

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.

GETTING STARTED

Overview

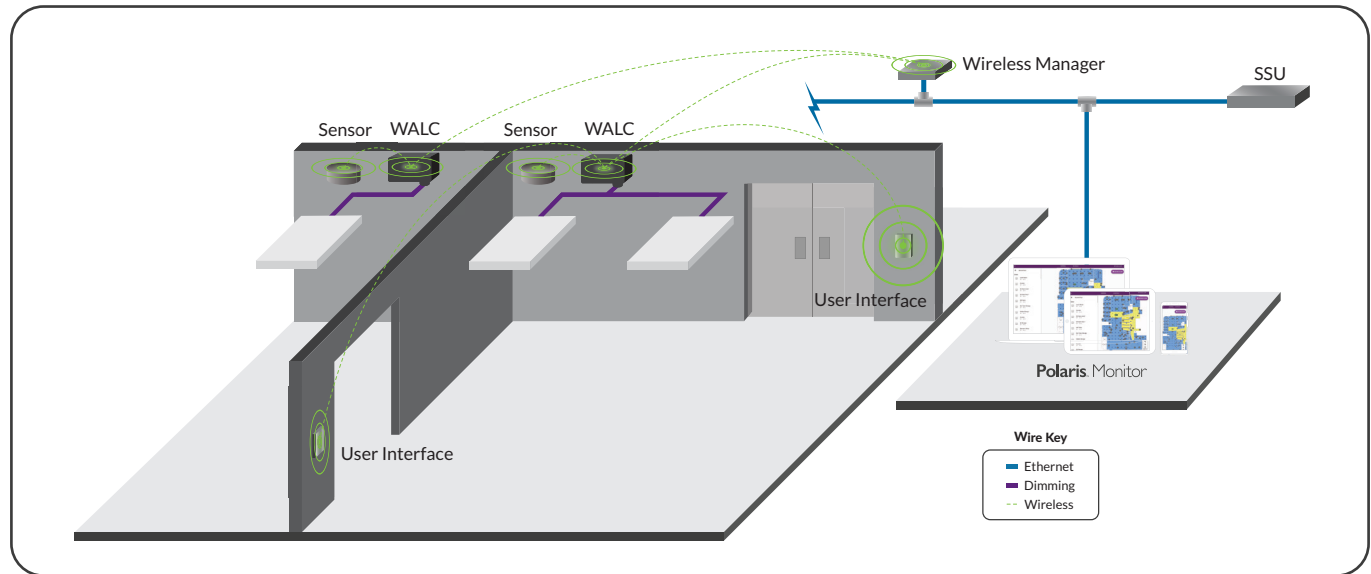
The Wireless Area Lighting Controller (WALC) is a wireless control device that operates a switched line AC and 0-10V control to luminaires. It communicates to the Encelium X Wireless Manager over a wireless mesh network based on the Zigbee standard.

The WALC is available in two models:

- Indoor
- Damp Rated

WIRELESS SYSTEM OVERVIEW

This illustration shows how each component is easily integrated into the Encelium X Lighting Control System.



INSTALLATION

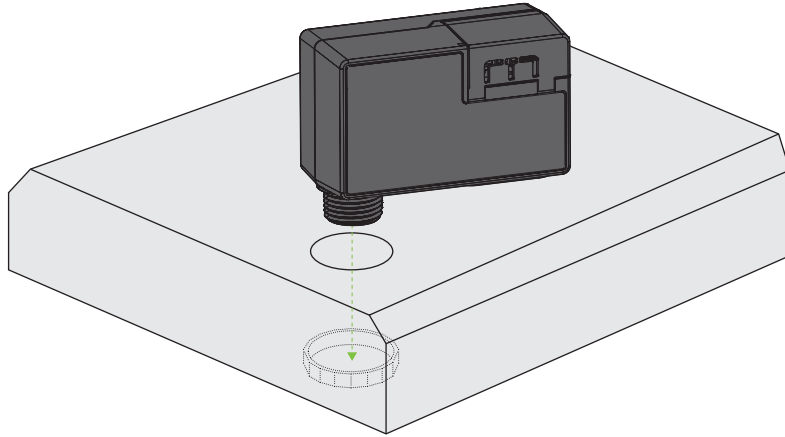
In a typical installation, the WALC connects to electronic dimming, non-dimming, HID, etc., ballasts or LED drivers to make each individual device controllable by the Encelium X Lighting Control Systems.

Notes: WALCs are to be installed in dry, indoor locations ONLY. For damp installations, ensure to use the appropriately rated version of the WALC Module (see Models section of this manual). Damp locations are defined as: interior locations subject to moderate degrees of moisture, such as basements, barns, cold-storage warehouses, as well as partially protected locations under canopies, marquees and open roofed porches.

MOUNTING OPTIONS

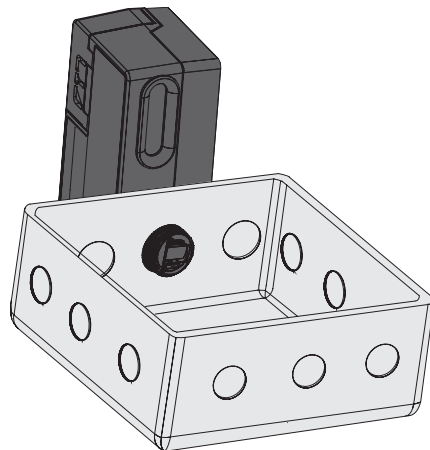
1 Option 1 –Luminaire Mount

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.



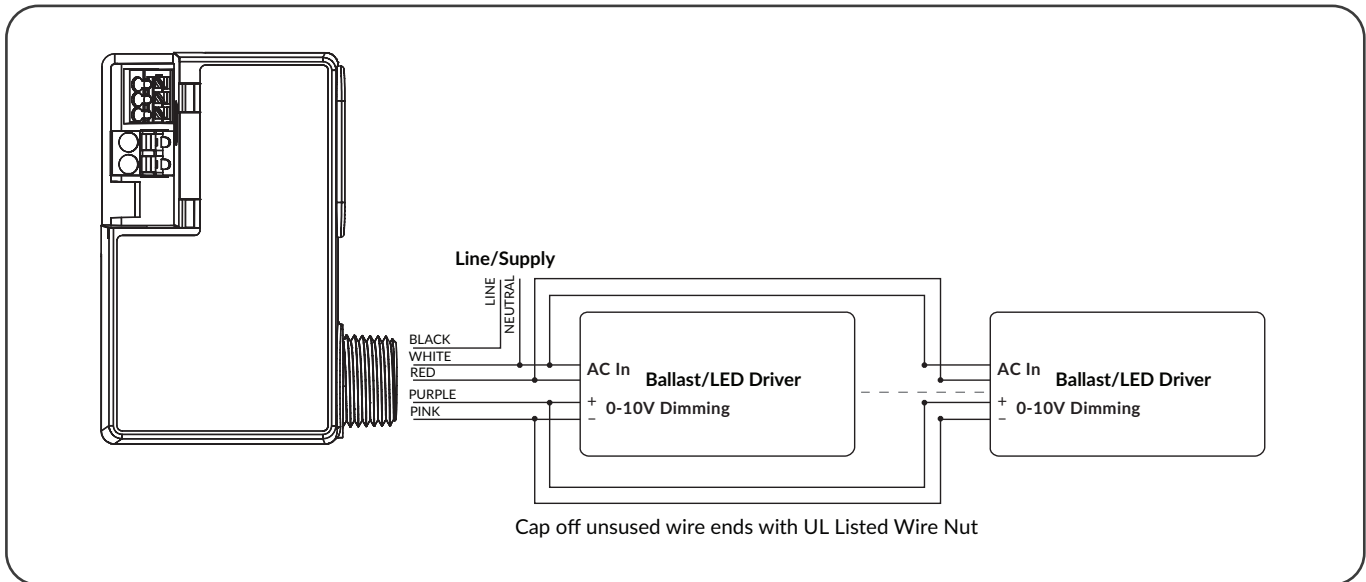
2 Option 2–Junction Box Mount

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

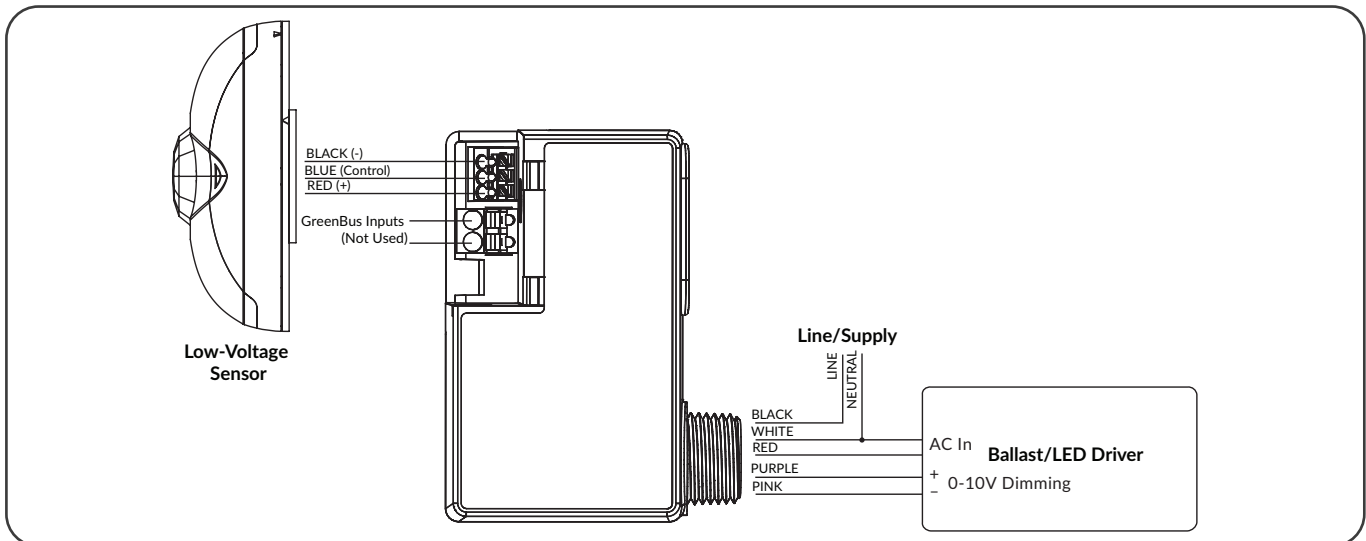


ELECTRICAL CONNECTIONS

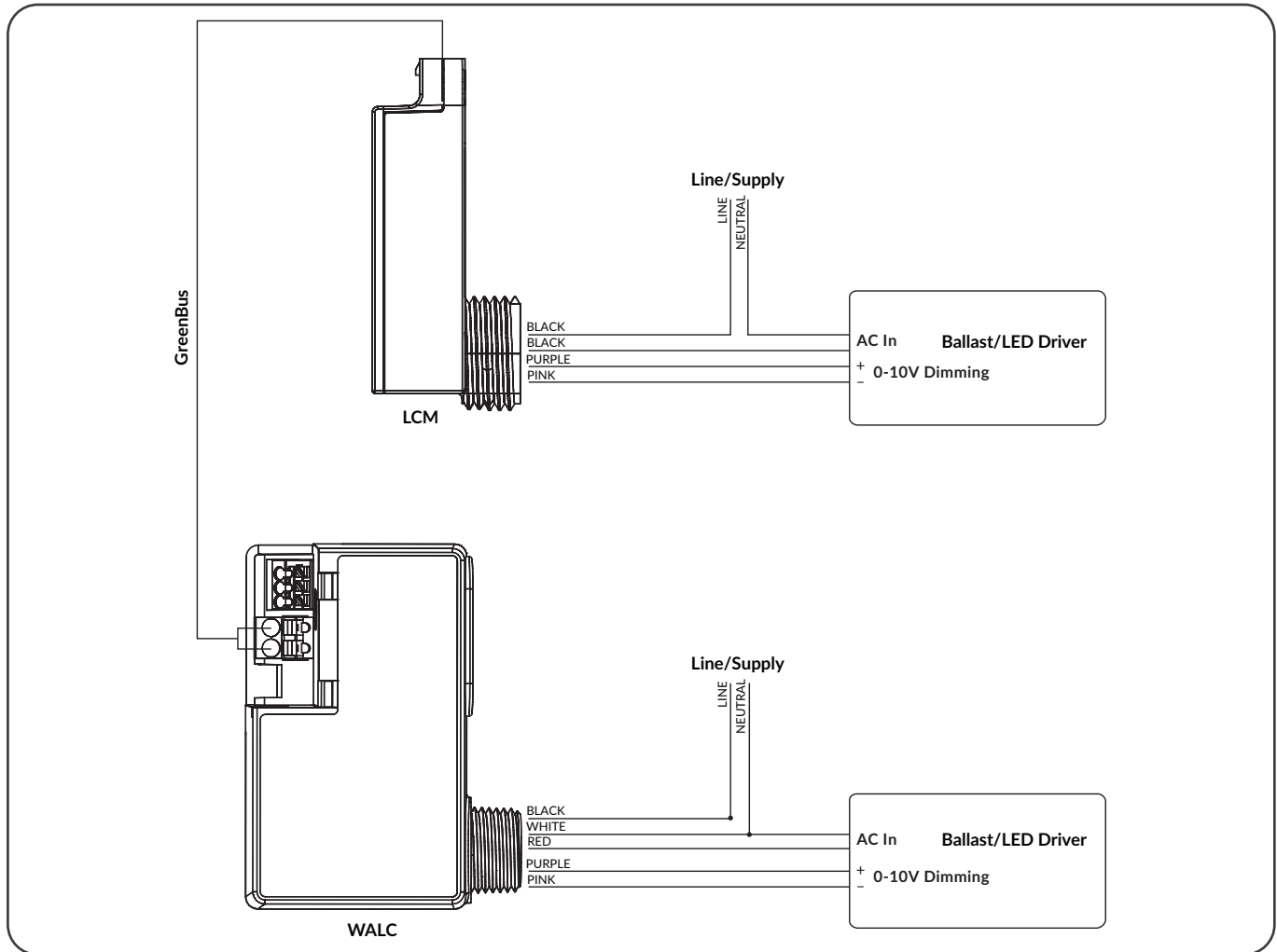
1 WALC to Dimming Ballast/LED Driver Wiring



2 WALC to Third-Party Sensor Wiring



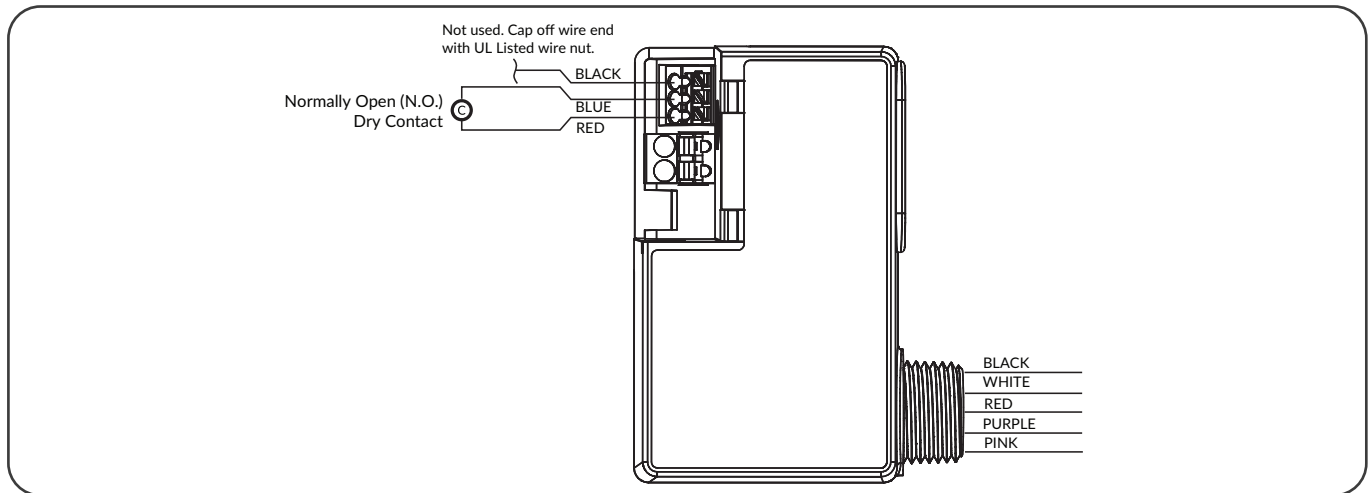
3 WALC to LCM Wiring



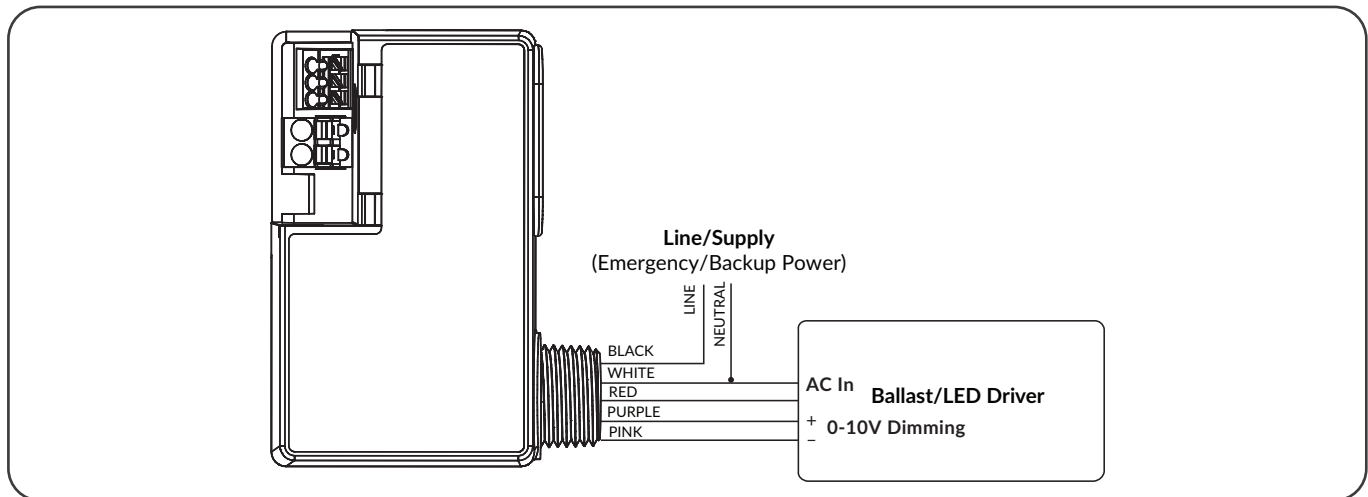
⚠ This configuration is applicable to Encelium X Lighting Control System ONLY.

Notes: Please refer to Luminaire Control Module (LCM) wiring and installation manual (included with applicable product) for connection information. WALC's GreenBus port connects to the following GreenBus products: Relay Panel Module, Phase-Cut Dimming Module, Luminaire Control Module, Area Lighting Controller and Wallstation.

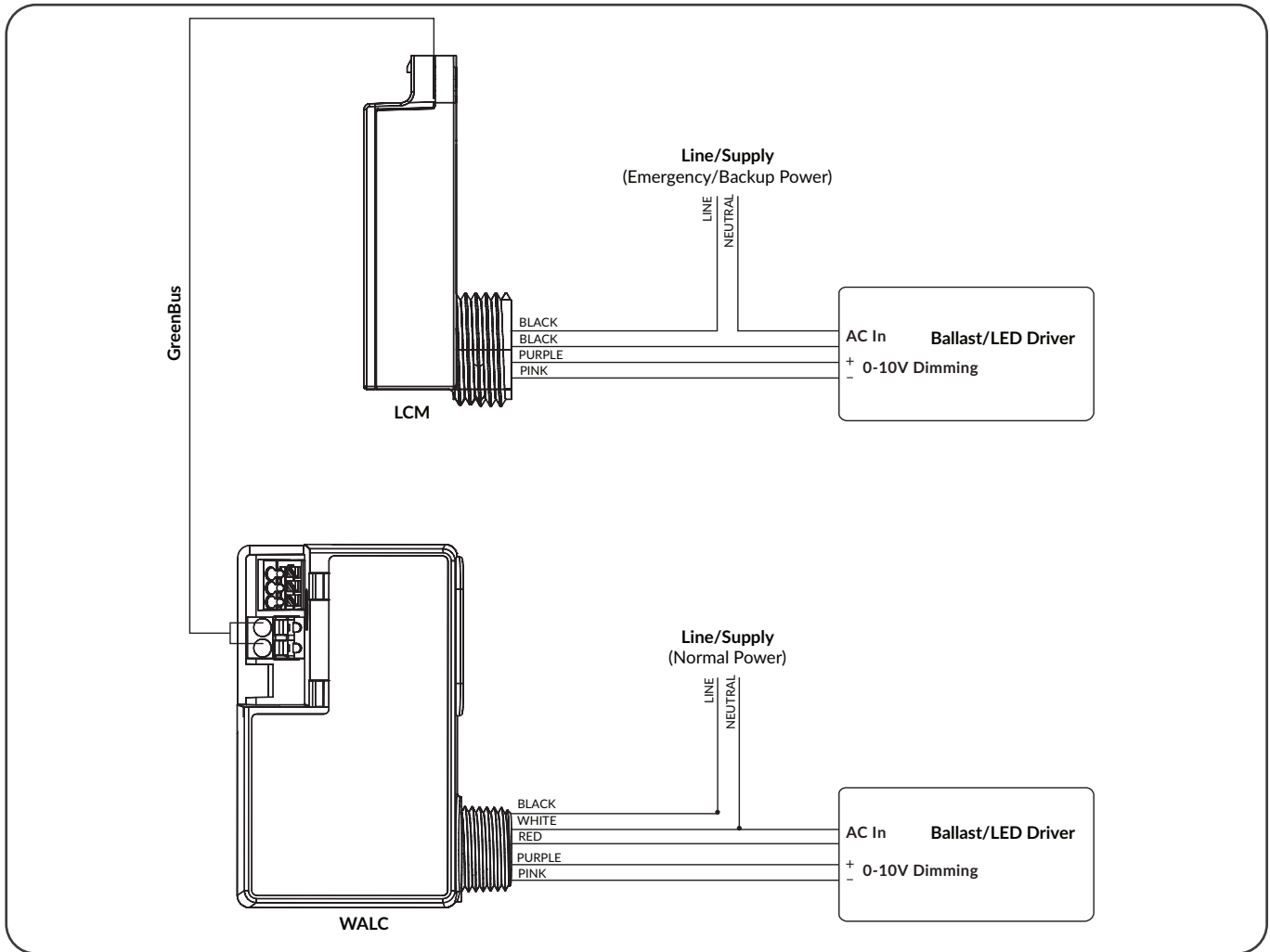
4 Integration Wiring



5 WALC Emergency Lighting Wiring



6 WALC to LCM Emergency Lighting Wiring

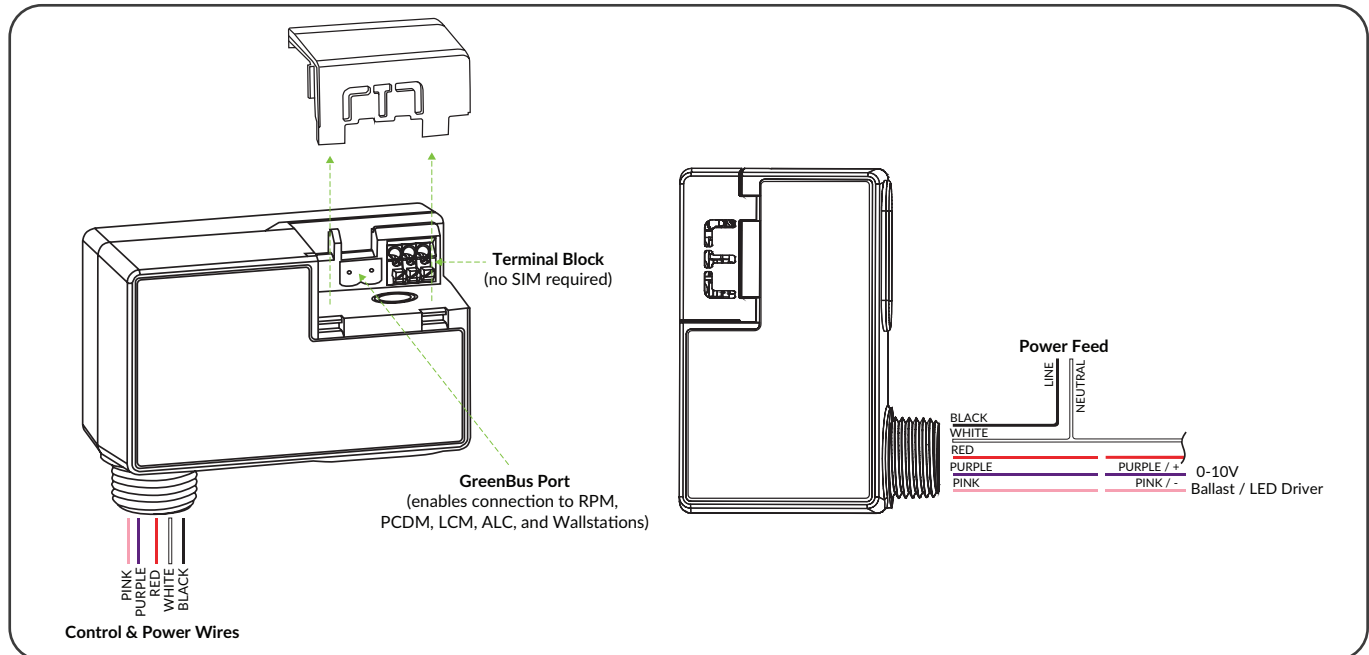


7 WALC Wiring

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 WALC dimming interface (purple and pink wires) is a galvanically isolated 0-10V circuit such that it may be wired as NEC Class 1 or 2.

The module has been tested in accordance to UL2043 and is suitable to be used in plenum or "plenum rated" areas. All wiring is rated 600V, 105°C (221°F) for use in luminaires. The black and red wires connect to the internal relay and allow the module to interrupt power to the load for complete shutoff. Refer to local electrical code, etc.

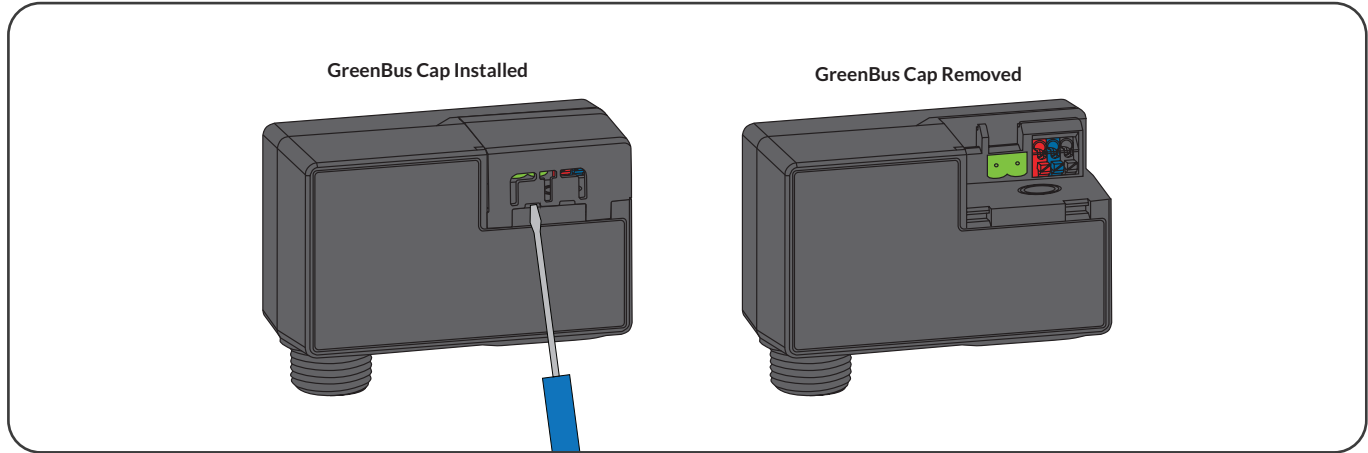
To control multiple ballasts, parallel all ballast input wires (line, neutral, and control wires purple and pink). It is recommended to observe the maximum ratings of the WALC to ensure maximum ratings are not exceeded.



- ⚠ Recommended branch circuit, 120-347V, 20A maximum. Recommended dimming signal capacity, 0-10V, 30mA maximum (sinking).
- ⚠ Due to the internal relay, power feed to the 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.
- ⚠ GreenBus uses proprietary connectors and jacks for ease of installation only. GreenBus is a proprietary standard. Connect to Encelium Lighting Control System only. Do not connect to other circuits.

8 Class 1 and Class 2 Wiring

The WALC may be wired as a Class 1 or a Class 2 device on the purple and pink wires. If these wires are connected to a Class 1 signal, ensure to install the black cap.



⚠ Failure to install black cap for Class 1 wiring schemes may result in exposed hazardous voltages at the GreenBus port.

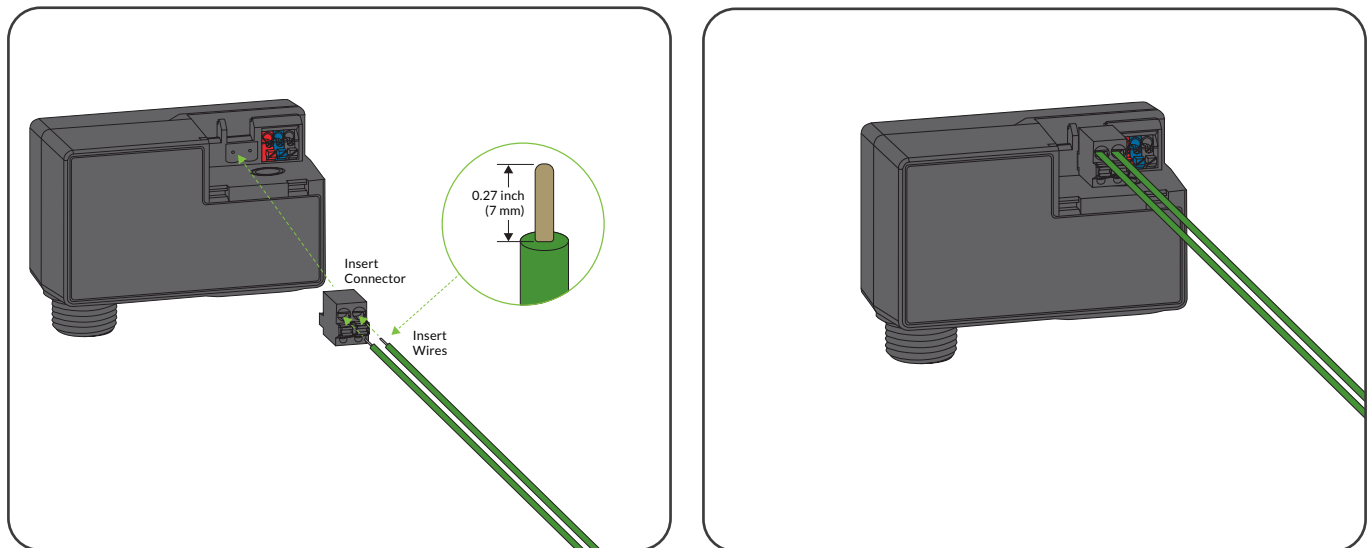
9 GreenBus

GreenBus is a low-cost, high reliability communication means to report information back to the Encelium Lighting Control Systems.

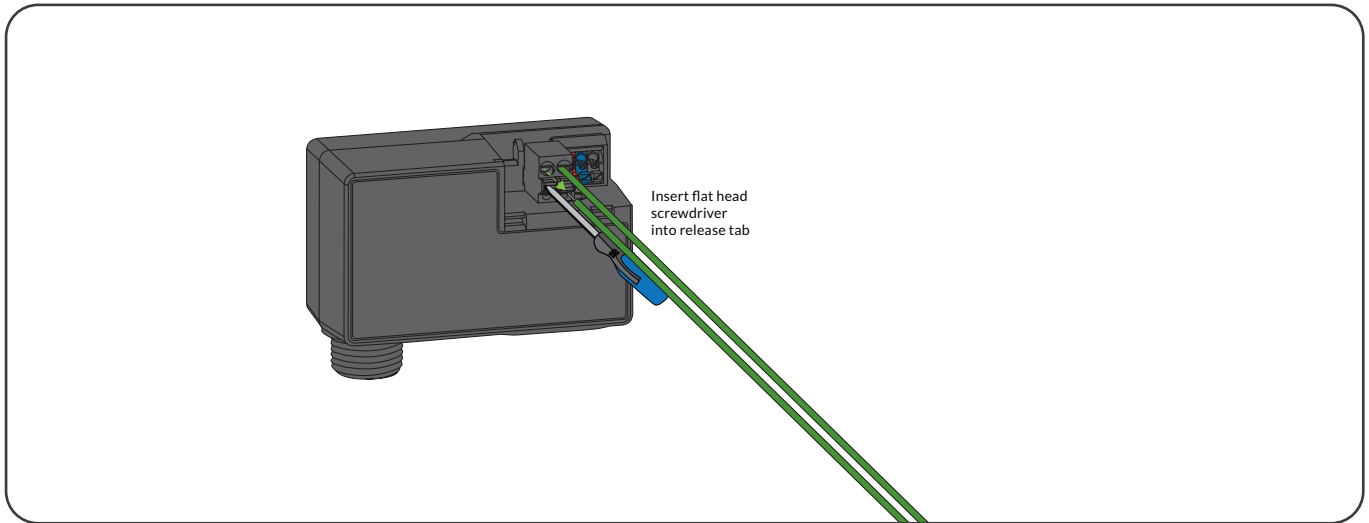
When tethering the GreenBus wiring can originate from a GB port on a Wireless Area Lighting Control Module (WALC) or a Wireless Control Module (WCM).

The GreenBus wires must be used with a proprietary connector supplied. Insert the connector to the WALC 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.



If the devices are connected with a method other than daisy-chain, this must be indicated to an Encelium Representative for approval before wiring.

- ⚠ GreenBus uses proprietary connectors and jacks for ease of installation only. GreenBus is a proprietary standard. Connect to Encelium Lighting Control System only. Do not connect to other circuits.

EMERGENCY LIGHTING

Central Power Sense, Stand-Alone WCM

Mains Connection

- WALC is connected to a branch circuit that is connected to back-up power circuit.
- The Encelium X Wireless Manager is NOT connected to emergency back-up power.

Condition Prior to Emergency

- Luminaire is functioning normally.

Emergency Condition

- WALC and Encelium X Wireless Manager lose normal power when power outage occurs.
- Emergency/back-up power system is initiated via central sense or switchgear.

Emergency Behavior

- WALC regains power feed when back-up power comes on. It releases the dimming control and turns on the internal relay to pass back-up power to the emergency luminaire.

Note: The WALC will begin dimming again when the Wireless Manager or Encelium X Controller comes back online.

Local Power Sense, WCM with LCM

Mains Connection

- WALC is NOT connected to an emergency back-up power branch circuit. The WALC detects power loss in this configuration (“local sense”).
- Luminaire Control Module (LCM) is connected to a branch circuit that is connected to back-up power.

Condition Prior to Emergency

- Luminaire is dim (or off).

Emergency Condition

- WALC and GreenBus Luminaire Control Module (UL924 recognized) loses power when power outage occurs.

Emergency Behavior

- GreenBus Luminaire Control Module regains power feed when backup power comes on.
- WALC does NOT regain power feed because it is not connected to an emergency back-up power branch circuit.
- The GreenBus Communication Bus is released allowing the GreenBus Luminaire Control Module to release dimming control and turn on the internal relay to pass backup power to the emergency luminaire.

Note: The WALC and GreenBus Luminaire Control Module will begin dimming again when the normal power is restored.

