

**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
- Programmable return to last state capability

**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 Act**

Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations.

**Build America Buy America**

Product with the BAA option also qualifies as produced in the United States under the definitions of the Build America, Buy America Act.

Please refer to [www.acuitybrands.com/buy-american](http://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](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.



nIO D  
nIO 1S



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).



**ORDERING INFORMATION**

nIO				Example: nIO D KO LT				
Series	I/O Options		Mounting		Temp/Humidity		Buy America(n) <sup>1</sup>	
nIO	D	0-10VDC dimming output	[blank]	Inline wired	[blank]	Standard	[blank]	Standard
	1S	Contact closure input	KO <sup>2</sup>	Chase nipple mounting	LT	Low Temp	BAA	Buy America(n) Act and/or Build America Buy America Qualified

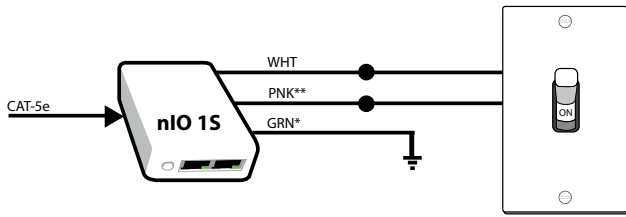
- Notes:**
1. Not available with LT.
  2. nIO 1S KO not UL listed.

## WIRING

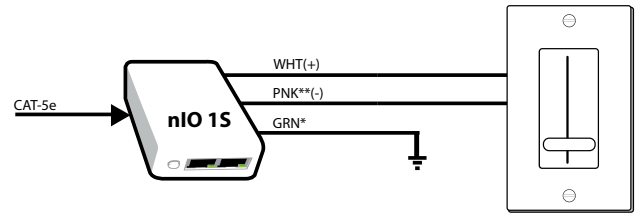
Power to a **nIO D** / **nIO 1S** device is provided by the CAT-5e connection to an nLight power pack/supply or other nLight device supplying bus power. If power is not present on the CAT-5e bus, the **nIO D**'s dimming output will release lights to highest level. T568B pin/pair assignment is recommended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

### TYPICAL nIO 1S WIRING CONFIGURATIONS

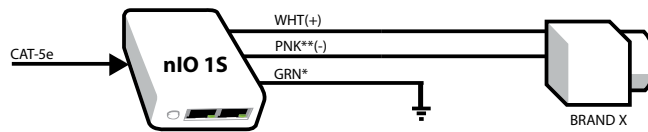
#### ON/OFF SWITCHES (TOGGLE OR MOMENTARY)



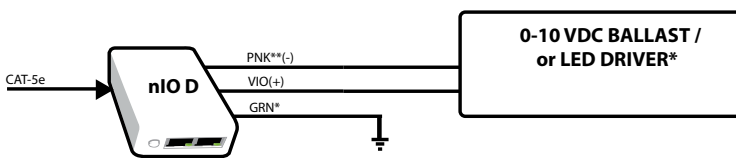
#### 0-10 VDC WALL DIMMERS



#### 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

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### 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) nIO 1S KO excluded from UL Listing

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### 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

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### 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, nIO 1S KO excluded from UL listing

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### General

**Standards/ Ratings** System Component to aid in compliance with Title 24, ASHRAE 90.1, IECC