

Universal Zone Coder
UZC-256
Installation Manual



Fire Alarm & Emergency Communication System Limitations

While a life safety system may lower insurance rates, it is not a substitute for life and property insurance!

An automatic fire alarm system—typically made up of smoke detectors, heat detectors, manual pull stations, audible warning devices, and a fire alarm control panel (FACP) 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.

An emergency communication system—typically made up of an automatic fire alarm system (as described above) and a life safety communication system that may include an autonomous control unit (ACU), local operating console (LOC), voice communication, and other various interoperable communication methods—can broadcast a mass notification message. Such a system, however, does not assure protection against property damage or loss of life resulting from a fire or life safety event.

The Manufacturer recommends that smoke and/or heat detectors be located throughout a protected premises 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. This document can be found at <http://www.systemsensor.com/appguides/>. 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, chimneys, even wet or humid areas 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, such as air conditioning vents.
- Smoke particles 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.).

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, compromising its ability to report a fire.

Audible warning devices such as bells, horns, strobes, speakers and displays 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:

- An emergency communication system may take priority over a fire alarm system in the event of a life safety emergency.
- Voice messaging systems must be designed to meet intelligibility requirements as defined by NFPA, local codes, and Authorities Having Jurisdiction (AHJ).
- Language and instructional requirements must be clearly disseminated on any local displays.
- 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 to or comprehend the meaning of the signal. Audible devices, such as horns and bells, can have different tonal patterns and frequencies. It is the property owner's responsibility to conduct fire drills and other training exercises 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 life safety 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 panel. It is essential to use only equipment listed for service with your control panel.

Telephone lines needed to transmit alarm signals from a premises 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 life safety system malfunction is inadequate maintenance. To keep the entire life safety 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 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 as required by National and/or local fire codes and should be performed by authorized professional life safety system installers only. Adequate written records of all inspections should be kept.

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Installation Precautions

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

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 inter-connecting cables while the unit is energized. Do not attempt to install, service, or operate this unit until manuals are read and understood.

CAUTION - System Re-acceptance Test after Software

Changes: To ensure proper system operation, this product must be tested in accordance with NFPA 72 after any programming operation or change in site-specific software. Re-acceptance 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 93% ± 2% RH (non-condensing) at 32°C ± 2°C (90°F ± 3°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 its peripherals be installed in an environment with a normal 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.

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 interference, 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, or 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.

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.

Units with a touchscreen display should be cleaned with a dry, clean, lint free/microfiber cloth. If additional cleaning is required, apply a small amount of Isopropyl alcohol to the cloth and wipe clean. Do not use detergents, solvents, or water for cleaning. Do not spray liquid directly onto the display.

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.

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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 devices pursuant to Subpart B of Part 15 of FCC Rules, which is designed to provide reasonable protection against such interference when devices are 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 or her 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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Section 1: Introduction

1.1 Product Overview

The Notifier UZC-256 Universal Zone Coder provides separate codes for up to 256 initiating zones. Each code requires a different initiating circuit. Only one notification appliance circuit is required, but coded output from the UZC-256 can be fed to many output circuits.

1.2 About This Manual

The core of this manual provides instructions for connecting the UZC-256 annunciator to various fire alarm control panels (FACPs). Each appendix contains instructions that are unique to a particular control panel. Section 1.4 “Related Documentation” lists part numbers for manuals of compatible equipment such as control panels.

1.3 UL 864 9th and 10th Edition

- Per the UL Continuing Certification Program, UL 864 9th edition fire alarm control equipment will retain certification after the rollout of UL 10th edition (12/2/2018).
- Installations of UL 864 10th Edition certified equipment are permitted to use UL864 9th Edition certified equipment when approved by the local Authority Having Jurisdiction (AHJ).

For product compliance, refer to the UL/ULC listing cards located on the UL online certification directory.

<http://iq.ulprospector.com>

The following products have not received UL 864 9th or 10th Edition certification and may only be used in retrofit applications. Operation of the UZC-256 with products not tested for UL 864 9th or 10th Editions have not been evaluated and may not comply with NFPA 72 and/or the latest edition of UL 864. These applications will require the approval of the local Authority Having Jurisdiction (AHJ).

- System 500
- System 5000
- AIM-200
- AM2020/AFP1010
- AFP-300/AFP-400
- NCA
- CPU-640
- CPU-3030
- CMX-1

1.4 Related Documentation

The table below provides a list of document sources (manuals) containing additional information regarding equipment that the UZC-256 can be connected to.

Document Name	P/N
Device Compatibility Document	15378
NFS-320 Listing Document	52745LD
NFS2-640Listing Document	52741LD
NFS-640 Installation Manual (UL 8th)	51332
NFS2-3030 Listing Document	LS10006-051NF-E
NFS-3030 Installation Manual (UL 8th)	51330
System 5000 Installation Manual (UL 8th)	15583
AIM-200 Manual (UL 8th)	15949
System 500 Installation Manual (UL 8th)	15019
AFP-300/AFP-400 Installation Manual (UL 8th)	50253
AM2020/AFP1010 Installation Manual (UL 8th)	15088
NCA Network Control Annunciator Manual (UL 8th)	51482
NCA-2 Network Control Annunciator Manual	52482

Section 2: Specifications

2.1 Coded Outputs

The UZC-256 contains three programmable outputs, each rated for three amps at 30 VDC. These outputs allow the UZC-256 to supply different coded information to certain output circuits, depending on the alarm initiation condition. This can be useful when employing coded outputs in floor-above, floor-below applications, or to provide various numbers of rounds for bell circuits or lamp circuits.

These relays are controlled by a predefined program, and can be set to respond to general alarm conditions with the fire alarm system. The UZC-256 also provides a second zone-in-alarm override of the general alarm delay.

2.2 EIA-485 Communication

The UZC-256 communicates with the control panel through the EIA-485 circuit. When installed, the zone coder will require 1 to 4 addresses on the EIA-485 interface.

	System 500	System 5000 (Select for Zone Reporting)	AM2020/AFP1010, AFP-300/400, NFS-320, NFS2-640, NFS-640, NFS-3030, and NFS2-3030 (Select for Point Reporting)			
Number of Points	1-56	1-56 57-120	1-64	65-128	129-192	193-256
Number of Addresses	1	1 2	1	2	3	4

Table 2.1 Points & Addresses for specific FACPs

Assignment of points to zone codes within the UZC-256 is automatic in the System 5000 and System 500; it is programmable in the NFS-320, NFS2-640, NFS-640, NFS2-3030, NFS-3030, NCA, NCA-2, AFP-300/AFP-400 and AM2020/AFP1010. Addresses occupied by the UZC-256 are unavailable to other devices on the EIA-485 circuit (AMG, annunciators, etc.).

See the programming utility's online help file or the *UZC-256 Programming Manual* for more details.

2.3 Zone Code Protocol

The UZC-256 allows the specification of several parameters:

- Up to four code digits
- Number of rounds
- Pulse-ON, Pulse-OFF time
- Time between digits
- Time between rounds

Due to the nature of coded outputs, the UZC-256 is not compatible with indicating devices which do not produce a steady or non-periodic sound. Periodic appliances that produce their own code (such as some codes available with electronic sounders) will not be compatible with the UZC-256.

2.4 Standby Battery Calculation

Use the following figures when calculating the required standby battery capacity as indicated in the above mentioned installation manuals:

- Standby Load: 35mA
- Alarm Load: 85mA

2.5 Circuit Requirements

Power input requirements

- 24 VDC nominal, 27.6 VDC max., 85 mA max.
- 5 VDC nominal
- Compatible power-limited power supply, UL/ULC-listed for fire protective signaling use. Note: Outputs will be regulated only when connected to a regulated power supply. Note: If the power supply is installed in the same backbox, the input may be non-power-limited.

EIA-485 connection (TB2):

- Maximum cable characteristic impedance is 120 ohms +/- 20%.
- Limit wire resistance to 100 ohms.
- Terminal blocks accept maximum wire size 12 AWG.

Outputs:

- The UZC-256 contains three programmable outputs, each rated for three amps at 30 VDC.
- Maximum line impedance for outputs is defined by the fire alarm control panel; refer to the installation manual for your FACP.
- Terminal blocks accept maximum wire size 12 AWG.

Section 3: Board Description

3.1 Connections & Components

See the appendix section of this manual for panel-specific connections:

- Appendix A, “System 500 (UL 8th)”
- Appendix B, “System 5000 (UL 8th)”
- Appendix C, “AM2020/AFP1010 (UL 8th)”
- Appendix D, “AFP-300/AFP-400 (UL 8th)”
- Appendix E, “NFS2-640 (UL 9th), NFS-320 (UL 9th) and NFS-640 Systems (UL 8th)”
- Appendix F, “NCA Systems (UL 8th)”
- Appendix G, “NFS-3030 (UL 8th), NFS2-3030 (UL 9th), and NCA-2 (UL 9th) Systems”

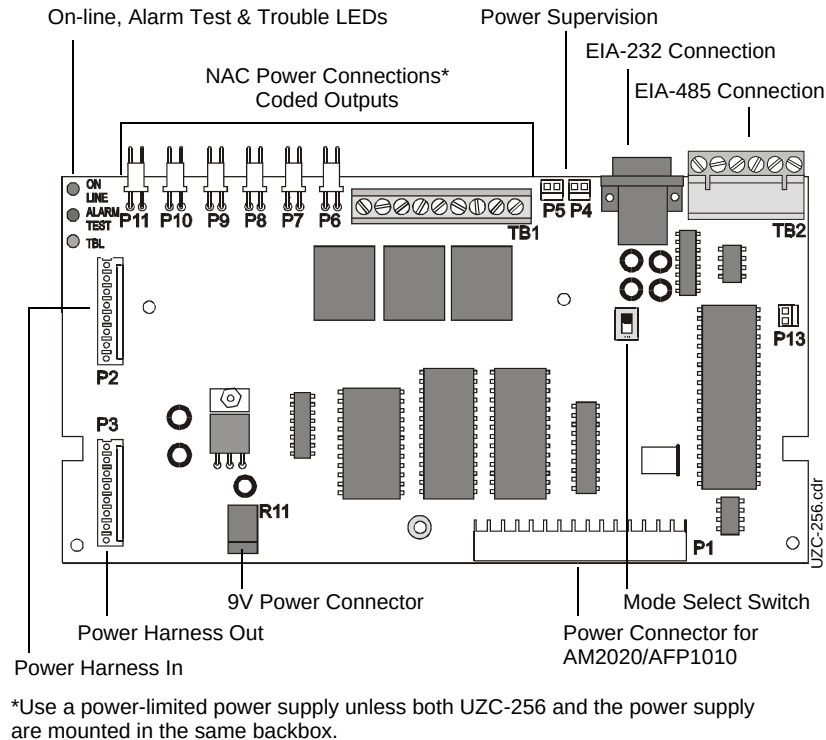


Figure 3.1 Connections & Components

3.1.1 LEDs

- **Trouble** (yellow) - Lights when one or more trouble conditions are detected.
- **Alarm-Test** (red) - Follows the main coded output.
- **On-Line** (green) - Flickers during communication with the control panel.

3.1.2 Mode Select Switch

Used to select Programming or Normal Mode.

3.1.3 Connections

- **NAC Power** - Power connection for NAC outputs. Requires a power-limited power supply (unless the power supply and the UZC-256 are installed in the same backbox).
- **Power Supervision** - Connection for power supervision wiring.
- **EIA-232** - Female DB-9 connector for programming from an IBM-compatible computer.
- **EIA-485** - For connection to the control panel (see Figure 3.3).
- **Power Socket** - For connection to an ICA-4L in an AM2020/AFP1010.
- **Power Harness In** - Connection to main power supply.
- **Power Harness Out** - To next device in power train.
- **9V Power** - Used to power the UZC-256 during remote programming. Requires a power-limited power supply.

3.2 Power Connections

Use a regulated, power-limited, compatible power supply that is UL/ULC-Listed for Fire Protective Signaling use, such as AMPS-24/E (see Appendix G on page 26). Also see installation documentation for your specific FACP and power supply.



NOTE: When connecting the UZC-256 to a power supply, use cable 75657. If the power supply does not have a connection compatible with the power harness, hardwire the connections as per Figure 3.2.

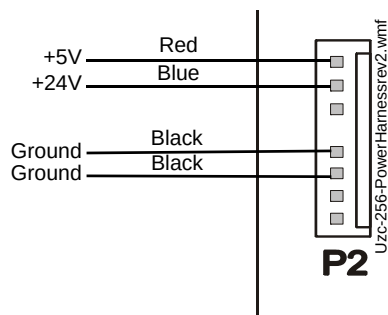


Figure 3.2 Connecting UZC-256 to 5V and 24V Power

3.3 EIA-485 Connections

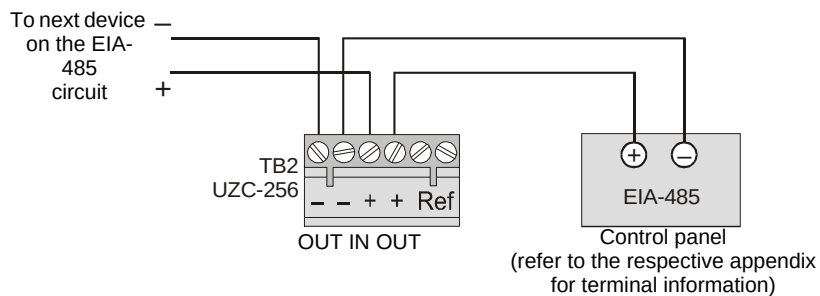
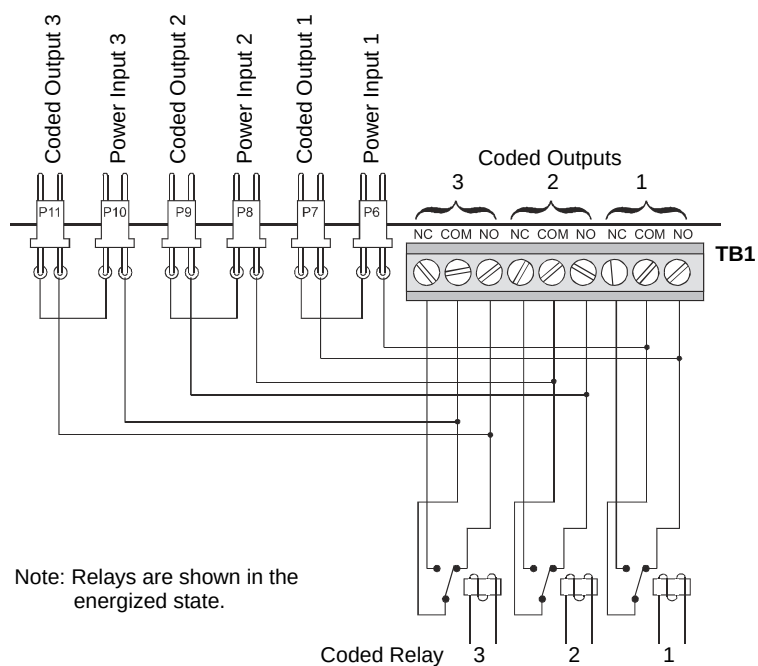


Figure 3.3 EIA Connections

3.4 Plug/Terminal Schematic



UZC-256schematic.wmf

Figure 3.4 Plug and Terminal Schematic

3.5 Wiring Diagram for SLC Control Modules

Typical connections between the UZC-256 and NACs using an SLC control module. For panel-end connections, refer to the installation manual for your FACP and power supply.

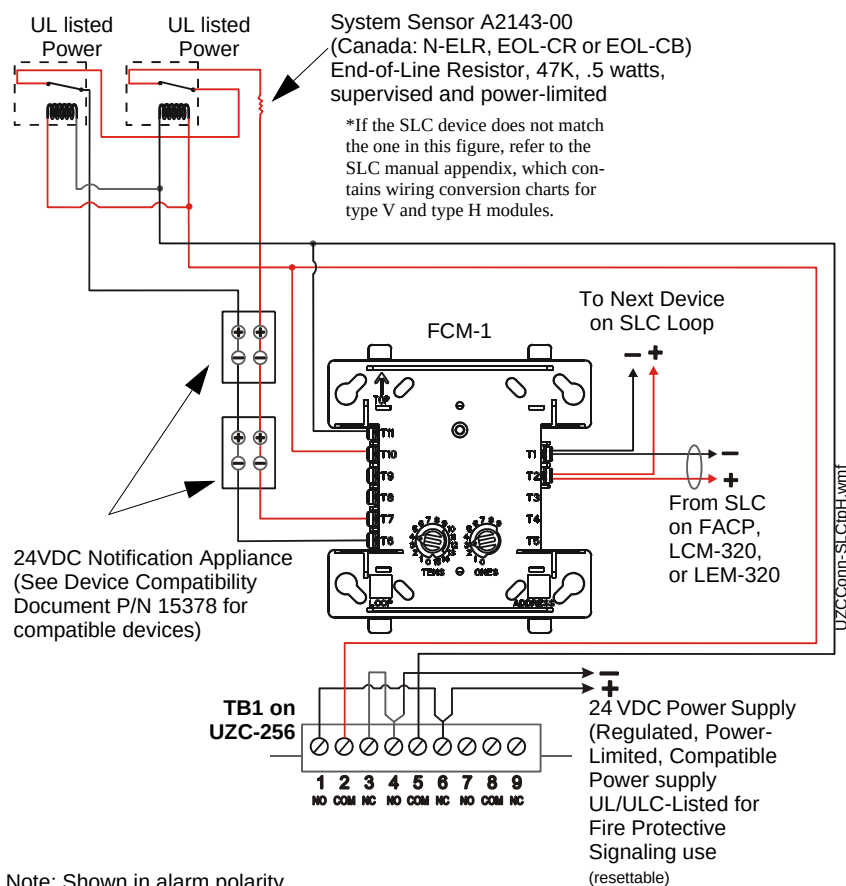


Figure 3.5 Typical Connections to SLC Control Module

3.6 Mounting Options

UZC-256 can be mounted in a variety of standard chassis in their compatible backboxes:

- CAB-500, see Appendix A, "System 500 (UL 8th)".
- CHS-4, see Appendix B, "System 5000 (UL 8th)".
- ICA-4L, see Appendix C, "AM2020/AFP1010 (UL 8th)".

Appendix A: System 500 (UL 8th)

A.1 Installation

A.1.1 Mechanical

In the System 500, the UZC-256 mounts to the back of the CAB-500 backbox, beneath the third (right-most) module.



NOTE: It is more convenient to mount the UZC-256 at the same time as the Main Power Supply, if possible.

To install follow instructions and refer to figure below:

Step	Action
1	Install three (3) self-tapping screws (1/2" long), with star washer, into mounting holes on circuit board as located below.
2	Install three (3) spacers (3/8" long) onto screws on back side of circuit board. Hold in place with wax.
3	Align the screws with the three (3) pilot holes in the backbox. Tighten screws securely. Do NOT over-tighten.

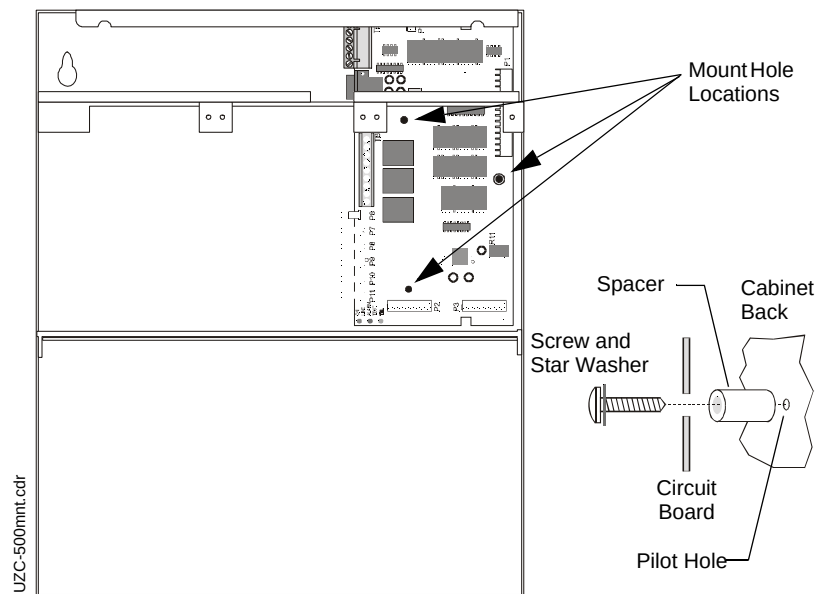


Figure A.1 Mounting the UZC-256 in the CAB-500

A.1.2 Electrical

Refer to "Board Description" on page 9 for all UZC-256 terminal locations.

1. Remove the Power Harness (PN 75168) connecting the MPS-24BPCA Power Supply and the CPU-500 and discard.
2. Connect Power Harness (PN 71086, provided) between terminal P3 on the UZC-256 and terminal J9 on the CPU-500.
3. Connect Power Harness (PN 75100, provided) between terminal P2 on the UZC-256 and terminal P2 on the MPS-24BPCA.
4. Connect the EIA-485 annunciator port from the UZC-256 terminal TB2-IN(+) and (-) to the CPU-500 EIA-485 Interface Board terminal TB-2 (+) and (-), using twisted-pair wire, maintaining polarity.
5. Connect the Power Supervision Cable (PN 71033, provided) between terminal P4 or P5 on the UZC-256 and terminal P4 on the MPS-24BPCA.
6. For connection of Notification Appliance power to and from the UZC-256, refer to "Power/NAC Configurations" on page 15.

Simplified diagram showing finalized connections:

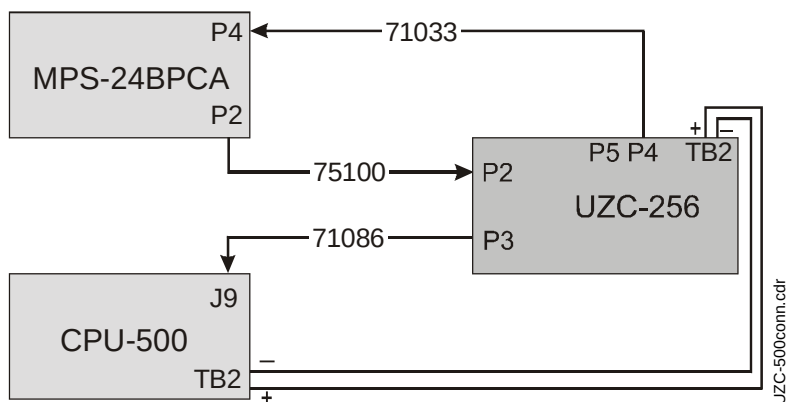


Figure A.2 UZC-256 and System 500 Connections

Position of the EIA-485 terminal block:

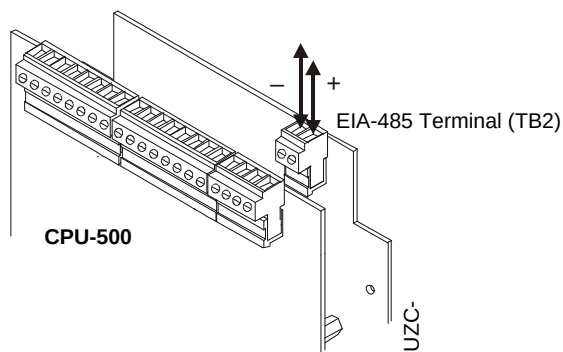


Figure A.3 EIA-485 Interface Board Terminal Block - CPU-500

A.2 Power/NAC Configurations

Simplified diagrams for wiring several different NAC configurations. All cables are PN 71091, except for the cable connecting the MPS and the UZC-256, which is PN 71093 (provided with the UZC-256).

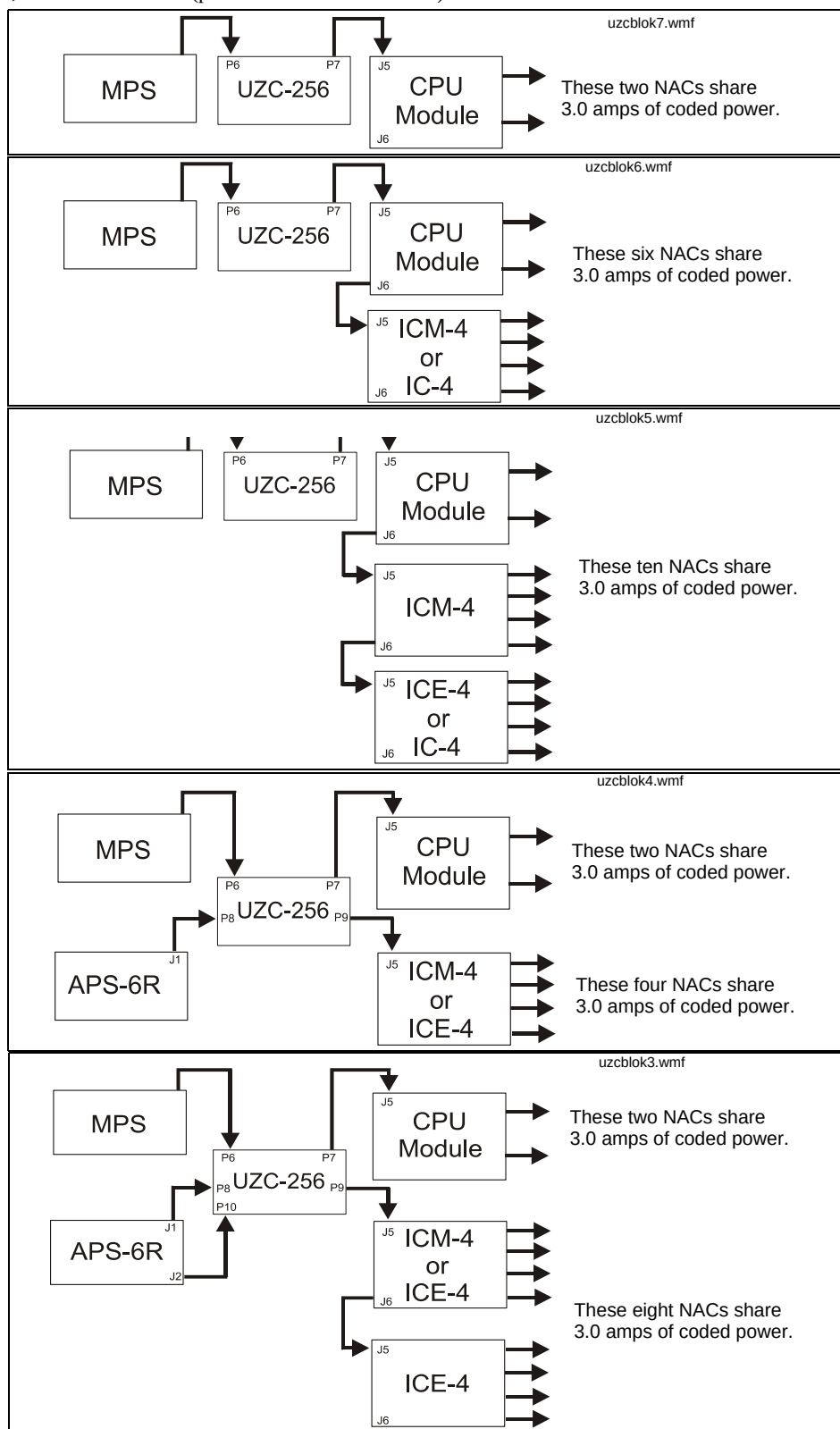


Figure A.4 NAC Configurations (Sheet 1 of 2)

Diagrams for wiring continued:

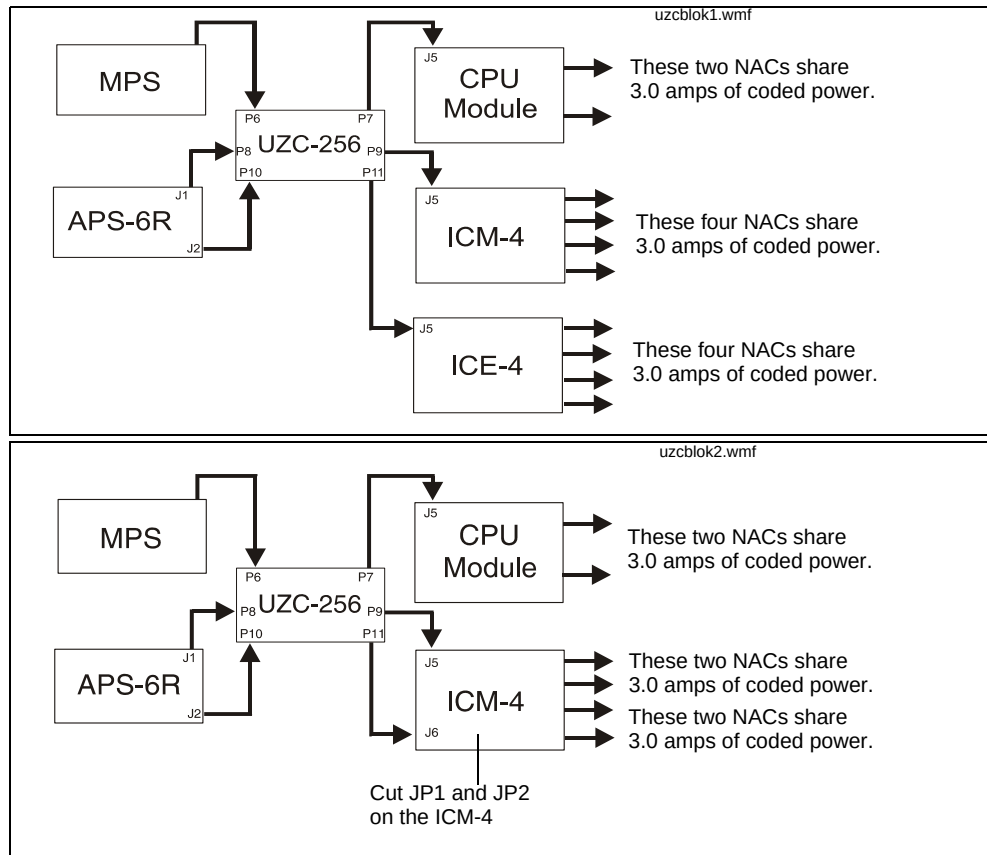


Figure A.5 NAC Configurations (Sheet 2 of 2)

Appendix B: System 5000 (UL 8th)

B.1 Installation

B.1.1 Mechanical

In a System 5000, the UZC-256 mounts to the base of the CHS-4 chassis beneath the third and fourth modules, to the right of the CPU. To install follow instructions and refer to figure below:

Step	Action
1	Install three (3) hex standoffs (5/8" long) onto studs of chassis. Tighten securely.
2	Align and mount the UZC-256 to the standoffs and secure with three (3) screws and star washers. Tighten securely.

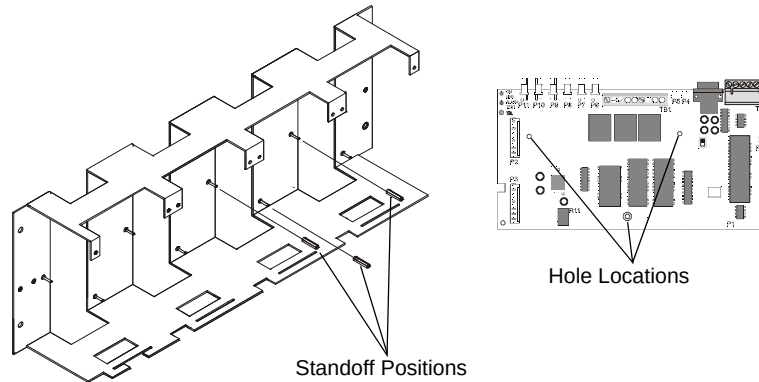


Figure B.1 Mounting the UZC-256 to a CHS-4

B.1.2 Electrical

Refer to “Board Description” on page 9 for all UZC-256 terminal locations.

Using MPS-24B

1. Disconnect Power Harness (PN 71086) from the MPS-24B Power Supply (P2) and connect to terminal P3 on the UZC-256.
2. Connect Power Harness (PN 75100, provided) between terminal P2 on the UZC-256 and terminal P2 on the MPS-24B. Continue with step #2 below.

Using MPS-24A

1. Connect Power Harness (PN 75100, provided) between terminal P2 on the UZC-256 and terminal P4 on the MPS-24A.
2. Connect the EIA-485 annunciator port from the UZC-256 terminal TB2-IN(+) and (–) to the CPU-5000 EIA-485 Interface Board terminal TB-2 (+) and (–), using twisted-pair wire, maintaining polarity.
3. Connect the Power Supervision Cable (PN 71033, provided) between terminal P4 or P5 on the UZC-256 and terminal P5 on the MPS-24A or terminal P4 on the MPS-24B.
4. For connection of Notification Appliance power to and from the UZC-256, refer to “Power/NAC Configurations” on page 15 and, if using an AIM-200, refer to Figure 3.5 on page 12.

Simplified diagram showing finalized connections:

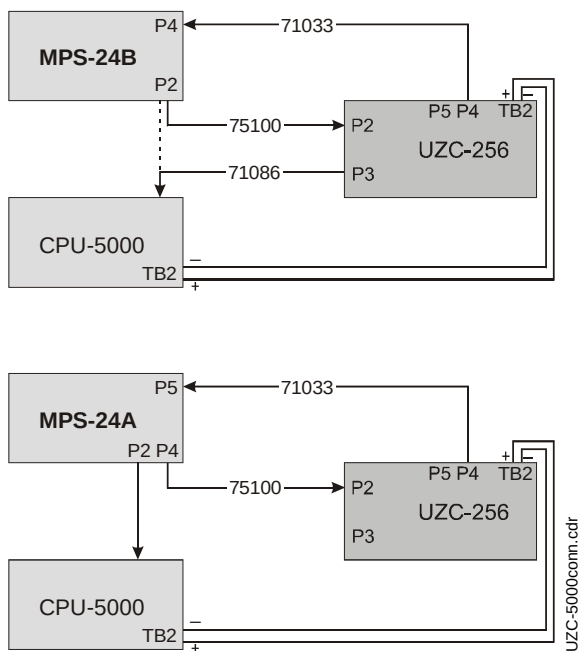


Figure B.2 UZC-256 and System 5000 Connections

Position of the EIA-485 terminal block:

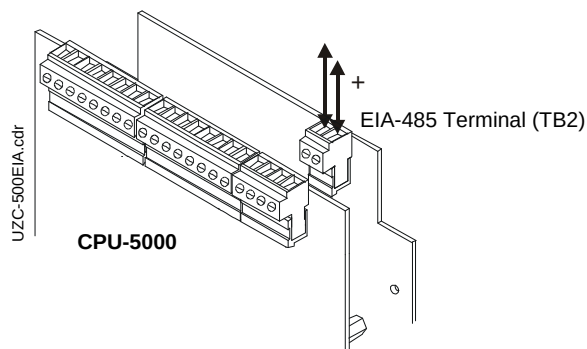


Figure B.3 EIA-485 Interface Board Terminal Block - CPU-5000

Appendix C: AM2020/AFP1010 (UL 8th)

C.1 Installation

C.1.1 Mechanical

In an AM2020/AFP1010, the UZC-256 plugs into a slot on the ICA-4L chassis. If the AM2020/AFP1010 is in an A-size cabinet (only one ICA-4L), the UZC-256 mounts beneath the CPU or the SIB. If a second or third ICA-4L chassis is available, the UZC-256 should be mounted in one of the two upper slots to permit easy access to UZC-256 wiring and switch settings.



NOTE: The UZC-256 mechanically eliminates one LIB-200 position, requiring the installation of an additional chassis in some instances. As an alternative, the AM2020/AFP1010 may use a CHS-4 chassis to mount the UZC-256.

The AM2020/AFP1010 does not require LIB-200 boards to be installed in consecutive positions. For example, in a five-loop system, the UZC-256 could be installed in LIB position 3 (upper left of second chassis), with LIB-200s in all other slots. In this case, the AM2020/AFP1010 would be programmed for loops 1, 2, 4, 5, and 6.

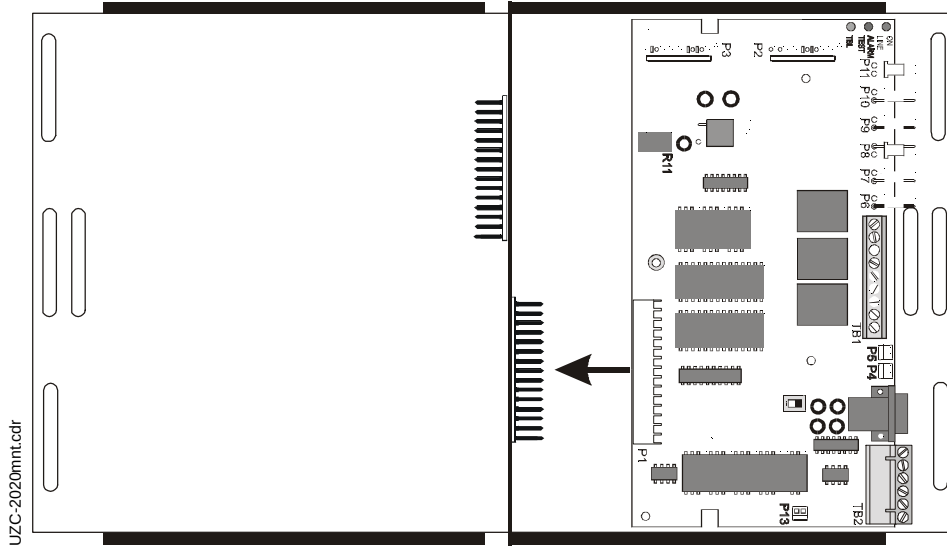


Figure C.1 Mounting the UZC-256 in an ICA-4L Chassis

C.1.2 Electrical

Connect notification appliance power devices as shown in Figure 3.5 on page 12.

Appendix D: AFP-300/AFP-400 (UL 8th)

D.1 Installation

D.1.1 Mechanical

Mount the UZC-256 into a CAB-3/CAB-4 Series or a CAB-AA cabinet.

If a CAB-AA cabinet is used with the AFP-300/AFP-400 system the method of installation is the same as that described in “System 500 (UL 8th)” on page 13.

If a CAB-3 Series cabinet is used with the AFP-300/AFP-400 system the method of installation is the same as that described in “System 5000 (UL 8th)” on page 17.

D.1.2 Electrical

1. Connect Power Harness (PN 75100, provided) between terminal P2 on the UZC-256 and connector J1 on the MPS-400 Power Supply.
2. Connect the EIA-485 annunciator port from the UZC-256 terminal TB2-IN(+) and (–) to the CPU-300/400 terminal TB4(+) and (–), maintaining polarity.
3. Connect the Power Supervision Cable (PN 71033, provided) between terminal P4 or P5 on the UZC-256 and terminal J5 on the MPS-400.
4. Connect notification appliance power devices as shown in Figure 3.5, “Typical Connections to SLC Control Module” on page 12 or as detailed in “Wiring 12 Zone-Coded NACs” on page 21 or “Wiring 20 Zone-Coded NACs” on page 21.

Simplified diagram showing finalized connections:

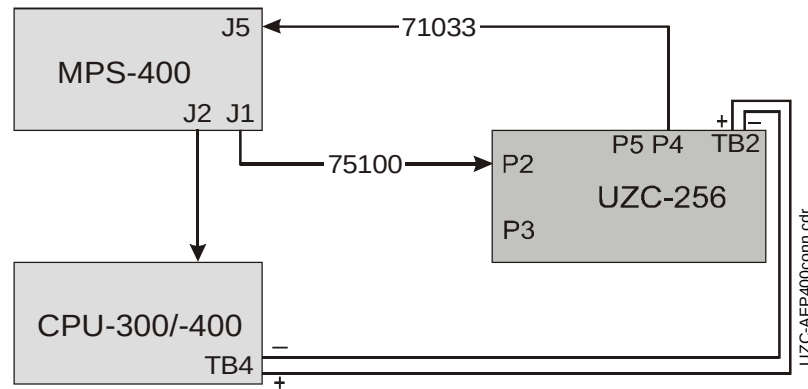


Figure D.1 UZC-256 and AFP-300/400 Connections

EIA-485 terminal block:

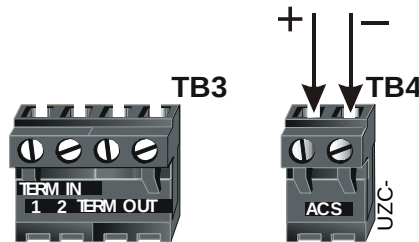


Figure D.2 EIA-485 Terminal Block TB4 - CPU-300/400

D.1.3 Wiring Diagram for Control Module

For typical connections between the UZC-256 and NACs using a SLC control module, refer to Figure 3.5, “Typical Connections to SLC Control Module” on page 12.

D.1.4 Wiring 12 Zone-Coded NACs

Connections between panel modules and the UZC-256 for wiring 12 zone-coded NACs is contained in the table below. All cables are PN 71091 (provided with the ICM-4), except for the cable connecting the MPS-400 and the UZC-256, which is PN 71093 (provided with the UZC-256).

UZC-256	Connector	Connects to...
Circuit #1	P6 or TB1(K1com) P7 or TB1(K1no)	APS-6R J1 ICM-4, J5
Circuit #2	P8 or TB1(K2com) P9 or TB1(K2no)	APS-6R J2 ICE-4, J5
Circuit #3	P10 or TB1(K3com) P11 or TB1(K3no)	MPS-400, J3 MPS-400, J3

Table D.1 Connections for 12 Zone-Coded NACS

Simplified block diagram for wiring 12 zone-coded NACs:

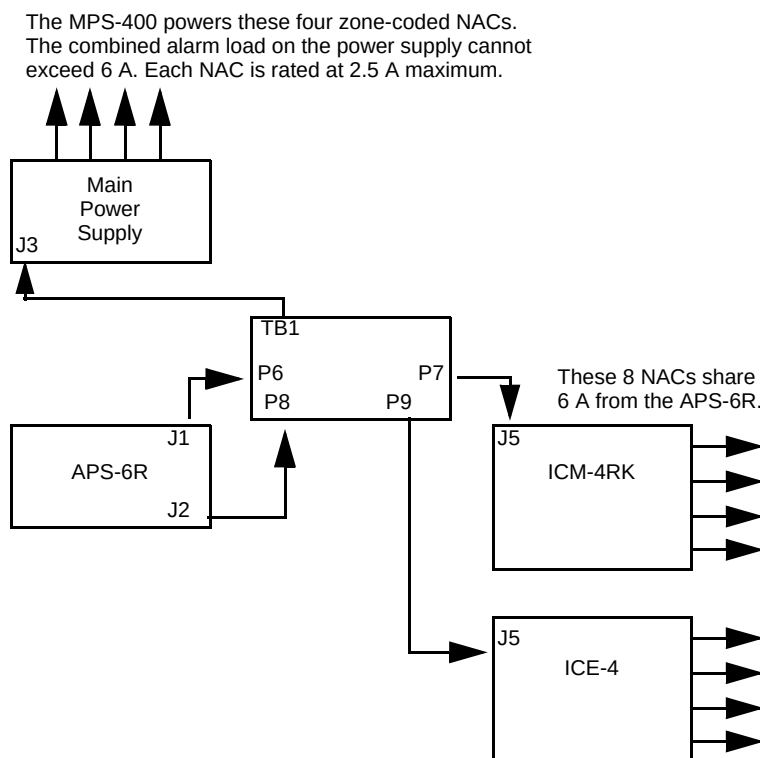


Figure D.3 Wiring for 12 Zone-Coded NACs

D.1.5 Wiring 20 Zone-Coded NACs

Connections between panel modules and the UZC-256 for wiring 20 zone-coded NACs is contained in the table below. All cables are PN 71091 (provided with the ICM-4), except for the cable connecting the MPS-400 and the UZC-256, which is PN 71093 (provided with the UZC-256).

UZC-256	Connector	Connects to...
Circuit #1	P6 or TB1(K1com) P7 or TB1(K1no)	APS-6R J1 ICM-4, J5
Circuit #2	P8 or TB1(K2com) P9 or TB1(K2no)	APS-6R J2 ICM-4, J5
Circuit #3	P10 or TB1(K3com) P11 or TB1(K3no)	MPS-400, J3 MPS-400, J3

Table D.2 Connections for 20 Zone-Coded NACS

Simplified block diagram for wiring 20 zone-coded NACs:

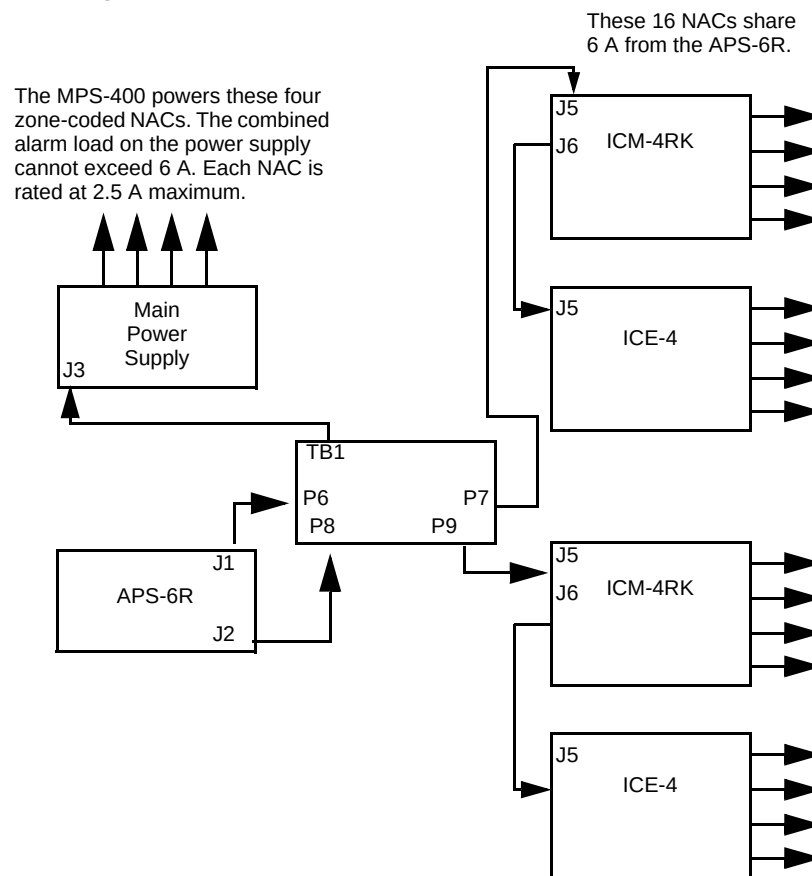


Figure D.4 Wiring for 20 Zone-Coded NACs

Appendix E: NFS2-640 (UL 9th), NFS-320 (UL 9th) and NFS-640 Systems (UL 8th)

E.1 NFS-320 Mounting

Due to space restriction in the NFS-320 cabinet assembly, the UZC-256 must be mounted in a separate enclosure. The BB-UZC Cabinet is hinged on the left and is shipped assembled with a chassis installed. For cabinet dimensions, refer to the *BB-UZC Product Installation Document*.

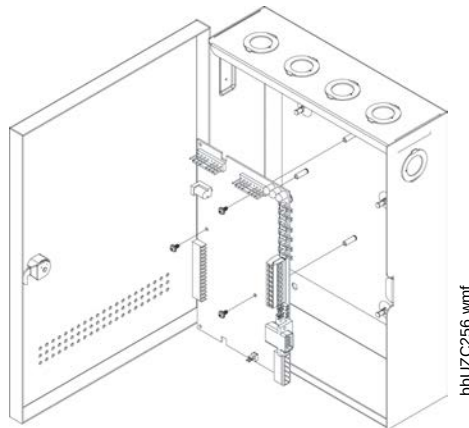


Figure E.1 BB-UZC

E.2 NFS2-640 and NFS-640 Mounting

With the NFS2-640 and NFS-640 installed in a CAB-4 series enclosure, the UZC-256 can be mounted to the base of a CHS-4/4N or CHS-4L chassis in the third and fourth positions. The CHS chassis mounts in a cabinet row beneath the CPU2-640/CPU-640. The UZC-256 can also be mounted in a BB-UZC (See Figure E.1 on page 23).

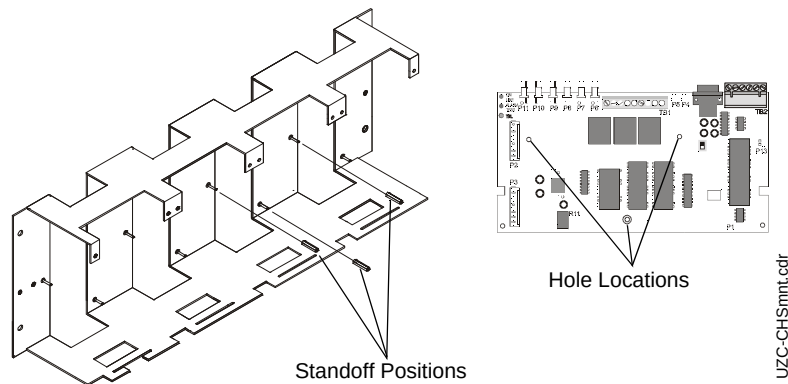


Figure E.2 Mounting the UZC-256 in a CHS-4

E.3 NFS2-640 and NFS-320 Connections

E.3.1 EIA-485 Circuit and Power

The EIA-485 connections are made to TB11 on the CPU2-640 or CPU-320 as shown. 24 VDC power-limited non-resettable power and 5 VDC non-resettable power for the UZC-256 is available from TB2 on the CPS-24. The CPS-24 is integral to the NFS2-640 and NFS-320 assemblies. See Section 3.2 on page 10 for additional information.

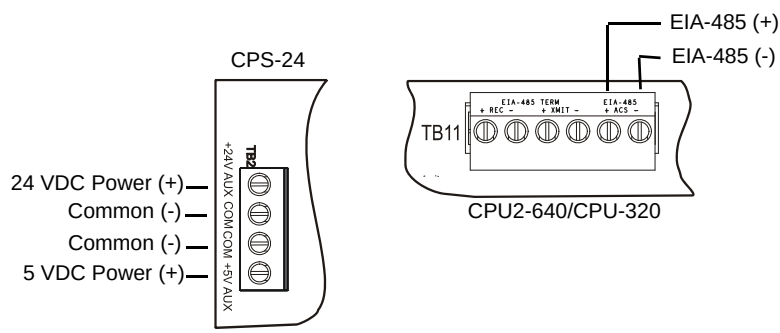


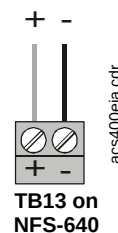
Figure E.3 NFS2-640 and NFS-320 EIA-485 and Power Connections

For more information on annunciator operation and FACP programming under various specific applications, refer to the NFS2-640 and NFS-320 documents referenced in Section 1.4, “Related Documentation”, on page 7.

E.4 NFS-640 Connections

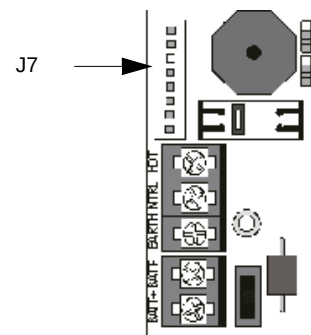
E.4.1 EIA-485 Connection

EIA-485 wiring is connected to TB13 of the NFS-640 as shown in the accompanying illustration. See Section 2.2 “EIA-485 Communication” for details.



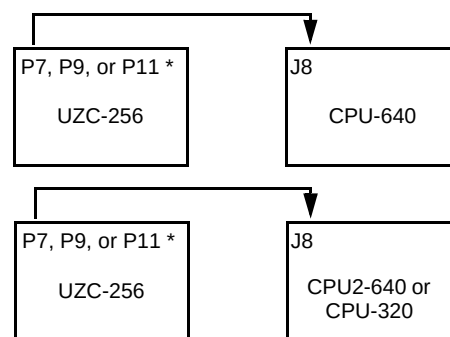
E.4.2 Power Connections

NFS-640 panels have an integral on-board power supply. Connect UZC-256 power cable to CPU-640 J7 Accessory Power Connection.



E.5 Connecting the Zone Code Input

NFS-320, NFS2-640 and NFS-640 each provides an optional input for zone-coded input. To code all four onboard NACs at once, connect P7, P9, or P11 on the UZC-256 to J8 on the NFS-640, NFS-320 or NFS2-640.



*See Fig. 3.4 on page 11

Appendix F: NCA Systems (UL 8th)

For NCA-2 connections, see Appendix G, “NFS-3030 (UL 8th), NFS2-3030 (UL 9th), and NCA-2 (UL 9th) Systems”, on page 26.

F.1 NCA Mounting

With the NCA mounted in a CAB-4 series, the UZC-256 can be mounted to the base of the CHS-4/4N or CHS-4L chassis in the third and fourth positions. The CHS-4/4N or CHS-4L chassis mounts in a cabinet row beneath the NCA. The UZC-256 can be mounted behind the NCA that is mounted in a DP-DISP or an ADP-4B when using the CHS-4L chassis. The UZC-256 can also be mounted in a BB-UZC (See Figure E.1 on page 23) when it cannot be mounted in the same enclosure as the NCA or when mounting the NCA in an ABS-2D or ABS-4D.

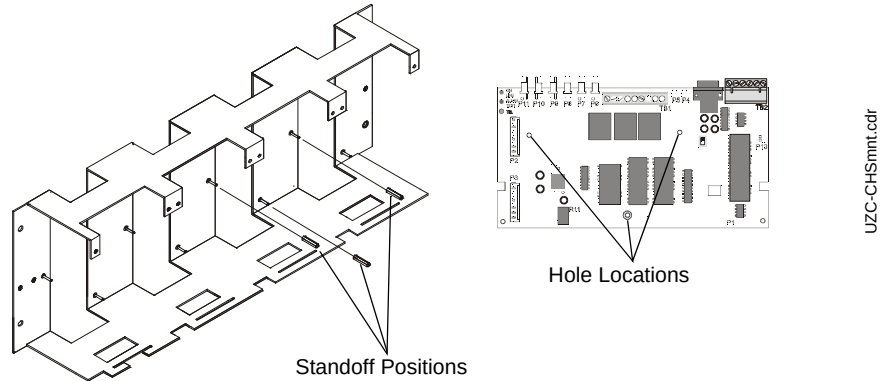
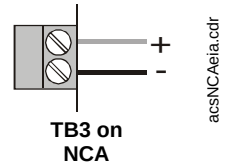


Figure F.1 Mounting the UZC-256 in a CHS-4

F.2 Connecting the EIA-485 Circuit

EIA-485 wiring is connected to TB3 of the NCA (ACS Mode interface) as shown in the accompanying illustration. See Section 2.2 “EIA-485 Communication” for details.



F.3 Providing Power to the UZC-256

When the power supply does not have a connector for power harness P2, hardwire connections as per Figure 3.2, “Connecting UZC-256 to 5V and 24V Power” on page 10.

F.4 Programming the NCA for Remote Annunciation

Annunciator points must be programmed from the NCA before the annunciators will function. To program the annunciators into NCA memory, and to map system points and software zones to annunciator points, refer to the *NCA Manual*.

Appendix G: NFS-3030 (UL 8th), NFS2-3030 (UL 9th), and NCA-2 (UL 9th) Systems

For NCA connections, see Appendix F, “NCA Systems (UL 8th)”, on page 25.

G.1 NFS-3030 and NFS2-3030 Mounting

When installed with the NFS-3030 or the NFS2-3030, the UZC-256 can be mounted to the base of the CHS-4/4N or CHS-4L chassis in the third and fourth positions. The CHS-4/4N or CHS-4L chassis mounts in a cabinet row beneath the NFS-3030 or NFS2-3030. The UZC-256 can also be mounted in a BB-UZC when it cannot be mounted in the same enclosure as the NFS-3030 or NFS2-3030. (See Figure E.1, “BB-UZC” on page 23)

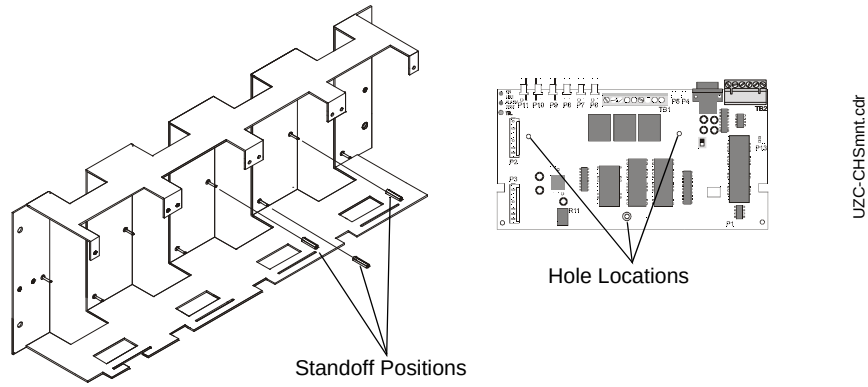


Figure G.1 Mounting the UZC-256 in a CHS-4

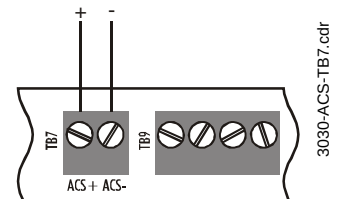
G.2 NCA-2 Mounting

When installed with the NCA-2, the UZC-256 can be mounted to the base of the CHS-4/4N or CHS-4L chassis in the third and fourth positions (See Figure G.1, “Mounting the UZC-256 in a CHS-4”). The CHS-4/4N or CHS-4L chassis mounts in a cabinet row beneath the NCA-2. The UZC-256 can also be mounted in a BB-UZC when it cannot be mounted in the same enclosure as the NCA-2 or when mounting the NCA-2 in an ABS-2D or ABS-4D (See Figure E.1, “BB-UZC” on page 23). Refer to Section E.2, “NFS2-640 and NFS-640 Mounting” on page 23 for mounting information when the NCA-2 is used with the standalone NFS2-640.

G.3 Connecting the EIA-485 Circuit

One ACS circuit may be connected to the NFS-3030/NFS2-3030/NCA-2 as shown in the accompanying illustration. The NFS-3030/NFS2-3030/NCA-2 is at the start of the EIA-485 circuit; do not T-tap. See Section 2.2 “EIA-485 Communication” for details.

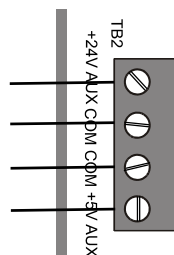
TB7 on NFS-3030/NFS2-3030/NCA-2



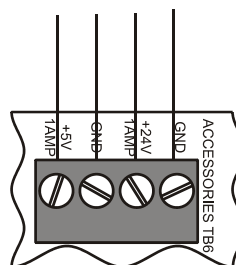
G.4 Providing Power to the UZC-256

Connect P2 to TB2 on the AMPS-24/E or TB6 on previous versions of the AMPS-24/E as shown in the following figure. AMPS-24/E, CPU2-3030, and NCA-2 do not have a connector for power harness P2; make UZC-256-end connections as per Figure 3.2, “Connecting UZC-256 to 5V and 24V Power” on page 10. The power run to the annunciator does not require a Power Supervision Relay. Loss of power is inherently supervised through a Communications loss. This 24 VDC output is supervised, filtered, and non-resettable. TB2 on the AMPS-24/E is power-limited. TB6 on previous versions of the AMPS-24/E is power-limited only if the +5V output on the terminal block is not used.

TB2 on the AMPS-24/E



TB6 on previous version of the AMPS-24/E



G.5 Programming the NFS-3030/NFS2-3030/NCA-2 for Remote Annunciation

Annunciator points must be programmed from the NFS-3030/NFS2-3030/NCA-2 before the annunciators will function. To program the annunciators into NFS-3030/NFS2-3030/NCA-2 memory, and to map system points and software zones to annunciator points, refer to the *NFS-3030 Programming Manual*, *NFS2-3030 Programming Manual*, or *NCA-2 Manual*.

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