Catalog Number: | Date: | Project:

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
- Programmable return to last state capability

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.

design select

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect.
*See ordering tree for details

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nLight® AIR rPP20

Power/Relay Pack



LISTED

Design Select options indicated by this color background.

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	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[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	

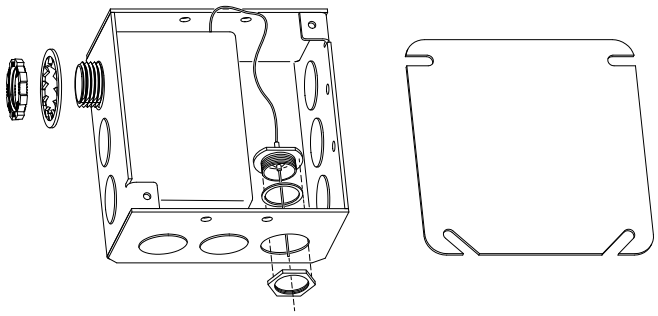
ACCESSORIES

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. To be Chicago Plenum rated, the Power Pack must be installed within a junction box. See illustration below and installation instructions for more information.
4. All phase-to-phase applications, including 208VAC and 480VAC, require factory installation.

Chicago Plenum



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SPECIFICATIONS

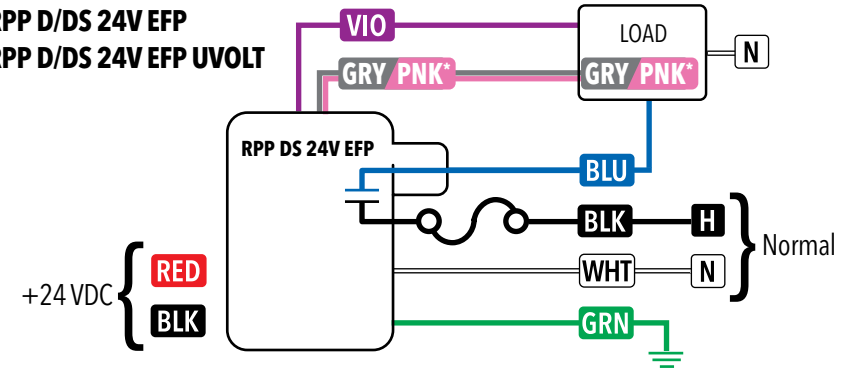
Size:	3.50" x 3.52" x 1.82" (120-277V model) 4.725" x 4.80" x 1.865" (UVOLT model)
Weight:	6 oz
Mounting:	1/2" Knockout
Color:	White (standard), Red (ER & EM)
Humidity:	5 to 90% non-condensing
Location:	Damp Location Rating
Wires:	Line and load 12 AWG stranded Neutral, ground, and power sense (ER version) 18 AWG stranded 0-10V, 20 AWG stranded
Operating Voltage:	120-277VAC, 120-480VAC (UVOLT)
SCCR:	5kA
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: RCPNLNL20-2057 cULus RoHS

Temperature and Load Ratings

Model	rPP20 (14°F -122°F) / (-10°C - 50°C)		rPP20 (14°F -140°F) / (-10°C - 60°C)		rPP20 UVOLT (14°F -158°F) / (-10°C - 70°C)			
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	8 A	6 A	5 A	5 A	20 A	20 A	20 A	5 A
Electronic Ballast	16 A	16A	5 A	5 A	16 A	16 A	16 A	5 A
Motor	0.5 HP	0.5 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



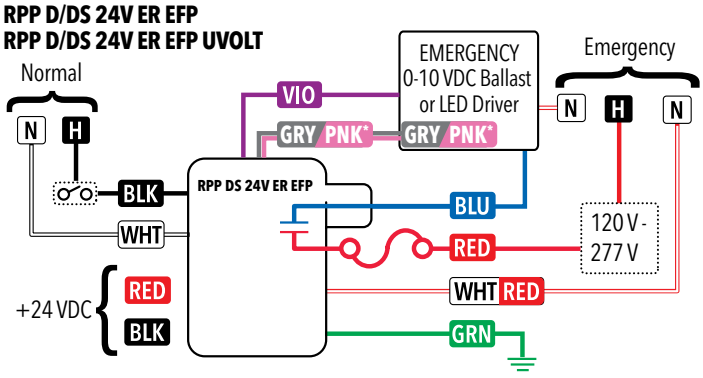
Legend

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.

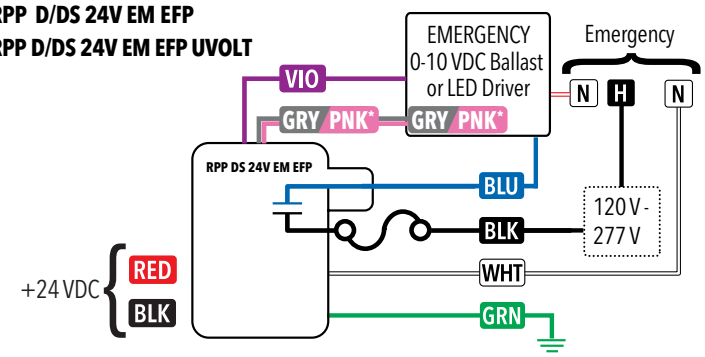
UL924 Sequence of Operation: When normal power sense leads have absence of voltage

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

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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

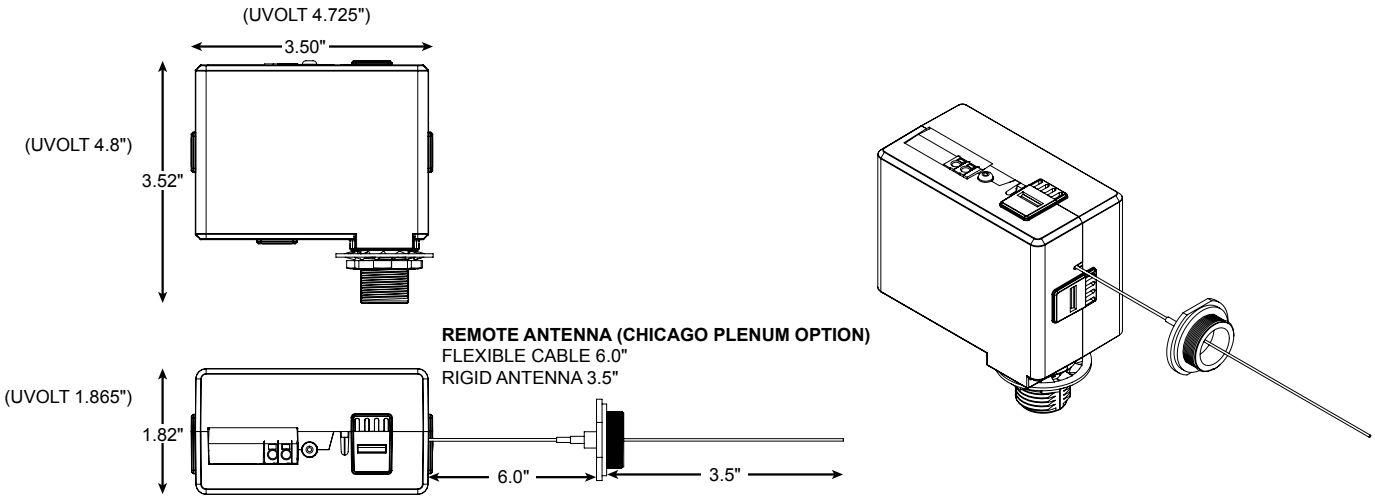
**347 only supported by UVOLT option.

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 CL**AIR**ITY™+ 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



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