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Project	
Notes	
Type	Date
Cat. No.	

SHF-OSDL/BT Series — **Bluetooth® High Frequency** Occ Sensor w/ Daylight Harvesting

DESCRIPTION

The SHF-OSDL/BT-PP3-DC-314 combines occupancy sensing, daylight harvesting, 0-10V dimming and Bluetooth® NLC into a convenient, plug and play, field installable sensor. It automatically detects motion and adjusts lighting levels based on occupancy and ambient light conditions, ensuring optimal illumination while reducing energy waste. Using Bluetooth® NLC—the first wireless standard for professional lighting—this system supports Bluetooth® NLC, enabling reliable, scalable control. It can be easily expanded with AleoBlue devices for seamless integration and energy code compliance.

APPLICATIONS

Indoor: Open offices, Individual offices, Conference rooms, Classrooms, Retail stores, Hospitals, Lobbies.

Fixture Mount
High Frequency Occ Sensor w/ Daylight Harvesting

Specification Features

Overview

- Bluetooth® NLC
- Utilizes high-frequency microwave sensing to detect motion accurately, even through certain low density, non-metallic materials
- 0-10V Dimming control
- On-board antenna
- LED indicator for motion
- Operates on 12V DC input
- For indoor use only
- Sensor reset by a Remote controller (RC100) & Magnet

Benefits

- Cost-effective solution for energy savings
- Energy code compliance
- Robust mesh network
- Decentralized control (no single point of failure)
- Gateway-less configuration & operations

Warranty

5-year Limited Warranty. See warranty documentation for more information.

Ordering Information

Example: SHF-OSDL/BT-PP3-DC-314

SHF	OSDL/BT	PP3	DC	314
Series **SHF** High Frequency Microwave Sensor	**Controls** **OSDL/BT** Wireless Bluetooth Occupancy Sensor with Daylight Harvesting	**Mounting** **PP3** Plug and Play (Snap-in with quick connector)	**Input Power** **DC** Direct Current	**314** **Designator** 314

Specifications and Dimensions subject to change without notice.

Performance Summary

Input Voltage	10-14V DC
Input Current	>50mA
Microwave High Frequency	5.8GHz±75MHz
Transmitting Power	<0.2mW
Dim Control Output	0-10V, max. 25mA sinking current
Sensor Type	High-frequency Microwave
Status Indicators	Green (network status), Green (occupancy detection)
Factory Reset	Magnet & Remote control Reset

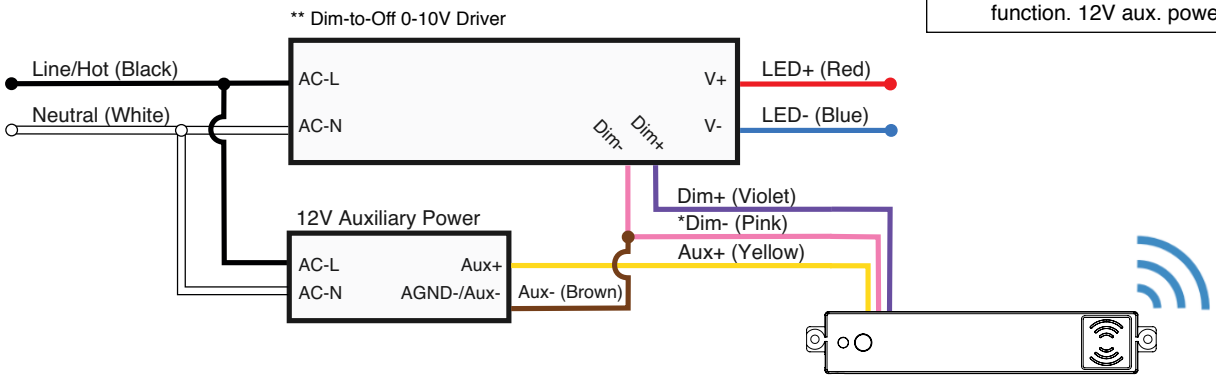
Compatible Driver	Dim-to-Off LED driver
Wireless Protocol	Bluetooth® NLC
Mounting Height	Max 13ft. (4m)
Bluetooth® Range*	Max 100ft. (30m)
IP Rating	IP20
Humidity	Max. 95% RH
Operating Temperature	-40°F ~ +158°F (-40°C ~ +70°C)
Warranty	5-year Warranty

*Bluetooth® Range is highly dependent on the integration of fixtures, surrounding environment and conditions. It is recommended to conduct testing for range accuracy.

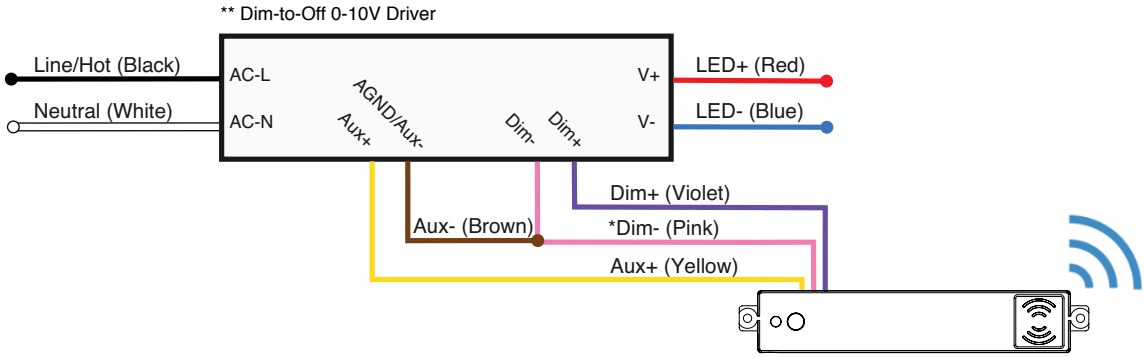
Wiring **Diagram**

0-10V Driver (3-Conductor)

NOTE: Driver must have 0-10V and Dim-to-Off function. 12V aux. power is required.



0-10V Driver with 12V Auxiliary Power (3-Conductor)



* *Dim-* consists of *Aux-* and AGND (analog ground) electrical conductors connected together
** Sensor is only compatible with Dim-to-Off drivers

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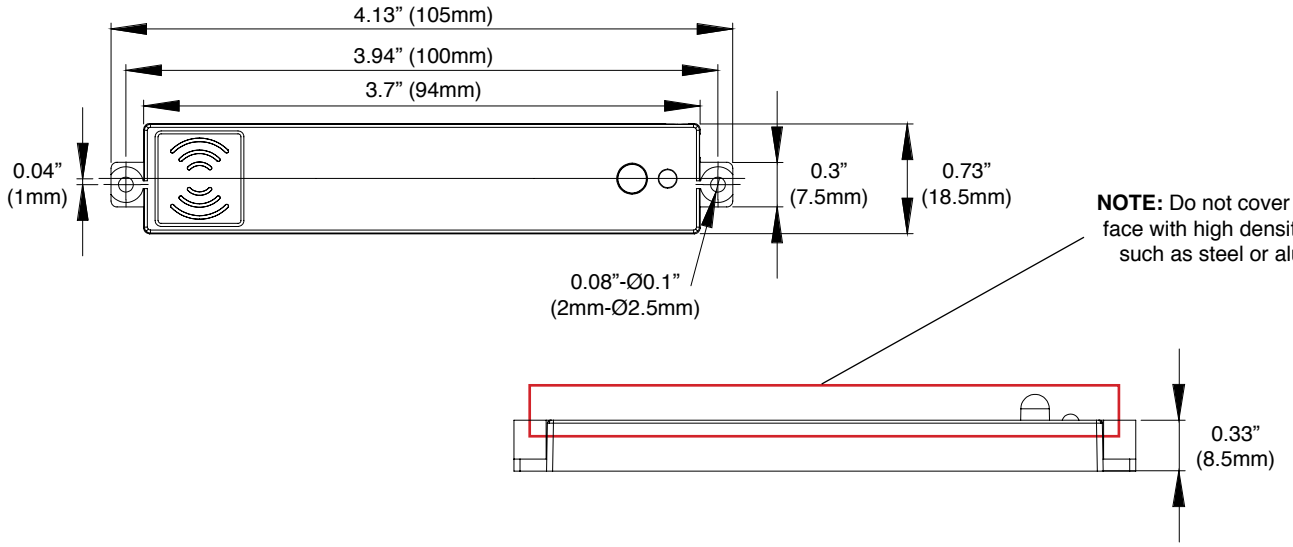
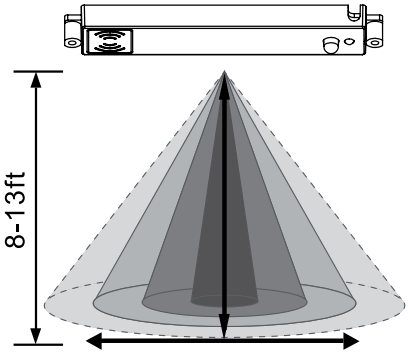
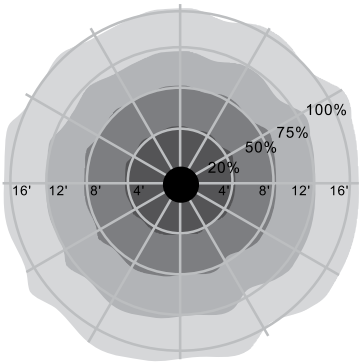
Dimensions



Detection Area

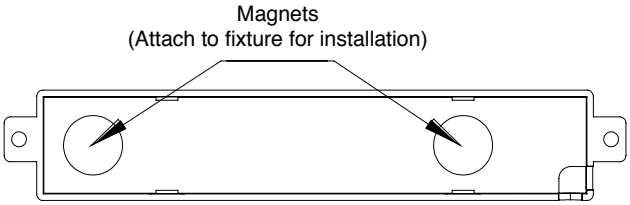


Height of installation 8~13ft.



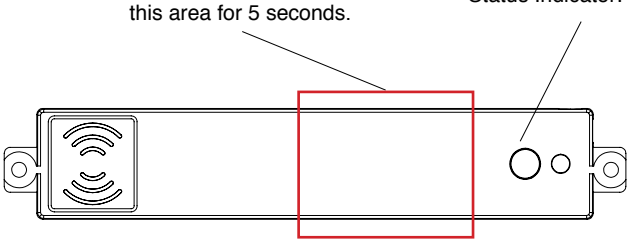
Detection range

Additional **Information**



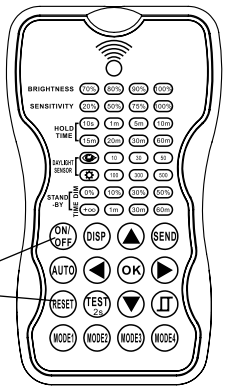
Magnetic Reset: Use strong magnet to touch this area for 5 seconds.

Motion Indicator: Green
Status Indicator: Green



Remote Control Reset: Point it to sensor. First press “RESET” button, then press “ON/OFF” button. Luminaire quickly flashes to indicate success.

RC100



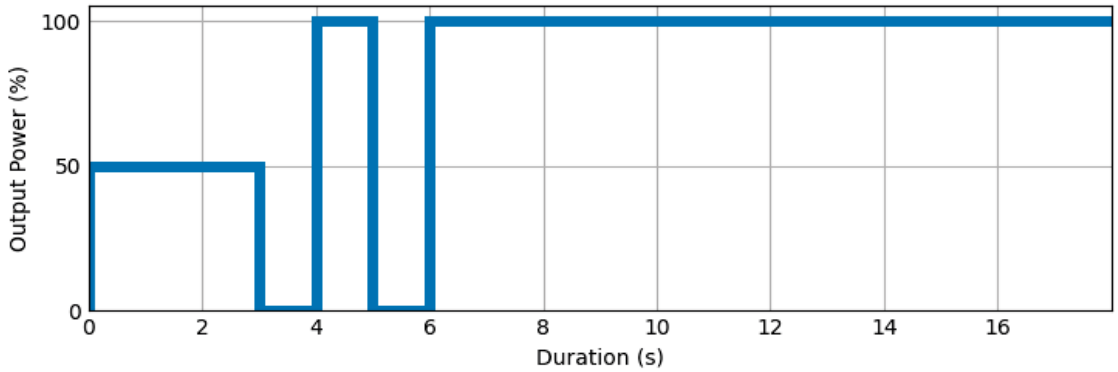
Specifications and Dimensions subject to change without notice.

End of Line Testing

The AleoBlue Sensor/Node initiates an automatic End-of-Line (EOL) test sequence upon initial power-up. This uncommissioned mode provides a visual confirmation that the fixture is operating correctly prior to integration into the AleoBlue control system.

The EOL sequence is intended for use at the end of the manufacturing line and during field installation, allowing fixture manufacturers and electrical contractors to verify proper LED functionality before commissioning.

The sequence continues until the device is provisioned into an AleoBlue network. Once commissioned, the visual test will no longer activate on power-up.



Disclaimer: Bluetooth® radio signal and range is highly dependent on the sensor integration and installation method. It is recommended to conduct testing to verify range performance and ensure proper sensor installation. Ensure that no enclosure or objects are obstructing the radio signal, as these may impact communication reliability.

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Learn More

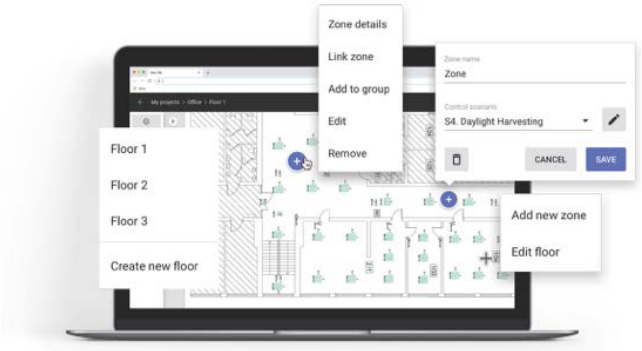
AleoBlue Wireless Bluetooth® Controls

The AleoBlue is a complete solution for managing connected lighting systems using a Bluetooth® Mesh lighting network. This enables seamless implementation of simple to complex lighting control scenarios without specialized training or lighting control engineering expertise.

DLC NLC Qualified.

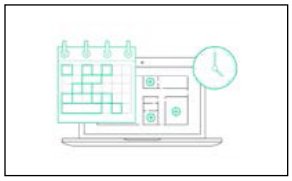
Features and Benefits

- Lighting Zones / Grouping
- Manual control of individual lights
- On Power up Behavior
- Zone Linking
- Vacancy Sensing
- Per fixture Daylight Control
- Per zone Daylight Control

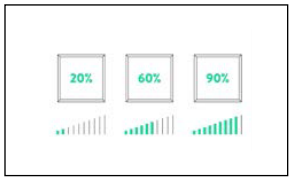


- Optimized Energy Consumption
- Less Hassle with On-Site Adjustments
- More Savings
- Increased Safety
- More Flexibility

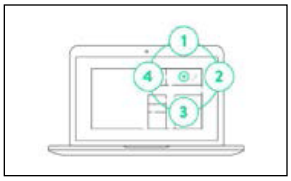
Scheduling



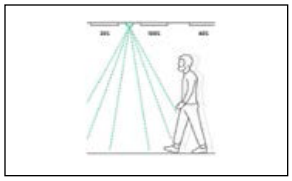
High and Low End Trim



Scenes



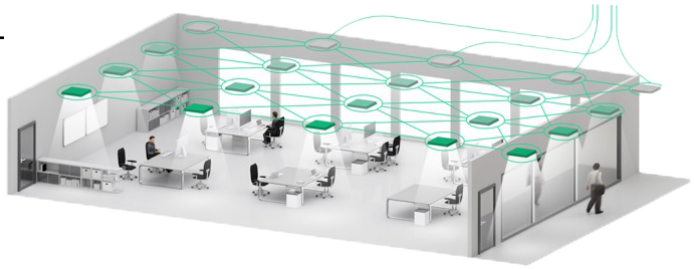
Occupancy Sensing



- Intuitive and user-friendly web and iOS apps
- No specialized training or lighting control expertize required
- Optimized for commercial spaces of any size
- No additional wiring or central control box
- Customizable lighting control parameters
- Future proof with Software Updates
- Multiple Zone Configurable
- Built-In Scenarios + Customization

Bluetooth® Mesh Technology Advantages

- The fastest low-power communication
- Scalability to thousands of devices
- The most advanced encryption standards as well as the cutting-edge device authentication
- No single point of failure (no central device)
- Compatibility with a widely available devices (smart phones & tablets – both with Bluetooth® 4.0 and Bluetooth® 5)



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Aleo Lighting, Inc. I www.aleolighting.com I Ph: 877-358-8825

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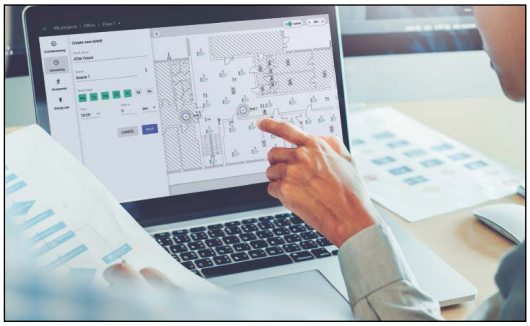
Learn More

Planning

Remote preparation of a retrofit project with the use of our web app. Uploading floor plans, defining individual lighting zones and choosing lighting control scenarios.

1. Import Floor Plans
2. Define Individual Lighting Zones
3. Specify Desired Lighting Control Scenarios



Implementation

Adding lighting devices to the Bluetooth® mesh network on-site with the use of an iOS app.

Customization and calibration of lighting control parameters during and after the commissioning process. Defining scenes for specific working activities.

1. Add Devices to Your Connected Lighting Network
2. Implement Predefined Zones and Scenarios
3. Optimize Configuration Settings if Needed

Provisioning / Configurations

The Bluetooth® mesh Node is in the Unprovisioned Mode until it is provisioned by a “Provisioner”, which typically is a smart phone with a Bluetooth® mesh compatible app.

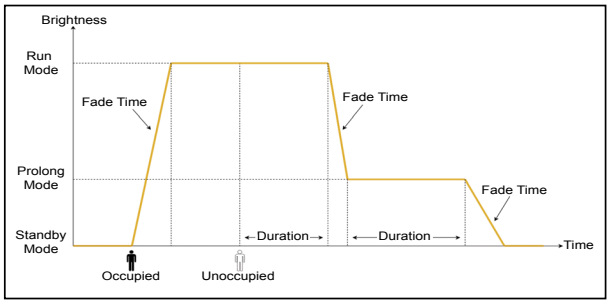
Specifications and Dimensions subject to change without notice.

Lighting Control Scenarios

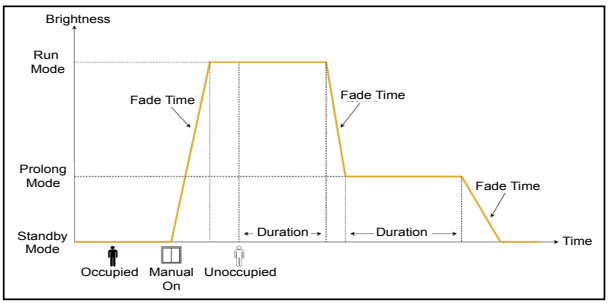
Multiple lighting control scenarios are available once the Bluetooth mesh Node is provisioned. At each scenario, duration, fade time and target brightness can be configured at any time with the iOS app.

Mode / Scenario	Wireless Switch	Occupancy Sensor	Ambient Light Sensor
Unprovisioned Mode	-	-	-
Switch	On / Off / Scenes	-	-
Occupancy	On / Off / Scenes	Auto On / Off	-
Vacancy	On / Off / Scenes	Auto Off	-
Occupancy with Daylight Harvesting	On / Off / Scenes	Auto On / Off	Enabled
Vacancy with Daylight Harvesting	On / Off / Scenes	Auto Off	Enabled

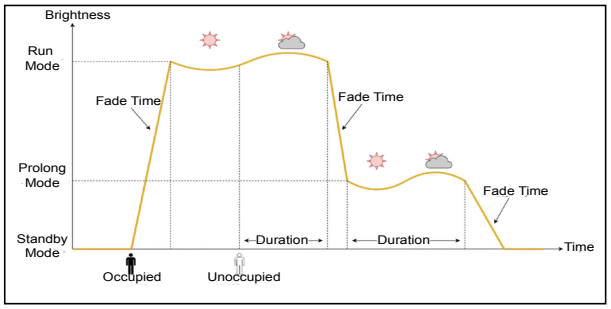
Occupancy Scenario



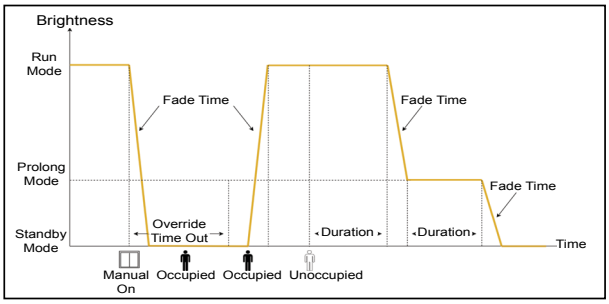
Vacancy Scenario



Occupancy Scenario - with Daylight Harvesting



Occupancy Scenario with Manual Override



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