

**Catalog Number • Numéro de Catalogue • Número de Catálogo: LMIO-301**

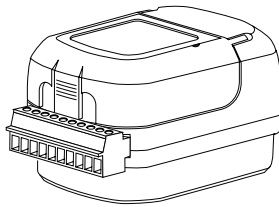
Country of Origin: Made in China • Pays d'origine: Fabriqué en Chine • País de origen: Hecho en China  
LMIO-301-U is BAA and TAA compliant (Product produced in the U.S.)

**This unit is pre-set for Plug n' Go™ operation, adjustment is optional.**

For full operational details, adjustment and more features of the product, see the DLM System Installation Guide provided with Wattstopper room controllers, and also available at [www.legrand.us/wattstopper](http://www.legrand.us/wattstopper).

**Installation shall be in accordance with all applicable regulations, local and NEC codes.** Wire connections shall be rated suitable for the wire size (lead and building wiring) employed.

For Class 2 DLM devices and device wiring: To be connected to a Class 2 power source only. Do not reclassify and install as Class 1, or Power and Lighting Wiring.



**SPECIFICATIONS**

Voltage .....	24VDC
Current Consumption .....	20mA
Power Supply .....	Wattstopper Room Controller
Connection to the DLM Local Network.....	2 RJ-45 ports
Analog Input Voltage Range	
Input 1 (terminal 9) .....	0-5VDC
Input 2 (terminal 10) .....	1-10VDC
Supply Output @24VDC +/- 15% .....	5mA
Environment .....	For Indoor Use Only
Operating Temperature.....	32° to 104°F (0° to 40°C)
Storage Temperature .....	23° to 176°F (-5° to 80°C)
Relative Humidity.....	5 to 95% (non condensing)
RoHS compliant, UL2043 Plenum rated	
Patent Pending	

**DESCRIPTION**

The LMIO-301 photocell input module is an accessory for a networked Digital Lighting Management (DLM) installation that allows an LMSM segment manager to read ambient light levels for use in controlling exterior lighting or interior lighting installed in brightly day-lit spaces such as atriums. The LMIO-301 works in conjunction with either the LMPO-200 exterior or LMPS-6000 skylight low voltage photocell heads.

**OPERATION**

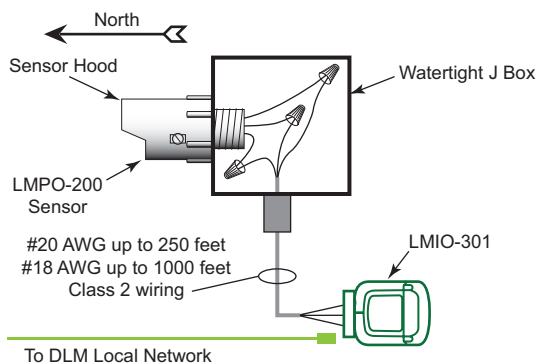
The LMIO-301 operates on Class 2 power supplied to a DLM local network by one or more room controllers or an LILM panel. It transmits light levels over the segment network as read from one of the remote analog LMPO or LMPS photocell sensors. The LMIO-301 converts the analog signal from the photocell sensor to a digital signal that is shared across the network. The segment manager controls the lighting based on user-defined setpoints and time delay settings.

**APPLICATION**

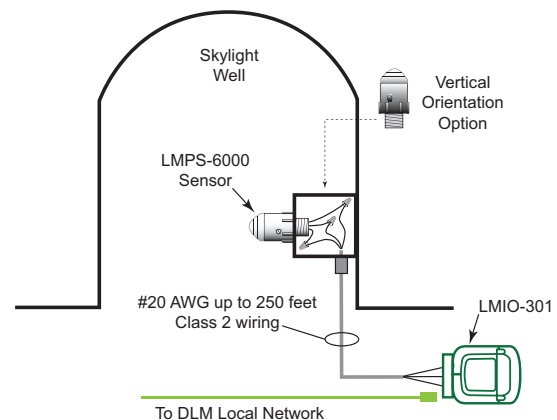
The LMIO-301 photocell input module is an ideal solution for any application where exterior lighting needs to be controlled based on actual ambient exterior light levels such as parking, site and landscape lighting. Applications with large expanses of skylight, clearstory or atrium glazing can also benefit from controlling lighting based on ambient light entering the building through the glazing.

When controlling outdoor lighting, the LMPO-200 photocell head mounts on the roof of the building facing North. The LMPO-200 photocell head is waterproof and has a built in hood to shield the lens from direct sunlight.

The LMPS-6000 photocell head is designed for indoor applications with direct exposure to extremely high light levels as would be present adjacent to the glass in an atrium, skylight, or clearstory.



**LMPO-200 Outdoor Application**



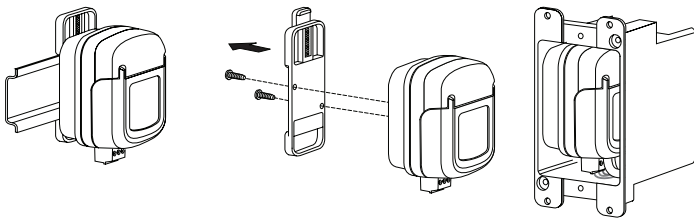
**LMPS-6000 Skylight Application**

## MOUNTING AND WIRING

**CAUTION: TO CONNECT A COMPUTER TO THE DLM LOCAL NETWORK USE THE LMCI-100. NEVER CONNECT THE DLM LOCAL NETWORK TO AN ETHERNET PORT – IT MAY DAMAGE COMPUTERS AND OTHER CONNECTED EQUIPMENT.**

Installation shall be in accordance with all applicable regulations, wiring practices, and codes. To be connected to a Class 2 power source only. Class 2 Device Wiring Only – Do Not Reclassify and Install as Class 1, 3 or Power and Lighting Wiring. Wire connections shall be rated suitable for the wire size (lead and building wiring) employed.

The LMIO-301 is UL2043 Plenum rated.



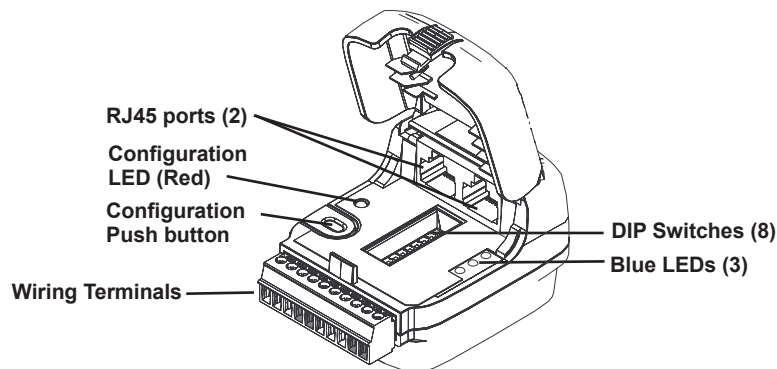
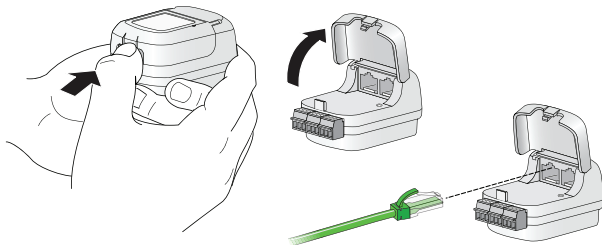
Din rail clip attached    Removing din rail clip    Inside a 2 1/8" deep single gang wall box

All connections to the LMIO-301 are Class 2 low voltage.

If code requires that the LMIO-301 be mounted in an enclosure, it can be mounted inside a 4" x 4" junction box, inside a 2 1/8" deep (or deeper) 1-gang wall box, in a 3" or 4" octagonal box, or on a din rail inside a building automation panel.

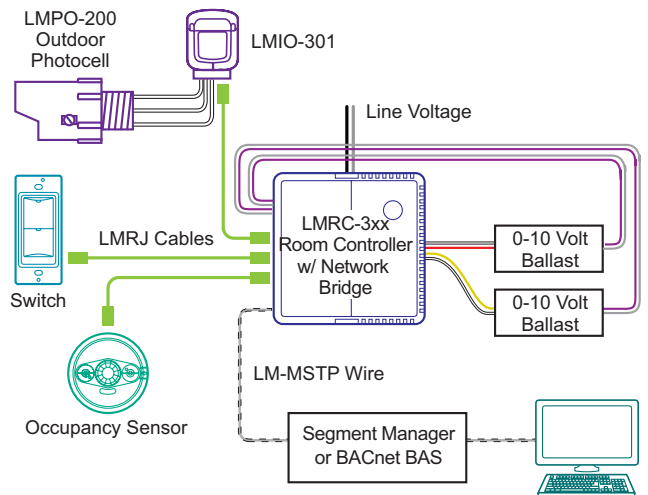
### Attach the LMRJ Cable

The DLM local network uses free topology low voltage wiring. The LMIO-301 can connect anywhere on the DLM local network.

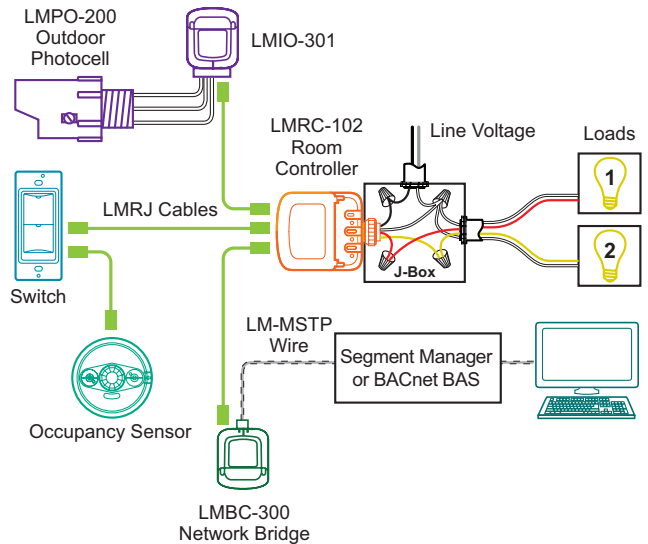


## DLM Local Network

### Example 1



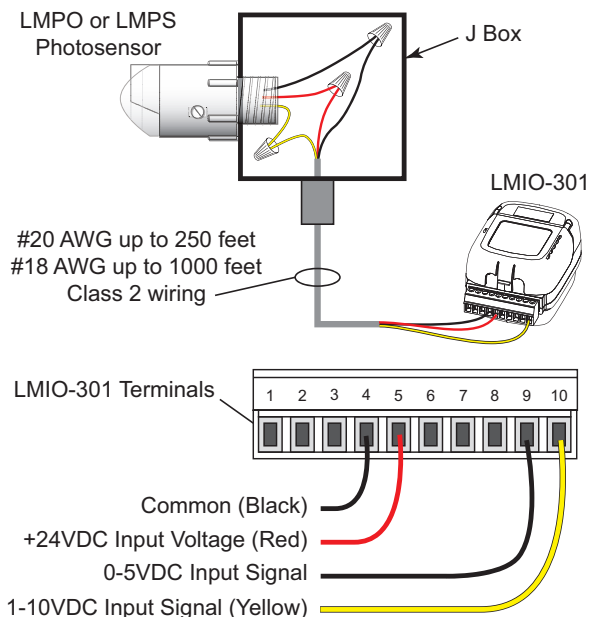
### Example 2



## TERMINAL CONNECTIONS

**1-10V Photocells:** Connect the photocell output to Terminal 10 (Input 2).

**0-5V Photocells:** Connect the photocell output to Terminal 9.



### ADJUSTMENTS

The LMIO-301 is equipped with a Configuration button. This button is provided for convenience in initiating DLM local network PnL mode; there are no binding functions needed for the LMIO-301.

The inputs may be configured using its DIP Switches for different light input levels on each of the photocell input terminals. Input 1 is calibrated for connection of 0-5VDC photocells. Input 2 is calibrated for 1-10VDC from photocells such as Wattstopper LMPO and LMPS models.

SWITCHES		Analog Input 1 (Terminal 9)
1	2	0-5VDC
Off	Off	0 – 200 FC (Default)
On	Off	0 – 50 FC
Off	On	0 – 500 FC
On	On	0 – 6000 FC
SWITCHES		Analog Input 2 (Terminal 10)
3	4	1-10VDC
Off	Off	0 – 200 FC (Default)
On	Off	0 – 50 FC
Off	On	0 – 500 FC
On	On	0 – 6000 FC
SWITCHES		Not Used
5, 6, 7		
SWITCH 8		If you connect, reconnect or change the photocell while the LMIO-301 is powered, toggle DIP Switch #8 to <b>ON</b> then <b>OFF</b> . This initializes sampling on the input and communication with the DLM Local Network.

### LED INDICATORS

The LEDs signify when input 1 or input 2 is activated, when the 24VDC output is overloaded and when PnL is active.

#### Blue LEDs

**Input 1:** Blinks when Data from Input 1 transmits to the DLM Local Network.

**Input 2:** Blinks when Data from Input 2 transmits to the DLM Local Network.

**24V Overload:** Blinks (1x/sec) when terminal 5 (24VDC) output exceeds 5mA and the LMIO-301 shuts off the output. LED goes **OFF** when the overcurrent condition is removed.

#### Red LED

**Config:** intermittent flashes indicate DLM system local network activity. Blinking at regular intervals of 2x/second indicates the local network is in PnL.

### TROUBLESHOOTING

#### The blue LED for 24V Overload is blinking (1x/sec).

This means that the 24VDC output from terminal 5 exceeded 5mA. The output has been shut **OFF**. The LED turns **OFF** when the overcurrent condition is removed.

- Make sure only one photocell is connected to the LMIO-301.
- Check wiring to terminal 5.

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**WARRANTY INFORMATION**

Wattstopper warrants its products to be free of defects in materials and workmanship for a period of five (5) years. There are no obligations or liabilities on the part of Wattstopper for consequential damages arising out of, or in connection with, the use or performance of this product or other indirect damages with respect to loss of property, revenue or profit, or cost of removal, installation or reinstallation.

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