FIRE·LITE® ALARMS
by Honeywell

Supplement to the ES-50X Manual #LS10129-000FL-E Revision E dated 5/23/2022 for ES-50XP Applications

Document LS10386-000FL-E Rev: A
2/23/2023 ECN:00029240

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.

Alarm Signaling Communications:

- **IP connections** rely on available bandwidth, which could be limited if the network is shared by multiple users or if ISP policies impose restrictions on the amount of data transmitted. Service packages must be carefully chosen to ensure that alarm signals will always have available bandwidth. Outages by the ISP for maintenance and upgrades may also inhibit alarm signals. For added protection, a backup cellular connection is recommended.
- **Cellular connections** rely on a strong signal. Signal strength can be adversely affected by the network coverage of the cellular carrier, objects and structural barriers at the installation location. Utilize a cellular carrier that has reliable network coverage where the alarm system is installed. For added protection, utilize an external antenna to boost the signal.
- **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 alarm signaling connections 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 interconnecting 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 0-49º C/32-120º 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 15-27º C/60-80º 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 present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de la classe A prescrites dans le Reglement sur le brouillage radioelectrique edicte par le ministere des Communications du Canada.

Software Downloads

In order to supply the latest features and functionality in fire alarm and life safety technology to our customers, we make frequent upgrades to the embedded software in our products. To ensure that you are installing and programming the latest features, we strongly recommend that you download the most current version of software for each product prior to commissioning any system. Contact Technical Support with any questions about software and the appropriate version for a specific application.

Documentation Feedback

Your feedback helps us keep our documentation up-to-date and accurate. If you have any comments or suggestions about our online Help or printed manuals, you can email us.

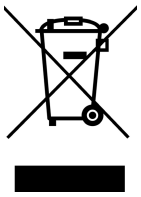
Please include the following information:

- Product name and version number (if applicable)
- Printed manual or online Help
- Topic Title (for online Help)
- Page number (for printed manual)
- Brief description of content you think should be improved or corrected
- Your suggestion for how to correct/improve documentation

Send email messages to:

FireSystems.TechPubs@honeywell.com

Please note this email address is for documentation feedback only. If you have any technical issues, please contact Technical Services.



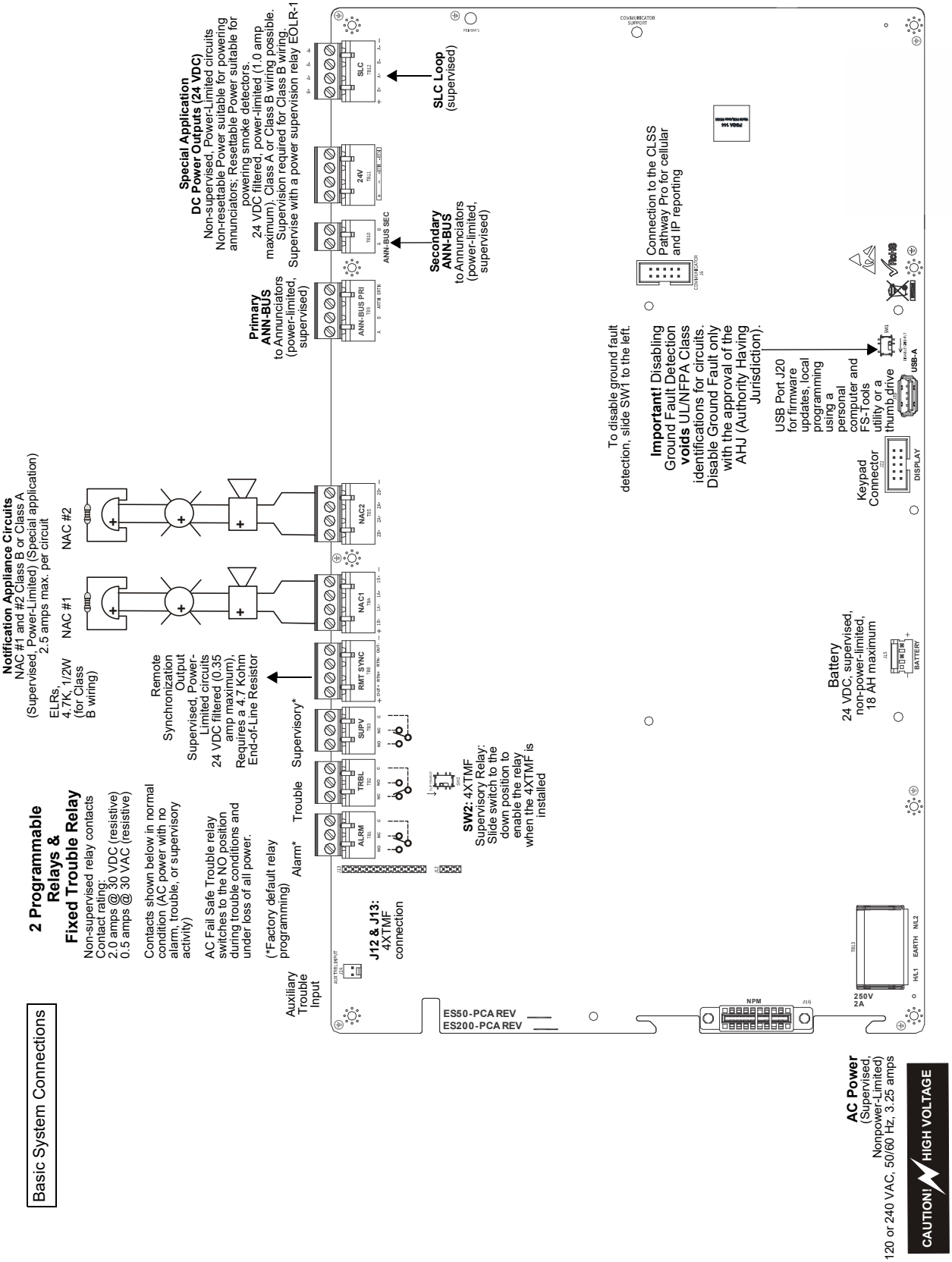
This symbol (shown left) on the product(s) and / or accompanying documents means that used electrical and electronic products should not be mixed with general household waste. For proper treatment, recovery and recycling, contact your local authorities or dealer and ask for the correct method of disposal.

Electrical and electronic equipment contains materials, parts and substances, which can be dangerous to the environment and harmful to human health if the waste of electrical and electronic equipment (WEEE) is not disposed of correctly.

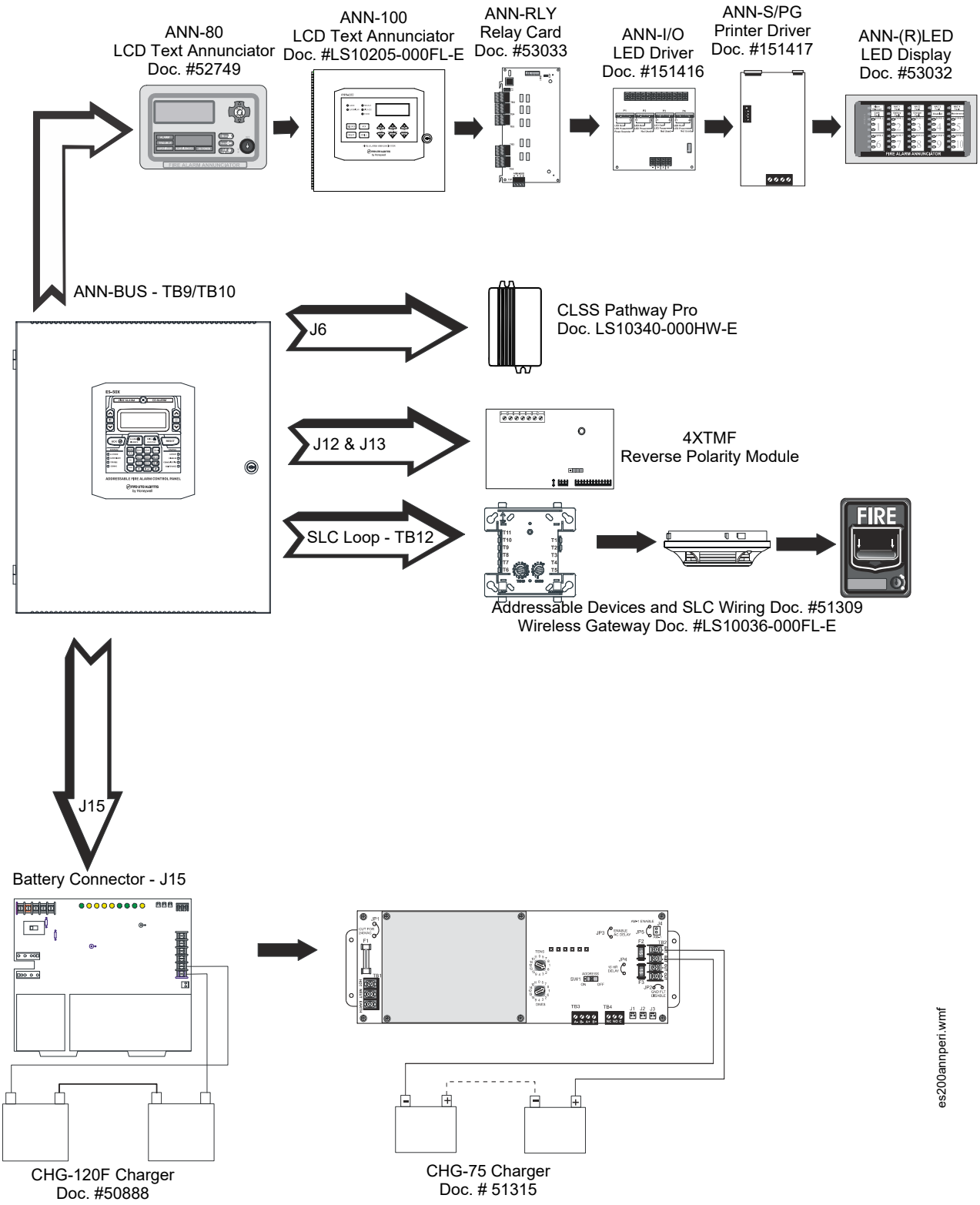
Use this text to update the ES-50X Series Manual for ES-50XP applications.

Fire-Lite Documents:

HW-AV-LTE-M-FL CLSS Pathway Pro Document #LS10340-000HW-E



Peripheral Devices and Their Documents:



1.1 Features and Options

- Pre-installed CLSS Pathway Pro

1.4 Components

CLSS Pathway Pro Communicator

The pre-installed CLSS Pathway Pro is a dual-path cellular communicator which runs on 24VDC power from the panel. It supports both AT&T and Verizon LTE networks, and uses either of them with a stronger signal. It transmits Contact ID data from the fire panel to the central monitoring station.The communicator transmits system status (alarms, troubles, AC loss, etc.) via ethernet or cellular network.

1.8.4 FCC Compliance

Contains FCC ID: RI7ME310G1WW

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference. (2) This device must accept any interference received, including, an interference that may cause undesired operation.

- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
- This device complies with FCC/ISED radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the ISED radio frequency (RF) Exposure rules. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. The antenna should be installed and operated with minimum distance of 8" (20 cm) between the radiator and your body.

2.6 UL Power-limited Wiring Requirements

Power-limited and non-power-limited circuit wiring must remain separated in the cabinet. All power-limited circuit wiring must remain at least 0.25" (6.35 mm) away from any non-power-limited circuit wiring and non-power-limited circuit wiring must enter and exit the cabinet through different knockouts and/or conduits. When connecting the ground cables, be sure that the AC mains ground is the first one installed, closest to the backbox. The antenna must be mounted 8 in (20cm) from the display/keypad. A typical wiring diagram for the ES-50XP is shown below.

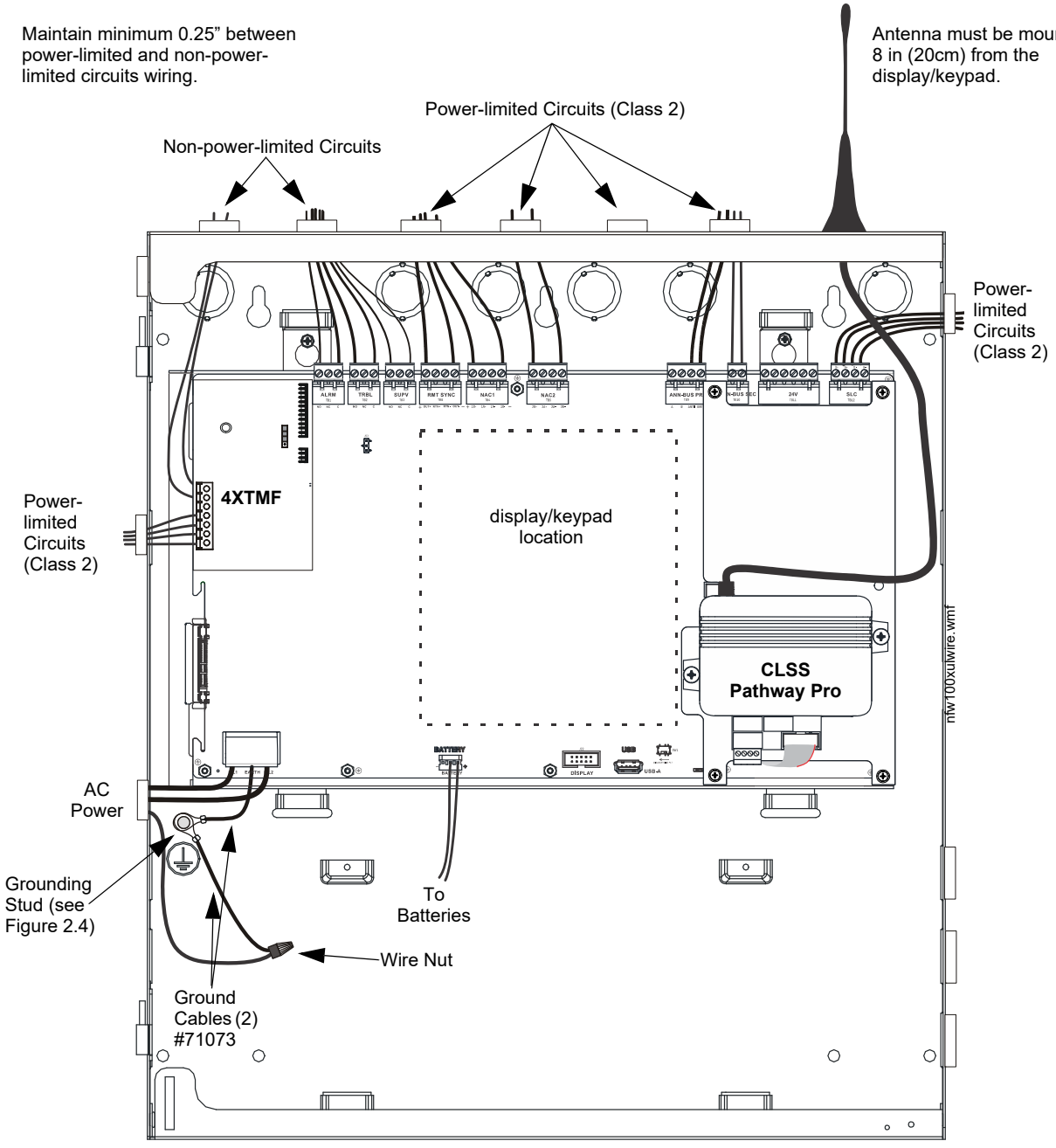


Figure 2.10 Typical UL Power-limited Wiring Requirements

2.8 CLSS Communicator

The CLSS Pathway Pro comes pre-installed and wired in the cabinet. The antenna must be mounted 8” (20cm) away from the display/keypad. Refer to Figure 2.10 above.

2.8.1 Configuration

After programming the panel via FS-Tools or the keypad, a CLSS account must be created and used to finalize communication from the Pathway Pro to the central station. Use either the CLSS Site Manager or CLSS Mobile app to configure the CLSS Pathway Pro.

Configuration must be done using a PC along with FS-Tools or the panel, and CLSS Site Manager. Follow the steps below.

1. Configure the panel via the keypad or FS-Tools.
2. Request a CLSS account and sign in.

   Navigate to www.fire.honeywell.com. Click *Request Access* and follow the on-screen instructions.
3. Build the customer site in CLSS.

   In the CLSS Site Manager, go to the *Quick access Menu* or *Feature Activation Screen* and click *Install Pathway Pro*. Follow the on-screen instructions to install the device.
4. Configure the Central Station.
5. Activate the CLSS Pathway Pro.
6. Upload the device list from panel/FS-Tools and download the Central Station Report.

3.5.7 Communicator

Programming Screen #3

The communicator settings allow the user to configure the settings for the pre-installed CLSS Pathway Pro. Pressing *2* while viewing the Programming Screen #3 will cause the following Communicator options to be displayed:

Communicator Screen #1

Communicator Screen #2

Communicator Screen #3

Communicator Installed

The pre-installed communicator provides communication to a central station. Use of the communicator requires it be enabled in user programming. Pressing *1* while viewing the Communicator Screen #1 will change the display to *Installed Yes*. Each press of the *1* key will cause the display to toggle between *Installed Yes* and *Installed No.*

Primary Communication Path

Communicator Screen #1

The Primary Communication Path screen is used to configure the method for reporting to central station. Pressing *1* for *Pri* will display the following screens.

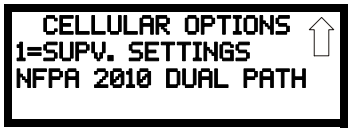
Comm Path Screen

■ Cellular

Comm Path Screen #1

To configure the communication method to contact central station using the CLSS Pathway Pro, select *3* for *Cellular* from the Comm Path Screen. The following screens will display.

Cellular Options Screen #1



Cellular Options Screen #2

Enable

To enable the Cellular connection, press *1* while viewing the Cellular Options Screen #1 to change the display to *Enabled Yes*. Each press of the *1* key will cause the display to toggle between *Enabled Yes* and *Enabled No.*

NOTE: When using the CLSS Pathway Pro, CS Account Options and Supervision Settings are not configured at the panel. Use the CLSS Site Manager or the mobile app to configure Central Station settings. Visit www.fire.honeywell.com and refer to Section 2.8 for more information.

9.3.2 How to Calculate System Current Load

Use Table 9.3 on page 131 to calculate current load as follows:

1. Enter the quantity of devices in all three columns.
2. Enter the current draw where required. Refer to the Device Compatibility Document and SWIFT Manual for compatible devices and their current draw.
3. Calculate the current draws for each in all columns.
4. Sum the currents for each column. This is the total load.
5. Verify that the total from Column 1 is less than or equal to the value specified in the note.
6. Copy the totals from Column 2 and Column 3 to Table 9.4 on page 132.

Table 9.3 contains columns for calculating current load. For each column, calculate the current and enter the total (in amperes) in the bottom row. When finished, copy the totals from Calculation Column 2 and Calculation Column 3 to Table 9.4 on page 132. For maximum output current available per circuit and per panel, refer to Section 1.2, “Specifications”, on page 14.

Device Type	Calculation Column 1 Primary (AC) Power Source Fire Alarm Current (amps)			Calculation Column 2 Secondary (Battery) Power Source Fire Alarm Current (amps)			Calculation Column 3 Secondary (Battery) Power Source Standby Current (amps)		
	Qty	X[current draw]=	Total	Qty	X [current draw]=	Total	Qty	X [current draw]=	Total
Main Circuit Board[1]				1	X[0.257]=		1	X[0.141]=	
CLSS Pathway Pro	[ ]	X[0.100]=		[ ]	X[0.100]=		[ ]	X[0.100]=	

Table 9.3 System Current Load Calculations

1 Main board with display only.

Appendix H: NFPA Requirements

The following is the minimum configuration to meet the NFPA requirements.

Module	Local	Aux	RS	CS	Proprietary	Process Management [1]
ES-50XP	Y	Y	Y	Y	N	Y
HW-AV-LTE-M-FL (pre-installed CLSS Pathway Pro)	Y	Y	Y	Y [2]	N	Y
Where Y = Yes, N = No, and O = Optional						

1 Non-Emergency
2 Also required when devices for Carbon Monoxide signaling are employed

ES-50XP Fire Alarm Control Panel Operating Instructions

NORMAL - Only *AC POWER* is illuminated green.
All other indicators are off. LCD display will read SYSTEM NORMAL.

PANEL KEY - The key to open the panel can be found at the following location:

_____

WHEN AUDIBLE DEVICES ARE SOUNDING -

FOR AN ALARM

1. Evacuate the protected area
2. Notify the monitoring service and/or the Fire Department immediately. Tell them briefly what happened and what your current status is.

   Phones: _____ _____
   Fire Department Monitoring Service
3. If the Fire Department is responding, be prepared to provide directions to arriving firefighters.

FOR TROUBLE, SUPERVISORY, AND EMERGENCY ALARMS

1. Notify the monitoring service and/or applicable first responders if this panel is connected to either one, and tell them what is happening.
2. Silence audible devices by unlocking and opening the panel and pressing the ACKNOWLEDGE/STEP button. The applicable indicator will remain illuminated. Contact authorized service personnel immediately! (See Below).

WARNING!

DO NOT ALLOW TROUBLE CONDITIONS TO REMAIN LOGGED IN THE SYSTEM. THE PROTECTION THE SYSTEM OFFERS HAS BEEN COMPROMISED OR ELIMINATED, WHEN A TROUBLE CONDITION EXISTS.

To return to normal after an alarm

1. Do not enter the protected area until safe to do so.
2. Clear all initiating devices. Smoke detectors will not reset if there is still smoke in the area.
3. Reset the control panel (PRESS the RESET button)

Power failure or brownout

If AC power drops too low or fails, *AC POWER* indicator will extinguish, the system *TROUBLE* indicator will turn on yellow, and the panel buzzer and any other audible trouble devices will sound. Contact authorized service personnel immediately. See below.

FIRE·LITE® ALARMS
by Honeywell

In the event of trouble, contact the
local Fire-Lite Service Representative

Name: _____

Company: _____

Address: _____

Telephone Number: _____

Manual activation (Fire Drill or otherwise)

Notification Appliance Circuits (NACs) can be activated by pressing and holding the DRILL button for at least two seconds.

NOTE: You may want to disconnect the municipal box by sliding the DISCONNECT switch, located on the 4XTMF module, to its disconnect position (to the right). If a DACT is connected, notify the monitoring service before conducting any fire drills or tests.

Alarm Silencing

Notification Appliance Circuits may be silenced by pressing the ALARM SILENCE button. *ALARM SILENCED* will turn on yellow. Subsequent alarms will reactivate circuits. Press the RESET button to clear the "silenced" condition.

NOTE: Notification Appliance Circuits may be programmed as nonsilenceable. Also, Signal Silence Inhibit, if enabled, will prevent silencing of NACs for five minutes after an alarm (see manual).

To test the indicators, LCD display and piezo

Press and release the RESET button and check all indicators/LEDs. Every indicator/LED should be on, LCD shows all pixels on, piezo sounder beeps.

For more information, refer to the ES-50X Series Manual, Document #LS10386-000FL-E and ES-50XP Supplement, Document #LS10388-000FL-E. They are kept in the following location:

_____

THIS SHEET SHALL BE FRAMED ADJACENT TO THE CONTROL PANEL

Document #LS10388-000FL-E Rev. A 2/16/2023 ECN 00029240

Cut along dotted line.

Cut along dotted line.