

PHILIPS

Sensors

EasySense

SNH211 MC



EasySense SNH211 MC is the ideal solution for per-fixture control of luminaires for high bay applications. It combines occupancy sensing, daylight harvesting, and task tuning in a single package for easy assembly in OEM luminaires or installation in the field. EasySense sensors operate with the established Philips Xitanium SR LED driver standard to make a simple two-wire connection between the sensor and the driver, thus eliminating the need for multiple components and auxiliary devices. The result is a cost-effective and easy-to-design-in solution ideal for energy savings. An intuitive app makes configuration and commissioning during and after installation fast and easy using the Philips MasterConnect app.

EasySense SNH211 MC is commissioned and configured via the Bluetooth available on modern smartphones. The sensors do not require gateways, network connections, or dashboards. The sensors in the group communicate to each other via Zigbee for simple area-based control. It is an uncomplicated means to achieve energy savings in industrial high bay applications while maintaining aesthetics in the space.



EasySense SNH211 MC

| Commercial Product Name | Order Code |
|-------------------------|------------|
| EasySense SNH211 MC | SNH211 MC |

Features

- Occupancy sensing, daylight harvesting, and task tuning in one device
- Groups/networks up to 120 lights
- 2-wire connection, with Xitanium SR drivers or SR bridge
- Selection of luminaires using a list based on BLE or pointing with a flashlight
- Simple grouping of luminaires to a wireless switch with Philips MasterConnect app
- Simple room level energy reporting with CSV file saved on the phone
- Configuration of sensor parameters - if desired - using Philips MasterConnect app, available on Google PlayStore and in Apple App Store for free
- 5m to 16m mounting height; IP65 rated

Benefits

- Combines functionality to reduce need for multiple components
- Quick task tuning in the field to optimize light and power levels
- Cost-effective solution for energy-savings
- 5-year limited system warranty with Philips Xitanium LED drivers¹
- Configuration and commissioning from the floor via Bluetooth
- Compatibility with qualified gateways

Applications

- Warehouses
- Assembly areas
- Cold storage

EasySense SNH211 MC

Specifications

| Ordering Information | |
|---------------------------------------|--|
| Order Code | SNH211 MC |
| Full Product Name | EasySense SNH211 MC |
| 12NC | 929002721813 |
| Carton Quantity | 10 pcs |
| Physical Information | |
| Overall Dimensions | Refer to drawing |
| Housing (Luminaire Hole) | ½" threaded nipple for ½" knockout |
| Net Weight per Piece | 185gm / 6.5oz |
| Color | Light gray housing (RAL 7035), translucent cover |
| Wiring | (2) 18AWG wires, unpolarized; 60cm length; 8mm strip length |
| Electrical Information | |
| Input Voltage | Powered by SR driver low voltage interface |
| Current Consumption | 13mA at 15V (average) |
| Nominal Power Consumption | 200mW (average) |
| Standby Power | <1W at fixture level including driver standby power |
| Activation | Sensors regulate light output out of the box with default settings |
| Occupancy Sensing | |
| Type | Passive infrared (PIR) |
| Occupancy based control | Enable/Disable. Enabled by default. |
| Occupancy Mode | Auto-on/auto-off; Manual-on/auto-off ; Manual-on / manual-off |
| Group/Zone Occupancy Sharing | Enabled/disabled |
| Group/Zone Lighting Behavior | Background level/Eco-on level |
| Eco-On Level | 1% - 100% |
| Hold Time | 2 - 100 minutes |
| Viewing Angle | ±27° |
| Background Light Level | 1% - 100% |
| Prolong Time | 2 minutes - 100 minutes, or infinite |
| Grace Fading | 1 second - 25 seconds |
| Response Time/Fading to Switch On/Off | 1 second |
| Daylight Sensing | |
| Daylight based control | Enabled/disabled. Default Enabled with target light level of “~150lux X Eco-ON%” |
| Calibration | Selectable. Light Level calibrated to “Max light output from fixture X Eco-ON%” |
| Viewing Angle | +/- 10° |
| Task Tuning | |
| Full Light Setting | 0% - 100% |
| Tuneable White | With FlexTune SR driver, default factory setting: 4000K |

Continued on next page.

1. View limited warranty at <http://www.usa.lighting.philips.com/support/support/warranty>.

EasySense SNH211 MC

Specifications (continued)

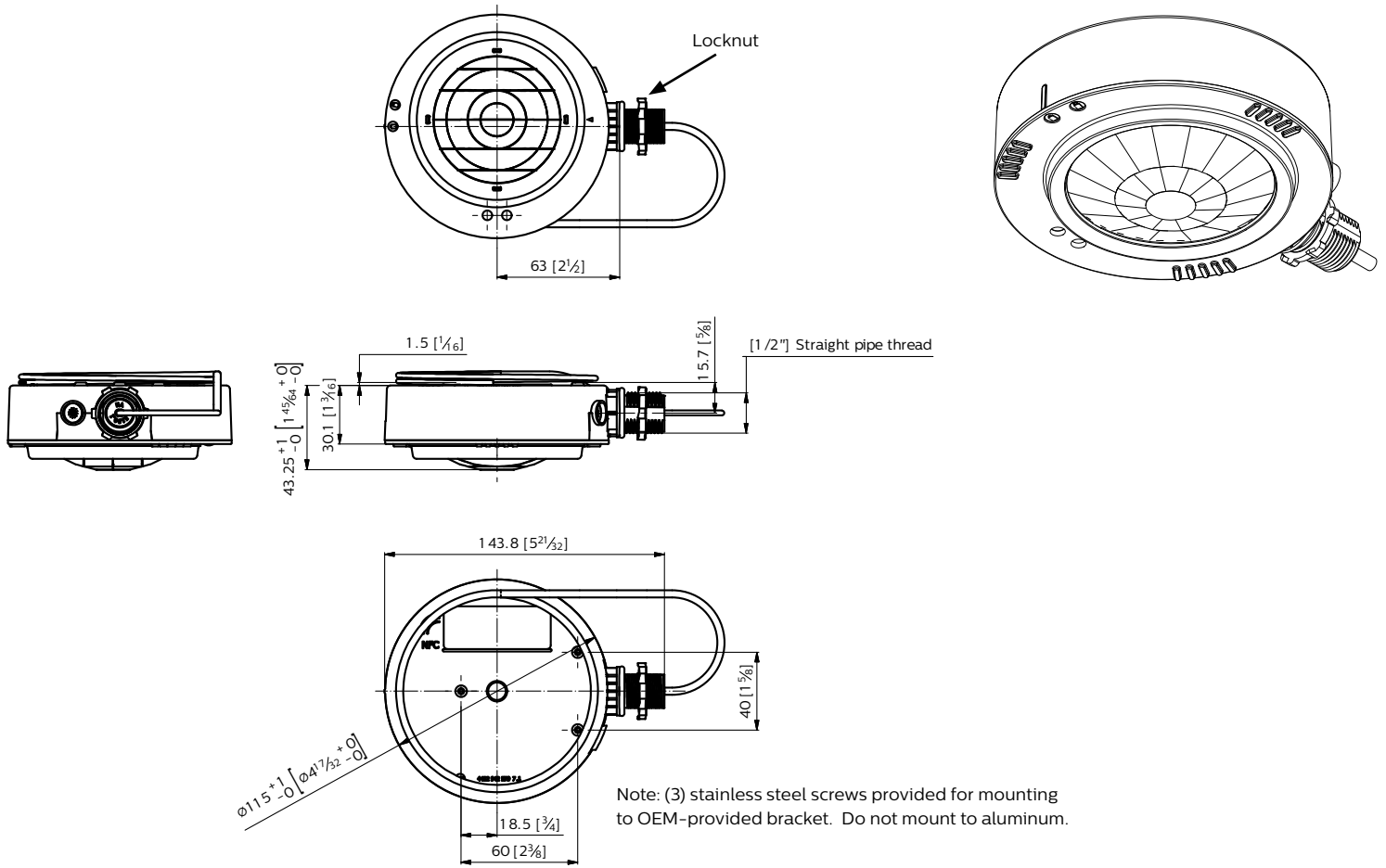
| Environment & Approbation | |
|--|--|
| Operating Ambient Temperature Range | -30°C to +65°C |
| Ingress Rating | Tested for compliance to IP65 by Dekra |
| Operating Humidity | 20% to 85% relative humidity, non-condensing |
| Storage Temperature | -30°C to +85°C |
| Max Case Temperature (Tcase) | +65°C |
| Agency Approbations | UL 916; cUL; FCC ID: 2AF2N-SHMC; IC ID: 20659-SHMC |
| Warranty | 5 years |
| Digital Interface | Xitanium SR. To be used only with LED drivers with class 2 outputs limited to less than 15 Watts |
| Other | |
| Wireless Protocol | Zigbee, IEEE 802.15.4, Bluetooth Low Energy |
| Encryption | AES-128 |
| Energy Reporting | Group/Room level using Philips MasterConnect App, report saved as CSV file on the smartphone |
| No. Drivers per Sensor | 4 max. (limited to 1 driver per sensor to support Energy Reporting) |
| Max Distance Switch-to-First Sensor | 50ft/15m line-of-site |
| Max Distance Sensor-to-Sensor | 50ft/15m line-of-sight |
| No. Sensors per Group | 120 max. |
| No. of Zones per Group | 15 max. |
| No. Switches per Group/Sensor | 15 max per group, 5 max per zone |
| Mounting Height | 16.4 to 52.4ft / 5m to 16m |
| Field Configuration | MasterConnect app via Bluetooth |

Driver Compatibility

EasySense SNH211 MC is compatible with Xitanium SR drivers. To find the SR driver that fits your application needs and for product specifications, please visit www.signify.com/xitaniumsr.

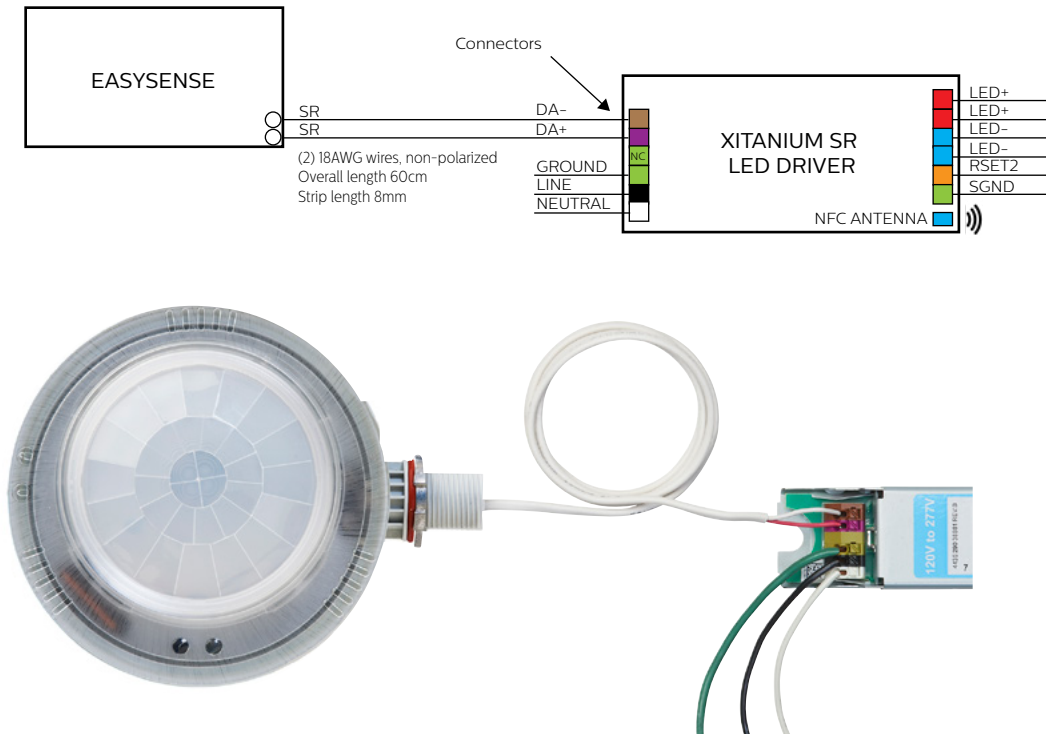
EasySense SNH211 MC

Dimensions, mm [in]



EasySense SNH211 MC

Wiring Diagram

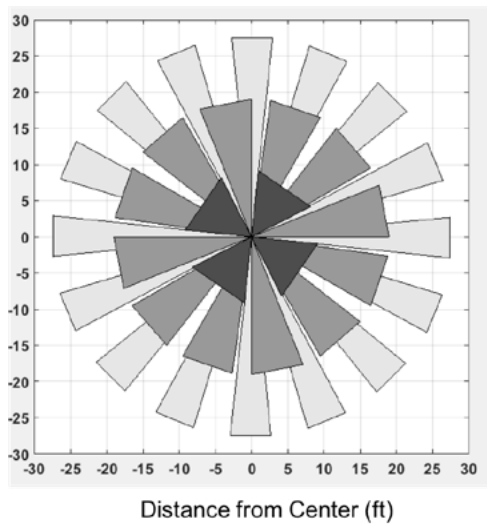


Note: This diagram depicts the sensor wires connected to a Xitanium SR Driver using the driver's connector. To connect to a Xitanium SR driver with leads, use suitable 18AWR solid wire wirenuts.

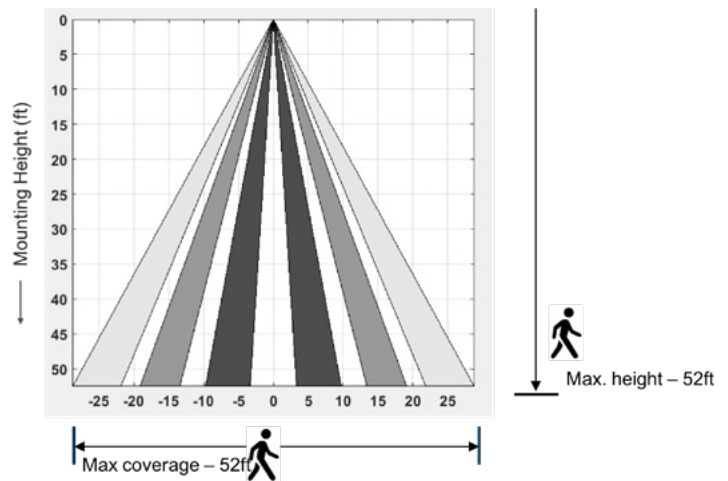
Occupancy Sensing

Based on 16m mounting height

Top coverage



Side coverage

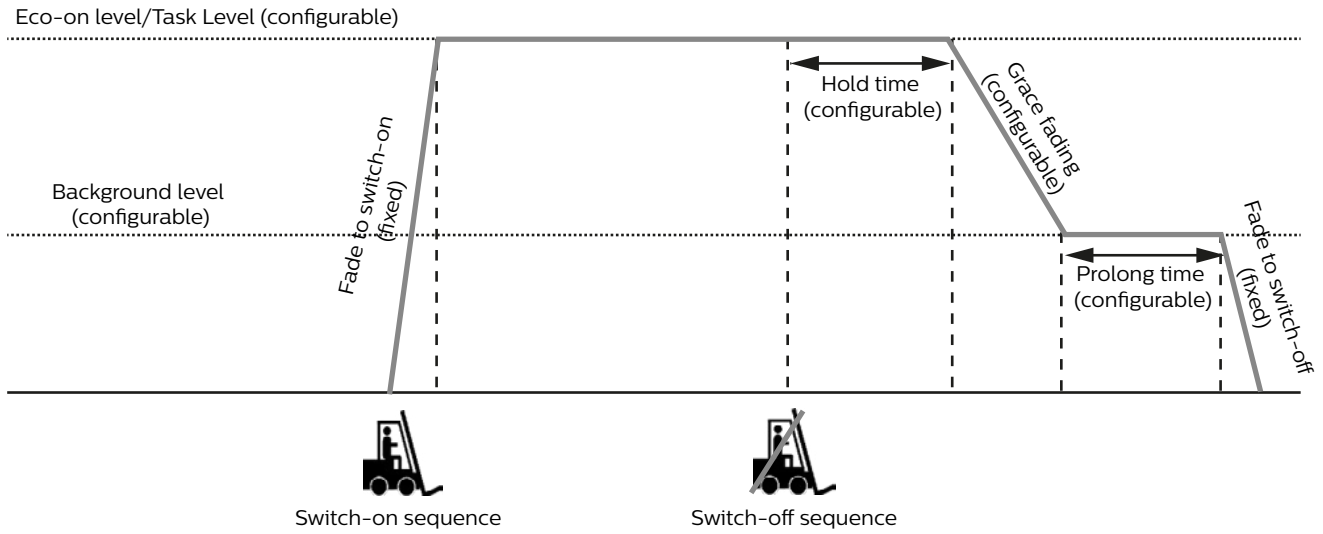


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Occupancy Sensing (continued)

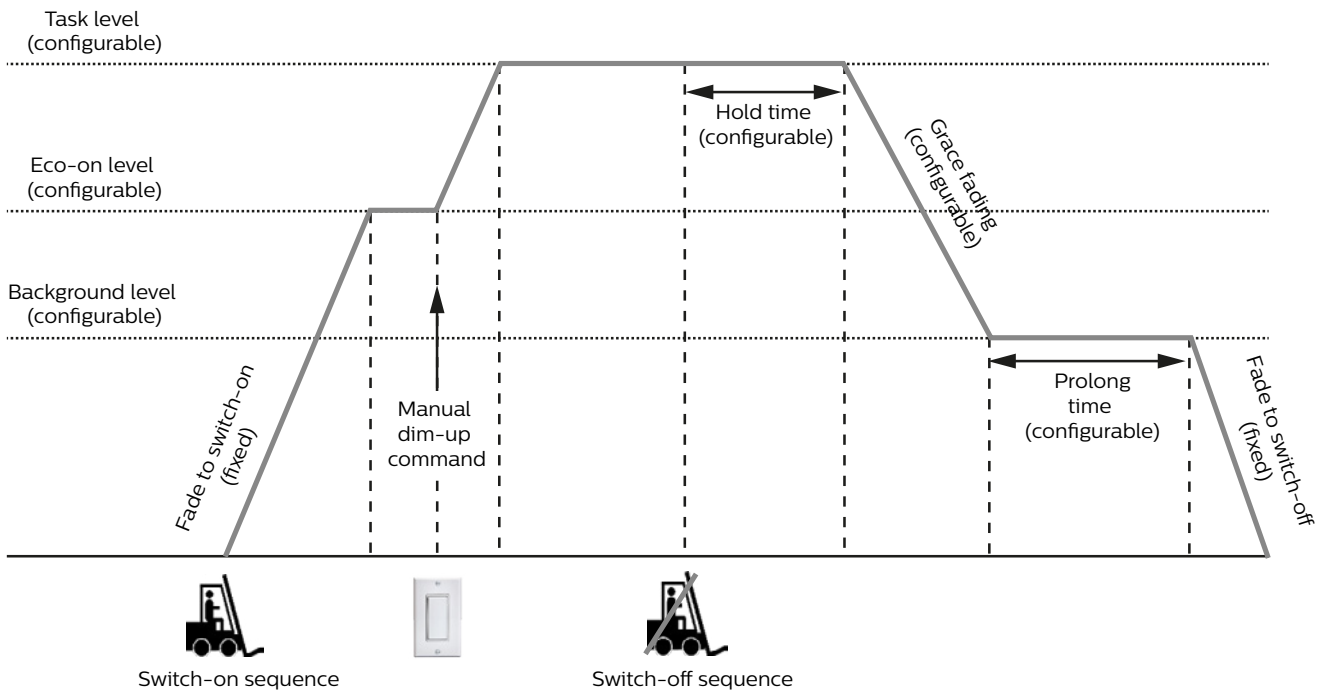
Full-On Sequence (Default)

Eco-On Level = Task Level



Partial-On Sequence (Configurable)

Eco-On Level < Task Level



EasySense SNH211 MC

Daylight sensor

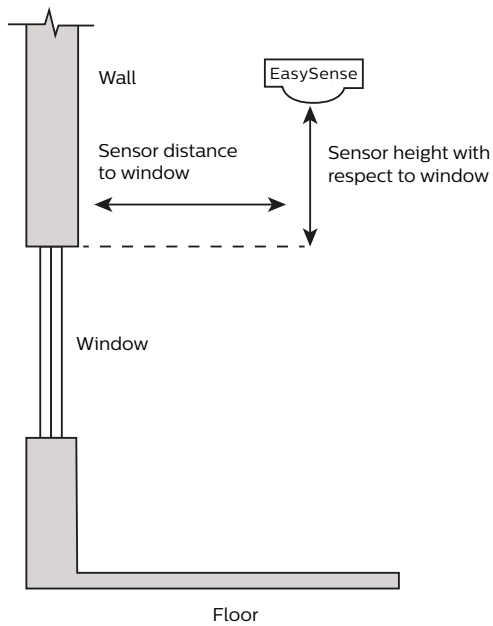
The light sensor measures the total amount of light with an opening angle of 10 degrees whereas the PIR has an angle of 27 degrees, all calculated from normal.

The following aspects should be observed during installation:

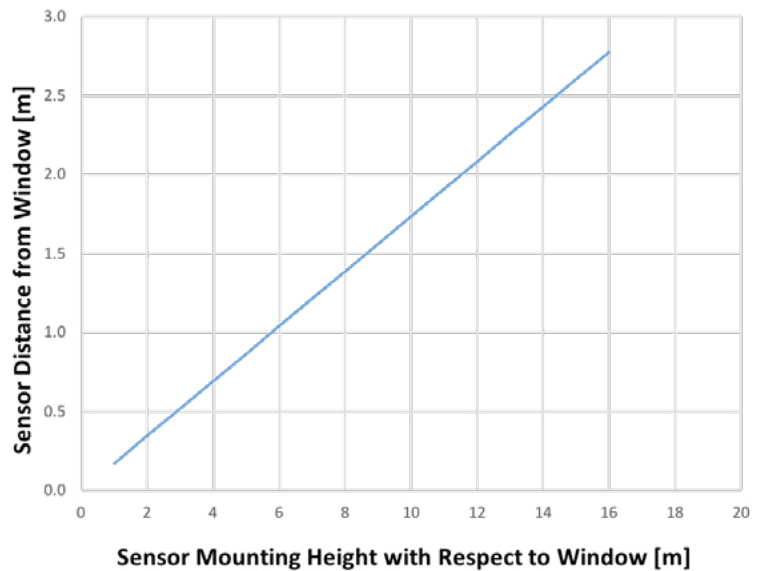
- Minimum distance from the window (see graph below)
- Prevent light reflections from outside entering the sensor (for example sunlight reflection on a car bonnet) as this will lead to incorrect light regulation.

As a guideline the formula $0.174 \times H$ can be used to calculate the minimum distance between the window and sensor whereby H is the height from the bottom of the window to the ceiling.

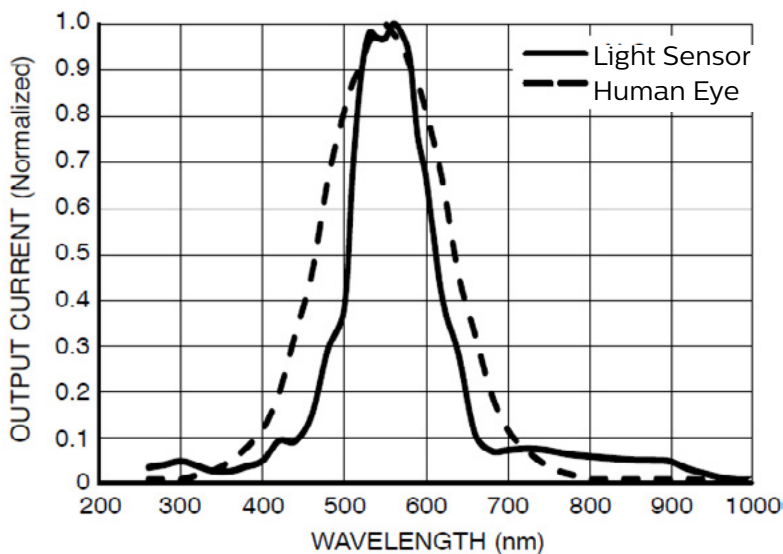
Photosensor spatial response



Minimum distance versus mounting height

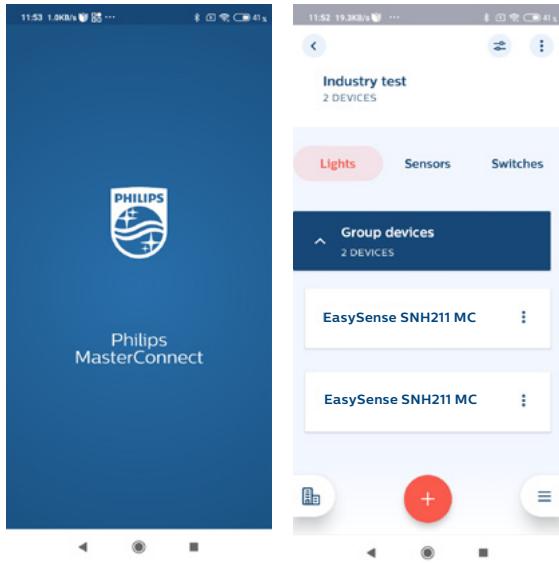


Photosensor spectral response



EasySense SNH211 MC

Philips MasterConnect app



EasySense parameters can be commissioned and configured with the Philips MasterConnect app.

This app allows grouping of luminaires and adding switches along with easy configuration of EasySense parameters.

Download Philips MasterConnect app from the Google Play Store or the Apple App Store. For details see the app manual on our website:

www.philips.com/easysense

Note: EasySense parameters can be configured via Philips MasterConnect app available for Apple and Android smartphones.

- This app allows configuring EasySense parameters, plus enables grouping to a wireless switch.

You must first download Philips MasterConnect app from either an Apple or Android smartphone, then register to receive a username and password. Refer to www.philips.com/easysense for details, and user manuals.

FCC and IC Statement

This device complies with part 15 of the FCC rules for the United States and Industry Canada (IC) license-exempt RSS

standard(s). 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. Any changes or modifications not expressly approved by Philips could void the user's authority to operate this equipment. This product is intended for commercial use only.

This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

Déclaration De Conformité À La Fcc/Ic Ce dispositif est conforme à la partie 15 des règles de la Federal Communications

Commission (FCC) des États-Unis et d'Industrie Canada (IC) exempts de licence RSS norme(s). Son fonctionnement est assujéti aux deux conditions suivantes: (1) Ce dispositif ne doit pas provoquer de brouillage préjudiciable, et (2) il doit accepter tout brouillage reçu, y compris le brouillage pouvant entraîner un mauvais fonctionnement. Tous les changements ou modifications non expressément approuvés par Philips, sont susceptibles d'annuler le droit de l'utilisateur à se servir de cet équipement. Ce produit est exclusivement destiné à un usage commercial.

Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre le radiateur et votre corps.

Default Factory Settings

| | |
|------------------------------|------------------------|
| Occupancy based control | Enabled |
| Daylight based control | Enabled |
| Occupancy Mode | Auto-on/off |
| Group/Zone Occupancy Sharing | Enabled |
| Zone Occupancy Sharing | Disabled |
| Group/Zone Lighting Behavior | Background level |
| Field Task Tuning | 100% |
| Eco-On Level | 100% |
| Background Light Level | 20% |
| Hold Time | 10 minutes |
| Prolong Time | 10 minutes |
| Grace Fading | 10 seconds |
| Fade to Switch-On | 1 second (fixed value) |
| Fade to Switch-Off | 1 second (fixed value) |

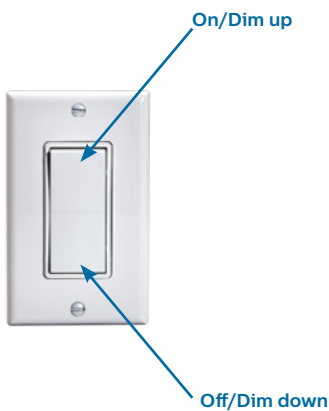
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Compatible Wireless Switches

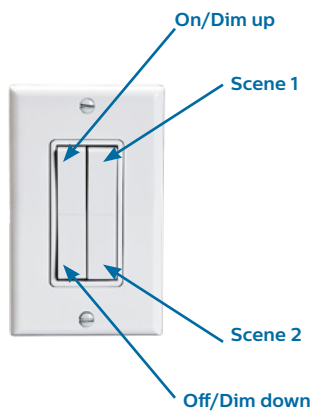
| Manufacturer | Model | Style |
|--------------|-----------|----------------------------|
| Illumra | ZBT-S1AWH | Single Rocker Self Powered |
| | ZBT-S2AWH | Dual Rocker Self Powered |

- Manufacturer's Product Information Links:
 - Illumra (www.illumra.com/easysense)

Single-Rocker Functions (typical switch shown)



Dual-Rocker Functions (typical switch shown)



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