

A long-exposure photograph of a city skyline at night, with numerous skyscrapers illuminated with warm yellow and orange lights. The sky is a deep blue. In the foreground, a multi-lane highway shows light trails from moving vehicles. A modern, multi-story building with a green roof is visible in the lower middle ground.

APPLICATION GUIDE TO CA TITLE 24

A SUPPLEMENTAL GUIDE TO CODE
REVISIONS IMPACTING LIGHTING CONTROL

NX Lighting Controls’ advanced systems and lighting controls offer a comprehensive portfolio of simple, scalable and seamless solutions for indoor and outdoor applications from a single partner. Our advanced lighting control technologies provide intuitive and flexible deployment options to meet code, enhance comfort, increase energy savings and improve operating efficiency for enterprises of any size. NX Lighting Controls’ product suite includes distributed and centralized, wired and wireless systems, luminaire integrated sensors, color tuning controls, panels, occupancy sensors, photocell sensors, and emergency relays.



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Title 24 establishes minimum requirements for energy-efficient buildings using prescriptive and performance related provisions. For more information, visit energy.ca.gov

The recommendations in this document are based on our understanding and interpretation of the code. In order to ensure full compliance, please reference the official published code.

	DEMAND RESPONSE CONTROLS	SHUT OFF CONTROL					
Control Requirement	Demand Response	Area Control	Multi-Level Lighting controls	Timeclock	Automatic Partial-Off Via Occupancy Sensor	Automatic Full-Off Via Occupancy Sensor	Add auto on controls
Code Provision	110.12(c),(e),130.1(e)	130.1(a)	130.1(b)	130.1(c)1A	130.1(c)6&7	130.1(c)5	
Code Summary	Buildings having a total installed lighting power of ≥ 4,000W (excluding spaces not requiring multilevel control) shall be capable of bi-directional demand response communication and automatically reducing general lighting power (except in excluded spaces). For buildings that do require both DR and controlled receptacles, including all required controlled receptacles must also turn off in response to demand response signals	All luminaires be functionally controlled with manual on and off lighting controls.	Any enclosed area ≥ 100ft^2 with a lighting power density > 0.5W/ft^2, shall provide multi-level lighting control.	Areas not required to be shut off by occupancy sensor may be shut off by an automatic time-switch control.	Full or Partial-off occupancy sensing are required in these areas. Partial-off occ sensing required for specified stairwells, common area corridors, parking garages, parking areas, loading & unloading zones.	Occupant-Sensing controls must be used in specific areas to shut off lighting.	Partial-ON or Vacancy Sensing Controls Provision: Sec130.1(c)5 Summary: Occupant sensing controls shall function either as Partial-ON (50-70%) or Vacancy (Manual ON only)
Private Office	•	•	•			•	
Open Office	•	•	•	•		•	•
Conf. Meeting, Multi- Purpose	•	•	•			•	•
Classroom, Lecture Hall, Training	•	•	•		•	•	•
Lobby	•	•	•	•	•	•	
Corridor	•	•		•	•	•	•
Restroom		•		•	•	•	•
Stairwell	•	•		•	•	•	
Gym/Fitness Center	•	•	•	•		•	•
Warehouse/Storage	•	•	•	•	•		
Parking Area, Interior		•	•	•			•
Exterior Lighting							

TITLE 24 CODE REQUIREMENTS FOR TYPICAL BUILDING SPACES

TITLE 24 APPLICATION GUIDE



	LIGHT LEVEL CONTROL	EXTERIOR CONTROLS			RECEPTACLE PLUG LOAD CONTROL
Control Requirement	Automatic Multi-Level Daylight Controls	Daylight Availability	Automatic Scheduling Controls	Motion Sensing Controls	Receptacle (Plug load control)
Code Provision	130.1(d)	130.2(c)1	130.2(c)2	130.2(c)3	130.5(d)
Code Summary	Areas in designated daylight zones with total power ≥ 120 watts (60 Watts for parking garages) use automatic multi-level daylight controls.	Lighting shall be controlled by a photo control, astronomical time-switch control or other control to automatically shut off when daylight is available.	Controls shall be capable of reducing the lighting power by 50-90% and capable of turning the lighting off, during scheduled unoccupied periods. Scheduling a minimum of two nighttime periods with independent lighting levels is required.	Controls shall be capable of reducing the lighting power by 50-90% and capable of turning the lighting off, during unoccupied periods. Motion sensing controls shall be capable of reducing the lighting to its dim or off state no longer than 15 minutes after the area has been vacated. Motion sensors are required for most outdoor lights mounted up to 24 ft. with the exception of luminaires with max. rated wattage of 40 watts each, which are not required to have motion sensing controls.	Both controlled and uncontrolled 120-volt receptacles shall be provided in office areas, lobbies, conference rooms, kitchen areas in office spaces and copy rooms
Private Office	•				•
Open Office	•				•
Conf. Meeting, Multi- Purpose	•				•
Classroom, Lecture Hall, Training	•				
Lobby	•				•
Corridor	•				
Restroom	•				
Stairwell	•				
Gym/Fitness Center	•				
Warehouse/Storage	•				
Parking Area, Interior	•				
Exterior Lighting		•	•	•	

CLASSROOM / LECTURE HALL / TRAINING ROOM

	Code Provision	Minimum Control Type	Requirement
ON/OFF CONTROL	130.1(a)	Local switch	Readily accessible device(s) to control lighting within an enclosed space.
	130.1(c)5	Vacancy sensor (Manual On - Auto Off): Partial On (50-70% On-Full Off) or Occupancy Sensor for partial on	Automatically shuts off lighting power after vacancy of 20 minutes or less.
LIGHT LEVEL CONTROL	130.1(b)	Multi-level lighting controls	At least one multi-level lighting control device (manual or automatic) in enclosed areas 100ft ² . or larger, or greater than 0.5 watts per ft ² . Light level requirements are defined in Table 130.1-A. Note, the majority of lighting types require multiple control steps.
	130.1(d) and 140.6(d)	Automatic Daylighting controls	Sensor to reduce lighting in response to available daylight. Daylighting zones defined in Section 130.1(d)1. Primary daylight zones must be controlled separately from secondary zones. Refer to Table 130.1-A for lighting-level requirements.
ADDITIONAL CONTROL	110.12	Demand Response	Automatic lighting reduction by a minimum of 15% of total installed general lighting power in response to a Demand Response Signal. Required for new buildings with installed lighting power of 4,000 watts or greater.

CONFERENCE / MEETING / MULTI-PURPOSE ROOM

	Code Provision	Minimum Control Type	Requirement
ON/OFF CONTROL	130.1(a)	Local switch	Readily accessible device(s) to control lighting within an enclosed space.
	130.1(c)5	Vacancy sensor (Manual On - Auto Off) Automatic Full-Off Occupancy Sensor with Partial On to 70%	Automatically shuts off lighting power after vacancy of 20 minutes or less.
LIGHT LEVEL CONTROL	130.1(b)	Multi-level lighting controls	At least one multi-level lighting control device (manual or automatic) in enclosed areas 100 sq. ft. or larger. Light level requirements are defined in Table 130.1-A. Note, the majority of lighting types require multiple control steps.
	130.1(d) and 140.6(d)	Automatic daylight control	Sensor to reduce lighting in response to available daylight. Daylighting zones defined in Section 130.1(d)1. Primary daylight zones must be controlled separately from secondary zones. Refer to Table 130.1-A for lighting-level requirements.
ADDITIONAL CONTROL	110.12	Demand Response	Automatic lighting reduction by a minimum of 15% of total installed lighting power in response to a Demand Response Signal. Required for new buildings with installed lighting power of 4,000 watts or greater.
	130.5(d)	Receptacle Control	Automatically turn OFF of the receptacles in the space. Install receptacles within 6 feet of each uncontrolled receptacle of the outlets in each receptacle.

PRIVATE OFFICE ≤ 250 SQ. FT.

	Code Provision	Minimum Control Type	Requirement
ON/OFF CONTROLS	130.1(a)	Local switch	Readily accessible device(s) to control lighting within an enclosed space.
	130.1(c)5	Vacancy sensor (Manual On - Auto Off) Automatic Full-Off Occupancy Sensor with Partial On to 70%	Automatically shuts off lighting power after vacancy of 20 minutes or less.
LIGHT LEVEL CONTROL	130.1(b)	Multi-level lighting controls	At least one multi-level lighting control device (manual or automatic) in enclosed areas 100 sq. ft. or larger. Light level requirements are defined in Table 130.1-A. Note, the majority of lighting types require multiple control steps.
	130.1(d) and 140.6(d)	Automatic daylight control	Sensor to reduce lighting in response to available daylight. Daylighting zones defined in Section 130.1(d)1. Primary daylight zones must be controlled separately from secondary zones. Refer to Table 130.1-A for lighting-level requirements.
ADDITIONAL CONTROL	130.4	Acceptance testing (functional testing)	Testing shall ensure that control hardware and software are calibrated, programmed, and functioning properly.
	130.1(e)	Demand Response	Automatic lighting reduction by a minimum of 15% of total installed lighting power in response to a Demand Response Signal. Required for new buildings with installed lighting power of 4,000 watts or greater
	130.5(d)	Receptacle Control	Automatically turn OFF of the receptacles in the space. Install receptacle within 6 feed of each uncontrolled receptacle or 50% of the outlets in each receptacle.

OPEN OFFICE > 250 SQ. FT.

	Code Provision	Minimum Control Type	Requirement
ON/OFF CONTROLS	130.1(a)	Local switch	Readily accessible device(s) to control lighting within an enclosed space.
	130.1(c)1	Programmable Timeclock	Scheduled time-of-day operated control that turns lighting off at specified times when typically unoccupied. Occupancy sensors or other building system signals that turn Off lights during vacancy also comply. Maximum 2 hour manual override.
	130.1(c)5	Vacancy sensor (Manual On - Auto Off): Partial On (50-70% On - Full Off)	Automatically shuts off lighting power after vacancy of 20 minutes or less.
LIGHT LEVEL CONTROL	130.1(b)	Multi-level lighting controls	At least one multi-level lighting control device (manual or automatic) in enclosed areas 100 sq. ft. or larger. Light level requirements are defined in Table 130.1-A. Note, the majority of lighting types require multiple control steps.
	130.1(d) and 140.6(d)	Automatic daylight control	Sensor to reduce lighting in response to available daylight. Daylighting zones defined in Section 130.1(d)1. Primary daylight zones must be controlled separately from secondary zones. Refer to Table 130.1-A for lighting-level requirements.
ADDITIONAL CONTROL	130.4	Acceptance testing (functional testing)	Testing shall ensure that control hardware and software are calibrated, programmed, and functioning properly.
	130.1(e)	Demand Response	Automatic lighting reduction by a minimum of 15% of total installed lighting power in response to a Demand Response Signal. Required for new buildings with installed lighting power of 4,000 watts or greater
	130.5(d)	Receptacle Control	Automatically turn OFF of the receptacles in the space. Install receptacle within 6 feet of each uncontrolled receptacle or 50% of the outlets in each receptacle.

CORRIDOR			
	Code Provision	Minimum Control Type	Requirement
ON/OFF CONTROLS	130.1(a)	Local switch	May use a manual control not accessible to unauthorized personnel
	130.1(c)5	Automatic Partial OFF	Automatically reduces lighting power in any one controlled zone by at least 50% after vacancy of 20 minutes or less.
LIGHT LEVEL CONTROL	130.1(b)	Multi-level lighting controls	At least one multi-level lighting control device (manual or automatic) in enclosed areas 100 sq. ft. or larger. Light level requirements are defined in Table 130.1-A. Note, the majority of lighting types require multiple control steps.
	130.1(d) and 140.6(d)	Automatic daylight control	Sensor to reduce lighting in response to available daylight. Daylighting zones defined in Section 130.1(d)1. Primary daylight zones must be controlled separately from secondary zones. Refer to Table 130.1-A for lighting-level requirements.
ADDITIONAL CONTROL	130.4	Acceptance testing (functional testing)	Testing shall ensure that control hardware and software are calibrated, programmed, and functioning properly.
	130.1(e)	Demand Response	Automatic lighting reduction by a minimum of 15% of total installed lighting power in response to a Demand Response Signal. Required for new buildings with installed lighting power of 4,000 watts or greater

RESTROOM			
	Code Provision	Minimum Control Type	Requirement
ON/OFF CONTROLS	130.1(a)	Local switch	May use a manual control not accessible to unauthorized personnel
	130.1(c)5	Automatic Partial OFF	Automatically reduces lighting power in any one controlled zone by at least 50% after vacancy of 20 minutes or less.
LIGHT LEVEL CONTROL	130.1(b)	Multi-level lighting controls	At least one multi-level lighting control device (manual or automatic) in enclosed areas 100 sq. ft. or larger. Light level requirements are defined in Table 130.1-A. Note, the majority of lighting types require multiple control steps.
	130.1(d) and 140.6(d)	Automatic daylight control	Sensor to reduce lighting in response to available daylight. Daylighting zones defined in Section 130.1(d)1. Primary daylight zones must be controlled separately from secondary zones. Refer to Table 130.1-A for lighting-level requirements.
ADDITIONAL CONTROL	130.4	Acceptance testing (functional testing)	Testing shall ensure that control hardware and software are calibrated, programmed, and functioning properly.
	130.1(e)	Demand Response	Automatic lighting reduction by a minimum of 15% of total installed lighting power in response to a Demand Response Signal. Required for new buildings with installed lighting power of 4,000 watts or greater

STAIRWELL

	Code Provision	Minimum Control Type	Requirement
ON/OFF CONTROLS	130.1(a)	Local switch	May use a manual control not accessible to unauthorized personnel
	130.1(c)6 & 7	Automatic Partial OFF	Automatically reduces lighting power in any one controlled zone by at least 50% after vacancy of 20 minutes or less.
LIGHT LEVEL CONTROL	130.1(b)	Multi-level lighting controls	At least one multi-level lighting control device (manual or automatic) in enclosed areas 100 sq. ft. or larger. Light level requirements are defined in Table 130.1-A. Note, the majority of lighting types require multiple control steps.
	130.1(d) and 140.6(d)	Automatic daylight control	Sensor to reduce lighting in response to available daylight. Daylighting zones defined in Section 130.1(d)1. Primary daylight zones must be controlled separately from secondary zones. Refer to Table 130.1-A for lighting-level requirements.
ADDITIONAL CONTROL	130.4	Acceptance testing (functional testing)	Testing shall ensure that control hardware and software are calibrated, programmed, and functioning properly.
	130.1(e)	Demand Response	Automatic lighting reduction by a minimum of 15% of total installed lighting power in response to a Demand Response Signal. Required for new buildings with installed lighting power of 4,000 watts or greater

STORAGE ROOM

	Code Provision	Minimum Control Type	Requirement
ON/OFF CONTROLS	130.1(a)	Local switch	Readily accessible device(s) to control lighting within an enclosed space.
	130.1(c)1	Programmable Timeclock	Scheduled time-of-day operated control that turns lighting off at specified times when typically unoccupied. Occupancy sensors or other building system signals that turn OFF lights during vacancy also comply. Maximum 2 hour manual override.
LIGHT LEVEL CONTROL	130.1(c)5	Vacancy sensor (Manual On - Auto Off): Partial On (50-70% On - Full Off)	Automatically shuts off lighting power after vacancy of 20 minutes or less.
	130.1(b)	Multi-level lighting controls	At least one multi-level lighting control device (manual or automatic) in enclosed areas 100 sq. ft. or larger. Light level requirements are defined in Table 130.1-A. Note, the majority of lighting types require multiple control steps.
ADDITIONAL CONTROL	130.1(d) and 140.6(d)	Automatic daylight control	Sensor to reduce lighting in response to available daylight. Daylighting zones defined in Section 130.1(d)1. Primary daylight zones must be controlled separately from secondary zones. Refer to Table 130.1-A for lighting-level requirements.
	130.4	Acceptance testing (functional testing)	Testing shall ensure that control hardware and software are calibrated, programmed, and functioning properly.
ADDITIONAL CONTROL	130.1(e)	Demand Response	Automatic lighting reduction by a minimum of 15% of total installed lighting power in response to a Demand Response Signal. Required for new buildings with installed lighting power of 4,000 watts or greater

APPLICATION TYPE

TYPE OF SOLUTION
(WIRED OR WIRELESS)

CLASSROOM WITH WINDOWS AND DAYLIGHTING ZONE - WIRED

CLASSROOM WITH WINDOWS AND DAYLIGHTING ZONE - WIRELESS

PRODUCT LAYOUT
AND HOW THEY'RE
CONNECTED

KEY

2RD

2RD Room Controller

Dual Technology Ceiling Mounted Occupancy Sensor

Multi-Zone Daylight Sensor

E1 LCAT-S 2x4 LED Troffer

Scene Switch

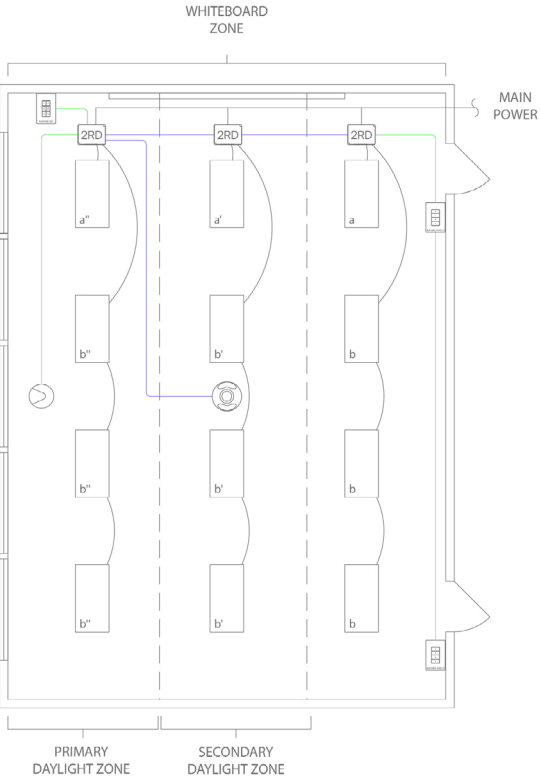
ORLO Switch

Main Power (120/277V)

FX BUS CAT5

SP BUS CAT5

Note: Drawings not shown to scale and are intended as illustrative example of the application.



WHAT
PRODUCTS ARE
USED IN THE
SPACE

BEST PRACTICE LAYOUT

- For optimal performance, the daylight sensor should be mounted near the window aperture and aligned to the middle of the opening for accurate measurement
- ORLO switch stations should be located near each entrance to the space, and scene control switch should be located near the front of the classroom at teacher station for convenient adjustment of lighting levels during instruction
- Ensure proper placement of occupancy sensors in space, keeping clear of any obstructions
- Space can be networked back to an Area Controller for BMS integration or networked Automated Demand Response with only a few additional components, please see networking page for additional details

BILL OF MATERIALS		
QTY.	Catalog #	Description
3	NXRCFX2-2RD-UNV	Room Controller with 2 Relays & 0-10V Dimming Outputs
1	NXSMDT-OMNI	Dual Technology Ceiling Mounted Occupancy Sensor
1	NXDS	Multi-Zone Daylight Sensor
1	NXSW2-SS	Scene Switch Specialty Switch
2	NXSW2-ORLO	On/Raise/Lower/Off Specialty Switch
16	LCAT-S*	2x4 LED Architectural Troffer

* For complete Lighting Fixture Schedule, see pages 41-50.

OPERATIONAL DESCRIPTION

- 0-10V Dimming
- 2 Manual control groups - front of class and general lighting
- Auto ON to 50-70% upon occupancy, or manual ON
- Auto OFF after period of vacancy ≤ 20min
- Manual On/Off/Raise/Lower control of fixtures
- Scene switch at teacher station for recall of presets and manual Raise/Lower control
- Ceiling mounted daylight sensor for multi-zone daylight harvesting capability where required (Exceptions: spaces with <24ft² of glazing or if lighting load is <120W combined in skylit and primary sidelit zones)

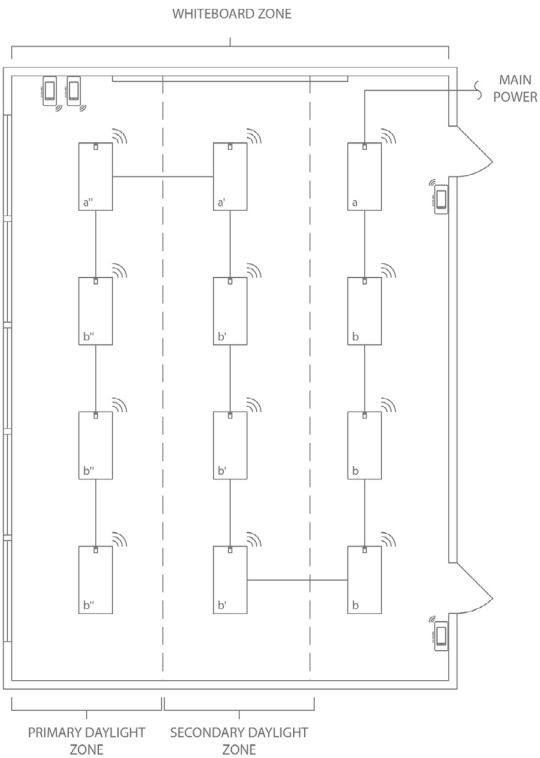


KEY

E1 LCAT-S 2x4 LED Troffer with Integrated Occupancy & Daylight Sensor

Wireless Rocker Switch

Main Power (120/277V)



BILL OF MATERIALS		
QTY.	Catalog#	Description
4	NXSW-WRS-WH	Battery-Operated Wireless Rocker Switch
12	LCAT-S with NXWSM*	NX Enabled 2x4 LED Architectural Troffer with NXWSM* with Integral Wireless Occupancy/Daylight Sensor

* For complete Lighting Fixture Schedule, see pages 41-50.

OPERATIONAL DESCRIPTION

- 0-10V Dimming
- Auto ON to 50-70% upon occupancy, or manual ON
- Auto OFF after period of vacancy ≤ 20min
- Manual On/Off/Raise/Lower control of each group of fixtures
- Integral daylight sensor in fixtures for daylight harvesting capability where required (Exceptions: spaces with <24ft² of glazing or if lighting load is <120W combined in skylit and primary sidelit zones)

GUIDELINES TO
FOLLOW WHEN LAYING
OUT THE SYSTEM

BEST PRACTICE LAYOUT

- Fixture integrated NX sensors can be used for both occupancy sensing and daylight harvesting when required
- Switch stations should be located near each entrance to space and teacher's station for convenient access
- Space can be networked back to an Area Controller for BMS integration or networked Automated Demand Response with only a few additional components, please see networking page for additional details

HOW THE SPACE
FUNCTIONS

PRIVATE OFFICE ≤ 250FT² WITH WINDOWS - WIRED



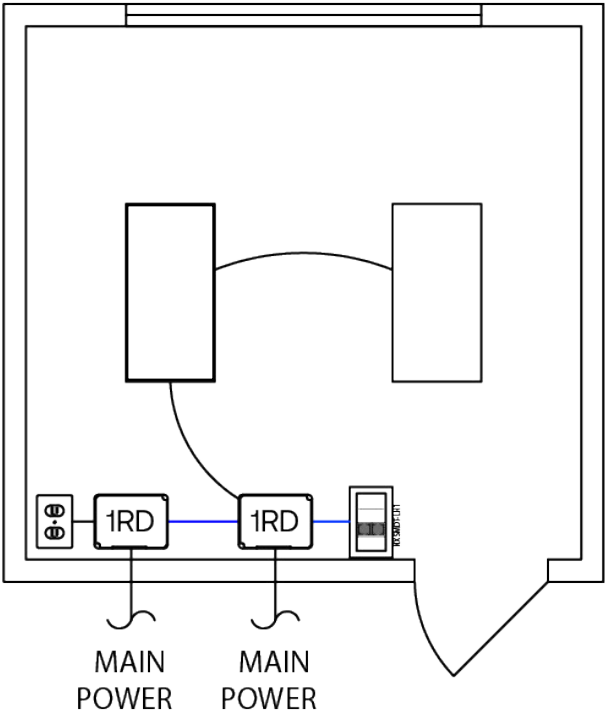
KEY

- 1RD 1RD Room Controller
- Dual Technology Wall Switch Occupancy Sensor
- Controlled Receptacle
- O1 LCAT-S 2x4 LED Troffer

Main Power (120/277V)

FX BUS CAT5

Note: Drawings not shown to scale and are intended as illustrative example of the application.



BEST PRACTICE LAYOUT

- NX LightHAWK can be used for occupancy sensing, daylight harvesting, as well as manual on/raise/lower/off control of lighting load in space
- Space can be networked back to an Area Controller for BMS integration or networked Automated Demand Response with only a few additional components, please see networking page for additional details

BILL OF MATERIALS		
QTY.	Catalog #	Description
1	NXSMDT-LH1	Dual Technology Wall Switch Occupancy Sensor
2	NXRCFX2-1RD-UNV	Room Controller with 1 Relay & 0-10V Dimming Output
2	LCAT-S*	2x4 LED Architectural Troffer

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

OPERATIONAL DESCRIPTION

- 0-10V Dimmable fixtures
- Auto ON to 50-70% upon occupancy
- Auto OFF after period of vacancy ≤ 20min
- Manual On/Off/Raise/Lower control of fixtures
- Plug load auto ON based on occupancy, and auto OFF after period of vacancy ≤ 20min
- Integral daylight sensor in LightHAWK for daylight harvesting where required (Exceptions: spaces with <24ft² of glazing or if lighting load is <120W combined in skylit and primary sidelit zones)

PRIVATE OFFICE ≤ 250FT² WITH WINDOWS - WIRELESS



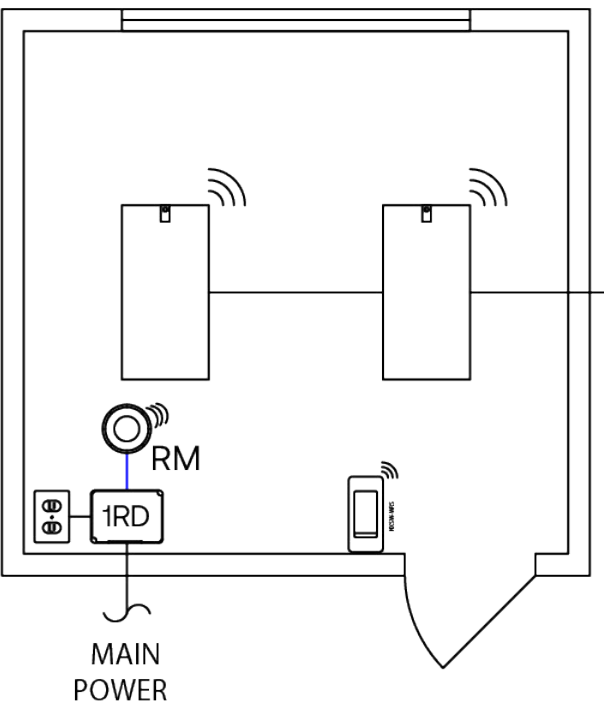
KEY

- 1RD 1RD Room Controller
- Wireless Rocker Switch
- Radio Module
- Controlled Receptacle
- O1 LCAT-S 2x4 LED Troffer with Integrated Occupancy & Daylight Sensor

Main Power (120/277V)

FX BUS CAT5

Note: Drawings not shown to scale and are intended as illustrative example of the application.



BILL OF MATERIALS		
QTY.	Catalog #	Description
1	NXSW-WRS-WH	Battery-Operated Wireless Rocker Switch
1	NXRCFX2-1RD-UNV	Room Controller with 1 Relay & 0-10V Dimming Output
1	NXRM2-H	Radio Module
2	LCAT-S with NXWSM*	NX Enabled 2x4 LED Architectural Troffer with Integral Wireless Occupancy/Daylight Sensor

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

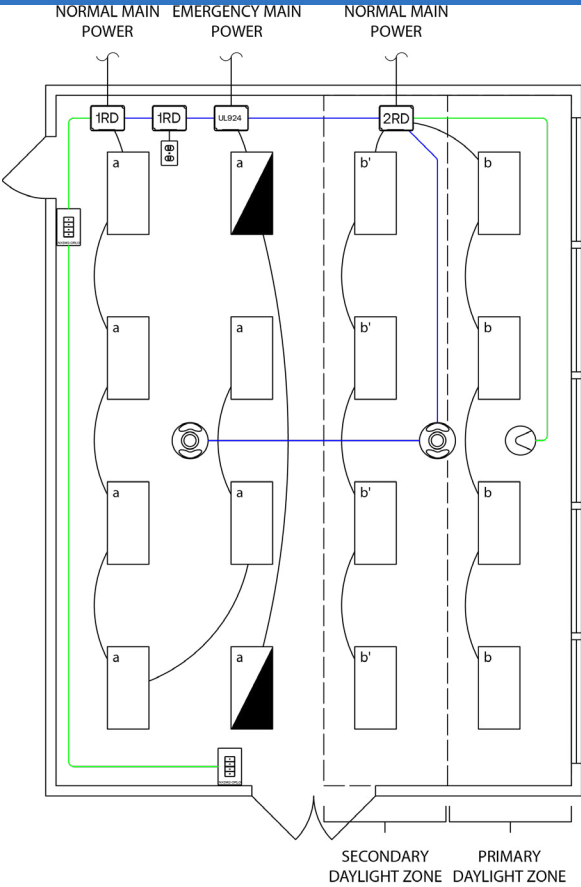
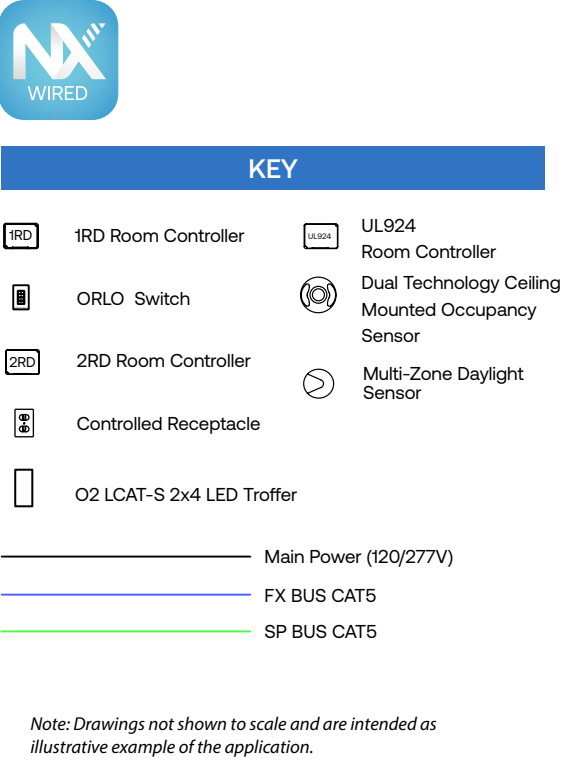
OPERATIONAL DESCRIPTION

- 0-10V Dimmable fixtures
- Auto ON to 50-70% upon occupancy
- Auto OFF after period of vacancy ≤ 20min
- Manual On/Off/Raise/Lower control of fixtures
- Plug load auto ON based on occupancy, and auto OFF after period of vacancy ≤ 20min
- Integral daylight sensor in fixtures for daylight harvesting where required (Exceptions: spaces with <24ft² of glazing or if lighting load is <120W combined in skylit and primary sidelit zones)

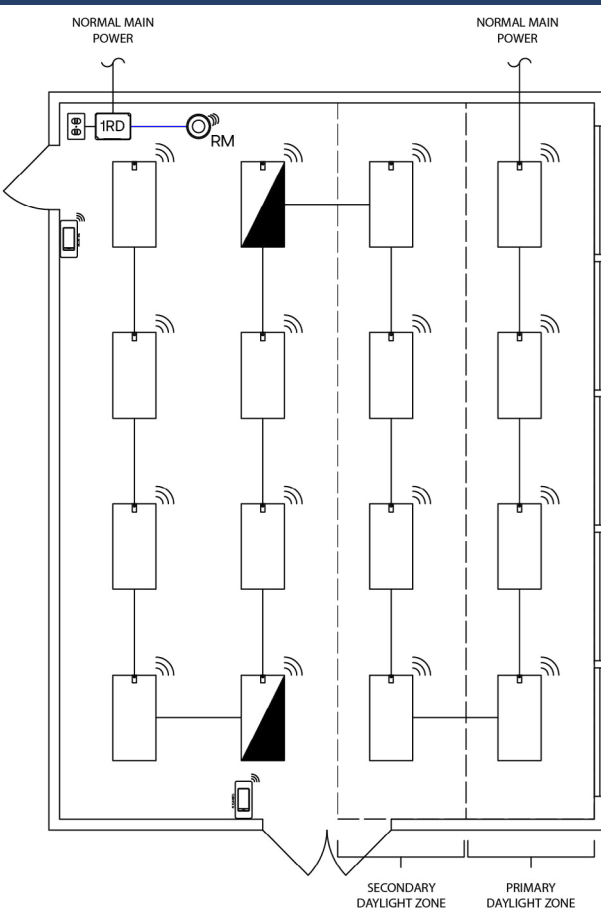
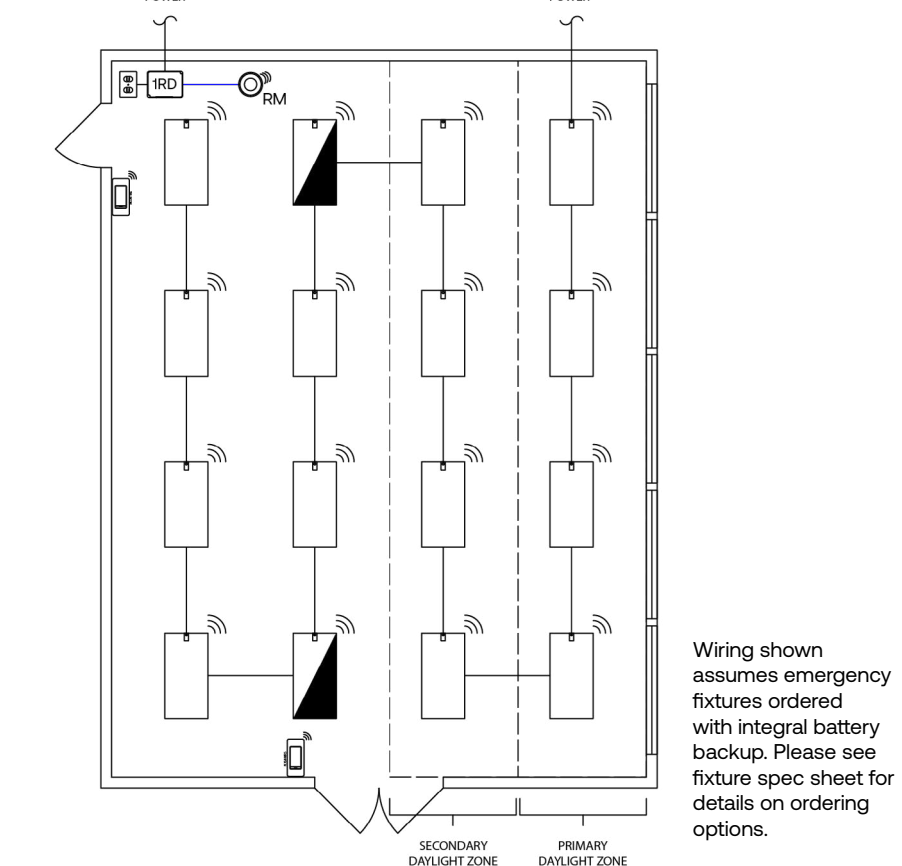
BEST PRACTICE LAYOUT

- Fixture integrated NX sensors can be used for both occupancy sensing and daylight harvesting when required
- For indoor spaces, place radios within 100' line of sight of at least two other wireless devices
- Space can be networked back to an Area Controller for BMS integration or networked Automated Demand Response with only a few additional components, please see networking page for additional details

OPEN OFFICE >250FT² WITH WINDOWS AND DAYLIGHTING ZONE - WIRED



OPEN OFFICE >250FT² WITH WINDOWS AND DAYLIGHTING ZONE - WIRELESS



Wiring shown assumes emergency fixtures ordered with integral battery backup. Please see fixture spec sheet for details on ordering options.

BEST PRACTICE LAYOUT

- For optimal performance, the daylight sensor should be mounted near the window aperture and aligned to the middle of the opening for accurate measurement
- Switch stations should be located near each entrance to the space
- Each occupancy control zone shall not exceed 600 ft²
- Ensure proper placement of occupancy sensors in space, keeping clear of any obstructions
- Space can be networked back to an Area Controller for BMS integration or networked Automated Demand Response with only a few additional components, please see networking page for additional details

BILL OF MATERIALS		
QTY.	Catalog #	Description
2	NXRCFX2-1RD-UNV	Room Controller with 1 Relay & 0-10V Dimming Output
2	NXSW2-ORLO	On/Raise/Lower/Off Specialty Switch
1	NXRCFX2-2RD-UNV	Room Controller with 2 Relays & 0-10V Dimming Outputs
2	NXSMDT-OMNI	Dual Technology Ceiling Mounted Occupancy Sensor
1	NXDS	Multi-Zone Daylight Sensor
1	NXRC-UL924-UNV	Emergency Room Controller with 1 Relay & (2) 0-10V Dimming Outputs
16	LCAT-S*	2x4 LED Architectural Troffer

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

OPERATIONAL DESCRIPTION	
<ul style="list-style-type: none">0-10V Dimmable fixturesAuto ON to 50-70% upon occupancy for each occupancy control zone not exceeding 600ft²Auto OFF after period of vacancy ≤ 20min for each occupancy zoneManual On/Off/Raise/Lower control of fixturesPlug load auto ON based on occupancy, and auto OFF after period of vacancy ≤ 20min	<ul style="list-style-type: none">Ceiling mounted daylight sensor for multi-zone daylight harvesting capability where required (Exceptions: spaces with <24ft² of glazing or if lighting load is <120W combined in skylit and primary sidelit zones)Integral timeclock in room controllers can also be utilized for standalone scheduled time-of-day operation of space with manual override switch

BILL OF MATERIALS		
QTY.	Catalog #	Description
1	NXRCFX2-1RD-UNV	Room Controller with 1 Relay & 0-10V Dimming Output
1	NXRM2-H	Radio Module
2	NXSW-WRS-WH	Battery-Operated Wireless Rocker Switch
16	LCAT-S with NXWSM*	NX Enabled 2x4 LED Architectural Troffer with Integral Wireless Occupancy/Daylight Sensor

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

OPERATIONAL DESCRIPTION	
<ul style="list-style-type: none">0-10V Dimmable fixturesAuto ON to 50-70% upon occupancy for each occupancy control zone not exceeding 600ft²Auto OFF after period of vacancy ≤ 20min for each occupancy zoneManual On/Off/Raise/Lower control of fixturesPlug load auto ON based on occupancy, auto OFF after period of vacancy ≤ 20min	<ul style="list-style-type: none">Integral daylight sensor in fixtures for daylight harvesting where required (Exceptions: spaces with <24ft² of glazing or if lighting load is <120W combined in skylit and primary sidelit zones)Integral timeclock in NX enabled luminaires can also be utilized for standalone scheduled time-of-day operation of space with manual override switch and occupancy sensors and occupancy sensors

BEST PRACTICE LAYOUT

- Fixture integrated NX sensors can be used for both occupancy sensing and daylight harvesting when required
- For indoor spaces, place radios within 100' line of sight of at least two other wireless devices
- Switch stations should be located near each entrance to the space
- Each occupancy control zone shall not exceed 600 ft²
- Space can be networked back to an Area Controller for BMS integration or networked Automated Demand Response with only a few additional components, please see networking page for additional details

CONFERENCE ROOM - WIRED



KEY

2RD

2RD Room Controller

1RD

1RD Room Controller

Multi-Zone Daylight Sensor

Controlled Receptacle

Scene Switch

Dual Technology Ceiling Mounted Occupancy Sensor

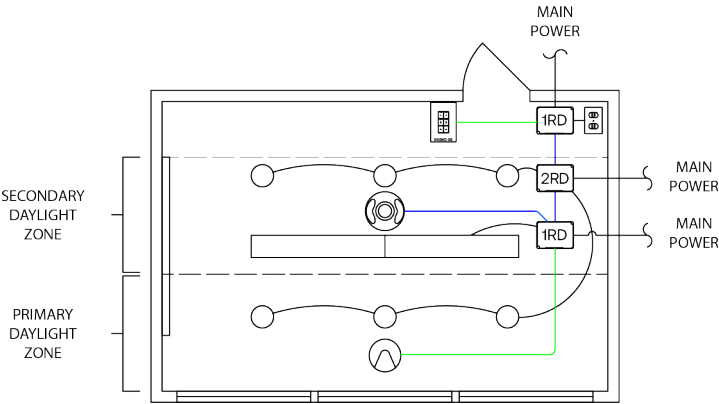
O3 2" LED Linear Direct/ Indirect Pendant

O3 4" LED Round Recessed Adjustable Downlight

Main Power (120/277V)

FX BUS CAT5

SP BUS CAT5



Note: Drawings not shown to scale and are intended as illustrative example of the application.

BEST PRACTICE LAYOUT

• For optimal performance, the daylight sensor should be mounted near the window aperture and aligned to the middle of the opening for accurate measurement

• Switch stations should be located near each entrance to the space

• Ensure proper placement of occupancy sensors in space, keeping clear of any obstructions

• Space can be networked back to an Area Controller for BMS integration or networked Automated Demand Response with only a few additional components, please see networking page for additional details

BILL OF MATERIALS		
QTY.	Catalog #	Description
2	NXRCFX2-1RD-UNV	Room Controller with 1 Relay & 0-10V Dimming Output
1	NXSW2-SS	Scene Switch Specialty Switch
1	NXRCFX2-2RD-UNV	Room Controller with 2 Relays & 0-10V Dimming Outputs
1	NXSMDT-OMNI	Dual Technology Ceiling Mounted Occupancy Sensor
1	NXDS	Multi-Zone Daylight Sensor
2	2L-P-ID*	2" LED Linear Direct/Indirect Pendant
6	LFR-4RA*	4" LED Round Recessed Adjustable Downlight

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

OPERATIONAL DESCRIPTION

• 0-10V Dimmable fixtures

• Auto ON to 50-70% upon occupancy, or manual ON

• Auto OFF after period of vacancy ≤20min

• Scene switch for recalling programmed presets and manual Raise/Lower of activated scene

• Plug load auto ON based on occupancy, and auto OFF after period of vacancy ≤20min

• Ceiling mounted daylight sensor for multi-zone daylight harvesting where required (Exceptions: spaces with <24ft² of glazing or if lighting load is <120W combined in skylit and primary sidelit zones)

CONFERENCE ROOM - WIRELESS



KEY

Multi-Zone Daylight Sensor

1RD

1RD Room Controller

Wireless Rocker Switch

Controlled Receptacle

Radio Module

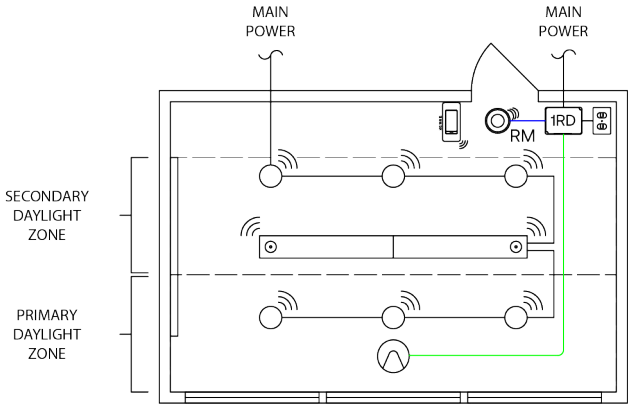
O3 2" LED Linear Direct/ Indirect Pendant with Integrated Occupancy & Daylight Sensor

O3 4" LED Round Recessed Adjustable Downlight with Networked Wireless Radio Module

Main Power (120/277V)

FX BUS CAT5

SP BUS CAT5



Note: Drawings not shown to scale and are intended as illustrative example of the application.

BEST PRACTICE LAYOUT

• For optimal performance, the daylight sensor should be mounted near the window aperture and aligned to the middle of the opening for accurate measurement

• Switch stations should be located near each entrance to the space

• Space can be networked back to an Area Controller for BMS integration or networked Automated Demand Response with only a few additional components, please see networking page for additional details

• For indoor spaces, place radios within 100' line of sight of at least two other wireless devices

BILL OF MATERIALS		
QTY.	Catalog #	Description
1	NXRCFX2-1RD-UNV	Room Controller with 1 Relay & 0-10V Dimming Output
1	NXRM2-H	Radio Module
1	NXSW-WRS-WH	Battery-Operated Wireless Rocker Switch
1	NXDS	Multi-Zone Daylight Sensor
2	2L-P-ID with NXWRM*	NX Enabled 2" LED Linear Direct/Indirect Pendant with Integral Wireless Occupancy/Daylight Sensor
6	LFR-4RA with NXW*	NX Enabled 4" LED Round Recessed Adjustable Downlight with Networked Wireless Radio Module

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

OPERATIONAL DESCRIPTION

• 0-10V Dimmable fixtures

• Auto ON to 50-70% upon occupancy, or manual ON

• Auto OFF after period of vacancy ≤20min

• Scene switch for recalling programmed presets and manual Raise/Lower of activated scene

• Plug load auto ON based on occupancy, and auto OFF after period of vacancy ≤20min

• Ceiling mounted daylight sensor for multi-zone daylight harvesting where required (Exceptions: spaces with <24ft² of glazing or if lighting load is <120W combined in skylit and primary sidelit zones)

CLASSROOM WITH WINDOWS AND DAYLIGHTING ZONE - WIRED



KEY

2RD

2RD Room Controller

Dual Technology Ceiling Mounted Occupancy Sensor

Multi-Zone Daylight Sensor

E1 LCAT-S 2x4 LED Troffer

Main Power (120/277V)

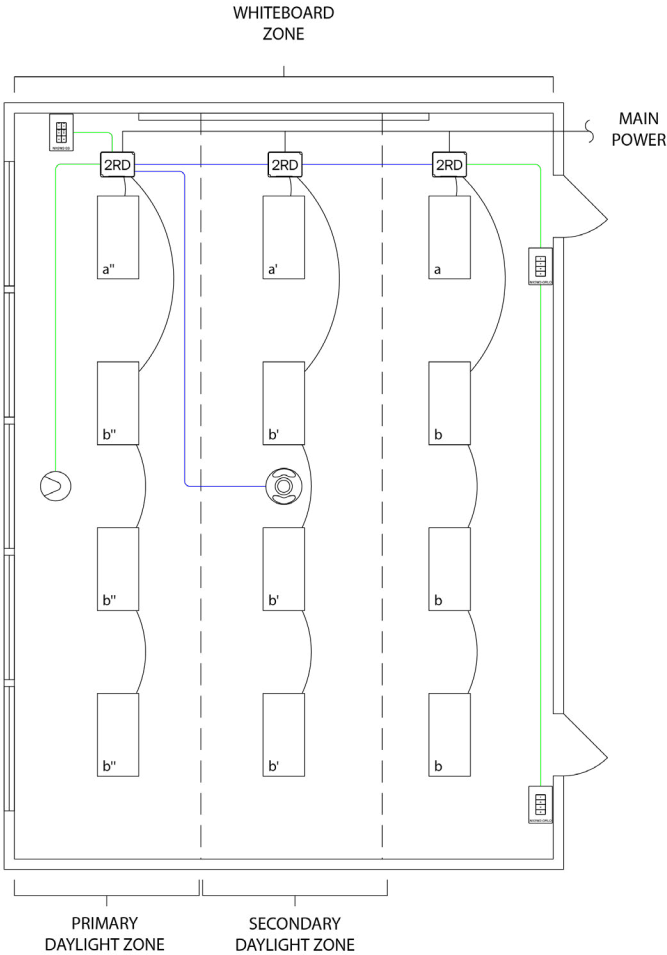
FX BUS CAT5

SP BUS CAT5

Scene Switch

ORLO Switch

Note: Drawings not shown to scale and are intended as illustrative example of the application.



BEST PRACTICE LAYOUT

- For optimal performance, the daylight sensor should be mounted near the window aperture and aligned to the middle of the opening for accurate measurement
- ORLO switch stations should be located near each entrance to the space, and scene control switch should be located near the front of the classroom at teacher station for convenient adjustment of lighting levels during instruction
- Ensure proper placement of occupancy sensors in space, keeping clear of any obstructions
- Space can be networked back to an Area Controller for BMS integration or networked Automated Demand Response with only a few additional components, please see networking page for additional details

BILL OF MATERIALS		
QTY.	Catalog #	Description
3	NXRCFX2-2RD-UNV	Room Controller with 2 Relays & 0-10V Dimming Outputs
1	NXSMDT-OMNI	Dual Technology Ceiling Mounted Occupancy Sensor
1	NXDS	Multi-Zone Daylight Sensor
1	NXSW2-SS	Scene Switch Specialty Switch
2	NXSW2-ORLO	On/Raise/Lower/Off Specialty Switch
16	LCAT-S*	2x4 LED Architectural Troffer

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

OPERATIONAL DESCRIPTION

- 0-10V Dimming
- 2 Manual control groups - front of class and general lighting
- Auto ON to 50-70% upon occupancy, or manual ON
- Auto OFF after period of vacancy ≤ 20min
- Manual On/Off/Raise/Lower control of fixtures

- Scene switch at teacher station for recall of presets and manual Raise/Lower control
- Ceiling mounted daylight sensor for multi-zone daylight harvesting capability where required (Exceptions: spaces with <24ft² of glazing or if lighting load is <120W combined in skylit and primary sidelit zones)

CLASSROOM WITH WINDOWS AND DAYLIGHTING ZONE - WIRELESS



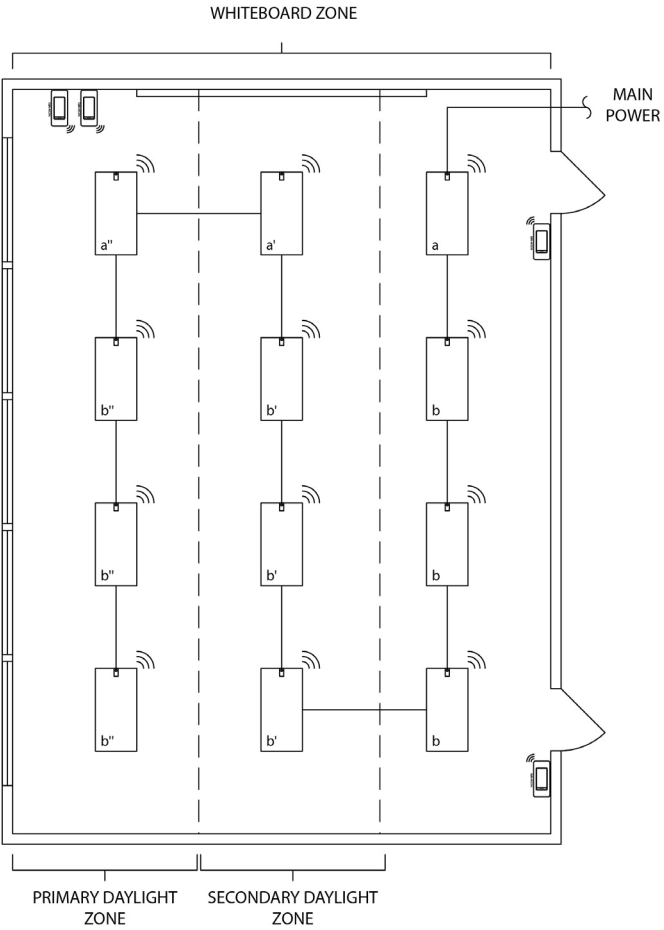
KEY

E1 LCAT-S 2x4 LED Troffer with Integrated Occupancy & Daylight Sensor

Wireless Rocker Switch

Main Power (120/277V)

Note: Drawings not shown to scale and are intended as illustrative example of the application.



BILL OF MATERIALS		
QTY.	Catalog#	Description
4	NXSW-WRS-WH	Battery-Operated Wireless Rocker Switch
12	LCAT-S with NXWSM*	NX Enabled 2x4 LED Architectural Troffer with NXWSM* with Integral Wireless Occupancy/Daylight Sensor

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

OPERATIONAL DESCRIPTION

- 0-10V Dimming
- Auto ON to 50-70% upon occupancy, or manual ON
- Auto OFF after period of vacancy ≤ 20min
- Manual On/Off/Raise/Lower control of each group of fixtures

- Integral daylight sensor in fixtures for daylight harvesting capability where required (Exceptions: spaces with <24ft² of glazing or if lighting load is <120W combined in skylit and primary sidelit zones)

BEST PRACTICE LAYOUT

- Fixture integrated NX sensors can be used for both occupancy sensing and daylight harvesting when required
- Switch stations should be located near each entrance to space and teacher's station for convenient access
- Space can be networked back to an Area Controller for BMS integration or networked Automated Demand Response with only a few additional components, please see networking page for additional details

LOBBY - WIRED



KEY

Multi-Zone Daylight Sensor

1RD Room Controller

2RD Room Controller

H5 LCAT-S 2x2 LED Troffer

Dual Technology Ceiling Mounted Occupancy Sensor

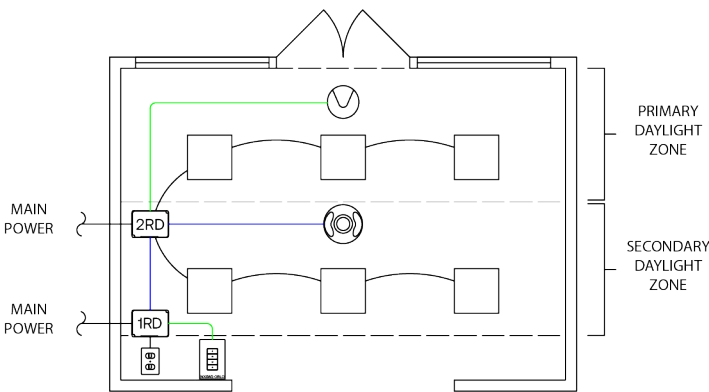
ORLO Switch

Controlled Receptacle

Main Power (120/277V)

FX BUS CAT5

SP BUS CAT5



Note: Drawings not shown to scale and are intended as illustrative example of the application.

LOBBY - WIRELESS



KEY

1RD Room Controller

Radio Module

Controlled Receptacle

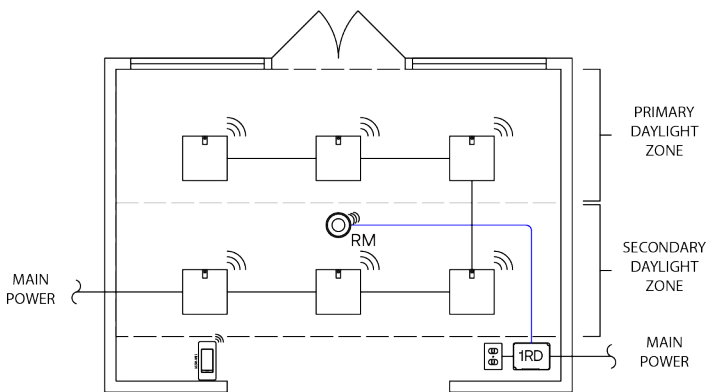
H5 LCAT-S 2x2 LED Troffer with Integrated Occupancy & Daylight Sensor

Wireless Rocker Switch

Main Power (120/277V)

FX BUS CAT5

Note: Drawings not shown to scale and are intended as illustrative example of the application.



BEST PRACTICE LAYOUT

- For optimal performance, the daylight sensor should be mounted near the window aperture and aligned to the middle of the opening for accurate measurement
- Switch stations should be located near each entrance to the space
- Ensure proper placement of occupancy sensors in space, keeping clear of any obstructions
- Space can be networked back to an Area Controller for BMS integration or networked Automated Demand Response with only a few additional components, please see networking page for additional details

BILL OF MATERIALS

QTY.	Catalog #	Description
1	NXRCFX2-1RD-UNV	Room Controller with 1 Relay & 0-10V Dimming Output
1	NXRCFX2-2RD-UNV	Room Controller with 2 Relays & 0-10V Dimming Outputs
1	NXSMDT-OMNI	Dual Technology Ceiling Mounted Occupancy Sensor
1	NXSW2-ORLO	On/Raise/Lower/Off Specialty Switch
1	NXDS	Multi-Zone Daylight Sensor
6	LCAT-S*	2x2 LED Architectural Troffer

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

OPERATIONAL DESCRIPTION

- 0-10V Dimmable fixtures
 - Auto ON to 50-70% upon occupancy, or manual ON
 - Auto OFF after period of vacancy ≤20min
 - Manual On/Off/Raise/Lower control of fixtures
 - Plug load auto ON based on occupancy, and auto OFF after period of vacancy ≤20min
- Ceiling mounted daylight sensor for multi-zone daylight harvesting capability where required (Exceptions: spaces with <24ft² of glazing or if lighting load is <120W combined in skylit and primary sidelit zones)
 - Integral timeclock in room controllers can also be utilized for standalone scheduled time-of-day operation of space with manual override switch and occupancy sensors

BILL OF MATERIALS

QTY.	Catalog #	Description
1	NXRCFX2-1RD-UNV	Room Controller with 1 Relay & 0-10V Dimming Output
1	NXRM2-H	Radio Module
1	NXSW-WRS-WH	Battery-Operated Wireless Rocker Switch
6	LCAT-S with NXWSM*	NX Enabled 2x2 LED Architectural Troffer with Integral Wireless Occupancy/Daylight Sensor

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

OPERATIONAL DESCRIPTION

- 0-10V Dimmable fixtures
 - Auto ON to 50-70% upon occupancy, or manual ON
 - Auto OFF after period of vacancy ≤20min
 - Manual On/Off/Raise/Lower control of fixtures
 - Plug load auto ON based on occupancy, and auto OFF after period of vacancy ≤20min
- Integral daylight sensor in fixtures for daylight harvesting capability where required (Exceptions: spaces with <24ft² of glazing or if lighting load is <120W combined in skylit and primary sidelit zones)
 - Integral timeclock in NX enabled luminaires can also be utilized for standalone scheduled time-of-day operation of space with manual override switch and occupancy sensors

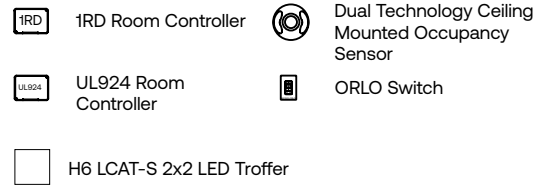
BEST PRACTICE LAYOUT

- Fixture integrated NX sensors can be used for both occupancy sensing and daylight harvesting when required
- For indoor spaces, place radios within 100' line of sight of at least two other wireless devices
- Switch stations should be located near each entrance to the space
- Space can be networked back to an Area Controller for BMS integration or networked Automated Demand Response with only a few additional components, please see networking page for additional details

CORRIDOR - WIRED

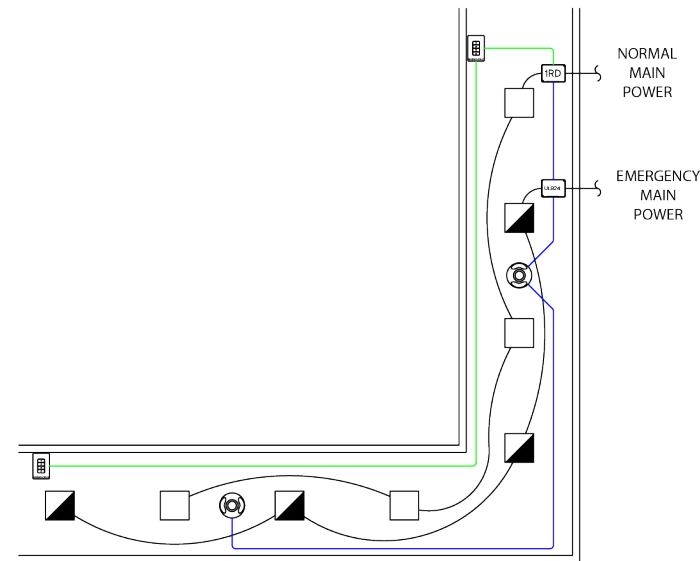


KEY



— Main Power (120/277V)
— FX BUS CAT5
— SP BUS CAT5

Note: Drawings not shown to scale and are intended as illustrative example of the application.



BEST PRACTICE LAYOUT

BILL OF MATERIALS

QTY.	Catalog #	Description
1	NXRCFX2-1RD-UNV	Room Controller with 1 Relay & 0-10V Dimming Output
1	NXRC-UL924-UNV	UL924 Emergency Room Controller with 1 Relay & (2) 0-10V Dimming Outputs
2	NXSW2-ORLO	On/Raise/Lower/Off Specialty Switch
2	NXSMDT-OMNI	Dual Technology Ceiling Mounted Occupancy Sensor
8	LCAT-S*	2x2 LED Architectural Troffer

* For complete Lighting Fixture Schedule, see pages 41-50.

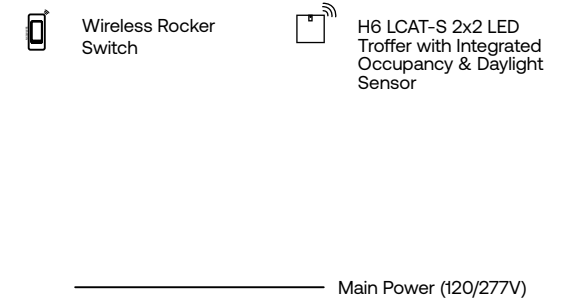
OPERATIONAL DESCRIPTION

- 0-10V Dimmable fixtures
- Auto full ON upon occupancy
- Partial OFF to $\leq 50\%$ after period of vacancy $\leq 20\text{min}$
- Manual On/Off/Raise/Lower control of fixtures
- Integral timeclock in room controllers can also be utilized for standalone scheduled time-of-day operation of space with manual override switch and occupancy sensors

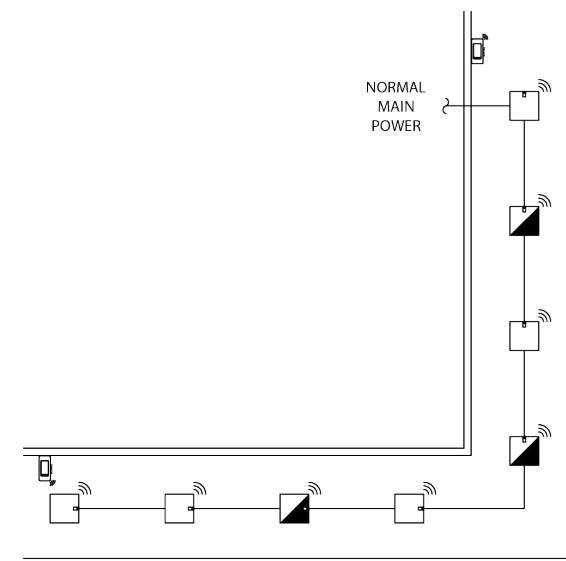
CORRIDOR - WIRELESS



KEY



Note: Drawings not shown to scale and are intended as illustrative example of the application.



Wiring shown assumes emergency fixtures ordered with integral battery backup. Please see fixture spec sheet for details on ordering options.

BILL OF MATERIALS

QTY.	Catalog #	Description
2	NXSW-WRS-WH	Battery-Operated Wireless Rocker Switch
8	LCAT-S with NXWSM*	NX Enabled 2x2 LED Architectural Troffer with Integral Wireless Occupancy/Daylight Sensor

* For complete Lighting Fixture Schedule, [see pages 41-50.](#)

OPERATIONAL DESCRIPTION

- 0-10V Dimmable fixtures
- Auto full ON upon occupancy
- Partial OFF to ≤50% after period of vacancy ≤ 20min
- Manual On/Off/Raise/Lower control of fixtures
- Integral timeclock in NX enabled luminaires can also be utilized for standalone scheduled time-of-day operation of space with manual override switch and occupancy sensors

BEST PRACTICE LAYOUT

PUBLIC RESTROOM - WIRED

PRIVATE OR SINGLE RESTROOM - WIRED



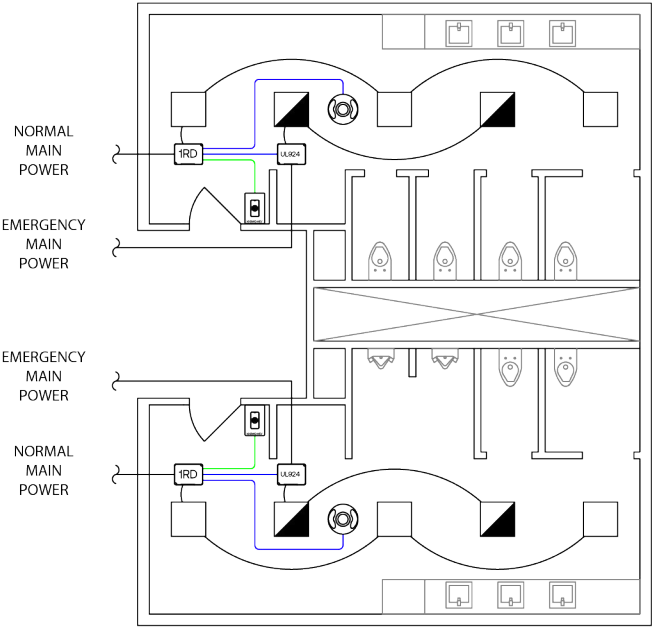
KEY

- 1RD

1RD Room Controller
- UL924

UL924 Room Controller
- H18 LCAT-S 2x2 LED Troffer
- Key Switch
- Dual Technology Ceiling Mounted Occupancy Sensor
- Main Power (120/277V)
- FX BUS CAT5
- SP BUS CAT5

Note: Drawings not shown to scale and are intended as illustrative example of the application.

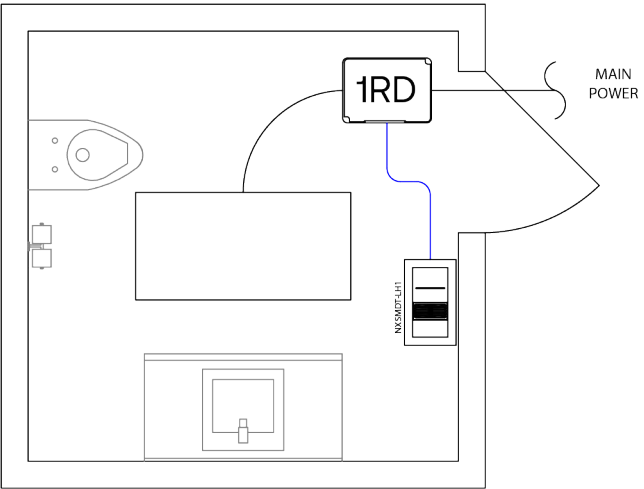


KEY

- 1RD

1RD Room Controller
- H19 LCAT-S 2x4 LED Troffer
- Dual Technology Wall Switch Occupancy Sensor
- Main Power (120/277V)
- FX BUS CAT5

Note: Drawings not shown to scale and are intended as illustrative example of the application.



BEST PRACTICE LAYOUT

- Switch stations should be located near each entrance to the space
- Ensure proper placement of occupancy sensors in space, keeping clear of any obstructions
- Space can be networked back to an Area Controller for BMS integration or networked Automated Demand Response with only a few additional components, please see networking page for additional details

BILL OF MATERIALS

QTY.	Catalog #	Description
2	NXRCFX2-1RD-UNV	Room Controller with 1 Relay & 0-10V Dimming Output
2	NXRC-UL924-UNV	UL924 Emergency Room Controller with 1 Relay & (2) 0-10V Dimming Outputs
2	NXSW2-KEY	Digital Key Switch
2	NXSMDT-OMNI	Dual Technology Ceiling Mounted Occupancy Sensor
10	LCAT-S*	2x2 LED Architectural Troffer

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

OPERATIONAL DESCRIPTION

- 0-10V Dimmable fixtures
 - Auto ON to 50-70% upon occupancy, or manual ON
 - Auto OFF after period of vacancy ≤20min
 - Key switch for manual control of fixtures by authorized personnel
- Integral timeclock in room controllers can also be utilized for standalone scheduled time-of-day operation of space with manual override switch and occupancy sensors

BILL OF MATERIALS

QTY.	Catalog #	Description
1	NXSMDT-LH1	Dual Technology Wall Switch Occupancy Sensor
1	NXRCFX2-1RD-UNV	Room Controller with 1 Relay & 0-10V Dimming Output
1	LCAT-S*	2x4 LED Architectural Troffer

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

OPERATIONAL DESCRIPTION

- 0-10V Dimmable fixtures
 - Auto ON to 50-70% upon occupancy, or manual ON
 - Auto OFF after period of vacancy ≤20min
- Manual On/Off/Raise/Lower control of fixtures

BEST PRACTICE LAYOUT

- NX LightHAWK can be used for occupancy sensing, daylight harvesting, as well as manual on/raise/lower/off control of lighting load in space
- Space can be networked back to an Area Controller for BMS integration or networked Automated Demand Response with only a few additional components, please see networking page for additional details

STAIRWELL - WIRED



KEY

1RD

1RD Room Controller

UL924

UL924 Room Controller

O10 ESL Surface Mounted Stairwell Fixture

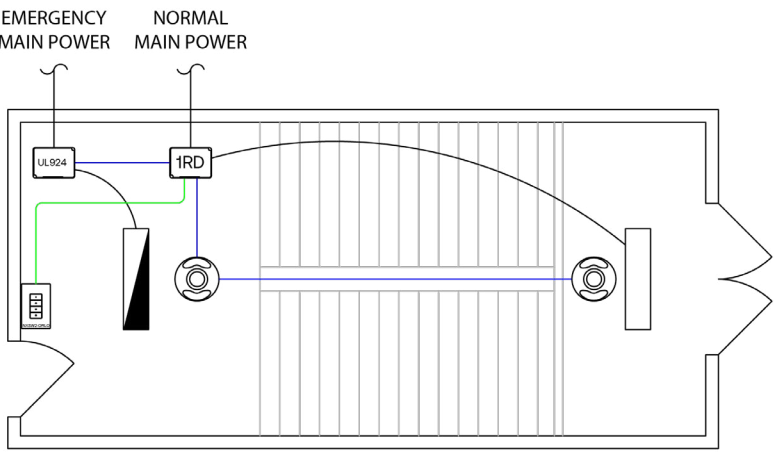
Main Power (120/277V)

FX BUS CAT5

SP BUS CAT5

ORLO Switch

Dual Technology Ceiling Mounted Occupancy Sensor



Note: Drawings not shown to scale and are intended as illustrative example of the application.

BEST PRACTICE LAYOUT

- Switch stations should be located near each entrance to the space
- Ensure proper placement of occupancy sensors throughout the stairwell, keeping clear of any obstructions and taking into account different levels and landings

BILL OF MATERIALS

QTY.	Catalog #	Description
1	NXRCFX2-1RD-UNV	Room Controller with 1 Relay & 0-10V Dimming Output
1	NXRC-UL924-UNV	UL924 Emergency Room Controller with 1 Relay & (2) 0-10V Dimming Outputs
1	NXSW2-ORLO	On/Raise/Lower/Off Specialty Switch
2	NXSMDT-OMNI	Dual Technology Ceiling Mounted Occupancy Sensor
2	ESL	2', 4', or 8' LED Surface or Wall Mounted Stairwell Fixture

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

OPERATIONAL DESCRIPTION

- 0-10V Dimmable fixtures
- Auto full ON upon occupancy
- Partial OFF to ≤50% after period of vacancy ≤ 20min
- Manual On/Off/Raise/Lower control of fixtures
- Integral timeclock in NX enabled luminaires can also be utilized for standalone scheduled time-of-day operation of space with manual override switch and occupancy sensors

STAIRWELL - WIRELESS

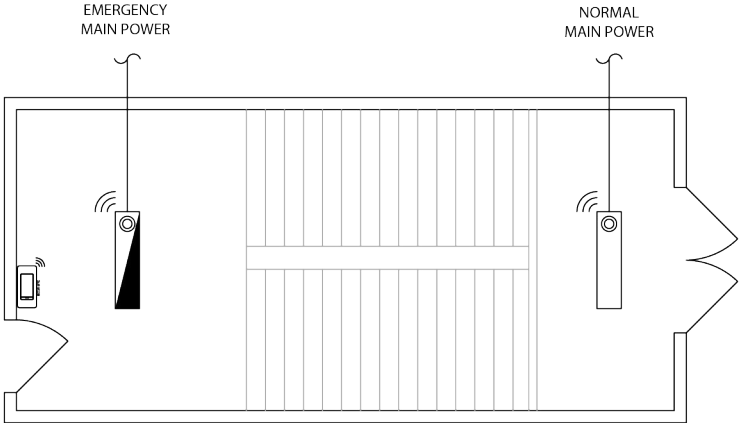


KEY

Wireless Rocker Switch

O10 ESL Surface Mounted Stairwell Fixture with Integrated Occupancy & Daylight Sensor

Main Power (120/277V)



Note: Drawings not shown to scale and are intended as illustrative example of the application.

BILL OF MATERIALS

QTY.	Catalog #	Description
1	NXSW-WRS-WH	Battery-Operated Wireless Rocker Switch
2	ESL with NXWOM*	NX Enabled 2', 4', or 8' LED Surface or Wall Mounted Stairwell Fixture with Integral Wireless Occupancy/Daylight Sensor

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

OPERATIONAL DESCRIPTION

- 0-10V Dimmable fixtures
- Auto full ON upon occupancy
- Partial OFF to ≤50% after period of vacancy ≤ 20min
- Manual On/Off/Raise/Lower control of fixtures
- Integral timeclock in NX enabled luminaires can also be utilized for standalone scheduled time-of-day operation of space with manual override switch and occupancy sensors

BEST PRACTICE LAYOUT

- Fixture integrated NX sensors can be used for both occupancy sensing and daylight harvesting when required
- Switch stations should be located near each entrance to the space

WAREHOUSE - WIRED



KEY

2RD

2RD Room Controller

UL924

UL924 Room Controller

1RD

1RD Room Controller

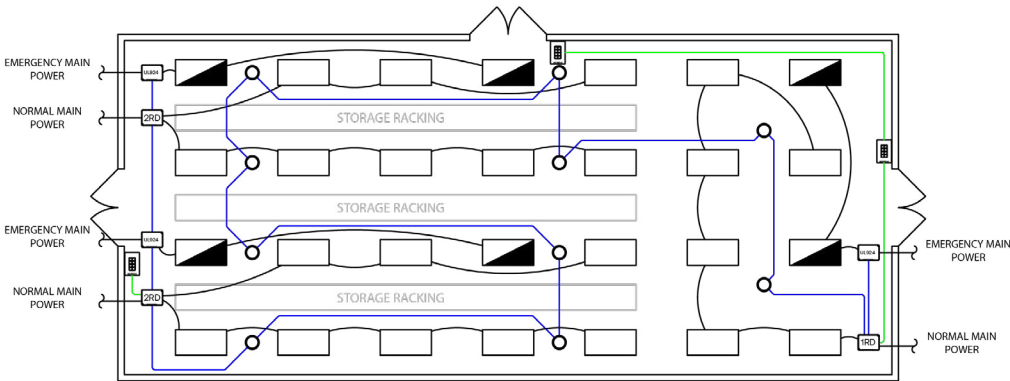
O15 LCAT-S 2x4 LED Troffer

High Mount PIR Occupancy Sensor

8-Button Switch

Main Power (120/277V)FX BUS CAT5SP BUS CAT5

Note: Drawings not shown to scale and are intended as illustrative example of the application.



BEST PRACTICE LAYOUT

- Switch stations should be located near each entrance to the space
- Ensure proper placement of occupancy sensors in space, keeping clear of any obstructions
- Space can be networked back to an Area Controller for BMS integration or networked Automated Demand Response with only a few additional components, please see networking page for additional details

BILL OF MATERIALS		
QTY.	Catalog #	Description
2	NXRCFX2-2RD-UNV	Room Controller with 2 Relays & 0-10V Dimming Outputs
5	NXRC-UL924-UNV	UL924 Emergency Room Controller with 1 Relay & (2) 0-10V Dimming Outputs
10	NXSMP2-HMO	High Mount PIR Occupancy Sensor
1	NXRCFX2-1RD-UNV	Room Controller with 1 Relay & 0-10V Dimming Output
3	NXSW2-8	8-Button Smart Switch
28	LCAT-S*	2x4 LED Architectural Troffer

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

OPERATIONAL DESCRIPTION

- 0-10V Dimmable fixtures
- Auto full ON upon occupancy
- Partial OFF to ≤50% after period of vacancy ≤ 20min

- Manual On/Off/Raise/Lower control of fixtures

WAREHOUSE - WIRELESS



KEY

Wireless Rocker Switch

O15 LCAT-S 2x4 LED Troffer Integrated Occupancy & Daylight Sensor

Main Power (120/277V)

Wiring shown assumes emergency fixtures ordered with integral UL924 dimming bypass module. Please see fixture spec sheet for details on ordering options.

BILL OF MATERIALS		
QTY.	Catalog #	Description
3	NXSW-WRS-WH	Battery-Operated Wireless Rocker Switch
28	LCAT-S with NXWHM*	NX Enabled 2x4 LED Architectural Troffer with Integral Wireless Occupancy/Daylight Sensor

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

OPERATIONAL DESCRIPTION

- 0-10V Dimmable fixtures
- Auto full ON upon occupancy
- Partial OFF to ≤50% after period of vacancy ≤ 20min
- Manual On/Off/Raise/Lower control of fixtures

BEST PRACTICE LAYOUT

- Fixture integrated NX sensors can be used for both occupancy sensing and daylight harvesting when required
- Switch stations should be located near each entrance to the space
- Space can be networked back to an Area Controller for BMS integration or networked Automated Demand Response with only a few additional components, please see networking page for additional details

GYMNASIUM - WIRED



KEY

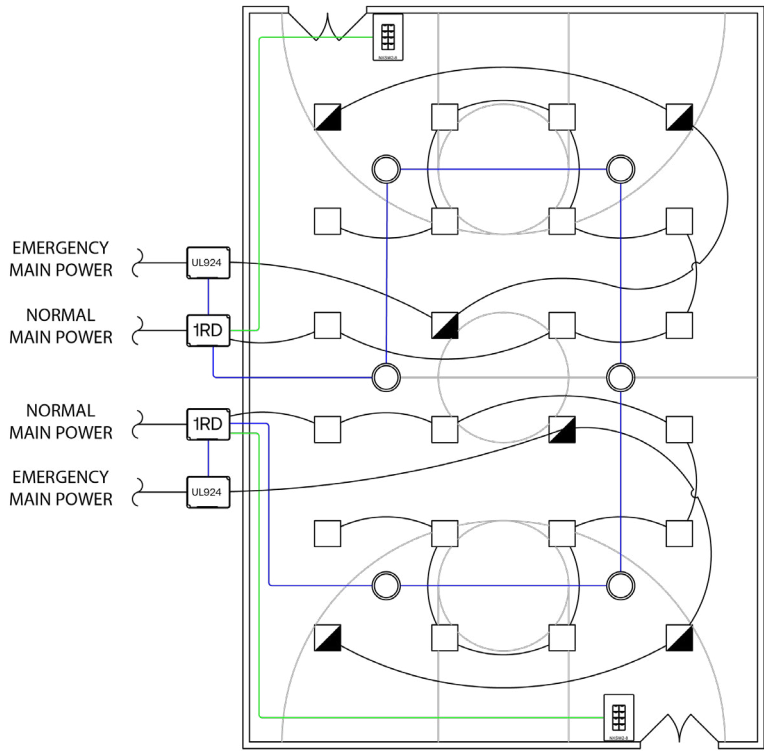
- UL924

UL924 Room Controller
- 1RD

1RD Room Controller
- E5 PELA Low Profile LED High Bay
- 8-Button Switch
- High Mount PIR Occupancy Sensor

- Main Power (120/277V)
- FX BUS CAT5
- SP BUS CAT5

Note: Drawings not shown to scale and are intended as illustrative example of the application.



BEST PRACTICE LAYOUT

- Switch stations should be located near each entrance to the space
- Ensure proper placement of occupancy sensors in space, keeping clear of any obstructions
- Space can be networked back to an Area Controller for BMS integration or networked Automated Demand Response with only a few additional components, please see networking page for additional details

BILL OF MATERIALS

QTY.	Catalog #	Description
2	NXRCFX2-1RD-UNV	Room Controller with 1 Relay & 0-10V Dimming Output
2	NXSW2-8	8-Button Smart Switch
6	NXSMP2-HMO	High Mount PIR Occupancy & Daylight Sensor
2	NXRC-UL924-UNV	Emergency Room Controller with 1 Relay & (2) 0-10V Dimming Outputs
24	PELA	Low Profile LED High Bay Fixture

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

OPERATIONAL DESCRIPTION

- 0-10V Dimmable fixtures
 - Auto ON to 50-70% upon occupancy, or manual ON
- Auto OFF after period of vacancy ≤20min
 - Manual ON/OFF/Raise/Lower control of each group of fixtures

GYMNASIUM - WIRELESS

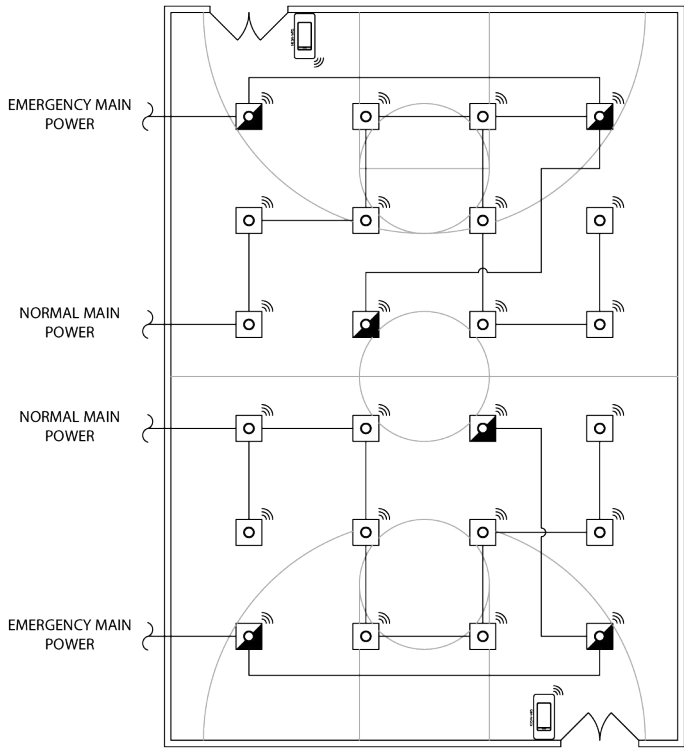


KEY

- E5 PELA Low Profile LED High Bay with Integrated Occupancy & Daylight Sensor
- Wireless Rocker Switch

- Main Power (120/277V)

Note: Drawings not shown to scale and are intended as illustrative example of the application.



Wiring shown assumes emergency fixtures ordered with integral UL924 dimming bypass module. Please see fixture spec sheet for details on ordering options.

BILL OF MATERIALS

QTY.	Catalog #	Description
2	NXSW-WRS-WH	Battery-Operated Wireless Rocker Switch
24	PELA with NXWHM*	NX Enabled Low Profile LED High Bay Fixture with Integral Wireless Occupancy/Daylight Sensor

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

OPERATIONAL DESCRIPTION

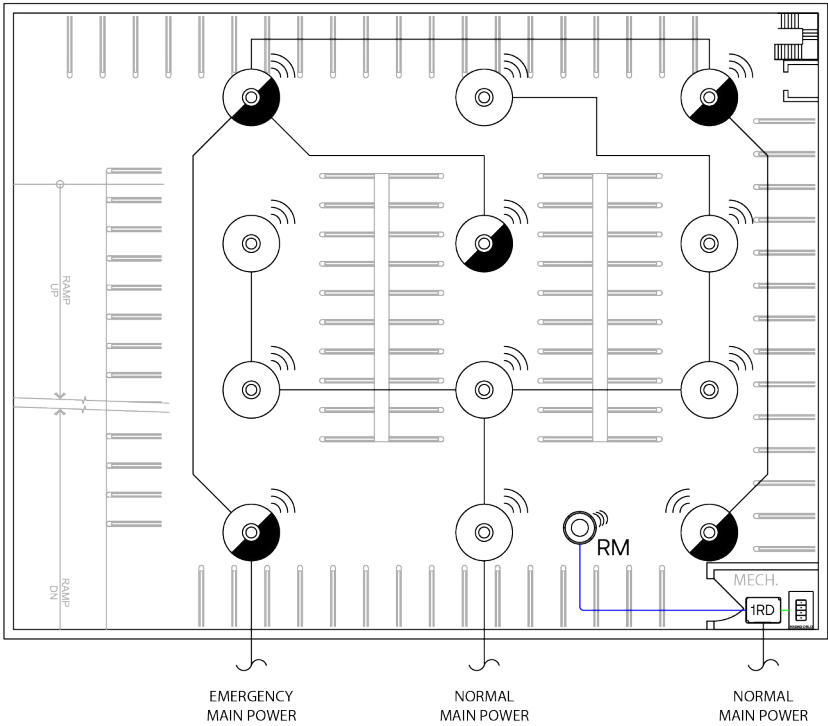
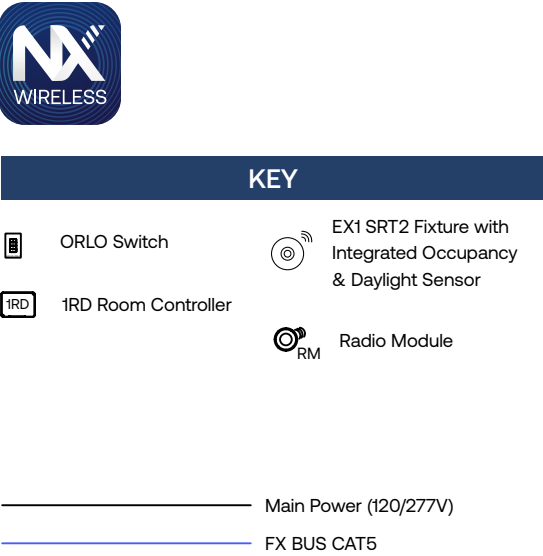
- 0-10V Dimmable fixtures
 - Auto ON to 50-70% upon occupancy, or manual ON
- Auto OFF after period of vacancy ≤20min
 - Manual ON/OFF/Raise/Lower control of fixtures

BEST PRACTICE LAYOUT

- Fixture integrated NX sensors can be used for both occupancy sensing and daylight harvesting when required
- Switch stations should be located near each entrance to the space
- Space can be networked back to an Area Controller for BMS integration or networked Automated Demand Response with only a few additional components, please see networking page for additional details

INTERIOR LEVEL PARKING GARAGE - WIRELESS

PARKING LOT - WIRELESS



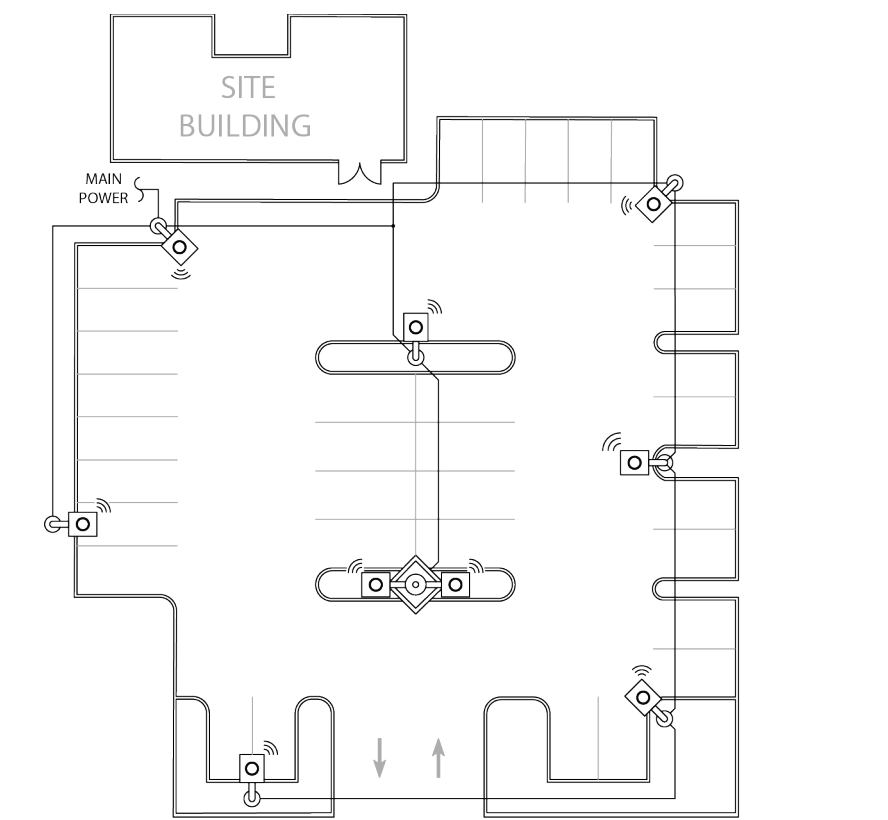
Wiring shown assumes emergency fixtures ordered with integral UL924 dimming bypass module. Please see fixture spec sheet for details on ordering options.

BILL OF MATERIALS		
QTY.	Catalog #	Description
1	NXRCFX2-1RD-UNV	Room Controller with 1 Relay & 0-10V Dimming Output
1	NXRM2-H	Radio Module
1	NXSW2-ORLO	On/Raise/Lower/Off Specialty Switch
12	SRT2 with NXWS12F*	NX Enabled Edge-Lit Ceiling/Surface/Garage Fixture with Integral Wireless Occupancy/Daylight Sensor

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

OPERATIONAL DESCRIPTION

- 0-10V Dimmable fixtures
 - Auto full ON upon occupancy
 - Partial OFF to ≤50% after period of vacancy ≤ 20min
- Manual ON/OFF/Raise/Lower control of fixtures
 - Control zones shall have a lighting load of ≤ 500W per zone

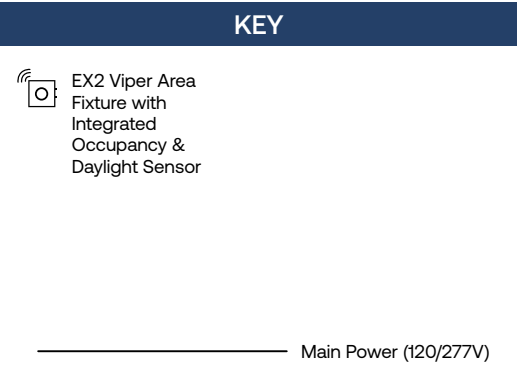


BILL OF MATERIALS		
QTY.	Catalog #	Description
9	VP with NXWS16F*	NX Enabled Viper Area/Site Fixture with Integral Wireless Occupancy/Daylight Sensor

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

OPERATIONAL DESCRIPTION

- 0-10V Dimmable fixtures
 - Auto full ON upon occupancy during active sensor hours
- Partial OFF to 10-50% after period of vacancy ≤15min when sensors are active
 - Integral astronomical timeclock in NX enabled luminaires utilized for dusk to dawn operation



Note: Drawings not shown to scale and are intended as illustrative example of the application.

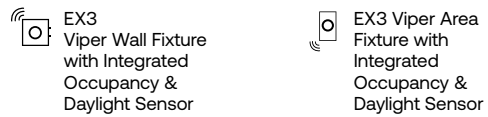
BEST PRACTICE LAYOUT

- Fixture integrated NX sensors can be used for both occupancy sensing and daylight harvesting when required
- For outdoor spaces, wireless enabled fixtures and radios shall be within 300' line of sight of at least two other wireless devices
- Space can be networked back to an Area Controller for BMS integration or networked Automated Demand Response with only a few additional components, please see networking page for additional details

PARKING LOT WITH BUILDING MOUNTED LIGHTS - WIRELESS

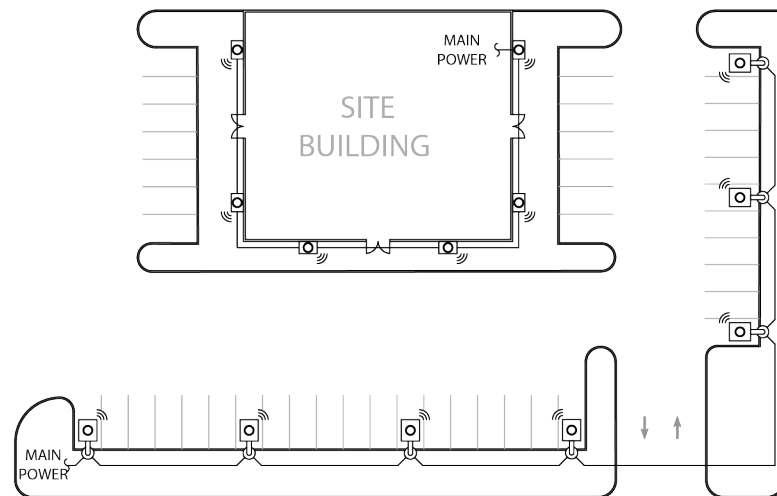


KEY



• Main Power (120/277V)

Note: Drawings not shown to scale and are intended as illustrative example of the application.



BEST PRACTICE LAYOUT

BILL OF MATERIALS

QTY.	Catalog #	Description
6	VPW with NXWS16F*	NX Enabled Viper Wall Fixture with Integral Wireless Occupancy/Daylight Sensor
7	VPW with NXWS40F*	NX Enabled Viper Area Fixture with Integral Wireless Occupancy/Daylight Sensor

* For complete Lighting Fixture Schedule, [see pages 41-50](#).

OPERATIONAL DESCRIPTION

- 0-10V Dimmable fixtures
- Auto full ON upon occupancy
- Partial OFF to $\leq 50\%$ after period of vacancy $\leq 20\text{min}$
- Manual ON/OFF/Raise/Lower control of fixtures
- Control zones shall have a lighting load of $\leq 500\text{W}$ per zone

NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

HEALTHCARE LIGHT FIXTURE SCHEDULE

SPACE TYPE	FIXTURE TYPE	DESCRIPTION	MANUFACTURER	BRAND	PART NUMBER	LINK TO CUT SHEET
Patient Room	H1 Option 1	2x2 or 2x4 recessed LED multi-function troffer (options for reading, ambient, and exam)	Current	Lifeshield	MDM	MDM
	H1 Option 2	2', 3', or 4' wall mounted LED multi-function bed light (options for reading, ambient, and night light)	Current	Lifeshield	EBL	EBL
Patient Toilet/ Shower	H2 Option 1	4" LED round recessed wet location downlight	Current	Prescolite	LFR-4RD	LFR-4RD-SH
	H2 Option 2	2' LED wall mounted vanity	Current	Columbia	CWM	CWM
Private Office	H3	2x2 or 2x4 LED architectural troffer	Current	Columbia	LCAT-S	LCAT-S
Conference Room	H4 Option 1	2" LED linear direct/indirect pendant	Current	Litecontrol	2L-P-ID	2L-P-ID
	H4 Option 2	4" LED round recessed adjustable downlight	Current	Prescolite	LFR-4RA	LFR-4RA
Lobby, Reception, and Waiting Area	H5 Option 1	2x2 or 2x4 LED architectural troffer	Current	Columbia	LCAT-S	LCAT-S
	H5 Option 2	4" LED round recessed downlight	Current	Prescolite	LFR-4RD	LFR-4RD
	H5 Option 3	Semi-decorative LED round or rectangular shaped pendants	Current	Litecontrol	88L	88L
	H5 Option 4	LED wall/slot perimeter cove	Current	Litecontrol	20L	20L
Corridor	H6	2x2 or 2x4 LED architectural troffer	Current	Columbia	LCAT-S	LCAT-S
Nurses Station	H7 Option 1	4" LED linear direct/indirect pendant	Current	Litecontrol	4L-P-ID	4L-P-ID
	H7 Option 2	4" LED linear recessed direct	Current	Litecontrol	4L-R-D	4L-R-D
	H7 Option 3	4" LED round recessed downlight	Current	Prescolite	LFR-4RD	LFR-4RD
Surgical Suite	H8 Option 1	1x4, 2x2, or 2x4 recessed surgical suite troffer	Current	Lifeshield	OBX	OBX
	H8 Option 2	4" LED round recessed surgical suite downlight	Current	Lifeshield	LTR-4RD	LTR-4RD (SR)
MRI Suite	H9 Option 1	6" LED round recessed MRI suite downlight	Current	Lifeshield	LTR-6RD-T-MRI	LTR-6RD (MRI)
	H9 Option 2	6" LED round recessed MRI suite wall washer	Current	Lifeshield	LTR-6RW-T-MRI	LTR-6RD (MRI)
	H9 Option 3	LED MRI suite message sign	Current	Lifeshield	OBN	OBN
Cleanroom	H10 Option 1	1x4, 2x2, or 2x4 recessed cleanroom troffer	Current	Lifeshield	OBX	OBX
	H10 Option 2	2x2 or 2x4 edge-lit LED cleanroom flat panel	Current	Lifeshield	NBT	NBT
	H10 Option 3	6" LED round recessed cleanroom downlight	Current	Lifeshield	LTR-6RD-T	LTR-6RD (CR)
Cafeteria	H11 Option 1	LED linear low bay	Current	Columbia	RLB	RLB
	H11 Option 2	2x2 or 2x4 LED architectural troffer	Current	Columbia	VSF	VSF
CONTINUED ON NEXT PAGE						

HEALTHCARE LIGHT FIXTURE SCHEDULE CONTINUED

SPACE TYPE	FIXTURE TYPE	DESCRIPTION	MANUFACTURER	BRAND	PART NUMBER	LINK TO CUT SHEET
Kitchen	H12	2x2, 1x4, or 2x4 backlit troffer	Current	Columbia	CBT	CBT
Copy/Print Room	H13 Option 1	2x2 or 2x4 LED architectural troffer	Current	Columbia	LCAT-S	LCAT-S
	H13 Option 2	LED undercabinet	Current	Columbia	CUC	CUC
Faculty Break Room	H14 Option 1	2x2 or 2x4 LED architectural troffer	Current	Columbia	LCAT-S	LCAT-S
	H14 Option 2	LED undercabinet	Current	Columbia	CUC	CUC
Locker Room	H15	2x2, 1x4, or 2x4 backlit troffer	Current	Columbia	CBT	CBT
Hallway/Circulation	H16 Option 1	4" LED round recessed downlight	Current	Prescolite	LFR-4RD	LFR-4RD
	H16 Option 2	2x2 LED architectural troffer	Current	Columbia	LCAT-S	LCAT-S
Stairwells	H17	4' LED vandal resistant wall bracket	Current	Lifeshield	WB3	W3B
Restroom - Public	H18 Option 1	2x2 or 2x4 LED architectural troffer	Current	Columbia	LCAT-S	LCAT-S
	H18 Option 2	4" LED round recessed downlight	Current	Prescolite	LFR-4RD	LFR-4RD
	H18 Option 3	6" LED perimeter wall/slot direct at sinks	Current	Litecontrol	6L-WS-D	6L-WS-D
Restroom - Staff/Private	H19 Option 1	2x2 or 2x4 LED architectural troffer	Current	Columbia	LCAT-S	LCAT-S
	H19 Option 2	4" LED round recessed downlight	Current	Prescolite	LFR-4RD	LFR-4RD
	H19 Option 3	2' or 4' LED wall mounted vanity	Current	Columbia	CWM	CWM
Storage, Janitor, Server/IDF/MDF Rooms	H20 Option 1	2', 4', or 8' LED linear strip	Current	Columbia	MPS	MPS
	H20 Option 2	2x2, 1x4, or 2x4 backlit troffer	Current	Columbia	CBT	CBT
Mechanical/ Electrical Rooms	H21	2', 4', or 8' LED linear strip	Current	Columbia	MPS	MPS
Egress - Exit Sign	EXT1	LED exit sign	Current	DualLite	SE	SE

EDUCATION LIGHT FIXTURE SCHEDULE

SPACE TYPE	FIXTURE TYPE	DESCRIPTION	MANUFACTURER	BRAND	PART NUMBER	LINK TO CUT SHEET
Classrooms - General	E1 Option 1	2x2 or 2x4 LED architectural troffer	Current	Columbia	LCAT-S	LCAT-S
	E1 Option 2	2x2 or 2x4 LED architectural troffer	Current	Columbia	VSY	VSY
	E1 Option 3	LED linear direct pendant	Current	Litecontrol	67L-P-ID	67L-P-ID
	E1 Option 4	LED linear direct/indirect pendant	Current	Litecontrol	STNC	STNC
Classrooms - Perimeter	E2 Option 1	4" LED perimeter wall/slot direct	Current	Litecontrol	4L-WS-D	4L-WS-D
	E2 Option 2	4" LED linear recessed wall washer	Current	Litecontrol	4L-xx-AD	4L-R-D
Administration Offices	E3	2x2 or 2x4 LED architectural troffer	Current	Columbia	LCAT-S	LCAT-S
Library	E4 Option 1	LED linear direct/indirect pendant	Current	Litecontrol	STNC	STNC
	E4 Option 2	2x2 or 2x4 LED architectural troffer	Current	Columbia	LCAT-S	LCAT-S
Gym	E5 Option 1	Low profile LED high bay	Current	Columbia	PEL	PEL
	E5 Option 2	LED high bay with reflector shade	Current	Columbia	UTB2	UTB2
Lobby, Reception, and Waiting Area	E6 Option 1	4" LED round recessed downlight	Current	Prescolite	LFR-4RD	LFR-4RD
	E6 Option 2	Semi-decorative LED round or rectangular shaped pendants	Current	Litecontrol	88L	88L
Cafeteria	E7 Option 1	LED linear low bay	Current	Columbia	RLB	RLB
	E7 Option 2	2x2 or 2x4 LED architectural troffer	Current	Columbia	VSY	VSY
Kitchen	E8	2x2, 1x4, or 2x4 backlit troffer	Current	Columbia	CBT	CBT
Copy/Print Room	E9	2x2 or 2x4 LED architectural troffer	Current	Columbia	LCAT-S	LCAT-S
	E10	LED undercabinet	Current	Columbia	CUC	CUC
Faculty Break Room	E11	2x2 or 2x4 LED architectural troffer	Current	Columbia	LCAT-S	LCAT-S
	E12	LED undercabinet	Current	Columbia	CUC	CUC
Hallway/Circulation	E13 Option 1	4" LED round recessed downlight	Current	Prescolite	LFR-4RD	LFR-4RD
	E13 Option 2	2x2 LED architectural troffer	Current	Columbia	LCAT-S	LCAT-S
Stairwells	E14	4' LED vandal resistant wall bracket	Current	Lifeshield	WB3	WB3
CONTINUED ON NEXT PAGE						

EDUCATION LIGHT FIXTURE SCHEDULE CONTINUED

SPACE TYPE	FIXTURE TYPE	DESCRIPTION	MANUFACTURER	BRAND	PART NUMBER	LINK TO CUT SHEET
Restroom	E15 Option 1	2x2, 1x4, or 2x4 backlit troffer	Current	Columbia	CBT	CBT
	E15 Option 2	6" LED perimeter wall/slot direct at sinks	Current	Litecontrol	6L-WS-D	6L-WS-D
Storage, Janitor, Server/IDF/MDF Rooms	E16 Option 1	2', 4', or 8' LED linear strip	Current	Columbia	MPS	MPS
	E16 Option 2	2x2, 1x4, or 2x4 backlit troffer	Current	Columbia	CBT	CBT
Mechanical/Electrical Rooms	E17	2', 4', or 8' LED linear strip	Current	Columbia	MPS	MPS

OFFICE LIGHT FIXTURE SCHEDULE

SPACE TYPE	FIXTURE TYPE	DESCRIPTION	MANUFACTURER	BRAND	PART NUMBER	LINK TO CUT SHEET
Private Office	O1	2x2 or 2x4 LED architectural troffer	Current	Columbia	LCAT-S	LCAT-S
Open Office	O2 Option 1	2x2 or 2x4 LED architectural troffer	Current	Columbia	LCAT-S	LCAT-S
	O2 Option 2	2" LED linear direct/indirect pendant	Current	Litecontrol	2L-P-ID	2L-P-ID
	O2 Option 3	2" LED linear direct recessed	Current	Litecontrol	2L-R-D	2L-R-D
Conference Room	O3 Option 1	2" LED linear direct/indirect pendant	Current	Litecontrol	2L-P-ID	2L-P-ID
	O3 Option 2	4" LED round recessed adjustable downlight	Current	Prescolite	LFR-4RA	LFR-4RA
Training Room	O4 Option 1	2" LED linear direct/indirect pendant	Current	Litecontrol	2L-P-ID	2L-P-ID
	O4 Option 2	4" LED round recessed adjustable downlight	Current	Prescolite	LFR-4RA	LFR-4RA
	O4 Option 3	2" LED perimeter wall/slot direct	Current	Litecontrol	2L-WS-D	2L-WS-D
Reception Area	O5 Option 1	4" LED round recessed downlight	Current	Prescolite	LFR-4RD	LFR-4RD
	O5 Option 2	Semi-decorative LED linear pendant	Current	Litecontrol	AIRA	AIRA
Copy/Print Room	O6 Option 1	2x2 or 2x4 LED architectural troffer	Current	Columbia	LCAT-S	LCAT-S
	O6 Option 2	LED undercabinet	Current	Columbia	CUC	CUC
Break Room	O7 Option 1	2x2 or 2x4 LED architectural troffer	Current	Columbia	LCAT-S	LCAT-S
	O7 Option 2	LED undercabinet	Current	Columbia	CUC	CUC

CONTINUED ON NEXT PAGE

OFFICE LIGHT FIXTURE SCHEDULE CONTINUED

SPACE TYPE	FIXTURE TYPE	DESCRIPTION	MANUFACTURER	BRAND	PART NUMBER	LINK TO CUT SHEET
Phone/Private Work Room	O8 Option 1	4" LED round recessed downlight	Current	Prescolite	LFR-4RD	LFR-4RD
	O8 Option 2	2" LED perimeter wall/slot direct	Current	Litecontrol	2L-WS-D	2L-WS-D
Hallway/Circulation	O9 Option 1	4" LED round recessed downlight	Current	Prescolite	LFR-4RD	LFR-4RD
	O9 Option 2	4" LED round cylinder downlight	Current	Prescolite	LTC-4RDW	LTC-4RDW
	O9 Option 3	2x2 LED architectural troffer	Current	Columbia	LCAT-S	LCAT-S
Stairwells	O10	2', 4', or 8' LED surface or wall mounted stairwell fixture	Current	Columbia	ESL	ESL
Restroom	O11 Option 1	4" LED round recessed downlight	Current	Prescolite	LFR-4RD	LFR-4RD
	O11 Option 2	2' or 4' LED wall mounted vanity	Current	Columbia	CWM	CWM
Shower	O12	4" LED round recessed shower downlight	Current	Prescolite	LFR-4RD	LFR-4RD (SH)
Storage, Janitor, Server/IDF/MDF Rooms	O13 Option 1	2', 4', or 8' LED linear strip	Current	Columbia	MPS	MPS
	O13 Option 2	2x2, 1x4, or 2x4 backlit troffer	Current	Columbia	CBT	CBT
Mechanical/Electrical Rooms	O14	2', 4', or 8' LED linear strip	Current	Columbia	MPS	MPS
Warehouse	O15	2x2 or 2x4 LED architectural troffer	Current	Columbia	LCAT-S	LCAT-S

EXTERIOR LIGHT FIXTURE SCHEDULE

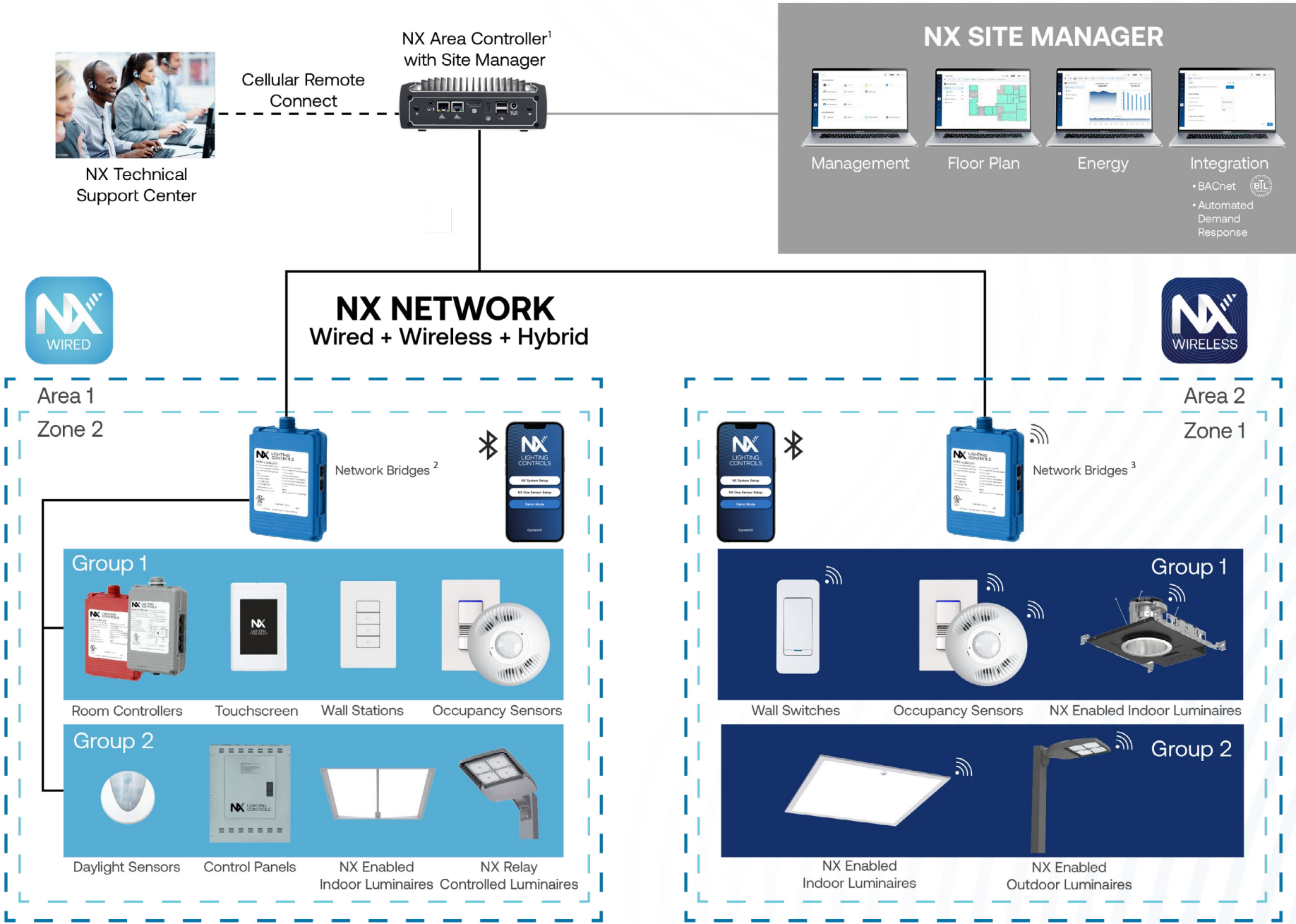
SPACE TYPE	FIXTURE TYPE	DESCRIPTION	MANUFACTURER	BRAND	PART NUMBER	LINK TO CUT SHEET
Interior Level Parking Garage	EX1	Edge-Lit Ceiling/Surface/Garage	Current	Beacon	SRT2	SRT2
Site with Parking Lot	EX2	Area/Site Luminaire	Current	Beacon	VP	VP
Parking Lot with Buliding Mounted Lights	EX3 Option 1	Wall Mounted Luminaire	Current	Beacon	VPW	VPW
	EX3 Option 2	Area/Site Luminaire	Current	Beacon	VP	VP

NETWORKING OVERVIEW

The NX Lighting Controls System provides all the building blocks necessary for a secure, on-premise enterprise lighting management system. The system not only controls lighting, but also provides actionable information to Building Owners and Facility Managers to create energy efficient spaces and improve occupant experience.

NX LIGHTING CONTROL SYSTEM

- Network of device and luminaires organized by Areas / Zones / Groups (AZG)
- NX wired & wireless devices and connected luminaires control lighting using relays and 0-10V dimming
- Wired devices connect using CAT5 cables and provide auto-configuration for basic code compliance
- Wireless devices are grouped together and communicate using secure AES 128-bit encrypted 2.4GHz wireless mesh technology based on the IEEE 802.15.4 standard. Network bridges manage NX Zones and connect wired and wireless zones to the NX Network
- NX Lighting Controls mobile app provides simple tool for quick device and system adjustments
- The NX Area Controller with Site Manager provides Building Owners & Facility Managers with multi-building lighting control, insights into their lighting system, and integration with Building Management Systems (BMS)



SITE MANAGER

- Intuitive web-based, comprehensive lighting management console
- Visual insights into energy usage
- Manage lighting schedules
- Quickly respond to requests for light level changes or reported issues from floor plan views
- Integrate the lighting system to any BACnet compatible Building Management System (BMS)

PLATFORM SNAPSHOT

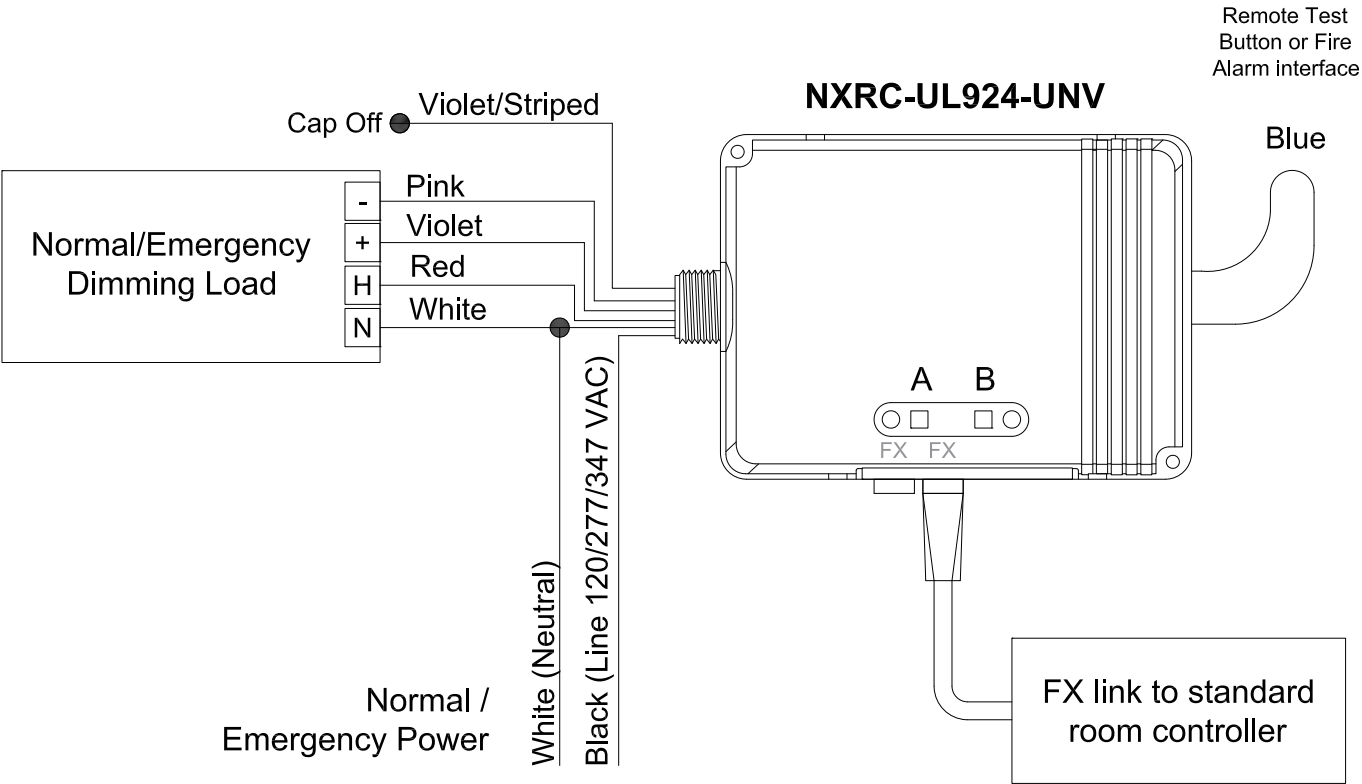
Space Type	Architecture	Deployment	Connectivity	Integration Options	Advance Solutions
Interior & Exterior	Distributed	Standalone & Network	Wired, Wireless, Hybrid	Contacts, BACnet™, OpenADR 2.0a/2.0b	SpectraSync™

The NX Lighting Controls system offers a completely integrated UL924 solution for emergency lighting controls that is less complicated and easier to install than classic standalone ALCR and BCELTS solutions. The NX UL924 Load Controller removes the need for complicated installations and wiring normally associated with UL924 solutions. The NX UL924 Load Controller senses normal power using a standard CAT5 connection to a NX Room Controller connected to normal power. In the event there is a loss of normal power the NX UL924 Load Controller will automatically bring the lights to full brightness, regardless of their current state. When normal power is restored all lighting returns to normal operation.

- UL924 Listed emergency lighting control device
- Meets NFPA Article 700 requirements for emergency lighting
- Single relay version with dual 0-10V interface for full range dimming control
- Automatically overrides lighting to emergency state upon loss of normal power
- Utilizes CAT5 connection to standard NX room controller for normal power sensing
- Full range continuous dimming defaults to full ON in emergency mode
- FX bus enabled and compatible with NXRCFX room controllers
- Provision for remote test button or fire alarm interface
- Advanced configuration, power metering, and control through either NX Area Controller or NX Lighting Controls mobile app



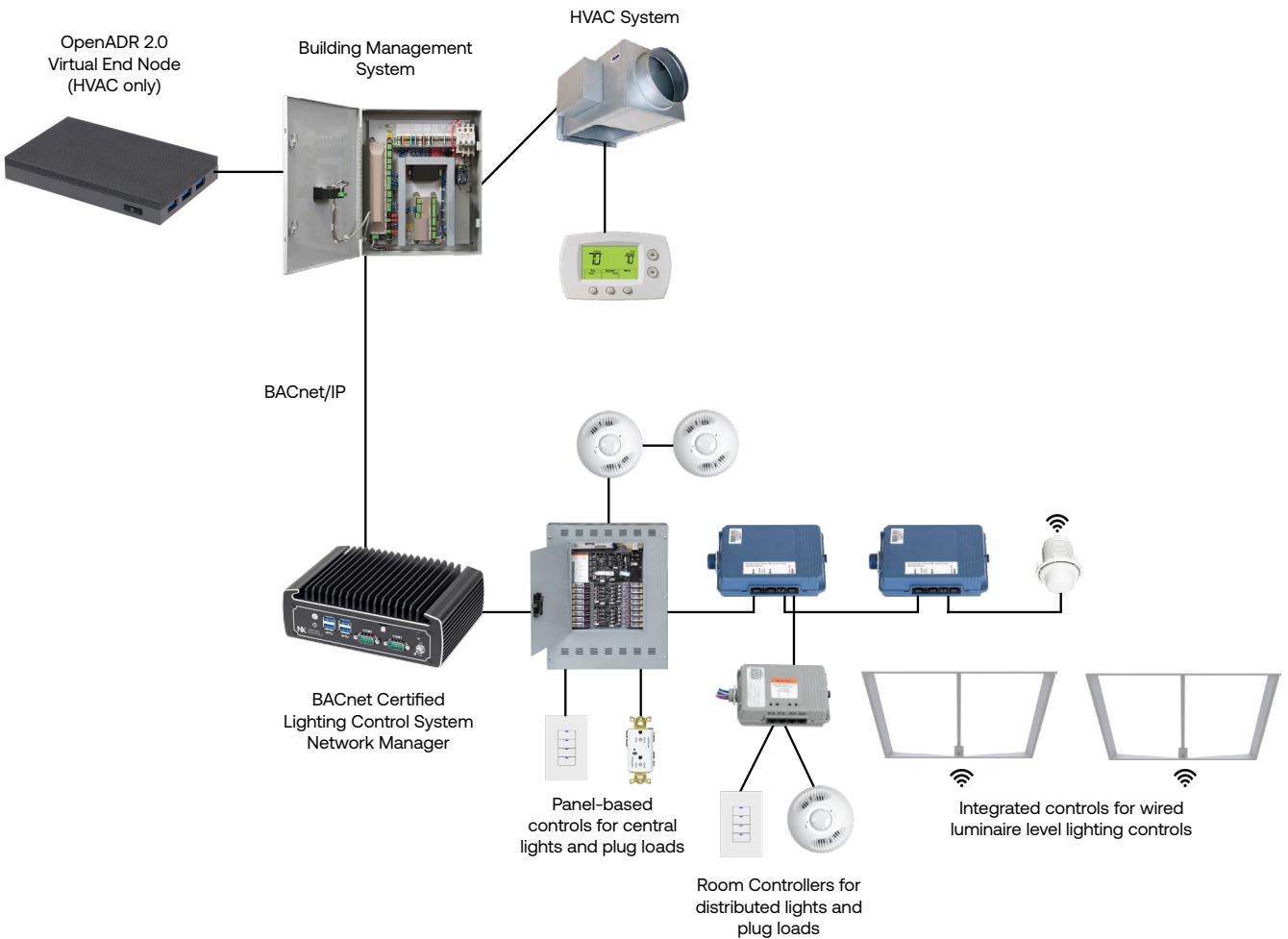
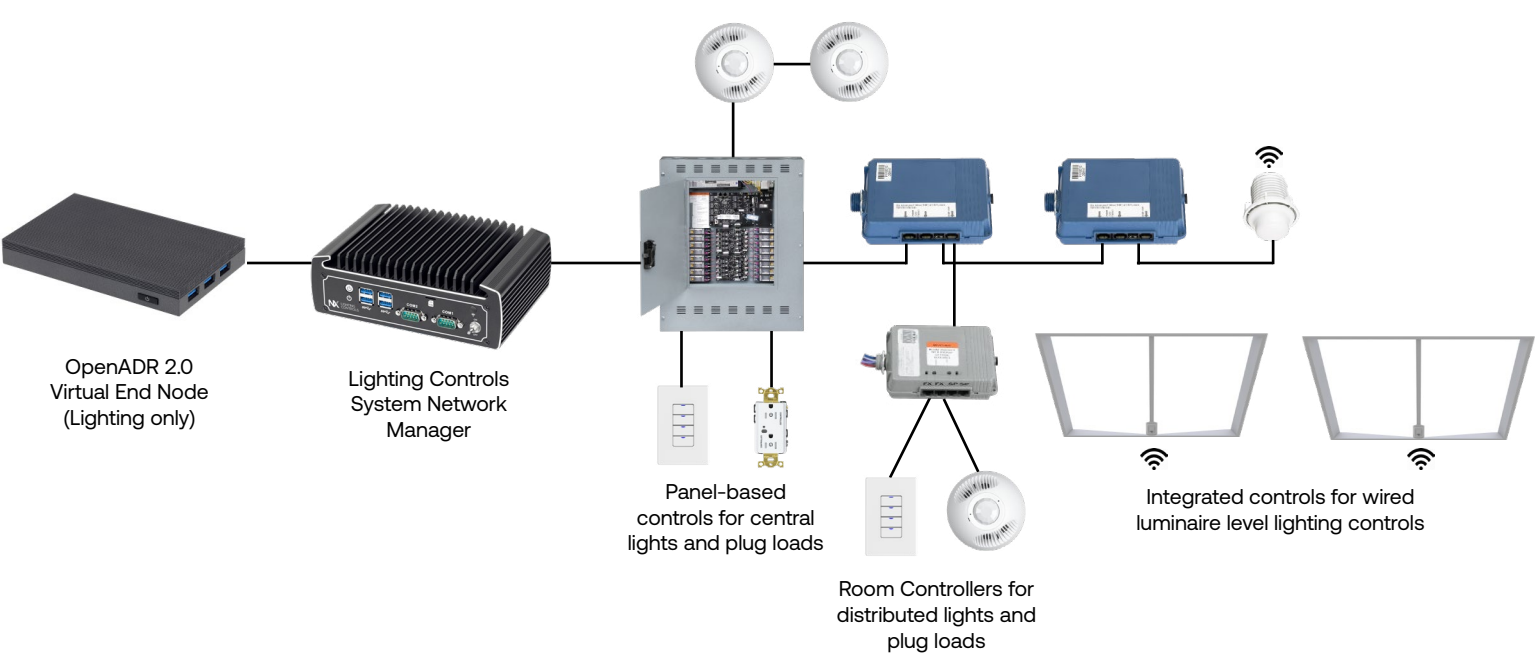
NX UL924 SOLUTION



- Certified to OpenADR 2.0b standard as a Virtual End Node (VEN)
- Allows for participation in Utility provided Demand Response programs
 - Provide Bidirectional communications with Open standard for Smart Grid compatibility
 - Provides an intuitive user interface for easy configuration of OpenADR settings
 - Single normally open/normally closed output

OpenADR is an open, highly secure standard for Demand Response. Current’s NX OpenADR solution (p/n NXOADR2B-VEN-DC) is a certified OpenADR 2.0 compliant Virtual End Node (VEN) that allows the NX Lighting Control System to participate in a bidirectional OpenADR 2.0 connection with a Utility Demand Response Automation Server (DRAS) to provide Automatic Demand Response and acknowledgments.

The NX OpenADR solution complies with California Title 24 110.12 mandatory energy code requirements for “buildings with non-residential lighting systems having a total installed lighting power of 4,000 watts or greater shall install controls that are capable of automatically reducing lighting power in response to a Demand Response Signal”. The NX OpenADR solution reduces general lighting subject to Demand Response by 15% or greater uniformly within a space.



MOBILE APP

The NX Lighting Controls mobile app helps provide quick, simple installation, and programming right in the palm of your hand.

The main screen of the app features the NX Lighting Controls logo at the top. Below the logo are three buttons: "NX System Setup", "NX One Sensor Setup", and "Demo Mode". At the bottom, it says "Current".

Below the main screen, there are four smaller screens illustrating different app features:

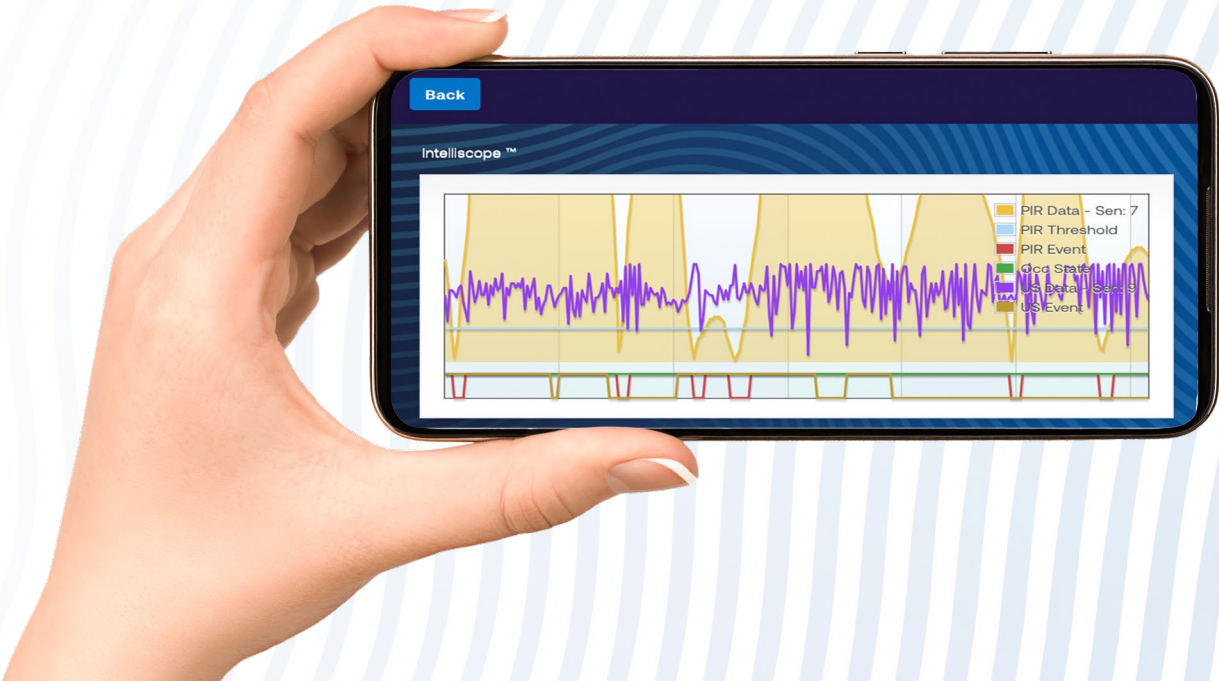
- AUTO-DISCOVERY**: Shows a list of discovered devices with details like MAC address, IP address, and signal strength.
- NETWORKING**: Shows a "New Network" screen with options to create a new network or join an existing one.
- DEVICE CONFIGURATION**: Shows a menu for configuring various devices including Room Controllers, Fixture Modules, Relays, Dimmers, Switches, Smart Sensors, Legacy Daylight Sensors, and Configuration Settings.
- OCCUPANCY SETTINGS**: Shows a screen for configuring occupancy settings, including a "PIR Threshold" slider and a "PIR Event" dropdown.

At the bottom, there are two QR codes for downloading the app from the App Store and Google Play.

The NX Lighting Controls mobile app is a free to use mobile application for programming both an NX Lighting Controls System or Standalone Bluetooth Sensors. The app allows you to discover and configure wired and wireless devices and setup groups and zones for both standalone and networked NX sites. The app also provides access to IntelliSCOPE™ for real time occupancy data with any digital NX or standalone Bluetooth sensor. The NX Lighting Controls mobile app is available for download on both Apple iOS and Android devices.

- Enables easy setup, configuration and diagnostics of standalone Bluetooth sensors, NX room devices and NXP2 lighting control panels via Bluetooth BLE
- Create custom holidays, schedules, and presets (lighting scenes)
- Set geographical location of site for sunrise/sunset schedules
- Simple configuration of relay and dimmer settings for selected areas and zones
- Passcode protected to prevent unauthorized access to system
- Supports OTA (Over The Air) device updates
- Features IntelliSCOPE™ diagnostic tool for real-time calibration and testing of NX digital smart sensors

All NX wireless sensors come enabled with our proprietary IntelliSCOPE™ functionality, which provides true ladder-less programming and installation all with the click of a button. IntelliSCOPE™ provides real-time occupancy data to help optimize sensor detection in any application, which helps save time and money.



PRODUCT CATALOG

CATALOG NO.	DESCRIPTOR	COLORS
AREA CONTROLLERS		
NXAC2-120-SM	NX Area Controller V2 w/ NX Site Manager, NX Network, BACnet, 120V	Black
NXAC2-120-SMA	NX Area Controller V2 w/NX Site Manager Adapter, NX Network, 120V	Black
NETWORK DEVICES		
NXHNB2	NX Network Bridge Module, Connects Wired and Wireless Zones to NX Network, Internal Time Clock, Low Voltage	Blue
NXPOE-7-24B	NX POE Switch/Power Injector, Seven RJ45 Powered NX Network Ports, One RJ45 Powered Uplink Port, 24VDC Power Supply (Included)	Black
NX-EOF-MC-01	NX Media Converter, Ethernet Over Fiber, Copper: Single RJ45 Port (10/100BASE-T), Fiber: ST Connector (100BASE-X), 120V	Gray
ROOM CONTROLLERS		
NXRCFX2-1RD-UNV	NX Room Controller, FX Bus Compatible, 1 Relay, 0-10V Dimming, Universal Voltage	Gray
NXRCFX2-2RD-UNV	NX Room Controller, FX Bus Compatible, 2 Relay, 0-10V Dimming, Universal Voltage	Gray
NXRC-UL924-UNV	UL924 Emergency Load Controller, 1 Relay, 0-10V Dimming, Universal Voltage	Red
OCCUPANCY SENSORS		
NXSMDT-OMNI-XX	NX Digital Smart Occupancy Sensor, Ceiling Mount, PIR and Ultrasonic, with Daylight Harvesting, Integrated Bluetooth, mini SmartPORT	White, Black, Gray
NXSMDT-LHO-XX	NX Digital Smart Occupancy Sensor, Wall Switch, PIR and Ultrasonic, with Daylight Harvesting, Integrated Bluetooth, Dual RJ45 SmartPORT, 0 Button	White, Black, Gray, Ivory, Light Almond, Red
NXSMDT-LH1-XX	NX Digital Smart Occupancy Sensor, Wall Switch, PIR and Ultrasonic, with Daylight Harvesting, Integrated Bluetooth, Dual RJ45 SmartPORT, 1 Button	White, Black, Gray, Ivory, Light Almond, Red
NXSMDT-LH2-XX	NX Digital Smart Occupancy Sensor, Wall Switch, PIR and Ultrasonic, with Daylight Harvesting, Integrated Bluetooth, Dual RJ45 SmartPORT, 2 Button	White, Black, Gray, Ivory, Light Almond, Red
NXSMIR-LHO-XX	NX Digital Smart Occupancy Sensor, Wall Switch, PIR, with Daylight Harvesting, Integrated Bluetooth, Dual RJ45 SmartPORT, 0 Button	White, Black, Gray, Ivory, Light Almond, Red
NXSMIR-LH1-XX	NX Digital Smart Occupancy Sensor, Wall Switch, PIR, with Daylight Harvesting, Integrated Bluetooth, Dual RJ45 SmartPORT, 1 Button	White, Black, Gray, Ivory, Light Almond, Red
NXSMIR-LH2-XX	NX Digital Smart Occupancy Sensor, Wall Switch, PIR, with Daylight Harvesting, Integrated Bluetooth, Dual RJ45 SmartPORT, 2 Button	White, Black, Gray, Ivory, Light Almond, Red
INTEGRATED SENSORS		
NXSMP2-OMNI	NX Digital Smart PIR Occupancy Sensor with Photocell and Bluetooth Programming, 360° Lens	White, Black, Gray
NXSMP2-LMI	NX Digital Smart PIR Occupancy Sensor with Photocell and Bluetooth Programming, Low Mount/Indoor, 360° Lens	White, Black, Gray
NXSMP2-HMO	NX Digital Smart PIR Occupancy Sensor with Photocell and Bluetooth Programming, High Mount/Outdoor, 360° Lens	White, Black, Gray
NXSMP2-LMO	NX Digital Smart PIR Occupancy Sensor with Photocell and Bluetooth Programming, Low Mount/Outdoor, 360° Lens	White, Black, Gray
DAYLIGHT SENSORS		
NXDS	NX Daylight Sensor	White
NXDS-O	NX Daylight Sensor Outdoor	White













CATALOG NO.	DESCRIPTOR	COLORS
WALL SWITCHES		
NXSW2-1-XX	NX Digital Smart Switch, 1 Button, Momentary, Pilot	White, Black, Gray, Ivory, Light Almond, Red
NXSW2-2-XX	NX Digital Smart Switch, 2 Button, Momentary, Pilot	White, Black, Gray, Ivory, Light Almond, Red
NXSW2-3-XX	NX Digital Smart Switch, 3 Button, Momentary, Pilot	White, Black, Gray, Ivory, Light Almond, Red
NXSW2-4-XX	NX Digital Smart Switch, 4 Button, Momentary, Pilot	White, Black, Gray, Ivory, Light Almond, Red
NXSW2-5-XX	NX Digital Smart Switch, 5 Button, Momentary, Pilot	White, Black, Gray, Ivory, Light Almond, Red
NXSW2-6-XX	NX Digital Smart Switch, 6 Button, Momentary, Pilot	White, Black, Gray, Ivory, Light Almond, Red
NXSW2-8-XX	NX Digital Smart Switch, 8 Button, Momentary, Pilot	White, Black, Gray, Ivory, Light Almond, Red
NXSW2-ORLO-XX	NX Digital Specialty Switch, On/Raise/Lower/Off	White, Black, Gray, Ivory, Light Almond, Red
NXSW2-OO-XX	NX Digital Specialty Switch, On/Off	White, Black, Gray, Ivory, Light Almond, Red
NXSW2-SS-XX	NX Digital Specialty Switch, Scene Switch	White, Black, Gray, Ivory, Light Almond, Red
NXSW2-CCT-XX	NX Digital Specialty Switch, CCT	White, Black, Gray, Ivory, Light Almond, Red
NXSW2-KEY-MNTD1-XX	NX Digital Specialty Key Switch, Maintained 1 Pole/Single Throw	White, Black, Gray, Ivory, Light Almond, Red
NXSW2-KEY-MTRY1-XX	NX Digital Specialty Key Switch, Momentary 1 Pole/Single Throw	White, Black, Gray, Ivory, Light Almond, Red
NXSW-TH3-WH	NX SimpleTouch 3.5" full color graphic wall station	White
NXSW-WRS-WH	NX Battery Powered Digital Switch Station, 2 Button configurable	White
INTERFACES		
NXCI	NX Contact Closure Interface Module, Removable Terminal Block with 2 Switch Inputs, Dual RJ45 SmartPORTS	Silver
NXAVM	NX Audio Visual Interface Module, Single DB9 Connector for RS232 Serial Communications, ASCII Based Command Set, Single RJ45 SmartPORT	Silver
NXRO	NX Occupancy Output Interface Module, Low Voltage Form C NO/NC Relay Output, Removable Terminal Block, Dual RJ45 SmartPORTS	Silver
NXHDI	NX Network Device Interface Module, Connects NXSP and NXCIO Devices to NX Network, Dual RJ45 SmartPORTS, DIN Rail Mount	Blue
NXSP	NX SmartPORT Module, 4 SmartPORTS (8 RJ45 Connectors), DIN Rail Mount	Blue
NXDCIO	NX Dry Contact Interface Module, 6 Low Voltage Inputs, 6 Form C NO/NC Outputs, DIN Rail Mount	Blue
NXOADR2-VEN-DC	NX OpenADR 2.0a/2.0b Bidirectional Virtual End Node (VEN) Module with Two NO/NC Dry Contact Outputs, 120V	Black
RADIO MODULES		
NXOFM-1R1D-UNV	NX 7-Pin On-Fixture Module, 1 Relay, 1 Dimmer, Universal Voltage (120V-480V)	Black
NXRM2-H	NX Network Radio Module with Bluetooth Programming, 12 VDC, ISM 2.4GHz	White, Black, Gray
NXBTC	NX RJ45 Bluetooth Radio Module with Time Server	Blue

PRODUCT CATALOG

CATALOG NO.	DESCRIPTOR	COLORS
ACCESSORIES		
NXRJSPLITTER	NX RJ45 Splitter 2-way Female for CAT5	Ivory
RJ45ADAPTER	NX RJ45 Splitter 2-way Female for CAT5	Gray
NXFRD-UNV	NX Forward & Reverse Phase Dimming Converter	Black
NXWPS	NX Wall Partition Sensor	White
LIGHTING CONTROL PANELS		
NXP2-PNL-8-8-U-S	NX Lighting Control Panel V2, 8 Relay Capacity, 8 Dimming Channels, 8-20A/Single Pole Latching Relays, 120/277VAC, Surface Mount	Gray
NXP2-PNL-8-0-U-S	NX Lighting Control Panel V2, 8 Relay Capacity, 8 Dimming Channels, Relays Not Included, 120/277VAC, Surface Mount	Gray
NXP2-PNL-16-16-U-S	NX Lighting Control Panel V2, 16 Relay Capacity, 16 Dimming Channels, 16-20A/Single Pole Latching Relays, 120/277VAC, Surface Mount	Gray
NXP2-PNL-16-0-U-S	NX Lighting Control Panel V2, 16 Relay Capacity, 16 Dimming Channels, Relays Not Included, 120/277VAC, Surface Mount	Gray
NXP2-PNL-24-24-U-S	NX Lighting Control Panel V2, 24 Relay Capacity, 24 Dimming Channels, 24-20A/Single Pole Latching Relays, 120/277VAC, Surface Mount	Gray
NXP2-PNL-24-0-U-S	NX Lighting Control Panel V2, 24 Relay Capacity, 24 Dimming Channels, Relays Not Included, 120/277VAC, Surface Mount	Gray
NXP2-PNL-32-32-U-S	NX Lighting Control Panel V2, 32 Relay Capacity, 32 Dimming Channels, 32-20A/Single Pole Latching Relays, 120/277VAC, Surface Mount	Gray
NXP2-PNL-32-0-U-S	NX Lighting Control Panel V2, 32 Relay Capacity, 32 Dimming Channels, Relays Not Included, 120/277VAC, Surface Mount	Gray
NXP2-PNL-48-48-U-S	NX Lighting Control Panel V2, 48 Relay Capacity, 48 Dimming Channels, 48-20A/Single Pole Latching Relays, 120/277VAC, Surface Mount	Gray
NXP2-PNL-48-0-U-S	NX Lighting Control Panel V2, 48 Relay Capacity, 48 Dimming Channels, Relays Not Included, 120/277VAC, Surface Mount	Gray
RELAYS		
NXP2-RL-SP	NX Lighting Control Panel V2 Relay, Single Pole, Latching, 120/227/347V, 20A- 50/60 Hz	Black
NXP2-RL-DP	NX Lighting Control Panel V2 Relay, Double Pole, Latching, 208/240/480V, 20A- 50/60 Hz	Black

CATALOG NO.	DESCRIPTOR	COLORS
NX IN-FIXTURE CABLES		
NXCBL-P-10	NX mini-Smart Port to Female RJ45 Plenum Cable, 10" length	Gray
NXCBL-P2-12	NX mini-Smart Port to Dual RJ45 Plenum Cable, 12" length	Gray
CAT5 SYSTEM CABLES		
CAT5-3IN-OR-PLENUM	CAT5 Cable, Plenum Rated, 3IN	Orange
CAT5-3F-OR-PLENUM	CAT5 Cable, Plenum Rated, 3F	Orange
CAT5-10F-OR-PLENUM	CAT5 Cable, Plenum Rated, 10F	Orange
CAT5-25F-OR-PLENUM	CAT5 Cable, Plenum Rated, 25F	Orange
CAT5-50F-OR-PLENUM	CAT5 Cable, Plenum Rated, 50F	Orange
CAT5-100F-OR-PLENUM	CAT5 Cable, Plenum Rated, 100F	Orange

PRODUCT CATALOG

	NX Integrated Control Options for Indoor Luminaires Ordering Logic and Description		CONTROL OPTION FUNCTIONALITY								CONTROL OPTION COMPONENTS		
			Networkable	Grouping	Scheduling	Occupancy/ Motion	Daylight Harvesting	0-10V Dimming	On/Off Control	Bluetooth® App Programming			Sensor Max Height
NX Wireless	NXW	NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor	✓	✓	✓	–	–	✓	✓	✓	–		NXRM2-H
	NXWSM	NX Networked Wireless Enabled Integral NXSMP2-SMI PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth® Programming	✓	✓	✓	✓	✓	✓	✓	✓	12FT		NXSMP2-SMI
	NXWRM	NX Networked Wireless Enabled Integral NXSMP2-LMI PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth® Programming	✓	✓	✓	✓	✓	✓	✓	✓	12FT		NXSMP2-LMI
	NXWOM	NX Networked Wireless Enabled Integral NXSMP2-OMNI PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth® Programming	✓	✓	✓	✓	✓	✓	✓	✓	14FT		NXSMP2-OMNI
	NXWLM	NX Networked Wireless Enabled Integral NXSMP2-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth® Programming	✓	✓	✓	✓	✓	✓	✓	✓	16FT		NXSMP2-LMO
	NXWHM	NX Networked Wireless Enabled Integral NXSMP2-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth® Programming	✓	✓	✓	✓	✓	✓	✓	✓	45FT		NXSMP2-HMO
NX Wired	NXE	NX Wired Dual RJ45 SmartPORTS, without Sensor	✓	✓	✓	–	–	✓	✓	✓	–		NXDSP
	NXESM	NX Wired Dual RJ45 SmartPORTS and Integral NXSMP2-SMI PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth® Programming	✓	✓	✓	✓	✓	✓	✓	✓	12FT		NXDSP NXSMP2-SMI
	NXERM	NX Wired Dual RJ45 SmartPORTS and Integral NXSMP2-LMI PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth® Programming	✓	✓	✓	✓	✓	✓	✓	✓	12FT		NXDSP NXSMP2-LMI
	NXEOM	NX Wired Dual RJ45 SmartPORTS and Integral NXSMP2-OMNI PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth® Programming	✓	✓	✓	✓	✓	✓	✓	✓	14FT		NXDSP NXSMP2-OMNI
	NXELM	NX Wired Dual RJ45 SmartPORTS and Integral NXSMP2-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth® Programming	✓	✓	✓	✓	✓	✓	✓	✓	16FT		NXDSP NXSMP2-LMO
	NXEHM	NX Wired Dual RJ45 SmartPORTS and Integral NXSMP2-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth® Programming	✓	✓	✓	✓	✓	✓	✓	✓	45FT		NXDSP NXSMP2-HMO

*Please reference Current luminaire specification sheets for option availability.

PRODUCT CATALOG

NX Integrated Control Options for Outdoor Luminaires Ordering Logic and Description		CONTROL OPTION FUNCTIONALITY									CONTROL OPTION COMPONENTS	
		Networkable	Grouping	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/Off Control	Bluetooth App Programming	Sensor Max Height		
NX Wireless	NXOFM-1R1D-UNV <small>(sold separate from luminaire)</small>	NX 7-Pin Twist-Lock® with NX Networked Wireless Radio, Integral Automatic Dimming Photocell, Integral Single Pole Relay with Dimming, and Bluetooth Programming										
	NXW	NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor										
	NXWS12F	NX Networked Wireless Enabled Integral NXSMP2-OMNI-O PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming										
	NXWS16F	NX Networked Wireless Enabled Integral NXSMP2-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming										
	NXWS40F	NX Networked Wireless Enabled Integral NXSMP2-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming										

*Please reference Current luminaire specification sheets for option availability.

Comprehensive Support Options to Meet Project Needs

Contact Us

Call (800) 888-8006 and select one of the options listed below



Tech Support Hours: 7:00am – 7:00pm EST, Monday – Friday

Quotes, Applications, Layouts and Submittal Requests:
controls-Design@currentlighting.com

Technical Support (troubleshooting, specifications, programming):

currentlighting.com/controls/technical-services



Phone and Remote Support

While it is our goal to provide you with intelligent, simple and scalable control solutions, customer experience level and project complexity may necessitate additional support during the design development, construction and post-occupancy stages of a project. The support team is available for consultation to evaluate multiple control scenarios to identify the ideal lighting control device or system to meet energy code requirement and customer criteria. Additionally, our team of friendly and experienced professionals is enabled to assist on-site personnel, such as installation contractors, third party integrators, certified field technicians and facilities personnel, to quickly resolve issues and provide additional support.

Warranty

Current provides a 5-year limited warranty for LED luminaires and Lighting Controls devices.



On-site Support

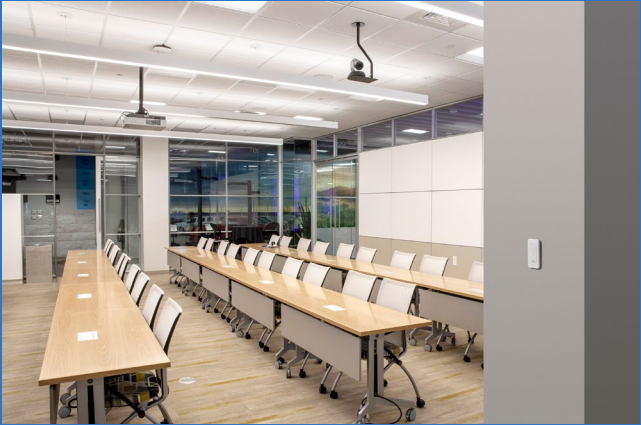
Current offers on-site support service to ensure your project goes smoothly. While Current products are designed with simplicity in mind, some projects may benefit from a Field Service Engineer to perform an on-site pre-installation walk-through, after-hours and remote startup assistance, occupant training, sensor tuning, preset programming and other pre/post-occupancy services.

Design Services



Our team of lighting control system design professionals are available to provide sensor layouts, networked system design services and third party integration support for new and retrofit projects. Our goal is to provide you with on-time and accurate delivery of design deliverables optimized for your specific application, compliant with local building codes and project specifications.

The Institute



Classroom Education

Current offers cutting edge educational opportunities at Institute facilities across the United States. Our headquarters, located in Greenville, SC houses one of the industries largest training facilities with over 25,000 square-feet and is engineered to present a total solutions approach to your lighting and controls challenges. Additionally, we have dedicated Institute facilities in North Carolina and Texas as well as Current facility classrooms for in-person instruction across the United States.

Virtual Education

Current’s virtual education opportunities cover many facets of the lighting and controls industry including fundamentals, trends, technology, and product solutions. In addition, we can provide accredited continuing education (CEU) modules to help you maintain your certifications.

Engage with us in a way that’s best for you!

- An online university with modules designed for self pace individual learning consumed on-demand.
- Live (private) instructor-led training private events for individuals within your own organization designed specifically for your needs.
- Live (public) instructor led training public events highlighting new technologies, continuing education, and lighting trends.





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