# LUT-ELI-3PH Emergency Lighting Interface

The LUT-ELI-3PH is a device that works with Lutron® lighting controls to provide an emergency lighting solution. The device is capable of sensing normal (non-essential) line voltage power and accepting an output from a fire alarm control panel (FACP). Upon loss of normal power or receiving a signal from the FACP, the LUT-ELI-3PH will send a signal to the compatible Lutron® control(s) to which it is connected. This signal will cause the controls to enter the emergency lighting mode and any lights controlled will go to the emergency light level setting.

Features

- Compatible Lutron controls
  - GP, LP, LCP, XP, XPS, CCP, CXP, HS and HomeWorks® rough-in panels
  - Energi Savr Node™ units
  - GRAFIK Eye® QS units
  - Quantum® lighting management hubs with EcoSystem® bus supplies
- UL® 924 & CSA C22.2 No. 141-02 listed as "Emergency Lighting and Power Equipment"
- Requires a 24 V⎓ power feed from a source on normal/emergency (essential) power for unit to operate.
- Status light indicates the phase status. Status light "ON" is normal mode, "OFF" is emergency mode.
- A test button is provided to perform a functional test of the system by simulating an emergency situation.
- Accepts a maintained dry contact closure from an FACP to actuate the emergency mode.
- Senses line voltage from 100–347 V∼.
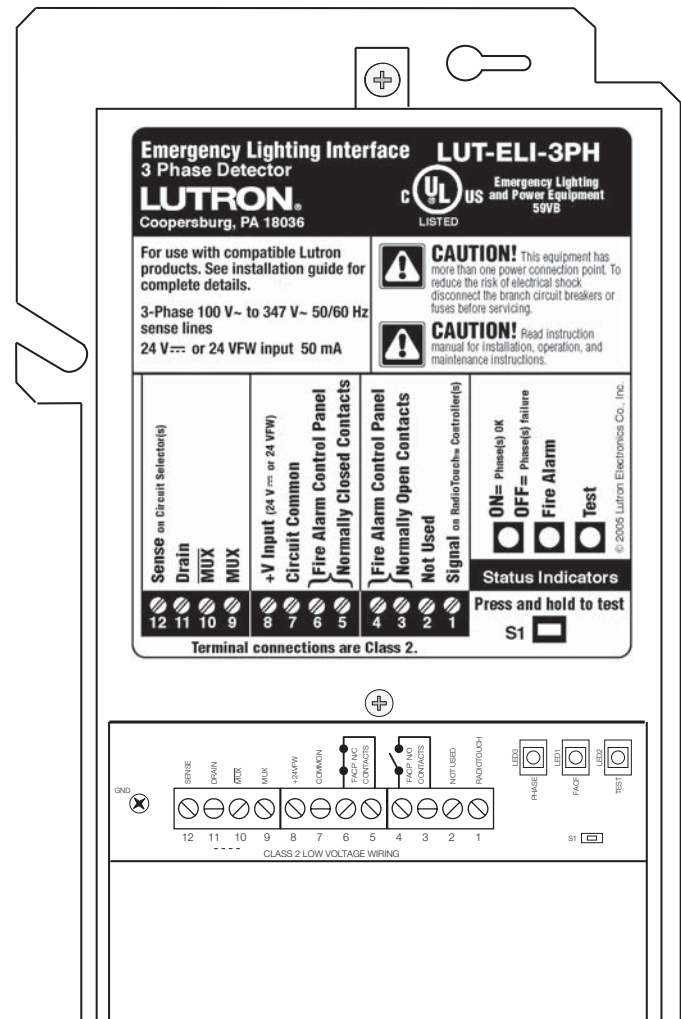
Job Name:	Model Numbers:
Job Number:	

Specifications

Regulatory Approvals

- Complies with requirements for use in other spaces used for environmental air (plenums) per NEC® 2014 300.22(C)(3)
- Meets the Canadian National Building Code plenum requirements for a concealed space used as a plenum within a floor or roof assembly
- cULus Listed - USA & Canada
- NOM Certified (LUT-ELI-3PH-S only) - Mexico
- Lutron® Quality Systems registered to ISO 9001.2000

Power

- Sense voltage input to the LUT-ELI-3PH unit must be from the Normal (Non-Essential) power source.
- Sense voltage range: 100–347 V∼ 50/60 Hz 30 mA, 1-Phase, 3-Phase, or split phase.
- Proper short-circuit and over-current protection must be provided at the distribution panel. A 20 A maximum circuit breaker may be used for the installation.

Environment

- Ambient Temperature Operating Range: 32 °F–104 °F (0 °C–40 °C).
- Relative humidity: less than 90% non-condensing.
- For indoor use only.

Inputs

- 2 inputs for an FACP. A normally open or normally closed dry contact input on the FACP inputs will activate the emergency mode.

Status Light

- Status light indicates the phase status. Status light "ON" is normal mode, "OFF" is emergency mode.

Test Button

- A test button is provided to perform a functional test of the system by simulating an emergency situation.

System Communications and Capacity

- May be added to an existing Lutron® system.
- One LUT-ELI-3PH unit may be used with up to 32 circuit selectors, module interfaces (MI), specification-grade panel interfaces (SPI) or LCD controllers, Energi Savr Node™ units, GRAFIK Eye® QS units, or Quantum® bus supplies mixed in any combination.
- There can be up to 4 Quantum® bus supplies in a Quantum® hub. Only 1 Quantum® bus supply per hub needs to be connected per LUT-ELI-3PH unit. There can be up to 32 Quantum® bus supplies connected to one LUT-ELI-3PH unit.
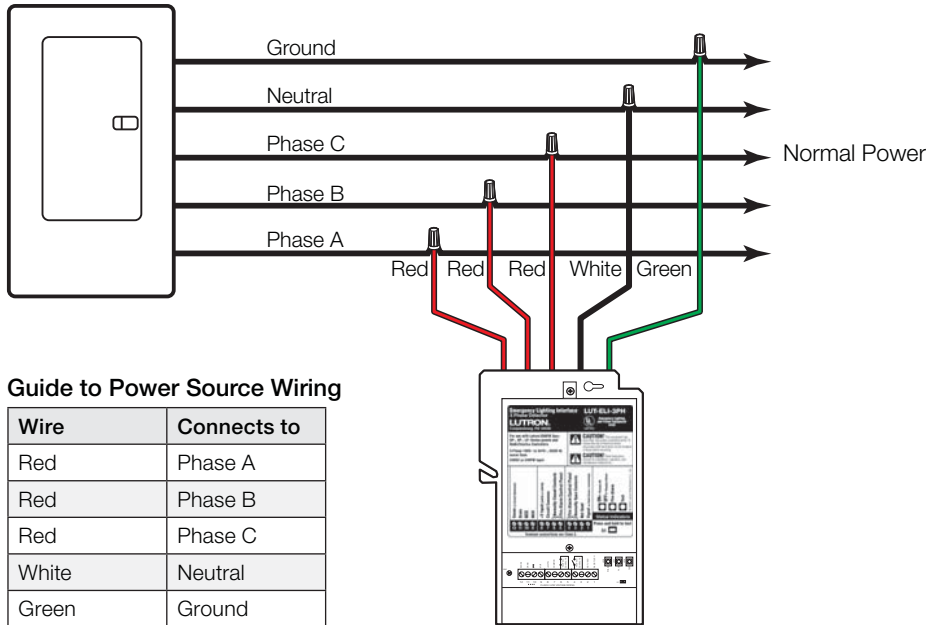
Mounting

- The interface mounts to a standard 4 x 4 in (102 x 102 mm) junction box.

Job Name:	Model Numbers:
Job Number:	

Dimensions and Mounting

All dimensions shown as in (mm)

Front View

Side View

5.00
(127)

2.50
(64)

7.75
(197)

Mounting Example Side View (Cross-Section)

4 x 4 in (102 x 102 mm)
Junction Box

For line voltage
wiring only

LUT-ELI-3PH
UNIT

WALL

Insert
NEC® Class 2/PELV
wires through
knockouts

Job Name:	Model Numbers:
Job Number:	

Line Voltage Wiring Examples:

3-Phase Diagram

Guide to Power Source Wiring

Wire	Connects to
Red	Phase A
Red	Phase B
Red	Phase C
White	Neutral
Green	Ground

Split Phase Diagram

Guide to Power Source Wiring

Wire	Connects to
Red	Phase A
Red	Phase A
Red	Phase B
White	Neutral
Green	Ground
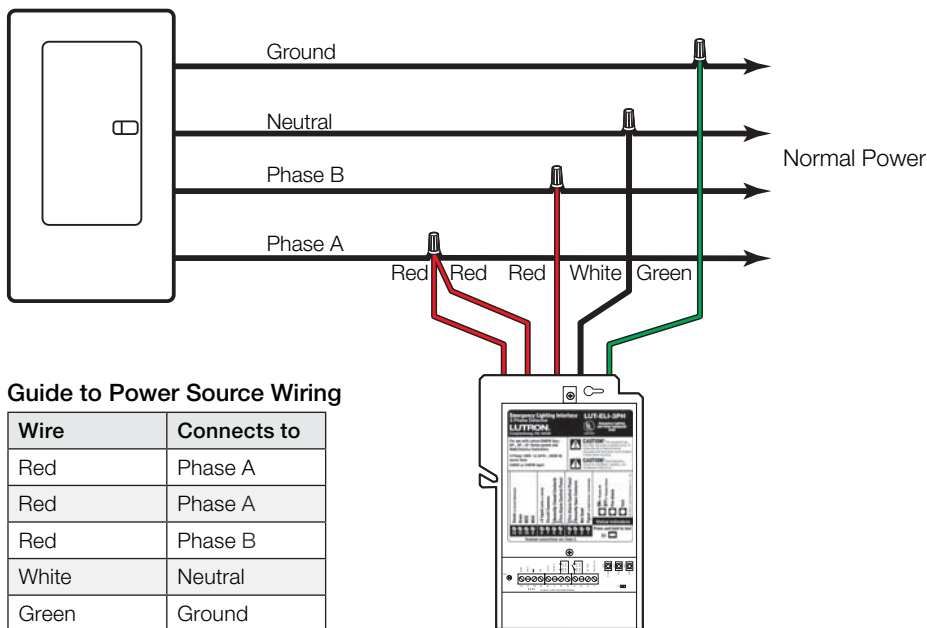
Job Name:	Model Numbers:
Job Number:	

Line Voltage Wiring Examples: *(continued)*

Single Phase Diagram

Ground

Neutral

Line/Hot

Normal Power

Red   Red   Red   White   Green
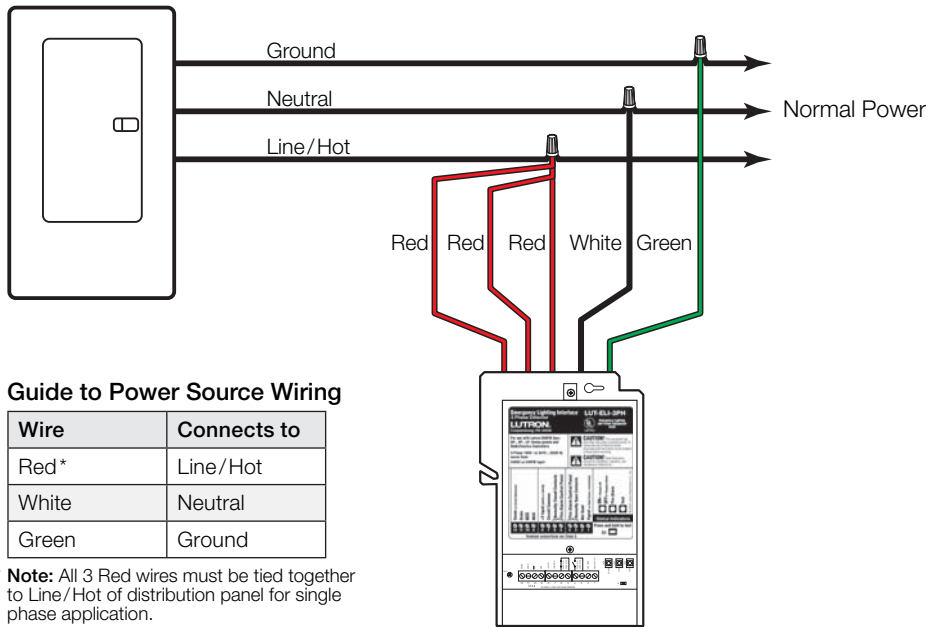
Guide to Power Source Wiring

Wire	Connects to
Red*	Line/Hot
White	Neutral
Green	Ground

* Note: All 3 Red wires must be tied together to Line/Hot of distribution panel for single phase application.

Job Name:	Model Numbers:
Job Number:	

IEC PELV / NEC® Class 2 Wiring Example:
GP, XP, LP, CCP, and CXP Panels

Control Wiring:
(2) 12 AWG
(2.5 mm²)
1: Common
2: 24 V⎓

Data Link:
(1) shielded,
twisted pair
18 AWG
(1.0 mm²)
3: MUX
4: $\overline{MUX}$

Sense:
(1) 18 AWG
(1.0 mm²)
5: Sense line

Shield/Drain

To lighting controls
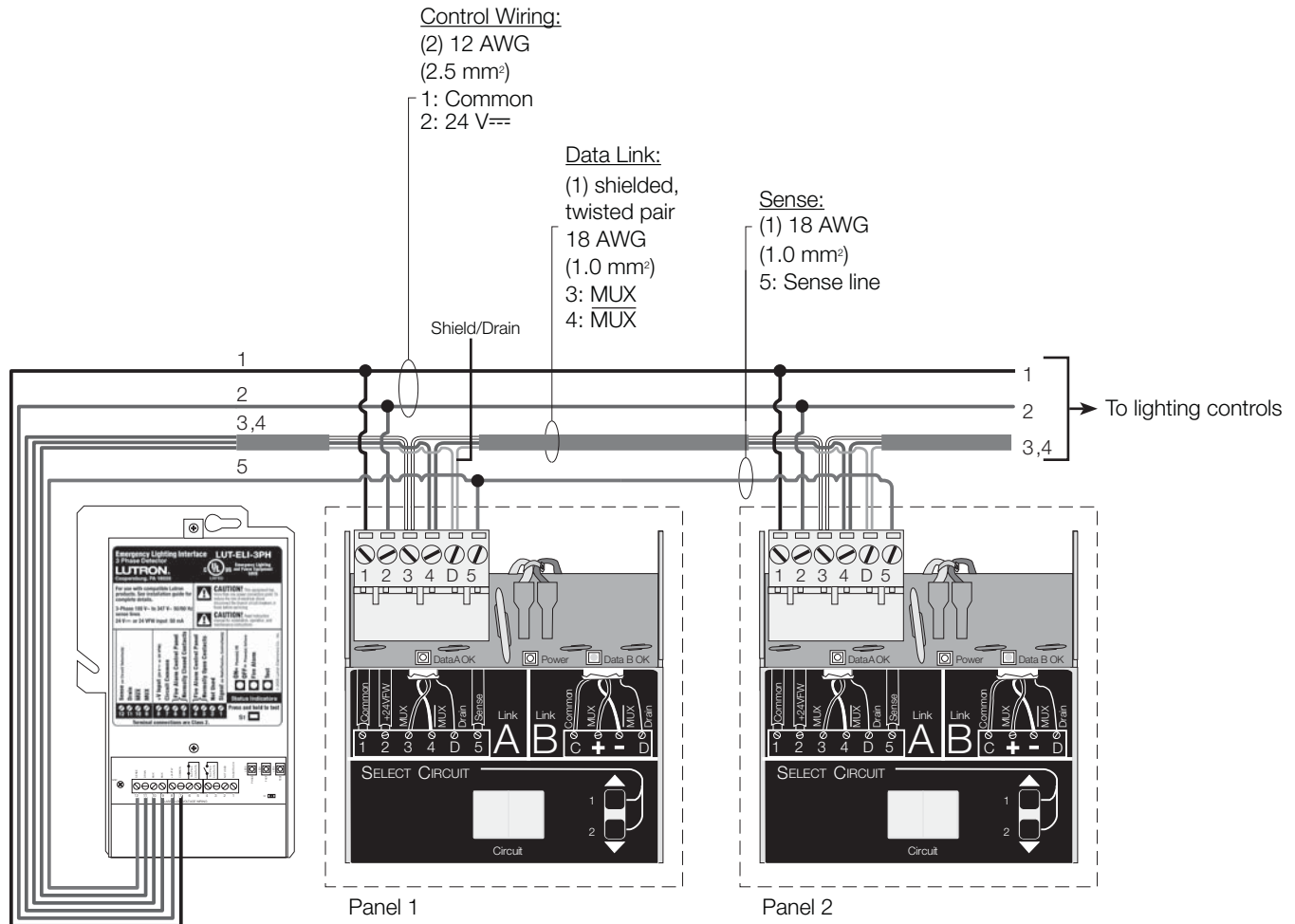
Panel 1

Panel 2

Guide to Wiring

LUT-ELI	Circuit Selector
Pin 12	Pin 5
Pin 11	Pin D
Pin 10	Pin 4
Pin 9	Pin 3
Pin 8	Pin 2
Pin 7	Pin 1

- One LUT-ELI-3PH unit may be connected in parallel with up to 32 circuit selectors.

- A LUT-ELI-3PH unit may be placed anywhere on the power panel link.

- The switch position SW6 on the circuit selector / controller must be in the right-most position, "Essential" on all Emergency Panels.

- The LUT-ELI-3PH unit 24 V⎓ input must always be connected to at least one of the Emergency Panels.

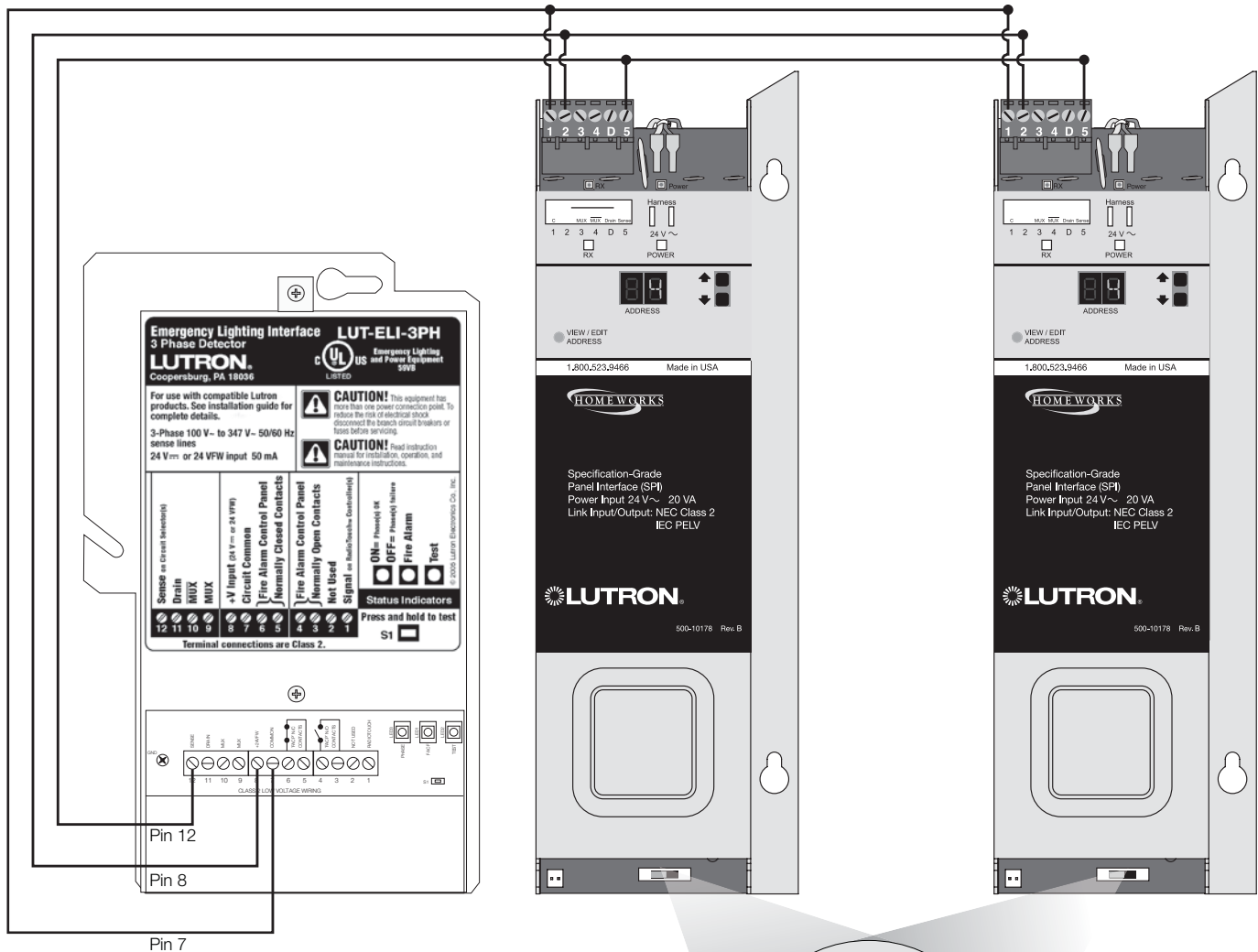| Job Name:	Model Numbers:
Job Number:	

IEC PELV/NEC® Class 2 Wiring Example:
HomeWorks® QS Panels with a Module Interface (MI)
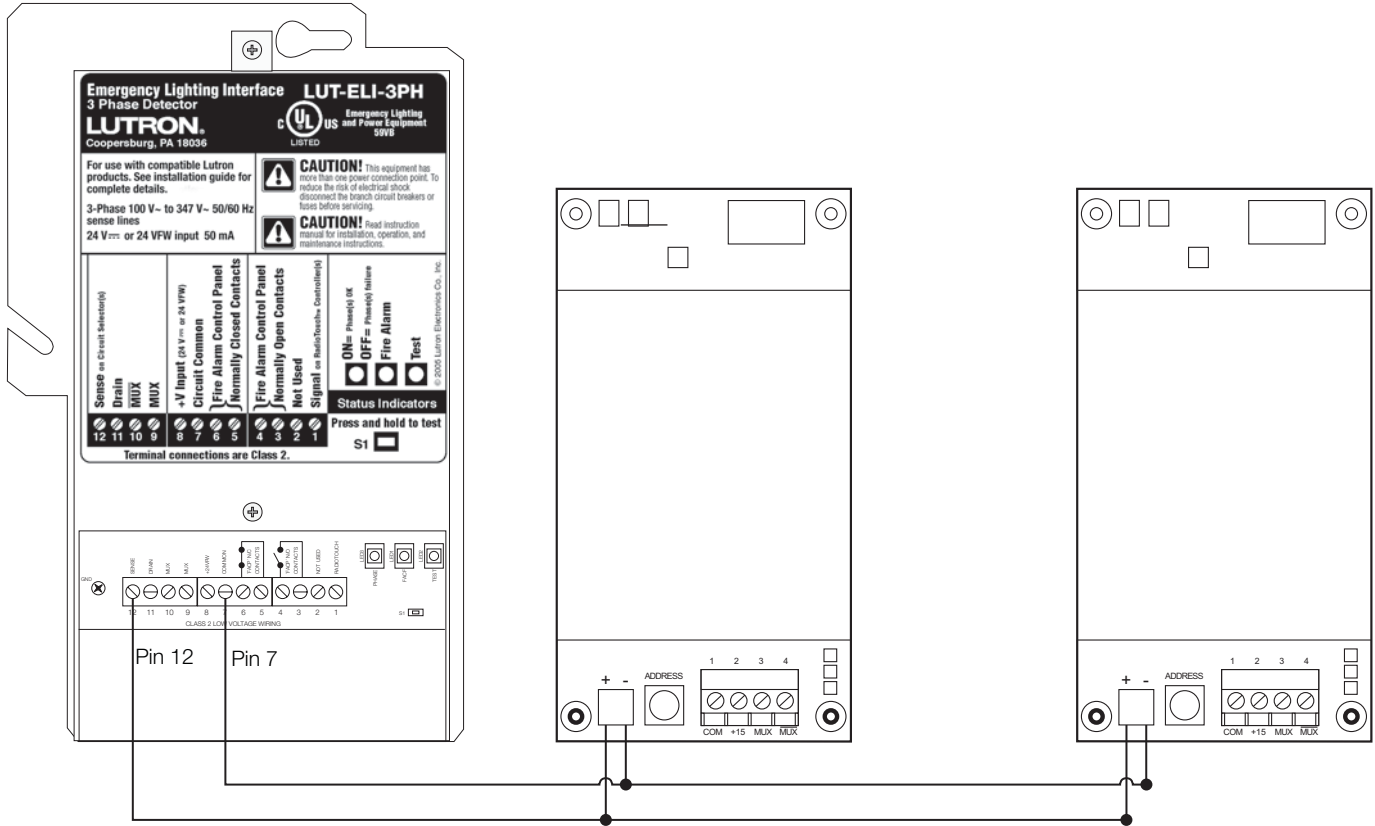
• One LUT-ELI-3PH unit may be connected in parallel with up to 32 MIs across two panel links.

Job Name:	Model Numbers:
Job Number:	

IEC PELV / NEC® Class 2 Wiring Example:
HomeWorks® QS Panels with a Specification Grade Interface (SPI)

Pin 12

Pin 8

Pin 7

Guide to Wiring
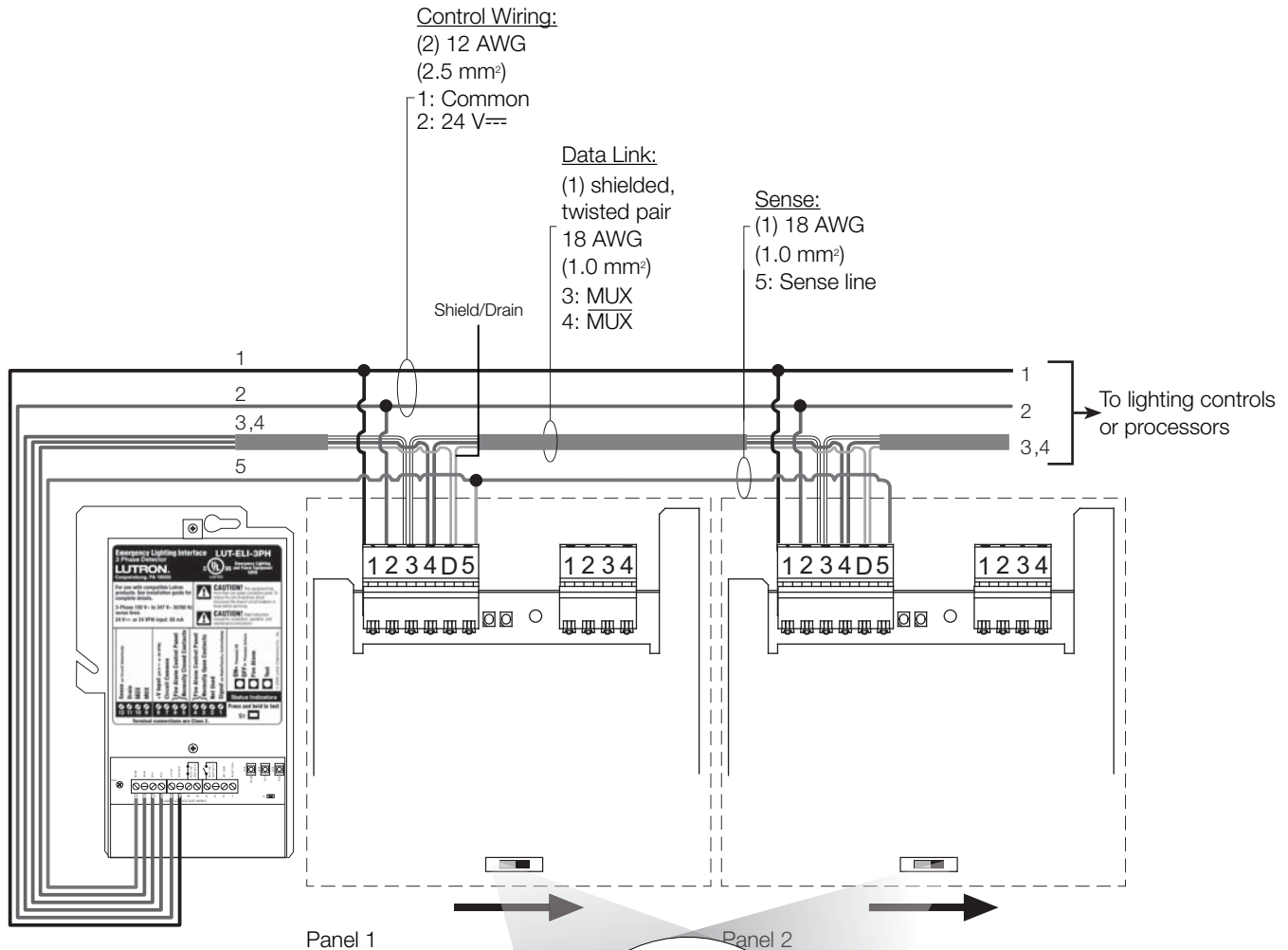
LUT-ELI	SPI
Pin 12	Pin 5
Pin 8	Pin 2
Pin 7	Pin 1

Move Right

- One LUT-ELI-3PH unit may be connected in parallel with up to 32 SPIs across two panel links.

- A LUT-ELI-3PH unit may be placed anywhere on the power panel link.

- The switch position SW6 on the SPI must be in the right-most position, "Essential" on all Emergency Panels.

- The LUT-ELI-3PH unit 24 V⎓ input must always be connected to at least one of the Emergency Panels.

| Job Name:	Model Numbers:
Job Number:	

IEC PELV/NEC® Class 2 Wiring Example:
LCP128® and Softswitch128® (XPS) Panels

Control Wiring:
(2) 12 AWG
(2.5 mm²)
1: Common
2: 24 V⎓

Data Link:
(1) shielded,
twisted pair
18 AWG
(1.0 mm²)
3: MUX
4: $\overline{\text{MUX}}$

Sense:
(1) 18 AWG
(1.0 mm²)
5: Sense line

Shield/Drain

To lighting controls
or processors

Panel 1   Panel 2

Move Right

Guide to Wiring

LUT-ELI	LCD Controller
Pin 12	Pin 5
Pin 11	Pin D
Pin 10	Pin 4
Pin 9	Pin 3
Pin 8	Pin 2
Pin 7	Pin 1
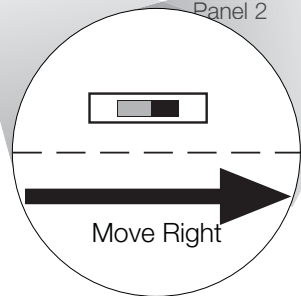
- One LUT-ELI-3PH unit may be connected in parallel with up to 32 LCP/XPS controllers.

- A LUT-ELI-3PH unit may be placed anywhere on the power panel link.

- The switch position SW6 on the controller must be in the right-most position, '"Essential" on all Emergency Panels.

- The LUT-ELI-3PH unit 24 V⎓ input must always be connected to at least one of the Emergency Panels.

Job Name:	Model Numbers:
Job Number:	

Energi Savr Node™ Units

Using a LUT-ELI-3PH unit with an Energi Savr Node™ unit ensures that the system is compliant with UL® 924. Follow the wiring diagram in the LUT-ELI-3PH for mains wiring. Use the diagram below to complete the installation. There can be up to 32 Energi Savr Node™ units connected to one LUT-ELI-3PH unit.

Model QSN-4T16-S is shown below. Check the documentation of your particular model for proper terminal connections.

Wiring to the Energi Savr Node™ Unit
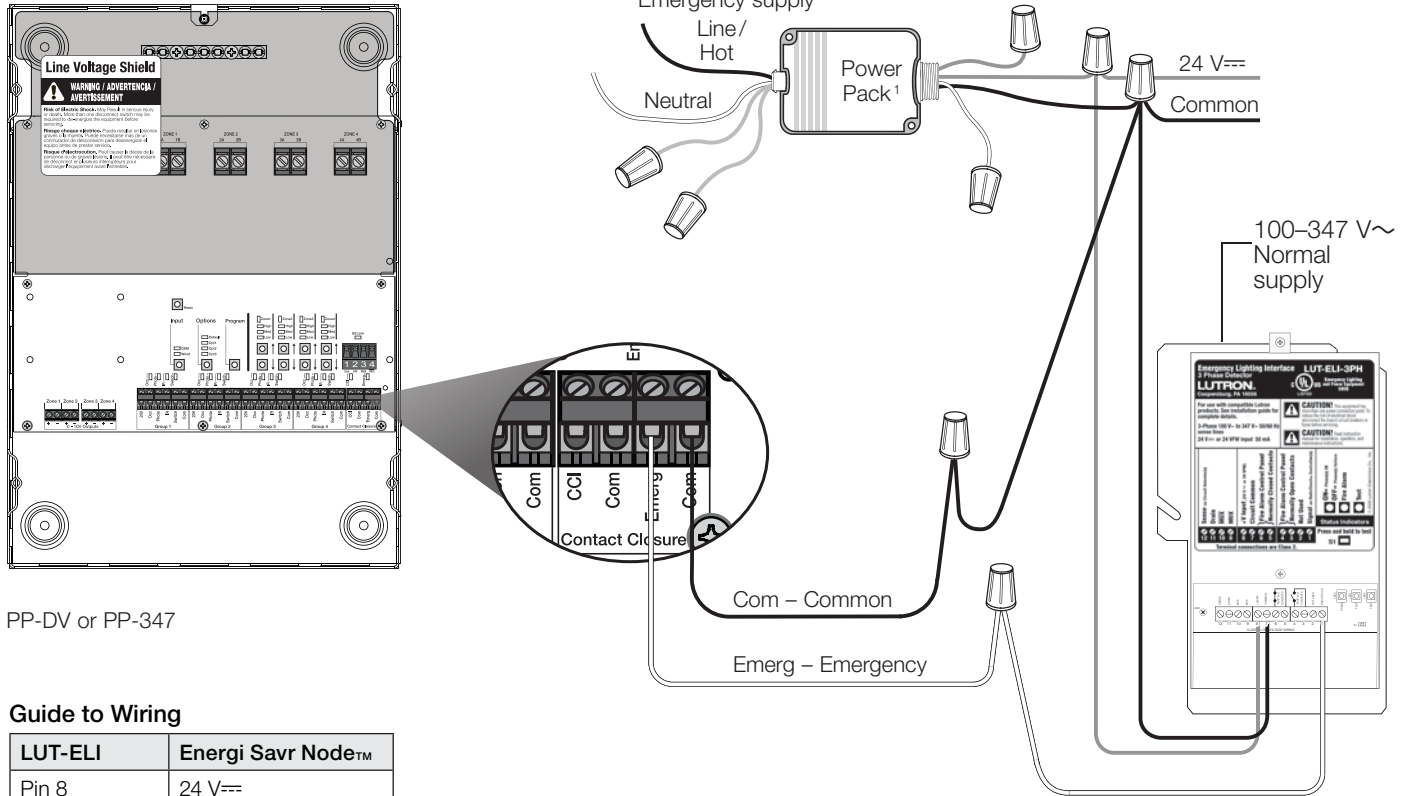
¹ PP-DV or PP-347

Guide to Wiring

LUT-ELI	Energi Savr Node™
Pin 8	24 V⎓
Pin 7	Com
Pin 1	Emerg

Wiring Summary:

- Wire the power pack red wire (+24 V) to the LUT-ELI-3PH unit terminal 8 (V+).
- Wire the power pack black wire (Common) to the LUT-ELI-3PH unit terminal 7 (Circuit Common) and to Energi Savr Node™ "Com" terminal of the Emergency Contact Closure Input.
- Wire the signal wire from the LUT-ELI-3PH unit (terminal 1) to the Energi Savr Node™ "Emerg" terminal of the Emergency Contact Closure Input.
- When normal power loss is detected, the LUT-ELI-3PH unit sends all programmed zones to emergency light levels (Default is typically 100%).
- When normal power loss is restored, the LUT-ELI-3PH unit causes all programmed zones to return to previous light levels.

Job Name:	Model Numbers:
Job Number:	

Quantum® Systems

Using a LUT-ELI-3PH unit with a Quantum® bus supply ensures that the system is compliant with UL® 924. Follow the wiring diagram in the LUT-ELI-3PH unit for mains wiring. Use the diagram below to complete the installation. Only 1 bus supply per hub needs to be connected per LUT-ELI-3PH unit. There can be up to 32 Quantum® bus supplies connected to one LUT-ELI-3PH unit.

Wiring to Quantum® Bus Supply
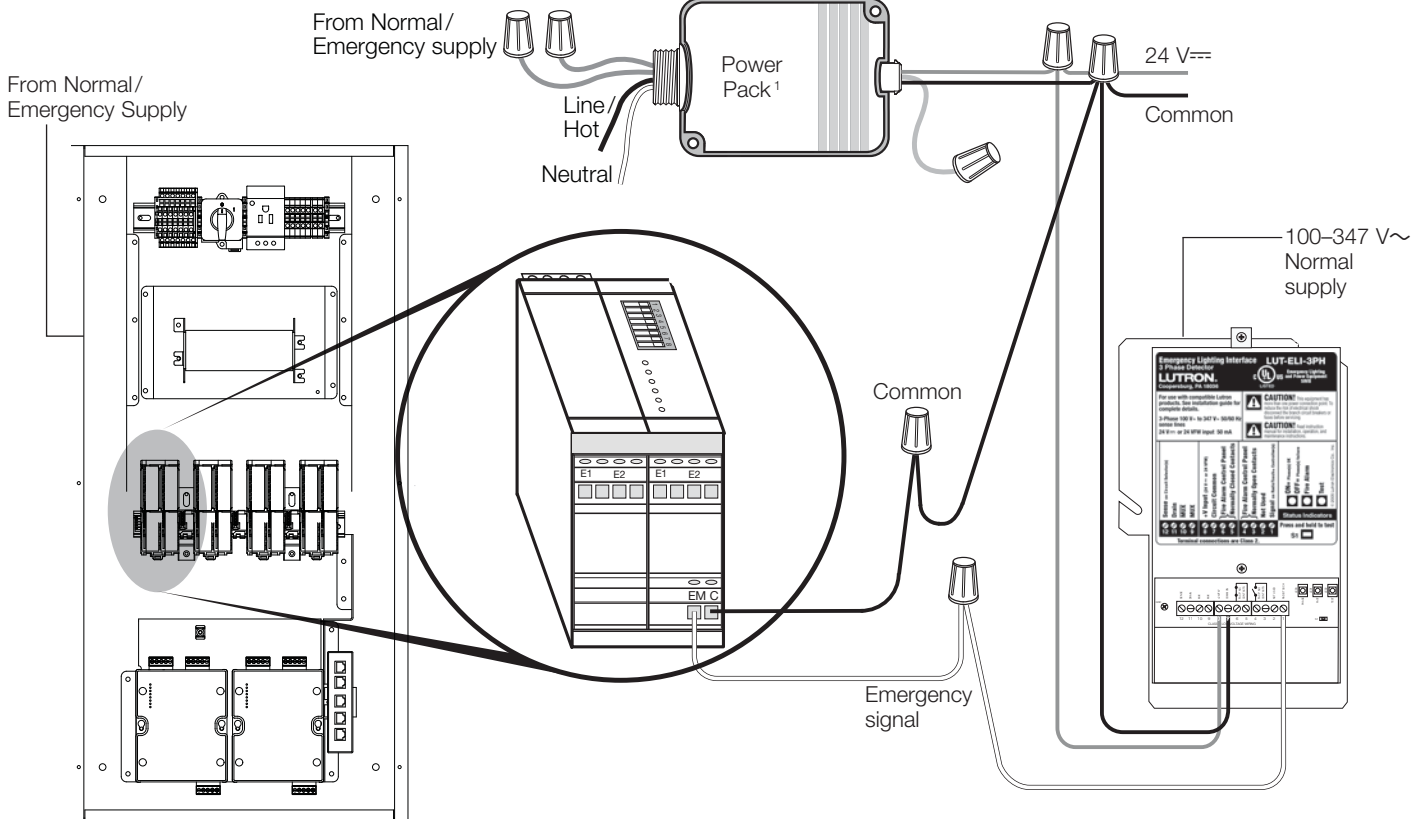
[1] PP-DV or PP-347

Guide to Wiring

LUT-ELI	Bus Supply
Pin 8	24 V⎓
Pin 7	Com
Pin 1	Emerg

Wiring Summary:

- Wire the power pack red wire (+24 V) to the LUT-ELI-3PH unit terminal 8 (+VFW).
- Wire the power pack black wire (Common) to the LUT-ELI-3PH unit terminal 7 (Common) and to the Quantum® bus supply terminal 5 (Common).
- Wire the signal wire from the LUT-ELI-3PH unit (terminal 1) to the Quantum® bus supply terminal 6 (CCI-Emergency).
  Note: When normal power loss is detected, the LUT-ELI-3PH unit sends a signal to the bus supplies which send the programmed lights to emergency light levels.
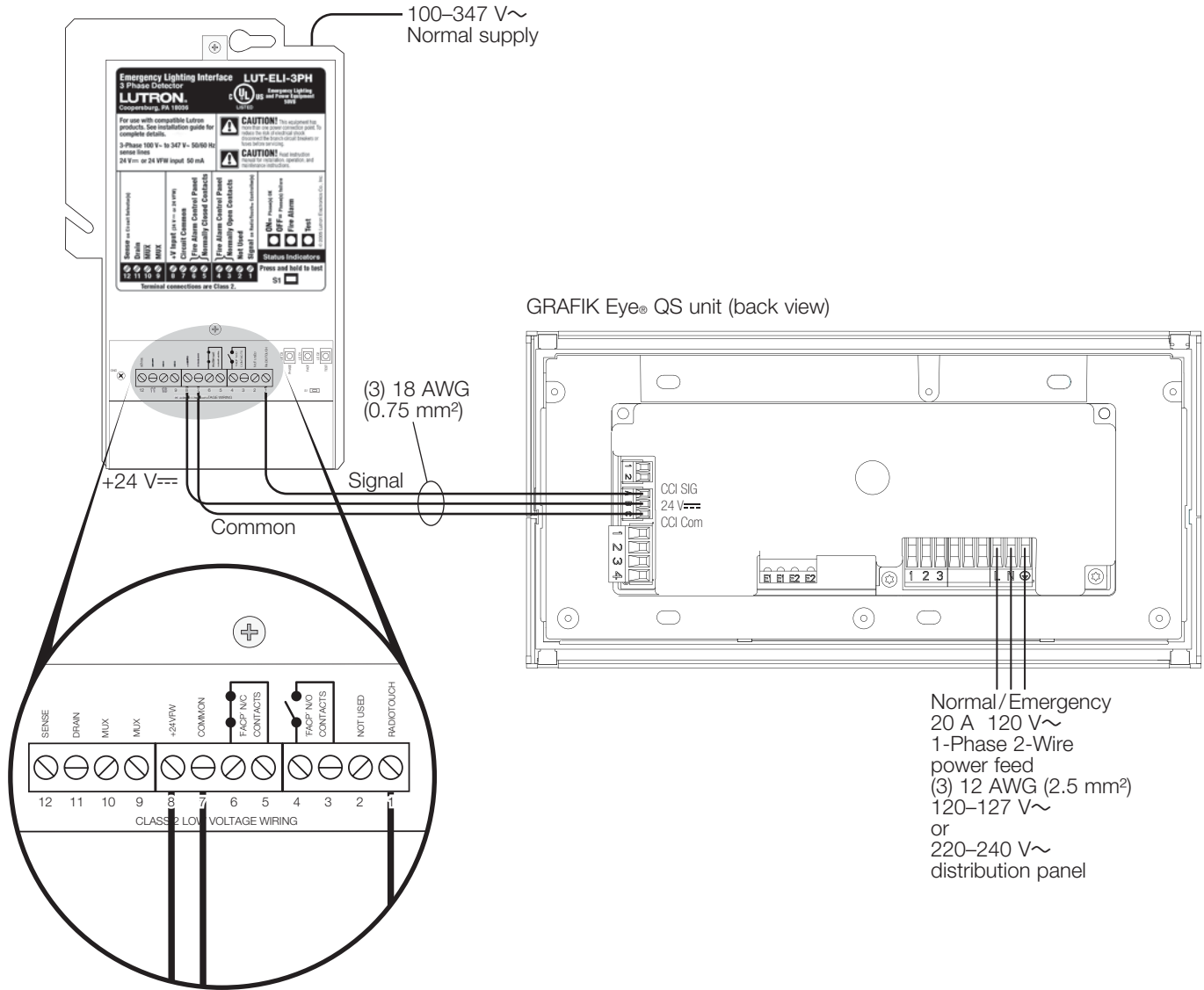
Job Name:	Model Numbers:
Job Number:	

Installing a LUT-ELI-3PH Unit with a GRAFIK Eye® QS Unit

Wiring to a GRAFIK Eye® QS Control Unit

Note: For a 1-phase 2-wire application, connect phase A, B, and C wires on
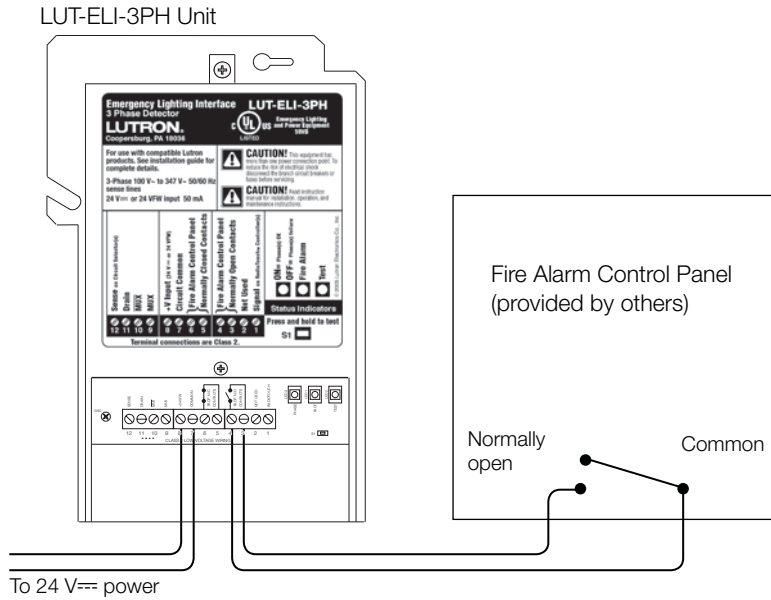LUT-ELI-3PH together for phase sensing.

- Provide proper short-circuit and overcurrent protection at the distribution panel. Maximum circuit breaker installation of 20 A.

- When normal power loss is detected at the LUT-ELI-3PH unit, all zones in the GRAFIK Eye® QS units will go to their emergency states.

- The GRAFIK Eye® QS unit MUST be powered from a normal/emergency power feed.

✦**LUTRON.** SPECIFICATION SUBMITTAL   Page

Job Name:	Model Numbers:
Job Number:	

IEC PELV/NEC® Class 2 Wiring Example: Fire Alarm Control Panel (FACP)

Normally Open FACP Input

LUT-ELI-3PH Unit

Fire Alarm Control Panel (provided by others)

Normally open   Common

To 24 V--- power

Supervisory Circuit (Normally Closed FACP Input)

LUT-ELI-3PH Unit

Fire Alarm Control Panel (provided by others)
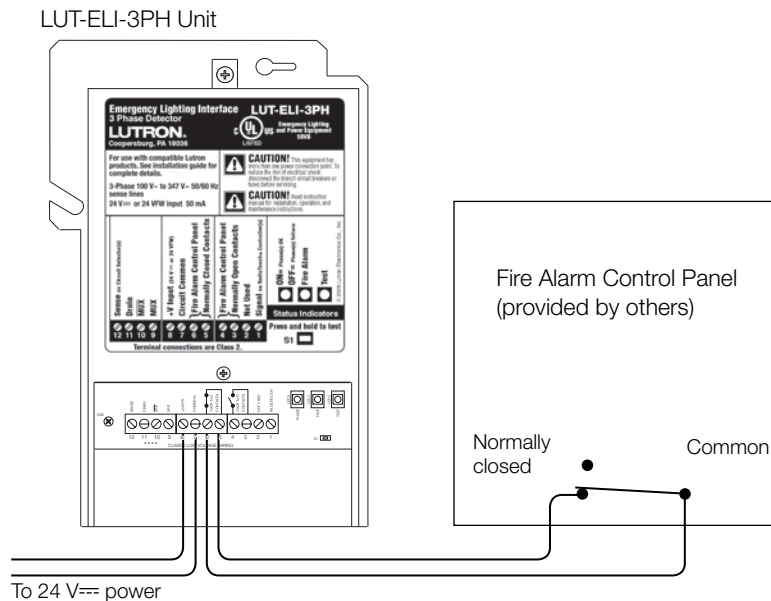
Normally closed   Common

To 24 V--- power

Important

Use only with normally open (terminals 3 and 4) or normally closed (terminals 5 and 6) dry contact closure. When the proper contact state is triggered, it must be maintained for the LUT-ELI-3PH unit to go into Emergency Mode. Once the contact is released, the LUT-ELI-3PH unit will return the GRAFIK® Systems GP, LP, XP panel(s), XPS, LCP, RadioTouch® controller, EcoSystem® Bus Supply, GRAFIK Eye® QS unit, or Quantum® Bus Supply back to normal operation mode.

The LUT-ELI-3PH unit will have a factory installed jumper to provide the normally closed input signal for the supervisory circuit when a normally closed FACP input is not provided.

Consult your Fire Alarm Control Panel's instruction manual before connecting to the LUT-ELI-3PH unit.

Notice: Do not connect any voltage source to the FACP inputs on the LUT-ELI-3PH unit. If voltage is provided by the FACP and connected to the LUT-ELI-3PH unit, it can damage the LUT-ELI-3PH unit.

Job Name:	Model Numbers:
Job Number:	