



Sensors

EasyAir

SNS212 MC



Datasheet

EasyAir SNS212 MC

The Philips EasyAir SNS212 MC is the ideal solution for per-luminaire control of new light luminaires. This new generation sensor features all functions of its predecessor SNS210 MC while providing the technical basis for future innovations. It combines occupancy and daylight sensing in a single, compact package for easy OEM luminaire assembly. EasyAir SNS212 MC operates with Xitanium SR or D4i certified drivers via a simple two-wire connection between sensor and 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 Philips MasterConnect App.

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
- Zigbee 3.0 and D4i certified
- Operates with Philips Xitanium SR drivers, D4i certified drivers and qualified wireless switches
- Compact size, 2-wire connection
- Tunable White with Philips FlexTune 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 Philips 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
- Canteen or coffee areas



Ordering Information

Commercial product name	Colour	Description	EOC	12NC	Carton Quantity
EasyAir SNS212/w MC	White	Office Sensor Advanced Grouping	871951445905200	929003416606	50 pcs
EasyAir SNS212/b MC	Black	Office Sensor Advanced Grouping	871951445899400	929003416806	50 pcs
EasyAir SNS212/g MC	Grey	Office Sensor Advanced Grouping	871951445903800	929003416706	50 pcs

Product Data

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

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	16 gr
Volume required Inside Luminaire (LxWxH)	50 mm x 19 mm x 24 mm
Color	White, black and grey
Connectors	WAGO 2060/BJB 46.132 2-pole terminal block rated for AWG24 to AWG18 solid or stranded wire
Input wire cross-section (solid conductor wire)	0.25 - 0.75 mm ² , 18 - 24 AWG
Input wire cross-section (stranded wire)	0.3 - 0.5 mm ² , 20 - 22 AWG

Electrical Information

Input Voltage	Powered by SR driver low-voltage interface
Current Consumption	9.5 mA
Nominal Power Consumption	140 mW
Standby Power	< 1 W on luminaire level (typically 0.6W), including driver standby power
Frequency	2.4 GHz
Activation	Sensors regulate light output out-of-the-box with default settings

Occupancy Sensing

Type	Passive infrared (PIR)
Occupancy Based Control	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 light behaviour	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 second

Daylight Sensing

Daylight based control	Enabled/disabled. Default Enabled with target light level of "≈500lux X Eco-ON%".
Calibration	Selectable. 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 Philips FlexTune 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 - 85 °C
Storage Humidity	0-95% non condensing
Ingress Protection	IP20
Max Case Temperature (Tcase)	55 °C
Agency Approbations	CE, ENEC, RTTE, EMC, RCM, SRRC
Warranty	5 years
Digital Interface	Xitanium SR

Other

Wireless protocol	2.4 GHz, IEEE 802.15.4
Encryption	AES - 128
Status Indicators	After commissioning: Red LED on: Motion is detected; Green LED on: Vacancy detected & Sensor is functional
Energy reporting	Group/Room level using Philips MasterConnect App. Report saved as CSV file on the phone.
Max no. Devices in a Group	120 (including ZGP switches)
No. SR-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-Luminaire	10 m line-of-sight
Max Distance Luminaire-to-Luminaire	12 m line-of-sight
No. Switches per Group	15 max, 5 max per zone
No. Zones per Group	15 max
Field Configuration	via BLE, parameters set via Philips MasterConnect app
BLE range for user to luminaire	10m line-of-sight

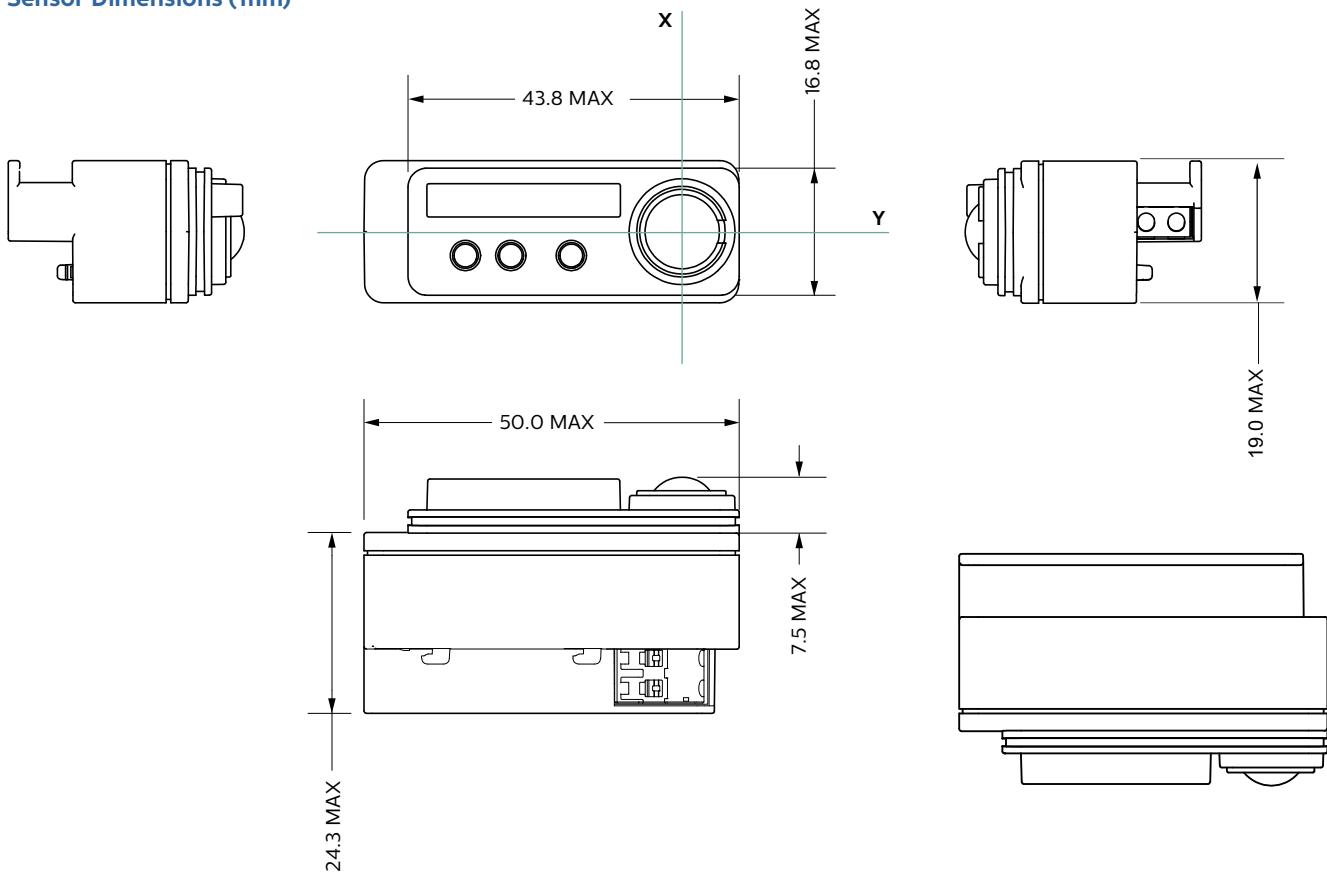
Compatible LED Drivers

Logistic code 12NC	Description
9290 015 05006	Xitanium 75W 0.7-2.0A 54V SR 230V
9290 015 46406	Xitanium SR Bridge built-in
9290 015 46506	Xitanium SR Bridge independent
9290 015 16306	Xitanium 36W 0.3-1A 54V SR 230V
9290 016 95806	Xitanium 150W 0.2-0.7A 300V SR 230V iXt
9290 016 95706	Xitanium 100W 0.15-0.5A 300V SR 230V iXt
9290 016 95606	Xitanium 100W 0.25-0.7A 220V SR 230V
9290 016 95506	Xitanium 60W 0.08-0.35A 300V SR 230V
9290 016 95406	Xitanium 60W 0.08-0.35A 220V SR 230V
9290 016 95306	Xitanium 35W 0.08-0.35A 150V SR 230V
9290 016 93706	Xitanium 36W 0.08-0.4A 220V SR FlexTune 230V
9290 016 93806	Xitanium 75W 0.15-0.7A 220V SR FlexTune 230V
9290 028 61106	Xitanium 20W WH 0.15-0.5A 54V SR ls 230V
9290 028 61206	Xitanium 36W WH 0.3-1.05A 54V SR ls 230V
9290 028 61306	Xitanium 50W WH 0.7-1.5A 54V SR ls 230V
9290 029 33606	Xitanium 36W 0.3-1.0A 54V SR 230V G2
9290 029 33706	Xitanium 75W 0.7-2.0A 54V SR 230V G2

Specifications available at https://www.lighting.philips.com/prof/led-electronics/masterconnect-system/masterconnect-sensors/LP_CF_9218075_EU/family

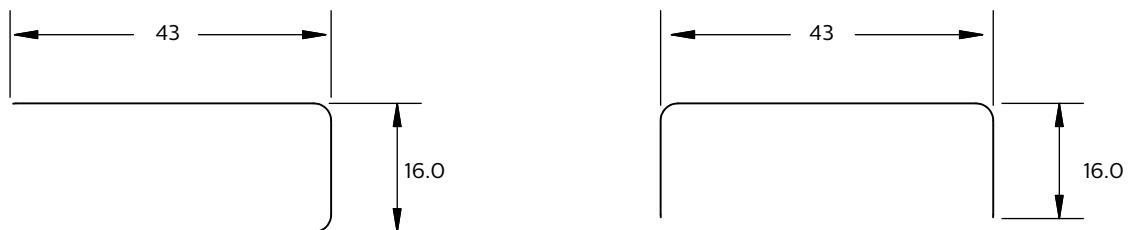
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Sensor Dimensions (mm)

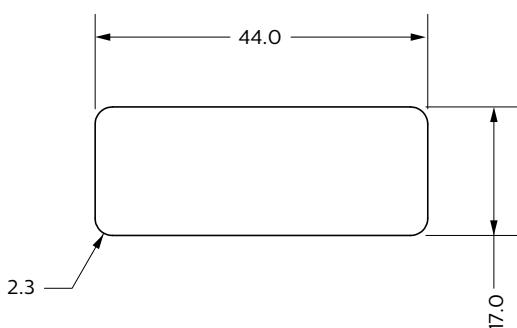


Mounting Dimensions (mm)

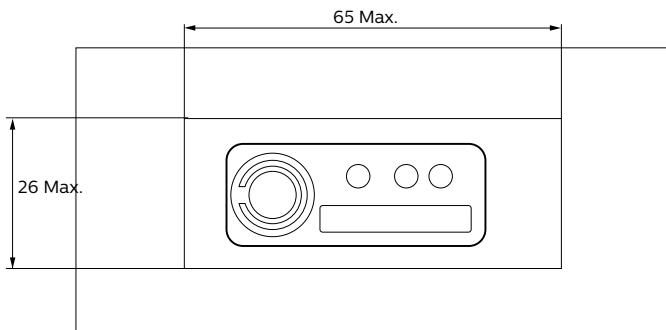
Mounting in U-shaped slot in sheet metal (max thickness 1 mm), tolerance +0.2 mm/-0.0 mm



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

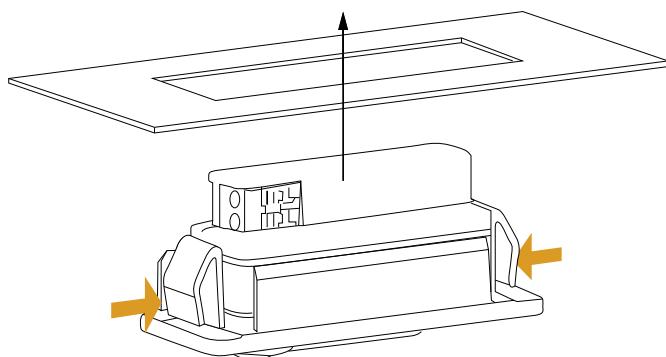
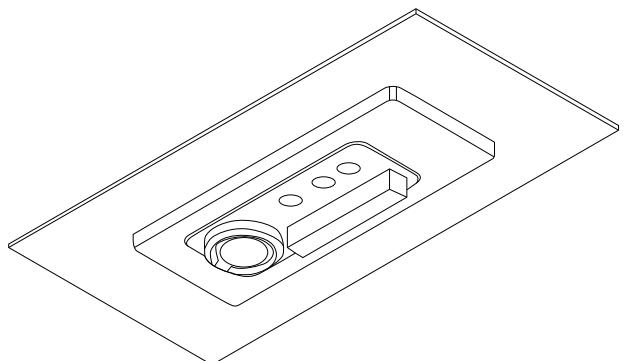
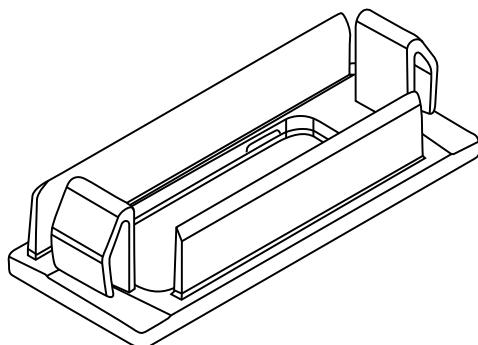
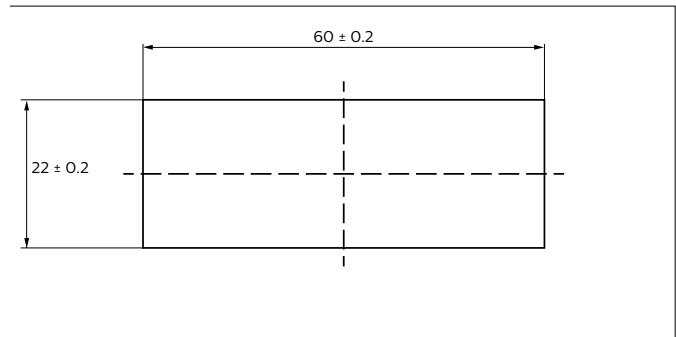
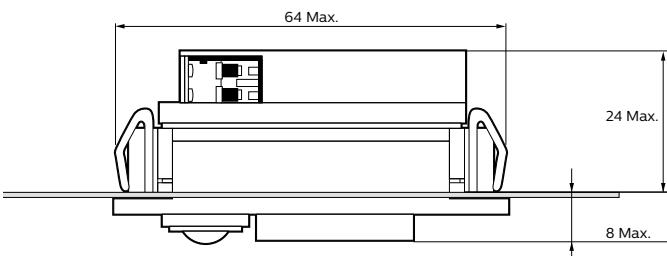


Mounting in a bracket (SMB-50)



Accessories	Colour	12NC
SMB-50 /w	White	9290 028 13706
SMB-50 /g	Grey	9290 028 12806
SMB-50 /b	Black	9290 021 37306

The EasyAir 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.



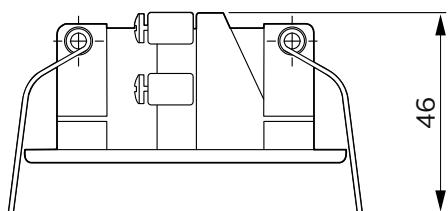
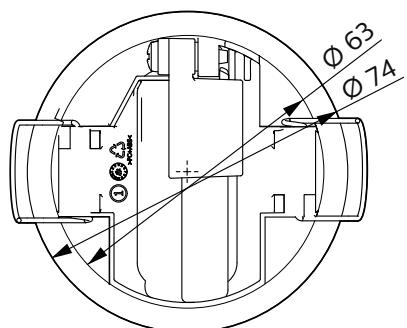
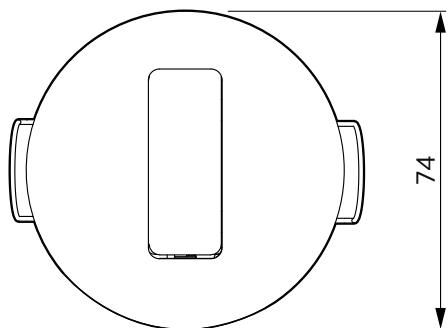
Press springs inwards on both sides before the bracket can slide-in the luminaire hole.

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

Easy Air 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.

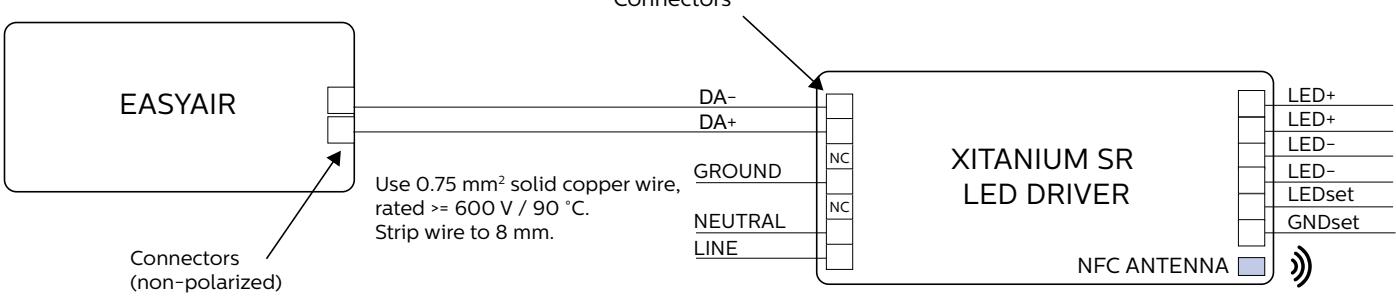
Please note that below accessory CMP/w does not contain a sensor. Assembly of sensor with CMP accessory should be carried out by OEM or installer. The wiring should be kept <2m from Xi SR Driver or SR Bridge.

Product	Colour	12NC
CMP/w	White	9290 034 17206



EasyAir SNS212 MC

Wiring Diagram



EasyAir SNS212 MC

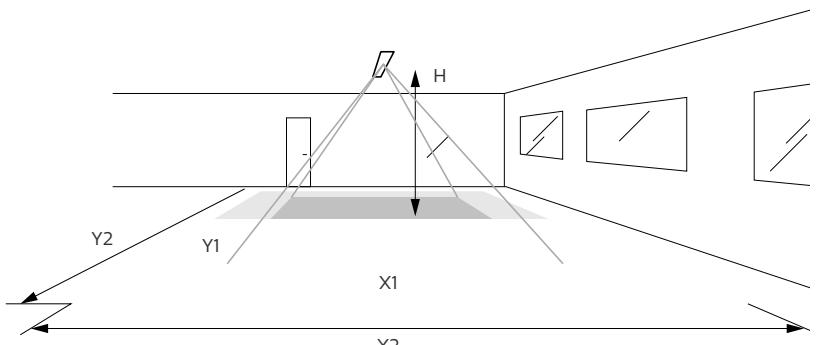
Occupancy Sensing

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

- Minor movement (person moving ≤ 0.9 m/s).
- Major movement (person moving ≥ 0.9 m/s)..

Height	Minor Movement		Major Movement	
H	X1	Y1	X2	Y2
2.4 m	1.9 m	2.9 m	2.9 m	4.3 m
3 m	2.4 m	3.6 m	3.6 m	5.4 m

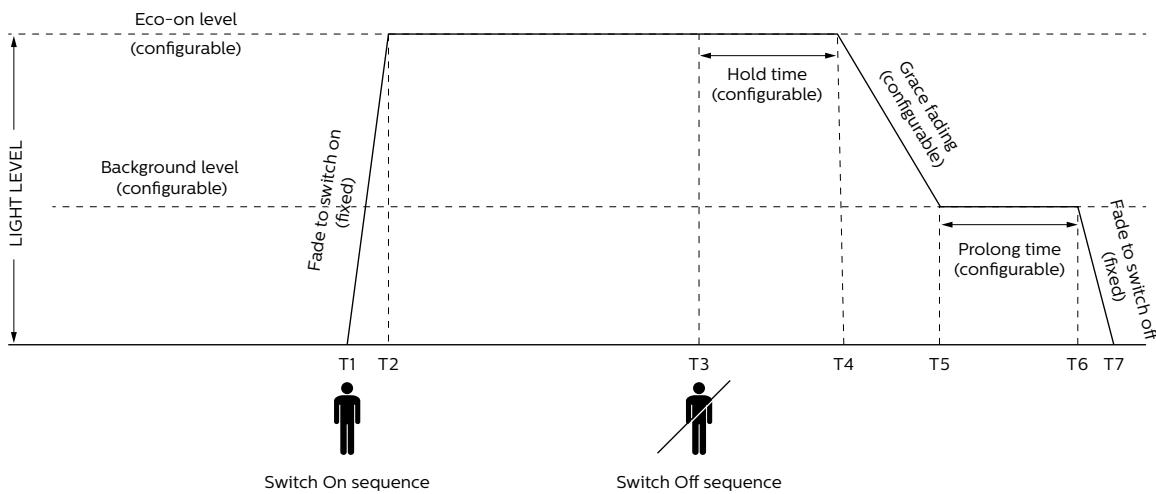
Note: Longer dimension of detection area (Y1, Y2) is parallel to longer dimension of EasyAir SNS212 MC.



Occupancy Sensing (continued)

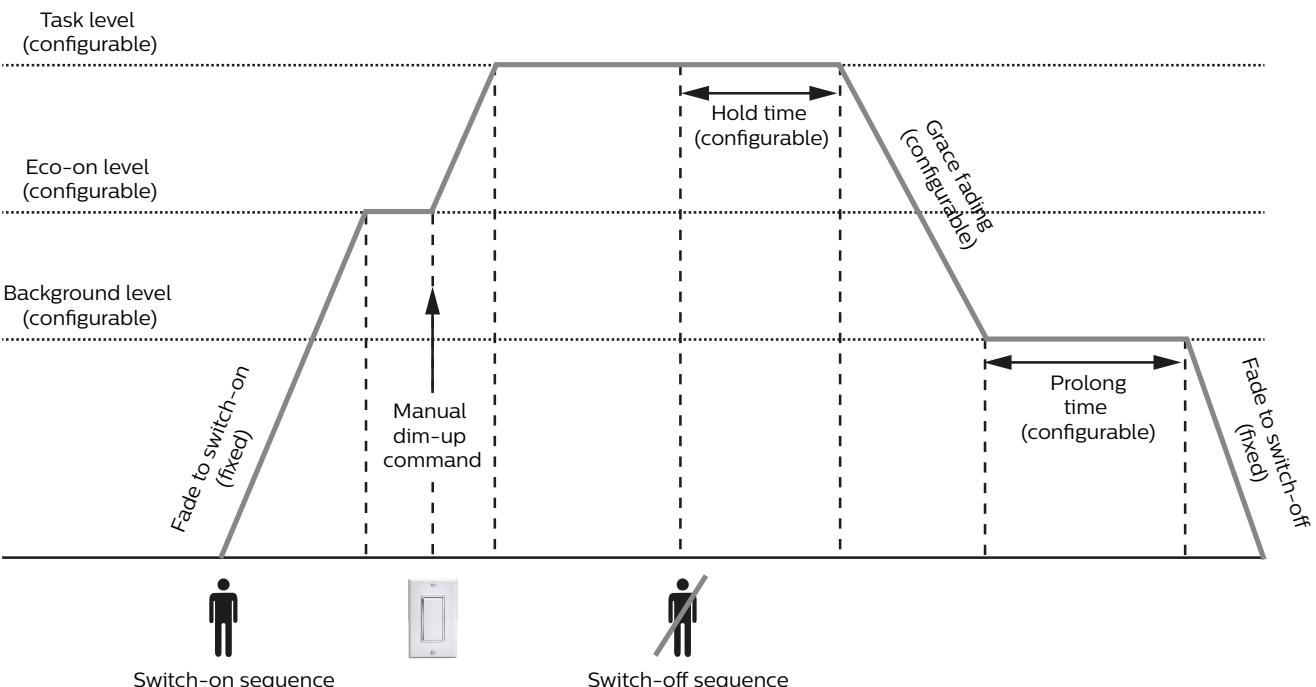
Full-On Sequence (Default)

Eco-On Level = Task Level



Partial-On Sequence (Configurable)

Eco-On Level < Task Level



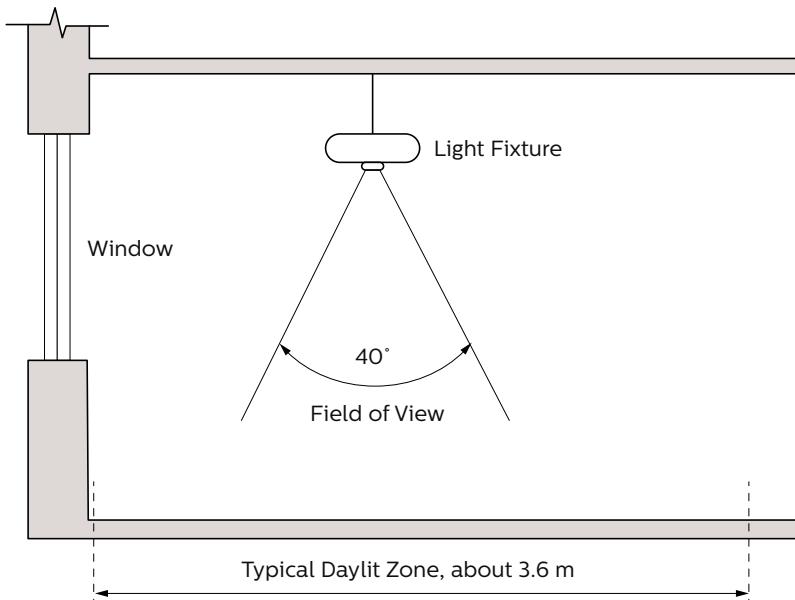
Daylight Sensor

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:

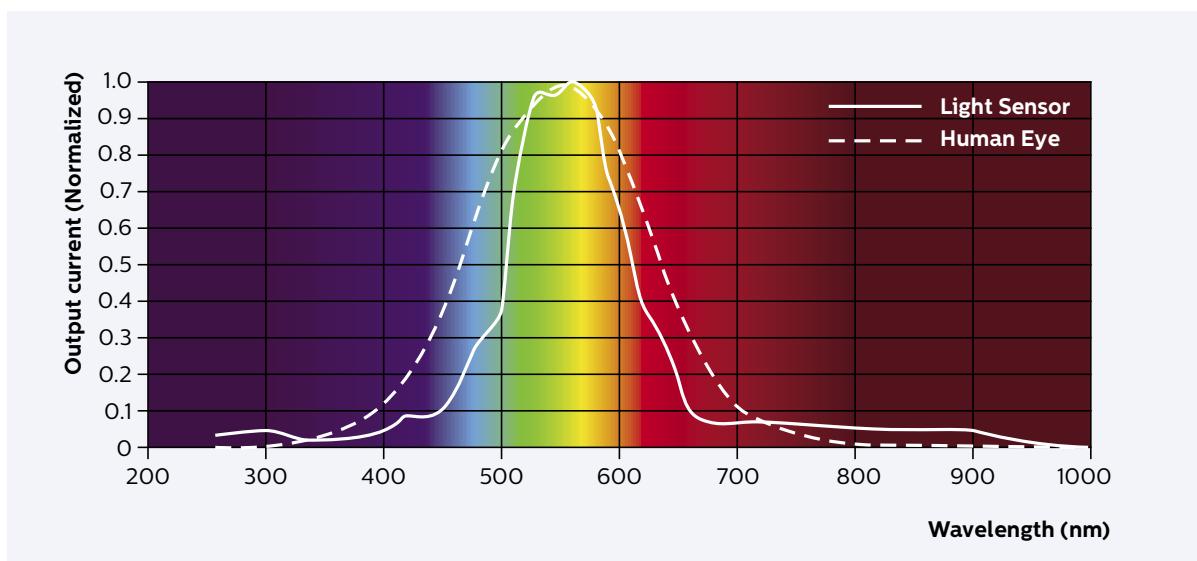
- Minimum distance from the window ≥ 0.6 m.
- Prevent light reflections from outside entering the sensor (for example sunlight reflection on a car bonnet) as this will lead to incorrect light regulation.

As a guideline the formula $0.72 \times h$ can be used to calculate the minimum horizontal distance between the window and sensor whereby h is the vertical height of the sensor measured from the bottom of the window.

Photosensor Spatial Response

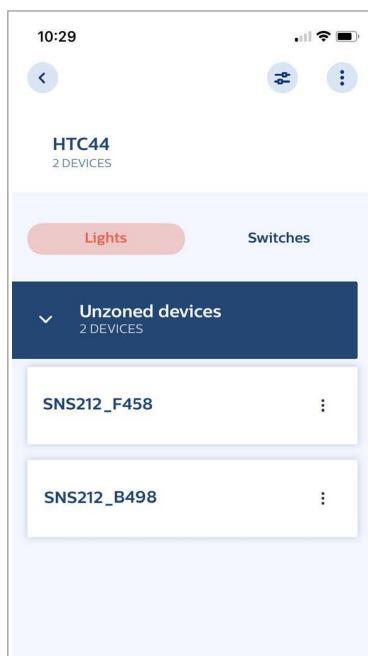
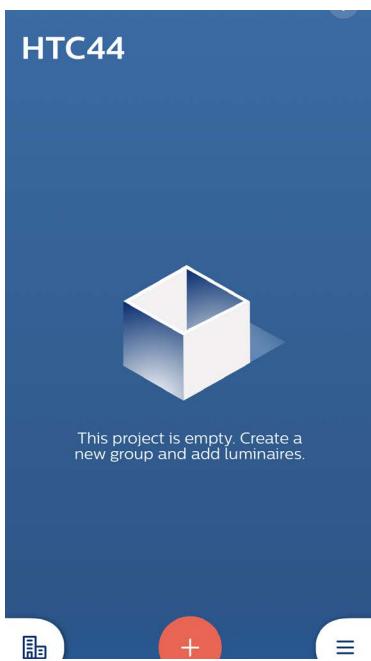


Photosensor Spectral Response



EasyAir SNS212 MC

EasyAir SNS212 MC Configuration App



EasyAir SNS212 MC parameters can be configured via Philips MasterConnect App.

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

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

https://www.lighting.philips.com/prof/led-electronics/masterconnect-system/masterconnect-sensors/LP_CF_9218075_EU/family

Default Factory Settings

Occupancy based control	Enabled
Daylight Based Control	Enabled
Occupancy Mode	Auto-on/off
Group/Zone Occupancy Sharing	Enabled
Group/Zone Lighting Behaviour	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)
CCT (of TW systems)	4000K

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CmBacktrace 1.3

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