



ENCELIUM WPLCM Wireless Area Lighting Control Module Instruction Manual

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ENCELIUM

WALC

INSTRUCTIONS

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

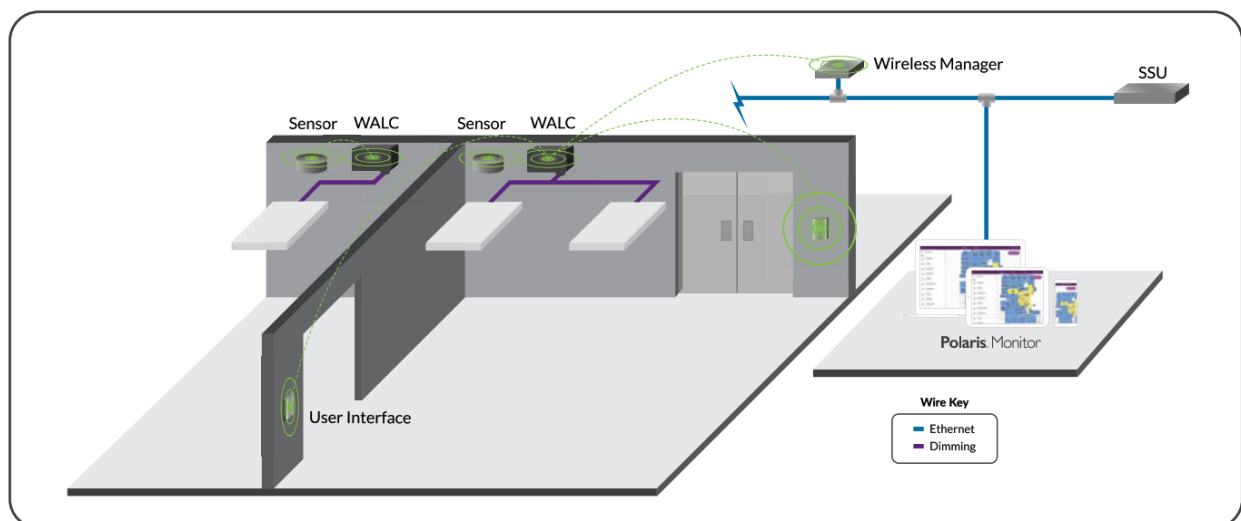
Overview

The Wireless Area Lighting Control Module (WALC) is compatible with the Encelium X Networked Light Management System and the Encelium Edge Standalone Wireless Light Management System. The WALC can interface with most electrical lighting loads and sensors. It features an integrated relay to interrupt power to its loads (ballasts/drivers) which is rated for up to 347V, making it usable with all common lighting circuit voltages. The WALC features an interface that allows control of the dimming signal to luminaire ballasts or other accessories. The dimming interface is isolated for installation as either an NEC Class 1 or 2 circuit. The WALC also features an interface that is able to connect to a GreenBus™ device or a DALI device. The WALC makes each device addressable via the wireless network (e.g. each luminaire or the group of luminaires controlled by the module can be dimmed and turned “ON/OFF”). The module will obtain its address during the commissioning process and no actions are required during installation. 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 Networked System or Encelium Edge System.

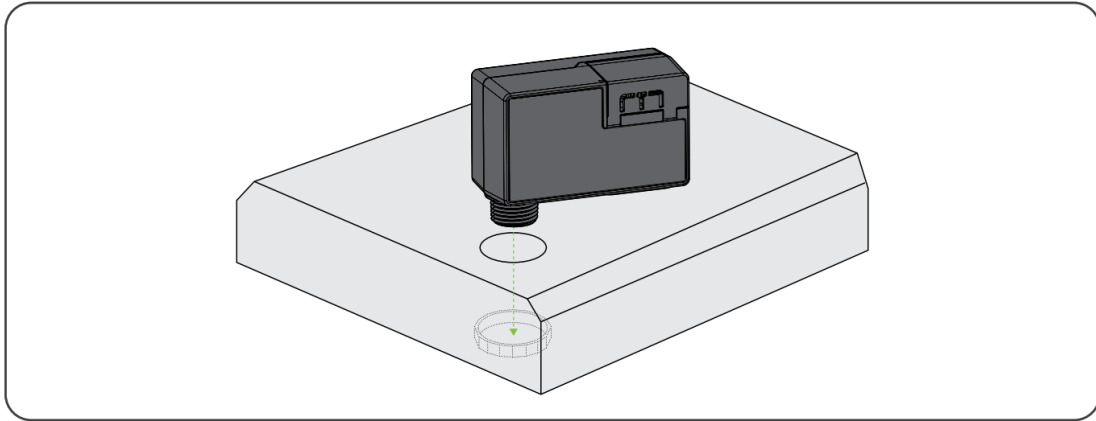
Notes: WALCs are to be installed in dry, indoor locations ONLY. For damp installations, ensure to use the appropriately rated version of the WALC Module (see Models section of this manual). Damp locations are defined

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

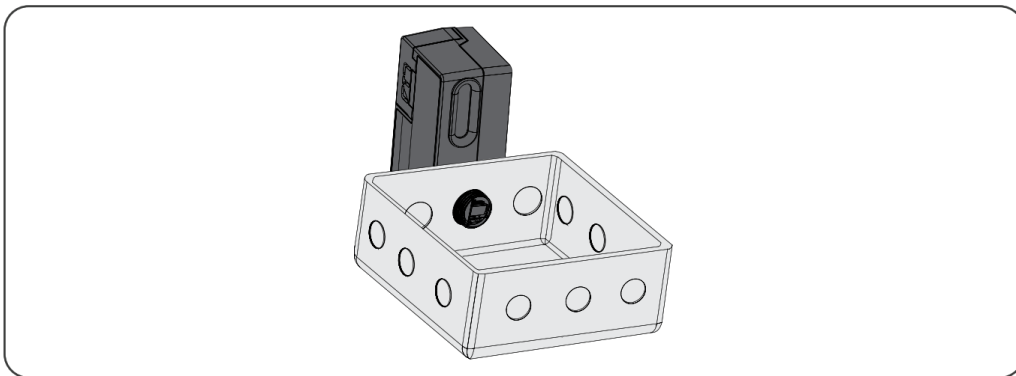
1. Option 1 —Luminaire Mount

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



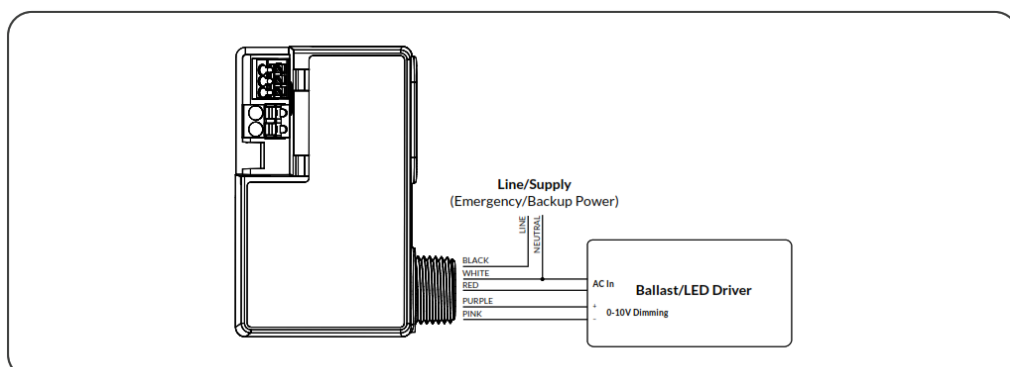
2. Option 2—Junction Box Mount

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

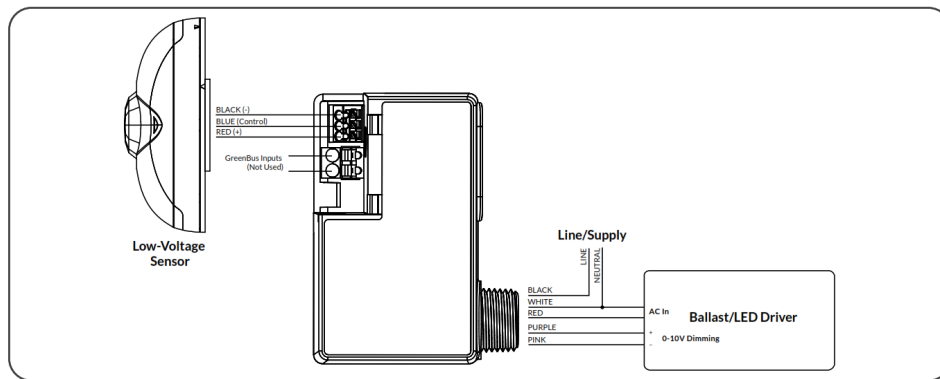


ELECTRICAL CONNECTIONS

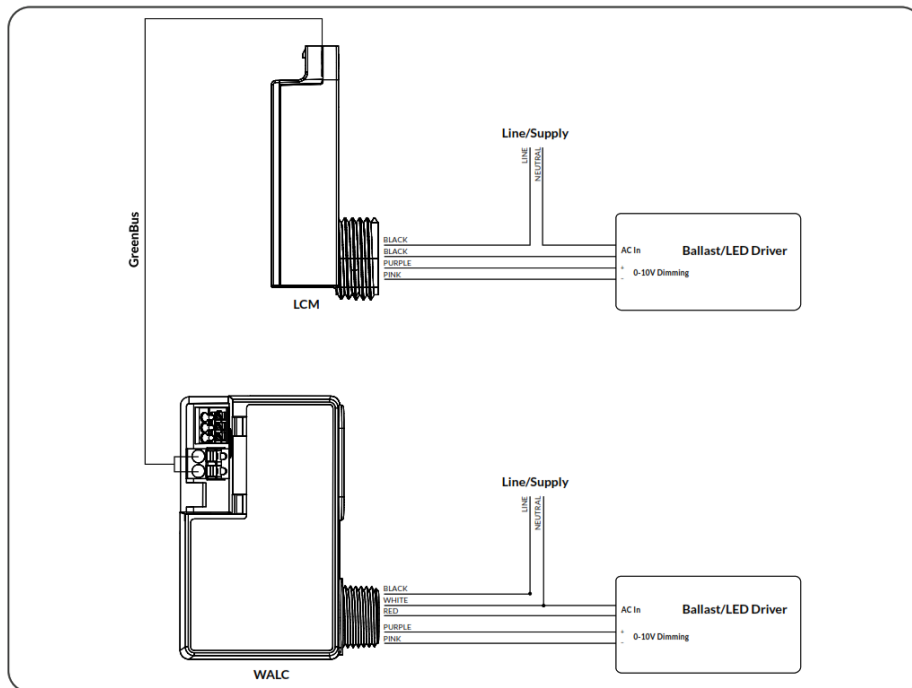
1. WALC to Dimming Ballast/LED Driver Wiring



2. WALC to Third-Party Sensor Wiring



3. WALC to LCM Wiring

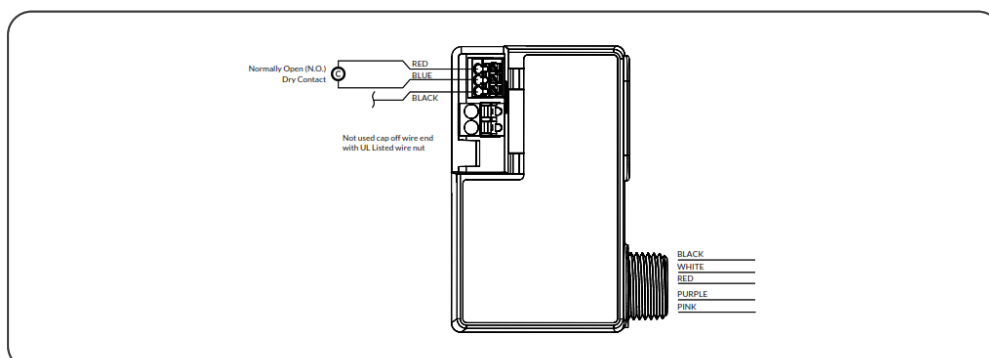


This configuration is applicable to Encelium Networked Light Management System ONLY.

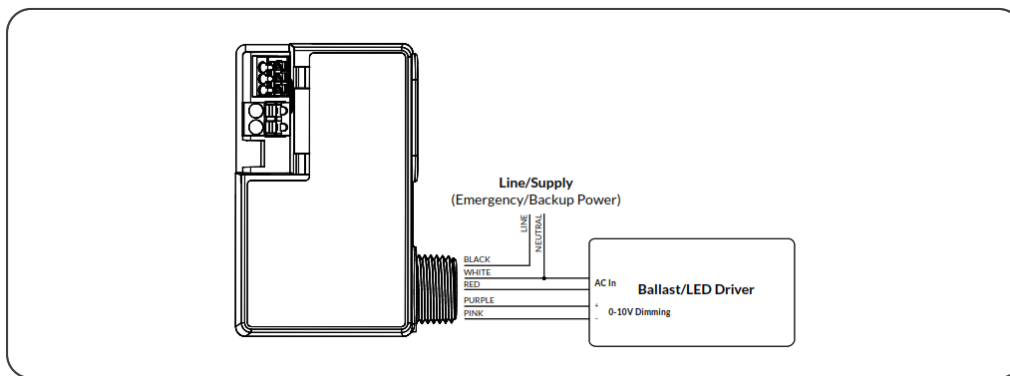


Notes: Please refer to Luminaire Control Module (LCM) wiring and installation manual (included with applicable product) for connection information. WALC's GreenBus port connects to the following GreenBus products: Relay Panel Module, Phase-Cut Dimming Module, Luminaire Control Module, Area Lighting Controller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

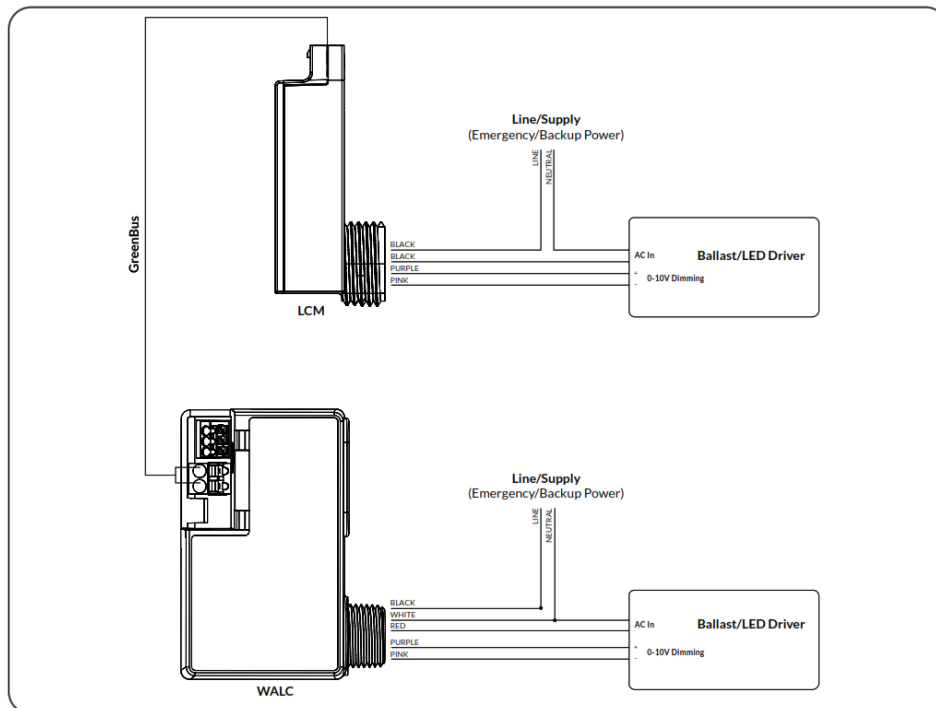
4. Integration Wiring



5 WALC Emergency Lighting Wiring



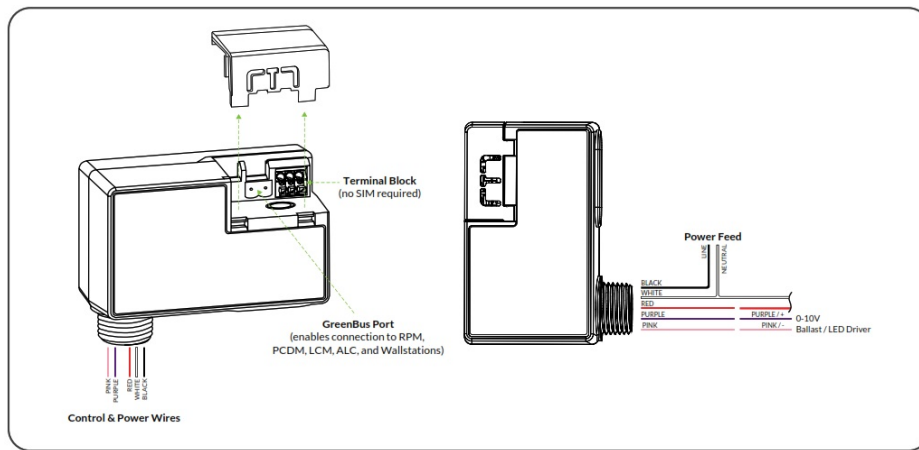
6. WALC to LCM Emergency Lighting Wiring



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, 221°F (105°C) 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).



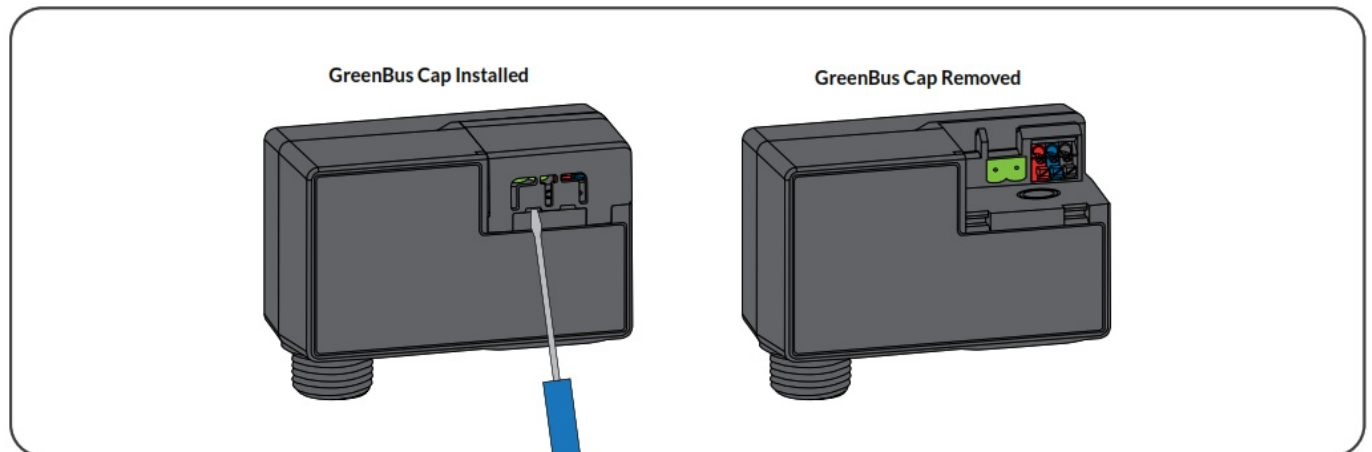
Due to the internal relay, the power feed to the luminaire may be live even if the lights are off. Turn off power at circuit breaker or fuse before installing or servicing module. Observe lockout procedures.



GreenBus uses proprietary connectors and jacks for ease of installation only. GreenBus is a proprietary standard. Connect to Encelium X Networked Light Management 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 a black cap for Class 1 wiring schemes may result in exposed hazardous voltages at the GreenBus port.

9. GreenBus

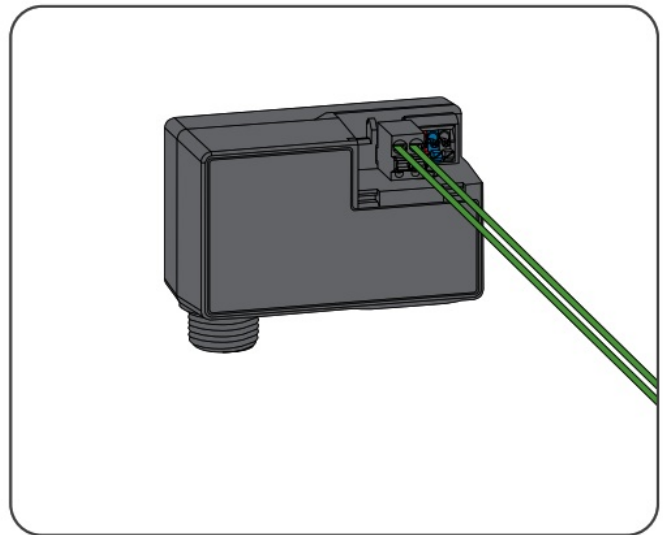
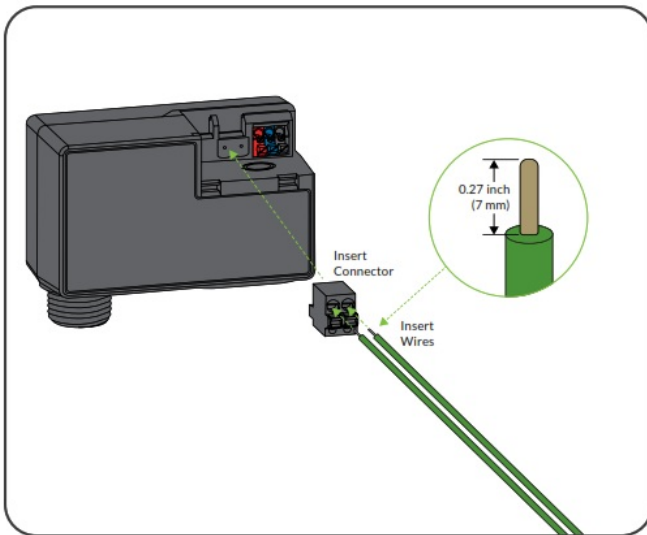
GreenBus is a low-cost, high-reliability communication means to report information back to the Encelium X Lighting Control Systems.

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



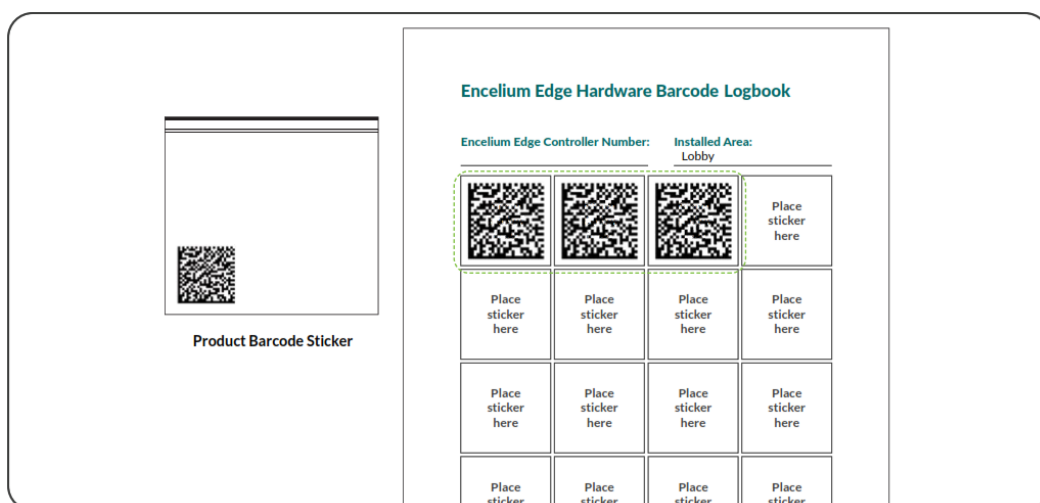
To remove the wires, use a flat head screwdriver to release the wires from the terminal blocks.

Notes: Relay Contact; recommended relay switching capacity 120 VAC, 450 W or 277 VAC, 900 W maximum. 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.

HARDWARE BARCODE LOGBOOK

For Encelium Edge installations, remove the barcode sticker from the transparent bag that is supplied in the product packaging and place the sticker in the supplied handbook.



EMERGENCY LIGHTING

Central Power Sense, Stand-Alone WCM
Mains Connection

- WALC is connected to a branch circuit that is connected to the backup power circuit.
- The Encelium X Wireless Manager or the Encelium Edge Controller is NOT connected to emergency backup power. Condition Prior to Emergency
- Luminaire is functioning normally.

Emergency Condition

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

Emergency Behavior

- WALC regains power feed when backup 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 backup 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 backup 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.

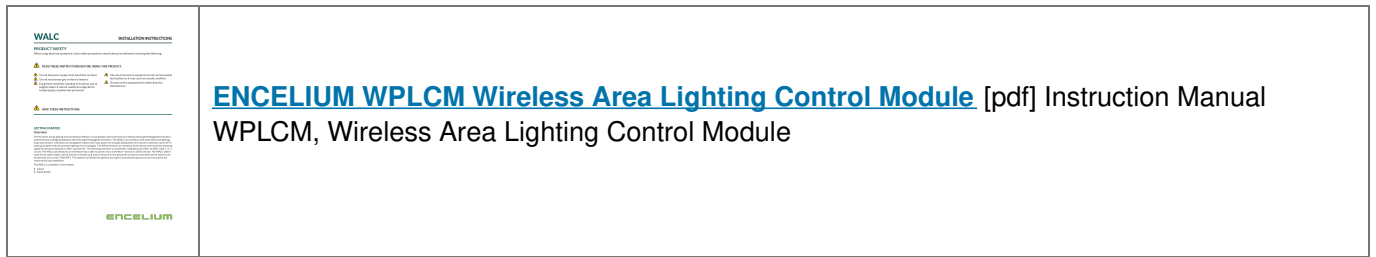
Note: The WALC and GreenBus Luminaire Control Module will begin dimming again when the normal power is restored.

TROUBLESHOOTING

There are no user-serviceable parts inside. For detailed information about how to set-up, install, use, and maintain Encelium hardware and software, please visit: help.encelium.com

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Documents / Resources



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