PHILIPS

Sensors

EasySense

SNS210 MC

The Philips EasySense SNS210 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 SNS210 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.

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 SNS210 MC.

EasySense SNS210 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 SNS210 MC a very cost effective DLC-qualified networked lighting control solution.

For more information about the Advance FlexTune System, please visit:
https://www.signify.com/en-us/brands/advance/systems/flextune-system

EasySense fixture-mount sensor

Features

- Occupancy sensing, daylight harvesting and task tuning in one device
- Compact size, 2-wire connection (SR)
- Operates with Advance Xitanium SR drivers and compatible Zigbee wireless switches
- Preset with most common sensor parameters
- Simple grouping and zoning of luminaires to a wireless switch with Philips MasterConnect App
- Selection of luminaires using a list based on BLE signal strength or pointing with standard flash-light
- Configuration of sensor parameters– at group level or single light level
- Simple room level energy reporting with CSV file saved on the phone
- Tunable White in combination with Advance FlexTune SR driver

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 and power levels
- Enables multiple modes such as manual -on/auto-off or manual on/off
- Cost-effective solution for energy-savings
- Configuration and commissioning from the floor
- Easy verification of energy savings at room level
- Simple wireless control for Tunable White fixtures
- Qualified for maximum utility rebate
- 5-year limited system warranty with Philips Xitanium LED drivers

Applications

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

Product Data

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

Ordering Information

Order Code	SNS210 MC
Full Product Name	Philips EasySense SNS210 MasterConnect (MC)
12NC	929001756513
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 / 17gr
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

Sensor Ready (SR) Interface

Input Voltage	Powered by SR driver low-voltage interface
Current Consumption	13mA
Nominal Power Consumption	200mW
Standby Power	< 1 W on luminaire level, including driver standby power

Occupancy Sensing

Type	Passive infrared (PIR)
Occupancy Based Control	Default enabled ; activated upon commissioning
Occupancy Mode	Auto-on/off, Manual-on/off, Manual-on/auto-off; Red LED indicates occupancy detected
Group Occupancy Sharing	Enabled/disabled
Group Lighting Behavior	Background light level, Eco on level
Eco-On Level	1-100%
Hold Time	2-100 minutes
Viewing Angle	X = 62°, Y = 84° (See detection pattern)
Background Light Level	1-100%
Prolong Time	2 - 100 minutes + infinite
Grace Fading	1-25 seconds
Fading to Switch On/Off	1 seconds

Continued on next page.

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

EasySense fixture-mount sensor

Product Data (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%

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	UL, CSA; Tested and approved for use in plenums; FCC ID: 2AF2N-SSMC; IC: 20659-SSMC
Warranty	5 years
Digital Interface	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	40 (automated behavior without switches) 30 (all use cases supported including switches) 20 (all use cases including group level energy reporting)
No. Switches per Group	5 max
Field Configuration	via BLE, parameters set via Philips MasterConnect App

Compatible LED Drivers

| Driver Model Number	Description
XI040C110V054VPT1	Xitanium 40W 1.1A 54V 120-277V SR
XI040C110V054VPT2	Xitanium 40W 1.1A 54V 120-277V SR (1% dim)
XI040C110V050VWT1	Xitanium 40W 1.1A 50V 120-277V SR (1% dim) FlexTune
XI075C200V054VPT1	Xitanium 75W 2.0A 54V 120-277V SR

Compatible Xitanium SR Bridges
SRB-BS
SRB-LD

Specifications available at www.philips.com/xitaniumsr/na.

EasySense fixture–mount sensor

Sensor Dimensions (in./mm)

0.66 [16.8] MAX
1.72 [43.8] MAX
0.75 [19.0] MAX
1.97 [50.0] MAX
0.30 [7.5] MAX
0.96 [24.3] MAX
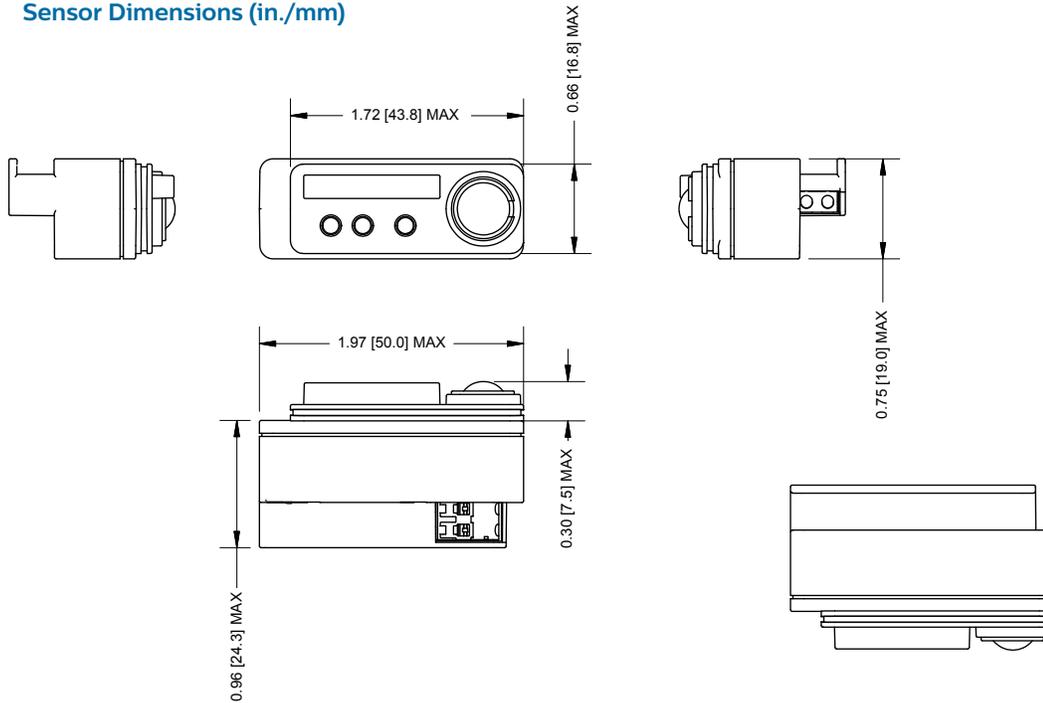
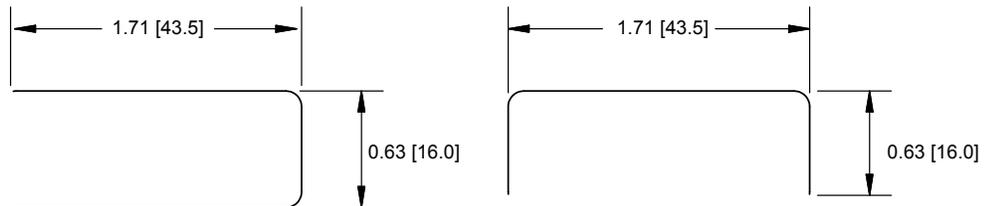## Mounting Dimensions (in./mm)

Accessory Mounting Ring

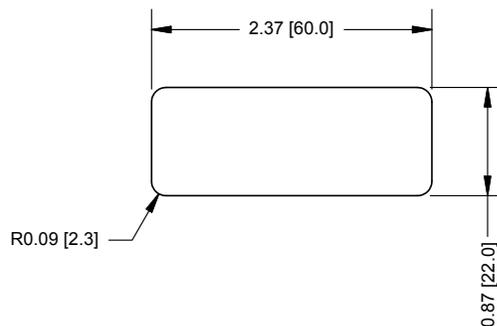Part Number SMR–50 / Set of 50

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

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

1.71 [43.5]   1.71 [43.5]

0.63 [16.0]   0.63 [16.0]

Mounting in cut–out in sheet matal (thickness 0.7 mm to 1.0 mm), tolerance +/–0.2mm

Accessory Mounting Bracket

Part Number SMB–50 / Set of 50

- (1) SMB–50 includes (50) mounting brackets
- Ordered separately, not included with EasySense
- Dimensions: 64.1mm x 25.3mm x 10.3mm

2.37 [60.0]

R0.09 [2.3]
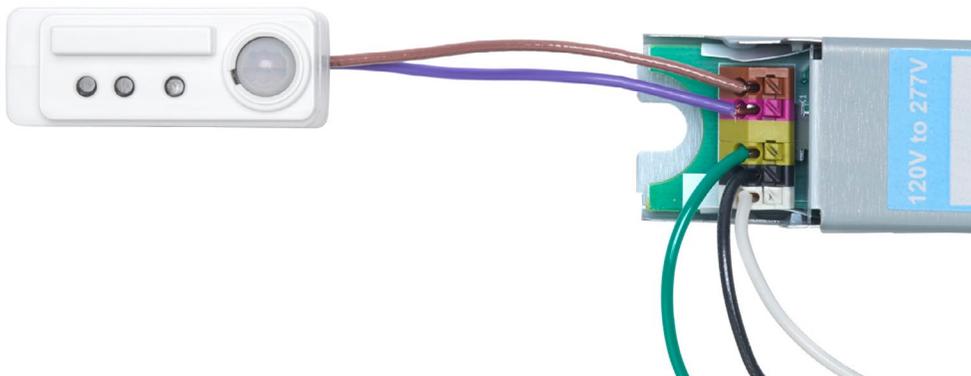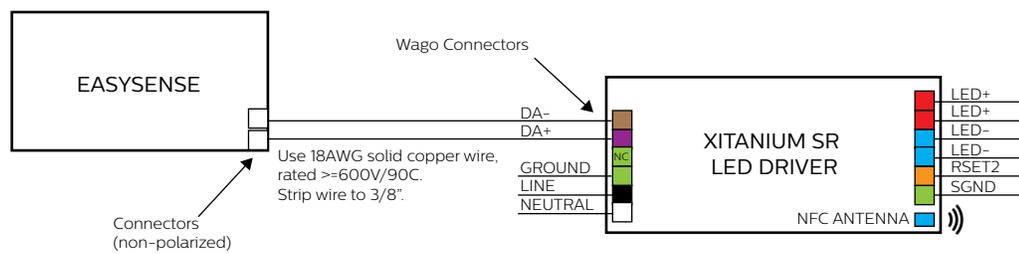
0.87 [22.0]

EasySense fixture-mount sensor

Accessory Ceiling Mounting Bracket

12NC: 929002137106

- CMP bracket is available as a bracket without any pre-mounted sensor or cable.
- The sensor needs to be inserted the CMP bracket and the cable needs to be attached to it.
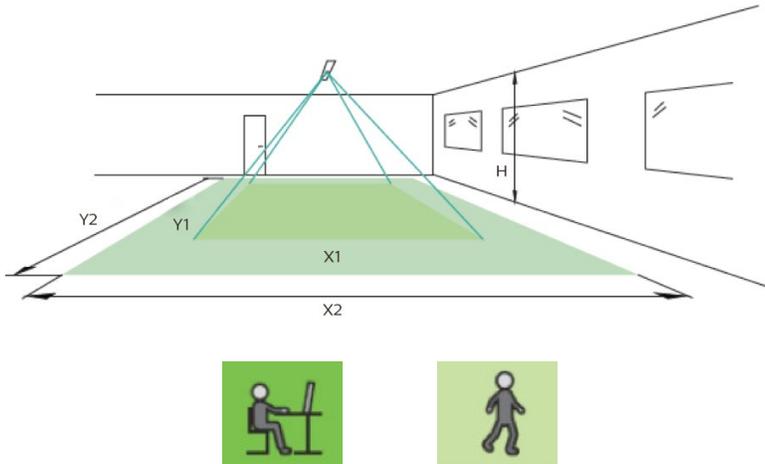- The cable and screws are available with the accessory.
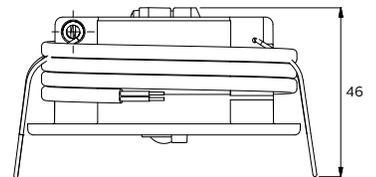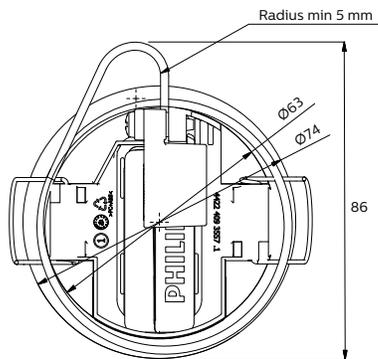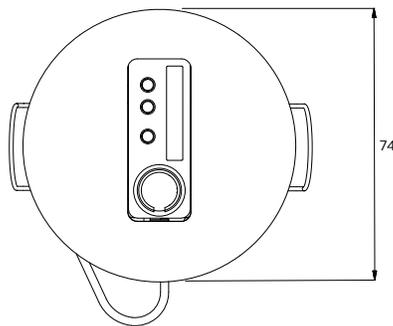
Wiring Diagram

EasySense fixture-mount sensor

Occupancy Sensing

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

·   Minor movement (person moving ≤ 3.0'/s or 0.9m/s)

·   Major movement (person moving ≥ 3.0'/s or 0.9m/s)

Height	Minor Movement		Major Movement	
H	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.

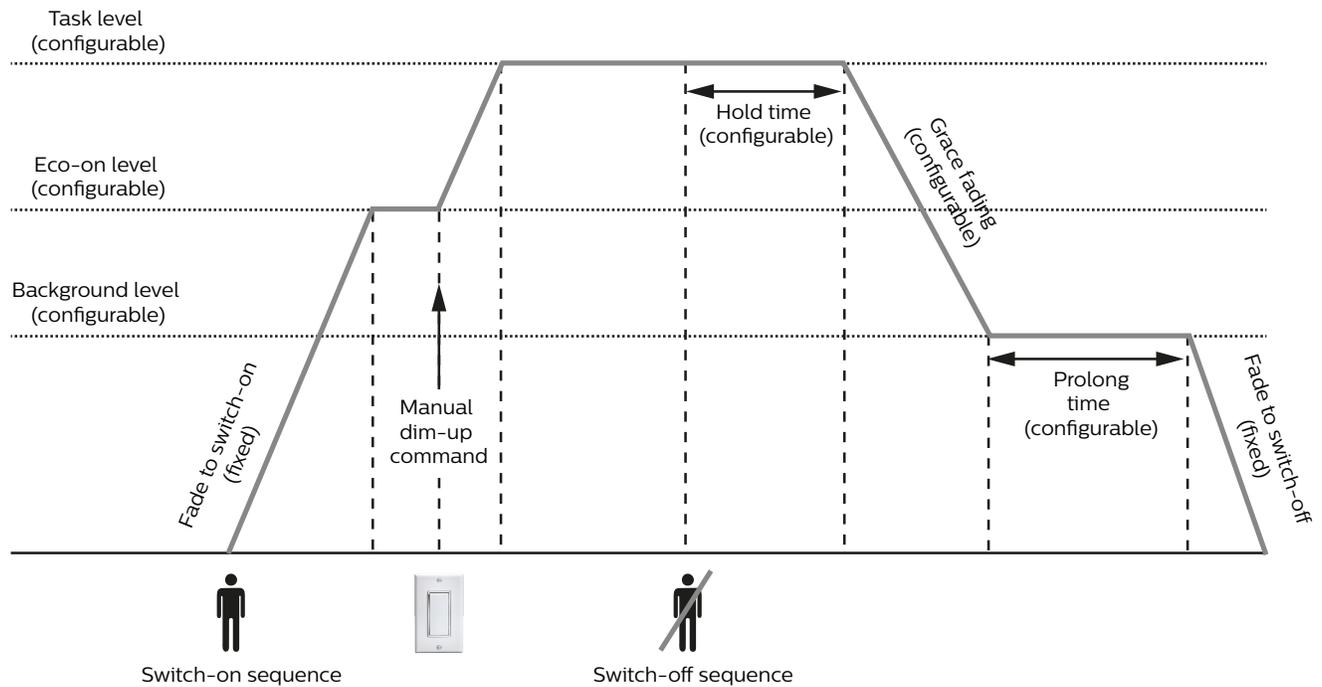# EasySense fixture-mount sensor

Occupancy Sensing (continued)

Full-On Sequence (Default)
Eco-On Level = Task Level

Eco-on level/Task Level (configurable)

Hold time (configurable)

Grace fading (configurable)

Background level (configurable)

Fade to switch-on (fixed)

Prolong time (configurable)

Fade to switch-off (fixed)

Switch-on sequence

Switch-off sequence
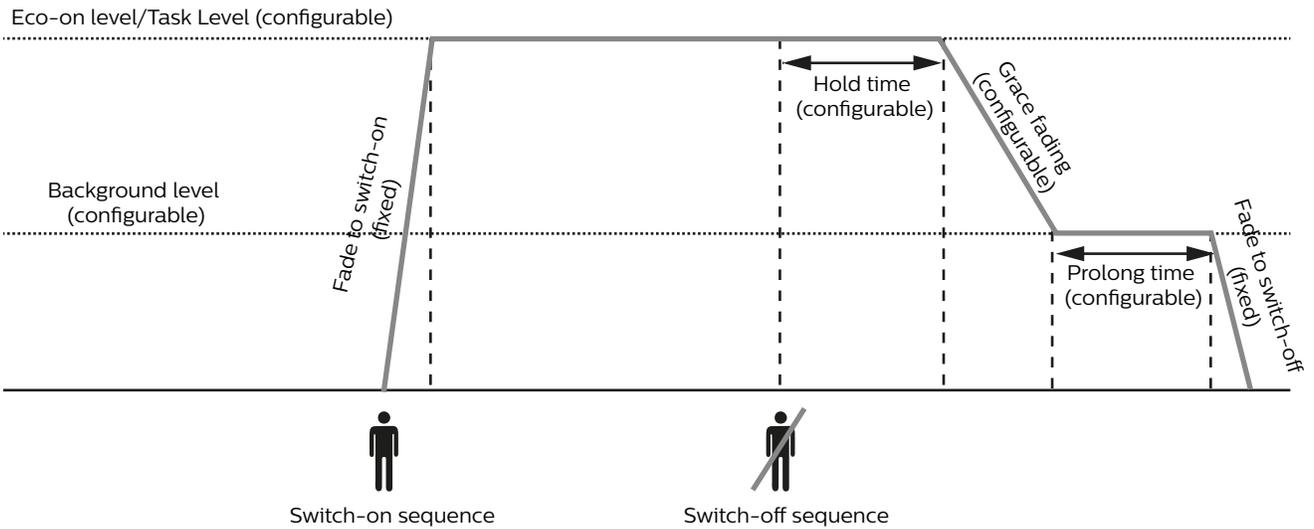
Partial-On Sequence (Configurable)
Eco-On Level < Task Level

Task level (configurable)

Hold time (configurable)

Grace fading (configurable)

Eco-on level (configurable)

Background level (configurable)

Fade to switch-on (fixed)

Manual dim-up command

Prolong time (configurable)

Fade to switch-off (fixed)

Switch-on sequence

Switch-off sequence

EasySense fixture–mount sensor

Daylight Sensor

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

- Minimum distance from the window ≥ 2.0'/0.6m.

- 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 x 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
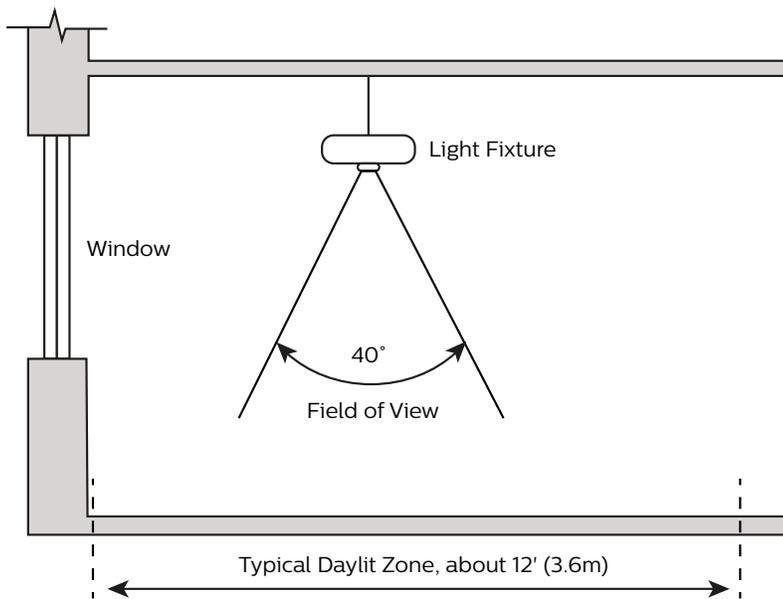
Photosensor Spectral Response
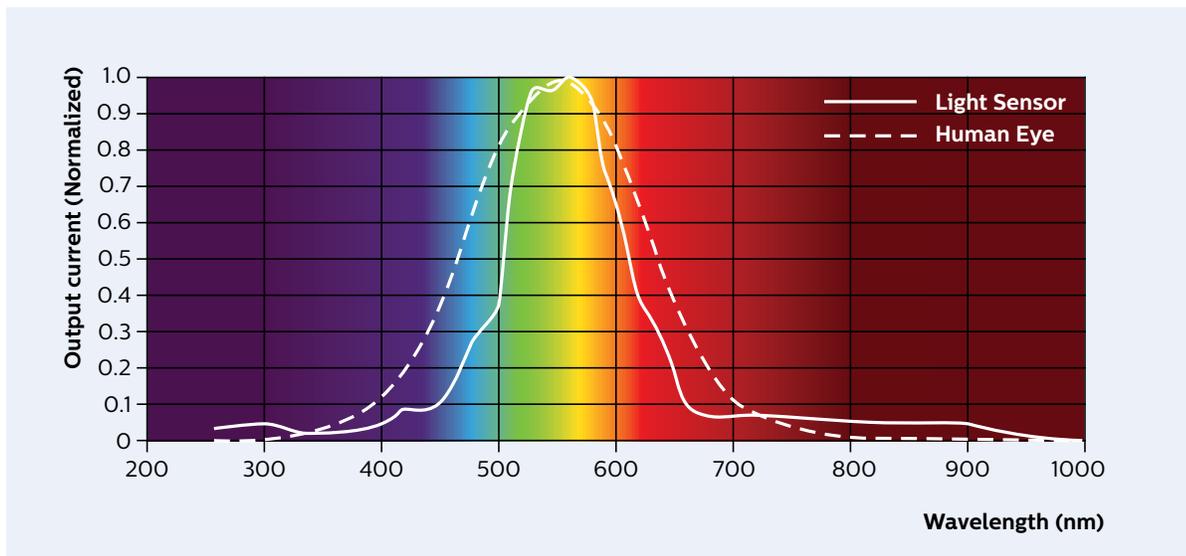
EasySense Configuration App
(Philips field app MC)
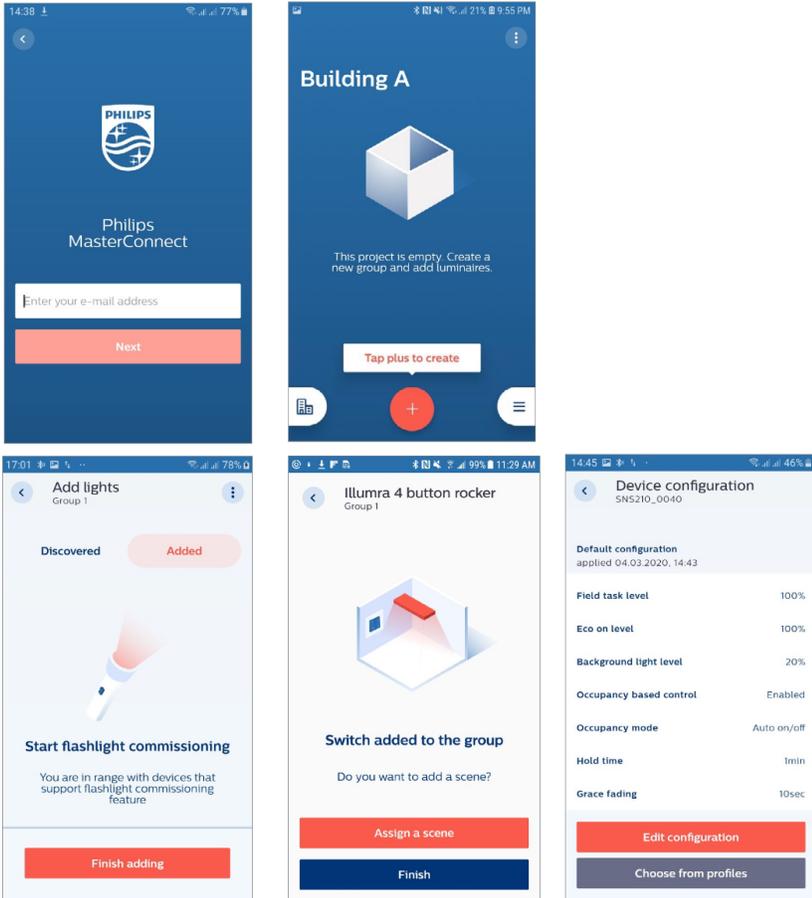
EasySense SNS210 MC parameters can be configured via MasterConnect App.

This App allows grouping of luminaires and adding switches along with easy configuration EasySense SNS210 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/easysense/easysense-sns210mc

for details including recommended phones and user manuals.

Default Factory Settings

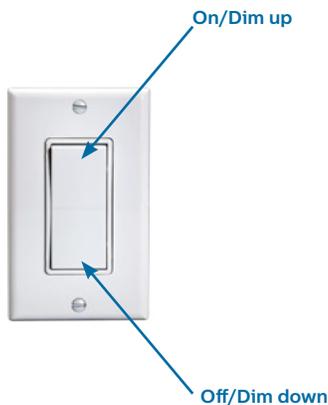|	
Occupancy Based Control	Enabled
Daylight-Based Control	Enabled
Occupancy Mode	Auto-on/off
Group Occupancy Sharing	Enabled
Group Lighting Behavior	Background level
Field Task Tuning	100%
Eco-On Level	100%
Background Light Level	20%
Hold Time	10 minutes
Prolong Time	10 minutes
Grace Fading	10 seconds
Fade to Switch-On	1 second (fixed value)
Fade to Switch-Off	1 second (fixed value)
Color Temperature (only with FlexTune SR driver)	4000K

EasySense fixture-mount sensor
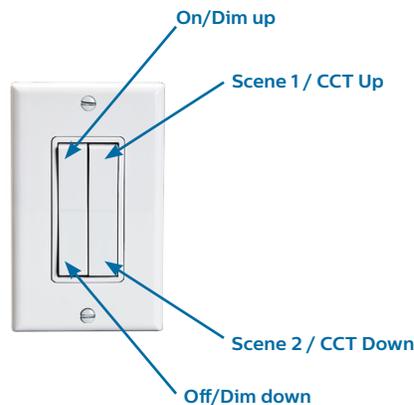
Compatible Wireless Switches

Manufacturer	Model	Style
Illumra	ZBT-S1AWH	Single Rocker Self Powered
	ZBT-S2AWH	Dual Rocker Self Powered
Magnum Energy Solutions	MZ-SW1	Single Rocker Self Powered
	MZ-SW2	Dual Rocker Self Powered
	MZ-ASW1	Single Rocker Self Powered
	MZ-ASW2	Dual Rocker Self Powered
	MZ-ESRP	Single Rocker Self Powered
	MZ-EDRP	Dual Rocker Self Powered

- Max no. sensors per switch: 30

- Manufacturers links to product information:
    - o   Illumra (www.illumra.com/easysense)
    - o   Magnum Energy Solutions:
        www.magnumenergysolutions.com/products

Single-Rocker Functions
(typical switch shown)

Dual-Rocker Functions
(typical switch shown)

On/Dim up

On/Dim up

Scene 1 / CCT Up

Scene 2 / CCT Down

Off/Dim down

Off/Dim down