

PHILIPS

Sensors

EasyAir

SNH200



Datasheet

EasyAir SNH200

EasyAir SNH200 is the ideal solution for per-fixture control of new light luminaires for high bay applications. 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 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 app for Android smartphones allows quick and easy configuration and commissioning during and after installation.

EasyAir includes advanced grouping functionality which enables occupancy sharing and zoning capability. Up to 40 sensors can be operated together in a single group, and the group can then be divided into a maximum of 6 zones. With this advanced functionality, the group can be programmed such that a zone comes up to full light level upon motion detection while other zones dim up to a lower background light level. This enhances energy savings while still providing lighting in adjacent areas.

EasyAir SNH200 does 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 uncomplicated means to achieve energy savings in industrial high bay applications while maintaining aesthetics in the space.

EasyAir SNH200

Features

- Occupancy sensing, daylight harvesting and task tuning in one device
- Occupancy sharing, 40 sensors max per group, 6 zones max per group
- 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 NFC or IR Philips Field Apps, available on Google PlayStore 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 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	EOC	12NC	MOQ
EasyAir SNH200	industry sensor advanced grouping	8718696 748541 00	9290 016 25706	20 pcs
IR Dongle	Mandatory infrared accessory for grouping and configuring from floor level	8718699 611811 00	9290 016 51106	1 pc

Product Data

Physical Information

Overall Dimensions	Refer to drawing
Housing (Luminaire Hole)	M20 threaded nipple for M20 knockout
Net Weight per Piece	185gm
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	45mA peak and 15mA at 15V (average)
Nominal Power Consumption	200mW (average)

Occupancy Sensing

Type	Passive infrared (PIR)
Enable/Disable	Enabled by default
Occupancy Mode	Auto-on/auto-off; Manual-on/auto-off ; Manual-on / manual-off
Group Occupancy Sharing	Enabled/disabled
Group Lighting Behavior	Background level/task level
Hold Time	2 minutes - 60 minutes
Viewing Angle	±30°
Background Light Level	0% - 100%
Prolong Time	0 minutes - 150 minutes, or infinite
Grace Fading	0 seconds - 25 seconds
Response Time/Fading to Switch On/Off	0.7 seconds

Daylight Sensing

Enable/Disable	Disabled by default
Auto-Calibration	Upon power-up; disabled when daylight sensing is disabled
Viewing Angle	+/- 10°

Task Tuning

Full Light Setting	5% - 100%
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Environment & Approbation

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

Other

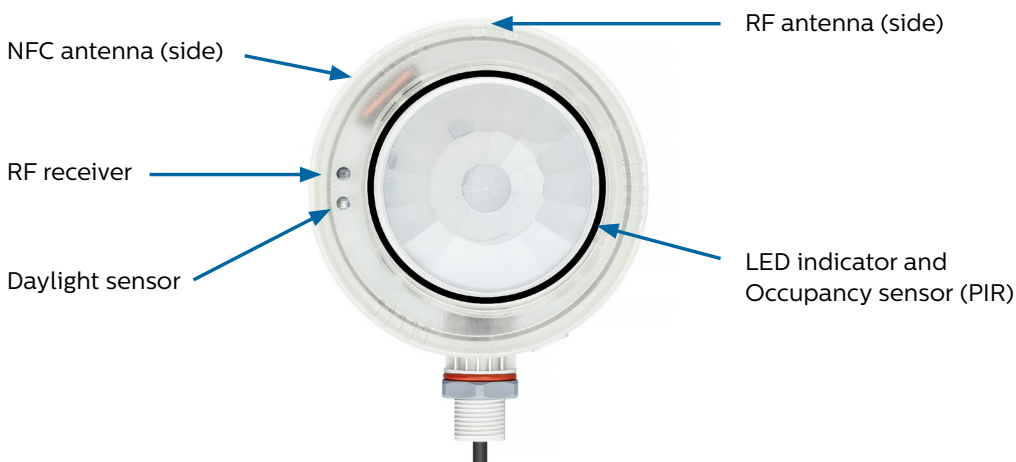
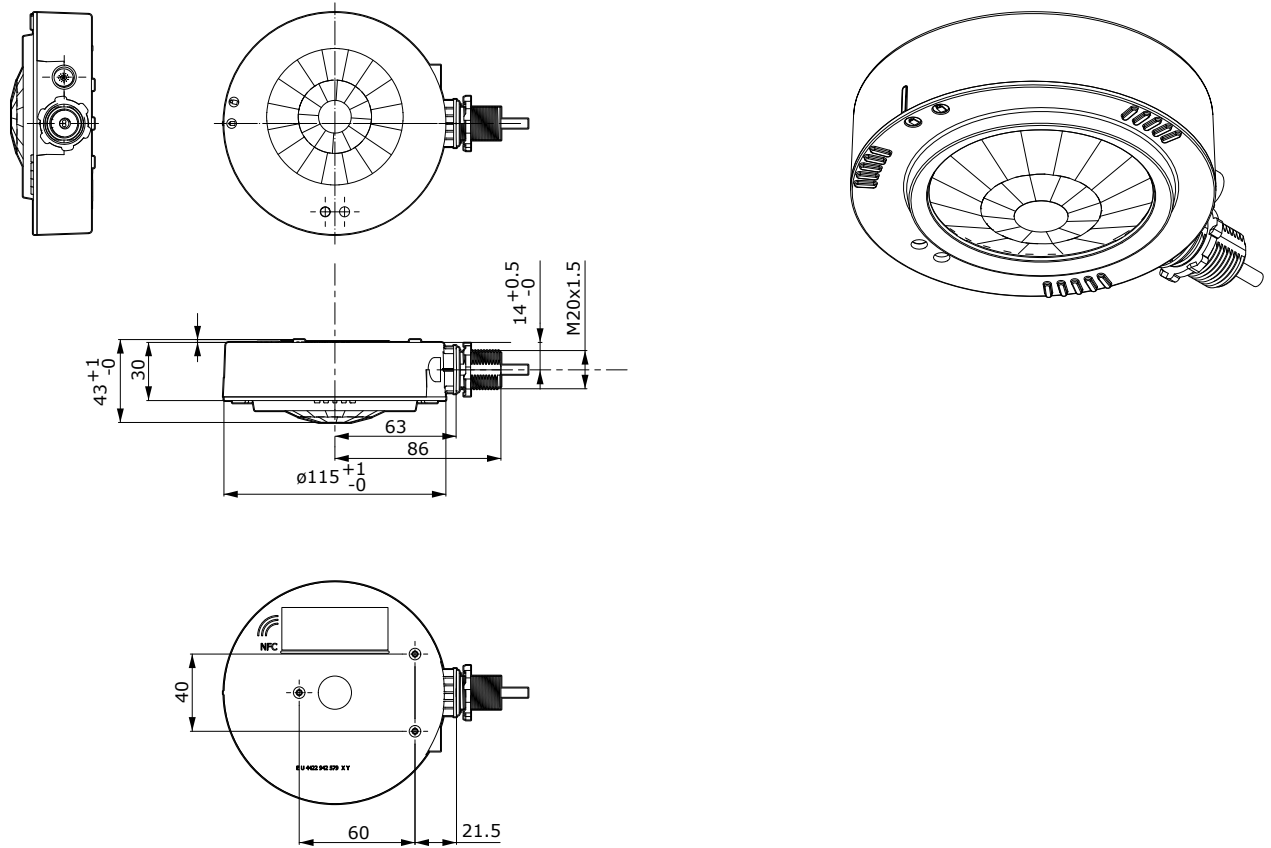
Wireless Protocol	Zigbee, IEEE 802.15.4
Encryption	AES-128
No. SR Drivers per Sensor	4 max.
Max Distance Switch-to-First Sensor	15m line-of-sight
Max Distance Sensor-to-Sensor	15m line-of-sight
No. Sensors per Group	40 max.
No. of Zones per Group	6 max.
No. Sensors per Zone	40 max.
No. Switches per Group/Sensor	5 max.
Mounting Height	5m to 16m
Field Configuration	via NFC or IR, parameters set via Philips Field Apps; Configuration via IR requires a specific IR dongle available via Philips

Compatible LED Drivers

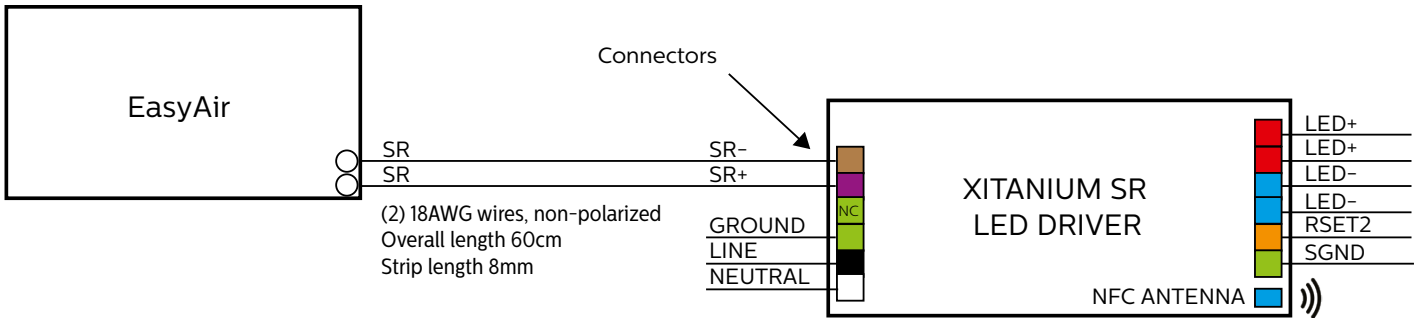
Logistic code 12NC	Description
9290 015 40806	Xitanium 100W 0.15-0.5A 300V SR 230V iXt
9290 015 40906	Xitanium 150W 0.2-0.7A 300V SR 230V iXt
9290 015 05006	Xitanium 75W 0.7-2.0A 54V SR 230V
9290 015 07706	Xi SR 75W 0.2-0.7A SNEMP 230V S240 sXt
9290 015 07806	Xi SR 75W 0.3-1.05A SNEMP 230V S240 sXt
9290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

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

Sensor Dimensions (mm)



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.

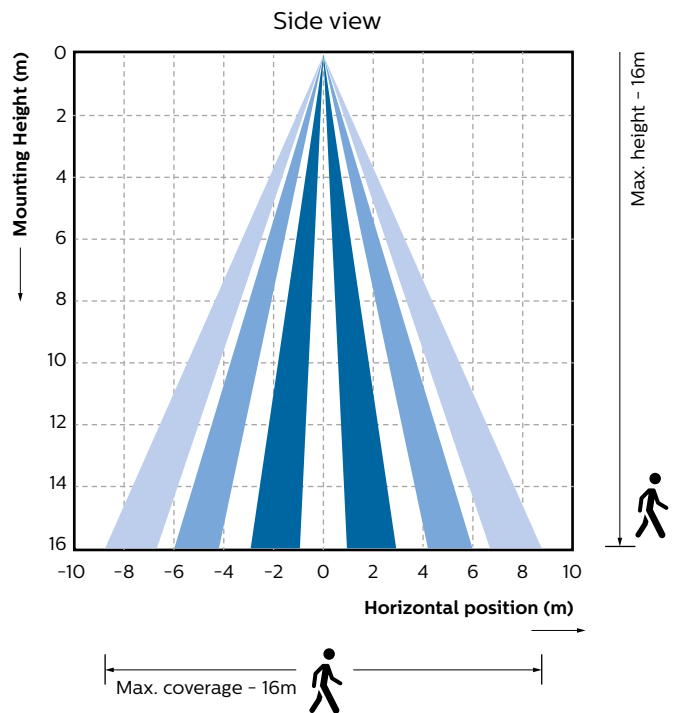
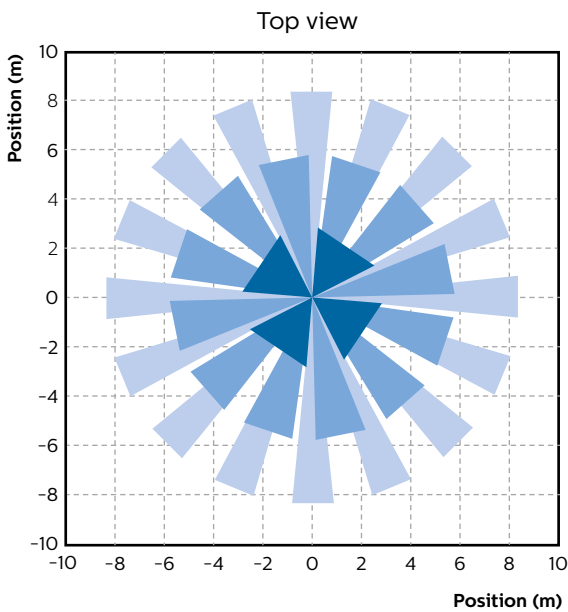
Occupancy sensing detection patterns

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 1:1. 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.

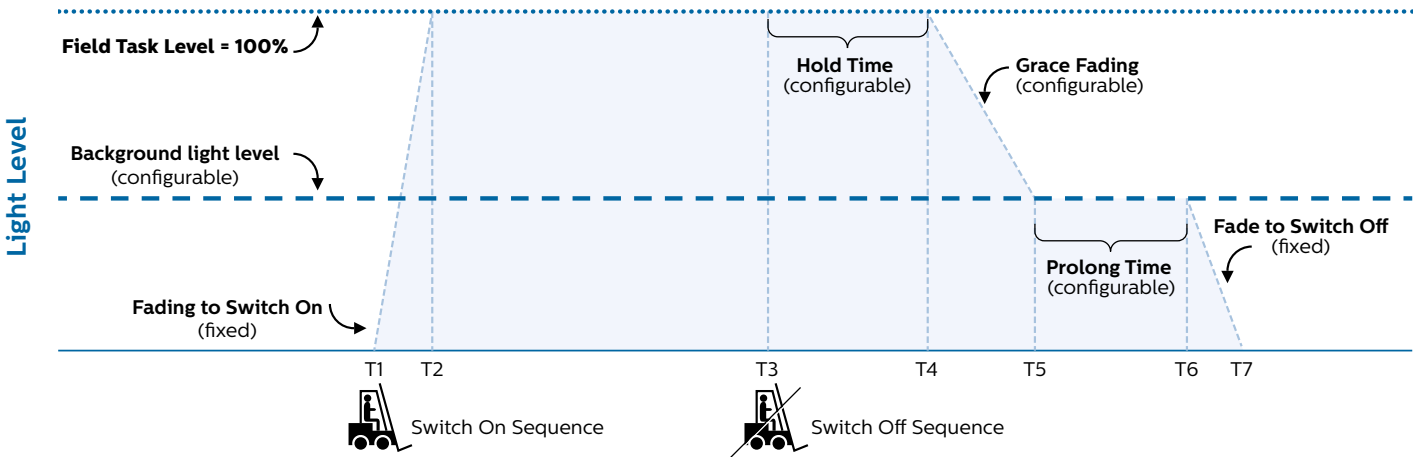


Warning:

Place heat radiating devices outside of the monitoring cone.
Avoid drafts (e.g. from ventilators or heating systems).

Occupancy Sensing (continued)

Full-On Sequence



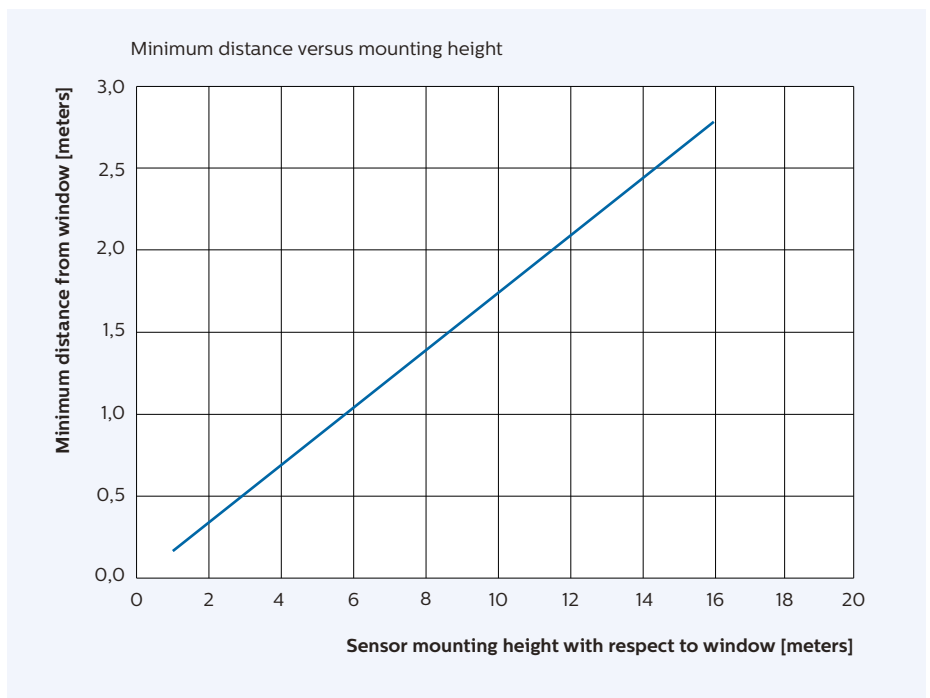
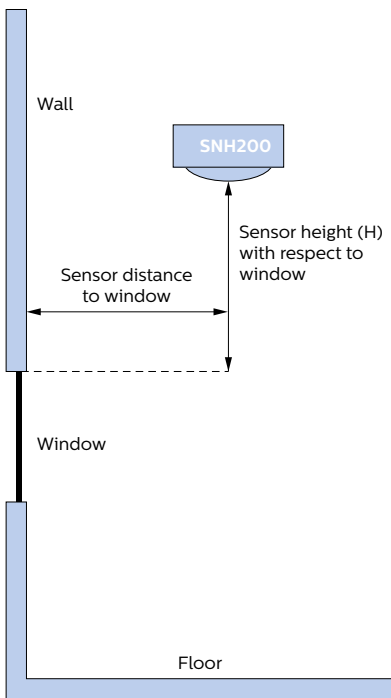
Daylight Sensor

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:

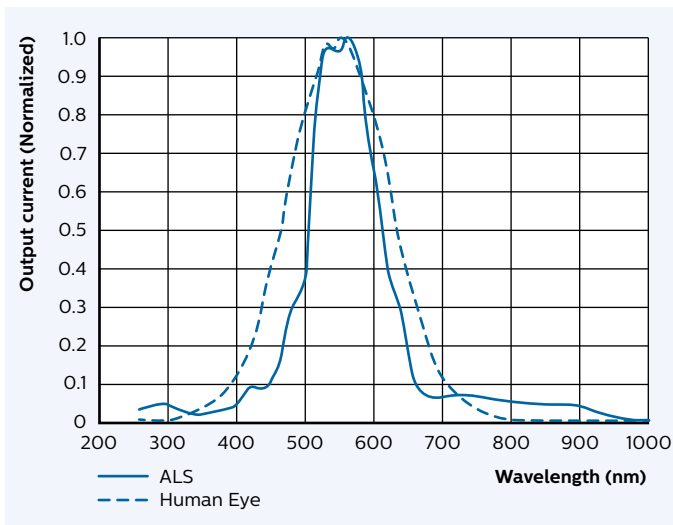
- Minimum distance from the window - refer below graph
- Prevent light reflections from outside entering the sensor (for example sunlight reflection from a car/truck bonnet) as this will lead to incorrect light regulation.

As a guideline the formula $0.174 \times H$ 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 response



Photosensor spectral response



Philips Field Apps: EasyAir NFC and EasyAir Industry IR



Note: Use of IR requires from IR Dongle from Philips to configure and group from floor level.

EasyAir parameters can be configured via Philips Field Apps available in Google PlayStore. For list of supported phones, please visit our website.

1. EasyAir NFC – This app allows configuring EasyAir parameters only when you can physically access the sensor with a smartphone, making use of near field communication (NFC) technology.
2. EasyAir Industry IR - This app allows commissioning (grouping and zoning) of sensors. It is also possible to add switches or configure sensor settings via this app using Android phone and specific IR device from Philips Lighting.



Philips Field Apps can be downloaded for free from Google PlayStore. The user needs to register on our portal to receive username and password. Refer to app manual on our website for more details.

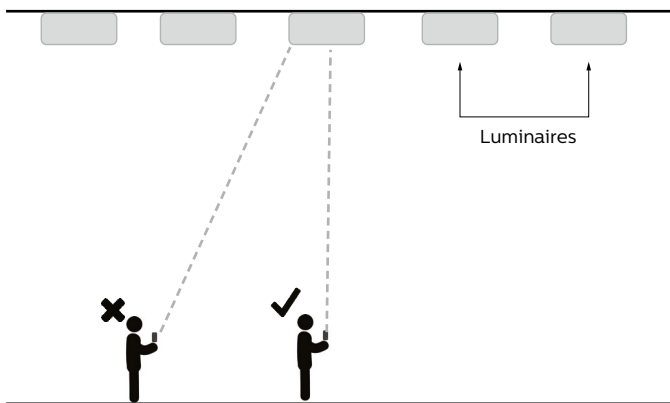
Default Factory Settings

Occupancy based control	Auto-on, Enabled
Daylight Based Control	Auto-on, Disabled
Daylight dependent switching	Default disabled
Daylight dependent override	Default disabled
LED Indicator	Enabled
Occupancy Mode	Auto-on/off
Group Occupancy Sharing	Enabled
Group Light Behaviour	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

IR Dongle

EasyAir SNH200 can be commissioned and configured through InfraRed (IR) technology. To achieve high heights upto 16m with minimal interference, it is mandatory to use the 'IR Dongle' accessory available via Philips. Ensure that you stand and point from right under the sensor to avoid interference with neighbouring sensors.

For support, consult your Philips representative.



Advise on installer's positioning for correct commissioning of SNH200 using IR Dongle

Configuration via Mobile App

EasyAir parameters can be configured via Philips Field Apps available for Android phones. It is mandatory to use IR dongle with an Android phone for commissioning and configuration of SNH200. Two options are available:

1. **EasyAir NFC** – This app allows configuring EasyAir parameters only when you can physically access the sensor with a smartphone. The correct functioning of this app is strongly dependent on the strength and placement of NFC antenna within the Android phone*.
2. **EasyAir Industry IR** – This app allows configuring EasyAir parameters plus enables grouping to a wireless switch, which can be done with an Android phone and a specific IR dongle* from Philips.

*Note: Please refer the list of recommended phones on our website for details on NFC and IR support per Android phone.

You must first register for Philips Field Apps to receive a username and password, then download Philips Field Apps from the Google Play Store.

Refer to www.lighting.philips.co.uk/oem-emea/products/easy-to-integrate-wireless-sensors for details, including recommended Android phones and app manual.

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 Philips could void the user's authority to operate this equipment. This product is intended for commercial use only.

Hereby, Philips Lighting 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:

<http://www.lighting.philips.co.uk/oem-emea/support/technical-downloads>

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