PHILIPS

Sensors

EasySense

SNS200
Advanced Grouping

Datasheet

EasySense SNS200:
Luminaire-Mount Sensor for Advanced Grouping

The Philips EasySense luminaire-mount sensor is the ideal solution for per-luminaire control of new light luminaires. It combines occupancy sensing, daylight harvesting and task tuning in a single, compact package for easy OEM luminaire assembly. EasySense operates with the established Xitanium SR driver standard to make 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 field apps.

Features

- Occupancy sensing, daylight harvesting and task tuning in one device
- Compact size, 2-wire connection
- Operates with Philips Xitanium SR drivers and qualified wireless switches
- Preset with most common sensor parameters
- Configuration of sensor parameters— if desired — using NFC or IR via intuitive Android-based Philips field apps
- Simple grouping of luminaires to a wireless switch with Philips field apps

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 auto-off/manual-on application
- Cost-effective solution for energy-savings
- 5-year limited system warranty with Philips Xitanium LED drivers
- Configuration and commissioning from the floor

Applications

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

September 2016

Ordering Information

Commercial product name	EOC	12NC	Carton Quantity
EasySense Advanced Grouping SNS200	8718696 698945 00	929 000 766 813	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	17 gr
Volume required Inside Luminaire (LxWxH)	50 mm x 19 mm x 24 mm
Color	White and Grey
Connectors	(2) Lite-Trap connectors
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	13 mA
Nominal Power Consumption	200 mW
Standby Power	< 1 W on luminaire level, including driver standby power
Occupancy Sensing	
Type	Passive infrared (PIR)
Enable/Disable	Default enabled
Occupancy Mode	Auto-on/off, Manual-on/off, Manual-on/auto-off; Red LED indicates "on"
Occupancy Sharing	Enabled/disabled
Elsewhere Occupancy Level	Background level, task level
Hold Time	0.5 - 60 minutes
Viewing Angle	X = 72°, Y = 86° (See detection pattern)
Background Light Level	0-100%
Prolong Time	0 minutes - infinity
Grace Fading	0-25 sec
Response Time/Fading to Switch On/Off	0.7 sec
Daylight Sensing	
Enable/Disable	Default enabled
Auto-calibration	Upon power-up
Viewing Angle	40° (half value sensitivity); 2% cut-off point at 75°
Task Tuning	
Full Light Setting	0-100%
Environment & Approbation	
Operating Ambient Temperature Range	0 °C to 55 °C
Operating Humidity	0 – 95% non condensing
Storage Temperature	-25 °C to 85 °C
Storage Humidity	0-95% non condensing
Max Case Temperature (Tcase)	55 °C
Agency Approbations	CE, ENEC, RTTE, EMC
Warranty	5 years warranty for released Philips system combination (sensor and compatible driver). 3 years warranty for sensor only.
Digital Interface	Xitanium SR
Other	
Status Indicators	Red, Yellow. Yellow LED on: Vacancy & Sensor is functional; Red LED on: Motion is detected
Energy reporting	Calculated from last "power on": % On, Energy Consumed (Whr), System on time (hrs), Avg power consumed (w-hr), Lamp on time (hrs)
No. Drivers per Sensor	4 max
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	10 max
Field Configuration	via NFC or IR, parameters set via Philips field apps

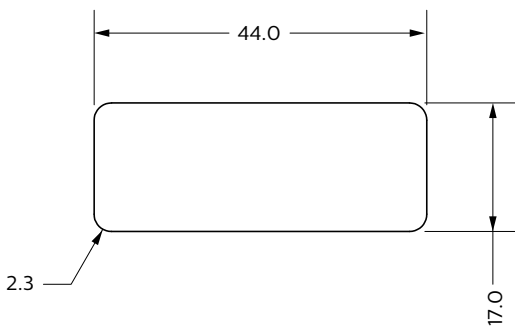## EasySense Luminaire-Mount Sensor

Sensor Dimensions (mm)

43.8 MAX

16.8 MAX

19.0 MAX

50.0 MAX

7.5 MAX

24.3 MAX
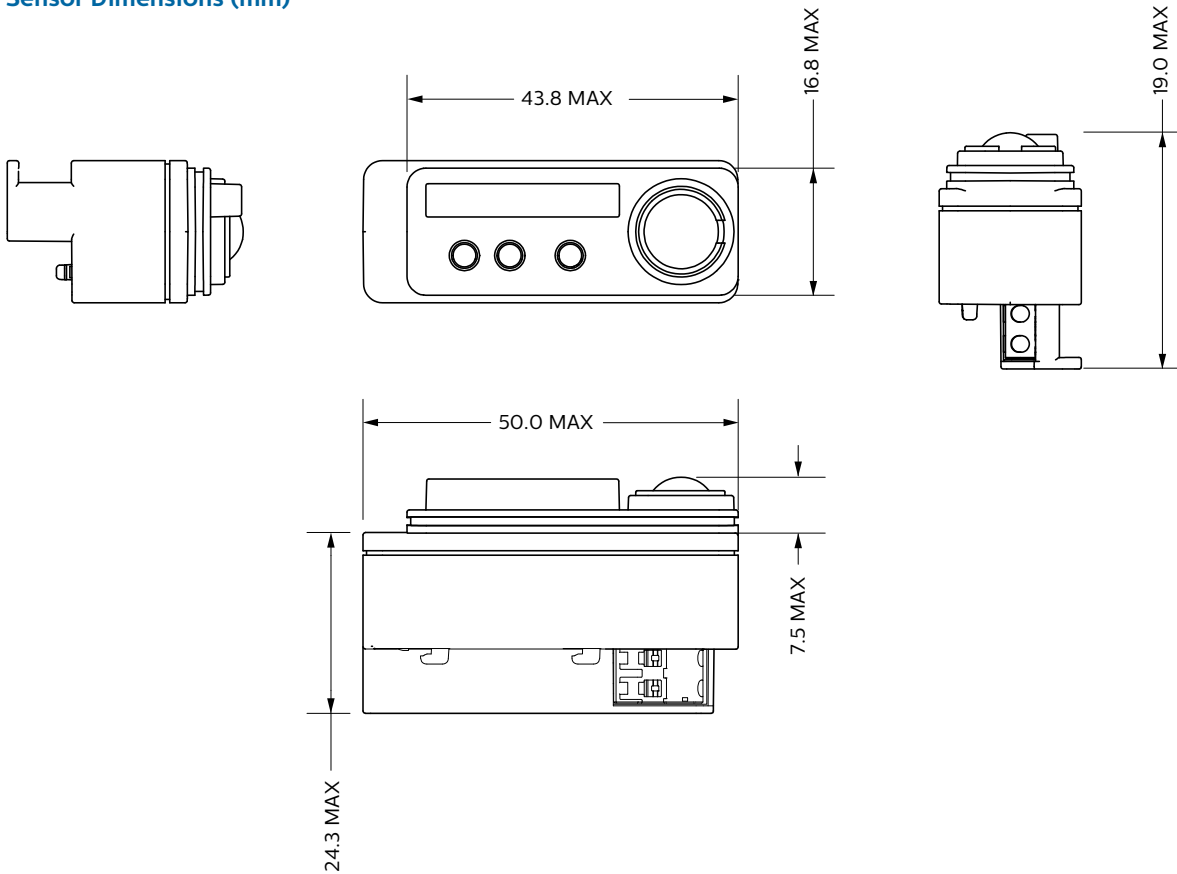
Mounting Dimensions (mm)

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

43.5

16.0

43.5

16.0
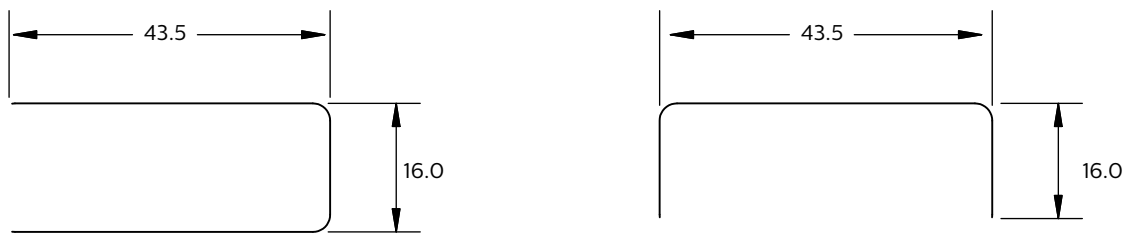
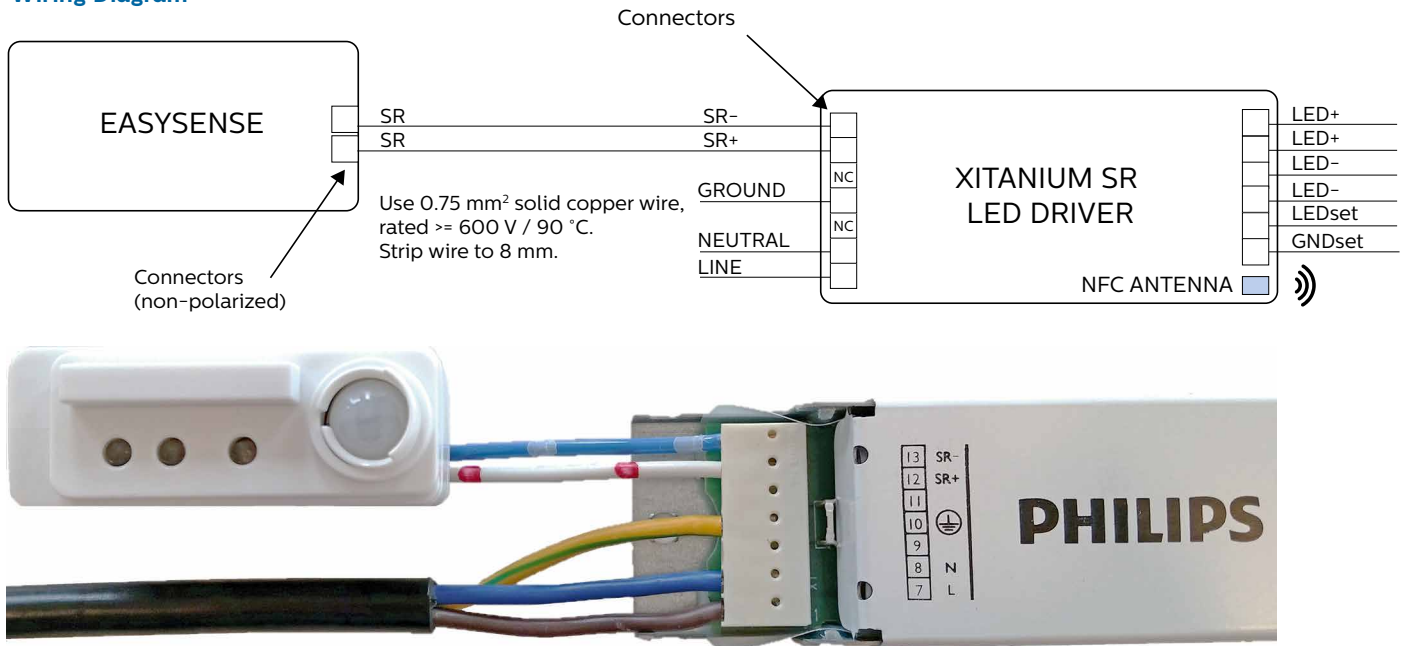Mounting in cut-out in sheet matal (thickness 0.7 mm to 1.2 mm), tolerance +/-0.2 mm

44.0

17.0

2.3

Accessories	12NC
EasySense Bracket SMB-50 white	929001540206
EasySense Bracket SMB-50 grey	929001540306

EasySense Luminaire-Mount Sensor

Wiring Diagram

EASYSENSE

SR — SR−
SR — SR+

Connectors

Use 0.75 mm² solid copper wire, rated >= 600 V / 90 °C. Strip wire to 8 mm.

Connectors (non-polarized)

GROUND — NC

NEUTRAL — NC
LINE

XITANIUM SR LED DRIVER

LED+
LED+
LED−
LED−
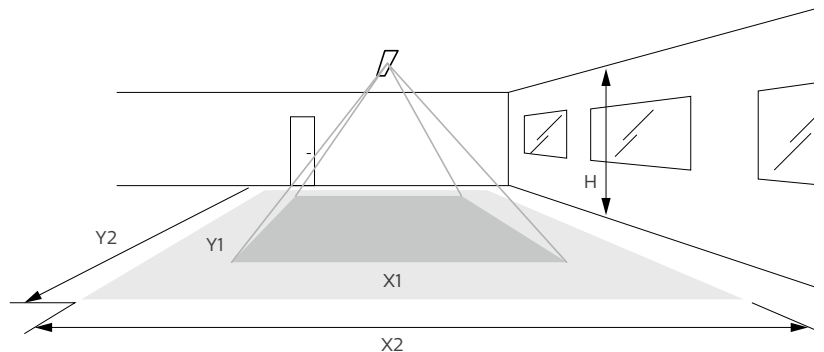LEDset
GNDset

NFC ANTENNA

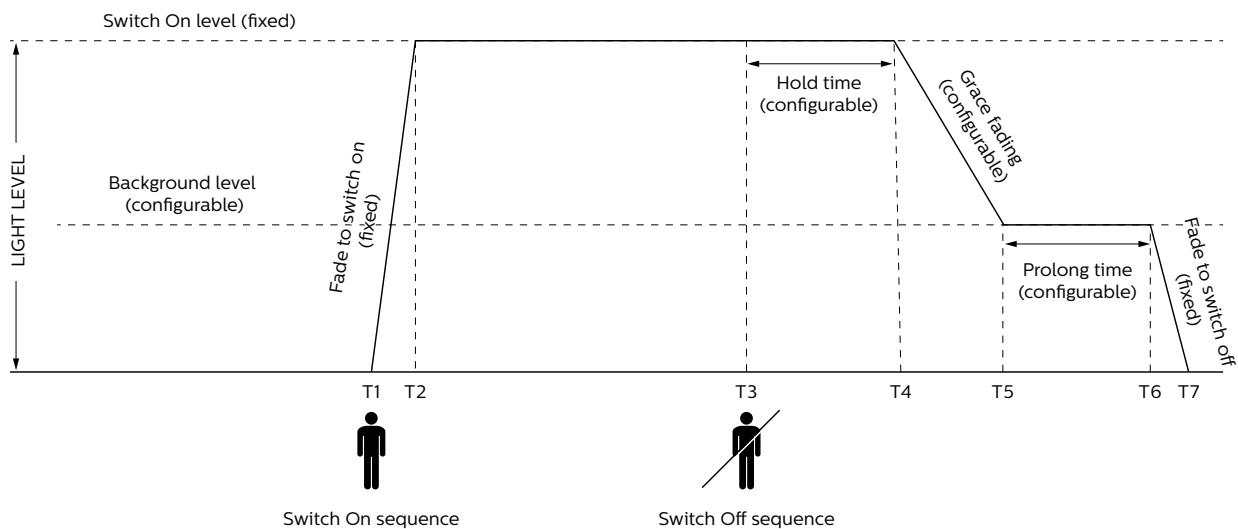---

EasySense Luminaire-Mount Sensor

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	Y1	X1	Y2	X2
2.4 m	2.9 m	2.7 m	4.5 m	2.9 m
3 m	3.6 m	3.4 m	5.4 m	3.6 m

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

Switch On level (fixed)

Hold time (configurable)

Grace fading (configurable)

Background level (configurable)

Fade to switch on (fixed)

Prolong time (configurable)

Fade to switch off (fixed)

LIGHT LEVEL

T1 T2 — T3 — T4 T5 — T6 T7

Switch On sequence

Switch Off sequence

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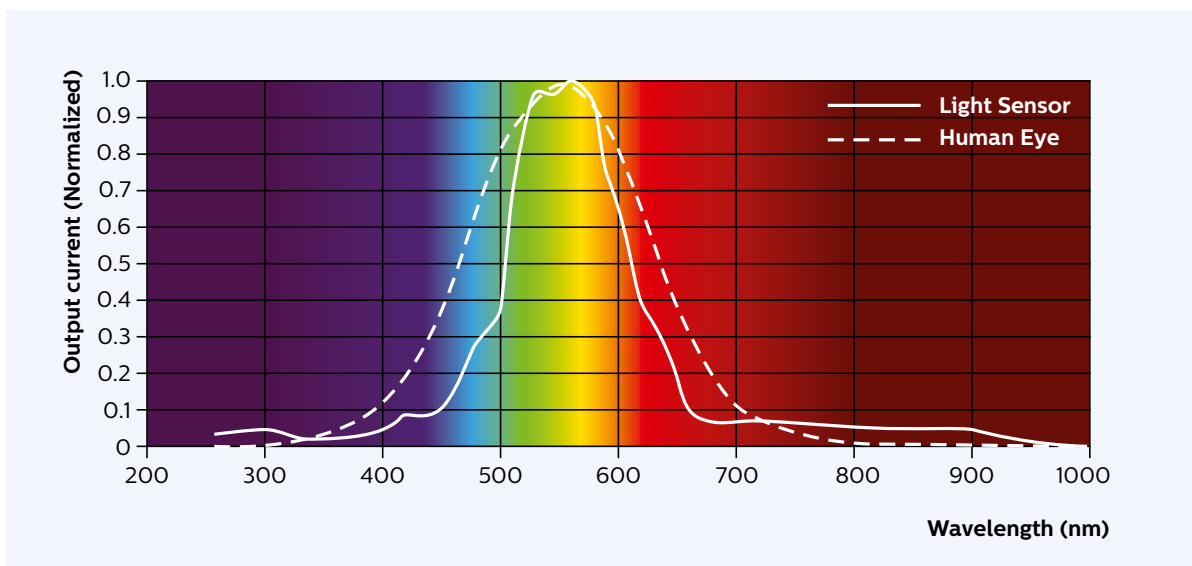
- Minimum distance from the window ≥ 0.6 m.
- Prevent light reflections from outside entering the sensor (for example sunlight reflection on a car bonnet) as this will lead to incorrect light regulation.

As a guideline the formula 0.72 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.
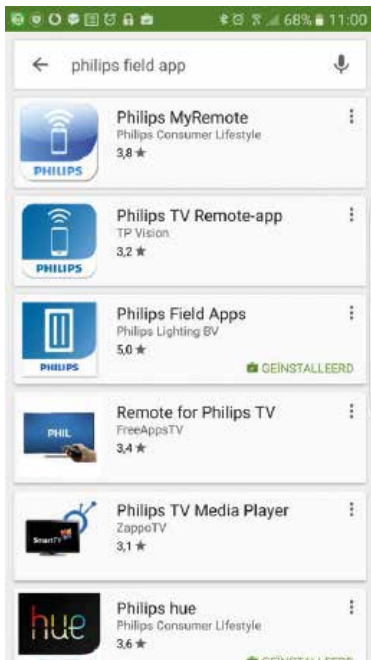
Photosensor Spatial Response

Light Fixture

Window

40°

Field of View

Typical Daylit Zone, about 3.6 m
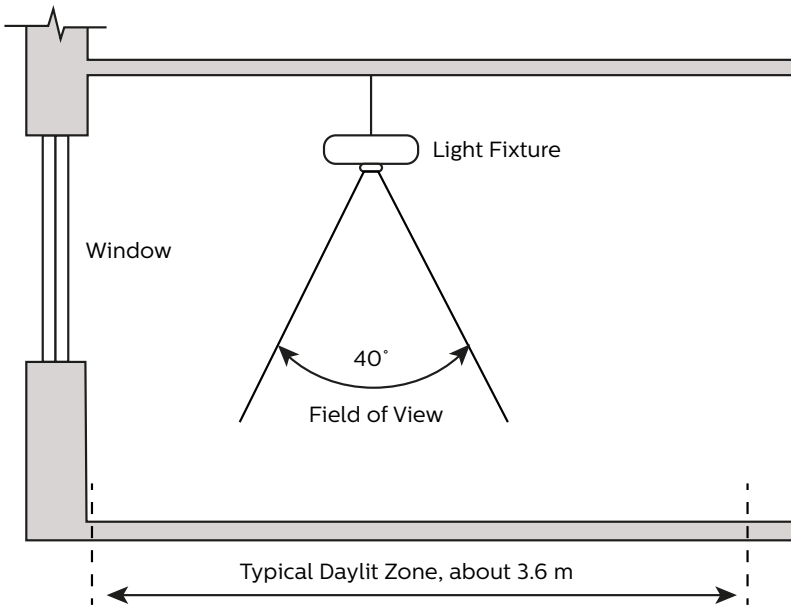
Photosensor Spectral Response

Output current (Normalized)

—— Light Sensor
– – – Human Eye

Wavelength (nm)

EasySense Luminaire-Mount Sensor

EasySense Configuration App

EasySense parameters can be configured via Philips field apps. Two versions are available:

1. EasySense NFC – This app allows configuring EasySense parameters only, when you can physically access the sensor with a smartphone.
2. EasySense IR – This app allows configuring EasySense paramters plus enables grouping to a wireless switch, which can be done with the IR feature of applicable phones from floor level.

You must first register for the app to receive a username and password, then download Philips field apps from the Google Play Store. Refer to www.philips.com/easysense for details including applicable Android phones and user manuals.
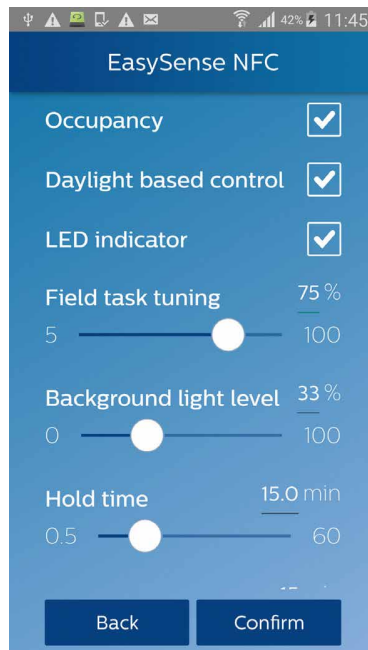
Default Factory Settings

Occupancy Detection	Auto-on, Enabled
Daylight Based Control	Auto-on, Enabled
LED Indicator	Enabled
Occupancy Mode	Auto-on/off
Occupancy Sharing	Enabled
Elsewhere Occupancy Level	Background level
Field Task Tuning	100%
Background Light Level	20%
Hold Time	15 minutes
Prolong Time	15 minutes
Grace Fading	10 seconds
Fade to Switch On	0.7 seconds
Fade to Switch Off	0.7 seconds

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