

# Solo Sensor, Line Voltage, PIR, 0-10V Dimming Indoor/Outdoor Sensor

Cat. No. ZLS10-IDW



## WARNINGS:

- **TO AVOID FIRE, SHOCK, OR DEATH, TURN OFF POWER** at circuit breaker or fuse, and test that power is off before wiring!
- To be installed and/or used in accordance with appropriate electrical codes and regulations.
- If you are unsure about any part of these instructions, consult an electrician.
- **SAVE THESE INSTRUCTIONS.**

PK-A3384-10-00-5A AR2561

## INSTALLATION INSTRUCTIONS

ENGLISH

### DESCRIPTION

Leviton® Cat. No. ZLS10-IDW is a line voltage occupancy and daylight harvesting sensor, designed for installation directly into a lighting fixture. The sensor is rated for wet and cold locations and is suitable for indoor and outdoor fixtures. The sensor is designed for individual dimming control of 0-10VDC dim-to-OFF LED drivers or electronic ballasts, or switching of non-dimming ballasts.

ZLS10-IDW includes both a mid and high bay lens, designed to provide an adjustable coverage radius of up to 30 ft., when mounted at a maximum height of 40 ft. Configure the dimming profile and output settings of the sensor using DIP switches or a Leviton Cat. No. ZLSOR-RC1 IR remote control.

The sensor uses Passive Infrared (PIR) detection technology to monitor for occupancy, and controls the fixture based on user-selectable settings. PIR detection may be disabled using the remote control. The fixture will remain ON regardless of occupancy, and if enabled, daylight harvesting will continue to operate.

An integrated photocell can be enabled, using the remote control to measure the available ambient light and adjust the lighting output of the fixture between user-defined task and Stand-By lighting levels. When disabled, the fixture will dim to the Stand-By level after the Hold Time has expired. If occupancy is not detected, the fixture will turn OFF at the end of the Stand-By time.

The sensor may be installed into your fixture by the fixture manufacturer. When the sensor is pre-installed in a fixture, refer to the fixture documentation for installation methods, means, and requirements.

### NOTES:

- 0-10V dimming LED driver or ballast must support dim-to-OFF.
- If pre-installed into a fixture and you are replacing it, refer to fixture instructions for appropriate installation.
- Maximum mounting height of 40 ft.

### INSTALLATION PRE-REQUISITES

#### NOTES:

- Configure DIP switch settings prior to installation into fixture.
- See sensor dimensions for mounting requirements.

#### FOR OPTIMAL PERFORMANCE:

The ZLS10-IDW sensor lens establishes dozens of zones of detection. The sensor is sensitive to the heat emitted by the human body. In order to trigger the sensor, the source of heat must move from one zone of detection to another. The device is most effective in sensing motion across its field-of-view, and less effective in sensing motion towards or away from its field-of-view. Keep this in mind when selecting the installation location. Note that occupancy sensors respond to rapid changes in temperature, so care should be taken not to mount the device near a climate control source (e.g., radiators, air exchanges, and air conditioners). Hot or cold drafts will look like body motion to the device, and will trigger it if the unit is mounted too close. It is recommended to mount the Occupancy Sensor at least 6 ft. away from a climate control source. In addition, it is also recommended to NOT mount the Occupancy Sensor directly under a large light source. Large wattage bulbs (greater than 100W incandescent) give off a lot of heat, and switching the bulb causes a temperature change that can be detected by the device. Mount the Occupancy Sensor at least 6 ft. away from large bulbs. If it necessary to mount the device closer, lower the wattage of the bulb directly overhead.

#### CLASS 2 WIRING:

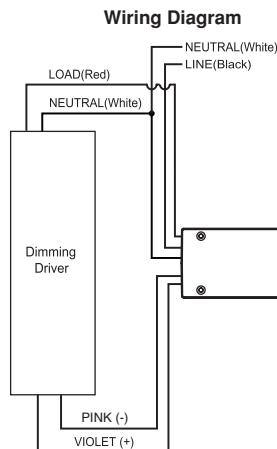
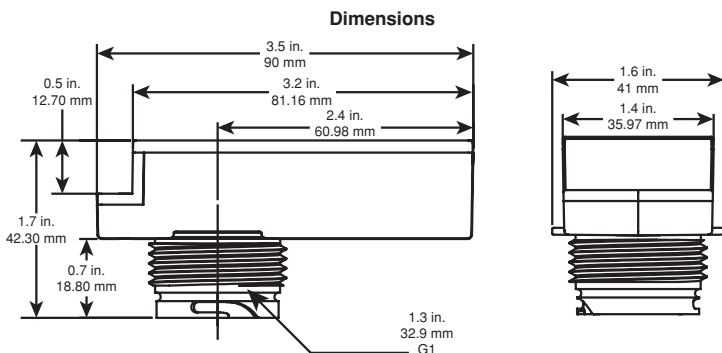
**For 0-10V Control Wiring:** Connect the Violet wire to the + 0-10V line and the Pink wire to the 0-10V common, using Class 1 or Class 2 wiring methods, as indicated in these instructions, ballast/fixture/driver instructions, or ballast/fixture/driver label markings. Observe all requirements of any authority having jurisdiction, with respect to wire type, sleeving, isolation methods, and the like.

### INSTALLATION

**WARNING: TO AVOID FIRE, SHOCK, OR DEATH, TURN OFF POWER** at circuit breaker or fuse, and test that power is off before wiring!

1. Confirm factory default DIP switch settings and configure as required.  
Factory Defaults to:

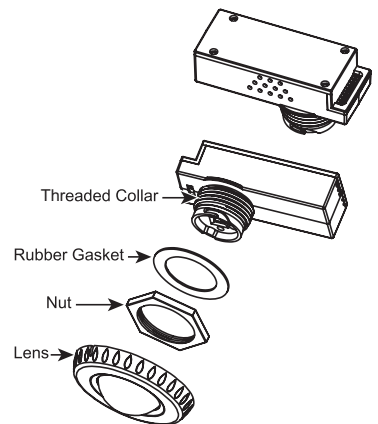
- Sensitivity: 100%
  - Hold Time: 10 seconds
  - Daylight Sensor: 30 lux
  - Stand-By Level: 30%
  - Stand-By Time: 60 minutes
- Position sensor correctly in fixture, align lens, and install by turning counterclockwise, until tight.
  - Make wiring connections per wiring diagram.
  - After all connections have been made, ensure that all wire connectors are firmly attached and that there is no exposed copper.
  - Restore power to the circuit and verify that locator LED light is ON.



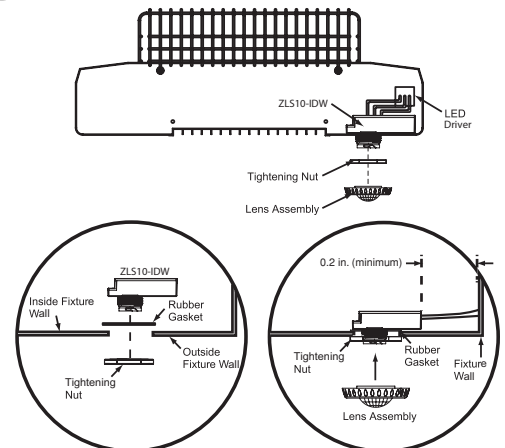
Specifications	
<b>Catalog Numbers</b>	ZLS10-IDW
<b>Input Voltage / Frequency</b>	120/277VAC, 50-/60Hz
<b>Load Ratings:</b>	
• LED,CFL, Electronic Ballast @ 120V	600W
• LED,CFL, Electronic Ballast @ 277V	1385W
• Magnetic Ballast, Cold Cathode @ 120V	660W
• Magnetic Ballast, Cold Cathode @ 277V	1200W
• Resistive, Tungsten @ 120V	800W
• Resistive, Tungsten @ 277V	1200W
<b>Operating Temperature</b>	-40°F to 158°F (-40°C to 75°C)
<b>Storage Temperature</b>	-40°F to 185°F (-40°C to 85°C)
<b>Impulse Voltage</b>	4000V
<b>Pollution Degree</b>	2
<b>Action Control Type</b>	Type 1

Symbol	Meaning
~	VAC, Volts Alternating Current
--...	VDC, Volts Direct Current
A	A = Load in Amps
mA	mA = Load in mA

Installation Diagram 1



Installation Diagram 2



## OPERATION

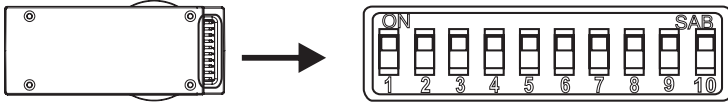
The ZLS10 sensor is designed to operate per configuration settings set by DIP switch or using the optional remote, ZLSOR-RC1. See user manual for more information on ZLSOR-RC1 features and operation.

## CONFIGURATION

Use the DIP switches on the sensor, or the optional remote, ZLSOR-RC1, to set the configuration parameters. See the user manual for more information on configuration, using the remote.

Configuration of the sensor using DIP switches on the device:

- DIP Switches 1 and 2 for Sensitivity / Range
- DIP Switches 3 and 4 for Hold Time / Timeout
- DIP Switches 5 and 6 for Daylight Sensor Lux Level
- DIP Switches 7 and 8 for Stand-By Level
- DIP Switches 9 and 10 for Stand-By Level Hold Time



1. **Sensitivity / Range:** Set the desired occupancy detection sensitivity.

2. **Hold Time / Timeout:** Set the desired length of time that the light will remain ON after occupancy is no longer detected.

3. **Daylight Sensor Lux Level:** Set or disable the desired Lux threshold, at which the sensor will prevent the light from turning ON, when sufficient ambient light is present.

4. **Stand-By Level:** Set the desired level to which the light will dim after the Hold Time expires.

5. **Stand-By Time:** Set the desired length of time that the light will remain at Stand-By level. If  $\infty$  is selected, the light will remain at that level indefinitely, or until occupancy is detected.

## TROUBLESHOOTING

### Lights will not turn ON.

- Sensor is wired incorrectly. Confirm that sensor wiring matches the wiring diagram, and inspect it visually for problems.
- If daylight sensor is enabled, check settings and make adjustments to Lux levels.

### Lights will not turn OFF.

- Sensor is wired incorrectly. Confirm that the sensor's wiring is done correctly, and inspect it visually for problems.
- Make sure the luminaire is installed with at least 1 ft. (30 cm.) of space between the luminaire and surrounding reflective surfaces (e.g., metal, glass, or concrete walls).
- Sensitivity / Range is set improperly. Adjust DIP Switches 1 and 2.

### Lights turn OFF and ON too quickly.

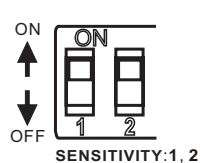
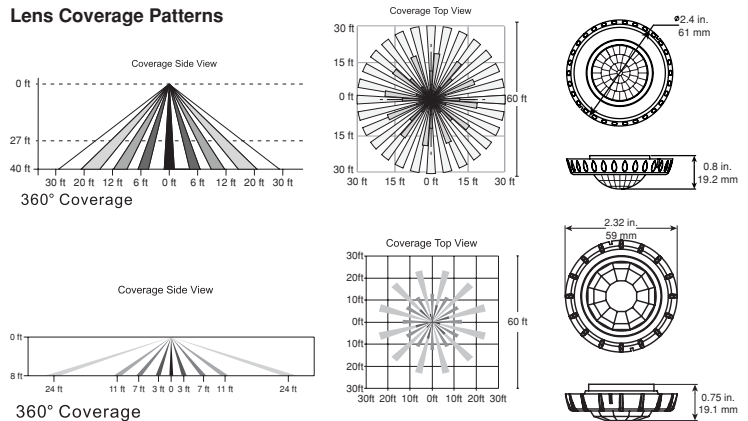
- Sensitivity / Range is set improperly. Adjust DIP Switches 1 and 2.
- Hold Time / Timeout is set improperly. Adjust DIP Switches 3 and 4.

This Class B digital apparatus complies with Canadian CAN ICES-3(B)/NMB-3(B). Any changes or modifications not expressly approved by Leviton could void the user's authority to operate this equipment.

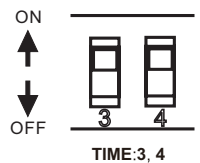
### FOR CANADA ONLY

For warranty information and/or product returns, residents of Canada should contact Leviton in writing at Leviton Manufacturing of Canada ULC to the attention of the Quality Assurance Department, 165 Hymus Blvd, Pointe-Claire (Quebec), Canada H9R 1E9 or by telephone at 1-800-405-5320.

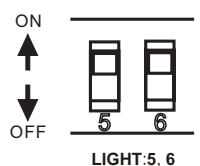
## Lens Coverage Patterns



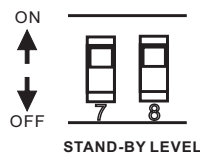
SENSITIVITY	
1	2
↓ ↓	20%
↓ ↑	50%
↑ ↓	75%
↑ ↑	100%



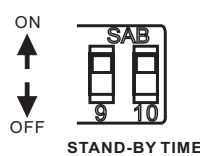
TIME	
3	4
↓ ↓	10S
↓ ↑	1Min
↑ ↓	5Min
↑ ↑	15Min



LIGHT	
5	6
↓ ↓	(light sensor disable)
↓ ↑	10Lux
↑ ↓	30Lux
↑ ↑	50Lux



STAND-BY LEVEL	
7	8
↓ ↓	0%
↓ ↑	10%
↑ ↓	30%
↑ ↑	50%



STAND-BY TIME	
9	10
↓ ↓	+
↓ ↑	1Min
↑ ↓	30Min
↑ ↑	60Min

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### FCC STATEMENT:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### FCC SUPPLIERS DECLARATION OF CONFORMITY (SDOC):

Model ZLS10-IDW manufactured by Leviton Manufacturing Co., Inc., 201 North Service Road, Melville, NY 11747, <http://www.leviton.com>. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### IC STATEMENT:

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

### LIMITED 5 YEAR WARRANTY AND EXCLUSIONS

Leviton warrants to the original consumer purchaser and not for the benefit of anyone else that this product at the time of its sale by Leviton is free of defects in materials and workmanship under normal and proper use for five years from the purchase date. Leviton's only obligation is to correct such defects by repair or replacement, at its option. For details visit [www.leviton.com](http://www.leviton.com) or call 1-800-824-3005. This warranty excludes and there is disclaimed liability for labor for removal of this product or reinstallation. This warranty is void if this product is installed improperly or in an improper environment, overloaded, misused, opened, abused, or altered in any manner, or is not used under normal operating conditions or not in accordance with any labels or instructions. **There are no other or implied warranties of any kind, including merchantability and fitness for a particular purpose, but if any implied warranty is required by the applicable jurisdiction, the duration of any such implied warranty, including merchantability and fitness for a particular purpose, is limited to five years. Leviton is not liable for incidental, indirect, special, or consequential damages, including without limitation, damage to, or loss of use of, any equipment, lost sales or profits or delay or failure to perform this warranty obligation.** The remedies provided herein are the exclusive remedies under this warranty, whether based on contract, tort or otherwise.