

GRYDLIGHT WIRELESS CORRIDOR SENSOR

TECHNICAL SPECIFICATION

Revision History

SI #	Change Description	Version	Date
1	Initial Draft	1.0	11-07-2020
2	Updated Time out for PIR, TH and ALS	1.1	13-07-2023
3	Made few corrections	1.2	23-08-2023
4	Made few corrections	1.3	01-12-2025

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Overview

GrydLight Wireless Battery Sensor is an occupancy detection device. The passive infrared (PIR) sensors detect and transmit the human presence data to the controller for action on the sensor input. 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 dimming/control of the light(s). The control system is dynamic, configurable during installation and commissioning process.

Features

Individual lights or group of lights can be mapped in controller with battery sensor, which can be used for switched on/off and dimming.

- Based on latest secure Bluetooth Mesh wireless Technology
- Sensor has settings for
 - Auto On/Auto Off
 - Auto Low light on/Auto off
- Manual-On/Auto Off
- Auto Low-Light feature turns on the light when Ambient light falls below configured level.
- Passive Infrared motion detection with fine motion detection
- Inbuilt temperature and Humidity sensor.

Power

- Battery – CR123A
- Minimum operating voltage : 2.3 volts.
- Maximum operating voltage : 3.6 volts.
- 9 years battery life
(Battery life calculation)

Environment

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



Compliance

- CE Certified
- RoHS Compliant
- IP rating - IP22

PIR Timeout Options

- Field programmable using secure BLE Mesh protocol from 2 Minutes to 1 Hours.
- PIR un-occupancy time range: 1 min to 1hour.
- PIR re-transmission time range: 2 min to 1hour
- For Indoor use only

Models Available

GRYD-CP-WL-SR-WH → Colour Code
 → Range*
 → Wireless
 → Corridor PIR

Material and Colour

Material: ABS

Colour: Roma white

Technical Specification

Radio

BLE Mesh:

- Supported Standards and Modulation Techniques.
 - 802.15.5 - GFSK/ 1Mbps
- Antenna - Whip Antenna
- Antenna Gain - 0 dBi
- Expected Indoor Range - 30 meters.

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

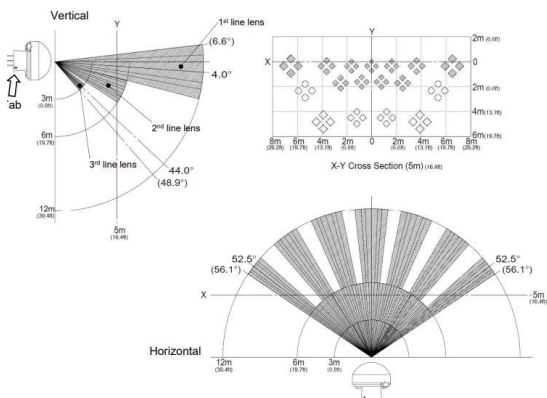
Glass, acrylic or similar materials standing between the target and the sensor may not allow a correct transmission of infrared rays. Non-movement or quick movements of the heat source inside the detection area also make it difficult for detection.

- Detection Zones: 68
- Area Coverage
15 Meter Diameter at **8 ft height** installation

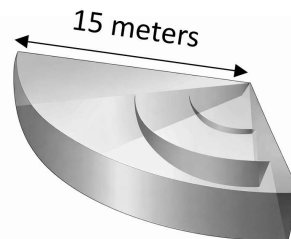
	Value
Horizontal	112°
Vertical	56°

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

Sensor Sensitivity



Sensor Coverage



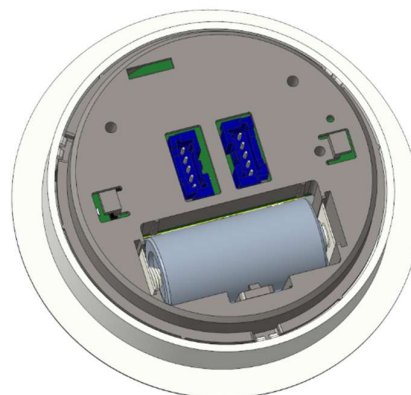
Sensor range

Installation Height	8 Ft
Diameter	15 Mt

Installation Overview

Battery Installation

To install battery, remove the back-mounting cover and insert the battery in the Battery holder.

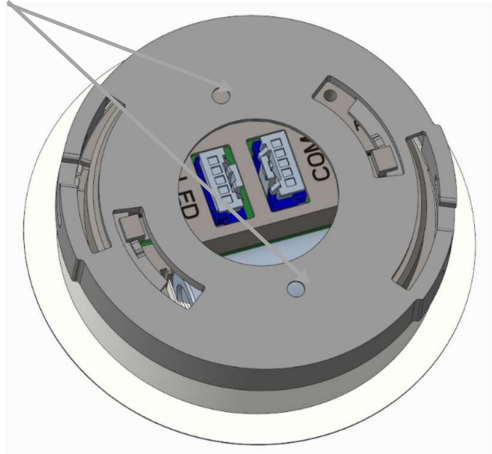


Sensor Placement

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

Hot objects and moving air currents can affect the sensor performance. It is recommended to install the sensor away from HVAC vents.

Ceiling mount with screws



Dimensions



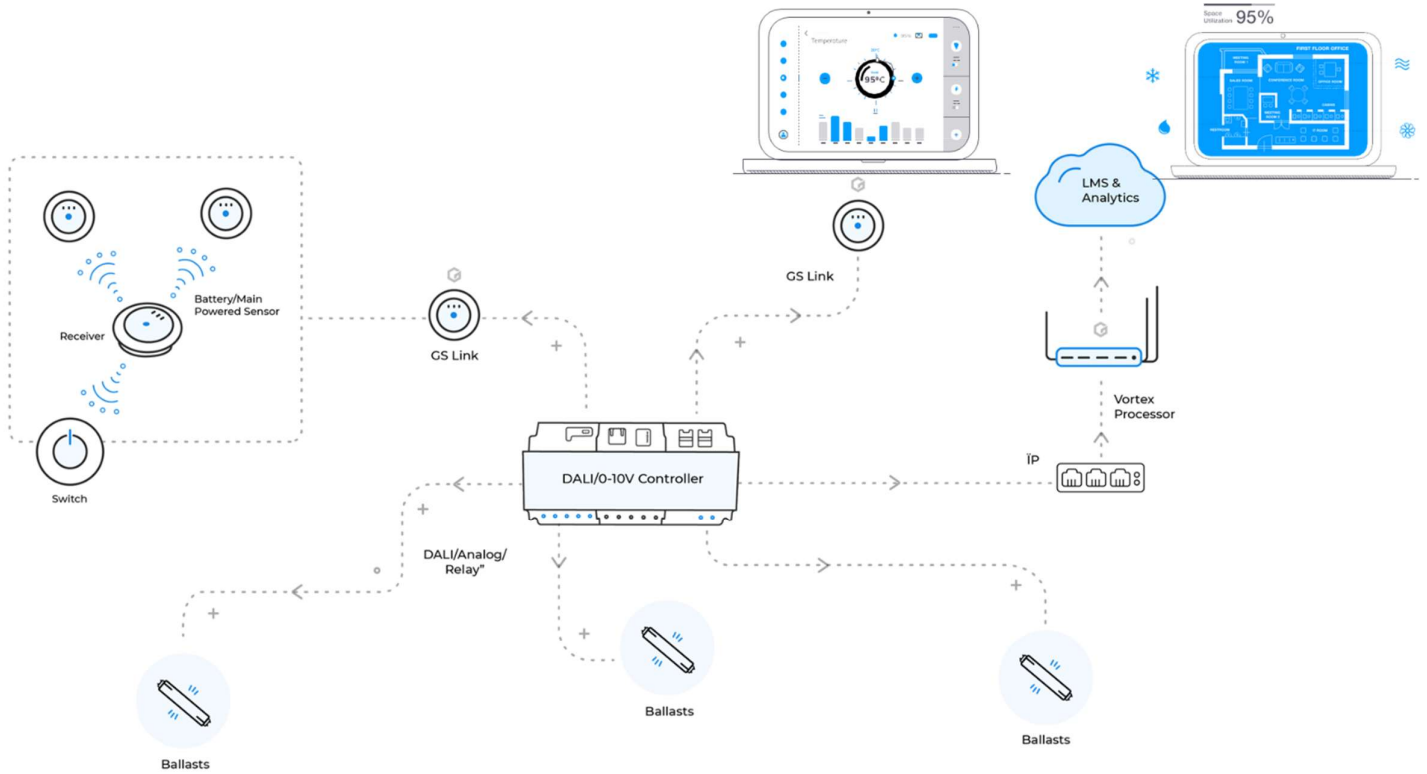
70 mm



70mm

25.2 mm

System Diagram



LED Indications

The product has two LED (Red and Green) 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
Red and green blink alternatively	Device entered pairing mode

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