

PHILIPS

Sensors

EasySense

Fixture-Mount for Networks



EasySense for networks is based on zigbee technology for use in wireless systems for indoor connected lighting. It provides a simple solution to actively manage and control energy usage, while remotely adjusting light settings and determining service needs. With the added zigbee functionality, EasySense can now be an integral part of networks also based on the zigbee standard. A program is under development by Philips to qualify third-party network systems for use with EasySense SNS300.

EasySense is renowned for its compact size and ability to easily integrate into luminaires. In addition, the sensors are compatible with Philips Advance Xitanium SR LED drivers, eliminating the need for auxiliary devices and alleviating time-consuming configuration issues. The simple two-wire connection from driver to sensor reduces design-in complexity and eliminates additional components that add to overall costs. Now SNS300 can provide fixture-specific information into networks for centralized control and enable functionality such as energy monitoring, scheduling and load shedding.

Commercial Product Name	Order Code
EasySense Fixture-Mount Sensor	SNS300

EasySense fixture-mount sensor

Features

- Compatible with qualified gateway and network partners
- Occupancy and daylight sensing in one device
- Compact size, 2-wire connection
- Operates with Philips Advance Xitanium SR LED drivers

Benefits

- Choice of network systems to suit the application
- 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 Advance Xitanium LED drivers¹

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	SNS300
Full Product Name	EasySense Fixture-Mount Sensor
Carton Quantity	50 pcs/carton
Physical Information	
Overall Dimensions	1.97in x 0.75in x 1.24in / 50mm x 19.0mm x 31.5mm
Housing (luminaire hole)	1.73in x 0.67in / 44mm x 17mm (L x w)
Net Weight per Piece	0.6oz / 17gr
Volume Required Inside Luminaire (LxWxH)	1.87in x 0.75in x 0.95in / 50mm x 19mm x 24mm
Color	White
Connectors	(2) Lite-trap connectors rated for AWG24 to AWG18 solid conductor wire (AWG22-AWG20 for stranded wire)
Electrical Information	
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)
Behavior	Determined by network settings, no stand-alone operation

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	
Behavior	Determined by network settings, no stand-alone operation
Viewing Angle	40° (half value sensitivity); 2% cut-off point at 75°
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	UL, CSA; Tested and approved for use in plenums; FCC ID: 2AF2N-SNS100; IC: 20659-SNS100
Certification	California Title 20
Warranty	5 years
Digital Interface	Xitanium SR
Other	
Wireless Protocol	Zigbee, IEEE 802.15.4
Encryption	AES-128
LED Status Indicators	Red, Yellow. Yellow LED on: Vacancy & Sensor is functional; Red LED on: Occupancy detected
No. Drivers per Sensor	4 maximum
Max. Distance Fixture-to-Fixture	40ft line-of-sight
Field Configuration	Via qualified third-party network system application

Compatible LED Drivers

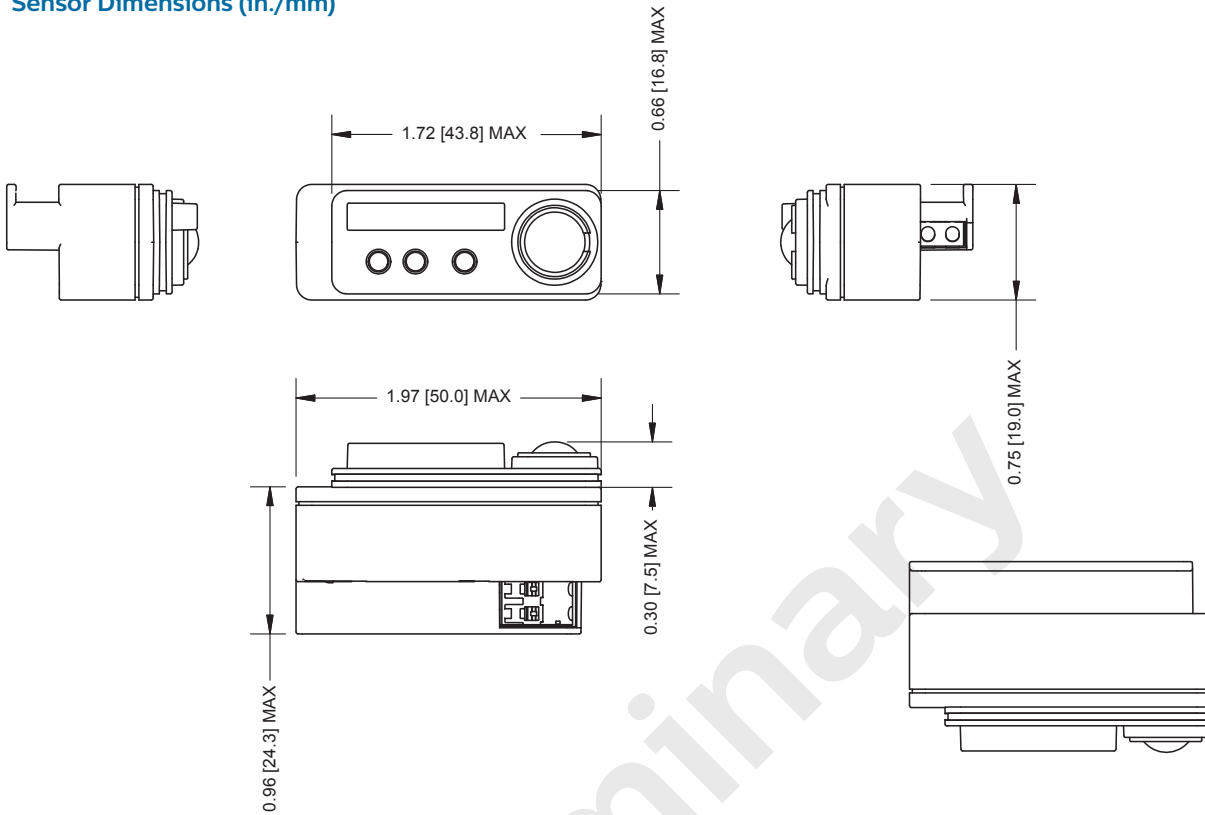
Refer to www.philips.com/xitaniumsr/na for a complete list of SR drivers and SR bridges for use with EasySense.

Compatible Wireless Switches

Only for use with qualified wireless switches from qualified gateway and network partners.

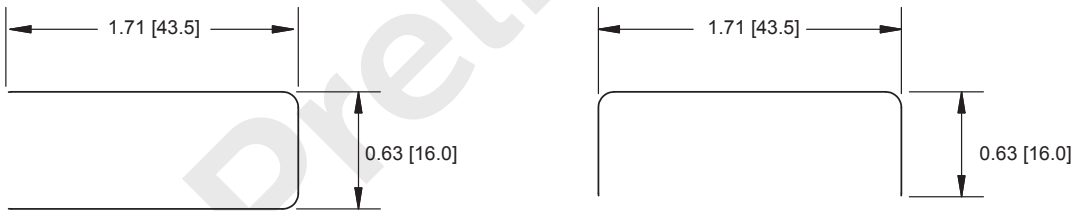
EasySense fixture-mount sensor

Sensor Dimensions (in./mm)

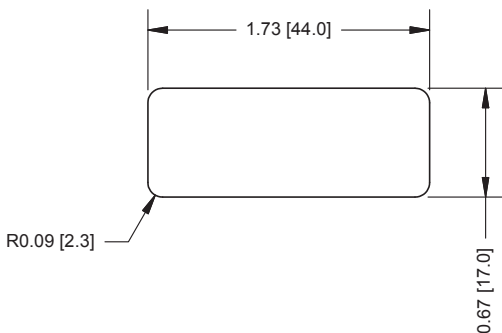


Mounting Dimensions (in./mm)

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



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



Accessory Mounting Ring

Part Number SMR-50 / Set of 50

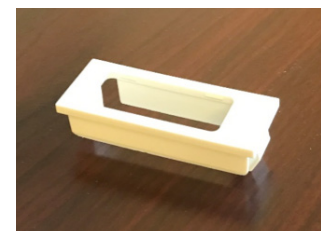
- (1) SMR-50 includes a set of (50) mounting rings
- Ordered separately, not included with EasySense
- Dimensions: 53mm x 26mm x 1.5mm



Accessory Mounting Bracket

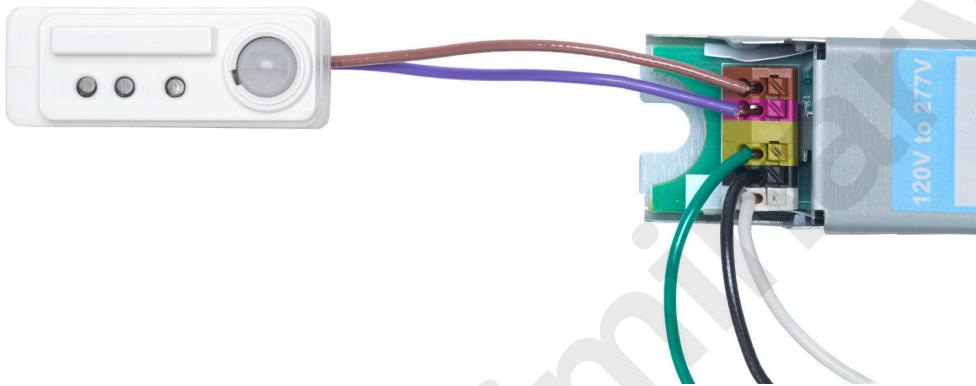
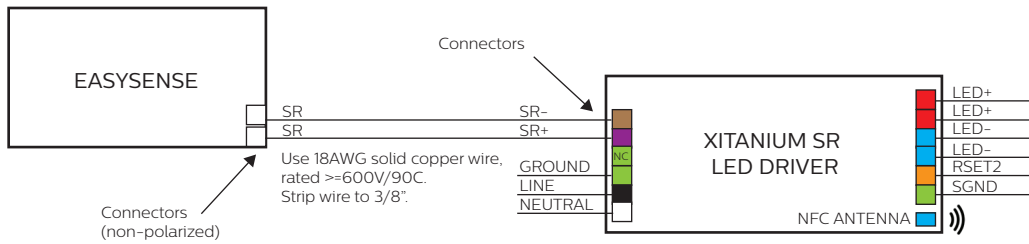
Part Number SMB-50 / Set of 50

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



EasySense fixture-mount sensor

Wiring Diagram



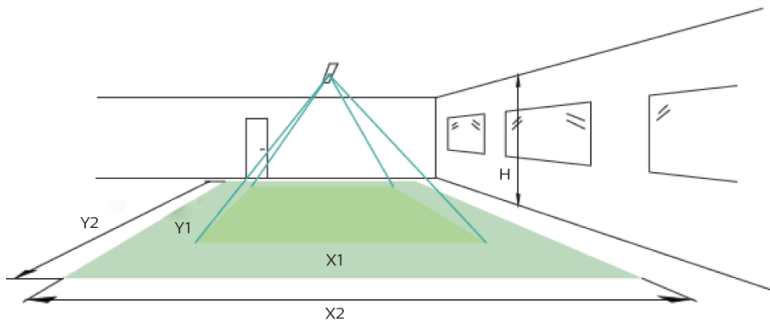
EasySense fixture-mount sensor

Occupancy Sensing

Note: EasySense SNS300 does not provide stand-alone operation based on occupancy. Status is provided to the network system for centralized control and command.

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

- Minor movement (person moving $\leq 3.0/s$ or $0.9m/s$).
- Major movement (person moving $\geq 3.0/s$ or $0.9m/s$).



Height	Minor Movement		Major Movement	
	Y1	X1	Y2	X2
8'/2.4m	10'/2.9m	9'/2.7m	15'/4.5m	9'/2.9m
10'/3m	12'/3.6m	11'/3.4m	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

Daylight Sensor

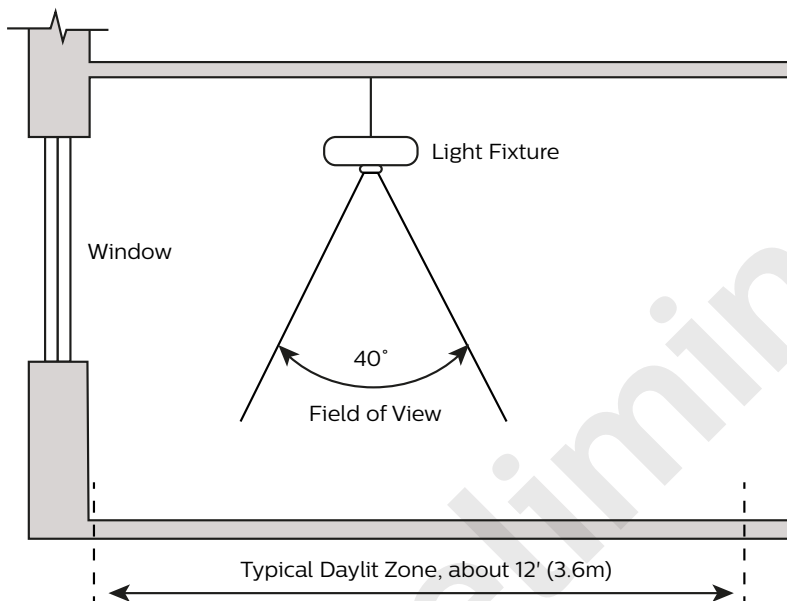
Note: EasySense SNS300 does not provide stand-alone operation based on daylight. Status is provided to the network system for centralized control and command.

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:

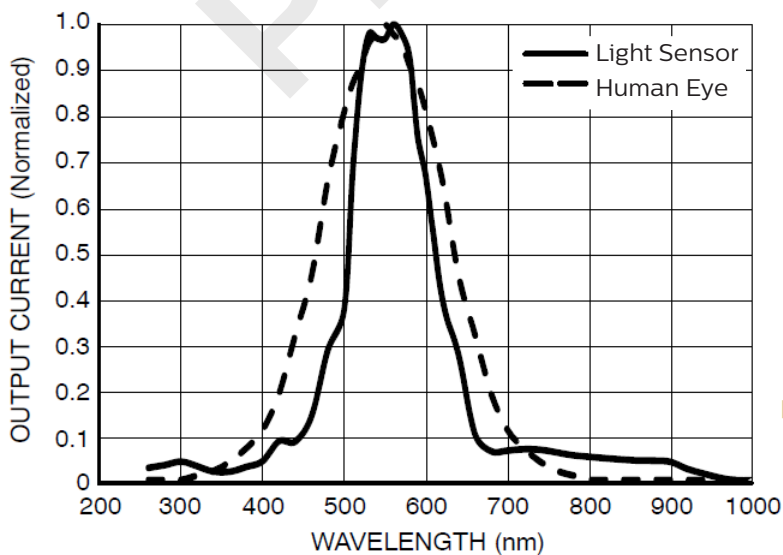
- Minimum distance from the window $\geq 2.0'/0.6\text{m}$.
- Prevent light reflections from outside entering the sensor (for example sunlight reflection on a car bonnet) as this will lead to incorrect light regulation.

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

Photosensor Spatial Response

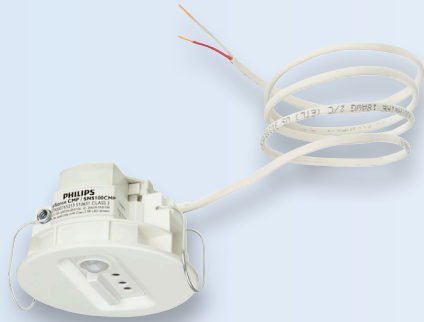


Photosensor Spectral Response



EasySense fixture-mount sensor

Ceiling-Mount Option

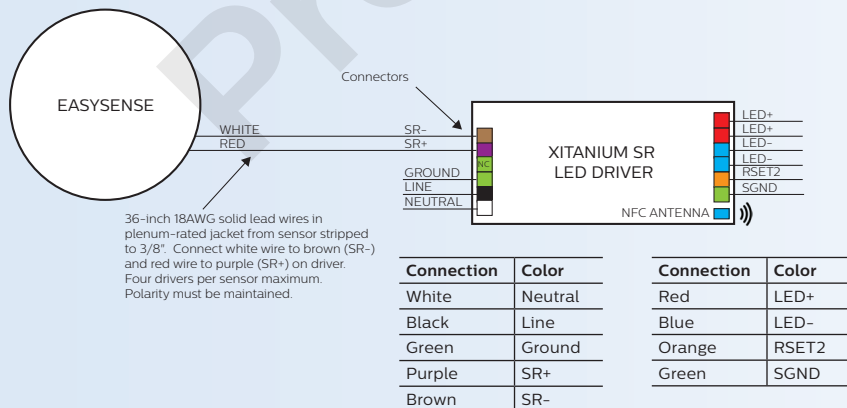


Sensor Part Number

Order Code	SNS300CMP (517839)
Full Product Name	EasySense Ceiling-Mount Sensor
Carton Quantity	1 pc/carton
Assembly	Includes sensor pre-assembled in ceiling mounting plate with leads ready for field installation
Net Weight per Piece	2.6oz / 75gr
Color	White
No. Drivers per Sensor	Four drivers per sensor maximum; polarity must be maintained

Note: For use in non-fire-rated installations only.

Wiring Diagram

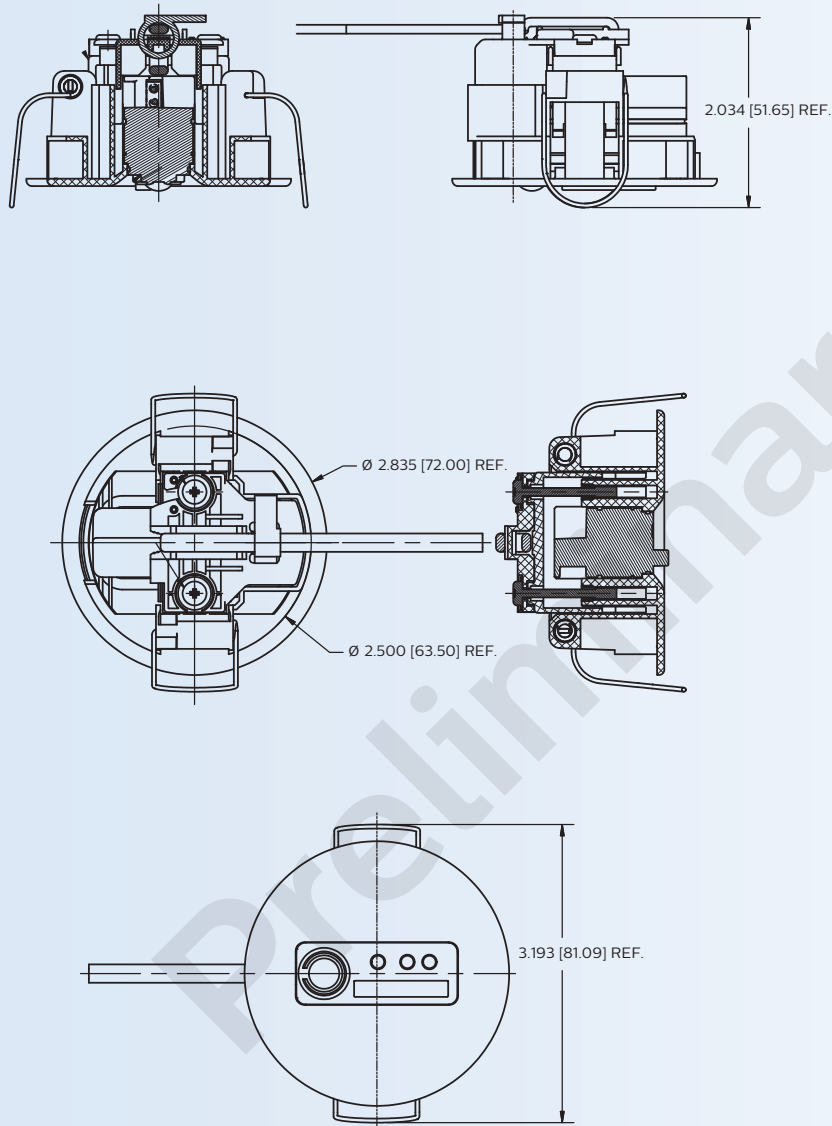


Note: Refer to www.philips.com/easysense for quick installation guide.

EasySense fixture-mount sensor

Ceiling-Mount Option

Sensor Dimensions (in/mm)



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