aleoblue™

Project	
Type	Date
Cat. No.	

AB-SHF-FM-DVL

AleoBlue™ Bluetooth® High Frequency Occ Sensor w/ Daylight Harvesting

DESCRIPTION

The AB-SHF-FM-DVL 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.

SPECIFICATION FEATURES

OVERVIEW

- Bluetooth® NLC
- Utilizes high-frequency microwave sensing to detect motion accurately, even through certain 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

WARRANTY

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

BENEFITS

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

ORDERING INFORMATION

EXAMPLE: AB-SHF-FM-DVL

AB	SHF	FM	D	V	L
Series	**Controls**	**Mounting**	**Input Power**	**Dimming**	**Finish Color**
AB AleoBlue™	**SHF** HF Sensor	**FM** Fixture Mount	**D** DC Power	**V** 0-10V Dimming	**L** Snap-in w/ 4-pin quick connector, Rectangular

Specifications and Dimensions subject to change without notice.

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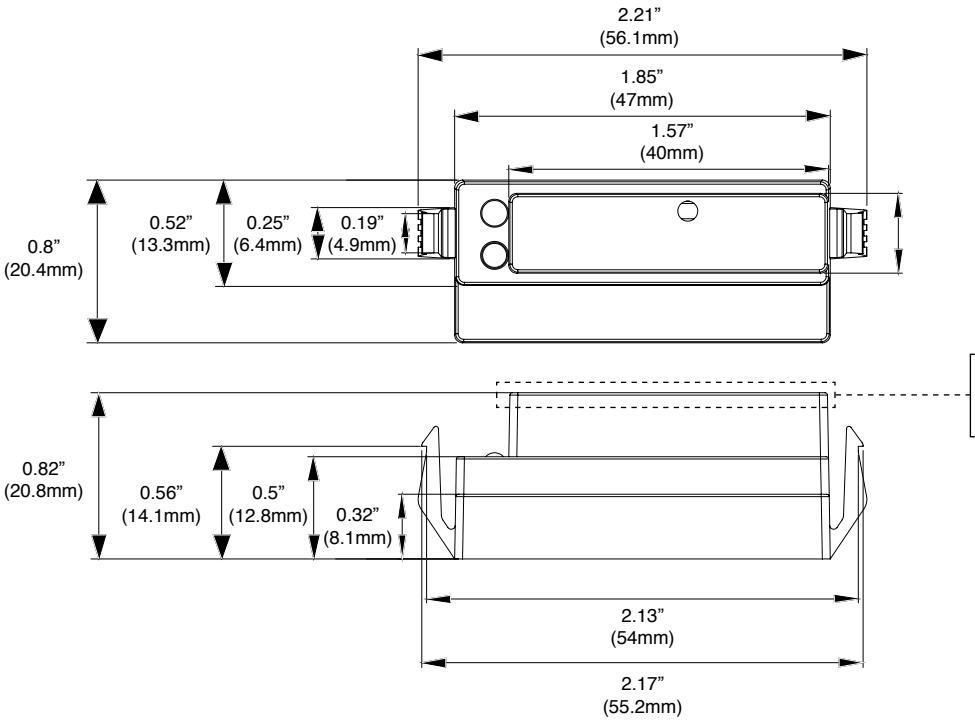
PERFORMANCE SUMMARY

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 12ft. (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.

PRODUCT DIMENSIONS



NOTE: Do not cover the sensor face with high density material such as steel or aluminum.

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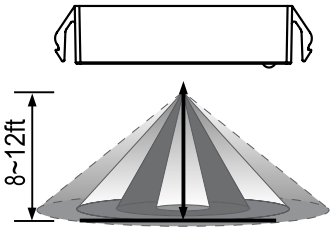
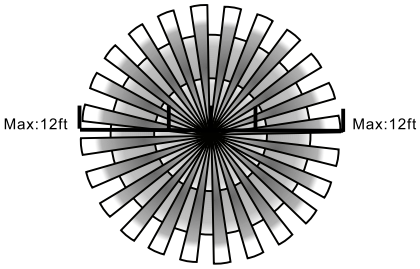
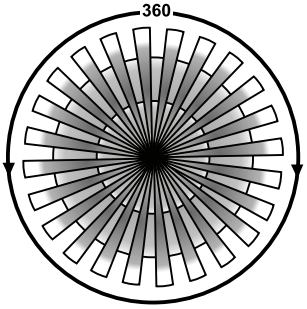
DETECTION AREA



Height of installation 8~12ft.

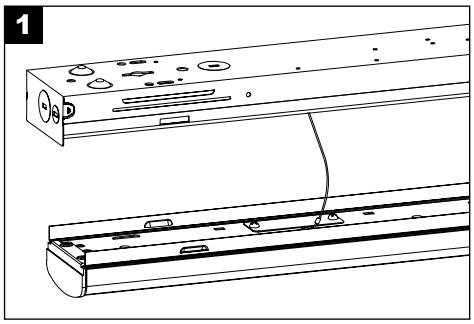


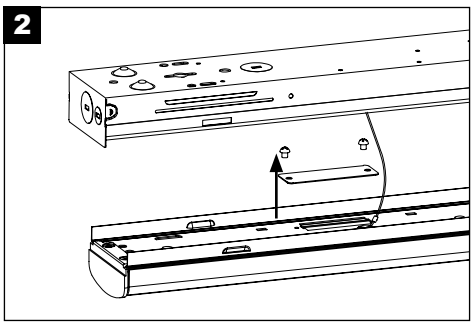
(Height of installation 8ft.)
Detection range



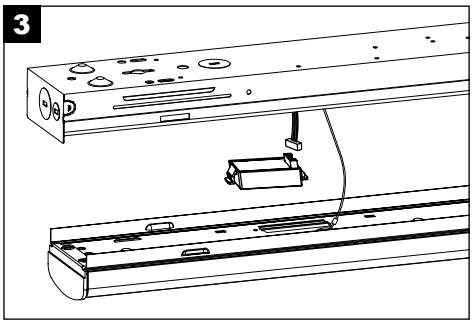
Detection angle

SENSOR INSTALLATION

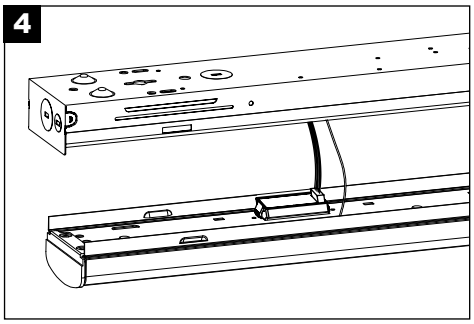




From the back of the gear tray, remove the (2) screws from the sensor plate to access the sensor wire connector and sensor cut-out.



Connect and mate the connector from the wiring harness to the terminal connectors on the sensor.



Snap the sensor into the sensor cut-out from the back of the gear tray to complete installation.

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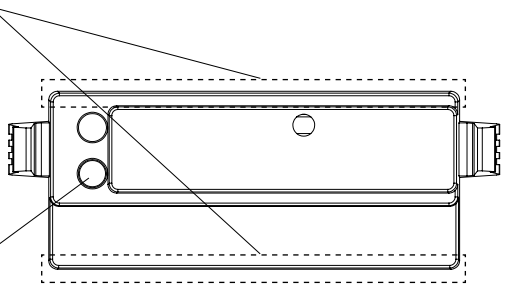
ADDITIONAL INFORMATION

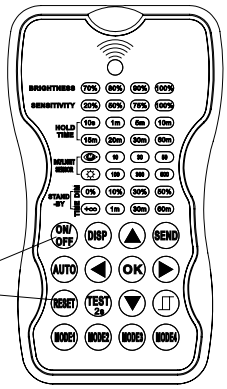
Magnetic Reset: Use strong magnet to touch this area for 5 seconds.

Note: Sensor must not be covered by metallic or high density material that may block Bluetooth® radio signal.



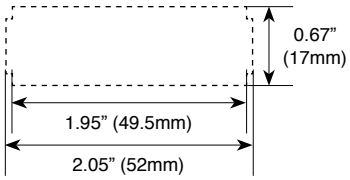
Motion Indicator: Green
Status Indicator: Green

RC100



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

Cut-out

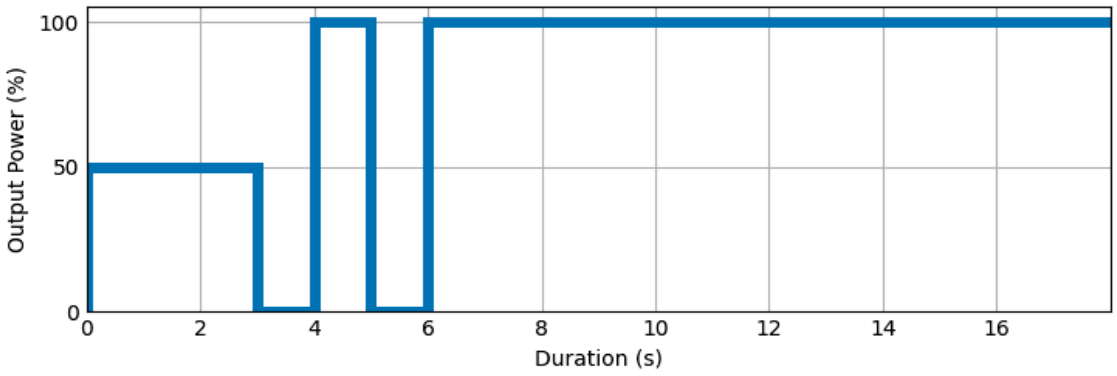


END OF LINE TESTING

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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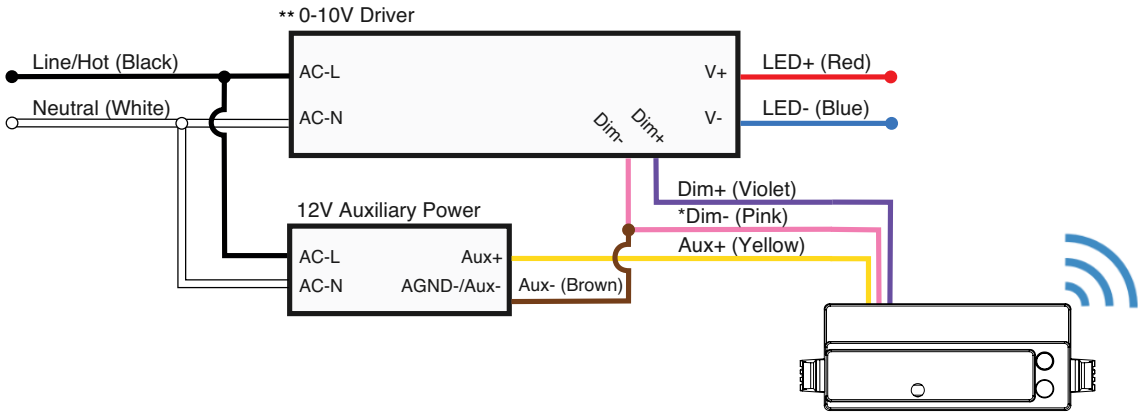
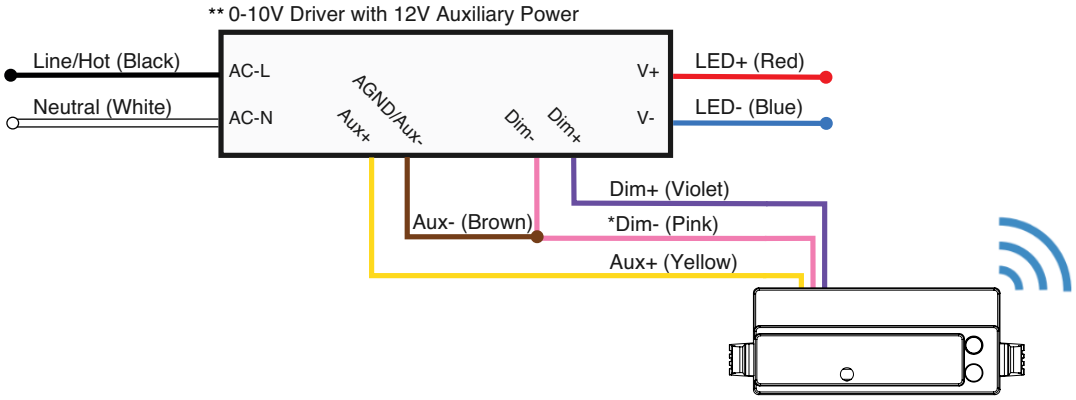
WIRING DIAGRAM

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

aleo LIGHTING + CONTROLS
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aleoblue™

ALEOBLUE WIRELESS BLUETOOTH® CONTROLS

DLC LISTED

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

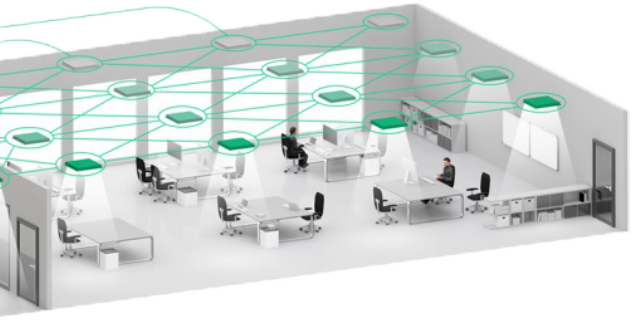
DLC NLC Qualified.

FEATURES AND BENEFITS

- Lighting Zones / Grouping
- Manual control of individual lights
- On Power up Behavior
- Zone Linking
- High-End Trim
- LLLC (Luminaire Level Lighting Controls)
- Energy Monitoring
- Optimized Energy Consumption
- Less Hassle with On-Site Adjustments
- More Savings
- Increased Safety
- More Flexibility
- 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

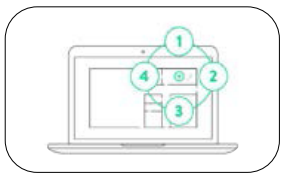
BLUETOOTH® NLC TECHNOLOGY ADVANTAGES

- 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)

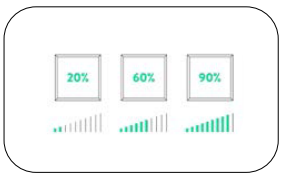


SCHEDULING

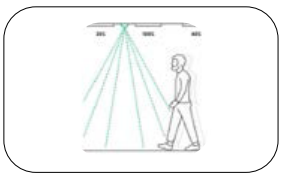
SCENES



HIGH / LOW END TRIM



OCCUPANCY SENSING



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.

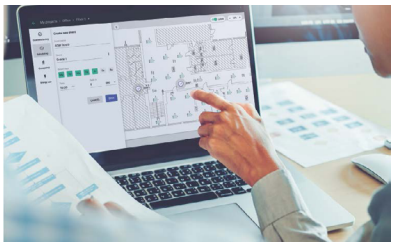
1. Import Floor Plans
2. Specify Desired Lighting Control Scenarios
3. Define Individual Lighting Zones

IMPLEMENTATION

Adding lighting devices to the Bluetooth® NLC 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® NLC Node is in the Unprovisioned Mode until it is provisioned by a “Provisioner”, which typically is a smart phone with a Bluetooth® NLC compatible app.

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