

PHILIPS

Sensors

EasySense

SNS212 MC



The Philips EasySense SNS212 MC from Signify is an economical and touchless lighting control solution that provides per-luminaire control of new LED luminaires. It combines occupancy and daylight sensing in a single, compact package for easy OEM luminaire assembly. EasySense SNS212 MC operates with the Advance Xitanium SR driver to make a simple two-wire connection between sensor and driver, thus eliminating the need for multiple components and auxiliary devices. It provides advanced lighting controls functionalities without the need for a central gateway.

EasySense SNS212 MC is D4i certified. In addition to Advance Xitanium SR drivers, SNS212 MC can also be used with D4i certified LED drivers from other manufacturers. It is also Zigbee certified. This enables interoperability within larger systems that include Zigbee certified components and gateways.

To improve the user experience during commissioning, Signify has also updated the commissioning app. This improved version is called MasterConnect. It's available for either the iOS or Android smartphones. There are numerous enhancements and new functionalities to improve the user experience in commissioning the Philips EasySense SNS212 MC.

EasySense SNS212 MC also supports simple control of tunable white fixtures with award-winning Advance FlexTune System. It also supports room level energy reporting without the need for a separate gateway. These advance features and updated field app make EasySense SNS212 MC a very cost effective DLC-qualified networked lighting control solution.



EasySense fixture-mount sensor

Commercial Product Name	Order Code
EasySense SNS212 MC	SNS212 MC

Features

- Out-of-the-box light regulation with preset sensor parameters
- Groups/networks up to 120 lights
- Occupancy sensing, daylight harvesting and task tuning in one device
- Compact size, 2-wire connection
- Operates with Advance Xitanium SR drivers or D4i certified drivers and qualified wireless switches
- Tunable White with Advance FlexTune SR driver
- Simple grouping of luminaires to a wireless switch with Philips MasterConnect App.
- Selection of luminaires using a list based on BLE or pointing with standard flashlight.
- Configuration of sensor parameters – at group, zone or single light level
- Simple room level energy reporting with CSV file saved on the phone

Benefits

- Combines functionality to reduce need for multiple components
- Fits into existing and new-design luminaires
- Quick task tuning in the field to optimize light levels, color temperature and power
- Enables multiple modes such as manual-on/auto-off or manual on/off
- Cost-effective solution for energy savings
- 5-year limited system warranty with Advance Xitanium LED drivers
- Configuration and commissioning from the floor
- Compatibility with qualified gateways

Applications

- Conference rooms
- Individual offices
- Open offices
- Classrooms
- Storage and break areas
- Restrooms
- Lobbies
- Stairways

EasySense fixture-mount sensor

Specifications

All specifications are typical and at 25°C Tcase unless otherwise specified.

Ordering Information	
Order Code	SNS212 MC
Full Product Name	EasySense SNS212 MC
12NC	929003416313
Carton Quantity	50 pcs/carton
Physical Information	
Overall Dimensions	50 mm x 19.0 mm x 31.5 mm
Housing (Luminaire Hole)	44 mm x 17 mm (l x w)
Net Weight per Piece	0.6oz / 16gr
Volume Required Inside Luminaire (LxWxH)	50 mm x 19 mm x 24 mm
Color	White
Connectors	WAGO 2060 2-pole terminal block. Rated for AWG24 to AWG18 solid or AWG22 to AWG20 stranded wire
Electrical Information	
Input Voltage	Powered by D4i/SR driver low-voltage interface
Nominal Current Consumption	9mA
Nominal Power Consumption	140mW
Activation	Sensors regulate light output out-of-the-box with default settings
Standby Power	< 1 W on luminaire level, including driver standby power
Occupancy Sensing	
Type	Passive infrared (PIR)
Occupancy Based Control	Enable/Disable. Default enabled.
Occupancy Mode	Auto-on/off, Manual-on/off, Manual-on/auto-off; Red LED indicates occupancy detected
Group/Zone Occupancy Sharing	Enabled/disabled
Group/Zone Lighting Behavior	Background light level, Eco on level
Eco-On Level	1-100%
Hold Time	2 - 100 minutes, or infinite
Viewing Angle	X = 62°, Y = 84° (See detection pattern)
Background Light Level	1-100%
Prolong Time	2 - 100 minutes, or infinite
Grace Fading	1-25 seconds
Fading to Switch On/Off	1 second

Continued on next page.

1. View limited warranty at <https://www.signify.com/en-us/support/warranties>

EasySense fixture-mount sensor

Specifications (continued)

All specifications are typical and at 25°C Tcase unless otherwise specified.

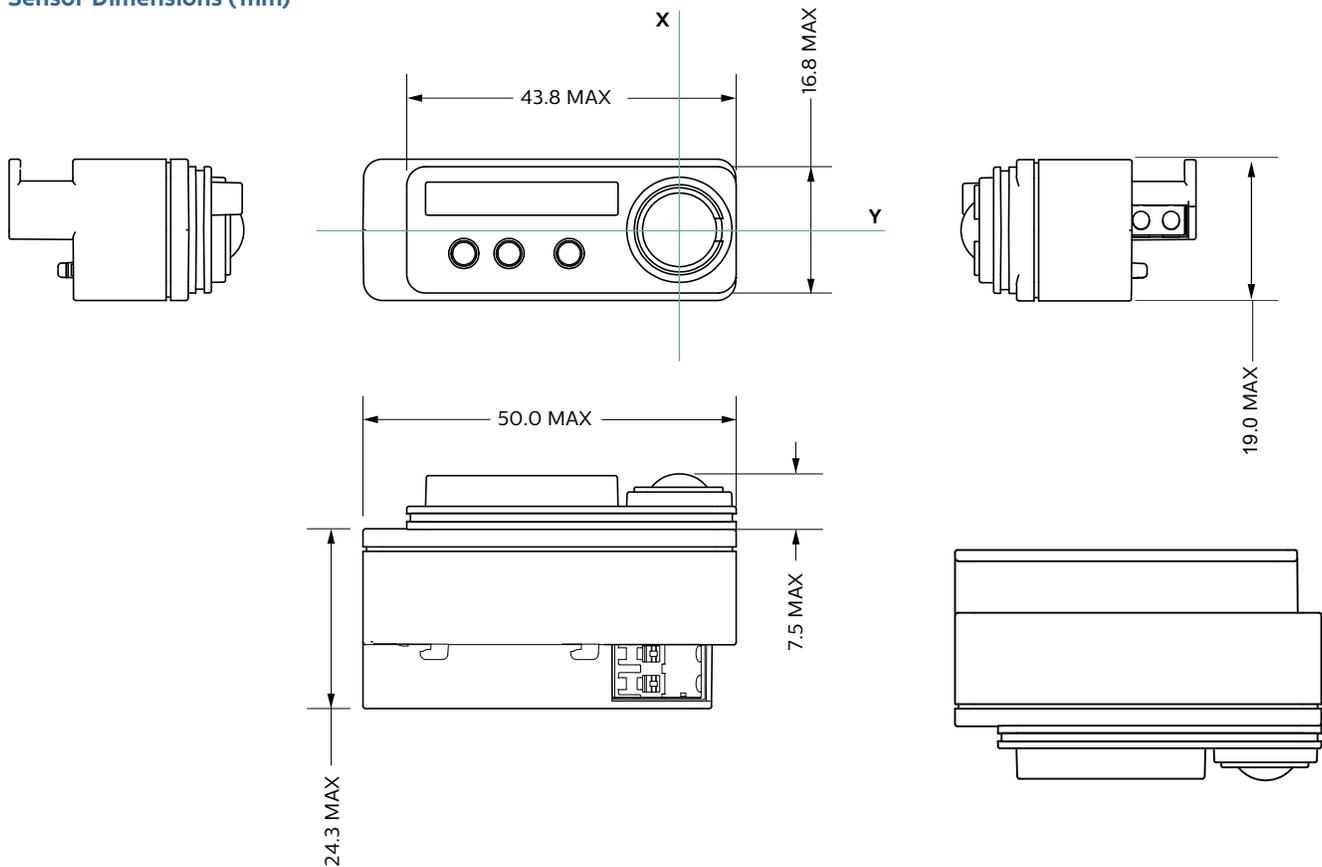
Daylight Sensing	
Daylight based control	Enable/Disable. Default Enabled with target light level of "500lux X Eco-ON%". Actual Lux value will be fixture and application dependent. Daylight sensor calibration is selectable at the time of commissioning and configuration. Light Level calibrated to "Max light output from fixture X Eco-ON%"
Viewing Angle	40° (half value sensitivity); 2% cut-off point at 75°
Task Tuning	
Field Task Level	0-100%
Tunable White	With FlexTune SR driver, default factory setting: 4000K
Environment & Approbation	
Operating Ambient Temperature Range	0°C to 55°C
Operating Humidity	0 – 85% non condensing
Storage Temperature	-25°C to 85°C
Storage Humidity	0-95% non condensing
Max Case Temperature (Tcase)	55°C
Agency Approbations	UL916; cUL; Tested and approved for use in plenums; FCC ID: 2AF2N-SSM2; IC: 20659-SSM2
Warranty	5 years
Digital Interface	D4i/DALI-2, Sensor Ready (SR), a standard-compliant (ANSI C137.4 and DiiA) digital interface
Other	
Wireless Protocol	2.4 Ghz, IEEE 802.15.4
Cybersecurity certification	IEC 62443 compliant, IEC 62443-4-1
Encryption	AES-128
Energy Reporting	Group/Room level using Philips MasterConnect App, Report saved as CSV file on the phone.
LED Status Indicators	After commissioning: Red LED on: Motion is detected; Yellow LED on: Vacancy detected & Sensor is functional
No. Drivers per Sensor	4 max (Limited to 1 driver per sensor for support of Tunable White and Energy Reporting features)
Max Distance Switch-to-First-Fixture	33ft line-of-sight
Max Distance Fixture-to-Fixture	40ft line-of-sight
Max No. of Devices in a Group	120
No. Switches per Group	15 max, 5 max per zone
Field Configuration	via BLE, parameters set via Philips MasterConnect App

Driver Compatibility

EasySense SNS212 MC is compatible with Xitanium SR drivers and SR Bridges from Signify and D4i certified LED drivers from other manufacturers. To find the SR driver that fits your application needs and for product specifications, please visit www.signify.com/xitaniumsr.

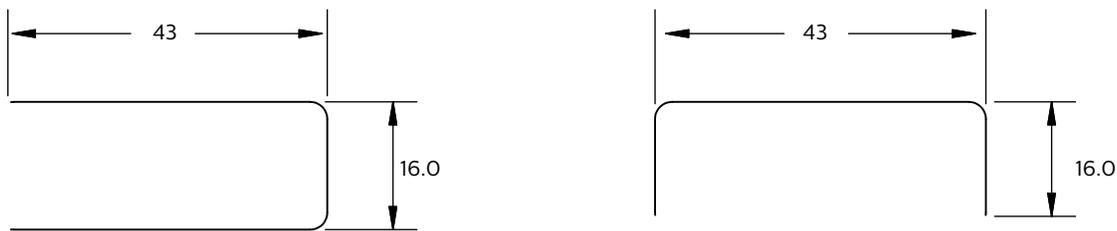
EasySense fixture-mount sensor

Sensor Dimensions (mm)

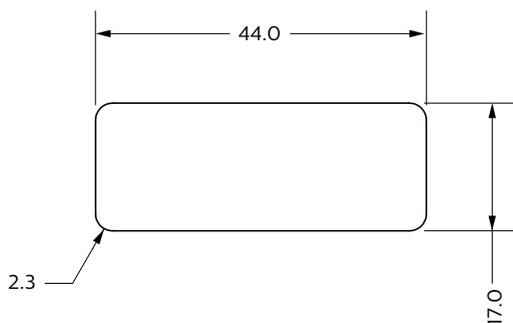


Mounting Dimensions (mm)

Mounting in U-shaped slot in sheet metal (max thickness 1 mm), tolerance +0.2 mm/-0.0 mm



Mounting in cut-out in sheet metal (thickness 0.7 mm to 1.2 mm), tolerance +/-0.2 mm



Accessory Mounting Ring

Part Number SMR-50 / Set of 50

12NC: 929000767013

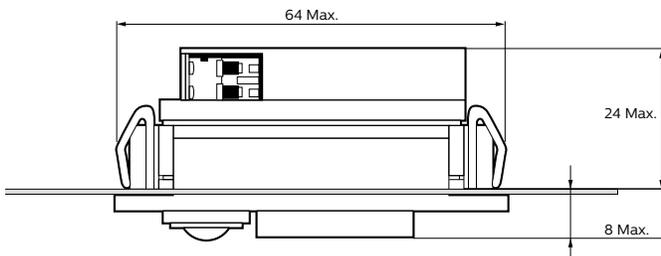
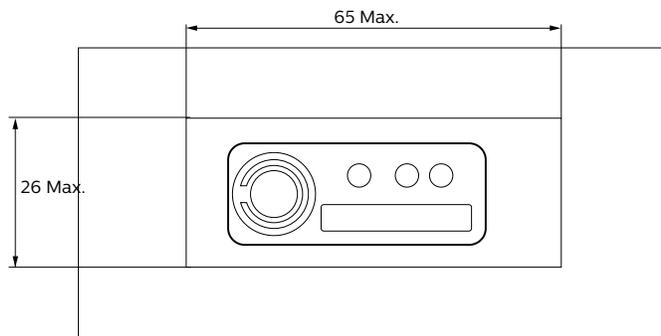
- (1) SMR-50 includes a set of (50) mounting rings
- Ordered separately, not included with EasySense
- Dimensions: 53mm x 26mm x 1.5mm



EasySense fixture-mount sensor

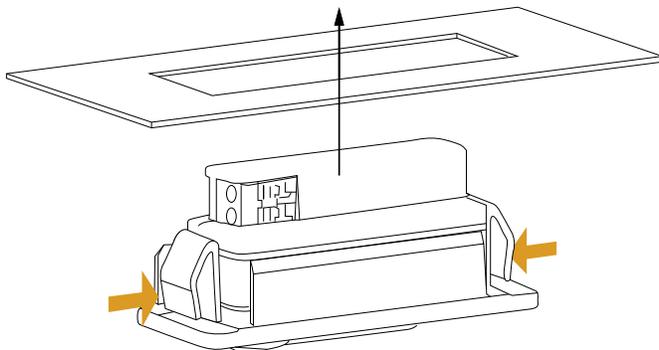
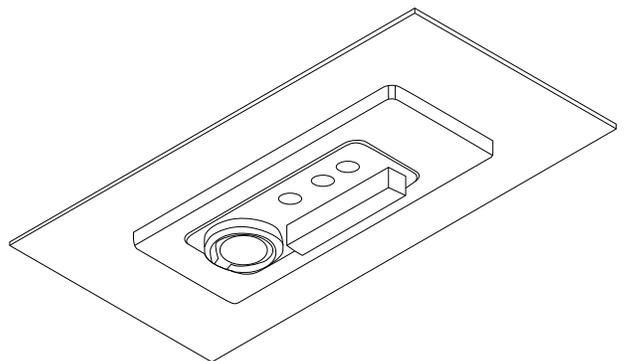
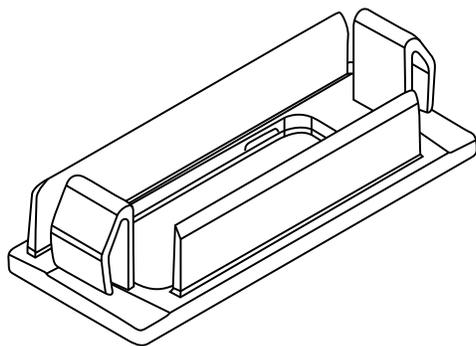
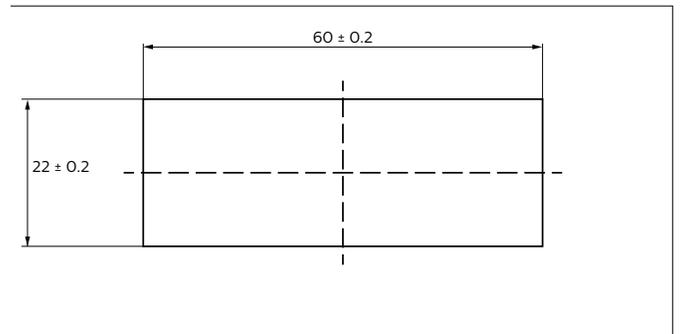
Accessory Mounting Bracket (SMB-50)

Dimensions (mm)



Accessories	Colour	12NC
SMB-50 /w	White	9290 028 13706

The EasySense SNS212 MC can be mounted in a surface mounted bracket (SMB-50). Refer the figures for details on mounting and design-in into luminaire. All dimensions are in mm.



Press springs inwards on both sides before the bracket can slide-in the luminaire hole.

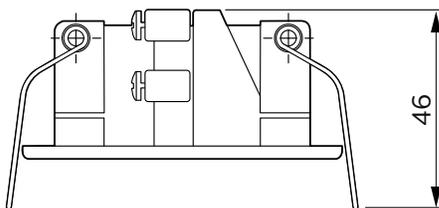
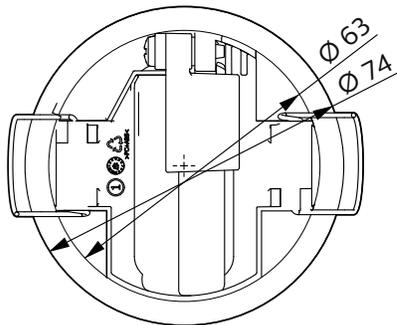
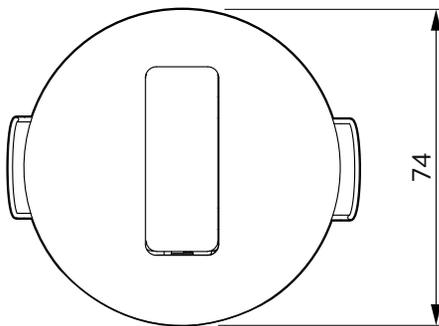
EasySense fixture-mount sensor

Installing EasySense SNS212 MC with ceiling mount bracket (CMP/w)

EasySense SNS212 MC can be mounted outside of the luminaire using the recessed ceiling mount bracket CMP/w. For cut-out in the ceiling and mounting, refer the figures below. All dimensions are in mm.

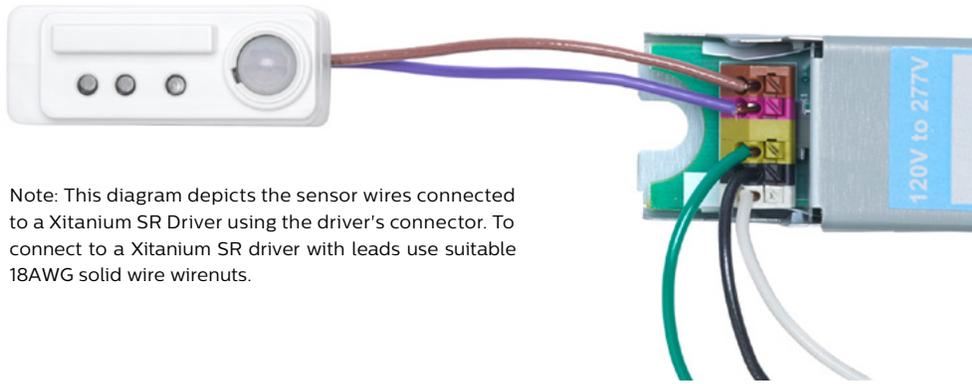
Please note that below accessory CMP/w does not contain a sensor. Assembly of sensor with CMP accessory should be carried out by OEM or installer. The wiring should be kept <2m from Xi SR Driver or SR Bridge.

Product	Colour	12NC
CMP/w	White	9290 034 17206

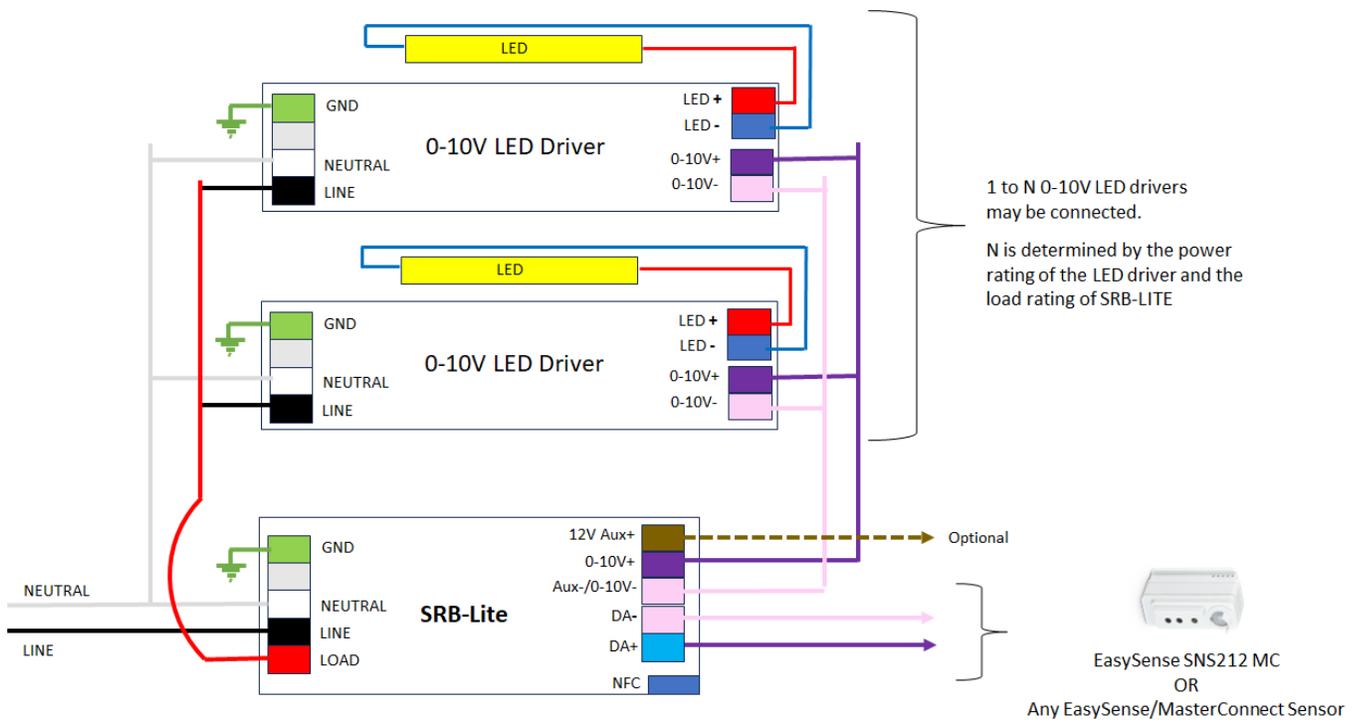
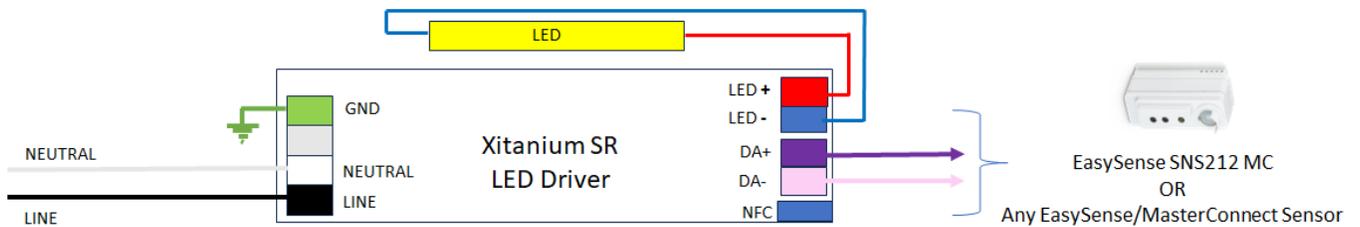


EasySense fixture-mount sensor

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 18AWG solid wire wirenuts.

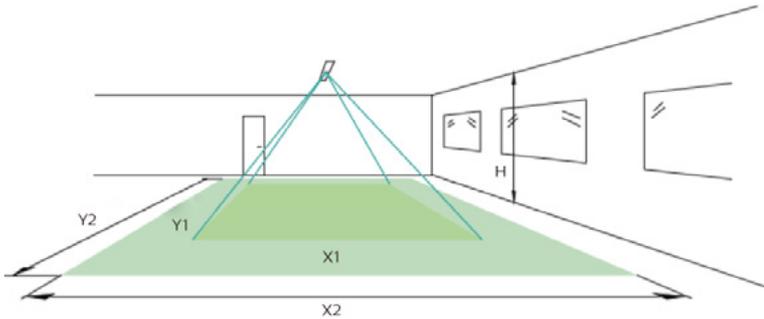


EasySense fixture-mount sensor

Occupancy Sensing

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

- Minor movement (person moving $\leq 3.0'$ /s or 0.9m/s)
- Major movement (person moving $\geq 3.0'$ /s or 0.9m/s)



Height	Minor Movement		Major Movement	
	Y1	X1	Y2	X2
8'/2.4m	10'/2.9m	6'/1.9m	14'/4.3m	9'/2.9m
10'/3m	12'/3.6m	8'/2.4m	18'/5.4m	12'/3.6m

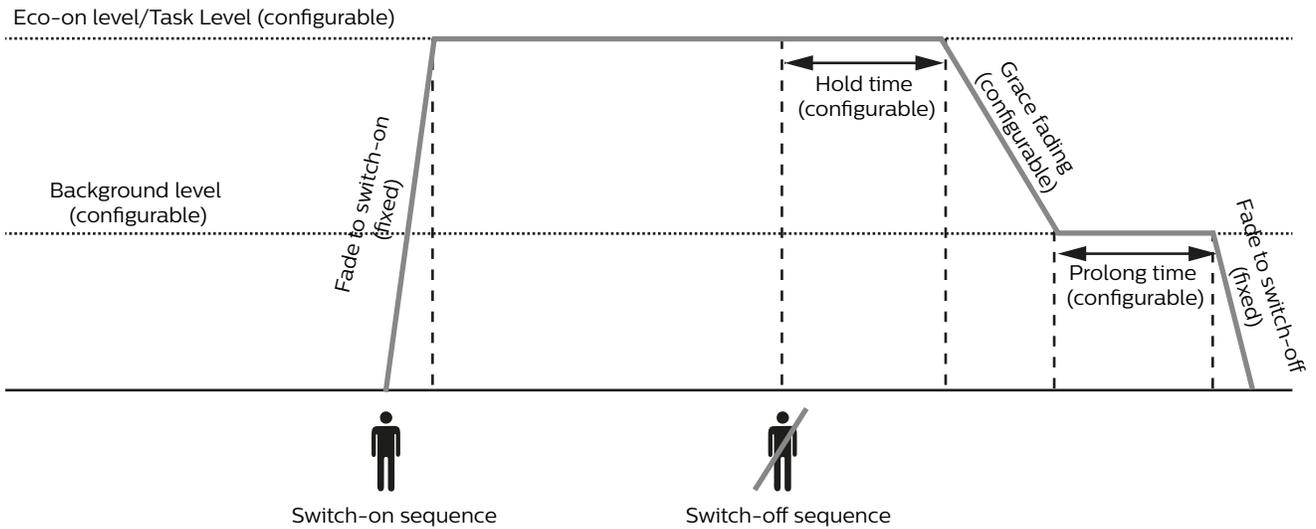
Note: Longer dimension of detection area (Y1, Y2) is parallel to longer dimension of EasySense.

EasySense fixture-mount sensor

Occupancy Sensing (continued)

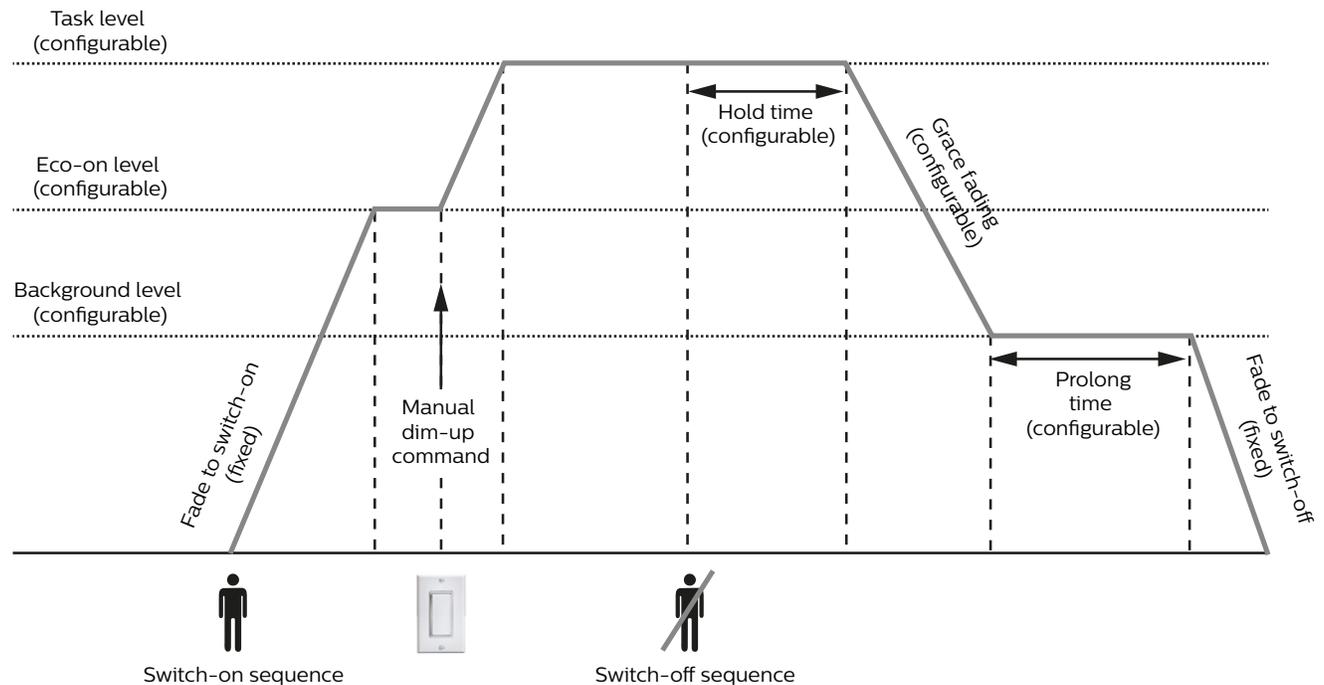
Full-On Sequence (Default)

Eco-On Level = Task Level



Partial-On Sequence (Configurable)

Eco-On Level < Task Level



EasySense fixture-mount sensor

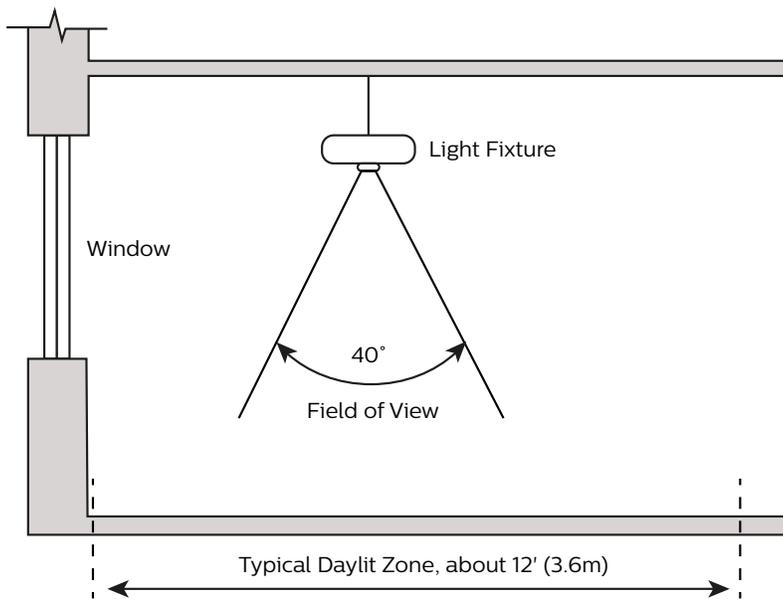
Daylight Sensor

The light sensor measures the total amount of light in a circular field of $\approx 80\%$ of the PIR detection area. The following aspects should be observed during installation:

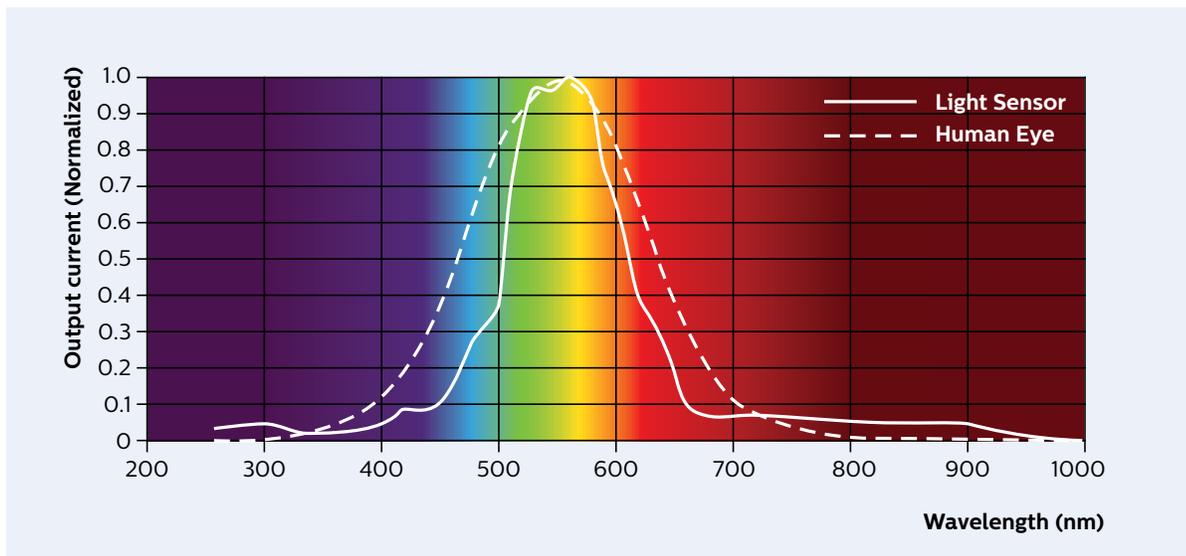
- Minimum distance from the window $\geq 2.0/0.6\text{m}$.
- Prevent light reflections from outside entering the sensor (for example sunlight reflection on a car bonnet) as this will lead to incorrect light regulation.

As a guideline the formula $0.72 \times H$ 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.

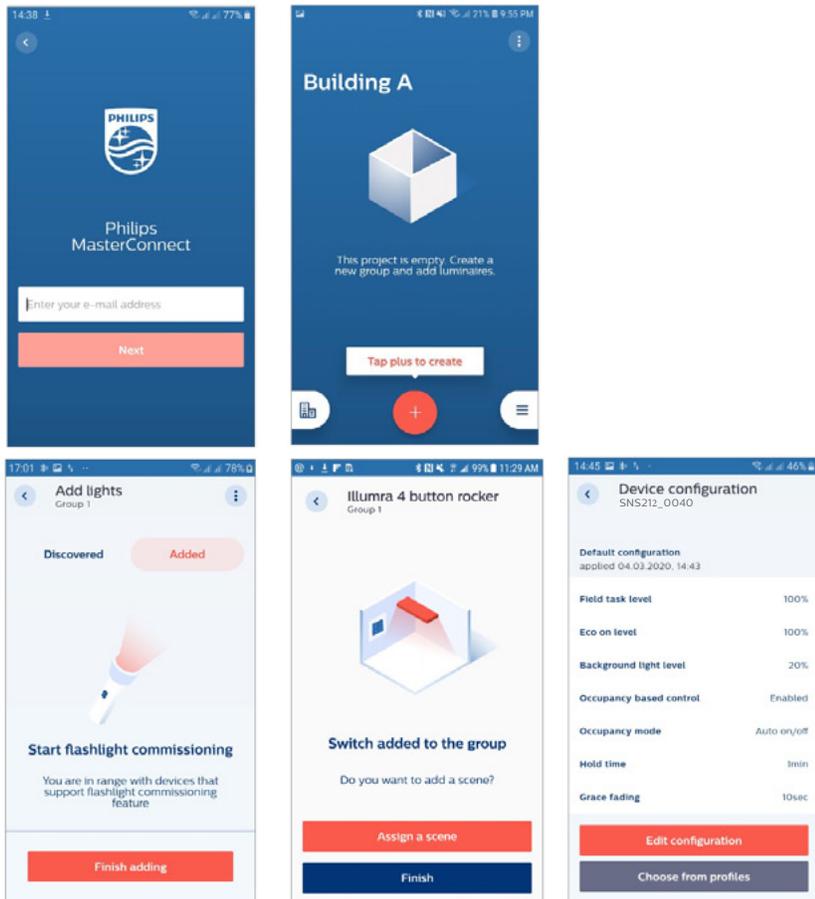
Photosensor Spatial Response



Photosensor Spectral Response



EasySense Configuration App (Philips MasterConnect)



EasySense SNS212 MC parameters can be configured via MasterConnect App.

This App allows grouping of luminaires and adding switches along with easy configuration EasySense SNS212 MC parameters.

Download MasterConnect App from either the Apple Store or Google Play. For more information, please visit our website:

<https://www.usa.lighting.philips.com/products/lighting-components/masterconnect>

for details including recommended phones and user manuals.

Default Factory Settings

Occupancy Based Control	Enabled
Daylight-Based Control	Enabled
Occupancy Mode	Auto-on/off
Group/Zone Occupancy Sharing	Enabled
Group/Zone Lighting Behavior	Background level
Zone Occupancy Sharing	Disabled
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)
Color Temperature (only with FlexTune SR driver)	4000K

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Compatible Wireless Switches

Two examples are given below. For the latest list of compatible switches please refer to the Philips MasterConnect website: <https://www.usa.lighting.philips.com/products/lighting-components/masterconnect>

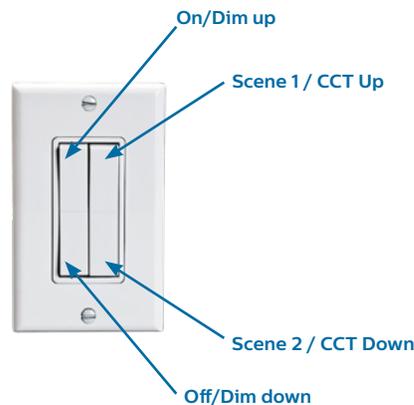
Manufacturer	Model	Style
Illumra	ZBT-S1AWH	Single Rocker Self Powered
	ZBT-S2AWH	Dual Rocker Self Powered

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

Single-Rocker Functions (typical switch shown)



Dual-Rocker Functions (typical switch shown)



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 Signify 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 Signify, 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.

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