



Parks, Recreation, & Culture
Invitation to Tender
No. 2023-PRC-06
Arts and Heritage Hub
ADDENDUM #13

For further information:
Contact: Chris Barfoot
cbarfoot@ladysmith.ca
250.245.6421

| | |
|---------------------------|--|
| Tender Issue Date: | Thursday, June 29, 2023 |
| Addendum #1: | Thursday, July 6, 2023 |
| Addendum #2 | Thursday, July 31, 2023 |
| Addendum #3 | Thursday, August 10, 2023 |
| Addendum #4 | Monday, August 14, 2023 |
| Addendum #5 | Wednesday, August 16, 2023 |
| Addendum #6 | Tuesday, August 22, 2023 |
| Addendum #7 | Wednesday, August 23, 2023 |
| Addendum #8 | Monday, August 28, 2023 |
| Addendum #9 | Wednesday, August 30, 2023 |
| Addendum #10 | Friday, September 1, 2023 |
| Addendum #11 | Thursday, September 7, 2023 |
| Addendum #12 | Thursday, September 7, 2023 |
| Addendum #13 | Monday, September 18, 2023 |
| Site Visit: | 10:00 a.m., Friday, August 11, 2023 |
| RFI Due Date | September 11, 2023 |
| Tender Closing: | 2:00 p.m., Thursday, September 21, 2023 |
| Tender Opening: | 2:15 p.m., Thursday, September 21, 2023 Ladysmith City Hall |



Addendum #13: Invitation to Tender (ITT) No. 2023-PRC-06

Arts and Heritage Hub

This Addendum includes responses to general questions.

Issued: September 18, 2023

This Addendum shall be read in conjunction with and considered as an integral part of the Invitation to Tender (ITT). Revisions supersede the information contained in the original ITT or previously issued Addendum. No consideration will be allowed for any extras due to any Proponents not being familiar with the contents of this Addendum. All other terms and conditions remain the same.

ADDENDUM

Include attached 'Addendum – TA0014 – General Questions' document.

End of Addendum #12



Tender Addendum TA014

Contractor Reference: None

Date 2023.09.15

Project 2032 LAHH

Client Town of Ladysmith

The following addendum supersedes information contained in drawings, specifications and any previous addenda for the project to the extent referenced. This Addendum forms part of the tender documents and is subject to all of the conditions set out in the contract conditions.

General Questions

1. Please refer to attached documents.

Reason for Change: Clarification and alternatives.

Distribution List

Chris Barfoot, Town of Ladysmith, cbarfoot@ladysmith.ca

Ben Checkwitch, Checkwitch Poiron Architects Inc., ben@cparch.ca

Stuart Crossfield, Lewkowich Engineering Associates Ltd., scrossfield@lewkowich.com

Gurhasanpreet Singh, AES Engineering, Gurhasanpreet.Singh@aesengr.com

Per Hector Alcala, Architect AIBC



TA014 – General Questions – Arts & Heritage Hub

1. Drawing S100, Cast-In-Place Concrete note 2 a). It states to provide Type GU cement. However, Type GU cement is not readily available on Vancouver Island. Would Type GUL cement be permitted, please?

GUL cement is an acceptable alternate.

2. Can native material be used for backfilling around the building and within the grade beams?

Native material (Fill soils) can be used as backfill in areas that do not provide structural support (buildings, roads, sidewalks etc.). Material should be sorted to remove common sense material such as large metal objects, asphalt, and significant organic materials etc. Backfill should not contain asphalt within 3m of building.

3. Can native material be used to backfill all Underground utilities?

Should not be used as backfill in areas providing structural support for buildings, roads, sidewalks etc. Native material suitable for landscaping.

4. Is Directional drilling of the Electrical/ Communications conduit required? Or is the removal of the rails an option where the electrical line crosses under the Train Display?

The preferred method for installing the conduit under the railroad tracks is to trench on either side of the tracks and push the conduit under the tracks.

5. Please specify the steel casing embedment depth into the rock for the socketed piles.

Overburden soils are noted to 4.3m depth, while bedrock described as weak and of poor quality. Groundwater noted at between 1m and 3m in adjacent boreholes. We expect casing may be required the full length to support an open hole for pile installation, and ensure base is clean.

6. The proposed lighting alternatives by Symmetry and MACSII are acceptable. See attached Electrical Addendum 03.

7. The proposed alternate for CCTV is acceptable. See attached Electrical Addendum 04.

THE FOLLOWING ADDENDUM SUPERCEDES INFORMATION CONTAINED IN DRAWINGS AND SPECIFICATIONS ISSUED FOR THE PROJECT TO THE EXTENT REFERENCED. THIS ADDENDUM FORMS PART OF THE TENDER DOCUMENTS AND IS SUBJECT TO ALL OF THE CONDITIONS SET OUT IN CONTRACT CONDITIONS.

This electrical addendum contains one (1) page.

PART 1 ALTERNATE SUBMITTALS

1.1 LIGHTING ALTERNATES BY SYMMETRY

- .1 Please see the attachment for review comments.
- .2 The attachment contains 166 pages.

1.2 LIGHTING ALTERNATES BY MACSII

- .1 Please see the attachment for review comments.
- .2 The attachment contains 5 pages.

END OF ELECTRICAL ADDENDUM NO. 03



SYMMETRY LIGHTING LTD
1955 EAST HASTINGS STREET
VANCOUVER, BC V5L 1T5
Phone: 778-373-3377
Fax:
Contact: Goulding, Bruce

LADYSMITH Arts & Heritage Hub

23-28655-0

8/30/2023



Project 23-28655-0
LADYSMITH Arts & Heritage Hub

Submitted By
SYMMETRY LIGHTING LTD

| Type | Manufacturer/Brand | Catalog Number |
|------|--------------------|--|
| L | | GS LVS2 160 30K WP |
| L | | GIT P3 08 |
| H | | GH 4RC2 24 A 30 38 JB DM |



GS-160LVS

TYPE: PROJECT: CATALOG#: LED STRIP LIGHT

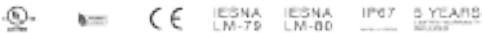


Product Features

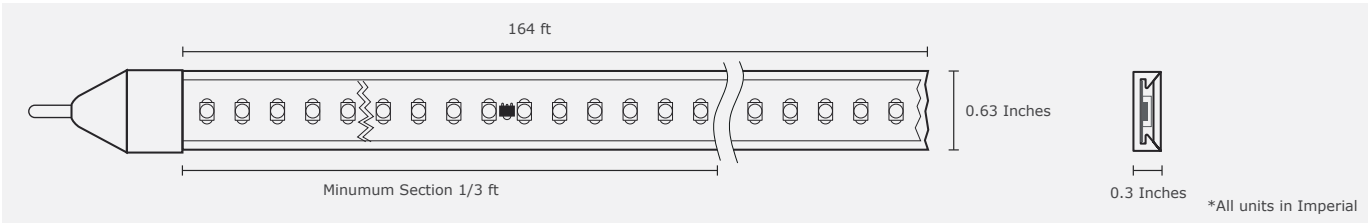
The **LVS series** is a line voltage a constant current strip light, available in a continuous **50 meter (164 ft)** run. The LVS series has minimum sections of **4 inches (1/3 ft)**, has over voltage protection, and requires no driver.

Product Specifications

| Model | GS-LVS-24 | GS-LVS-27 | GS-LVS-30 | GS-LVS-35 | GS-LVS-40 | GS-LVS-50 |
|--------------------------|------------|------------|------------|------------|------------|------------|
| Lumen Output | 150 lm | 163 lm | 163 lm | 163 lm | 175 lm | 175 lm |
| LED Quantity | 36 pcs | 36 pcs | 36 pcs | 36 pcs | 36 pcs | 36 pcs |
| Power Consumption (W) | < 2.5 W | < 2.5 W | < 2.5 W | < 2.5 W | < 2.5 W | < 2.5 W |
| Input Voltage | 120V AC | 120V AC | 120V AC | 120V AC | 120V AC | 120V AC |
| Efficacy | 60 lm/W | 65 lm/W | 65 lm/W | 65 lm/W | 70 lm/W | 70 lm/W |
| Colour Temperature (CCT) | 2400K | 2700K | 3000K | 3500K | 4000K | 5000K |
| CRI | Ra90 | Ra90 | Ra90 | Ra90 | Ra90 | Ra90 |
| IP Rating | IP67 | IP67 | IP67 | IP67 | IP67 | IP67 |
| Forward Current | 20.8 mA/ft | 20.8 mA/ft | 20.8 mA/ft | 20.8 mA/ft | 20.8 mA/ft | 20.8 mA/ft |



Technical Drawing



Order Form

| | | | | | | | | | |
|----------|-------------------|--|--|---|---|---|---|---|---|
| GS | - | - | - | - | - | - | - | - | - |
| Series | 2 | 3 | 4 | 5 | 6 | | | | |
| 2. MODEL | 3. LENGTH | 4. Colour Temperature | 5. CONNECTORS | 6. ACCESSORIES | | | | | |
| LVS LVS | 160 164 ft 200 | 24 2400K 30 3000K 40 4000K 27 2700K 35 3500K 50 5000K | WP Waterproof 2 PIN Connector JP Jumper (24") | A V2 End Cap with Power Plug B V2 Extended Cord (Male) C V2 Extended Cord (Female) D Extended Cord (M/F) | | | | | |

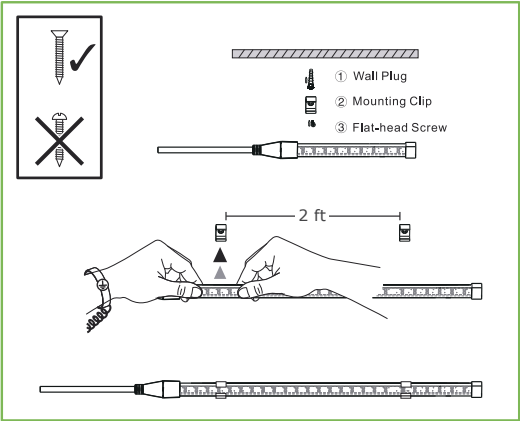


GS-160LVS

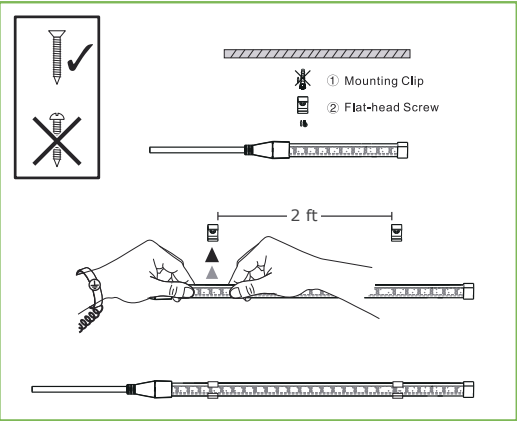
TYPE: PROJECT: CATALOG#: LED STRIP LIGHT

Installation Diagram

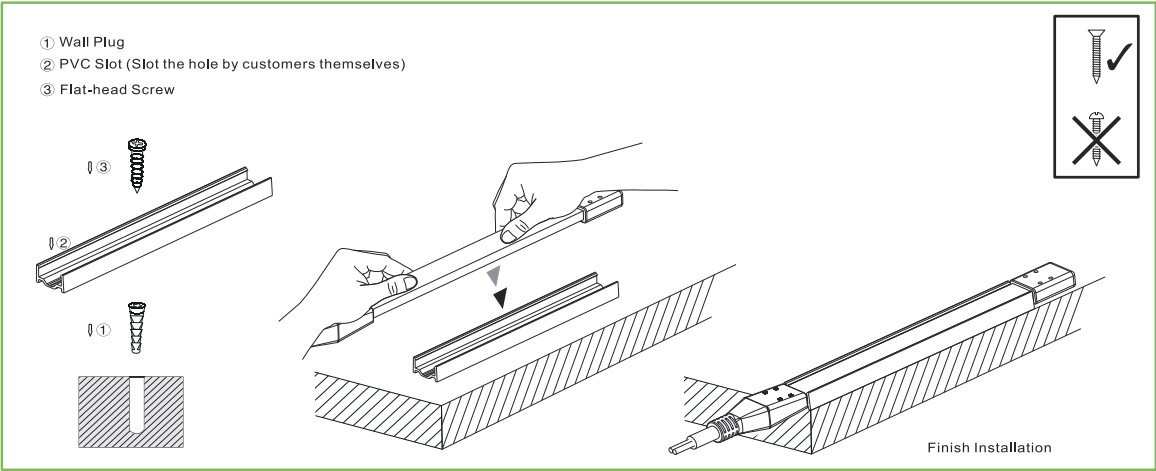
Installation on Masonry Wall



Installation on Panelling Wall



Installation via PVC slot



AES ENGINEERING LTD.
FOR BIDDING PURPOSES ONLY










| ACCEPTABLE | ACCEPTABLE AS NOTED | NOT ACCEPTABLE |
|------------|---------------------|----------------|
| ✓ | | |

Project Number: 0121.0081
Per: GS Date: 2023-09-05
Reviewed only as to general conformity with the design concept.



TYPE: PROJECT: CATALOG#: LED STRIP LIGHT

Accessories & Connectors

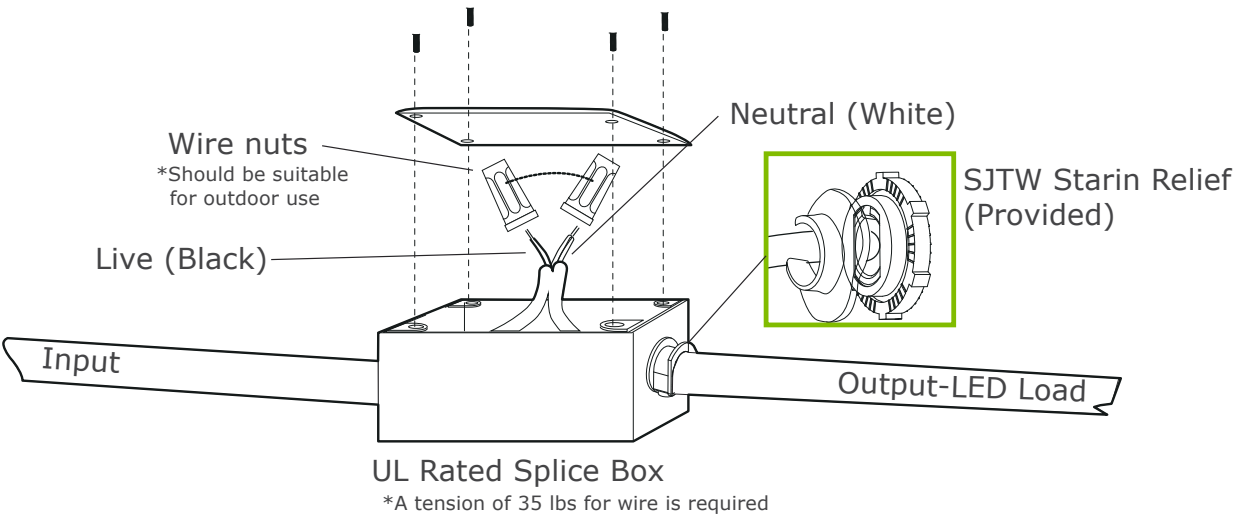
| Part Name | Description | Image |
|-----------|--|---|
| EC | End Cap |  |
| EC-PC | End cap with a power cord |  |
| WP-2P-CN | Waterproof 2 PIN connectors |  |
| 24-JP | Jumper (24") |  |
| EC-PP | End cap with a power plug |  |
| EX-M-EC | Extended cord (male) with an end cap |  |
| EX-FM-EC | Extended cord (female) with an end cap |  |
| EX-FM | Extention cord (male&female) |  |
| MC | Mounting Clip |  |



GS-160LVS

TYPE: PROJECT: CATALOG#: LED STRIP LIGHT

Wiring Instruction





GIT-P3-08

DECORATIVE LED PROFILE

TYPE:

PROJECT:

CATALOG#:



Product Features

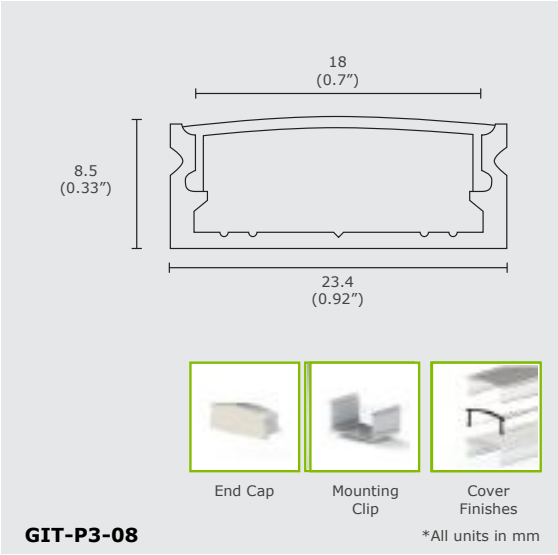
GIT-P3-08 is an elegant and modern design decorative LED profile which suitable for a wide variety of applications & recommended use with GS-50SLX. It comes with end caps which will attach onto the ends of the profile. There are several choices for cover option : clear, milky or frosted plastic cover. It can works with Green Image Tech's Strip lights.

Product Specifications

| | |
|-----------------|-------------------------|
| Model | GIT-P3-08 |
| Length | 2500 mm |
| Dimensions (mm) | 23.4 x 8.5 mm |
| Material | Aluminum |
| Max LED Strip | 18 mm |
| Cover Options | Clear, Milky or Frosted |



Technical Drawing



Order Form

| | | | | | | | | |
|-----------------|------------------|---------------------------|---|--|---|--|---|--|
| P3 | - | | - | | - | | - | |
| Series | 2 | 3 | 4 | | | | | |
| 2. MODEL | 3. LENGTH | 4. COVER OPTIONS | | | | | | |
| 08 08 | 2500 2500 (2.5m) | C Clear M Milky F Frosted | | | | | | |

AES ENGINEERING LTD.
FOR BIDDING PURPOSES ONLY

| | | |
|-----------------|------------------------|-------------------|
| ACCEPTABLE ✓ | ACCEPTABLE AS NOTED | NOT ACCEPTABLE |
|-----------------|------------------------|-------------------|

Project Number: 0121.0081
Per: GS Date: 2023-09-05
Reviewed only as to general conformity with the design concept.



SYMMETRY

Acuity Controls Drawing Package

Controls@Symmetry-Lighting.com

PH 778.373.3377

nLight Platform Introduction & Generic Submittal

nLight.AcuityBrands.com



AES ENGINEERING LTD.
FOR BIDDING PURPOSES ONLY

ACCEPTABLE



ACCEPTABLE
AS NOTED

NOT
ACCEPTABLE

Project Number: 0121.0081

Per: GS Date: 2023-09-05

Reviewed only as to general conformity with the design concept.

AcuityBrands®

nLight Platform Introduction & Generic Submittal
BC

Drawing Type:

Prepared For:
Engineering

Date: 2023-08-18

Scale: NOT TO SCALE

Drawn By: BY

Project #: SYM

DWG Ref: NONE

Sheet: LC0.0

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2022-08-18

Job Name: nLight Platform Introduction & Generic Submittal

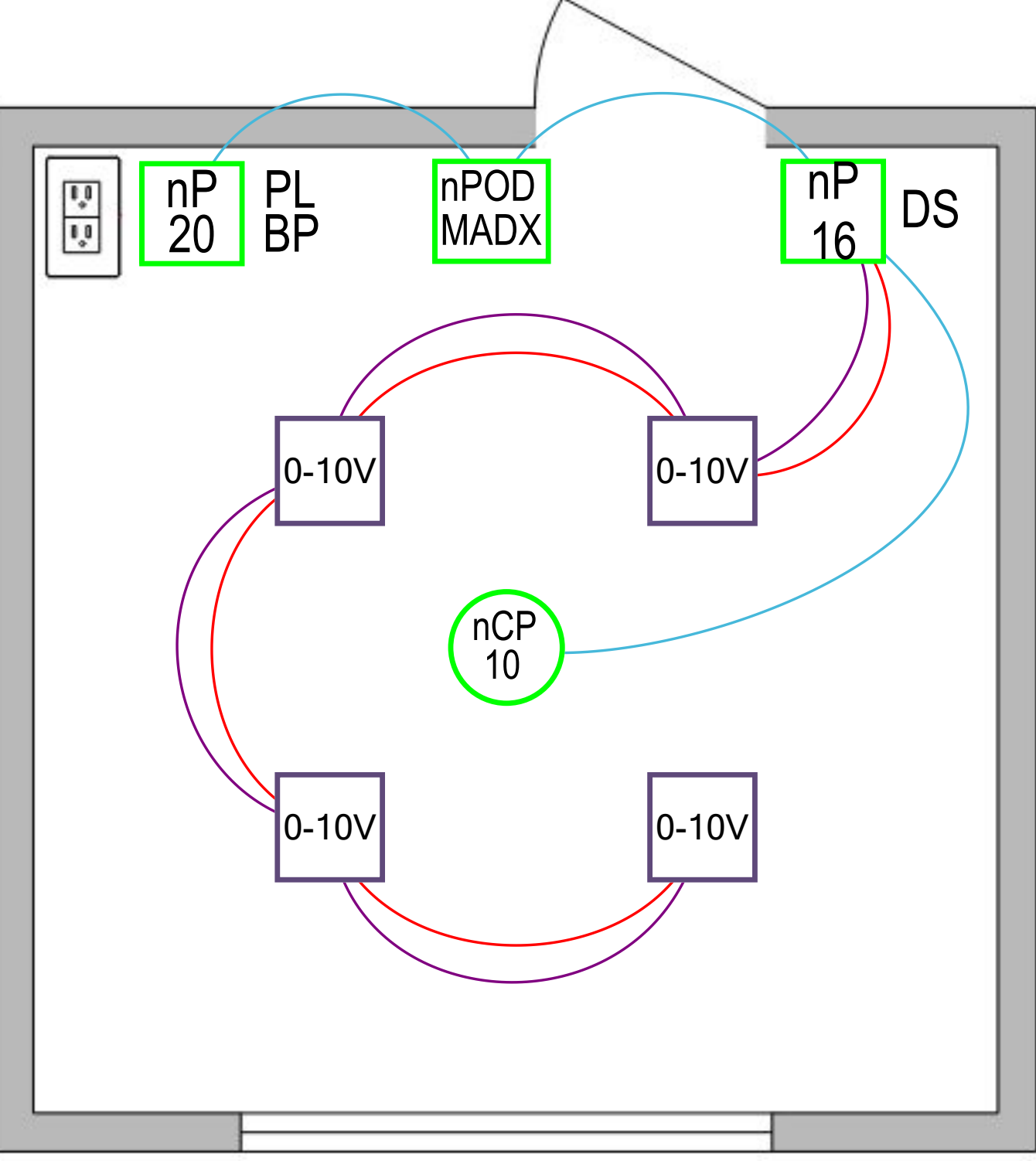
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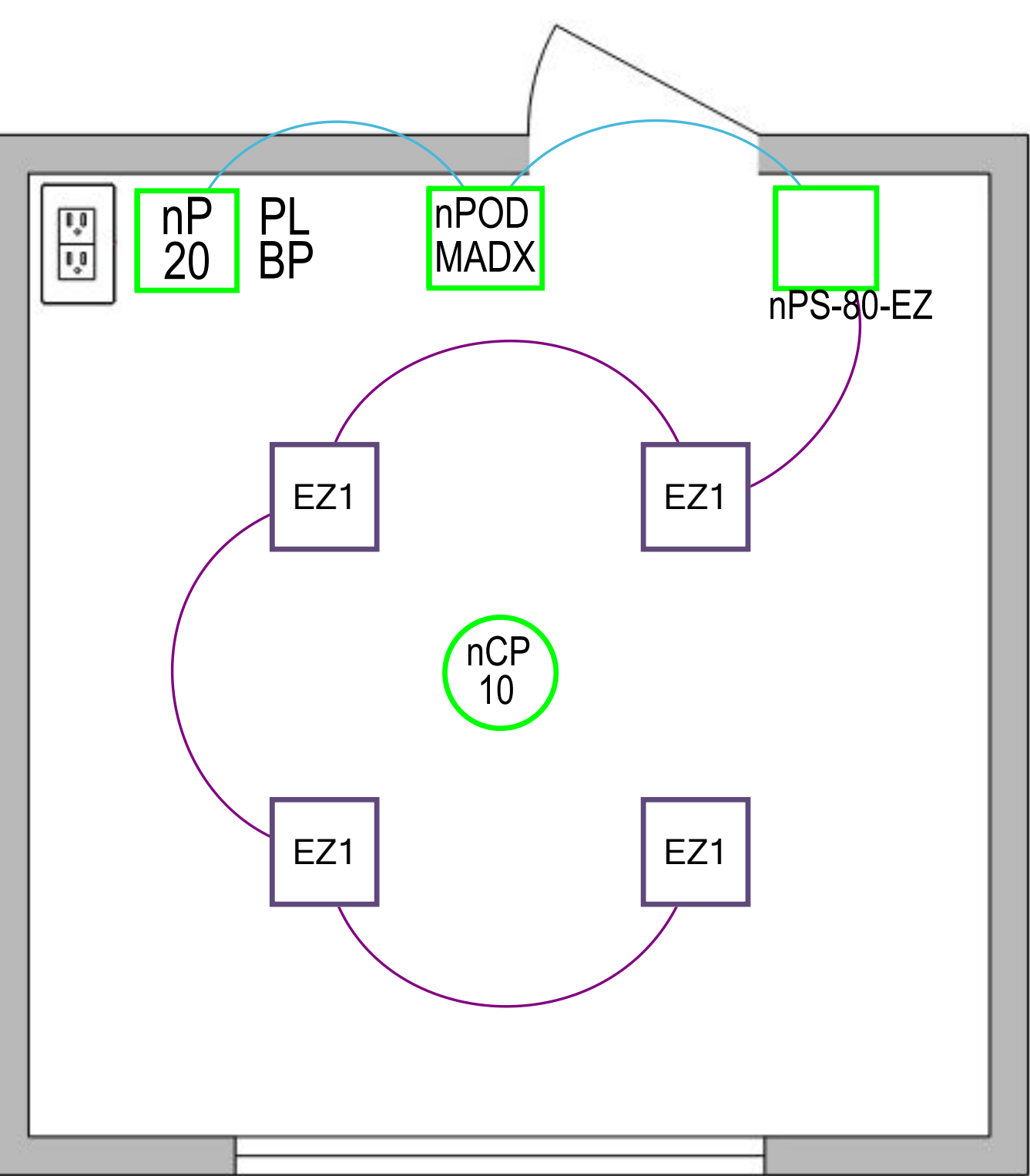
Enclosed Office Examples - Stand Alone

nLight Wired - Stand Alone

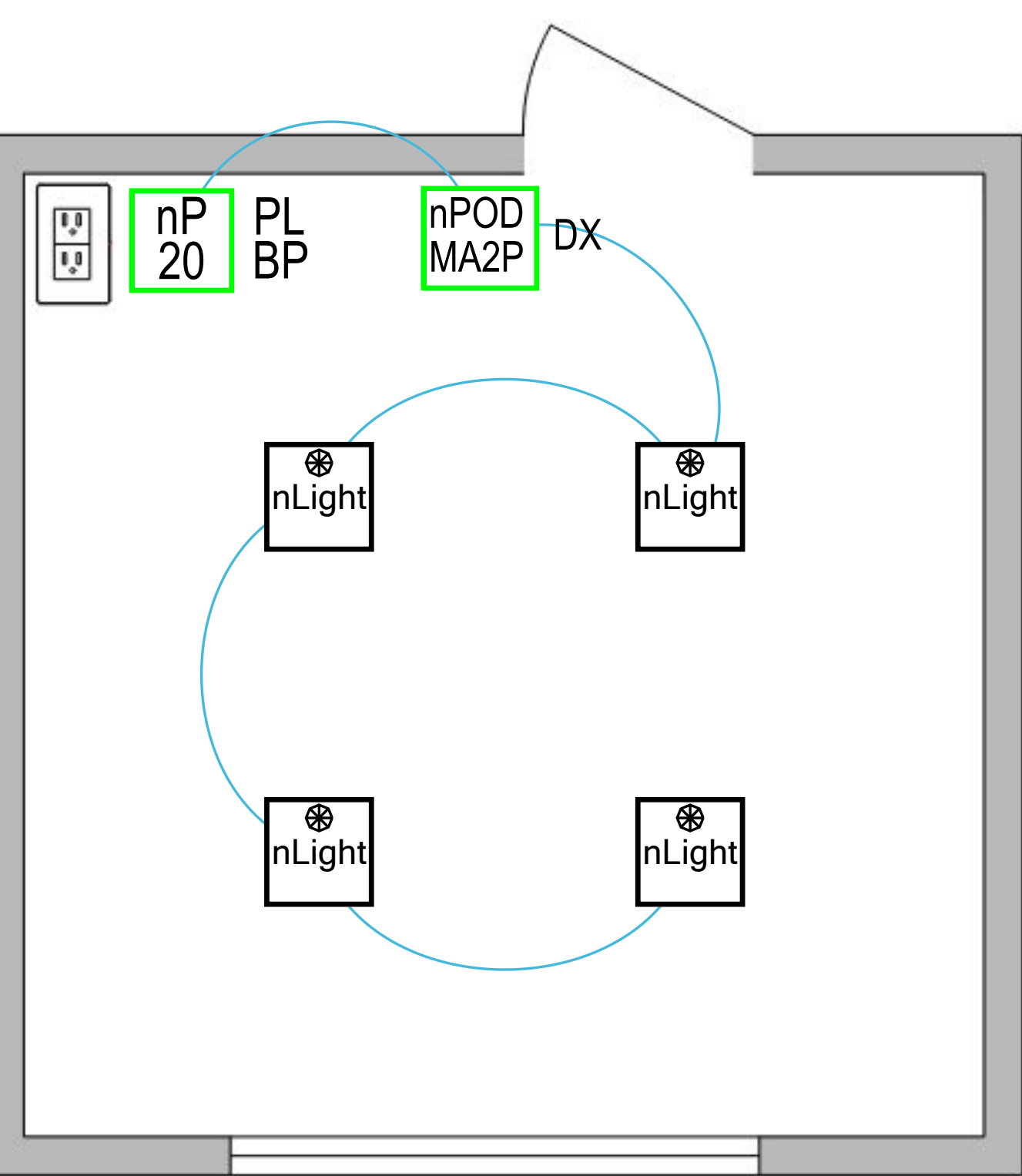
0-10V - nLight Power Pack



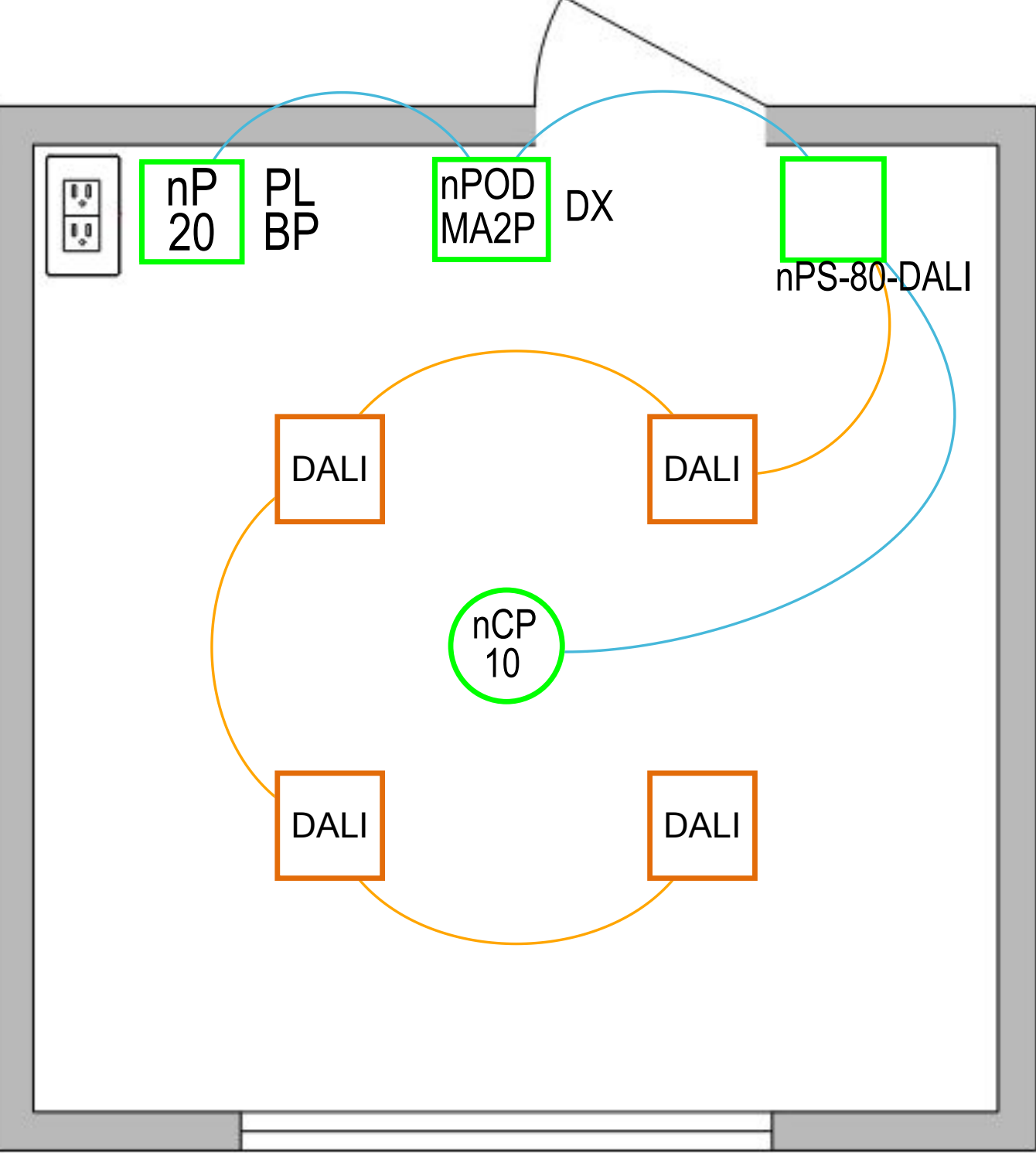
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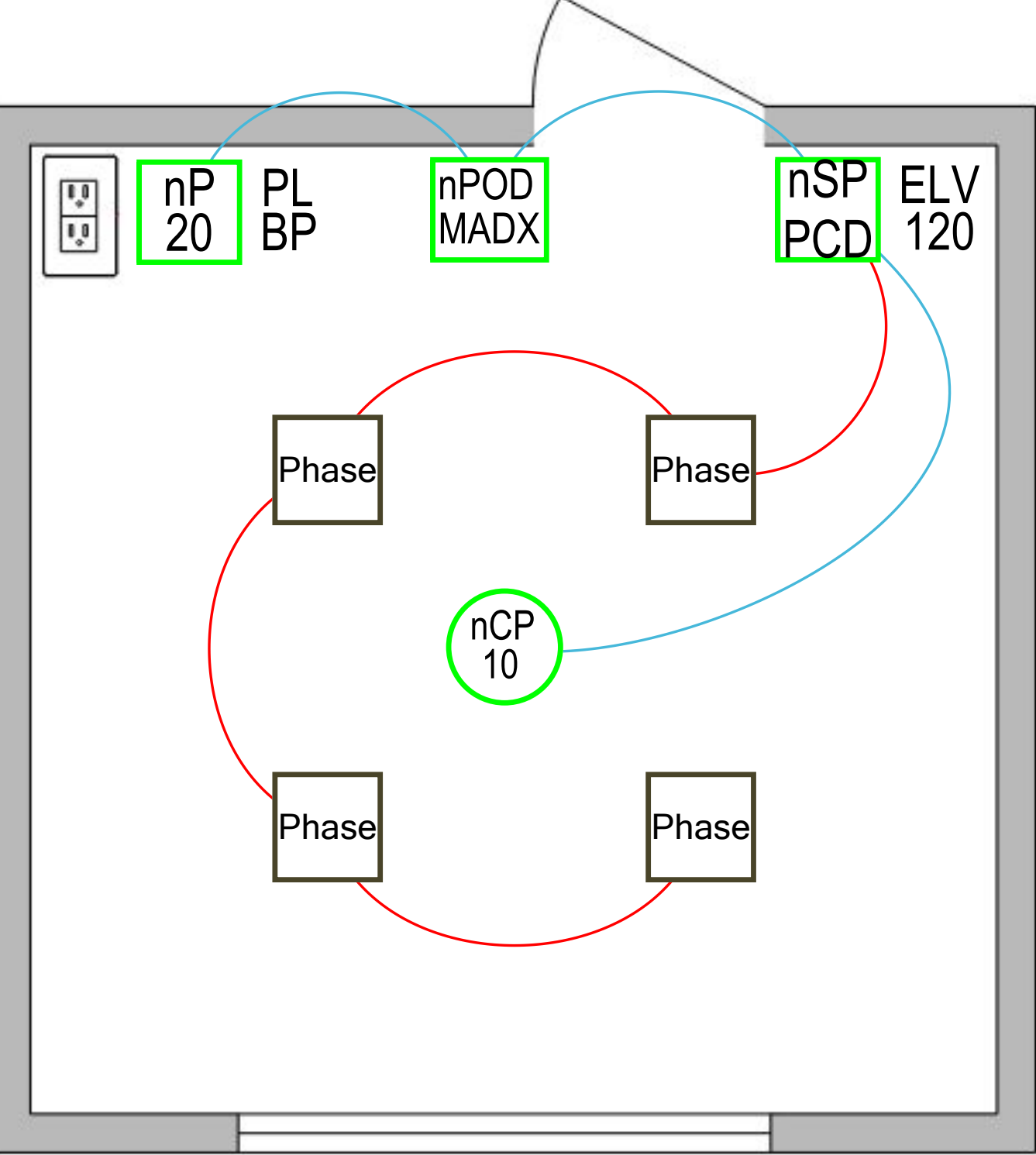
nLight Enabled



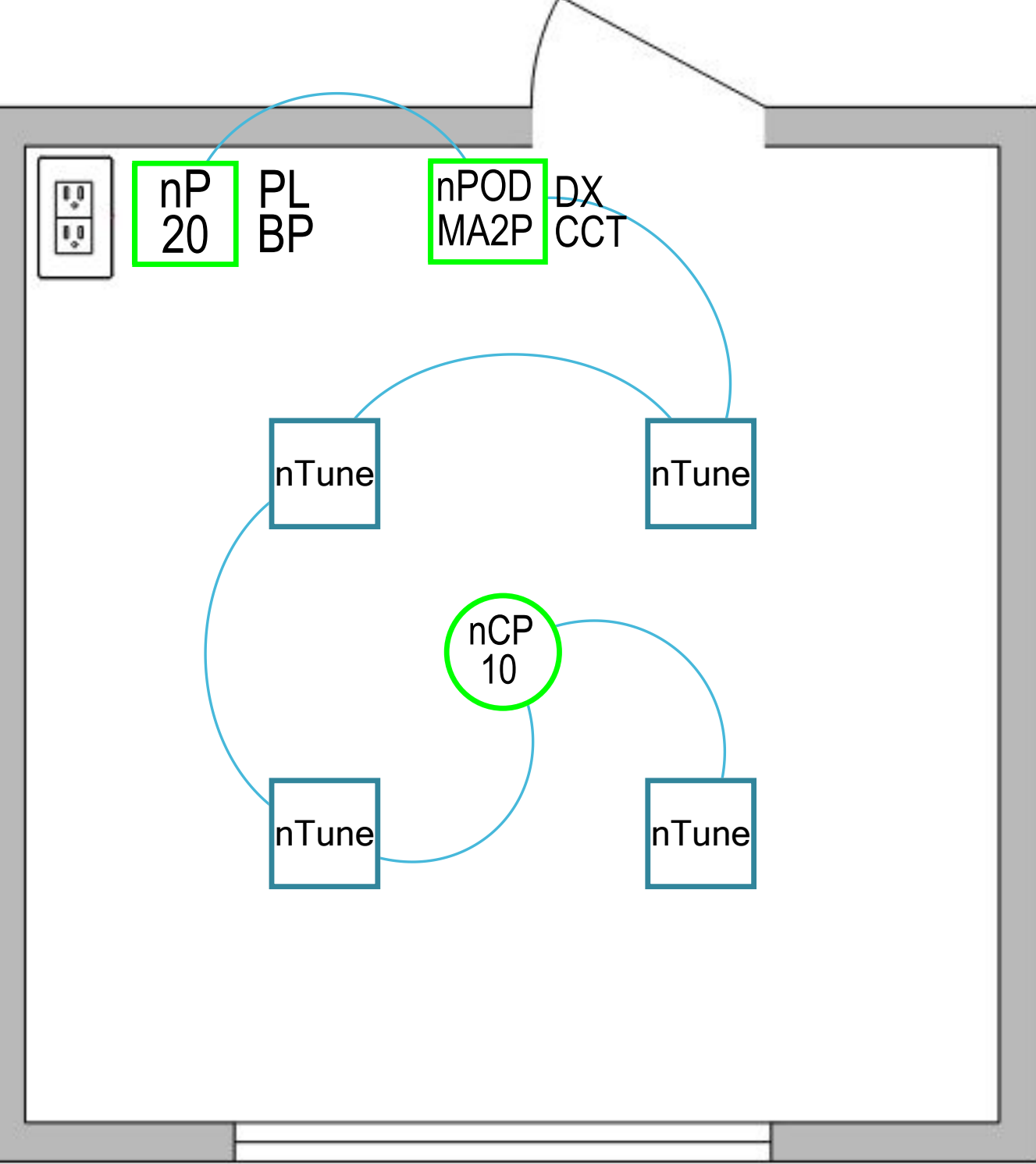
DALI - nDALI



Phase Dimming - nLight

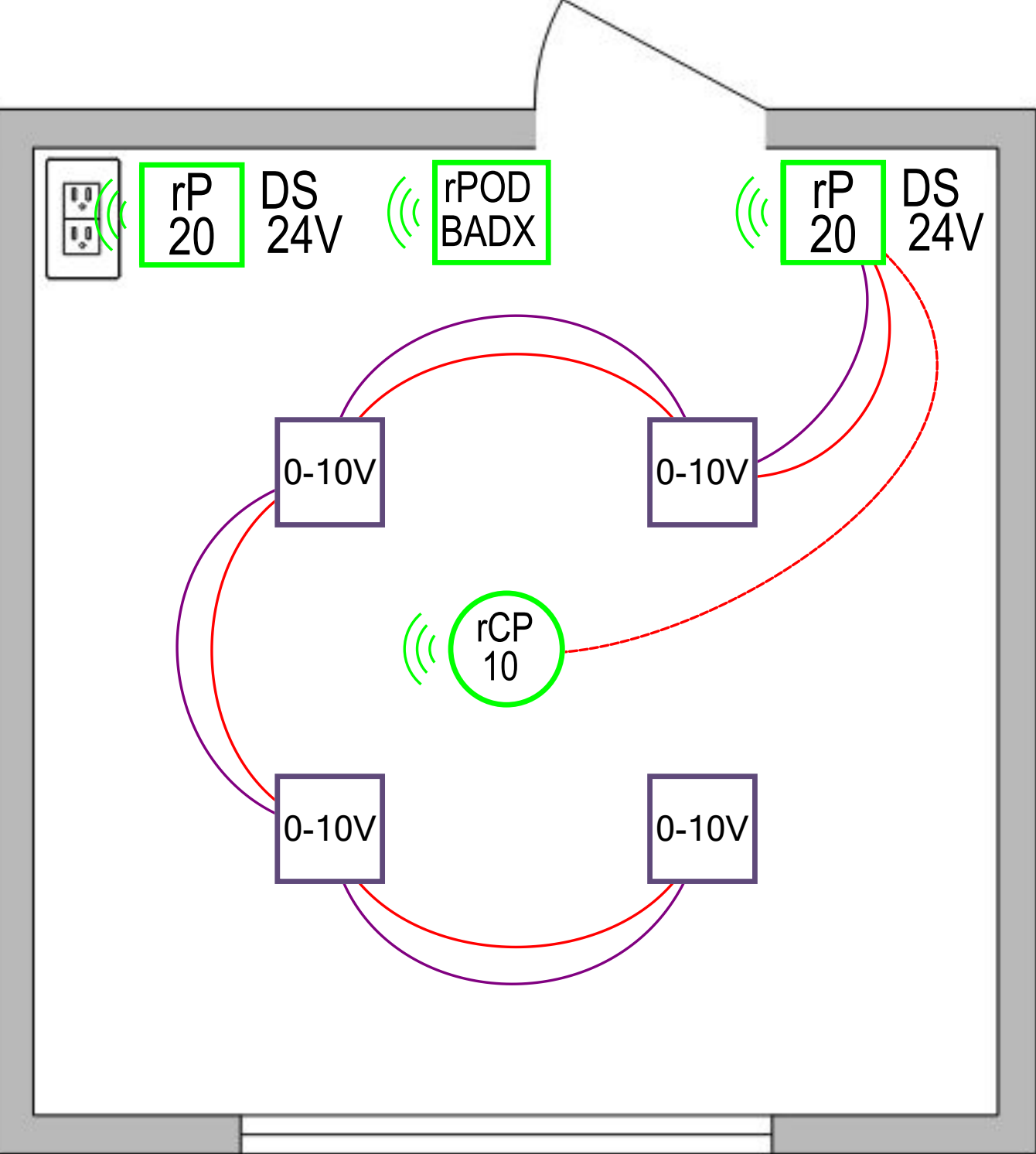


Tunable White - nTune CCT

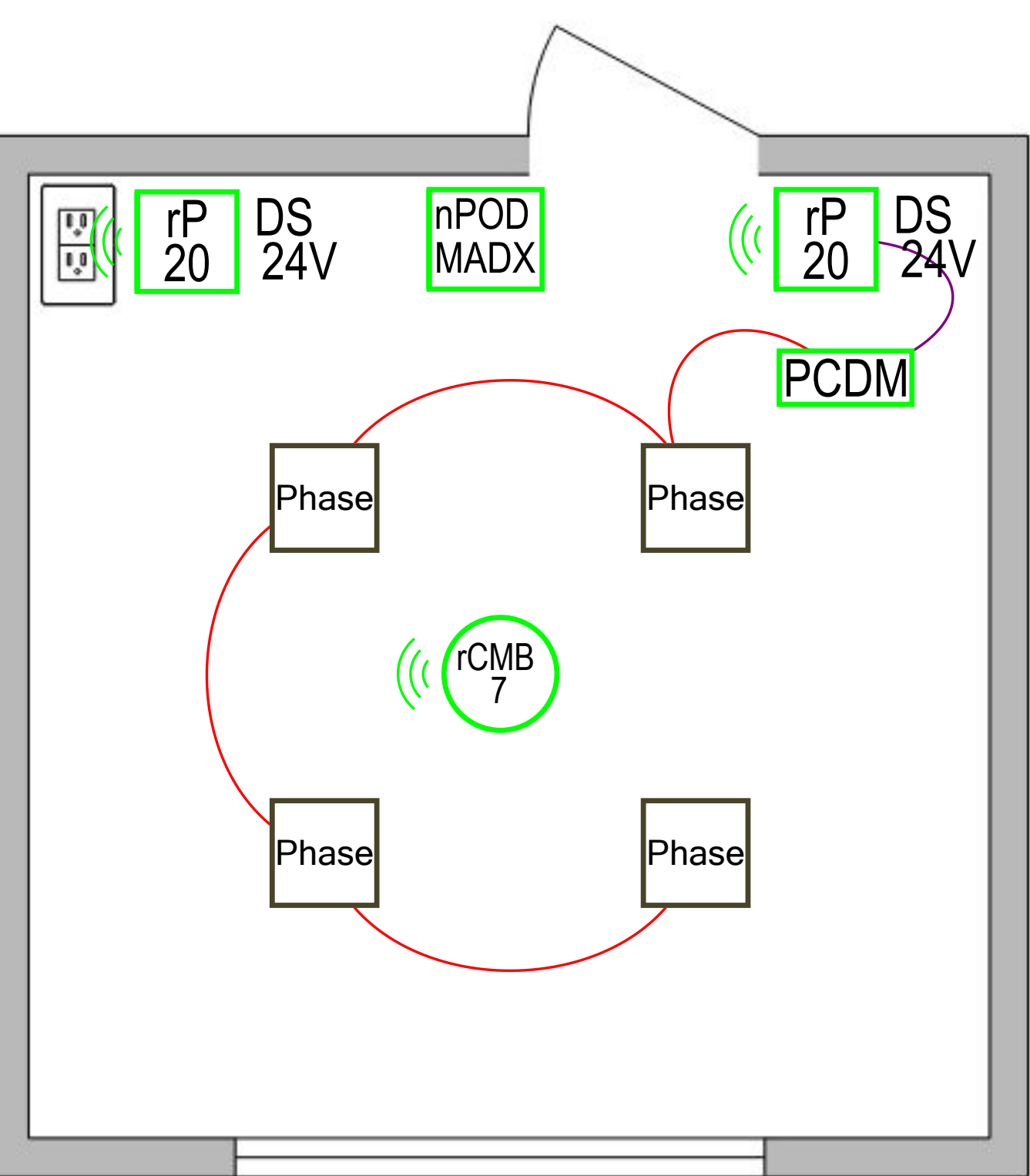


nLight Air - Stand Alone

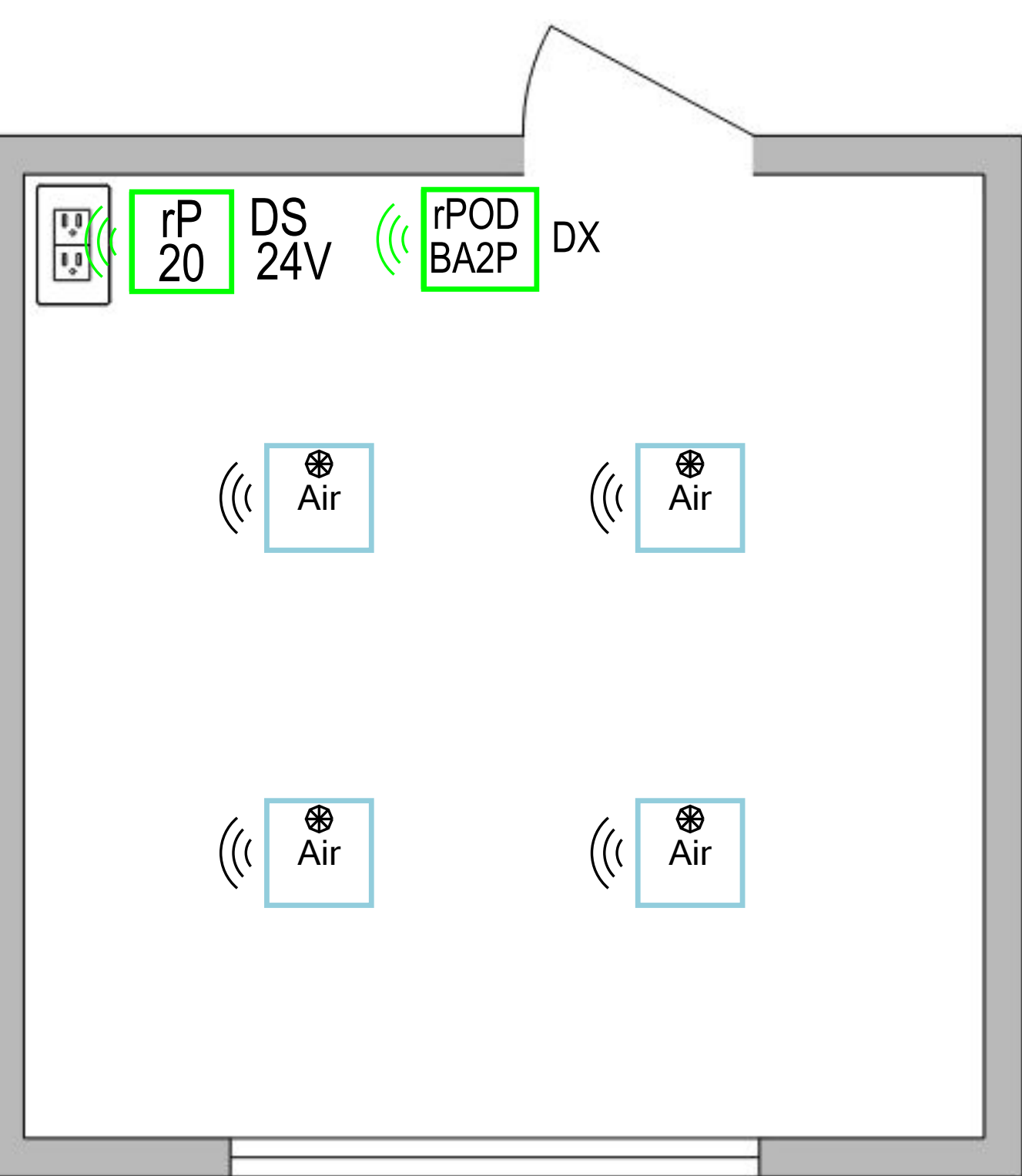
0-10V - nLight Air Power Pack



Phase Dimming - nLight Air



nLight Air Enabled



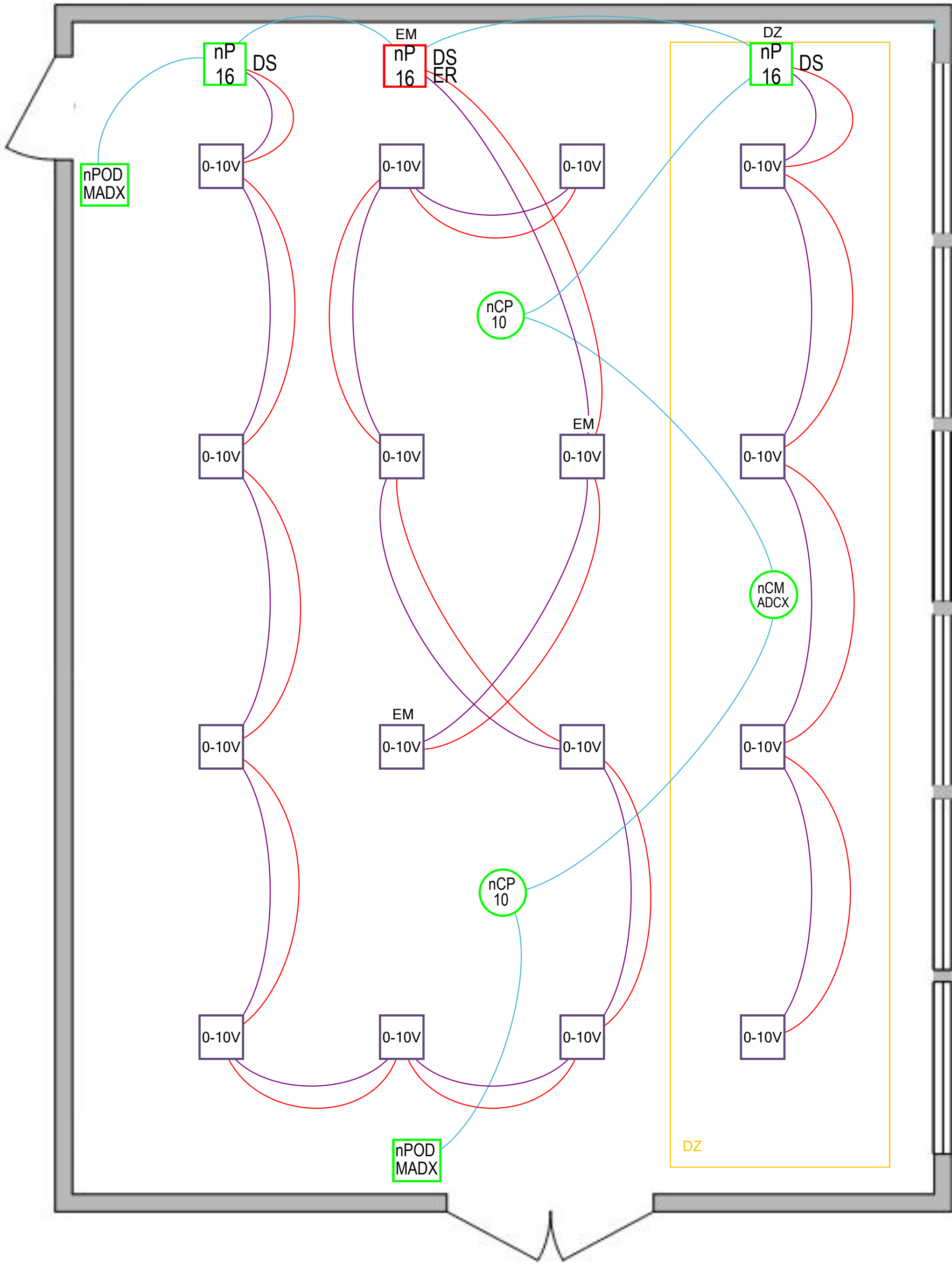
| PRODUCT LEGEND Enclosed Office Examples | |
|--|--|
| | 0-10V Luminaire 0-10V Dimming to 10% |
| | Air Luminaire nLight Air enabled, wireless control integral combination occupancy & daylight sensor with 7-15" mounting height lens |
| | DALI Luminaire Dali control |
| | EZ1 Luminaire 0-10V Dimming |
| | nLight Luminaire nLight enabled Integral combination occupancy & daylight sensor with 7-15" mounting height lens |
| | nTune Luminaire nLight Enabled tunable white |
| | Phase Luminaire Line Voltage Phase Dimming (2W3WMLV/ELV) |

| PRODUCT LEGEND Enclosed Office Examples | |
|--|---|
| | DM2 PCDM Phase Control Dimming Module |
| | DP1 NPP16 DS EFP Power/Relay Pack, Dimming Side Output, External Fault Protection |
| | DP2 NSP5 PCD ELV 120 Secondary Relay Pack, Phase Control Dimming, Electronic Low Voltage, 120V |
| | OS1 NCM PDT 10 RJB Low Voltage Ceiling Mount Sensor, Passive Dual Technology, Large Motion / Extended Range 360° Lens, Rear RJ-45 Ports |
| | OS3 RCMSB 7 G2 Ceiling Mount Battery Powered Sensor, Mini-Low Bay 360° Lens, Generation Two |
| | OS4 RCMS PDT 10 G2 Networked nLight AIR occupancy and daylight sensor, Passive Dual Technology, Large Motion / Extended Range 360° Lens, Generation Two |
| | PP1 NPP20 PL BP Power/Relay Pack, Plug Load, Bus power |
| | PP4 RPP20 DS 24V EFP G2 nLight Air Power/Relay Pack, Networked Version, Dimming Side Output, 24-volt output, External Fault Protection, Generation Two |
| | PS1 NPS 80 DALI Power Supply, 80 mA, DALI Driver Control |
| | PS4 NPS 80 EZ Power Supply, 80 mA, eldoLED Driver Control |
| | SW1 RPODBA DX XX G2 nLight Preset Wall control, Raise/Lower Dimming, Generation Two |
| | SW4 NPODMA 2P DX XX nLight Wired Aesthetic Wallpod, 2-Pole, Raise/Lower Dimming |
| | SW6 NPODMA 2P DX CCT XX nLight Wired Aesthetic Wallpod, 2-Pole, Raise/Lower Dimming, Correlated color temperature |
| | SW7 NPODMA DX XX nLight Wired Aesthetic Wallpod, Raise/Lower Dimming |
| | SW8 RPODBA 2P DX XX G2 nLight Preset Wall control, 2-Pole, Raise/Lower Dimming, Generation Two |

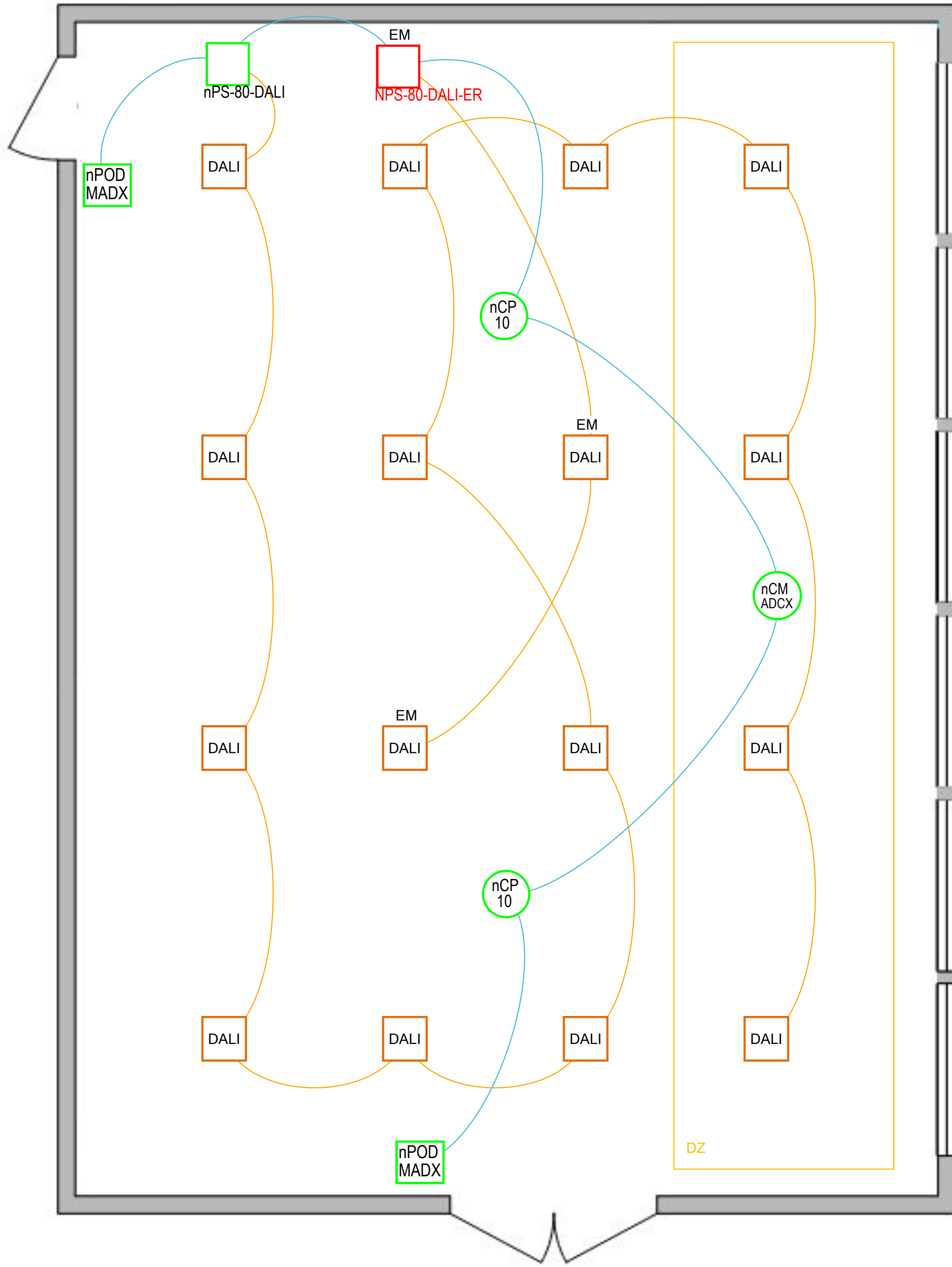
| WIRE LEGEND nLight Networked | |
|---------------------------------|--|
| | 0-10 0-10 0-10v dimming wire |
| | CAT5 Ethernet CAT5e Ethernet CAT5e network cable (non nLight) |
| | CAT5 nLight CAT5e nLight Pre-terminated CAT5e cable for nLight communication network |
| | DALI DALI DALI dimming cable |
| | DMX DMX DMX cable (BELDEN 9829) |
| | LINE Line Voltage Line voltage cable |
| | LV Low Voltage Low voltage cable |
| | USB USB USB cable |

Open Office Examples

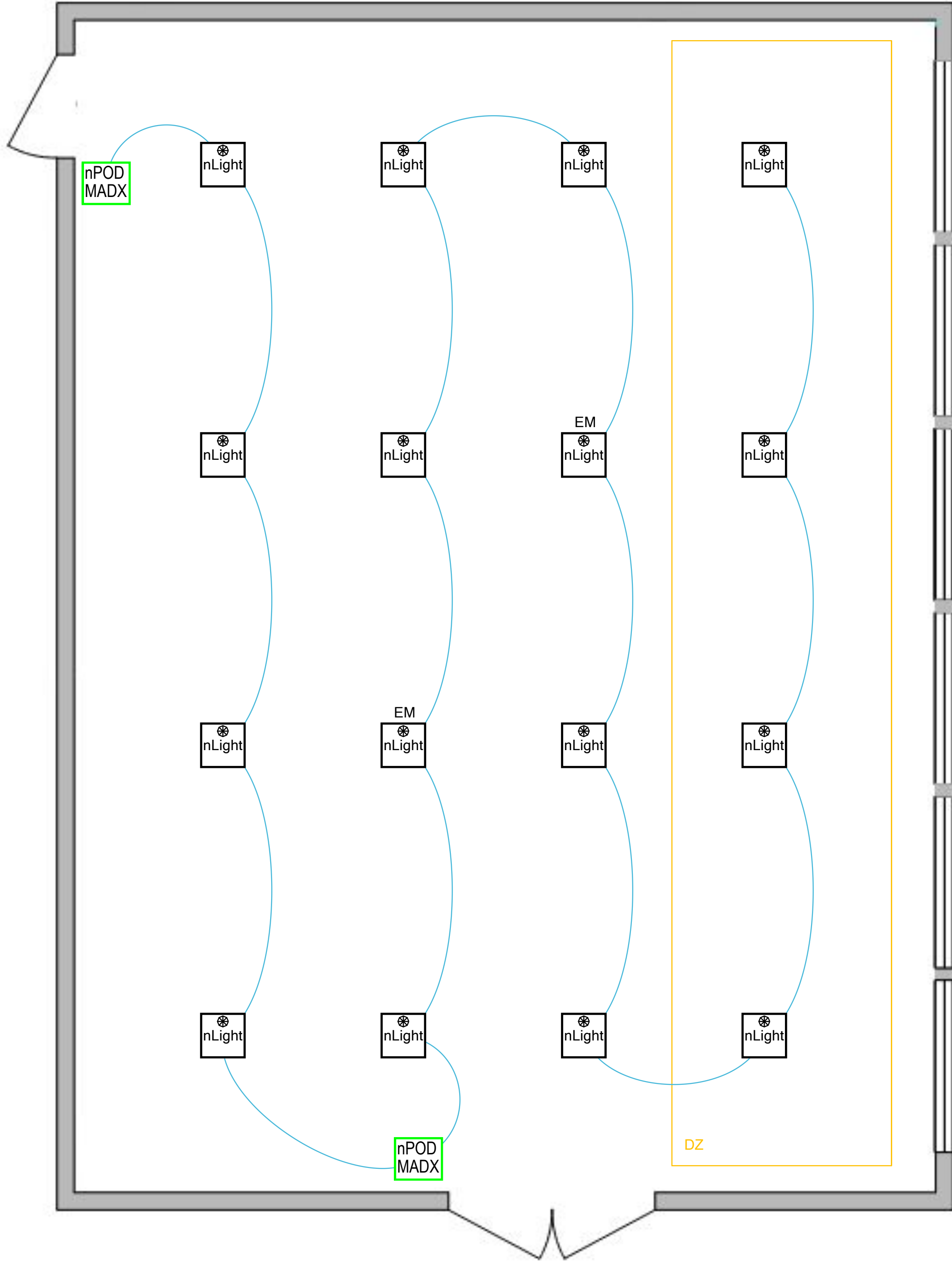
0-10V - nLight Power Pack



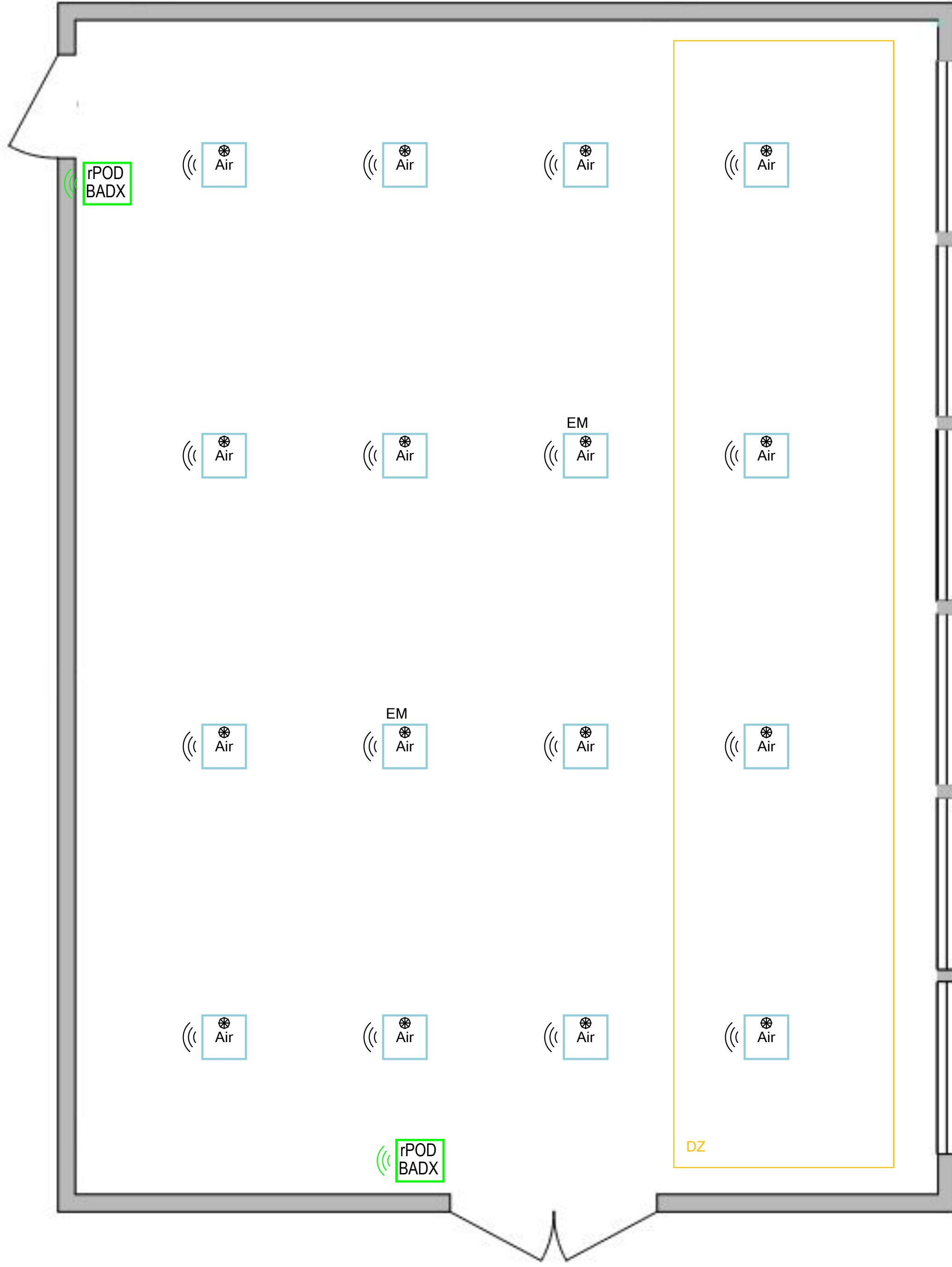
DALI - nDALI



nLight Enabled



nLight Air Enabled



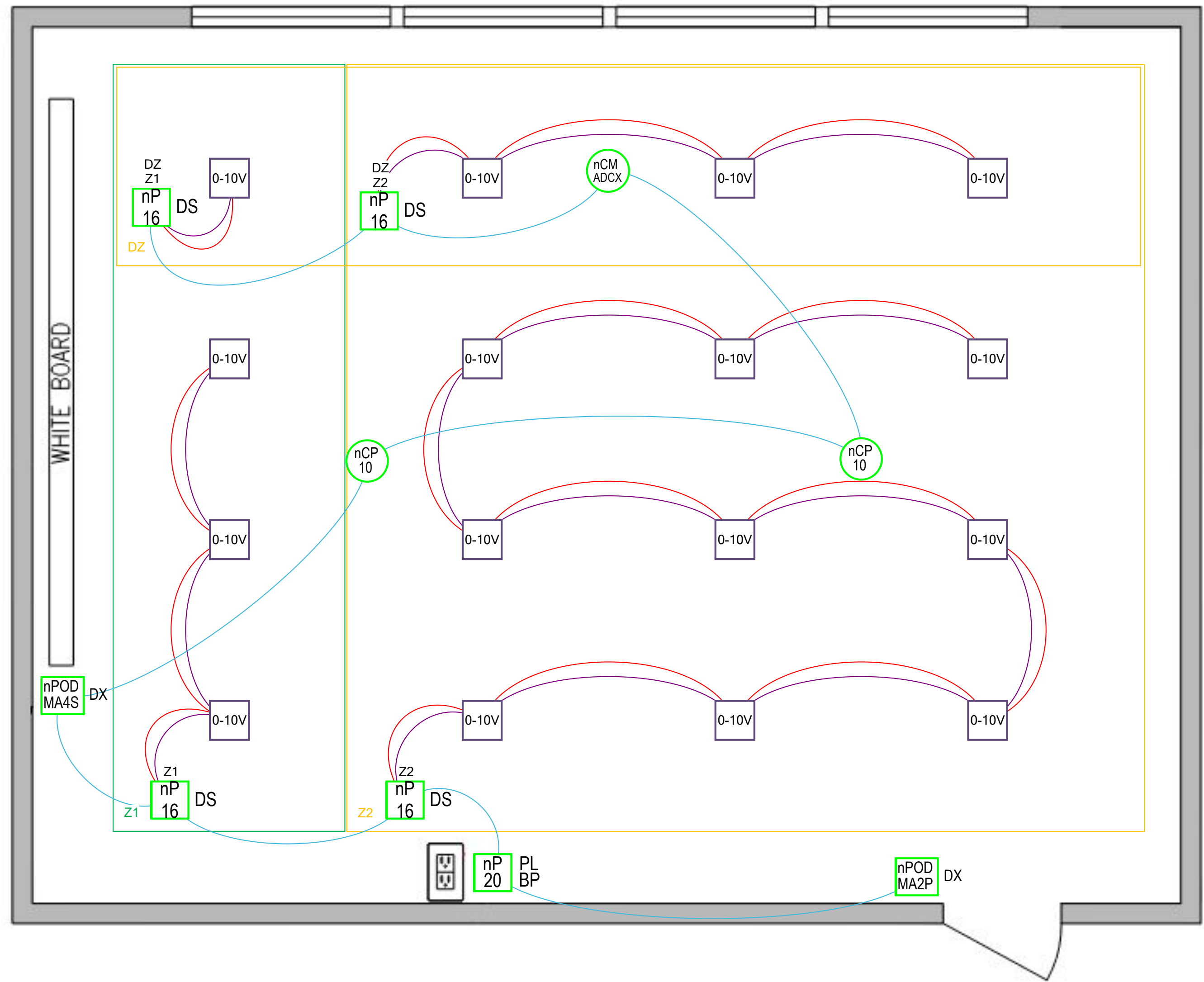
| PRODUCT LEGEND Open Office Examples | |
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| | 0-10V Luminaire 0-10V Dimming to 10% |
| | Air Luminaire nLight Air enabled, wireless control integral combination occupancy & daylight sensor with 7-15' mounting height lens |
| | DALI Luminaire Dali control |
| | nLight Luminaire nLight enabled Integral combination occupancy & daylight sensor with 7-15' mounting height lens |

| PRODUCT LEGEND Open Office Examples | |
|--|---|
| | DE1 NPP16 DS ER EFP Power/Relay Pack, Dimming Side Output, UL924 Emergency Operation, External Fault Protection |
| | DP1 NPP16 DS EFP Power/Relay Pack, Dimming Side Output, External Fault Protection |
| | OS1 NCM PDT 10 RJ/B Low Voltage Ceiling Mount Sensor, Passive Dual Technology, Large Motion / Extended Range 360° Lens, Rear RJ-45 Ports |
| | PC2 NCM ADCX RJ/B Low Voltage Ceiling Mount Sensor, Photocell w/ Auto Dimming, 0-10V Output Provided by Other Device(s), Rear RJ-45 Ports |
| | PS1 NPS 80 DALI Power Supply, 80 mA, DALI Driver Control |
| | PS7 NPS 80 DALI ER Power Supply, 80 mA, DALI Driver Control, UL924 Emergency Operation |
| | SW1 RPODBA DX XX G2 nLight Preset Wall control, Raise/Lower Dimming, Generation Two |
| | SW7 NPODMA DX XX nLight Wired Aesthetic Wallpod, Raise/Lower Dimming |

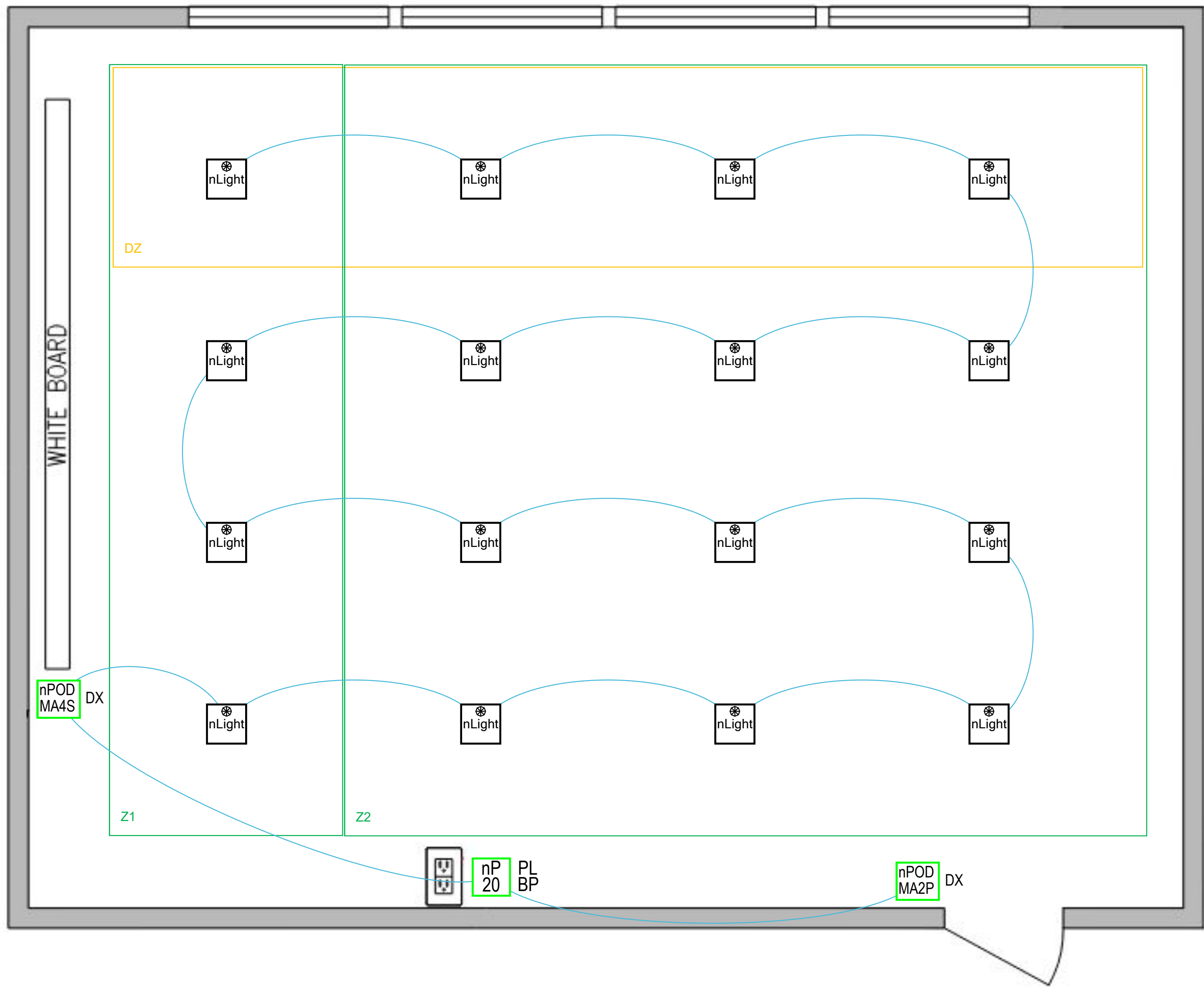
| WIRE LEGEND nLight Networked | |
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| | LV Low Voltage Low voltage cable |
| | USB USB USB cable |

Classroom Examples

0-10V - nLight Power Pack



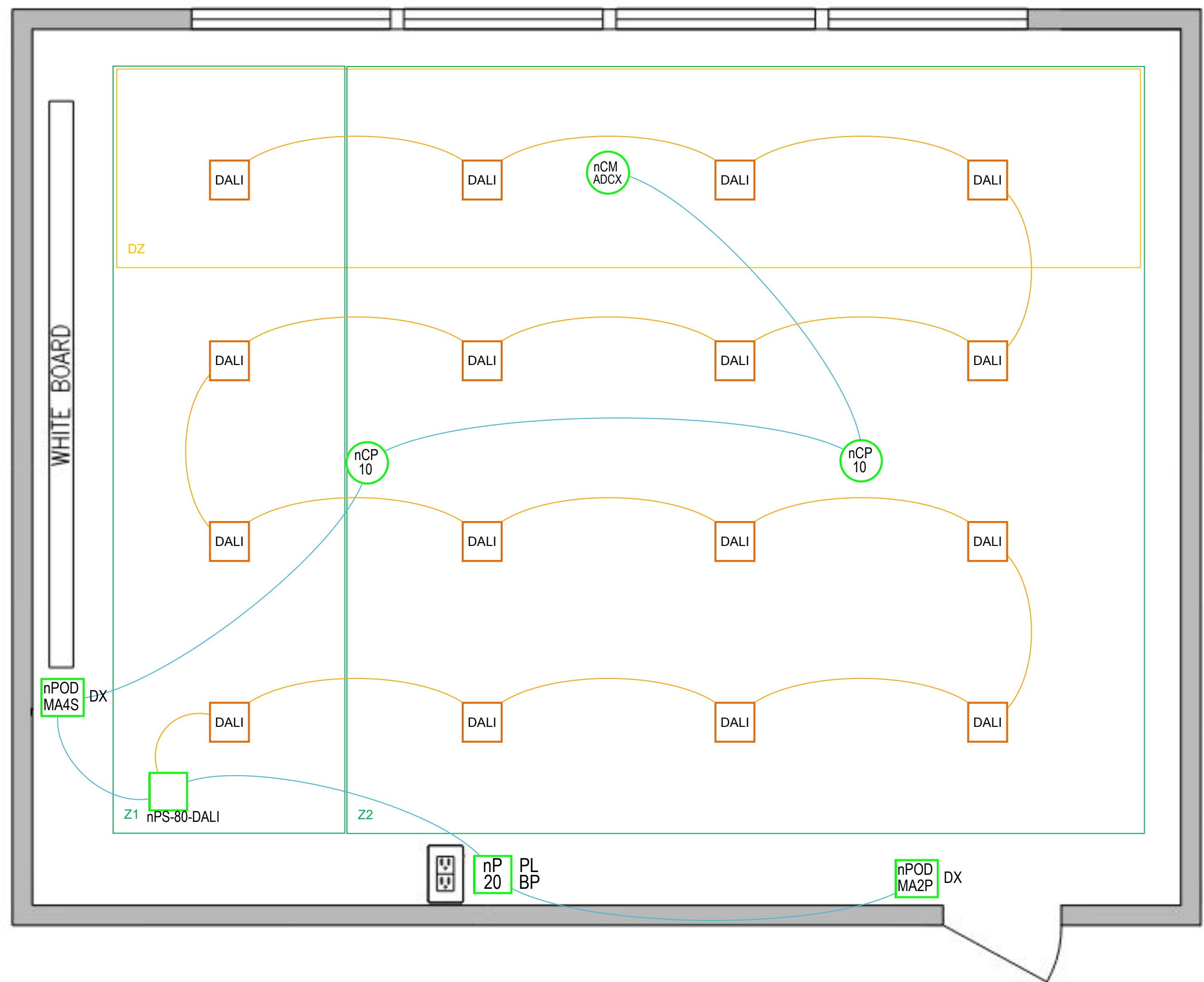
nLight Enabled



| PRODUCT LEGEND Classroom Examples | |
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| PRODUCT LEGEND Classroom Examples | |
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| | PP1 NPP20 PL BP Power/Relay Pack, Plug Load, Bus power |
| | PP4 RPP20 DS 24V EFP G2 nLight Air Power/Relay Pack, Networked Version, Dimming Side Output, 24 volt output, External Fault Protection, Generation Two |
| | PS1 NPS 80 DALI Power Supply, 80 mA, DALI Driver Control |
| | SW11 RPODBA 4S DX XX G2 nLight Preset Wall control, 4 scene control, Raise/Lower Dimming, Generation Two |
| | SW4 NPODMA 2P DX XX nLight Wired Aesthetic Wallpod, 2-Pole, Raise/Lower Dimming |
| | SW8 RPODBA 2P DX XX G2 nLight Preset Wall control, 2-Pole, Raise/Lower Dimming, Generation Two |
| | SW9 NPODMA 4S DX XX nLight Wired Aesthetic Wallpod, 4 scene control, Raise/Lower Dimming |

DALI - nDALI

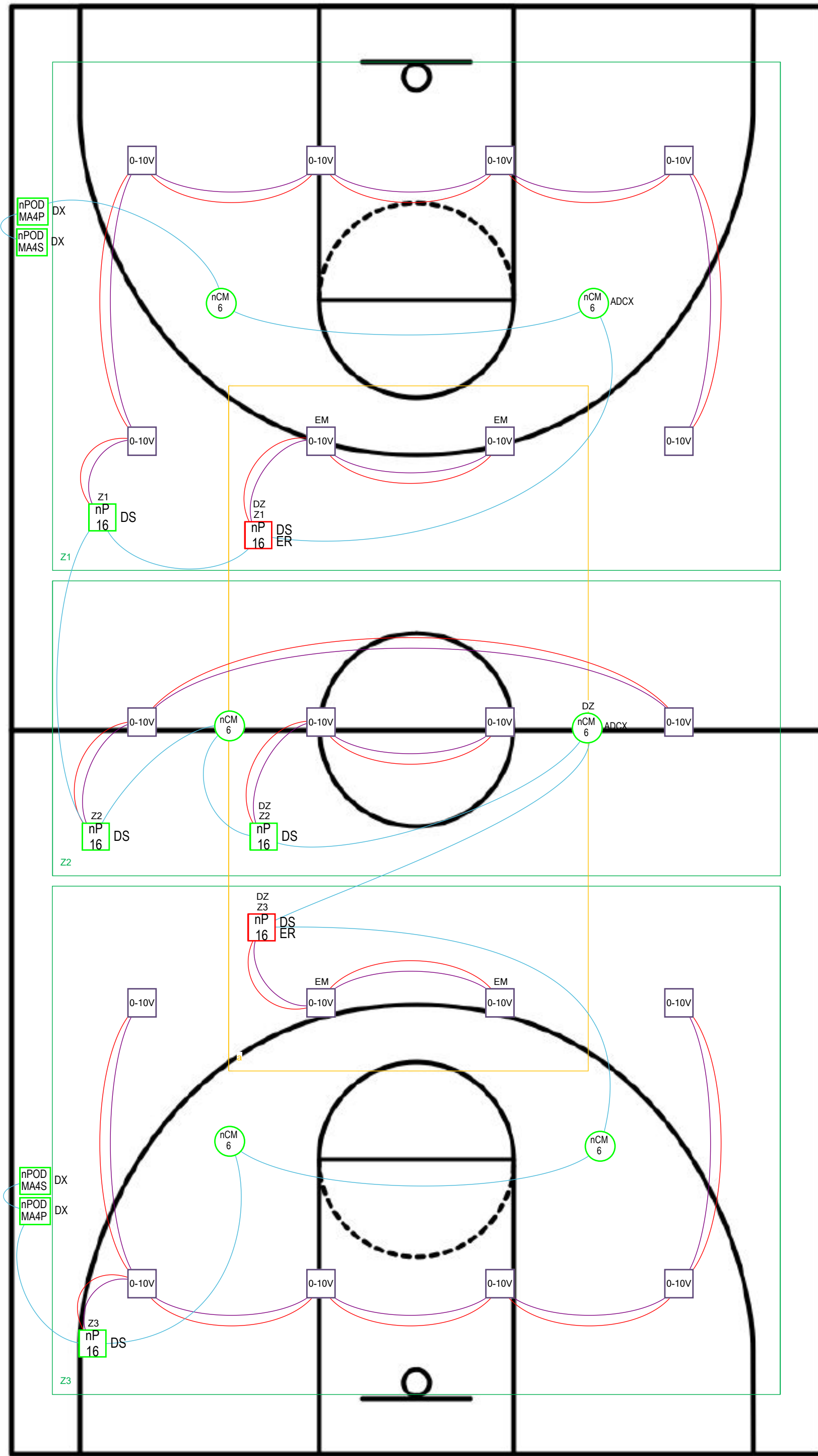


nLight Air Enabled

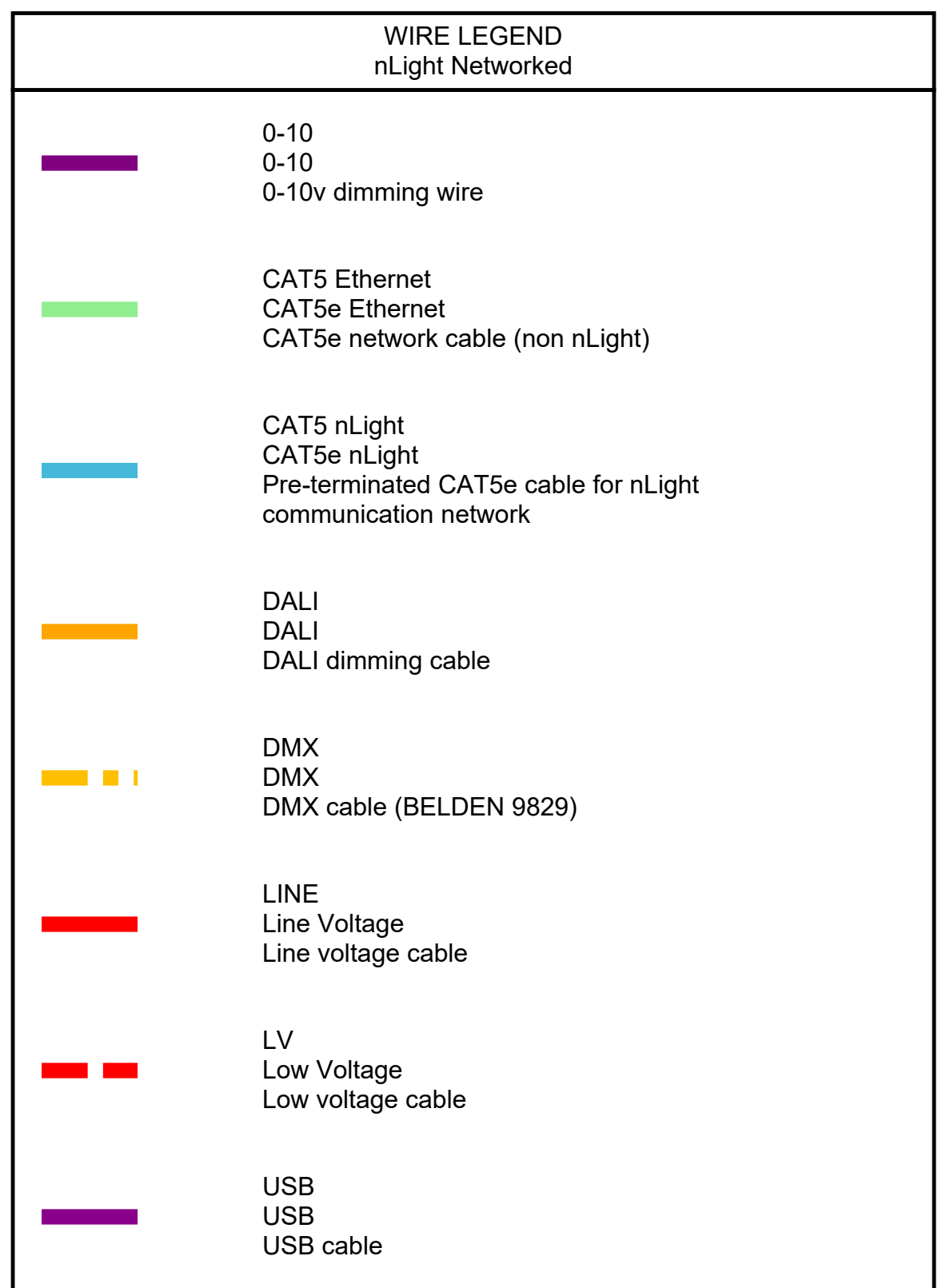
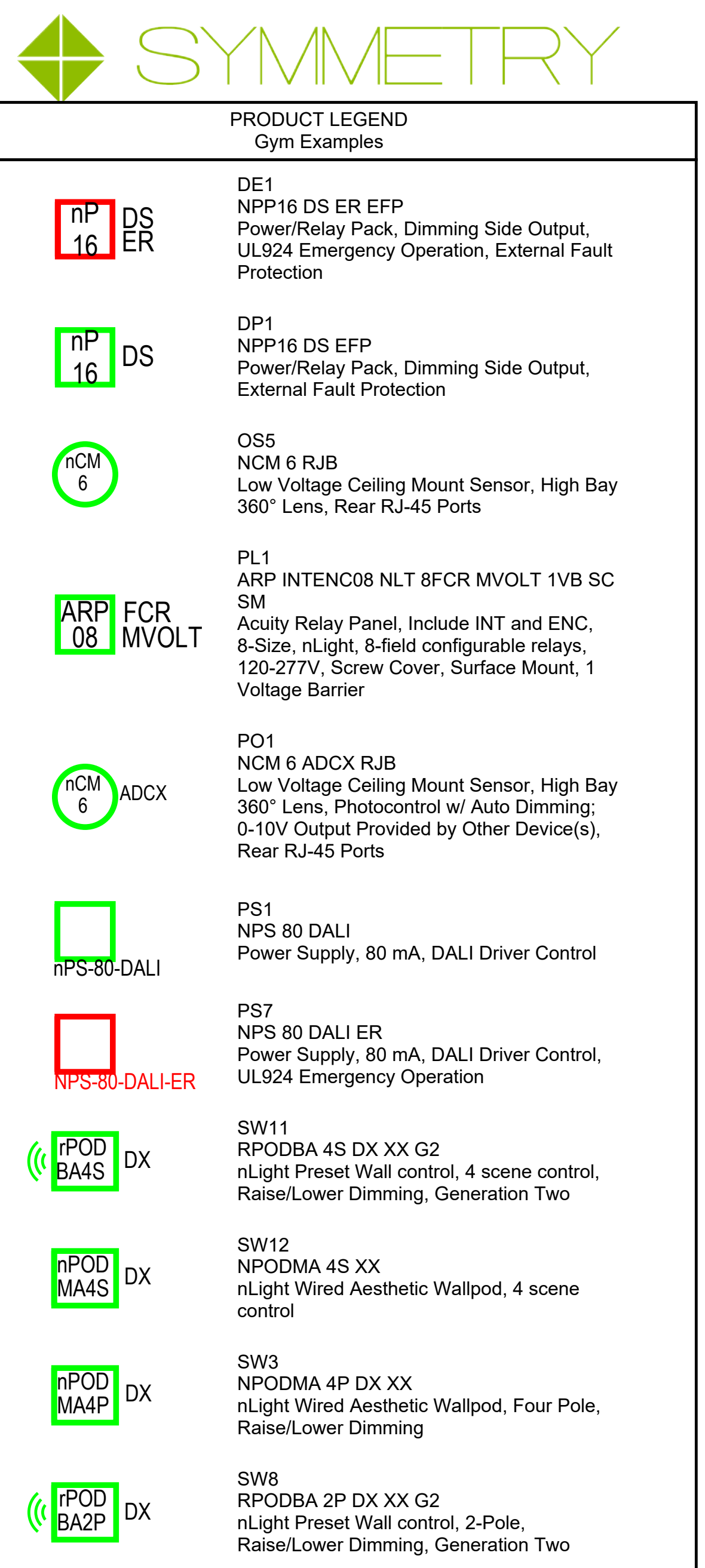
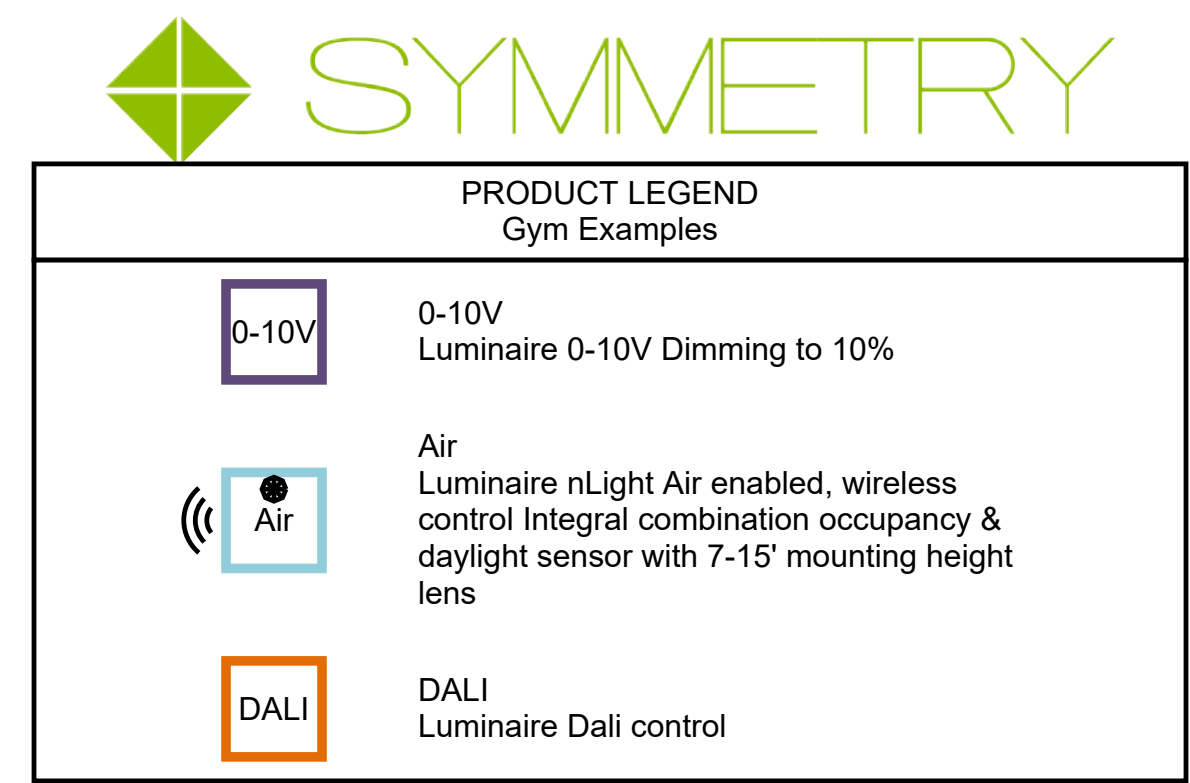
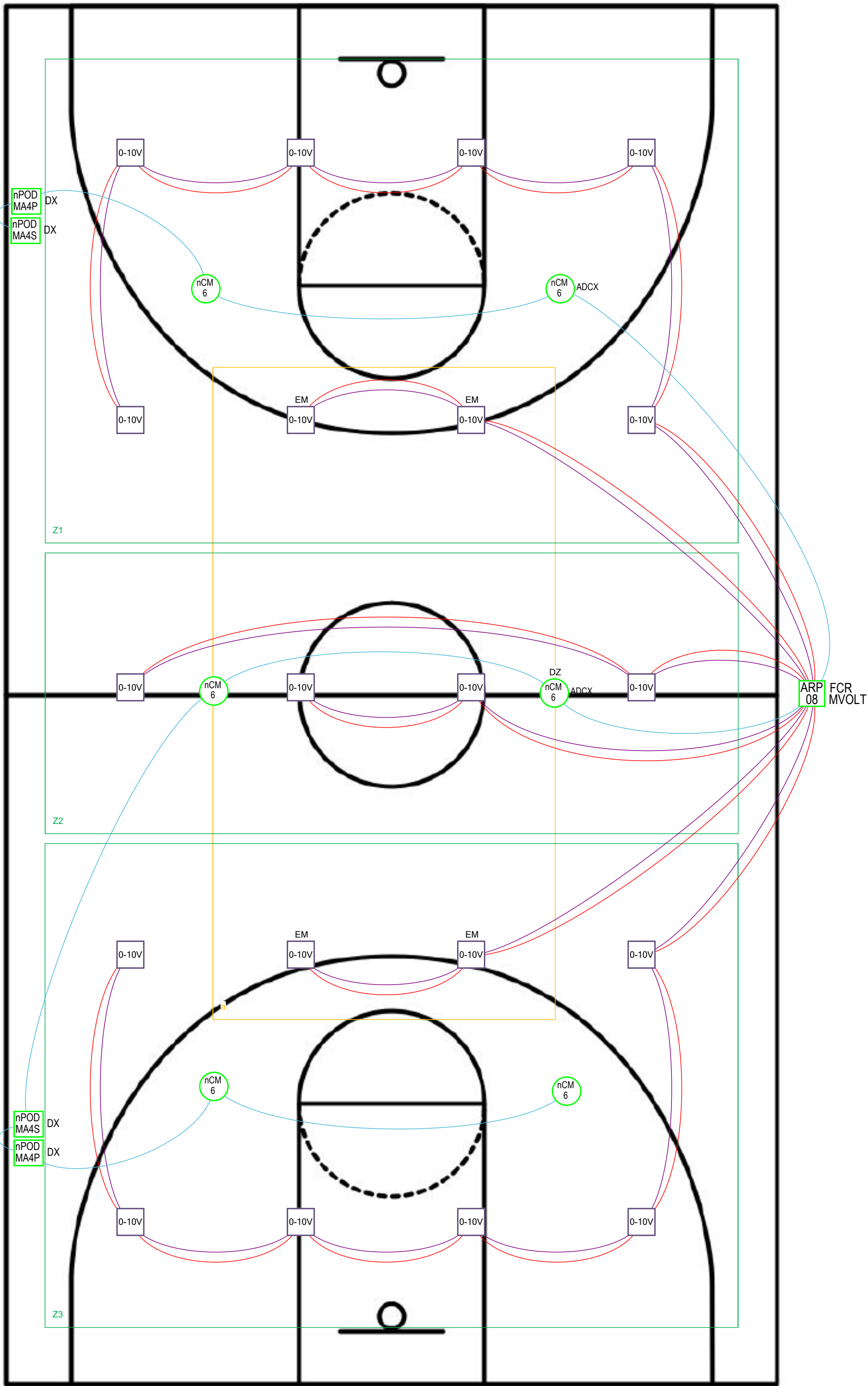


| WIRE LEGEND nLight Networked | |
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0-10V - nLight Power Pack

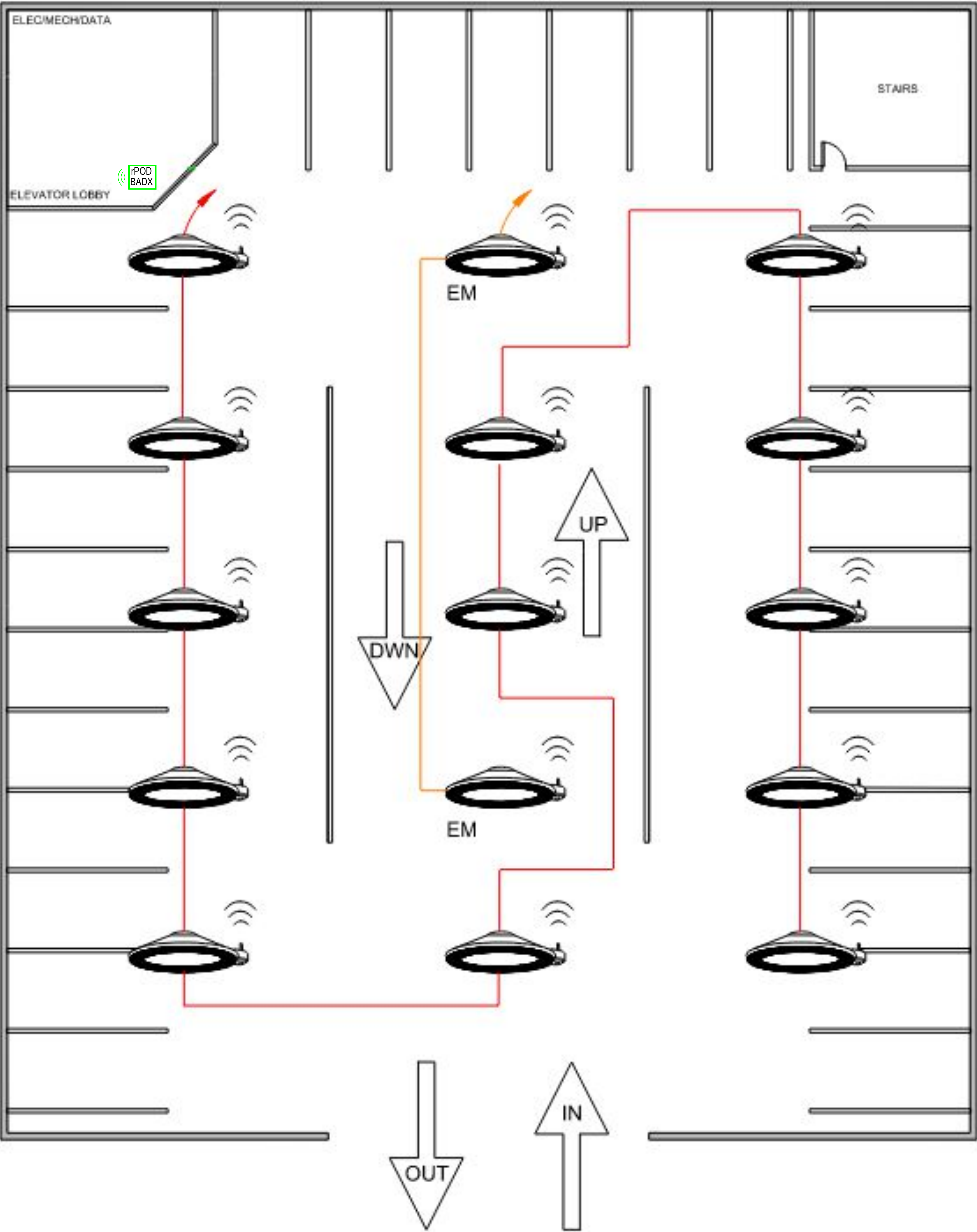




0-10V - nLight Relay Panel - ARF



Parking Garage

nLight Air

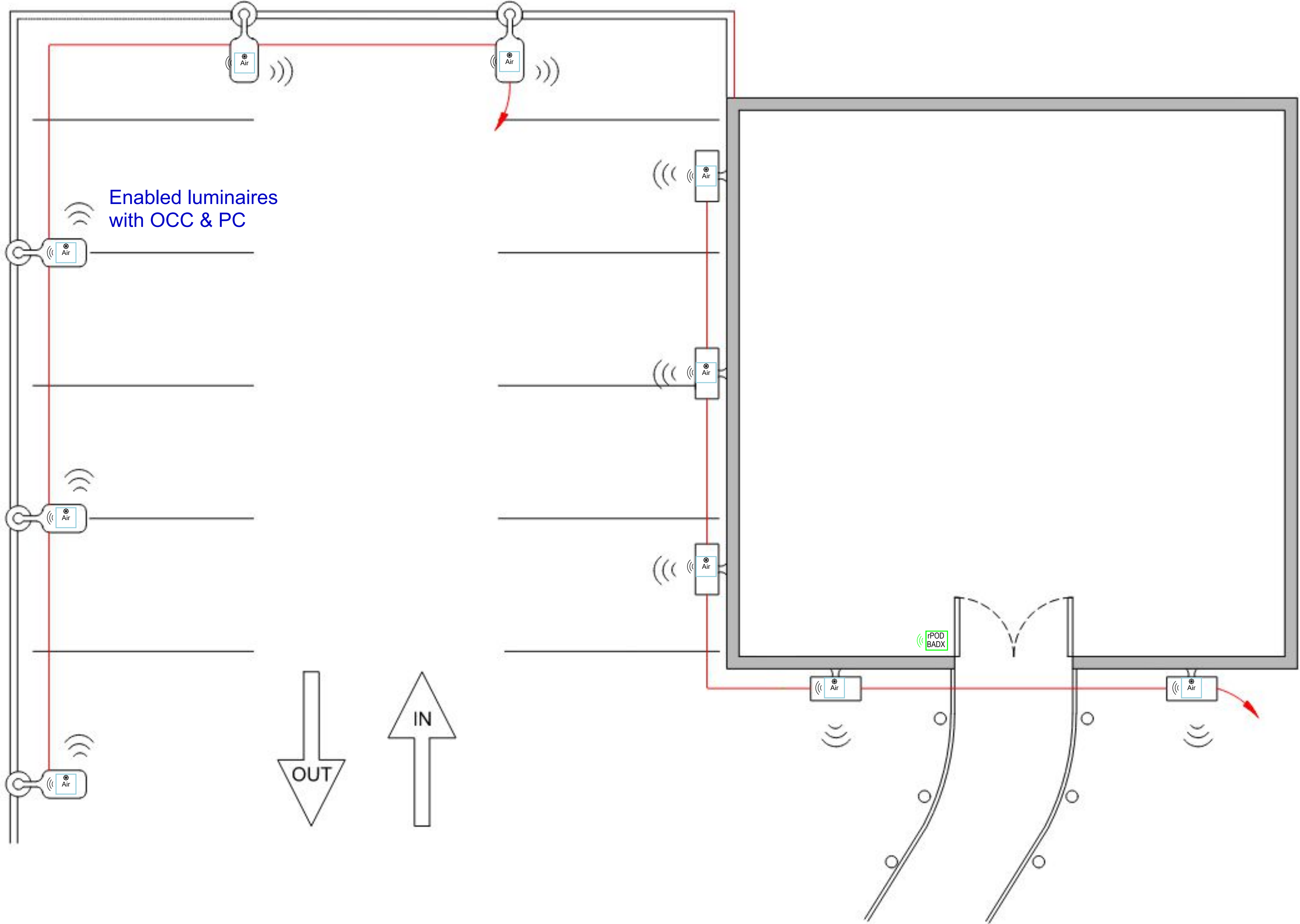



| PRODUCT LEGEND | |
|---|--|
| Parking Garage Example | |
|  | SW1 RPODBA DX XX G2 nLight Preset Wall control, Raise/Lower Dimming, Generation Two |
|  | VCPG Luminaire nLight Air enabled, wireless control Integral combination occupancy & daylight sensor with 7-15' mounting height lens |

A Parking Garage Example
NOT TO SCALE


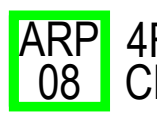


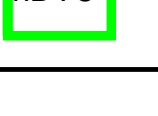
Exterior


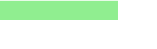






nLight Air



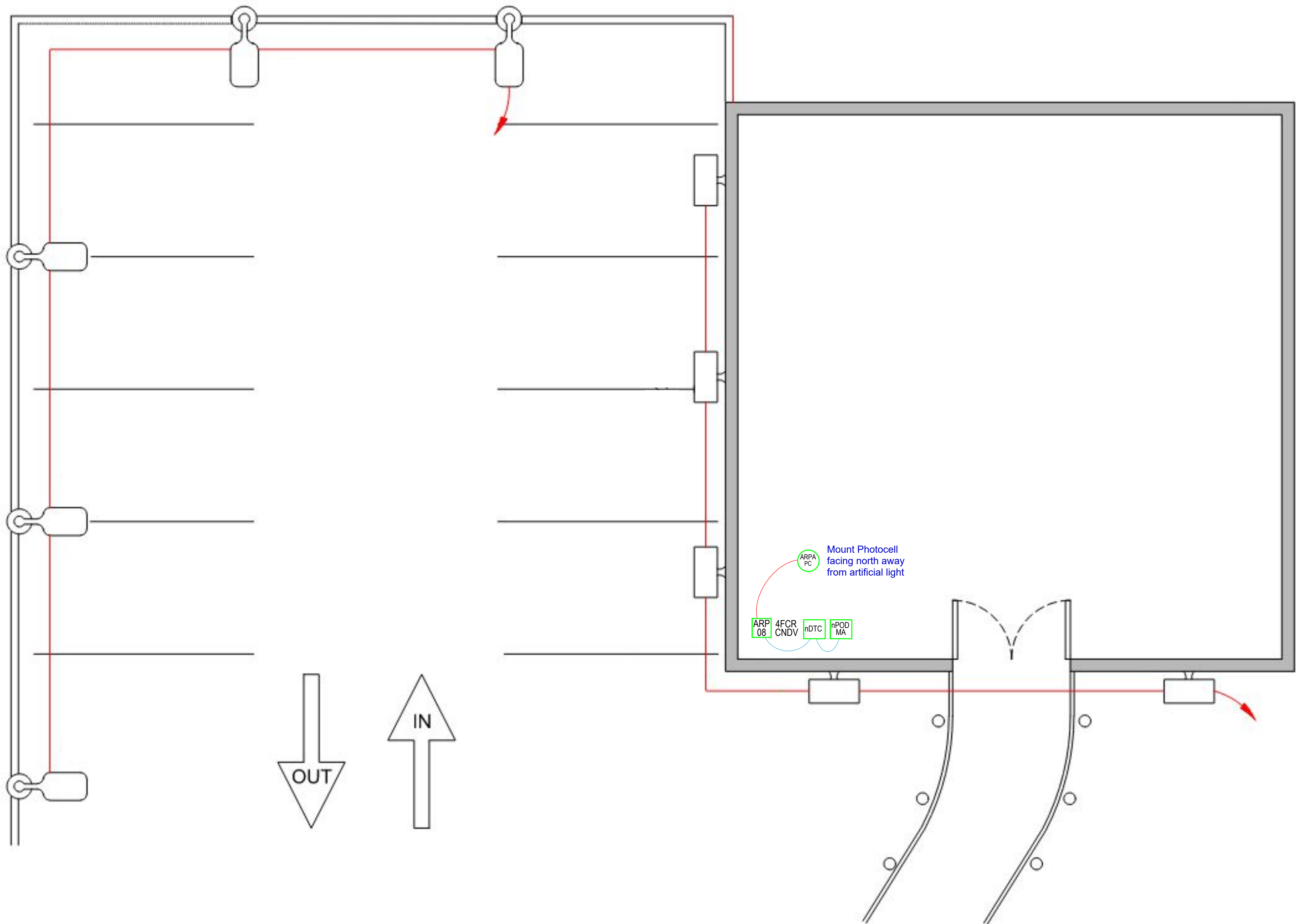
| PRODUCT LEGEND Exterior Examples | |
|---|--|
|  | Air Luminaire nLight Air enabled, wireless control Integral combination occupancy & daylight sensor with 7-15' mounting height lens |



| PRODUCT LEGEND Exterior Examples | |
|---|---|
|  | PC1 ARPA PC Acuity Relay Panel accessory, On/off photocell |
|  | PL2 ARP NLT 4FCR CNDV SC SM Acuity Relay Panel, nLight, 4-field configurable relays, 347V, Screw Cover, Surface Mount |
|  | SW1 RPOD8A DX XX G2 nLight Preset Wall control, Raise/Lower Dimming, Generation Two |
|  | SW13 NPODMA XX nLight Wired Aesthetic Wallpod |
|  | TC1 NDTC XX nLight Digital Time Clock |

| WIRE LEGEND nLight Networked | |
|---|--|
|  | 0-10 0-10 0-10v dimming wire |
|  | CAT5 Ethernet CAT5e Ethernet CAT5e network cable (non nLight) |
|  | CAT5 nLight CAT5e nLight Pre-terminated CAT5e cable for nLight communication network |
|  | DALI DALI DALI dimming cable |
|  | DMX DMX DMX cable (BELDEN 9829) |
|  | LINE Line Voltage Line voltage cable |
|  | LV Low Voltage Low voltage cable |
|  | USB USB USB cable |

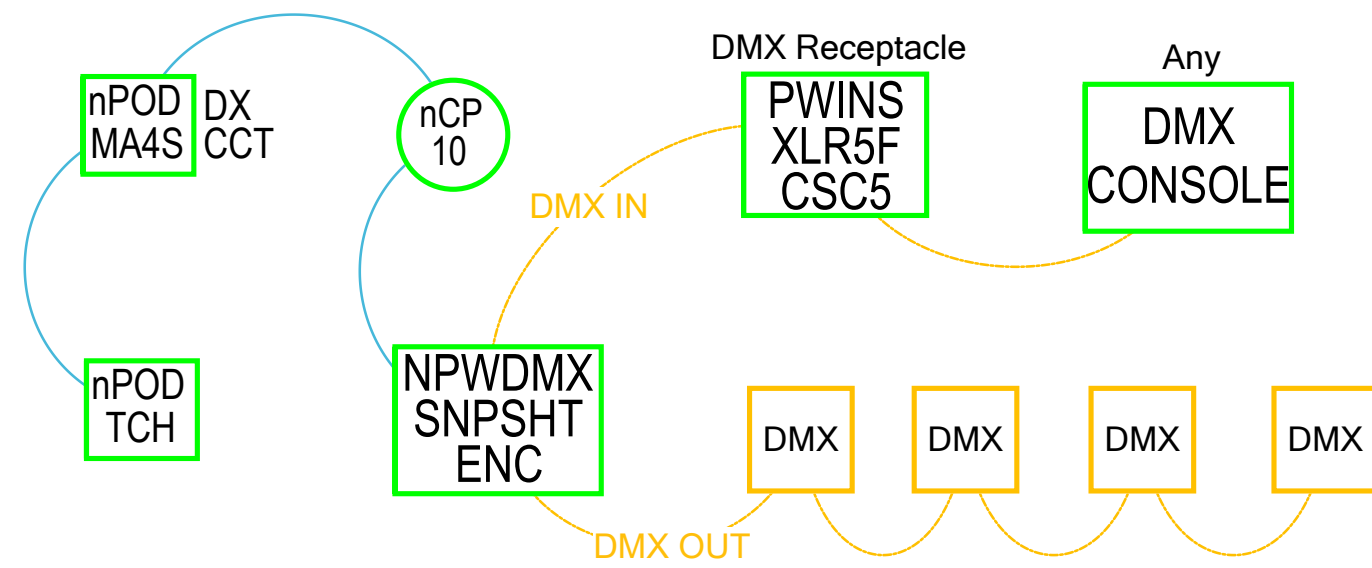
nLight Relay Panel - ARP



A Exterior Examples
NOT TO SCALE

DMX

DMX w nLight Snapshot



Auditorium w nLight & DMX

When DMX Console is off, nlight/base building system to control space as normal with simple switching, occupancy and scheduling.
When DMX Console turns on, console to override nLight control of entire space.
Emergency to override all controls when normal power is lost, or emergency input.

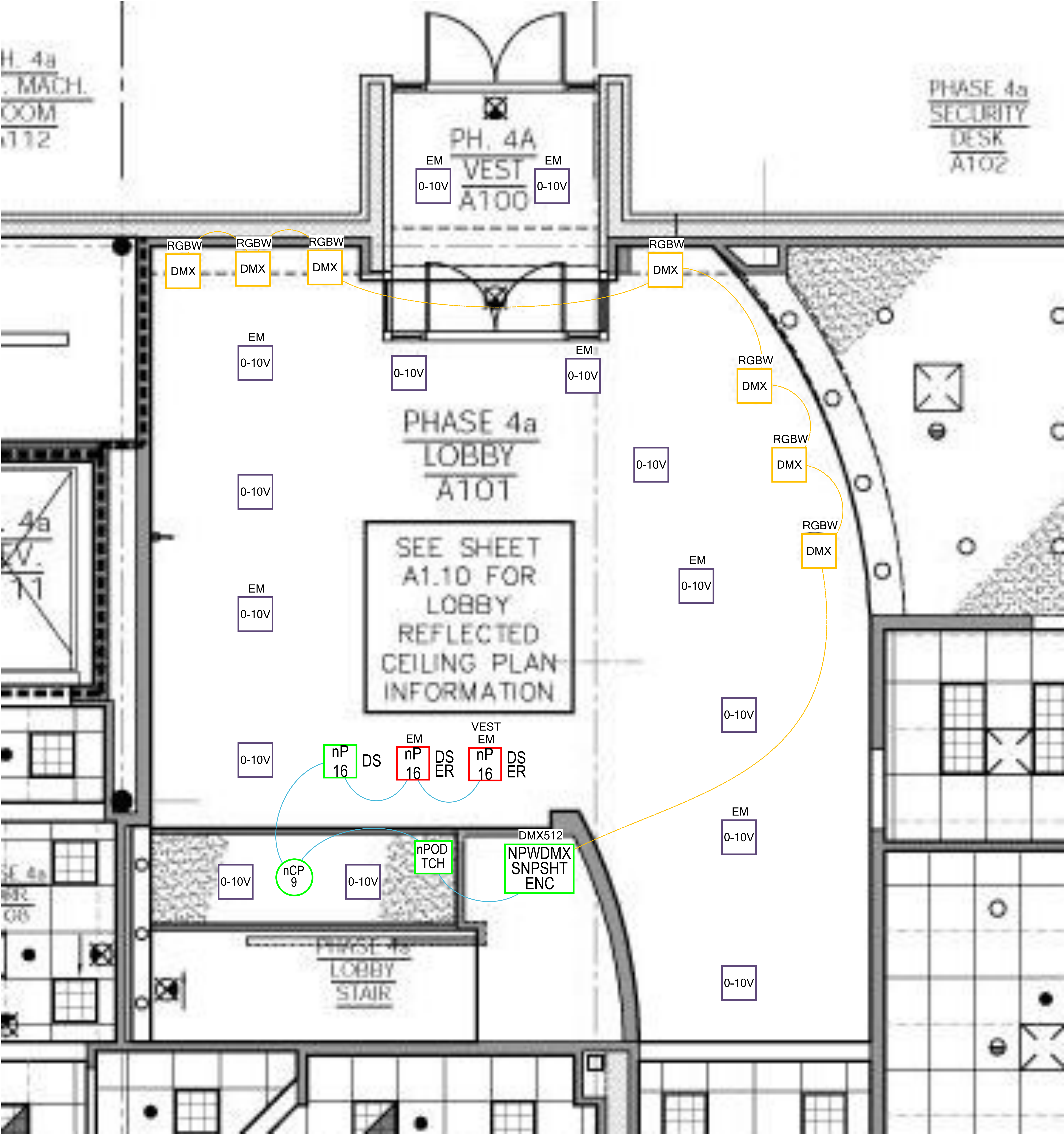


| PRODUCT LEGEND | |
|----------------|---|
| DMX Examples | |
| | 0-10V Luminaire 0-10V Dimming to 10% |
| | DMX Luminaire DMX control |

| PRODUCT LEGEND | |
|----------------|---|
| DMX Examples | |
| | DE1 NPP16 DS ER EFP Power/Relay Pack, Dimming Side Output, UL924 Emergency Operation, External Fault Protection |
| | DP1 NPP16 DS EFP Power/Relay Pack, Dimming Side Output, External Fault Protection |
| | OS1 NCM PDT 10 RJ/B Low Voltage Ceiling Mount Sensor, Passive Dual Technology, Large Motion / Extended Range 360° Lens, Rear RJ-45 Ports |
| | OS2 NCM PDT 9 RJ/B Low Voltage Ceiling Mount Sensor, Passive Dual Technology, Small Motion / Standard Range 360° Lens, Rear RJ-45 Ports |
| | PL1 ARP-INTENC08 NLT 8FCR MVOLT 1VB SC SM Acuity Relay Panel, Include INT and ENC, 8-Size, nLight, 8-field configurable relays, 120-277V, Screw Cover, Surface Mount, 1 Voltage Barrier |
| | PS2 NPWDMX SNAPSHOT ENCSML nLight DMX, Snapshot Controller, Small Enclosure, 10IN x 13IN x 4.5IN |
| | PS3 DMX CONSOLE DMX CONSOLE - ANY MANUFACTURER |
| | PW1 PWINS XLR5F CSC5 XX Insert, XLR 5-Pin Female, 5-Pin Compression Screw Connector |
| | SW14 NPODMA 4S DX COLOR XX nLight Wired Aesthetic Wallpod, 4 scene control, Raise/Lower Dimming, Color control |
| | SW5 NPOT TOUCH XX Low Voltage Wallpod, Touchscreen Wall Control |
| | SW7 NPODMA DX XX nLight Wired Aesthetic Wallpod, Raise/Lower Dimming |
| | SW9 NPODMA 4S DX XX nLight Wired Aesthetic Wallpod, 4 scene control, Raise/Lower Dimming |

| WIRE LEGEND | |
|------------------|---|
| nLight Networked | |
| | 0-10 0-10 0-10v dimming wire |
| | CAT5 Ethernet CAT5e Ethernet CAT5e network cable (non nLight) |
| | CAT5 nLight CAT5e nLight Pre-terminated CAT5e cable for nLight communication network |
| | DALI DALI DALI dimming cable |
| | DMX DMX DMX cable (BELDEN 9829) |
| | LINE Line Voltage Line voltage cable |
| | LV Low Voltage Low voltage cable |
| | USB USB USB cable |

Lobby w nLight & DMX



A DMX Examples
NOT TO SCALE

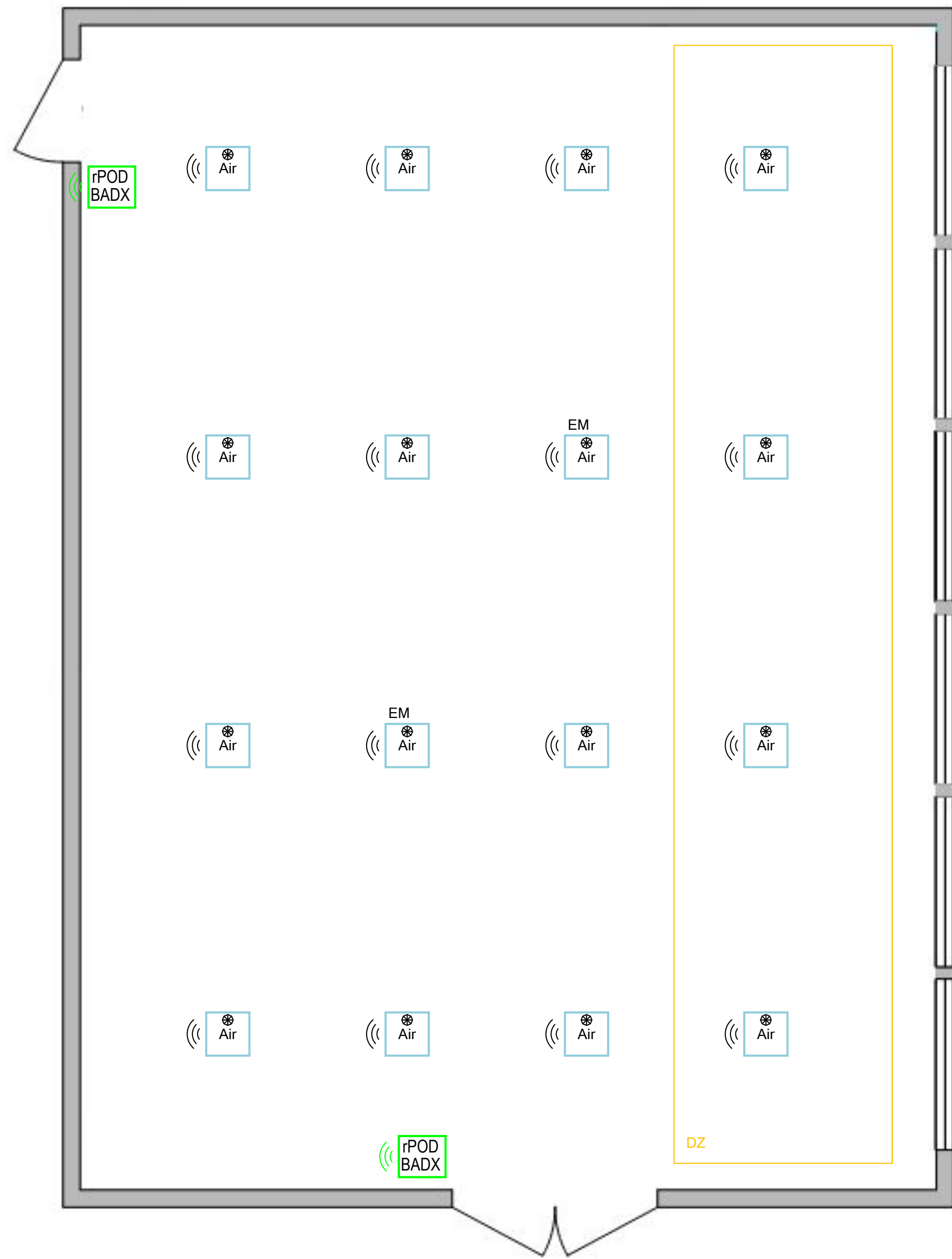
| PRODUCT LEGEND DMX Examples | |
|--------------------------------|---|
| | 0-10V Luminaire 0-10V Dimming to 10% |
| | DMX Luminaire DMX control |

| PRODUCT LEGEND DMX Examples | |
|--------------------------------|---|
| | DE1 NPP16 DS ER EFP Power/Relay Pack, Dimming Side Output, UL924 Emergency Operation, External Fault Protection |
| | DP1 NPP16 DS EFP Power/Relay Pack, Dimming Side Output, External Fault Protection |
| | OS1 NCM PDT 10 RJ8 Low Voltage Ceiling Mount Sensor, Passive Dual Technology, Large Motion / Extended Range 360° Lens, Rear RJ-45 Ports |
| | OS2 NCM PDT 9 RJ8 Low Voltage Ceiling Mount Sensor, Passive Dual Technology, Small Motion / Standard Range 360° Lens, Rear RJ-45 Ports |
| | PL1 ARP INTENC08 NLT 8FCR MVOLT 1VB SC SM Acuity Relay Panel, Include INT and ENC, 8-Size, nLight, 8-field configurable relays, 120-277V, Screw Cover, Surface Mount, 1 Voltage Barrier |
| | PS2 NPWDMX SNAPSHOT ENCSML nLight DMX, Snapshot Controller, Small Enclosure, 10IN x 13IN x 4.5IN |
| | PS3 DMX CONSOLE DMX CONSOLE - ANY MANUFACTURER |
| | PW1 PWINS XLR5F CSC5 XX Insert, XLR 5-Pin Female, 5-Pin Compression Screw Connector |
| | SW14 NPODMA 4S DX COLOR XX nLight Wired Aesthetic Wallpod, 4 scene control, Raise/Lower Dimming, Color control |
| | SW5 NPOD TOUCH XX Low Voltage Wallpod, Touchscreen Wall Control |
| | SW7 NPODMA DX XX nLight Wired Aesthetic Wallpod, Raise/Lower Dimming |
| | SW9 NPODMA 4S DX XX nLight Wired Aesthetic Wallpod, 4 scene control, Raise/Lower Dimming |

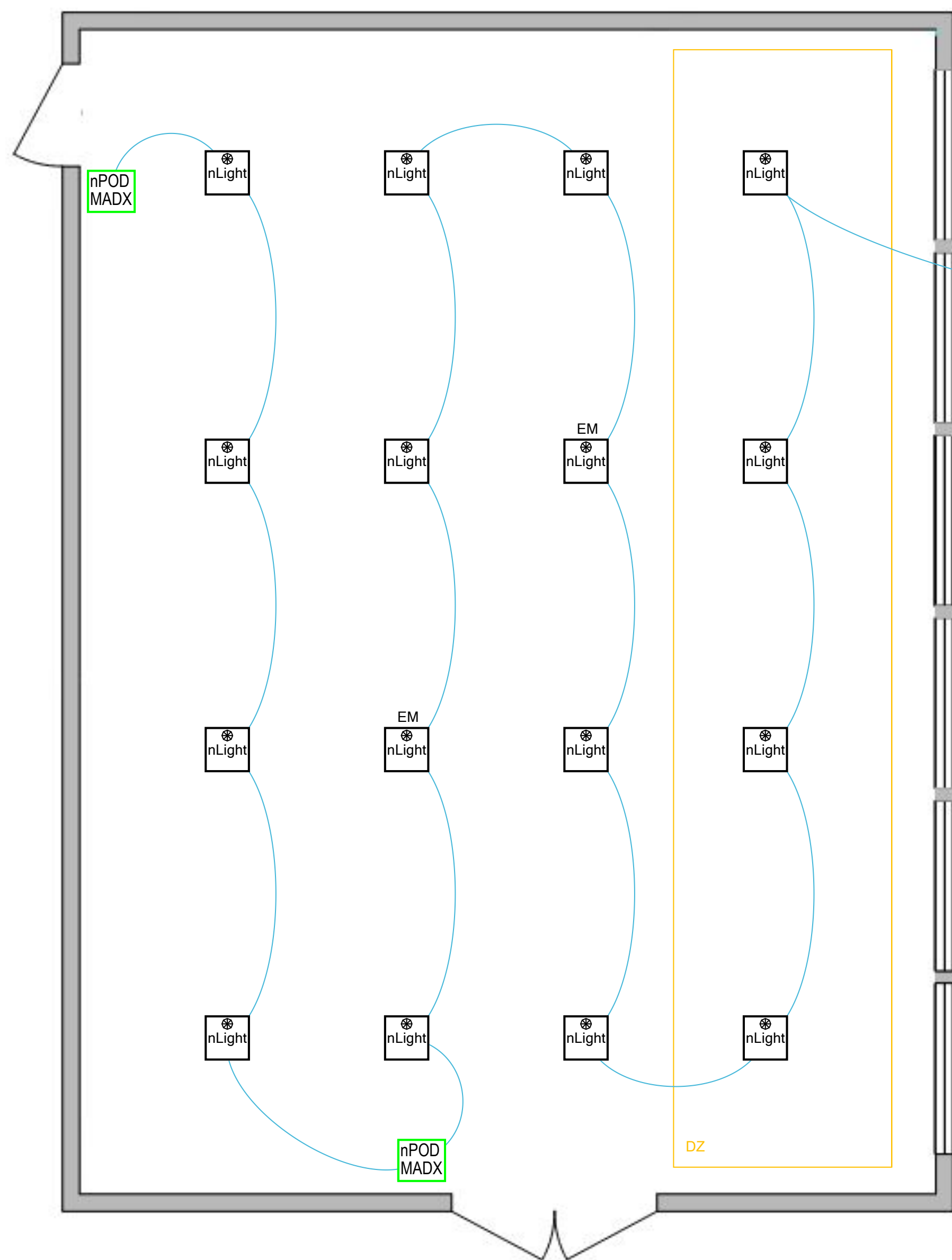
| WIRE LEGEND DMX Examples | |
|-----------------------------|---|
| | CAT5 nLight CAT5e nLight Pre-terminated CAT5e cable for nLight communication network |
| | DMX DMX DMX cable (BELDEN 9829) |



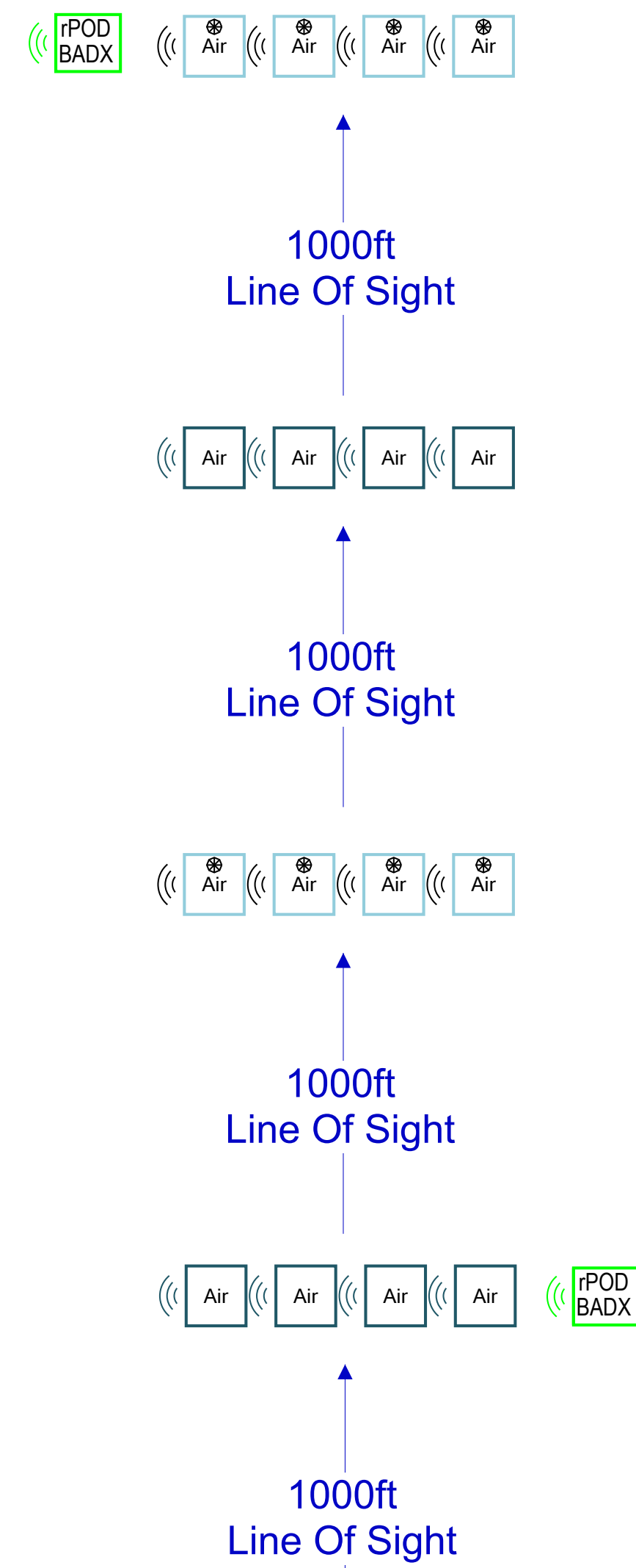
nLight Air Enabled



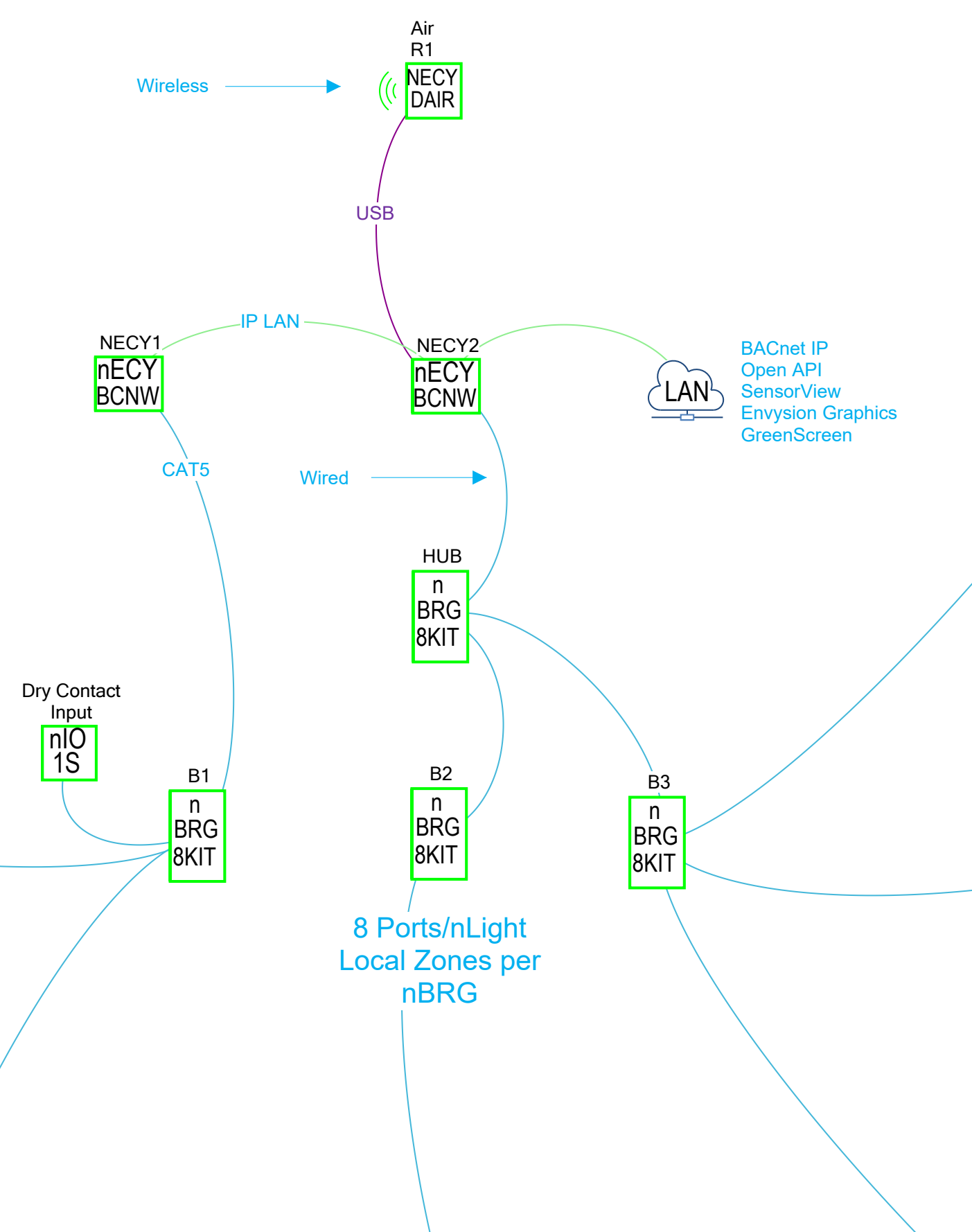
nLight Enabled



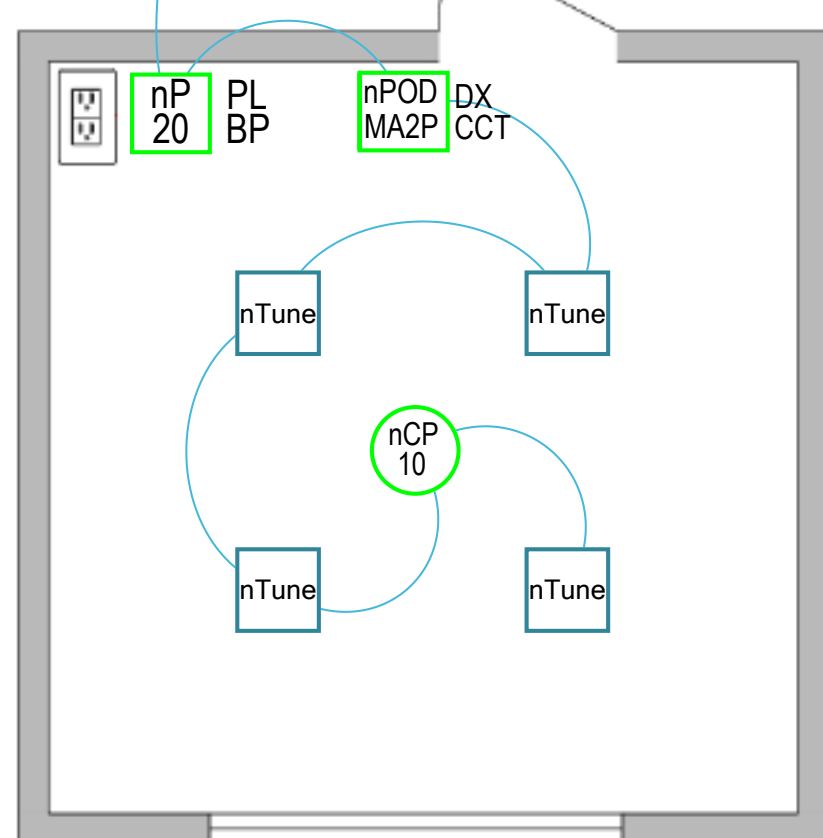
nLight Air Autonomous Bridging Technology



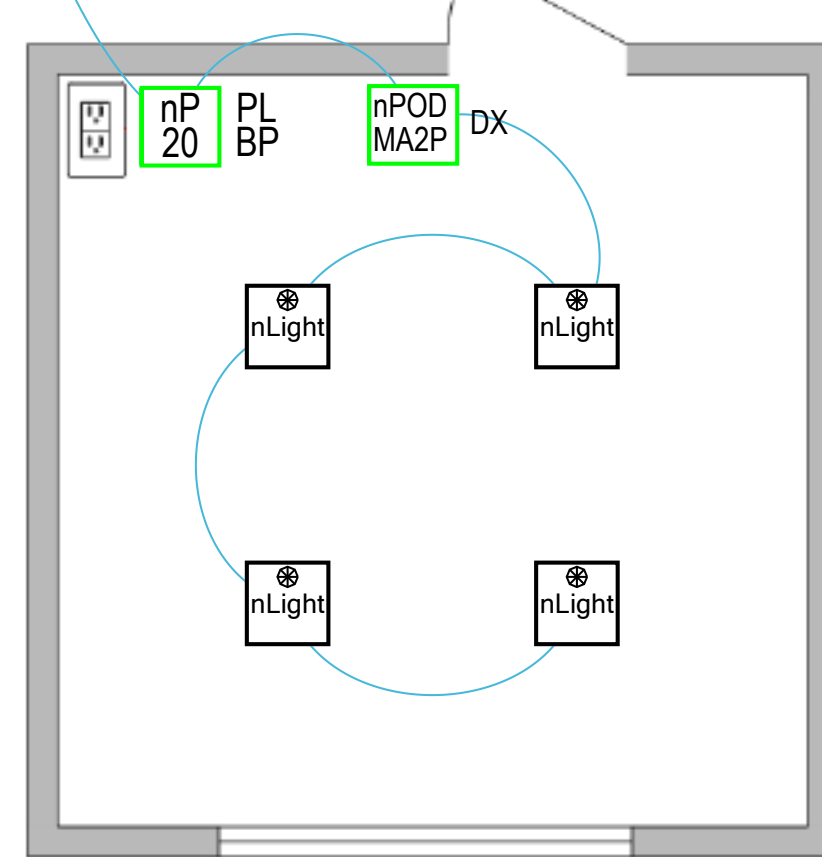
nLight Platform Backbone



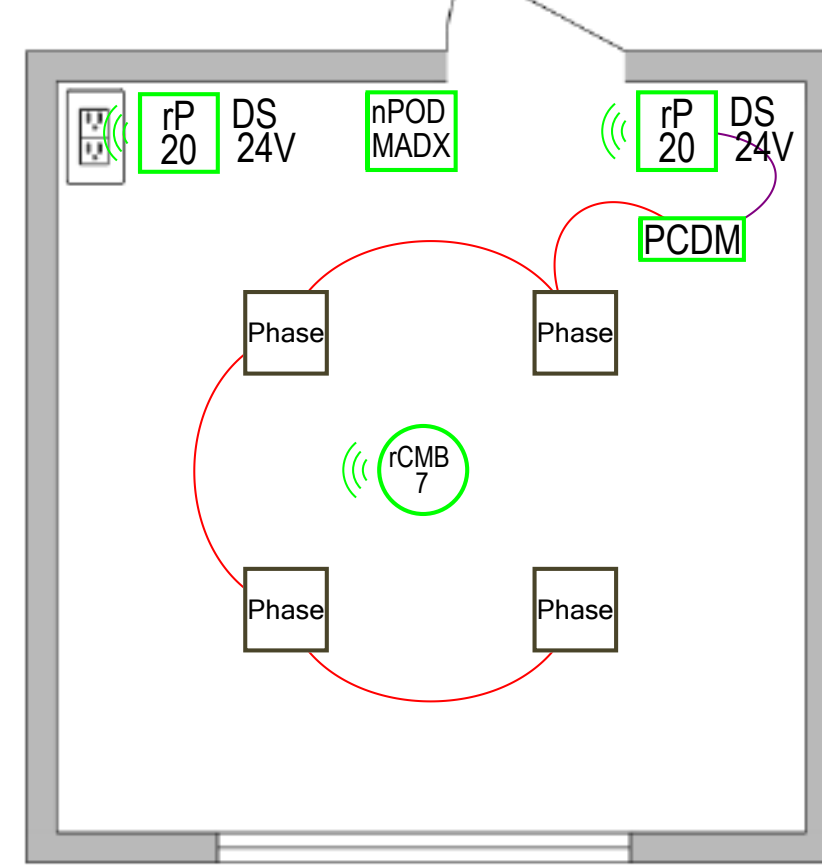
Tunable White - nTune CCT



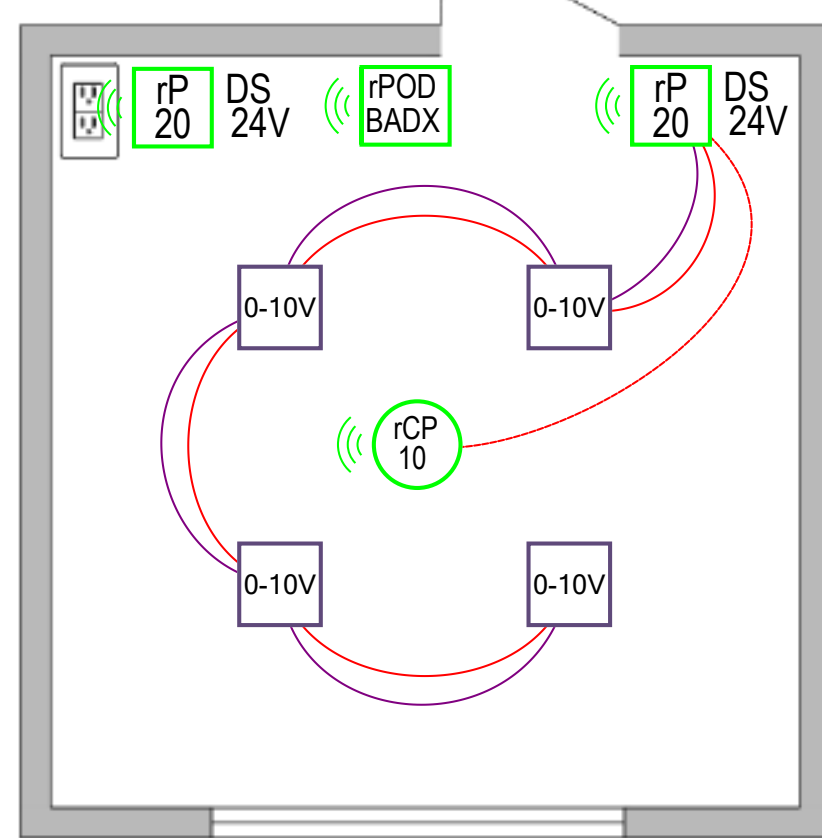
nLight Enabled



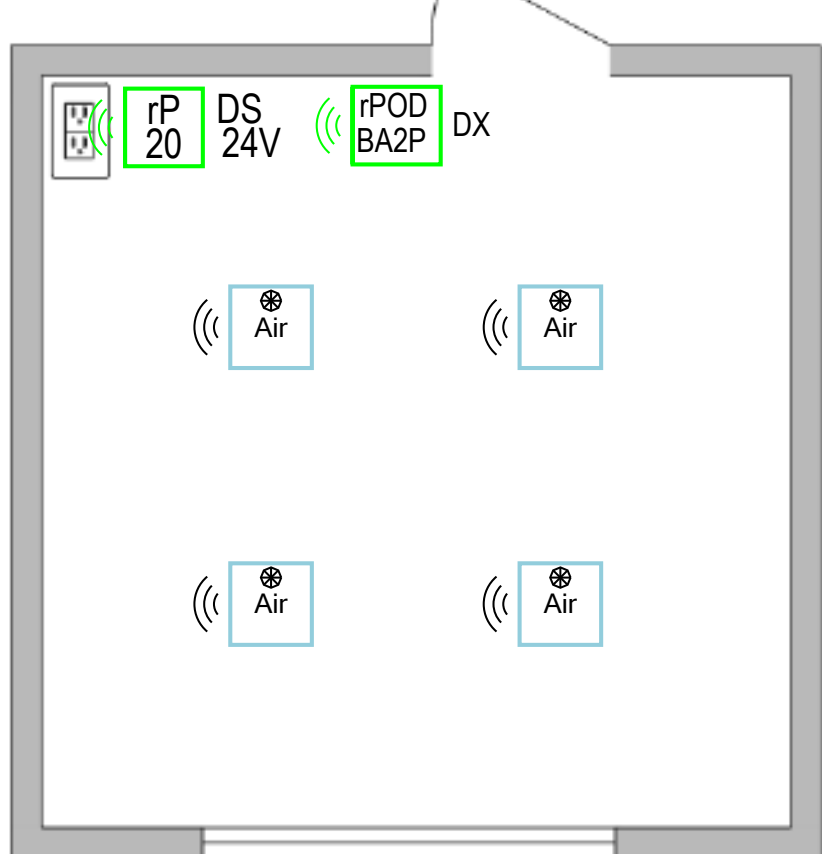
Phase Dimming - nLight Air



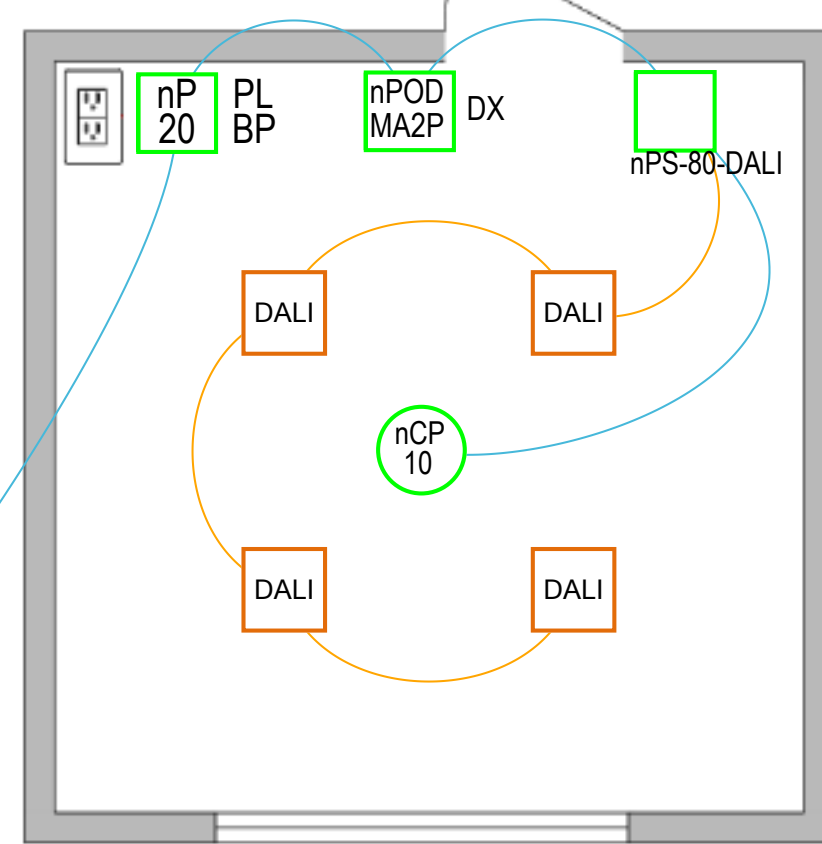
0-10V - nLight Air Power Pack



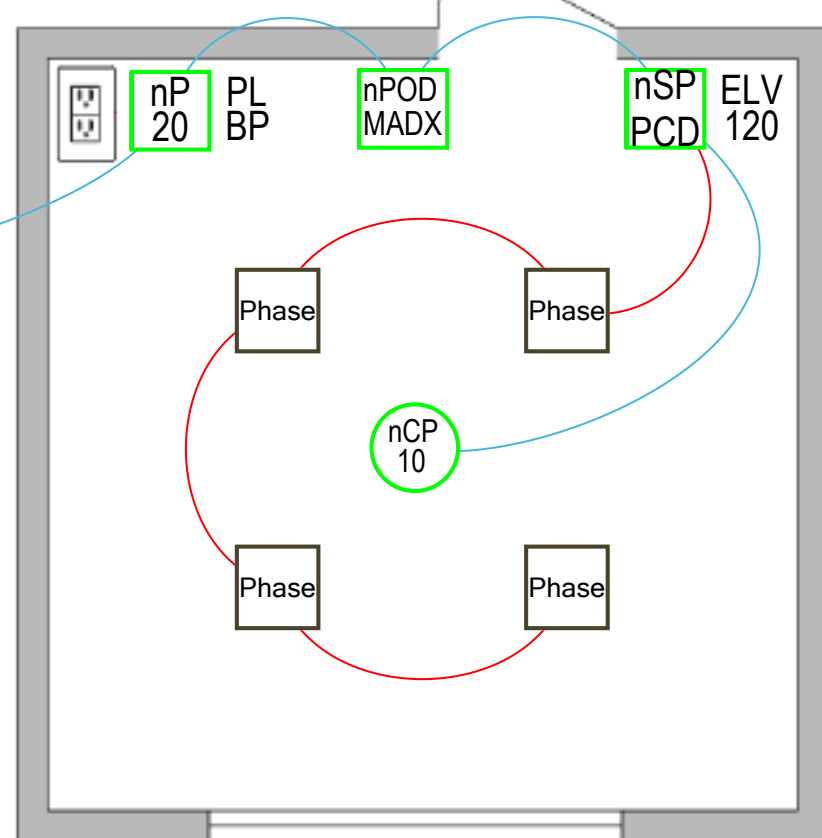
nLight Air Enabled



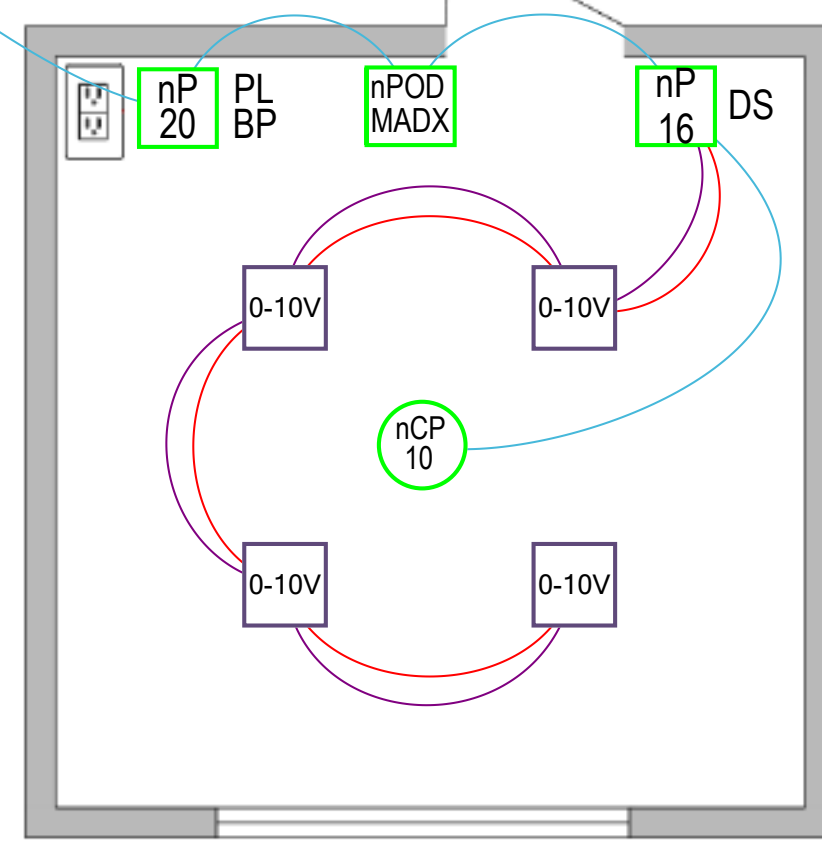
DALI - nDALI



Phase Dimming - nLight



0-10V - nLight Power Pack



| PRODUCT LEGEND nLight Networked | |
|------------------------------------|--|
| 8 | 0-10V Luminaire 0-10V Dimming to 10% |
| 28 | Air Luminaire nLight Air enabled, wireless control integral combination occupancy & daylight sensor with 7-15" mounting height lens |
| 8 | Air Luminaire nLight Air enabled, wireless control |
| 4 | DALI Luminaire DALI control |
| 20 | nLight Luminaire nLight enabled Integral combination occupancy & daylight sensor with 7-15" mounting height lens |
| 4 | nTune Luminaire nLight Enabled tuneable white |
| 8 | Phase Luminaire Line Voltage Phase Dimming (2W/3WMLVELV) |

| WIRE LEGEND nLight Networked | |
|---|----------------------------------|
| 0-10 | 0-10 |
| 0-10 | 0-10v dimming wire |
| CAT5 Ethernet | CAT5e Ethernet |
| CAT5e Ethernet | CAT5e network cable (non nLight) |
| CAT5 nLight | CAT5e nLight |
| Pre-terminated CAT5e cable for nLight communication network | |
| DALI | DALI |
| DALI | DALI dimming cable |
| DMX | DMX |
| DMX | DMX cable (BELDEN 9829) |
| LINE | Line Voltage |
| Line Voltage | Line voltage cable |
| LV | Low Voltage |
| Low Voltage | Low voltage cable |
| USB | USB |
| USB | USB cable |

| PRODUCT LEGEND nLight Networked | |
|------------------------------------|--|
| 4 | BRG 8KIT BRG 8 KIT nLight Bridge, 8 ports, Kit |
| 1 | PCDM DM2 PCDM Phase Control Dimming Module |
| 1 | NP 16 DS NPP16 DS EFP Power/Relay Pack, Dimming Side Output, External Fault Protection |
| 1 | NSP PCD ELV 120 NSP5 PCD ELV 120 Secondary Relay Pack, Phase Control Dimming, Electronic Low Voltage, 120V |
| 1 | NECY DAIR EA1 NECYD NLTAIR G2 Adapter, nLight AIR, Generation Two |
| 1 | LAN LAN Local Area Network (LAN) connection is assumed to be provided by others or present at this location. All networked devices connecting to the LAN should be on the same subnet. |
| 1 | NIO 1S NIO 1S nLight Device, Contact Closure Input |
| 4 | OCF 10 NCM PDT 10 RJB Low Voltage Ceiling Mount Sensor, Passive Dual Technology, Large Motion / Extended Range 360° Lens, Rear RJ-45 Ports |
| 1 | OCMP OS3 RCMSB 7 G2 Ceiling Mount Battery Powered Sensor, Mini-Low Bay 360° Lens, Generation Two |
| 1 | OCF 10 OS4 RCMS PDT 10 G2 Networked nLight AIR occupancy and daylight sensor, Passive Dual Technology, Large Motion / Extended Range 360° Lens, Generation Two |
| 5 | NP 20 PL BP NPP20 PL BP Power/Relay Pack, Plug Load, Bus power |
| 5 | NP 20 DS 24V RPP20 DS 24V EFP G2 nLight Air Power/Relay Pack, Networked Version, Dimming Side Output, 24 volt output, External Fault Protection, Generation Two |
| 1 | NPS 80 DALI PS1 NPS 80 DALI Power Supply, 80 mA, DALI Driver Control |
| 2 | NECY BCNW SC1 NECY MVOLT BAC REM ENC NW nLight Eclypse, 120-277V, BACnet, Enclosure for nLight ECLYPSE, No Wi-Fi |
| 5 | NPOD BADX SW1 RPODBA DX XX G2 nLight Preset Wall control, Raise/Lower Dimming, Generation Two |
| 2 | NPOD MA2P DX SW4 NPODMA 2P DX XX nLight Wired Aesthetic Wallpod, 2-Pole, Raise/Lower Dimming |
| 1 | NPOD MA2P CCT SW6 NPODMA 2P DX CCT XX nLight Wired Aesthetic Wallpod, 2-Pole, Raise/Lower Dimming, Correlated color temperature |
| 5 | NPOD MADX SW7 NPODMA DX XX nLight Wired Aesthetic Wallpod, Raise/Lower Dimming |
| 1 | NPOD BA2P DX SW8 RPODBA 2P DX XX G2 nLight Preset Wall control, 2-Pole, Raise/Lower Dimming, Generation Two |



Networked Lighting Controls Platform

Your Site. One System.



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Designing in the Modern Age

Designing a high-performance building that focuses on the people in the space changes how we think about design and specification.

There is an increased focus from building owners, architects, and contractors on improving the occupancy experience and reducing operating costs. Those elements are crucial to modern buildings because they add value for clients.

How can you design a cost-effective, networked lighting controls solution for all commercial applications that is energy efficient and delivers a comfortable and convenient environment for your clients?

- Control
- Savings
- Easy Specification



nLight is the Solution

nLight is a distributed, intelligent digital lighting controls platform featuring the most advanced technologies to meet the demand for greater functionality while helping to reduce energy consumption and energy code compliance.

nLight cost-effectively integrates time-based, daylight-based, sensor-based, and manual lighting controls through its connected, intelligent digital devices. These include, occupancy sensors, photocells, wall switch/dimmers, panels, power/relay packs, controllers, and enabled luminaires.



How nLight Works

The nLight lighting controls platform functions as a network of digital devices interconnected through proprietary CAT 5e (nLight Wired) and wireless (nLight AIR) methods that enable time-based, daylight-based, sensor-based, and manual lighting controls.



Distributed Intelligence

nLight is a distributed intelligence system, where all devices have the ability to act independent of each other.

Benefits:

- **Reliability:** all other devices can continue to communicate with one another in the space
- **Low Cost:** Add only the devices needed, resulting in fewer devices and less programming
- **Easy Installation:** Devices are spread throughout your space without the need for long-distance runs



nLight Advantages

nLight takes the stress out of specifying and delivering advanced control strategies, saving time and providing you with confidence in your project delivery. With a complete application set under a single controls platform, nLight spans the common applications for commercial, educational, healthcare, industrial, and corporate campuses.

Simple ■ Scalable ■ Connected ■ Comprehensive



Simple

The nLight lighting controls platform makes it simple to specify, design, install, and setup, helping to achieve code compliance with either CAT 5e wired controls that work out-of-the-box, or wireless controls with easy configuration using a mobile app.



Scalable

Ideal for practically any application, small to large, indoor to outdoor, nLight offers seamless lighting control scaling from one room to a whole building, across an entire site on one lighting controls system.



Connected

nLight connects light fixtures, sensors, and other control devices to create a digital network with unmatched flexibility.



Comprehensive

nLight offers a comprehensive portfolio of lighting control devices and enabled luminaires covering all common applications including, commercial indoor, industrial, and outdoor.

Scalable



Ideal for practically any application, small to large, indoor to outdoor, nLight offers seamless lighting control scaling from one room, to a whole building, across an entire site. As technology changes, nLight provides a future-proof solution that scales and adapts as systems are added or upgraded.

How Does nLight Scale?

nLight Wired scales easily by adding new devices via the plug and play of CAT 5e cable into the device ports.

nLight AIR also scales easily by adding new devices in a room via Bluetooth® using our intuitive mobile app or software.

Start with a Single Room and Expand

To scale to multiple rooms, floors, and an entire building simply, add an nLight ECLYPSE™ to network your project.

Why One Lighting Controls System Matters

Using a single lighting controls platform for all areas of your application ensures easier specification, installation, maintenance, and an improved user experience with the same controls and features for each space.

nLight is a lighting controls platform that natively integrates its wired (nLight Wired) and wireless (nLight AIR) products for ease and flexibility in design and installation, in virtually all applications.

- No need to integrate disparate systems
- Works for virtually all application types without any topology limitations
- Configured through a single software application

From a Single Room, to a Single Floor, to Multiple Floors, to an Entire Building



Single Room/ Office Space

Start with implementing controls for a single room solution, and return at any time to easily upgrade to a networked system.

Multiple Rooms/ Entire Floor

Add controls to more rooms or an entire floor without having to reprogram or replace existing equipment.

Multiple Floors/ Entire Building

Scale controls to multiple floors or an entire building on one system with independent control for each floor or networked using an nLight® ECLYPSE™.

Everything on One Platform Across an Entire Site

nLight seamlessly scales from one building to an entire campus, networking indoor to outdoor with one system.

The Right Solution for Your Lighting Controls Project



When searching for a comprehensive lighting controls provider, there are two critical elements to consider:

- The selection of luminaires that contain controls devices
- The portfolio of the lighting control devices required for the project.

The powerful and trusted combination of nLight® and Acuity Brands® has your solution all from one company using one lighting controls system with

an extensive selection of luminaires you know and love.

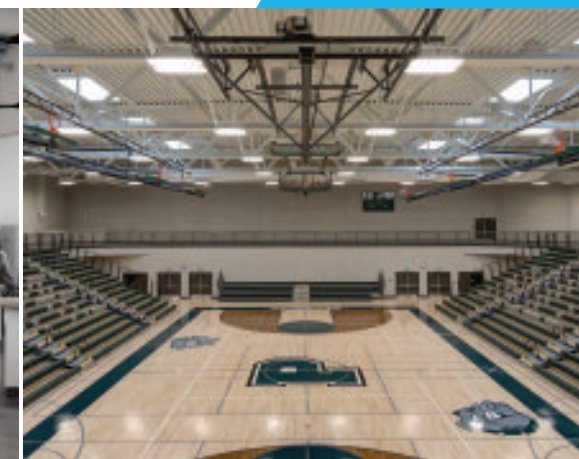
The extensive portfolio of nLight lighting control devices includes sensors and switches to support occupancy at various mounting heights, photocells for daylighting control, and wall switches for on/off, dimming, and scene control.

nLight also offers a variety of load controllers to support flexibility in luminaire control, including emergency control, digital dimming with bi-directional driver communication, and analog and phase dimming.

Many spaces have the same requirements regardless of building type — open office, education, warehouse, parking garage, and industrial.

Your Spaces — the nLight Advantages:

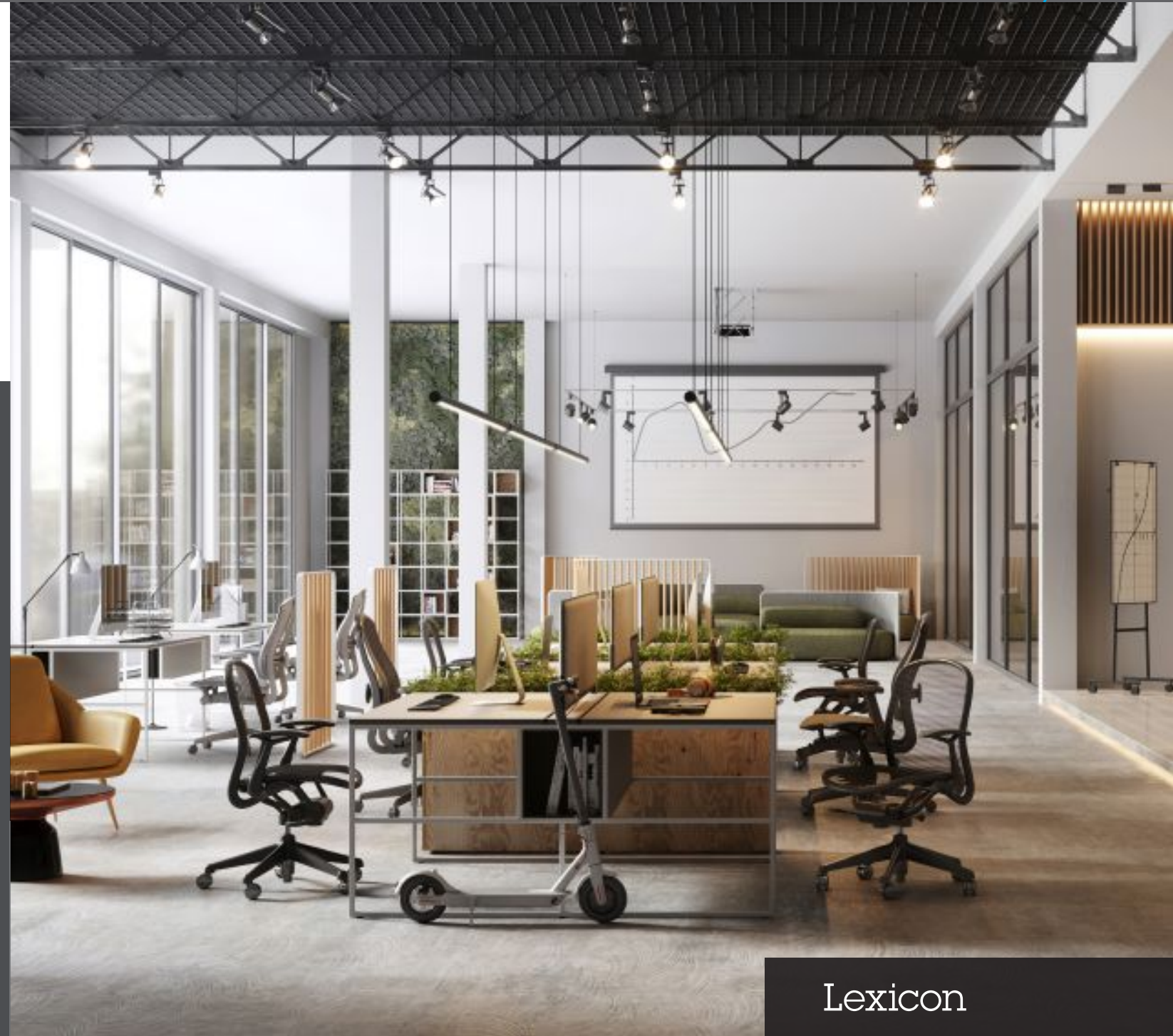
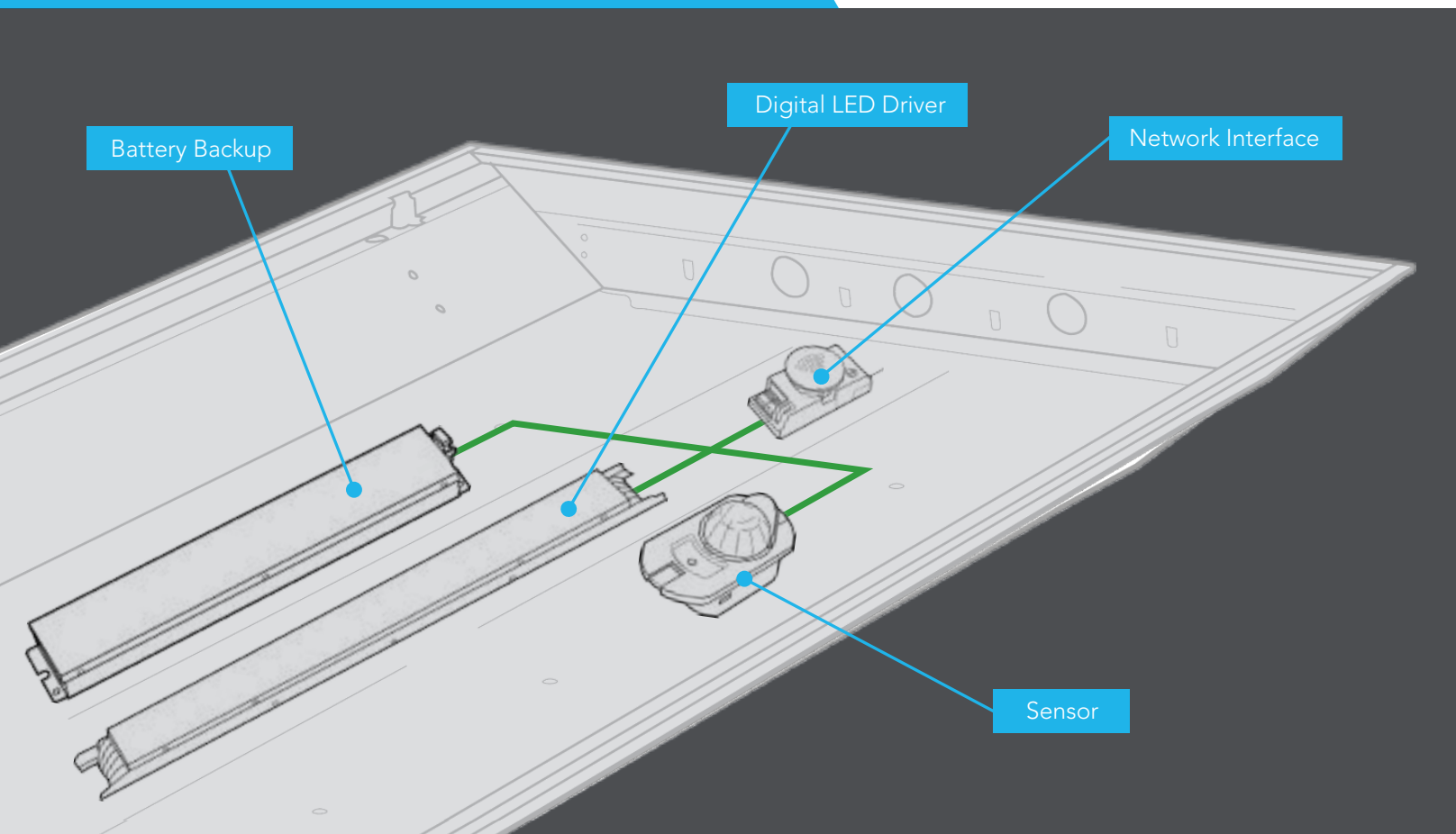
- Low cost of install
- Wired and wireless products
- A broad portfolio of controls-embedded devices
- Flexible products that facilitate multiple roles to reduce total number of devices to install
- Products intended to meet code-requirements as well as customer-driven requirements



Industry Leading nLight Enabled Luminaires

nLight enabled luminaires provide factory-tested luminaire level control with fewer devices to install, resulting in more capability in less time. With a wide range of nLight enabled luminaires and devices, you have the freedom to design a specification that achieves the requirements of the project without limiting your vision.

EMBEDDED CONTROLS



Lexicon

Controls in a Luminaire

nLight enabled luminaires connect to the nLight network via control devices either within or attached to the fixture. With enabled luminaires,

everything is simplified: design, including sensor layout, installation, and configuration on-site, eliminating many interoperability challenges.

ENABLED

'Speaks controls protocol' from the factory and is wired, terminated and tested at factory before shipping

EMBEDDED

A controls device and/or sensor within the light fixture

INTEGRATED

A controls device that is attached to the light fixture

REMOTE

A controls device is embedded or integrated within a fixture remote driver box

COMPATIBLE

A controls device that works with the light fixture, but ships separately and is field installed

nLight Enabled Luminaires



More than 500 nLight enabled luminaire families from Acuity Brands deliver a digital network that opens the door to future Internet of Things (IoT) solutions, providing a bridge between today and tomorrow. With a complete application set under a single lighting controls platform, nLight spans the common applications for commercial, educational, healthcare, industrial, and corporate campuses.

Indoor

Today's indoor environment requires lighting solutions that can adapt to diverse skill sets and spatial needs. The Acuity Brands broad product portfolio of LED lighting and controls technologies can support sustainability and employee wellness initiatives, helping reinforce your brand to clients and reduce your energy use and costs.



Lithonia Lighting® EPANL



Lithonia Lighting BLT



Lithonia Lighting ENVEX™

Industrial

The combination of Lithonia Lighting industrial luminaires and nLight controls provide a quality lighting controls solution that allows for substantial reduction in energy use with basic and advanced controls strategies. With a networked control solution, more efficiencies can be unlocked as sensor data is analyzed and fixture performance is monitored remotely.



Lithonia Lighting IBG



Lithonia Lighting CLX



Lithonia Lighting FEM

Outdoor (Area & Site)

The combination of Lithonia Lighting outdoor luminaires and nLight® AIR wireless controls creates a site-wide solution that can both save energy and meet the requirements of increasingly stringent energy codes.



Lithonia Lighting D-Series



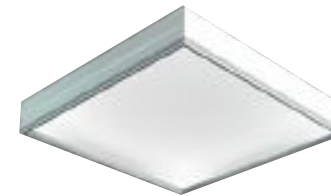
Lithonia Lighting VCPG LED



Lithonia Lighting WDGE LED

Architectural

Acuity Brands offers an exemplary selection of architectural and downlighting LED luminaires featuring nLight controls that maintain the fixture's aesthetic. Our technology allows us to add individual luminaire control and complement the design with discrete sensors where needed to aid in code compliance and energy savings.



MARK Architectural Lighting™ Chisel™

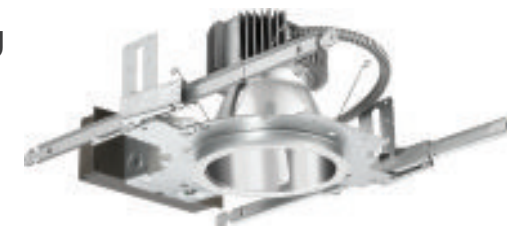


Peerless® Renna™



MARK Architectural Lighting™ Slot

Downlighting



Gotham® EVO®



Lithonia Lighting LDN8

nLight Enabled Luminaires

Please scan the QR code to see the current nLight enabled fixtures.



nLight AIR Enabled



nLight Wired Enabled



The Value of Digitally Connected Systems in Lighting

nLight is a lighting controls platform that expands lighting from a singular purpose into a connected, data-rich system through its embedded digital technology. With a digitally connected luminaire, lighting evolves to influence building and occupant actions, helping to conserve energy, increase productivity, and gain valuable insight into how facilities are managed.

Technologies & Solutions

Digitally connected luminaires provide a variety of possibilities now and in the future that goes beyond basic lighting control. When you apply sensing technology into every luminaire, you gain valuable insight into how people move throughout and use a space over time. Through the use of Bluetooth® Low Energy (BLE) radios, connected luminaires can offer additional “Internet of Things (IoT)” type features, such as real-time location services or asset tracking, to further enhance how building spaces are being used.

The nLight ECLYPSE™ controller expands the power of a lighting control system to collect data and share it with other connected systems, typically through a building management system (BMS). This allows a facility manager to gain valuable insight into operations or affect the behavior of connected systems. This can result in more efficient operations and improved occupancy experiences, values that will continue to be requested as spaces evolve and customers recognize the benefits.



TECHNOLOGY

nLight control devices capture and combine multiple streams of data.



CONNECTED

Our wired and wireless network manages sensors and enables connectivity between sensors and intelligent devices.



ACTIONABLE INSIGHTS

Real-time data is turned into actionable insights to help make informed decisions for managing lighting, HVAC, space and safety.

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Acuity Brands is under license. Other trademarks and trade names are those of their respective owners.

Older building infrastructure and LED upgrades offer the ability to explore digitally connected luminaires, and many building owners and facility managers are opting for these systems when upgrading. This is due to the immediate benefits, such as reducing energy consumption while opening the door for a variety of other benefits in the future.

The Benefits of a Digitally Connected System

| FEATURE | BENEFIT |
|--|--|
| Improved Quality of Light & Performance | Connected luminaires delivers an enhanced visual aesthetic through precise control of light levels for buildings, occupants, and guests |
| Remote Technology | Creates operational efficiencies through remote maintenance with enhanced reporting for the building system |
| Customizable Solution | Designed to provide a future-ready infrastructure that is capable of being upgraded, managed, and maintained |
| Lower Implementation Costs for Future Projects | Simplifies the addition of devices when expanding into additional spaces or adding capability |
| Unified System-Wide Energy Conservation | Enables energy conservation and overall lighting performance with motion sensing and daylight harvesting sensors, optimizing the use of natural daylight |
| Building Management Integration | nLight supports a broad range of protocols that provide simplistic connectivity to other building systems such as HVAC to BMS controllers |
| Diagnostics | Connected digital controls can generate luminaire diagnostics and deliver firmware updates over the network |

Preparing for the Future Now

By deploying a digitally connected lighting controls system, you’re realizing initial benefits while preparing a business for the future, helping to preserve the investment and leverage it when the time is appropriate for the customer.

Mobile Apps

Easy Configuration and Control

Extending lighting controls even further, nLight utilizes mobile apps and software to make configuration, startup, and maintenance simple and easy. This provides an alternative to push button or dip switch programming without a remote that can get broken or lost. Mobile apps and software address the essential needs of a project and the business.

Configuration with Mobile Apps



CLAIRITY™+

The CLAIRITY + mobile app is a single app launcher that provides a variety of connected lighting applications for contractors, sales agents, or facility maintenance professionals. Within this app are mobile applications from various brands, including nLight and SensorSwitch™.

The CLAIRITY + application provides easy startup, configuration, and modification of nLight lighting controls. This cloud-connected app allows validated end-users to startup, configure, and troubleshoot from a compatible smartphone or tablet.



Personal Control with Mobile Apps

myPersonify

The myPersonify mobile application is an easy-to-use, intuitive tool that allows for control of scenes, lights, and shades directly from a mobile device when connected to an nLight UNITOUCH. For today's occupants, myPersonify offers enhanced personal control through the convenience of a mobile app for nLight wired devices in the space they occupy.

Software

nLight software solutions present a variety of features, including on premise and remote configuration, dashboarding, and monitoring. Building owners and property managers can use the variety of software solutions for occupancy pattern statistics to make data-driven decisions for renovations, space planning, and other expansions. This also includes monitoring building and luminaire energy consumption, allowing for actions that support and promote sustainability initiatives.



SensorView

Advanced Lighting Configuration

SensorView is a free, intuitive, and easy-to-use browser-based application that gives authorized users the ability to remotely configure and monitor both wired and wireless networked luminaires and controlled devices. It provides a simple and quick setup tool for creating custom configuration profiles that can either be scheduled or run on demand. SensorView also assists with system configuration by indicating and reporting on sensor and controller settings and displaying live device status.



Space Utilization

Sensor Trending Analysis

Space Utilization allows building owners and property managers to analyze where occupants spend their time throughout the day. This software requires no setup or configuration, so useful data begins trending as soon as the system is online.





nLight Wired: The Basics

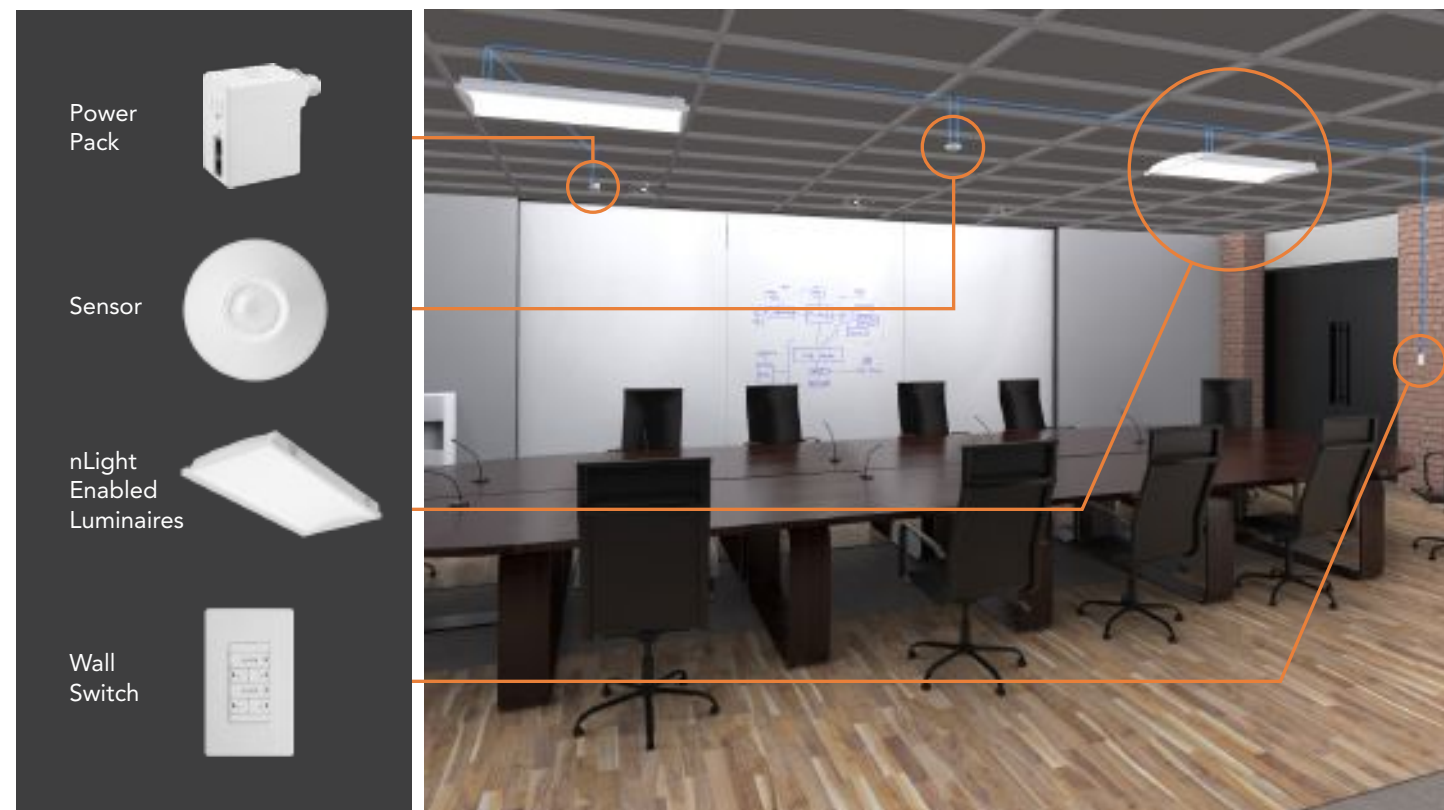
nLight Wired is a CAT 5e, low voltage-based solution that works by establishing a proprietary digital communication network between connected devices. It creates a system with distributed intelligence, as well as enables global access to the building's lighting system via web-based management software – SensorView.

nLight Wired delivers distributed intelligence with all lighting control actions (i.e., On/Off, Raise/Lower, Occupancy/Daylighting, etc.) carried out locally within each individual lighting zone, thus reducing wiring requirements and associated labor costs. nLight Wired reduces installation time with its plug-and-play feature, allowing devices to automatically discover each other and self-commission.

From a Single Room — nLight Wired Conference Room Example

Below is an example of a typical nLight wired zone: a conference room with two nLight-enabled luminaires, an occupancy sensor, a power pack for controlling the whiteboard downlights, and a wall switch to manually control the lighting. Devices within a zone are wired in any order using standard CAT 5e cabling, and almost always in a daisy-chain fashion.

Once wired, the zone will self-commission and begin to function standalone. Systems with multiple control zones can be networked together; however, each local nLight control zone remains essentially its own network bus. This simplifies local communication due to the low device count in each zone.



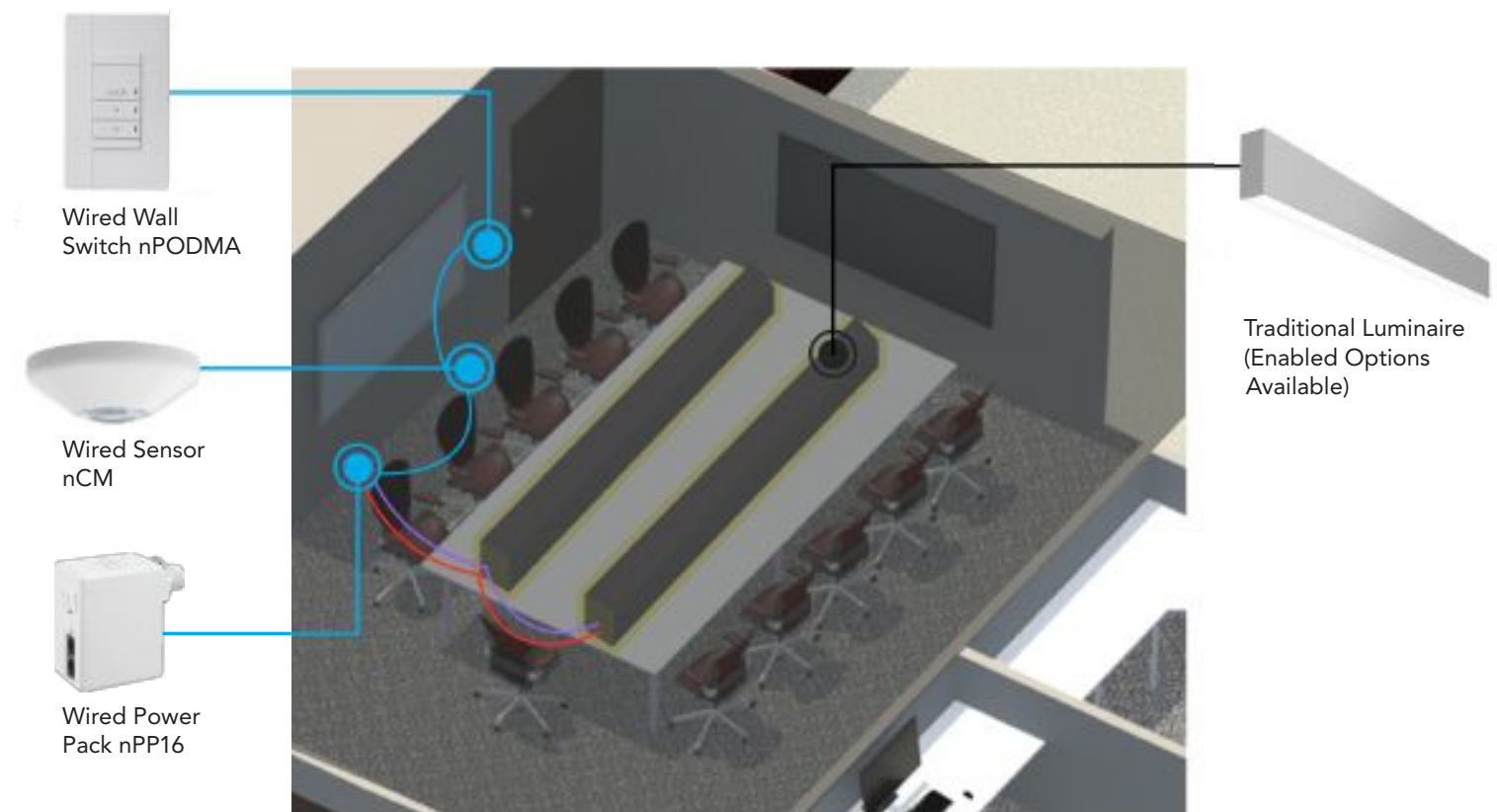
Example with nLight Enabled Luminaires

— CAT 5e Cable

How nLight Wired Connects

Network your space by simply connecting CAT 5e cable from a device or luminaire. See our example of how nLight connects devices and luminaires in a conference room.

nLight Wired — Room Level



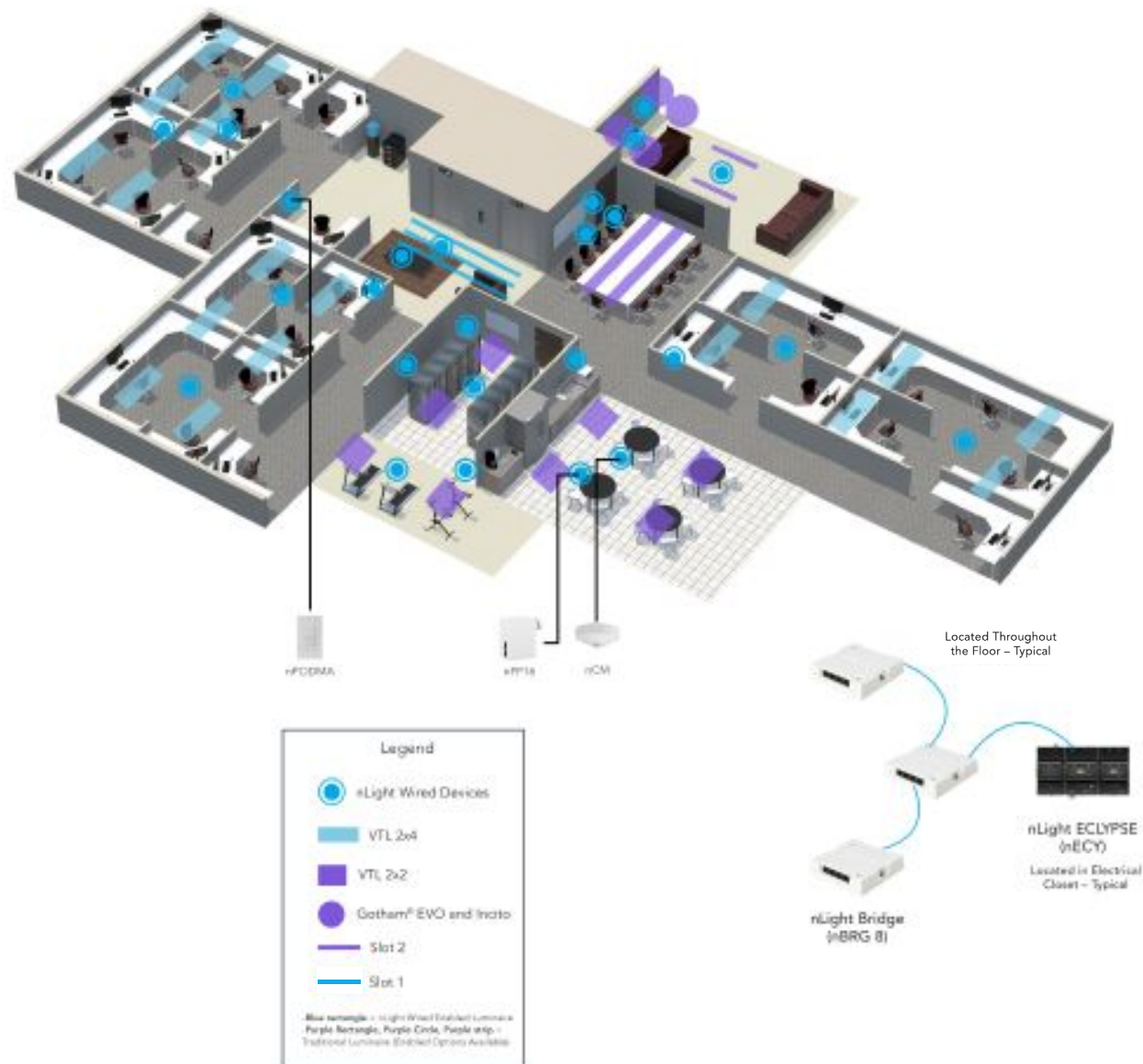


nLight Wired: Scalable

How nLight Wired Scales from Multiple Rooms to an Entire Floor

To scale to multiple rooms on an entire floor, please see the commercial office example below. Connect the nLight control devices and luminaires using CAT 5e cable (as shown) and simply add the nLight ECLYPSE™ and nLight bridge.

nLight Wired — Floor Level

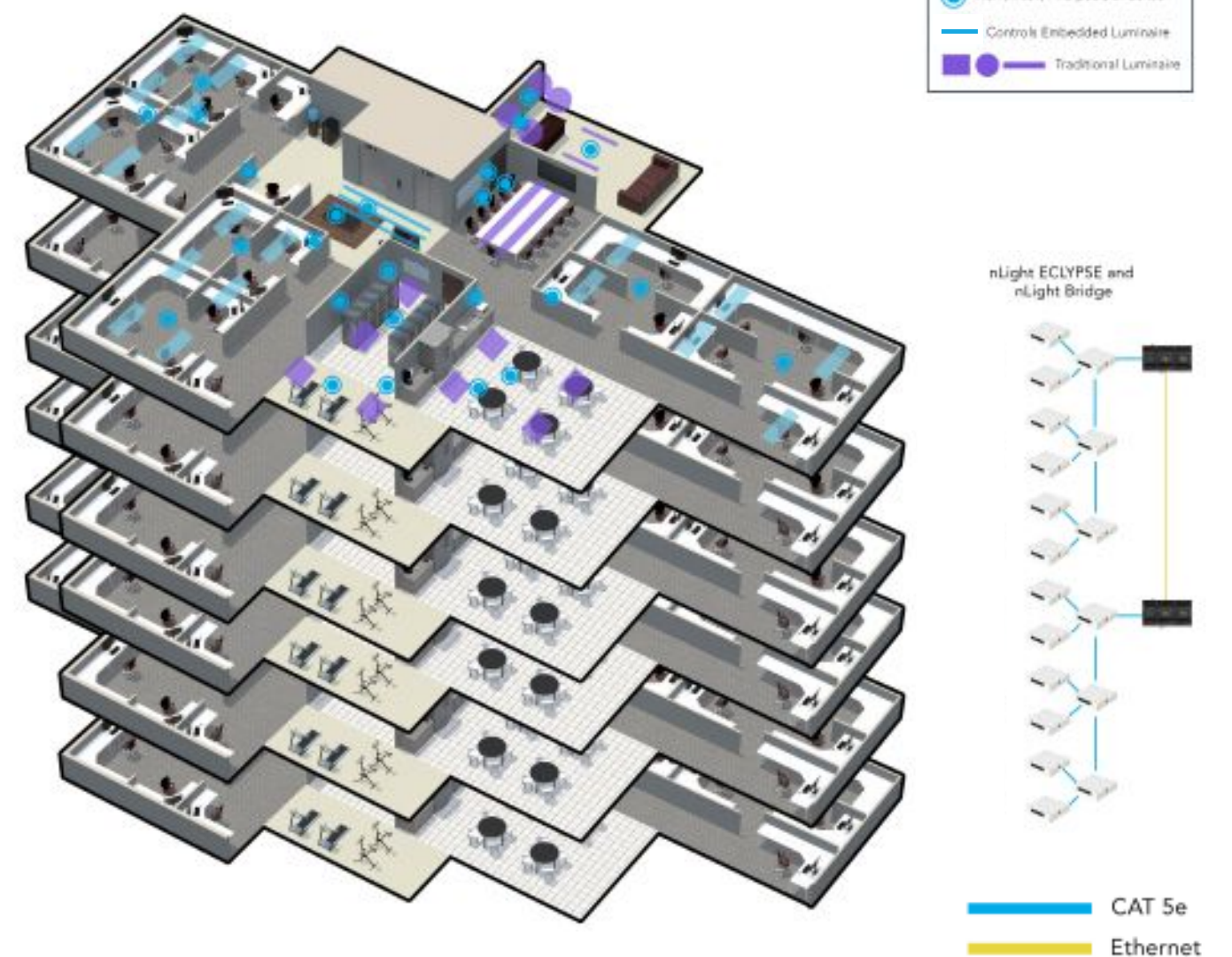


How nLight Wired Scales to Control an Entire Building

nLight Wired easily scales to your entire building, by connecting an nLight ECLYPSE™ controller and nLight bridges on each floor of your structure. For buildings like the one shown below, a single controller can often manage devices for multiple floors. Additional controllers can be added to

manage devices on different floors. The number of floors a controller can manage is limited mainly by the number of devices on the floors. A single controller can manage up to 750 devices, so if most spaces require less than five devices, a controller could manage up to 150 rooms.

nLight Wired — Building Level



For detailed layouts please see our **nLight application guides** or use our Visual Controls software.



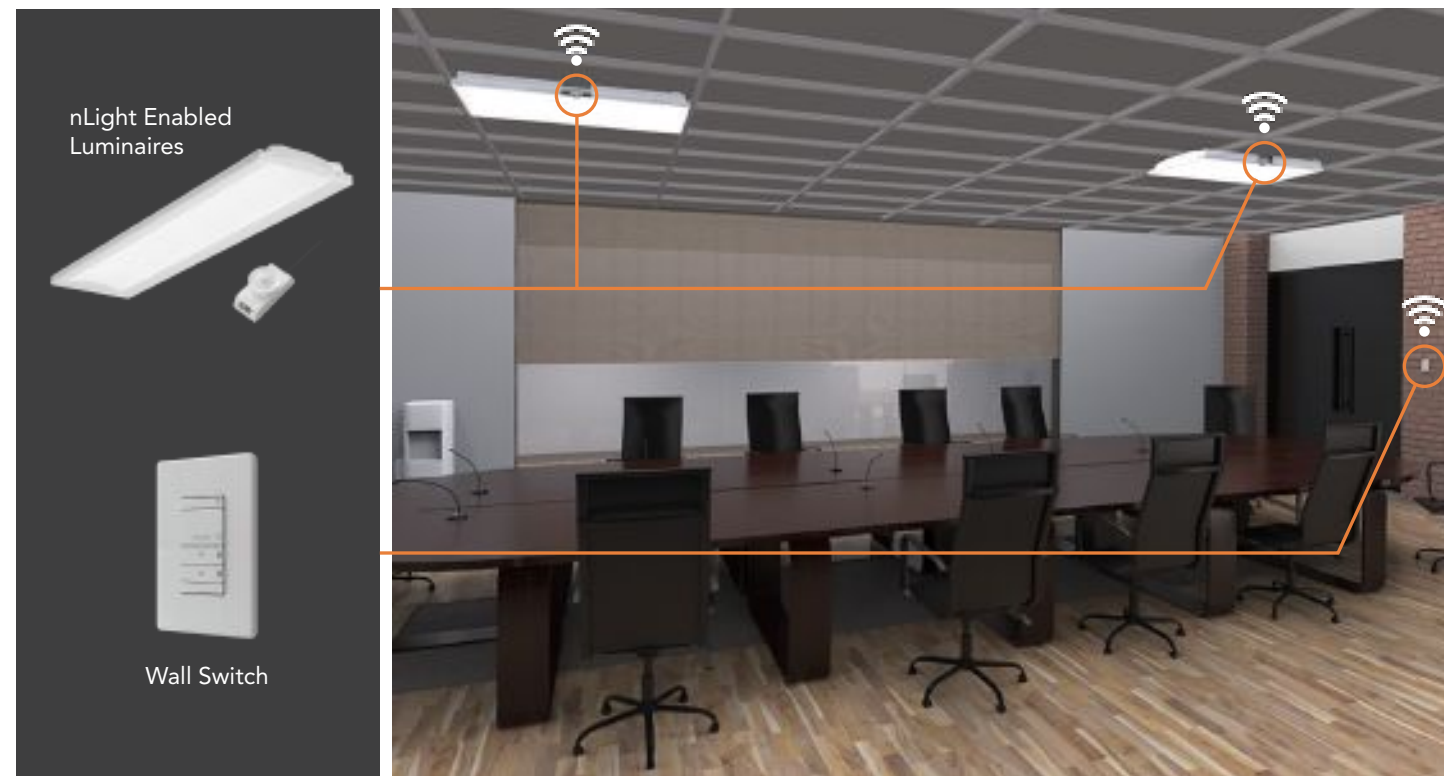
nLight AIR (Wireless): The Basics

nLight AIR is a simplified wireless lighting control solution that eliminates the need to run wires, resulting in an overall lower cost of install. Developed to penetrate typical obstructions found in commercial buildings, nLight AIR simplifies design and installation by embedding sensors directly into a wide variety of indoor and outdoor luminaires.

The comprehensive, integrated security architecture of nLight AIR provides security controls at all product levels from connected luminaires to system controllers and from physical infrastructure to cloud and mobile applications.

nLight AIR Conference Room Example

An example of a typical nLight AIR zone is a conference room with nLight enabled luminaires and a wall switch.



Example with nLight Enabled Luminaires

Simple as 1, 2, 3

1
Install the nLight®
AIR fixtures with
embedded sensor.

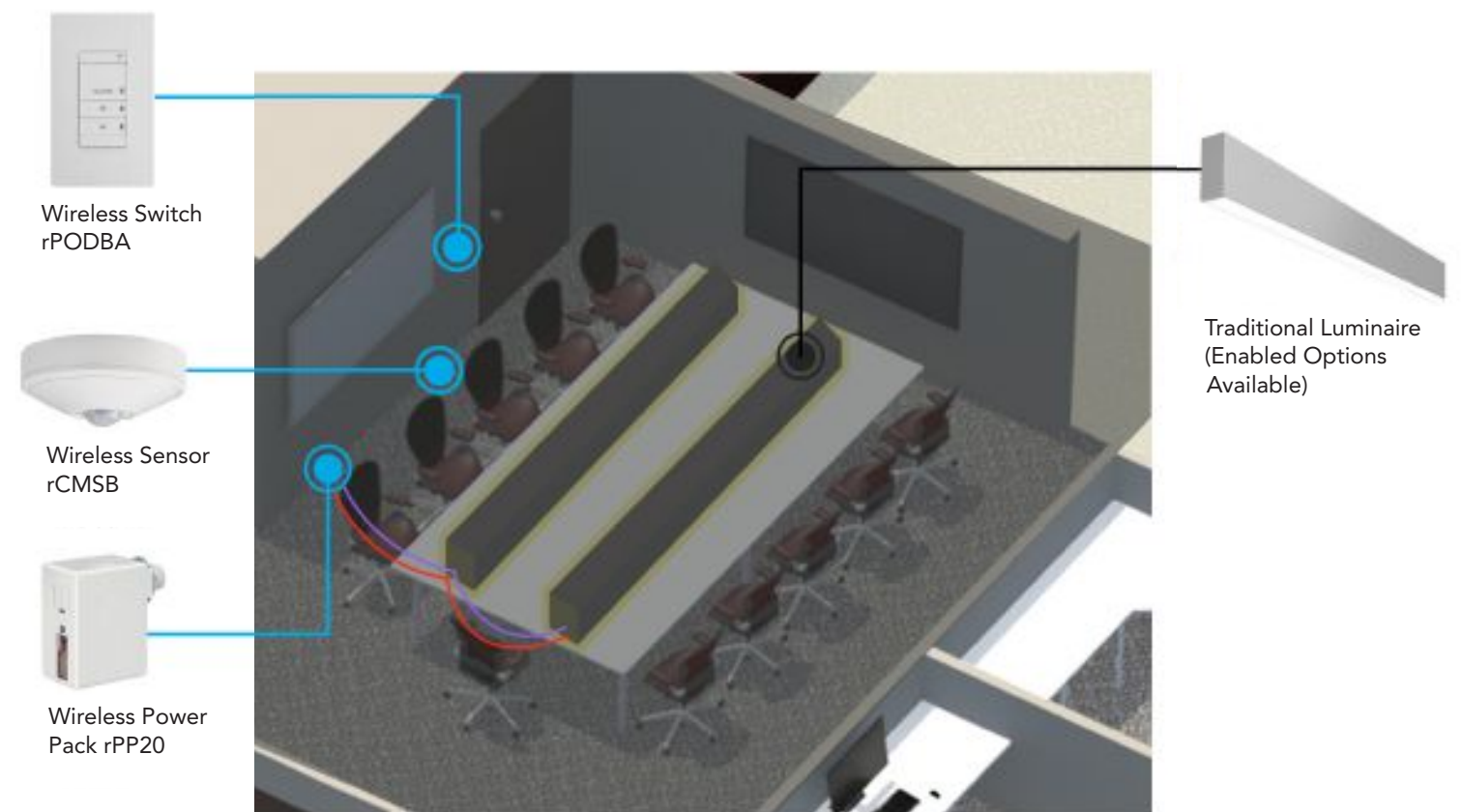
2
Install the wireless
battery-powered
wall switch.

3
With the **CLAIRITY +** app, pair the fixtures with the
wall switch and if desired, customize the sensor
settings for the desired outcome.

How nLight AIR Connects

Devices within a zone use Bluetooth Low Energy (BLE) to communicate with a mobile app for commissioning and configuration. Once commissioned, the nLight AIR devices use a 900Mhz radio to communicate lighting control commands, providing robust and reliable communication to end devices.

nLight AIR — Room Level





nLight AIR: Scalable

How nLight AIR Scales from Multiple Rooms to an Entire Floor

To scale to multiple rooms on an entire floor, please see the commercial office example below. Connect the nLight AIR control devices and luminaires, program, and simply add the nLight ECLYPSE™.

nLight AIR — Floor Level

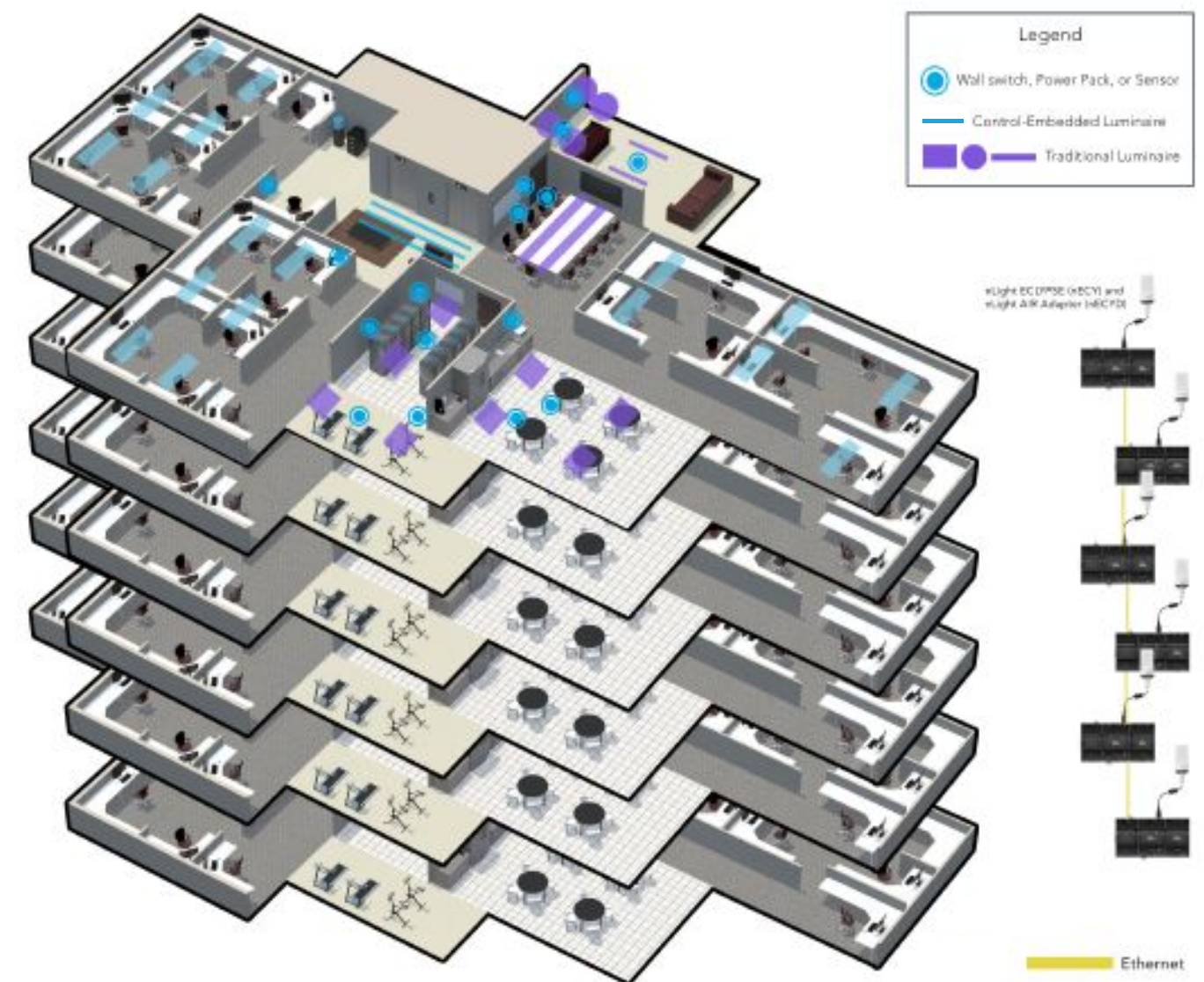


How nLight AIR Scales to Control an Entire Building

nLight AIR easily scales to your entire building, by connecting an nLight ECLYPSE™ controller with the nLight AIR adapter on each floor of your building, as shown below. For wireless applications, a system

controller is recommended to manage devices on its floor. System controllers on separate floors can then be connected to manage remote devices through a single user experience.

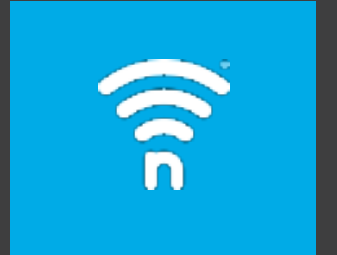
nLight AIR — Building Level



For detailed layouts please see our **nLight application guides** or use our Visual Controls software.

nLight AIR Autonomous Bridging Technology (ABT)

The nLight platform continues to evolve, enhancing its nLight AIR wireless technology by adding more range and reliability to its network. Autonomous Bridging Technology allows networks to grow farther than ever and eliminates guesswork in lighting controls designs.



How it Works

nLight AIR, with its new Autonomous Bridging Technology, “bridges” new groups of devices to the system controller by using devices that are already connected to it. This indirect connection allows nLight AIR networks to grow larger, and because of the long-range broadcasts, information exchanges are incredibly fast.

Key Features

- **Communicate Around Corners:** Design with confidence, knowing that messages will get where they need to go by repeating around obstructions using nearby devices.
- **Get Off the Site more Quickly:** No additional programming required during setup — devices self-initialize to bridge other devices when needed. Just start programming groups closest to your adapter, and the system will auto-establish to form a robust, connected network.
- **Communicate Farther, Faster:** Groups and their corresponding devices are bridged only when necessary, extending your network and allowing groups to respond more quickly through the star topology of nLight AIR.
- **Intelligent Network:** The automatically bridged network self-improves over time, eliminating waste.
- **No Additional Hardware Needed:** Repeating is possible with existing hardware, which reduces the need to add more devices for larger networks.

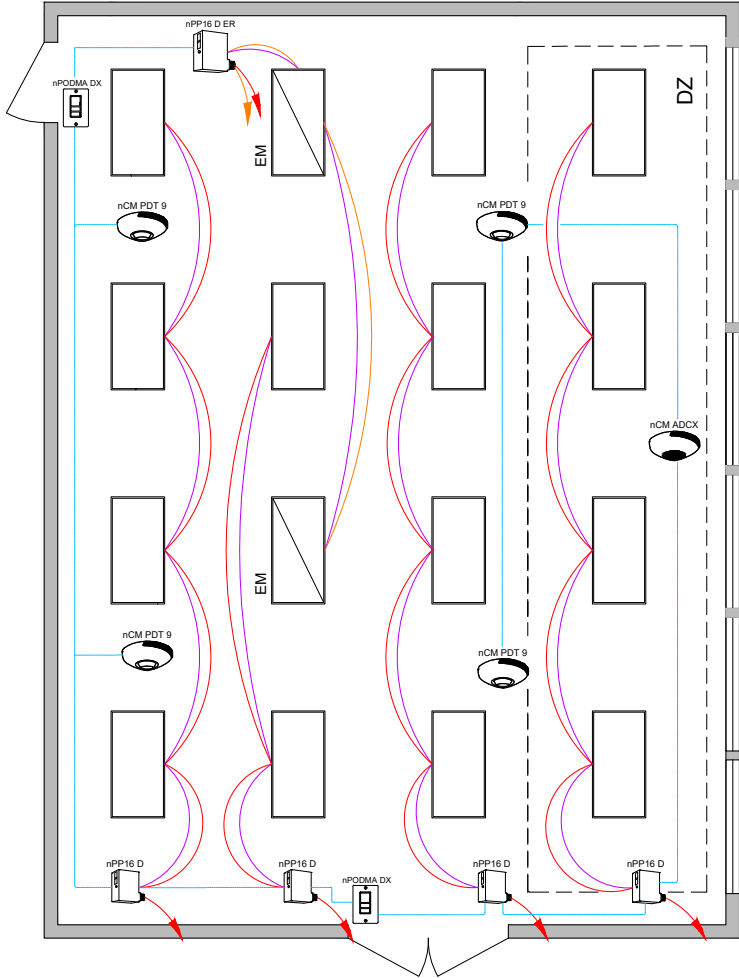
Emergency

Acuity Brands offers a simple solution for virtually every application, from standard to emergency solutions. No extra wiring and easy-to-select Emergency options result in time and money savings on site.

Having fewer devices to install makes specification, design, and installation effortless. Please see the typicals and bill of materials below to see the simplicity of our wired and wireless solutions.

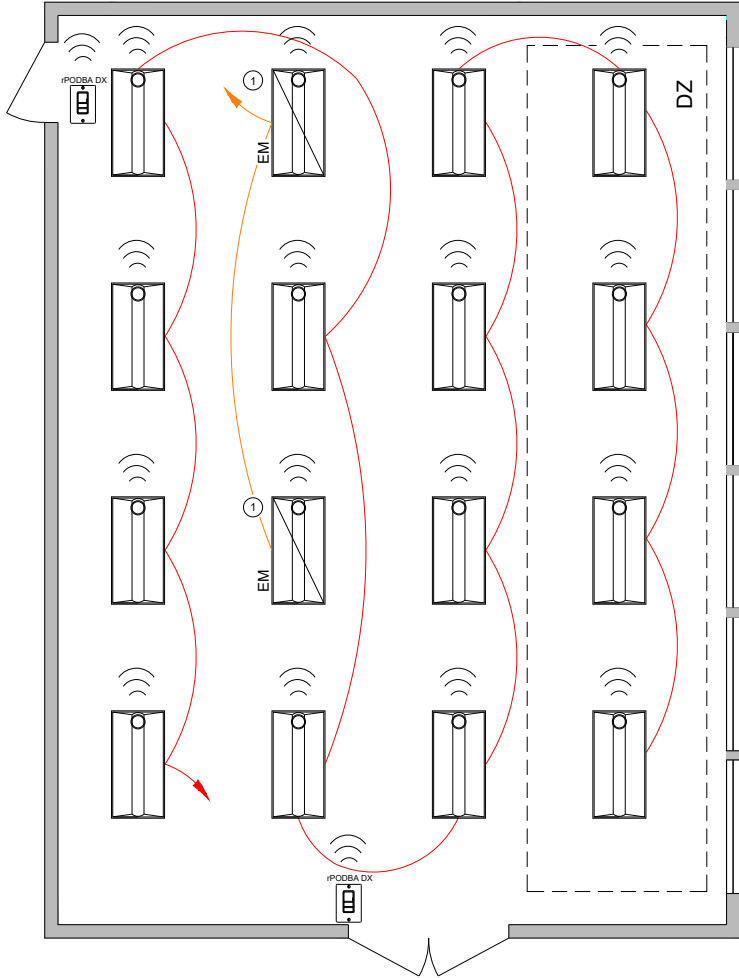
nLight Wired with Emergency

| Qty | Product # | Description |
|-----|----------------|--|
| 4 | nPP16 D EFP | Relay Pack with 0-10V Dimming Output |
| 1 | nPP16 D ER EFP | Emergency Relay Pack with 0-10V Dimming Output |
| 2 | nPODMA DX | On/Off, Raise/Lower WallPod |
| 4 | nCM PDT 9 RJB | Occupancy Sensor |
| 1 | nCM ADCX RJB | Daylight Sensor |



nLight AIR with Emergency

| Qty | Product # | Description |
|-----|-----------------------|--|
| 14 | See Note ² | nLight AIR Enabled Troffer with Sensor Option |
| 2 | See Note ² | nLight AIR Enabled Troffer with Sensor and EM Option |
| 2 | rPODBA DX G2 | Battery Powered, On/Off, Raise/Lower WallPod |



① Fixture(s) assumed to include EM emergency option. For battery backup option, no dedicated EM circuit necessary.

Contact your local lighting agent for more information on nLight enabled fixtures. nLight enabled fixtures provide Luminaire Level Lighting Controls (LLLC), as specified in the relevant code.

For detailed layouts please see our **nLight application guides** or use our Visual Controls software.

Easy to Specify, Install and Use



Easy to Specify & Design

The flexible nLight system architecture saves valuable time for developing quality lighting controls solutions without adding complexity through its advanced control strategies. nLight is a single lighting control system that goes indoor to outdoor, without the need for home runs and gateways for virtually any commercial and industrial applications.

When using the comprehensive portfolio of nLight enabled luminaires, you have the freedom to design a specification that achieves your vision and requirements while ensuring interoperability with extensive factory testing.

nLight enabled luminaires allow for fewer devices to specify and install by eliminating the need to have external controls components because they are directly integrated into the luminaires at the factory.

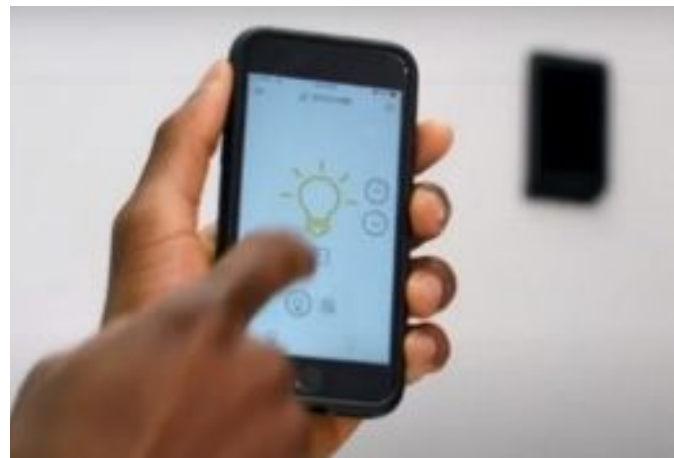


the need for expensive system programming hubs or gateways. Stand-alone solutions can be simply upgraded to a networked system leveraging existing equipment in a cost-effective way at a later time.

Easy to Use for Building Owners and Occupants

Maximize your investment with a smart building ready system. Scale systems as technology changes; adapt as systems are added and/or upgraded.

nLight is one digital lighting controls platform designed to create energy-efficient spaces scaling from a room to a connected building, across an entire site with unparalleled control.



Easy to Install

Using nLight requires less startup time using a single system for all lighting applications, indoors and outdoors. With a wide-range of nLight enabled luminaires, nLight has everything you need to aid in delivering cost-effective, high-quality lighting controls solutions to your customers.

The nLight lighting controls platform reduces controls installation time through its wired plug-and-play solution using industry-standard CAT 5e connections or wireless solutions that can be easily installed and commissioned using the free CLAIRITY™ + mobile application.

nLight Wired and nLight AIR stand-alone solutions can be easily configured via mobile applications without

Improve Productivity: Specification & Design Tools



Application Guides

Please visit our **applications guide page** to download the appropriate nLight guides (IECC, Title 24, ASHRAE, and more). Typical nLight layouts and general code interpretations are included in each guide, covering the most common spaces and making code compliance quicker and easier.

- **Please Visit Our Typicals Page to find the code, building, and space types required for your project designs.**
Visit acuitybrands.com/resources/technical-resources/typicals
- **Visual Controls: A Quicker Way to do a Design Take-Off**
To get access please contact your local lighting agent.
- **Save Design & Code Research Time: Online Sequence of Operations Tool**
Visit acuitybrands.com/Methodik
- **Spec Builder: Build Your Spec Faster and Easier**
Visit spec.build
- **Explore Acuity Academy**
Acuity Academy provides educational resources for individuals wanting to expand their lighting, controls and building management technical knowledge. On Acuity Academy, you can register for instructor-led classes, take e-learning courses or watch videos and recorded content.

www.acuitybrands.com/resources/training-and-education
For more information on nLight, please visit: nLightcontrols.com

Security

Acuity Brands is fully committed to developing and maintaining secure products and has a robust Product Security Program in place. Through the security governance mode, we incorporate core security principles and best practices early into the product development lifecycle. Our security governance policies include standards-derived policies, industry best practices and guidelines.

For more information, download the **nLight® AIR Security Architecture PDF**



ioXt® Alliance

Acuity Brands seeks to meet and exceed security regulations and guidelines, so we are pleased to work with the ioXt Alliance to test and certify our products given their expertise and vision. Further, cybersecurity threats are evolving at a fast pace, and professional collaborations between Acuity Brands and other reputable and respected members of the ioXt Alliance allow all parties to stay educated and prepared for future threats.

All trademarks referenced are property of their respective owners.

California's Civil Code Title 1.81.26, Security of Connected Devices, approved under Senate Bill No. 327 (2018)

Acuity Brands has reviewed its connected devices, including nLight®, Atrius®, Fresco™, ROAM®, and Pathway Connectivity Solutions® products. This review consisted of validating existing security measures and implementing additional security features so that all Acuity Brands products/solutions offered for sale in California after January 1, 2020, at a minimum, will comply with Title 1.81.26.



Acuity Brands has proven that it meets SOC 2 Type 1 compliance requirements, certifying that it upholds the necessary principles for security, availability, processing integrity, confidentiality, and privacy. Meeting the prerequisites for SOC 2, assures customers that Acuity Brands has appropriate information security controls in place for its products and services.

All trademarks referenced are property of their respective owners.

Service and Support

Acuity Brands offers a portfolio of service plans and support documents with information to guide you for design, pre-site information, implementation, maintenance and on-going improvements to your lighting controls environment.

Services/Service Plans

Control Service Plans offer proactive, onsite and remote diagnostics, configuration changes, training, and software/firmware updates typical of maintaining lighting control systems. Service Plans help facility managers and owners maintain their investment for optimal performance and maximum value.

- Pre-paid, budgeted services, with coverage options for planned and unplanned visits.
- Fully customizable to meet your unique requirements.
- Optimize your energy savings as your building needs evolve.

Our service plans are available in single or multi-year arrangements and are customized to fit your exact needs. Acuity Brands has three controls service plans designed to fit your service requirements and budget.

Get all the details at **Acuity Brands Control Services and Support**



Support

The services and support team simplifies design and specification. We are committed to supporting your project needs from design to occupancy and beyond.

Technical Support phone number:
1-800-535-2465

Support email addresses:

- nLight Wired: nlight-support@acuitybrands.com
- nLight AIR: nlightair-support@acuitybrands.com





ASHRAE 90.1-2016

nLight® Applications Guide





/ nLight Lighting Controls Platform

It's not just smarter. It's easier.

nLight is a sensor-based digital lighting controls solution that offers wired and wireless lighting controls that easily connect luminaires, sensors, and other control devices to create a digital network. The nLight platform of products enables ease in specification, installation, and ownership, making it the go-to digital lighting controls platform for specifiers, contractors, and building owners.



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/ ABOUT

About ASHRAE 90.1

ASHRAE 90.1 is an energy code designed to reduce energy consumption. The ASHRAE 90.1–2016 energy code has specific requirements for lighting controls. The use of advanced lighting controls to synchronize light levels with daylight, occupancy, and multi-level control capability are required in order to be compliant.

About This Guide

Acuity Brands® offers the nLight® ASHRAE 90.1–2016 Applications Guide as a reference of typical nLight layouts that help make code compliance quicker and easier. The Acuity Brands Design Services Team is also available to support engineers and contractors with detailed design, submittal, and installation. For additional information, please contact your Acuity Brands Sales Representative.

About nLight

nLight® is a sensor-based digital lighting controls solution that offers wired and wireless lighting controls that easily connect luminaires, sensors, and other control devices to create one digital lighting controls platform to aid in code compliance, reduce energy, and enable advanced networked capabilities. Ideal for practically any application, small to large, indoor to outdoor, nLight offers lighting controls that scale from one room to an entire floor, from one floor to an entire building, from one building to an entire campus.

The chart below is an overview of the Code Requirements for Common Building Spaces. Please use this information as a guide. For specific ASHRAE code requirements please refer to the ASHRAE 90.1–2016 code.

| Control Requirement* | | Code Provision | Code Summary* | Space Type | | | | | | | | |
|----------------------|--|--------------------------|--|-----------------|------------------|--|--|--------|----------|----------|-----------|---------------------------|
| | | | | Enclosed Office | Open Plan Office | Conference, Meeting, Multipurpose Room | Classroom, Lecture Hall, Training Room | Lobby | Corridor | Restroom | Stairwell | Gymnasium/ Fitness Center |
| On-Off Control | Local (i.e., Switch) Control | 9.4.1.1[a] | There shall be one or more readily accessible manual lighting controls in the space that controls all lighting in the space. Note: Remote locations permitted for reasons of safety or security. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Manual ON | 9.4.1.1[b] | None of the lighting in the space shall be automatically turned on. | ✓ | ✓ | ✓ | ✓ | | | | | ✓ |
| | Partial Automatic ON | 9.4.1.1[c] | The general lighting shall be allowed to be turned on automatically to 50% of the lighting power. | (or) ✓ | (or) ✓ | (or) ✓ | (or) ✓ | | | | | (or) ✓ |
| | Full Automatic ON | 9.4.1.1 | Automatically controlled spaces are allowed to turn on to full. | | | | | ✓ | ✓ | ✓ | ✓ | |
| | Automatic Partial OFF Via Occupancy Sensor | 9.4.1.1[g] | The general lighting power shall be automatically reduced by at least 50% within 20 minutes of all occupants leaving the space. Note: Full Off also complies. | | | | | ✓ | ✓ | | ✓ | |
| | Automatic Full OFF Via Occupancy Sensor | 9.4.1.1[h] | All lighting shall be automatically shut off within 20 minutes of all occupants leaving the space. | ✓ | (or) ✓ | ✓ | ✓ | (or) ✓ | (or) ✓ | (or) ✓ | ✓ | ✓ |
| | Scheduled Shutoff (i.e. Timeclock) | 9.4.1.1[i] | All lighting shall be automatically shut off during periods when the space is scheduled to be unoccupied using a time-of-day operated control. Note: A signal from another automatic control device or alarm/security system complies. | | | ✓ | | | | | ✓ | ✓ |
| Light Level Control | Bi-Level Lighting Control | 9.4.1.1[d] | Controlled lighting shall have at least one control step between 30% and 70%, or continuous dimming, in addition to full on and full off. | ✓ | ✓ | ✓ | ✓ | | | | ✓ | ✓ |
| | Automatic Daylight Responsive Controls for Sidelighting/ Toplighting | 9.4.1.1[e] 9.4.1.1[f] | If the general lighting load is 150W or greater in the primary sidelighted or toplighted areas, or 300W or greater in the primary & secondary sidelighted areas, the general lighting in these areas shall be controlled by multi-step or continuous dimming photocontrols. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Additional Controls | Parking Garage Lighting Power Setback | 9.4.1.2[b] | Lighting power of each luminaire shall be automatically reduced by a minimum of 30% when there is no activity detected within a lighting zone for 20 minutes. | | | | | | | | | |
| | Automatic Receptacle (i.e. Plug Load Control) | 8.4.2 | 50% of all receptacles, and 25% of branch circuit feeders installed for modular furniture, shall be automatically turned off by an occupant sensor within 20 minutes of all occupants leaving the space. <i>Note: A time-of-day schedule or a signal from another automatic control device or alarm/security system complies.</i> | ✓ | ✓ | ✓ | ✓ | | | | | |
| Exterior Control | Exterior Lighting Controls | 9.4.1.4 | 9.4.1.4[a] Daylight shutoff 9.4.1.4[b] Facade and Landscape lighting shutoff 9.4.1.4[c] Lighting setback | | | | | | | | | |

*Note: This summary is for general information purposes only and is provided without any warranty as to accuracy, completeness, or otherwise. The user should read the applicable code sections for more complete and detailed descriptions of code requirements and exceptions and should consult with a professional engineering or other competent advisor before making any decision or taking any action based on this summary.

| Warehouse/ Storage Area | Parking Area (Garage), Interior | Exterior Lighting |
|----------------------------|---------------------------------------|----------------------|
| ✓ | | |
| ✓ | | |
| (or) | | |
| ✓ | | |
| ✓ | | |
| ✓ | | |
| (or) | | |
| ✓ | ✓ | |
| ✓ | | |
| ✓ | | |
| | ✓ | |
| | | |
| | | ✓ |

For each space type there will be a wired solution on the left and wireless solution on the right.

Room description

Room layout diagram with controls, fixtures, and wiring

6

ENCLOSED OFFICE: < 250 sq. ft., Windows, nLight Enabled Fixtures

Wired

Wireless

Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|-----------------|---|
| | 2 | See Note | nLight Wired Enabled Troffer |
| | 1 | nWSXA PDT LV DX | Wall Switch Occupancy Sensor with On/Off, Raise/Lower |
| | 1 | nPP20 PL | Plug Load Relay Pack |

Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|------------------|---|
| | 2 | See Note | nLight AIR Enabled Troffer with Sensor Option |
| | 1 | rPODBA DX G2 | Battery Powered, On/Off, Raise/Lower WallPod |
| | 1 | rPP20 24V EFP G2 | Plug Load Relay Pack |

OPERATIONAL DETAILS:

Light Fixtures:

- All fixtures are dimmable
- All fixtures can be controlled together or independently
- Maximum level can be task-tuned to any percentage via programming

Occupancy Control:

- Fixtures must be turned on manually for optionally can be configured to come on automatically (to 50%)
- Plug load turns on automatically
- Fixtures and plug load turn off automatically when room becomes vacant

Daylight Control:

- Not required for offices without windows or that have loads <150W in sidelit zones

Manual Control:

- On/off & raise/lower control of fixtures

ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE® controller
- Wireless fixture embedded control and occupancy/daylighting sensor options available, please see the fixture specification sheet
- For emergency lighting control use a power pack with EREM option or nLight Enabled Fixture with emergency option

Note: Contact your local lighting agent for more information on nLight enabled fixtures.

www.acuitybrands.com/nLight • 800-535-2465

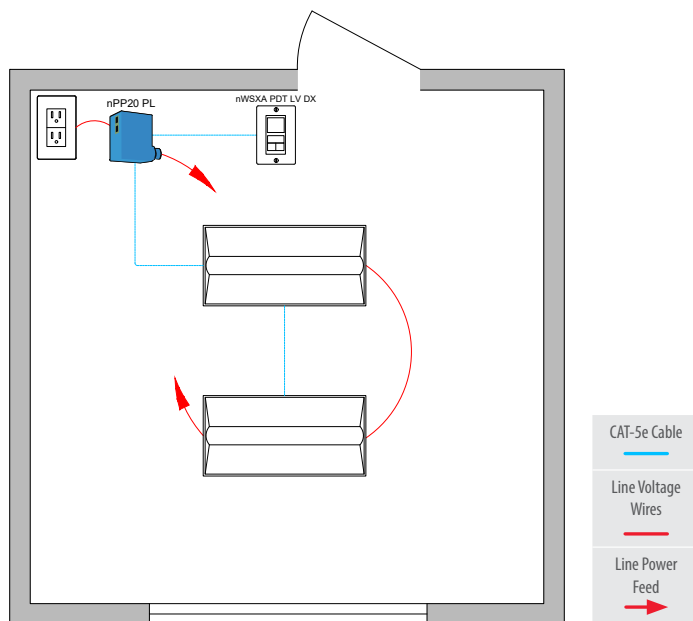
Wire type legend

Required list of devices in order to implement room layout design above

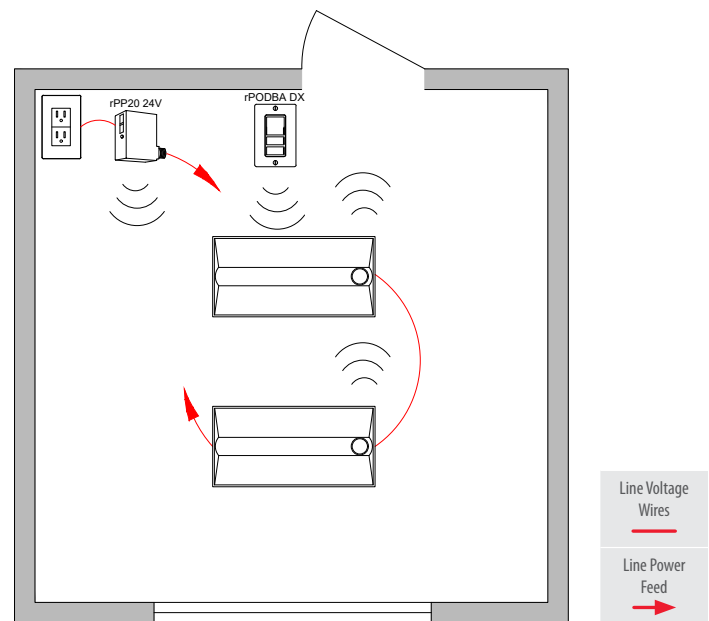
Operational details describe the functionality provided by the equipment specified in the solution

Additional options that add control capacity beyond code requirements

Wired



Wireless



Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|-----------------|---|
| | 2 | See Note | nLight Wired Enabled Troffer |
| | 1 | nWSXA PDT LV DX | Wall Switch Occupancy Sensor with On/Off, Raise/Lower |
| | 1 | nPP20 PL | Plug Load Relay Pack |

Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|------------------|---|
| | 2 | See Note | nLight AIR Enabled Troffer with Sensor Option |
| | 1 | rPODBA DX G2 | Battery Powered, On/Off, Raise/Lower WallPod |
| | 1 | rPP20 24V EFP G2 | Plug Load Relay Pack |

/ OPERATIONAL DETAILS:

Light Fixtures:

- All fixtures are dimmable
- All fixtures can be controlled together or independently
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Fixtures must be turned on manually (or optionally can be configured to come on automatically to 50%)
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Manual Control:

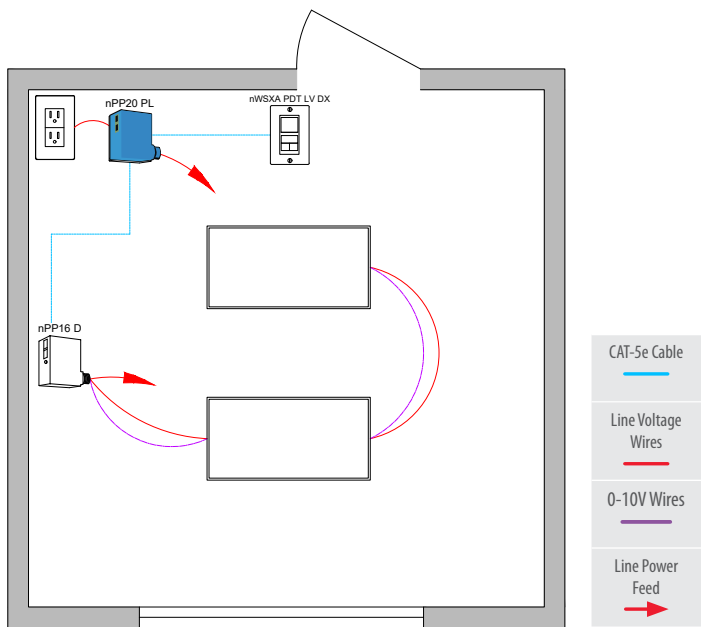
- On/off & raise/lower control of fixtures

/ ADDITIONAL OPTIONS:

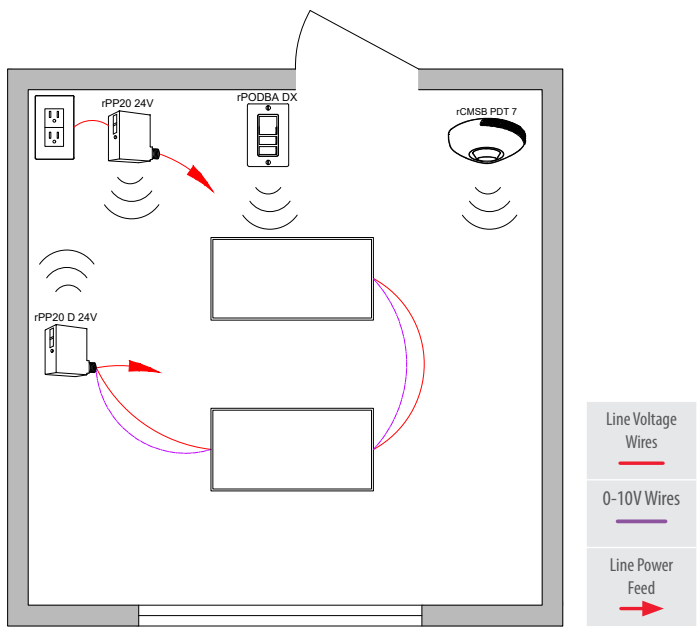
- Room can be connected to nLight backbone to enable network control or time schedules
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE® controller
- Wireless fixture embedded control and occupancy/daylighting sensor options available, please see the fixture specification sheet
- For emergency lighting control use a power pack with ER/EM option or nLight Enabled Fixture with emergency option

Note: Contact your local lighting agent for more information on nLight enabled fixtures.




Wired







Wireless



Bill of Materials

| Symbol | Qty | Product # | Description |
|---|-----|-----------------|---|
|  | 1 | nPP16 D EFP | Relay Pack with 0-10V Dimming Output |
|  | 1 | nWSXA PDT LV DX | Wall Switch Occupancy Sensor with On/Off, Raise/Lower |
|  | 1 | nPP20 PL | Plug Load Relay Pack |

Bill of Materials

| Symbol | Qty | Product # | Description |
|---|-----|--------------------|---|
|  | 1 | rPP20 D 24V EFP G2 | Relay Pack with 0-10V Dimming Output |
|  | 1 | rPODBA DX G2 | Battery Powered, On/Off, Raise/Lower WallPod |
|  | 1 | rCMSB PDT 7 G2 | Battery Powered Occupancy and Daylight Sensor |
|  | 1 | rPP20 24V EFP G2 | Plug Load Relay Pack |

/ OPERATIONAL DETAILS:

Light Fixtures:

- All fixtures are dimmable
- All fixtures are controlled together
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Fixtures must be turned on manually (or optionally can be configured to come on automatically to 50%)
- Plug-load turns on automatically
- Fixtures and plug-load turn off automatically when room becomes vacant

Daylight Control:

- Not required for offices without windows or that have loads <150W in sidelit zone

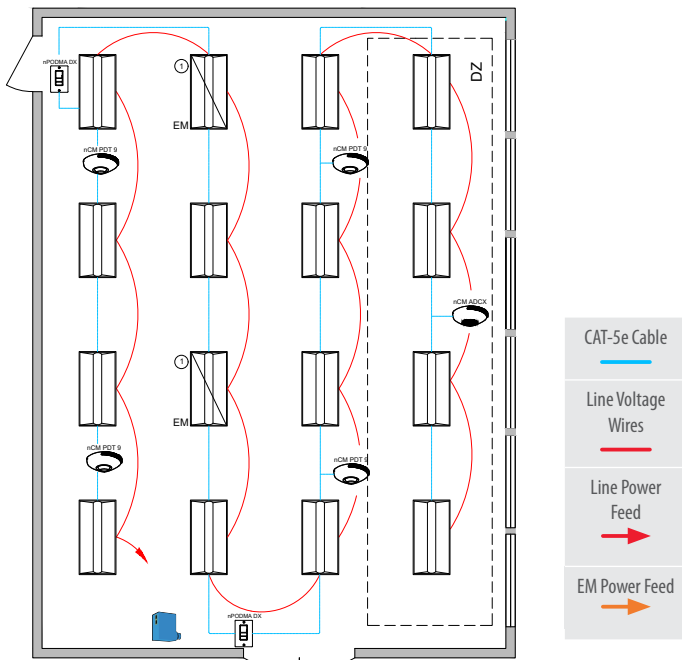
Manual Control:

- On/off & raise/lower control of fixtures

/ ADDITIONAL OPTIONS:

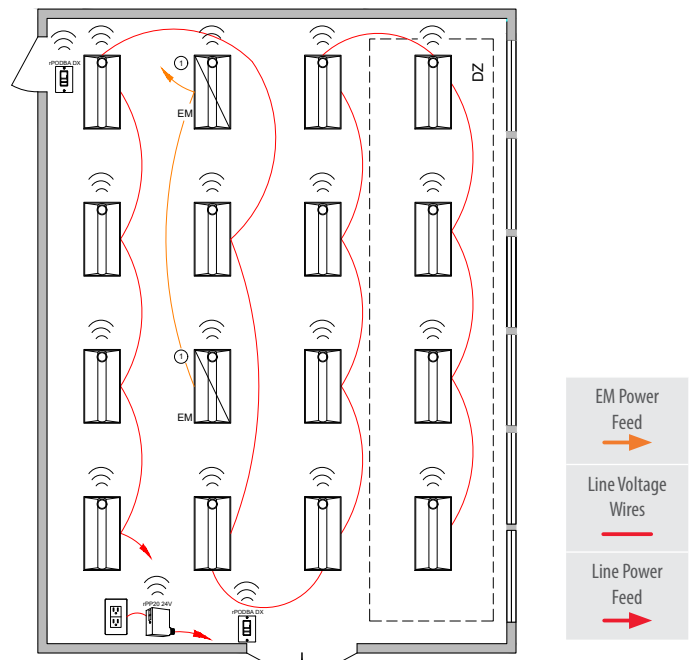
- Room can be connected to nLight backbone to enable network control or time schedules
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE® controller
- For emergency lighting control use a power pack with ER/EM option or nLight Enabled Fixture with emergency option

Wired



① Some nLight enabled EM fixtures require a normal sense line connection. Wiring shown assumes battery backup emergency option. See fixture spec sheets for details.

Wireless



① Fixture(s) assumed to include power interruption detection emergency option. For battery backup option, no dedicated EM circuit necessary.

Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|---------------|--|
| | 14 | See Note | nLight Wired Enabled Troffer |
| | 2 | See Note | nLight Wired Enabled Troffer with Battery Option |
| | 2 | nPODMA DX | On/Off, Raise/Lower WallPod |
| | 4 | nCM PDT 9 RJB | Occupancy Sensor |
| | 1 | nCM ADCX RJB | Daylight Sensor |
| | 1 | nPP20 PL | Plug Load Relay Pack |

Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|------------------|--|
| | 14 | See Note | nLight AIR Enabled Troffer with Sensor Option |
| | 2 | See Note | nLight AIR Enabled Troffer with Sensor and EM Option |
| | 2 | rPODBA DX G2 | Battery Powered, On/Off, Raise/Lower WallPod |
| | 1 | rPP20 24V EFP G2 | Plug Load Relay Pack |

/ OPERATIONAL DETAILS:

Light Fixtures:

- All fixtures are dimmable
- All fixtures are controlled together or independently
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Fixtures must be turned on manually (or optionally can be configured to come on automatically to 50%)
- Plug-load turns on automatically
- Fixtures and plug-load turn off automatically when room becomes vacant

Daylight Control:

- Smooth continuous dimming
- Custom grouping of fixtures into separate daylight zones (max. number zones = number of fixtures)
- Not required for offices without windows or that have loads <150W in sidelit zones

Manual Control:

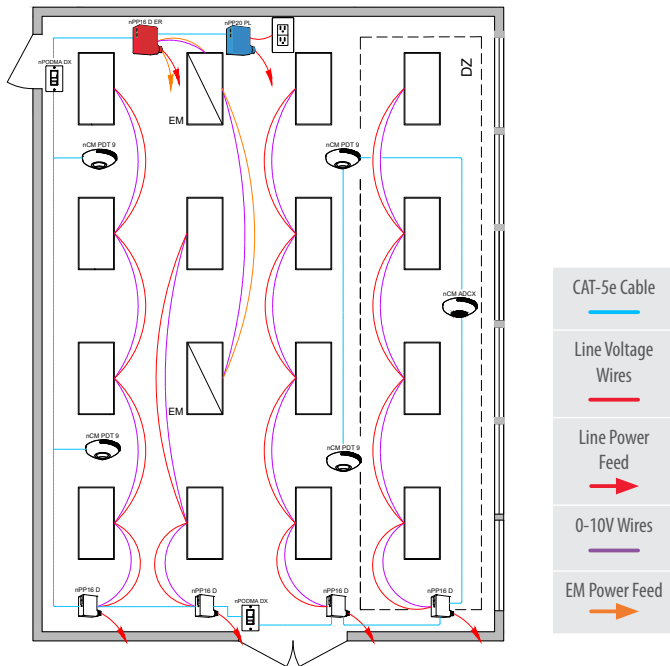
- On/off & raise/lower control of fixtures

/ ADDITIONAL OPTIONS:

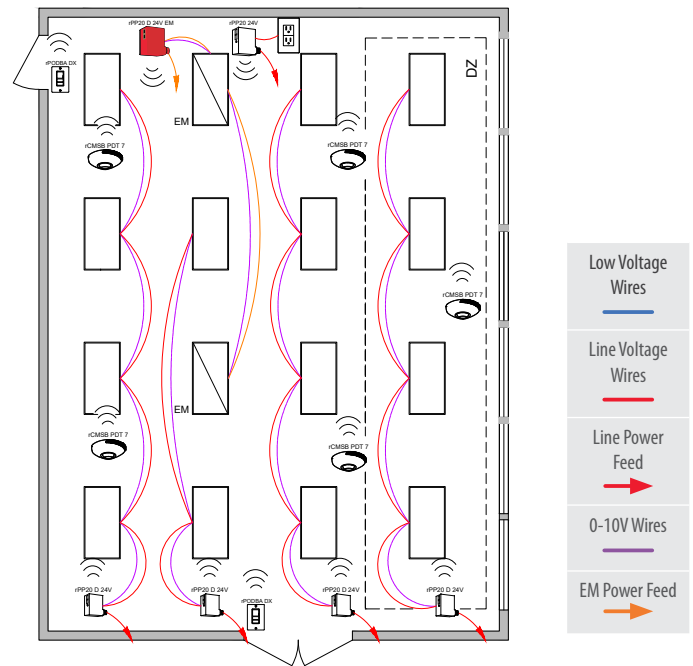
- Room can be connected to nLight backbone to enable network control or time schedules
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE® controller
- Wireless fixture embedded control and occupancy/daylighting sensor options available, please see the fixture specification sheet
- For emergency lighting control use a power pack with ER/EM option or nLight Enabled Fixture with emergency option

Note: Contact your local lighting agent for more information on nLight enabled fixtures.

Wired



Wireless



Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|----------------|--|
| | 4 | nPP16 D EFP | Relay Pack with 0-10V Dimming Output |
| | 1 | nPP16 D ER EFP | Emergency Relay Pack with 0-10V Dimming Output |
| | 2 | nPODMA DX | On/Off, Raise/Lower WallPod |
| | 4 | nCM PDT 9 RJB | Occupancy Sensor |
| | 1 | nCM ADCX RJB | Daylight Sensor |
| | 1 | nPP20 PL | Plug Load Relay Pack |

Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|-----------------------|--|
| | 4 | rPP20 D 24V EFP G2 | Relay Pack with 0-10V Dimming Output |
| | 1 | rPP20 D 24V EM EFP G2 | Emergency Relay Pack with 0-10V Dimming Output |
| | 2 | rPODBA DX G2 | Battery Powered, On/Off, Raise/Lower WallPod |
| | 5 | rCMSB PDT 7 G2 | Battery Powered Occupancy and Daylight Sensor |
| | 1 | rPP20 24V EFP G2 | Plug Load Relay Pack |

OPERATIONAL DETAILS:

Light Fixtures:

- All fixtures are dimmable
- Each row controlled independently
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Fixtures must be turned on manually (or optionally can be configured to come on automatically to 50%)
- Plug-load turns on automatically
- Fixtures and plug-load turn off automatically when room becomes vacant

Daylight Control:

- Smooth continuous dimming
- Daylight zones defined by rows
- Not required for offices without windows or that have loads <150W in sidelit zones

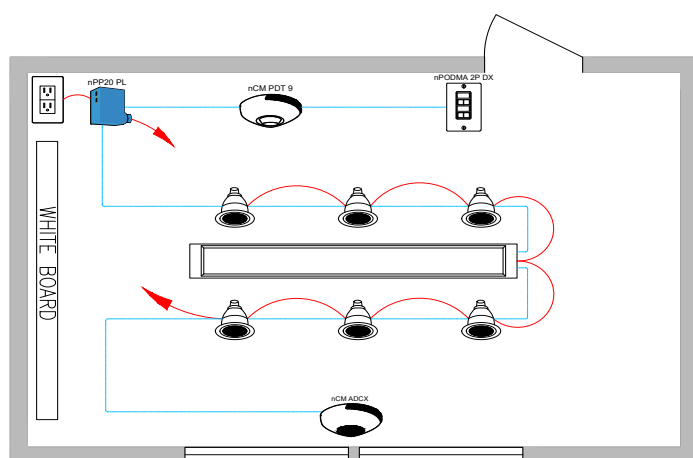
Manual Control:

- On/off & raise/lower control of fixtures

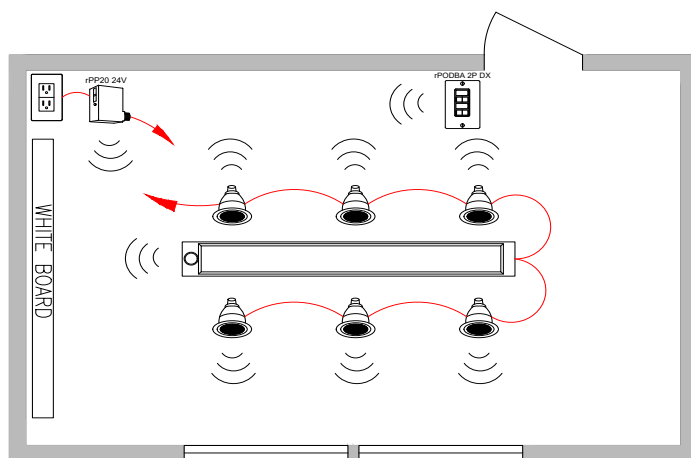
ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE® controller
- For emergency lighting control use a power pack with ER/EM option or nLight Enabled Fixture with emergency option

Wired



Wireless



Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|---------------|--|
| | 1 | See Note | nLight Wired Enabled Linear Fixture |
| | 6 | See Note | nLight Wired Enabled Downlight Fixture |
| | 1 | nPODMA 2P DX | 2-Pole, On/Off, Raise/Lower WallPod |
| | 1 | nCM PDT 9 RJB | Occupancy Sensor |
| | 1 | nCM ADCX RJB | Daylight Sensor |
| | 1 | nPP20 PL | Plug Load Relay Pack |

Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|------------------|--|
| | 1 | See Note | nLight AIR Enabled Linear Fixture with Sensor Option |
| | 6 | See Note | nLight AIR Enabled Downlight Fixture |
| | 1 | rPODBA 2P DX G2 | Battery Powered, 2-Pole, On/Off, Raise/Lower WallPod |
| | 1 | rPP20 24V EFP G2 | Plug Load Relay Pack |

/ OPERATIONAL DETAILS:

Light Fixtures:

- All fixtures are dimmable
- Maximum level can be task tuned to any percentage via programming
- A/V zone can be programmed to control two fixtures in front of the whiteboard

Occupancy Control:

- Fixtures must be turned on manually (or optionally can be configured to come on automatically to 50%)
- Plug-load turns on automatically
- Fixtures and plug-load turn off automatically when room becomes vacant

Daylight Control:

- Smooth continuous dimming
- Custom grouping of fixtures into separate daylight zones (max number zones = number of fixtures)
- Not required for areas without windows or that have loads <150w in sidelit zones

Manual Control:

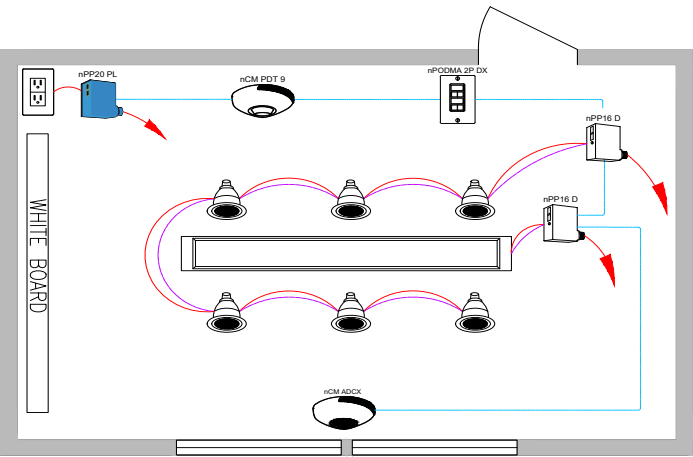
- On/off & raise lower control of two zones of fixtures

/ ADDITIONAL OPTIONS:

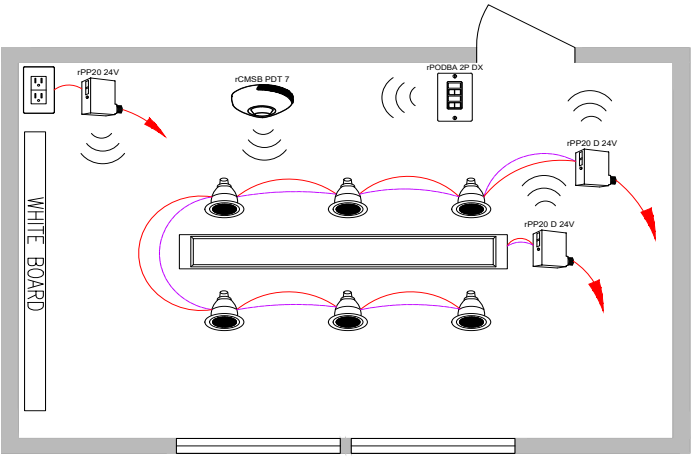
- Room can be connected to nLight backbone to enable network control or time schedules
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE® controller
- Wireless fixture embedded control and occupancy/daylighting sensor options available, please see the fixture specification sheet
- For emergency lighting control use a power pack with ER/EM option or nLight Enabled Fixture with emergency option

Note: Contact your local lighting agent for more information on nLight enabled fixtures.

Wired



Wireless



Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|---------------|--------------------------------------|
| | 2 | nPP16 D EFP | Relay Pack with 0-10V Dimming Output |
| | 1 | nPODMA 2P DX | 2-Pole, On/Off, Raise/Lower WallPod |
| | 1 | nCM PDT 9 RJB | Occupancy Sensor |
| | 1 | nCM ADCX RJB | Daylight Sensor |
| | 1 | nPP20 PL | Plug Load Relay Pack |

Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|--------------------|--|
| | 2 | rPP20 D 24V EFP G2 | Relay Pack with 0-10V Dimming Output |
| | 1 | rPODBA 2P DX G2 | Battery Powered, 2-Pole, On/Off, Raise/Lower WallPod |
| | 1 | rCMSB PDT 7 G2 | Battery Powered Occupancy and Daylight Sensor |
| | 1 | rPP20 24V EFP G2 | Plug Load Relay Pack |

OPERATIONAL DETAILS:

Light Fixtures:

- All fixtures are dimmable
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Fixtures must be turned on manually (or optionally can be configured to come on automatically to 50%)
- Plug-load turns on automatically
- Fixtures and plug-load turn off automatically when room becomes vacant

Daylight Control:

- Smooth continuous dimming
- Daylight zones defined by rows
- Not required for areas without windows or that have loads <150W in sidelit zones

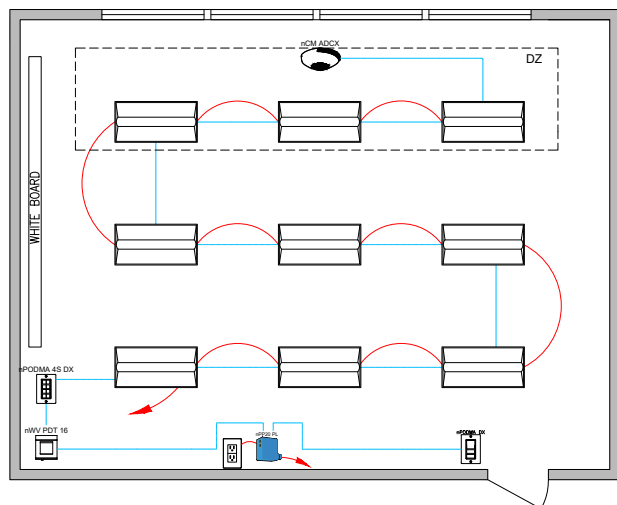
Manual Control:

- On/off & raise lower control of two zones of fixtures

ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE® controller
- For emergency lighting control use a power pack with ER/EM option or nLight Enabled Fixture with emergency option

Wired

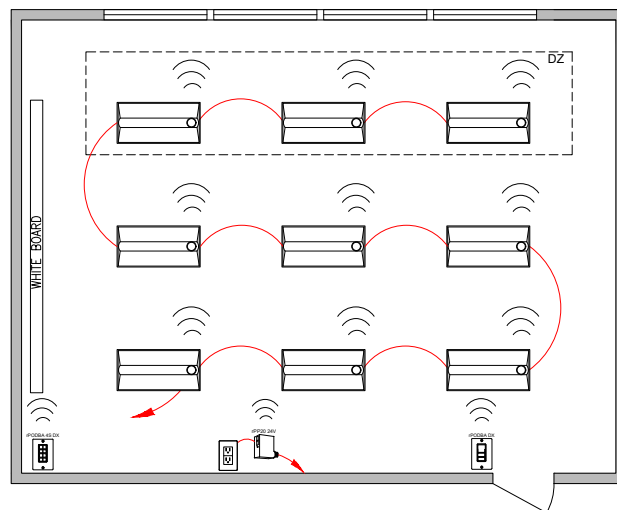


CAT-5e Cable

Line Voltage Wires

Line Power Feed

Wireless



Line Voltage Wires

Line Power Feed

Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|--------------|--|
| | 9 | See Note | nLight Wired Enabled Troffer |
| | 1 | nPODMA DX | On/Off, Raise/Lower WallPod |
| | 1 | nWV PDT 16 | Dual Technology Wide View Occupancy Sensor |
| | 1 | nPODMA 4S DX | Teacher Station — 4 Scene Control with Master On/Off & Raise/Lower |
| | 1 | nCM ADCX RJB | Daylight Sensor |
| | 1 | nPP20 PL | Plug Load Relay Pack |

Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|------------------|--|
| | 9 | See Note | nLight AIR Enabled Troffer with Sensor Option |
| | 1 | rPODBA DX G2 | Battery Powered, On/Off, Raise/Lower WallPod |
| | 1 | rPODBA 4S DX G2 | Teacher Station — Battery Powered 4 Scene Control with Master On/Off & Raise/Lower |
| | 1 | rPP20 24V EFP G2 | Plug Load Relay Pack |

/ OPERATIONAL DETAILS:

Light Fixtures:

- All fixtures are dimmable
- All fixtures are controlled together or independently
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Fixtures must be turned on manually (or optionally can be configured to some on automatically to 50%)
- Plug-load turns on automatically
- Fixtures and plug-load turn off automatically when room becomes vacant

Daylight Control:

- Smooth continuous dimming
- Custom grouping of fixtures into separate daylight zones (max number zones = number of fixtures)
- Not required for areas without windows or that have loads <150W in sidelit zones

Manual Control:

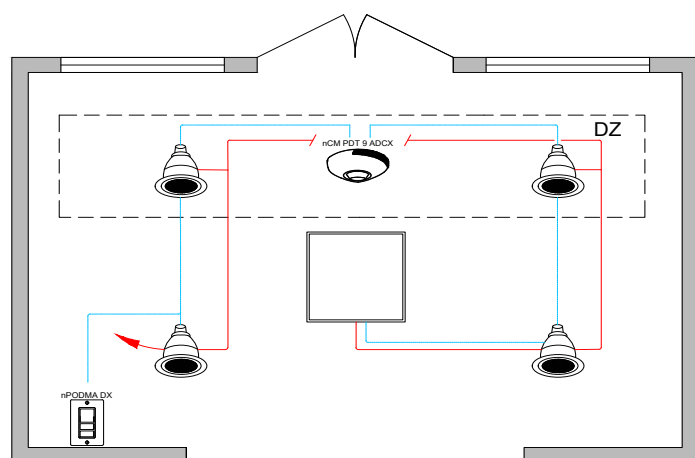
- On/off & raise/lower control of entire room
- Teacher station with 4 preset scenes

/ ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE controller
- Wireless fixture embedded control and occupancy/daylighting sensor options available, please see the fixture specification sheet
- For emergency lighting control use a power pack with ER/EM option or nLight Enabled Fixture with emergency option

Note: Contact your local lighting agent for more information on nLight enabled fixtures.

Wired

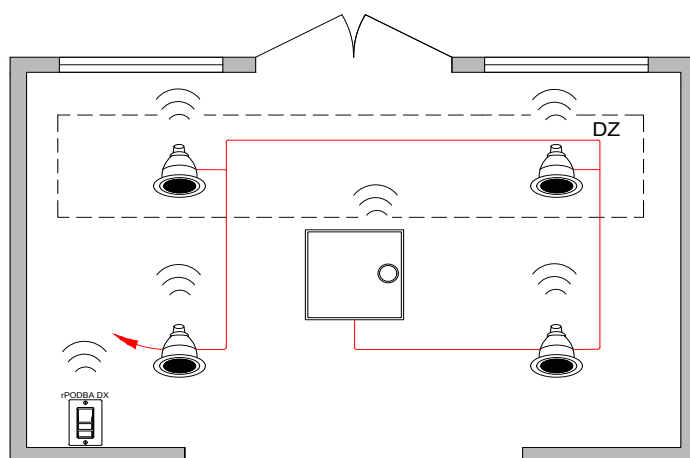


CAT-5e Cable

Line Voltage Wires

Line Power Feed

Wireless



Line Voltage Wires

Line Power Feed

Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|--------------------|--------------------------------|
| | 4 | See Notes | nLight Wired Enabled Downlight |
| | 1 | See Notes | nLight Wired Enabled Troffer |
| | 1 | nPODMA DX | On/Off, Raise/Lower WallPod |
| | 1 | nCM PDT 9 ADCX RJB | Occupancy and Daylight Sensor |

Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|--------------|---|
| | 4 | See Notes | nLight AIR Enabled Downlight |
| | 1 | See Notes | nLight AIR Enabled Troffer with Sensor Option |
| | 1 | rPODBA DX G2 | Battery Powered, On/Off, Raise/Lower WallPod |

/ OPERATIONAL DETAILS:

Light Fixtures:

- All fixtures are dimmable
- All fixtures are controlled together or independently
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Fixtures automatically go to full bright when occupied
- Fixtures automatically turn off when room becomes vacant

Daylight Control:

- Smooth continuous dimming
- Custom grouping of fixtures into separate daylight zones (max number zones = number of fixtures)
- Not required for areas without windows or that have loads <150W in sidelit zones

Manual Control:

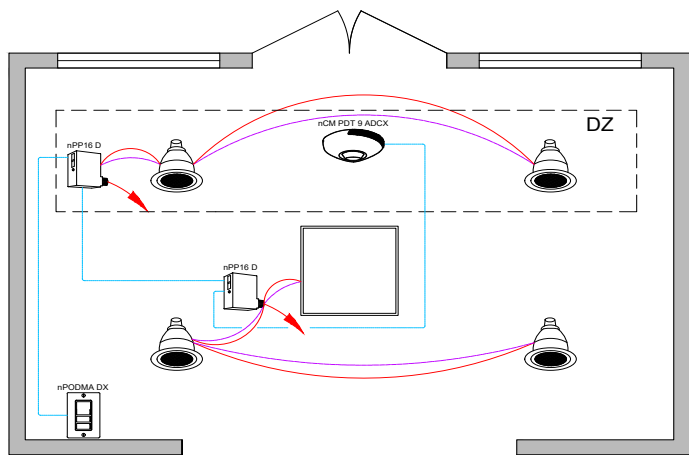
- On/off & raise/lower control of fixtures

/ ADDITIONAL OPTIONS:

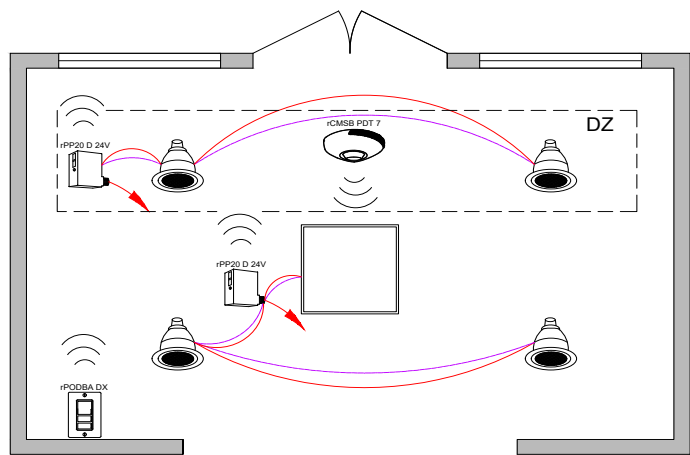
- Room can be connected to nLight backbone to enable network control or time schedules
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE controller
- Wireless fixture embedded control and occupancy/daylighting sensor options available, please see the fixture specification sheet
- For emergency lighting control use a power pack with ER/EM option or nLight Enabled Fixture with emergency option

Note: Contact your local lighting agent for more information on nLight enabled fixtures.

Wired



Wireless



Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|--------------------|--------------------------------------|
| | 2 | nPP16 D EFP | Relay Pack with 0-10V Dimming Output |
| | 1 | nPODMA DX | On/Off, Raise/Lower WallPod |
| | 1 | nCM PDT 9 ADCX RJB | Occupancy and Daylight Sensor |

Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|--------------------|---|
| | 2 | rPP20 D 24V EFP G2 | Relay Pack with 0-10V Dimming Output |
| | 1 | rPODBA DX G2 | Battery Powered, On/Off, Raise/Lower WallPod |
| | 1 | rCMSB PDT 7 G2 | Battery Powered Occupancy and Daylight Sensor |

/ OPERATIONAL DETAILS:

Light Fixtures:

- All fixtures are dimmable
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Fixtures automatically go to full bright when occupied
- Fixtures automatically turn off when room becomes vacant

Daylight Control:

- Smooth continuous dimming
- Daylight zones defined by relay module wiring
- Not required for areas without windows or that have loads <150W in sidelit zones

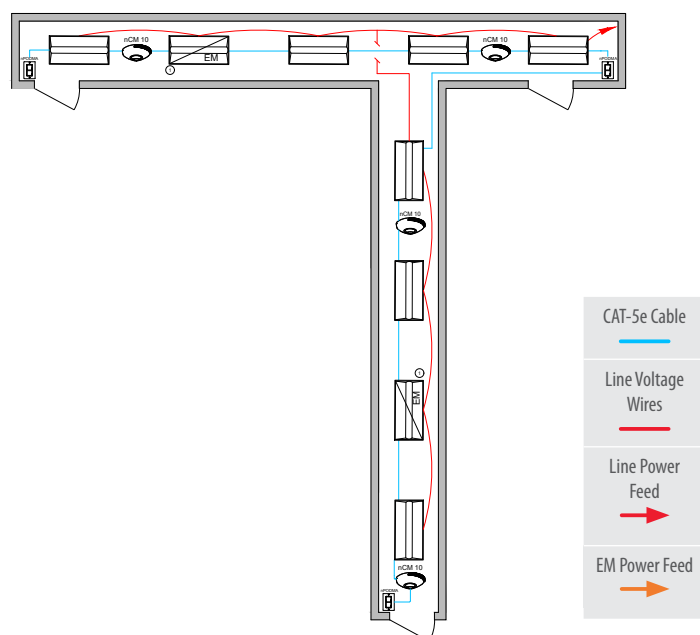
Manual Control:

- On/off & raise/lower control of fixtures

/ ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE® controller
- For emergency lighting control use a power pack with ER/EM option or nLight Enabled Fixture with emergency option

Wired



① Some nLight enabled EM fixtures require a normal sense line connection. Wiring shown assumes battery backup emergency option. See fixture spec sheets for details.

Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|------------|--|
| | 7 | See Note | nLight Wired Enabled Troffer with Sensor Option |
| | 2 | See Note | nLight Wired Enabled Troffer with Battery Option |
| | 3 | nPODMA | On/Off WallPod |
| | 4 | nCM 10 RJB | Occupancy Sensor |

/ OPERATIONAL DETAILS:

Light Fixtures:

- All fixtures are dimmable
- All fixtures are controlled together or independently
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Fixtures automatically go to full bright when occupied
- Fixtures automatically turn off or optionally can be configured to drop to low dim setting when space becomes vacant

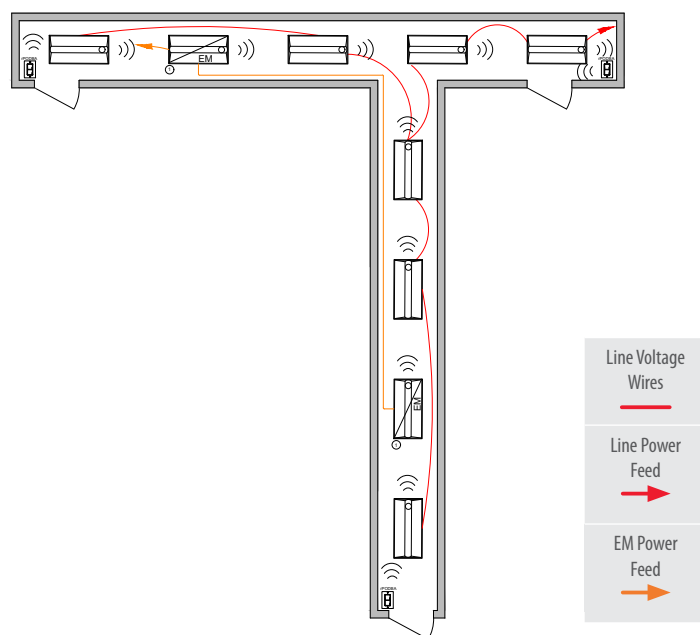
Daylight Control:

- Not required for areas without windows or that have loads <150W in sidelit zones

Manual Control:

- On/off control of fixtures

Wireless



① Fixture(s) assumed to include power interruption detection emergency option. For battery backup option, no dedicated EM circuit necessary.

Bill of Materials

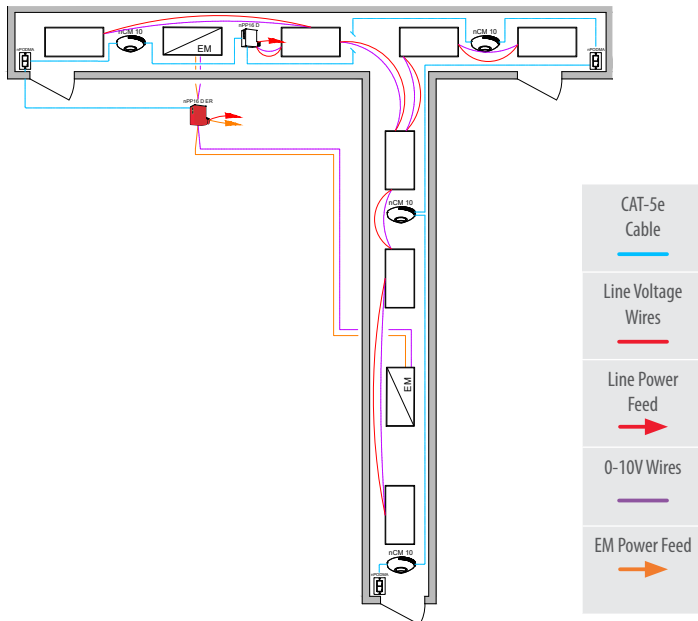
| Symbol | Qty | Product # | Description |
|--------|-----|-----------|--|
| | 7 | See Note | nLight AIR Enabled Troffer with Sensor Option |
| | 2 | See Note | nLight AIR Enabled Troffer with Sensor and EM Option |
| | 3 | rPODBA G2 | Battery Powered, On/Off WallPod |

/ ADDITIONAL OPTIONS:

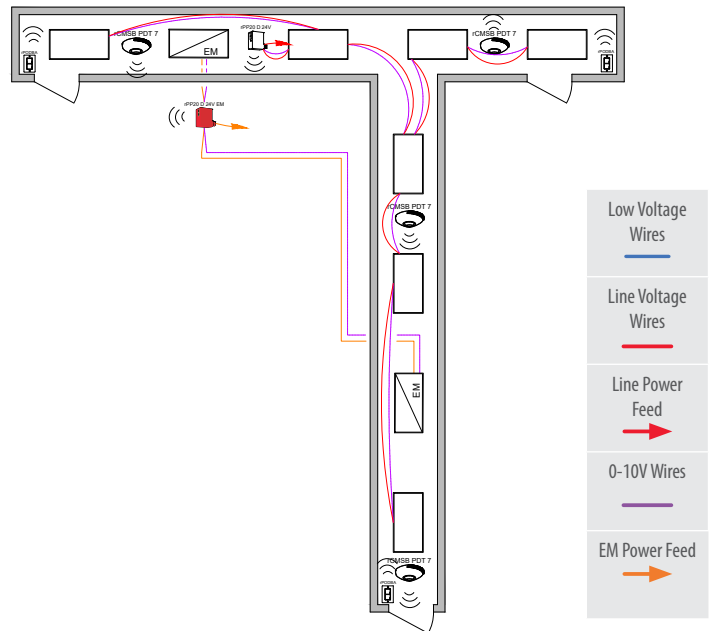
- Room can be connected to nLight backbone to enable network control or time schedules
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE controller
- Wireless fixture embedded control and occupancy/daylighting sensor options available, please see the fixture specification sheet
- For emergency lighting control use a power pack with ER/EM option or nLight Enabled Fixture with emergency option

Note: Contact your local lighting agent for more information on nLight enabled fixtures.

Wired



Wireless



Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|----------------|--|
| | 1 | nPP16 D EFP | Relay Pack with 0-10V Dimming Output |
| | 1 | nPP16 D ER EFP | Emergency Relay Pack with 0-10V Dimming Output |
| | 4 | nCM 10 RJB | Occupancy Sensor |
| | 3 | nPODMA | On/Off WallPod |

Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|-----------------------|--|
| | 1 | rPP20 D 24V EFP G2 | Relay Pack with 0-10V Dimming Output |
| | 1 | rPP20 D 24V EM EFP G2 | Emergency Relay Pack with 0-10V Dimming Output |
| | 4 | rCMSB PDT 7 G2 | Battery Powered Occupancy Sensor |
| | 3 | rPODBA G2 | Battery Powered, On/Off WallPod |

/ OPERATIONAL DETAILS:

Light Fixtures:

- All fixtures are dimmable
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Fixtures automatically go to full bright when occupied
- Fixtures automatically turn off or optionally can be configured to drop to low dim setting when space becomes vacant

Daylight Control:

- Not required for areas without windows or that have loads <150W in sidelit zones

Manual Control:

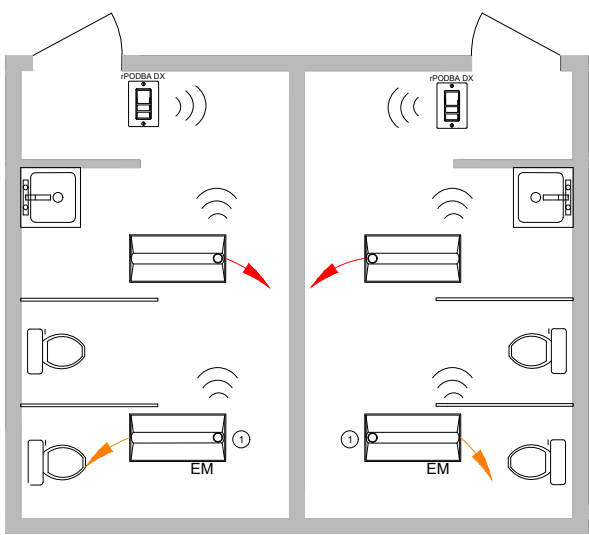
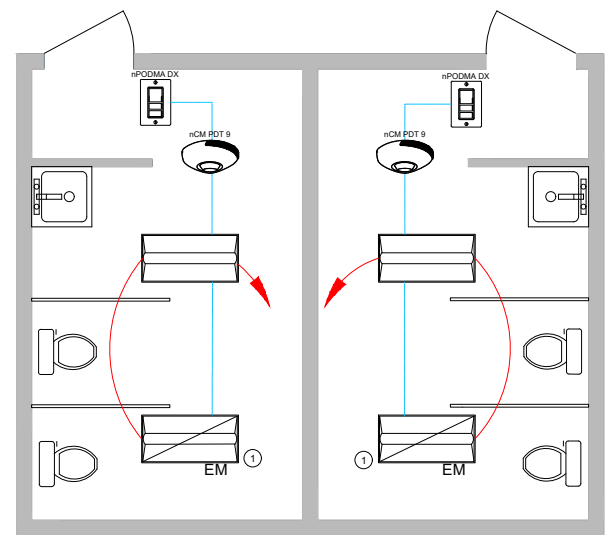
- On/off control of fixtures

/ ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE controller
- For emergency lighting control use a power pack with ER/EM option or nLight Enabled Fixture with emergency option

Wired

Wireless



① Some nLight enabled EM fixtures require a normal sense line connection. Wiring shown assumes battery backup emergency option. See fixture spec sheets for details.

① Fixture(s) assumed to include power interruption detection emergency option. For battery backup option, no dedicated EM circuit necessary.



Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|---------------|--|
| | 2 | See Note | nLight Wired Enabled Troffer |
| | 2 | See Note | nLight Wired Enabled Troffer with Battery Option |
| | 2 | nPODMA DX | On/Off, Raise/Lower WallPod |
| | 2 | nCM PDT 9 RJB | Occupancy Sensor |

Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|--------------|--|
| | 2 | See Note | nLight AIR Enabled Troffer with Sensor Option |
| | 2 | See Note | nLight AIR Enabled Troffer with Sensor and EM Option |
| | 2 | rPODBA DX G2 | Battery Powered, On/Off, Raise/Lower WallPod |

OPERATIONAL DETAILS:

Light Fixtures:

- All fixtures are dimmable
- All fixtures are controlled together or independently (per room)
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Fixtures automatically go to full bright when occupied (or optionally can be configured to come on automatically to 50%)
- Fixtures automatically turn off or optionally can be configured to drop to low dim setting when space becomes vacant

Manual Control:

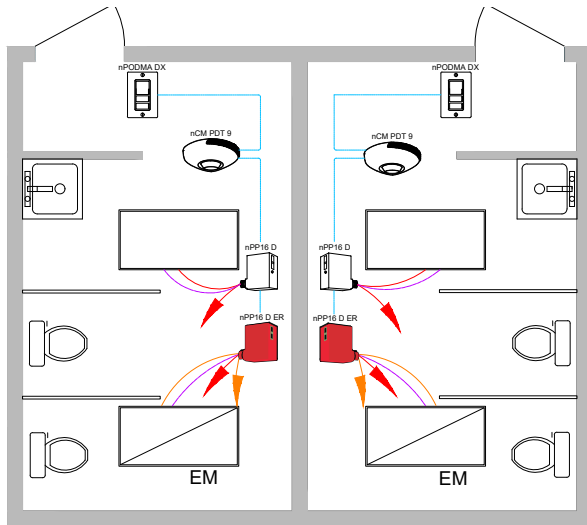
- On/off & raise/lower control of fixtures
- If switch poses safety concerns, optionally can be programmed for "on only"

ADDITIONAL OPTIONS:

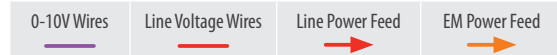
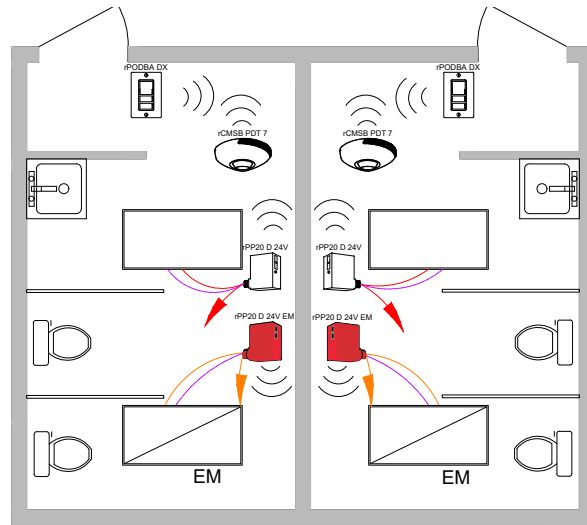
- Room can be connected to nLight backbone to enable network control or time schedules
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE® controller
- Fixture embedded control and occupancy/daylighting sensor options available, please see the fixture specification sheet
- For emergency lighting control use a power pack with ER/EM option or nLight Enabled Fixture with emergency option

Note: Contact your local lighting agent for more information on nLight enabled fixtures.

Wired



Wireless



Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|----------------|--|
| | 2 | nPP16 D EFP | Relay Pack with 0-10V Dimming Output |
| | 2 | nPP16 D ER EFP | Emergency Module with 0-10V Dimming Output |
| | 2 | nPODMA DX | On/Off & Raise/Lower WallPod |
| | 2 | nCM PDT 9 RJB | Occupancy Sensor |

Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|-----------------------|--|
| | 2 | rPP20 D 24V EFP G2 | Relay Pack with 0-10V Dimming Output |
| | 2 | rPP20 D 24V EM EFP G2 | Emergency Relay Pack with 0-10V Dimming Output |
| | 2 | rPODBA DX G2 | Battery Powered, On/Off & Raise/Lower WallPod |
| | 2 | rCMSB PDT 7 G2 | Battery Powered Occupancy Sensor |

/ OPERATIONAL DETAILS:

Light Fixtures:

- All fixtures are dimmable
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Fixtures automatically go to full bright when occupied (or optionally can be configured to come on automatically to 50%)
- Fixtures automatically turn off or optionally can be configured to drop to low dim setting when space becomes vacant

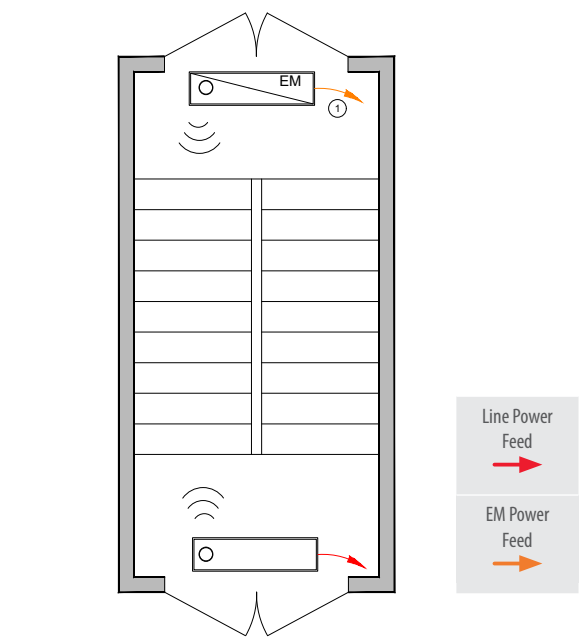
Manual Control:

- On/off & raise/lower control of fixtures
- If switch poses safety concerns, optionally can be programmed for "on only"

/ ADDITIONAL OPTIONS:

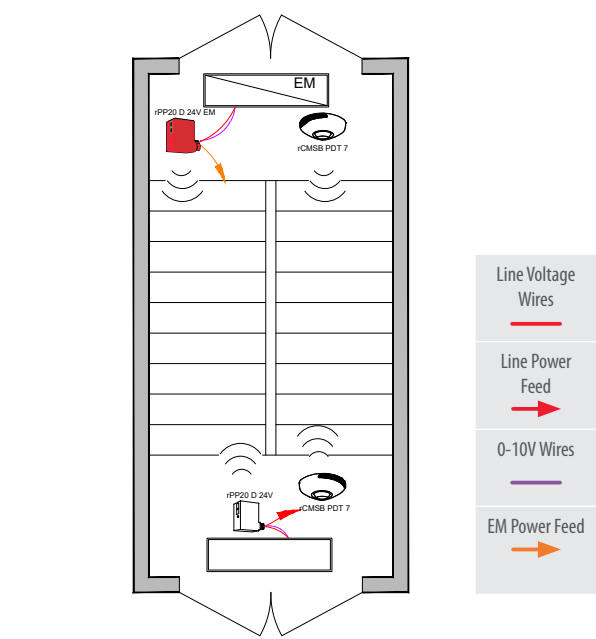
- Room can be connected to nLight backbone to enable network control or time schedules
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE® controller
- Wireless fixture embedded control and occupancy/daylighting sensor options available, please see the fixture specification sheet
- For emergency lighting control use a power pack with ER/EM option or nLight Enabled Fixture with emergency option

Wireless with nLight Enabled Fixtures



① Fixture(s) assumed to include power interruption detection emergency option. For battery backup option, no dedicated EM circuit necessary.

Wireless with 0-10V Dimming Fixtures



Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|-----------|--|
| | 1 | See Note | nLight AIR Enabled Fixture with Sensor Option |
| | 1 | See Note | nLight AIR Enabled Fixture with Sensor and EM Option |

Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|-----------------------|--|
| | 1 | rPP20 D 24V EFP G2 | Relay Pack with 0-10V Dimming Output |
| | 1 | rPP20 D 24V EM EFP G2 | Emergency Relay Pack with 0-10V Dimming Output |
| | 2 | rCMSB PDT 7 G2 | Battery Powered Occupancy Sensor |

OPERATIONAL DETAILS:

Light Fixtures:

- All fixtures are dimmable
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Fixtures automatically go to full bright when occupied
- Fixtures automatically turn off or optionally can be configured to drop to low dim setting when space becomes vacant

Manual Control:

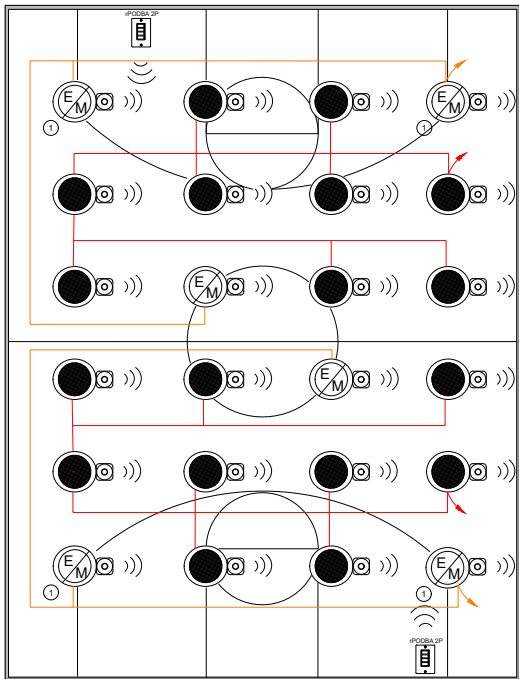
- Safety may preclude the use of a manual control in these areas

Note: Contact your local lighting agent for more information on nLight enabled fixtures.

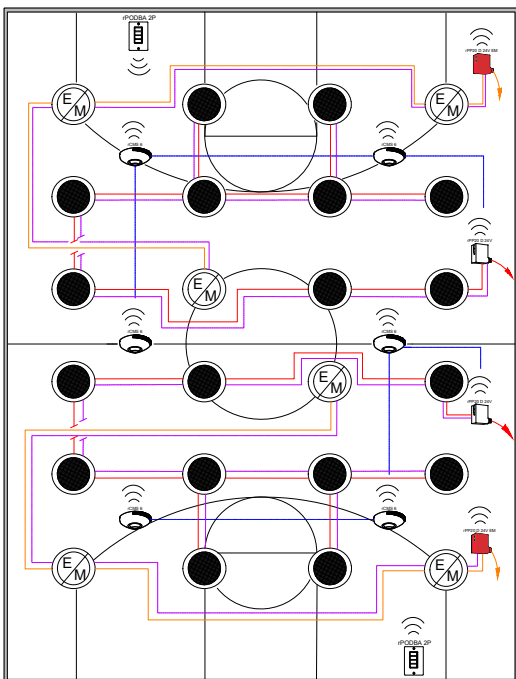
ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE® controller
- Wireless fixture embedded control and occupancy/daylighting sensor options available, please see the fixture specification sheet
- For emergency lighting control use a power pack with ER/EM option or nLight Enabled Fixture with emergency option

Wireless with nLight Enabled Fixtures



Wireless with 0-10V Dimming Fixtures



Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|--------------|--|
| | 18 | See Notes | nLight AIR Enabled Fixture with Sensor Option |
| | 6 | See Notes | nLight AIR Enabled Fixture with Sensor and EM Option |
| | 2 | rPODBA 2P G2 | Battery Powered, 2-Pole, On/Off WallPod |

Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|-----------------------|--|
| | 2 | rPP20 D 24V EFP G2 | Relay Pack with 0-10V Dimming Output |
| | 2 | rPP20 D 24V EM EFP G2 | Emergency Relay Pack with 0-10V Dimming Output |
| | 2 | rPODBA 2P G2 | Battery Powered, 2-Pole, On/Off WallPod |
| | 6 | rCMS 6 G2 | High Bay Occupancy Sensor |

OPERATIONAL DETAILS:

Light Fixtures:

- All fixtures are dimmable
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Fixtures automatically go to full bright when occupied
- Fixtures automatically turn off or optionally can be configured to drop to low dim setting when space becomes vacant

Daylight Control:

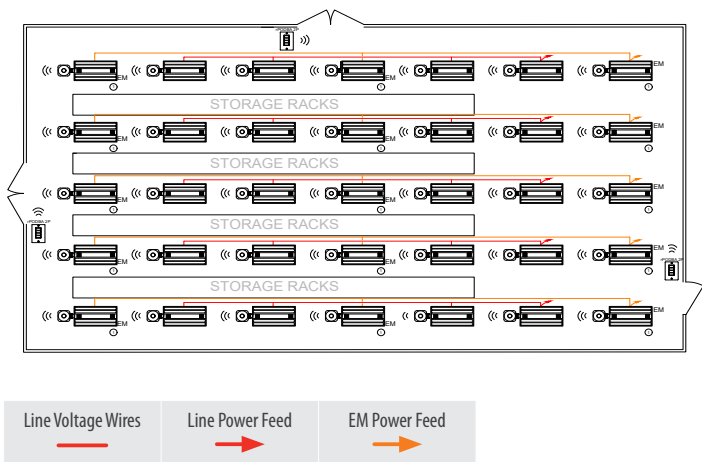
- Daylight responsive controls lights to full off when adequate daylight present
- Not required for spaces without skylights or that have loads <150W in toplight zones

ADDITIONAL OPTIONS:

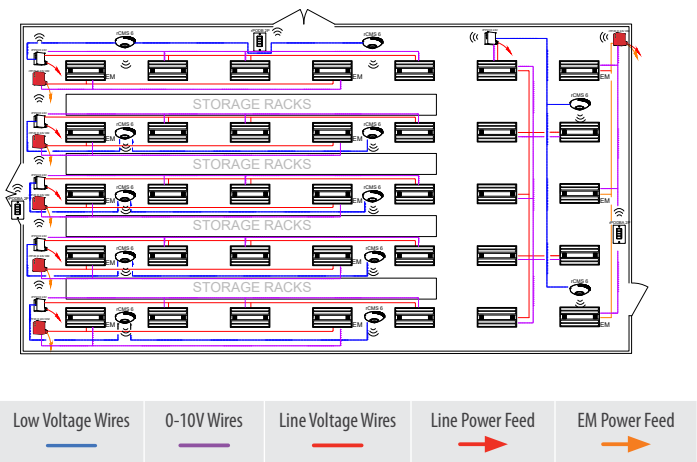
- Room can be connected to nLight backbone to enable network control or time schedules
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE® controller
- Wireless fixture embedded control and occupancy/daylighting sensor options available, please see the fixture specification sheet
- For emergency lighting control use a power pack with ER/EM option or nLight Enabled Fixture with emergency option

Note: Contact your local lighting agent for more information on nLight enabled fixtures.

Wireless with nLight Enabled Fixtures



Wireless with 0-10V Dimming Fixtures



Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|--------------|---|
| | 20 | See Note | nLight AIR Enabled High Bay Fixture with Sensor Option |
| | 15 | See Note | nLight AIR Enabled High Bay Fixture with Sensor and EM Option |
| | 3 | rPODBA 2P G2 | Battery Powered, 2-Pole, On/Off WallPod |

Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|-----------------------|--|
| | 6 | rPP20 D 24V EFP G2 | Relay Pack with 0-10V Dimming Output |
| | 6 | rPP20 D 24V EM EFP G2 | Emergency Relay Pack with 0-10V Dimming Output |
| | 3 | rPODBA 2P G2 | Battery Powered, 2-Pole, On/Off WallPod |
| | 12 | rCMS 6 G2 | High Bay Occupancy Sensor |

OPERATIONAL DETAILS:

Light Fixtures:

- All fixtures are dimmable
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Fixtures automatically go to full bright when occupied
- Fixtures automatically turn off or optionally can be configured to drop to low dim setting when space becomes vacant

Daylight Control:

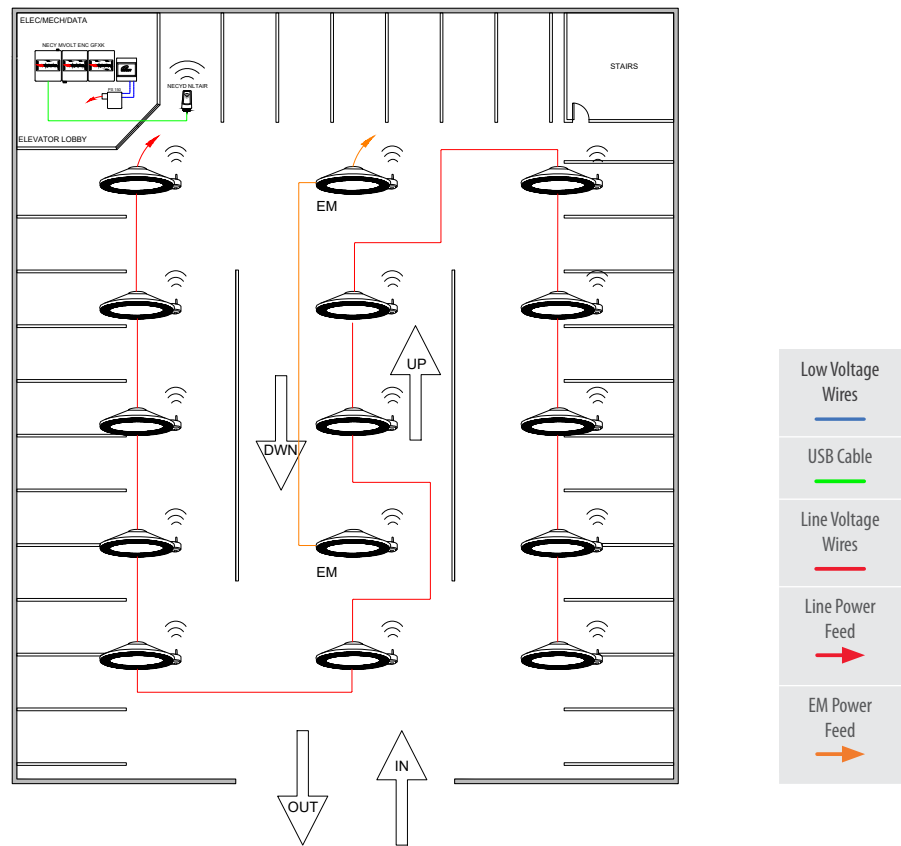
- Daylight responsive controls lights to full off when adequate daylight present
- Not required for spaces without skylights or that have loads <150W in toplight zones

ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE® controller
- Wireless fixture embedded control and occupancy/daylighting sensor options available, please see the fixture specification sheet
- For emergency lighting control use a power pack with ER/EM option or nLight Enabled Fixture with emergency option

Note: Contact your local lighting agent for more information on nLight enabled fixtures.

Wireless Parking Garage



Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|-----------------|---|
| | 13 | See Note | nLight AIR Enabled Canopy Fixture with Sensor Option |
| | 2 | See Note | nLight AIR Enabled Canopy Fixture with Sensor and EM Option |
| | 1 | nECY | nLight ECLYPSE Network System Controller |
| | 1 | nECYD NLTAIR G2 | nLight AIR Adapter |

OPERATIONAL DETAILS:

Light Fixtures:

- All fixtures are dimmable
- All fixtures can be controlled together or independently
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Fixtures automatically go to full bright when occupied
- Fixtures automatically turn off or optionally can be configured to drop to low dim setting when space becomes vacant

Daylight Control:

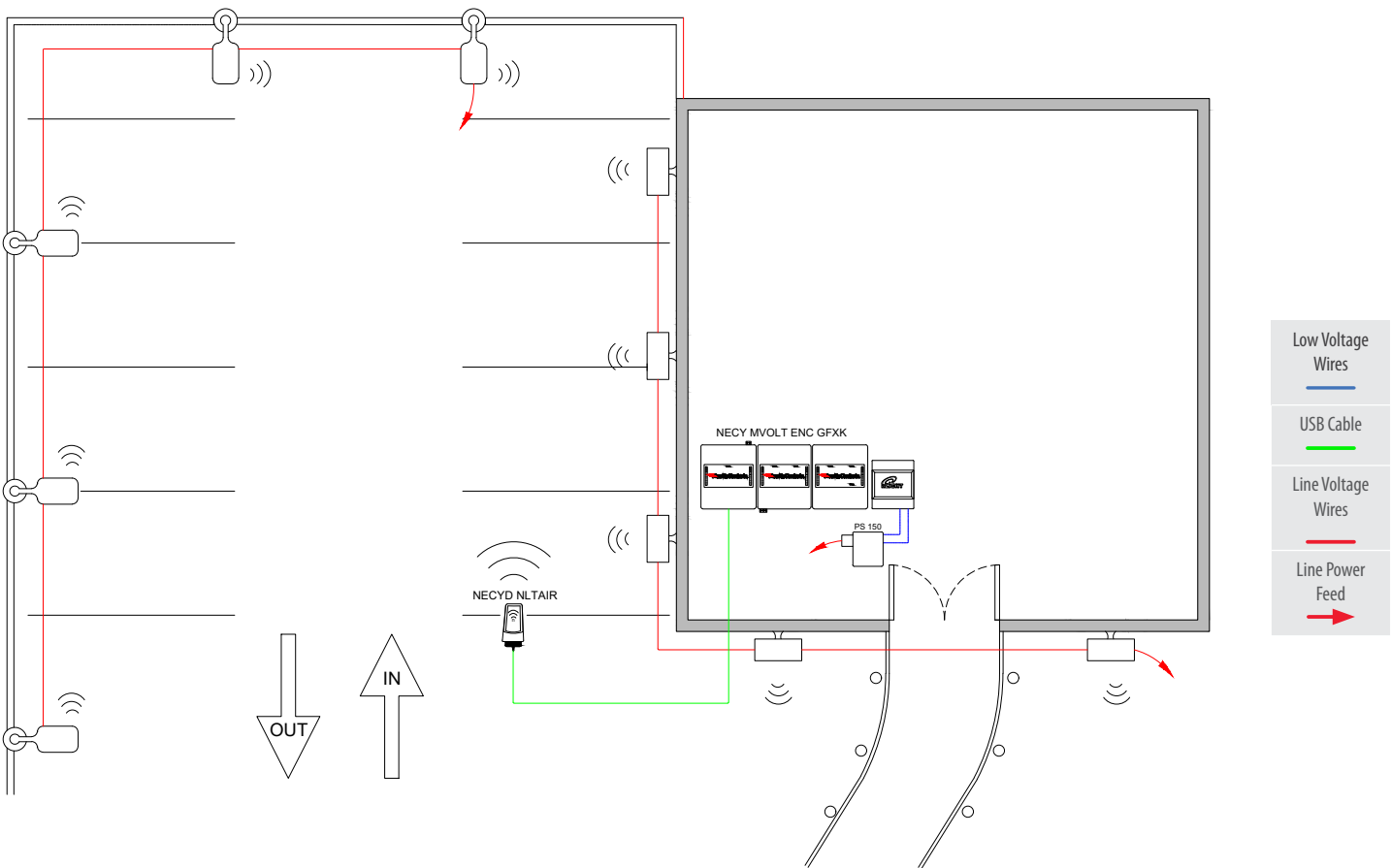
- Daylight responsive controls lights to full off when adequate daylight present

Note: Contact your local lighting agent for more information on nLight enabled fixtures.

ADDITIONAL OPTIONS:

- Devices can be connected to nLight backbone to enabled network control or time schedules, including astronomical time schedules for shutoff. GFKX option can be added to nLight ECLYPSE to provide manual override (9.4.4.1[a]).
- Wireless fixture embedded control and occupancy/daylighting sensor options available, please see the fixture specification sheet
- For emergency lighting control use a power pack with ER/EM option or nLight Enabled Fixture with emergency option

Wireless Site Lighting



Bill of Materials

| Symbol | Qty | Product # | Description |
|--------|-----|-----------------|--|
| | 5 | See Note | nLight AIR Enabled Area Fixture |
| | 5 | See Note | nLight AIR Enabled Wall Mount |
| | 1 | nECY | nLight ECLYPSE Network System Controller |
| | 1 | nECYD NLTAIR G2 | nLight AIR Adapter |

OPERATIONAL DETAILS:

Light Fixtures:

- All fixtures are dimmable
- All fixtures can be controlled together or independently
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Fixtures automatically go to full bright when occupied
- Fixtures automatically turn off or optionally can be configured to drop to low dim setting when space becomes vacant

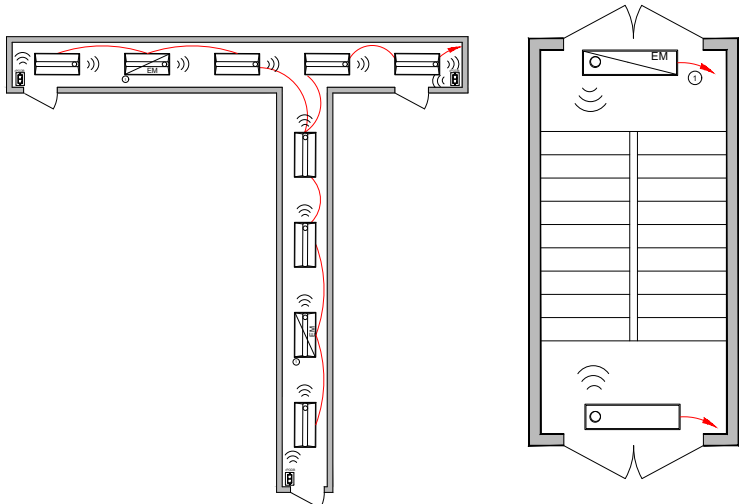
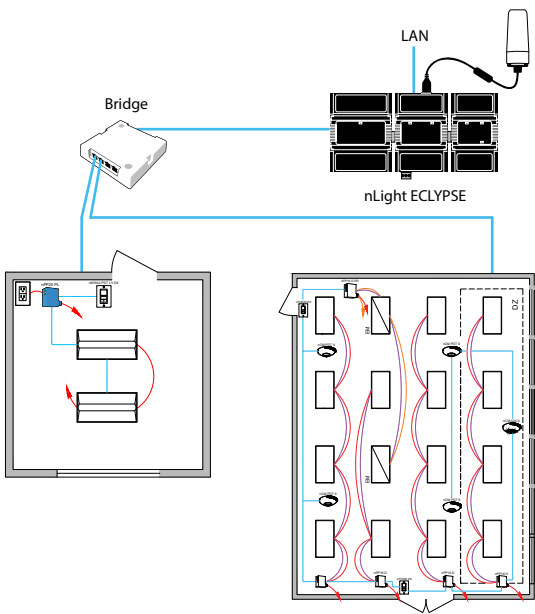
Daylight Control:

- Daylight responsive controls lights to full off when adequate daylight present

ADDITIONAL OPTIONS:

- Devices can be connected to nLight backbone to enabled network control or time schedules, including astronomical time schedules for lighting shutoff (9.4.1.4[b]) and lighting setback (9.4.1.4[c]). GFXX option can be added to nLight ECLYPSE to provide manual override (9.4.4.1[a]).
- Wireless fixture embedded control and occupancy/daylighting sensor options available, please see the fixture specification sheet
- For emergency lighting control use a power pack with ER/EM option or nLight Enabled Fixture with emergency option




Note: Contact your local lighting agent for more information on nLight enabled fixtures.








Programmable Time Clock Control:

Although not pictured within each of the individual room design guides, each nLight controlled space can be connected via an nLight backbone to create a networked nLight lighting control system capable of meeting the requirements of ASHRAE 90.1 scheduled shutoff, provision 9.4.1.4[i]. A networked system also enables astronomical time clock control.






Bill of Materials

| Symbol | Qty | Product # | Description |
|---|-----|-----------------|---|
|  | 1 | nBRG 8 KIT | 8-Port Backbone Bridge |
|  | 1 | nECY MVOLT ENC | nLight ECLYPSE Network System Controller and Optional BMS Interface |
|  | 1 | nECYD NLTAIR G2 | nLight AIR Adapter |

| Control Requirement | Code Provision | nLight Solution Details | |
|---------------------|---|--|--|
| Shut-Off Control | Local (i.e. Switch) Control | nLight WallPod devices provide a user with local control of lighting within an nLight controlled space. WallPods are available in multiple styles – each with varying features and user experiences. | |
| | | Push-Button WallPod | Graphic WallPod* |
| | | nPODMA Series rPODBA Series  | nLight UNITOUCH Touchscreen Wall Switch  |
| | | Traditional tactile buttons and LED user feedback. | Full-color touch screen provides a sophisticated look and feel. |
| | Scheduled Shutoff (i.e. Timeclock) | Individual nLight control groups (i.e.: rooms) can be easily networked together across an entire building simply by connecting them into a “backbone” made up of one or more nLight bridge devices and/or nLight AIR adapters and an nLight ECLYPSE system controller. The system controller provides programmable time clock functionality for an nLight network as well as interfaces to the SensorView suite of web-based software applications (via an Ethernet LAN / WAN connection). | |
| | | Network System Controller | |
| | | Network System Controller  | |
| | | Additional benefits of installing an nLight backbone include remote status monitoring, system-wide configuration changes, and BMS interface capability, and ADR interface capability. | |
| | Automatic Full OFF Via Occupancy Sensor | nLight occupancy sensors utilize 100% digital passive infrared (PIR) detection, come in several mounting styles, and offer multiple coverage pattern options. Additionally, nLight sensors are available with patented Microphonics™ dual technology detection for rooms with obstructions. Configuring for full off vs. partial off control is done with system programming. | |
| | Automatic Partial OFF Via Occupancy Sensor | 360° Occupancy Sensor | 120° WideView Corner Sensor* |
| | | nCM Series rCMS Series rCMSB Series  | nWV Series  |
| | | Surface mounts to ceiling tiles or sheetrock/plaster. | Directly mounts in corner or to ceiling via repositionable ceiling bracket. |

*Available with nLight Wired products only.

Note: This summary is for general information purposes only and is provided without any warranty as to accuracy, completeness, or otherwise. The user should read the applicable code sections for more complete and detailed descriptions of code requirements and exceptions and should consult with a professional engineering or other competent advisor before making any decision or taking any action based on this summary.

| Control Requirement | | Code Provision | nLight Solution Details | |
|---------------------|--|--------------------------|---|--|
| Light Level Control | Bi-Level Lighting Control | 9.4.1.1[d] | nLight provides multiple options for controlling continuous dimming luminaires. This allows spaces with several lighting types and technologies to be controlled together and with a common user experience. | |
| | | | nLight Enabled Acuity Brands Fixtures | Dimming Relay Packs |
| | | |  | nPP16 Series rPP20 Series  |
| | | | Acuity Brands offers a wide variety of LED fixtures with factory installed integrated nLight controls that provide smooth continuous dimming. | nLight dimming relay enable control of any 0-10VDC dimmable LED luminaire. |
| Additional Controls | Automatic Daylight Responsive Controls for Sidelighting/ Toplighting | 9.4.1.1[e] 9.4.1.1[f] | nLight offers standalone daylight harvesting sensors as well as occupancy sensors with integrated daylight harvesting. Sensors are available in various housings and provide continuous dimming control of any/all networked nLight enabled fixtures or dimming relay packs, each capable of being its own daylight zone. | |
| | | | Ceiling Mount Dimming Photocell | Recessed Mount Dimming Photocell* |
| | | | nCM Series rCMS Series rCMSB Series  | nRM Series  |
| | | | The nLight Plug Load Relay Pack is capable of switching an entire 20A receptacle load. Simply add an occupancy sensor to an nLight Control Zone (room) and the sensor will automatically switch off when the room is vacant. | |
| Additional Controls | Automatic Receptacle (i.e. Plug Load) Control | 8.4.2 | Plug Load / Receptacle Relay Pack | |
| | | |  nPP20 PL Series rPP20 Series | |

nLight Enabled Fixtures

Acuity Brands offers the industry's broadest portfolio of controls enabled fixtures. Please scan the QR code to see the current nLight enabled fixtures.



nLight AIR Enabled Luminaires



nLight Wired Enabled Luminaires

Mobile Apps

Quick and Easy Lighting Configuration and Control In the Palm of Your Hand

nLight Wired



nLight BLE Radio Module

nLight wired uses the nIO BT (Bluetooth® Low Energy radio module) to communicate with the nConfig app to modify the settings and operation of the devices in an nLight zone.

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Acuity Brands Lighting is under license.

nConfig™

The nConfig mobile app is for nLight wired controls startups. It's a quick and easy alternative to SensorView software for smaller projects and simple programming.

nLight AIR



CLAIRITY™ Pro

The CLAIRITY Pro mobile app allows you to start up, configure and troubleshoot nLight AIR wireless controls from a compatible smartphone or tablet.



ASHRAE 90.1–2016 Applications Guide

In addition to being North America's leading manufacturer of indoor and outdoor luminaires, Acuity Brands offers an extensive portfolio of advanced lighting control and building technology solutions for indoor and outdoor applications, from single-room control to fully connected smart building management. Our products, technology, expertise and support include occupancy and photosensors, centralized and distributed systems, panels, luminaire-integrated wired/wireless networked controls and IoT platform services.

nLight Typical Layout Drawings

<http://www.acuitybrands.com/typicals>

ASHRAE

<https://www.ashrae.org/>

Use the Following Sections of the ASHRAE 90.1–2016 Code as Reference:

- Section 8.4.2 — Automatic Receptacle Control
- Section 9.4.1.1[a] — Local Control
- Section 9.4.1.1[b] — Manual On
- Section 9.4.1.1[c] — Partial Automatic On
- Section 9.4.1.1[d] — Bi-Level Lighting Control
- Section 9.4.1.1[e] — Automatic Daylight Responsive Control for Sidelighting
- Section 9.4.1.1[f] — Automatic Daylight Responsive Controls for Toplighting
- Section 9.4.1.1[g] — Automatic Partial Off
- Section 9.4.1.1[h] — Automatic Full Off
- Section 9.4.1.1[i] — Scheduled Shutoff
- Section 9.4.1.2 — Parking Garage Lighting Control
- Section 9.4.1.4 — Exterior Lighting Control



A+ Certified solutions from Acuity Brands help you quickly and confidently select and implement lighting systems that are both compatible and consistent.

For lighting applications, A+ means verified consistent performance, visual appearance and system interoperability of all luminaires and controls within the certified solutions. For lighting professionals it means confidence that all parts of the lighting system will work together and meet common Acuity Brands specifications.

Go to www.acuitybrands.com/solutions/a-certified or contact your local Acuity Brands representative for more information.

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nLight®

Wired & Wireless Quick Reference Guide

Occupancy Sensors

Daylight Sensors

User Interfaces

Load Controllers

Backbone & Accessories

www.nlightcontrols.com

























Introduction

The nLight Quick Reference Guide brings you the best of nLight in a simple, easy-to-read chart, including CAD symbols, product descriptions and technical resources...all designed to make specifying nLight a breeze.









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Wired Occupancy Sensors

| Product Image | Model Name | CAD Symbol | Description |
|---|---------------------------------------|--|--|
|  | nCM 9 RJB nCM 9 ADCX RJB |   | Low Voltage Ceiling Mount Passive Infrared Sensor; Small Motion 360° Low Voltage Ceiling Mount Passive Infrared Sensor; Small Motion 360°; Automatic Dimming Control Photocell |
| | nCM PDT 9 RJB nCM PDT 9 ADCX RJB |   | Low Voltage Ceiling Mount Dual Technology Sensor; Small Motion 360° Low Voltage Ceiling Mount Dual Technology Sensor; Small Motion 360°; Automatic Dimming Control Photocell |
| | nCM 10 RJB nCM 10 ADCX RJB |   | Low Voltage Ceiling Mount Passive Infrared Sensor; Large Motion 360° Low Voltage Ceiling Mount Passive Infrared Sensor; Large Motion 360°; Automatic Dimming Control Photocell |
| | nCM PDT 10 RJB nCM PDT 10 ADCX RJB |   | Low Voltage Ceiling Mount Dual Technology Sensor; Large Motion 360° Low Voltage Ceiling Mount Dual Technology Sensor; Large Motion 360°; Automatic Dimming Control Photocell |
|  | nCM 6 RJB |  | Low Voltage Ceiling Mount Passive Infrared Sensor; High Mount 360° |
|  | nRM 9 nRM 9 ADCX |   | Low Voltage Recess Mount Passive Infrared Sensor; Small Motion 360° Low Voltage Recess Mount Passive Infrared Sensor; Small Motion 360°; Automatic Dimming Control Photocell |
| | nRM PDT 9 nRM PDT 9 ADCX |   | Low Voltage Recess Mount Dual Technology Sensor; Small Motion 360° Low Voltage Recess Mount Dual Technology Sensor; Small Motion 360°; Automatic Dimming Control Photocell |
| | nRM 10 nRM 10 ADCX |   | Low Voltage Recess Mount Passive Infrared Sensor; Large Motion 360° Low Voltage Recess Mount Passive Infrared Sensor; Large Motion 360°; Automatic Dimming Control Photocell |
| | nRM PDT 10 nRM PDT 10 ADCX |   | Low Voltage Recess Mount Passive Infrared Sensor; Large Motion 360° Low Voltage Recess Mount Passive Infrared Sensor; Large Motion 360°; Automatic Dimming Control Photocell |
|  | nRM 6 |  | Low Voltage Recess Mount Passive Infrared Sensor; High Mount 360° |
|  | nWV 16 |  | Low Voltage Corner Mount Passive Infrared Sensor; Wide View 120° |
| | nWV PDT 16 |  | Low Voltage Corner Mount Dual Technology Sensor; Wide View 120° |


























Wired Daylight Sensors

| Product Image | Model Name | CAD Symbol | Description |
|---|--------------|---|---|
|  | nCM PC RJB |  | Low Voltage Ceiling Mount Sensor; On/Off Photocell |
| | nCM ADCX RJB |  | Low Voltage Ceiling Mount Sensor; Automatic Dimming Control Photocell |
|  | nRM PC |  | Low Voltage Recess Mount Sensor; On/Off Photocell |
| | nRM ADCX |  | Low Voltage Recess Mount Sensor; Automatic Dimming Control Photocell |
|  | nIO PC KIT |  | Outdoor On/Off Photocell Kit |

Wired Load Controllers

| Product Image | Model Name | CAD Symbol | Description |
|---|---|---|---|
|  | nPP16 EFP |  | Power/Relay Pack; 16 Amp |
| | nPP16 D EFP |  | Power/Relay Pack; 16 Amp; 0-10V Dimming |
| | nPP16 DS EFP |  DS | Power/Relay Pack; 16 Amp; 0-10V Dimming via Side Slot |
|  | nPP16 ER EFP |  ER | Power/Relay Pack; 16 Amp; Emergency Loads |
| | nPP16 D ER EFP |  ER | Power/Relay Pack; 16 Amp; 0-10V Dimming; Emergency Loads |
| | nPP16 DS ER EFP |  DS ER | Power/Relay Pack; 16 Amp; 0-10V Dimming via Side Slot; Emergency Loads |
|  | nPP20 PL |  PL | Plug Load (Receptacle) Power Pack; 20 Amp |
|  | nSP5 PCD 2W |  2W | Secondary Pack; Forward Phase Control Dimming; 2-Wire |
| | nSP5 PCD 3W |  3W | Secondary Pack; Forward Phase Control Dimming; 3-Wire |
| | nSP5 PCD MLV |  MLV | Secondary Pack; Forward Phase Control Dimming; Magnetic Low Voltage |
| | nSP5 PCD ELV 120 |  ELV 120 | Secondary Pack; Reverse Phase Control Dimming; 120VAC; Electronic Low Voltage |
|  | ARP INTENC08 NLT 8FCR MVOLT SC SM (DTC) |  FCR MVOLT | Relay Panel; 8 Field Configurable Relays; 120-277VAC; Screw Cover Surface Mount; Optional - Digital Time Clock |
| | ARP INTENC16 NLT 16FCR MVOLT SC SM (DTC) |  FCR MVOLT | Relay Panel; 16 Field Configurable Relays; 120-277VAC; Screw Cover Surface Mount; Optional - Digital Time Clock |
| | ARP INTENC32 NLT 32FCR MVOLT HLK SM (DTC) |  FCR MVOLT | Relay Panel; 32 Field Configurable Relays; 120-277VAC; Hinge-Locking Surface Mount; Optional - Digital Time Clock |
| | ARP INTENC48 NLT 48FCR MVOLT HLK SM (DTC) |  FCR MVOLT | Relay Panel; 48 Field Configurable Relays; 120-277VAC; Hinge-Locking Surface Mount; Optional - Digital Time Clock |














Wired User Interfaces

| Product Image | Model Name | CAD Symbol | Description |
|---|------------------------|---|---|
|  | nPODMA (2P) (4P) xx |   | Wall Switch; Screwless Faceplate; Single Channel On/Off; Optional 2-Pole (2P) and 4-Pole (4P) |
|  | nPODMA (2P) (4P) DX xx |   | Wall Switch; Screwless Faceplate; Single Channel On/Off/Dimming; Optional 2-Pole (2P) and 4-Pole (4P) |
|  | nPODMA 2S xx |  | Wall Switch; Screwless Faceplate; 2 Scene Controller |
|  | nPODMA 2S DX xx |  | Wall Switch; Screwless Faceplate; 2 Scene Controller; On/Off/Dimming |
|  | nPODMA 4S xx |  | Wall Switch; Screwless Faceplate; 4 Scene Controller |
|  | nPODMA 4S DX xx |  | Wall Switch; Screwless Faceplate; 4 Scene Controller; On/Off/Dimming |
|  | nPOD TOUCH xu |  | Touch Screen Wall Switch |
|  | nWSXA xx |  | Low Voltage Passive Infrared Wall Switch Sensor |
| | nWSXA PDT LV xx |  | Low Voltage Dual Technology Wall Switch Sensor |
|  | nWSXA LV DX xx |  | Low Voltage Passive Infrared Wall Switch Sensor; Dimming |
| | nWSXA PDT LV DX xx |  | Low Voltage Dual Technology Wall Switch Sensor; Dimming |
|  | nPODA KEY xz |  | Low Voltage Digital Key Switch; Return to Center Momentary |
| | nPODA KEY MNTN xz |  MNTN | Low Voltage Digital Key Switch; Maintain Position |

NOTE: xx indicates color option - available in White (WH), Ivory (IV), Light Almond (AL), Black (BK), Gray (GY), Red (RD)
xz indicates color option - available in White (WH), Ivory (IV), Light Almond (AL), Stainless Steel (STS)
xu indicates color option - available in White (WH) or Black (BK)





















nLight Wired

Wired Accessories

| Product Image | Model Name | CAD Symbol | Description |
|---|--------------|---|---|
|  | nDTC xu |  | Digital Time Clock |
|  | nIO 1S (KO) |  | Contact Closure Input Device; Optional Knock-Out Form Factor |
| | nIO D (KO) |  | 0-10V Dimming Control Device; Optional Knock-Out Form Factor |
|  | nIO BT |  | Low Energy Communication Programming Module with Bluetooth® wireless technology |
|  | nSHADE |  | Dry Contact Pulse On/Off Shade Controller; Momentary Open and Close Contacts |
|  | nIO X KIT |  | External Third Party RS-232 Input Device |
|  | nAR40 |  | Auxiliary Dry Contact Relay |
|  | nPS 80 |  | Bus Power Supply; 80mA |
|  | CAT5 xyFT J1 |  | Single Plenum Rated CAT-5e Cable (available lengths include: 6", 2', 5', 10', 15', 30', 50') |

NOTE: xy indicates length
xu indicates color option - available in White (WH) or Black (BK)

Wireless Occupancy and Daylight Sensors

| Product Image | Model Name | CAD Symbol | Description |
|---|-------------------|---|---|
|  | rCMS 6 G2 |  | Ceiling Mount Passive Infrared Sensor; High Mount 360° |
| | rCMS 9 G2 |  | Ceiling Mount Passive Infrared Sensor; Small Motion 360° |
| | rCMS PDT 9 G2 |  | Ceiling Mount Dual Technology Sensor; Small Motion 360° |
| | rCMS 10 G2 |  | Ceiling Mount Passive Infrared Sensor; Large Motion 360° |
| | rCMS PDT 10 G2 |  | Ceiling Mount Dual Technology Sensor; Large Motion 360° |
|  | rCMSB 7 G2 |  | Battery Powered Ceiling Mount Passive Infrared Sensor; Low Mount 360° |
| | rCMSB 45 G2 |  | Battery Powered Ceiling Mount Passive Infrared Sensor; High Mount 360° |
| | rCMSB 45A G2 |  | Battery Powered Ceiling Mount Passive Infrared Sensor; High Mount Aisleway 360° |
|  | rLSXR 6 G2 |  | Fixture Mount Passive Infrared Sensor, Multi-Volt; High Mount 360° |
| | rLSXR 6 HVOLT G2 |  HVOLT | Fixture Mount Passive Infrared Sensor; High Voltage; High Mount 360° |
| | rLSXR 6 EM G2 |  | Fixture Mount Passive Infrared Sensor; Emergency Operation via Normal Power Sensing Broadcasts; Multi-Volt; High Mount 360° |
| | rLSXR 9 G2 |  | Fixture Mount Passive Infrared Sensor, Multi-Volt; Small Motion 360° |
| | rLSXR 9 HVOLT G2 |  HVOLT | Fixture Mount Passive Infrared Sensor; High Voltage; Small Motion 360° |
| | rLSXR 9 EM G2 |  | Fixture Mount Passive Infrared Sensor; Emergency Operation via Normal Power Sensing Broadcasts; Multi-Volt; Small Motion 360° |
| | rLSXR 10 G2 |  | Fixture Mount Passive Infrared Sensor, Multi-Volt; Low Mount 360° |
| | rLSXR 10 HVOLT G2 |  HVOLT | Fixture Mount Passive Infrared Sensor; High Voltage; Low Mount 360° |
| | rLSXR 10 EM G2 |  | Fixture Mount Passive Infrared Sensor; Emergency Operation via Normal Power Sensing Broadcasts; Multi-Volt; Low Mount 360° |

Wireless Occupancy and Daylight Sensors













| Product Image | Model Name | CAD Symbol | Description |
|---|-------------------|---|---|
|  | rLSXR 50 G2 |  | Fixture Mount Passive Infrared Sensor; Multi-Volt; High Mount Aisleway |
| | rLSXR 50 HVOLT G2 |  | Fixture Mount Passive Infrared Sensor; High Voltage; High Mount Aisleway |
| | rLSXR 50 EM G2 |  | Fixture Mount Passive Infrared Sensor; Multi-Volt; Emergency Operation via Normal Power Sensing Broadcasts; High Mount Aisleway |
|  | rSBOR 6 G2 |  | Pole or Fixture Mount Passive Infrared Sensor (IP66); Multi-Volt; High Mount 360° |
| | rSBOR 6 HVOLT G2 |  | Pole or Fixture Mount Passive Infrared Sensor; High Voltage; High Mount 360° |
| | rSBOR 6 EM G2 |  | Pole or Fixture Mount Passive Infrared Sensor; Emergency Operation via Normal Power Sensing Broadcasts; Multi-Volt; High Mount 360° |
| | rSBOR 10 G2 |  | Pole or Fixture Mount Passive Infrared Sensor; Multi-Volt; Low Mount 360° |
| | rSBOR 10 HVOLT G2 |  | Pole or Fixture Mount Passive Infrared Sensor; High Voltage; Low Mount 360° |
| | rSBOR 10 EM G2 |  | Pole or Fixture Mount Passive Infrared Sensor; Multi-Volt; Emergency Operation via Normal Power Sensing Broadcasts; Low Mount 360° |
| | rSBOR 40 G2 |  | Pole or Fixture Mount Passive Infrared Sensor; Multi-Volt; High Mount 360° |
| | rSBOR 40 HVOLT G2 |  | Pole or Fixture Mount Passive Infrared Sensor; High Voltage; High Mount 360° |
| | rSBOR 40 EM G2 |  | Pole or Fixture Mount Passive Infrared Sensor; Multi-Volt; Emergency Operation via Normal Power Sensing Broadcasts; High Mount 360° |

Wireless User Interfaces

| Product Image | Model Name | CAD Symbol | Description |
|---|----------------------------|---|---|
|  | rPODBA (2P) xx G2 |  | Battery Powered Wall Switch; Screwless Faceplate; Optional 2 Pole |
|  | rPODBA (2P) DX xx G2 |  | Battery Powered Wall Switch; Screwless Faceplate; Optional 2 Pole; On/Off+Raise/Lower |
|  | rPODBA 2S xx G2 |  | Battery Powered Wall Switch; Screwless Faceplate; 2 Scene Controller |
|  | rPODBA 2S DX xx G2 |  | Battery Powered Wall Switch; Screwless Faceplate; 2 Scene Controller; On/Off+Raise/Lower |
|  | rPODBA 4S xx G2 |  | Battery Powered Wall Switch; Screwless Faceplate; 4 Scene Controller |
|  | rPODBA 4S DX xx G2 |  | Battery Powered Wall Switch; Screwless Faceplate; 4 Scene Controller; On/Off+Raise/Lower |
|  | rPODLA (2P) MVOLT xx G2 |  | Line Powered Wall Switch; Screwless Faceplate; Optional 2 Pole, MVOLT |
|  | rPODLA (2P) DX MVOLT xx G2 |  | Line Powered Wall Switch; Screwless Faceplate; Optional 2 Pole; On/Off+Raise/Lower, MVOLT |
|  | rPODLA (2P) 347 xx G2 |  | Line Powered Wall Switch; Screwless Faceplate; Optional 2 Pole; 347 Voltage |
|  | rPODLA (2P) DX 347 xx G2 |  | Line Powered Wall Switch; Screwless Faceplate; Optional 2 Pole; On/Off+Raise/Lower; 347 Voltage |
|  | rPODLA 2S MVOLT xx G2 |  | Line Powered Wall Switch; Screwless Faceplate; 2 Scene Controller, MVOLT |
|  | rPODLA 2S MVOLT DX xx G2 |  | Line Powered Wall Switch; Screwless Faceplate; 2 Scene Controller; On/Off+Raise/Lower, MVOLT |
|  | rPODLA 4S MVOLT xx G2 |  | Line Powered Wall Switch; Screwless Faceplate; 4 Scene Controller, MVOLT |
|  | rPODLA 4S MVOLT DX xx G2 |  | Line Powered Wall Switch; Screwless Faceplate; 4 Scene Controller; On/Off+Raise/Lower, MVOLT |



NOTE: xx indicates color option – available in White (WH), Ivory (IV), Light Almond (AL), Black (BK), Gray (GY), Red (RD)

Wireless Load Controllers

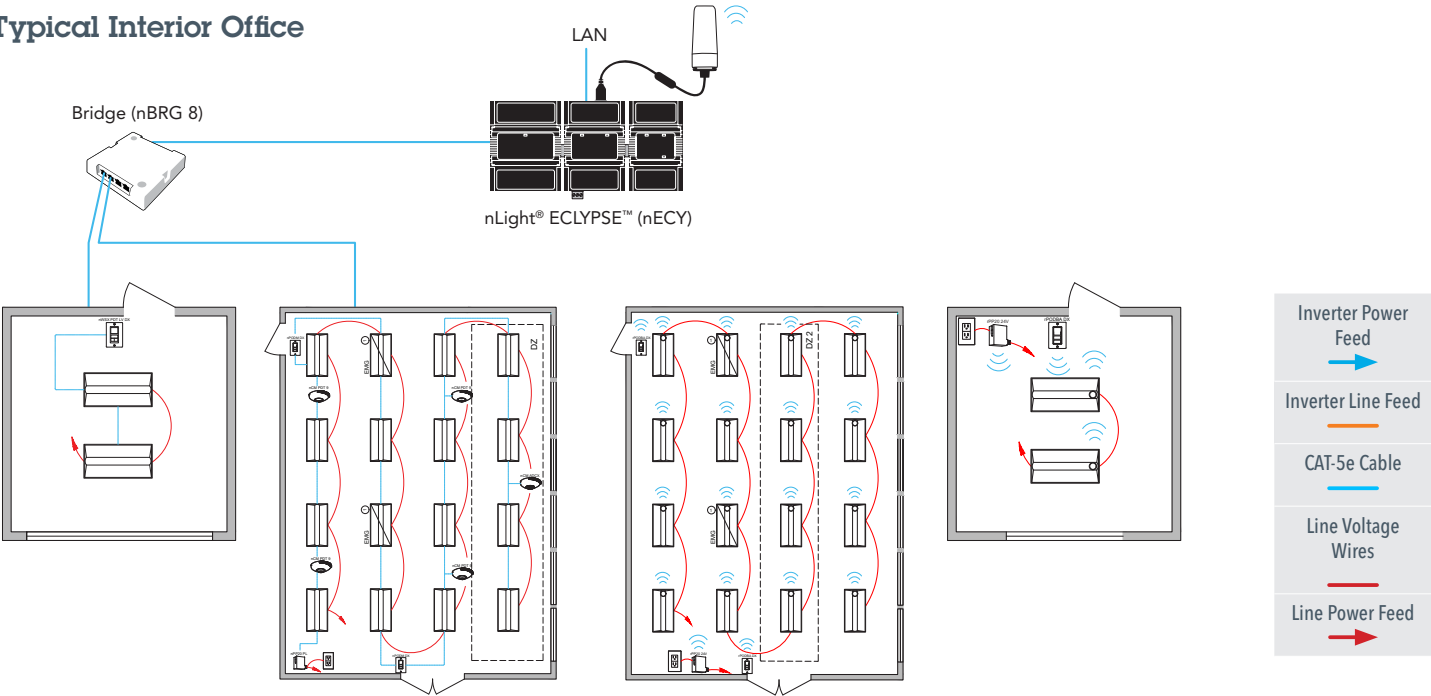
| Product Image | Model Name | CAD Symbol | Description |
|---|-----------------------------|---|--|
|  | rPP20 EFP G2 |  | Power/Relay Pack; 20 Amp |
| | rPP20 D EFP G2 |  | Power/Relay Pack; 20 Amp; 0-10V Dimming |
| | rPP20 D 24V EFP G2 |  | Power/Relay Pack; 20 Amp; 0-10V Dimming; 24V Output Terminals |
| | rPP20 D 24V EFP UVOLT G2 |  | Power/Relay Pack; 20 Amp; 0-10V Dimming; 24V Output Terminals; 120-480V |
| | rPP20 D 24V EFP CP G2 |  | Power/Relay Pack; 20 Amp; 0-10V Dimming; 24V Output Terminals; Chicago Plenum Rated |
|  | rPP20 D 24V EM EFP G2 |  | Power/Relay Pack; 20 Amp; 0-10V Dimming; 24V Output Terminals; Emergency Operation via Normal Power Sensing Broadcasts |
| | rPP20 D 24V ER EFP G2 |  | Power/Relay Pack; 20 Amp; 0-10V Dimming; 24V Output Terminals; Emergency Operation via Power Sense Leads |
| | rPP20 D 24V EM EFP UVOLT G2 |  | Power/Relay Pack; 20 Amp; 0-10V Dimming; 24V Output Terminals; Emergency Operation via Normal Power Sensing Broadcasts; 120-480V |
| | rPP20 D 24V ER EFP UVOLT G2 |  | Power/Relay Pack; 20 Amp; 0-10V Dimming; 24V Output Terminals; Emergency Operation via Power Sense Leads; 120-480V |
| | rPP20 D 24V EM EFP CP G2 |  | Power/Relay Pack; 20 Amp; 0-10V Dimming; 24V Output Terminals; Emergency Operation via Normal Power Sensing Broadcasts; Chicago Plenum Rated |
| | rPP20 D 24V ER EFP CP G2 |  | Power/Relay Pack; 20 Amp; 0-10V Dimming; 24V Output Terminals; Emergency Operation via Power Sense Leads; Chicago Plenum Rated |
|  | rTLN MVOLT DSNV G2 |  | Twist-to-Lock Node; 0-10V Dimming; 120-277V |
| | rTLN HVOLT DSNV G2 |  | Twist-to-Lock Node; 0-10V Dimming; 347-480V |
| | rTLN DALI MVOLT DSNV G2 |  | Twist-to-Lock Node; DALI Control; 120-277V |
| | rTLN DALI HVOLT DSNV G2 |  | Twist-to-Lock Node; DALI Control; 347-480V |

nLight Platform

Backbone & Accessories

| Product Image | Model Name | CAD Symbol | Description |
|---|---|---|---|
|  | nECY MVOLT (BAC) (ADR) (SVS) (REM) ENC (GFXK) |  | System Controller; 750 Device Limit; 120-277VAC, 347VAC Optional; Optional BACnet (BAC), Automated Demand Response (ADR), Visualization Software (SVS), Remote Factory Assistance (REM), and/or Graphic Diagnostic and Manual Override Touchscreen (GFXK) |
|  | nECY MVOLT (BAC) (ADR) (SVS) (REM) ENC AIR |  | System Controller; nLight AIR-Only, 150 Device Limit; 120-277VAC, 347VAC Optional; Optional BACnet (BAC), Automated Demand Response (ADR), Visualization Software (SVS), Remote Factory Assistance (REM), Packaged nLight AIR Adapter (AIR) |
|  | nBRG 8 Kit |  | 8-Port Bridge for Wired nLight Devices; Power Supply Included |
|  | nECYD NLTAIR G2 |  | nLight AIR Adapter for nLight ECLYPSE |
|  | nECYD EXT150 |  | 150-Foot, USB to CAT6 Extender for the nLight AIR Adapter (nECYD NLTAIR G2); Includes 120VAC Power Adapter and CAT6 to USB Converters |
|  | NECYMOD CAR1 12FT |  | Field Deployable Cellular Router for Remote Assistance and Programming by Factory; USA/Mexico SIM Included |
| | NECYMOD CAR2 12FT |  | Field Deployable Cellular Router for Remote Assistance and Programming by Factory; Canada SIM Included |

Typical Interior Office





Additional Resources

Application Typical Designs

www.acuitybrands.com/typicals

BIM Models

<https://www.acuitybrands.com/resources/customer-tools/bim-downloads>

Specification Sheets

www.nlightcontrols.com

Energy Code Application Guides

<https://nlight.acuitybrands.com/resources/app-guides>

Visual Controls

Visual Controls includes helpful tools for designing nLight projects.

For access contact your local lighting agent.

<https://www.acuitybrands.com/support/how-to-buy>



A+ Certified solutions from Acuity Brands help you quickly and confidently select and implement lighting systems that are both compatible and consistent.

For lighting applications, A+ means verified consistent performance, visual appearance and system interoperability of all luminaires and controls within the certified solutions. For lighting professionals it means confidence that all parts of the lighting system will work together and meet common Acuity Brands specifications.

Go to www.acuitybrands.com/solutions/a-certified or contact your local Acuity Brands representative for more information.

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nLight® UNITOUCH

Seamless control,
modern and intuitive



The nLight® UNITOUCH is a Bluetooth® enabled touchscreen wall switch that provides seamless control of luminaires and devices on the nLight lighting controls platform through a single piece of glass or the MyPersonify mobile app. As the perfect blend of aesthetic design and user experience, the nLight UNITOUCH is an easy-to-install wall switch that's ideal for commercial, educational, hospitality, and retail applications.

Benefits

- **Modern Form Factor** – Provides a sleek and clean design with a contemporary aesthetic to enhance the look and feel of your space or project
- **Intuitive User Interface** – Delivers an exceptional user experience combined with an easy to read and navigate interface using common icons
- **Mobile App** – Equipped with Bluetooth® Low Energy (BLE), the nLight UNITOUCH enables users the ability to remotely control lights and shades through the MyPersonify mobile app
- **Multi-zone, Scene and Shade Control** – All three on one wall switch for complex spaces and projects
- **Security/Access** – User access levels to ensure the highest level of protection for your organization. Two user access levels with full access to configure for administrators and control only access for occupants in the space.

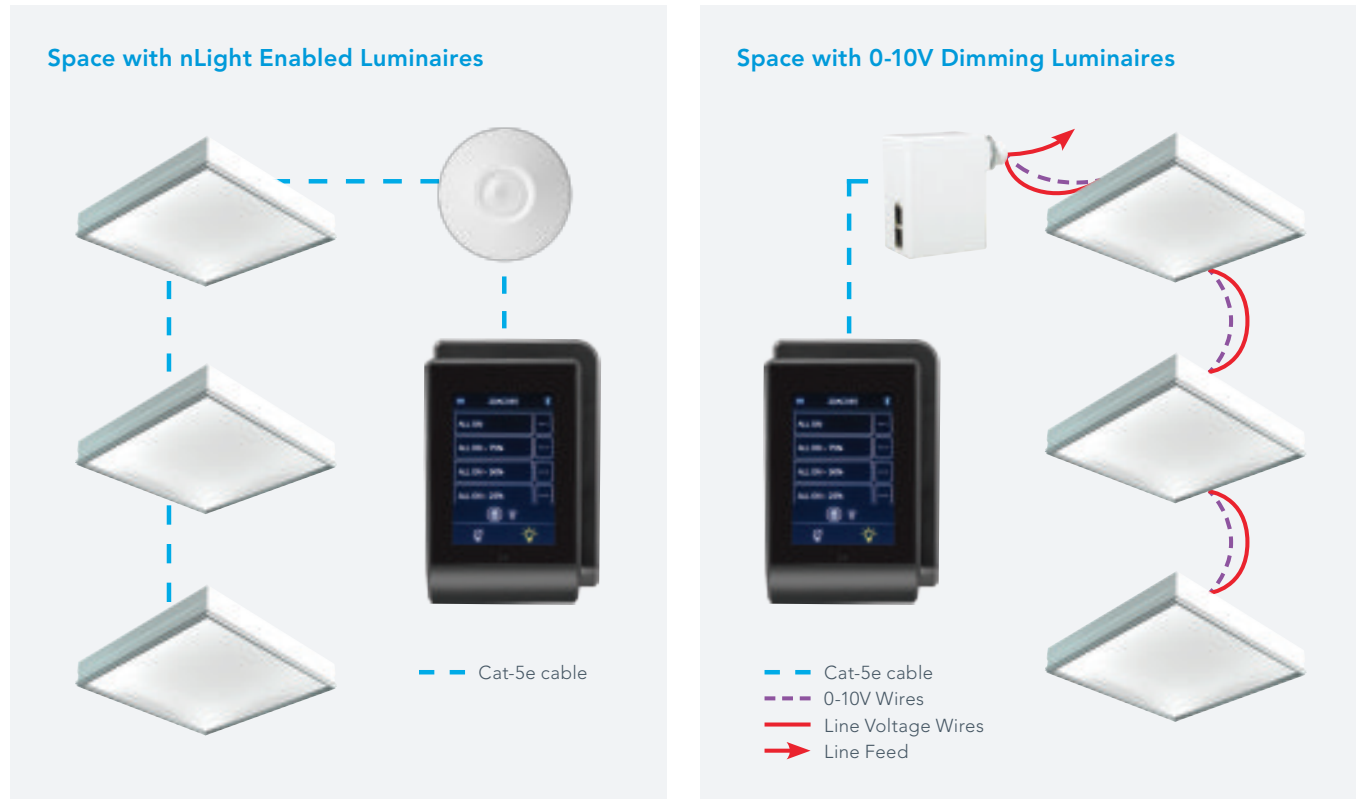


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nLight Wired Devices and Luminaires

The nLight® UNITOUCH is a touchscreen wall switch that allows local configuration and control of lighting zones.



To learn more about the nLight lighting controls platform, contact your local lighting representative or visit www.acuitybrands.com/nLight.



nLight® Digital Time Clock

Self-contained timeclock and panel-based programming in one lighting controls system



The nLight Digital Time Clock (nDTC) delivers smart and simple configuration, control, and scheduling of nLight devices for small-to-medium projects. Available as a wall-mounted device, or pre-assembled in an ARP relay panel, the nDTC is a cost-effective solution for time-based control in a lighting control zone, eliminating the need for complex networked controllers.

Features and Benefits

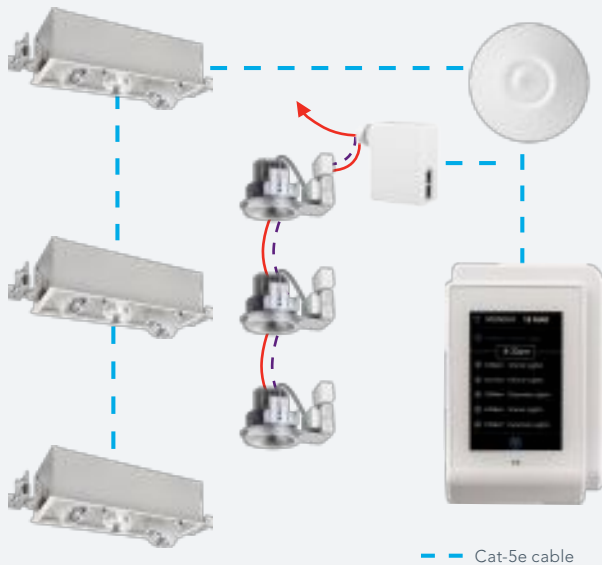
- **ON-SCREEN PROGRAMMING AND CONFIGURATION:** Easy programming without the need for specialized technicians, software, USB, or cable.
- **DIGITAL TIME CLOCK:** Create schedules to adjust a building's light levels automatically for energy efficiency and aid in code compliance.
- **SCALABILITY:** The nDTC allows you the flexibility to have a stand-alone solution that scales to a fully networked solution.
- **OUT-OF-THE-BOX FUNCTIONALITY:** Default settings that work immediately after installation helping you get off the job faster.





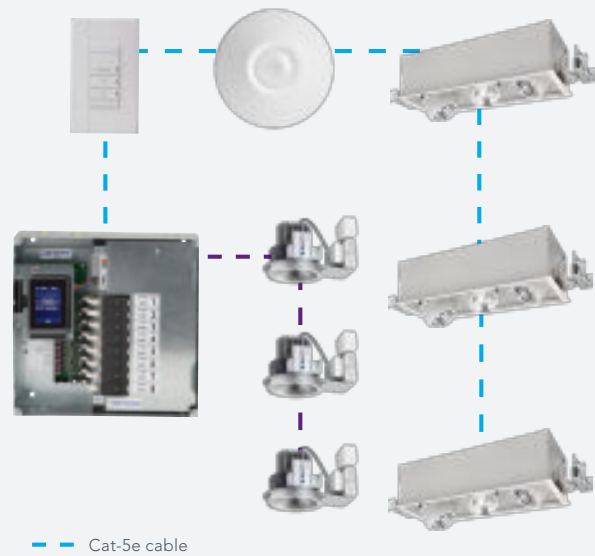
Wall-Mounted nDTC

The nDTC can be used as a single-gang wall device to deliver a simple and effective time-based control solution for nLight devices in a lighting zone.



nDTC Pre-Assembled in ARP Panel

Use the pre-assembled ARP relay panel with the nDTC for more robust functionality in spaces requiring full circuit control.



To learn more about the nLight lighting controls platform, contact your local lighting representative or visit www.acuitybrands.com/nLight

nGRAVE BUTTON ENGRAVING ORDER FORM



Project Name

Contact Name

Order Number

Phone Number

###-###-####

Nomenclature

Field Autofills on Input

EXT

QTY

INSTRUCTIONS

- All fields are required
- Check box to select device type
- Check box to select button color
- **XX*** = Button Color
- All lettering will be aligned in accordance to the LED pipe
- Upper and lowercase letters are available
- Number of characters includes spaces
- **#A** buttons have a limit of 9 characters per line
- **#B** buttons have a limit of 5 characters per line

SELECT DEVICE

☐ Check here to clear selection

| | | | | | | |
|---|--|---|--|--|--|--|
| NGRAVE FA2 XX* 1A 2A nPODMA nPODMA 2S rPODBA rPODBA 2S rPODLA | NGRAVE FA3 XX* 1A 2A 3A 4A nPODMA DX rPODBA DX rPODLA DX | NGRAVE FA4A XX* 1A 2A 3A 4A nPODMA 2P nPODMA 4S rPODBA 2P rPODBA 4S rPODLA 2P | NGRAVE FA6A XX* 1A 2A 3A 4A nPODMA 2P DX rPODBA 2P DX rPODLA 2P DX | NGRAVE FA6B XX* 1A 2A 3A 4A nPODMA 2S DX rPODBA 2S DX rPODLA 2S DX | NGRAVE FA8A XX* 1B 2B 3B 4B 5B 6B 7B 8B nPODMA 4P rPODBA 4P | NGRAVE FA8B XX* 1B 2B 3B 4B 5B 6B 7B 8B nPODMA 4P DX nPODMA 4S DX rPODBA 4P DX rPODBA 4S DX |
|---|--|---|--|--|--|--|

SELECT ENGRAVING TYPE*

☐ Check here to clear selection

☐ **Preferred** (Custom Buttons, BK and RD available) ☐ **Standard** (BK and RD ***not*** available)

SELECT BUTTON COLOR*

☐ Check here to clear selection

| | | | | | |
|--|--|---|---|--|--|
| <input type="checkbox"/> WH - White | <input type="checkbox"/> IV - Ivory | <input type="checkbox"/> GY - Gray | <input type="checkbox"/> AL - Lt. Almond | <input type="checkbox"/> BK - Black | <input type="checkbox"/> RD - Red |
|--|--|---|---|--|--|

"A" BUTTONS

| | | | | | | |
|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 1A - Line 1 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Line 2 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 2A - Line 1 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Line 2 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 3A - Line 1 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Line 2 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 4A - Line 1 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Line 2 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

"B" BUTTONS

| | | | | | |
|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 1B - Line 1 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Line 2 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 2B - Line 1 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Line 2 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 3B - Line 1 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Line 2 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 4B - Line 1 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Line 2 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 5B - Line 1 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Line 2 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 6B - Line 1 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Line 2 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 7B - Line 1 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Line 2 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 8B - Line 1 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Line 2 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

OVERVIEW

The nLight Bridge increases the number of lighting control zones in an nLight system. This ability stems from the fact that each Bridge has 8 RJ-45 ports into which zones of daisy-chained nLight devices can connect. The Bridge also is an integral component of the communication backbone in an nLight network. Fundamentally, Bridges act as hubs by aggregating traffic from the connected downstream zones and placing it onto the backbone. They also act as routers by forwarding information from the backbone out to the applicable downstream zones.

FEATURES

- Communicates with nLight Network
- Remotely configurable/upgradeable
- Push-button programmable
- Green LED indicators for each Port
- Redistributes bus power between ports
- Supports up to 128 devices per port

Buy American

BAA variants of this product are assembled in the USA and meet the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to www.acuitybrands.com/buy-american for additional information.

Warranty

Five-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.



This item is an A+ capable component, which has been designed and tested to provide out-of-the-box luminaire compatibility with simple commissioning, when included as part of an A+ Certified™ Solution.

To learn more about A+, visit www.acuitybrands.com/aplus.



nBRG 8
8-Port nLight Bridge



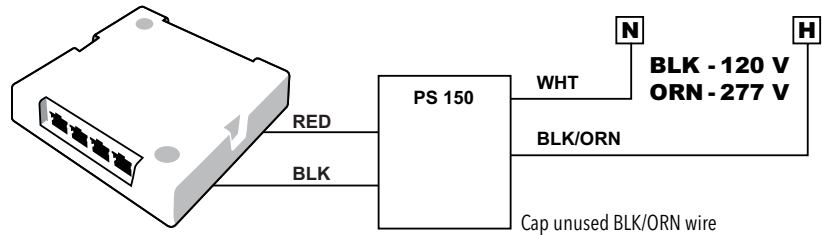
ORDERING INFORMATION

| nBRG 8 | | | | |
|---------------|----------------------------------|---------------------------------|--|--|
| Series | Voltage | Temp/Humidity | Power Supply | Buy America(n) ¹ |
| nBRG 8 Bridge | [blank] 120/277VAC 347 347VAC | [blank] Standard LT Low temp | [blank] Unit Only KIT Kit w/ power supply | [blank] Standard BAA Buy America(n) Act Compliant |

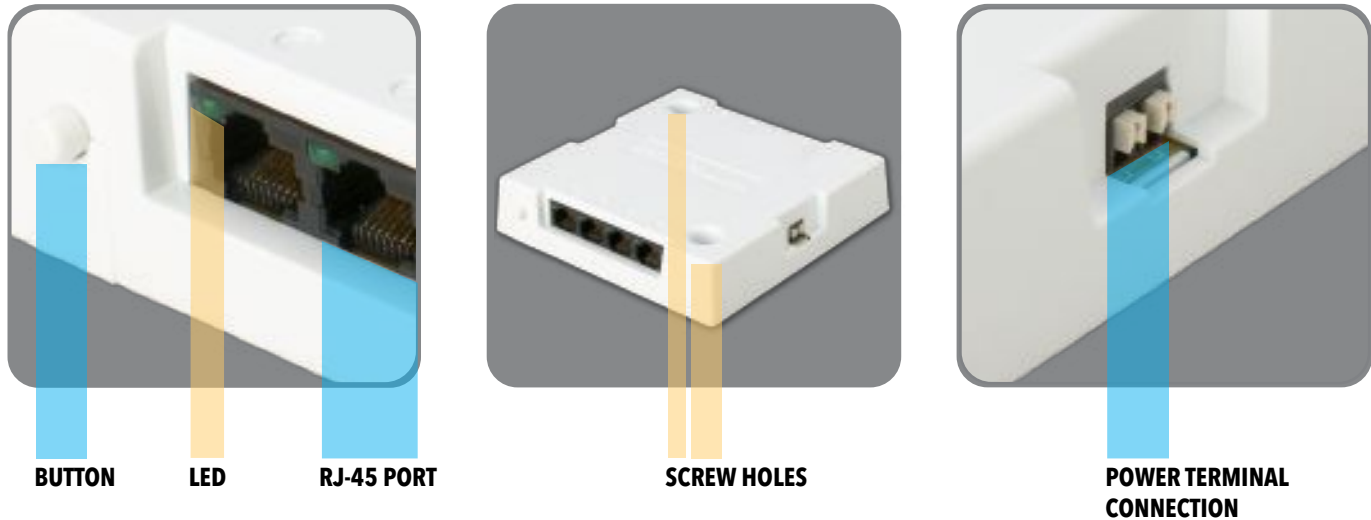
Notes:
1. Not available with 347, LT, or KIT options.

WIRING (DO NOT WIRE HOT)

A 15-24 VDC or VAC power supply can deliver power to the Bridge via the terminal connections on the side of the unit. The **PS 150** version power supply (included in the **KIT** option) is recommended, as it conveniently mounts through a knock-out on the side of the junction box where the Bridge unit is mounted.

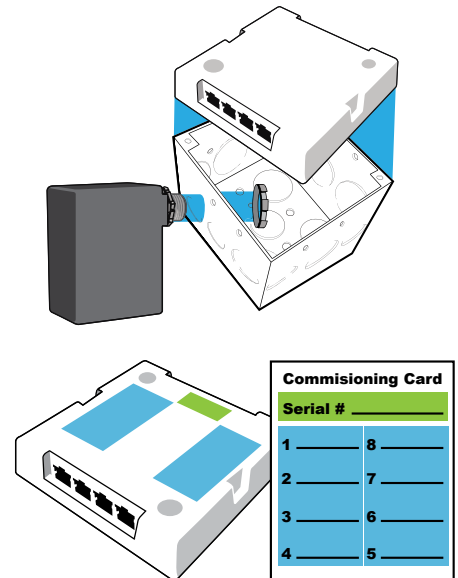
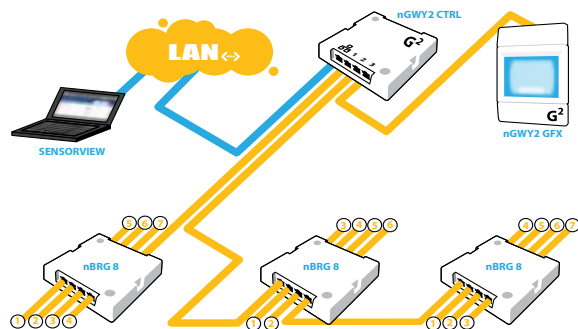


DETAILED DIAGRAM



INSTALLATION

1. Mount power supply to a 4" x 4" square junction box (through a 1/2" knockout)
2. Connect the power supply's class 1 line voltage wires. Cap any unused wires.
3. Mount Bridge unit to top of same junction box
4. Connect the power supply's low voltage wires to the Bridge's terminal connectors. Upon power up, unit's LEDs will flash.
5. Attach CAT-5e cables from lighting zones to the appropriate Bridge RJ-45 ports according to system design. Individual port LEDs will blink according to the following pattern:
 - Rapid Flash - Port is in discovery
 - 1 Blink - Healthy zone of devices
 - 2 Blinks - Upstream bridge or gateway is detected
 - 4 Blinks - Downstream bridge is detected
6. Fill out Bridge's port identification sticker(s) and commissioning card



NETWORK CONFIGURATION

An nLight network backbone consists of one or more Bridges and a Gateway (nGWY2 CTRL & nGWY2 GFX) communicating over CAT-5e wired connections. The architecture can be topology-free, however wide branching backbone networks are recommended over linear runs. Any one or more RJ-45 ports on a Bridge may be used to connect to other Bridge or Gateway devices.

Note: A maximum of 9 bridges may be used in a row (ie: bridge jumps from the gateway to the last bridge should remain less than 9).

PROGRAMMING

Refer to included instructions on LED indications and push button functionality.

SPECIFICATIONS

| | | |
|---------------|----------------------------------|--|
| Electrical | Input Ratings | 15-24VDC, 60mA, Class 2 (via included PS-150 or PS-150-347 power supply with KIT option) 15-24VDC, 40mA, Class 2 per port (e.g. from a connected nPP16) |
| | Low Voltage Output Ratings | 15VDC, 40mA per RJ-45 Port (90mA total with connected PS-150 or PS-150-347 power supply) |
| | Standards/ Ratings | Energy Management Equipment, UL916 (E167435) |
| Mechanical | Dimensions | 4.90H" x 4.90W"x 1.05D" (124mm x 124mm x 27mm) |
| | Mounting | Directly to 4" x 4" Square Box Surface Mount |
| | Color | White |
| | Connection Type | RJ-45 nLight Network Ports (8) Low-Voltage Terminals |
| Environmental | Warrantied Operating Temperature | Standard: 32°F to 140°F (0°C to 60°C) LT option: -4°F to 140°F (-20°C to 60°C) |
| | Relative Humidity | Up to 90%, Non-Condensing |
| | Standards/ Ratings | RoHS, Plenum UL2043 |
| General | Standards/ Ratings | System Component to aid in compliance with Title 24, ASHRAE 90.1, IECC |
| | Security | Complies with California Civil Code Title 1.81.26, Security of Connected Devices, approved under Senate Bill No.327 (2018) |

OVERVIEW

The nLight nPP16 ER EFP family of power packs is the workhorse of an nLight system, delivering robust system performance and design versatility for commercial and industrial lighting control applications. The nPP16 ER EFP switches loads via an internal latching relay designed with robust protection from the harsh switching requirements of T5 fluorescent and LED loads. Optional 0-10V dimming outputs (D or DS options) are designed with circuit isolation and provide up to 100mA of current sinking capability. The nLight nPP16 ER EFP Series relay pack is used to switch luminaires powered via an emergency circuit. The nLight nPP16 ER EFP relay pack is ideally suited for use in conjunction with a standard nnPP16 EFP power/relay pack that controls a zone's normal powered lighting.

FEATURES

- Automatically Overrides Emergency Lights On To Full Brightness Upon Normal Power Loss
- Communicates w/ nLight Network
- Self-Contained Relay Switches Line Voltage Load
- Optional out-of-box vacancy and partial-on modes
- Remotely Configurable/Upgradeable
- Test/programming button
- Configurable Relay Logic
- Extended Chase Nipple
- Plenum rated
- Includes fuse integrated to relay wirelead for protection from load faults
- Meets NEMA410 ratings for LED/electronic ballast inrush

Buy American

BAA variants of this product are assembled in the USA and meet the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to www.acuitybrands.com/buy-american for additional information.

Warranty

Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.



nPP16 ER EFP Emergency Relay Pack



Model #: nPP16 (D) ER EFP



ORDERING INFORMATION

| Series | Dimming | Emergency | Fault Protection | Default Mode | Voltage | Temp/humidity | Buy America(n) ² |
|------------------------|--|------------------------------|-------------------------------|--|--|---------------------------------|--|
| nPP16 Power/Relay Pack | [blank] None D 0-10VDC Dimming output (via chase nipple) DS 0-10VDC Dimming output (via side slot) | ER UL924 Emergency Operation | EFP External Fault Protection | [blank] Auto On (Switch Ch. 1) SW2 Auto On (Switch Ch. 2) SW3 Auto On (Switch Ch. 3) SW4 Auto On (Switch Ch. 4) SA Manual On (Switch Ch. 1) SA2 Manual On (Switch Ch. 2) PA70 Auto On to 70% (Partial On) ¹ PA Auto On to 50% (Partial On) ¹ | [blank] 120/277VAC 230 220-240VAC 347 120/347VAC | [blank] Standard LT Low temp | [blank] Standard BAA Buy America(n) Act Compliant |

ACCESSORIES

NPP FUSE J10 Replacement Fuse (10 Pack)

Notes:

1. Requires D or DS option
2. Not available with 230, 347, or LT options

SPECIFICATIONS

| | | |
|----------------------|---|---|
| Electrical | Input Ratings | 120/277VAC, 50/60 Hz, 220-240VAC, 50/60Hz (with 230 option), 120/347VAC, 50/60 Hz (with 347 option), 120-277VAC, 50/60 Hz Normal Power Sense, 120-347VAC, 50/60 Hz Normal Power Sense (with 347 option) |
| | Output Ratings | 120-347VAC, 50/60 Hz, 16A - Tungsten, Standard Ballast, Electronic Ballast, General Purpose, 120VAC, 50/60 Hz, 1/2 HP - Motor, SCCR: 5KA, 100mA, 0-10VDC Dimming Sink Current |
| | Relay Type | Latching |
| | Low Voltage Output Ratings | Self-powering, does not supply nLight bus voltage |
| | Class Rating | 0-10V Dimming can be wired Class 1 or 2 |
| Mechanical | Standards/ Ratings | Energy Management Equipment, UL916 (E167435), Emergency Power Equipment, UL924 (E342232) |
| | Dimensions | 3.38"H x 2.53"W x 1.83"D (86mm x 64mm x 47mm)-does not include 1/2" chase nipple |
| | Mounting | 1/2" Knockout (7/8" hole) |
| | Color | Red |
| | Connection Type | RJ-45 nLight Network Ports (2) Non-Dimming Model: Line Voltage Leads Dimming Model: Line and Low Voltage Leads |
| Environmental | Warrantied Operating Temperature | Standard: 14°F to 122°F (-10°C to 50°C), Standard: 14°F to 113°F (-10°C to 45°C) if enclosed within a junction box LT option: 4°F to 122°F (-20°C to 50°C) |
| | Relative Humidity | Up to 90%, Non-Condensing |
| | Standards/ Ratings | RoHS, Plenum UL2043 |
| General | Standards/ Ratings | System Component to aid in compliance with Title 24, ASHRAE 90.1, IECC |

WIRING

T568B pin/pair assignment is recommended for all CAT-5e cables. Unit powers itself but does not provide any bus power to other connected nLight devices. For Supply Connections, use 14 AWG or larger wires rated for at least 90° C.

Diagram for non-dimming units

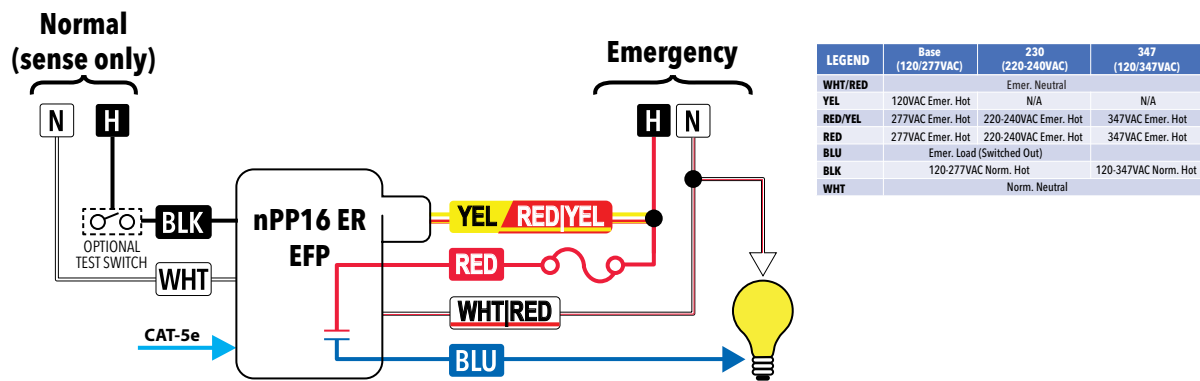
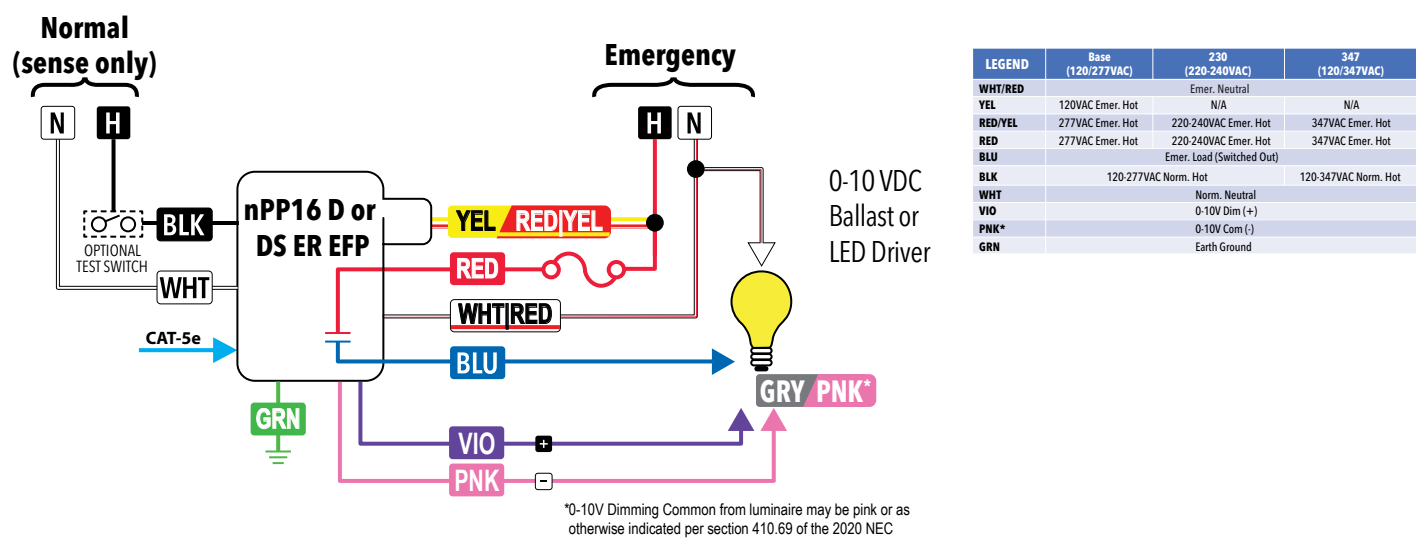


Diagram for units with a dimming option (-D or -DS suffix)



- Notes
1. Connect to either YEL, or RED/YEL, feed ONLY and cap off unused wire.

ADDITIONAL EMERGENCY (-ER) SPECIFICATION INSTRUCTIONS

When normal power sense leads have absence of voltage, the relay closes and 0-10V dimming is set to high end trim level.

PUSH-BUTTON TESTING:

As long as the relay is in the open (lights off) position and normal power is present, you are able to simulate normal power being lost by pressing and releasing the unit's push-button one time. After a few seconds the relay will close for 4 seconds, then open back up and return to normal operation. A separate push-button test switch (not included) can also be wired in as shown in above diagrams.

INTERFACING WITH A FIRE ALARM PANEL:

To interface unit to a fire alarm system such that the relay is overridden closed (lights on) upon activation of the fire alarm system, the fire alarm system must provide a normally closed line-voltage rated relay which opens when the fire alarm system is activated. This relay must be put in series with the Black power sense line on the nPP16 ER EFP. When the normally closed relay opens, the nPP16 ER EFP will close its load relay to provide egress lighting when the fire alarm system is activated.

OVERVIEW

The nLight PCDM Series Phase Control Dimming Module is capable of switching and dimming reverse phase dimmed outputs. When paired with an nLight AIR rPP20 D(S) or nLight Wired nPS 80 EZ, the PCDM allows reverse phase dimmable luminaires to be controlled by an nLight network. Each PCDM can be used across multiple devices up to the maximum wattage per the input voltage. The PCDM can be mounted directly to a junction box and is rated for plenum spaces.

FEATURES

- Capable of communicating with a nLight device (rPP20 or nPS 80 EZ)
- Dims reverse phase luminaires with 0-10V
- 120V and 277V capable
- Auto-sensing voltage switch
- Chase nipple for j-box mounting
- Plenum rated

Warranty

Five-year limited manufacturer warranty. Please reference: www.acuitybrands.com/support/customer-support/terms-and-conditions regarding third party manufacturer warranty terms.

This product is manufactured by Ecosense Lighting Inc.

Note: Actual performance may differ as a result of end-user environment and application.
Specifications subject to change without notice.



PCDM
Phase Control
Dimming Module



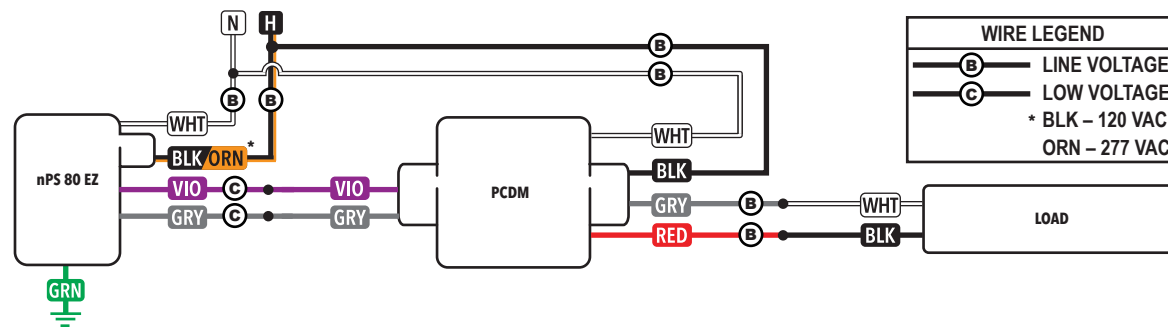
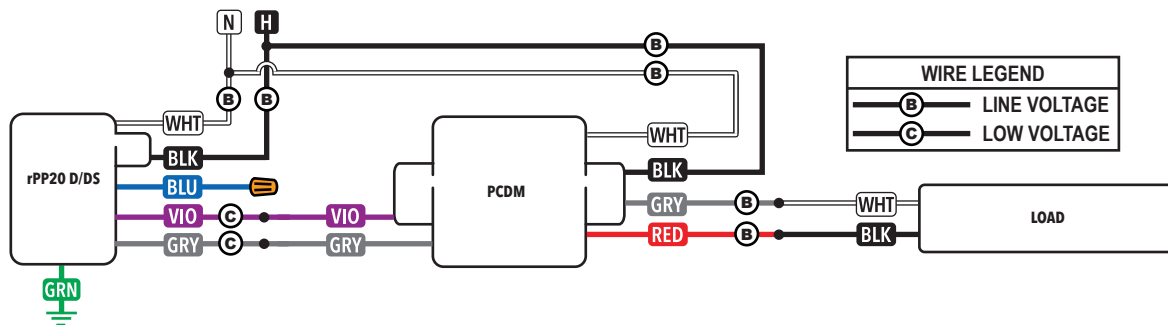
ORDERING INFORMATION

| PCDM | Example: PCDM |
|--------|---------------|
| Series | |
| PCDM | |

SPECIFICATIONS

| | | |
|----------------------|---|---|
| Electrical | Input Ratings | 110-120VAC or 277VAC, 60Hz, Auto-sensing |
| | Power Ratings | @110-120 VAC, 450W Max @277 VAC, 1000W Max |
| Mechanical | Dimensions | 3.40" W x 7.00" L x 2.00" H (87mm x 178mm x 50mm) |
| | Mounting | 1/2" Knockout (7/8" hole) |
| | Color | Gray |
| | Connection Type | 0-10V Dimming Leads (Purple & Gray) Line Voltage Leads (Red, Black, White, and Gray) |
| Environmental | Weight | 0.99lbs (0.45 kg) |
| | Warrantied Operating Temperature | -4°F to 104°F (-20°C to 40°C) |
| | Standards/ Ratings | RoHS, ETL Damp Location |

WIRING (DO NOT WIRE HOT)



OVERVIEW

The nLight nPP16 EFP family of power packs is the workhorse of an nLight system, delivering robust system performance and design versatility for commercial and industrial lighting control applications. The nPP16 EFP family is capable of switching loads via an internal latching relay designed with robust protection from the harsh switching requirements of T5 fluorescent and LED loads. These power packs also provide nLight system bus power - up to 40mA from each of its two RJ-45 ports - by transforming Class 1 line voltage (120/277 VAC or 347 VAC) to Class 2 low voltage (15 VDC). This power is typically utilized by other nLight devices within the power pack's local control zone; however, remaining power is also made available over the network for Bridges and devices in other zones to utilize.

FEATURES

- Communicates w/ nLight Network
- Self-Contained Relay Switches Line Voltage Load
- Supplies 40mA of Bus Power / RJ-45 port
- Optional out-of-box vacancy and partial-on modes
- Remotely Configurable/Upgradeable
- Push-Button Programmable
- Configurable Relay Logic
- Extended Chase Nipple
- Plenum rated
- Includes fuse integrated to relay wirelead for protection from load faults
- Meets NEMA410 ratings for LED/electronic ballast inrush

Buy American

BAA variants of this product are assembled in the USA and meet the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to www.acuitybrands.com/buy-american for additional information.

Warranty

Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.



nPP16 EFP Power/Relay Pack



Model #: nPP16 (D) EFP



ORDERING INFORMATION

| Series | Dimming | | Fault Protection | Default Mode | | Buy America(n) ² |
|------------------------|---------|---|-------------------------------|--------------|--|---|
| nPP16 Power/Relay Pack | [blank] | None | EFP External Fault Protection | [blank] | Auto On (Switch Ch. 1) | [blank] Standard BAA Buy American(n) Act Compliant |
| | D | 0-10VDC Dimming output (via chase nipple) | | SW2 | Auto On (Switch Ch. 2) | |
| | | | | SW3 | Auto On (Switch Ch. 3) | |
| | | | | SW4 | Auto On (Switch Ch. 4) | |
| | DS | 0-10VDC Dimming output (via side slot) | | SA | Manual On (Switch Ch. 1) | |
| | | | | SA2 | Manual On (Switch Ch. 2) | |
| | | | | PA70 | Auto On to 70% (Partial On) ¹ | |
| | | | | PA | Auto On to 50% (Partial On) ¹ | |

| ACCESSORIES | |
|--------------|------------------|
| NPP FUSE J10 | Replacement Fuse |

Notes:

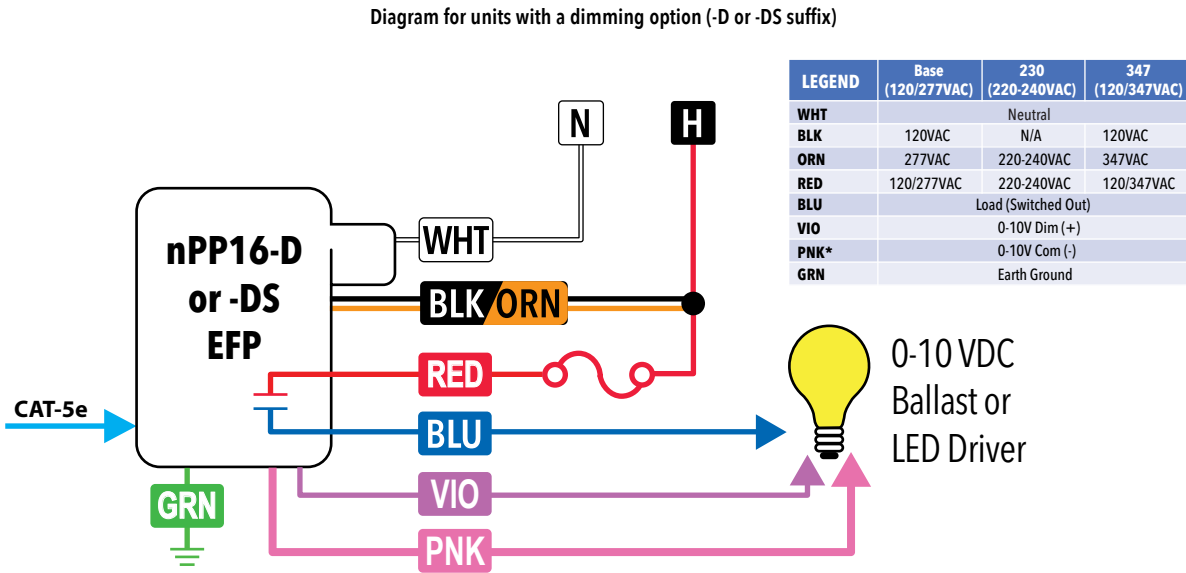
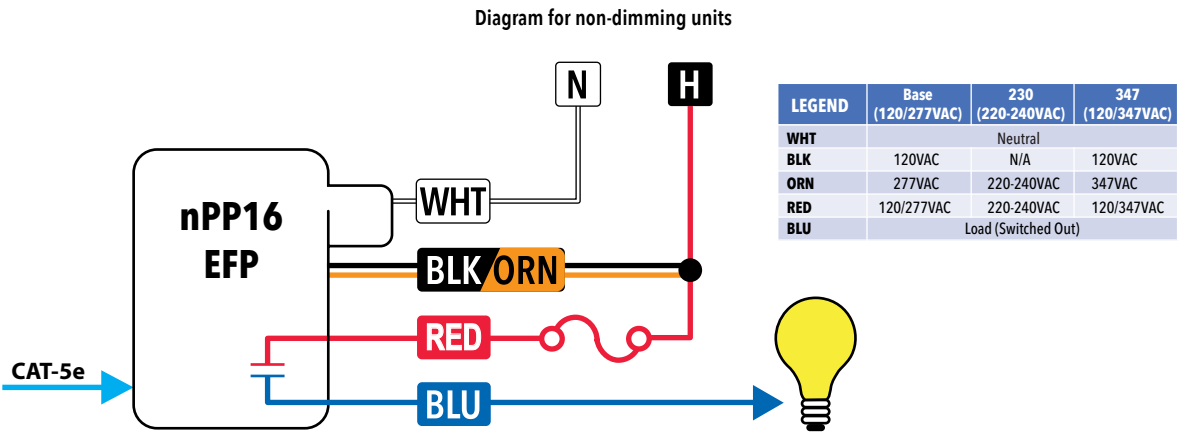
1. Requires D or DS option
2. Not available with 230, 347, or LT options

SPECIFICATIONS

| | | |
|---------------|----------------------------------|--|
| Electrical | Input Ratings | 120/277VAC, 50/60 Hz 220-240VAC, 50/60Hz (with 230 option) 120/347VAC, 50/60 Hz (with 347 option) |
| | Output Ratings | 120/277VAC, 50/60 Hz 220-240VAC, 50/60Hz (with 230 version) 120/347VAC, 50/60 Hz (with 347 version) 16A - Tungsten, Standard Ballast, Electronic Ballast, General Purpose 120VAC, 50/60 Hz, 1/2 HP -Motor SCCR: 5KA 100mA, 0-10VDC Dimming Sink Current |
| | Relay Type | Latching |
| | Low Voltage Output Ratings | 15VDC, 40mA per RJ-45 Port (80mA total) |
| | Class Rating | 0-10V Dimming can be wired Class 1 or 2 |
| | Standards/ Ratings | Energy Management Equipment, UL916 (E167435) |
| Mechanical | Dimensions | 3.38"H x 2.53"W x 1.83"D (86mm x 64mm x 47mm) - does not include 1/2" chase nipple |
| | Mounting | 1/2" Knockout (7/8" hole) |
| | Color | White |
| | Connection Type | RJ-45 nLight Network Ports (2) Non-Dimming Model: Line Voltage Leads Dimming Model: Line and Low Voltage Leads |
| Environmental | Warrantied Operating Temperature | Standard: 14°F to 122°F (-10°C to 50°C) Standard: 14°F to 113°F (-10°C to 45°C) if enclosed within a junction box LT option: -4°F to 122°F (-20°C to 50°C) |
| | Relative Humidity | Up to 90%, Non-Condensing |
| | Standards/ Ratings | RoHS, Plenum UL2043 |
| General | Standards/ Ratings | System Component to aid in compliance with Title 24, ASHRAE 90.1, IECC |

WIRING

T568B pin/pair assignment is recommended for all CAT-5e cables. For Supply Connections, use 14 AWG or larger wires rated for at least 90° C.



OVERVIEW

The nLight nSP5 PCD Series Secondary Relay and Dimming Pack is capable of switching and dimming incandescent lighting loads, certain line voltage dimmable fluorescent lighting loads, magnetic low voltage (MLV) lighting loads, and electronic low voltage (ELV) lighting loads. Manual switching and adjustment of the dimming level is possible via WallPods or through the nLight SensorView software. The nSP5 PCD's two RJ-45 connectors make control wiring with standard CAT-5 cabling quick and easy. For mounting, the nSP5 PCD has an elongated chase nipple that allows it to be attached either directly through a 1/2" knockout onto a junction box, or to an adjacent box for meeting specific local code requirements in ceiling plenums.

SWITCHING & DIMMING OPERATION

The nSP5 PCD performs phase cut dimming (either forward or reverse depending on model) of the line voltage being supplied to a 120 VAC incandescent (tungsten) load, a 120/277 VAC dimmable fluorescent (ballast) load, a 120/277 VAC magnetic low voltage (inductive) load, or a 120 VAC electronic low voltage (non-inductive) load. The nSP5 PCD 2W version dims the switched line voltage connection going to a 2-wire dimming ballast or incandescent lamp. The nSP5 PCD MLV version is designed to dim low voltage lighting powered by an inductive (magnetic) transformer. Similarly the nSP5 PCD ELV version is designed to reverse phase dim electronic low voltage loads. The nSP5 PCD 3W dims the dedicated dimming input to a 3-wire dimming ballasts. All versions have an internal latching relay that switches the loads (see electrical specifications). Note, that in order to function the nSP5 PCD must be connected as part of an adequately powered nLight zone as the unit does not power itself from the line voltage it is switching/dimming.

FEATURES

- Communicates w/ nLight network
 - Remotely configurable/upgradable
 - Push-button programmable
 - Configurable relay logic
- Self-contained relay
 - Forward phase and reverse phase options
 - Extended chase nipple
 - Plenum rated

Warranty

Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.



This item is an A+ capable component, which has been designed and tested to provide out-of-the-box luminaire compatibility with simple commissioning, when included as part of an A+ Certified™ Solution. To learn more about A+, visit www.acuitybrands.com/aplus.



nSP5 PCD



ORDERING INFORMATION

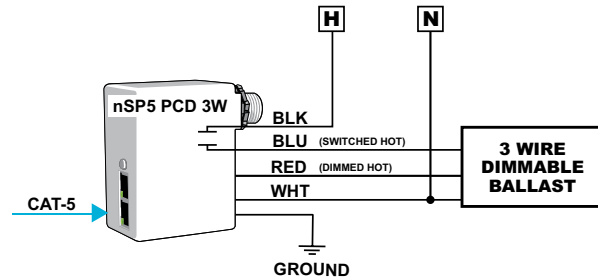
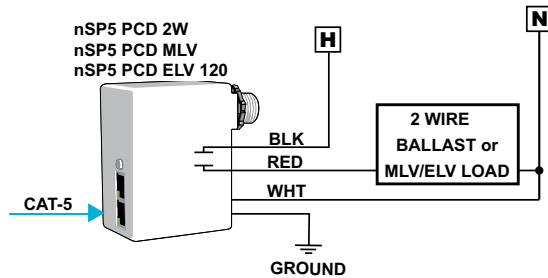
| nSP5 PCD | | | Example: nSP5 PCD 2W LT | |
|----------|--------------|----------------------------------|-------------------------|----------|
| Series | Dimming Type | | Temp/Humidity | |
| nSP5 PCD | 2W | Two wire dimming | [blank] | Standard |
| | 3W | Three wire dimming | LT | Low temp |
| | MLV | Magnetic low voltage | | |
| | ELV 120 | Electronic low voltage (120 VAC) | | |

WIRING (DO NOT WIRE HOT)

Device power is provided via the CAT-5e connection and not taken off the line. T568B pin/pair assignment is recommended for all CAT-5e cables. For dimming 120 VAC incandescent loads use the 2-wire diagram below. In multi-phase applications, use a separate neutral for each phase containing a dimmer circuit.

Additional notes on usage of nSP5 PCD ELV 120 module:

1. **Caution:** module should not be used to dim a load fed from a local step-down transformer.
2. **Caution:** to avoid overheating and possible damage to other equipment, do not use module to control receptacles, magnetic fluorescent lighting fixtures, motor-operated, or transformer-supplied appliances.
3. Use only to control the primary side of electronic transformer-supplied low-voltage lighting.
4. Some fixture manufacturers do not recommend dimming their solid-state transformers. To determine if a fixture may be dimmed, consult literature of the fixture manufacture.



OPERATIONAL SETTINGS

- Several operational settings for the nSP5 PCD are available:
- Override (On/Off/Normal)
- Occupancy Tracking (Enable/Disable)
- Photocell Tracking (Enable/Disable)
- Switch Tracking (Enable/Disable)
- Local Occupancy Tracking Channel (1-16)
- Local Photocell Tracking Channel (1-16)
- Local Switch Tracking Channel (1-16)
- Global Tracking (Enable/Disable)
- Global Tracking Channel (1-128)
- Button Mode (Enable/Disable)
- Invert Relay Logic* (Enable/Disable)
 - *does not invert dimming operation
- Idle Time Until Dim
- Dimming Range High (0 - 100%)
- Dimming Range Low (0 - 100%)
- Dimming Offset (-200% to +200%)
- LED (Override On/Override Off/Normal)
- Follow Photocell Mode (Enabled +, Enabled +/-, Disabled)
- WallPod Dimming Adjustments (Perm., Temp., Photocell Temp. Override)
- Special Modes:
 - Manual On to Auto Off (Semi-Auto), Auto to (Timed) Override On
 - Manual to (Timed) Override On, Manual On to Full Auto, Predictive Off
- Frequency (60 Hz / 50 Hz)

SPECIFICATIONS

| | | |
|---------------|----------------------------------|--|
| Electrical | Input Ratings | 15-24VDC, 7mA, Class 2 (nLight network power) |
| | Output Ratings | 120VAC, 50/60Hz, 475W - Electronic Low Voltage Load (ELV 120 Model) 120VAC, 50/60Hz, 575W - Tungsten, Standard Ballast (2W, 3W, MLV Models) 277VAC, 50/60Hz, 1375W - Tungsten, Standard Ballast (2W, 3W, MLV Models) |
| | Minimum Load Ratings | 7W (2W, 3W, MLV Models) None (ELV 120 Model) |
| | Relay Type | Latching |
| | Standards/ Ratings | Energy Management Equipment, UL916 (E167435) |
| Mechanical | Dimensions | 3.38"H x 2.53"W x 1.83"D (86mm x 64mm x 47mm) - does not include 1/2" chase nipple or heat sink |
| | Mounting | 1/2" Knockout (7/8" hole) – Open Air Only |
| | Color | White Aluminum Heat Sink (2W, 3W, MLV Models) Black Heat Sink (ELV 120 Model) |
| | Connection Type | RJ-45 nLight Network Ports (2), Line Voltage Leads |
| Environmental | Warrantied Operating Temperature | 14°F to 122°F (-10°C to 50°C) |
| | Relative Humidity | Up to 90%, Non-Condensing |
| | Standards/ Ratings | RoHS, Plenum UL2043 |
| General | Standards/ Ratings | System Component to aid in compliance with Title 24, ASHRAE 90.1, IECC |

OVERVIEW

The nLight® AIR Adapter is used to connect an nLight AIR control system to the nLight ECLYPSE®, enabling time-based configuration, remote programming, and control via BACnet, Automated Demand Response, and RESTful API. Using browser based software, users can control their wired and wireless nLight devices through a graphic floor plan, configure settings through the floor plan view or a tree view, and perform firmware updates.

The nLight AIR Adapter gives secure network capability to devices within a single space or across multiple spaces. A network of nLight AIR devices can be zoned, programmed, and controlled through an nLight ECLYPSE and Adapter with protection from nLight AIR's robust five-tier security framework.

FEATURES

- Enables wireless network control of up to 750 nLight AIR devices (per nLight AIR Adapter) in a single space or across multiple spaces
- Allows control of devices through SensorView software, BACnet commands, Automated Demand Response, and RESTful API
- Easy wiring through a USB connection to the nLight ECLYPSE.
- 5-tier security prevents unauthorized control of the wireless network.
- IP66 rating for indoor and outdoor use.
- Includes a 16-foot cable, mounting bracket, and an optional extender for remote mounting.
- Supports web-based update of devices using SensorView software

Warranty

Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/customer-support/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

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nLight® AIR Adapter
Wirelessly enables nLight AIR devices to communicate with nLight ECLYPSE Controller



ORDERING INFORMATION

| NECY | | Examples: NECYD NLTAIR G2 | |
|--------------|---------------------------------------|---------------------------|----------------------------|
| Series | | Generation | |
| NECYD NLTAIR | Networked nLight AIR wireless adapter | G2 | Generation 2 compatibility |

Additional Accessories: Order as separate catalog number.

| | |
|--------------|---|
| NECYD EXT150 | USB to CAT6 extender to add up to 150 feet of length ^{1,3} |
|--------------|---|

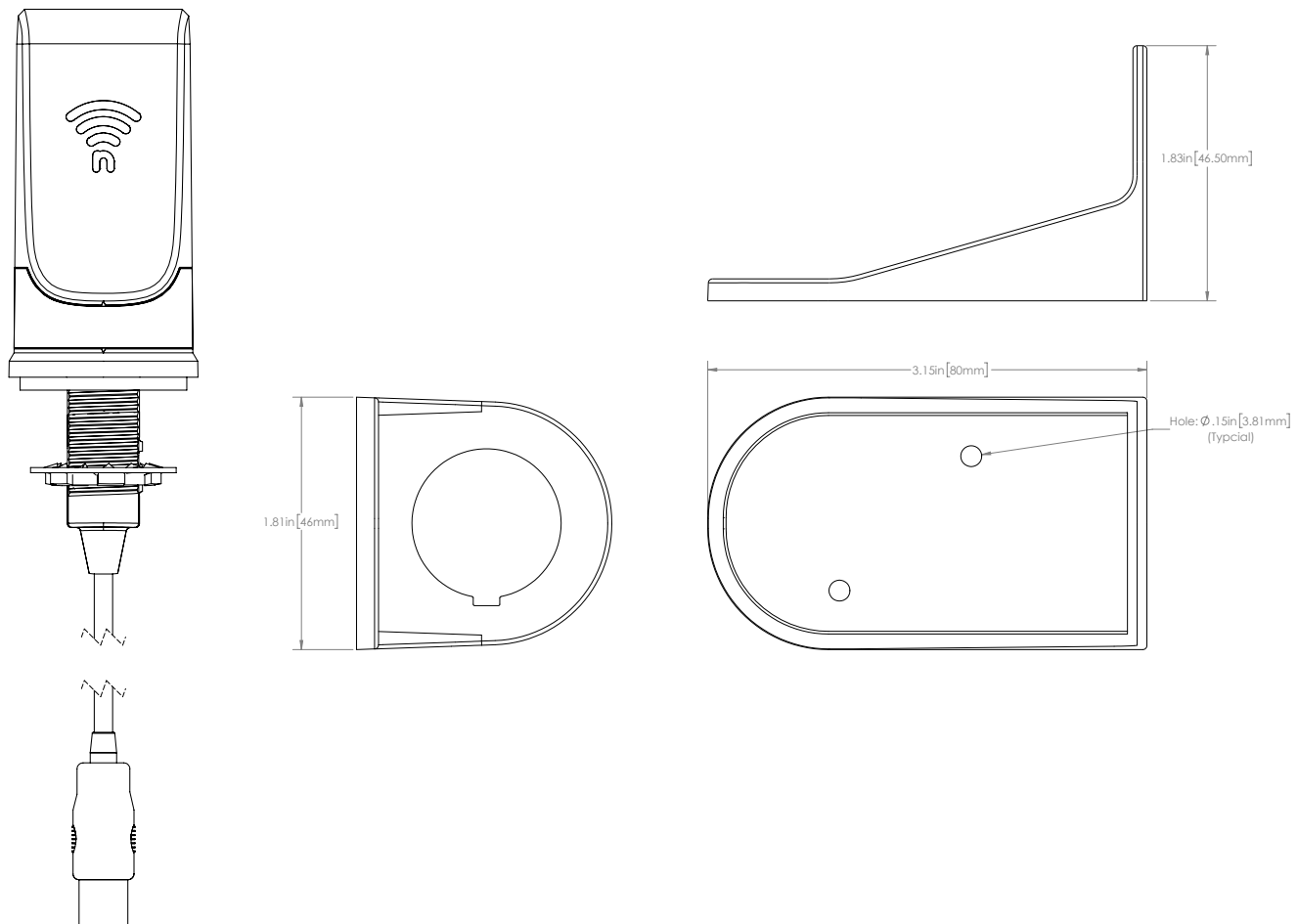
Notes:

1. USB extender requires 120V. Wall adapter is included for connection closest to the NECYD NLTAIR G2. Requires use of CAT6 cable (provided by others). CAT5 and CAT5e cable should not be used with this product.
2. Wireless Range is subject to site-specific conditions. See nLight AIR Design Guide for more information.
3. The USB extender accessory is manufactured by CommFront. Five-year limited manufacturer warranty. Please reference www.acuitybrands.com/support/customer-support/terms-and-conditions regarding third party manufacturer warranty terms.

SPECIFICATIONS

| | |
|------------------------|---|
| Dimensions: | 5" h x 1.62" l x 1.62" d |
| Product Weight: | 5.8 oz |
| Trim Color: | White |
| Enclosure Material: | Technomelt™ (high performance thermoplastic polyamide) |
| Max Humidity: | 0-95% non-condensing |
| Operating Temperature: | -40°C to 65°C |
| Mounting: | Ceiling mount, wall mount, panel mount (with included bracket) |
| Radio Frequency: | Dual Radio: 900MHz & 2.4GHz |
| RF Transmit Power: | 900Mhz: up to 27 dBm 2.4GHz: up to 10.4 dBm |
| Wireless Standard: | 900MHz: IEEE 802.15.4-based 2.4GHz: Version 4.0+ of the Bluetooth specification |
| Wireless Range: | 1,000 ft line of sight, 150 ft range in standard indoor construction ² Connected nLight AIR devices support repeating broadcasts to increase initial broadcast range ² |
| Security: | Application Data Encryption: AES-128 bit Mutual Entity Authentication Message Confidentiality Message Authentication and Replay Prevention Limited Anonymity Complies with California Civil Code Title 1.81.26, Security of Connected Devices, approved under Senate Bill No. 327 (2018) |
| Regulatory Compliance: | FCC: 2ADCB-RMODITHP, IC: 6715C-RMODITHP Safety: Canada & US UL Listed; RoHS Compliant |
| Cable: | 16 ft; not plenum rated |

MECHANICAL AND MOUNTING DETAILS



OVERVIEW

The nLight nIO D / nIO 1S is a low voltage device that interfaces and provides network addressability for a variety of non-nLight devices. The nIO D is an output device that controls the dimming level of 0-10 VDC dimming ballasts / LED drivers. The nIO 1S is an input device that detects a toggle or momentary dry contact closure switch. Additionally, the nIO 1S's can read a 0-10 VDC dimming control signal from non-nLight dimming photocells and wall dimmers.

nIO D / nIO 1S devices wire into any zone of nLight devices (sensors, power packs, WallPods) using CAT-5e cabling. Class 2 interface wires are present with each unit: an input or an output wire, and a common/ground. The nIO D / nIO 1S comes standard in an inline wired housing or with a 1/2" chase nipple for mounting to a luminaire or junction box knockout (KO option).

FEATURES

nIO D

- Outputs 0-10VDC Dimming Signal

nIO 1S

- Inputs Dry Contact Switches (Toggle or Momentary)
- Inputs 0-10 VDC Dimming Signal from a non-nLight Device
- Toggles Local Relays On/Off
- Communicates w/ nLight Network
- Remotely Configurable/Upgradeable
- Push-Button Programmable
- Inline Wired - No Mounting Required

Buy American

BAA variants of this product are assembled in the USA and meet the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to www.acuitybrands.com/buy-american for additional information.

Warranty

Five-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.



This item is an A+ capable component, which has been designed and tested to provide out-of-the-box luminaire compatibility with simple commissioning, when included as part of an A+ Certified™ Solution. To learn more about A+, visit www.acuitybrands.com/aplus.



nIO D
nIO 1S



ORDERING INFORMATION

| nIO | | | | | | Example: nIO D KO LT | |
|--------|-------------|------------------------|----------|-----------------------|---------------|----------------------|----------------------------------|
| | | | | | | | |
| Series | I/O Options | | Mounting | | Temp/Humidity | | Buy America(n) ¹ |
| nIO | D | 0-10VDC dimming output | [blank] | Inline wired | [blank] | Standard | [blank] Standard |
| | 1S | Contact closure input | KO | Chase nipple mounting | LT | Low Temp | BAA Buy America(n) Act Compliant |

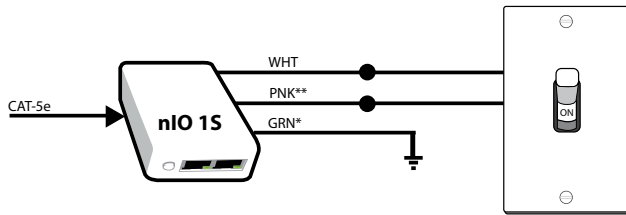
Notes:
1. Not available with LT.

WIRING

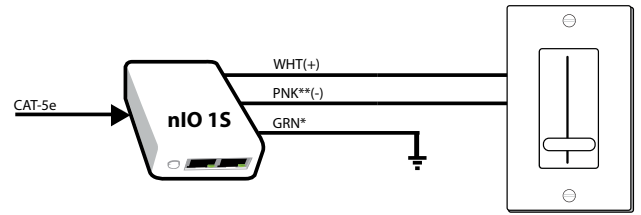
Power to a **nIO D** / **nIO 1S** device is provided by the CAT-5e connection to an nLight power pack/supply or other nLight device supplying bus power. If power is not present on the CAT-5e bus, the **nIO D**'s dimming output will release lights to highest level. T568B pin/pair assignment is recommended for all CAT-5e cables.

TYPICAL nIO 1S WIRING CONFIGURATIONS

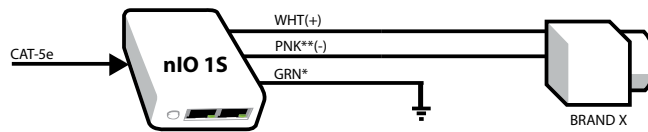
ON/OFF SWITCHES (TOGGLE OR MOMENTARY)



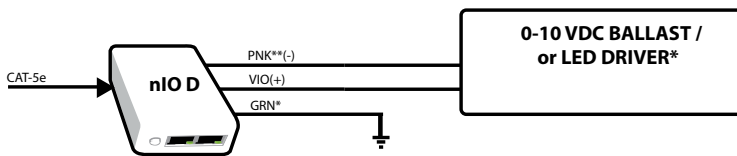
0-10 VDC WALL DIMMERS



0-10 VDC DIMMING PHOTOCELL



nIO D WIRING CONFIGURATION



*Note: A green wire is available for an optional connection to an approved ground. This wire is isolated from the class 2 circuitry of the sensor. Connection will provide improved network protection in case of accidental landing of line voltage to VIOLET or PINK dimming wires. It also provides network isolation from any high voltage leakage from a ballast or driver's 0-10V input wires. If an approved ground is not available the green wire should be capped.

**0-10V Dimming Common from luminaire may be pink or as otherwise indicated per section 410.69 of the 2020 NEC.

SPECIFICATIONS

| | | |
|---------------|----------------------------------|--|
| Electrical | Input Ratings | 15-24VDC, 3mA, Class 2 (nLight network power) |
| | Output Ratings | D Option: 20mA, 0-10VDC Dimming Sink Current 1S Option: 1mA Source Current |
| | Standards/ Ratings | Energy Management Equipment, UL916 (E167435) |
| Mechanical | Dimensions | Base Version: 2.54"H x 1.98"W x 1.00"D (65mm x 50mm x 25mm) KO Option: 3.38"H x 2.53"W x 1.83"D (86mm x 64mm x 47mm) - does not include 1/2" chase nipple |
| | Mounting | Base Version: Pre-drilled screw hole KO Option: 1/2" Knockout (7/8" hole) |
| | Color | White |
| | Connection Type | RJ-45 nLight Network Ports (2) Low-Voltage Leads |
| Environmental | Warrantied Operating Temperature | Standard: 32°F to 140°F (0°C to 60°C) LT option: -4°F to 140°F (-20°C to 60°C) |
| | Relative Humidity | Up to 90%, Non-Condensing |
| | Standards/ Ratings | RoHS, Plenum UL2043 |
| General | Standards/ Ratings | System Component to aid in compliance with Title 24, ASHRAE 90.1, IECC |

OVERVIEW

The nCM xx RJB family of nLight ceiling/surface mount occupancy sensors provide a range of networked sensor solutions for applications with finished ceilings (e.g. ceiling tiles, sheetrock, plaster). nCM xx RJB family sensors utilize 100% digital Passive Infrared (PIR) detection and are available with several lens options, providing flexibility for multiple mounting height and coverage pattern requirements. Dual technology occupancy detection can also be added as an option for applications where occupants are stationary for long periods of time. nCM xx RJB family sensors are also available with an optional auxiliary low voltage relay for simple integration with a BMS system or other building system.

nCM xx RJB family sensors are powered via the nLight network bus and typically communicate with one or more nLight enabled luminaires (e.g. Lithonia VTLED Series) or nLight relay/dimming packs to enable control of fixtures individually or in groups. These configurations work standalone and do not require a connection to a larger nLight network.

FEATURES

- 100% digital PIR detection
- Optional dimming photocell (ADCX option)
- Optional auxiliary low voltage relay (AR option) for dry contact output – relay only tracks occupancy by default, ignoring switch and photocell commands
- LED status indicator
- Adjustable settings (e.g. occupancy time delays, photocell set-points) via push-button or SensorView software application
- Broadcasts occupancy and photocell information over a local nLight channel
- Remotely upgradeable firmware

Buy American

BAA variants of this product are assembled in the USA and meet the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to www.acuitybrands.com/buy-american for additional information.

Warranty

Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.

Specifications subject to change without notice.



nCM xx RJB
nCM PDT xx RJB



nCM 9 RJB
nCM PDT 9 RJB



nCM 10 RJB
nCM PDT 10 RJB



nCM 6 RJB



This item is an A+ capable component, which has been designed and tested to provide out-of-the-box luminaire compatibility with simple commissioning, when included as part of an A+ Certified™ Solution.

To learn more about A+, visit www.acuitybrands.com/aplus.



ORDERING INFORMATION

| nCM xx RJB | | | Example: nCM PDT 9 ADCX RJB | | |
|--------------------|-------------------------------|--|-----------------------------|--|----------------------------------|
| Series / Detection | | Coverage Type | Options (See Below) | RJ45 Port Location | Buy America(n) ² |
| nCM | PIR Detection | 9 Small Motion 360° | | RJB Rear RJ45 (CAT5e patch cable & RJ45 splitter included) | blank Standard |
| nCM PDT | Dual Tech (PIR/ Microphonics) | 10 Large Motion 360° | | | BAA Buy America(n) Act Compliant |
| | | 6 High Mount 360° (not available with PDT version) | | | |

| nCM xx RJB Options | | | | | |
|---|--|---------------------------|---------------------------|------------------|-----------------------------|
| Photocell | | Auxiliary Relay | Preset Type ¹ | Time Delay | Temp/ Humidity |
| [blank] Standard (No photocell) | | [blank] None | [blank] Single Time Delay | [blank] Standard | [blank] Standard |
| ADCX Automatic Dimming Control (of remote dimming output) | | AR Low Voltage Aux. Relay | 2P Dual Time Delay | 15M 15 Minutes | LT Low Temp / High Humidity |
| | | | | 20M 20 Minutes | |
| | | | | 30M 30 Minutes | |

NOTES:

1. Not available with **AR** or **ADCX** options.
2. Not available with AR, 2P, Time Delay, or LT options

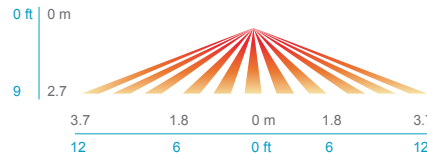
COVERAGE PATTERNS*

SMALL MOTION 360° (Model # nCM 9/nCM PDT 9¹)

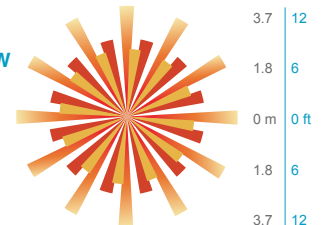


- Best choice for small motion (e.g. hand movements) detection
- 360° conical shaped pattern
- Provides 12 ft (3.66 m) radial coverage (~500 ft²) when mounted to standard 9 ft (2.74 m) ceiling
- 8 to 15 ft (2.44 to 4.57 m) mounting heights provide 10 to 20 ft (3.05 to 6.10 m) radial coverage

SIDE VIEW



TOP VIEW



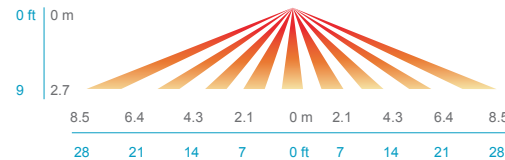
¹ Sensors with Microphonics™ provides overlapping detection of human activity over the complete PIR coverage area. Advanced filtering is also utilized to prevent non-occupant noises from keeping the lights on.

LARGE MOTION 360° (Model # nCM 10/nCM PDT 10¹)

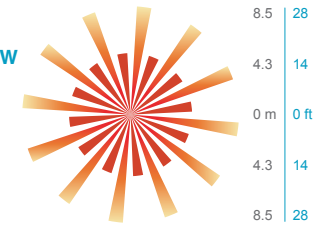


- Best choice for large motion detection (e.g. walking)
- 360° conical shaped pattern
- Provides ~24 ft (7.32 m) radial coverage (~2000 ft²) when mounted at 9 ft (2.74 m)
- 7 to 15 ft (2.13 to 4.57 m) mounting heights provide 16 to 36 ft (4.88 to 10.97 m) radial coverage
- Detection range improves when walking across beams compared to into beams

SIDE VIEW



TOP VIEW



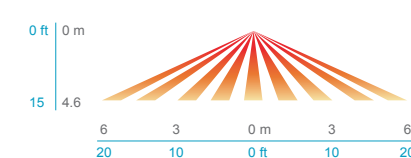
¹ Sensors with Microphonics™ provides overlapping detection of human activity over the complete PIR coverage area. Advanced filtering is also utilized to prevent non-occupant noises from keeping the lights on.

HIGH MOUNT 360° (Model # nCM 6)

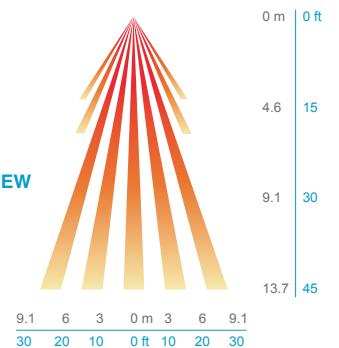


- Best choice for 15 to 45 ft (4.57 to 13.72 m) mounting heights
- 15 to 20 ft (4.57 to 6.10 m) radial coverage overlaps area lit by a typical high bay fixture
- Excellent detection of large motion (e.g. walking) up to 35 ft (10.76 m)
- Excellent detection of extra large motion (e.g. forklifts) up to a 45 ft (13.72 m)

LOW VIEW



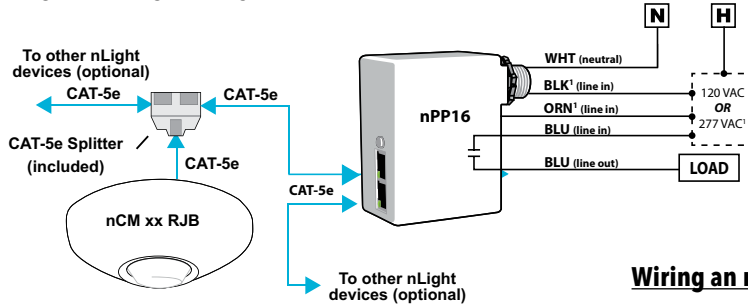
HIGH VIEW



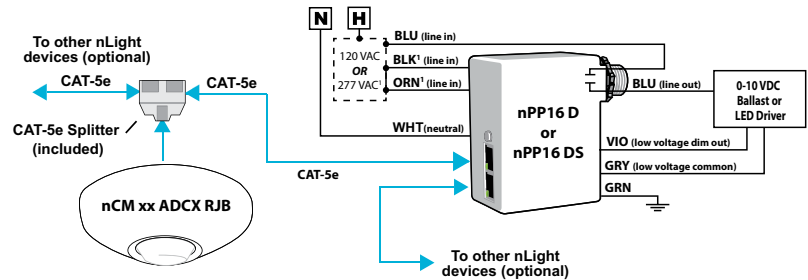
* Coverage pattern shown is derived from NEMA WD7 testing

TYPICAL APPLICATIONS

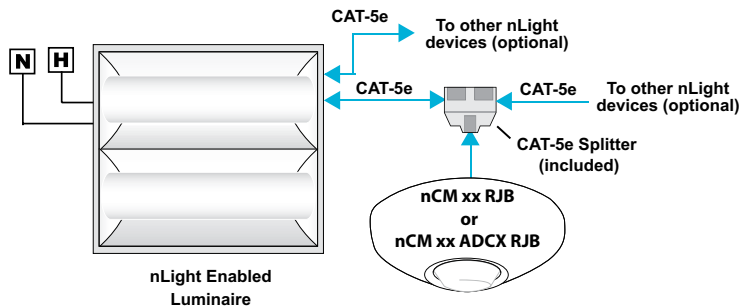
Wiring to an nLight Relay Pack



Wiring an nCM xx ADCX RJB to an nLight Dimming Pack



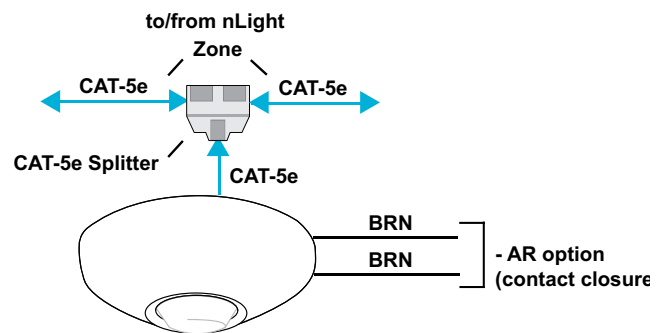
Wiring to an nLight Enabled Luminaire



TYPICAL APPLICATIONS

The following instructions are for mounting sensor directly to a ceiling tile or sheetrock surface. Sensor's mounting holes also align with standard round fixture or single gang handy box (screws not provided).

1. Using template included with unit, mark spots on ceiling tile/sheetrock for cable hole and mounting anchors/screws
2. Drill 1/2" hole through ceiling surface at location indicated on template
3. Insert provided anchors into ceiling surface at locations indicated on template
4. Remove provided RJ-45 splitter from sensor's attached CAT5e cable and then thread cable (and low voltage wires if **-AR** option included) through hole from underside
5. Mount sensor to anchors using two screws provided
6. Attach provided RJ45 splitter device (model **CAT5 Y**) above ceiling to cable from sensor (see diagram on right)
7. Interconnect CAT-5e cables to/from rest of nLight zone to RJ45 splitter
8. Once power is received via CAT-5e connection, all devices in zone will automatically begin functioning together according to each device's defaults
9. Install decorative sensor lid by rotating clockwise
10. Refer to included instruction card for default settings and directions on push-button programming.



SPECIFICATIONS

| | | |
|---------------|----------------------------------|---|
| Electrical | Input Ratings | 15-24VDC, 3mA, Class 2 (nLight network power) |
| | Output Ratings | 24 VAC/VDC, 1A - Resistive (AR option) |
| | Relay Type | Latching (AR option) |
| | Standards/ Ratings | Energy Management Equipment, UL916 (E167435) |
| Mechanical | Dimensions | 4.55"W x 1.55"D (116mm x 40mm) |
| | Mounting | Single-Gang or Octagonal Box, Surface Mount |
| | Color | White |
| | Finish | Matte |
| Environmental | Connection Type | RJ-45 nLight Network Ports (2 ports via included RJ-45 splitter) Low-Voltage Leads (AR option) |
| | Warrantied Operating Temperature | Standard: 14°F to 185°F (-10°C to 85°C) PDT option: 14°F to 140°F (-10°C to 60°C) LT option: -4°F to 185°F (-20°C to 85°C) PDT LT options: -4°F to 140°F (-20°C to 60°C) |
| | Relative Humidity | Up to 90%, Non-Condensing |
| | Standards/ Ratings | RoHS |
| General | Standards/ Ratings | System Component to aid in compliance with Title 24, ASHRAE 90.1, IECC |

OVERVIEW

The rCMSB family of nLight AIR-enabled wireless ceiling/surface mount occupancy and daylight sensors provide a range of sensor solutions for a wide variety of ceiling applications. The rCMSB sensor utilizes analog Passive Infrared (PIR) detection and are available with several lens options, providing flexibility for multiple mounting height and coverage pattern requirements. It also has an integrated photosensor, with automatic daylight harvesting/dimming control available during programming.

The rCMSB is battery powered for ease of installation where line power is not easily accessible and communicates with one or more nLight AIR-enabled fixtures or Power Packs to enable control of fixtures individually or in groups.

FEATURES

- Powered with three off-the-shelf lithium AA batteries and rated for 10 years of use, minimizing battery replacement.
- Analog PIR Detection and optional Passive Dual Technology (PDT) occupancy that adds Microphonics to look and listen for occupants in the space.
- A recessed mount option that takes the tools out of your hands, installing in a standard 3" hole and delivering the lowest profile of any independent occupancy sensor
- Integrated, dimming photosensor included – Photocell views down through sensor lens
- LED status indicator to indicate motion during operation and provide feedback during startup
- Adjustable settings (e.g. occupancy time delays, photocell set-points) via CLAIRITY™+ mobile app
- Batteries are included and preinstalled, allowing for a simple unbox and mount installation
- Communicates with nLight AIR devices via radio frequency (RF) in the 900MHz spectrum

Warranty

Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

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*nLight® AIR
rCMSB
Ceiling Mounted
Battery Powered
Smart Sensor*



ORDERING INFORMATION

| rCMSB | | | | | | | | | | Example: RCMSB 7 G2 | |
|--------------------|--|-----------|-----------------------------|------|---------------------|---------------|----------------|------------|----------------------------|---------------------|--|
| | | | | | | | | | | | |
| Series / Detection | | Detection | | Lens | | Mounting Type | | Generation | | | |
| RCMSB | nLight AIR occupancy and daylight sensor | [blank] | PIR Detection | 7 | Low Mount 360 | [blank] | Surface Mount | G2 | Generation 2 compatibility | | |
| | | PDT | Dual Tech PIR/ Microphonics | 45 | High Mount 360° | RECM | Recessed Mount | | | | |
| | | | | 45A | High Mount Aisleway | JBM | J-Box Mount | | | | |

Accessories

MASKKIT RCMSBACC J5 Masking Labels*

*Must order in quantities of 5

Notes:

1. PDT is only available with the 7 lens.

SPECIFICATIONS

| | | |
|---------------------------------------|---|--|
| Product Weight | 4.3 oz | Out of Box Settings |
| Color | Matte White | Daylighting setpoint: 5 fc |
| Enclosure Material | Polycarbonate/ABS | LED behavior: Enabled, responds to occupancy transitions |
| Max Humidity | 95% non-condensing | Occupancy Time Delay: 10 min* default |
| Mounting | Surface mountable to concrete, drywall, ceiling tile or metal. Recessed mountable in drywall or ceiling tile applications. | |
| Operating Temperature | -40°C to 60°C (Indoor Use Only) | *Note: shorter delay may affect battery life |
| Radio Frequency | Dual Radio: 900MHz & 2.4GHz | |
| RF Transmit Power | 900Mhz: up to 20 dBm 2.4GHz: up to 10.4 dBm | |
| Wireless Standard | 900MHz: IEEE 802.15.4-based 2.4GHz: Version 4.0+ of the Bluetooth specification | |
| Security Application Data Encryption: | AES-128 bit Mutual Entity Authentication Message Confidentiality Message Authentication and Replay Prevention Limited Anonymity | |
| Regulatory Compliance: | FCC ID: 2ADCB-RMODIT3, RoHS Compliant, cULus IC: 6715C-RMODIT3 IFETEL: RCPNLL20-2057 | |
| Masking Labels | Masking Labels are available as a 5 pack to mask off a portion of the lens coverage pattern for end-of-aisle applications. | |



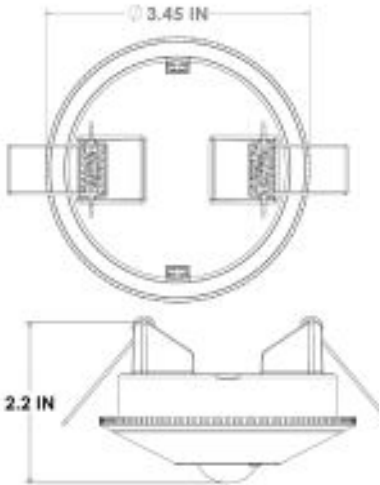
Masking Label

DIMENSIONS

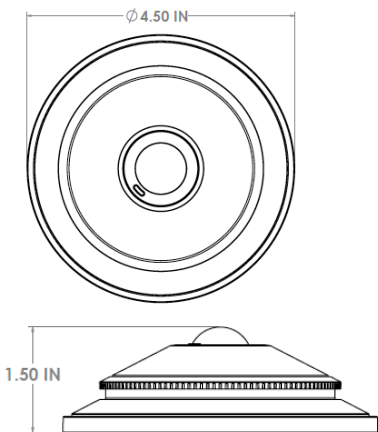
Surface Mount



Recessed Mount



J-Box Mount



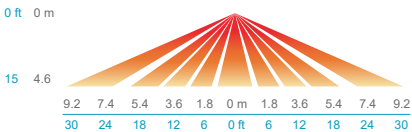
COVERAGE PATTERNS*

7 – LOW MOUNT 360°

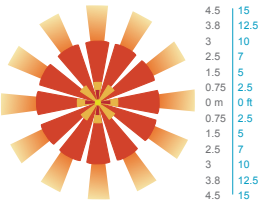


- Recommended for walking motion detection from mounting heights between 8 ft (2.44 m) and 20 ft (6.10 m)
- Initial detection of walking motion along sensor axis at distances of 2x the mounting height up to 15 ft (4.57 m) and 1.75x up to 20ft (6.10 m).
- Provides 12 ft (3.66 m) radial detection of small motion when mounted at 9 ft (2.74 m)

SIDE VIEW



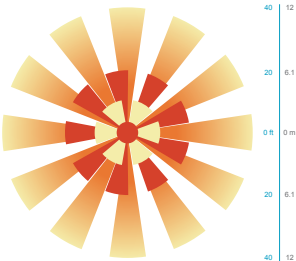
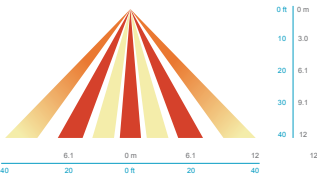
TOP VIEW



45 – HIGH MOUNT 360°



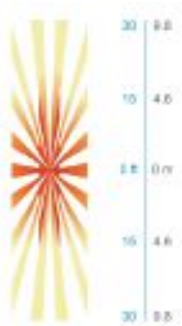
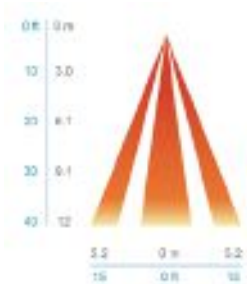
- Optimized full coverage pattern for 10 – 40 ft. (3.1 – 12 m)
- Reliable detection of large motion (e.g. pedestrian walking traffic) up to 30 ft. (9.1 m) mounting height
- Reliable detection of extra-large motion (e.g. forklift traffic) up to 40 ft. (12 m) mounting height



45A – HIGH MOUNT AISLEWAY



- Optimized bi directional coverage pattern for aiseways with 10 – 40 ft. (3.1 – 12 m) mounting heights
- 1.5x's mounting height equals approximate detection range
- Reliable detection of large motion (e.g. pedestrian walking traffic) up to 30 ft. (9.1 m) mounting height
- Reliable detection of extra-large motion (e.g. forklift traffic) up to 40 ft. (12 m) mounting height



* Coverage pattern shown is derived from NEMA WD7 testing

OVERVIEW

The rCMS family of nLight AIR-enabled wireless ceiling/surface mount occupancy sensors provide a range of sensor solutions for applications with finished ceilings (e.g. ceiling tiles, sheetrock, plaster). The rCMS family sensors utilize digital Passive Infrared (PIR) detection and are available with several lens options, providing flexibility for multiple mounting height and coverage pattern requirements. Dual technology occupancy detection can also be added as an option for applications where occupants are stationary for long periods of time. All sensors have integrated on/off photocells, with automatic daylight harvesting/dimming control standard. Additionally, the rCMS family sensors are also available with an optional auxiliary low voltage relay for simple integration with a BMS system or other building system.

The rCMS family sensors are powered by an nLight AIR Power Pack (rPP20) or by a 24V DC supply (PS150). rCMS family sensors typically communicate with one or more nLight AIR-enabled fixtures or Power Packs to enable control of fixtures individually or in groups.

FEATURES

- Digital PIR detection
- Integrated, dimming photocell standard – Photocell views down through sensor lens
 - Provides automatic dimming control between min and max trim levels
 - Works during occupied periods when applied with an occupancy behavior
- Optional auxiliary low voltage solid-state relay (AR option) for dry contact output
- LED status indicator
- Adjustable settings (e.g. occupancy time delays, photocell set-points) via **CLAIRITY™+** mobile app or SensorView software application
- Powered by 24V DC from rPP20 or nLight PS 150 power supply
- Standards-based nLight AIR 900 MHz

Warranty

Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

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nLight® AIR rCMS Ceiling Mounted Smart Sensor



rCMS 9



rCMS 10



rCMS 6



ORDERING INFORMATION

| rCMS | | | | | | | | | | Example: RCMS PDT 10 AR G2 | |
|--------------------|--|---------------------------|---------------------------------|---------------------|--|-----------------|-----------------------------------|----------------|------|----------------------------|----------------------------|
| Series / Detection | | Power Supply ¹ | | Occupancy Detection | | Lens (Required) | | Operating Mode | | Generation | |
| RCMS | nLight AIR occupancy and daylight sensor | [blank] | Power Supply ordered separately | [blank] | PIR Detection PDT ² Dual Tech PIR/ Microphonics | 10 | Large Motion/ Extended Range 360° | [BLANK] | None | G2 | Generation 2 compatibility |
| | | PS 150 | Standard 150 mA Power Supply | | | 9 | Small Motion/ Extended Range 360° | | | | |
| | | | | | | 6 | High Bay 360° Lens | | | | |

1. PS 150 or RPP20 24V required to power RCMS. Can also be ordered separately.
2. Must be ordered with 10 or 9.

SPECIFICATIONS

| | |
|---------------------------------------|--|
| Dimensions | 4.55" Dia. (11.56 cm) 1.55" Deep (3.94 cm) |
| Product Weight | 6 oz |
| Color | Matte White |
| Enclosure Material | Poly-Carbonate/ABS |
| Max Humidity | 5-95% non-condensing |
| Mounting | Ceiling Tile / Sheetrock Surface, 3.5" Octagon Box, Single Gang Handy box |
| Wires | 9"; (2) 20 AWG used for DC input; 9"; (2) 20AWG used for AR option only |
| Relay | Rating (AR option only) 100mA @ 24VAC/VDC (resistive only) |
| Peak Consumption | 650mW |
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -40°C to 85°C |
| Radio Frequency | Dual Radio: 900MHz & 2.4GHz |
| RF Transmit Power | 900Mhz: up to 20 dBm 2.4GHz: up to 10.4 dBm |
| Wireless Standard | 900MHz: IEEE 802.15.4-based 2.4GHz: Version 4.0+ of the Bluetooth specification |
| Security Application Data Encryption: | AES-128 bit Mutual Entity Authentication Message Confidentiality Message Authentication and Replay Prevention Limited Anonymity Complies with California Civil Code Title 1.81.26, Security of Connected Devices, approved under Senate Bill No. 327 (2018) |
| Regulatory Compliance Wireless: | FCC ID: 2ADCB-RMODIT3, cULus, ROHS Compliant IC: 6715C-RMODIT3 IFETEL: RCPNLLN20-2057 |

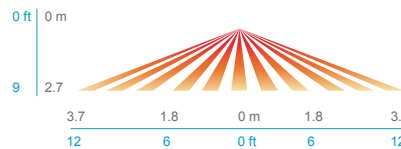
COVERAGE PATTERNS

SMALL MOTION 360°

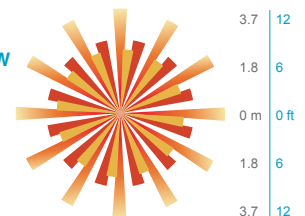


- Best choice for small motion (e.g. hand movements) detection
- 360° conical shaped pattern
- Provides 12 ft (3.66 m) radial coverage (~500 ft²) when mounted to standard 9 ft (2.74 m) ceiling
- 8 to 15 ft (2.44 to 4.57 m) mounting heights provide 10 to 20 ft (3.05 to 6.10 m) radial coverage

SIDE VIEW



TOP VIEW



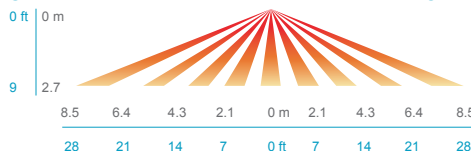
¹ Sensors with Microphonics™ provides overlapping detection of human activity over the complete PIR coverage area. Advanced filtering is also utilized to prevent non-occupant noises from keeping the lights on.

LARGE MOTION 360°

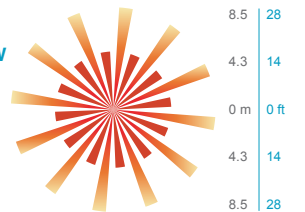


- Best choice for large motion detection (e.g. walking)
- 360° conical shaped pattern
- Provides ~24 ft (7.32 m) radial coverage (~2000 ft²) when mounted at 9 ft (2.74 m)
- 7 to 15 ft (2.13 to 4.57 m) mounting heights provide 16 to 36 ft (4.88 to 10.97 m) radial coverage
- Detection range improves when walking across beams compared to into beams

SIDE VIEW



TOP VIEW



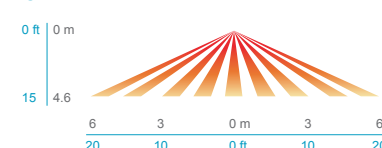
¹ Sensors with Microphonics™ provides overlapping detection of human activity over the complete PIR coverage area. Advanced filtering is also utilized to prevent non-occupant noises from keeping the lights on.

HIGH MOUNT 360°

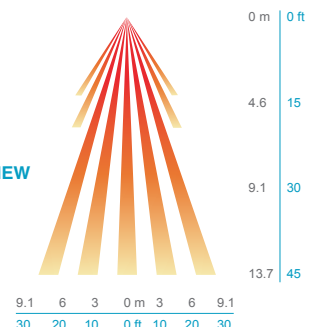


- Best choice for 15 to 45 ft (4.57 to 13.72 m) mounting heights
- 15 to 20 ft (4.57 to 6.10 m) radial coverage overlaps area lit by a typical high bay fixture
- Excellent detection of large motion (e.g. walking) up to 35 ft (10.76 m)
- Excellent detection of extra large motion (e.g. forklifts) up to a 45 ft (13.72 m)

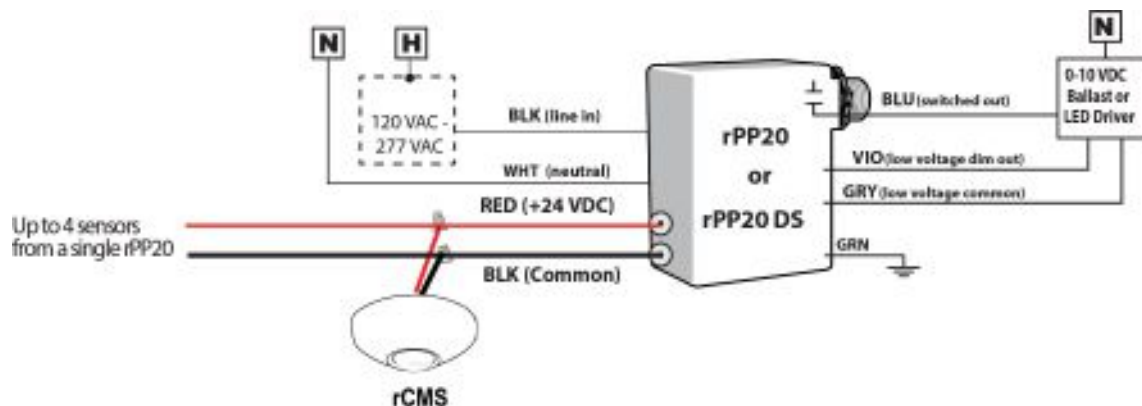
LOW VIEW



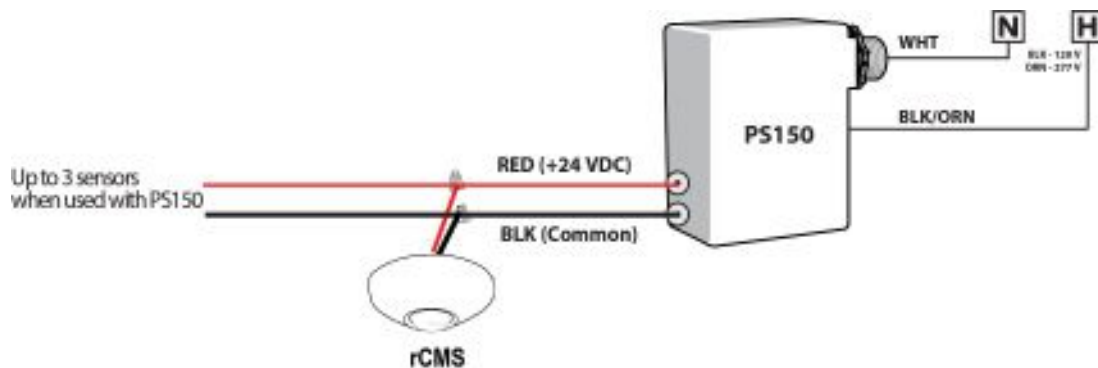
HIGH VIEW



Wiring an rCMS to an nLight AIR relay Power Pack (rPP20)



Wiring to an nLight PS 150 Power Supply



OVERVIEW

The ARPA APS is an ambient light sensing device that connects to a nLight™ ARP Relay Panels as an analog input. The photosensor provides control of lighting in response to ambient light conditions.

FEATURES

- Indoor and outdoor applications
- Color compensated to provide accurate readings
- Easy mounting
- Class-2 wiring
- Linear response curve
- Daylight-compensating or daylight-tracking operation
- Switch or dim loads

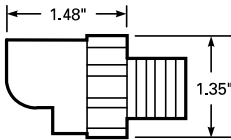
Warranty

5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/support/customer-support/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
Specifications subject to change without notice.



ARPA APS
Analog Photosensor



ORDERING INFORMATION

| Example: ARPA APS OL | | |
|-----------------------|---------------------------|--------------------------|
| Series | Photosensor | Mounting Type |
| ARPA ARP Accessory | APS Analog photosensor | OL Outdoor (0-100 FC) |

SPECIFICATIONS

MECHANICAL

- Outdoor Sensor – Integral 1/2" ID threaded fitting mounts to standard 1/2" conduit opening; locate on roof or other exposed structure that is not shaded or exposed to night time illumination.

CONSTRUCTION

- Material – Cycloact™ UV stabilized plastic.
- Color – White.
- Type – Blue enabled photo-diode.

ENVIRONMENTAL

- Operating Temperature: -40°C - 60°C (-40°F - 140°F).

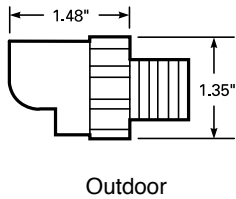
FUNCTIONAL

- Response – Linear to ambient light level over entire range. Single set point with deadband to prevent cycling or linked to outputs for multi-step or variable response.
- Field of View:
- Outdoor Sensor – Omni-directional with hooded aperture to shield sensor from direct light, epoxy encapsulated to seal out moisture.

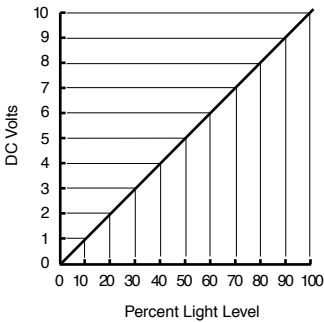
ELECTRICAL

- Accuracy – +/- 1% at 70°F (21°C)
- Input Voltage – 24 VDC, Class 2, 3 conductor #18 AWG.
- Output Range: (see chart below)
Outdoor – 0-100 Fc = 0-10 VDC
Outdoor – 0-1000 Fc = 0-10 VDC

DIMENSIONS



OUTPUT RANGE CHART



WIRING DIAGRAM FOR NLIGHT ARP



OVERVIEW

The nLight Relay Panel family delivers cost-effective 0-10V dimming and switching for your building design needs. The panel communicates with an nLight network and supports up to 128 digital devices per nLight control zone. Offering a full range of panel sizes, the nLight Relay Panel is ideal for spaces that require full circuit control, with the optional flexibility of configuring single pole relays into a two or three-pole relays in the field.

Also included on each panel is a programmable input that can be connected to a photocell, for example, and a separate dry contact "alarm" input that overrides all relays until the contact is released.

nLIGHT OPERATION

The nLight Relay Panel is nLight-enabled, meaning it has the ability to communicate over an nLight network. When daisy-chain wired with other nLight-enabled sensors, power packs, or WallPods™ using CAT-5e cabling, an nLight control zone is created. Connecting the panel to an nLight network backbone and nLight® ECLYPSE™ system controller enables time-based control, remote programming and monitoring from SensorView™ software, and BMS integration capabilities.

The digital time clock (DTC) option allows for on-screen configuration and control of connected devices, while introducing scheduling to standalone panel. When connected to nLight backbone and nLight ECLYPSE system controllers the panels relinquish all time clock functionality.

FEATURES

- Communicates with an nLight network
- Up to 128 digital devices per nLight control zone - each nLight Relay Panel utilizes 9 device addresses per 8 relays/dimming outputs:
 - 1 address per relay/dimming output
 - 1 address for the programmable input
- All relays include local manual override lever
- All relays are individually programmable
- One 0-10V dimming output per relay
- Create and control up to 32 schedules – Normal & Holiday (DTC version)
- Astronomical Timeclock feature enables +/- Sunset or Sunrise settings and programmable Latitude/Longitude (DTC version)
- Programmable "dry contact/pull high" input (with provided 24VDC source)
 - Input is programmable to preset/profile scene, photosensor signal, wallpod toggle (maintain or momentary)
- Contact input for "alarm" override (requires maintain contact signal)
- All relays communicate with switch/occupancy/photocell channel 1 out of the box (programmable through SensorView)
- FCR type relays capable of being field configured to 2 and 3-pole relay configurations with included hardware:
 - 4/8 Relay Panel: 2x2-Pole and 1x3-Pole Hardware Included
 - 12/16 Relay Panel: 4x2-Pole and 2x3-Pole Hardware Included
 - 24/32/48 Relay Panel: 6x2-Pole and 3x3-Pole Hardware Included
- Supplies auxiliary 24VDC power and nLight network bus power (40mA per RJ45 port)
- Removable back plate for ease of installation
- UL 924 panel listing for Switching Emergency Circuits
- Optional field installed voltage barrier(s) for normal/emergency use, or mixed voltage use
- Remotely Configurable/Upgradeable

Buy American

This product is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to www.acuitybrands.com/resources/buy-american for additional information.

Warranty

Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.



Relay Panel



Buy American



ORDERING INFORMATION

| nLight RELAY PANEL | | | | Example: ARP INTENC08 NLT 8FCR MVOLT SC SM | | | |
|--------------------|--------------------|--------------------|-----------------------|--|------------------------------|--------------------|------------------------------|
| Panel Size | | Relay Quantity | | | | | |
| ARP INTENC08 NLT | 8-Relay Enclosure | 4SPR ¹ | 4-Single Pole Relays | 32SPR ³ | 32-Single Pole Relays | 16FCR ² | 16-Field Configurable Relays |
| ARP INTENC16 NLT | 16-Relay Enclosure | 8SPR ¹ | 8-Single Pole Relays | 48SPR ⁴ | 48-Single Pole Relays | 24FCR ³ | 24-Field Configurable Relays |
| ARP INTENC32 NLT | 32-Relay Enclosure | 12SPR ² | 12-Single Pole Relays | 4FCR ¹ | 4-Field Configurable Relays | 32FCR ³ | 32-Field Configurable Relays |
| ARP INTENC48 NLT | 48-Relay Enclosure | 16SPR ² | 16-Single Pole Relays | 8FCR ¹ | 8-Field Configurable Relays | 48FCR ⁴ | 48-Field Configurable Relays |
| | | 24SPR ³ | 24-Single Pole Relays | 12FCR ² | 12-Field Configurable Relays | | |

| Operating Voltage | | Voltage Barrier | | Door Type | | Mounting | | Clock Option | |
|-------------------|-----------------|------------------|--------------------|------------------|---------------|-----------------|---------------|--------------|--------------------|
| MVOLT | 120-277VAC | [blank] | No barriers | SC | Screw Cover | SM ⁷ | Surface Mount | [blank] | No Clock |
| CNDV ⁵ | 120-277, 347VAC | 1VB | 1 Voltage Barrier | HLK ⁷ | Hinge Locking | FM | Flush Mount | DTC | Digital Time Clock |
| | | 2VB | 2 Voltage Barriers | | | | | | |
| | | 3VB ⁶ | 3 Voltage Barriers | | | | | | |
| | | 4VB ⁶ | 4 Voltage Barriers | | | | | | |

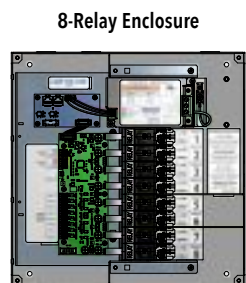
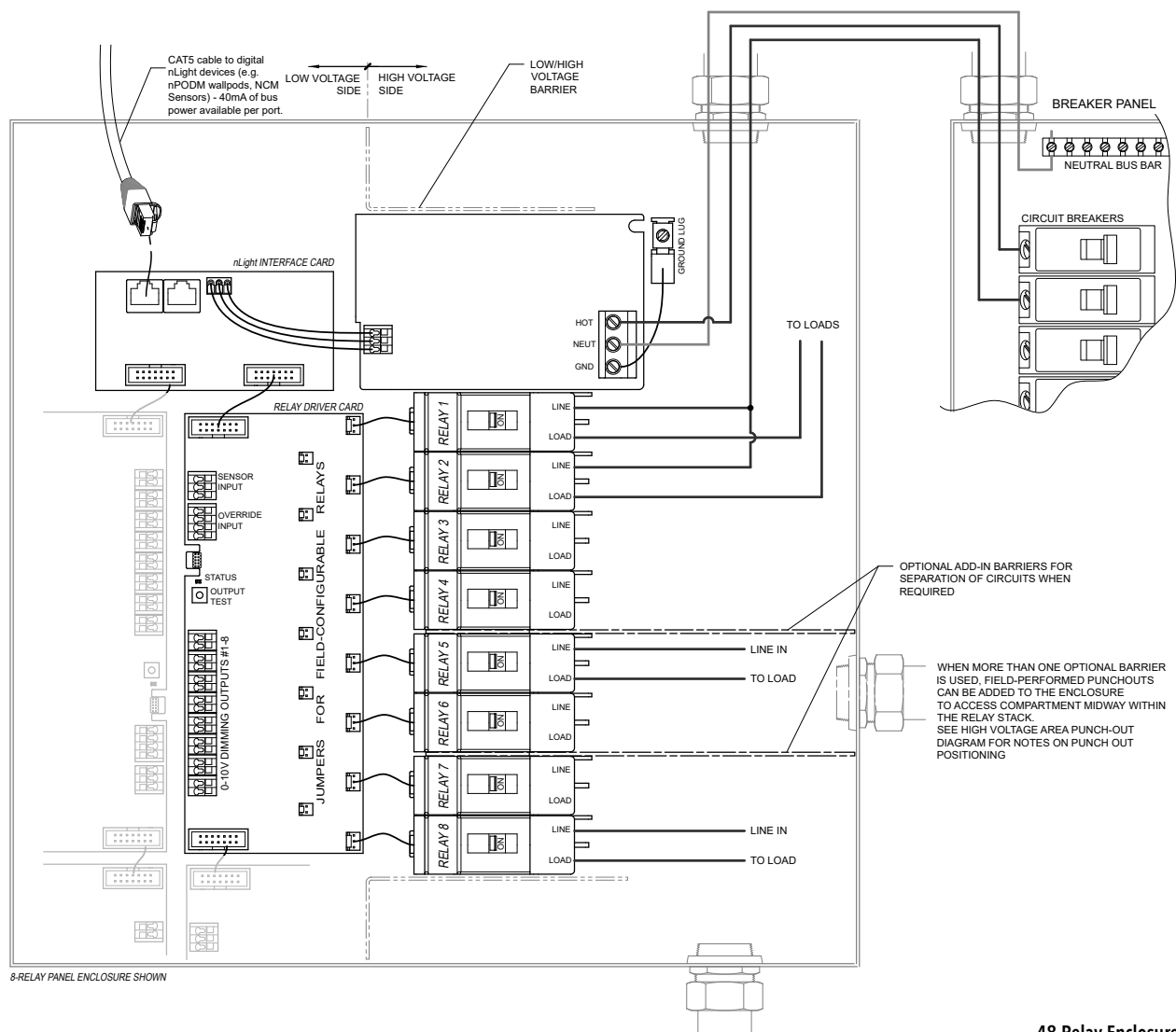
NOTE: If desired, panel enclosure and interior components can be ordered separately (typically for panel enclosure rough-in prior to final wiring and system programming). Contact your Acuity representative for ordering tree information.

1. Only available in 8-Relay Enclosure.
2. Only available in 16-Relay Enclosure.
3. Only available in 32-Relay Enclosure.
4. Only available in 48-Relay Enclosure.
5. Only available with xFCR Relay Option.
6. Only available in 32 or 48-Relay Enclosure Options.
7. 32/48 Enclosures only available in hinge locking surface mount.

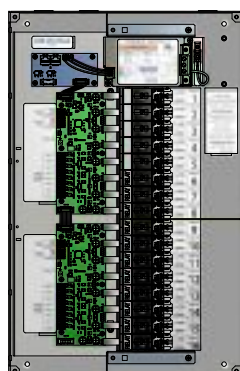
| Photosensor Accessories: Order as separate catalog number. | | |
|--|--|---|
| Series | Description | Recommended Application |
| ARPA PC | Simple switching (at ~1-3fc) with mechanically adjustable slide | Outdoor dusk to dawn, On/Off only |
| ARPA APS OL | Analog sensor (0-100FC) with switching/dimming thresholds remotely adjustable (via SensorView) | Outdoor dusk to dawn lighting, On/Off or On/Off/Dimming (where necessary) |

| Additional Accessories: Order as separate catalog number. | |
|---|--|
| Series | Description |
| ARP FCR CONFIG HARDWARE BAG | Extra set of hardware to create 2 and 3-pole relays in the field (2x 2-pole relays, 1x 3-pole relay) |
| ARPA FCR40 | Replacement FCR40 Relay |
| ARP BARRIER REPLACEMENT KIT | Additional voltage barrier for 4/8/12/16 relay panels |
| ARP32-48 VOLTAGE BARRIER | Additional voltage barrier for 24/32/48 relay panels |

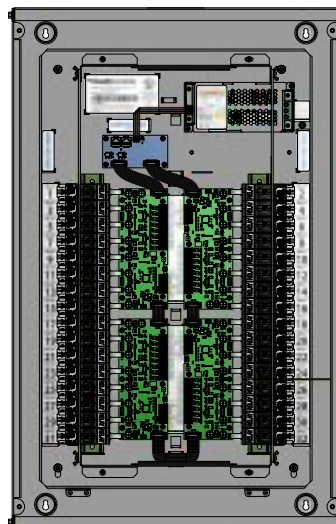
WIRING - SINGLE-POLE



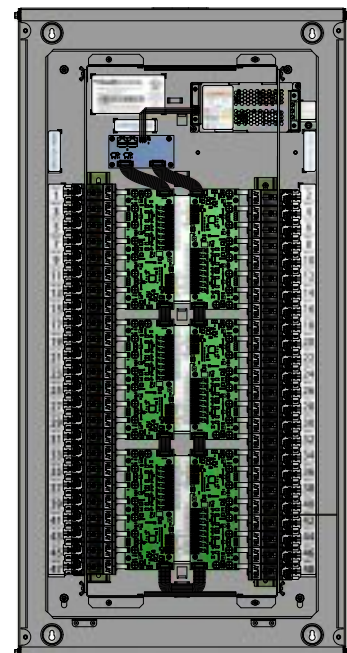
8-Relay Enclosure



16-Relay Enclosure



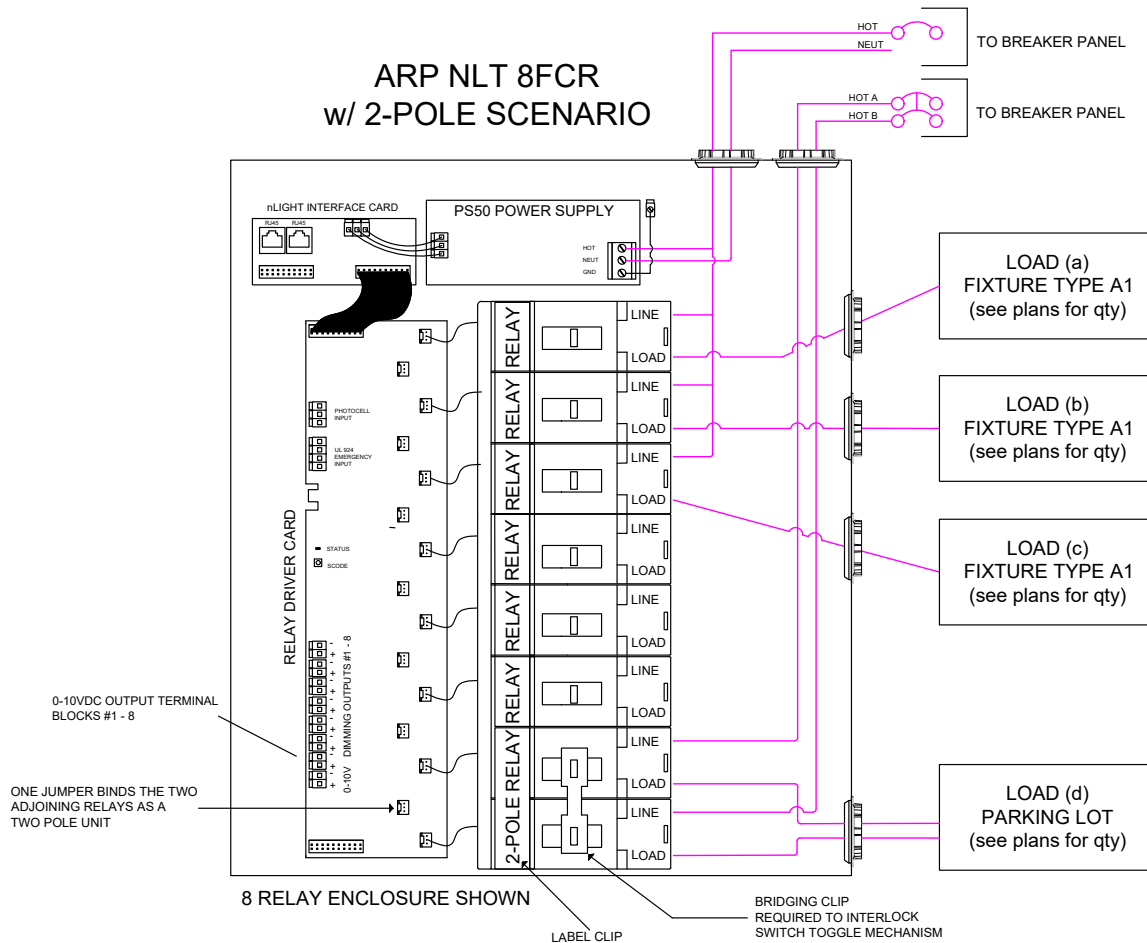
32-Relay Enclosure



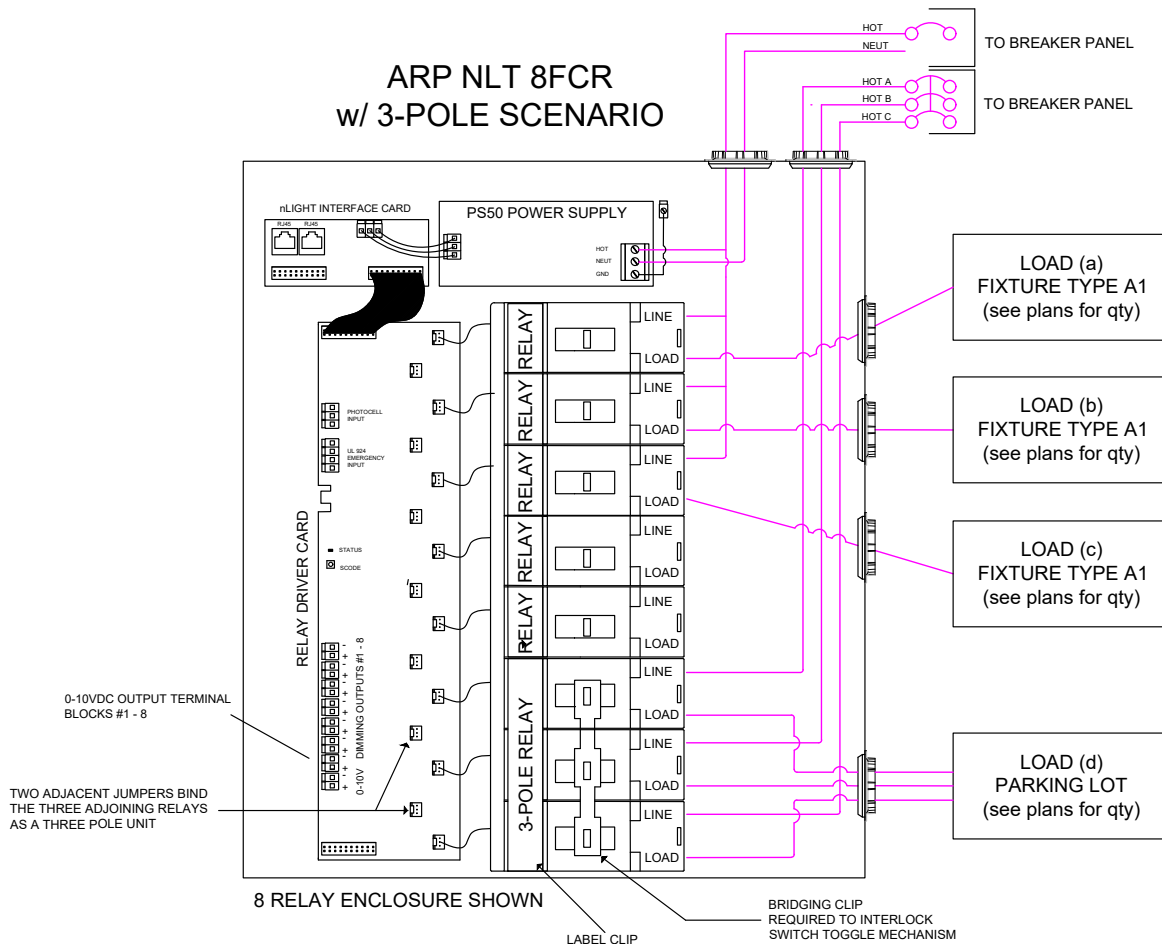
48-Relay Enclosure

Dead-Front removed
Shown with optional Circuit Separation Barrier

ARP NLT 8FCR w/ 2-POLE SCENARIO



ARP NLT 8FCR w/ 3-POLE SCENARIO



SPECIFICATIONS

ENCLOSURE DIMENSIONS

Note: Enclosure is NEMA 1 rated

8-Relay Enclosure

- BACKBOX ONLY: 14.25"H x 14.25"W x 4.00"D
- SURFACE MOUNT SCREW COVER (standard offering): 14.41"H x 14.41"W x 4.05"D
- FLUSH MOUNT SCREW COVER: 15.65"H x 15.65"W x 4.05"D (IN-WALL DEPTH: 4.0")

16 Relay Enclosure

- BACKBOX ONLY: 22.25"H x 14.25"W x 4.00"D
- SURFACE MOUNT SCREW COVER (standard offering): 22.45"H x 14.45"W x 4.06"D
- FLUSH MOUNT SCREW COVER: 23.65"H x 15.65"W x 4.06"D (IN-WALL DEPTH: 4.0")

32 Relay Enclosure

- BACKBOX ONLY: 32.10"H x 20.13"W x 6.00"D
- SURFACE MOUNT HINGED DOOR w/ KEYLOCK: 32.10"H x 20.13"W x 6.68"D

48 Relay Enclosure

- BACKBOX ONLY: 40.10"H x 20.13"W x 6.00"D
- SURFACE MOUNT HINGED DOOR w/ KEYLOCK: 40.10"H x 20.13"W x 6.68"D

Patent

- 10,129,950
- 9,691,578
- 9,368,306

RELAYS

"FCR" Type Relays - Field Configurable for 2-Pole and 3-Pole Relays

- Magnetic/Standard Ballast:
 - 40A @ 120-347VAC (Single-pole)
 - 40A @ 480VAC (Multi-pole)
- Electronic Ballast:
 - 16A @ 120-347VAC
- Tungsten:
 - 20A @ 120-277VAC
- Horsepower Ratings:
 - 2HP @ 120VAC
 - 3HP @ 240-277VAC
- DC:
 - 20A @ 48VDC
- SCCR:
 - 65kA @ 277/480VAC with: Screw Cover (SC) option for 8 & 16 relay enclosure
Hinge Locking (HLK) option for 32 & 48 relay enclosure
 - 14kA @ 277/480VAC with: Hinge Locking (HLK) option for 8 & 16 relay enclosure

"SPR" Type Relays

- Magnetic/Standard Ballast:
 - 20A @ 120-277VAC
- Electronic Ballast:
 - 16A @ 120-277VAC
- Tungsten:
 - 5000W @ 250VAC
- Horsepower Ratings:
 - 2HP @ 120VAC
- DC:
 - 20A @ 48VDC
- SCCR:
 - 5kA @ 277VAC

NLIGHT ADDRESSES PER PANEL

- (9) ARP04/08
 - (8) Relays/Dimming Outputs
 - (1) Programmable Input
- (18) ARP12/16
 - (16) Relays/Dimming Outputs
 - (2) Programmable Inputs
- (36) ARP24/32
 - (32) Relays/Dimming Outputs
 - (4) Programmable Inputs
- (54) ARP48
 - (48) Relays/Dimming Outputs
 - (6) Programmable Inputs

INPUTS (1 PER 8 RELAYS)

- (1) Programmable Input for contact closure or photosensor signal (see photosensor accessories above)
- (1) Override input (requires maintained signal)
- 24VDC/200mA auxiliary power available (per 8 relays)
- Connectors accept 16 to 24 AWG wire

OUTPUTS

- 0-10V Capable of Class 1 or Class 2 Wiring
- 100mA Sink Per Dimming Output
- Note:
 - Low trim default 1V, adjustable down to 0.7V
 - High trim default 10V, 10V max
 - Off mode: < 0.7V
- Connectors accept 16 to 24 AWG wire

POWER SUPPLY INPUTS

- 120-277VAC
- 347VAC Option
- 50/60 Hz
- Max 0.5 Amps for 8/16 relay enclosure
- Max 1.0 Amp for 32/48 relay enclosure

PROGRAMMING

- Via SensorView Software

ENVIRONMENT

- Ambient, 8 & 16 relay enclosure: 32-122F (0-50C)
- Ambient, 32 & 48 relay enclosure: 32-113F (0-45C)
- Relative Humidity: 90% non-condensing

STANDARDS

- UL and cUL 916 listed
- UL 924 listed (for emergency circuit use)
- UL 2043 (Plenum) Rated for Surface Mount Screw cover "SC SM" option (8 & 16 relay enclosure only)

BUS CONNECTOR

- (2) RJ45 connectors
- 40mA Bus Power per RJ45 (80mA total)

OVERVIEW

The nLight nPP20 PL power pack extends the power pack family, delivering robust system performance and design versatility for commercial and industrial control applications. The nPP20 PL is capable of switching loads up to 20 Amps for general purpose receptacle load via an internal latching relay designed with robust protection. This power pack also has two available options – the base unit powers off of line voltage, but does not provide nLight bus power. An option is available for a unit that provides bus power – this option (BP) provides up to 40mA from each of its two RJ-45 ports by transforming Class 1 line voltage (120 VAC) to Class 2 low voltage (15 VDC). This power is typically utilized by other nLight devices within the power pack's local control zone; however, remaining power is also made available over the network for Bridges and devices in other zones to utilize. Simply add this device into an nLight control zone with an occupancy sensor and the unit will automatically switch off when the room becomes vacant. Local manual switch and photocell control of receptacles is not typically required, therefore it is disabled by default.

The nPP20 PL's two RJ-45 connectors make control wiring with standard CAT5e cabling easy and clean. For simplifying installation, the nPP20 PL is designed with an elongated chase nipple that allows them to be attached directly through a 1/2" knockout into a junction box.

FEATURES

- Communicates w/ nLight Network
- Self-Contained Relay Switches Line Voltage Load
- BP Option Supplies 40mA of Bus Power / RJ-45 port
- Remotely Configurable/Upgradeable
- Push-Button Programmable
- Configurable Relay Logic
- Extended Chase Nipple

Buy American

BAA variants of this product are assembled in the USA and meet the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to www.acuitybrands.com/buy-american for additional information.

Warranty

Five-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.



This item is an A+ capable component, which has been designed and tested to provide out-of-the-box luminaire compatibility with simple commissioning, when included as part of an A+ Certified™ Solution. To learn more about A+, visit www.acuitybrands.com/aplus.



nPP20 PL
Plug Load Control Power Pack



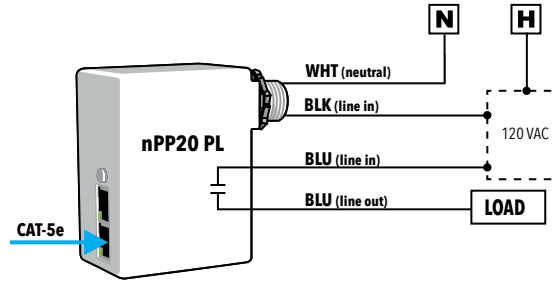
ORDERING INFORMATION

| nPP20 PL | | | Example: nPP20 PL BP |
|--|--|---------------------------------|--|
| Series | Options | Temp / Humidity | Buy America(n) ¹ |
| nPP20 PL Plug Load Control Power Pack | [blank] Self-powers only BP Provides nLight bus power | [blank] Standard LT Low Temp | [blank] Standard BAA Buy America(n) Act Compliant |

Notes:
1. Not available with LT

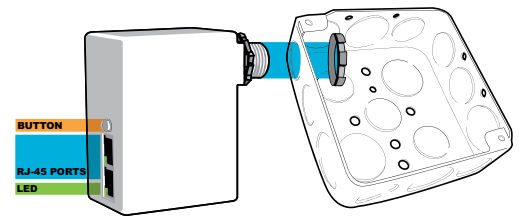
WIRING (DO NOT WIRE HOT)

T568B pin/pair assignment is recommended for all CAT-5e cables. For Supply Connections, use 14 AWG/90°C, 12 AWG/75°C or larger.



GENERAL INSTALLATION INSTRUCTIONS

- Mount through a 1/2" knockout in any junction box or luminaire. Secure with lock nut.
- Following above wiring diagram, connect wires to line voltage feed(s), neutral(s), and load.
- Interconnect unit (via RJ-45 ports) with other nLight devices in lighting zone using CAT-5e cables.
- Test all wiring for shorts prior to powering up the unit from the circuit breaker, and ensure that there are no loose or exposed wires that could short to other wires or components. Once wiring is confirmed, power up the unit from the circuit breaker.
- Once power is received via CAT-5e connection, all devices in zone will automatically begin functioning together according to each device's defaults.



SPECIFICATIONS

| | | |
|---------------|----------------------------------|---|
| Electrical | Input Ratings | 120VAC, 50/60 Hz |
| | Output Ratings | 120VAC, 50/60 Hz, 20A - General Purpose |
| | Relay Type | Latching |
| | Low Voltage Output Ratings | Self-powering, does not supply nLight bus voltage (Base version) 15VDC, 40mA per RJ-45 Port (80mA total) (BP Option) |
| | Standards/ Ratings | Energy Management Equipment, UL916 (E167435) Emergency Power Equipment, UL924 (E342232) |
| Mechanical | Dimensions | 3.38"H x 2.53"W x 1.83"D (86mm x 64mm x 47mm) - does not include 1/2" chase nipple |
| | Mounting | 1/2" Knockout (7/8" hole) |
| | Color | Blue |
| | Connection Type | RJ-45 nLight Network Ports (2) Line Voltage Leads |
| Environmental | Warrantied Operating Temperature | 14°F to 122°F (-10°C to 50°C) 14°F to 113°F (-10°C to 45°C) if enclosed within a junction box |
| | Relative Humidity | Up to 90%, Non-Condensing |
| | Standards/ Ratings | RoHS, Plenum UL2043 |
| General | Standards/ Ratings | System Component to aid in compliance with Title 24, ASHRAE 90.1, IECC |

OVERVIEW

nLight AIR rPP power packs are designed to offer flexible control for commercial and industrial lighting applications. The rPP consists of a relay, 0-10V dimming control, and a low voltage power supply output to power and wireless sensors. The rPP is capable of switching loads up to 20 A via a latching relay designed with robust inrush protection. Select power packs provide +24VDC low voltage output to power up to 4 nLight AIR mounted occupancy sensors and photocells. The nLight AIR rPP is designed for use as part of an nLight AIR group of devices or with the nLight ECLYPSE™.

POWER PACK FEATURES

- On/Off and dimming control of a luminaire or group of luminaires
- 24VDC output to power up to 4 nLight AIR rCMS low voltage sensors or other low voltage devices
- Suitable for plug load control
- UL 924 listed options for simplified lighting control on emergency lighting circuits
- Power Monitoring with Current Measurement +/- 3% accuracy

INSTALLATION FEATURES

- Wireless communication enables simple retrofits - no communication wires to pull between devices
- Chase nipple or side output dimming options
- UL 2043 listed for plenum applications
- An optional external antenna (CP option) for meeting code specific requirements or IP-rated applications
- Simple app-based configuration of space behaviors

ADVANCED WIRELESS FEATURES

- Devices intercommunicate to provide grouped-response to motion and on/off and dimming response to daylight conditions when wirelessly connected to a motion or daylight sensor, or on/off/dimming when connected to a wireless switch
- Fully compatible with other nLight AIR devices on the site
- Easy to integrate with the nLight ECLYPSE, which provides site-wide lighting control through nLight's SensorView software and provides optional BMS integration
- Comprehensive wireless security

Warranty

Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

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DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.



nLight® AIR rPP20 Power/Relay Pack



ORDERING INFORMATION

| rPP20 | | | | | | | | | | Example: rPP20 D 24V EFP G2 | | | | | | | | | |
|--------|-----------------------------|--------------------------------|--|--|--------|--|--|----------------------|---|-----------------------------|-----|---------------------------|--|--|--|--|--|--|--|
| | | | | | | | | | | | | | | | | | | | |
| Series | | Dimming and Low Voltage Output | | | | | | Emergency | | | | Fault Protection | | | | | | | |
| RPP20 | nLight AIR Power/Relay Pack | [blank] | None | | DS | 0-10VDC dimming output (via side leads), no 24V output terminals | | [blank] ¹ | None | | EFP | External Fault Protection | | | | | | | |
| | | 24V | No dimming, 24V Output Terminals | | | ER | UL924 Emergency Operation, via power sense leads | | | | | | | | | | | | |
| | | D | 0-10VDC Dimming output (via chase nipple), no 24V Output Terminals | | DS 24V | 0-10VDC Dimming output (via side leads), 24V Output Terminals | | EM ² | UL924 Emergency Operation, via separate normal power sensing device | | | | | | | | | | |
| | | D 24V | 0-10VDC dimming output (via chase nipple), 24V output terminals | | | | | | | | | | | | | | | | |

| Territory Compliance | | Voltage | | Power Monitoring | | Generation | |
|----------------------|----------------|----------------------|----------|------------------|--------------------|------------|----------------------------|
| [blank] | None | [blank] ⁴ | 120-277V | [blank] | None | G2 | Generation 2 compatibility |
| CP ³ | Chicago Plenum | UVOLT ⁴ | 120-480V | IM | Current Monitoring | | |

| ACCESSORIES | |
|--------------|------------------|
| NPP FUSE J10 | Replacement Fuse |

Notes

1. Can provide normal power sensing information to nLight AIR devices with EM option. See the UL 924 Response section for more information.
2. EM option requires an nLight AIR device connected to normal power for wireless normal power detection. See the UL 924 Response section for more information.
3. Not available with UVOLT model.
4. All phase-to-phase applications, including 208VAC and 480VAC, require factory installation.

SPECIFICATIONS

Size: 3.50" x 3.52" x 1.82" (120-277V model)
4.725" x 4.80" x 1.865" (UVOLT model)

Weight: 6 oz

Mounting: 1/2" Knockout

Color: White (standard), Red (ER & EM)

Humidity: 5 to 95% non-condensing

Location: Damp Location Rating

Wires: Line and load 12 AWG stranded
Neutral, ground, and power sense (ER version) 18 AWG stranded
0-10V, 20 AWG stranded

Operating Voltage: 120-277VAC, 120-480VAC (UVOLT)

Relay type: Latching

Frequency: 50/60Hz

Current Monitoring: MVOLT versions include automatic voltage detection for power calculation. HVOLT versions require user input of voltage via SensorView to calculate power
Minimum Current required to ensure +/- 3% Accuracy
MVOLT - 425mA
UVOLT - 625mA

DC Output Terminals: Push-in Terminals, solid or tinned 16-20AWG

DC Output Voltage/Current: 24 VDC, 100 mA max output

0-10V Dimming: Sinks 150mA; 0-10VDC dimmable ballasts or LED drivers;

Radio Frequencies: 900 MHz up to +20dBm, 2.4 GHz up to +10 dBm

Wireless Standard: 900 MHz: IEEE 802.15.4-based; 2.4 GHz: Version 4.0+ of the Bluetooth specification

Security: Application Data Encryption AES-128 bit, Mutual Entity Authentication, Message Confidentiality, Message Authentication and Replay Prevention, Limited Anonymity
Complies with California Civil Code Title 1.81.26, Security of Connected Devices, approved under Senate Bill No. 327 (2018)

Regulatory Compliance: FCC ID: 2ADCB-RMODIT3
IC: 6715C-RMODIT3
IFETEL: RCPNLL20-2057
cULus
RoHS

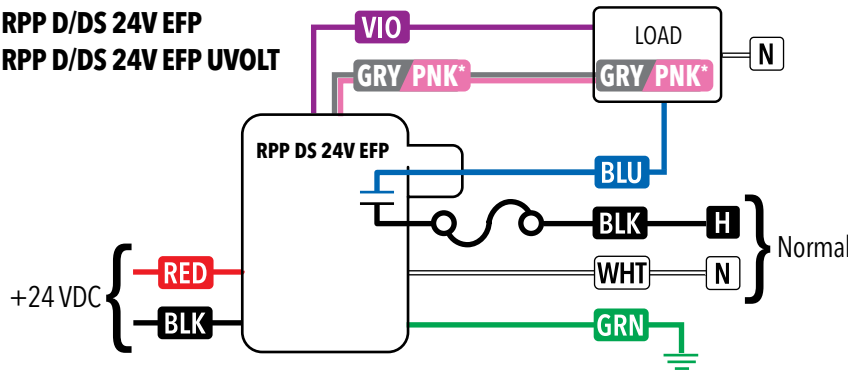
Temperature and Load Ratings

| Model | rPP20 (-10 to 50 C) | | rPP20 (-10 to 60 C) | | rPP20 UVOLT (-10 to 70C) | | | |
|--------------------|---------------------|---------|---------------------|---------|--------------------------|---------|---------|---------|
| Voltage | 120 VAC | 277 VAC | 120 VAC | 277 VAC | 120 VAC | 277 VAC | 347 VAC | 480 VAC |
| General Purpose | 20 A | 20 A | 5 A | 5 A | 20 A | 20 A | 20 A | 5 A |
| Tungsten | 20 A | 20 A | 5 A | 5 A | 20 A | 20 A | 20 A | 5 A |
| Standard Ballast | 20 A | 20 A | 5 A | 5 A | 20 A | 20 A | 20 A | 5 A |
| Electronic Ballast | 16 A | 16 A | 5 A | 5 A | 16 A | 16 A | 16 A | 5 A |
| Motor | 1.5 HP | 1.5 HP | 1.5 HP | 1.5 HP | 1.5 HP | 1.5 HP | 3/4 HP | 1/2 HP |

WIRING (Do not wire hot)

RPP D/DS 24V EFP

RPP D/DS 24V EFP UVOLT



Legend

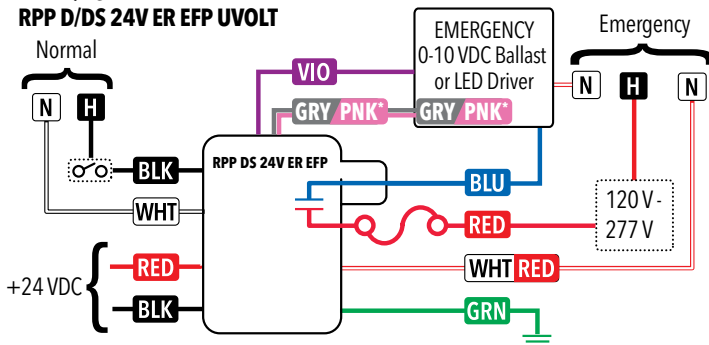
BLK - Unswitched Hot 120-277, 347VAC**
WHT - Neutral
BLU - Switched Output
VIO - 0-10V Dim
PNK* - 0-10V Common
RED (Terminal) - +24VDC
BLK (Terminal) - DC Common
GRN - Ground

*0-10V Dimming Common from luminaire may be pink or as otherwise indicated per section 410.69 of the 2020 NEC.
**347 only supported by UVOLT option.

WIRING FOR EMERGENCY (-ER) UNITS

RPP D/DS 24V ER EFP

RPP D/DS 24V ER EFP UVOLT



Legend

RED - 120-277, 347VAC** Emergency Hot
WHT/RED - Emergency Neutral
BLK - Unswitched Norm. Hot
WHT - Norm. Neutral
BLU - Switched Output
VIO - 0-10V Dim (+)
PNK* - 0-10V Com (-)
RED (Terminal) - +24VDC
BLK (Terminal) - DC Com
GRN - Ground
Optional Test Switch (by others)

*0-10V Dimming Common from luminaire may be pink or as otherwise indicated per section 410.69 of the 2020 NEC.
**347 only supported by UVOLT option.

UL924 Sequence of Operation:

When normal power sense leads have absence of voltage

- Relay is closed and 0-10V dimming is at high end trim level
- Device ignores wireless lighting control commands

RPP D/DS 24V EM EFP
RPP D/DS 24V EM EFP UVOLT



- EM devices will remain at their high-end trim and ignore wireless lighting control commands, unless a normal-power-sensed (NPS) broadcast is received at least every 8 seconds.
- Using the **CLAIRITY™+** mobile app, EM devices must be associated with a group that includes a normal power sensing device to receive NPS broadcasts.
- Only non-emergency rP20, rLSXR, rSBOR, rSDGR, and nLight AIR luminaires with version 3.4 or later firmware can provide normal power sensing for EM devices. See specification sheets for control devices and luminaires for more information on options that support normal power sensing.

(UVOLT 4.725")

3.50"

(UVOLT 4.8")

3.52"

1.82"

(UVOLT 1.865")

REMOTE ANTENNA (CHICAGO PLENUM OPTION)
FLEXIBLE CABLE 6.0"
RIGID ANTENNA 3.5"

OVERVIEW

The nPS 80 DALI is a dual-function DALI® and nLight controller that enables control of open protocol lighting while leveraging all the benefits of the nLight lighting controls system. The device is DALI-2® certified and provides DALI bus power to control of up to 64 DALI-compliant digital addressable drivers in a single DALI loop. These drivers are individually configured and monitored through nLight interfaces, however, are controlled through DALI groups, virtual zones, for which the device supports up to 16.

The nPS 80 DALI is certified by the Digital Illumination Interface Alliance (DiiA)® to ensure compatibility with DALI-2 certified and marked LED drivers, as well as fluorescent ballasts. Compatible drivers can be found in the DiiA® website at <https://www.digitalilluminationinterface.org/products>.

If used with LED drivers, or fluorescent ballasts, that are not DALI-2 certified, Acuity recommends that compatibility is tested prior to acquisition and installation.

FEATURES

- Certified DALI-2
- Supports a single DALI loop (up to 64 DALI devices)
- Controls a maximum of 16 DALI zones
 - Consumes 17 device addresses in the nLight Wired port
- Integral DALI bus power supplies up to 150mA
- Communicates w/ nLight Wired Network
- Supplies 40mA of Bus Power per RJ-45 port
- Remotely Configurable/Upgradeable
- Easy to integrate into the nLight Eclipse which provides site-wide lighting control through nLight's SensorView software and further BMS integration
- Push-Button Programmable
- Extended Chase Nipple
- Plenum rated
- UL924 listed - Automatically Overrides Emergency Lights On Upon Normal Power Loss



nPS 80 DALI nLight DALI Controller



Model #: nPS 80 DALI (ER)(CCT)



Warranty

Five-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/support/customer-support/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
Specifications subject to change without notice.

ORDERING INFORMATION

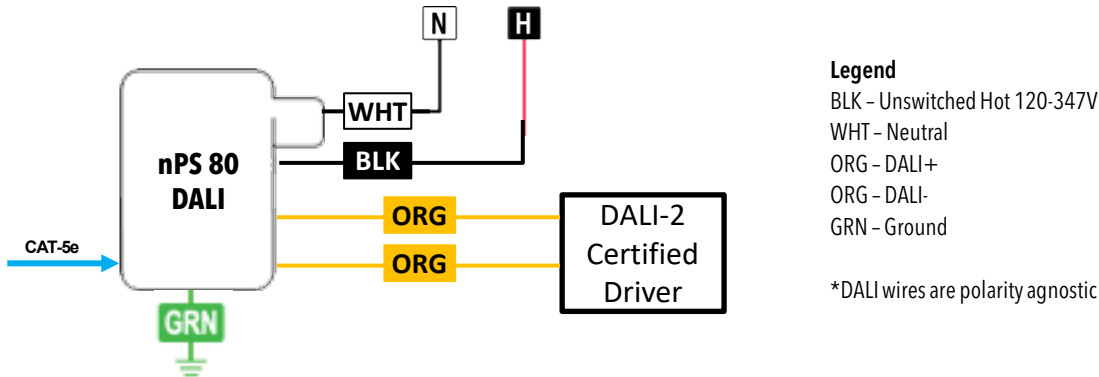
| Series | Emergency | Control Type | Buy America(n) |
|------------------------------------|---|--|--|
| nPS 80 DALI nLight DALI Controller | [blank] Standard ER UL924 Emergency Operation, via power sense leads | [blank] Standard CCT Correlated Color Temperature | [blank] Standard BAA Buy America(n) Act Compliant |

SPECIFICATIONS

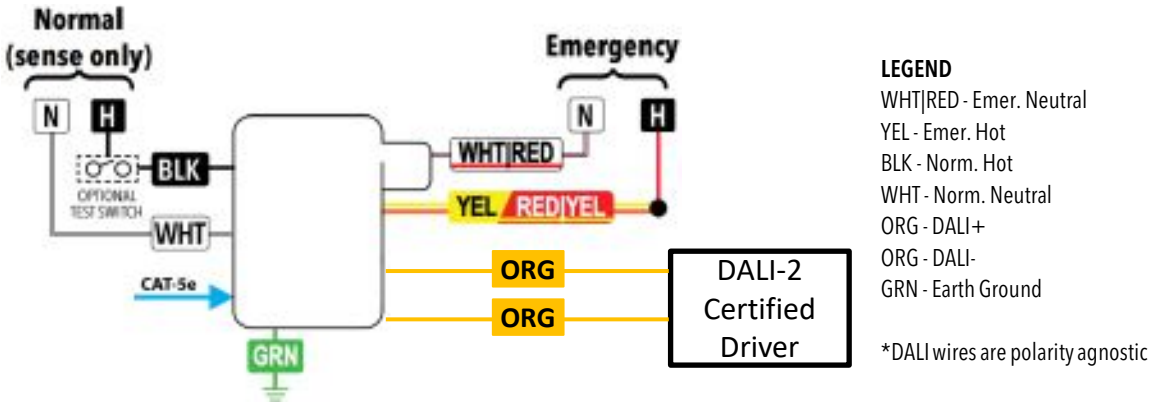
| | | |
|---------------|----------------------------------|--|
| Electrical | Operating Voltage | 120 - 347VAC, 50/60 Hz |
| | DALI Output Ratings | 18 VDC, 150 mA maximum |
| | nLight Output Ratings | 15VDC, 40mA per RJ-45 Port (80mA total) |
| | Standards/ Ratings | Energy Management Equipment, UL916 (E167435) |
| Mechanical | Dimensions | 4.72"H x 4.82"W x 1.86"D (119.89mm x 122.43mm x 47.24mm) |
| | Mounting | 1/2" Knockout (7/8" hole) |
| | Color | White - Standard Red - Emergency |
| | Connection Type | RJ-45 nLight Network Ports (2) Line and Low Voltage DALI Leads |
| Environmental | Warrantied Operating Temperature | 14°F to 122°F (-10°C to 50°C) |
| | Relative Humidity | Up to 90%, Non-Condensing |
| | Standards/ Ratings | RoHS, Plenum UL2043 |
| Compliance | Certification | DALI-2® Certified |
| | | IEC 60669-2-5 |
| | | UL/cUL 916 |
| | | UL/cUL 924 (ER variants only) |
| | Regularly | CE / ENEC |
| | | RETILAP |
| | | Buy American Act (BAA) |
| | | |
| General | Standards/ Ratings | System Component to aid in compliance with Title 24, ASHRAE 90.1, IECC |

WIRING (Do not wire hot)

T568B pin/pair assignment is recommended for all CAT-5e cables. For Supply Connections, use 14 AWG or larger wires rated for at least 90° C.

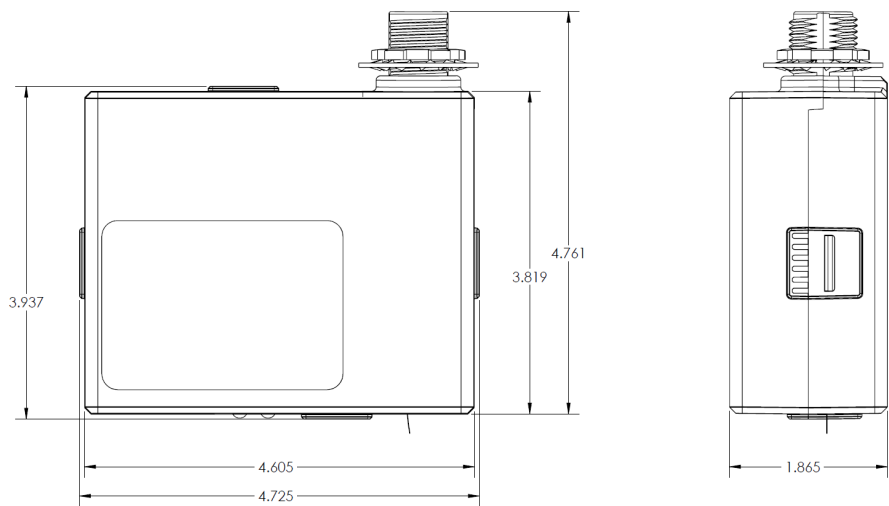


WIRING FOR EMERGENCY (-ER) UNITS (Do not wire hot)

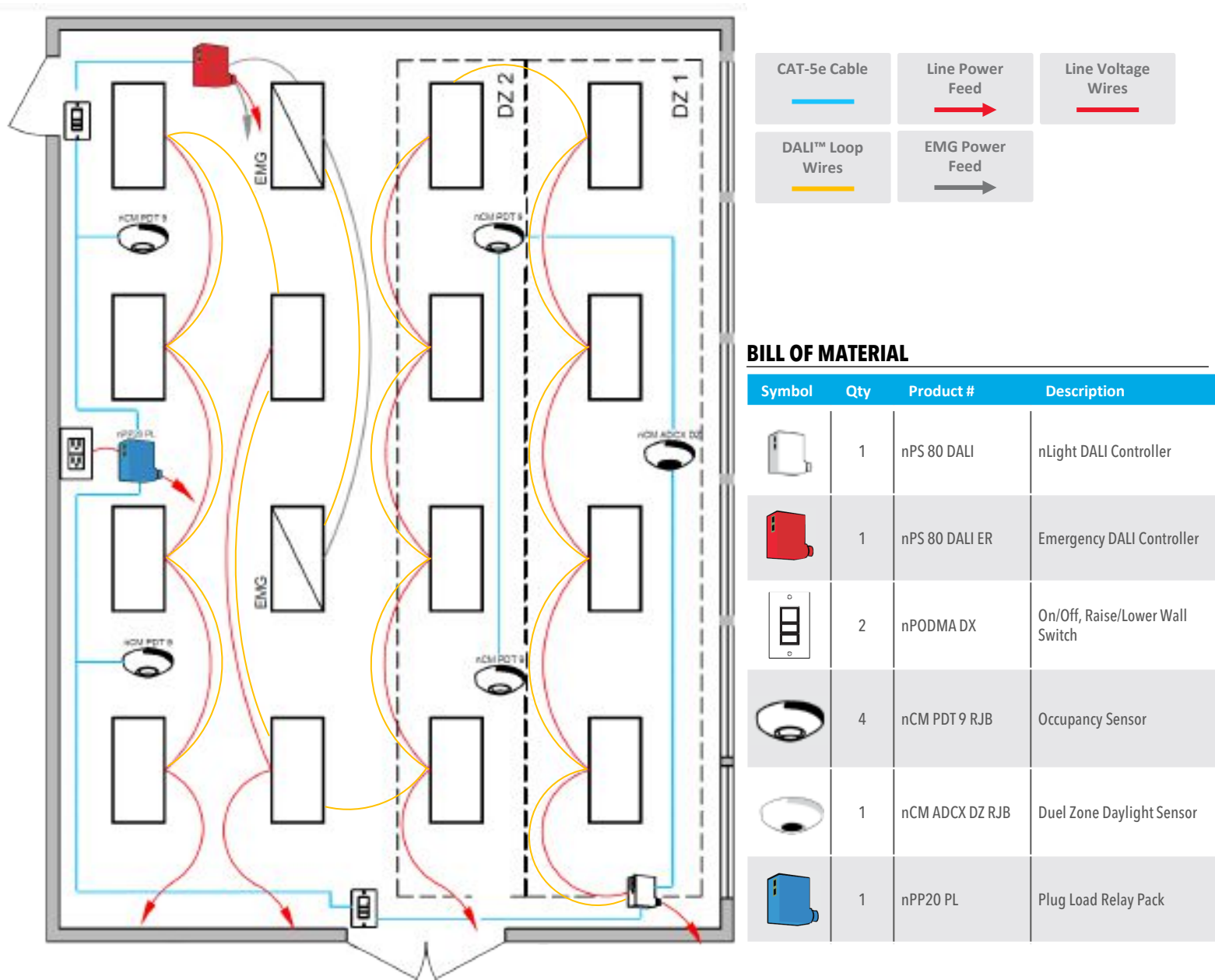


DIMENSIONS

Preliminary



TYPICAL APPLICATION (Title 24 - Open Office)



OVERVIEW

The nLight® Snapshot (nPWDMX) is an nLight DMX Snapshot Controller, powered by Pathway™, that enables bi-directional communication between a DMX512 lighting system and a wired nLight® network. The nLight Snapshot creates a single solution for controlling DMX and nLight Wired devices by allowing nLight wall switches, sensors, and nLight® ECLYPSE™ system controllers to control theatrical DMX lights while also enabling any DMX theatrical console to trigger scenes and broadcast levels to nLight channels. The device offers a toolset of software solutions for ease of configuration and settings, including Pathscape™ and SensorView.

FEATURES

- Converts DMX512 to nLight protocol, or vice versa
- Consumes 17 nLight device addresses
 - 16 outputs and 1 input (composed of 16 scenes and 16 virtual switches)
- Supplies 40mA of nLight Bus Power per RJ-45 port
- Equipped with two DMX512 ports, individually configurable as In or Out/Thru
- Supports triggering up to sixteen (16) 4-universe snapshots
- Compatible with Pathway Vignette wall stations (PWWSI) and systems
- Includes a dry Contact Closure Input for direct control of a single nLight channel or scene
- Sends and receives sACN on Ethernet port and merge with snapshots or build priority rules
- Simultaneously and in real-time, map up to eight theatrical DMX control sources for merging to each output slot
- Acts as an E1.20 RDM controller, when used with free Pathscape configuration software
- User-configurable DMX output speed and signal loss behavior
- Supports the following DMX-over-Ethernet protocols:
 - Pathway Secure sACN
 - E1.31 streaming ACN (sACN)
- Easy to integrate into the nLight Eclipse which provides site-wide lighting control through nLight's SensorView software and further BMS integration

Warranty

Five-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/support/customer-support/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice



Pathway Connectivity Solutions is your dynamic DMX lighting network backbone for projects that include RGBX or entertainment lighting. Our Portfolio includes DMX Lighting Network Switches, Splitters, Gateways, and Controls.



nPWDMX SNAPSHOT nLight® DMX512 and sACN Controller



Model #: nPWDMX SNAPSHOT DIN



Model #: nPWDMX SNAPSHOT ENCSML

Powered by 

ORDERING INFORMATION

| Example: nPWDMX SNAPSHOT DIN | | | |
|------------------------------|----------------------------|---------------------|--|
| nPWDMX SNAPSHOT | | | |
| Series | | Mounting | |
| nPWDMX SNAPSHOT | nLight Snapshot Controller | DIN | DIN-Mount (6.25"). No enclosure and no Power Supply |
| | | ENCSML ¹ | Panel assembly including a NEMA Type 1 metal enclosure, with a 50 Watts power supply |

1. **NOTE:** For additional panel assembly options refer to the [PWSA Pathway System Assemblies](#) spec sheet or the [Pathway System Assembly Tool](#).

| ACCESSORIES | |
|-------------------------------|---|
| Series | Description |
| PWINS XLR5M IDC5 [SS/BL/WH] | Insert, XLR 5-Pin Male, 5-Pin Insulation Displacement Contact Connector [Stainless Steel/Black/White] |
| PWINS XLR5F IDC5 [SS/BL/WH] | Insert, XLR 5-Pin Female, 5-Pin Insulation Displacement Contact Connector [Stainless Steel/Black/White] |
| PWINS XLR5M CSC5 [SS/BL/WH] | Insert, XLR 5-Pin Male, 5-Pin Compression Screw Connector [Stainless Steel/Black/White] |
| PWINS XLR5F CSC5 [SS/BL/WH] | Insert, XLR 5-Pin Female, 5-Pin Compression Screw Connector [Stainless Steel/Black/White] |
| PWINS RJ45EC PD [SS/BL/WH] | Insert, RJ45 EtherCON, Punch Down [Stainless Steel/Black/White] |
| PWINS RJ45EC RJ45R [SS/BL/WH] | Insert, RJ45 EtherCON, RJ45 Female (Rear) [Stainless Steel/Black/White] |
| PWCON SPARE IDC3 Q4 | Connector, Spare, 3-Pin Insulation Displacement Contact Connector (Qty 4) |
| PWCON SPARE CSC3 Q4 | Connector, Spare, 3-Pin Compression Screw Connector (Qty 4) |

SPECIFICATIONS

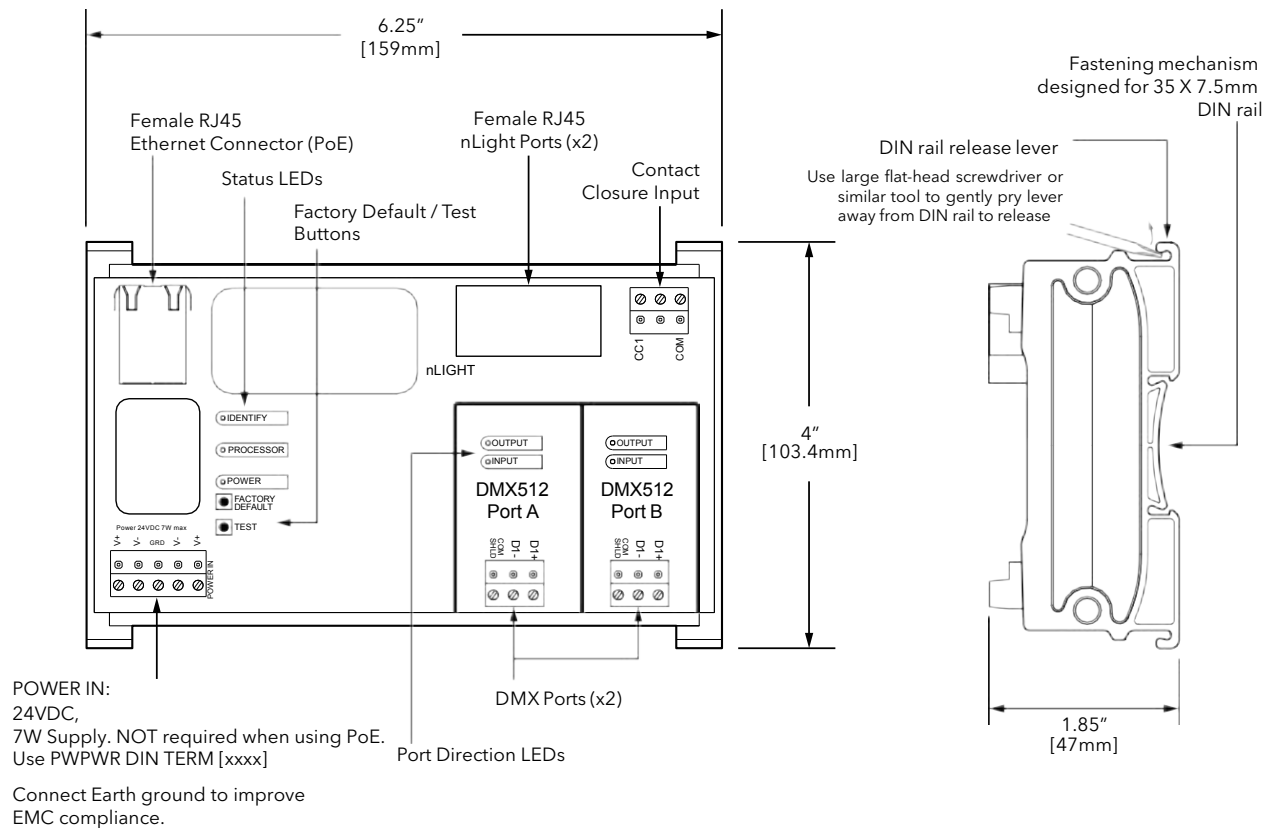
| | | |
|---------------|----------------------------------|---|
| Electrical | Input Ratings | nPWDMX SNAPSHOT DIN [Card Only] PoE Class 2 Device 24VDC power input (not used if using PoE) 7W maximum power consumption nPWDMX SNAPSHOT ENCSML 120-277VAC, 50/60Hz wide-range power input 50W maximum power consumption |
| | nLight Output Ratings | 16-24VDC, 40mA per RJ-45 Port (80mA total) |
| | Regulatory Compliance | nPWDMX SNAPSHOT ENCSML UL508A |
| | | |
| Mechanical | Dimensions | nPWDMX SNAPSHOT DIN [Card Only] 6.25" W x 4" H x 1.85" D (159mm W x 103mm H x 47mm D) nPWDMX SNAPSHOT ENCSML 10" W x 13" H x 4.5" D (260mm W x 330mm H x 114mm D) |
| | Mounting Interface | nPWDMX SNAPSHOT DIN [Card Only] 35mm x 7.5mm DIN rail |
| | Weight | nPWDMX SNAPSHOT DIN [Card Only] 0.47 lbs (0.21 kg) nPWDMX SNAPSHOT ENCSML 9.6 lbs (4.35 kg) |
| | Connection Type | RJ-45 nLight Network Ports (2) DMX512 Ports (2) Dry Contact Closure Input (1) Ethernet Port - 10/100 Mbps Ethernet network port (PoE) (1) |
| Environmental | Warrantied Operating Temperature | 32°F to 113°F (0°C to 45°C) |
| | Relative Humidity | 5-95%, non-condensing |
| | Standards/ Ratings | RoHS 2011/65/EU + A1 2015/863 |
| Compliance | Regulatory | FCC ANSI E1.11 DMX512-A R2013 ANSI E1.20 RDM ¹ - Remote Device Management ANSI E1.31 sACN-Streaming ACN ANSI E1.33 RDMnet IEEE 802.3af Power-over-Ethernet California Title 1.81.26, Security of Connected Devices Notes 1. Ports configured as outputs are RDM Controllers when used with Pathscope or E1.33 RDMnet. RDM cannot pass from an input port to an output port. |
| | | |
| General | Standards/ Ratings | System Component to aid in compliance with Title 24, ASHRAE 90.1, IECC |

| nLIGHT WIRING GUIDE |
|--|
| DO terminate cables according to T568B. |
| DO make sure crimps are deep, straight and that the blades penetrate the conductors evenly for proper contact. |
| DO use a remote cable tester to verify each CAT-5e cable. |
| DO NOT use cables with strain-relief boots at connectors. Some nLight devices have limited cabling space that does not allow for boots. |
| DO protect CAT-5e connectors (bag and tie) and cover open ports if construction is ongoing and connections cannot be completed. |
| DO NOT use tape on connectors residue from tape will cause poor connections. |

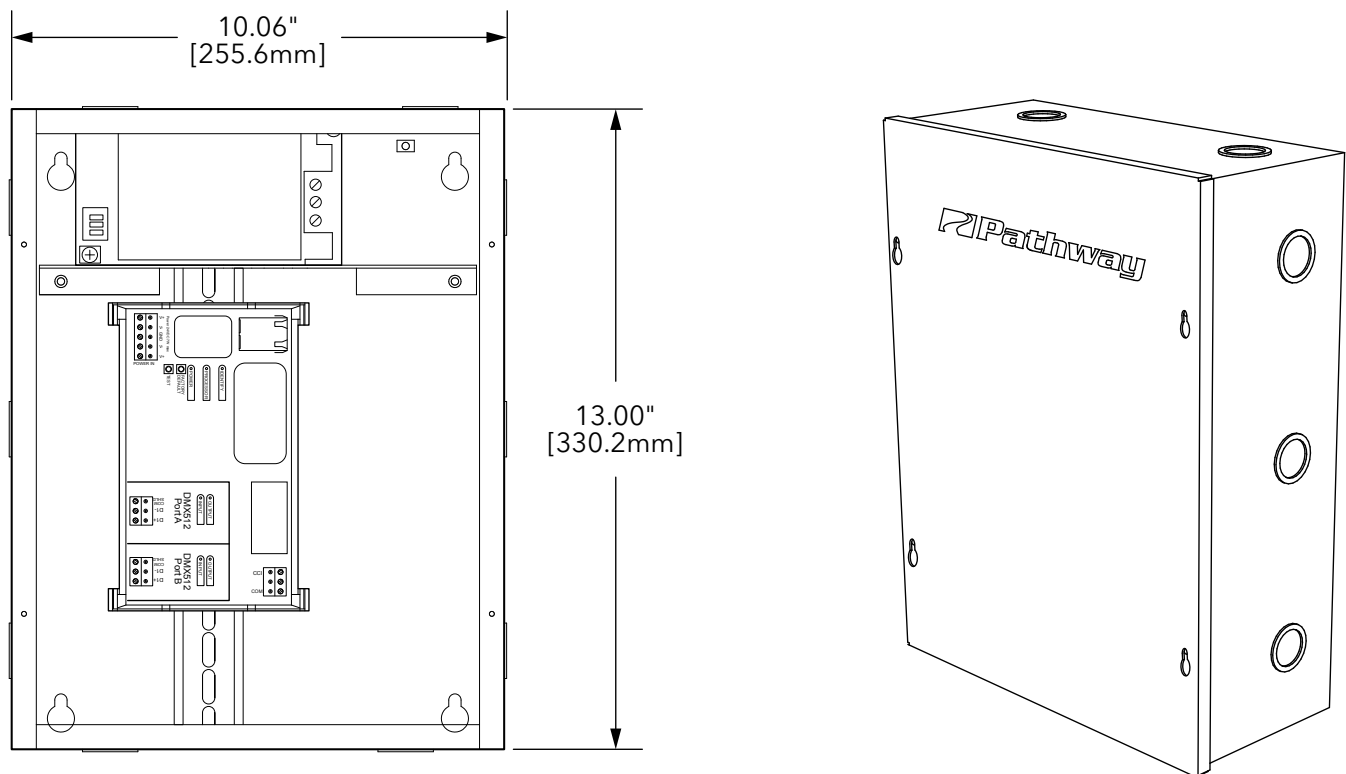
| DMX512 / RDM PINOUT | | |
|---------------------|----------------------------|---------------------------|
| Purpose | XLR / Terminal Block Pin # | RJ45 PIN # and Wire Color |
| Shield / Common | 1 | 7 - White / Brown |
| Data - (complement) | 2 | 2 - Orange |
| Data + (true) | 3 | 1 - White / Orange |

DIMENSIONS

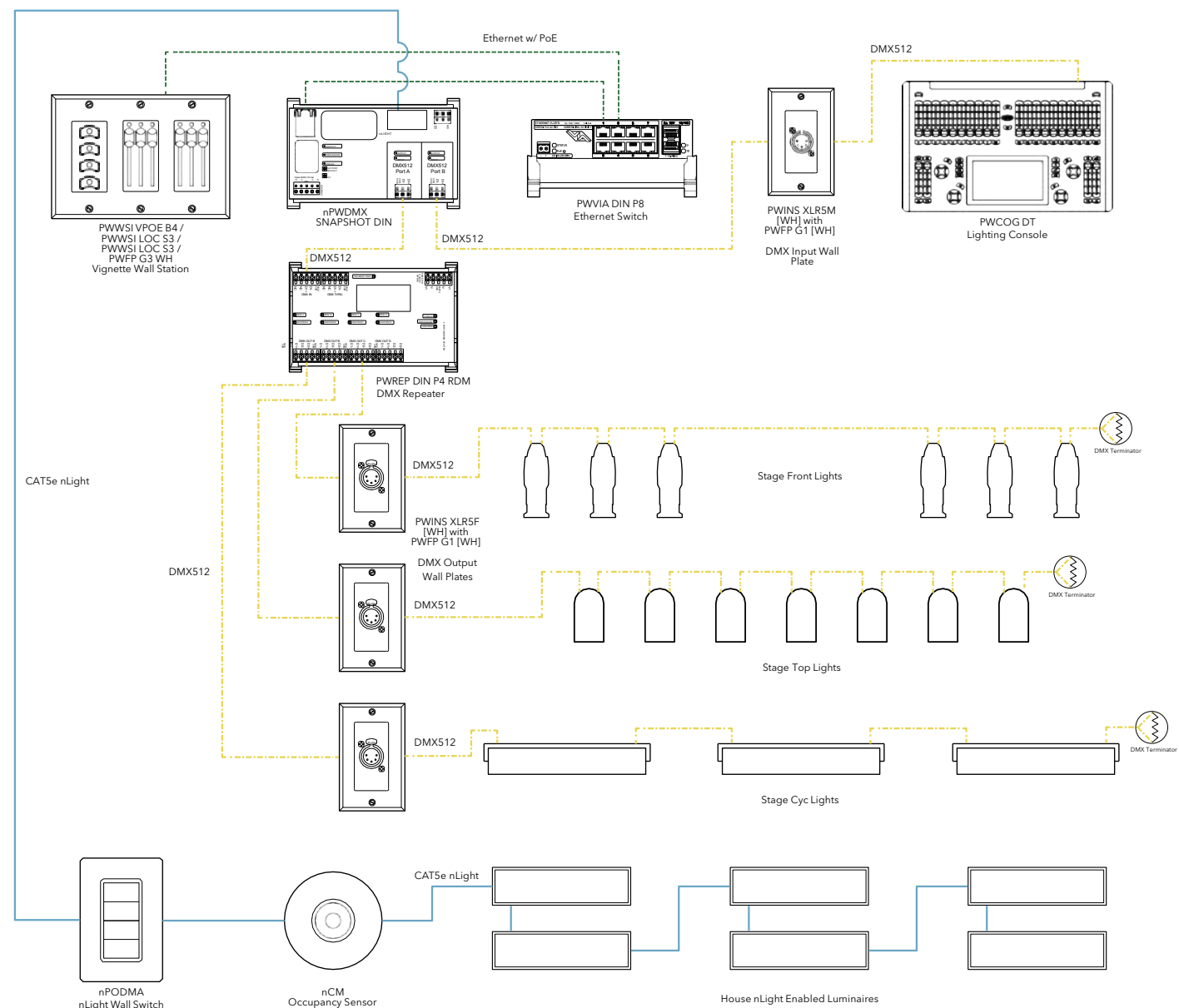
nPWDMX SNAPSHOT DIN

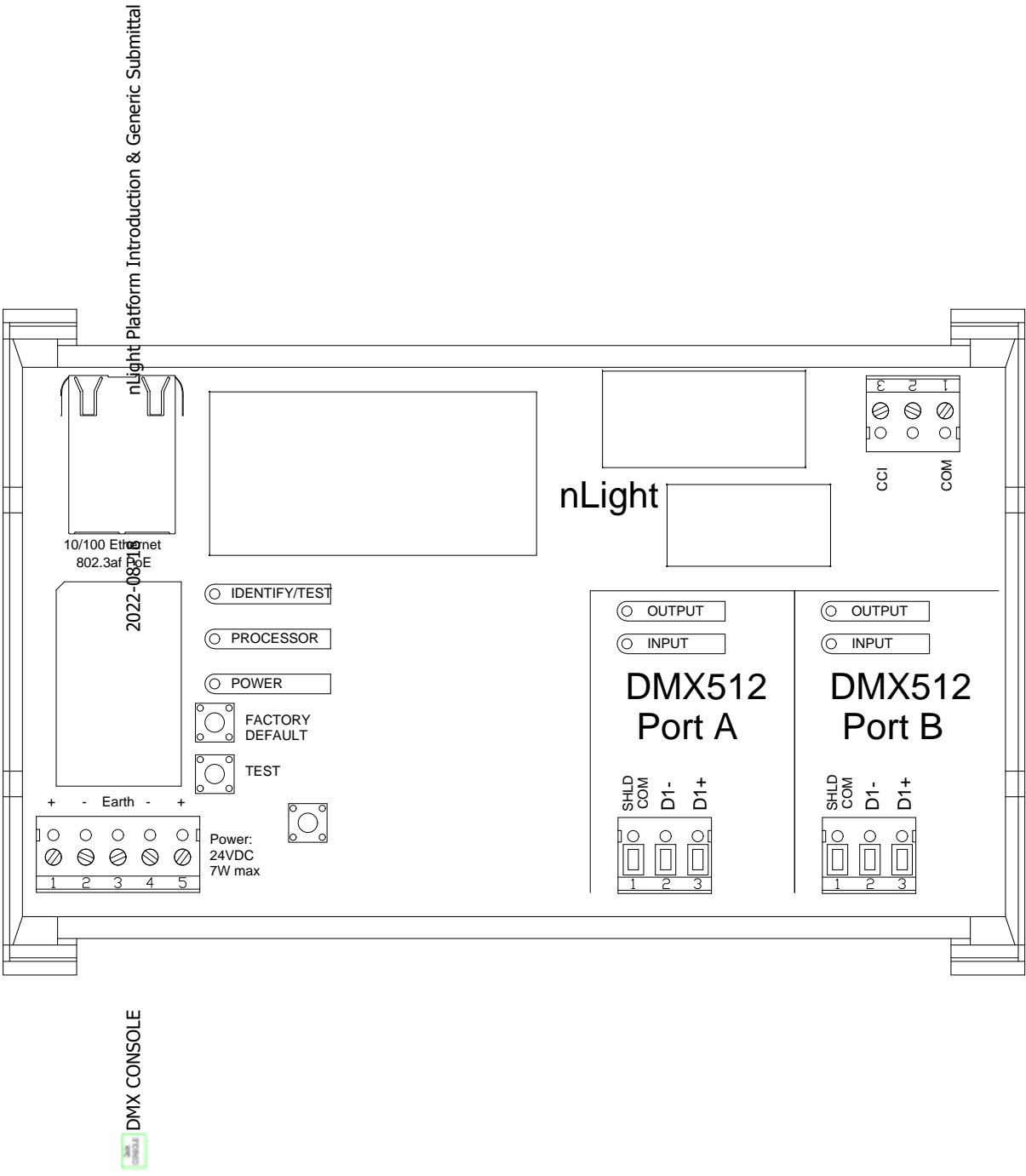


nPWDMX SNAPSHOT ENCSML



TYPICAL APPLICATION





nLight Platform Introduction & Generic Submittal

DMX CONSOLE

OVERVIEW

The nLight nPS 80 EZ dimming pack controls LED luminaires with 0-10V LED drivers from eldoLED. This smart device results in the luminaire being "nLight enabled" - making it both addressable as well as capable of digitally communicating with other nLight enabled controls such as occupancy sensors, photocells, and WallPods. This allows for advanced operation and design flexibility ranging from stand-alone rooms to building and campus-wide networks.

The nPS 80 EZ device also provides energy saving lumen management. With lumen management the device actively manages the luminaires LED light output such that constant lumen output is maintained over system life, thus preventing the energy waste created by the traditional practice of over-lighting.

An nPS 80 EZ is compatible with all eldoLED 0-10V drivers, however a nLO EZ PH device is also an option for controlling eldoLED ECOdrive (1%) family drivers with an auxiliary power output.

FEATURES

- Optimized for eldoLED drivers
- Communicates w/ nLight Network
- Supplies 40mA of Bus Power / RJ-45 port
- Remotely configurable/upgradeable
- Push-button programmable
- Extended Chase Nipple
- Plenum rated

Warranty

Five-year limited warranty. Complete warranty terms located at:

www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.



nPS 80 EZ Dimming Power Pack



ORDERING INFORMATION

| nPS 80 EZ | | | | Example: nPS 80 EZ ER LT |
|-----------|--|--------------------|---|--------------------------|
| Series | Default Mode | Voltage | Lumen Compensation | Temp/Humidity |
| nPS 80 EZ | [blank] Auto On (Switch Ch. 1) | [blank] 120/277VAC | [blank] Lumen comp. (disabled by default) | [blank] Standard |
| | SW2 ¹ Auto On (Switch Ch. 2) | 347 120/347VAC | N80 Lumen comp. (enabled by default) | LT Low temp |
| | SW3 ¹ Auto On (Switch Ch. 3) | | | |
| | SW4 ¹ Auto On (Switch Ch. 4) | | | |
| | SA ¹ Manual On (Switch Ch. 1) | | | |
| | PA70 Auto-On to 70% (Partial-On) | | | |

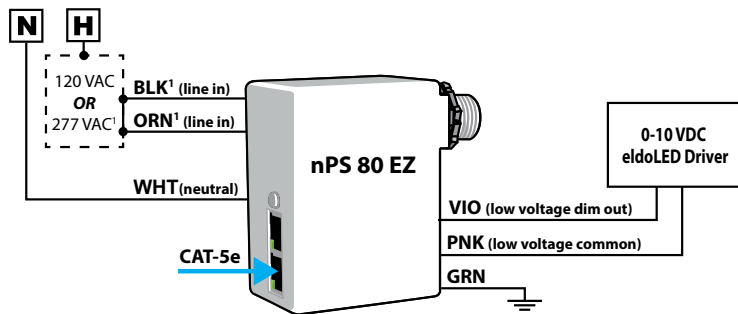
NOTES

1 Not Available with N80 or LT options

WIRING (DO NOT WIRE HOT)

T568B pin/pair assignment is recommended for all CAT-5e cables. For Supply Connections, use 14 AWG or larger wires rated for at least 75° C.

Diagram for standard units

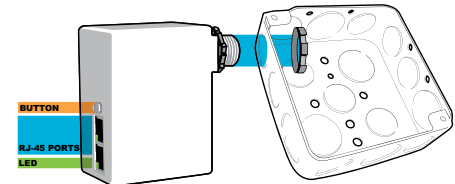


Notes

1) BLK - 120 VAC, ORN - 277 VAC (or 347 VAC if unit has 347 option)

INSTALLATION INSTRUCTIONS

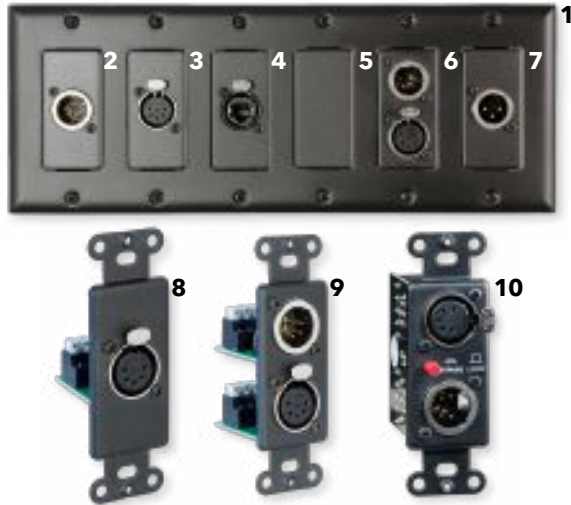
- Mount through a 1/2" knockout in any junction box or luminaire. Secure with lock nut.
- Following above wiring diagram, connect wires to line voltage feed(s), neutral(s), and load.
- Connect low voltage violet and gray dimming wires to 0-10 VDC driver leads and green wire to an approved ground connection. Note wires have 600V rated insulation.
- Interconnect unit (via RJ-45 ports) with other nLight devices in lighting zone using CAT-5e cables.



SPECIFICATIONS

| | | |
|---------------|----------------------------------|--|
| Electrical | Input Ratings | 120/277VAC, 50/60 Hz 120/347VAC, 50/60 Hz (with 347 option) |
| | Output Ratings | 75mA, 0-10VDC Dimming Sink Current |
| | Low Voltage Output Ratings | 15VDC, 40mA per RJ-45 Port (80mA total) |
| | Class Rating | 0-10V Dimming can be wired Class 1 or 2 |
| | Standards/ Ratings | Energy Management Equipment, UL916 (E167435) |
| Mechanical | Dimensions | 3.38"H x 2.53"W x 1.83"D (86mm x 64mm x 47mm) - does not include 1/2" chase nipple |
| | Mounting | 1/2" Knockout (7/8" hole) |
| | Color | White |
| | Connection Type | RJ-45 nLight Network Ports (2) Line and Low Voltage Leads |
| Environmental | Warrantied Operating Temperature | 14°F to 122°F (-10°C to 50°C) |
| | Relative Humidity | Up to 90%, Non-Condensing |
| | Standards/ Ratings | RoHS, Plenum UL2043 |
| General | Standards/ Ratings | System Component to aid in compliance with Title 24, ASHRAE 90.1, IECC |

DATA RECEPTACLES



- Models shown:
1. PWFP G6 BL
 2. PWINS XLR5M [CSC5/IDC5] BL
 3. PWINS XLR5F [CSC5/IDC5] BL
 4. PWINS RJ45EC [PD/RJ45R] BL
 5. PWINS BLANK NONE BL
 6. PWINS XLR5M 2XLR5F [CSC5/IDC5] [2CSC5/2IDC5] BL
 7. PWINS XLR3M [CSC5/IDC5] BL
 8. PWINS XLR5F IDC5 BL
 9. PWINS XLR5M 2XLR5F IDC5 2IDC5 BL
 10. PWINS XLR5M 2XLR5F PASS CSC5 2CSC5 BL

OVERVIEW

Custom data receptacles that ship from stock.

Specify wall receptacle stations in nearly any configuration: Single receptacle inserts are available in three, four, or five-pin XLR connectors, in both male or female, and female RJ45 etherCON. Dual receptacle inserts are available in many popular configurations.

With pre-installed, locking front connectors and solderless compression-screw or insulation displacement contact (IDC) rear connectors, all inserts are ready for installation out of the box.

Available in attractive matte black, stainless steel and white finishes. Color-matched 1 to 6-gang faceplates (PWFP [xxxx]) are available separately. All inserts are ordered individually.

Please note that we cannot provide engraving services.

FEATURES

- Receptacle inserts feature pre-installed, rugged, locking-style connectors
- Easy, modular assembly using standard backboxes
- Two-part pluggable connectors with rear compression screw, insulation displacement contact (IDC), or punch-down (RJ45 only) connectors means no soldering
- Field configurable
- Finishes available in matte black, stainless steel or white
- Connectors available optionally without insert plate (PWCON)

WARRANTY

3-year limited warranty. Complete warranty terms located at:
<https://www.acuitybrands.com/support/warranty>

NOTE

Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

ORDERING INFORMATION

Notes

1. XLR 3-Pin, 4-Pin and 5-Pin Front Connectors must be paired with either CSC5 or IDC5 Rear Connectors.
2. RJ45 etherCON Front Connectors must be paired with either PD or RJ45R Rear Connectors
3. If ordering a Blank Plate, Rear Connector Type 1 must be NONE. Omit Connector 2 Type and Rear Connector 2 Type Columns.
4. If ordering a single-connector insert (no 2nd connector desired), omit Connector 2 Type and Rear Connector 2 Type Columns.
5. PASS Pass-Thru Insert is a unique part and available only as XLR5M 2XLR5F Front Connectors, and in BL Finish.

| PWINS | | | | | | |
|--|--|---------------------------------------|-------------------------------------|---|--|--------------------|
| EXAMPLE (1 Connector): PWINS RJ45EC PD SS EXAMPLE (2 Connectors): PWINS XLR5F 2RJ45EC IDC5 2IDC5 BL | | | | | | |
| PWINS | | | | | | |
| Series | Connector 1 Type | Connector 2 Type | Pass Thru | Rear Connector 1 Type | Rear Connector 2 Type | Finish |
| PWINS Pathway Data Receptacle Inserts | XLR5F ¹ XLR 5-Pin Female | [EMPTY] ⁴ No 2nd Connector | [EMPTY] No Pass Thru | CSC5 5-Pin Compression-screw Connector | [EMPTY] ⁴ No 2nd Rear Connector | BL Matte Black |
| | XLR5M ¹ XLR 5-Pin Male | 2XLR5F ¹ XLR 5-Pin Female | PASS ⁵ Pass Thru enabled | IDC5 5-Pin Insulation Displacement Contact Connector | 2CSC5 5-Pin Compression-screw Connector | SS Stainless Steel |
| | XLR3F ¹ XLR 3-Pin Female | 2XLR5M ¹ XLR 5-Pin Male | | 2IDC5 5-Pin Insulation Displacement Contact Connector | | WH White |
| | XLR3M ¹ XLR 3-Pin Male | 2XLR3F ¹ XLR 3-Pin Female | | PD RJ45 Punch Down | | |
| | XLR4F ¹ XLR 4-Pin Female | 2XLR3M ¹ XLR 3-Pin Male | | RJ45R RJ45 Female (Rear) | 2PD RJ45 Punch Down | |
| | XLR4M ¹ XLR 4-Pin Male | 2RJ45EC ² RJ45 etherCON | | NONE No Rear Connector; Blank Plate | 2RJ45R RJ45 Female (Rear) | |
| | RJ45EC ² RJ45 etherCON | | | | | |
| | BLANK ³ No connector; Blank Plate | | | | | |

SPECIFICATIONS

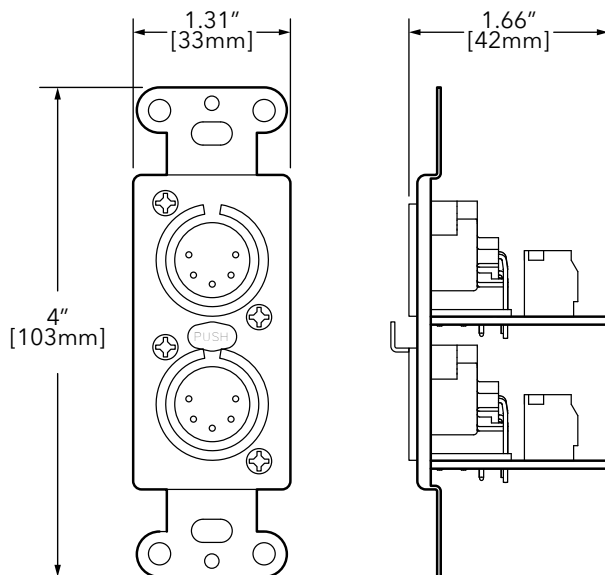
Mechanical

| | | |
|-------------------|--|---------------|
| Dimensions | PWINS BLANK NONE | |
| | 1.3" W x 4" H x 0.2" D (33mm W x 113mm H x 43mm D) | |
| Weight | All other Inserts | |
| | 1.3" W x 4" H x 1.7" D (33mm W x 113mm H x 5mm D) | |
| Weight | Single-Connector Configuration | 1.2 oz (35 g) |
| | Dual-Connector Configuration | 1.9 oz (55 g) |
| | PWINS BLANK NONE | 0.5 oz (15 g) |

WIRING

| DMX512 / RDM PINOUT | | |
|---------------------------|----------------------------|---------------------------|
| Purpose | XLR / Terminal Block Pin # | RJ45 PIN # and Wire Color |
| Shield / Common | 1 | 7 - White / Brown |
| Data - (complement) | 2 | 2 - Orange |
| Data + (true) | 3 | 1 - White / Orange |
| Not Used | 4 | 6 - Green |
| Not Used | 5 | 3 - White / Green |
| Not Used - Do Not Connect | N/A | 4 - Blue |
| Not Used - Do Not Connect | N/A | 5 - White / Blue |
| Not Used - Do Not Connect | N/A | 8 - Brown |

DIMENSIONS



PWINS XLR5M 2XLR5F CSC5 2CSC5 [BL/SS/WH]
Shown.

Appearance will differ depending on
configuration.

OVERVIEW

The nLight ECLYPSE™ system controller connects an nLight® lighting network to support connectivity and management over an IP network, control and device setting adjustment, integration with building management, integration with demand response, and more.

FEATURES

- Communicates over IP, allowing the system controller and connected lighting controls devices to be accessed and configured across a local area network
- Each system controller supports up to 750 nLight and nLight AIR devices. Additional controllers can connect and scale a system of lighting controls to a maximum of 20,000 devices
- BACnet Testing Laboratories (BTL) listed as a BACnet Building Controller (B-BC)
- Can be discovered and managed through free SensorView software and through an onboard web GUI
- Provides time-of-day and astronomical time clock capabilities for scheduled lighting control events
- Manages forwarding of global control channels and system profiles to affect devices on multiple controllers at the same time
- Enhanced security through toggleable HTTP or HTTPS connections, a FIPS 140-2, Level 1 compliant security interface, SSO or Radius Server capabilities, and more
- Optional demand response client allows activation of configurable load shed dimming levels by utility DRAS through OpenADR 2.0a

Warranty

Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.



BACnet is a registered trademark of ASHRAE. ASHRAE does not endorse, approve or test products for compliance with ASHRAE standards. Compliance of listed products to the requirements of ASHRAE Standard 135 is the responsibility of BACnet International (BI). BTL is a registered trademark of BI.

Patents:

- US9819544B2
- EP3250970B1
- EP3139697B1
- US9924243B2
- US10073423B2
- US9608538B2
- CA2971061A1



nLight ECLYPSE™ System Controller



ORDERING INFORMATION

| NECY | | | | | Example: NECY MVOLT BAC ENC | | | | |
|--------|----------------|---------|--------------------|---------|-----------------------------|---------|--------------|------------------------|-------------|
| Series | | Voltage | | BACnet | | AutoDR | | Visualization Software | |
| nECY | nLight ECLYPSE | MVOLT | 120-277VAC | [blank] | Not Enabled | [blank] | Not Enabled | [blank] | Not Enabled |
| | | 347 | 120-277VAC, 347VAC | BAC | BACnet/IP & MS/TP Enabled | ADR | Open ADR VEN | SVS ¹ | Envysion |

| Cellular Modem | | Enclosure | | Wi-Fi Adapter | | Options | |
|---------------------|---|-----------|-----------------------------|---------------|---------------------------|-------------------|--|
| [blank] | No Cellular Modem | ENC | NEMA Type 1 metal enclosure | [blank] | Includes Wi-Fi Adapter | [blank] | None |
| REM ⁶ | Prewired CLAIRITY™ Link router with cellular SIM | | | NW | No Wi-Fi Adapter Included | SEP | Single Ethernet Port |
| REMR ^{2,6} | Prewired CLAIRITY™ Link router with cellular SIM and cloud-toggable relay | | | | | GFXK ³ | Touchscreen interface (model nGWY2 GFX, mounted separately), PS 150 power supply, CAT5 cable |
| | | | | | | AIR ⁴ | Includes NECYD NLTAIR G2 |

| ACCESSORIES | |
|---------------------------|--|
| nECY ENC | NEMA 1 Enclosure and pre-mounted 120-277VAC input, 24VDC output (Max 50W) power supply |
| nECYD NLTAIR G2 | nLight AIR wireless adapter |
| nECYREPL INTF | nLight Interface module (introduces 750 device limit if added to an ECLYPSE with AIR option) |
| nECYUPG SVEA ⁵ | nLight ECLYPSE License, adds support of up to 5 MODBUS devices |

Notes

- Requires BACnet option.
- Cloud-toggable relay is prewired and intended to powercycle the nLight ECLYPSE remotely.
- If 347 voltage option is selected, includes PS150 347.
- AIR option supports 150 devices. RJ45 ports for connecting nLight wired devices are not available with the AIR option. GFXK option is not available with AIR option.
- SVEA license requires SVS and BAC licenses as prerequisites. See nLight [ECLYPSE Replacement Parts Guide](#) for more information.
- 347 option is required for cellular connectivity in Canada. MVOLT versions will support connectivity in the United States and Mexico only. Active connectivity plan required for cellular connectivity. All routers ship with 12-months Ethernet connectivity enabled. See CLAIRITY Link router specification sheet for more information.
- Cellular connectivity performance may be affected by carrier coverage and antenna placement. Coverage by supported carriers should be verified prior to purchase.
- See the Specifications section for a list of all supported carriers per country.
- Use of default SIM included with hardware is required for REMCONN CELL connectivity plan. REMCONN ETH does not require use of a cellular SIM but is required for connectivity with the portal using a non-standard, third-party SIM, provided by, paid for, and maintained by others. Compatibility with non-default, third party SIMs is not guaranteed or warranted.

CONNECTIVITY PLANS

Remote support via the CLAIRITY Link solution is enabled through a connectivity plan (REMCONN). Purchase of a CLAIRITY Link router includes an initial 12-month Ethernet connectivity plan that begins upon shipment of hardware from the factory. For extended periods of connectivity, or for cellular connectivity, supplementary plans can be purchased. Flexible plans are offered in 3-month to 24-month durations and can be purchased at any time.

FEATURES

- Flexible connectivity periods offer affordable, connected assistance from nLight technical experts
- With no hidden fees and no continuous costs, CLAIRITY Link connectivity is an on-demand service that can be purchased at any time
- On-premise systems continue to operate when a connectivity plan is inactive
- Optional service plans affordably supplement the ability to remotely connect, adding comprehensive programming, sustainment, and preventative maintenance options

| Example: REMCONN ETH 24MO CAR1 | | | | | | | |
|--------------------------------|--|-----------------------|--|----------------|-----------------|---------------------|------------------------|
| Series | | Connection Type | | Service Length | | Supported Countries | |
| REMCONN | Connectivity plan to enable remote access by factory representatives | ETH | Uses Ethernet connection to a customer-provided network with Internet access for communication with the CLAIRITY Link portal | 3MO | 3-month length | CAR1 | US, Mexico, and Canada |
| | | | | 6MO | 6-month length | | |
| | | | | 9MO | 9-month length | | |
| | | CELL ^{7,8,9} | Includes a cellular plan to supplement or replace Ethernet connectivity for communication with the CLAIRITY Link portal | 12MO | 12-month length | | |
| | | | | 18MO | 18-month length | | |
| | | 24MO | 24-month length | | | | |

SPECIFICATIONS

Control Module

| | |
|-------------------------------|--|
| Size: | 4.74" H x 3.57" W x 2.31" D (12.03 cm x 9.07 cm x 5.86 cm) |
| Mounting: | DIN rail mounted |
| nLight ECLYPSE Assembly Size: | 4.74" H x 14.76" W x 2.43" D (12.03 cm x 37.5 cm x 6.16 cm) |
| Ports: | Ethernet: (2) switched RJ-45 Ethernet ports USB Connections: 2 x USB 2.0 ports RS-485 Serial Communications: Screw terminals (Used for either BACnet MS/TP Subnet: RJ-45 |
| Real Time Clock (RTC): | Real Time Clock with rechargeable battery. Supports SNTP network time synchronization |
| RTC Battery: | 20 hours charge time, 20 days discharge time. Up to 500 charge / discharge cycles |
| Enclosure: | FR/ABS UL94-V0 flammability rating |
| Environmental: | Operating Temperature: 32°F to 122°F (0 to 50°C) Storage Temperature: -22°F to 158°F (-30 to 70°C) Relative Humidity: 0 to 90% non-condensing Ingress Protection Rating: IP20 |
| Security: | FIPS Publication 140-2, Level 1 Compliant Complies with California Civil Code Title 1.81.26, Security of Connected Devices, approved under Senate Bill No. 327 (2018) |

nLight Network Interface Module

| | |
|--------------------------|---|
| Size: | 4.74" H x 3.20" W x 2.31" D (12.03 cm x 8.12 cm x 5.86 cm) |
| Mounting: | DIN rail mounted |
| Ports: | 3 nLight bus ports (RJ-45) |
| nLight Bus Power Output: | 0mA per port |

Power Supply Module (24V)

| | |
|------------------------|--|
| Size: | 24V: 4.74" H x 2.85" W x 2.31" D (12.03 cm x 7.24 cm x 5.86 cm) |
| Operating Voltage: | 24V: 24VAC/DC; ±15%; Class 2 |
| Output Voltage, | |
| Rated Current & Power: | 24V: 18VDC regulated, 0-1.6A, 30W max |

Enclosure

| | |
|---------|--|
| Type: | NEMA 1 rated surface mount screw cover |
| Size: | 14.25"H x 14.25"W x 4.00"D (36.20cm x 36.20cm x 10.16cm) |
| Rating: | UL 2043 (Plenum) Rated |

CLAIRITY Link Router

| | |
|----------------------------------|--|
| Size: | 2.92"H x 3.27"W x 0.99"D (74mm x 83mm x 25mm) |
| Power Consumption: | < 6.5W |
| Input Voltage Range: | 9-30VDC |
| Mobile: | 4G LTE - up to 150Mbps 3G - up to 42Mbps 2G - up to 236.8kbps United States - ATT, T-Mobile/Sprint, US Cellular, Alaska Wireless Mexico - Telefonica Canada - Tellus, Bell, SaskTel® |
| Ethernet: | WAN - 10/100Mbps; connects to an owner- provided, Internet-connected network. May be used for nLight ECLYPSE controller discovery on the same network. LAN-10/100Mbps; used for discovery of nLight ECLYPSE controllers that are connected to a network without Internet connectivity Wireless Mode - IEEE 802.11b/g/n Security - WPA2-Enterprise Wi-Fi Hotspot - used for modem and SIM diagnostics Wi-Fi Client - not supported |
| Environmental: | Operating temperature - -40C to 75C Operating humidity - 10% to 90% non- condensing Storage temperature - -45C to 75C |
| Security: | Firewall - pre-configured firewall Attack Prevention - DDOS prevention, port scan prevention WEB filter - whitelist for specifying allowed sites only Access control - control of TCP, UDP, ICMP packets, MAC address filter Complies with California Civil Code Title 1.81.26, Security of Connected Devices, approved under Senate Bill No. 327 (2018) |
| Ingress Protection Regulatory | IP30 FCC, IC/ISED, EAC, RCM, PTCRB, RoHS, CE/RED, WEEE, Wi-Fi Certified, CCC, Anatel, GCF, REACH, Thailand NBTC, Ukraine UCRF, SDPPI (POSTEL) |
| Antennas: | Mobile - 698-960/1710-2690 MHz, SMA male connector Wi-Fi - 2400-2483.5 MHz, SMA male connector |
| Input/Output | Input - 1x digital, non-isolated input (on 4 pin power connector) Output - 1 x digital, open collector output (30 V, 300 mA, on 4 pin power connector) |
| SIM | 1 x SIM slot (Mini SIM – 2FF), 1.8V/3V, external SIM holder |
| Dimensions | 83 x 25 x 74 mm |

COMMUNICATION

| | |
|-----------------------------------|---|
| Ethernet Connection Speed: | 10/100 Mbps |
| Addressing: | IPv4 or Hostname |
| BACnet Profile: | BACnet Building Controller (B-BC) |
| BACnet Listing: | BTI, B-BC |
| BACnet Interconnectivity: | BBMD forwarding capabilities BACnet/IP to BACnet MS/TP routing |
| BACnet Transport Layer: | MS/TP & IP (optional) |
| Web Server Protocol: | HTML5 |
| Web Server Application Interface: | REST API |

Supported BACnet MS/TP and Modbus RTU Connectivity:

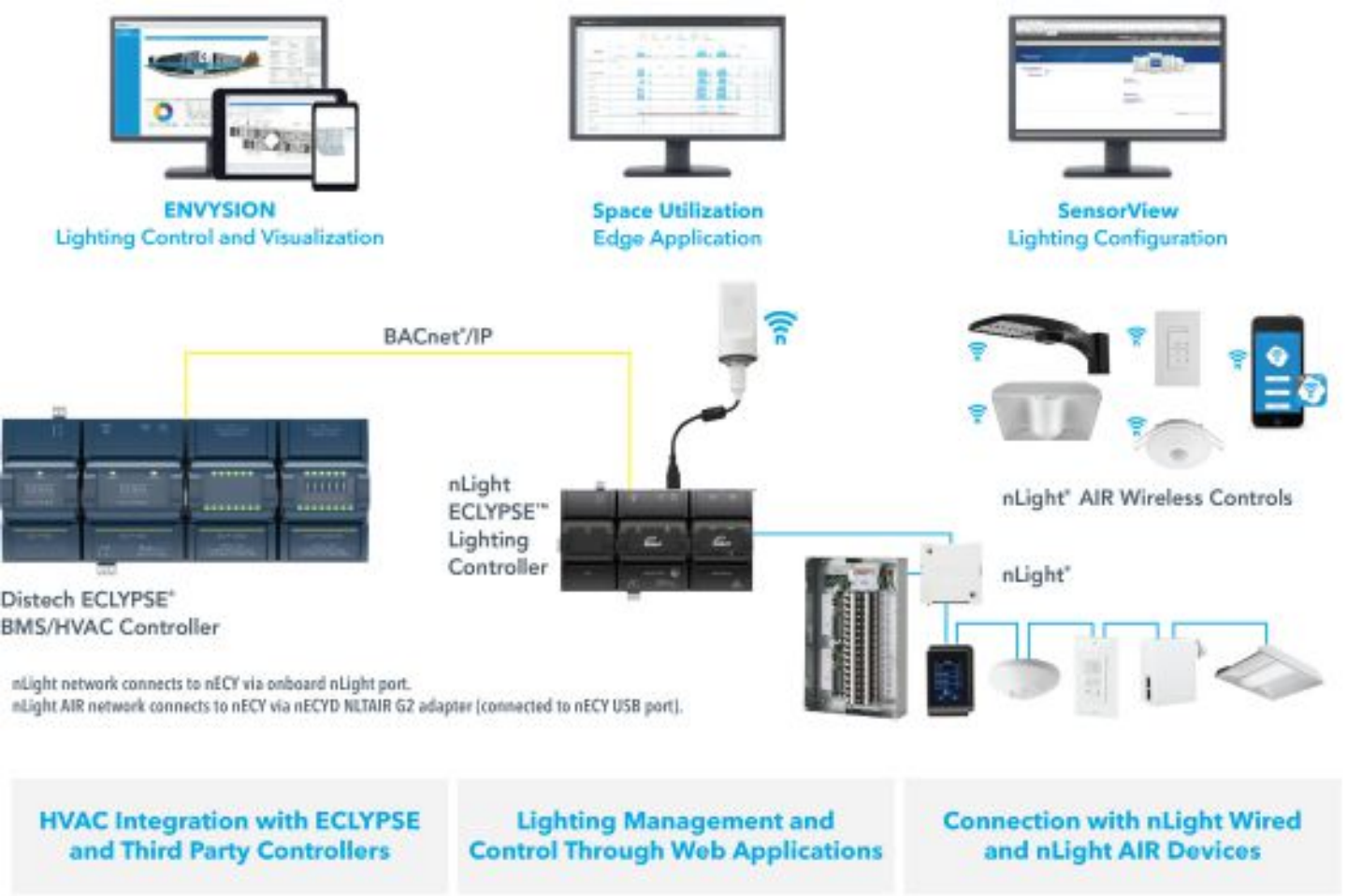
- BACnet MS/TP OR Modbus RTU 1 × RS-485 serial communications ports
- Each RS-485 port supports one communication protocol at a time
- RS-485 Wiring – 1-pair + Common/shield
- RS-485 EOL Resistor – Built-in
- RS-485 Baud Rates – 9600, 19200, 38400, or 76800 bps
- RS-485 Addressing – Controller's Web Configuration Interface

Supported Wireless Connectivity:

- Wireless Adapter – USB Port Connection
- Wi-Fi Communication Protocol – IEEE 802.11b/g/n
- Wi-Fi Network Types – Client, Access Point, Hotspot

SYSTEM ARCHITECTURE

The nLight ECLYPSE serves as the backbone for nLight and nLight AIR digital lighting networks. The nLight ECLYPSE provides networked devices with schedule management and remote software programming via SensorView web-based software. The backbone also provides support for system-wide controls such as master override switches, automated demand response, and BACnet integration. One nLight ECLYPSE is capable of handling up to 750 total devices and up to 128 global channels for the entire network. The nLight ECLYPSE is also compatible with other Distech ECLYPSE products, offering a full suite of BAS capabilities.



EXAMPLE NLIGHT ECLYPSE NOMENCLATURE AND OPTIONS

| Example Nomenclature | Connection to Wired Devices | Maximum of 150 Wireless Devices | Maximum of 750 Wireless Devices | All License Options Available (BAC, SVS, SVEA) |
|-------------------------------------|-----------------------------|---------------------------------|---------------------------------|--|
| NECY MVOLT ENC | ✓ | No AIR Adapter | No AIR Adapter | ✓ |
| NECY MVOLT ENC + NECYD NLTAIR G2 | ✓ | Not Limited at 150 | ✓ | ✓ |
| NECY MVOLT ENC AIR | No Wired Interface Module | ✓ | Reduced Capability | ✓ |
| NECY MVOLT ENC AIR + NECYREPLY INTF | ✓ | Not Limited at 150 | ✓ | ✓ |

OVERVIEW

The nLight® AIR rPODBA is a wireless, battery-powered wall switch including toggle and/or raise lower features with optional multi-pole control. It provides a user with local control of a lighting zone. A true wire-free switch, these single gang decorator style devices have soft-click buttons and a green LED indicator for each button. The wall switches communicate with other nLight AIR devices via radio frequency (RF). A battery-powered wall switch can work with any nLight AIR enabled fixture or power pack to provide toggle switch operation. Wall switches with the DX option have the added ability to adjust the level of any nLight AIR controlled dimmable light fixture.

FEATURES

- Powered with three off-the-shelf lithium AAA batteries and rated for 10 years of normal use, minimizing battery replacement. (Battery replacement with alkaline batteries does not guarantee a 10-year run time.)
- Communicates with nLight AIR devices via radio frequency (RF) in the 900MHz spectrum
- Soft-click push-button control
- 1 or 2 on/off
- 1 or 2 raise/lower
- Batteries are included and preinstalled, allowing for a simple unbox and mount installation
- Wireless multi location dimming

CUSTOM BUTTON ENGRAVING

- Custom lettering for units can be specified and ordered at: [nGrave Form](#)
- To ensure color uniformity, ordering templates facilitate specifying all buttons on a unit as custom lettered. Replacing single buttons not recommended
- Buttons may ship separately and require field installation

Warranty

Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.



This item is an A+ capable component, which has been designed and tested to provide out-of-the-box luminaire compatibility with simple commissioning, when included as part of an A+ Certified™ Solution.

To learn more about A+, visit www.acuitybrands.com/aplus.

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*nLight® AIR
rPODBA:
Battery powered,
Wall Switch*



Note: nLight® AIR devices are only compatible with other nLight AIR enabled devices; and is not cross compatible with other nLight product lines at this time.

| rPODBA | | | | Example: RPODBA 2P DX WH G2 |
|--------|--|---|--|-------------------------------|
| Series | Poles & Scenes | Dimming Control | Color | Generation |
| RPODBA | [blank] Single Pole 2P Two Pole 2S 2 Scene control (2 buttons) 4S 4 Scene control (4 buttons) | [blank] On/off Control DX On/off + Raise/Lower Control | WH White IV Ivory AL Light Almond BK Black GY Gray RD Red | G2 Generation 2 Compatibility |

ORDERING INFORMATION

All rPODBA switches are shipped with wall plates, however, the following order information is available to acquire replacement wall plates.

| Wall Plate - Additional or Replacement | | | | | | | | | | | |
|--|------------------------|------------|-------------|-----------------|-------|-----------------|--------------|-----------------|--------------|-------------------|--------------------------|
| | | | | | | | | | | | |
| Series | | # of Gangs | | Color | | | | Packaging | | | |
| WS XPODA | Wall Plates (Standard) | 1 GNG | Single Gang | WH | White | AL ² | Light Almond | VP ² | Variety Pack | [blank] | Single Unit ³ |
| SSW | Sealed Covers | | | IV | Ivory | BK ² | Black | | | M5 ² | 5 Pack |
| | | | | GY ² | Gray | RD | Red | | | M6 ^{1,2} | 6 Pack |

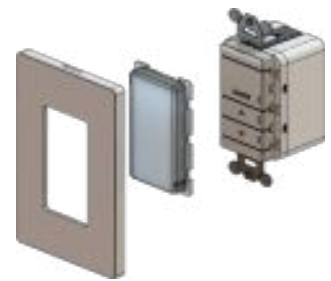
| Accessories |
|--|
| RPODBA MOUNTRING Replacement mounting ring for rPODBA and rPODB switches |

1. Available only for variety pack.
2. Not available for SSW series
3. Single units only available for SSW series

WALL SWITCH CLEANING

It will occasionally be necessary to clean the wall switches. All rPODBA switches may be wiped down with a soft cloth or paper towel dampened with glass cleaner, vinegar and water, hydrogen peroxide, or a mild abrasive. Spray a limited amount on the cloth or paper towel prior to applying. Do not spray cleaner on the switches directly, and do not wipe the switches down with a towel saturated (drips when wrung out) with cleaner.

If the ability to clean the switches using chemical spray disinfectants is desired, we recommend the use of the Sealed Screwless Wall Plate (SSW). The Sealed Screwless Wall Plate is a cover for the standard wall plate, designed with an IP54 rating. It consists of a transparent silicone rubber layer that covers the wall switch to prevent liquids from entering the wall switch while maintaining a tactile button feel. The Sealed Screwless Wall Plate is the ideal solution to prevent liquids from entering the wall switch while maintaining a tactile button feel. The Sealed Screwless Wall Plate is the ideal solution to help protect a wall switch from fluid entering the device while enabling the use of disinfectants recommended by the EPA for use against SARS-CoV-2, the coronavirus that causes COVID-19, which often require spraying or saturating the surface.

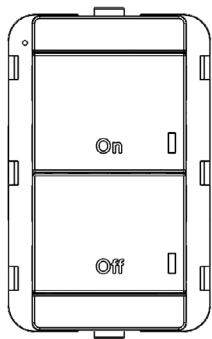


For more information on the [Sealed Screwless Wall Plates](#)

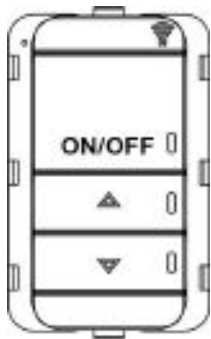
SPECIFICATIONS

| | |
|-----------------------|--|
| Dimensions | 2.74" H x 1.68" W x 1.63" D (6.96 cm x 4.27 cm x 4.14 cm) |
| Weight | 4.25 oz |
| Mounting | Single Gang Switch Box or Low Voltage Ring |
| Color | White, Ivory, Lt. Almond, Gray, Red, Black |
| Operating Temperature | -40C to 60C (Indoor Use Only) |
| Relative Humidity | Standard: 20 to 75% non-condensing |
| Radio Frequency | Dual Radio: 900Mhz & 2.4GHz |
| RF Transmit Power | 900Mhz: +20dBm; 2.4GHz: Variable |
| Wireless Standard | 900MHz: IEEE 802.15.4-based 2.4GHz: Version 4.0+ of the Bluetooth specification |
| Security | Application Data Encryption: AES-128 bit Mutual Entity Authentication Message Confidentiality Message Authentication and Replay Prevention Limited Anonymity |
| Regulatory Compliance | Complies with California Civil Code Title 1.81.26, Security of Connected Devices, approved under Senate Bill No. 327 (2018) FCC ID: 2ADCB-RMODIT3 RoHS IC: 6715C-RMODIT3 IFETEL: RCPNLNL20-2057 |
| Battery Type | 3 AAA lithium (included) |
| Battery Life | 10 years (with lithium batteries) |
| Programming Tool | CLAIRITY™+ mobile app |

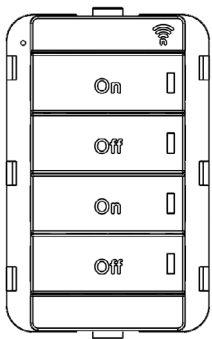
DEFAULT LABELING



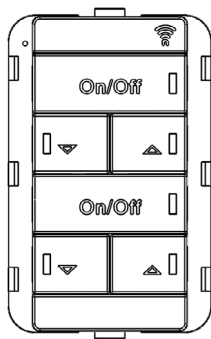
rPODBA



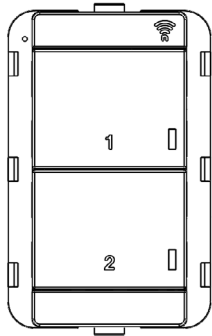
rPODBA DX



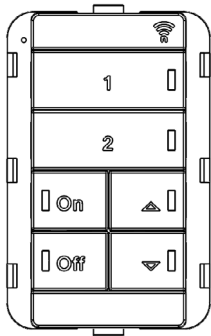
rPODBA 2P



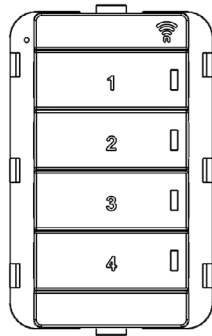
rPODBA 2P DX



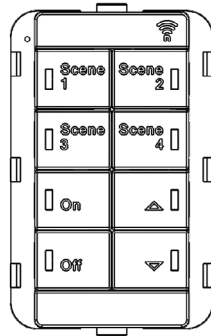
rPODBA 2S



rPODBA 2S DX



rPODBA 4S



rPODBA 4S DX

INSTALLATION OVERVIEW

Installation of the rPODBA is simple, wire free, and does not require special tools. Follow the instructions below to install the rPODBA wall switch.

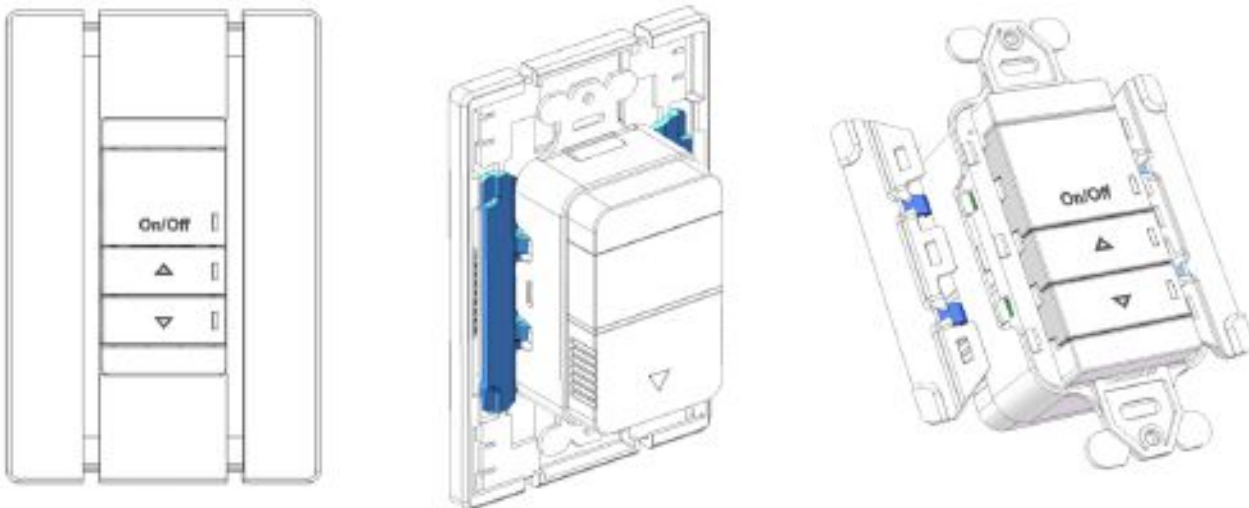
OUT-OF-THE-BOX DECORA WALL PLATE

- Remove the wall plate from the device by pulling the sides out to expand the wall plate and release it from the mounting flanges.
- Connect the unit to the gang box
 - The unit will connect to the gang box by screws, one at the top and one at the bottom
 - To ensure correct wall plate installation, drive the screws until the mounting flanges contact the wall surface. If the screws are overdriven, the mounting flanges will disengage, preventing wall plate installation. If this happens, reattach the mounting flange(s) and install to correct position. (The flanges may be reattached by inserting the two tabs in the side of the unit and pushing the part inward to engage the three snaps.)
- Reattach the wall plate
 - Expand the wall plate horizontally
 - Place the wall plate onto the unit
 - Contract the horizontally expanded wall plate onto the unit such that the side flange features seat inside the wall plate
- No wiring needed

OFF-THE-SHELF DECORA WALL PLATE

When installing the unit with standard off-the-shelf decora wall plates, the following steps should be followed.

- Remove the Acuity wall plate from the device by pulling the sides out to expand the wall plate and releasing it from the mounting flanges.



- Unhook and remove the side flanges from the device
- Connect the unit to the gang box
 - The unit will connect to the gang box by screws, one at the top and one at the bottom
- Attach the wall plate

OVERVIEW

The nPODMA Series WallPods are single gang nLight-enabled decorator wall switches that enable toggle/raise/lower/scene control of lighting zones. Equipped with soft-click push-buttons, and a green LED indicator for each button, these devices allow field replaceable and custom engraved button options. nPODMA WallPods communicate with other nLight devices, via CAT-5e cable, through RJ-45 connectors and can be daisy-chained to work with nLight power packs and/or nLight-enabled fixtures to provide switch control operations.

The scene control option presents a convenient method of selecting a custom lighting control scene for spaces in which installed, or requesting a global profile scene be run across several remote zones. By default, scene control wall switches are configured as on/off toggle switches and are to be customized programmatically through the SensorView software.

*In order to utilize a blink warning, system gateway and additional programming is required.

FEATURES

- Communicates with nLight network
- Remotely configurable/upgradeable
- Soft-click push-button control
- Sets lights to one of two or four preset levels with single button push (nPODMA xL versions only)
- Scene controllers run locally stored scenes or global scenes (stored on gateway)
 - Capable of Programming 4 Different Scene Types
 - Local "Profile" Scene – Modifies the operational configuration of up to 80 devices in the local zone. Stopping scene will revert devices to default settings.
 - Local "Preset" Scene – Modifies on/off/dim levels for up to 16 local switch groups. Exit scene through additional "preset" scene or WallPod control.
 - Global "Profile" Scene – Modifies the operational configuration of any devices on the system. Stopping scene will revert devices to default settings. Scene is stored on the system Gateway.
 - Global "Preset" Scene – Modifies on/off/dim levels for up to 128 global switch groups. Exit scene through additional "preset" scene or WallPod control.
- Easy-to-install screwless wall plate design offers a clean, uninterrupted aesthetic for a more refined look in the space.
- A full range of color options provides a variety of choices for your building designs with the assurance that the housing and the wall plate match.
- 1, 2, or 4 channel on/off
- 1, 2, or 4 channel raise/lower
- "Dynamic" options for custom button names when pairing with Acuity Brands nTUNE fixtures

CUSTOM BUTTON ENGRAVING

- Standard Button labeling is shown on back
- Custom lettering for units can be specified and ordered at: [nGrave Form](#)
- To ensure color uniformity, ordering templates facilitate specifying all buttons on a unit as custom lettered. Replacing single buttons not recommended
- Buttons may ship separately and require field installations

Buy American

BAA variants of this product are assembled in the USA and meet the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to www.acuitybrands.com/buy-american for additional information.

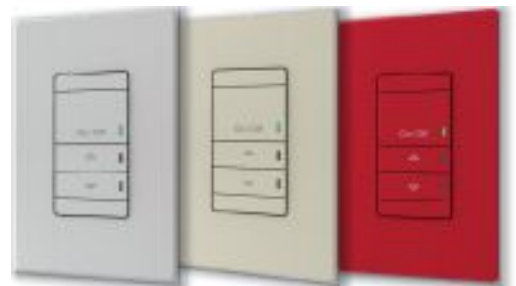
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Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.



nPODMA
Wallpod: On/Off & On/
Off+Raise/Lower



This item is an A+ capable component, which has been designed and tested to provide out-of-the-box luminaire compatibility with simple commissioning, when included as part of an A+ Certified™ Solution.

To learn more about A+, visit www.acuitybrands.com/aplus.



| nPODMA | | | | | | Example: nPODMA DX WH | |
|--------|---|---|---|---|-------------------------------|---|--|
| Series | Poles & Scenes | Dimming Control | Dynamic | Color | Temp/Humidity | Buy America(n) ⁶⁷ | |
| nPODMA | [blank] None 2P Two channels 4P Four channels 2L ¹ Two levels 2L AB ¹ High/low step control 4L ² Four levels with raise/lower 1SB ¹ 1 Scene control (2 buttons) 2S 2 Scene control (2 buttons) 2SB ¹ 2 Scene control (4 buttons) 4S 4 Scene control (4 buttons) 4SB ¹ 4 Scene control (8 buttons) | [blank] Standard DX On/off + raise/lower control | [blank] Standard CCT ³ Correlated color temperature GRSC ⁵ Grayscale COLOR ⁵ Color control EDUTW ⁴ Tuneable White | WH White IV Ivory GY Gray AL Lt Almond BK Black RD Red | [blank] Normal LT Low temp | [blank] Standard BAA Buy America(n) Act Compliant | |

| ACCESSORIES | | | | | |
|---------------------------------|-------------------|------------------|---|---|---|
| Series | # of Gangs | Mounting | Color | Packaging | |
| WS xPODA Wall Plates (Standard) | 1 GNG Single Gang | [blank] Standard | WH White IV Ivory GY ⁹ Gray AL ⁹ Lt Almond | BK ⁹ Black RD Red VP ⁹ Variety Pack | [blank] Single Unit ¹¹ M5 ⁹ 5 Pack M6 ^{8,9} 6 Pack |
| SSW ¹⁰ Sealed Cover | | | | | |

Notes

1. Not available with DX option.
2. Only available with DX option.
3. Only available with 2P DX version.
4. Only available with 4S and 4S DX versions.
5. Only available with 2P DX and 4S DX versions.
6. Only available in WH, IV, or GY.
7. Not available with LT option.
8. Only available for Variety Packs.
9. Not available for SSW Series.
10. Ships with custom screwless wall plate.
11. Single units only available with SSW series.

All nPODMA switches are shipped with wall plates and mounting flanges (WS XPODA), and mounting flanges (WS XPODA), however, the following order information is available to acquire replacement wall plates. Also compatible with the [WALLP](#) Series.

WALL SWITCH CLEANING

It will occasionally be necessary to clean the wall switches. All nPODMA switches may be wiped down with a soft cloth or paper towel dampened with glass cleaner, vinegar and water, hydrogen peroxide, or a mild abrasive. Spray a limited amount on the cloth or paper towel prior to applying. Do not spray cleaner on the switches directly, and do not wipe the switches down with a towel saturated (drips when wrung out) with cleaner.

If the ability to clean the switches using chemical spray disinfectants is desired, we recommend the use of the Sealed Screwless Wall Plate (SSW). The Sealed Screwless Wall Plate is a cover for the standard wall plate, designed with an IP54 rating. It consists of a transparent silicone rubber layer that covers the wall switch to prevent liquids from entering the wall switch while maintaining a tactile button feel. The Sealed Screwless Wall Plate is the ideal solution to help protect a wall switch from fluid entering the device while enabling the use of disinfectants recommended by the EPA for use against SARS-CoV-2, the coronavirus that causes COVID-19, which often require spraying or saturating the surface.

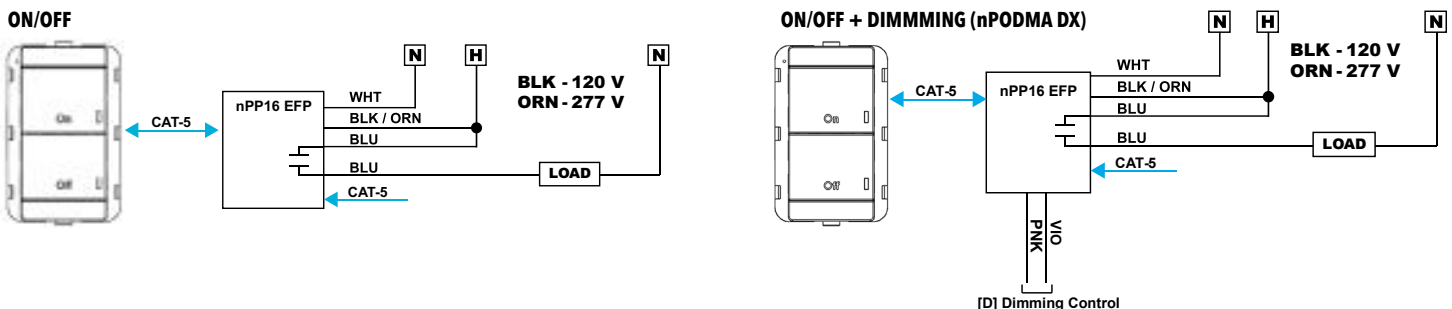


For more information on the [Sealed Covers](#)

WIRING

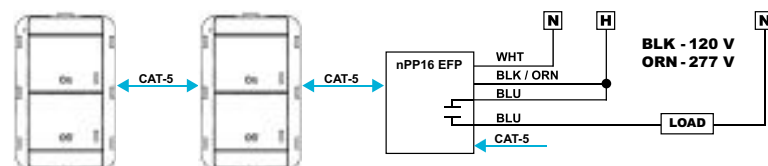
TYPICAL WIRING

Power to WallPod device is provided via the CAT-5e connection to an nLight enabled fixture, nLight power pack (e.g. **nPP16**), power supply (nPS80), or Bridge (nBRG 8).

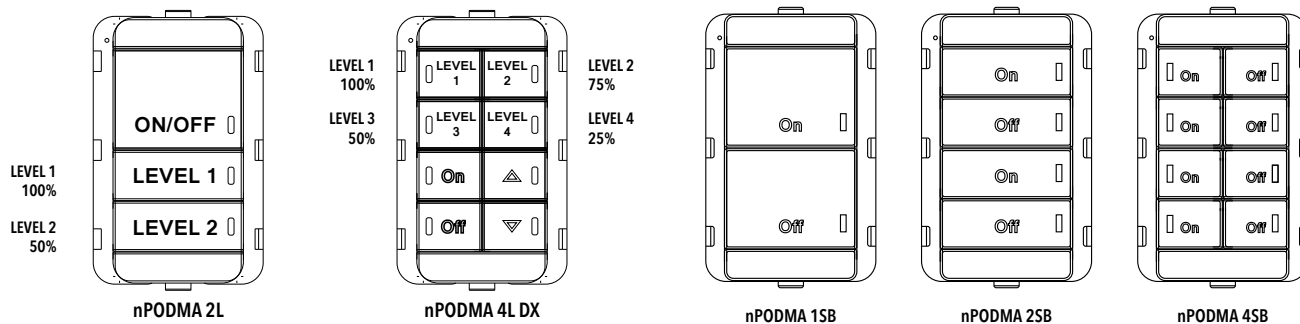
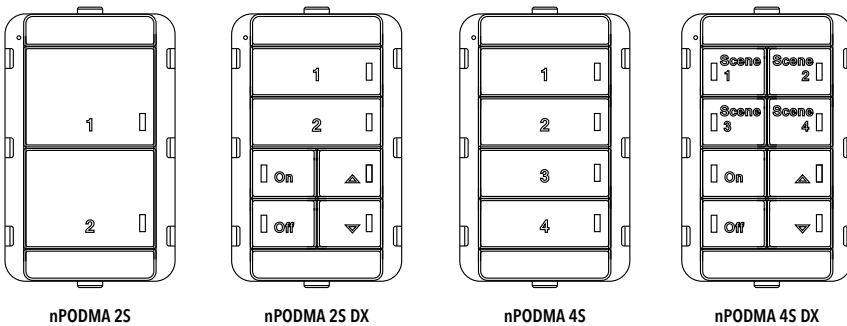
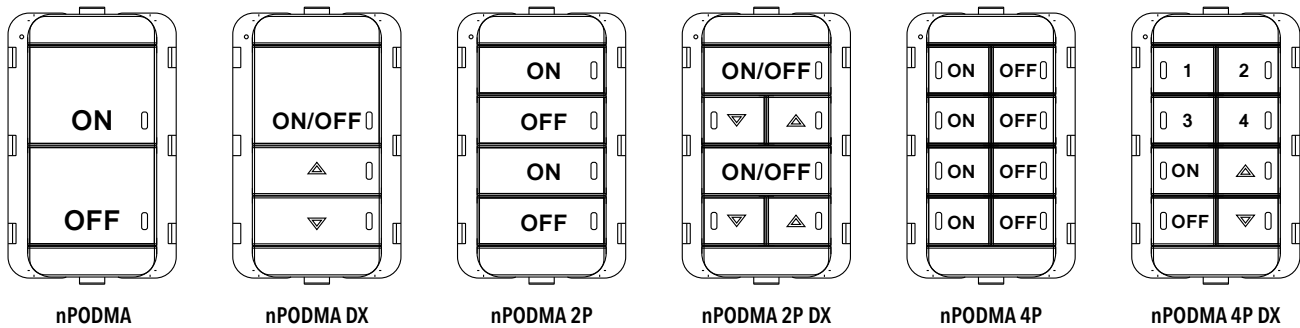


3-WAY CONFIGURATION WIRING

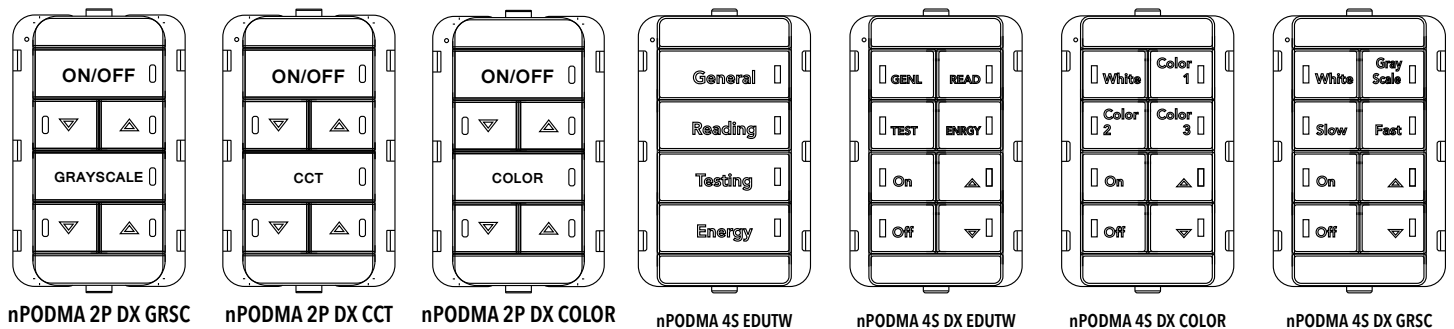
WallPods and/or nLight wall switch sensors can be configured together to create zones with multiple switching locations.



DEFAULT LABELING

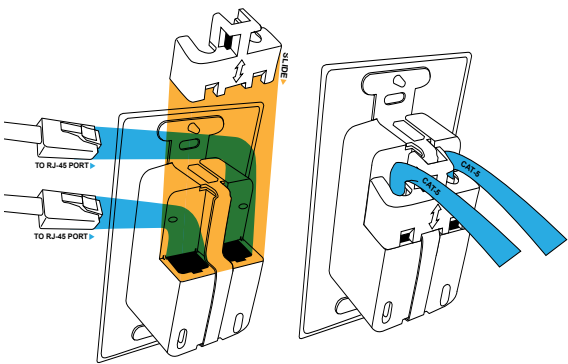


Dynamic wallpods below are paired with Acuity Brands nTUNE fixtures for out-of-box operation. Reference fixture cut sheets for additional details.



INSTALLATION

- Ensure CAT-5e cable(s) are effectively fed through the gang box
 - Push the CAT5e cables through the back of the gang box
- Remove the wall plate from the device by pulling the sides out to expand the wall plate and release it from the mounting flanges.
- Access RJ-45 port(s) on the WallPod by sliding the plastic guard up
- Insert the CAT-5e cable(s) to the RJ-45 port(s)
- Slide the guard back onto metal strap
- Connect the unit to the gang box
 - The unit will connect to the gang box by screws, one at the top and one at the bottom
 - To ensure correct wall plate installation, drive the screws until the mounting flanges contact the wall surface. If the screws are overdriven, the mounting flanges will disengage, preventing wall plate installation. If this happens, reattach the mounting flange(s) and install to correct position. (The flanges may be reattached by inserting the two tabs in the side of the unit and pushing the part inward to engage the three snaps.)
- Reattach the wall plate
 - Expand the wall plate horizontally
 - Place the wall plate onto the unit
 - Contract the horizontally expanded wall plate onto the unit such that the side flange features seat inside the wall plate



Attention! Only use non-booted CAT5e cables.

PROGRAMMING

- Refer to instruction card IN-11.3 for directions on programming the switch via the upper-most left push-button. All buttons are factory set to the matching switch channel (button 1 - channel 1, button 2 - channel 2, etc). For nPODMA 4P DX, channels to be controlled are selected first, then the control button (on/off or raise/lower).
- For 2L and 4L variants, the preset dim level of a button can be changed by first adjusting the light level with either the unit's raise/lower buttons (nPODM 4L DX) or via another raise/lower WallPod broadcasting on the same switch channel (necessary with a nPODM 2L). Once lights are at desired level, hold a LEVEL button for 8 seconds until the LED flashes. Levels can also be set via SensorView.

SPECIFICATIONS

| | | |
|---------------|----------------------------------|---|
| Electrical | Input Ratings | 15-24VDC, 5mA, Class 2 (nLight network power) |
| | Standards/Ratings | Energy Management Equipment, UL916 (E167435) |
| Mechanical | Dimensions | 2.74"H x 1.68"W x 1.63"D (70mm x 43mm x 41mm) - does not include ground strap |
| | Mounting | Single-Gang Box or Low Voltage Ring |
| | Connection Type | RJ-45 nLight Network Ports (2) |
| Environmental | Warrantied Operating Temperature | 32°F to 140°F (0°C to 60°C) LT Option: -4°F to 140°F (-20°C to 60°C) |
| | Relative Humidity | Up to 90%, Non-Condensing |
| | Standards/ Ratings | RoHS |
| | Security | Complies with California Civil Code Title 1.81.26, Security of Connected Devices, approved under Senate Bill No. 327 (2018) |

OVERVIEW

The nLight® UNITOUCH is an elegant capacitive touch screen wall switch that leverages the perfect blend between aesthetic design and intuitive user experience to enable control of any nLight controlled space. Developed with end-users first at mind, the nLight® UNITOUCH is an easy-to-install wall switch that enables control of nLight-enabled devices, scenes, shades and channels behind a multi-user access level architecture.

Equipped with Bluetooth(R) Low Energy (BLE), the nLight UNITOUCH enables users the ability to remotely control lights and shades through the MyPersonify mobile app.

FEATURES

- 3.5" full-color responsive capacitive touch screen
- Slim and compact form factor
- Simple and intuitive user interface
- Proximity screen sensor for auto "wake-up"
- Customizable Screen Saver Image
 - Supported file formats: JPG, PNG
 - Optimal resolution: 320x480
- Full alpha-numeric nomenclature for scenes and lighting channels
- Controls up to 16 On/Off/Dim lighting and shade channels
- Controls up to 16 scene controls
- Enables on-screen customization of all preset scenes, On/Off/Dim lighting and shade channels
- Optional password protected lockout screen
- Multi-level password/PIN protection
- Enables wireless control of scenes, lights and shades through the MyPersonify mobile app
- Mounts to a single gang switch box
- Complies with California Civil Code Title 1.81.26, Security of Connected Devices, approved under Senate Bill No. 327 (2018)



Warranty

Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.



nLight UNITOUCH™ Touch Screen Wall Switch



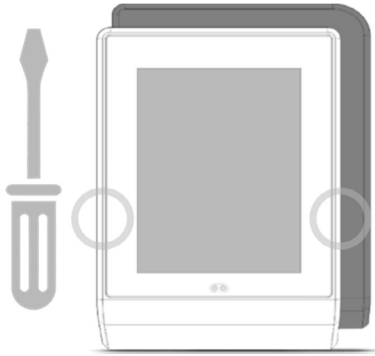
ORDERING INFORMATION

| Example: nPOD TOUCH WH | | |
|------------------------|--------------------------|----------|
| Switch | Power Supply Type | Color |
| nPOD TOUCH | [blank] Includes PS150 | WH White |
| | PS347 Includes PS150-347 | BK Black |
| | NPWS No Power Supply | |

The nLight UniTouch is equipped with two RJ-45 ports to facilitate CAT5e daisy-chain connection with other nLight-enabled devices, and a set of power terminals where low voltage power is connected (from the provided PS 150 power supply module).

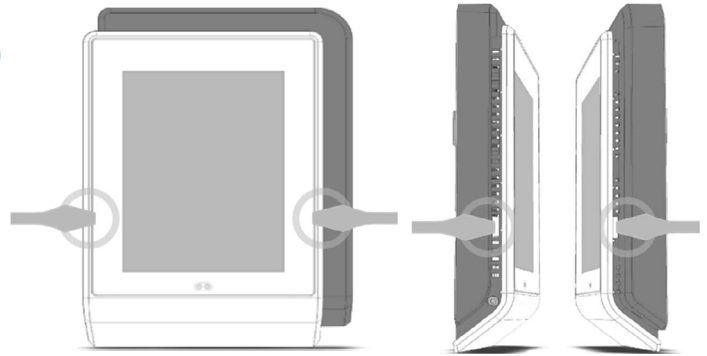
Mounting Instructions

STEP
1



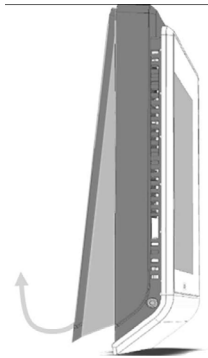
To mount, the faceplate must be detached from the backplate. This will require an appropriately sized tool (i.e., flat-head screwdriver) that can fit in the release tab.

STEP
2



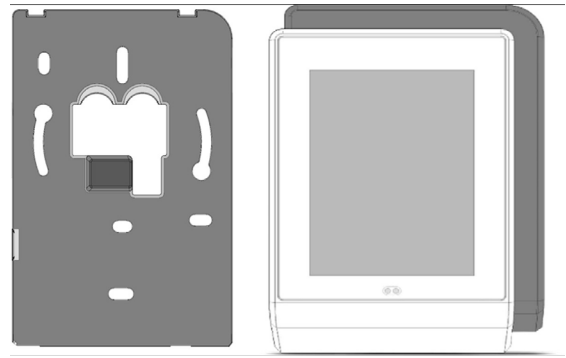
Using the appropriately sized tool, press in the release tabs on each side of the device until the backplate is noticeably released.

STEP
3



Pull the backplate out from the bottom, away from the faceplate, as pictured.

STEP
4



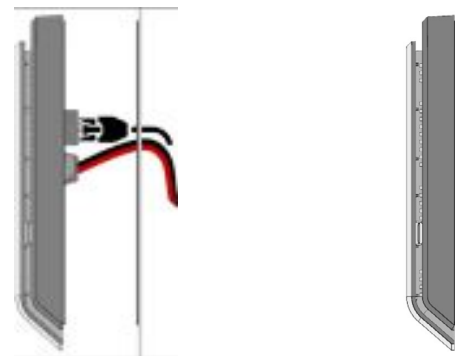
Device should be separated into two pieces, backplate and faceplate. The backplate will be used to mount onto a wall gang box.

STEP
5



Pull all wires out of the wall and run them through the central hole of the backplate. Screw the backplate onto the wall.

STEP
6



Plug the wire(s) into the connector(s), then gently push the excess wiring back into the wall. Reattach the front plate and ensure that it clips tightly in place. Tighten the security screw, if applicable.

SPECIFICATIONS

| | | |
|---------------|----------------------------------|---|
| Electrical | Input Ratings | 15-24VDC, <1.5W, Class 2 (via included PS-150 or PS-150-347 power supply) |
| | Standards/Ratings | Energy Management Equipment, FCC Rules Part 15, Subpart B Class B |
| Mechanical | Dimensions | 5.18"H x 3.37"W x 0.75"D (131.5mm x 85.5mm x 19mm) |
| | Mounting | Single-Gang Box or Low Voltage Ring |
| | Connection Type | RJ-45 nLight Network Ports (2) Low-Voltage Terminals |
| | Color: | White, Black |
| Environmental | Warrantied Operating Temperature | Standard: 32°F to 122°F (0°C to 50°C) |
| | Relative Humidity | Up to 90%, Non-Condensing |
| | Standards/ Rating | RoHS |
| General | Standards/ Rating | System Component to aid in compliance with Title 24, ASHRAE 90.1, IECC |
| | Regulatory | cULus Listed (E228719) |

OVERVIEW

The nDTC is a low voltage powered capacitive touch screen digital time clock that delivers smart and simple scheduling, dimming, switching, occupancy and photosensing for small-to-medium projects that require minimal footprint and flexibility of configuring. Available as a single gang wall-mount, or pre-assembled to an ARP panel, the device communicates with an nLight Wired network and supports up to 127 digital devices in an nLight control zone.

FEATURES

- Create and control up to 32 schedules (Normal & Holiday)
- Astronomical Timeclock feature enables +/- Sunset or Sunrise settings and programmable Latitude/ Longitude
- Controls up to 127 nLight devices
- Password protected configuration
- Optional password protected lock out
- Proximity screen sensor for auto “wake-up”
- Slim and compact form factor
- 3.5" full-color responsive capacitive touch screen
- Mounts to a single gang switch box (Standalone version)

Warranty

Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.



nLight nDTC
Touch Screen
Digital Time Clock



ORDERING INFORMATION

| Example: nDTC NPWS WH | | |
|-----------------------|--------------------------|----------|
| Switch | Power Supply Type | Color |
| nDTC | [blank] Includes PS150 | WH White |
| | PS347 Includes PS150-347 | BK Black |
| | NPWS No Power Supply | |

The nLight nDTC is equipped with two RJ-45 ports to facilitate CAT5e daisy-chain connection with other nLight-enabled devices, and a set of power terminals where low voltage power is connected (from the provided PS 150 power supply module).

WIRING – Wall-Mount version

A 15-24 VDC or VAC power supply can deliver power to the nLight® nDTC via the polarity insensitive terminal connections on the back of the unit. The PS 150 version power supply is recommended, as it conveniently mounts through a knock-out on the back of the junction box where the unit is mounted.

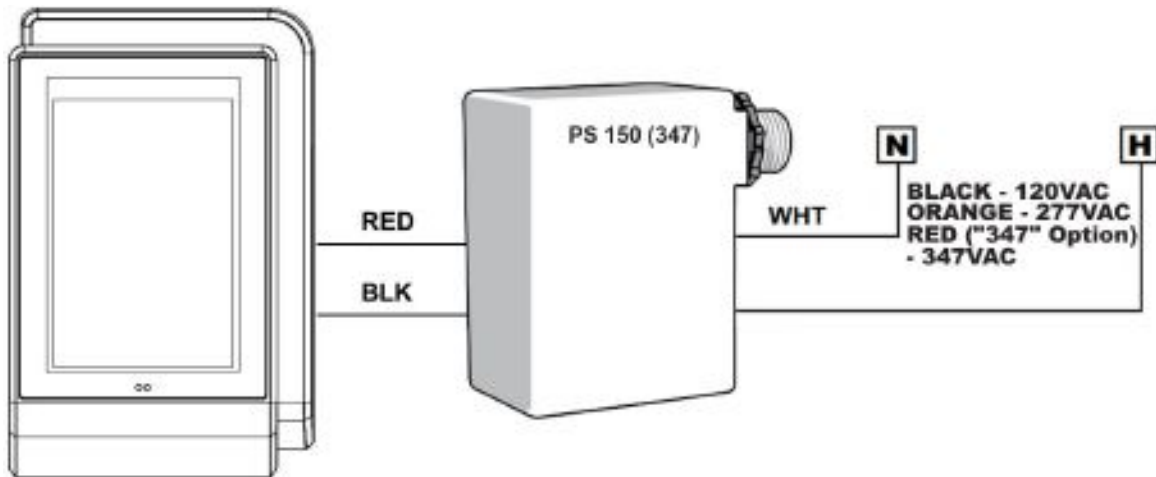


Figure 1 - Wiring Diagram

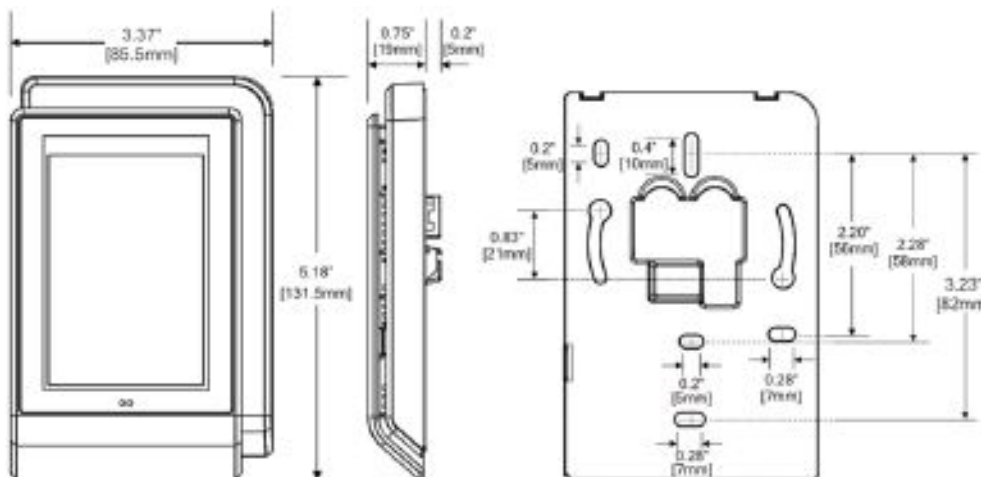
Mounting Instructions – Wall-Mount Version

The nLight® nDTC has been designed for ease of installation. However, certain conditions apply when choosing a suitable location for the device:

- The device should be installed approximately 6" (15cm) from a corner, to provide sufficient access to the faceplate release tabs.
 - Allow for proper clearance around the device's enclosure and wiring terminals to provide easy access for hardware configuration and maintenance.
 - Orient the device with the ventilation slots towards the top to permit proper heat dissipation.



The nLight® nDTC is not designed for outdoor use.



Installation – Wall-Mount Version

Upon unpacking, inspect the contents of the carton for shipping damages. Do not install a damaged device.



Take reasonable precautions to prevent electrostatic discharge to the device when installing, servicing or during operation. Discharge accumulated static electricity by touching one's hand to a well-grounded object before working with the device.

For proper installation and subsequent operation of the device, pay special attention to the following recommendations:

1. Turn circuit breaker to **OFF** position, or remove fuse(s), and test that power is off before installation process.



Never wire any electrical device with power turned on. Wiring while **HOT** may cause permanent damage to this device and other equipment and void warranty.

2. Remove the front cover of the device from the mounting plate:
 - a. Remove the security screw
 - b. Using an appropriately sized tool, press in the two (2) release tabs on the sides of the device and pull the front cover out from the bottom. See Figure 2 for security screw and release tab locations.
3. Pull all cables 6" (15cm) out of the wall and insert them through the central hole of the back plate.
4. Make sure that the mounting surface is flat and clean.
5. Screw the back plate onto the electrical junction box.
6. Plug the wire(s) into the connector(s). Gently push excess wiring back into the wall.
7. Reattach the front plate and make sure it clips tightly into place. Tighten the security screw.
8. Upon restoring power, unit will begin discovering connected devices. After discovery is complete, use touch screen features to confirm operation.

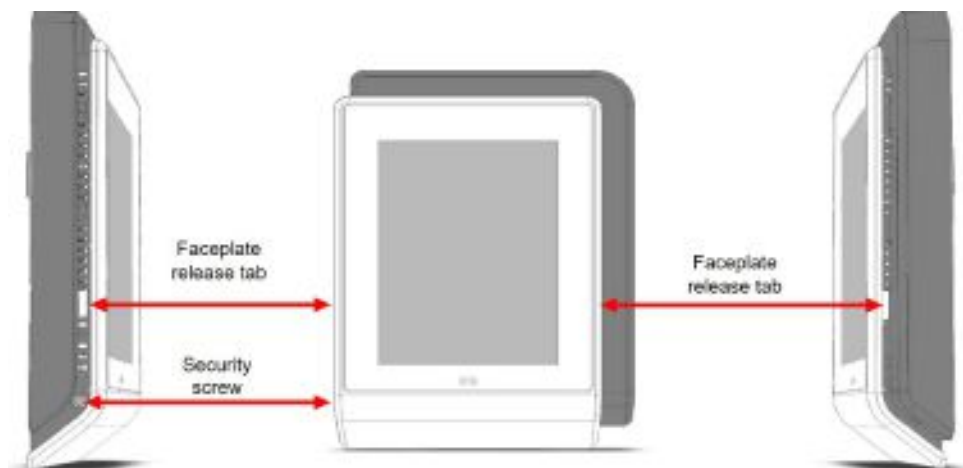


Figure 2 - Security Screw and Faceplate Tab Locations

SPECIFICATIONS

| | | |
|---------------|----------------------------------|--|
| Electrical | Input Ratings | 15-24VDC, 60mA, Class 2 (via included PS-150 or PS-150-347 power supply) |
| | Standards/Ratings | Energy Management Equipment, FCC Rules Part 15, Subpart B Class B |
| Mechanical | Dimensions | 5.18"H x 3.37"W x 0.75"D (131.5mm x 85.5mm x 19mm) |
| | Mounting | Single-Gang Box or Low Voltage Ring |
| | Connection Type | RJ-45 nLight Network Ports (2) Low-Voltage Terminals |
| | Color: | White, Black |
| Environmental | Warrantied Operating Temperature | Standard: 32°F to 122°F (0°C to 50°C) |
| | Relative Humidity | Up to 90%, Non-Condensing |
| | Standards/ Rating | RoHS |
| General | Standards/ Rating | System Component to aid in compliance with Title 24, ASHRAE 90.1, IECC |

LED

INTEGRAL DRIVER

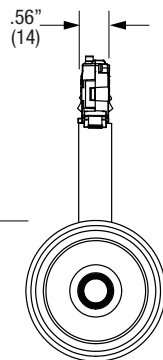
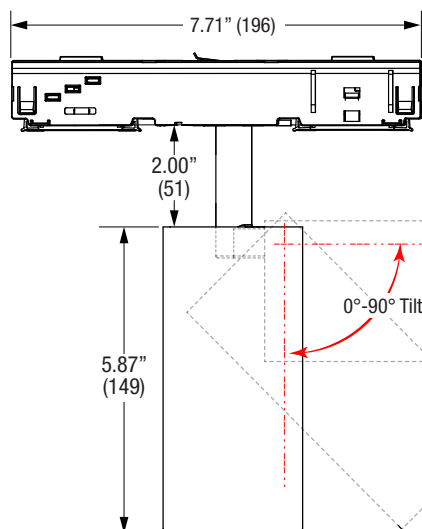
SMALL

PROJECT

TYPE

CATALOG NUMBER

Measurements in () are metric equivalents.



Specifications

TRACKHEAD

- 2.75" diameter cylinder shaped trackhead
- 0° - 90° vertical tilting / 360° horizontal rotation
- Constant friction
- Die cast aluminum housing
- LED optical grade reflector
- Powder coat finish

LED SOURCE

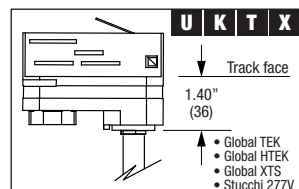
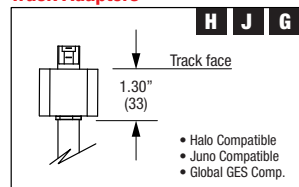
- CREE
- ValuDIM™ Warm dimming
- Field replaceable optics available
- Will accept 1 lens and 1 louver

ELECTRICAL

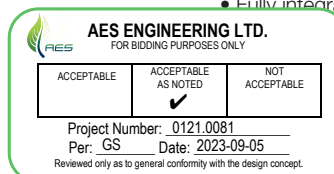
- Fully integral LED driver
- Dimming options

with Halo®, Juno®, Global®
Global® XTS track,
track, Global® HTEK track

Track Adapters



Halo® is a registered trademark of Cooper Industries,
Juno® is a registered trademark of Juno Lighting,
Global® is a registered trademark of Nordic Aluminium.



AES: CONFIRM THE FIXTURE FINISH WITH ARCHITECT.



ValuDIM™



5 YEAR WARRANTY
Limited

ORDERING INFO QuikShip In RED - 10 pc Minimum - Consult factory for quantities of 100 or more

| SERIES | ADAPTER | WATTAGE | CRI / COLOR | BEAM | POWER SUPPLY | FINISH |
|---|--------------------------------------|--|---|------------------------|---|-----------------------------------|
| TRA19B JULIE Trackhead Die-Cast Aluminum Adjustable Aim | H Halo® compatible* | 08C 8W LED | 8027 80CRI / 2700K | N Narrow 12° | D11 Phase Dimming 120V | BB All Black |
| | J Juno® compatible* | 801 lm del. | 8030 80CRI / 3000K | M Medium 25° | DM1 Phase or 0-10V Dimming 120V (V adapter only) | WB White with Black Bezel |
| | G Global® GES compatible* | 13C 13W LED | 8035 80CRI / 3500K | W Wide 34° | LD2 Non Dimming 277V (K adapter only) | WW All White |
| | T Global® TEK compatible* | 1078 lm del. | 8040 80CRI / 4000K | V Very Wide 55° | D22 0-10V Dimming 277V (U adapter only) | SB Silver with Black Bezel |
| | X Global® XTS compatible* | 15C 15W LED | 9227 92CRI / 2700K | | | Consult factory for custom colors |
| | K Global® HTEK compatible** | 1208 lm del. | 9230 92CRI / 3000K | | | |
| | V Stucchi 120V compatible*** | Delivered @ 80CRI / 3000K Narrow Beam | 9235 92CRI / 3500K | | | |
| | U Stucchi 277V compatible**** | | 9240 92CRI / 4000K | | | |
| | * D11 only | | 9827 98CRI / 2700K | | | |
| | ** LD2 only | | 9830 98CRI / 3000K | | | |
| | *** DM1 only | | 9835 98CRI / 3500K | | | |
| | **** D22 only | | 9840 98CRI / 4000K | | | |
| | | ValuDIM™ 15V 15W LED / 712lm del. / 3000-1800K Warm Dimming Delivered @ 92CRI / 3000K Narrow Beam | 9220 92CRI / 3000-1800K Warm Dimming (ValuDIM Only) | | | |

Ordering Example: **TRA19B-K-13C-8030-N-LD2-WW**

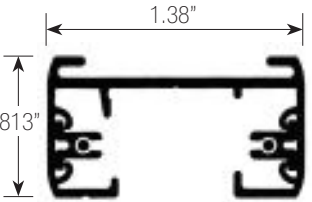
| | | |
|---------|------|----------------|
| PROJECT | TYPE | CATALOG NUMBER |
|---------|------|----------------|

AES ENGINEERING LTD.
FOR BIDDING PURPOSES ONLY

| | | |
|------------|---------------------|----------------|
| ACCEPTABLE | ACCEPTABLE AS NOTED | NOT ACCEPTABLE |
| | ✓ | |

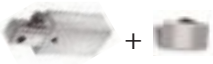
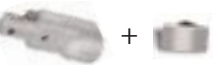







Project Number: 0121.0081
Per: GS Date: 2023-09-05
Reviewed only as to general conformity with the design concept.

20 AMP 120V ONE CIRCUIT TRACK SECTION

| PRODUCT | CATALOG # | DESCRIPTION |
|---|-----------|---|
|  | GES204-3 | 4' Track Section (44" actual length) - White |
| | GES204-2 | 4' Track Section (44" actual length) - Black |
| | GES204-1 | 4' Track Section (44" actual length) - Natural Aluminum |
| | GES208-3 | 8' Track Section (92" actual length) - White |
| | GES208-2 | 8' Track Section (92" actual length) - Black |
| | GES208-1 | 8' Track Section (92" actual length) - Natural Aluminum |
| | GES212-3 | 12' Track Section (140" actual length) - White |
| | GES212-2 | 12' Track Section (140" actual length) - Black |
| | GES212-1 | 12' Track Section (140" actual length) - Natural Aluminum |

AES: CONFIRM THE TRACK FINISH WITH ARCHITECT.

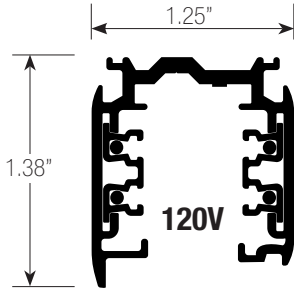
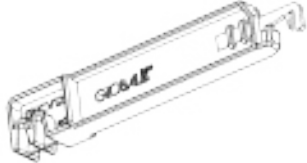
20 AMP 120V TRACK ACCESSORIES GLOBAL 20 AMP 120V TRACK ACCESSORIES

| PRODUCT | CATALOG # | DESCRIPTION |
|---|--------------------|---|
|  | GES11+41 | Live End Feed for One Circuit Track Comes with 1X GES41 (<i>Reference top of page 2</i>) <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
|  | GES13+41 | Circuit End Feed for One Circuit Track Comes with 1X GES41 (<i>Reference top of page 2</i>) <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
|  | GES14+2X41 | Live Center Feed for One Circuit Track Comes with 2X GES41 (<i>Reference top of page 2</i>) <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
|  | GES34+2X41 | Feedable "L" Connector for One Circuit Track Comes with 2X GES41 (<i>Reference top of page 2</i>) <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
|  | GES40+3X41 | Feedable "T" Connector for One Circuit Track / Left / Right Configurable Comes with 3X GES41 (<i>Reference top of page 2</i>) <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
|  | GES38+4X41 | Conduit Continuation Kit for One Circuit Track Used to jumper track runs around obstacles Comes with 4X GES41 (<i>Reference top of page 2</i>) <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
|  | GES21 | Linear Coupler for One Circuit Track <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
|  | GEA21 | Track Reinforcement Plate • For use with Linear Coupler to strengthen mechanical connection between track sections <i>Available finish: -1 = Silver/Gray</i> |
|  | GES11CB GES14CB | GES Live End Feed / Current Limiter Enclosure GES Live Center Feed / Current Limiter Enclosure (<i>Circuit breaker by others</i>) <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |

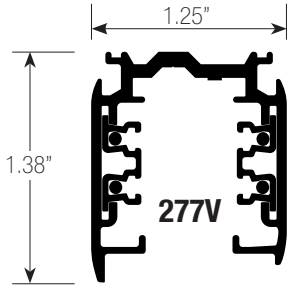
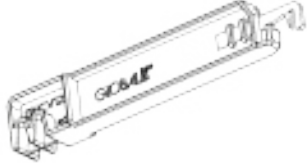
| PRODUCT | CATALOG # | DESCRIPTION |
|---|--|--|
|  | GES41 | Dead End - Included with most live end feeds, Live center feeds, conduit end feeds and L, T, and X connectors. May also be ordered separately. <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
|  | GES13+16 | Conduit Continuation Kit for One Circuit Track Used to jumper track runs around obstacles <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
|  | GES15 | Outlet Box Cover <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
|  | GES70 | Monopoint Canopy - One Circuit <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
|  | GES67+41 | Floating Feed for One Circuit Track Comes with 2X GES41 (<i>Reference top of page</i>) <i>Available finish: -2 = Black, -3 = White</i> |
|  | GES17 | T-Bar Feed Kit for One Circuit Track Allows for feeding of track from an intersection point in a suspended ceiling application. For use with GES/GET 11, 14, 34, 38, 39 & 40 connectors. <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
|  | GES66 | Field Switchable Track Adapter - <ul style="list-style-type: none"> • Max 20lbs / 600W • Supplied with 1/8" 27 IPS threaded nipple for fixture connection • Grounded nipple (GEA66GW) available upon request <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
| Mounting Options (Maximum 4' O.C.) | | |
|  | GEA7 | <ul style="list-style-type: none"> • For Mounting to T-Bar: T-Bar Mounting Clip -2 = Black, -3 = White |
|  | SKB30 GEA6 | <ul style="list-style-type: none"> • For Mounting with Threaded Rod: Cable or Threaded Rod Mount Ceiling Cup. -2 = Black, -3 = White <i>(Threaded Rod by Others)</i> Threaded Rod Mounting Clip - Finish = N/A |
|  | SKB30 SKB34 GEA12 | <ul style="list-style-type: none"> • For Mounting with Aircraft Cable: Cable or Threaded Rod Mount Ceiling Cup. -2 = Black, -3 = White Cable -1 = 5ft, -1/3m = 9ft, -1/5m = 16ft Cable Mounting Clip - Finish = N/A |
|  | GEA3712 GEA3718 GEA3724 GEA3736 GEA3748 GEA11 GEA10 | <ul style="list-style-type: none"> • For Mounting with Pendant Stem: 12" Stem Kit Includes stem and canopy 18" Stem Kit Includes stem and canopy 24" Stem Kit Includes stem and canopy 36" Stem Kit Includes stem and canopy 48" Stem Kit Includes stem and canopy FOR EVERY GEA37 STEM A GEA10 OR GEA11 IS REQUIRED End Feed Stem Suspension Point (Stem not included) Universal Stem Suspension Point (Stem not included) <i>Available finish: -2 = Black, -3 = White</i> |

| | | |
|---------|------|----------------|
| PROJECT | TYPE | CATALOG NUMBER |
|---------|------|----------------|

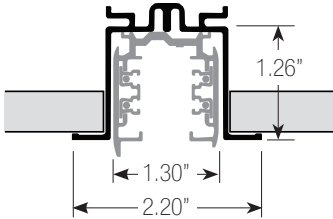
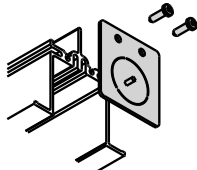
20 AMP 120V TWO CIRCUIT / TWO NEUTRAL TRACK LENGTHS

| PRODUCT | CATALOG # | DESCRIPTION | ACCESSORY |
|---|-----------|---|--|
|  | TEK404-3 | 4' 120V Track Section - 2cct/2ntl - White | XTSV12 Conductor Bending Tool (Required for field cutting of track)  |
| | TEK404-2 | 4' 120V Track Section - 2cct/2ntl - Black | |
| | TEK404-1 | 4' 120V Track Section - 2cct/2ntl - Natural Aluminum | |
| | TEK408-3 | 8' 120V Track Section - 2cct/2ntl - White | |
| | TEK408-2 | 8' 120V Track Section - 2cct/2ntl - Black | |
| | TEK408-1 | 8' 120V Track Section - 2cct/2ntl - Natural Aluminum | |
| | TEK412-3 | 12' 120V Track Section - 2cct/2ntl - White | |
| | TEK412-2 | 12' 120V Track Section - 2cct/2ntl - Black | |
| | TEK412-1 | 12' 120V Track Section - 2cct/2ntl - Natural Aluminum | |




20 AMP 277V TWO CIRCUIT / TWO NEUTRAL TRACK LENGTHS

| PRODUCT | CATALOG # | DESCRIPTION | ACCESSORY |
|--|-----------|---|---|
|  | HTEK404-3 | 4' 277V Track Section - 2cct/2ntl - White | XTSV12 Conductor Bending Tool (Required for field cutting of track)  |
| | HTEK404-2 | 4' 277V Track Section - 2cct/2ntl - Black | |
| | HTEK404-1 | 4' 277V Track Section - 2cct/2ntl - Natural Aluminum | |
| | HTEK408-3 | 8' 277V Track Section - 2cct/2ntl - White | |
| | HTEK408-2 | 8' 277V Track Section - 2cct/2ntl - Black | |
| | HTEK408-1 | 8' 277V Track Section - 2cct/2ntl - Natural Aluminum | |
| | HTEK412-3 | 12' 277V Track Section - 2cct/2ntl - White | |
| | HTEK412-2 | 12' 277V Track Section - 2cct/2ntl - Black | |
| | HTEK412-1 | 12' 277V Track Section - 2cct/2ntl - Natural Aluminum | |

RECESSED HOUSING FOR TWO CIRCUIT / TWO NEUTRAL TRACK SECTIONS 120V or 277V

| PRODUCT | CATALOG # | DESCRIPTION | END CAP |
|---|-----------|---|---|
|  | FTP404-3 | 4' 3.50" Recessed Track Housing - White | FTP41 Available finish: 1 = Silver/Gray / 2 = Black 3 = White |
| | FTP404-2 | 4' 3.50" Recessed Track Housing - Black | |
| | FTP404-1 | 4' 3.50" Recessed Track Housing - Natural Aluminum | |
| | FTP408-3 | 8' 3.50" Recessed Track Housing - White |  |
| | FTP408-2 | 8' 3.50" Recessed Track Housing - Black | |
| | FTP408-1 | 8' 3.50" Recessed Track Housing - Natural Aluminum | |
| | FTP412-3 | 12' 3.50" Recessed Track Housing - White | |
| | FTP412-2 | 12' 3.50" Recessed Track Housing - Black | |
| | FTP412-1 | 12' 3.50" Recessed Track Housing - Natural Aluminum | |

20 AMP 120V / 277V TWO CIRCUIT / TWO NEUTRAL TRACK ACCESSORIES

| PRODUCT | CATALOG # | DESCRIPTION |
|---|-----------------|--|
|  | TEK11 HTEK11 | Live End Feed for 2 Circuit / 2 Neutral Track 120V Live End Feed for 2 Circuit / 2 Neutral Track 277V Available finish: -1 = Silver/Gray, -2 = Black, -3 = White |
|  | TEK14 HTEK14 | Live Center Feed for 2 Circuit / 2 Neutral Track 120V Live Center Feed for 2 Circuit / 2 Neutral Track 277V Available finish: -1 = Silver/Gray, -2 = Black, -3 = White |
|  | TEK34 HTEK34 | Feedable "L" Connector for 2 Circuit / 2 Neutral Track 120V Feedable "L" Connector for 2 Circuit / 2 Neutral Track 277V Available finish: -1 = Silver/Gray, -2 = Black, -3 = White |

| PRODUCT | CATALOG # | DESCRIPTION |
|---|--|--|
|  | TEK39 TEK40 HTEK39 HTEK40 | Feedable "T" Connector for 2 Circuit / 2 Neutral Track Adjustable Right Polarity 120V Feedable "T" Connector for 2 Circuit / 2 Neutral Track Adjustable Left Polarity 120V Feedable "T" Connector for 2 Circuit / 2 Neutral Track Adjustable Right Polarity 277V Feedable "T" Connector for 2 Circuit / 2 Neutral Track Adjustable Left Polarity 277V <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
|  | TEK38 HTEK38 | Feedable "X" Connector for 2 Circuit / 2 Neutral Track 120V Feedable "X" Connector for 2 Circuit / 2 Neutral Track 277V <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
|  | TEK24 HTEK24 | Adjustable Elbow Connector for 2 Circuit / 2 Neutral Track 120V Adjustable Elbow Connector for 2 Circuit / 2 Neutral Track 277V <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
|  | TEK21 HTEK21 | Linear Coupler for 2 Circuit / 2 Neutral Track 120V Linear Coupler for 2 Circuit / 2 Neutral Track 277V <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
|  | TEK41 HTEK41 | Dead End 120V (Must be ordered separately) Dead End 277V (Must be ordered separately) <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
|  | TEK11CB HTEK11CB | TEK Live End Feed / Current Limiter Enclosure 120V HTEK Live End Feed / Current Limiter Enclosure 277V (Circuit breaker by others) <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
|  | GES15 | Outlet Box Cover <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
|  | TEK100L HTEK100L | Adapter - Switchable between circuits & on / off • Max. 20lbs. / 1200W - Includes rotation lock Adapter - Switchable between circuits & on / off • Max. 20lbs. / 2770W - Includes rotation lock <i>Available finish: -1 = Silver/Gray, -2 = Black, -3 = White</i> |
| Mounting Options (Maximum 4' O.C.) | | |
|  | SKBT12 | • For Mounting to T-Bar: T-Bar Ceiling Mounting Clip -2 = Black, -3 = White |
|  | SKB30 SKB34 SKB12 | • For Mounting with Threaded Rod or Aircraft Cable: Cable or Threaded Rod Mount Ceiling Cup. -2 = Black, -3 = White Cable -1 = 5ft, -1/3m = 9ft, -1/5m = 16ft (Threaded rod by others) Cable or Threaded Rod Mount Clip -1 = Silver/Gray, -2 = Black, -3 = White |
|    | SPUS12 SPUS18 SPUS24 SPUS36 SPUS48 SP4E SP4L SP4T SP4X SP4P | • For Mounting with Pendant Stem: 12" Stem Kit Includes stem and canopy 18" Stem Kit Includes stem and canopy 24" Stem Kit Includes stem and canopy 36" Stem Kit Includes stem and canopy 48" Stem Kit Includes stem and canopy <i>FOR EVERY SPUS STEM AN SP4E, SP4L, SP4T, SP4X OR SP4P IS REQUIRED</i> End Feed Suspension Point "L" Feed Suspension Point "T" Feed Suspension Point "X" Feed Suspension Point Universal Stem Suspension Point Includes bracket and cover. Stem not included <i>Available finish: -2 = Black, -3 = White</i> |

THE FOLLOWING ADDENDUM SUPERCEDES INFORMATION CONTAINED IN DRAWINGS AND SPECIFICATIONS ISSUED FOR THE PROJECT TO THE EXTENT REFERENCED. THIS ADDENDUM FORMS PART OF THE TENDER DOCUMENTS AND IS SUBJECT TO ALL OF THE CONDITIONS SET OUT IN CONTRACT CONDITIONS.

This electrical addendum contains one (1) page.

PART 1 ALTERNATE SUBMITTALS

1.1 CCTV ALTERNATE REQUEST 1

- .1 Please see the attachment for review comments.
- .2 The attachment contains 6 pages.

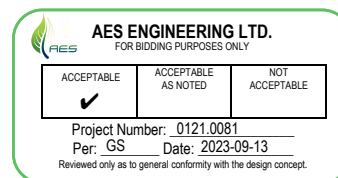
1.2 CCTV ALTERNATE REQUEST 2

- .1 Please see the attachment for review comments.
- .2 The attachment contains 13 pages.

END OF ELECTRICAL ADDENDUM NO. 04

Sarix® IMP Indoor and Environmental Domes

UP TO 5 MP, H.265, H.264, WDR, DAY/NIGHT IP DOMES



Product Features

- H.265, H.264 Main, High, MJPEG video encoding
- Up to 5 MP resolution at 30 frames per second
- Up to 60 frames per second (ips) at 4 MP for 5 MP cameras
- Autofocus motorized remote zoom lens
- Integrated adaptive IR illumination up to 50 m (some models)
- Operating temperature up to 60°C (140°F) (environmental models)
- Micro SDHC and SDXC card up to 2 TB addressable, 128 GB testable
- Pelco Pro Analytics Suite including Adaptive Motion, Object Counting, Motion Detection, Camera Sabotage
- Power over Ethernet (PoE or PoE+), 24 VAC, 12 VDC
- Pelco Smart Compression Technology
- All models vandal resistant to IK10
- Compatible with Pelco and third-party video management systems
- ONVIF Profile S, Profile G, Profile Q, and Profile T conformant

Sarix Professional Range

Powerful, versatile, and affordable, the **Sarix® Professional (P)** range cameras pack the most popular features and functionality of Sarix technology into a wide range of indoor and outdoor options, including bullet cameras and domes. There is also a vandal resistant wedge camera and a box camera. Mix and match the performance options and form factor you need for almost any lighting condition, environment, and application.

IMP Dome Series Camera

Within the **Sarix Professional** range, the **Sarix IMP Series** dome cameras feature a remote zoom lens for wide angle or long range surveillance needs. Autofocus capability ensures the camera can be automatically refocused when needed. Additionally, the **Sarix IMP Series** features advanced color science and true WDR, optional adaptive IR illumination for increased visibility in difficult lighting conditions. IK10 vandal resistant on both indoor and outdoor domes and IP66/IP67 on the outdoor dome ensures enough robustness for installation in challenging environments.

Video

Sarix Professional provides options for three simultaneous video streams. The three streams can be compressed with efficient H.265, H.264 High or Main profiles, or MJPEG formats. The streams can be configured to a variety of frame rates and variable bit rates to



- Full 3-year warranty

optimize image quality with bandwidth and storage efficiency. Pelco Smart Compression is available on both H.264 and H.265, minimizing storage and bandwidth utilization.

Edge Storage

Sarix Professional range cameras feature onboard edge storage with a micro SDHC and SDXC card. Video clips of varying lengths can be stored to the card upon alarm, or video can be written continuously to the SD card in the case of network outage. Video can be retrieved from the card through the FTP protocol or by using an ONVIF Profile G compliant client.

Open and Integrated

Sarix Professional range cameras seamlessly connect to Pelco video management systems such as VideoXpert™, VXToolbox, Endura® version 2.0 (or later), and Digital Sentry® version 7.3 (or later). **Sarix Professional** range cameras integrate with major third-party systems through the open Pelco API or the ONVIF Profile S, Profile G, Profile Q, and Profile T standards.

Standard Web Interface

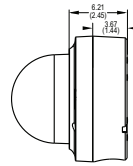
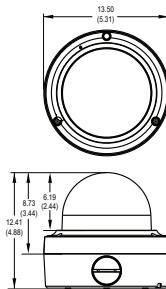
Pelco cameras use a standard Web browser interface for easy remote setup and administration. Controls are optimized for convenient one-step camera configuration for features including color, exposure, flicker control, backlight compensation, and streaming.

TECHNICAL SPECIFICATIONS

BACK BOX FEATURES

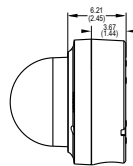
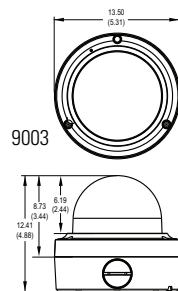


VALUES IN PARENTHESES ARE INCHES; ALL OTHERS ARE CENTIMETERS.



Indoor Surface Mount

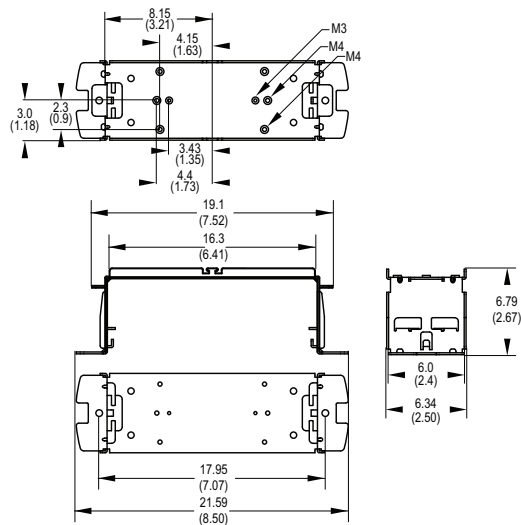
- Aluminum Body and Trim Ring; Polycarbonate Bubble
- RAL 9003
- IK10 (20J) Impact Resistance
- IEEE802.3af PoE, 18 ~ 32 VAC, 12 +/-10% VDC
- IR Illumination 50 m
- IP 64 Ingress Protection



Environmental Surface Mount

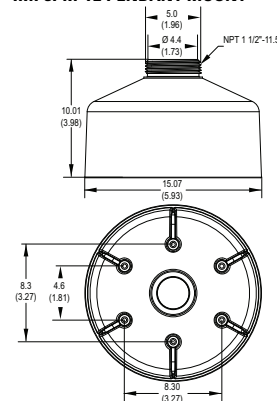
- Aluminum Body and Trim Ring; Polycarbonate Bubble
- RAL 9003
- Type 4X, When Used with IMP3EBAP
- IK10 (20J) Impact Resistance
- IEEE802.3at PoE, 18 ~ 32 VAC, 12 +/-10% VDC
- IR Illumination 50 Meters
- IP66, IP67 Ingress Protection

IMP3ICM-1E IN-CEILING BRACKET



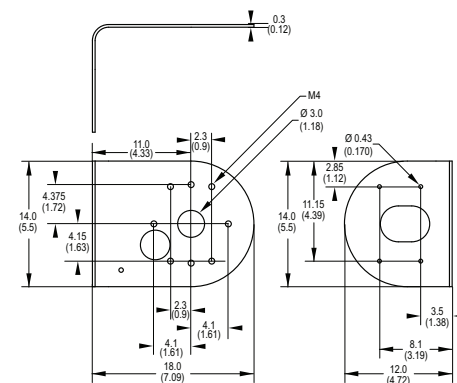
Color: RAL 9003

IMP3PM-1E PENDANT MOUNT



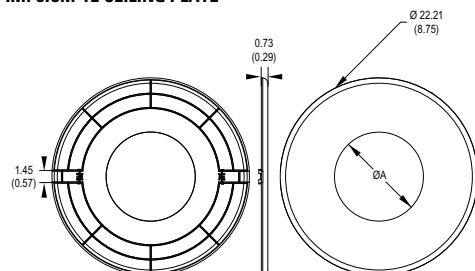
Color: RAL 9003

IMP3PMB-1I WALL MOUNT BRACKET



Color: RAL 9003

IMP3ICM-1E CEILING PLATE



Color: RAL 9003

TECHNICAL SPECIFICATIONS

CAMERA

| | |
|--------------------------|--|
| Imaging Device | 1/2.8-inch |
| Imager Type | CMOS |
| Imager Readout | Progressive scan |
| Highest Resolution | |
| 5MP | 2592 x 1944 (5.0 MP) |
| 3MP | 2048 x 1536 (3 MP) |
| 2 MP | 1920 x 1080 (2 MP) |
| 1 MP | 1280 x 960 (1 MP) |
| Electronic Shutter Range | 1/10,000 to 1 sec |
| True Wide Dynamic Range | 120 dB, per IEC62676 |
| White Balance | Range: 2,000° to 10,000°K; Selectable ATW (Auto Tracing White Balance), Auto, and Manual |
| 3D Noise Reduction | Yes (ON/OFF selectable) |

Minimum Illumination

| MP | Lens | Sensitivity | Color | | Mono | | Mono (IR on) |
|------|-----------|-------------|------------|-------------|----------|------------|--------------|
| | | | 33 ms | 200 ms | 33 ms | 200 ms | |
| 5 MP | 2.8-12 mm | f/1.4 | 0.26 lux | 0.065 lux | 0.15 lux | 0.0375 lux | 0.0 lux |
| 3 MP | 2.8-12 mm | f/1.4 | 0.065 lux | 0.01625 lux | 0.03 lux | 0.0075 lux | 0.0 lux |
| 2 MP | 2.8-12 mm | f/1.4 | 0.0169 lux | 0.00416 lux | 0.01 lux | 0.0025 lux | 0.0 lux |
| 1 MP | 2.8-12 mm | f/1.4 | 0.0169 lux | 0.00416 lux | 0.01 lux | 0.0025 lux | 0.0 lux |

| | |
|------------------------|--|
| Day/Night Capabilities | Mechanical IR cut filter (ON/OFF/AUTO), with different set points on lux |
| IR Illumination | 850 nm adaptive IR, up to 50 meters; auto ON in night mode, or OFF |
| Signal to Noise Ratio | ≥50 dB |

LENS

| | |
|----------------|----------------------|
| Lens Type | Built-in; varifocal |
| Focal Length | f/1.4, 2.8 ~ 12 mm |
| Focus | Autofocus, motorized |
| Zoom | Remote |
| Auto Iris Type | DC-Iris |

Field of View*

| Focal Length | Angle of View | 1 MP | 2 MP | 3 MP | 5 MP |
|--------------|---------------|----------|-----------|-----------|-----------|
| 2.8 to 12 mm | Diagonal | 96°~ 32° | 123°~ 40° | 120°~ 39° | 124°~ 40° |
| | Horizontal | 74°~ 26° | 103°~ 35° | 90°~ 31° | 94°~ 32° |
| | Vertical | 55°~ 20° | 54°~ 20° | 66°~ 23° | 68°~ 24° |

*Field of view may vary with changes in resolution settings.

TECHNICAL SPECIFICATIONS

VIDEO

Video Streams

Up to three simultaneous streams, the second stream and third stream are variable based on the setup of the primary stream

Video Overlay

Camera name, time, date, and customizable text with multiple supported languages. Embedding of custom images and logos supported.

Available Resolutions

| MP | Width | Height | Aspect Ratio |
|-----|-------|--------|--------------|
| 5.0 | 2592 | 1944 | 4:3 |
| 3.7 | 2560 | 1440 | 16:9 |
| 3.2 | 2048 | 1536 | 4:3 |
| 3 | 2304 | 1296 | 16:9 |
| 2.1 | 1920 | 1080 | 16:9 |
| 1.9 | 1600 | 1200 | 4:3 |
| 1.2 | 1280 | 960 | 4:3 |
| 0.9 | 1280 | 720 | 16:9 |
| 0.5 | 800 | 600 | 4:3 |
| 0.3 | 640 | 480 | 4:3 |
| 0.2 | 640 | 360 | 16:9 |
| 0.1 | 320 | 240 | 4:3 |
| 0.1 | 320 | 180 | 16:9 |

Frame Rates

| MP | Images per Second (ips) |
|------|--|
| 5 MP | 60, 50, 30, 25, 20, 16.67, 15, 12.5, 10, 7.5, 5, 3, 2, 1 |
| 3 MP | 30, 25, 20, 16.67, 15, 12.5, 10, 7.5, 5, 3, 2, 1 |
| 2 MP | 30, 25, 20, 16.67, 15, 12.5, 10, 7.5, 5, 3, 2, 1 |
| 1 MP | 30, 25, 20, 16.67, 15, 12.5, 10, 7.5, 5, 3, 2, 1 |

Note: Available frame rates are selectable for each independent stream depending on the coding, resolution, and stream configuration.

Video Encoding

H.265, H.264 High or Main profiles; and MJPEG

Bit Rate Control

Constant bit rate (CBR), constrained variable bit rate (CVBR) with configurable maximum value

Orientation Modes

Corridor Mode, Mirror Mode, Flip Mode, Electronic Image Rotation 90°, 180°, and 270°

Window Blanking

8 configurable windows

Flicker Control

Selectable 50 Hz or 60 Hz modes

PELCO PRO ANALYTICS SUITE

Sarix Professional range cameras feature the Pro suite of video analytics including Motion Detection, Camera Sabotage, Audio Detection, Object Counting, Adaptive Motion, Object Removal, and Directional Motion.

Simple Motion Detection algorithms allow the camera to record or send an alarm when there is motion detected in a selected zone or with the entire scene.

A Camera Sabotage alarm is triggered if the lens is obstructed or when the camera is repositioned.

Audio Detection allows user to define an audio intensity threshold to trigger surrounding audio.

Object Counting counts the number of moving objects passing through the defined virtual lines.

Adaptive Motion detects moving objects crossing defined lines and entering a defined target area.

Object Removal: This behavior detects moving objects that leave the target area.

Directional Motion detects objects moving in disallowed directions.

PELCO'S SMART COMPRESSION TECHNOLOGY

Pelco's Smart Compression Technology lowers bandwidth and storage requirements by up to 70%. Our technology allows the user to make informed optimization between storage savings and image quality.

Pelco's Smart Compression Technology dynamically analyzes motion occurring within live video in real-time, to intelligently compress the information you don't need, while retaining details with clear quality in the areas that are important in the scene. By enabling Dynamic GOP, an added feature of Smart Compression, the number of I-frames are automatically reduced in scenes with low motion. Based on the complexity of scenes and extent of motion, up to 70% bandwidth savings can be achieved.

AUDIO

Streaming

Bi-directional full duplex

Built-In Microphone

60 SPL @ 25 ft > 40 dB SNR (Indoor models only)

Input

Line level, 3K ohm differential w/ 1Vp-p maximum signal

Output

Line level, 600 ohm differential w/1Vp-p

Encoding

G.711 A-law/G.711 U-law

TECHNICAL SPECIFICATIONS

ELECTRICAL

| | |
|--------------|---|
| Network Port | RJ-45 connector for 10/100Base-TX |
| Power Input | IEEE802.3af PoE (Indoor), IEEE802.3at (Environmental) 18 ~ 32 VAC, 12 ± 10% VDC |

Indoor Dome

| Model | Power Input | Power Consumption (Watts or VA) | | |
|------------------|-------------|---------------------------------|-----------------------------|--------------------------|
| | | Typical | Maximum (Models without IR) | Maximum (Models with IR) |
| IMP131 IMP231 | 12 VDC | 4.3 W | 5.4 W | 8.4 W |
| | 24 VAC | 4.4 W | 5.3 W | 7.9 W |
| | PoE | 5.2 W | 9.6 W | 12 W |
| IMP331 | 12 VDC | 5 VA | 5.4 VA | 8.4 VA |
| | 24 VAC | 5 VA | 5.8 VA | 7.9 VA |
| | PoE | 5.8 VA | 9.6 VA | 12 VA |
| IMP531 | 12 VDC | 7.5 W | 8.4 W | 10.2 W |
| | 24 VAC | 7 W | 7.2 W | 9.4 W |
| | PoE | 8.1 W | 12 W | 12 W |

Environmental Dome

| Model | Power Input | Power Consumption (Watts or VA) | | |
|------------------|-------------|---------------------------------|-----------------------------|--------------------------|
| | | Typical | Maximum (Models without IR) | Maximum (Models with IR) |
| IMP131 IMP231 | 12 VDC | 4.3 W | 14.4 W | 16.8 W |
| | 24 VAC | 4.4 W | 13.0 W | 14.4 W |
| | PoE | 5.2 W | 14.4 W | 16.8 W |
| IMP331 | 12 VDC | 5 VA | 14.4 W | 16.8 W |
| | 24 VAC | 5 VA | 13.0 VA | 14.4 W |
| | PoE | 5.8 VA | 14.4 VA | 16.8 W |
| IMP531 | 12 VDC | 7.5 W | 16.8 W | 19.2 W |
| | 24 VAC | 7 W | 14.4 W | 15.8 W |
| | PoE | 8.1 W | 16.8 W | 16.8 W |

Local Storage Micro SDHC and SDXC card, 2 TB addressable, 128 GB or more testable

Alarm
Input 1, PhotoMOS™ relay (30 V, 1 A)
Output 1, PhotoMOS™ relay (30 V, 1 A)
Triggers Unsupervised mode that detects switch closures (Normally Open and Normally Closed)

Analog Output IMP531-1ERS only

ENVIRONMENTAL

| | |
|-----------------------|--|
| Operating Temperature | |
| Environmental | –40° to 60°C (–40° to 140°F) |
| Indoor | –10° to 55°C (14° to 131°F) |
| Storage Temperature | –40° to 70°C (–40° to 158°F) |
| Operating Humidity | 5% to 95%, RH condensing (environmental models) 5% to 90%, RH noncondensing (indoor models) |
| Storage Humidity | 20% to 80%, RH noncondensing |
| Shock and Vibration | |
| Resistance | IEC 60068-2-6 and 2-27 |
| Impact Resistance | IK10 (20 Joules) |

Ingress Protection IP64 (Indoor models) & IP66/67, Type 4X (Environmental models)

GENERAL

| | |
|---------------------|--------------------------------|
| Construction | Aluminum; polycarbonate bubble |
| Finish | RAL 9003 |
| Weight | |
| Unit | 0.86 kg (1.90 lb) |
| Shipping | 1.20 kg (2.65 lb) |
| Pan/Tilt Adjustment | Manual |
| Pan | 0° ~ 370° |
| Tilt | –15° ~ –90° |
| Rotate | 0° ~ 355° |

NETWORK

| | |
|---------------------|--|
| Supported Protocols | TCP/IP, UDP/IP (unicast, multicast IGMP), UPnP, DNS, DHCP, RTP, RTSP, NTP, IPv4, IPv6, SNMP v2c/v3, QoS, HTTP, HTTPS, SSH, SSL, SMTP, FTP, 802.1x (EAP), and NTCIP 1205, ARP, DDNS, ICMP, IGMP, RTCP, SFTP, SIP, TLS/TLS, WS-discovery |
| Users | |
| Unicast | Up to 5 simultaneous users depending on resolution settings (3 guaranteed streams) Unlimited users H.264/H.265 |
| Multicast | |
| Security Access | Password protected, HTTPS, IEEE 802.X, Digest Authentication, IP Filtering |
| Software Interface | Web browser view and setup |

INTEGRATION

| | |
|-----------------------------|---|
| Video Management | VideoXpert; VX Toolbox; Endura 2.0 (or later); Digital Sentry 7.3 (or later); Third-party VMS through Pelco API, ONVIF Profile S, Profile G, Profile Q, and Profile T |
| Open API | Pelco Mobile |
| Mobile Application | Capture 1-, 5- or 10-second video clips on camera sabotage, motion detection, or alarm input; record video continuously in the case of network outage with option to overwrite; access video through FTP protocol and ONVIF Profile G |
| Local Storage | VX Toolbox Web UI or VX Toolbox Microsoft® Internet Explorer® 8.0, Mozilla® Firefox® 3.5, Google® Chrome™ 61.0 and later |
| Camera Discovery | |
| Firmware Upgrade | |
| Web Browser Support | English, French, German, Italian, Portuguese, Arabic, Russian, Spanish, Turkish, Korean, Simplified Chinese |
| Multilingual User Interface | |

TECHNICAL SPECIFICATIONS

SYSTEM MODEL NUMBERS*

| Back Box | Resolution | Lens | Model Number | Description |
|----------|------------|--------------|--------------|--|
| Surface | 1 MP | 2.8 to 12 mm | IMP131-1ERS | Sarix Pro Environmental IR Dome |
| | 1 MP | 2.8 to 12 mm | IMP131-1IRS | Sarix Pro Indoor IR Dome with Microphone |
| | 2 MP | 2.8 to 12 mm | IMP231-1ES | Sarix Pro Environmental Dome |
| | 2 MP | 2.8 to 12 mm | IMP231-1ERS | Sarix Pro Environmental IR Dome |
| | 2 MP | 2.8 to 12 mm | IMP231-1IS | Sarix Pro Indoor Dome with Microphone |
| | 2 MP | 2.8 to 12 mm | IMP231-1IRS | Sarix Pro Indoor IR Dome with Microphone |
| | 3 MP | 2.8 to 12 mm | IMP331-1ES | Sarix Pro Environmental Dome |
| | 3 MP | 2.8 to 12 mm | IMP331-1ERS | Sarix Pro Environment IR Dome |
| | 3 MP | 2.8 to 12 mm | IMP331-1IS | Sarix Pro Indoor Dome with Microphone |
| | 3 MP | 2.8 to 12 mm | IMP331-1IRS | Sarix Pro Indoor IR Dome with Microphone |
| | 5 MP | 2.8 to 12 mm | IMP531-1ES | Sarix Pro Environmental Dome |
| | 5 MP | 2.8 to 12 mm | IMP531-1ERS | Sarix Pro Environmental IR Dome |
| | 5 MP | 2.8 to 12 mm | IMP531-1IS | Sarix Pro Indoor Dome with Microphone |
| | 5 MP | 2.8 to 12 mm | IMP531-1IRS | Sarix Pro Indoor IR Dome with Microphone |

*System options contain a back box/mount, camera, and clear dome.

CERTIFICATIONS*

- CE - EN 55032 (Class A), EN 50130-4, EN 60950-1
- FCC (Class A) - 47 CFR Part 15
- UL and cUL Listed - UL 60950-1, CAN/CSA-C22.2 No. 60950-1-07
- UL/IEC/EN 60950-22 (environmental models only)
- ICES-003 (Class A)
- RCM
- KCC
- NOM
- EAC
- BIS
- Type 4X (environmental models only) when installed properly with IMP3EBAP
- IP66/67 (environmental models only) when installed properly
- IEC 60068-2-6 and 2-27
- ONVIF Profile S, Profile G, Profile Q, and Profile T conformant

*At the time of this publication, certifications are pending. Consult the factory or www.pelco.com for the current status of certifications.

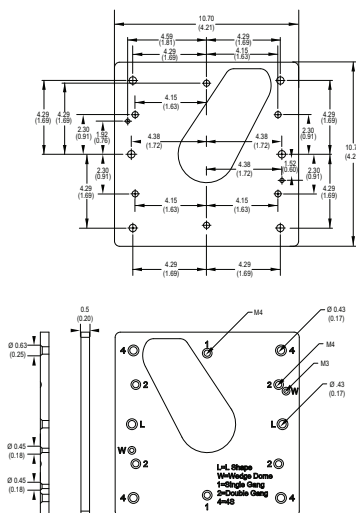
RECOMMENDED MOUNTS

| | |
|---------------------|-----------------------------|
| WMVE-SW | Wall mount arm, 1.5 in. NPT |
| PA101 with WMVE-SW | Pole Mount |
| IMP3PMB-1I | Wall mount |
| IMP3ICM-1E | In-ceiling mount |
| IMP3PM-1E | Pendant mount |
| IMM-CM with WMVE-SW | |
| and IMP3PM-1E | Corner mount |

OPTIONAL ACCESSORIES

| | |
|-----------|---------------------------------|
| IMP3EBAP | 4S electrical box adapter |
| IMP3LD-0E | Smoked environmental lower dome |
| IMP3LD-0I | Smoked indoor lower dome |
| IMP3LD-1E | Clear environmental lower dome |
| IMP3LD-1I | Clear indoor lower dome |

IMP3EBAP 4S ELECTRICAL BOX ADAPTER



Color: RAL 9003

WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov
ADVERTENCIA: Cáncer y Daño Reproductivo - www.P65Warnings.ca.gov
AVERTISSEMENT: Cancer et Troubles de l'appareil reproducteur - www.P65Warnings.ca.gov

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VideoXpert Professional v 3.5

Scalable Video Management and Surveillance System

Product Features

- “VideoXpert in a box” functionality for small to mid-sized sites
- Simple setup / IT-Friendly — designed for Unicast or multicast environments using Microsoft® Windows® for easy configuration and maintenance
- Available in different hardware configurations to support the needs of different sites
- Supports MJPEG, MPEG-4, H.264, and H.265
- Supports monitor walls, including cell layouts and cameras
- Up to 450 Mbps throughput per recorder
- Supports attached storage (NAS) to extend video retention
- Includes VxToolbox for simple configuration of one or more servers
- Includes pre-defined roles for easy user creation, and also supports granular editing of user permissions
- Motion Pixel Search for server side motion detection and quick retrieval of events
- 4k/H.264 and H.265 support for live and playback modes for cameras that support streaming through ONVIF, and the ability to export recorded segments
- HTTPS support for Pelco and third-party cameras
- Supports environments that use anti-virus and firewall software
- Imports users and roles from existing LDAP servers to reduce administrative overhead, and enables single sign-on (SSO)
- Check on VMS and camera health using SNMP (VxSNMP is available as a free, separate download)
- Capable of listening for ASCII commands on a serial and Ethernet port simultaneously (ASCII Service is available as a free, separate download)
- Includes Event Monitor Service feature, capable of polling for alarms from devices and performing specified actions when an alarm state change occurs (VideoXpert Event Monitor Service is available as a free, separate download)
- Ability to expose video streams to third-party clients, with customizable RTSP endpoints that allow a client application connection to a VideoXpert System stream via the VxConnect service (VxConnect is available as a free separate download)
- VxPortal web based client allows viewing and exporting video without installing any software
- Check on VMS and camera health using SNMP (VxSNMP is available as a free, separate download)
- Extensible through mapping and plugins, including video information overlays and license plate recognition
- Supports aggregation through VideoXpert Enterprise system with aggregation



| AES ENGINEERING LTD. FOR BIDDING PURPOSES ONLY | | |
|---|------------------------|-------------------|
| ACCEPTABLE ✓ | ACCEPTABLE AS NOTED | NOT ACCEPTABLE |
| Project Number: 0121.0081 | | |
| Per: GS Date: 2023-09-13 | | |
| Reviewed only as to general conformity with the design concept. | | |

- Supports ONVIF S- and G-compliant cameras and devices
- Edge Storage Auto Gap Fill functionality detects when a gap in local camera recording occurs, and automatically downloads video and audio (if present) to fill the gap
- Investigation mode enables operators to synchronize video playback and export investigative playlists covering scenes of interest
- Monitor multiple VxPro sites with a single client
- The desktop workstation supports up to two 4k monitors or four 1080p monitors
- Supports shared displays so operators can send video to surveillance personnel who need it most
- Supports DNS hostnames for ONVIF-compliant cameras and Pelco cameras
- Enables and supports Risk Management Framework (RMF) and FIPS 104-2
- Provides seamless transition to VideoXpert™ Enterprise
- Provides a migration path for Digital Sentry® systems
- Server models support Dell iDRAC and OpenManage tools

Overview

VideoXpert Professional is a video management system (VMS) in a single box, designed for easy setup and robust monitoring in small or moderately sized applications. Designed for Windows platforms, VxPro is easy to install, quick to setup, and provides an intuitive interface that helps operators use video captured by the system.

VxPro is available in tailor-made hardware solutions or in software solutions to support your existing VMS infrastructure, VxPro provides options to support the throughput you need, and different amounts of storage in RAID 6, RAID 5, or JBOD arrangements to fit your needs for retention, redundancy, and fault tolerance. Software licenses operate in terms of channels, so you don't overpay for the solution you need. The system supports unicast and multicast transmission modes, easily adapting to your network scheme.

Server models also include Dell's iDRAC (integrated Dell Remote Access Controller) platform and support for Dell's OpenManage tools, allowing administrators to remotely configure and support VxPro servers, reducing the need for physical access to the server. Using the iDRAC controller, you can monitor hardware and receive email alerts via SNMP.

VxPro includes VxToolbox, an easy-to-use Windows application enabling users to quickly and easily configure an entire network of servers and cameras locally or remotely. VxPro has pre-defined roles, designed around standard surveillance operations, making user creation and assignments quick and easy.

The included VxOpsCenter client software provides an easy to use interface, so you can use VideoXpert with little to no training. You can operate VxOpsCenter clients in multi-system access mode, allowing one workstation to access multiple servers, scaling your surveillance solution. VxOpsCenter also supports modular plugins, providing integrated functionality from external systems, including informational overlays, license plate recognition (LPR), analytics, and a built-in mapping application.

Built around open standards, VideoXpert includes a complete application programming interface (API), software development kit (SDK), and dedicated technical support, allowing other systems' manufacturers to develop interfaces leveraging VideoXpert's capabilities.

Administrators can migrate current Digital Sentry hardware environments to VideoXpert Professional, repurposing hardware and reusing current video management infrastructure while gaining the benefits of VideoXpert. VideoXpert Professional can also utilize Digital Sentry storage hardware as recording

solutions, preserving the video stored on those devices while providing access to VideoXpert Professional features.

Technical Specifications

Hardware

| Item | Power 2 Server | Flex 2 Server | Eco 2 Server | Workstation |
|-------------------------|---|-----------------------|-----------------------|----------------------|
| Form Factor | Rack (2RU) | Tower | | |
| Processor | Intel® Xeon® Silver 4110 | Intel® Xeon® E-2134 | Intel® Xeon® E-2124 | Intel® Core™ i7-8700 |
| Memory | 16 GB DDR4 | | | |
| Operating System | Microsoft® Windows® 10 IoT Enterprise 64-bit (LTSC) | | | |
| OS Drive | 2x SSD 240 GB (RAID 1) | M.2 SSD 240 GB | | M.2 NVMe 256 GB |
| Storage | | | | |
| Max ¹ | 96 TB (7200 RPM SATA) | 28 TB (7200 RPM SATA) | 12 TB (7200 RPM SATA) | N/A |
| RAID Level ² | 6/5/JBOD | | JBOD | N/A |
| Optical Drive | N/A | | | DVR±RW |
| Dell iDRAC Controller | iDRAC9 Basic | | | N/A |
| USB Ports | | | | |
| USB 2.0 | 1x front | 4x rear | | 2x front, 2x rear |
| USB 3.0 | 2x rear | 1x front, 2x rear | | 1x front, 4x rear |
| USB 3.1 Type-C | N/A | | | 1x front |

¹Maximum storage based on JBOD configuration

²RAID level is user configurable

Power 2 Server



Flex 2 Server



Eco 2 Server**Desktop Workstation****Video**

| Item | Power 2 Server | Flex 2 Server | Eco 2 Server | Workstation |
|--|---|---------------|--------------|---------------|
| Video Outputs | 4x Mini DisplayPort 1.4 | | | |
| Video system | NVIDIA Quadro P620 (2 GB memory) | | | |
| Maximum Video Resolution per output type | | | | |
| mDP 1.4 direct connect | HDR 5120 x 2880 at 60 Hz (30-bit color) | | | |
| Video Standards | | | | |
| NTSC | N/A | | | 60 Hz capable |
| PAL | N/A | | | 75 Hz capable |

Audio

| Item | Power 2 Server | Flex 2 Server | Eco 2 Server | Workstation |
|-----------------|-------------------|---------------|--------------|--|
| Inputs | N/A | | | Universal Audio Jack (front) |
| Outputs | DisplayPort Audio | | | Universal Audio Jack (front), Line Out (rear), Internal Speaker, DisplayPort Audio |
| Connector Types | mDP Cable (out) | | | 3.5 mm 4 pole (In/Out), 3.5 mm 3 pole (Out), mDP cable (Out) |

Networking

| Item | Power 2 Server | Flex 2 Server | Eco 2 Server | Workstation |
|-------------------------------------|---------------------------|---------------|----------------|-------------|
| Gigabit Ethernet (1000Base-T) ports | 2x + dedicated iDRAC port | | | 1x |
| Recording Throughput | Up to 450 Mbps | | Up to 200 Mbps | N/A |
| IP version | IPv4 and IPv6 | | | |

Power

| Item | Power 2 Server | Flex 2 Server | Eco 2 Server | Workstation |
|-------------|---|--------------------------------------|--------------------------------------|-------------------------------------|
| Input | 100 to 240 VAC 50/60 Hz, autoranging | | | 90-264 VAC, 3.2 A (maximum) |
| Supply | Dual Hot Swappable 750 W (Platinum) | Internal 350 W (Bronze) | Internal 365 W (Gold) | Internal 200 W |
| | Note: This system is also designed to be connected to IT power systems with a phase-to-phase voltage not exceeding 230 V. | | | |
| Consumption | 2891 BTU/hr max | 1405 BTU/hr max (350 W power supply) | 1908 BTU/hr max (365 W power supply) | 682 BTU/hr max (200 W power supply) |
| | Note: Heat dissipation is calculated by using the power supply maximum wattage rating. Results will vary depending on system load. | | | |

Environmental

| Item | Power 2 Server | Flex 2 Server | Eco 2 Server | Workstation |
|---------------------------------|--|---------------|--------------|----------------------------|
| Operating Temperature | 10° to 35°C (50° to 95°F) with no direct sunlight on the equipment | | | 0° to 35°C (32° to 95°F) |
| | Note: Maximum temperature is reduced by 1°C/300 m (33.8°F/984.25 ft) above 950 m (3,117 ft) | | | |
| Non-Operating Temperature | −40° to 65°C (−40° to 149°F) | | | |
| Operating Relative Humidity | 10% to 80% RH with 29°C (84.2°F) max dew point | | | 5% to 95% (non-condensing) |
| Non-Operating Relative Humidity | 5% to 95% RH with 33°C (91°F) maximum dew point. Atmosphere must be non-condensing at all times. | | | 10% to 90%, noncondensing |

| Item | Power 2 Server | Flex 2 Server | Eco 2 Server | Workstation |
|---------------------|--|---------------|--------------|--------------------------------------|
| Operating Altitude | Maximum of 3048 m (10,000 ft) | | | –15.2 m to 3048 m (–50 to 10,000 ft) |
| Operating Vibration | 0.26 Grms at 5 Hz to 350 Hz (operation orientations) | | | 0.66 Grms |

Physical

| Item | Power 2 Server | Flex 2 Server | Eco 2 Server | Workstation |
|-----------------------------|--|---|---|--|
| Dimensions (D x W x H) | 68.2 x 43.4 x 8.68 cm (26.8 x 17.1 x 3.4 in) without rack ears and bezel | 58.91 x 21.8 x 44.33 cm (23.19 x 8.58 x 17.45 in) without bezel | 45.38 x 17.5 x 36.29 cm (17.87 x 6.89 x 14.29 in) | 29.2 x 9.26 x 29 cm (15.5 x 3.65 x 11.42 in) |
| Rack Mounting | 2 RU | N/A | | |
| Maximum Weight ¹ | 29.68 kg (65.43 lb) | 25.25 kg (55.67 lb) | 11.16 kg (24.6 lb) | 5.26 kg (11.57 lb) |

¹ Unit weight varies by hard drive configuration. For example: 4TB hard drive is 680 g (1.5 lb) and 8TB hard drive is 780 g (1.72 lb).

Minimum System Requirements¹

| Item | Server | Workstation |
|------------------|--|-------------|
| Processor | Intel® Core™ i5 | 64-bit CPU |
| Memory | 16 GB | |
| Operating System | Microsoft® Windows® 7 64-bit, Windows® 10 64-bit, or Windows® Server 2012 or 2016 ² | |
| Browser | Google Chrome 73.0.3683.86, Mozilla Firefox 66.0.1, or Microsoft Edge 44.17763.1.0 and above | |

¹Software-only systems tested without antivirus software installed.

²Although server OS is supported, VxOpsCenter is not supported in the server OS.

Software Licenses, Servers, and Workstation Models

With VxPro, you only pay for the devices you want to use with your system. Each camera in a VxPro environment consumes a “channel” license. VxPro includes four trial licenses and a 1-year SUP to quickly get started.

Each camera/encoder on a VideoXpert system requires a channel license. To enable upgrades to VideoXpert software, an active software upgrade plan (SUP) is also required.

| License | Description |
|------------|---|
| VXP-1C | 1 channel license for VideoXpert Pro, plus one year SUP |
| VXP-1C-3Y | 1 channel license for VideoXpert Pro, plus three year SUP |
| VXP-SUP-1Y | Extension to current channel license (SUP); entitles you to upgrades for one year. One per channel is required. |
| VXP-SUP-3Y | Extension to current channel license (SUP); entitles you to upgrades for three years. One per channel is required. |
| U1-AGG-1P | (Optional) This is a one-channel license for VideoXpert Professional to aggregate into a VideoXpert Enterprise system. Professional services are recommended. |

Hardware Models

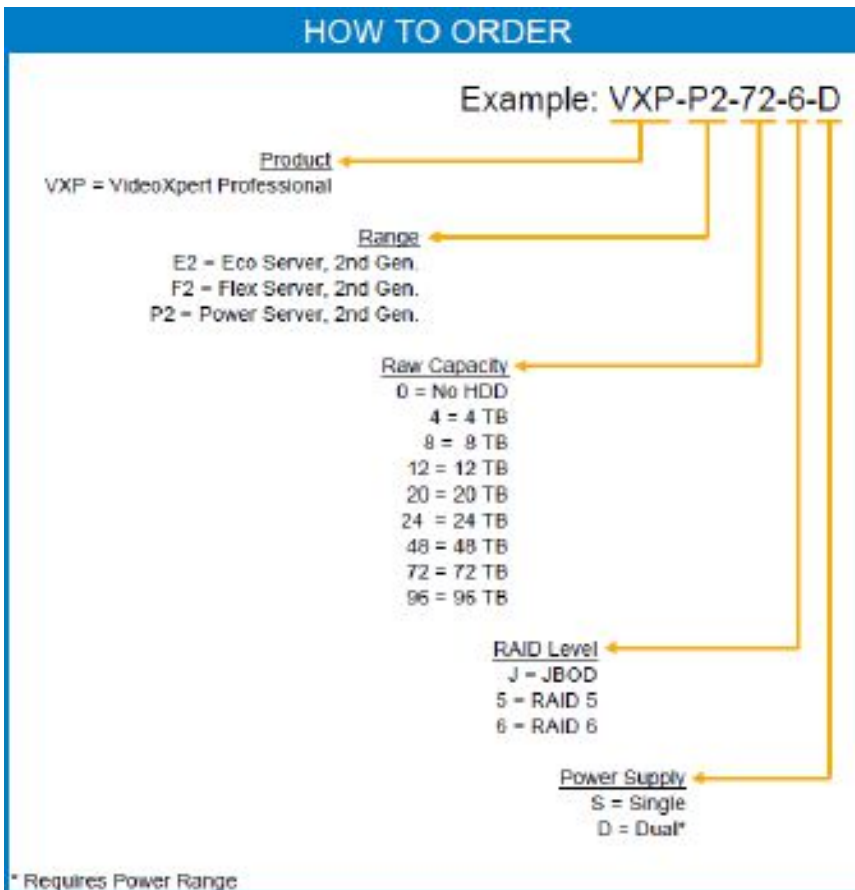
| Model | Range | Raw Capacity | Effective Capacity | RAID Level | Power Supply |
|---------------|---------|--------------|--------------------|--------------|--------------|
| VXP-P2-96-6-D | Power 2 | 96 TB | 72.70 TB | RAID 6 | Dual |
| VXP-P2-96-5-D | Power 2 | 96 TB | 79.97 TB | RAID 5 | Dual |
| VXP-P2-96-J-D | Power 2 | 96 TB | 87.24 TB | JBOD | Dual |
| VXP-P2-72-6-D | Power 2 | 72 TB | 50.89 TB | RAID 6 | Dual |
| VXP-P2-72-5-D | Power 2 | 72 TB | 58.16 TB | RAID 5 | Dual |
| VXP-P2-72-J-D | Power 2 | 72 TB | 65.43 TB | JBOD | Dual |
| VXP-P2-48-6-D | Power 2 | 48 TB | 29.08 TB | RAID 6 | Dual |
| VXP-P2-48-5-D | Power 2 | 48 TB | 36.35 TB | RAID 5 | Dual |
| VXP-P2-48-J-D | Power 2 | 48 TB | 43.62 TB | JBOD | Dual |
| VXP-P2-24-5-D | Power 2 | 24 TB | 14.54 TB | RAID 5 | Dual |
| VXP-P2-24-J-D | Power 2 | 24 TB | 21.81 TB | JBOD | Dual |
| VXP-P2-0-X-D | Power 2 | 0 TB | N/A | Unconfigured | Dual |
| VXP-F2-28-6-S | Flex 2 | 28 TB | 18.15 TB | RAID 6 | Single |
| VXP-F2-28-5-S | Flex 2 | 28 TB | 21.78 TB | RAID 5 | Single |
| VXP-F2-28-J-S | Flex 2 | 28 TB | 25.41 TB | JBOD | Single |
| VXP-F2-20-5-S | Flex 2 | 20 TB | 14.52 TB | RAID 5 | Single |
| VXP-F2-20-J-S | Flex 2 | 20 TB | 18.15 TB | JBOD | Single |
| VXP-F2-8-J-S | Flex 2 | 8 TB | 7.26 TB | JBOD | Single |
| VXP-F2-4-J-S | Flex 2 | 4 TB | 3.63 TB | JBOD | Single |

| Model | Range | Raw Capacity | Effective Capacity | RAID Level | Power Supply |
|---------------|-------------|--------------|--------------------|------------|--------------|
| VXP-F2-0-J-S | Flex 2 | 0 TB | N/A | JBOD | Single |
| VXP-E2-12-J-S | Eco 2 | 12 TB | 10.89 TB | JBOD | Single |
| VXP-E2-8-J-S | Eco 2 | 8 TB | 7.26 TB | JBOD | Single |
| VXP-E2-4-J-S | Eco 2 | 4 TB | 3.63 TB | JBOD | Single |
| VXP-E2-0-J-S | Eco 2 | 0 TB | N/A | JBOD | Single |
| VX-WKS | Workstation | N/A | | | |

How to Order

Use the following table to create a model number for your VideoXpert hardware and/or software package. Your model number consists of the VxPro range, capacity, RAID-level, single/dual power supply, and quantity of licenses.

The chart below lists the full range of features. Capacity, RAID level, dual power supply, and channel requirements may be limited by the product range you select. Workstations come in a single configuration and do not require capacity, RAID, power supply, or channel designations.



VideoXpert Player

The VxPlayer decrypts, validates, and plays-back secured exports from VideoXpert. You can download the player directly from VideoXpert along with an exported video file or you can download it from Pelco.com. The following sections specify the minimum system requirements for non-VideoXpert machines running the VxPlayer.

Hardware Requirements

- Dual Core i5 2.67 GHZ
- 4 GB RAM
- 200+ GB of free HDD space or more
- GPU that supports OpenGL 3.0 or higher
- 1024 x 768 or higher screen resolution
- 100/1000 Ethernet Network Interface Card
- Sound Card

Software Requirements

- Windows 7 Pro or Ultimate 64-bit, or Windows 10 Pro 64-bit
- .NET 4.6.1 or higher
- OpenGL 3.0 or higher
- Direct3D 9 or higher

Security

VideoXpert includes the following security features:

- Client authentication
- Passwords stored in encrypted format only
- Configurable roles and permissions
- User action reports
- TLS-based encryption over HTTPS
- Support running with antivirus
- Ability to encrypt exports
- Synchronized system clocks using NTP
- Incorporates FIPS 140-2 validated cryptographic modules
- FISMA/NIST Configuration Guidance – This guide will help organizations documenting the system through their RMF process with information about:
 - How to categorize the system
 - Which NIST-based security controls are applicable
 - How VX implements NIST-based security controls

- FISMA/NIST Compliance Testing – VideoXpert is installed on a FISMA representative system with applicable DISA STIGs (Defense Information Systems Agency, Secure Technical Implementation Guidelines) and tested for functionality. Applicable STIGS include:
 - Microsoft Windows 10 for VxOpsCenter and VxToolbox
 - Microsoft .Net Framework 4
 - Microsoft Internet Explorer 11
 - Microsoft Windows Firewall and Advanced Security
 - Postgres Database 9.x

Supported Languages

The VxOpsCenter and VxPortal interfaces is are available in the following languages:

- Arabic
- Brazilian Portuguese
- German
- French
- Italian
- Korean
- Russian
- Simplified Chinese
- Spanish for Latin America
- Turkish

Supplied Accessories

- Keyboard*
- Mouse*
- USB drive containing resource and recovery information
- Rack mount kit (Power Series only)
- Desktop workstation 4 mini DisplayPort to DisplayPort and 1 mini DisplayPort to HDMI
- US, UK, and EU power cords

*Not included with Power 2 Series (VXP-2P) models.

Optional Accessories

- **VXP-KIT-4TB** 4 TB hard disk drive with carrier for Eco 2 or Flex 2 Servers only
- **VXP-KIT-8TB** 8 TB hard disk drive with carrier for 2nd generation Power 2 Servers only

Workstation Optional Accessories

- **VX-A3-SDD** Shared Display Decoder with US, Europe, and United Kingdom power cords
- **VX-A3-ACC** Accessory Server with US, Europe, and United Kingdom power cords
- **VX-A3-DEC** Enhanced Decoder with US, Europe, and United Kingdom power cords

- **3DX-600-3DMOUSE** Enhanced 3D Mouse and Joystick
- **Y-U0023-G910KBD** Enhanced Keyboard
- **A1-KBD-3D-KIT2** Enhanced Keyboard and 3D Mouse Combination Kit
- **KBD5000** Keyboard with Jog/Shuttle, Keypad, and Joystick
- **PMCL622** Full High-Definition LED Monitor, 22"
- **PMCL624** Full High-Definition LED Monitor, 24"
- **PMCL632** Full High-Definition LED Monitor, 32"
- **PMCL643K** 4K Ultra-High-Definition LED Monitor, 43"
- **PMCL649K** 4K Ultra-High-Definition LED Monitor, 49"
- **PMCL655K** 4K Ultra-High-Definition LED Monitor, 55"
- **PMCL665K** 4K Ultra-High Definition LED Monitor, 65"

Optional Power Accessories

- **PWRCRD-S-AR** Standard power cord, Argentina
- **PWRCRD-S-AU** Standard power cord, Australia
- **PWRCRD-S-EU** Standard power cord, Europe
- **PWRCRD-S-UK** Standard power cord, United Kingdom
- **PWRCRD-S-US** Standard power cord, United States
- **PWRCRD-R-AR** Round power cord, Argentina
- **PWRCRD-R-AU** Round power cord, Australia
- **PWRCRD-R-EU** Round power cord, Europe
- **PWRCRD-R-UK** Round power cord, United Kingdom
- **VXP-KIT-P2-PSU** Hot-swappable power supply for the VXP-P2 series.

Certifications

- CE (Class A)
- FCC, Part 15 (Class A)
- ICES-003 (Class A)
- UL/cUL Listed
- RCM
- CCC
- KCC
- NOM

Standards/Organizations

- Pelco is a member of the MPEG-4 Industry Forum
- Pelco is a member of the Universal Plug and Play (UPnP) Forum, Steering Committee
- Pelco is a member of the Universal Serial Bus (USB) Implementers Forum

- Pelco is a contributor to the International Standards for Organization / Electrotechnical Commission (ISO/IEC) Joint Technical Committee 1 (JTC1), "Information Technology," Subcommittee 29, Working Group 11
- Compliance, ISO/IEC 14496 standard (also known as MPEG-4)
- Compliance, International Telecommunication Union (ITU) Recommendation G.711, "Pulse Code Modulation (PCM) of Voice Frequencies"
- Compliance, Open Network Video Interface Forum (ONVIF) Profile S



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International Standards Organization
Registered Firm; ISO 9001 Quality System

⚠ WARNING: Cancer and Reproductive Harm -
www.P65Warnings.ca.gov.
⚠ ADVERTENCIA: Cáncer y Daño Reproductivo -
www.P65Warnings.ca.gov.
⚠ AVERTISSEMENT: Cancer et Troubles de
l'appareil reproducteur - www.P65Warnings.ca.gov.

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