PHILIPS

Sensors

EasyAir

SNH212 MC
SNHB212 MC

LED

SNH212 MC

SNHB212 MC

EasyAir SNH212 MC, SNHB212 MC

EasyAir SNH(B)212 MC is the ideal solution for per-fixture control of new light luminaires for high bay applications. This new generation sensor features all functions of its predecessor SNH(B)210 MC while providing the technical basis for future innovations. It combines occupancy sensing, daylight harvesting and task tuning in a single package for easy assembly in OEM luminaires or installation in the field. EasyAir SNH(B)212 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 the Philips MasterConnect app.

Easy Air SNH(B)212 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 easy way to achieve energy savings in industrial high bay applications while maintaining aesthetics in the space.

Works with

PHILIPS
MasterConnect

zigbee

December 2024

EasyAir SNH212 MC, SNHB212 MC

Features

- Occupancy sensing, daylight harvesting and task tuning in one device
- Groups/networks up to 120 lights
- Out-of-the-box light regulation with preset sensor parameters
- Zigbee 3.0 and D4i certified
- Operates with Philips Xitanium SR drivers, D4i certified drivers and qualified wireless switches
- 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 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 drivers
- Configuration and commissioning from the floor via Bluetooth
- Compatibility with qualified gateways

Applications

- Warehouses
- Assembly areas
- Cold storage

Ordering data

Commercial product name	Description	EAN	12NC	MOQ
EasyAir SNH212 MC	industry sensor advanced grouping, wire exit at side	8720169269705	9290 034 17006	10 pcs
EasyAir SNHB212 MC	industry sensor advanced grouping, wire exit at backside	8720169269729	9290 034 171 06	10 pcs

Product Data

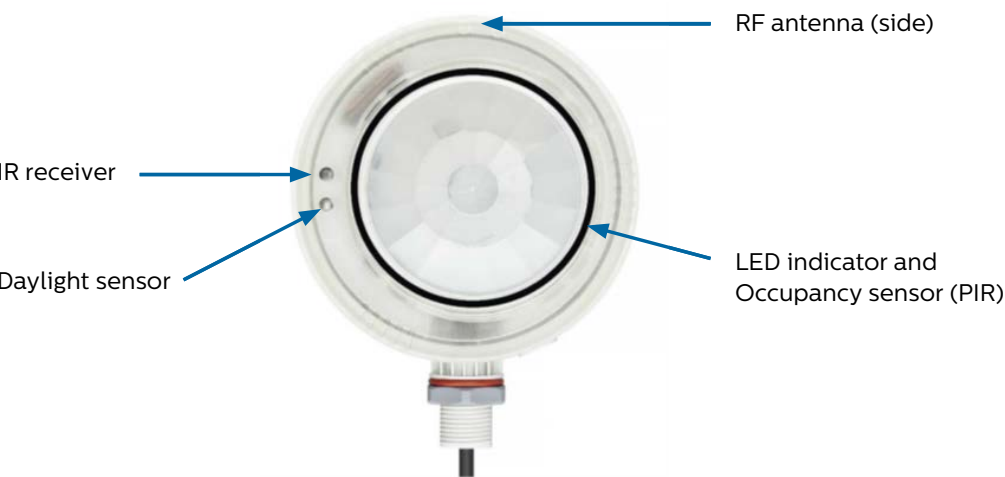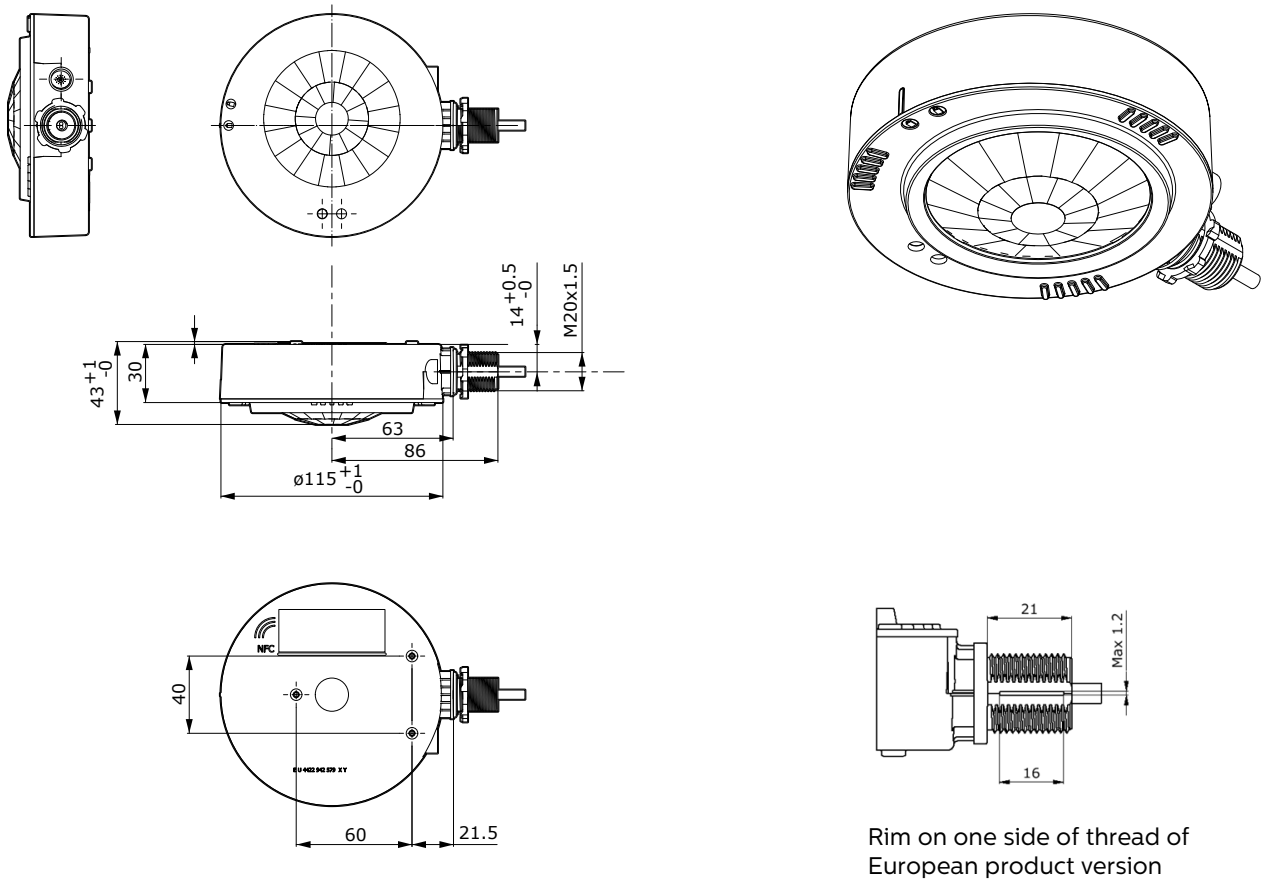| Physical Information	
Overall Dimensions	Refer to drawing
Housing (Luminaire Hole)	M20 threaded nipple for M20 knockout (SNH212 MC)
Net Weight per Piece	183g (SNH212 MC), 172 g (SNHB212 MC)
Color	Light gray housing (RAL7035), translucent cover
Wiring	(2) 18AWG wires, unpolarized; 60cm length; 8mm strip length
Electrical Information	
Input Voltage	Powered by SR driver low voltage interface
Current Consumption	9.5mA at 15V (average)
Nominal Power Consumption	140mW (average)
Standby Power	<0.6W 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	Default enabled
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 minutes – 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°

EasyAir SNH212 MC, SNB212 MC

Task Tuning

Full light setting	0% – 100%
Tunable White	With Philips FlexTune driver, default factory setting: 4000K

Environment & Approbation

Operating Ambient Temperature Range	–30°C to +65°C
Ingress Protection (IP) Rating	Tested for compliance to IP65 by Dekra
Operating Humidity Range	20% to 85% relative humidity
Storage Temperature Range	–30°C to +80°C
Max Case Temperature (Tcase)	+65°C
Agency Approbations	CE, ENEC, UKCA, RED, EMC, RCM, SRRC, CQC
Warranty	5 years
Digital Interface	Xitanium SR

Other

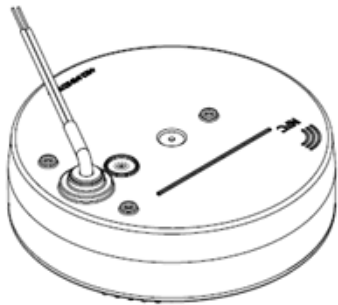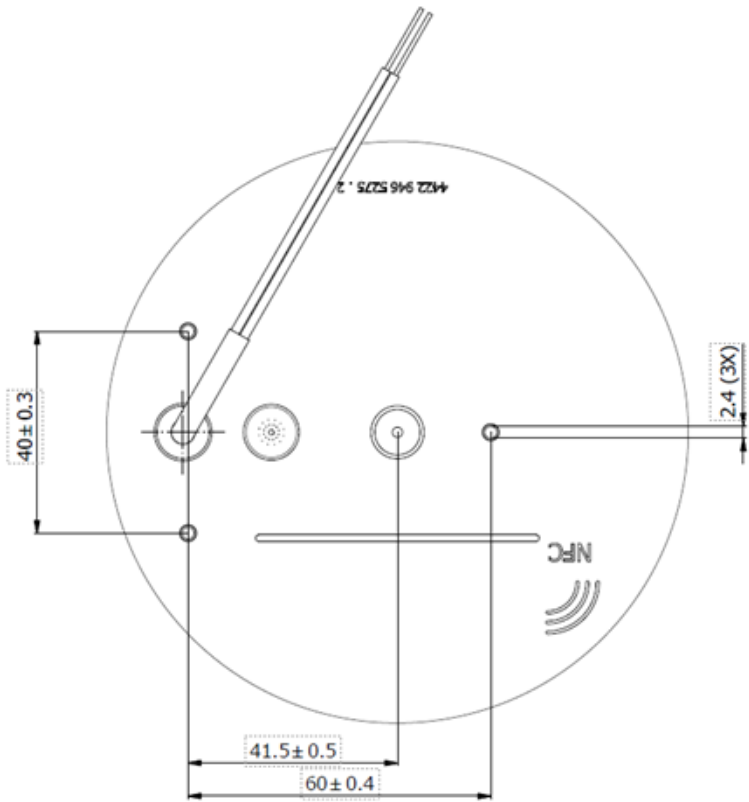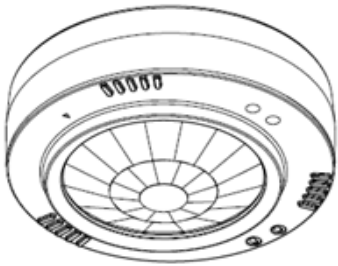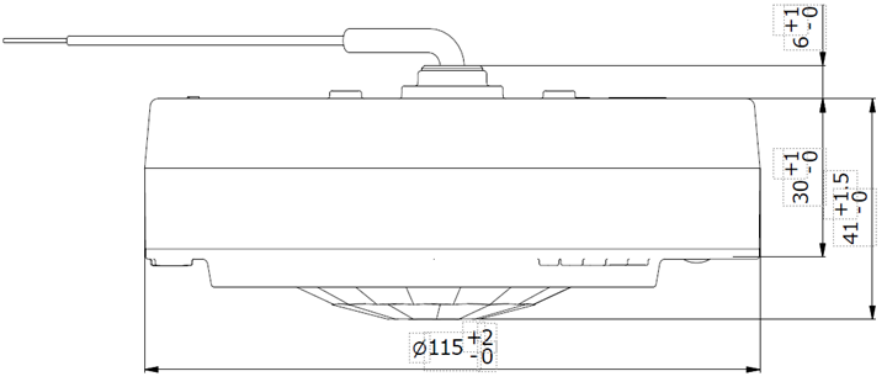|	
Wireless Protocol	Zigbee, IEEE 802.15.4, Bluetooth Low Energy
Encryption	AES-128
Energy reporting	Group/Room level using Philips MasterConnect App. Report saved as CSV file on the phone.
No. SR-Drivers per Sensor	4 max (Limited to 1 driver per sensor for support of Tunable White and Energy Reporting features)
Max Distance Switch-to-First Sensor	15m line-of-sight
Max Distance Sensor-to-Sensor	15m line-of-sight
Max no. Sensors per Group	120
No. of Zones per Group	15 max.
No. Switches per Group	15 max, 5 max per zone
Mounting Height	5m to 16m
Field Configuration	via Bluetooth with Philips MasterConnect app

Compatible LED Drivers

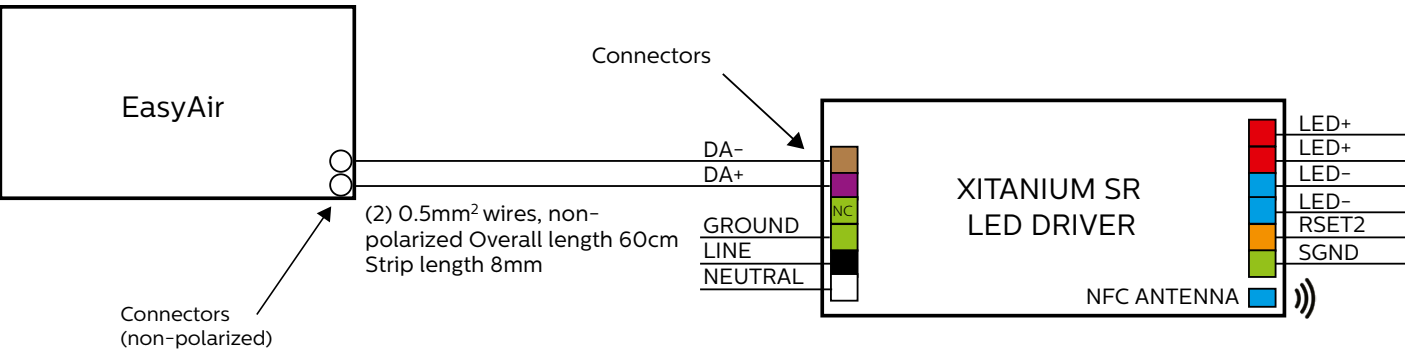| Logistic code 12NC	Description
9290 034 23706	Xitanium SR Bridge built-in
9290 034 23806	Xitanium SR Bridge independent
9290 016 95806	Xitanium 150W 0.2-0.7A 300V SR 230V iXt
9290 016 95706	Xitanium 100W 0.15-0.5A 300V SR 230V iXt
9290 028 80406	Xitanium 12W 0.08-0.5A 25V SR 230V
9290 028 80506	Xitanium 23W 0.15-0.7A 41V SR 230V
9290 034 10806	Xitanium 90W 0.25-0.7A 220V SR 230V G2
9290 034 10506	Xitanium 35W 0.08-0.35A 220V SR 230V G2
9290 034 10606	Xitanium 60W 0.15-0.5A 220V SR 230V G2
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 Is 230V
9290 028 61206	Xitanium 36W WH 0.3-1.05A 54V SR Is 230V
9290 028 61306	Xitanium 50W WH 0.7-1.5A 54V SR Is 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
9290 021 78906	Xi SR 22W 0.3-1.0A SNEMP 230V C133 sXt
9290 021 78806	Xi SR 22W 0.2-0.7A SNEMP 230V C133 sXt
9290 021 79006	Xi SR 40W 0.2-0.7A SNEMP 230V C133 sXt
9290 021 79106	Xi SR 40W 0.3-1.0A SNEMP 230V C133 sXt
9290 021 71906	Xi SR 75W 0.2-0.7A SNEMP 230V S240 sXt
9290 021 72006	Xi SR 75W 0.3-1.0A SNEMP 230V S240 sXt
9290 028 27206	Xi SR 75W 0.2-1.0A SNEMP 230V C150 sXt
9290 021 72106	Xi SR 150W 0.2-0.7A SNEMP 230V S240 sXt
9290 021 72206	Xi SR 150W 0.3-1.0A SNEMP 230V S240 sXt

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

Sensor Dimensions SNH212 MC (mm)

$14 ^{+0.5}_{-0}$

M20x1.5

$43 ^{+1}_{-0}$

30

63

86

ø115 $^{+1}_{-0}$

NFC

40

EU 4422 942 579 XY

60

21.5

21

Max 1.2

16

Rim on one side of thread of
European product version

RF antenna (side)

IR receiver

Daylight sensor

LED indicator and
Occupancy sensor (PIR)

Sensor Dimensions SNHB212 MC (mm)

Wiring Diagram

EasyAir

Connectors

DA−
DA+

(2) 0.5mm² wires, non-polarized Overall length 60cm
Strip length 8mm

Connectors
(non-polarized)

NC

GROUND
LINE
NEUTRAL

**XITANIUM SR
LED DRIVER**

LED+
LED+
LED−
LED−
RSET2
SGND

NFC ANTENNA))

Note: Above depicts connecting wires from sensor to Xitanium SR drivers that include connectors. For connection to Xitanium SR drivers that include leads, use wirenuts suitable for 18AWG solid wire.

Occupancy sensing detection patterns

The plots below show the top and side view of the occupancy coverage based on NEMA test, an industry standard.

In the side view, it is visible that coverage ratio of mounting height: diameter at ground level is at maximum 1:1. For example if the mounting height is 12m, the maximum diameter coverage is 12m.

Disclaimer:

1. In these plots, the white areas are blind spots and the detection is based on subject's motion. An idle subject may not continue to trigger occupancy detection once the hold time expires.
2. As PIR based sensing works on temperature difference between the subject and the ground level, the occupancy detection could vary due to clothing and size of subject.

Top view

Side view
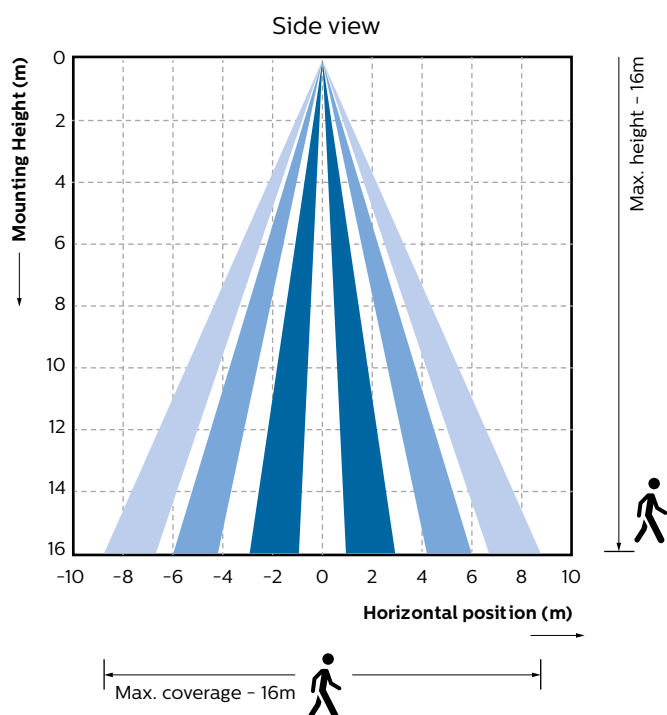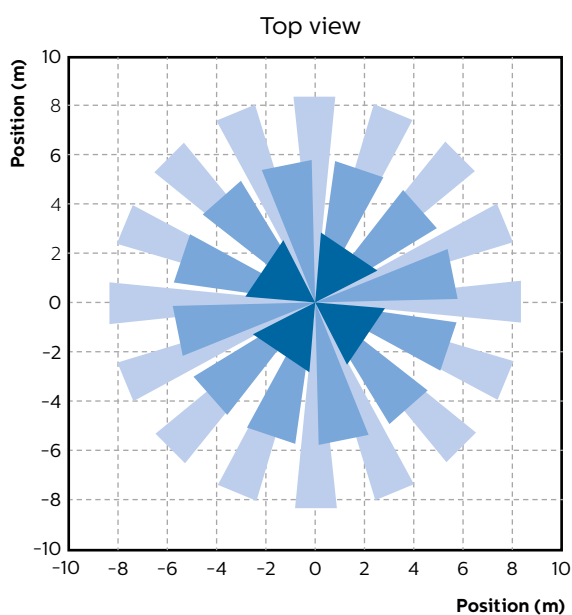
> ⚠️ **Warning:**
>
> Place heat radiating devices outside of the monitoring cone.
> Avoid drafts (e.g. from ventilators or heating systems).

Occupancy Sensing (continued)

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

Field Task Level = 100%

Hold Time (configurable)

Grace Fading (configurable)

Light Level

Background light level (configurable)

Prolong Time (configurable)

Fade to Switch Off (fixed)

Fading to Switch On (fixed)

T1 T2   T3   T4   T5   T6 T7

Switch On Sequence

Switch Off Sequence
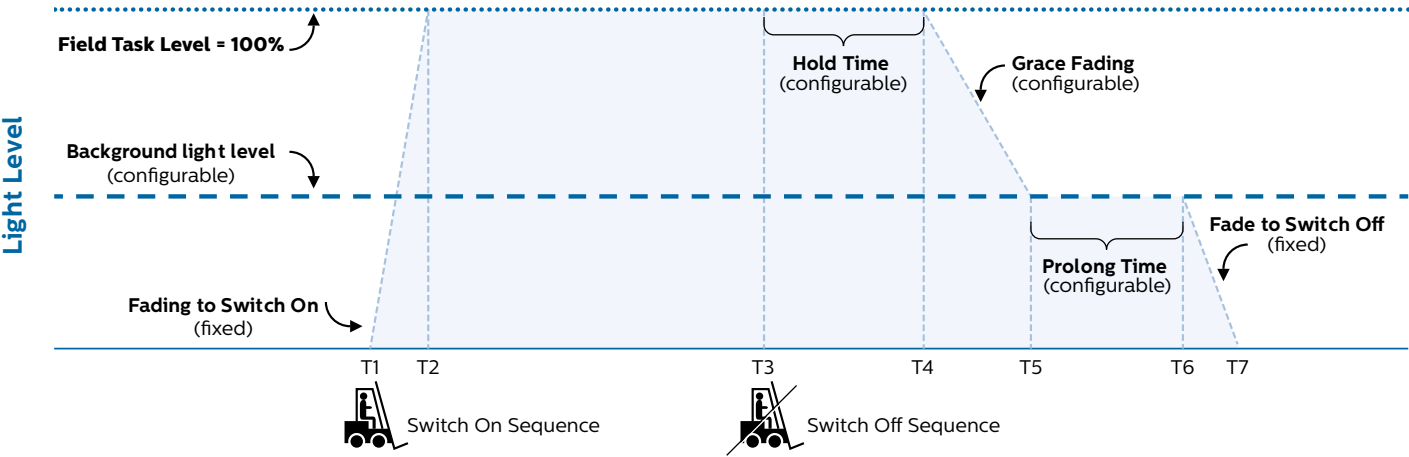
Daylight Sensor

The light sensor measures the total amount of light with an opening angle of 10° whereas PIR has 27°, all calculated from normal. The following aspects should be observed during installation:

· Minimum distance from the window – refer below graph
· Prevent light reflections from outside entering the sensor (for example sunlight reflection from a car/truck bonnet) as this will lead to incorrect light regulation.

As a guideline the formula 0.174 x H can be used to calculate the minimum horizontal distance between the window and sensor whereby H is the height measured from the bottom of the window to the sensor.

Photosensor spatial reponse

Minimum distance versus mounting height
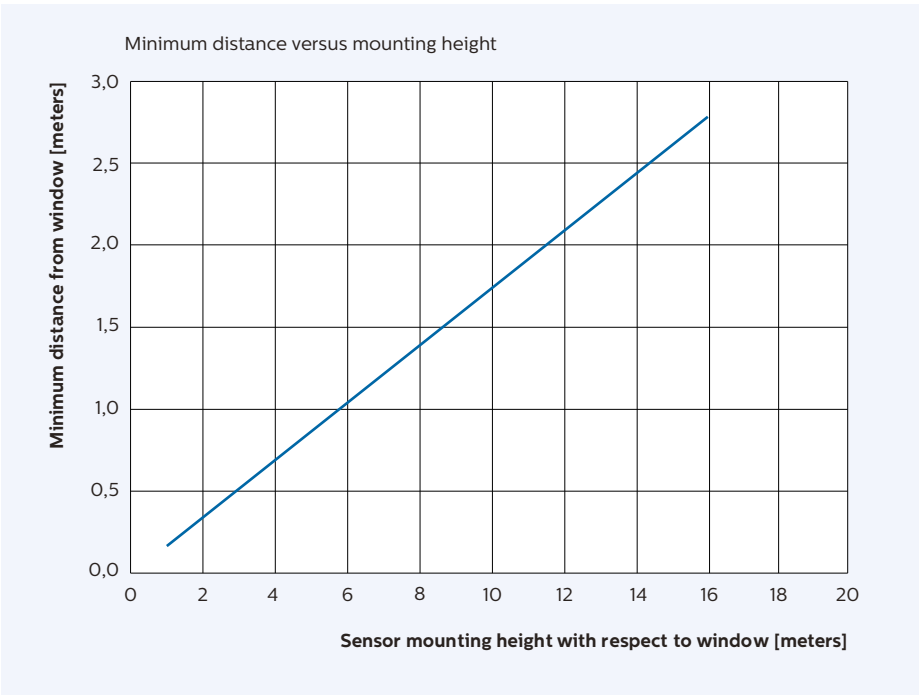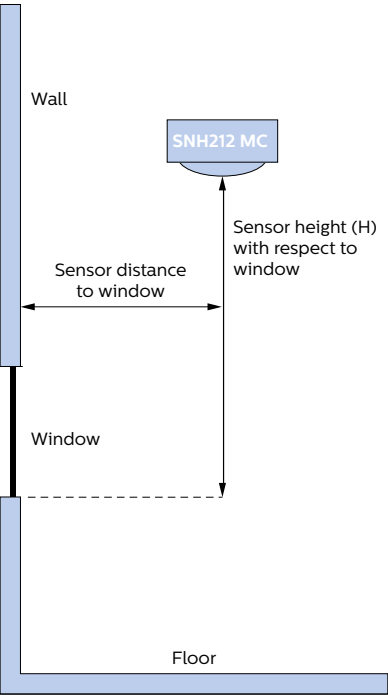
Photosensor spectral response
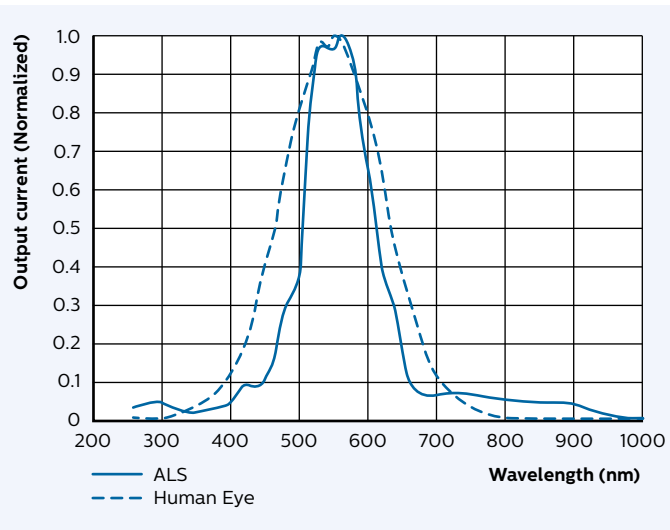
Philips MasterConnect app
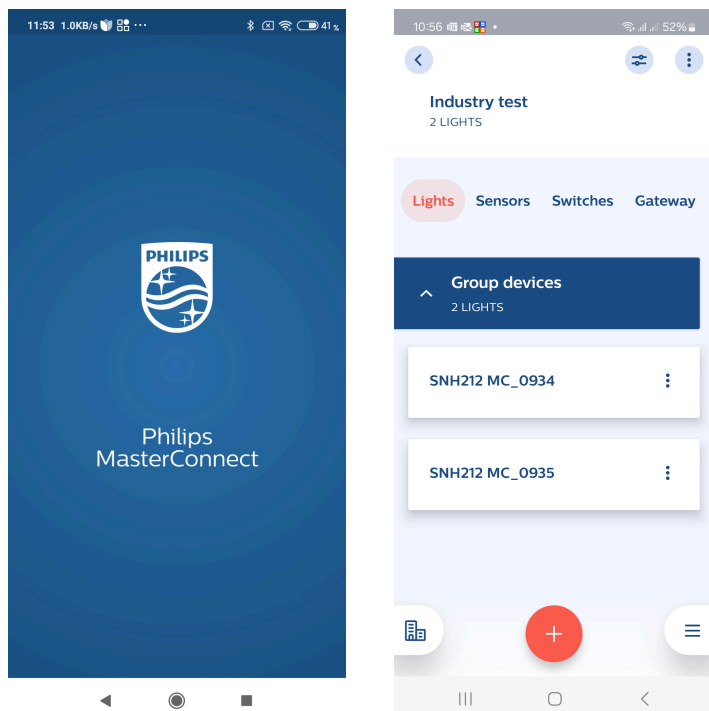
EasyAir SNH(B) 212 MC parameters can be commissioned and configured with the Philips MasterConnect app.

This app allows grouping of luminaires and adding switches along with easy configuration of EasyAir SNH(B)212 MC parameters.

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

Compliance to Radio Equipment Directive (RED)

The Directive ensures a single market for Radio and Telecommunication Terminal Equipment by setting harmonized standards for safety and health, electromagnetic compatibility and the efficient use of the radio spectrum. This applies to all products using the radio frequency spectrum. This device is compliant to the underlying harmonized standards which is verified by an independent Notified Body. 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.

Hereby, Signify declares that the radio equipment type EasyAir is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity and technical information is available on the website:

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

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CmBacktrace 1.3

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