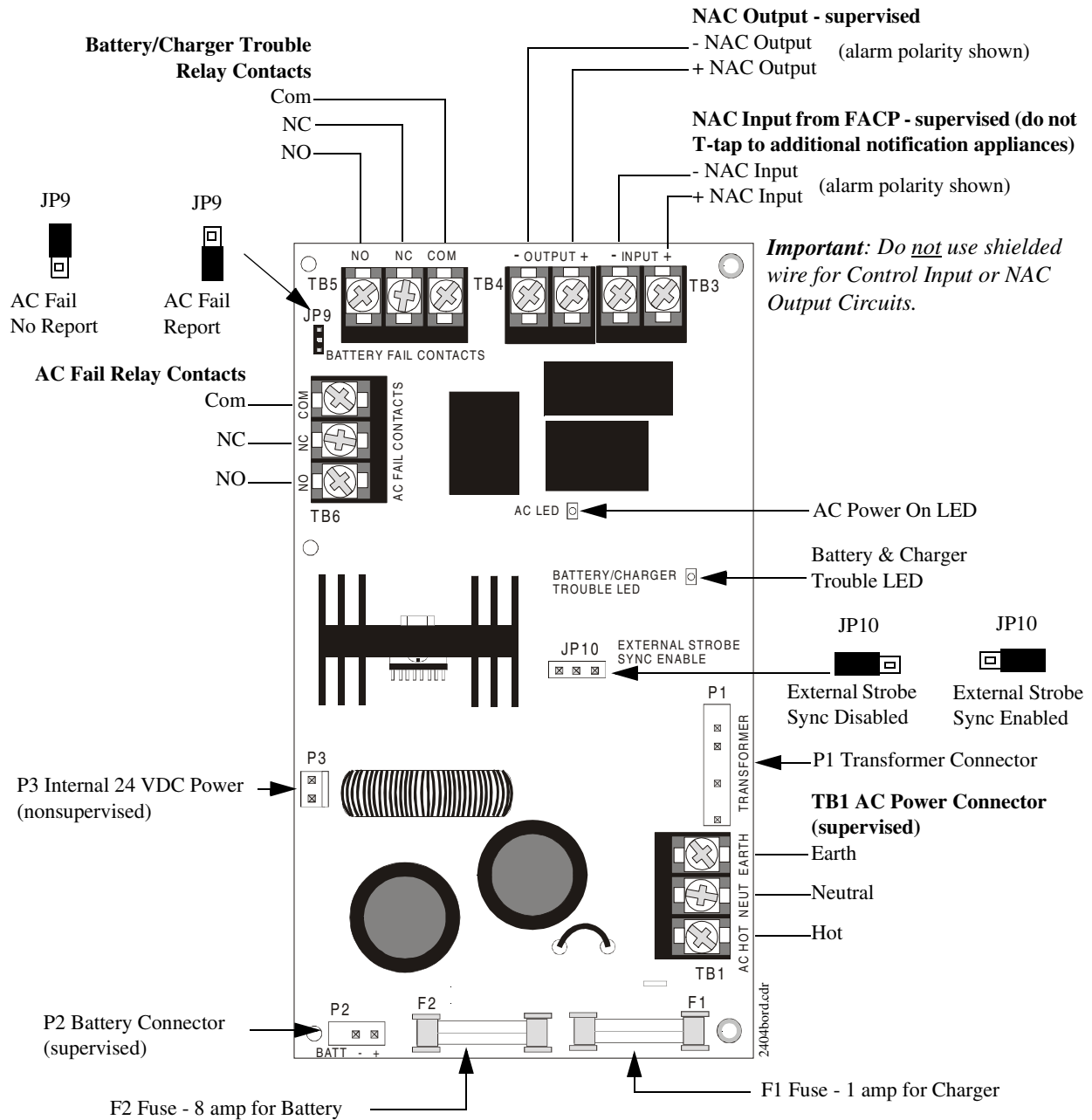


Figure 1.1 FCPS-2404 Board Layout

SECTION 2 Installation

Carefully unpack the system and check for shipping damage. Select a location for the cabinet that is in a clean, dry, vibration-free area where extreme temperatures are not encountered. The area should be readily accessible with sufficient room to easily install and maintain the power supply. Locate the top of the cabinet approximately five feet above the floor with the hinge mounting on the left.

Determine the number of conductors required for the devices to be installed and determine the appropriate knockouts. All wiring must be in accordance with the National and/or Local codes for fire alarm systems and power supplies.

2.1 Backbox Mounting

1. Mark and predrill holes for the top two keyhole mounting bolts
2. Install two upper fasteners in the wall with the screw heads protruding approximately 1/4"
3. Using the upper keyholes, mount the backbox over the two screws
4. Mark the lower two holes, remove the backbox from the wall and drill the mounting holes
5. Mount the backbox, install the remaining fasteners and tighten all screws

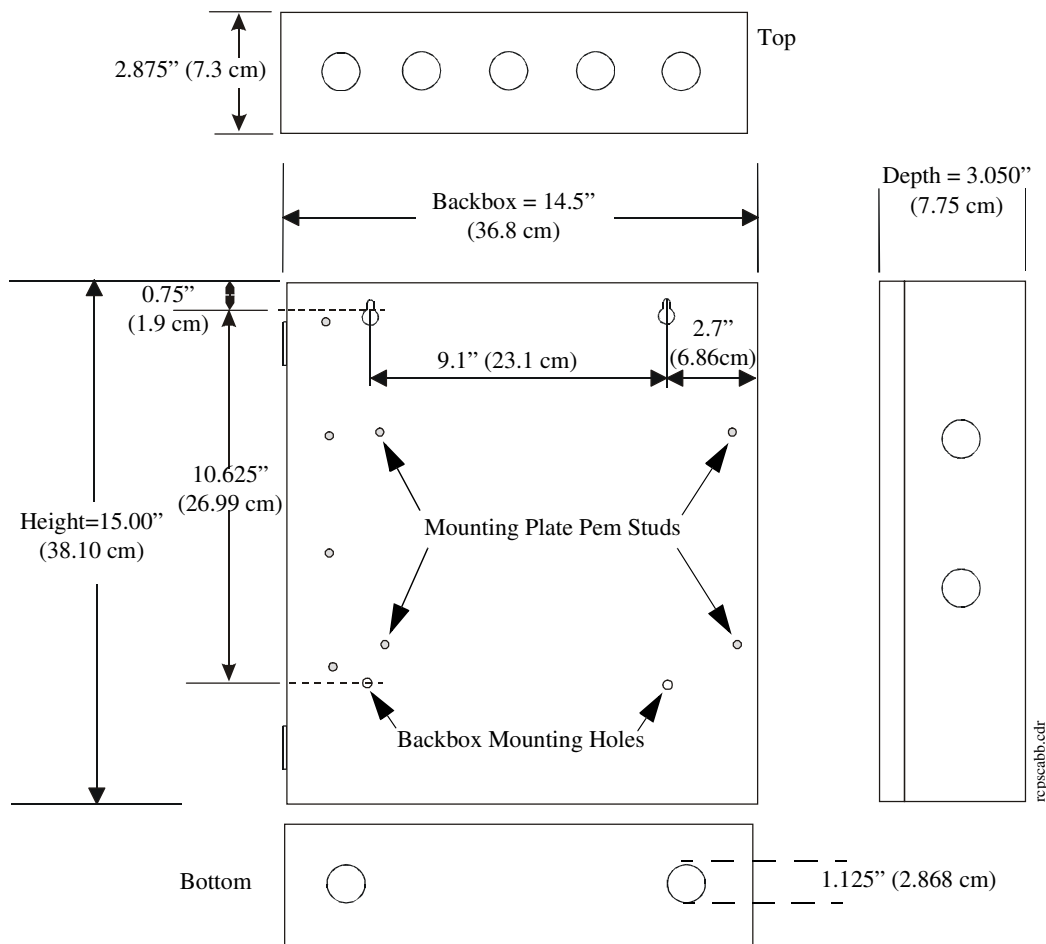


Figure 2.1 Backbox Mounting Dimensions

2.2 Mounting Plate

A Mounting Plate is installed in the backbox with the FCPS-2404 Power Supply board and transformer premounted and space for optional modules such as addressable control modules and UL listed synchronization modules which mount to the pem studs. Note that optional kit #90273, which must be ordered separately, contains a power cable assembly and hardware for mounting two control modules or one control module and one UL listed synchronization module on the Mounting Plate. The hardware includes standoffs #4-40 x 1.00" for mounting a synchronization module and standoffs #4-40 x 1.50" for mounting control modules.

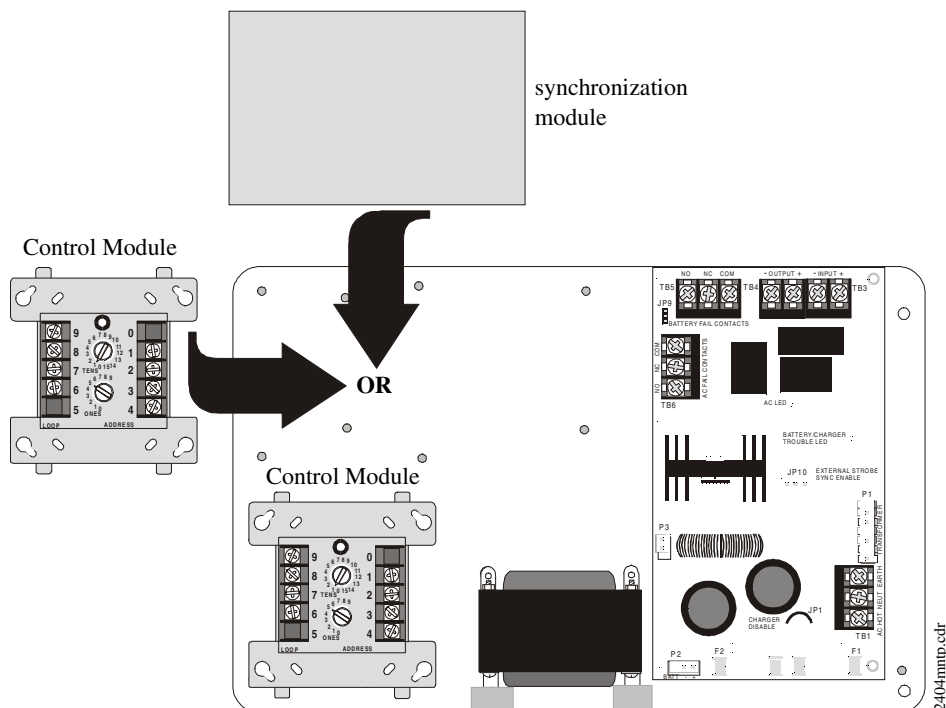
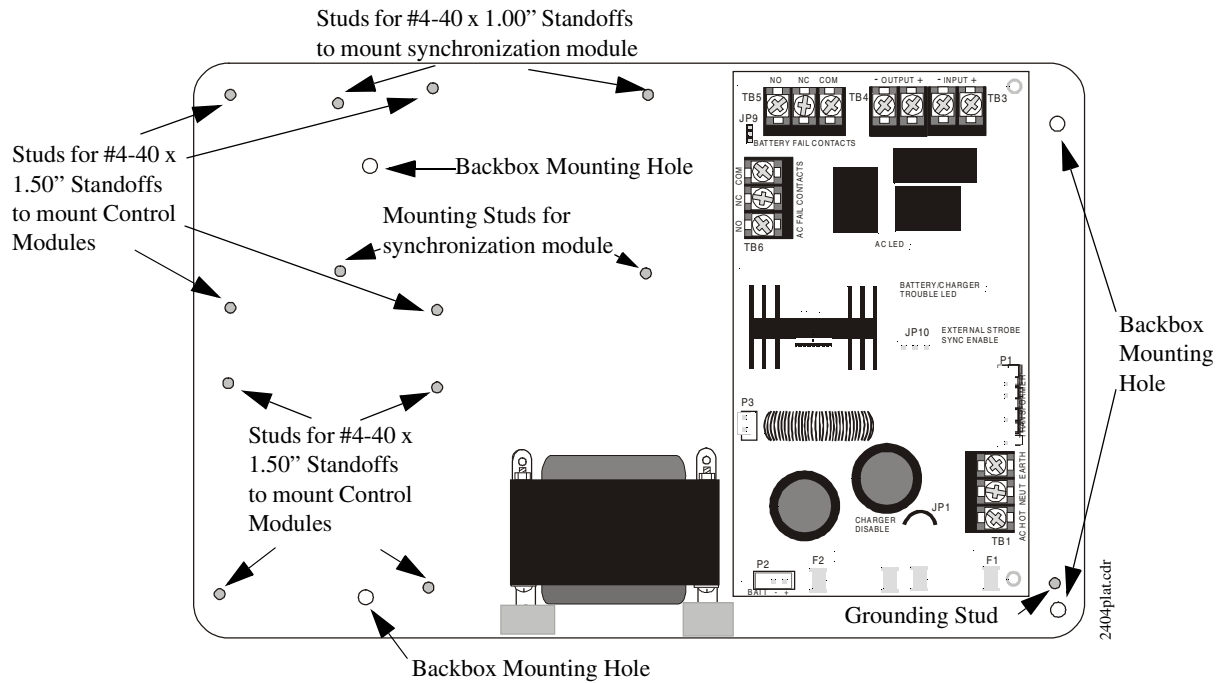


Figure 2.2 FCPS-2404 Mounting Plate

2.3 UL Power-limited Wiring Requirements

Power-limited and nonpower-limited circuit wiring must remain separated in the cabinet. All power-limited circuit wiring must remain at least 0.25” away from any nonpower-limited circuit wiring. Furthermore, all power-limited circuit wiring and nonpower-limited circuit wiring must enter and exit the cabinet through different conduits. One such example of this is shown below. Your specific application may require different conduit knockouts to be used. Any conduit knockouts may be used. For power-limited applications, use of conduit is optional.

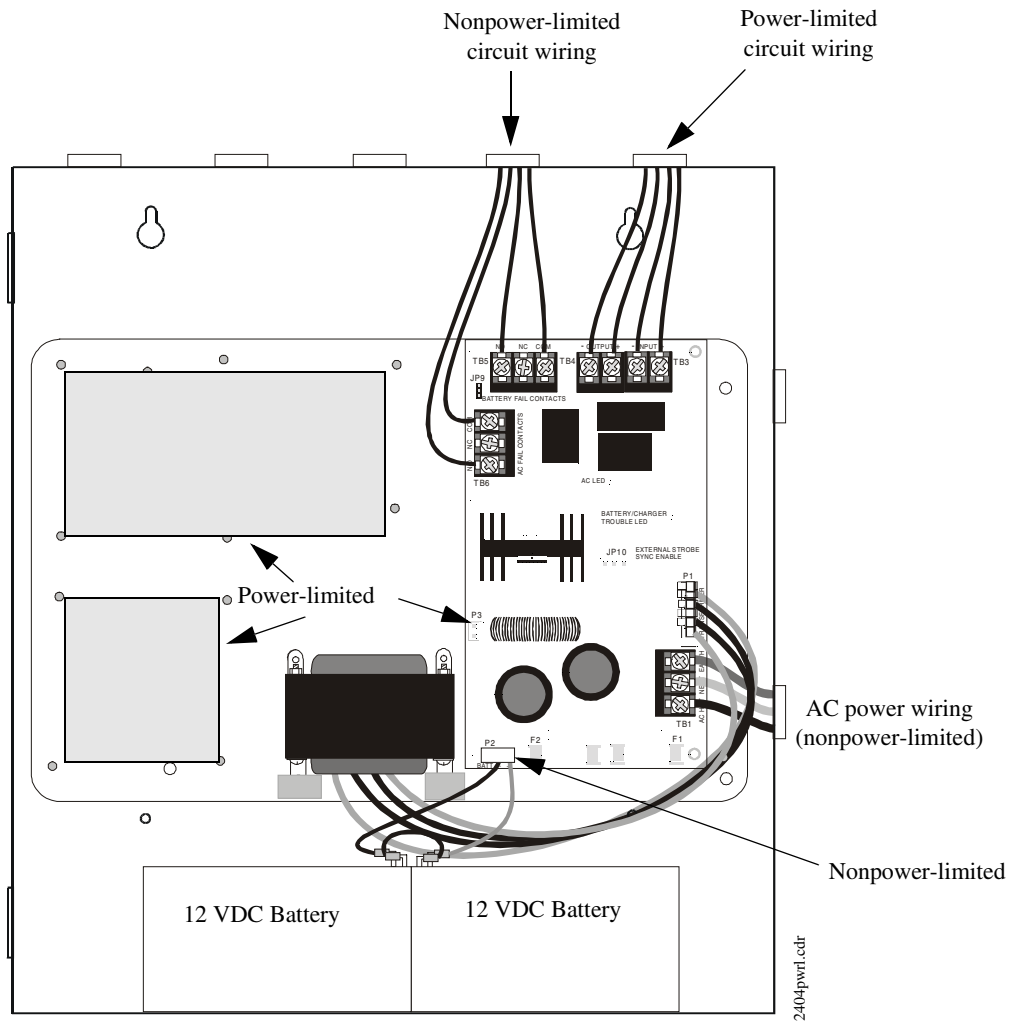


Figure 2.3 Power-limited Wiring Example

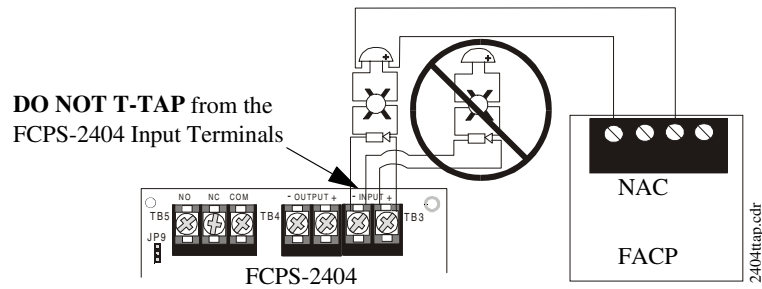
SECTION 3 Operation and Applications

3.1 Trouble Supervision

3.1.1 Supervision of FACP to FCPS-2404 Wiring

The FACP (Fire Alarm Control Panel) supervises the connection between itself and the FCPS-2404 via the control panels NAC End-of-Line Resistor (ELR). The ELR must be installed after the last notification appliance on the power supply NAC Output terminals. An open or short anywhere on the control panel’s NAC or power supply NAC will be detected at the FACP as an NAC trouble.

IMPORTANT: Do not T-tap (no parallel connections) from the FCPS-2404 Input Terminals to any additional devices.



3.1.2 Supervision of FCPS-2404 Faults

The FACP will detect power supply faults as an open circuit condition on its NAC. Any of the following conditions will cause an internal trouble contact on the power supply to open provided the FACP Notification Appliance Circuit is not in alarm. The following trouble conditions will cause a general NAC trouble:

- A field wiring fault on the NAC output of the power supply
- An AC fail condition at the power supply
- A battery fail condition at the power supply
- A battery charger fail on the power supply

Any power supply trouble will break the connection between the FACP and the ELR provided the FACP’s NAC is not in alarm. The FACP’s ELR must be placed after the last notification appliance connected to FCPS-2404 Out + and - terminals on TB4.

3.1.3 Multiple FCPS-2404 Power Supplies

Note that multiple FCPS-2404 power supplies may be daisy-chained in series with a single FACP Notification Appliance Circuit. In a configuration like this, the ELR is placed after the last notification appliance of the last FCPS in the daisy-chain. All power supplies and their circuits will be supervised by the FACP’s Notification Appliance Circuit.

3.1.4 Trouble Relays

The FCPS-2404 power supply has two Form-C trouble relays:

- Battery and/or charger trouble relay will transfer on low or no battery conditions and on battery charger fail. This relay may be monitored by a control panel input circuit or addressable monitor module when specific trouble indications for these conditions are required
- AC power loss relay transfers when the AC power is lost or drops too low. This relay may be monitored by a control panel input circuit or addressable monitor module when specific trouble indications for these conditions are required

3.1.5 AC Loss Reporting Delay

The reporting of AC loss to a central station is usually delayed in order to prevent multiple transmissions of AC loss and restoral, thus allowing AC power to stabilize. When a host FACP is programmed to delay AC loss reporting, the FCPS-2404 must be configured to prevent a general NAC trouble when AC fails. This is accomplished by moving the JP9 AC Fail jumper from the factory default position to the AC Fail No Report position as described on page 9. This will prevent AC loss from being reported as a general trouble via the NAC which is connected from the host FACP.

Note that the AC Fail relay is not affected by jumper JP9. The relay will transfer whenever AC power is lost.

In the event that an immediate indication of AC loss is required at a control panel programmed for AC loss reporting delay, the FCPS-2404 can be monitored in one of the following ways:

- Connect the primary AC power from a single AC mains circuit breaker to both the host FACP and FCPS-2404 power supply. In this way, AC loss for both the control panel and power supply is monitored by the control panel, which will give an immediate indication when AC power fails
- When an addressable FACP is the host panel, an addressable monitor module connected to the control panel's SLC can be used to monitor the normally closed AC Fail trouble contacts at TB6 of the FCPS-2404. Upon AC loss at the power supply, the AC Fail normally closed trouble contacts will open, causing the monitor module to detect a trouble
- Refer to the SLC manual for information on wiring a monitor module and the appropriate control panel manual for information on programming the monitor module.

3.2 Controlling One FCPS-2404 with FACP NAC

The FCPS output circuit can be controlled by an FACP Notification Appliance Circuit. The End-of-Line Resistor from the control panel's NAC must be installed after the last device on the power supply NAC as illustrated in Figure 3.1.

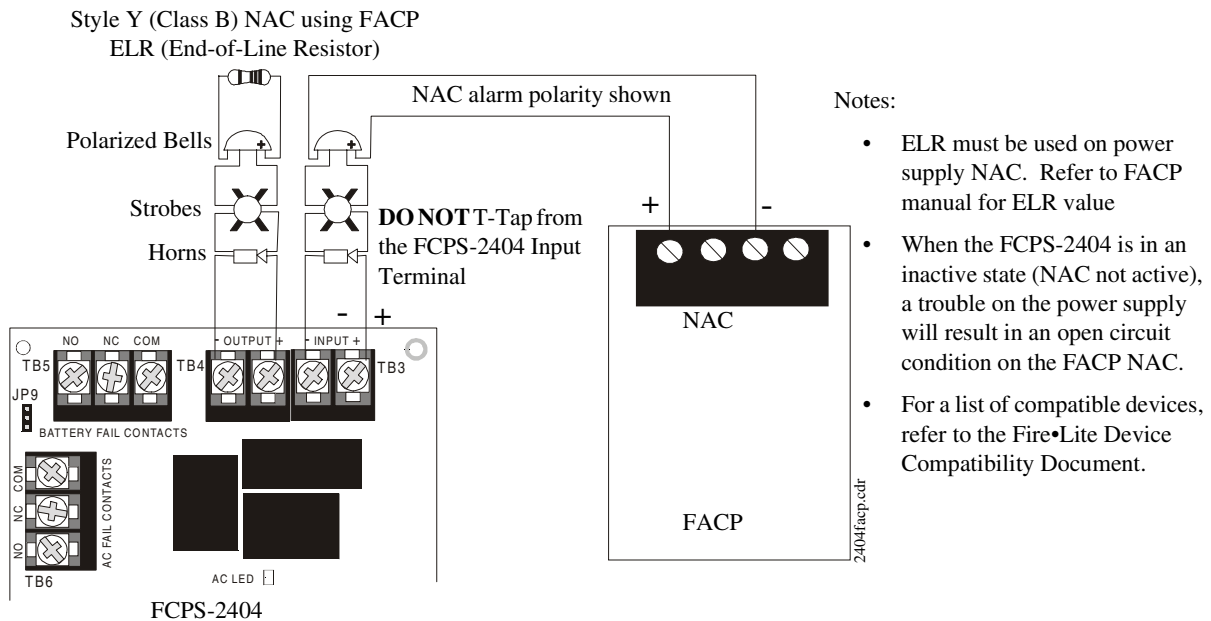


Figure 3.1 FCPS-2404 and NAC

3.3 Controlling FCPS-2404 with Control Module and External Power

The FCPS output circuit can be controlled from one addressable control module. The control module may be power from the FACP 24 VDC filtered output. An End-of-Line Resistor from the control module must be installed after the last device on the power supply NAC as illustrated in Figure 3.2.

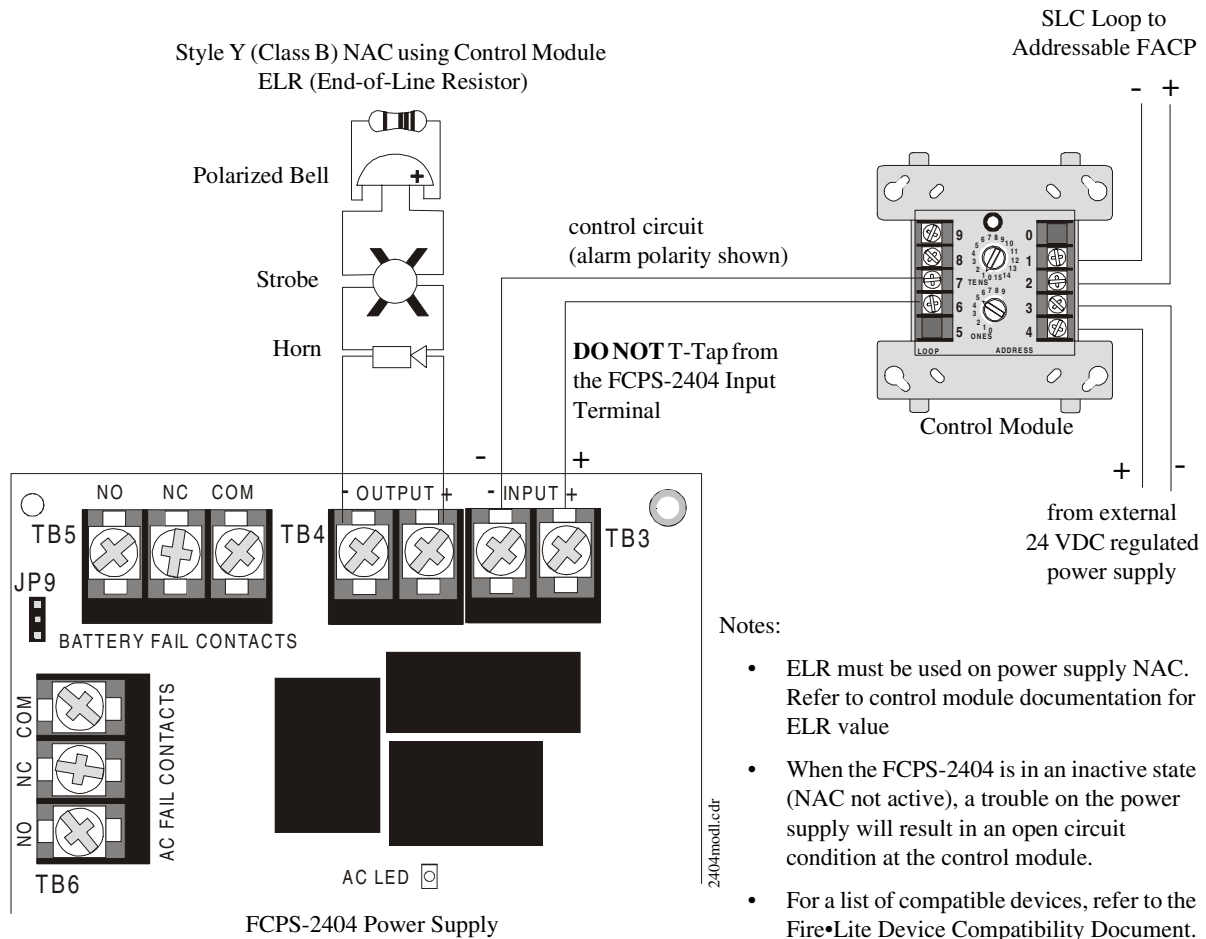
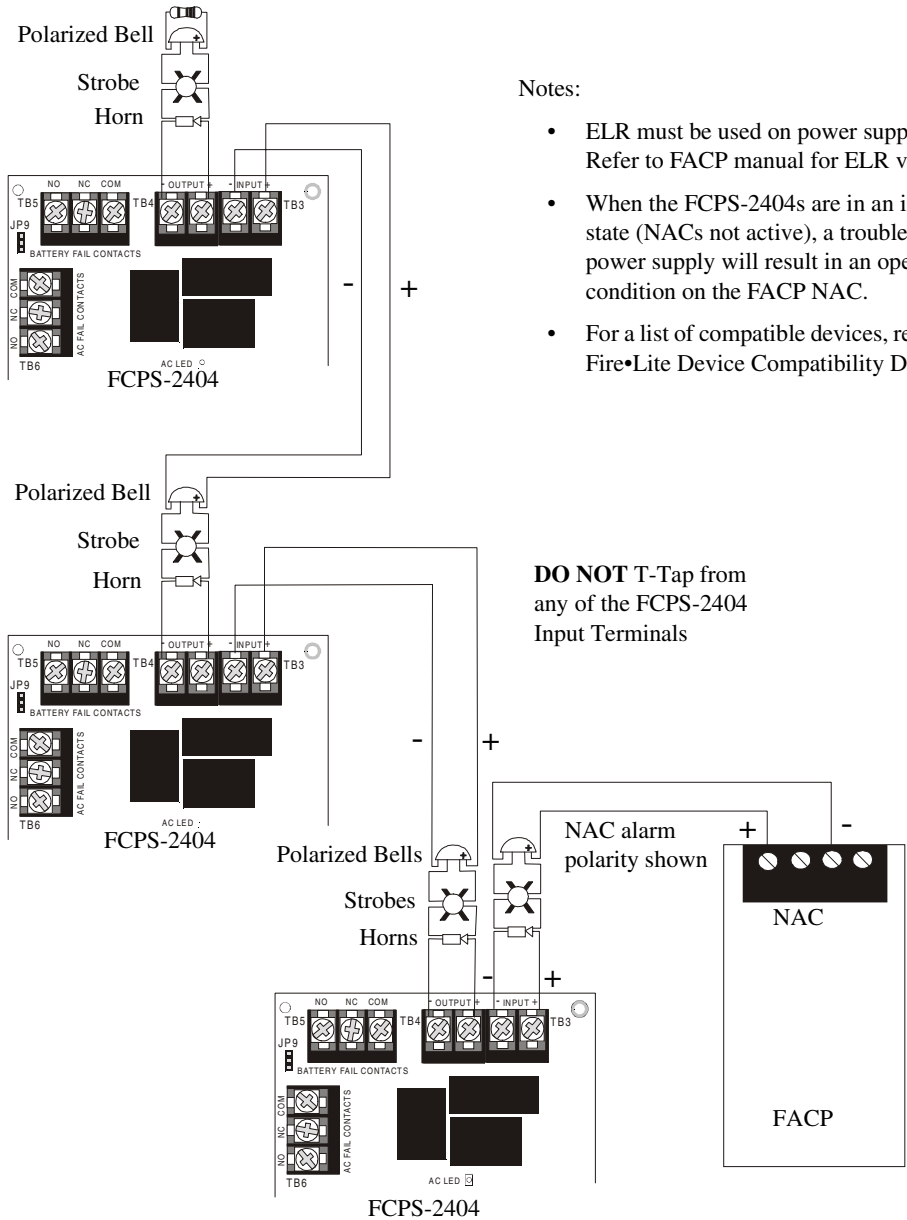


Figure 3.2 FCPS-2404 with Control Module and External Power

3.5 Multiple FCPS-2404 Power Supplies

Up to four FCPS-2404 supplies can be daisy-chained to a single control panel NAC. The following illustration shows three power supplies daisy-chained to a single NAC. The End-of-Line Resistor from the control panel's NAC must be installed after the last device on the last daisy-chained power supply NAC as illustrated in Figure 3.4.

Style Y (Class B) NAC using FACP
ELR (End-of-Line Resistor)



Notes:

- ELR must be used on power supply NAC. Refer to FACP manual for ELR value
- When the FCPS-2404s are in an inactive state (NACs not active), a trouble on any power supply will result in an open circuit condition on the FACP NAC.
- For a list of compatible devices, refer to the Fire•Lite Device Compatibility Document.

DO NOT T-Tap from any of the FCPS-2404 Input Terminals

Figure 3.4 Multiple FCPS-2404 Power Supplies

3.6 Synchronized Signals

Synchronization allows all audible and visual signaling devices to pulse on and off at exactly the same time. All notification appliances connected to daisy-chained FCPS-2404 power supplies can be synchronized by using a UL listed synchronization module. In addition, the External Strobe Sync Enable jumper JP10, which is located on the FCPS-2404 circuit board, must be positioned so that the right two pins are jumpered together. *It is important to note that the FCPS-2404 power supply requires the connection of a UL listed synchronization module.*

There are many different ways to accomplish synchronization. Following are three possible applications.

3.6.1 Sync Module

Synchronization can be achieved by using a UL listed synchronization module. In this application, the NAC from an FACP is connected to the FCPS-2404 Input circuit. The power supply output circuit is wired inside the cabinet to the sync module. The zone output of the sync module is connected to the notification appliances and then to the Input of the next FCPS-2404. The slave output of the sync module is connected to the slave input of the sync module in the next FCPS-2404. This daisy-chain connection is repeated for each FCPS-2404 to allow synchronized signals on all power supply NACs. Refer to the appropriate synchronization module documentation for wiring information.

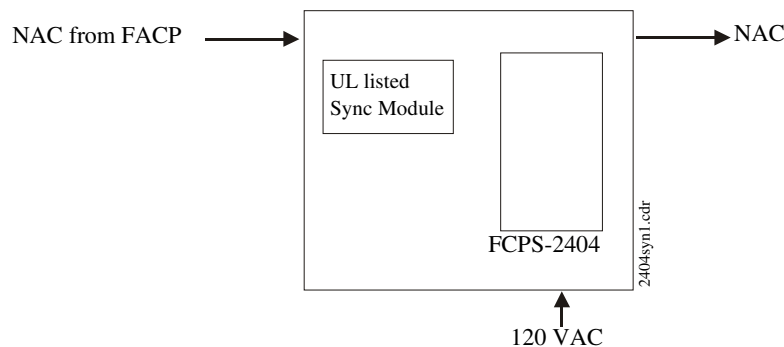


Figure 3.5 Synchronization

3.6.2 Sync Module and One Control Module

Synchronization can also be achieved by using an addressable control module to trigger the FCPS-2404 Input circuit. In this application, the output of the control module is connected to the Input circuit of the first power supply. 24 VDC power is supplied to the control module via a cable connected to P3 of the FCPS-2404. The remaining connections are the same as in the previous application. Note that only one control module is required in the first power supply while the remaining daisy-chained power supplies do not require control modules. Refer to the appropriate synchronization module and control module documentation for wiring information.

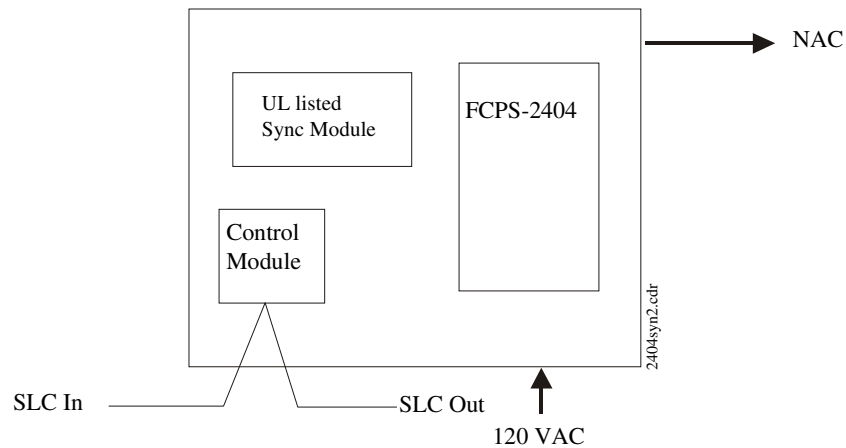


Figure 3.6 Synchronization with Addressable Control Module

3.6.3 Sync Module and Two Control Modules - Silenceable

Synchronization can also be achieved in such a way that the audible devices can be made silenceable while the visual devices will continue to operate. In this application, two control modules and a UL listed synchronization module are required. One control module output, which is programmed for nonsilenceable, is connected to the Input circuit of the first FCPS-2404 power supply. The power supply Output circuit is then connected to the sync module zone input circuit. The second control module, which is programmed for silenceable, is connected to the Horn input circuit of the sync module. In this way, if the FACP is signal silenced, the horns connected to the power supply will silence but the visual devices (strobes) will continue to operate.

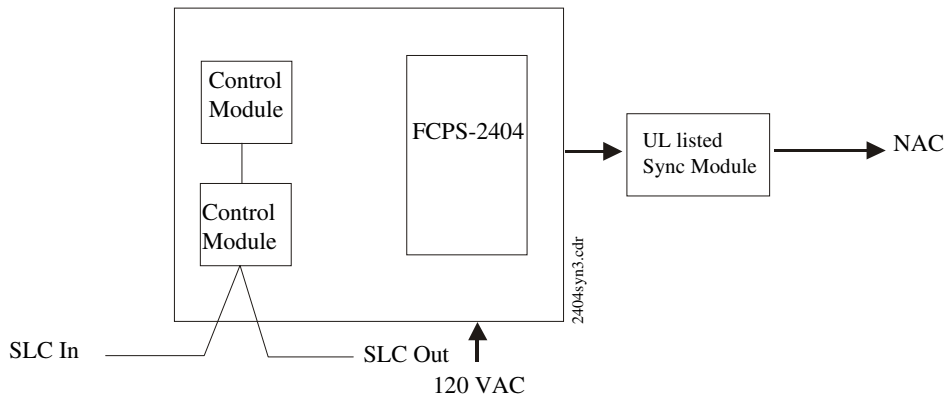


Figure 3.7 Synchronization with Control Modules - Silenceable

3.7 Coded Signals

An NAC circuit which is coded by the control panel (e.g. ANSI Temporal) may be used to drive a multiple FCPS-2404 power supplies daisy-chained together. Each power supply will repeat the code. *It is important to note that the External Strobe Sync jumper JP10 must be positioned in the Disabled position (left two pins jumpered) on all power supplies to support coded signals.*

SECTION 4 Power Supply AC Requirements

4.1 The AC Branch Circuit

The power supply requires connection to a separate, dedicated AC branch circuit, which must be labeled **FIRE ALARM**. This branch circuit must connect to the line side of the main power feed of the protected premises. No other non-fire alarm equipment may be powered from the fire alarm branch circuit. The branch circuit wire must run continuously, without any disconnect devices, from the power source to the power supply. Overcurrent protection for this circuit must comply with Article 760 of the National Electrical Codes as well as local codes. Use 14 AWG (2.00 mm²) wire with 600 volt insulation for this branch circuit.

The FCPS-2404 power supply requires 120 VAC, 50/60 Hz, 1.45 amps maximum.

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