






### PRODUCT SAFETY

When using electrical equipment, basic safety precautions should always be followed, including the following:

 **READ THESE INSTRUCTIONS BEFORE USING THIS PRODUCT.**

-  Do not let power supply cords touch hot surfaces.
-  Do not mount near gas or electric heaters.
-  Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
-  The use of accessory equipment is not recommended by Encelium as it may cause an unsafe condition.
-  Do not use this equipment for other than the intended use.

 **SAVE THESE INSTRUCTIONS.**

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### GETTING STARTED

#### Overview

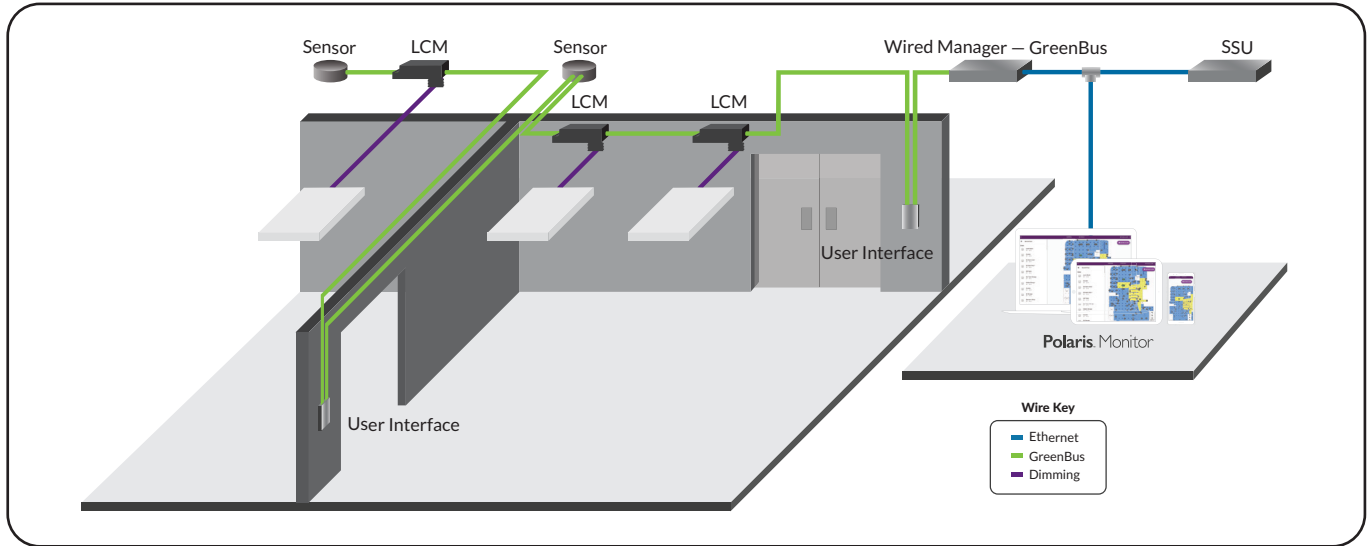
The Luminaire Control Module (LCM) provides an interface between ballasts and the GreenBus communication network. The LCM is automatically addressed when it is connected to a Wired Manager. Individually addressable, the LCM enables each ballast to be independently controlled and configured.

The LCM is available in two models:

- Indoor
- Damp Rated

## WIRED SYSTEM OVERVIEW

GreenBus technology makes wiring fast and error-free, since it's intuitive to install. With Encelium X, you can control DALI devices exclusively or a mixture of GreenBus and DALI.



## INSTALLATION

The LCM dimming interface (Purple and Pink wires) is a Class 2 circuit. Secure the retainer nut before wiring the module.

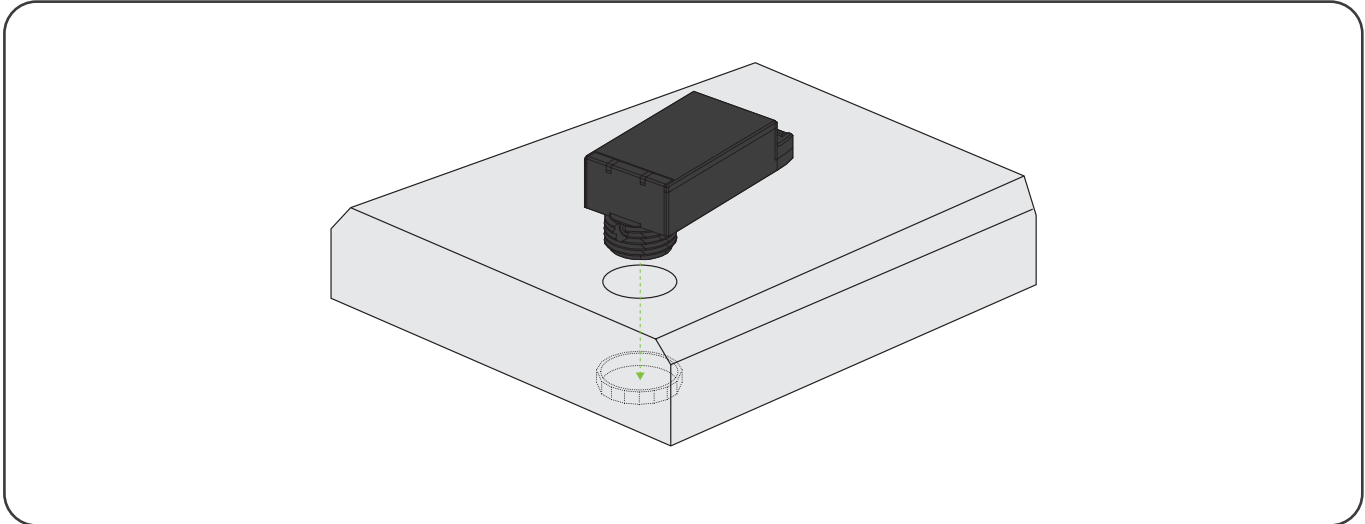
The LCM connects to LED drivers and electronic dimming, non-dimming, HID, etc., ballasts to make each individual device addressable and controllable.

**Notes:** The LCM is to be installed in dry and indoor locations ONLY. For damp installations, ensure to use the LCM (damp rated). Damp locations are defined as: interior locations subject to moderate degrees of moisture, such as some basements, some barns, some cold-storage warehouses, and the like, and partially protected locations under canopies, marquees, roofed open porches, and the like.

### MOUNTING OPTIONS

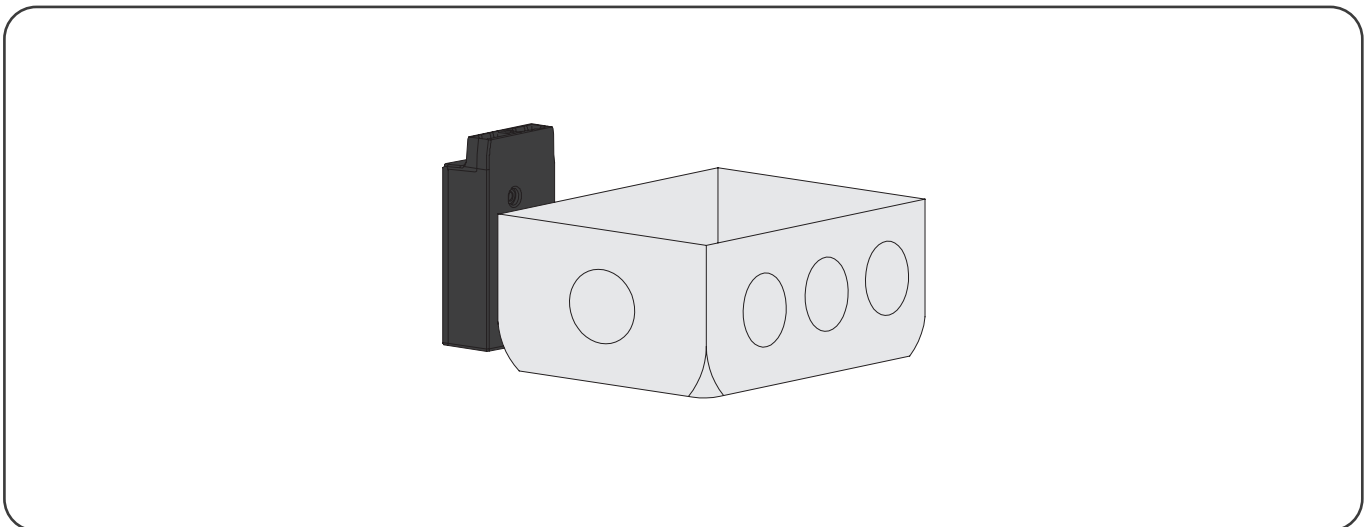
#### 1 Option 1 –Luminaire Mount

The mechanical construction allows for simple installation of the module in an available PG-7 (0.5 inch) trade-size knockout on top or side of a luminaire.



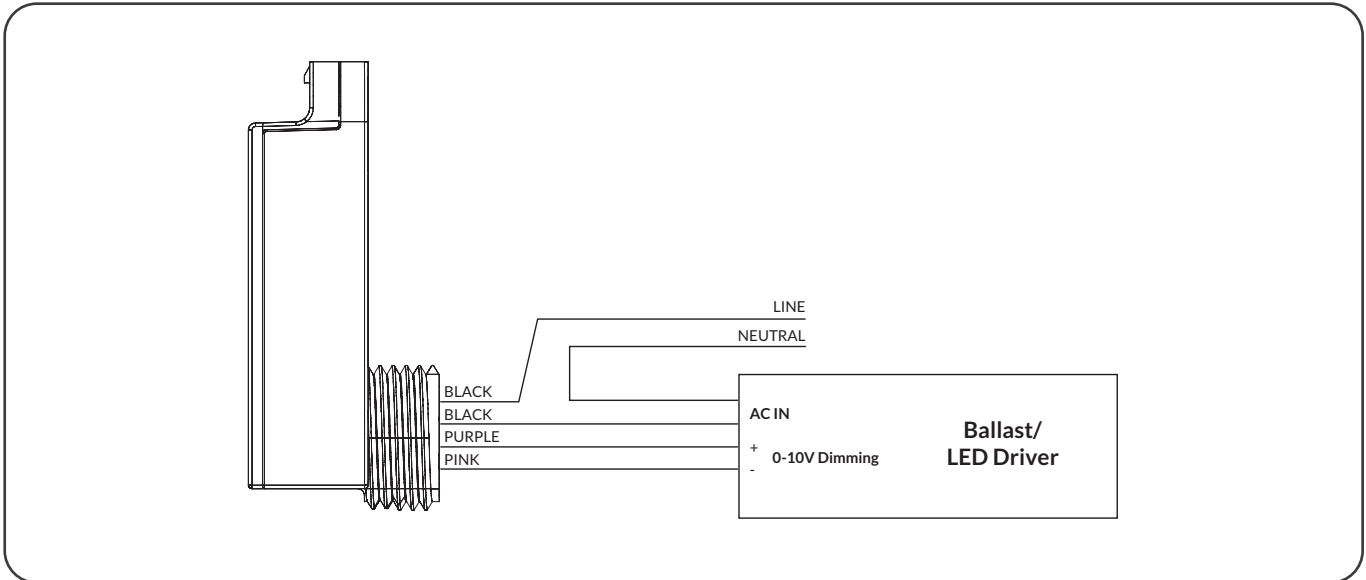
#### 2 Option 2 –Junction Box Mount

For some installations, a junction box may be required. It is recommended to securely mount the LCM to the junction box using an available PG-7 (0.5 inch) trade-size knockout and retainer nut.



## ELECTRICAL CONNECTIONS

### 1 Dimmable Wiring

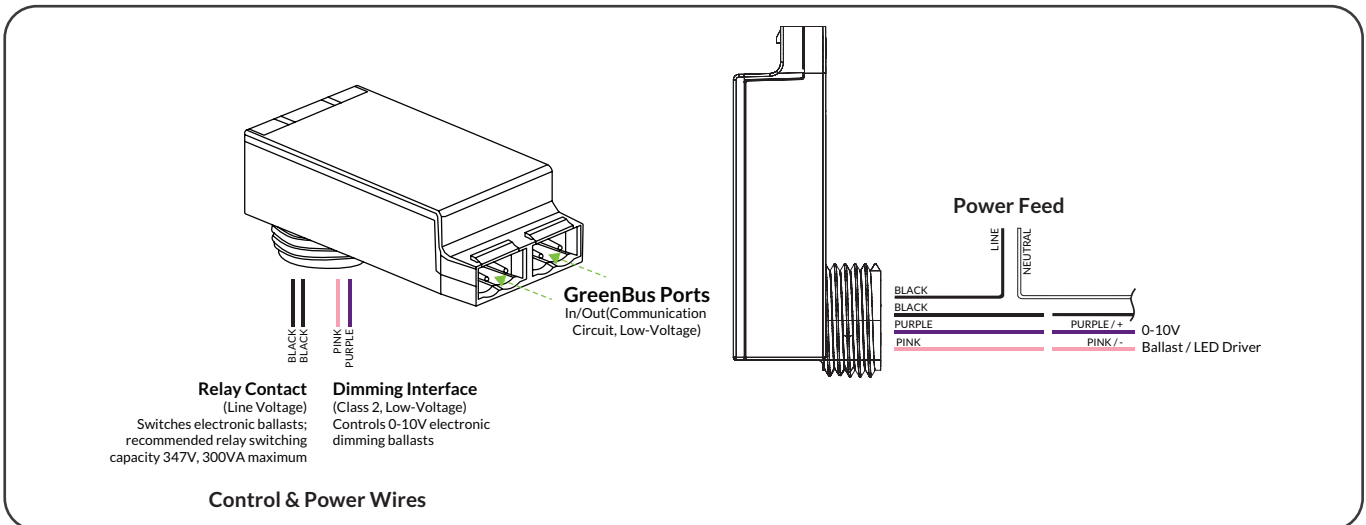


### 2 LCM Wiring

GreenBus™ communication wiring is still accessible from the outside of the luminaire, while all necessary wiring to the electronic dimming ballast is available on the inside.

The module is made from tested material to be used in plenum or “plenum rated” areas. All wiring is rated 600V, 105°C (221°F) for use in luminaires.

To control a two ballast luminaire, parallel all ballast input wires (line, neutral and control wires purple and pink). It is recommended to use one module per ballast. Do not connect more than two ballasts in parallel.



**⚠** Recommended relay switching capacity, 120-347V, 300VA maximum.

**⚠** Due to the internal relay, power feed to luminaire may be live even if lights are off. Turn off power at circuit breaker or fuse before installing or servicing module. Observe lockout procedures.

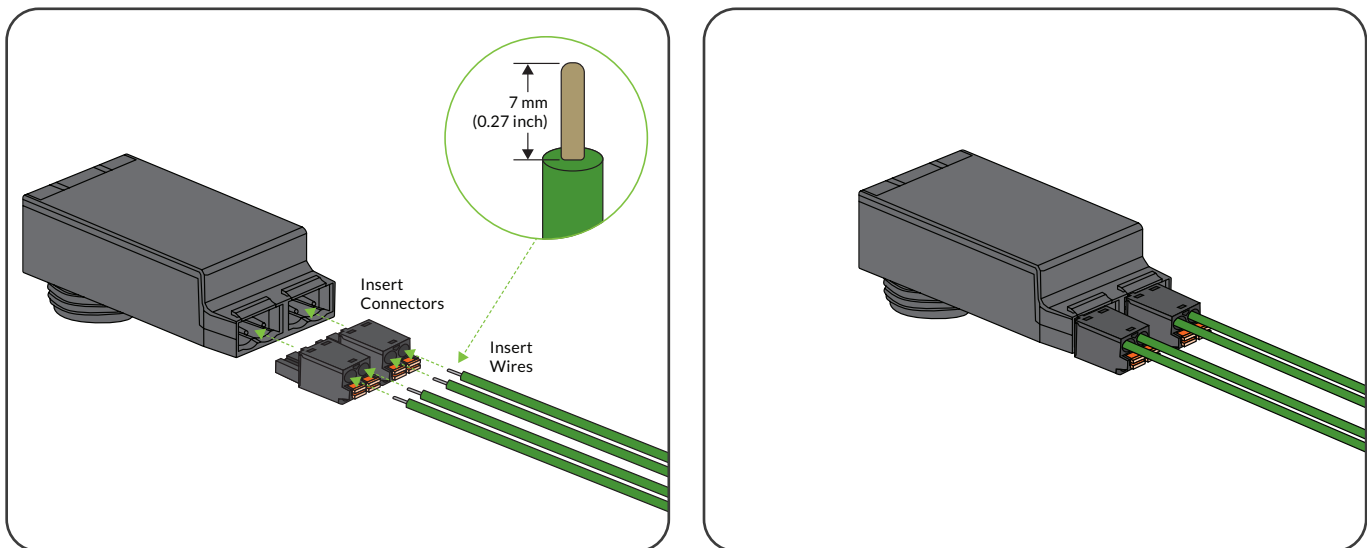
### 3 GreenBus

The GreenBus wiring originates at the Wired Manager and propagates in a daisy-chain from module to module (or other compatible equipment).

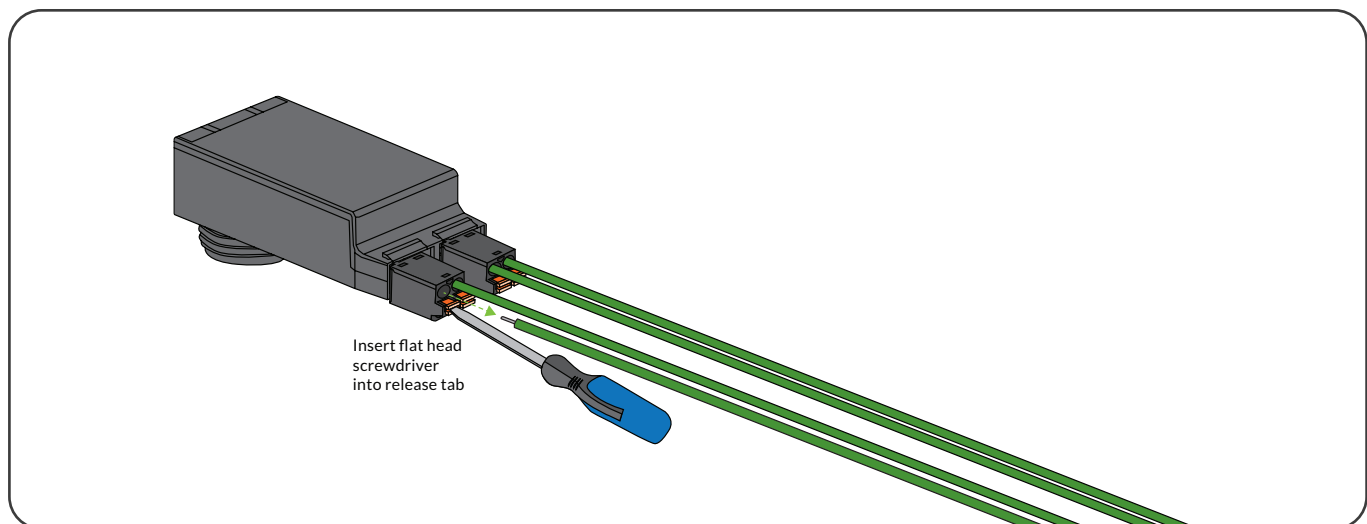
If changes are required, determine an optimum wiring path utilizing the supplied prefabricated cables, based on the position of luminaires and sensors. As the modules obtain power via the GreenBus, the number of modules on each chain is limited. It is suggested to leave room for future system upgrades and to limit the number of modules per chain to 100 units during initial installation.

The GreenBus wires must be used with proprietary connectors supplied. Insert the connectors to the LCM GB ports.

**⚠** GreenBus must be laid out as per supplied system layout drawing. If changes are required, determine an optimum wiring path utilizing the supplied cables, based on the position of the devices

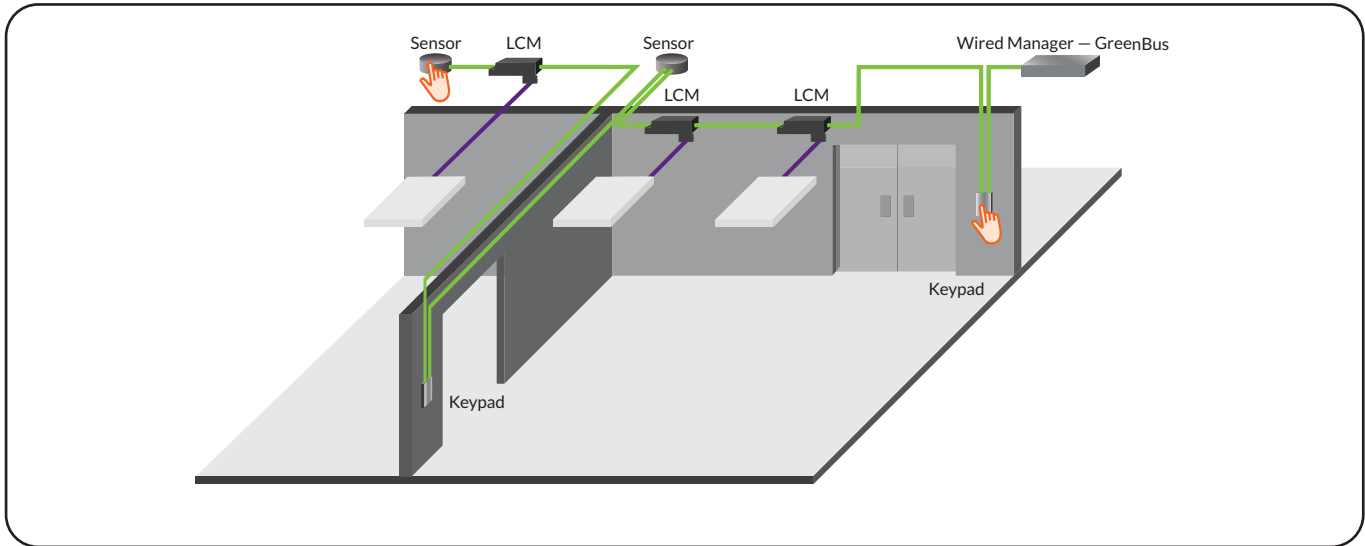


To remove the wires, use a flat head screwdriver to release the wires from the terminal blocks.



## INSTALLATION TESTING

Installer can quickly test if the devices have been wired correctly by pressing any button on the wallstation or the sensor which triggers all the load controllers on the channel to change the dimming level by 25%. Every press will trigger this function to enable testing of the AC line wiring, dimming wiring and communication integrity over the GreenBus lines.



## MANUAL PAIRING

Installers can easily pair devices in a room or a zone to gain manual control (on, off and dimming) and occupancy time outs. Holding any buttons on a wallstation or sensor for 10 seconds enters the system in the Manual Pairing mode. The system then guides the user by blinking the load controllers on the GreenBus wiring scheme as a means of identifying and pairing them to the wallstation or sensor.

