



LIGHTING
CONTROLS™

NX Pocket Guide
Ver. 1.0

Current

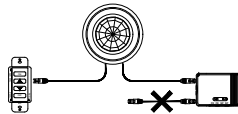
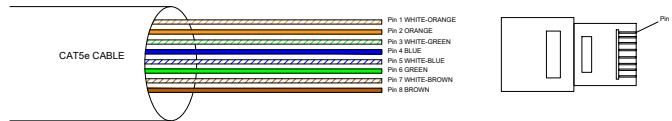
NX Network and Smart Port Network Rules:

Wiring CAT5e:

- Do not leave any cable end unplugged.
- Do not loop a cable back into the same device.
- Do not make a complete circuit.
- Cat5e runs not to exceed 1000' in each Zone bus. 330' max between FX ports.
- Cat5e runs in a Zone are topology free, splitters and couplers can be used as needed.
- Test all Cat5 cables.

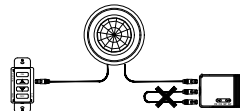
Inside the Zone:

- Max of 64 loads
- Always power room controllers with a constant hot (unswitched) circuit.



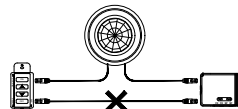
1. Don't leave any cable end unplugged.

Without splitters, you should have 1 less CAT5e cable than the number of devices.



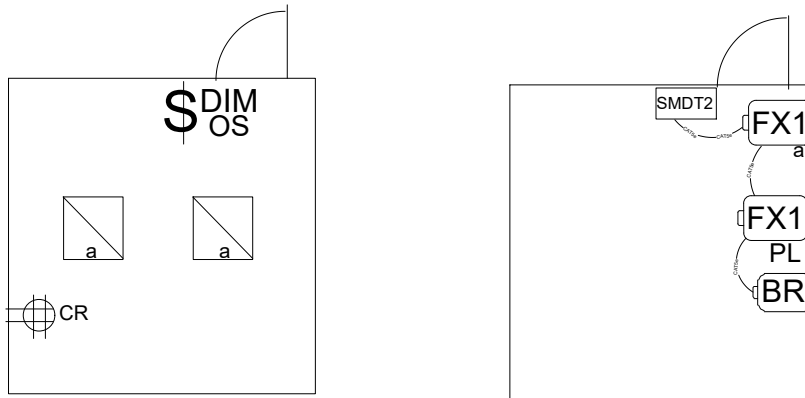
2. Don't loop a cable back into the same device.

Don't loop to same device or within the room / local network. CAT5E only within a room, not between them.



3. Don't make a complete circuit with the cable.

Small Private Office

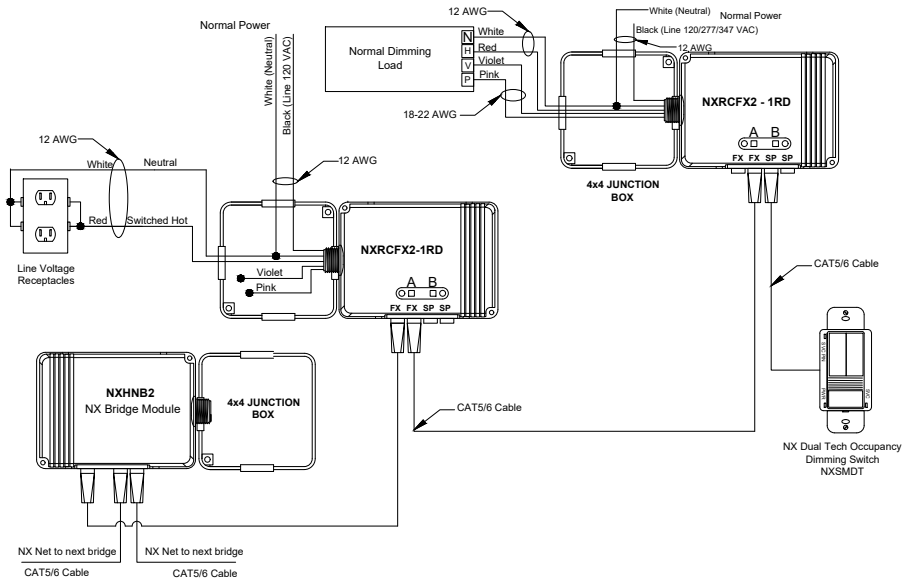


Sequence of Operation:

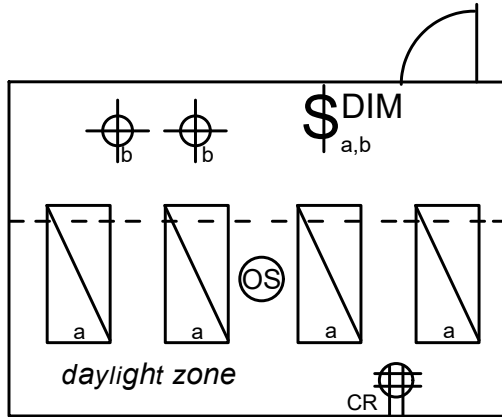
Manual On/Auto Off Lighting Control - Switch must be pressed for lighting to be turned on; lighting is turned off automatically based on occupancy.

Auto On/Auto Off Plug Load Control - Outlets are enabled when the Zone becomes occupied and turned off when unoccupied.

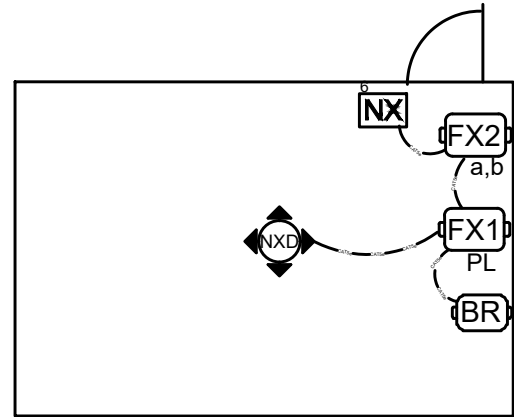
Zone may be stand alone or networked - Network bridge is optional, only required when ADR or BACnet points are required.



Large Private Office



Typical E-Sheet symbols



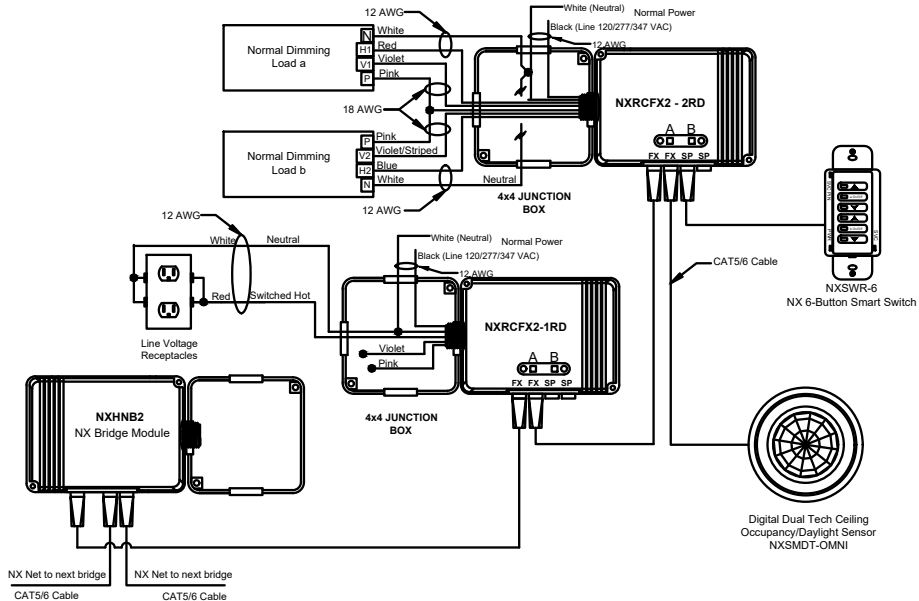
Typical HLI Submittal

Sequence of Operation:

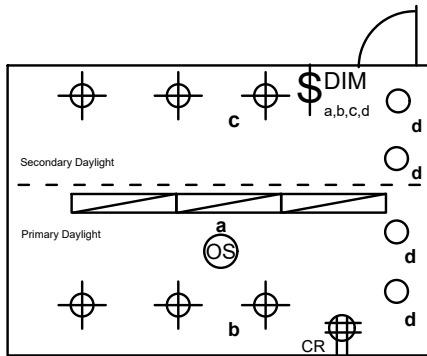
Manual On/Auto Off Lighting Control - Switch must be pressed for lighting to be turned on lighting is turned off automatically based on occupancy.

Auto On/Auto Off Plug Load Control - Outlets are enabled when the Zone becomes occupied and turned off when unoccupied.

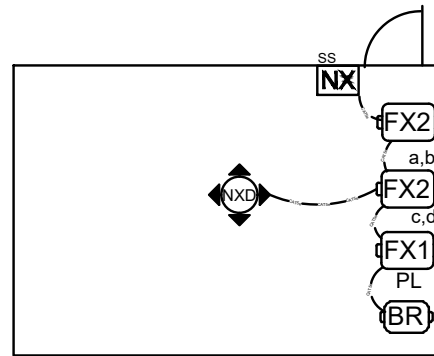
Zone may be stand alone or networked - Network bridge is optional, only required when ADR or BACnet points are required.



Conference Room



Typical E-Sheet symbols



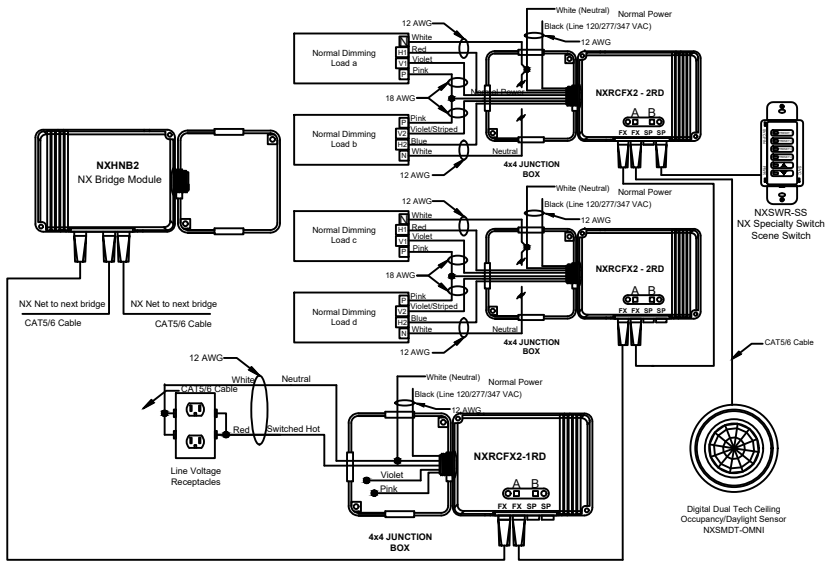
Typical HLI Submittal

Sequence of Operation:

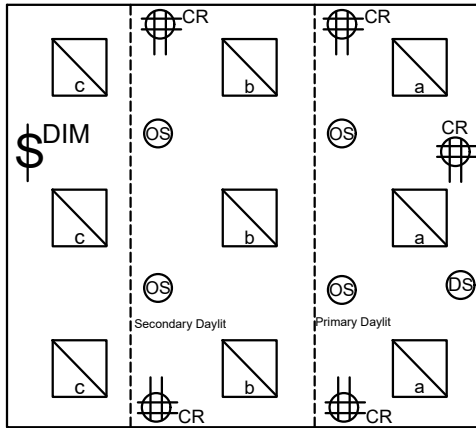
Manual On/Auto Off Lighting Control - Switch must be pressed for lighting to be turned on lighting is turned off automatically based on occupancy.

Auto On/Auto Off Plug Load Control - Outlets are enabled when the Zone becomes occupied and turned off when unoccupied.

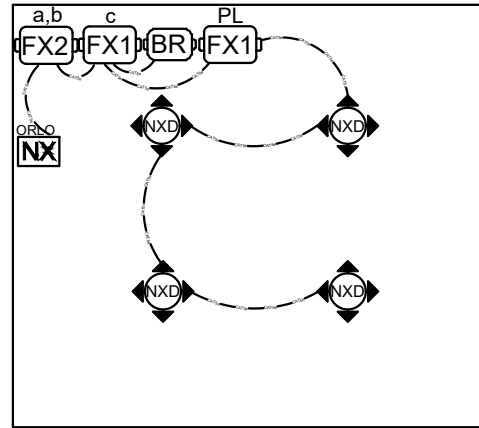
Zone may be stand alone or networked - Network bridge is optional, only required when ADR or BACnet points are required.



Large Room



Typical E-Sheet symbols



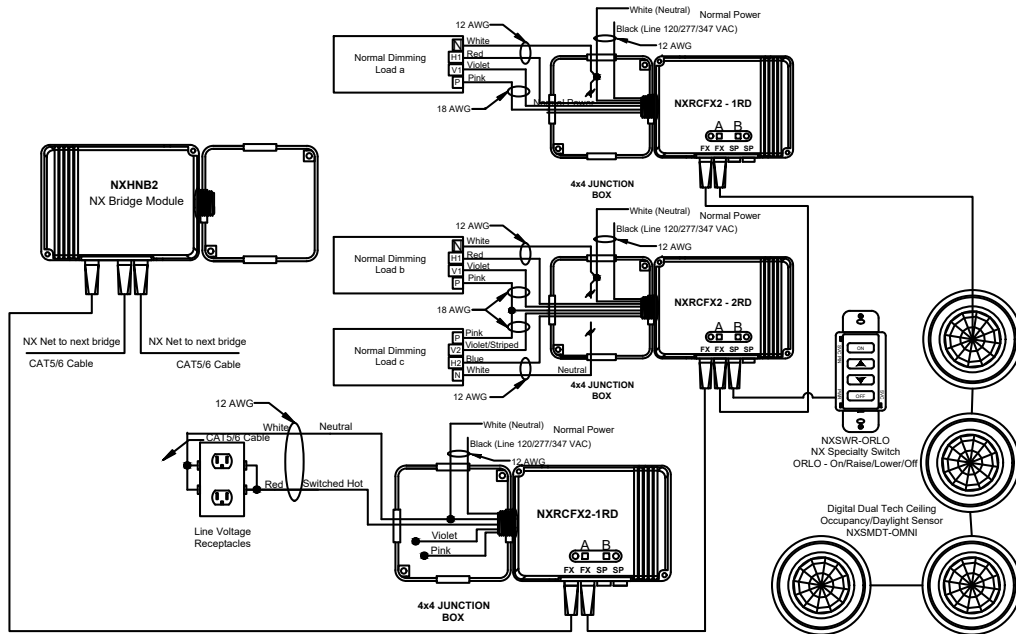
Typical HLI Submittal

Sequence of Operation:

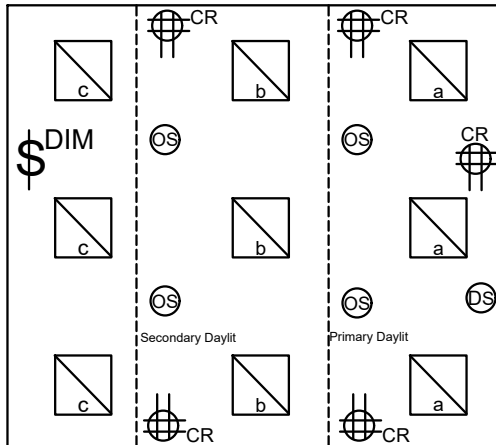
Manual On/Auto Off Lighting Control - Switch must be pressed for lighting to be turned on lighting is turned off automatically based on occupancy.

Auto On/Auto Off Plug Load Control - Outlets are enabled when the Zone becomes occupied and turned off when unoccupied.

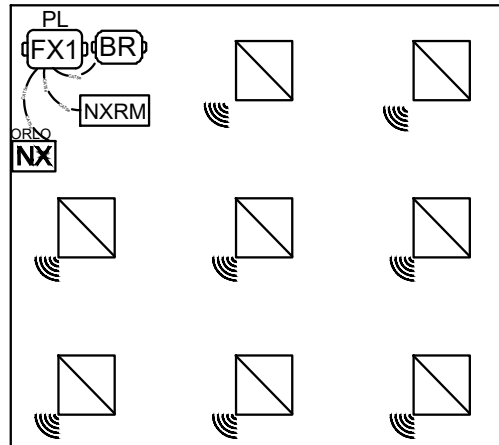
Zone may be stand alone or networked - Network bridge is optional, only required when ADR or BACnet points are required.



Open Office > 250 sq ft.



Typical E-Sheet symbols



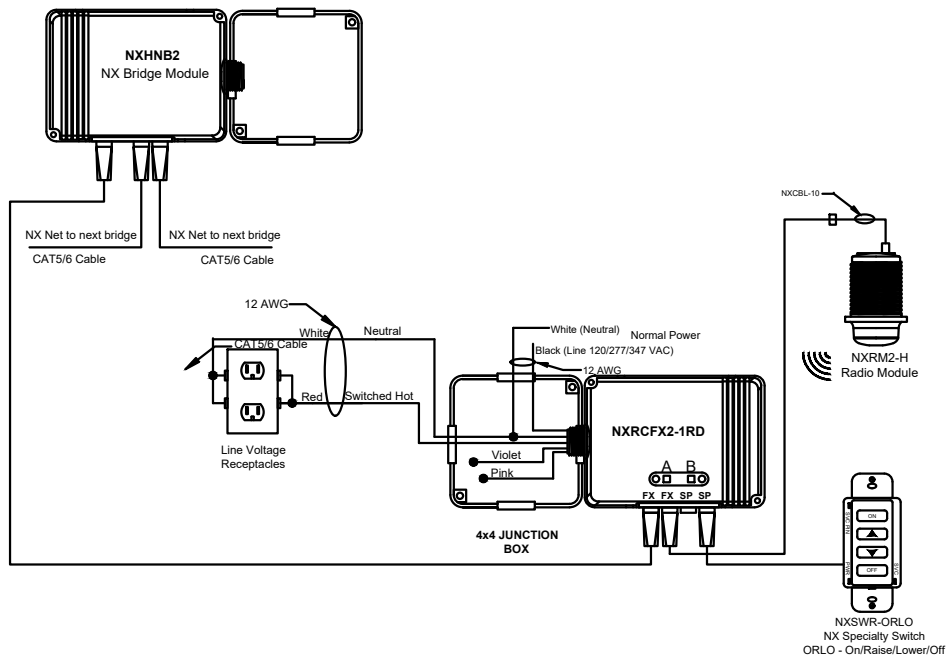
Typical HLI Submittal

Sequence of Operation:

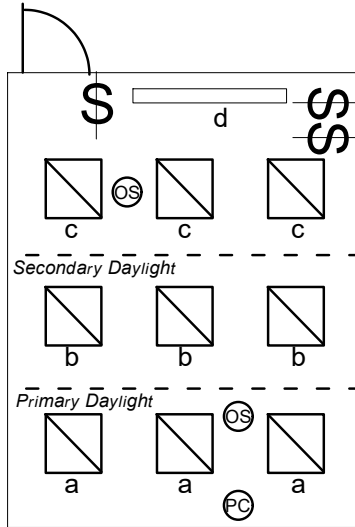
Manual On/Auto Off Lighting Control - Switch must be pressed for lighting to be turned on lighting is turned off automatically based on occupancy. Occupancy sensors control Zones/Groups should be limited to less than 600 square feet. Unoccupied Zones/Groups programmed to go to 20% during. Once all zones have become unoccupied for more than 20 minutes the entire Open Office would be turned off.

Auto On/Auto Off Plug Load Control - Outlets are enabled when the Zone becomes occupied and turned off when unoccupied.

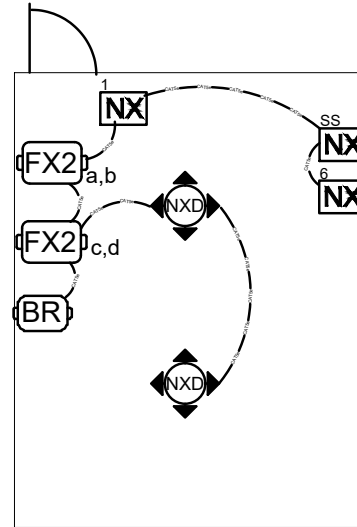
Zone may be stand alone or networked - Network bridge is optional, only required when ADR or BACnet points are required.



Classroom



Typical E-Sheet symbols



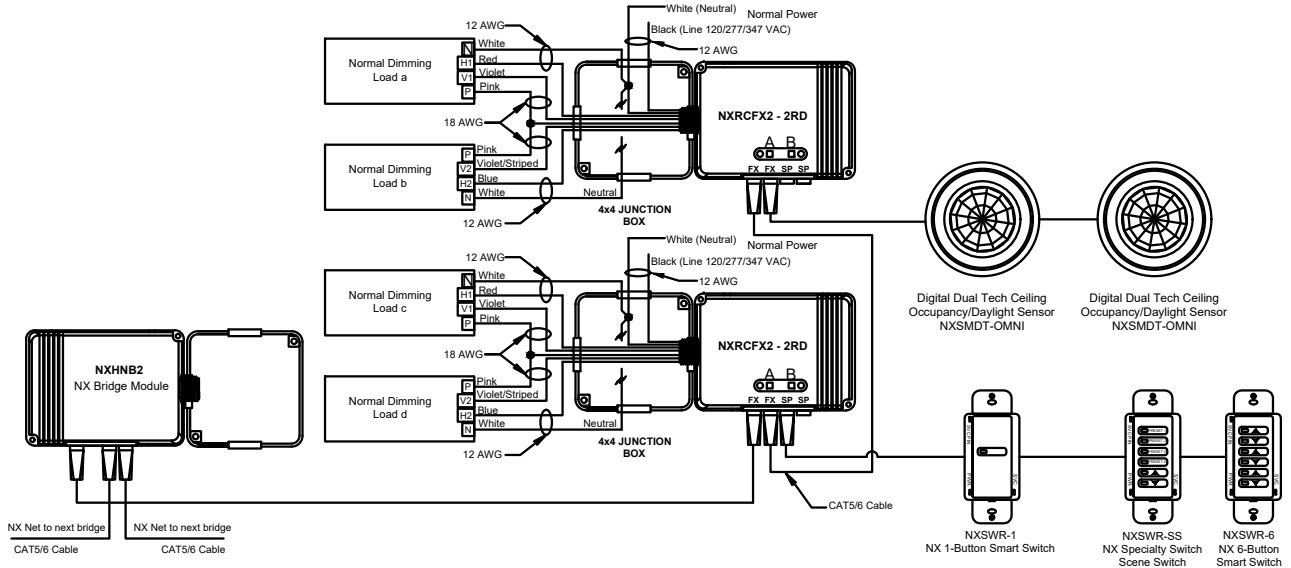
Typical HLI Submittal

Sequence of Operation:

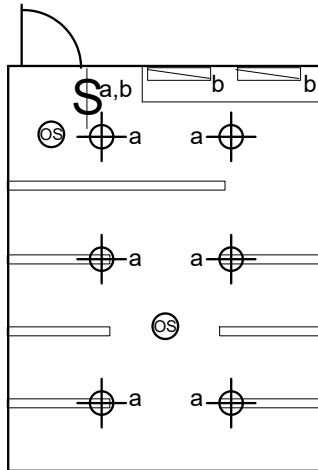
Manual On/Auto Off Lighting Control - Switch must be pressed for lighting to be turned on lighting is turned off automatically based on occupancy.

Auto On/Auto Off Plug Load Control - Outlets are enabled when the Zone becomes occupied and turned off when unoccupied.

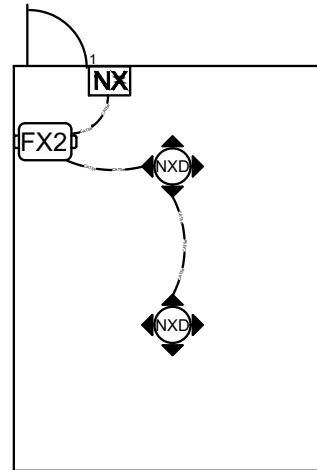
Zone may be stand alone or networked - Network bridge is optional, only required when ADR or BACnet points are required



Restroom Multi-Stall



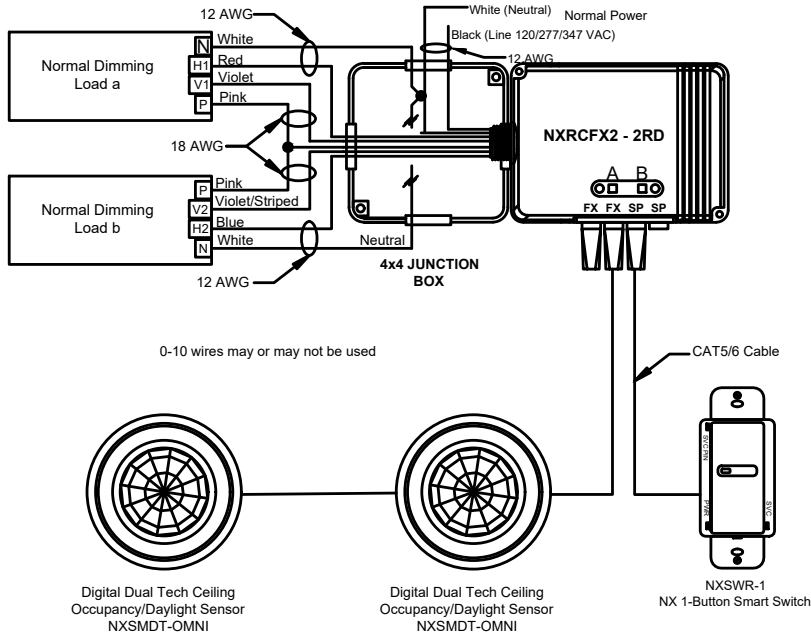
Typical E-Sheet symbols



Typical HLI Submittal

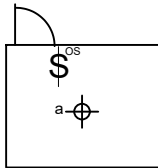
Sequence of Operation:

Automatic On/Auto Off Lighting Control - Switch must be pressed for lighting to be turned on lighting is turned off automatically based on occupancy
 Zone may be stand alone or networked - Network bridge is optional, only required when ADR or BACnet points are required.

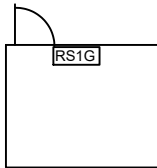


Restroom Single Stall

1 Load

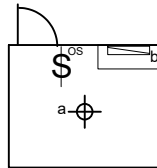


Typical E-Sheet symbols

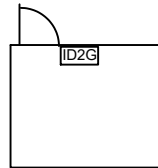


Typical HLI Submittal

2 Loads

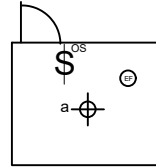


Typical E-Sheet symbols

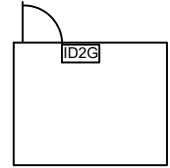


Typical HLI Submittal

1 Load + Exhaust Fan



Typical E-Sheet symbols

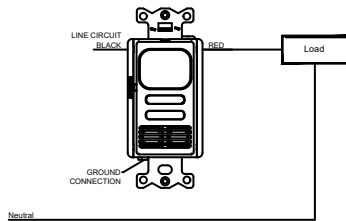


Typical HLI Submittal

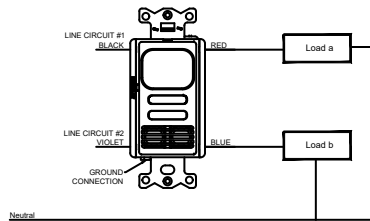
Sequence of Operation:

Automatic On/Auto Off Lighting Control - Switch must be pressed for lighting to be turned on lighting is turned off automatically based on occupancy.
 Zone may be stand alone or networked - Network bridge is optional, only required when ADR or BACnet points are required.

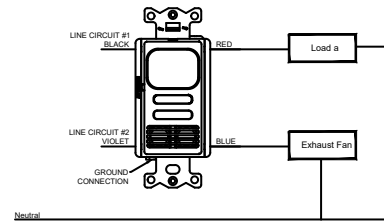
LHRIRS1-G (PIR) or LHRMST1-G (US & PIR)
Line Voltage Occupancy Switch



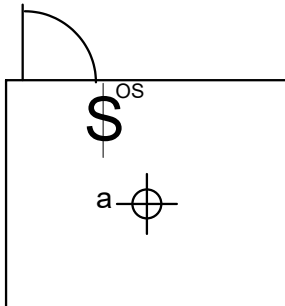
LHRDCIRD2 (PIR) OR LHRDCMTD2 (US & PIR)
Line Voltage Occupancy Switch
2 Relays



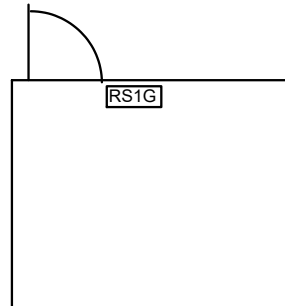
LHRDCIRD2 (PIR) OR LHRDCMTD2 (US & PIR)
Line Voltage Occupancy Switch
2 Relays



Storage/Janitor Closet



Typical E-Sheet symbols

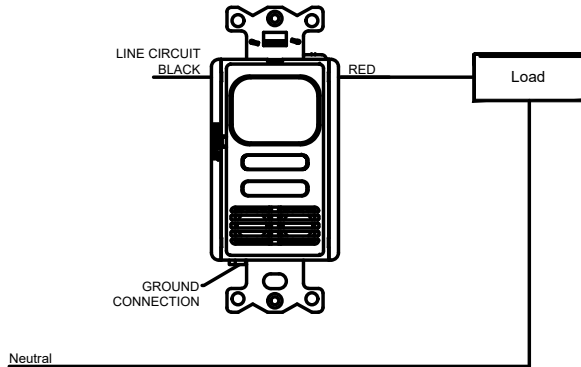


Typical HLI Submittal

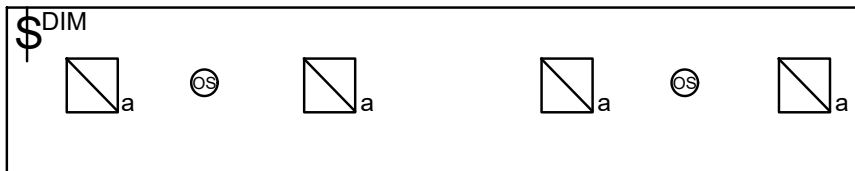
Sequence of Operation:

Automatic On/Auto Off Lighting Control - Switch must be pressed for lighting to be turned on lighting is turned off automatically based on occupancy.
 Zone may be stand alone or networked - Network bridge is optional, only required when ADR or BACnet points are required.

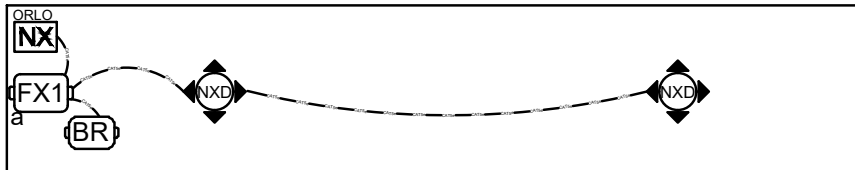
LHRIRS1-G (PIR) or LHRMTS1-G (US & PIR)
Line Voltage Occupancy Switch



Corridor



Typical E-Sheet symbols

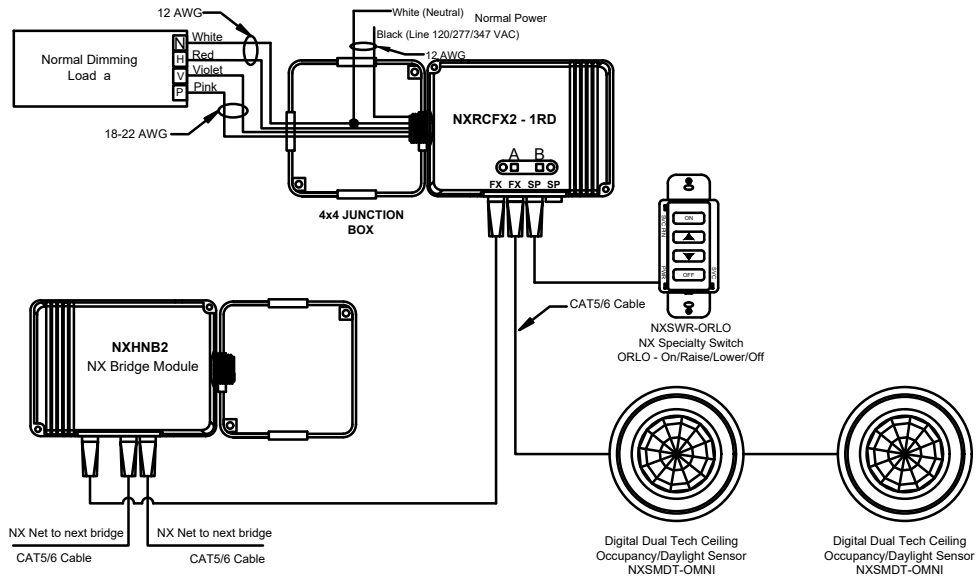


Typical HLI Submittal

Sequence of Operation:

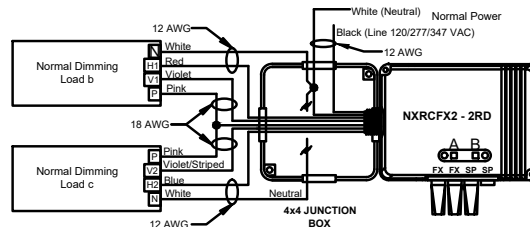
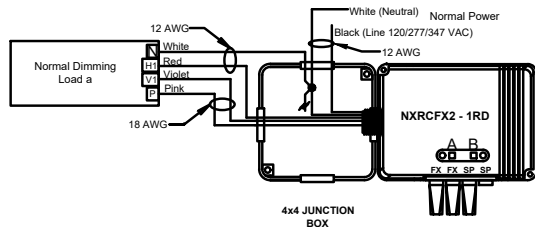
Automatic On/Partial Off with Grace Period Lighting Control - Switch must be pressed for lighting to be turned on lighting is turned off automatically based on occupancy

Zone may be stand alone or networked - Network bridge is optional, only required when ADR or BACnet points are required.



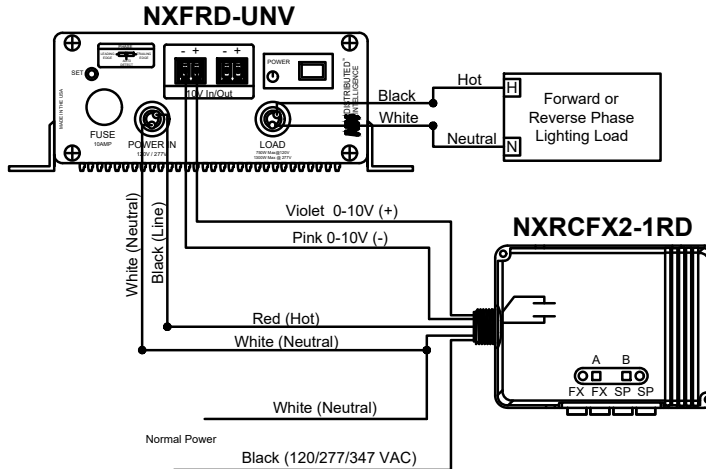
0-10v Room Controllers

- NXRCFX2-1RD and NXRCFX2-2RD 0-10 wiring class 1
- Connect to J-box with 1/2" nipple
- 0-10 wiring is polarity dependent; Violet +, Pink - (negative used to be Grey)
- 120V/277V input, output 20A, can be used for Plug Load Controller at 120V
- Room Controllers have internal timeclock and can run schedules with no additional devices required



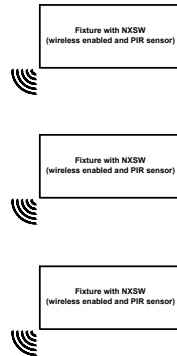
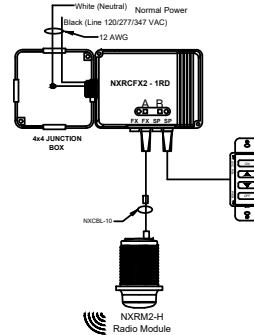
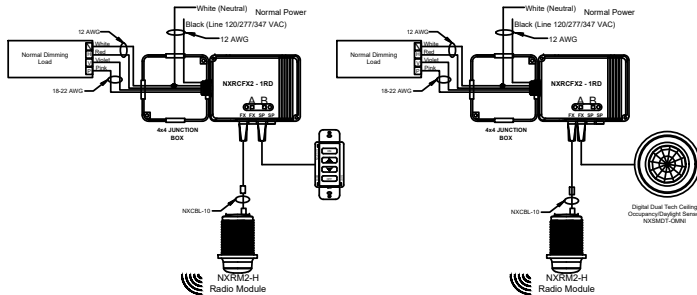
Phase Dimming Controllers

- NXFRD-UNV used with 0-10 dimming room controllers to control phase dimming loads
- NXFRD-UNV is a phase adaptive module
- 120V/277V input



Radio Modules

- Connects to Smart Port and allows radio control to fixtures with integrated radio modules or to other radio modules
- Can connect with interior and exterior fixtures which have radio modules installed
- Range up to 1000' line of sight
- Available in White, Black, Gray



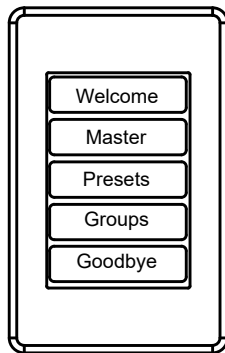
NX Lighting Controls App

- Universal programming device for all NX devices
- Available on the Apple App and Google Play stores
- Communicate through Bluetooth with NX Digital Switches/Sensors, NXBTC dongle
- Firmware is upgradeable and ability to update firmware of devices over the air.



NXSW-TH3 Single Gang Touchscreen

- Connects to other devices in the room by Cat5e
- Mounts to standard single gang back box
- Custom splash screen logos can be uploaded
- Control up to 16 groups
- Setup groups, presets and schedules through app
- Optional password access control

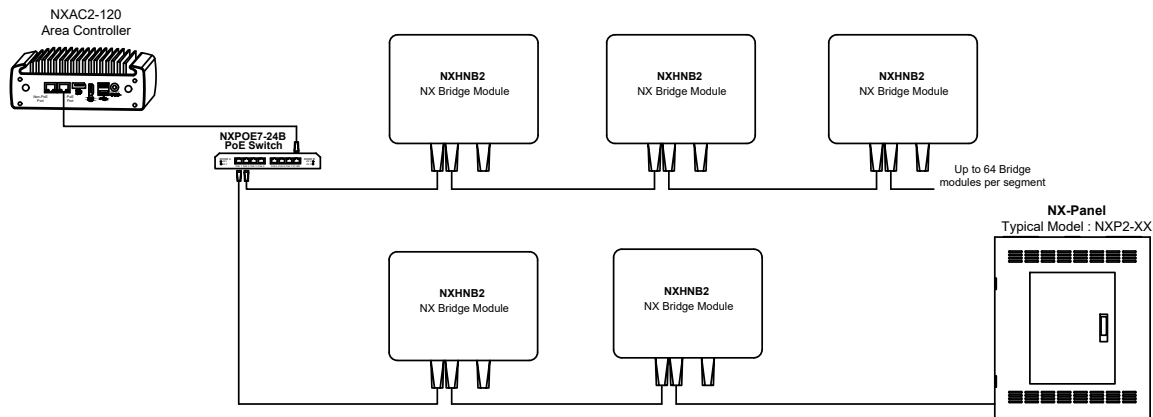


NXSW-TH3
Single Gang Touchscreen

NXAC2 and Network

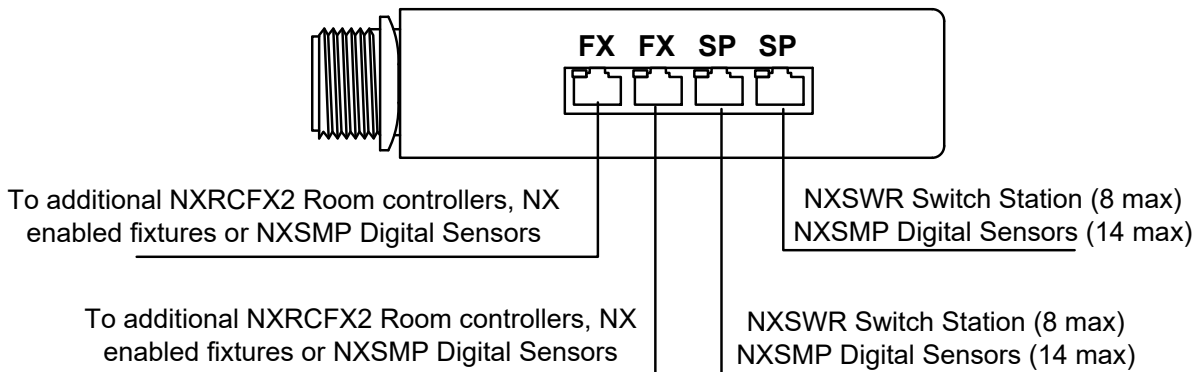
NX Network Wiring:

- Each segment can have up to 24 NXHB2 bridges
- Bridges to be connected in daisy chain topology
- BACnet allows for ADR (Automatic Demand Response), timeclock functions, and BACnet integration with BMS systems
- NXAC2 has (1) NX Network connection (RJ45) and can be connected to a PoE switch to utilize multiple segments.



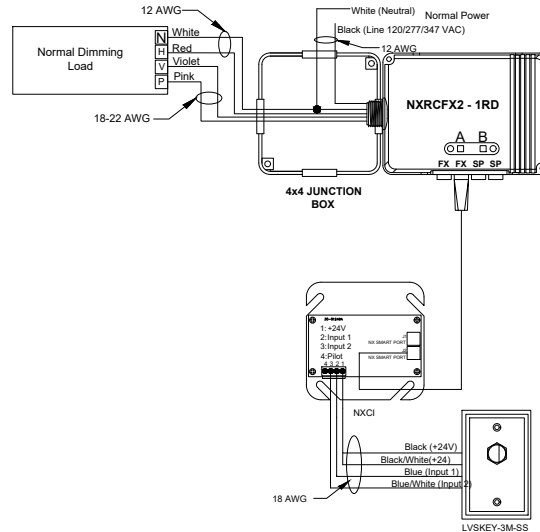
Room Controller Ports:

- Up to 32 Room Controllers can be connected together through the FX ports
- NX Digital Sensors can be connected to the FX ports or the Smart Ports
- Wall switch stations and legacy sensors must be connected to the Smart Ports



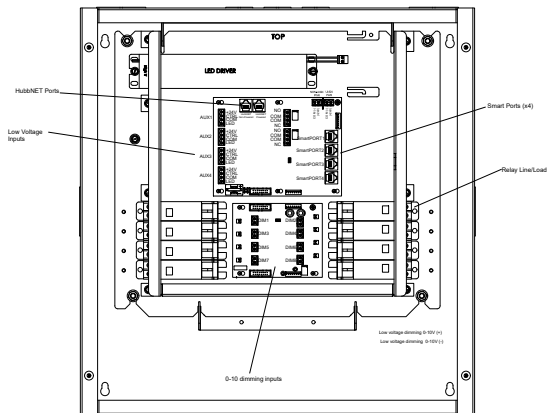
Key Switch

- LVSKEY-3M-SS , momentary key switch
- The key switch will connect to the NXCI with 18awg wire
- The NXCI (contact interface) will connect to a smart port by Cat5e
- Typically used in public corridors and restrooms



Lighting Control Panels

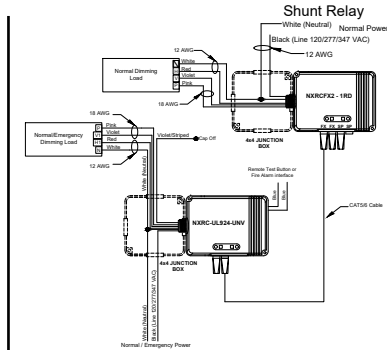
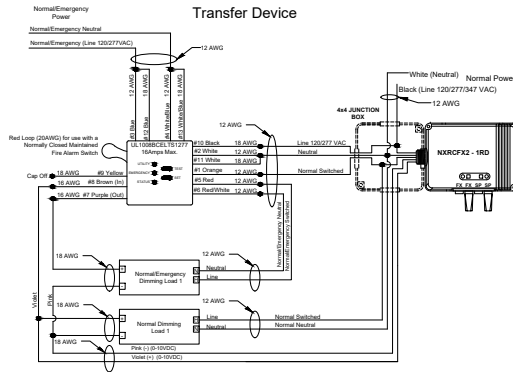
- 8, 16, 24, 32, 48 relay capacity.
- All panels are feed through relays.
- Relays have 0-10v dimming capabilities.
- Switches, Occupancy Sensors, Photocells can all be connected with Cat5e OR low voltage wiring.
- Cat5e cable can be connected from the NX Network port (RJ45) to the network with other bridges/panels/NXAC2.
- NX Lighting Control App is used to create/modify programming.
- Relays are 30A and can be single or double pole.
- Panel can operate standalone or networked.
- Optional UL924 control for Emergency Circuits.
- 120v/277v input voltage for control card.
- Voltage barrier between relays available.



Emergency Fixtures

Typically, emergency fixtures fall into one of several categories:

- 1.) Integral battery pack - The fixture is fed with an additional constant line in which becomes the normal sense feed and charges the battery under normal power. Upon loss of normal power the load goes to full powered by the battery and bypasses all controls.
- 2.) Shunt relays (UL924) - Fixtures which are connected to an inverter or generator (and are always powered through EM) a shunt relay monitors normal sense feed and switch sense feed. Under normal power the EM load will react the same as the normal load, as the shunt relay will close when the switch sense feed is on and open when the switch sense feed is off. Upon loss of normal power through the normal sense feed the shunt relay will close and bypass all controls turning the load to full.
- 3.) Transfer device (1008) - Under normal power the loads are powered by normal power. Upon loss of normal power relays transfer the loads to be powered by EM (inverter or generator)





LIGHTING
CONTROLS™

HLI Brands: currentlighting.com

Applications Layouts, Submittal, and O&M manual Requests: controls-Design@currentlighting.com

Controls E-tools: Controls-Etools@currentlighting.com

Field Service Scheduling (Remote & On site): controls-startup@currentlighting.com

HLI Technical Support: (800) 888-8006 or controls-tech@currentlighting.com