

Lyteswitch Two

Network photo sensor controller
Indoor and outdoor sensor

The Lyteswitch Two Simple-P photo sensor monitors light levels and transmits data across the Simple-P network to the lighting control panels. Each sensor has 8 individual set points for ON or OFF control with a selectable deadband and is programmable to control any or all relays, groups, or presets. Each sensor has a built-in adjustable filter to eliminate false triggering from lightning or other light sources. Use sensor for daylight harvesting to shed lighting loads or use with a dimming module to dim loads. The indoor and outdoor photocell heads convert the analog light levels to a digital form and are UV and weather resistant.

Features

- Light levels monitored indoors or outdoors to 1800 foot candles
- Made in the USA
- Control points consist of 8 individual ON and OFF inputs
- Dead-band for each control point
- Analog to digital photocell heads
- Photocell filter to eliminate false triggering of loads
- Digitally addressable device for a unique address
- RJ45 connectors for easy data line connections
- Photocell head connectors are screw-to-connect type
- Mounting options for in the panel or at a remote location
- UV resistant photocell heads
- Encased photocell head protects sensor from the elements

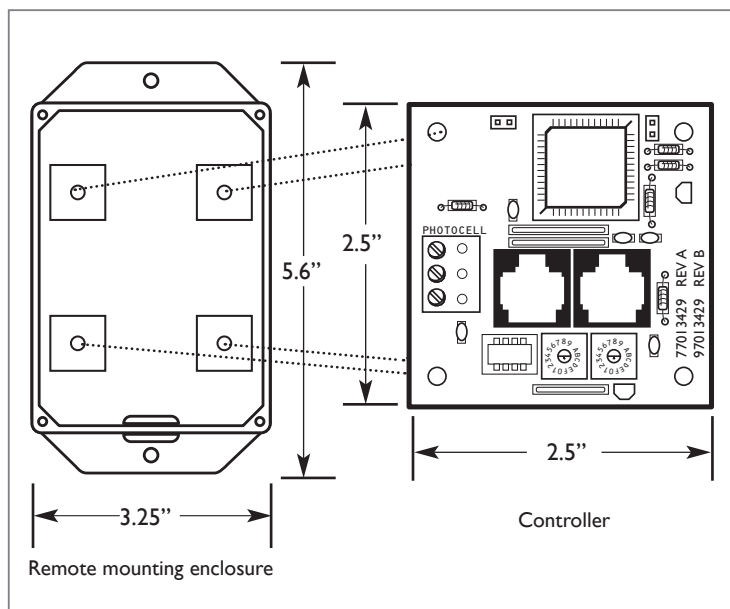
Job Information:	Device Type: _____
Job Name: _____	
Cat No.: _____	
Notes: _____	Qty: _____

PHILIPS

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Photo sensor

Dimensions



Specifications

Safeguards

- Photocell filter to eliminate false triggering of loads

Controller physical

- 2.5" wide x 2.5" high
- Digital addressing switches
- RJ45 data line connection
- Power out and digital input connections

Electrical

- Powered from the panel or the Simple-P network

Photocell heads

- Outdoor photocell mounts in a 1/2" LB type fitting or junction box
- Indoor photocell mounts to ceiling tile or other structure

Controller operating environment

- Location: interior space
- Operating temp.: 0° to 50° C
- Humidity: 10% to 90% non-condensing
- Atmosphere: non-explosive/corrosive
- Vibration: stationary

Photocell operating environment

- Location: interior/exterior space
- Operating temp.: -35° to 50° C
- Humidity: 10% to 100% condensing
- Atmosphere: non-explosive/corrosive
- Vibration: stationary

Certifications

- UL 508
- FCC Part 15, Class A

Ordering

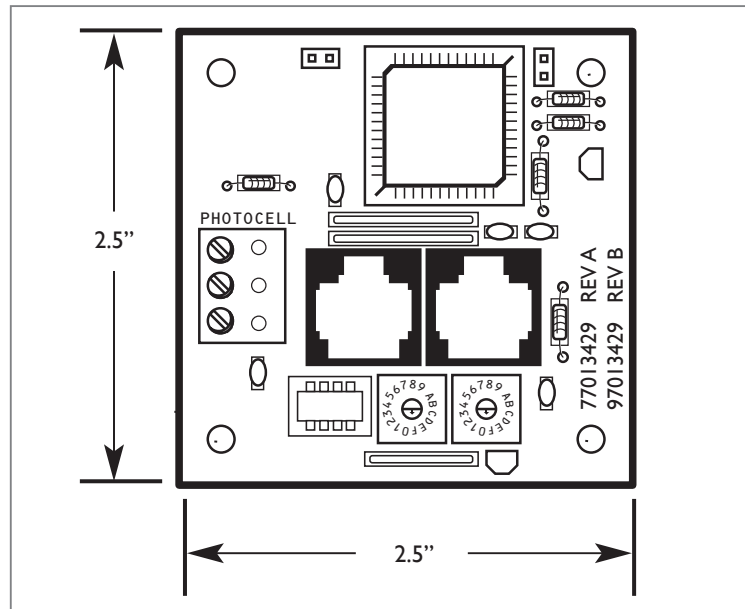
Table 1: Photo sensor part numbers and descriptions

Part number	Description
DC-DRE-PCI-001	LS2 Indoor Simple-P Photo Sensor
DC-DRE-PCO-001	LS2 Outdoor Simple-P Photo Sensor

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Simple-P data line photocell controller

Dimensions



General information

- CAT-5/CAT-6 wire control for photocell input
- Sensor range dark to daylight, 256 steps
- User adjustable dead band for each set point
- 8- Individually adjustable ON/OFF set points
- Convenient installation
- Powered via Simple-P data line

Sensors

- Completely digital sensor for reliable measurement of foot candle level
- Suitable for indoor or outdoor use
- 8- individual ON/OFF set points with 256 levels and individual deadband

Adjustments

- Indoor/outdoor ranges
- Individually adjustable ON/OFF set points
- All variable settings may be configured from Lyteswitch Two keypad

Capacities

- One Simple-P photocell head (indoor or outdoor)

Output and interfacing

- Lyteswitch Two data line connection

Controller mounting

- Controller can be mounted at a remote location up to 5000 feet away

Physical:

Outdoor sensor

- 1/2" knockout or threaded connector

Indoor sensor

- Designed to be mounted to ceiling tile or other ceiling structure
- UV stabilized

Electrical

- 1/2" knockout or threaded connector

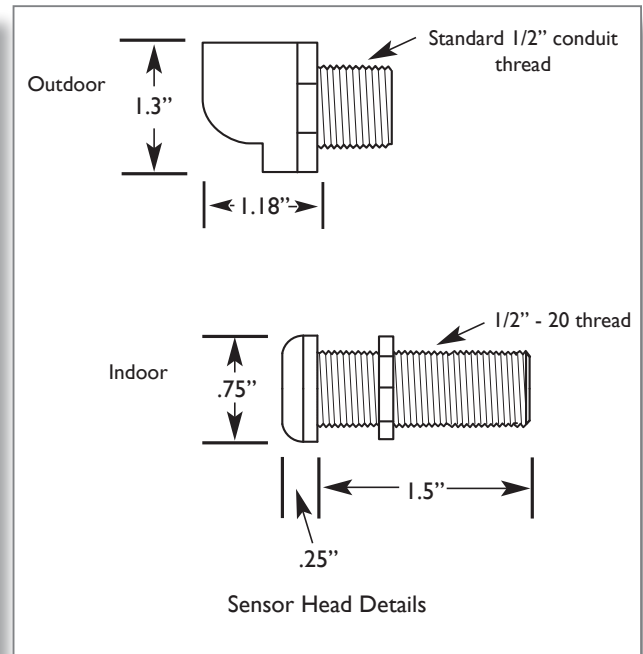
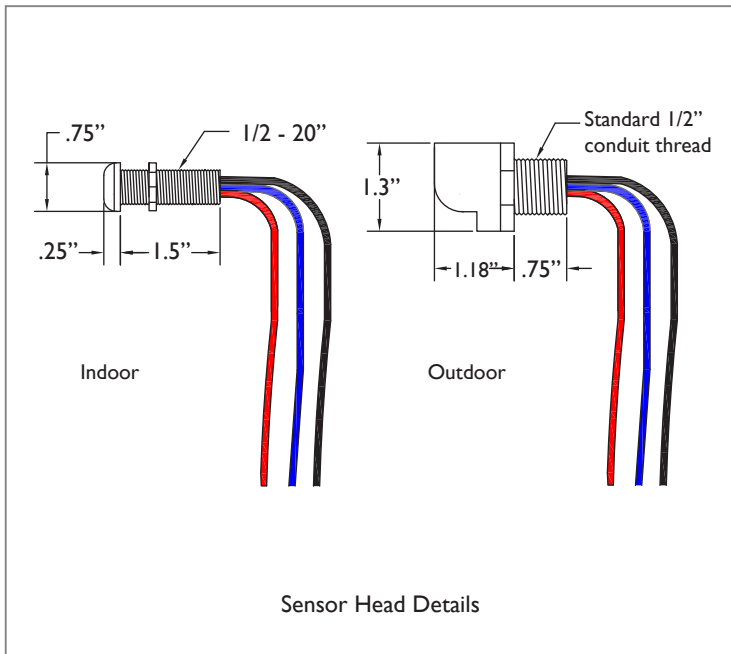
Mounting options

- Remote plastic mounting box

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Photo sensor head details

Dimensions



Specifications

Indoor Photocell Sensor Head

- Designed to mount in a ceiling tile, into sheet rock, or directly into a lighting fixture.
- White PVC material
- Head .75" x .25", 1/2 - 20 x 1.50 threaded mount
- 6" wire leads, 22 AWG
- Analog photocell to digital output

Outdoor Photocell Sensor Head

- Provided with a standard 1/2" conduit thread for mounting on an LB type fitting or junction box
- White PVC material
- Head 1.3" x 1.18", 1/2" conduit thread x .75"
- 6" wire leads, 22 AWG
- Analog photocell to digital output

Additional information

Operating environment

- Location: Interior/exterior space
- Operating temperature: -31° to 122° Fahrenheit (-35° to 50° degrees Celsius)
- Humidity: 10% to 100% condensing
- Atmosphere: Non-explosive / non-corrosive
- Vibration: Stationary

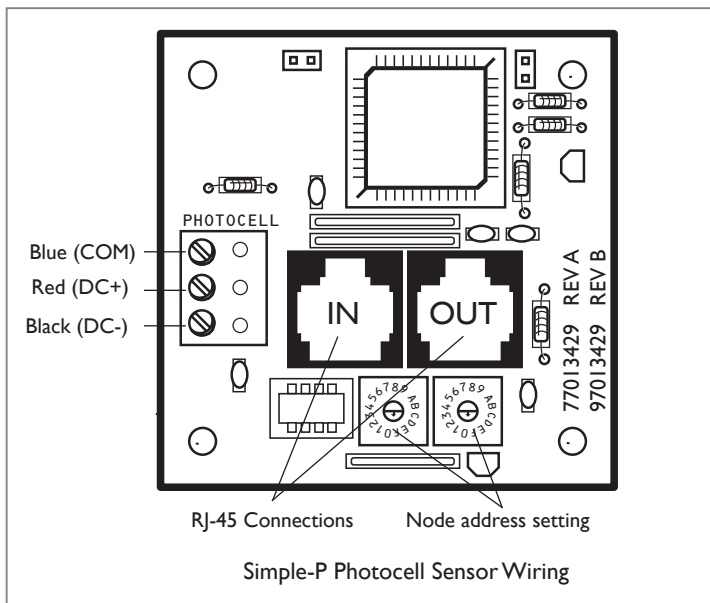
Connections

- Red: 12VDC positive
- Black: 12VDC common
- Blue: digital control signal
- Power out and digital input connections

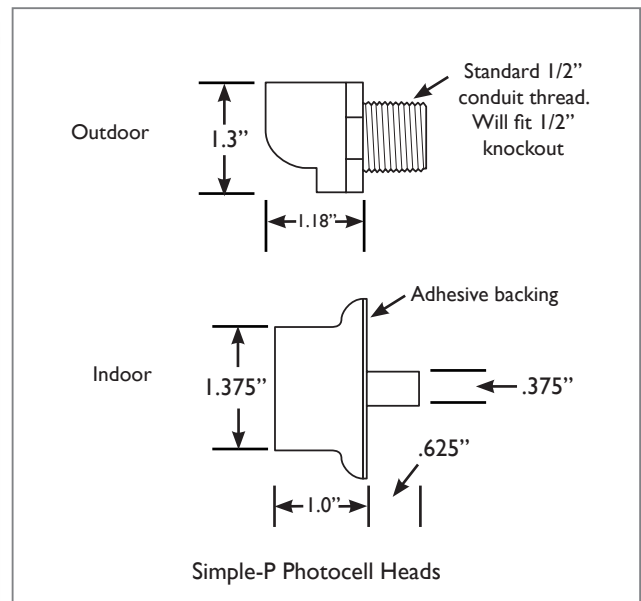
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Simple-P Photocell Controller Installation

Wiring



Dimensions



Physical:

Outdoor sensor

- 1/2 knockout or threaded connector

Indoor sensor

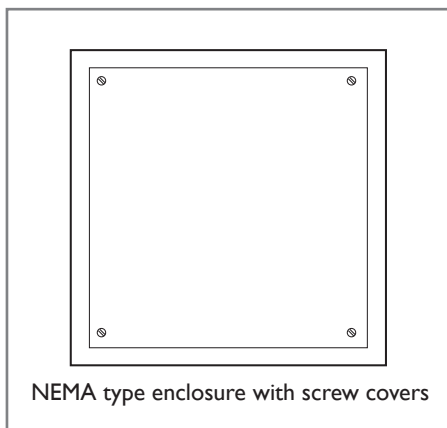
- Mounts to ceiling tile or other ceiling structure

Electrical

- Powered from Simple-P data line

Mounting

- Remote NEMA type enclosure



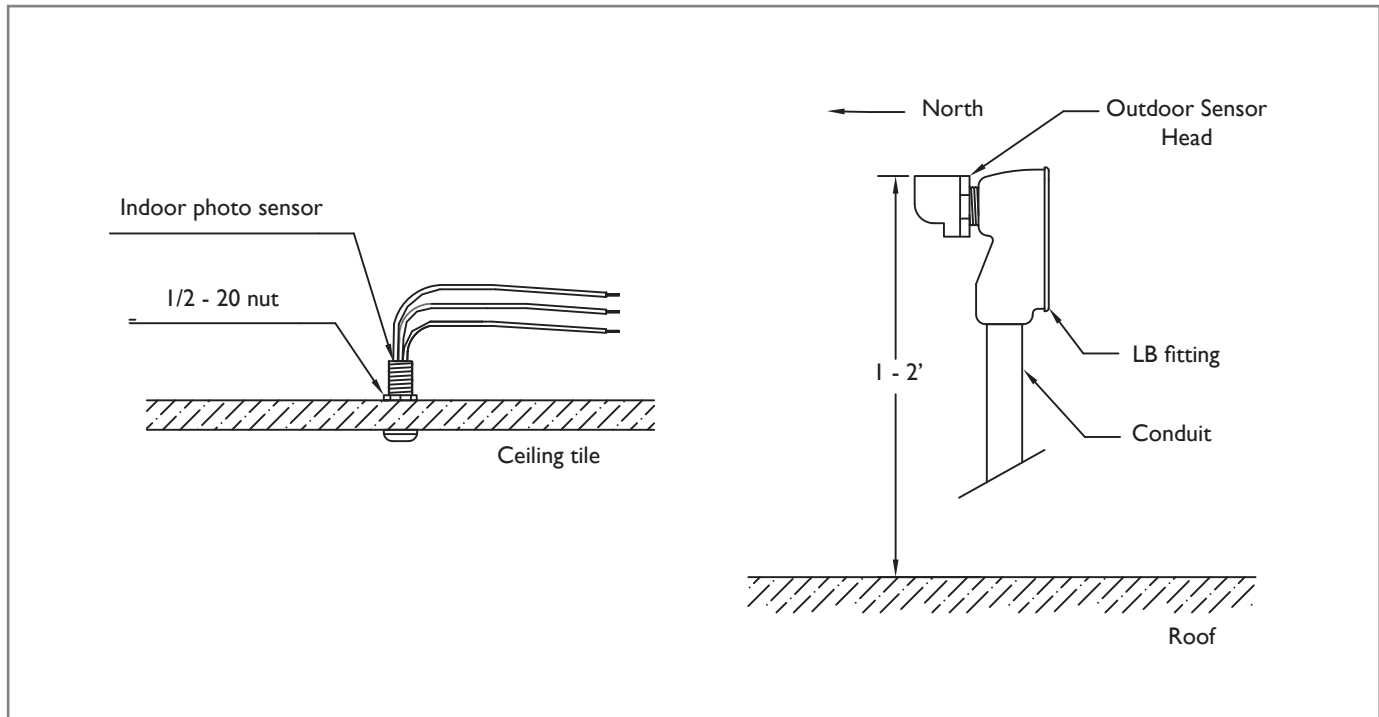
WARNING: Before installation, disconnect power at circuit breakers or remove fuses to avoid electrical shock or damage to the unit. Failure to disconnect power before installing or servicing the unit may result in serious injury or death.

Installation:

- Route the CAT-5/CAT-6 Simple-P communications cable to the photo controller from the nearest Simple-P device.
- Crimp male ends of the cable and check the cable integrity with a CAT-5/CAT-6 cable tester.
- Install the photo sensor and terminate the photo sensor control lines to the controller board following the color markings on the controller printed circuit board.
- Set the address of the photo controller to a unique address on the mini-spur using the encoder wheels.
- Plug the incoming CAT-5/CAT-6 cable into the "IN" port on the photo controller RJ-45 connector. Plug the other end of the CAT-5/CAT-6 into the "OUT" connector on the upstream Simple-P devices.

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Photo sensor head installation details



Indoor photo head installation

Placement of a sensor head for an indoor application varies greatly depending on the space to be controlled. Consider variables such as the reflectivity of room surfaces, the location of windows and skylights, and the location of electrical light sources such as recessed ceiling or pendant light fixtures. Proper placement of the photo sensor head also depends on the operation scenario desired at the location.

Open loop scenario: *Monitors the incoming natural daylight levels and not the electrical lights.* In this scenario, place the sensor head in a location with a high amount of natural light sources, such as in a skylight cavity or within a few feet of the window surface where the room's electrical lighting has a marginal effect.

Closed loop scenario: *Monitors the reflected light levels within the space including natural daylight and electrical lighting.* In this scenario, place the photo sensor head where equally affected by daylight and electric light sources, roughly between the rows of linear lights and the natural daylight sources.

Mount the photo sensor head in the ceiling, ceiling tile, skylight, light-well or lighting fixture. Mount the photo sensor to measure the light for one of the above scenarios. Ensure light does not directly enter the eye when mounting in or near the lighting fixture. To mount, drill a 1/2" hole in the suitable location avoiding obstructions behind the mounting surface. Insert the photocell sensor head and retain with the nut provided, then connect the three wires to the photo sensor controller or room controller per wiring details provided.

Outdoor photo sensor head installation

Install the outdoor photo sensor head properly to prevent faulty switching. Install where pole lights or direct artificial light will enter its eye. Install the photo sensor head in an open area away from artificial light sources and shaded areas, such as the top of the building. Mount the photocell head horizontally with the eye facing due north and the hood on top in an outdoor LB type fitting with a standoff distance of 1 to 2 feet from the roof surface. Increase standoff distance on areas of increased roof reflectivity, or when the roof has frequent snow cover.



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