

Project	
Notes	
Type	Date
Cat. No.	

SPIR-OSDL/BT-CM-AC-210 AleoBlue, Wireless Bluetooth® PIR Occ Sensor w/ Daylight Harvesting

DESCRIPTION

The SPIR-OSDL/BT-CM-AC-210 combines occupancy sensing, daylight harvesting, 0-10V dimming and Bluetooth® mesh radio circuits into a small package. The result is increased occupant comfort and significant energy savings that meet the most demanding building energy codes. By leveraging Bluetooth® mesh, the first wireless standard for professional lighting applications which ensures unmatched scalability and reliability, the wireless lighting control system can be seamlessly expanded with Bluetooth® mesh-certified products and/or compatible Bluetooth® switches as needed.

APPLICATIONS

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



SPIR-OSDL/BT-CM-AC-210

Ceiling Mount | PIR Occ Sensor with Daylight Harvesting

Specification Features



Overview

- Bluetooth® mesh compliant
- Bluetooth® NLC Certified
- PIR sensing with daylight harvesting
- Built-in 20mA 0-10V signal output
- Built-in 5A Relay
- On-board antenna

Benefits

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

Certification

UL Listed.

Warranty

5-year Limited Warranty. See warranty documentation for

Ordering Information

Example: SPIR-OSDL/BT-CM-AC-210

SPIR	OSDL/BT	CM	AC	210
Series	Controls	Mounting	Input Power	210
SPIR	OSDL/BT	CM	AC	Designator
PIR	Wireless Bluetooth Occupancy Sensor with	Ceiling Mount	120-277V AC	210
Sensor	Daylight Harvesting			

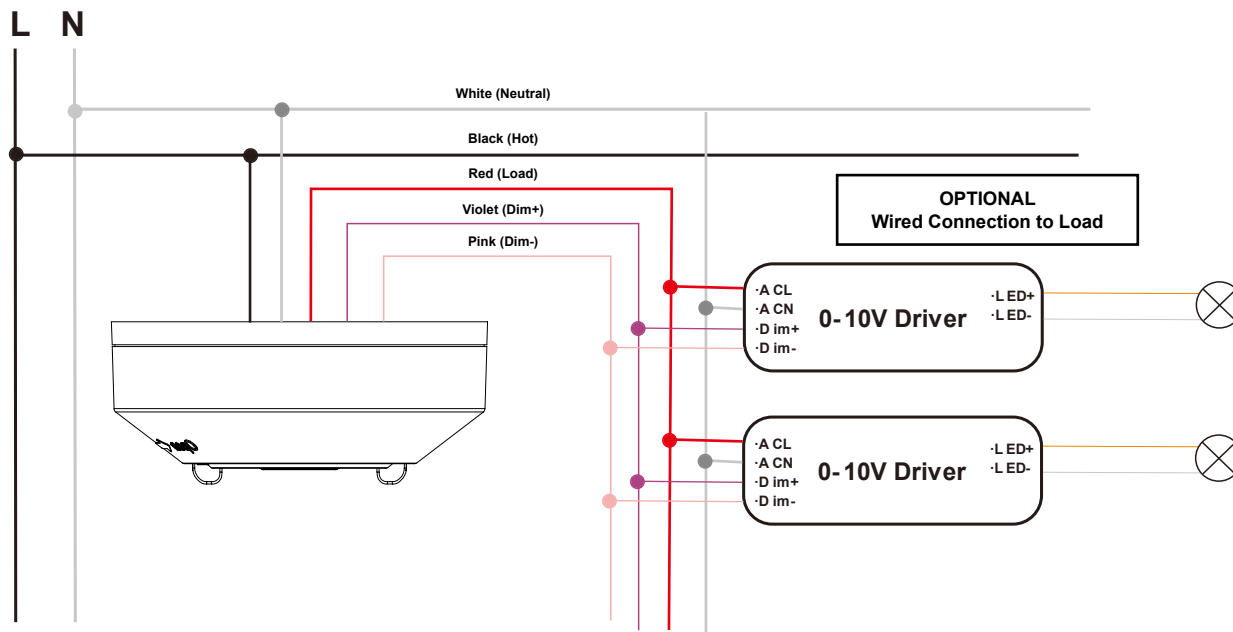
Performance Summary

ELECTRICAL	
Operating Voltage	120-277VAC 50/60Hz
Stand-by Power	<0.5W
Relay	Max. 5A @ 120V, 277VAC
EMC Standard (EMC)	EN55015, EN61000, EN61547
Safety Standard (LVD)	EN60669-1, EN60669-2-1, AS/NZ60669-1/-2-1
RED	EN300328, EN301489-1/-17
Certification	ENEC, CE, RED, UL
PHYSICAL	
Movement Detection	Max. ϕ 26m @ 39.4ft (12m) height
Installation	Max. 39.4ft (12m)
Operation Temperature	-10°C ~ +50°C
IP Rating	IP20
Material	Flame-retardant/ABS
Protection Class	Class II
Bluetooth Range (Max.)	213ft.*

Lead Information		
Color	Length (in)	Parameter
Black	10	18AWG, 300V
White	10	18AWG, 300V
Red	10	18AWG, 300V
Purple	10	22AWG, 300V
Pink	10	22AWG, 300V

*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



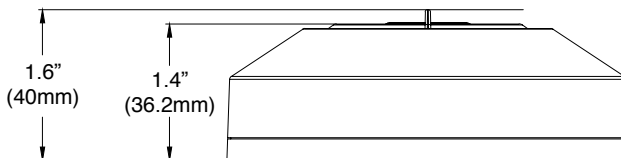
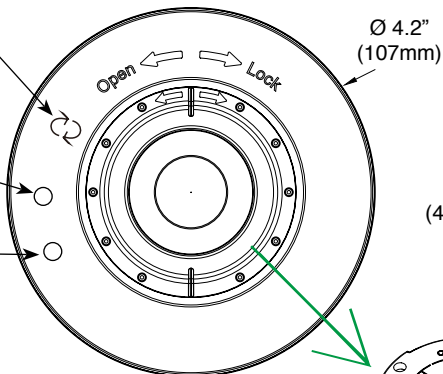
Specifications and Dimensions subject to change without notice.

Dimensions and Product Information

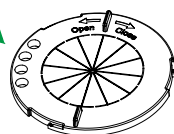
Magnetic Reset: Use a strong magnet to touch device top part for 5 seconds.

Daylight Harvesting Sensor

Indicator*



***Green (Commissioning):** Flashes 3 times to indicate connection/disconnection from the network.
Red (Motion Detection): Lights up when motion is detected.

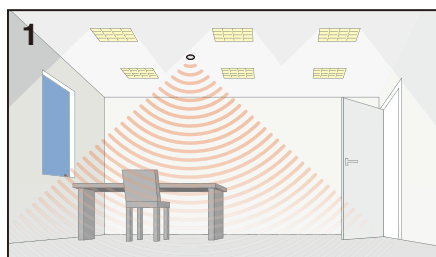


Lens Cover

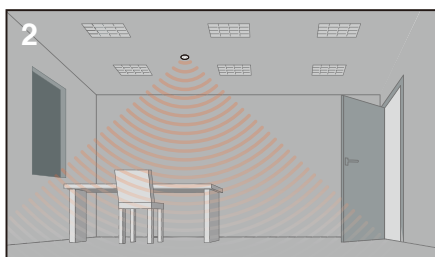
Watch Device Set Up Tutorial Video



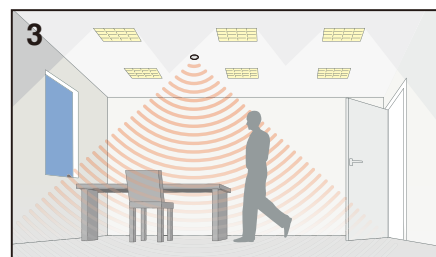
Application Information



1 Power up the sensor. The light should come on immediately.



2 Vacate the room or remain very still and wait for the light to switch off.



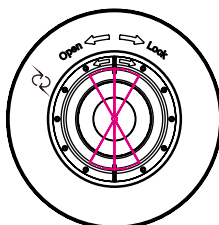
3 Enter the room or make some movement and check that the light switches on.

NOTE: Do not place the sensor near heat sources, fans or in ventilated ceiling voids.

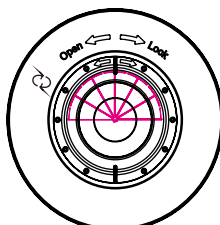
NOTE: Do not place close to or positioned such that any light source points directly into the sensor.

NOTE: Ensure wires and cables are securely held within the connection terminals.

NOTE: Disconnect the sensor from the circuit before performing insulation testing of the wiring circuit.



Aisle/Corridor Application:
 Split the lens cover into aisle type.

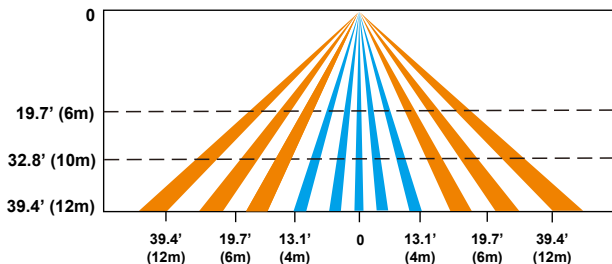


Semi-sphere Application:
 Split the lens cover into semi-circle type.

Detection Pattern

High-bay Lens

Coverage Side View

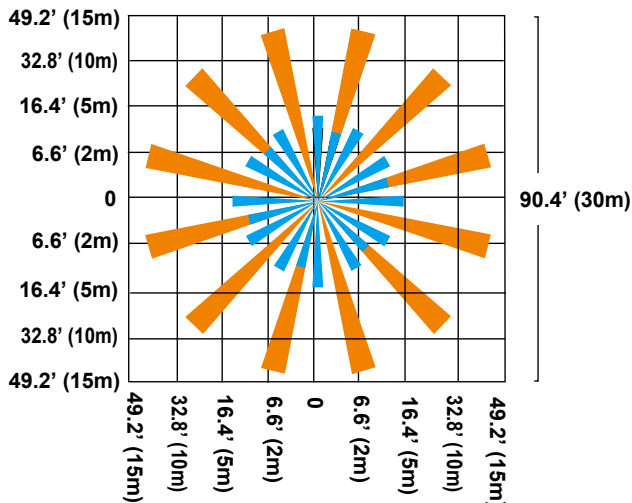


The detection area for movement sensor can be roughly divided into two parts:

- █ Slow movement (person moving <math>< 10\text{/s}</math> or 0.3m/s)
- █ Quickmovement (person moving > 13/s or 0.4m/s)

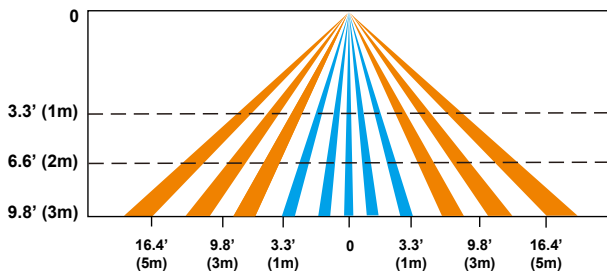
Default sensitivity : 80% (ϕ 23m at 12m height)

Coverage Top View



Low-bay Lens

Coverage Side View

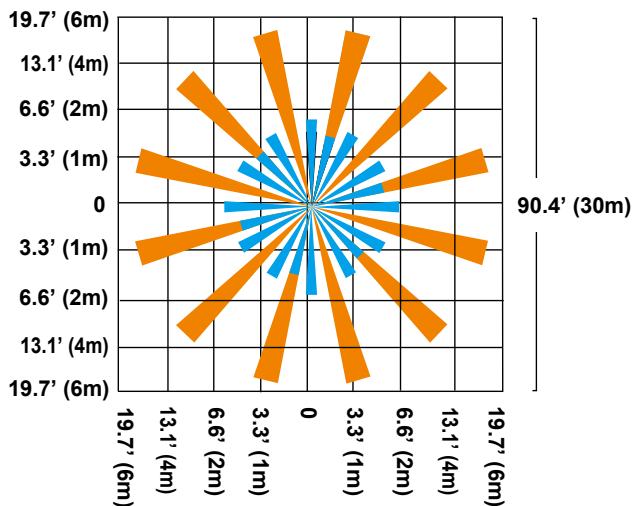


The detection area for movement sensor can be roughly divided into two parts:

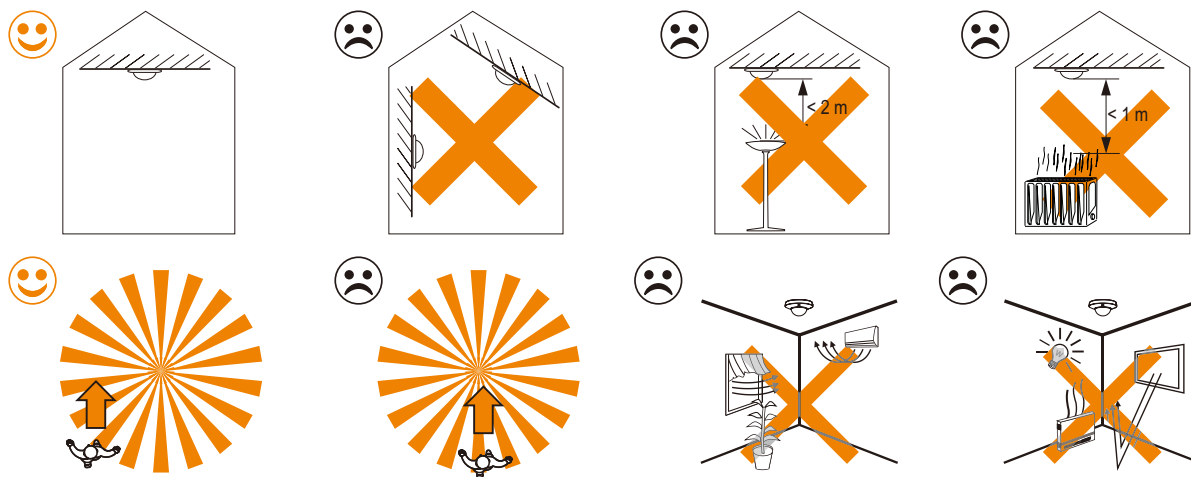
- █ Slow movement (person moving <math>< 10\text{/s}</math> or 0.3m/s)
- █ Quickmovement (person moving > 13/s or 0.4m/s)

Default sensitivity : 80% (ϕ 23m at 12m height)

Coverage Top View



Placement/Detection Instructions





AleoBlue Wireless Bluetooth Controls

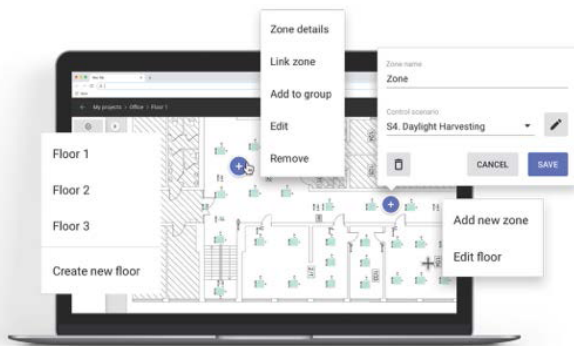


The AleoBlue is a complete solution for managing connected lighting systems using a Bluetooth Mesh lighting network. This enables seamless implementation of simple to complex lighting control scenarios without specialized training or lighting control engineering expertise.

DLC NLC Qualified.

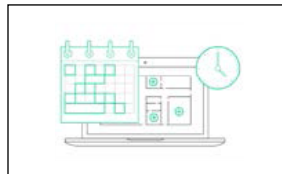
Features and Benefits

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

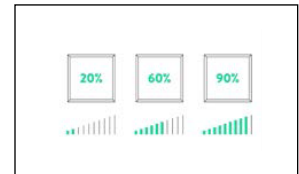


- Optimized Energy Consumption
- Less Hassle with On-Site Adjustments
- More Savings
- Increased Safety
- More Flexibility

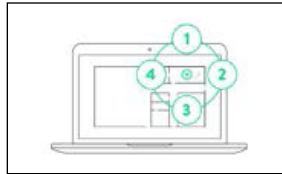
Scheduling



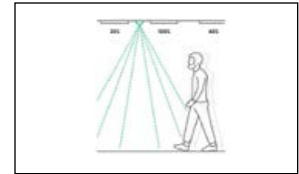
High and Low End Trim



Scenes



Occupancy Sensing



- Intuitive and user-friendly web and iOS apps
- No specialized training or lighting control expertise 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



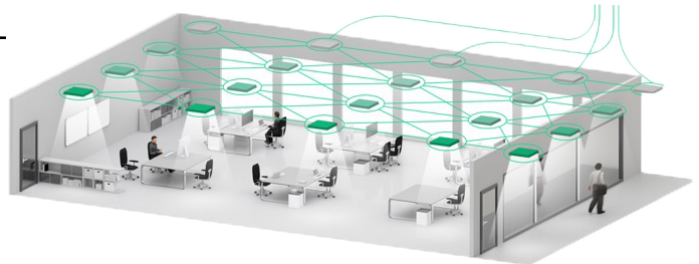
The most advanced encryption standards as well as the cutting-edge device authentication

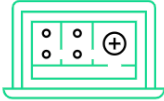


No single point of failure (no central device)



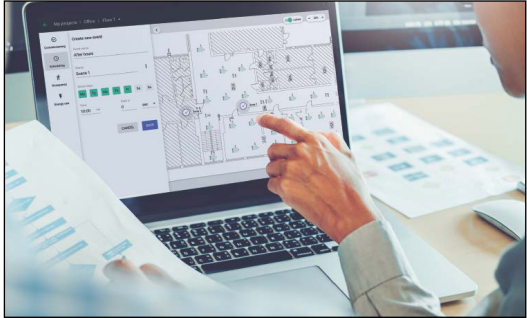
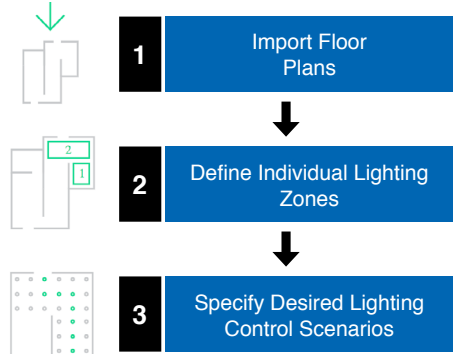
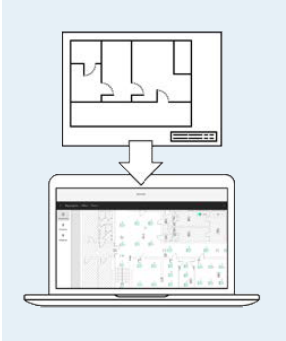
Compatibility with a widely available devices (smart phones & tablets – both with Bluetooth 4.0 and Bluetooth 5)





Planning

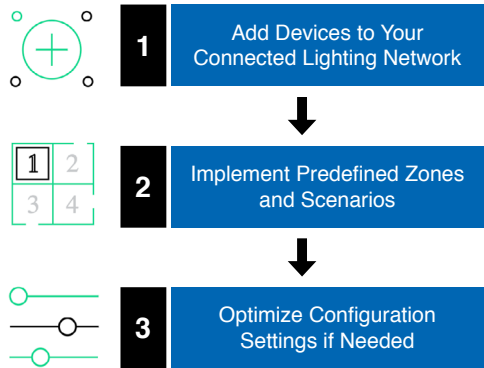
Remote preparation of a retrofit project with the use of our web app. Uploading floor plans, defining individual lighting zones and choosing lighting control scenarios.



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.



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.

Ordering Information



AleoBlue, Wireless Bluetooth PIR Occ Sensor w/ Daylight Harvesting
Model: SPIR-OSDL/BT-CM-AC-210

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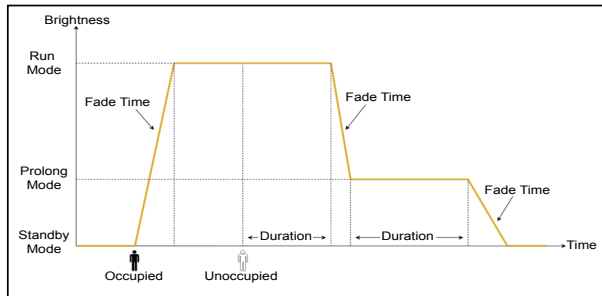
Lighting Control Scenarios

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.

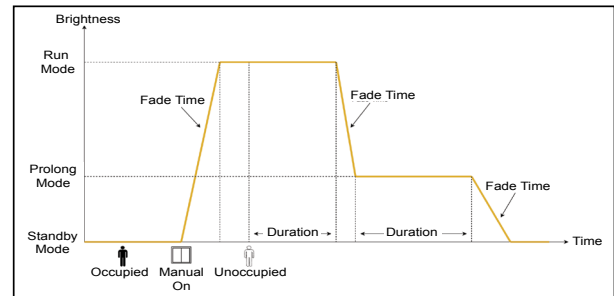


Mode / Scenario	Wireless Switch	Occupancy Sensor	Ambient Light Sensor
Unprovisioned Mode	-	-	-
Switch	On / Off / Scenes	-	-
Occupancy	On / Off / Scenes	Auto On / Off	-
Vacancy	On / Off / Scenes	Auto Off	-
Occupancy with Daylight Harvesting	On / Off / Scenes	Auto On / Off	Enabled
Vacancy with Daylight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

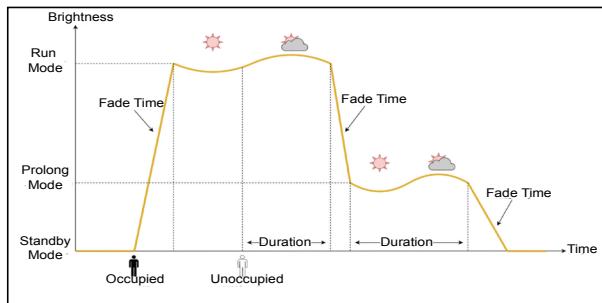
Occupancy Scenario



Vacancy Scenario



Occupancy Scenario - with Daylight Harvesting



Occupancy Scenario with Manual Override

