2023

# GRYDSENSE RELAY CONTROLLER

TECHNICAL SPECIFICATION

Revision History

| Sl # | Change Description | Version | Date |
|---|---|---|---|
| 1 | Initial Draft | 1.0 | 11-07-2020 |
| 2 | Formatted to new format | 1.1 | 13-07-2023 |

# Table of Contents

## Overview

The GrydLight din-rail mounted Controller is an interface between the fixtures, sensors and the Vortex Gateway. It can be used to Switch on/off Loads

Each GS-link loop in controller can connect to at most 20 sensors.

It can loop the light/s to sensors, i.e., the lights/ ballasts which are to be controlled based on the sensor trigger.

The buttons support

Sensor Commissioning, Sensor Factory Reset, Controller Factory Reset, Relay Test, etc.,

Ethernet connectivity

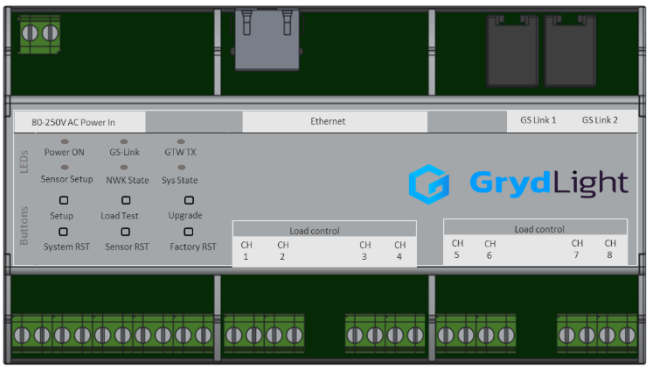
## Features and Capacities

- Up to 8 individual loads could be switched on/off
  - 8 Individual terminals with NO and C contacts
  - Up to 250V compatible contacts
  - Inrush Current Protected up to 80A
  - Latching Contacts
- Max Load of 500W per relay
- Non-Volatile memory backup.
- Minimal commissioning requirement for default operations.
- Remote upgrade of the system using ethernet.
- Network expanded by connecting occupancy sensors on 'GS-Link' network.
- Includes GS-link control link for seamless integration of lights, control stations and GS-link Sensor Modules.
- 2 GS-link for interfacing with 20 wired sensors per link.

## Models Available

GRYD-RC-4R – 4 relay channels

## Specifications




### Power

- On board AC/DC
- 85-265VAC, 50/60 Hz Compatible
- Max Current Draw - 100mA

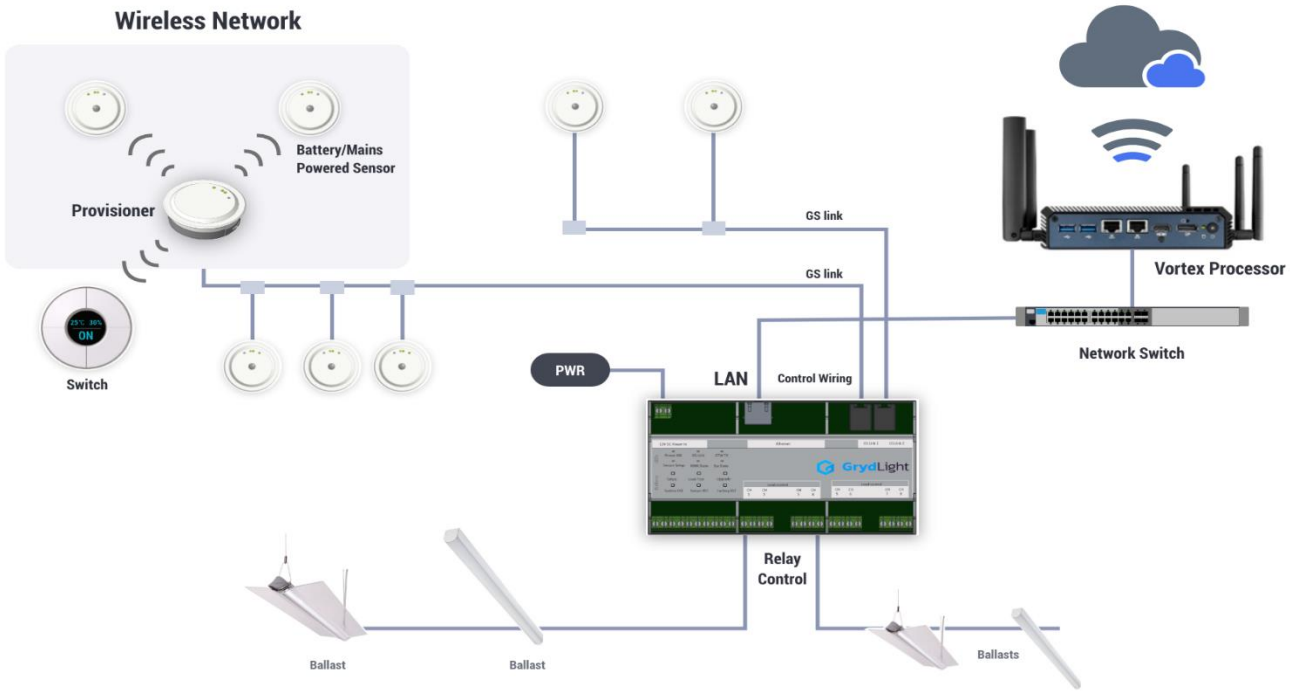
### Environment

- Ambient Temperature Operating Range: 0ºC to 40ºC
- Relative Humidity: less than 90% non-condensing
- For indoor use only

### Terminals

- Mains Wiring: 2.5Sqmm [3 Core]
- Sensor Wiring: 0.5Sqmm [2 Core]

# System Diagram



## Explanation and Features

| | |
|---|---|
| **(1). GS-Link connectors** | up to 8 receivers can be looped per each GS link. |
| **(2). Mains wiring** | AC Line, Neutral |

## Standards

- Our Switching module is complaint to IEC-61326.
- Surge complaint to IEC / EN 61000-4-5:2014+A1:2017
- ESD compliant to IEC / EN 61000-4-2:2009
- CE Certified
- ROHS Compliant

## Sensors Connected to the Controller

- Use occupancy sensors to automatically turn the lights off/on in an area a fixed time after it becomes vacant/occupied.
- 16 Sensors can be connected per loop directly to the controller
- Occupied/ Unoccupied level can be programmed.
- Temperature and humidity sensors can be used to monitor ambient temperature and humidity in the zone defined.

## Mounting

Mounts to standard DIN rail

## GrydLight Module – Sensor (Wired / Wireless) Integration

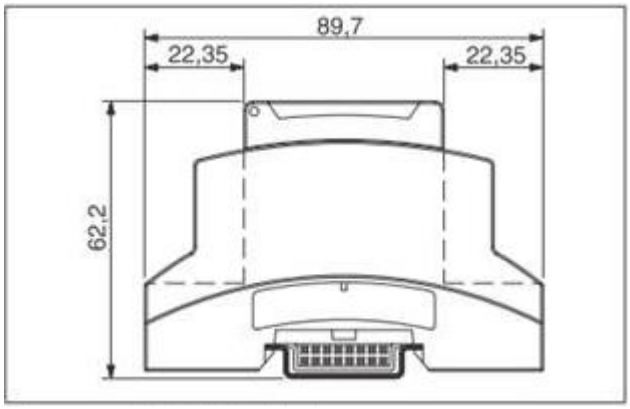
- BLE Occupancy Sensor to control zone on the GS-Link
- Assign up to 20 BLE Occupancy Sensor
- Add additional wired and wireless sensors by adding to the GS-Link
- Wire and power up to 20 sensors in total
- Occupancy Sensor

## GS-Link System Low-Voltage Wiring

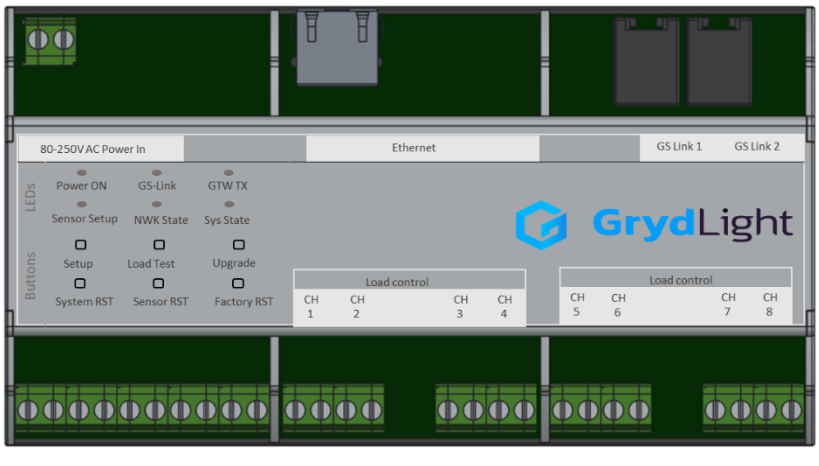
- System communication using low voltage wiring
- Wiring may be daisy chained or tapped
- Wiring must be isolated between mains cable
- Total length of the GS-Link cannot exceed 290ft
- Using 6 core cable is recommended for GS-Link
- Using twisted pair is recommended.

# Mechanical Dimensions

## Side View



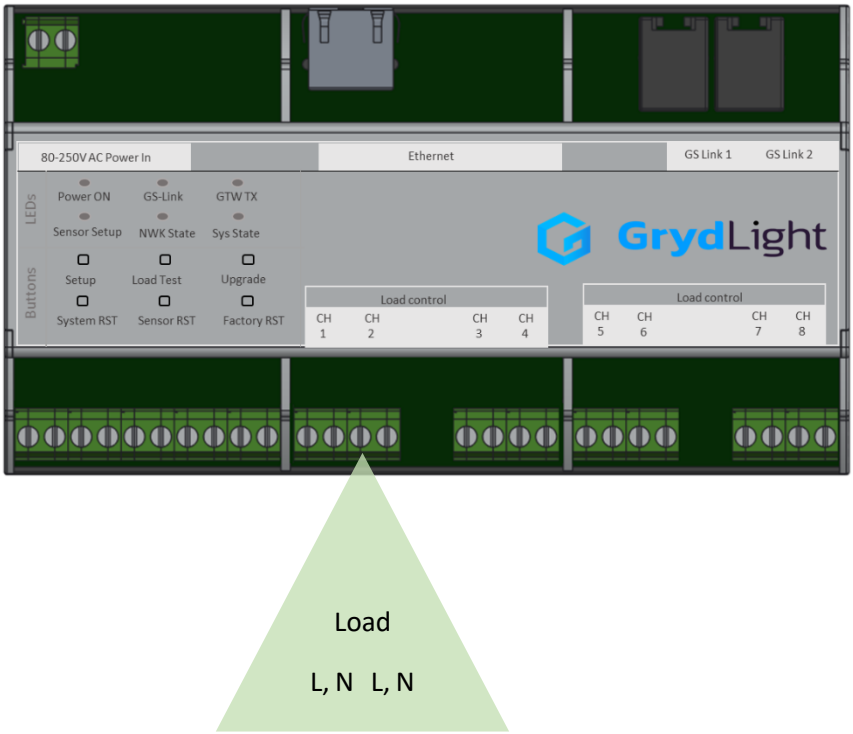

## Top View




89.7mm (3.53 inch)

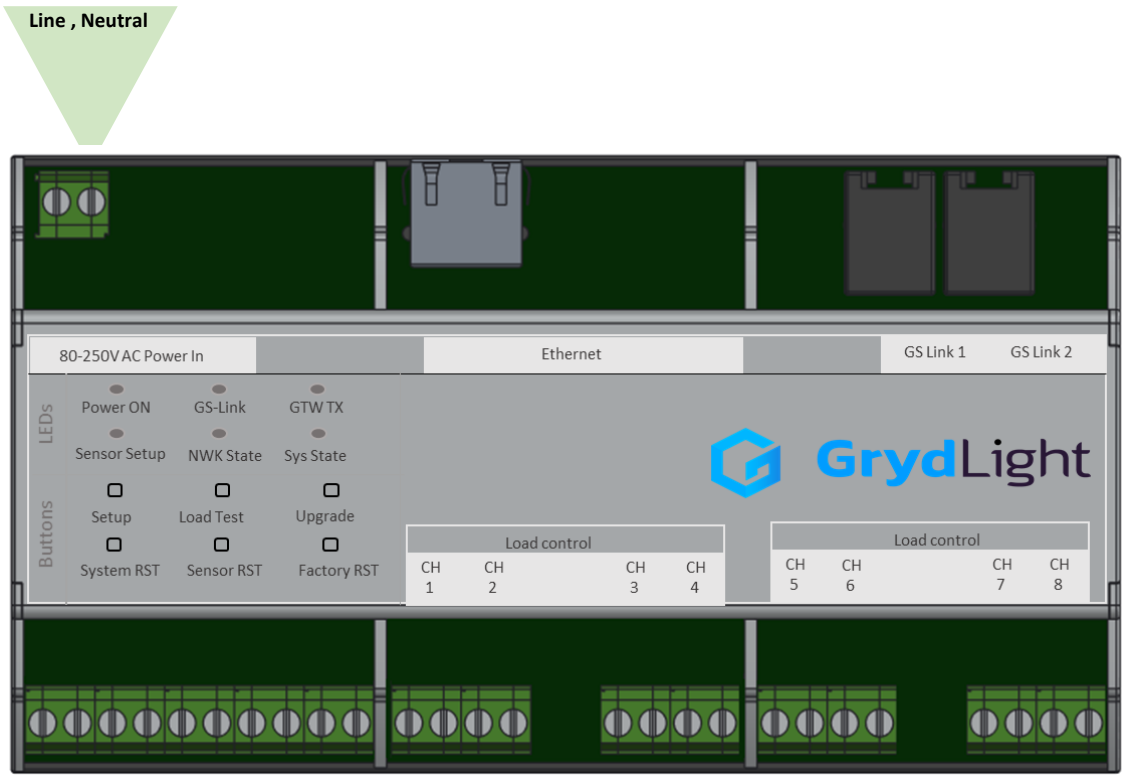
161.6 mm (6.63 inch)

# Overview of Load Wiring Terminals

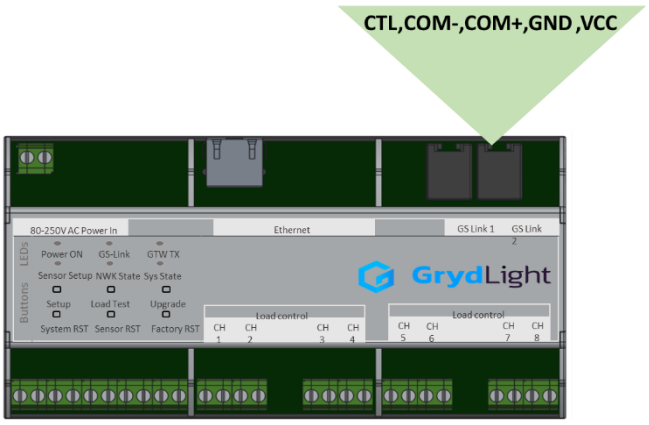



## Wiring – Line Voltage

220 V



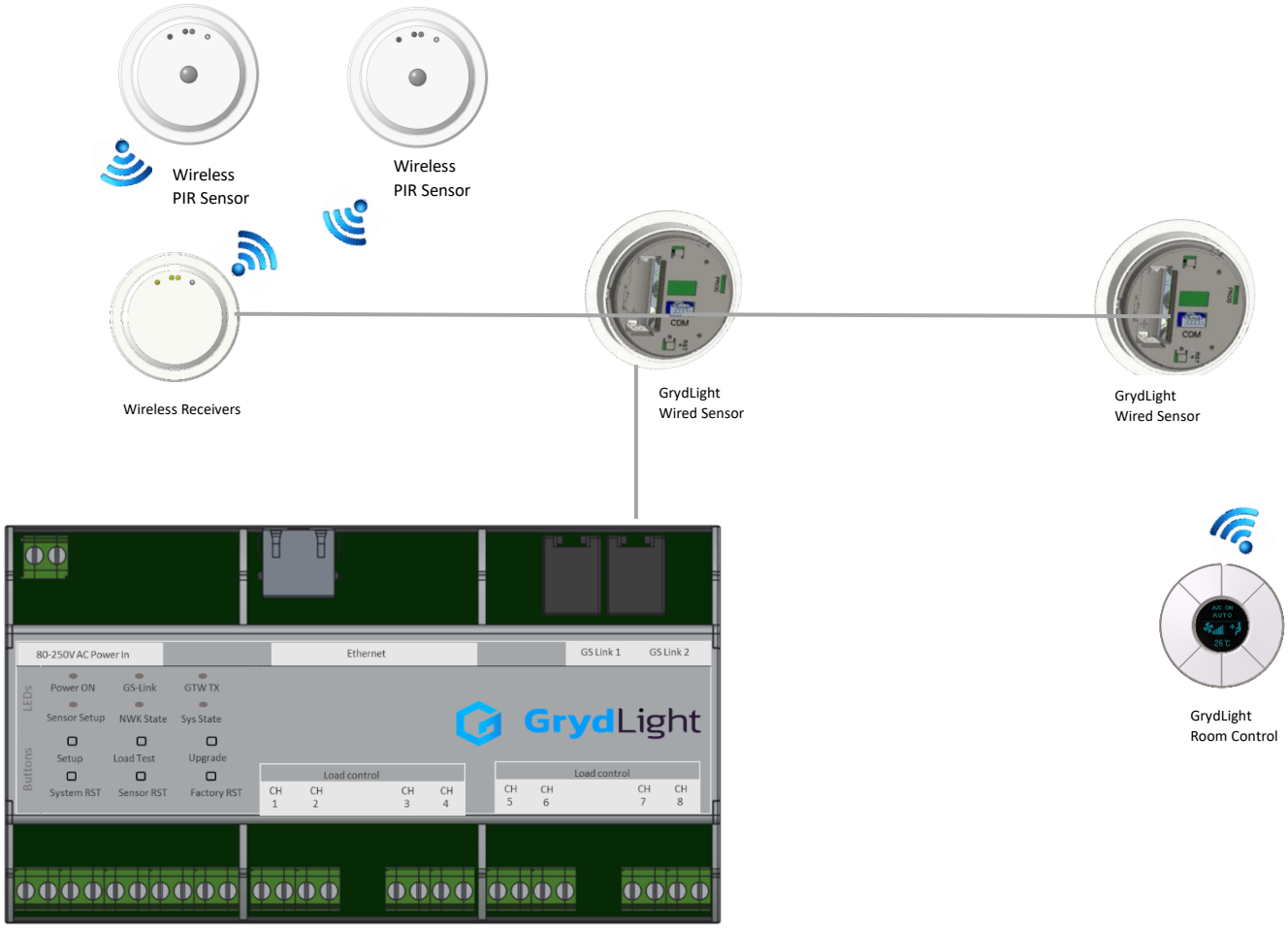
# Wiring – GS Link Connector Wiring




## Low Voltage Communication Interface

- System communicates using Low-Voltage wiring
- Wiring can be daisy chained
- Total Length of the GS link should not excel 100 meters
- Using 6 core cable is recommended for GS-Link
- Using twisted pair is recommended.

# Daisy-Chain wiring Example




GrydLight Load Controller