

Wireless Battery-Powered Daylight Sensor

WLDH 3 V == 7 μA 434 MHz

Compatible Products

This sensor is compatible with Hubbell's WL-series and other Lutron Clear Connect powered devices. Contact technical support or visit www.hubbell-wiring.com for integration information and a full list of compatible products.

Product Description

Hubbell's Daylight Sensor is a wireless, ceiling-mounted, battery-powered device that automatically controls lights through RF communication with switching device. The Sensor detects light in the space, and then transmits the appropriate commands to the associated switching device. When sufficient daylight is available, the system turns off the electric light. When insufficient daylight is available, the system will increase the electric light.

P/N - PDS 2511 PN

Important Notes

1. The Sensor is part of a system and cannot be used to control a load without a compatible switching device. Refer to the instruction sheets of the receiving devices for installation information.

2. **Clean Sensor with a soft damp cloth only. DO NOT** use any chemical cleaners.

3. The Sensor is intended for indoor use only. Operate between 32 °F and 104 °F (0 °C and 40 °C).

4. **DO NOT** paint Sensor.

5. Use only high-quality lithium batteries, one (1) size CR2450, 3 V == (ANSI-5029LC, IEC-CR2450). **DO NOT** use rechargeable batteries. Using improperly rated batteries could damage the Sensor.

NOTICE: DO NOT disassemble, crush, puncture, drop on a hard surface, subject to high heat, place in water, incinerate, or alter batteries in any way. Please dispose of batteries in compliance with all applicable legal requirements. Your waste disposal provider may have information regarding any state or local restrictions on battery disposal.

6. **California residents:** The batteries in these devices contain Perchlorate Material—special handling may apply. For more information visit www.dtsc.ca.gov/hazardouswaste/perchlorate.

7. The range and performance of the RF system is highly dependent on a variety of complex factors such as:

- Distance between system components
- Geometry of the building structure
- Construction of walls separating system components
- Electrical equipment located near system components

WARNING: Entrapment hazard. To avoid the risk of entrapment this product must not be used to control equipment which could create hazardous situations, such as entrapment, if operated accidentally. Examples of equipment which must not be controlled with this product include (but are not limited to) motorized gates, garage doors, industrial doors, etc. Accidental operation of the above equipment with this product could result in serious injury or death.

FCC Information

This device complies with part 15 of the FCC Rules and Industry Canada licence-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.

Modifications not expressly approved by Hubbell Wiring Devices Inc. could void the user's authority to operate the equipment.

NOTE: The 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.

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Technical Assistance

For questions concerning the installation or operation of this product, call the **Hubbell Wiring Technical Service**

Please provide exact model number when calling.

1.475.882.4820

Monday - Friday, 8am - 5pm ET

techserv@hubbell.com www.hubbell-wiring.com

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Instructions

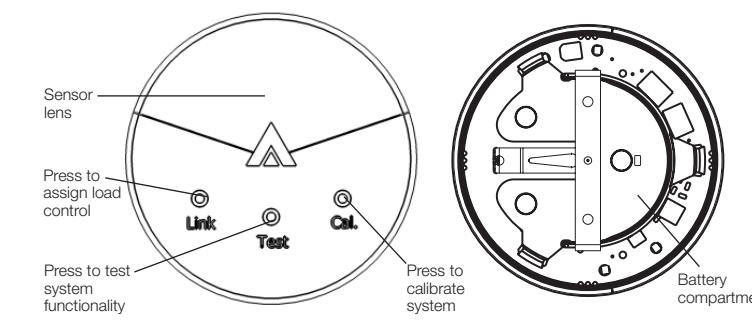


Install a Sensor in as little as 15 minutes.

Getting Started:

Key Features

- **Easy Installation.** No wiring required.
- **Easy Set-Up.** Default settings are ideal for most situations. Simple and intuitive adjustments available.
- **Low Maintenance.** 10-year battery life.
- **Daylight Switching.** Sensors integrate with various Hubbell Switches.
- **Multiple Devices.** Each Sensor may be added to up to 10 receiving devices.



Sensor Operation: Daylight Sensor Only

Switching – The lights must be manually turned on at the switching device. The Sensor will automatically turn the lights off 15 minutes after sufficient daylight is available in the space.

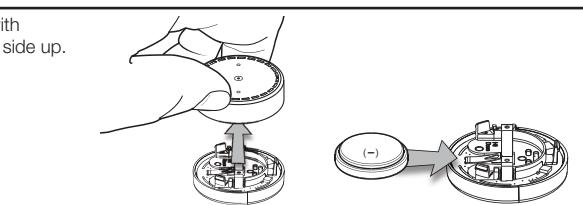
Sensor Operation: Daylight & Occupancy Sensor

Switching – The lights will automatically turn on when the space is occupied and there is not sufficient daylight available. The Sensor will automatically turn the lights off 15 minutes after sufficient daylight is available in the space. The lights will automatically turn off when the space is vacant.

NOTE: The lights can also be manually turned off at any time by using the switching device directly.

A Pre-Installation

1 Before setting up the Sensor, the corresponding switching device(s) should be installed. Refer to that product's installation sheet for instructions.



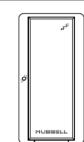
B Set-Up

In order for the Sensor to operate properly, it must first be set up with a corresponding switching device. The procedure for setting up a Sensor with a WL-series Electronic Switch is detailed below.

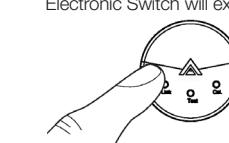
If setting up a Sensor with a different device, visit www.hubbell-wiring.com or consult the installation guide for that device for the correct set-up procedure.

1 Setting up a Sensor with a WL-series Electronic Switch

1.1 Place the Electronic Switch in set-up mode by pressing and holding the tap button for approximately 6 seconds until all LEDs on the device begin flashing. Release the tap button.



1.2 Add the Sensor to the Electronic Switch by pressing and holding the "Link" button on the front of the Sensor for approximately 6 seconds until the lens flashes briefly. The lights in the room will also flash 3 times, indicating the Sensor has been successfully added. The Electronic Switch will exit set-up mode automatically.



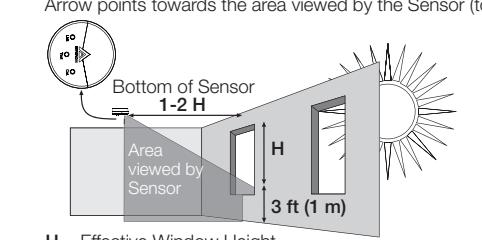
C Sensor Placement

Determine the Daylight Sensor Mounting Location using the diagrams below:

- The arrow on the Daylight Sensor points toward the area viewed by the Sensor.
- Place the Daylight Sensor so its arrow is pointed at the nearest window at a distance from the window of one to two times the effective window height (H).
- The effective window height (H) starts at the window sill or 3 ft (1 m) up from the floor, whichever is higher, and ends at the top of the window.
- Ensure that the view of the Daylight Sensor is not obstructed.
- Mount the Daylight Sensor away from large metal surfaces (e.g. light fixtures or metal-backed ceiling tiles). Metal objects will affect the Daylight Sensor's RF performance.
- Do not position the Daylight Sensor above an electric light that shines up at the ceiling or at the Sensor.**
- Do not position the Daylight Sensor in the well of a skylight.
- For narrow areas where the Daylight Sensor cannot be placed 1-2 (H) from windows, place Sensor near windows facing into the space.

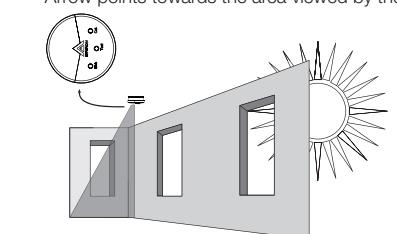
Location for average size areas

Arrow points towards the area viewed by the Sensor (toward windows)



Location for narrow areas (corridors, private offices)

Arrow points towards the area viewed by the Sensor (away from window)



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D Temporary Mounting Methods

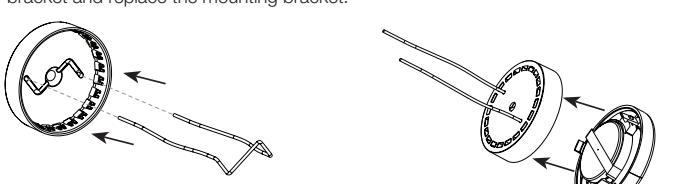
If you are uncertain about correctly positioning the Sensor, the following temporary mounting and testing procedures are recommended to verify proper performance before permanently installing the Sensor.

1 Temporary Mounting: Drop Ceiling

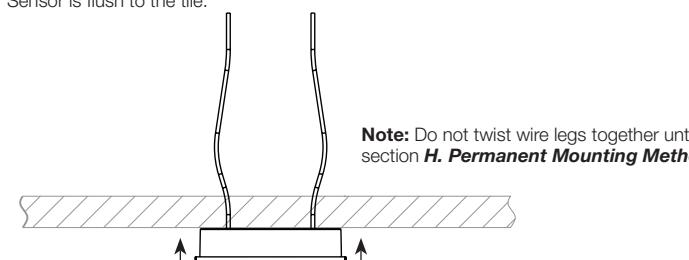
Use this procedure if the Sensor will be mounted on a ceiling tile.

The ceiling tile mounting wire is provided for both temporary and permanent mounting of the Sensor to drop ceilings composed of multiple tiles. It is designed to allow temporary mounting, testing, and repositioning (if necessary) of the Sensor without damaging a ceiling tile. Once the Sensor's final position has been chosen, the mounting wire can be twisted to lock the Sensor in place permanently.

1.1 Insert the ceiling tile mounting wire through the two smaller holes in the mounting bracket and replace the mounting bracket.



1.2 Mount Sensor to a ceiling tile by inserting the wire legs through the tile making sure the Sensor is flush to the tile.



Note: Do not twist wire legs together until section H. Permanent Mounting Methods.

1.3 Perform the Calibration and Test the Sensor as described in sections E. Calibration and F. Testing the Daylight Sensor.

1.4 If the Sensor does not perform satisfactorily from this location, it may be moved to another location by pulling the Sensor straight down and repeating steps 1.2 and 1.3.

1.5 If the Sensor's performance is satisfactory, it should be permanently attached to the ceiling tile, as described in section H. Permanent Mounting Methods.

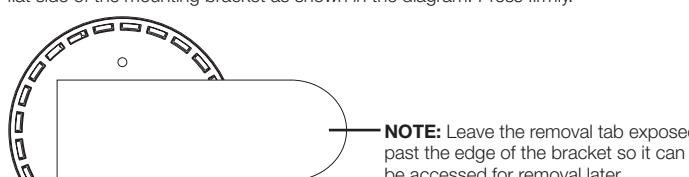
2 Temporary Mounting: Solid Ceiling

Use this procedure if the Sensor will be mounted on a solid, continuous ceiling surface such as drywall, plaster, concrete, or wood.

One 3M™ Command™ adhesive strip is provided for temporarily mounting and testing the Sensor on smooth, solid ceiling surfaces. This strip is designed for easy, damage-free removal and is not reusable. This strip should not be used for permanently mounting the Sensor (see section H. Permanent Mounting Methods). Carefully follow the removal instructions below to ensure the ceiling is not damaged during removal.

NOTE: DO NOT use the adhesive strip on ceiling tiles, as they will likely cause damage to the tile upon removal.

2.1 Peel the red "Command Strip" liner off of the adhesive strip and apply the strip to the flat side of the mounting bracket as shown in the diagram. Press firmly.

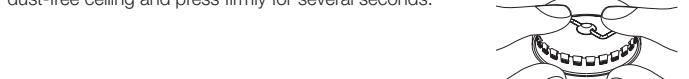


Note: Leave the removal tab exposed past the edge of the bracket so it can be accessed for removal later.

2.2 Identify a location for the Sensor (see section C. Sensor Placement).

2.3 Remove the black "wall side" liner from the adhesive strip.

2.4 Position the mounting bracket on a clean, dry, dust-free ceiling and press firmly for several seconds.



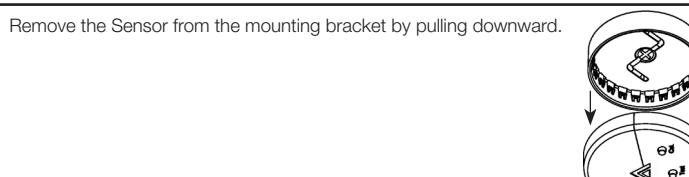
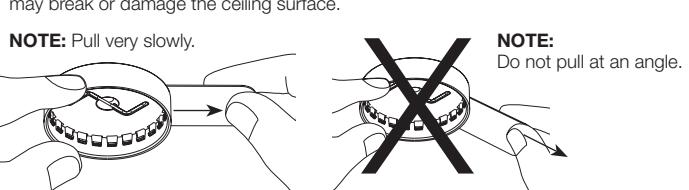
2.5 Attach the Sensor to the mounting bracket.

2.6 Perform the Calibration and Test the Sensor as described in section E. Calibration and F. Testing the Daylight Sensor.

2.7 Proceed to section H. Permanent Mounting Methods.

3 Removing Temporary Mounting Strip

3.1 Remove the Sensor from the mounting bracket by pulling downward.

3.2 To remove the bracket from the ceiling, firmly hold the mounting bracket with one hand and grasp the removal tab on the adhesive strip with the other hand. Pull the tab **VERY SLOWLY** straight across the ceiling, stretching the strip until the bracket releases from the ceiling. Discard the strip. **NEVER** pull the strip at an angle, as it may break or damage the ceiling surface.

E Calibration

Before calibrating, ensure power to the lighting circuit is ON and the lighting control system is set up.

Calibration must be done when daylight is available but not extremely bright, i.e. when some artificial light is required to achieve the desired light level in the space.

1 Adjust Electric Lights

WL-series Electronic Switch – Toggle lights to on. Calibrating a switched system will help normalize the sensor with the space and lights within the system. Section G. Tuning the System may be used after Calibration is complete to adjust performance as desired.

2 Calibration Process

2.1 Activate the Calibration procedure by pressing the "Cal" button on the front of the Sensor for approximately 6 seconds until the lens illuminates. The LEDs on all associated Electronic Switches should be flashing quickly.



The Sensor's lens will continue to flash every 5 seconds indicating that the Sensor is still in the selected mode.

2.2 Within 45 seconds, select all Electronic Switches that you want to calibrate by pressing the tap button. The LEDs will continue to flash slowly.



If the 45-second window is missed, the LEDs will stop flashing. Simply exit Calibration, step 2.6, and restart at Calibration step 2.1.

2.3 Move out of the way of the Sensor so as to not interfere with the light measurements.

2.4 Calibration will automatically begin approximately 45 seconds after pressing the "Cal" button. The Calibration will automatically turn lights on and off (total time approximately 3 minutes).

2.5 The Calibration is complete once the lights in the room flash three times. The Sensor and selected Electronic Switches automatically enter Test mode once calibration is complete. (See step 3 of section F. Testing the Daylight Sensor)

2.6 To exit Calibration prior to entering another mode, tap the "Test" button on the Sensor. To exit an individual Electronic Switch, press the tap button on the desired device.

F Testing the Daylight Sensor

Before testing, ensure power to the lighting circuit is ON and the lighting control system is set up and calibrated properly.

1 Activate Test mode by tapping the "Test" button on the front of the Sensor. The lens will flash, indicating that the mode was entered. The LEDs on all associated Electronic Switches should be flashing quickly.

