RPT-E3-UTP
Repeater Module
Product Installation Document

⚠ **CAUTION 1: STATIC SENSITIVE EQUIPMENT**
THIS EQUIPMENT IS SENSITIVE TO STATIC ELECTRICITY. IT MAY BE DAMAGED IF NOT PROPERLY HANDLED.
TRANSPORT AND STORE THIS UNIT IN A STATIC-SHIELDING BAG.
FAILURE TO OBSERVE THIS REQUIREMENT COULD CAUSE LATENT DAMAGE TO THE EQUIPMENT WHICH
MIGHT NOT MANIFEST ITSELF UNTIL AFTER THE EQUIPMENT IS PLACED IN SERVICE.

⚠ **CAUTION 2: DISCONNECT ALL POWER**
REMOVE ALL SOURCES OF POWER BEFORE SERVICING, REMOVING OR INSTALLING ANY UNITS.

Section 1: Description

The Repeater-E3, Unshielded, Twisted-Pair (RPT-E3-UTP) sub-assembly is an ARCNET communication circuit. It provides a remote interface between the ILI-MB-E3/ILI95-MB-E3, NGA and the Broadband network. If you use the RPT-E3-UTP with the ANX, you must use the ANX for Fire applications only. The following are the network communications circuits.
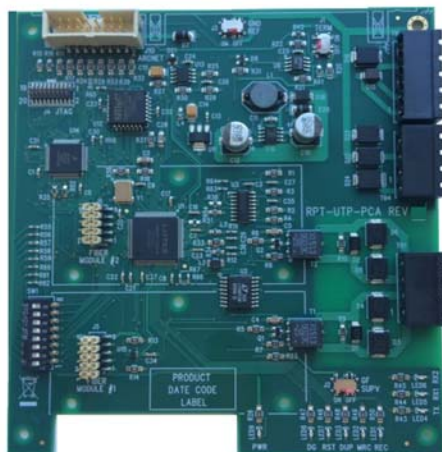
- RPT-E3-UTP (Repeater Module) connects to the network using unshielded, twisted-pair wire.
- FML-E3 (Fiber-Optic Multi-Mode) provides the fiber-optic multi-mode 62.5 microns fiber.
- FSL-E3 (Fiber-Optic Single-Mode) provides the fiber-optic single-mode 50 microns fiber.

    To provide fiber connectivity, you must use one fiber-optic module per a network channel to transmit/receive.

The RPT-E3-UTP can be used for the optional Network Releasing Systems. The ARCNET communication circuits are wired in a Class X configuration. When the RPT-E3-UTP is connected to the network (via the ARCNET), it is compatible with the following systems.

- E3 Series Fire and/or Mass Notification Systems and Retrofit Kits
- E3 Series System
- E3 Series Broadband System
- E3 Series Classic System (For Fire applications only)
- S3 Series System (Small Addressable Fire Alarm Control Panel)

Figure 1.1 illustrates the RPT-E3-UTP sub-assembly.

Figure 1.1 RPT-E3-UTP Sub-Assembly

1.1 Mass Notification System (MNS)

The Gamewell-FCI, Mass Notification System (MNS) is a Combination In-Building Fire and Mass Notification System. It comprises the E3 Series Broadband Emergency Voice Evacuation System and the E3 Series Broadband Networked Fire Alarm System. This design allows a wide range of configurations to form an integrated, distributed fire alarm system in combination with the audio evacuation for both Fire and Mass Notification functions as desired. The design also allows for its use as a dedicated standalone Mass Notification System without the fire alarm service. The network communication conveys all Fire Alarm and Mass Notification control functions, audio evacuation, voice paging, and fire fighter communications over a single pair of wires or fiber-optic cable. The modular design offers several configurations to accommodate the following audio components:

- Autonomous Control Unit (ACU), (Main Command Center)
- Local Operating Console (LOC), (Remote Command Center)
- E3 Series Broadband Voice Evacuation System

Table 1.1.1 lists the E3 Series sub-assemblies that can be used in the Gamewell-FCI, MNS (Mass Notification System).

Autonomous Control Unit ACU) Main Command Center	E3 LOC Remote Command Center	E3 Broadband System (Distributed System)
AM-50 Series Amplifiers	AOM-TELF/AOM-2SF	AM-50 Series Amplifiers
ANU-48 (Remote Annunciator)	ASM-16 (Addressable Switch Module)	ANU-48 (Remote Annunciator)
ASM-16 (Addressable Switch Module)	INI-VG Series (Intelligent Network Interface Voice Gateway)	ASM-16 (Addressable Switch Module)
ILI-MB-E3 (Intelligent Loop Interface-Main Board)	INCC-MIC (Microphone)	ILI-MB-E3 (Intelligent Loop Interface-Main Board)
ILI-S-E3 (Intelligent Loop Interface-Expansion Board)	NGA (Network Graphic Annunciator)	ILI-S-E3 (Intelligent Loop Interface-Expansion Board)
ILI95-MB-E3 (Intelligent Loop Interface-Main Board)	INCC-TEL (Telephone)	ILI95-MB-E3 (Intelligent Loop Interface-Main Board)
ILI95-S-E3 (Intelligent Loop Interface95-Expansion Board)		ILI95-S-E3 (Intelligent Loop Interface95-Expansion Board)
INCC-MIC (Microphone)		INCC-MIC (Microphone)
INCC-TEL (Telephone)		INCC-TEL (Telephone)
INI-VG Series (Intelligent Network Interface Voice Gateway)		INI-VGC (Intelligent Network Interface Voice Gateway)
NGA (Network Graphic Annunciator)		INI-VGX (Intelligent Network Interface Voice Gateway)
PM-9/PM-9G (Power Supply)		NGA (Network Graphic Annunciator)
RPT-E3-UTP (Communication Circuit)		PM-9/PM-9G (Power Supply)
		RPT-E3-UTP (Communication Circuit)
Note: In the E3 Series, Mass Notification System, the LCD-E3 and LCD-SLP Display panels are not used.		

Table 1.1.1 E3 Series Modules Used in the MNS System

1.1.1 Mass Notification System - Documentation

The following MNS System information is available in the Gamewell-FCI, *Mass Notification System (MNS) Installation/Operation Manual, Part Number:LS10013-000GF-E.*

- System Configurations
- Cabinets Installations
- Class 2 Power-Limited Requirements
- Wiring
- System Operation
- Testing/Maintenance

Section 2: Installation

2.1 Standards

This product is intended to be installed in accordance with the following standards.

National Fire Protection Association

- AHJ   Authority Having Jurisdiction
- NFPA 70   National Electrical Code
- NFPA 72   National Fire Alarm Code
- NFPA 101   Life Safety Code

UL Standards 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 roll-out 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. https://iq.ulprospector.com.

Underwriters Laboratories® Standard

- UL-2572 MNS Mass Notification, Second Edition

2.2 Installation Requirements

All components of the E3 Series® and S3 Series Systems should be installed per the following requirements:

- Installations are to be indoors only, in dry locations, protected from rain, water, and rapid changes in temperature that could cause condensation. Equipment must be securely mounted on rigid, permanent walls.
- Operating temperature shall not exceed the range of 32° to 120° F (0 to 49° C).
- Operating humidity not to exceed 93% non-condensing at 90° F (32° C).
- There should be adequate space around the installation to allow easy access for operation and servicing.
- All sub-assemblies and components are to be located in compliance with the local, the national codes and the manufacturer's recommendations.
- All installation field wiring shall be in compliance with the local code, the national code and the manufacturer's recommendations.
- Use the Architects and Engineering Specifications for detailed information on your Facility's Configuration.
- Installers must be Gamewell-FCI Factory Certified to program this product. For additional information on this product, contact the Gamewell-FCI Customer Support to schedule the Factory Certified Training.

2.3 Specifications

The following list the electrical specifications for the RPT-E3-UTP sub-assembly.

Operating Voltage:	24 VDC FWR non-resettable (from PM-9/PM-9G power supply)
Operating Current:	0.016 amp
Alarm Current:	0.017 amp
Operating Temperature:	32° to 120° F (0° to 49°C)
Relative Humidity:	0° to 93%, non-condensing at 90° F (32°C)
Supervised	
Class 2 Power-Limited	

2.4 RPT-E3-UTP Installation Assembly Options

Table 2.4.1 lists the cabinet configurations that the RPT-E3-UTP can be installed. To determine which configuration to install the RPT-E3-UTP module, identify the System your facility uses. Then, locate the configuration in the Cabinet Assembly Options column. To locate the Section that describes how to install the RPT-E3-UTP in the appropriate configuration, refer to the Installation Instructions column.

For example, if your facility uses an E3 Series System, and your facility purchased the Cabinet AA1, refer to Section 2.5.2.1.1 for instructions on how to install the RPT-E3-UTP to the Cabinet AA1 Backbox.

Cabinet Assembly Options	Part Number	Cabinet Dimensions	Installation Instructions (For installation instructions, refer to the Section listed in the column).
E3 Series System Installation Options			
Cabinet AA1 Backbox	E3BB-BA1/RA1	8 3/4"W x 10"H x 4 1/2"D (22.2W x 25H x 11D cm)	Section 2.5.2.1
Cabinet B Backbox	E3BB-BB/RB	19 3/8"W x 19 3/8"H x 4 1/2"D (49W x 49H x 11D cm)	Section 2.5.2.2,
B-Slim Cabinet Backbox	E3BB-RBSLIM	14"W x 20"H x 4 1/2"D (35.5W x 50.8H x 11D cm)	Section 2.5.2.3
Cabinet C, E3 INX-C Plate	E3-INX-CPLATE	19 3/8"W x 30"H x 4 1/2"D (49W x 76H x 11D cm)	Section 2.5.2.3
Cabinet C, E3 INCC-C Plate	E3-INCC-CPLATE	19 3/8"W x 30"H x 4 1/2"D (49W x 76H x 11D cm)	Section 2.5.2.3
Cabinet C, E3-ILI-C Plate (RPT-E3-UTP Connected to ILI-MB-E3/ ILI95-MB-E3)	E3-ILI-CPLATE	19 3/8"W x 30"H x 4 1/2"D (49W x 76H x 11D cm)	Section 2.5.2.3
Cabinet C, E3-ILI-C Plate (RPT-E3-UTP Connected to ANX-MR-FO)	E3-ILI-CPLATE	19 3/8"W x 30"H x 4 1/2"D (49W x 76H x 11D cm)	Section 2.5.2.4
Cabinet D, E3-INX-D Plate	E3-INX-D PLATE	19 3/8"W x 41"H x 4 1/2"D (49W x 104H x 11D cm)	Section 2.5.2.4
Cabinet D, E3-INCC-D Plate	E3-INCC-D PLATE	19 3/8"W x 41"H x 4 1/2"D (49W x 104H x 11D cm)	Section 2.5.2.4
E3 Series Fire/MNS System Installation Options			
Cabinet C (ACU) E3 INCC-CAB-C Plate	E3-INCC-CPLATE	19 3/8"W x 30"H x 4 1/2"D (49W x 76H x 11 D cm)	Section 2.5.2.3
Cabinet C, E3-INX-CAB-C Plate	E3-INX-CPLATE	19 3/8"W x 30"H x 4 1/2"D (49W x 76H x 11D cm)	Section 2.5.2.3
Cabinet D, (ACU), E3-INCC-CAB-D	E3-INCC-D PLATE	19 3/8"W x 41"H x 4 1/2"D (49W x 104H x 11D cm)	Section 2.5.2.3
S3 Series System Installation Options			
SLP-BB Cabinet B, S3 Mounting Plate	SLP-BB	14"W x 20"H x 4 1/2"D (35.5W x 50.8H x 11D cm)	Section 2.5.3.1 and Section 2.5.3.2
B-Size Cabinet Backbox	E3BB-BB/RB	19 3/8"W x 19 3/8"H x 4 1/2"D (49W x 49H x 11D cm)	Section 2.5.2.2
Retrofit Installation Options			
600XL Retrofit Cabinet C Backbox	600XL-RETROFIT (E3-ILI-CPLATE)	22"W x 30"H x 5.5"D (55.8W x 76.2H x 13.9D cm)	Section 2.5.2.3
7200 Cabinet B E3-ILI-C Plate	E3-ILI-CPLATE	21"W x 28 1/2"H x 4"D (53.34W x 72.39H x 10.16D cm)	Section 2.5.2.3
7200 Cabinet C, E3-INCC-D Plate	E3-INCC-D PLATE	21"W x 38"H x 4"D (53.34W x 95.52H x 10.16D cm)	Section 2.5.2.3

Table 2.4.1 RPT-E3-UTP Installation Assembly Options

2.5 RPT-E3-UTP Installation

1. Installations are to be indoors only, in dry locations, protected from rain, water, and rapid changes in temperature that could cause condensation. Equipment must be securely mounted on rigid, permanent walls.

2. Remove the RPT-E3-UTP Repeater Module from its static-shield bag, observing proper static protection measures.

3. Visually inspect the unit for damage.

    If any components are damaged, notify the shipping carrier immediately. Report missing components to Gamewell-FCI Customer Service.

4. Use the Hardware Kit provided with the unit.

    The RPT-E3-UTP sub-assembly can be installed in several types of configurations in the E3 Series, S3 Series and Retrofit cabinets. To determine the RPT-E3-UTP installation that you require, refer to the following documents and Section 2.5.2 thru Section 2.5.3.
    - *E3 Series Cabinets B, C, D, Retrofit, DR-C4/DR-D4 & EQ Cabinets Installation Instructions, P/N:LS10082-000GF-E*
    - *E3 Series, Remote Annunciator Display and Retrofit Cabinets Installation Instructions, P/N: LS10083-000GF-E*
    - *S3 Series (Small Addressable Fire Alarm Control Panel) Installation/Operation Manual, P/N:LS10005-051GF-E*
    - *E3 Series Combined Fire and Mass Notification Installation/Operation Manual, P/N:LS10013-000GF-E*

2.5.1 Fiber Modules to RPT-E3-UTP Installation

The RPT-E3-UTP ARCNET communication circuit uses the FML-E3 and FSL-E3 fiber-option modules to convert from wire to fiber. To install the fiber modules to the RPT-E3-UTP, do the following:

1. Plug the Fiber Module #1 into J5 of the RPT-E3-UTP circuit as shown in Location 1 of the figure below.

2. To connect the Fiber Module # 1 to the RPT-E3-UTP, insert and secure three screws (#4-40 x 1/4" LG PHPD SEMS) from the Fiber Module # 1 to the RPT-E3-UTP as shown in Location 2 of the figure below.

3. Plug the Fiber Module #2 into J6 of the RPT-E3-UTP circuit as shown in Location 3 of the figure below.

4. To connect the Fiber Module #2 to the RPT-E3-UTP, insert and secure three screws (#4-40 x 1/4" LG PHPD SEMS) from the Fiber Module # 2 to the RPT-E3-UTP as shown in Location 4 of the figure below.
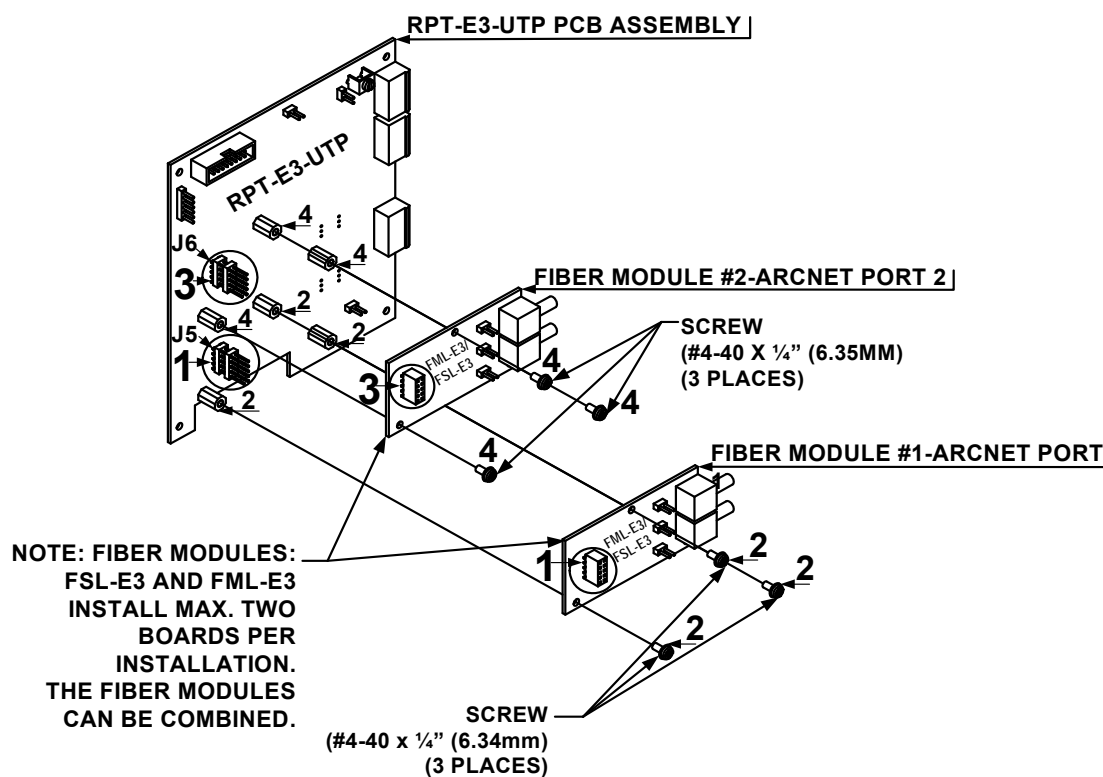

Figure 2.5.1.1 Fiber Modules Installed to the RPT-E3-UTP

NOTE: FIBER MODULES #1/#2 RESTRICTIONS:
If you use TB1-1 and TB1-2 for Port 1, do not install Fiber Module #1 into connector J5. If you use TB1-3 and TB1-4 for Port 2, do not install Fiber Module #2 into connector J6.

2.5.2 RPT-E3-UTP Installation to an E3 Series, Cabinet Configuration

In an E3 Series cabinet configuration, the PCA orientation of the RPT-E3-UTP sub-assembly is usually installed above the ILI-MB-E3, ILI95-MB-E3, or ANX sub-assembly as part of a backbox or a mounting plate configuration. To install the RPT-E3-UTP, refer to the following instructions.

2.5.2.1 RPT-E3-UTP Installed to a CAB AA1 or CAB A2 Backbox

1. Align and place the RPT-E3-UTP on top of the four studs that extend from the backbox as shown in Location 1 of figure below.
2. Insert and secure four screws (#4-40 x 3/8") into the four studs on the backbox as shown in Location 1 of the figure below.
    Figure 2.5.2.1.1 illustrates the RPT-E3-UTP installed to a CAB AA1 or CAB A2 backbox.
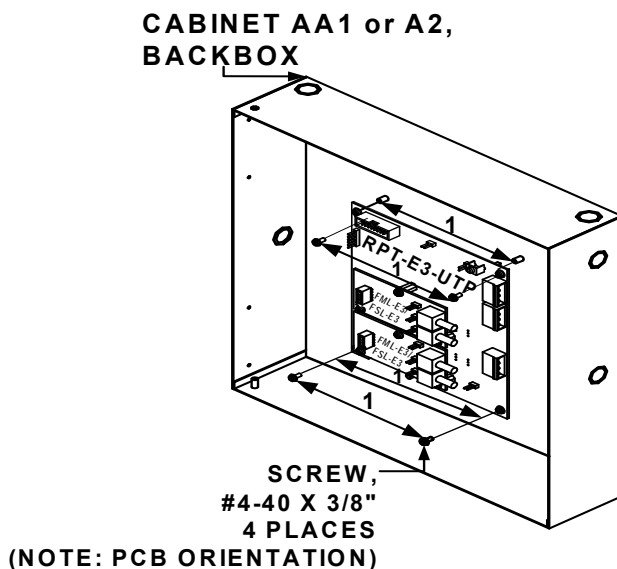

Figure 2.5.2.1.1 RPT-E3-UTP Installed to a CAB AA1 or CAB A2 Backbox

2.5.2.2 RPT-E3-UTP Installed to a CAB-B Backbox

1. Align and place the RPT-E3-UTP on top of the four standoffs that extend from the right side of the ILI-MB-E3/ILI95-MB-E3 as shown in Location 1 of the figure below.
2. Insert and secure four screws (#4-40 x 3/8") into the four standoffs on top of the ILI-MB-E3/ILI95-MB-E3 as shown in Location 2 of the figure below.

Figure 2.5.2.2.1 illustrates the RPT-E3-UTP installed to a CAB-B backbox.
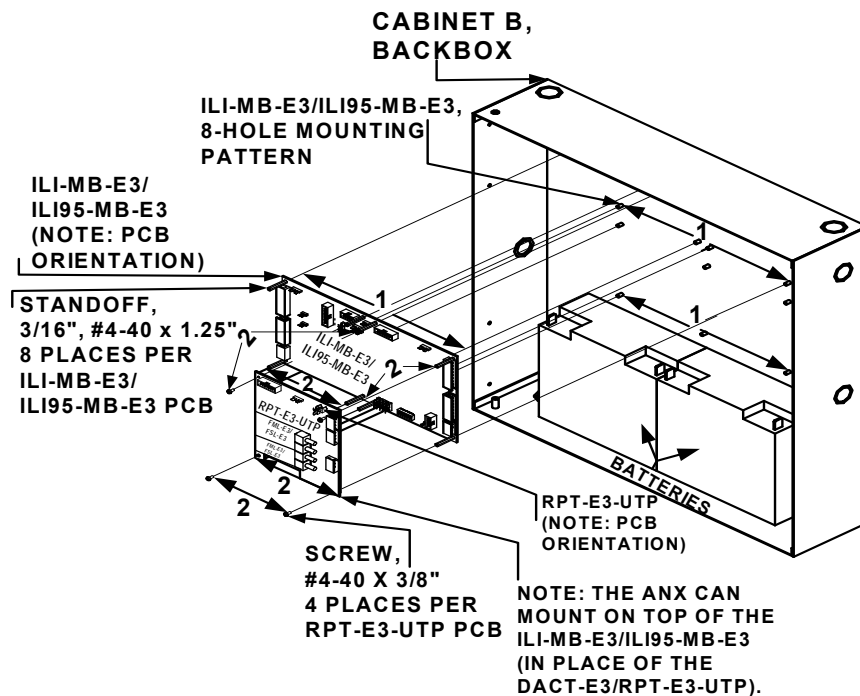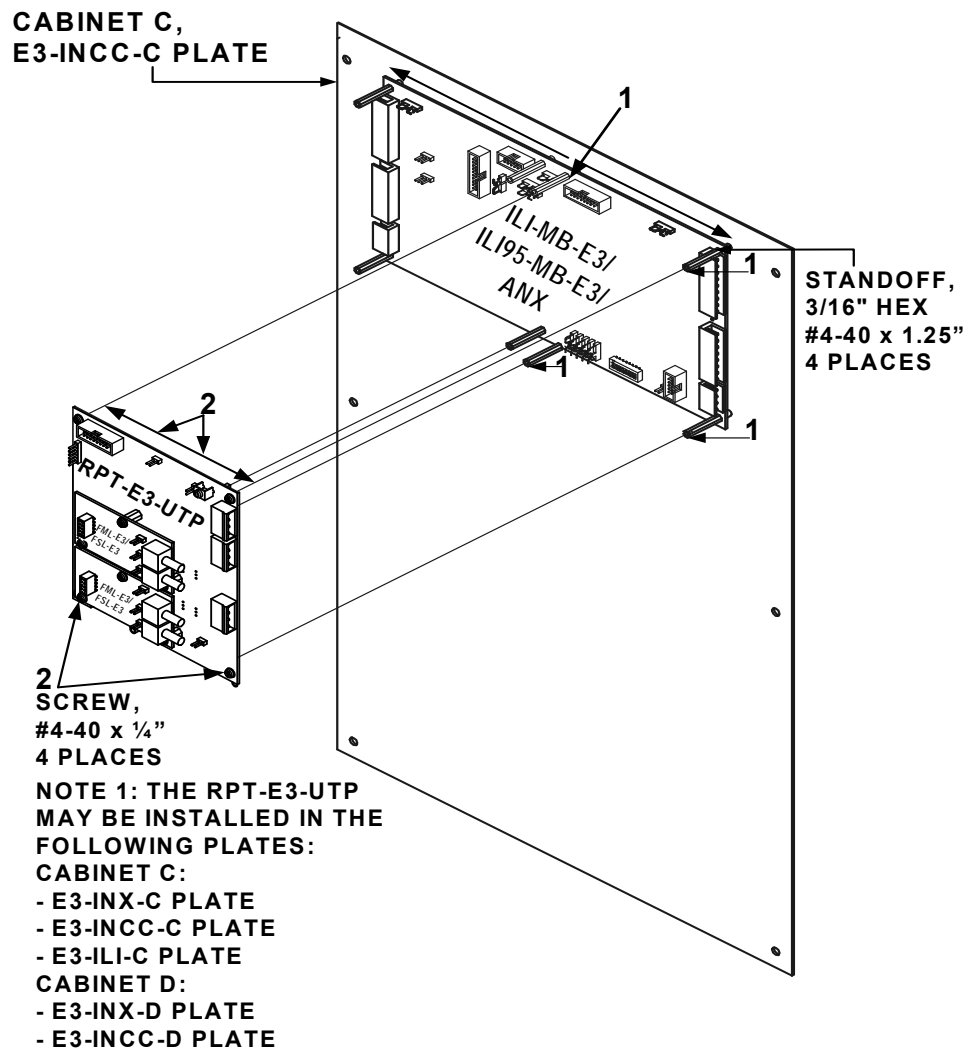

Figure 2.5.2.2.1 RPT-E3-UTP Installed to a CAB-B Backbox

2.5.2.3 RPT-E3-UTP Installed to an E3 Series, Mounting Plate

The RPT-E3-UTP can be installed in the following mounting plates.

- E3-INX-C Plate
- E3-INCC-C Plate
- E3-ILI-C Plate
- E3-INCC-D Plate
- E3-INX-D Plate

1. Insert and secure four standoffs (3/16" HEX #4-40, x 1") on top of the ILI-MB-E3/ILI95-MB-E3 or ANX as shown in Location 1 of the figure below.
2. Align and place the RPT-E3-UTP on top of the four standoffs that extend from the ILI-MB-E3/ILI95-MB-E3 or ANX as shown in Location 1 of the figure below.
3. Insert and secure four screws (#4-40 1/4") to the four standoffs extending from the right side of the ILI-MB-E3/ILI95-MB-E3 or ANX.

Figure 2.5.2.3.1 illustrates the RPT-E3-UTP installed to the Cabinet C, E3-INCC-C Plate.

Figure 2.5.2.3.1 RPT-E3-UTP Installed to an E3 Series Mounting Plate

2.5.2.4 RPT-E3-UTP Installed to the Mounting Plate for an ANX Connection

The RPT-E3-UTP can be connected to an ANX using any of the following mounting plates.

- E3-INX-C Plate
- E3-INCC-C Plate
- E3-ILI-C Plate
- E3-INCC-D Plate
- E3-INX-D Plate
- S3 Mounting Plate (SLP-BB)

1. Mount the first, ILI-MB-E3/ILI95-MB-E3 to the pins on the E3-ILI-C plate. Insert and secure eight standoffs, (3/16" hex, #4-40 x 1.25") to the eight-hole mounting pattern as shown in Location 1 of the figure below.
2. Align and place the RPT-E3-UTP on top of the four standoffs that extend from the ILI-MB-E3/ILI95-MB-E3 as shown in Location 1 of the figure below.
3. Mount the DACT-E3 and the RPT-E3-UTP over the standoffs on top of the ILI-MB-E3/ILI95-MB-E3. Insert and secure eight screws (#4-40 x 1/4") into the eight standoffs as shown in Location 2 of the figure below.
4. Mount the PM-9/PM-9G to the pins on the E3-ILI-C plate. Insert and secure six screws (#4-40 x 1/4") to the six-hole mounting pattern as shown in Location 3 of the figure below.
5. Mount the ANX to the pins on the E3-ILI-C plate. Insert and secure eight screws (#4-40 x 1/4") to the eight-hole mounting pattern as shown in Location 4 of the figure below.
6. Connect the ribbon cable from J10 on the RPT-E3-UTP to J4 on the ANX.

Figure 2.5.2.4.1 illustrates the RPT-E3-UTP installed to the ANX multi-ring module on the Cabinet C, E3-ILI-C Plate.
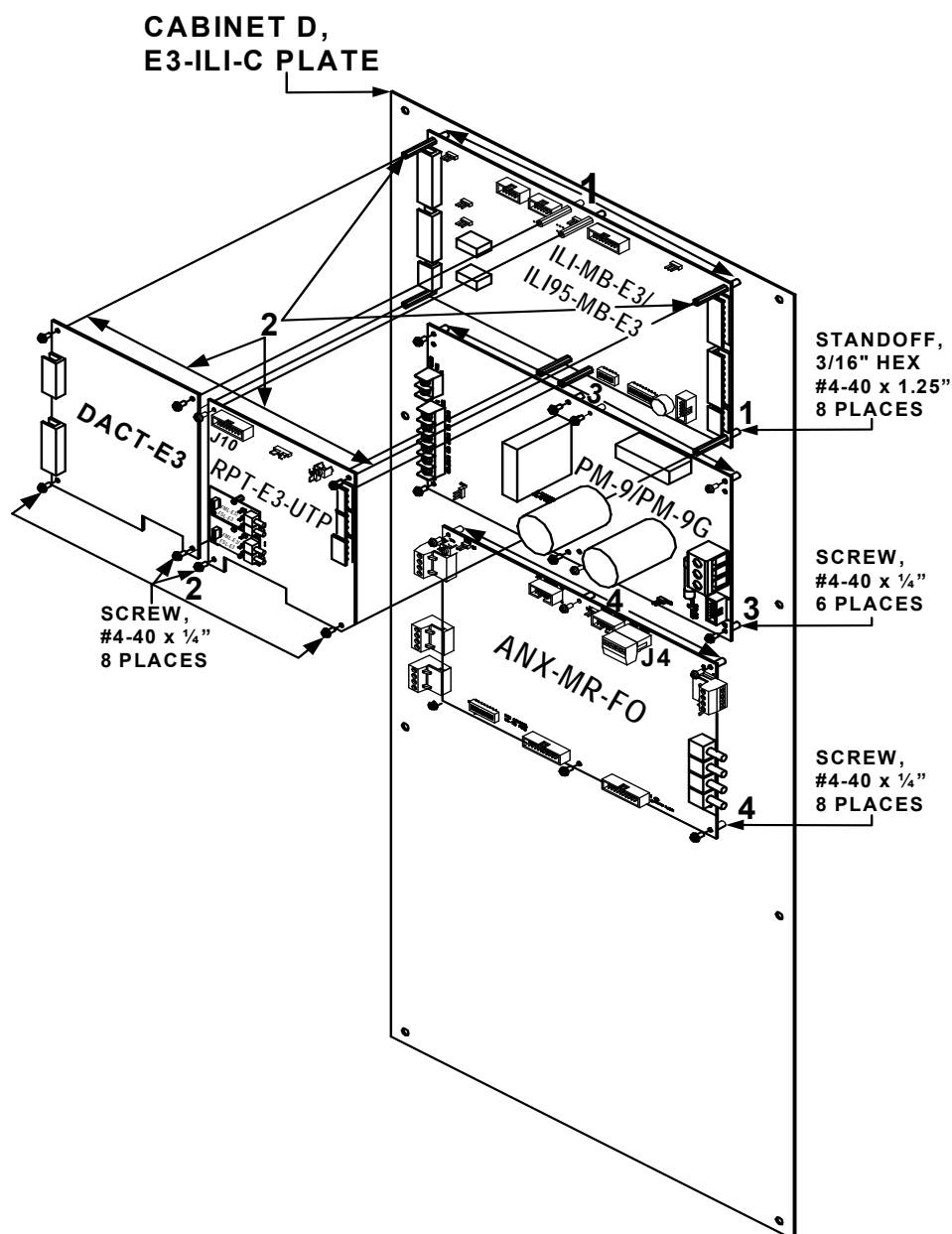

Figure 2.5.2.4.1 RPT-E3-UTP Installed to a Mounting Plate

2.5.3 RPT-E3-UTP Installed to an S3 Series, Cabinet Configuration

In an S3 Series cabinet configuration, the PCA orientation of the RPT-E3-UTP sub-assembly is usually installed above the SLP-E3 sub-assembly as part of a backbox configuration. To install the RPT-E3-UTP, refer to the following instructions.

2.5.3.1 RPT-E3-UTP Installed to an S3 Mounting Plate

The RPT-E3-UTP can be installed to the S3 Series mounting plate.

1. Insert and secure four standoffs (#4-40, x 1 1/2") on top of the SLP-E3 as shown in Location 1 of the figure below.
2. Align and place the RPT-E3-UTP on top of the SLP-E3.
3. Insert and secure four screws (#4-40 x 1/4") into the four standoffs as shown in Location 2 of the figure below.

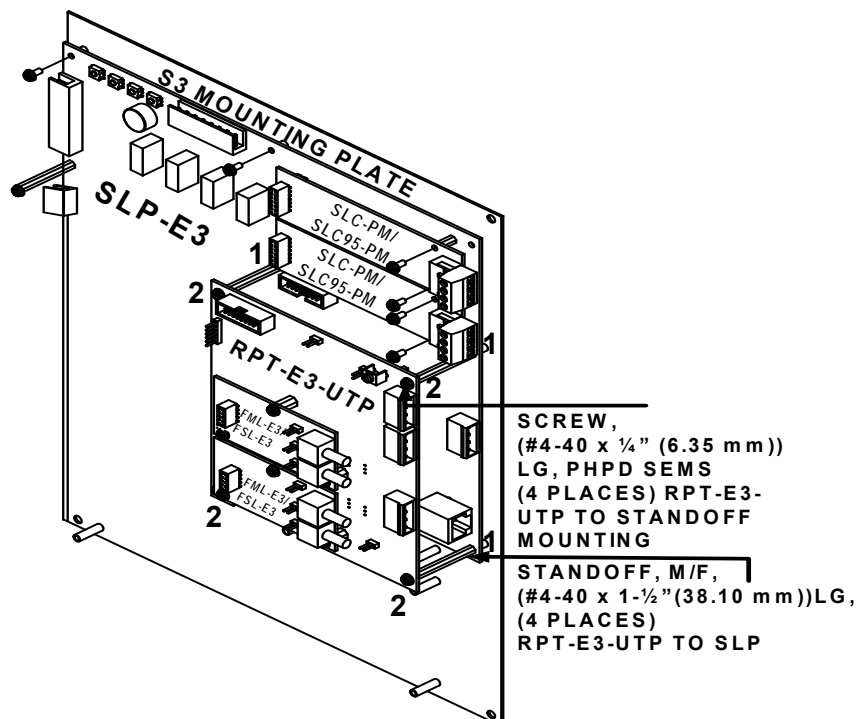Figure 2.5.3.1.1 illustrates the RPT-E3-UTP installed to an S3 Mounting Plate.

Figure 2.5.3.1.1 RPT-E3-UTP Installed to an S3 Series Mounting Plate

2.5.3.2 RPT-E3-UTP Installed in an SLP-BB Cabinet

Figure 2.5.3.2.1 illustrates the RPT-E3-UTP installed in an S3 Series, SLP-BB cabinet.
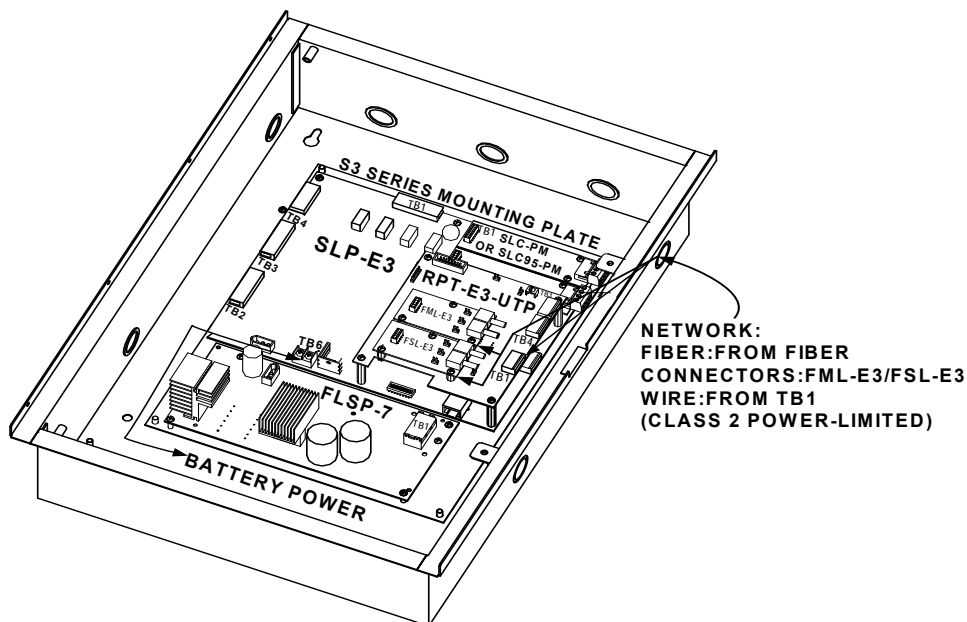

Figure 2.5.3.2.1 RPT-E3-UTP Installed in an SLP-BB Cabinet

Section 3: Wiring

3.1 RPT-E3-UTP Wiring Requirements

Table 3.1.1 lists the wiring requirements for the RPT-E3-UTP.

Circuit Type	Circuit Function	Wire Requirements	Distance	Typical Wire Type*
24 VDC Power Runs (Class 2 Power-Limited)	To Transmitter Annunciator	12-18 AWG (3.1 to 0.78 mm^2). Size wire so that no more than 1.2 V drop across wire run from supply source to end of any branch.	To meet 1.2 volt drop	12 to 18 AWG (3.1 to 0.78 mm^2)
ARCNET (Class 2 Power-Limited)	Provides interface between network nodes. ARCNET should be installed in a separate conduit.	Twisted-unshielded pair low capacitance 18 AWG	3,000 ft. (.914 m) (via RPT-E3 or INI-VG Series)	18 AWG (3.1 mm^2)
Note: Lightning arresters required on circuits extending between buildings; 999 meter length maximum to meet UL 1459.				

Table 3.1.1 RPT-E3-UTP Wiring Requirements

3.2 Fiber Wiring Requirements

Table 3.2.1 lists the fiber length DB loss attenuations for the FML-E3 multi-mode and FSL-E3 single-mode modules.

Specifications	FML-E3 Fiber-Optic Multi-Mode	FSL-E3 Fiber-Optic Single-Mode
Type of Connector	Type ST	Type LC
Maximum Attenuation:	8 dB for multi-mode with 62.5/125 micrometer cable @ 200 µ	30 dB for single-mode with 9/125 micrometer cable @ 1310 nm

Table 3.2.1 FML-E3/FSL-E3 Fiber Length DB Loss

RPT-E3-UTP Product Installation Document — P/N 9000-0580:H6 02/25/20

3.3 RPT-E3-UTP Wiring Connections

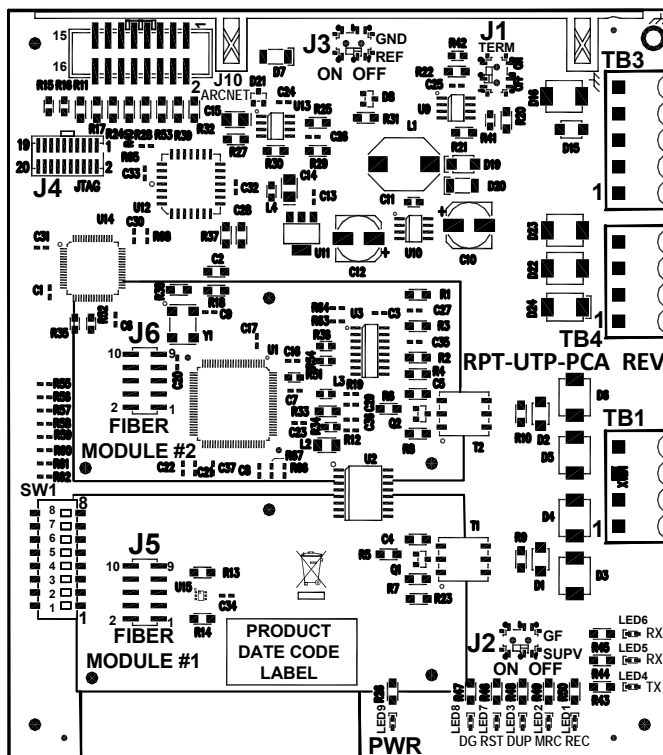Figure 3.3.1 illustrates the RPT-E3-UTP PCA sub-assembly.

Figure 3.3.1 RPT-E3-UTP Sub-Assembly

3.3.1 RPT-E3-UTP Wiring Designations

The RPT-E3-UTP wiring connections are shown in Table 3.3.1.1 and Figure 3.3.2.1.

Designation	Description	Comments	
TB1-1	ARCNET PORT 1A	Broadband Network (See Note 1) For Ground Fault Supervision, PORT 1A = IN from the previous panel or node. (See Note 5)	
TB1-2	ARCNET PORT 1B	Broadband Network (See Note 1) For Ground Fault Supervision, PORT 1B = IN from the previous panel or node. (See Note 5)	
TB1-3	ARCNET PORT 2A	Broadband Network (See Note 1) For Ground Fault Supervision, PORT 2A = OUT to the next panel or node. (See Note 6)	
TB1-4	ARCNET PORT 2B	Broadband Network (See Note 1) For Ground Fault Supervision, PORT 2B = OUT to the next panel or node. (See Note 6)	
TB3-1	COM A IN	**E3 Series** Local Differential ARCNET (See Note 3)	**S3 Series** Not used when the RPT-E3-UTP is installed in the SLP-BB and B-Size cabinets.
TB3-2	COM B IN	**E3 Series** Local Differential ARCNET (See Note 3)	**S3 Series** Not used when the RPT-E3-UTP is installed in the SLP-BB and B-Size cabinets.
TB3-3	COM A OUT	**E3 Series** Local Differential ARCNET. Connect to NGA TB1-3 (See Note 3)	**S3 Series** Not used when the RPT-E3-UTP is installed in the SLP-BB and B-Size cabinets.
TB3-4	COM B OUT	**E3 Series** Local Differential ARCNET. Connect to NGA TB1-4 (See Note 3)	**S3 Series** Not used when the RPT-E3-UTP is installed in the SLP-BB and B-Size cabinets.
TB3-5	Earth Ground	Local Differential ARCNET (See Note 2)	
TB4-1	+ 24 V IN	**E3 Series** Do not use, if J10 is used. (+24 VDC IN from TB3-6 ILI-MB-E3/ ILI95-MB-E3/ANX).	**S3 Series** Not used when the RPT-E3-UTP is installed in the SLP-BB and B-Size cabinets.

Table 3.3.1.1   RPT-E3-UTP Wiring Designations

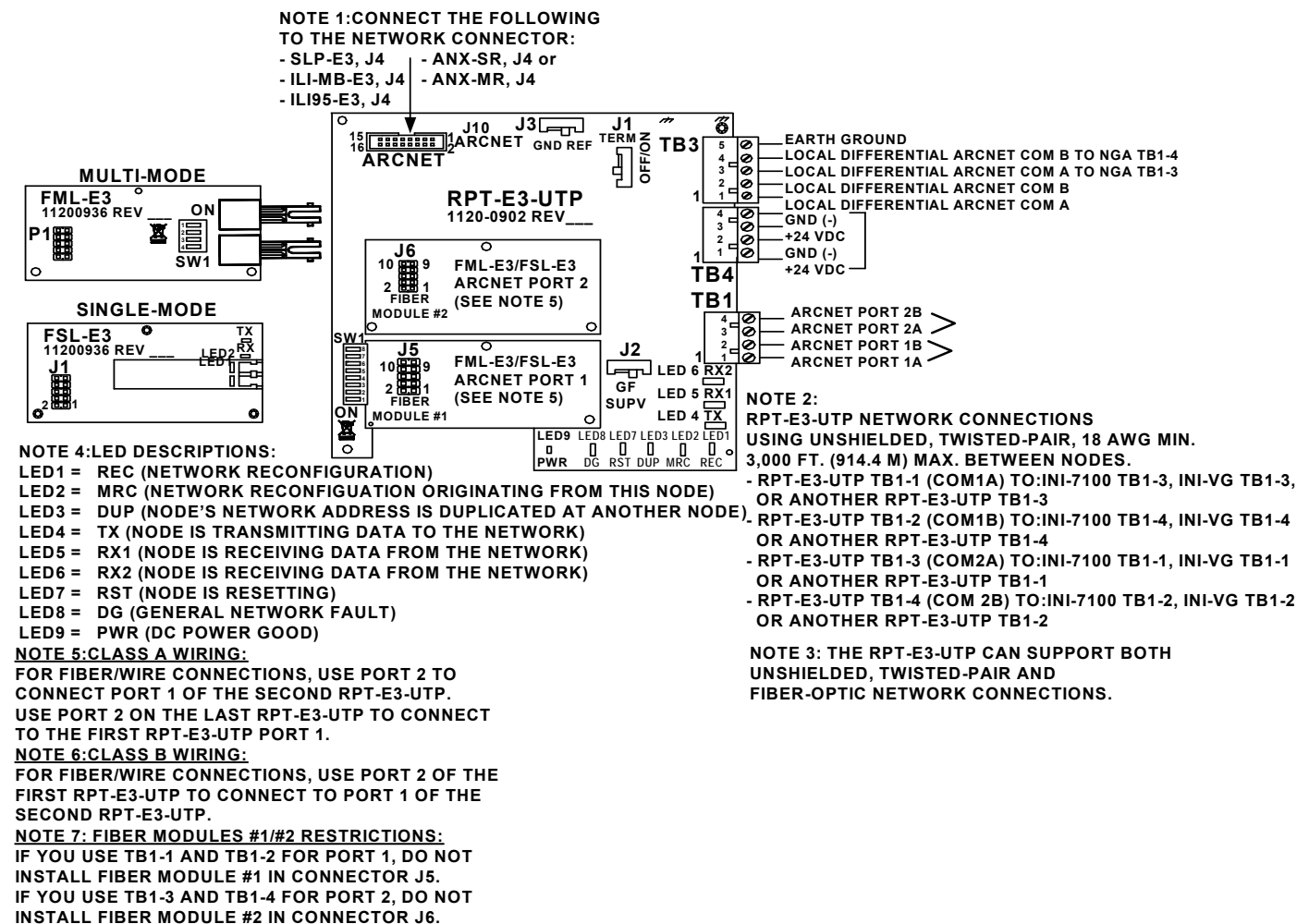| Designation	Description	Comments	
TB4-2	Common - IN	**E3 Series** Do not use, if J10 is used. (-GND IN from TB3-7 ILI-MB-E3/ILI95-MB-E3/ANX).	**S3 Series** Not used when the RPT-E3-UTP is installed in the SLP-BB and B-Size cabinets.
TB4-3	+ 24 V OUT	**E3 Series** Do not use, if J10 is used.	**S3 Series** Not used when the RPT-E3-UTP is installed in the SLP-BB and B-Size cabinets.
TB4-4	Common - OUT	**E3 Series** Do not use, if J10 is used.	**S3 Series** Not used when the RPT-E3-UTP is installed in the SLP-BB and B-Size cabinets.
J1	Switch	RS-485 Termination ON = Terminated, OFF = Un-Terminated	
J2	GFI - Switch	ON = Network ground fault supervision enabled, OFF = Disabled	
J3	GND FLT - Switch	ON = Earth ground drive enabled, OFF = Disabled	
J4		Factory use	
J5		Connection of optional Fiber-Optic modules (FML-E3 or FSL-E3) for network Port 1.	
J6		Connection of optional Fiber-Optic modules (FML-E3 or FSL-E3) for Network Port 2.	
J10	ARCNET	**E3 Series** Connector to ILI-MB-E3, ILI95-MB-E3 or ANX (See Note 4).	**S3 Series** Connects to SLP-E3 J4.

NOTES

Note 1: TB1 - RPT-E3 UTP Network Connections using unshielded, twisted-pair 18 AWG min. 3,000' (914.4 m) maximum between the following nodes:
- RPT-E3-UTP TB1-1 (COM1A) to: INI-7100 TB1-3 INI-VG Series TB1-3 or another RPT-E3-UTP TB1-3
- RPT-E3-UTP TB1-2 (COM1B) to: INI-7100 TB1-4 INI-VG Series TB1-4 or another RPT-E3-UTP TB1-4
- RPT-E3-UTP TB1-3 (COM2A) to: INI-7100 TB1-1 INI-VG Series TB1-1 or another RPT-E3-UTP TB1-1
- RPT-E3-UTP TB1-4 (COM2B) to: INI-7100 TB1-2 INI-VG Series TB1-2 or another RPT-E3-UTP TB1-2

Note 2: TB3-5 must be used when the RPT-E3-UTP is used remotely from a main system cabinet such as in a remote network display. Connect to a local cold water earth or via an additional conductor connected to any of the following:
- Terminal TB3-7 of the ILI-MB-E3, ILI95-MB-E3 or ANX
- Terminal TB4-4 of an INI-7100
- Terminal TB3-3 of the SLP-E3.

Note 3: REMOTE NGA DISPLAY WIRING:
The RPT-E3-UTP is required when you wire to a remote NGA Display. Use TB3 on the RPT-E3-UTP to connect to the NGA within the same cabinet.
REMOTE NGA DISPLAY WIRING TO OTHER NETWORK PANELS:
You can wire the RPT-E3-UTP in the remote NGA Display to other RPT-E3-UTPs in other network cabinets. Use TB1 on the RPT-E3-UTP, or optionally, use the fiber-optic connections on the FML-E3 or FSL-E3 to connect to other nodes in other cabinets.

Note 4: When J10 is used to connect the RPT-E3-UTP to the ILI-E3, ILI95-E3 Series, ANX or SLP-E3, do not use TB4.

Note 5: FIBER MODULE #1 RESTRICTION:
If you use TB1-1 and TB1-2 for Port 1, do not install Fiber Module #1 in connector J5.

Note 6: FIBER MODULE #2 RESTRICTION:
If you use TB1-3 and TB1-4 for Port 2, do not install Fiber Module #2 in connector J6.

Table 3.3.1.1   RPT-E3-UTP Wiring Designations (Continued)

3.3.2 RPT-E3-UTP Wiring Diagram

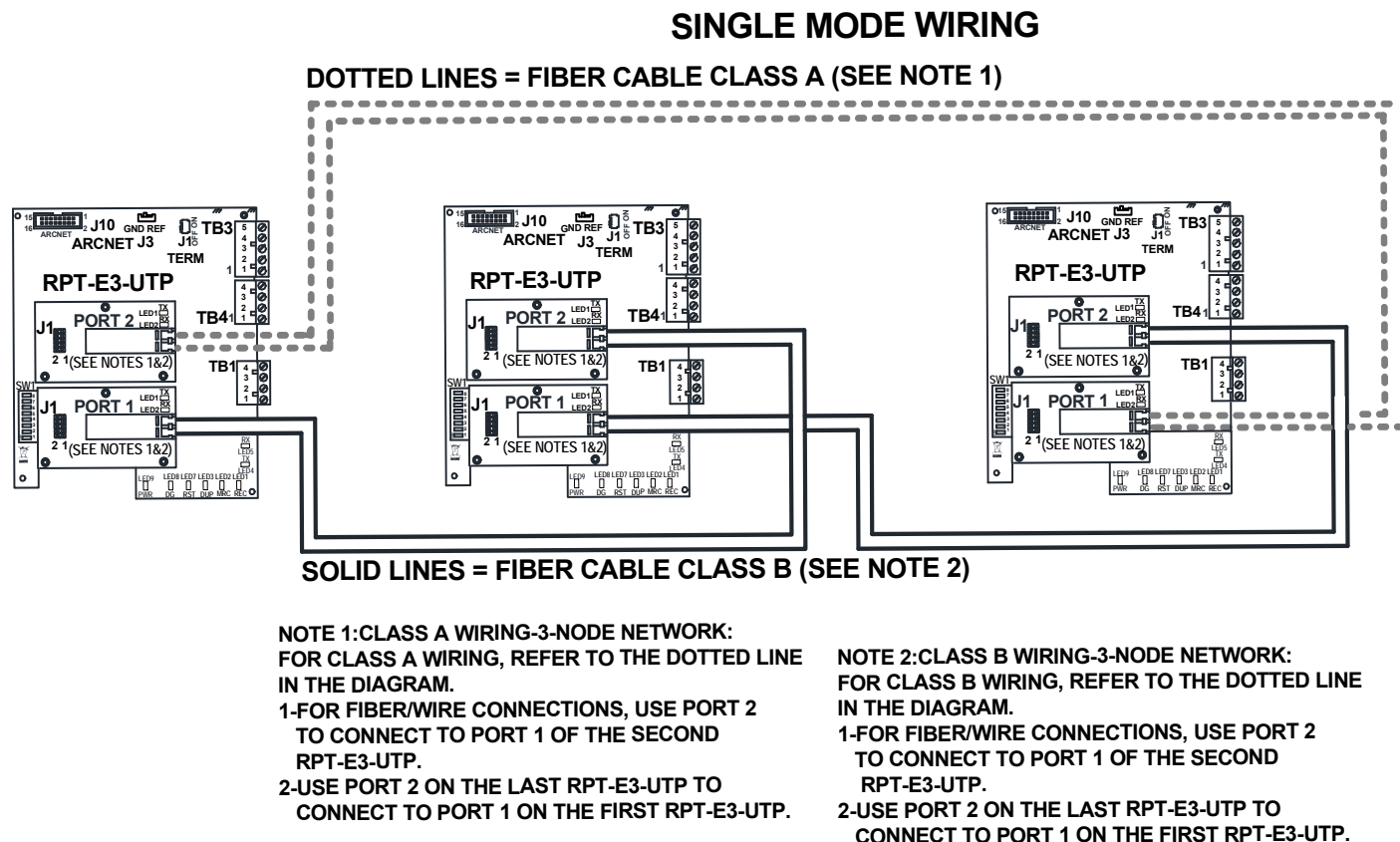Figure 3.3.2.1 illustrates the wiring connections for the RPT-E3-UTP sub-assembly.

Figure 3.3.2.1   RPT-E3-UTP Wiring Diagram

3.4 RPT-E3-UTP Wiring Configurations

3.4.1 RPT-E3-UTP Wire Configuration Diagram

Figure 3.4.1.1 illustrates the RPT-E3-UTP wiring configuration.

WIRE

NOTE 1:CLASS A WIRING-3-NODE NETWORK:
FOR CLASS A WIRING, REFER TO THE DOTTED
LINE IN THE DIAGRAM.
1-FOR FIBER/WIRE CONNECTIONS, USE PORT 2
  TO CONNECT TO PORT 1 OF THE SECOND
  RPT-E3-UTP.
2-USE PORT 2 ON THE LAST RPT-E3-UTP TO
  CONNECT TO PORT 1 ON THE FIRST RPT-E3-UTP.

NOTE 2:CLASS B WIRING-3-NODE NETWORK:
FOR CLASS B WIRING, REFER TO THE DOTTED
LINE IN THE DIAGRAM.
1-FOR FIBER/WIRE CONNECTIONS, USE PORT 2
  TO CONNECT TO PORT 1 OF THE SECOND
  RPT-E3-UTP.
2-USE PORT 2 ON THE LAST RPT-E3-UTP TO
  CONNECT TO PORT 1 ON THE FIRST RPT-E3-UTP.

Figure 3.4.1.1 RPT-E3-UTP Wire Configuration

3.4.2 RPT-E3-UTP Multi-Mode Wire Configuration Diagram

Figure 3.4.2.1 illustrates the RPT-E3-UTP multi-mode wiring configuration.

MULTI-MODE WIRING

NOTE 1:CLASS A WIRING-3-NODE NETWORK:
FOR CLASS A WIRING, REFER TO THE DOTTED LINE
IN THE DIAGRAM.
1-FOR FIBER/WIRE CONNECTIONS, USE PORT 2
  TO CONNECT TO PORT 1 OF THE SECOND RPT-E3-UTP.
2-USE PORT 2 ON THE LAST RPT-E3-UTP TO
  CONNECT TO PORT 1 ON THE FIRST RPT-E3-UTP.

NOTE 2:CLASS B WIRING-3-NODE NETWORK:
FOR CLASS B WIRING, REFER TO THE DOTTED LINE
IN THE DIAGRAM.
1-FOR FIBER/WIRE CONNECTIONS, USE PORT 2
  TO CONNECT TO PORT 1 OF THE SECOND RPT-E3-UTP.
2-USE PORT 2 ON THE LAST RPT-E3-UTP TO
  CONNECT TO PORT 1 ON THE FIRST RPT-E3-UTP.

Figure 3.4.2.1 RPT-E3-UTP Multi-Mode Wire Configuration

3.4.3 RPT-E3-UTP Single Mode Wire Configuration Diagram

Figure 3.4.3.1 illustrates the RPT-E3-UTP single mode wiring configuration.

SINGLE MODE WIRING

DOTTED LINES = FIBER CABLE CLASS A (SEE NOTE 1)

SOLID LINES = FIBER CABLE CLASS B (SEE NOTE 2)

NOTE 1: CLASS A WIRING-3-NODE NETWORK:
FOR CLASS A WIRING, REFER TO THE DOTTED LINE
IN THE DIAGRAM.
1-FOR FIBER/WIRE CONNECTIONS, USE PORT 2
  TO CONNECT TO PORT 1 OF THE SECOND
  RPT-E3-UTP.
2-USE PORT 2 ON THE LAST RPT-E3-UTP TO
  CONNECT TO PORT 1 ON THE FIRST RPT-E3-UTP.

NOTE 2: CLASS B WIRING-3-NODE NETWORK:
FOR CLASS B WIRING, REFER TO THE DOTTED LINE
IN THE DIAGRAM.
1-FOR FIBER/WIRE CONNECTIONS, USE PORT 2
  TO CONNECT TO PORT 1 OF THE SECOND
  RPT-E3-UTP.
2-USE PORT 2 ON THE LAST RPT-E3-UTP TO
  CONNECT TO PORT 1 ON THE FIRST RPT-E3-UTP.

Figure 3.4.3.1 RPT-E3-UTP Single Mode Wiring Configuration

Section 4: RPT-E3-UTP Programming Address Switch Settings

To set the address, use switch SW1. Depending on the type of the network node, you can select any of the following three types of address switch settings. (See Figure 4.1, Figure 4.2 or Figure 4.3).

> **NOTE:** To program the RPT-E3-UTP module, use the CAMWorks™ Software Program. For information on the latest version of CAMWorks, see the Gamewell-FCI website, www.gamewell-fci.com.
> Installers must be Gamewell-FCI Factory Certified to program this product. For additional information on this product, contact the Gamewell-FCI Customer Support to schedule the Factory Certified Training.
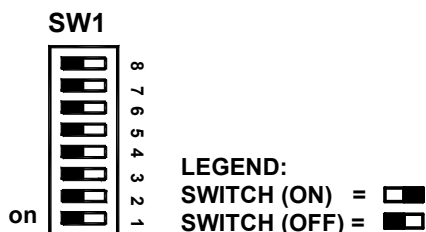
1. Standalone

STANDALONE = ALL SWITCHES ON

Figure 4.1 Standalone Address Settings

2. E3 Series, ILI-MB-E3/ILI95-MB-E3/NGA

E3 SERIES, ILI-MB-E3/ILI95-MB-E3/NGA = ALL SWITCHES OFF

NOTE: TO SET THE NODE ADDRESS FOR THE E3 SERIES, DO NOT USE SW1 ON THE RPT-E3-UTP. INSTEAD, USE THE SW1 ON THE ILI-MB-E3/ILI95-MB-E3.
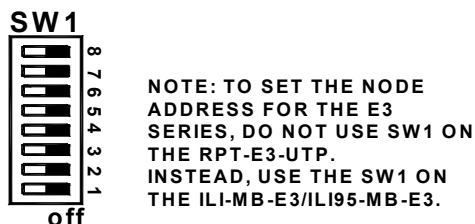
Figure 4.2 E3 Series, ILI-MB-E3/ILI95-MB-E3/NGA Address Settings

3. S3 Series Panel Node Address See Figure 4.3

Figure 4.3 illustrates the programming address switch settings for the RPT-E3-UTP connected to the S3 Series panel node address.

ADDRESS SWITCH SETTINGS

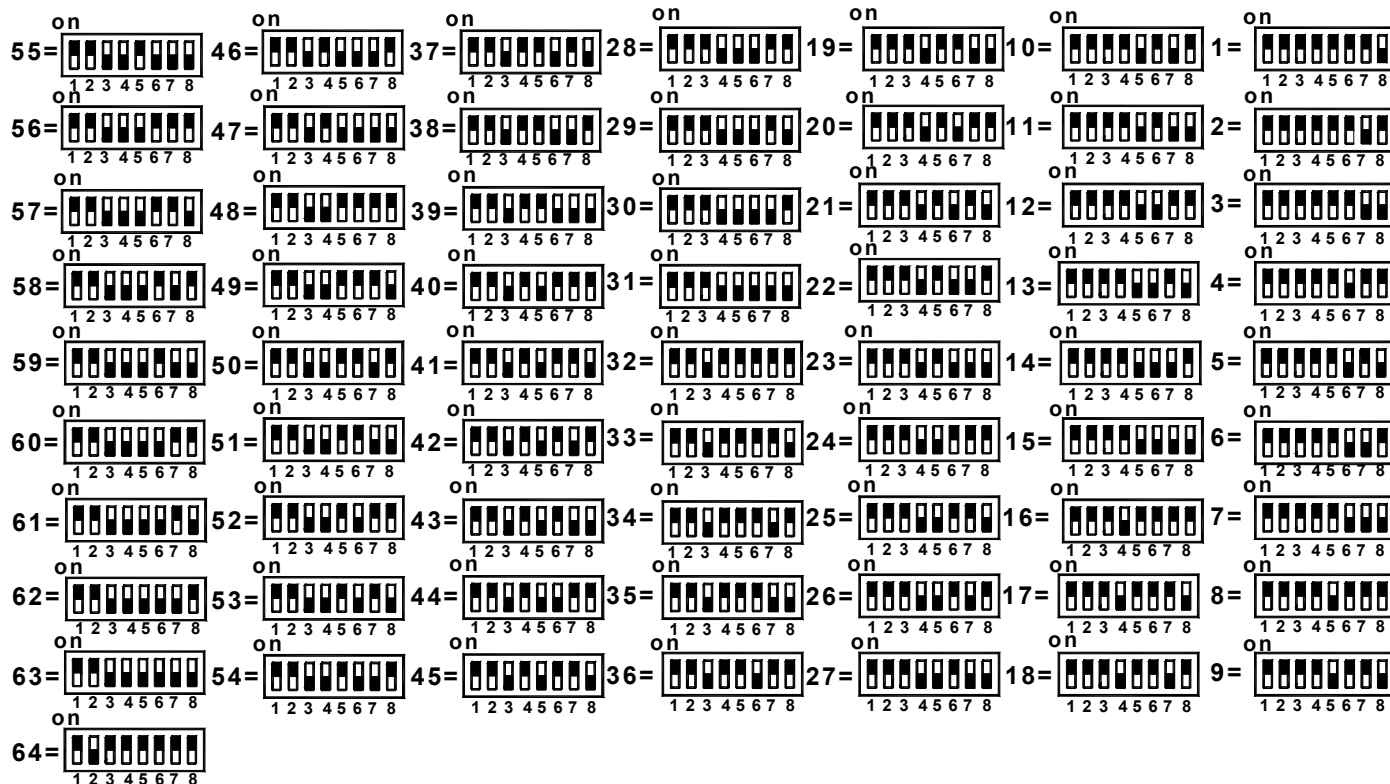SWITCH DOWN (ON) = ☐■   SWITCH UP (OFF) = ■☐

Figure 4.3 S3 Series Panel Node Address Switch Settings

Section 5: Programming Requirements

This product uses the CAMWorks™ Software Program. Installers must be Gamewell-FCI Factory Certified to program this product. For additional information, contact the Gamewell-FCI Customer Support to schedule Factory Certified Training.

> 📄 **NOTE:** For information on the latest version of CAMWorks, see the Gamewell-FCI website, www.gamewell-fci-esd.com.

Section 6: Reference Documentation

Table 6.1 lists the UL-Controlled documentation assigned to the S3 Series and E3 Series Systems. If you require detailed installation instructions on cabinetry, wiring and specifications, you can download the following UL-Controlled documents from the ESD site on the Gamewell-FCI Website (www.gamewell-fci-esd.com).

Part Number	Title
UL Listing Document	
LS10005-051GF-E	S3 Series (Small Addressable Fire Alarm Control Panel) UL Listing Document
LS10080-051GF-E	E3 Series Fire System (Expandable Emergency Evacuation System) UL Listing Document
Manuals	
9000-0575	E3 Series Broadband Installation/Operation Manual
9000-0577	E3 Series Classic Installation/Operation Manual
LS10013-000GF-E	E3 Series Combined Fire and MNS Installation/Operation Manual
Installation Instructions	
9000-0491	LCD-7100 (Remote Serial Annunciator) Installation Instructions
9000-0544	AM-50 Series (50 Watt Amplifiers) Installation Instructions
9000-0545	INX, INX CAB-B, INX CAB-C and INX CAB-D Network Audio Transponder Services Instructions
9000-0546	INCC Intelligent Network Interface Installation Instructions
9000-0550	ASM-16 (Addressable Switch Module) Installation Instructions
9000-0659	INI-VG Series (Intelligent Network Interface) Installation Instructions
9000-0564	ANU-48 (Remote LED Driver Annunciator) Installation Instructions
9000-0568	NGA (Network Graphic Annunciator) Installation Instructions
9000-0569	ILI-S-E3 (Intelligent Loop Interface - Expansion Board) Installation Instructions
9000-0579	ILI-MB-E3 (Intelligent Loop Interface - Main Board) Installation Instructions
9000-0581	DACT-E3 (Digital Alarm Communicator Transmitter) Installation Instructions
9000-0582	LCD-E3 (Liquid Crystal Display-E3) Installation Instructions
9001-0017	ILI95-MB-E3 (Intelligent Loop Interface-95 - Main Board) Installation Instructions
9001-0018	ILI95-S-E3 (Intelligent Loop Interface-95 - Expansion Board) Installation Instructions
9001-0055	PM-9G (Power Supply) Installation Instructions
9001-0064	ANX (Addressable Node Expander) Installation Instructions
9001-0066	RAN-7100 (Remote Alphanumeric Annunciator) Installation Instructions
LS10044-000GF-E	SLC-PM/SLC95-PM (Signaling Line Circuit-Personality Modules Installation Instructions
LS10046-000GF-E	FML-E3/FSL-E3 (Fiber-Optic Multi-Mode/Fiber-Optic Single-Mode) Installation Instructions
LS10058-000GF-E	FLPS-7 (Power Supply) Installation Instructions
LS10082-000GF-E	E3 Series Cabinets B, C, D, Retrofit, DR-C4/DR-D4 and EQ Cabinets Installation Instructions
LS10083-000GF-E	E3 Series, Remote Annunciator Display and Retrofit Cabinets Installation Instructions
LS10218-000GF-E	INI-VG Series (Intelligent Network Transponder-Voice Gateway-Third Generation) Instructions
LS10222-000GF-E	NGA (Network Graphic Annunciator-Second Generation) Installation Instructions
Addendum and Supplement	
9000-0427-L8	Compatibility Addendum to Gamewell-FCI Installation/Operation Manuals UL File S1869 Vol. 8C
LS10138-151GF-E	E3 Series Control Panel, Releasing Applications Supplement

Table 6.1 Reference Documentation

Honeywell