2023

GRYDSENSE STANDALONE ON/OFF SENSOR

TECHNICAL SPECIFICATION

Revision History

Sl #	Change Description	Version	Date
1	Initial Draft	1.0	01-06-20
2	Formatted and added timeout details	1.1	18-07-23

Table of Contents

Overview

GrydLight Standalone Sensor (Minimalistic) is an occupancy detection device used for control of light(s). The passive infrared (PIR) sensors automatically control lights via integrated dimming and switching devices, control of LED drivers for ON and OFF. The data is then transmitted to the cloud-based application for analytics. Ambient Light Sensor on board measures the current light intensity and provides a closed control loop to the system for efficient light(s) control**.**

The control system is dynamic, configurable during installation and commissioning process.

Features

Individual loads could be switched on or off.

- Max of 1Amp load can be driven in combination with the AC/DC driver module.
- Non-Volatile memory backup.
- Zero commissioning requirement for default operations.

Power

- Supply voltage 12 VDC
- Supply current 100 mA @ 12VDC.

Environment

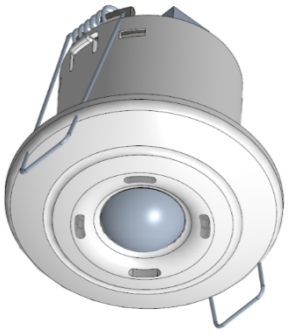
- Ambient temperature operating range: 0°C - 50°C
- Relative humidity: less than 90% non-condensing
- For indoor use only

Compliance

- CE Certified
- RoHS Compliant
- IP rating - IP22

Ambient Light Sensor

- Lux detection range – 0 to 60,000 Lux
- Accuracy - ± 0.1%



PIR Timeout Options

The sensor has a set of pre-set timeouts for switching off when, no motion is detected. These timeouts can be changed using a magnet on the field as required.

- Pre-set timeout available
  - 2 minutes
  - 5 minutes
  - 10 minutes
  - 12 minutes
  - 15 minutes (Default)

The timeout can be changed by just holding the magnet near the sensor (please look for magnet icon on the sensor body) for 10 seconds while the sensor is powered ON.

ALS Integration and Timeout Options

- The sensor has a set of pre-set timeouts for detect the ambient light to regulate the intensity of ballast. These timeouts can be changed using a magnet on the field as required.
  - Pre-set timeout available
    - 15 seconds(Default)
    - 30 seconds
    - 60 seconds
    - 2 minutes
    - 5 minutes
- The timeout can be changed by just holding the magnet near the sensor (please look for magnet icon on the sensor body) for 20 seconds while the sensor is powered ON.

Terminals

- Screw size: M2
- Torque: 0.2 N-m
- Colour: Green
- Mains Wiring: 3 core - 26~16 AWG

- Strip Length: 7 mm

Material and Color

- Material: ABS
- Colour: Roma white

Models Available

- **GRYD-TR-STA-1CH-PIR** – Standalone PIR Only
- **GRYD-TR-STA-1CH-ALS-PIR** – Standalone PIR with Ambient light sensing

PIR Sensor Specification

Basic Principles

Pa-PIRs is a pyroelectric infrared sensor that detects variations in infrared rays. It could also detect the presence of heat sources of a human body. Efficiency and reliability of the system may vary depending on actual operating conditions.

- Difficulty in sensing

  Glass, acrylic or similar materials standing between the target and the sensor may not allow a correct transmission of infrared rays. Non-movement or quick movements of the heat source inside the detection area also make it difficult for detection.

- Detection Zones: 208

	Value
Horizontal	125º
Vertical	125º

- Detection Performance / Detection Range

Temperature Difference	Value
8ºC (14.4ºF)	Up to 3.5m
4ºC (7.2ºF)	Up to 2.5m

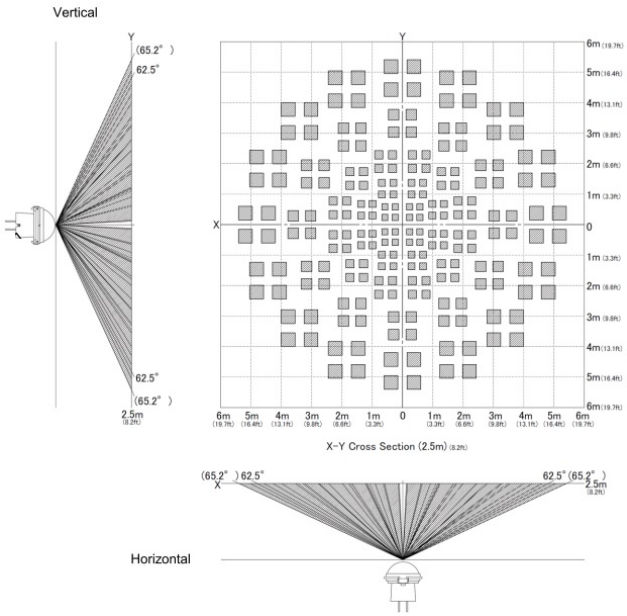
- Area Coverage

  Approximately 70-meter square

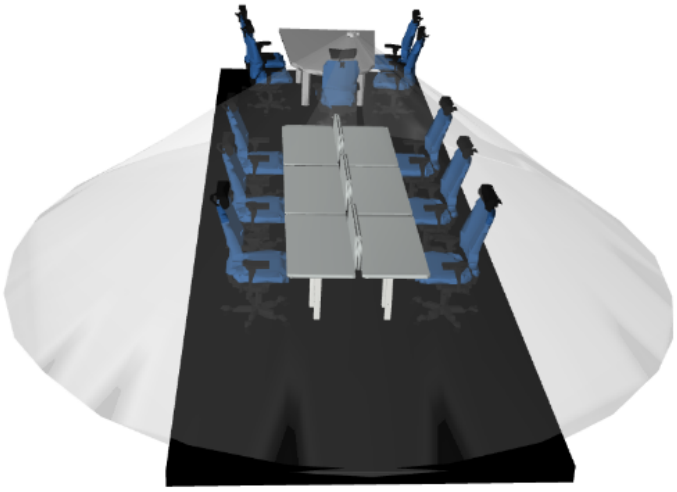
Depending on the temperature difference between the target (Object Size 700mm x 250mm) and the surroundings, detection range will change.

*Note: Standard Range or Extended Range PIR options are available.

Sensor Sensitivity



Sensor Coverage



Installation Overview

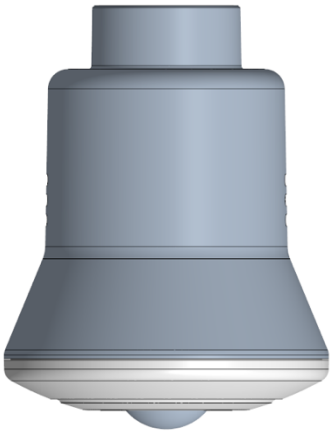
Sensor Setup

Sensor setup is available as a service by GrydLight.

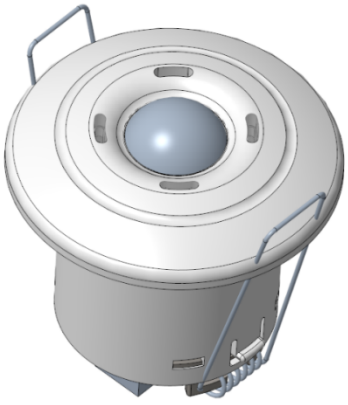
Sensor Placement

To detect motion, the sensor requires line of sight of room occupants. The sensor must have an unobstructed view of the room.

Mounting Option 1 - Ceiling drop with Conduit

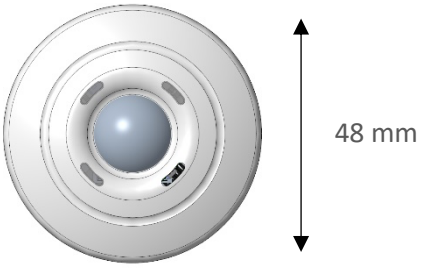


Mounting Option 2 - with Ceiling mount Springs

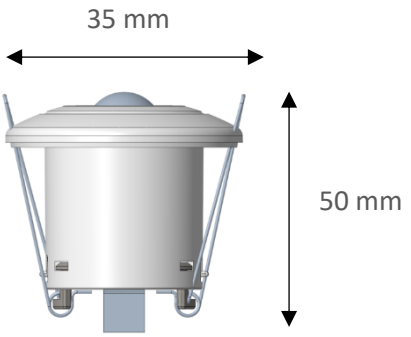


Dimensions

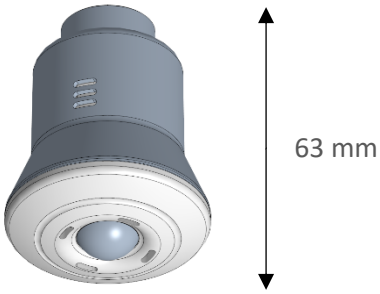
Front



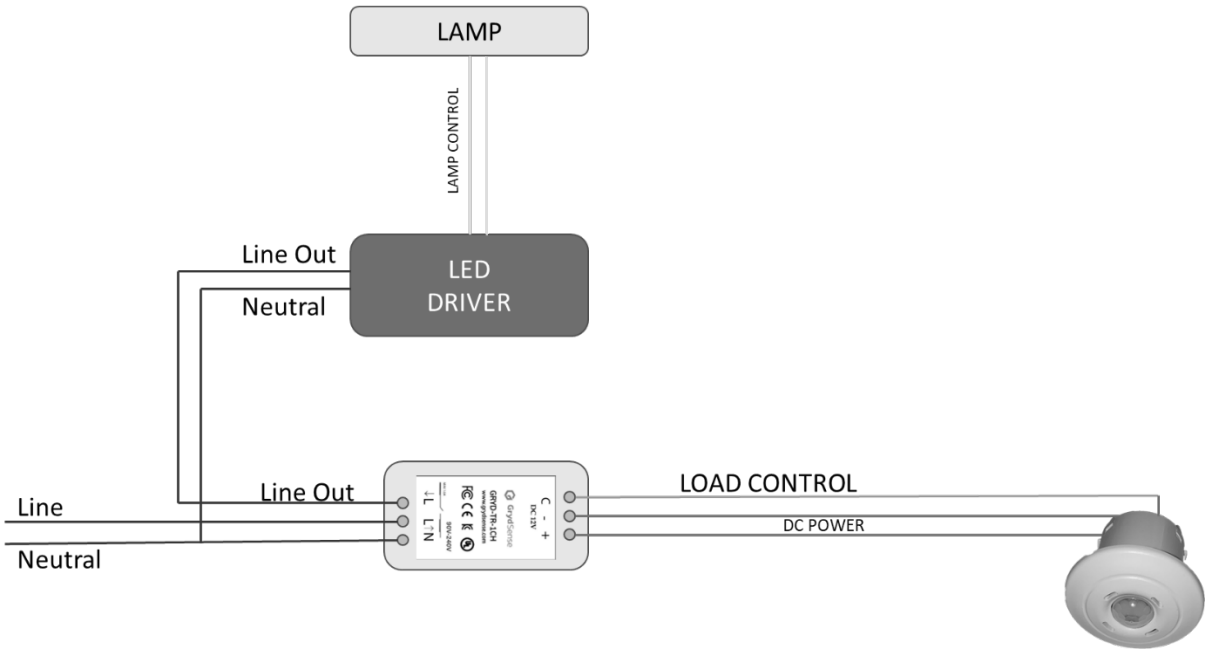
Height and Width



With Ceiling Drop option



Wiring Diagram



LED Indications

The product has two LED (Red and Greed) indicating various Lighting states of the product and the functions the sensors is performing. The following table summarises the system and LED state,

LED	Description
Red led blink only once	PIR detected some movement
green led blinks, after that red blink 5 times	Indicates seconds count for magnetic configuration change

Caution Statements

- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
- This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.