nLiGHT®

nPP16

POWER / RELAY PACK
w/ OPTIONAL CURRENT MONITORING

SPECIFICATIONS

FEATURES
Communicates w/ nLight Network
Remotely Configurable/Upgradeable
Push-Button Programmable
Configurable Relay Logic
Provides Low Voltage System Power
Self-Contained Relay Switches
   Line Voltage Load
Rated to Switch Receptacle Loads
Green LED Indicator
Extended Chase Nipple

PHYSICAL SPECS
SIZE (not including ½" chase nipple):
   3.38" H x 2.53" W x 1.83" D
   (8.59 cm x 6.43 cm x 4.65 cm)
WEIGHT: 6 oz
MOUNTING: ½" knockout
COLOR: White
nLIGHT NETWORK PORTS: 2 RJ-45

ELECTRICAL SPECS
OPERATING VOLTAGE: 120/277
   or 347 VAC
RELAY TYPE: Latching
RELAY LOAD:
   16 Amps (Ballast)
   16 Amps (General purpose
      receptacles)
OUTPUT VOLTAGE/CURRENT:
   15 VDC, 40mA / port
MOTOR LOAD: 1 HP
WIRES: 16 AWG (2), 18 AWG (3)

ENVIRONMENTAL SPECS
OPERATING TEMP:
   14º to 160º F (-10º to 71º C)
RELATIVE HUMIDITY:
   20 to 90% non-condensing
ROHS COMPLIANT
SILICONE FREE

OTHER
UL and CUL Listed
Plenum Rated
Title 24 System Component
5 Year Warranty
Assembled in the U.S.A.

OVERVIEW

The nLight **nPP16** Series power pack is the workhorse of an nLight system. Each unit has two important responsibilities: providing system power and switching lighting loads. To provide system power, the power pack transforms Class 1 line voltage (120/277 VAC or 347 VAC) to Class 2 15 VDC. For switching a lighting load, an internal 16A latching relay is used.

The power pack's two RJ-45 connectors make control wiring with standard CAT-5e cabling easy and clean. For simplifying installation, power packs have an elongated chase nipple that allows them to be attached either directly through a ½" knockout into a junction box, or inside an adjacent box for meeting specific local code requirements in ceiling plenums.

POWERING OPERATION

An **nPP16** Series power pack's transformer supplies up to 40mA of power from each of its two RJ-45 ports. This power is typically utilized by other devices within the power pack's local zone; however, remaining power is made available over the network for Bridges and devices in other zones to utilize. Sensors and WallPods typically require less than 3mA each; therefore, an **nPP16** can usually power its entire lighting zone and will often contribute power to other zones.

nLIGHT OPERATION

As an nLight native device, the **nPP16** is much more intelligent than traditional power packs. Typically, an **nPP16** is daisy-chain wired, using CAT-5e cabling, with nLight sensors and/or WallPods, forming an nLight control zone. Left alone, the zone will assume default operation and can be programmed via its devices' push-buttons. Once linked to a Gateway, directly or via a Bridge, the zone becomes capable of remote status monitoring and control via SensorView software.

All switches and sensors can be configured to output on one of sixteen channels, referred to as broadcast channels. Devices with relays, such as the **nPP16**, can then be configured to follow any of these channels via the tracking channel settings. By default, an **nPP16** is configured to follow all occupancy, photocell, and switch commands arriving on Channel 1. Via SensorView, however, channel tracking settings can be programmed for each device type individually. This is critical when an **nPP16** is in a zone with a 2P or DZ sensor that sends information on both channels simultaneously.

OPTIONS

CURRENT MONITORING (IM)
- Current flowing through the device's relay and the nominal voltage (120 or 277 VAC) is measured
- Values can be read via nLight SensorView software
- Used as the baseline load value off of which the Green Screen software plugin calculates energy savings

MANUAL ON (SA)
- Changes default operating mode to manual on

347 VAC (347)
- Allows unit to be powered from 347 VAC

LOW TEMP/HIGH HUMIDITY (LT)
- Device electronics are coated for corrosion resistance
- Unit operates down to -40º F/C (**IM** option unit down to -4º F/ -20 Cº)

ORDERING INFO

nPP16 [CURRENT MONITORING] [DEFAULT MODE] [VOLTAGE] [TEMP/HUMIDITY]

OPTIONS	CURRENT MONITORING	DEFAULT MODE	VOLTAGE	TEMP/HUMIDITY
	Blank = None	Blank = Auto On	Blank = 120/277 VAC	Blank = Standard
	IM = Current Monitoring	SA = Manual On	347* = 120/347 VAC	LT = Low Temp
		PL T24 = Occ. only Tracking (CA-T24 Plug Load)	*347 not available with IM option	

WIRING (DO NOT WIRE HOT)

Use the black wire if connecting to 120 VAC. Use the orange wire if connecting to 277 VAC. 347 VAC units will have a red input wire instead of the orange wire. T568B pin/pair assignment is recommended for all CAT-5e cables.


BLK - 120 V
ORN - 277 V
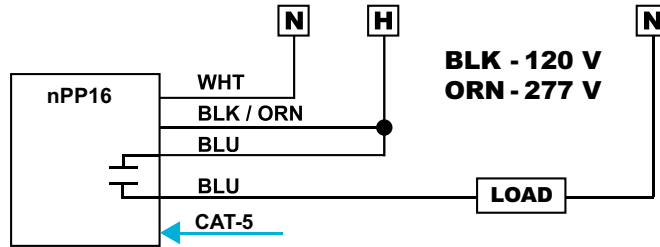
OPERATIONAL SETTINGS

Several operational settings for the **nPP16** are available including:

Override (On/Off/Normal)	Switch Tracking Channel (1-16)
Occupancy Tracking (Enable/Disable)	Button Mode (Enable/Disable)
Photocell Tracking (Enable/Disable)	Start to High (Enable/Disable)
Switch Tracking (Enable/Disable)	Invert Relay Logic (Enable/Disable)
Occupancy Tracking Channel (1-16)	LED (Override On/Override Off/Normal)
Photocell Tracking Channel (1-16)	Special Operating Modes:

Special Operating 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

INSTALLATION

- Mount to any junction box through a ½" knockout (note: chase nipple is long enough to accomodate mounting inside an adjacent box if necessary for local code requirements)
- Connect Class 1 wires to line voltage feed and load
- Interconnect unit (via RJ-45 ports) with other nLight devices in lighting zone using CAT-5e cables
- Once power is received via CAT-5e connection, all devices in zone will automatically begin functioning together according to each device's defaults
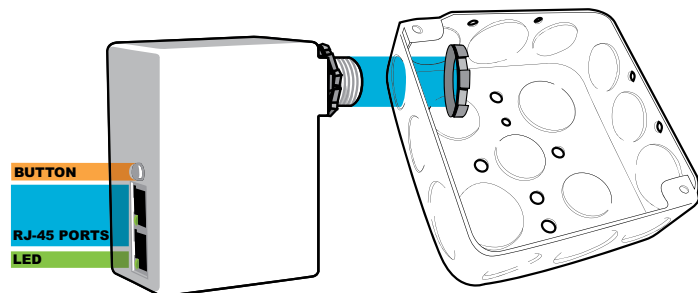
PROGRAMMING

Refer to instruction card IN-10.2 for default settings and directions on programming the sensor via the push-button.

sensorswitch

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