

## 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](http://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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\*See ordering tree for details

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## 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] <sup>1</sup> None	EFP External Fault Protection
	24V No dimming, 24V Output Terminals	DS 24V 0-10VDC Dimming output (via side leads), 24V Output Terminals	ER UL924 Emergency Operation, via power sense leads	
	D 0-10VDC Dimming output (via chase nipple), no 24V Output Terminals		EM <sup>2</sup> 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] <sup>4</sup> 120-277V	[blank] None	G2 Generation 2 compatibility
CP <sup>3</sup> Chicago Plenum	UVOLT <sup>4</sup> 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

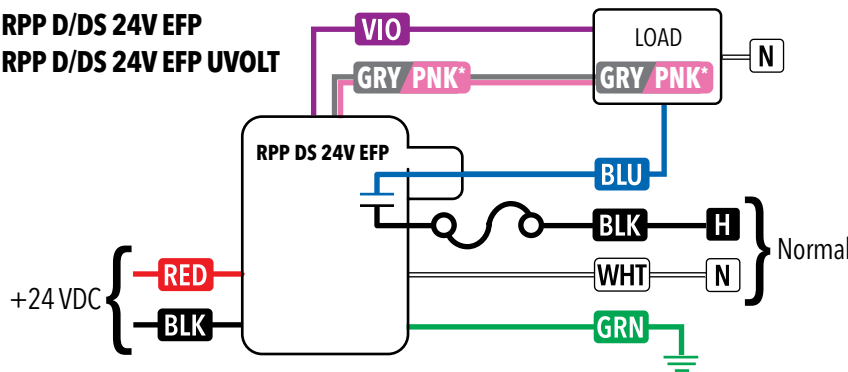
### Temperature and Load Ratings

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

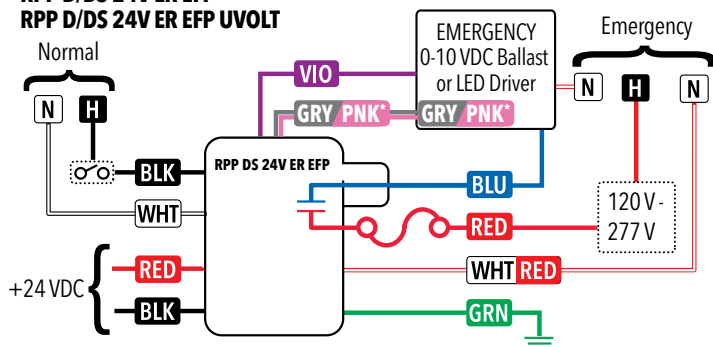
\*0-10V Dimming Common from luminaire may be pink or as otherwise indicated per section 410.69 of the 2020 NEC.

\*\*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  
 [Symbol] - 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:

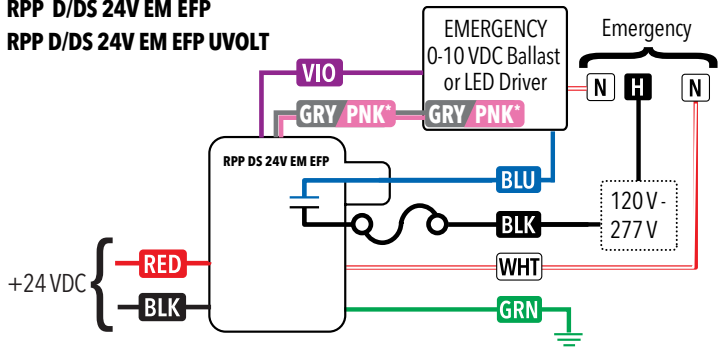
#### When normal power sense leads have absence of voltage

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

## WIRING FOR EMERGENCY (-EM) UNITS

### RPP D/DS 24V EM EFP

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



### Legend

BLK - 120-277, 347VAC\*\* Emergency Hot  
 WHT - Emergency Neutral  
 BLU - Switched Output  
 VIO - 0-10V Dim (+)  
 PNK\* - 0-10V Com (-)  
 RED (Terminal) - +24VDC  
 BLK (Terminal) - DC Com  
 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.

### UL 924 Response - nLight AIR Devices with EM Option

The below information applies to all nLight AIR devices with an EM option.

- 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 rPP20, 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.

## DIMENSIONS

