PHILIPS

Sensors

EasySense

SNH400

Specification Sheet

EasySense SNH400

EasySense SNH400 is the ideal solution for per-fixture control of new light High-bay luminaires. It combines occupancy detection, daylight harvesting and task tuning in a single package for easy assembly in High-bay luminaires or field installation. SNH400 operates with the established Philips Xitanium SR LED driver standard of 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 web dashboard allows streamlined configuration and commissioning during and after installation.

EasySense includes advanced grouping functionality which enables occupancy sharing and advanced light behavior. This enhances energy savings while still providing metrics about failures, energy consumption and occupancy to enable extra functionality and value.

EasySense SNH400 requires a gateway to connect to the cloud but not for basic light behavior functionality. The sensors in the group communicates to each other via Zigbee for advanced area-based control. It is an efficient way to achieve energy savings in industrial High-bay applications while providing extra value using a cloud-connected software.

April 2019

EasySense SNH400

Features
- Occupancy sensing, daylight harvesting and task tuning in one device
- 2-wire connection, with Xitanium SR drivers or SR bridge
- Operates with Philips Xitanium SR LED drivers and qualified wireless switches
- Configuration of sensor parameters – if desired – using the Cloud platform
- 5m to 16m mounting height; IP65 rated

Benefits
- Combines functionality to reduce need for multiple components
- Cost-effective solution for energy-savings and code-compliance strategies
- 5-year limited system warranty with Philips Xitanium LED drivers
- Configuration and commissioning from the floor

Applications
- Warehouses
- Assembly areas
- Cold storage

Ordering data

Commercial product name	Description	12NC
EasySense SNH400	industry sensor advanced grouping	9290 016 59913

Product Data

Physical Information	
Overall Dimensions	Refer to drawing
Housing (Luminaire Hole)	M20 threaded nipple for M20 knockout
Net Weight per Piece	185 g (6.53 oz)
Color	Light gray housing (RAL7035), translucent cover
Wiring	(2) 18 AWG wires, unpolarized; 60 cm (23.62 in) length; 8 mm (0.31 in) strip length
Electrical Information	
Input Voltage	Powered by SR driver low voltage interface
Current Consumption	45 mA peak and 15 mA at 15 V (average)
Nominal Power Consumption	200 mW (average)
Occupancy Sensing	
Type	Passive infrared (PIR)
Enable/Disable	Disabled by default
Viewing Angle	± 30°
Daylight Sensing	
Enable/Disable	Disabled by default
Auto-Calibration	From the dashboard
Viewing Angle	+/- 10°

Environment & Approbation	
Operating Ambient Temperature Range	-30 to 65 °C (-22 to 149 F)
Ingress Rating	Tested for compliance to IP65 by Dekra
Operating Humidity	20 to 85% relative humidity
Storage Temperature	-30 to 80 °C (-22 to 176 F)
Max Case Temperature (Tcase)	65 °C (149 F)
Agency Approbations	UL, CSA; Tested and approved for use in plenums; FCC ID: 2AF2N-SNS100; IC: 20659-SNS100 Certification
Warranty	5 years
Digital Interface	Xitanium SR
Other	
Wireless Protocol	Zigbee, IEEE 802.15.4
Encryption	AES-128
No. SR Drivers per Sensor	4 max.
Max Distance Switch-to-First Sensor	15 m (49.21 ft) line-of-sight
Max Distance Sensor-to-Sensor	15 m (49.21 ft) line-of-sight
Mounting Height	5 to 16 m (16.40 to 52.49 ft)

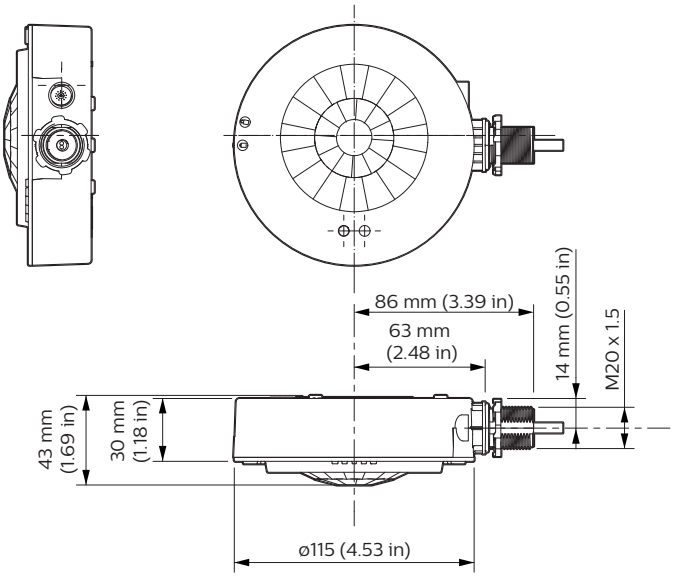
EasySense SNH400

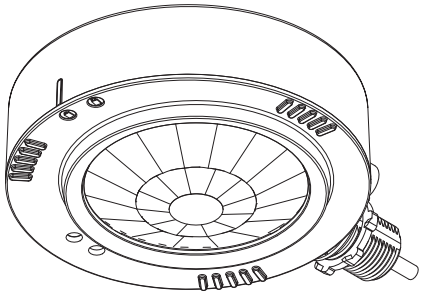
Compatible LED Drivers

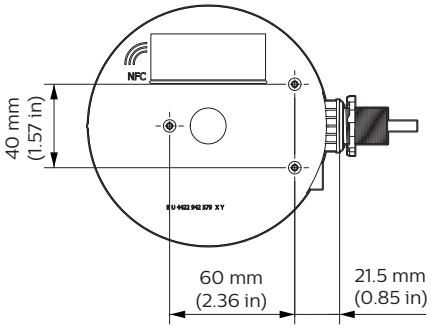
Logistic code 12NC	Description
9290 015 40806	Xitanium 100W 0.15-0.5A 300V SR 230V iXt
9290 015 40906	Xitanium 150W 0.2-0.7A 300V SR 230V iXt
9290 015 05006	Xitanium 75W 0.7-2.0A 54V SR 230V
9290 015 07706	Xi SR 75W 0.2-0.7A SNEMP 230V S240 sXt
9290 015 07806	Xi SR 75W 0.3-1.05A SNEMP 230V S240 sXt
9290 015 07506	Xi SR 150W 0.2-0.7A SNEMP 230V S240 sXt
9290 015 07606	Xi SR 150W 0.3-1.05A SNEMP 230V S240 sXt
9290 015 46406	Xitanium SR Bridge built-in
9290 015 46506	Xitanium SR Bridge independent

Specifications available at www.lighting.philips.co.uk/oem-emea/support/technical-downloads

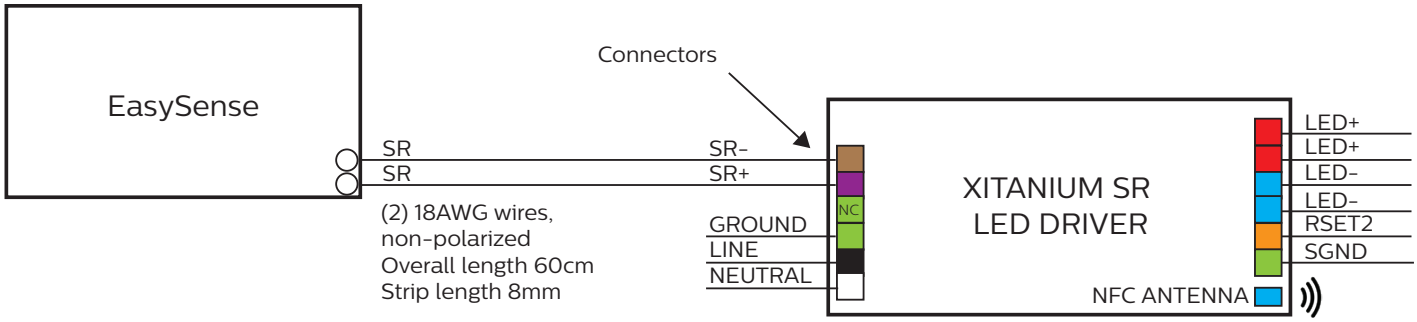
Sensor Dimensions







Wiring Diagram



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.

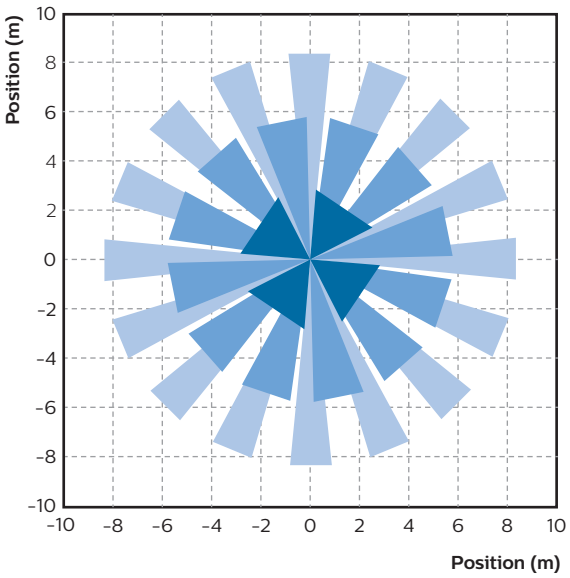
Occupancy sensing detection patterns

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 1:0.6. For example if the mounting height is 12 m, the maximum diameter coverage is 7.2 m.

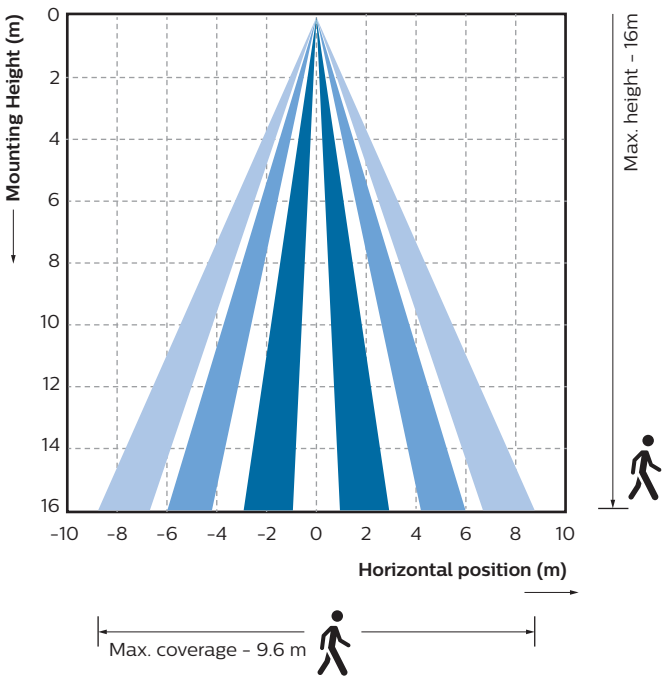
Disclaimer:

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).

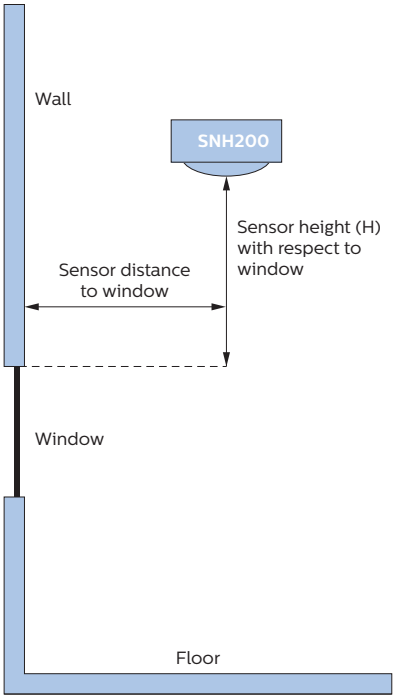
Daylight Sensor

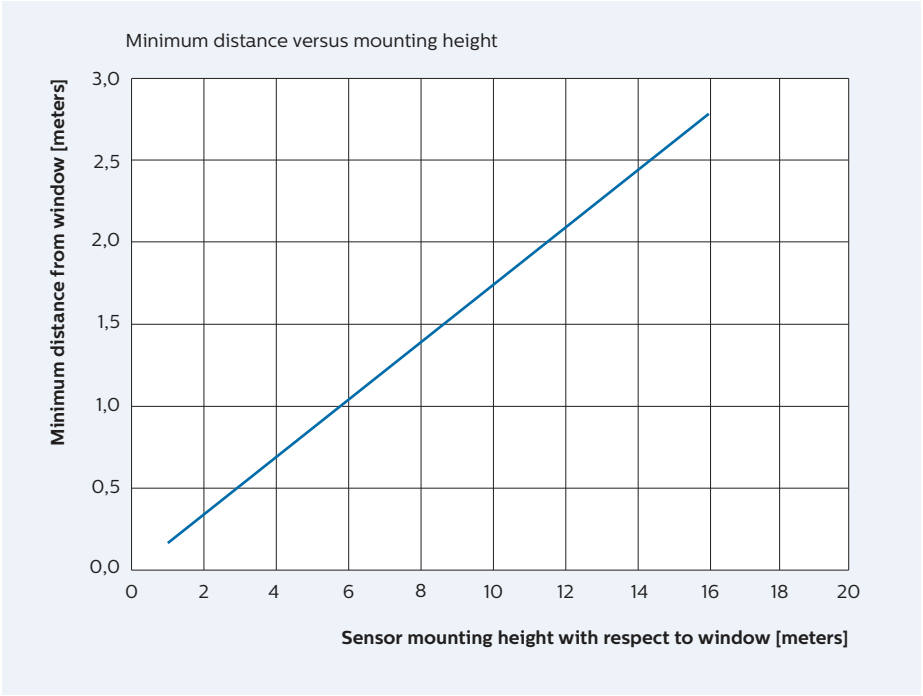
The light sensor measures the total amount of light with an opening angle of 10° whereas PIR has 30°, all calculated from normal. The following aspects should be observed during installation:

- 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.

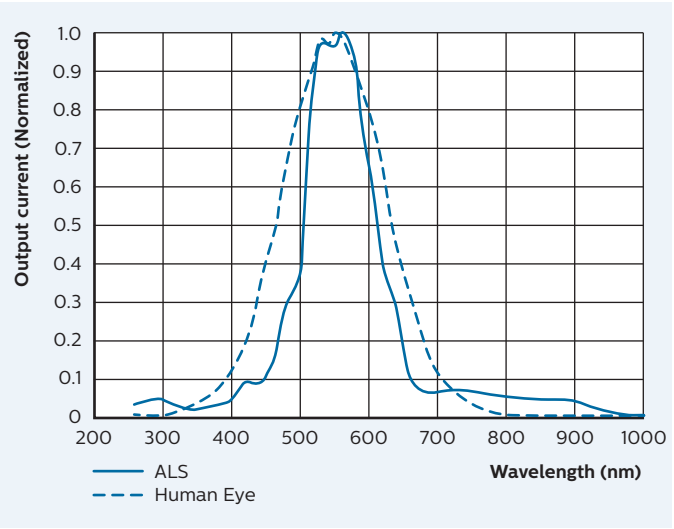
As a guideline the formula 0.174 x H can be used to calculate the minimum distance between the window and sensor whereby H is the height from the top of the window to the ceiling.

Photosensor spatial reponse





Photosensor spectral response



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04/2019
Data subject to change

www.lighting.philips.co.uk/oem-emea/products/connected-lighting