

## 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. Complete warranty terms located at:

[www.acuitybrands.com/resources/terms-and-conditions](http://www.acuitybrands.com/resources/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](http://www.acuitybrands.com/aplus).



## nSP5 PCD



## ORDERING INFORMATION

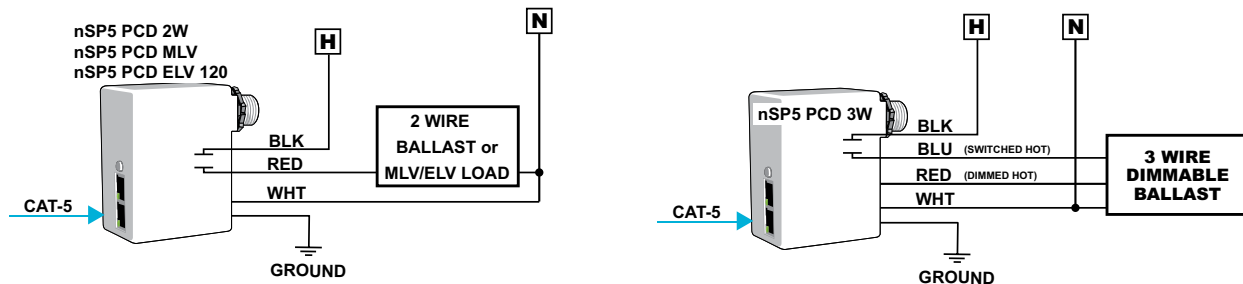
nSP5 PCD		Example: nSP5 PCD 2W LT	
Series	Dimming Type	Temp/Humidity	
nSP5 PCD	2W	Two wire dimming	[blank] Standard
	3W	Three wire dimming	LT Low temp
	MLV	Magnetic low voltage	
	ELV 120	Electronic low voltage (120 VAC)	

## 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

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<b>Electrical</b>	<b>Input Ratings</b>	15-24VDC, 7mA, Class 2 (nLight network power)
	<b>Output Ratings</b>	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)
	<b>Minimum Load Ratings</b>	7W (2W, 3W, MLV Models) None (ELV 120 Model)
	<b>Relay Type</b>	Latching
	<b>Standards/ Ratings</b>	Energy Management Equipment, UL916 (E167435)
<b>Mechanical</b>	<b>Dimensions</b>	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
	<b>Mounting</b>	1/2" Knockout (7/8" hole) – Open Air Only
	<b>Color</b>	White Aluminum Heat Sink (2W, 3W, MLV Models) Black Heat Sink (ELV 120 Model)
	<b>Connection Type</b>	RJ-45 nLight Network Ports (2), Line Voltage Leads
<b>Environmental</b>	<b>Warrantied Operating Temperature</b>	14°F to 122°F (-10°C to 50°C)
	<b>Relative Humidity</b>	Up to 90%, Non-Condensing
	<b>Standards/ Ratings</b>	RoHS, Plenum UL2043
<b>General</b>	<b>Standards/ Ratings</b>	System Component to aid in compliance with Title 24, ASHRAE 90.1, IECC