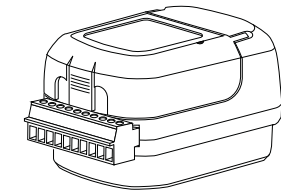


For full operational details and more features of the Digital Lighting Management (DLM System), see the DLM System Installation Guide available at www.wattstopper.com

LMIO-301

Digital Lighting Management Photocell Input Module



INSTALLATION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS, LOCAL AND NEC CODES.

For Class 2 DLM devices - To be connected to a Class 2 power source only.

For Class 2 Device Wiring Only – Do Not Reclassify and Install as Class 1, or Power and Lighting Wiring.

Wire connections shall be rated suitable for the wire size (lead and building wiring) employed.

UNIT DESCRIPTION

The LMIO-301 photocell input module is an accessory for a networked Digital Lighting Management (DLM) installation that allows an LSM 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.

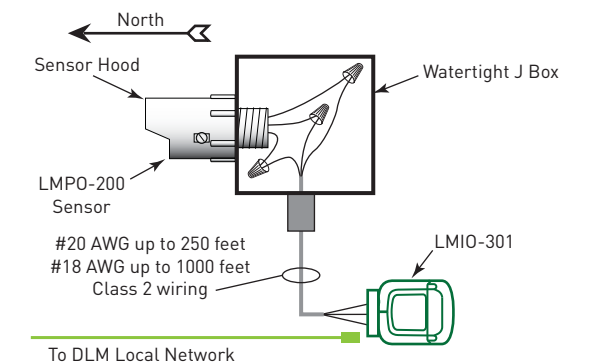
When controlling outdoor lighting, the LMPO-200 photocell head mounts on the roof of the building facing North. The LMPO-200 photocell head is waterproof and has a built in hood to shield the lens from direct sunlight.

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.

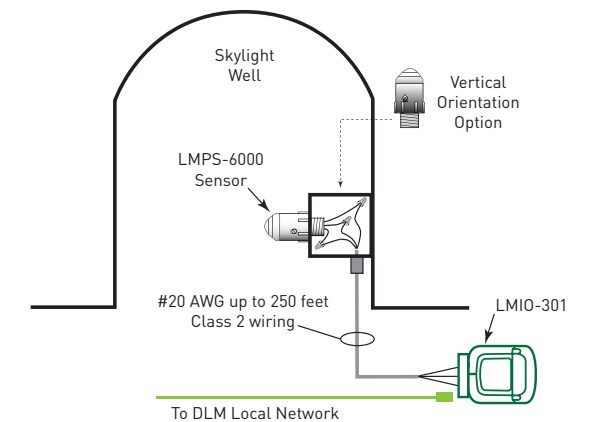
Specifications

Voltage	24VDC
Current Consumption	20mA
Power Supply.....	WattStopper Room Controllers
Connection to 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)
Other:	
RoHS compliant	
UL2043 Plenum rated	
5-year warranty	

LMPO-200 Outdoor Application



LMPS-6000 Skylight Application



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.

MOUNTING AND WIRING

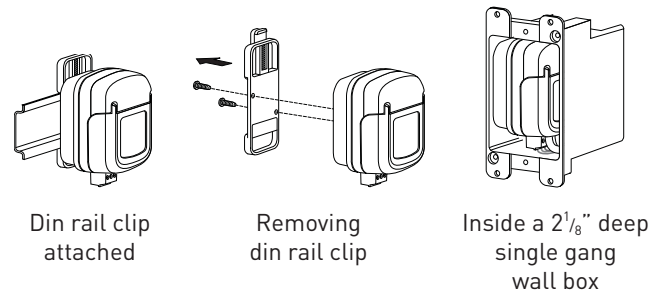
Installation shall be in accordance with all applicable regulations, wiring practices, and codes.

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.

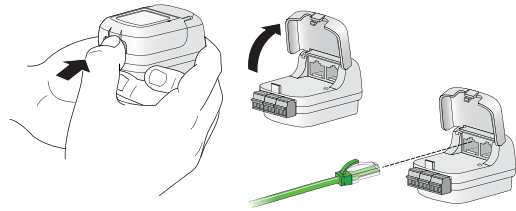
The LMIO-301 is UL2043 Plenum rated.

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



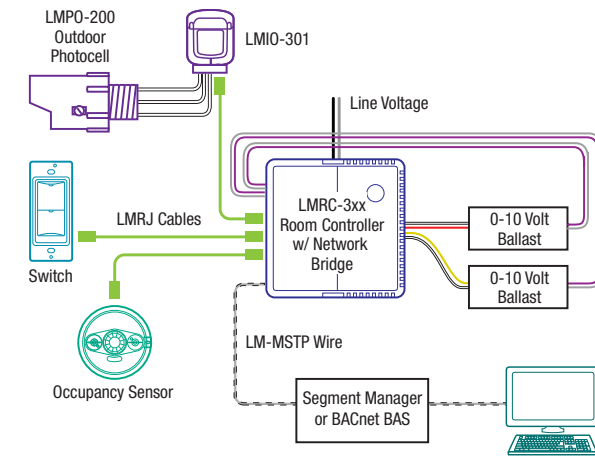
The DLM local network uses free topology low voltage wiring. The LMIO-301 can connect anywhere on the DLM local network.

WARNING
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.

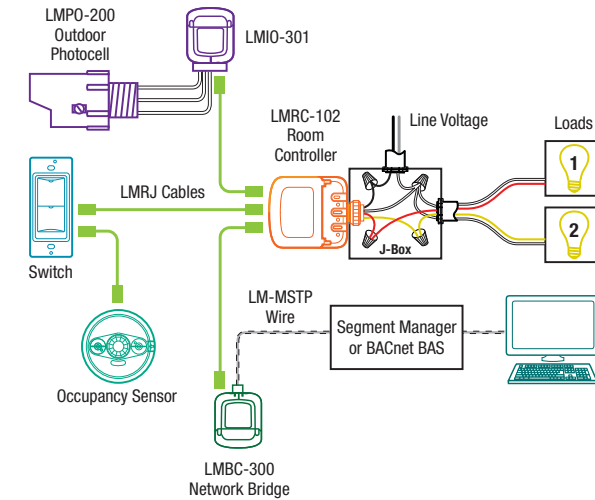
Do not connect more than one photocell to the LMIO-301.

DLM Local Network

Example 1



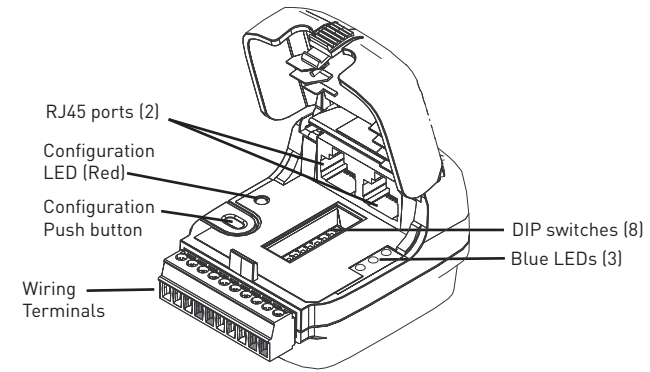
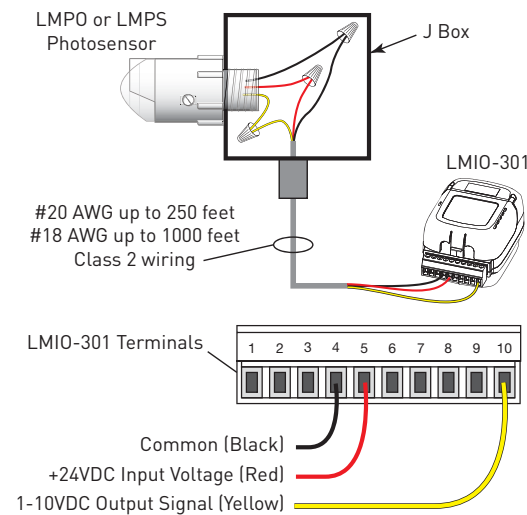
Example 2



TERMINAL CONNECTIONS

1-10V Photocells: connect the photocell output to terminal 10 (Input 2).

0-5V Photocells: connect the photocell output to terminal 9 (Input 1)



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 1	SWITCHES 2	Analog Input 1 (terminal 9) 0-5VDC
Off	Off	0 – 200 FC (Default)
On	Off	0 – 50 FC
Off	On	0 – 500 FC
On	On	0 – 6000 FC
SWITCHES 3	SWITCHES 4	Analog Input 2 (terminal 10) 1-10VDC
Off	Off	0 – 200 FC (Default)
On	Off	0 – 50 FC
Off	On	0 – 500 FC
On	On	0 – 6000 FC
SWITCHES 5, 6, 7	Not Used	
SWITCH 8	If you connect, reconnect or change the photocell while the LMIO-301 is powered, toggle DIP switch #8 to On then Off. 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).

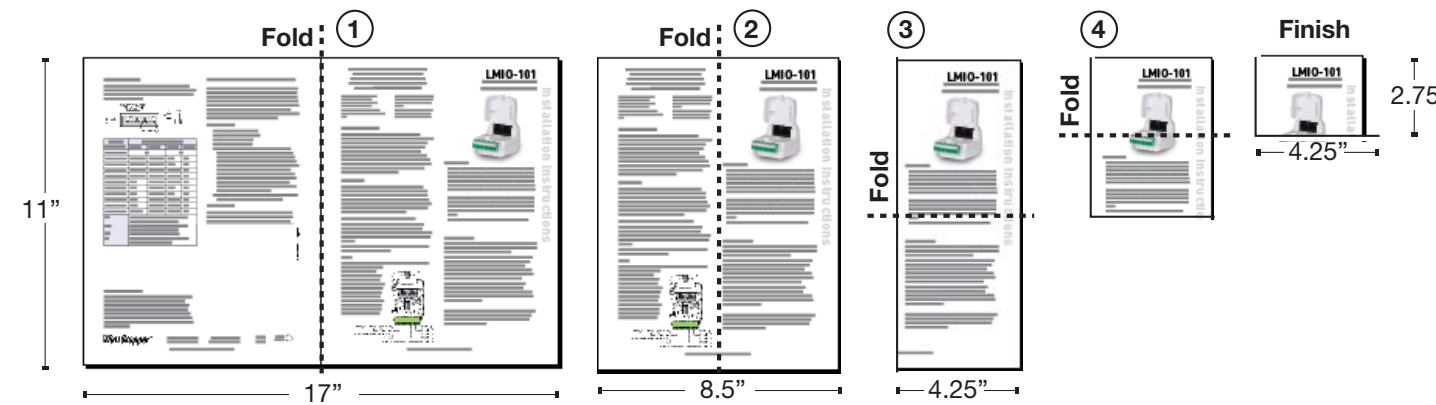
This means that the 24VDC output from terminal 5 exceeded 5mA. The output has been shut OFF. The LED turns OFF when the overcurrent condition is removed.

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

REV	DESCRIPTION	INT:	REV. DATE	APPROVED
1	ECO# C03943	PB	7/1/10	CG
2	ECO# C04282	PB	12/29/10	CG
3	ECO# C04633	PB		

MATERIAL: White 16lb (60g/m sq)
 Uncoated, recycled stock preferred
Flat Sheet Size: 17" x 11"
Final Trim Size: 8.5" (Wide) x 11" (High)
Ink: CMYK
Print: Two Sides
Pages: 4
Sheets: 1

TITLE BOX PAGE ONLY.
DO NOT MAKE FILM • DO NOT PRINT



IF YOU HAVE ANY QUESTIONS REGARDING SPECIFICATIONS OR REQUIRE
 ADDITIONAL FILE FORMATTING, PLEASE CONTACT Technical Writing Dept.
 Phone: 760-804-9701
 Email: dawn.revel@wattstopper.com

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PLM				
MARCOM				
ENGINEERING				
QA		Drawing #:	Orig. Drawing Date: 9 JUN 10	REV. #:
TITLE BOX PG	SCALE 1:1	11491	Revision Date: 13 JAN 2011	3