Lighting Controls

NXP2 SERIES
NX LIGHTING CONTROL PANEL

FEATURES

- Meets applicable ASHRAE, IECC and Title 24 energy codes and requirements

- Available in 8, 16, 24, 32 and 48 relay panel sizes

- Operates as standalone panel or NX network device

- Programmable using the Bluetooth® NX Lighting Controls mobile app*

- Matching number of relays and dimming channels

- Integrated NX SmartPORTs™ for connection of NX switches, sensors and accessories

- Optional UL924 emergency control

- Contractor friendly mounting/installation

*Requires NX Radio Bridge with Real Time Clock - included

SPECIFICATIONS

CONSTRUCTION

- Exterior:
  - NEMA 1 Enclosure (Available In surface and flush mount versions)
  - (4) Keyhole mounting holes for mounting to wall
  - Standard electrical knockouts on top, bottom and sides for low voltage and line voltage feeds
  - Hinged locking door
- Interior:
  - Allows for installation of the exterior prior to the addition of the interior electrical components
  - (4) Keyhole mounting holes for mounting to panel exterior
  - Optional metal plate barrier available to separate relays (p/n NXP2-PBAR)
- Panel Dimensions:
  - 08 Relay Panel: 20.7"L x 20.0"W x 4.0"D
  - 16 Relay Panel: 24.6"L x 20.0"W x 4.0"D
  - 24 Relay Panel: 32.6"L x 20.0"W x 4.0"D
  - 32 Relay Panel: 32.6"L x 20.0"W x 4.0"D
  - 48 Relay Panel: 40.4"L x 20.0"W x 4.0"D

ELECTRICAL

- Network Interface
  - Ethernet 10 base-T via NX Networked cable, integral 2-port Ethernet hub

ELECTRICAL (CONTINUED)

- Input Voltages
  - UNV: 120/277VAC (50/60Hz)
  - 347: 347VAC
  - 480: 480VAC
- Relay Operating Voltages
  - Single Pole:
    - General Use: 30A @ 347VAC
    - Tungsten: 1960W @ 120VAC
    - (Standard) Ballast: 10A @ 3470VAC
    - Electronic Ballast: 16A @ 277VAC
    - Motor Starting: 1 HP @ 110-125VAC; 1.5HP @ 220-277VAC
    - Short Circuit Current Rating (SCCR) of 14,000A @ 277VAC
  - Double Pole[1]:
    - General Use: 20A @ 347/480VAC
    - Tungsten: 2400W @ 120VAC
    - (Standard) Ballast: 20A @ 347/480VAC
    - Motor Starting: ½ HP @ 110-125VAC; 1.5HP @ 220-277VAC
    - Short circuit Current Rating (SCCR) of 5,000A @ 277VAC
- Relay Electrical Ratings
  - Rated for minimum 60,000+ operations (30,000+ cycles) at full 20A load
  - Rated full-life with HID load

ELECTRICAL (CONTINUED)

- Relay Mechanical Ratings
  - Rated for minimum 120,000+ operations (60,000+ cycles)
- Relay Operation
  - Mechanically latching
  - Provides at-a-glance indication of ON or OFF relay status
  - Includes manual override switch (integral to the relay)
- 0-10V Dimming
  - Available on all panels
  - (8) Integrated dimming channels per Relay-Dimmer Board
  - Each dimming channel capable of sinking 50mA
  - Full support for Dim-to-Off drivers
- Class 2 Low Voltage NX SmartPORTs
  - (4) NX SmartPORTs - 24VDC, 1.2A MAX (all outputs combined)
  - Supports NX switches, sensors (NXOS, NXSMP, NXDS) and accessories[2]
  - RS485 digital communication
- Class 2 Inputs / Outputs
  - (4) 3-Wire dry contact inputs. Each input provides connection for sourcing 24VDC, common, control and switch pilot light functionality

LC_3482A_NXP2_SPEC_R03

Lighting Controls

NXP2 SERIES
NX LIGHTING CONTROL PANEL

SPECIFICATIONS (CONTINUED)

ELECTRICAL (CONTINUED

- Class 2 Inputs / Outputs (Continued):

  - (2) SPDT (Normally Open/Normally Closed) dry contact outputs. Each output rated for 24VDC @ 50mA.

  - Terminal Tolerance:

    - Wire size: 14, 16, 18, 20, 22 AWG

    - Recommended tightening torque: 0.45 N-m (4 in-lbs.)

- Optional UL924 Emergency Control[4]

  - Pre-installed at factory

  - When installed, panel is suitable for controlling emergency lighting circuits

  - On loss of normal power, all relays go to closed (ON) position and all dimming channels will go to 100% light output

ELECTRICAL (CONTINUED

- Bluetooth® Technology

  - Bluetooth programming using the NX Lighting Controls mobile app requires the NX Radio Bridge with Real Time Clock (p/n NXBTC) – Included

OPERATION

- Programming and Configuration

  - Programmable via Bluetooth NX Lighting Controls mobile app (available on Google Play™ and Apple® App Store)

  - Programmable via web-browser user interface[3]

OPERATING ENVIRONMENT

- Indoor use only

- 32° to 112°F (0° to 50°C)

- Relative humidity (non-condensing): 10% to 90%

CERTIFICATIONS

- UL 916, CAN/CSA C22.2 No. 205

- UL 924, CAN/CSA C22.2 No. 141 Emergency Lighting (Requires UL924 Emergency Control Option)

WARRANTY

- 5 year limited

Notes:
1. Double pole relays occupy (2) relay spaces
2. Connection of NX actuators, bridges and radios is not supported
3. Requires NX Area Controller

ORDERING GUIDES

Stocked Panels

Example: NXP2-PNL-16-16-U-S

CATALOG #	

Model	
NXP2-PNL-8-0-U-S	NX Lighting Control Panel V2, 8 Relay Capacity, 8 Dimming Channels, Relays Not Included, Bluetooth Radio Bridge With Real Time Clock Included, 120/277VAC, Surface Mount
NXP2-PNL-8-8-U-S	NX Lighting Control Panel V2, 8 Relay Capacity, 8 Dimming Channels, 8-30A/Single Pole Latching Relays, Bluetooth Radio Bridge With Real Time Clock Included, 120/277VAC, Surface Mount
NXP2-PNL-16-0-U-S	NX Lighting Control Panel V2, 16 Relay Capacity, 16 Dimming Channels, Relays Not Included, Bluetooth Radio Bridge With Real Time Clock Included, 120/277VAC, Surface Mount
NXP2-PNL-16-16-U-S	NX Lighting Control Panel V2, 16 Relay Capacity, 16 Dimming Channels, 16-30A/Single Pole Latching Relays, Bluetooth Radio Bridge With Real Time Clock Included, 120/277VAC, Surface Mount
NXP2-PNL-24-0-U-S	NX Lighting Control Panel V2, 24 Relay Capacity, 24 Dimming Channels, Relays Not Included, Bluetooth Radio Bridge With Real Time Clock Included, 120/277VAC, Surface Mount
NXP2-PNL-24-24-U-S	NX Lighting Control Panel V2, 24 Relay Capacity, 24 Dimming Channels, 24-30A/Single Pole Latching Relays, Bluetooth Radio Bridge With Real Time Clock Included, 120/277VAC, Surface Mount
NXP2-PNL-32-0-U-S	NX Lighting Control Panel V2, 32 Relay Capacity, 32 Dimming Channels, Relays Not Included, Bluetooth Radio Bridge With Real Time Clock Included, 120/277VAC, Surface Mount
NXP2-PNL-32-32-U-S	NX Lighting Control Panel V2, 32 Relay Capacity, 32 Dimming Channels, 32-30A/Single Pole Latching Relays, Bluetooth Radio Bridge With Real Time Clock Included, 120/277VAC, Surface Mount
NXP2-PNL-48-0-U-S	NX Lighting Control Panel V2, 48 Relay Capacity, 48 Dimming Channels, Relays Not Included, Bluetooth Radio Bridge With Real Time Clock Included, 120/277VAC, Surface Mount
NXP2-PNL-48-48-U-S	NX Lighting Control Panel V2, 48 Relay Capacity, 48 Dimming Channels, 48-30A/Single Pole Latching Relays, Bluetooth Radio Bridge With Real Time Clock Included, 120/277VAC, Surface Mount

Lighting Controls

NXP2 SERIES
NX LIGHTING CONTROL PANEL

ORDERING GUIDES (CONTINUED)

Custom Panels

Example: NXP2-EIT-48-24SP-12DP-UNV-S

CATALOG #

NXP2	–		–		–		–		–		–		–	
Model		**Panel Shipment**		**Panel Size**		**Single Pole Relay Qty**		**Double Pole Relay Qty**		**Emergency Control**		**Input Voltage**		**Enclosure Mount**
NXP2 NX Lighting Control Panel V2		**EIT** Enclosure/ Interior Together[1] **EIS** Enclosure/ Interior Separately[1] **ENC** Enclosure Only **INT** Interior Only[1]		**8** 8 Relay/ Dimmer Capacity **16** 16 Relay/ Dimmer Capacity **24** 24 Relay/ Dimmer Capacity **32** 32 Relay/ Dimmer Capacity **48** 48 Relay/ Dimmer Capacity		**nnSP** Single Pole Relay Qty		**nnDP** Double Pole Relays		**Blank** No UL924 Control **924** UL924 Panel[2]		**UNV** Universal Voltage (120/277VAC) **347** 347VAC **480** 480VAC		**S** Surface Mount **F** Flush Mount

Notes:
1. Bluetooth Radio Bridge With Real Time Clock included for panel programming
2. If ordering a UL924 panel, must order a fully populated interior

Stocked NXP2 Panel Accessories

Example: NXP2-RL-DP

CATALOG #

Model	
NXP2-RL2-SP	Single Pole - General Use: 30A @ 347VAC; Tungsten: 1920W @ 120VAC; (Standard) Ballast: 10A @ 347VAC; Motor Starting: 1HP @ 110-125VAC; 1.5HP @ 220-277VAC
NXP2-RL-DP	Double Pole - General Use: 20A @ 347/480VAC; Tungsten: 2400W @ 120VAC; (Standard) Ballast: 20A @ 347/480VAC; Motor Starting: 1HP @ 110-125VAC; 1.5HP @ 220-277VAC
NXP2-PBAR	NX Lighting Control Panel V2 Relay Channel Barriers – Set of two
NXP2-CNTRLBRD	NX Lighting Control Panel V2 Controller Board Replacement
NXP2-RLYDMRBRD	NX Lighting Control Panel V2 Relay/Dimmer Board Replacement

LC_3482A_NXP2_SPEC_R03

Lighting Controls

DIMENSIONS

Sizes	A	B
V2-8	20.7"	17.7"
V2-16	24.6"	21.6"
V2-24	32.6"	29.6"
V2-32	32.6"	29.6"
V2-48	40.4"	37.4"

Surface Mount Panel Dimensions

Note:
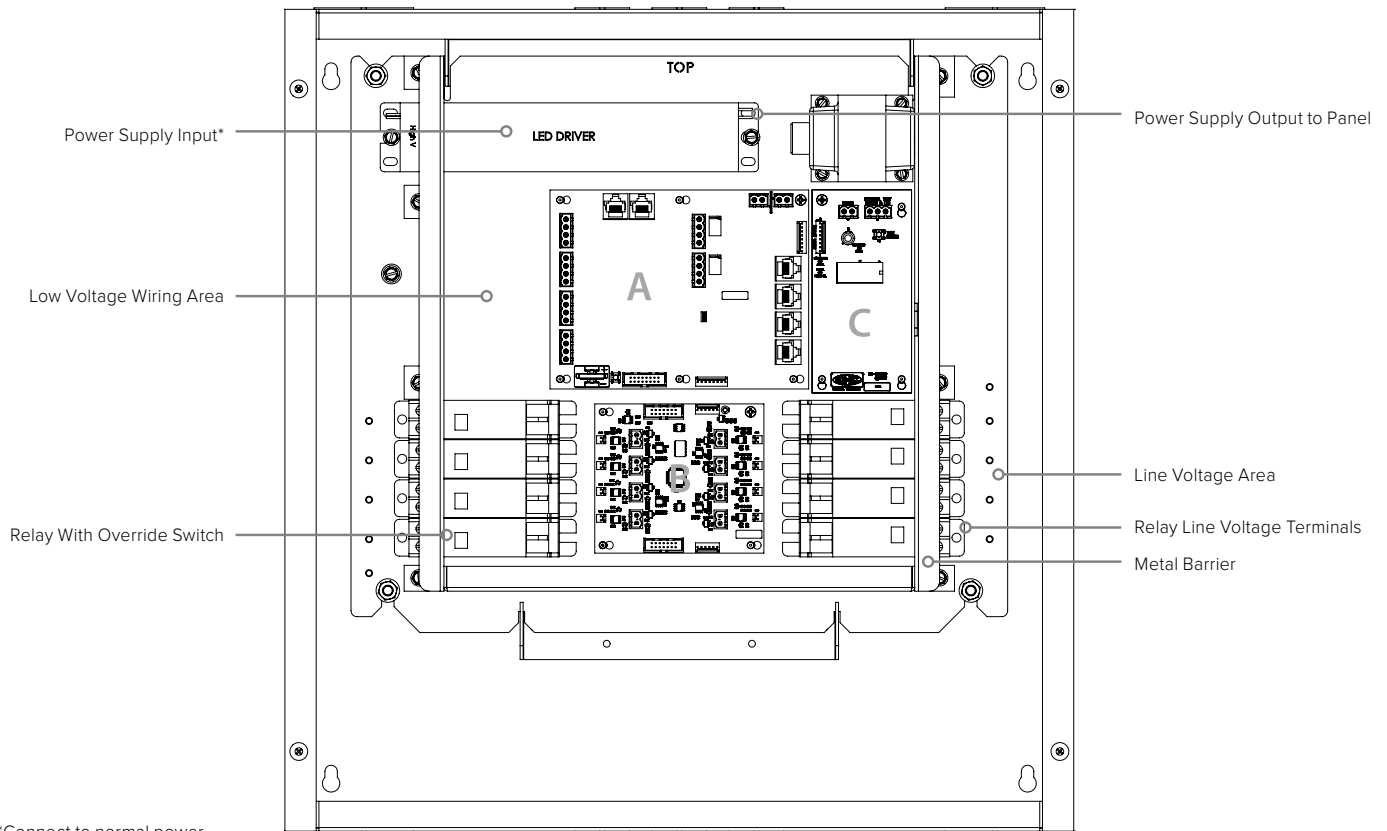1   For Flush Mount Panels, add 2" to A & B dimensions

Lighting Controls

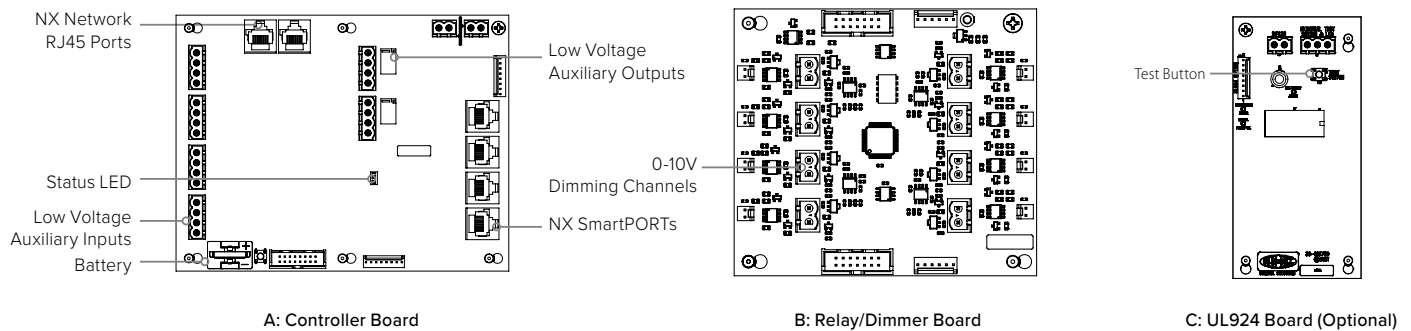## NXP2 SERIES
NX LIGHTING CONTROL PANEL

ADDITIONAL INFORMATION

Panel Interior

Power Supply Input*

Low Voltage Wiring Area

Relay With Override Switch

Power Supply Output to Panel

Line Voltage Area

Relay Line Voltage Terminals

Metal Barrier

*Connect to normal power source if panel is controlling emergency circuits.

Fully Populated 8 Relay Interior (with UL924 Option Board) Mounted in the Exterior Enclosure
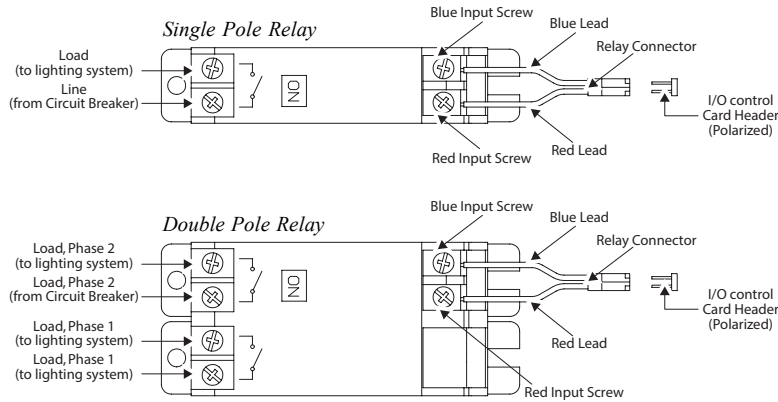

NX Network RJ45 Ports
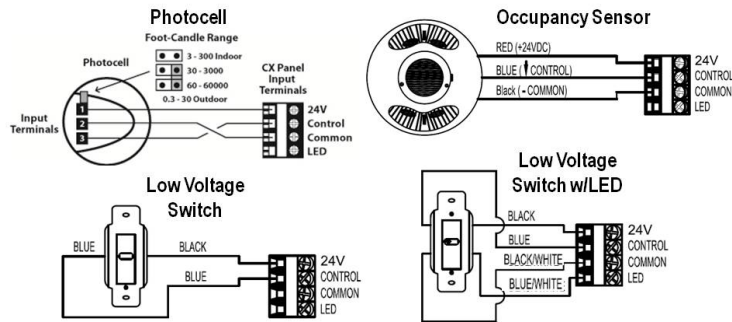
Low Voltage Auxiliary Outputs

Status LED

0-10V Dimming Channels

Low Voltage Auxiliary Inputs

NX SmartPORTs

Battery

Test Button

A: Controller Board

B: Relay/Dimmer Board

C: UL924 Board (Optional)

NXP2 SERIES
NX LIGHTING CONTROL PANEL

WIRING DIAGRAMS (CONTINUED)

Single Pole Relay

Load (to lighting system)
Line (from Circuit Breaker)

Blue Input Screw
Blue Lead
Relay Connector
I/O control Card Header (Polarized)
Red Input Screw
Red Lead

Double Pole Relay

Load, Phase 2 (to lighting system)
Load, Phase 2 (from Circuit Breaker)
Load, Phase 1 (to lighting system)
Load, Phase 1 (to lighting system)

Blue Input Screw
Blue Lead
Relay Connector
I/O control Card Header (Polarized)
Red Lead
Red Input Screw

Relay Wiring Diagrams

Photocell
Foot-Candle Range
- 3 - 300 Indoor
- 30 - 3000
- 60 - 60000
- 0.3 - 30 Outdoor

Photocell
Input Terminals
CX Panel Input Terminals
24V Control Common LED

Occupancy Sensor
RED (+24VDC)
BLUE (CONTROL)
Black (– COMMON)
24V CONTROL COMMON LED

Low Voltage Switch
BLUE
BLACK
BLUE
24V CONTROL COMMON LED

Low Voltage Switch w/LED
BLACK
BLUE
BLACK/WHITE
BLUE/WHITE
24V CONTROL COMMON LED

Low Voltage Input Wiring Diagrams

SMART SWITCHES
BLUETOOTH® RADIO BRIDGE WITH CLOCK
TO ADDITIONAL DEVICES
PANEL SMARTPORTS™
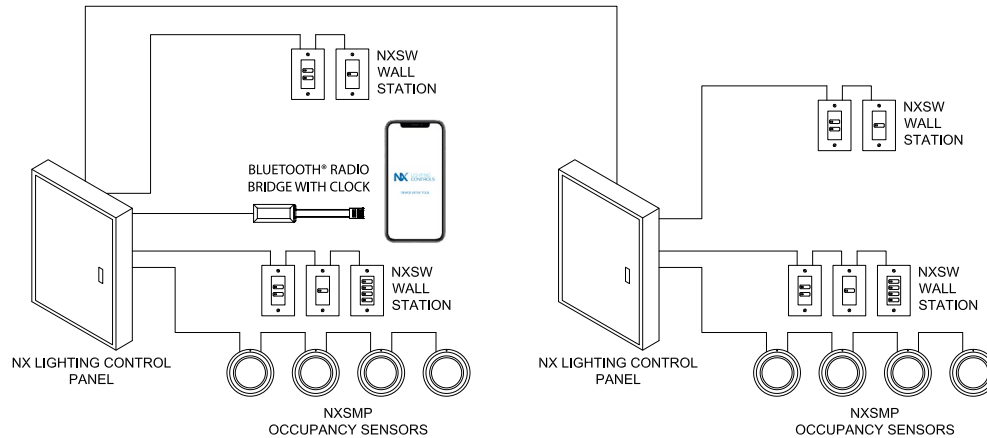OCCUPANCY SENSORS
DAYLIGHT SENSOR
NX LIGHTING CONTROL PANEL
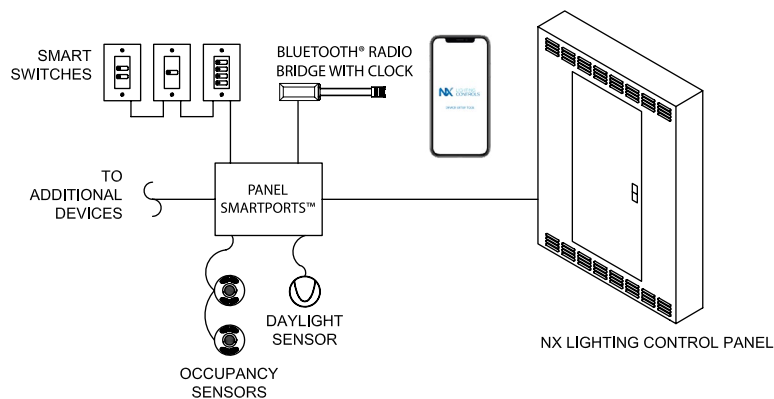
Standalone Panel Programmed Using Bluetooth Radio Bridge with Clock and NX Lighting Controls mobile app

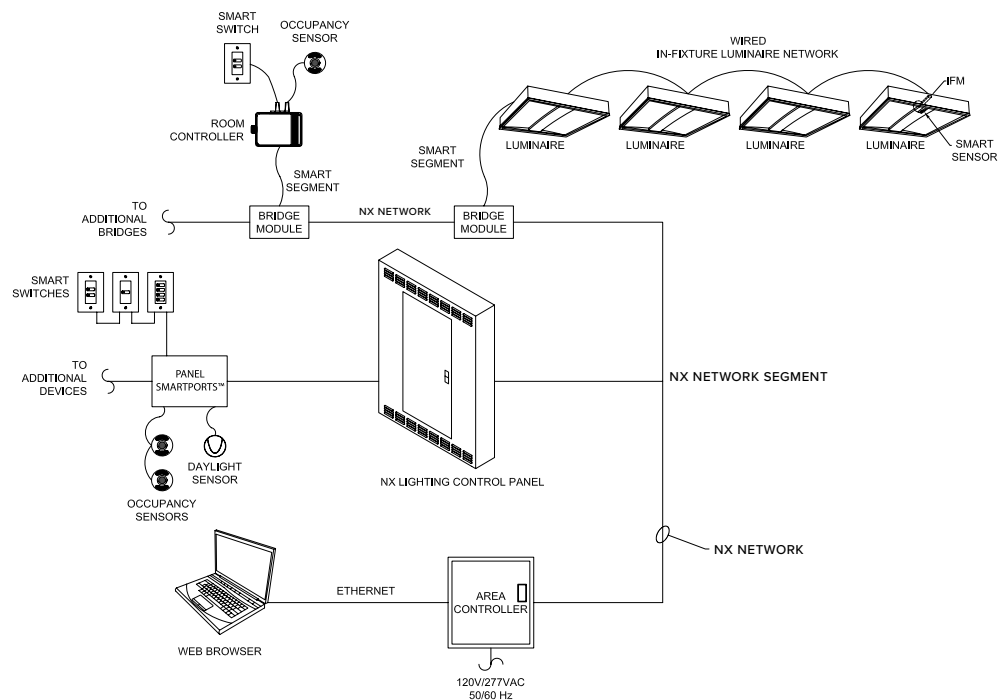LC_3482A_NXP2_SPEC_R03

Lighting Controls

NXP2 SERIES
NX LIGHTING CONTROL PANEL

WIRING DIAGRAMS (CONTINUED)

Networked Panels Programmed Using Bluetooth Radio Bridge with Clock and NX Lighting Controls mobile app

Networked Panel Programmed Using the NX Area Controller