

TruBlu Mesh Single Channel Controller with Integral Relay

Overview

- Single Channel Controller with 0-10VDC Dimming Output
- Mounts to 1/2" Knockout (Light Fixture or Enclosure)
- Compatible with Bluetooth® SIG Mesh Systems
- Features High End Trim Adjustment, Zoning & Continuous Dimming
- Sensor/Control Input (Active High) for Relay/Load Control
- Switching Relay with Zero-Crossing
- Line Voltage Input (120-277 VAC)
- 12VDC Auxiliary Output
- Approved for Lighting and Plug Loads
- Approved for Use in Plenum Applications
- Conforms with DLC NLC5 Cybersecurity Standards



Applications

The Wireless Room Controller (PSC-WCM-450-BLE-SR) is made to fit into a Bluetooth mesh system for wireless control of room lighting with an integral 20A relay and single channel of 0-10VDC dimming output.

With an input voltage of 120-277VAC, this unit is controlled wirelessly via a qualified Bluetooth SIG Mesh network, allowing for wireless dimming of lighting and seamless integration of Bluetooth® Mesh software solutions. The unit is suited for mounting to an electrical enclosure (via 1/2" knockout) or to a fixture/luminaire (via mounting tabs).

The PSC-WCM-450-BLE-SR is rated for use in Plenums and offers additional features, including 12VDC auxiliary power supply for sensors or other products and load control input that operates the integral relay.

Operation

TruBlu™ Mesh Controls: Qualified by Bluetooth SIG for its Bluetooth Mesh 1.0.1 specification, the controller connects to a Bluetooth mesh network and is accessed via the TruBlu web portal or mobile app for initial design, setup and scheduling, as well as subsequent parameter adjustments.

Advanced functionality such as energy monitoring, and demand response is available with the optional TruBlu Gateway (sold separately).

Single Channel Dimming: allows for zone control of one 0-10VDC dimming channel.

Power Multiple Sensors: a 12VDC auxiliary device power output is available to power multiple devices including occupancy sensors.

Integral Relay: features a 20A relay to control multiple fixtures in a lighting zone.

See the TruBlu™ Commissioning User Manual for more information.

Summary

Product Type:
Single Channel Wireless Room Controller

Input Voltage | Current Consumption:
120-277VAC 50/60Hz | 100 mA

Auxiliary Power Output: 12VDC 200mA (Input Voltage up to 200VAC)
12VDC 300mA (Input Voltage over 200VAC)

Sensor Control Input: Active High 10-14VDC, 30mA

0-10VDC Output: 100mA Current Sinking

Max Load Rating (20A Relay):
16A for Elec. Ballast, LED, CFL
20A for Resistive

Mounting: 1/2" Threaded Nipple to Fixture or Electrical Enclosure

Max Bluetooth Range¹: 100ft (30.4m)

Operating Temperature:
-40°F to 104°F (-40°C to 40°C)

Storage Temperature:
-40°F to 185°F (-40°C to 85°C)

Relative Humidity:
90-95% non-condensing

Color: White

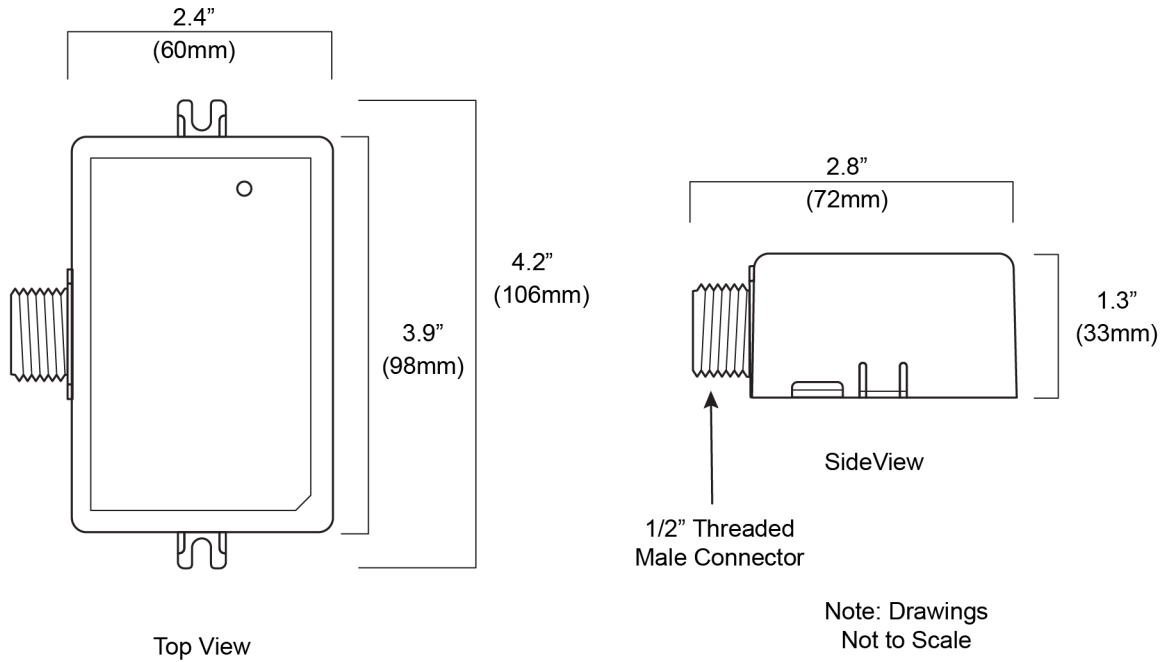
Warranty: 5 years

Note:
1. Bluetooth Range is highly dependent on the integration of fixtures, surrounding environment and conditions. It is recommended to conduct testing for Bluetooth range accuracy.

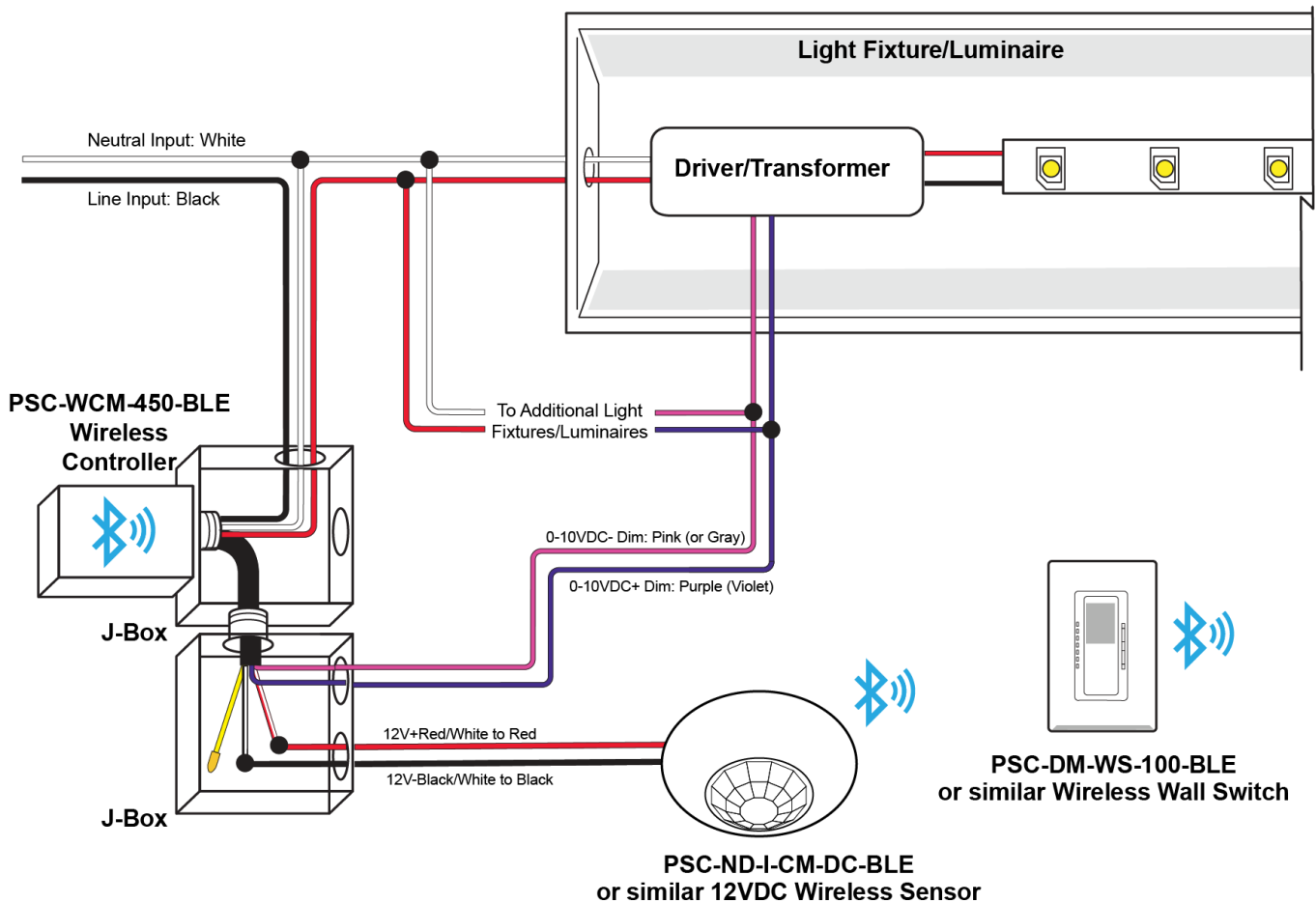
Project

Location/Type

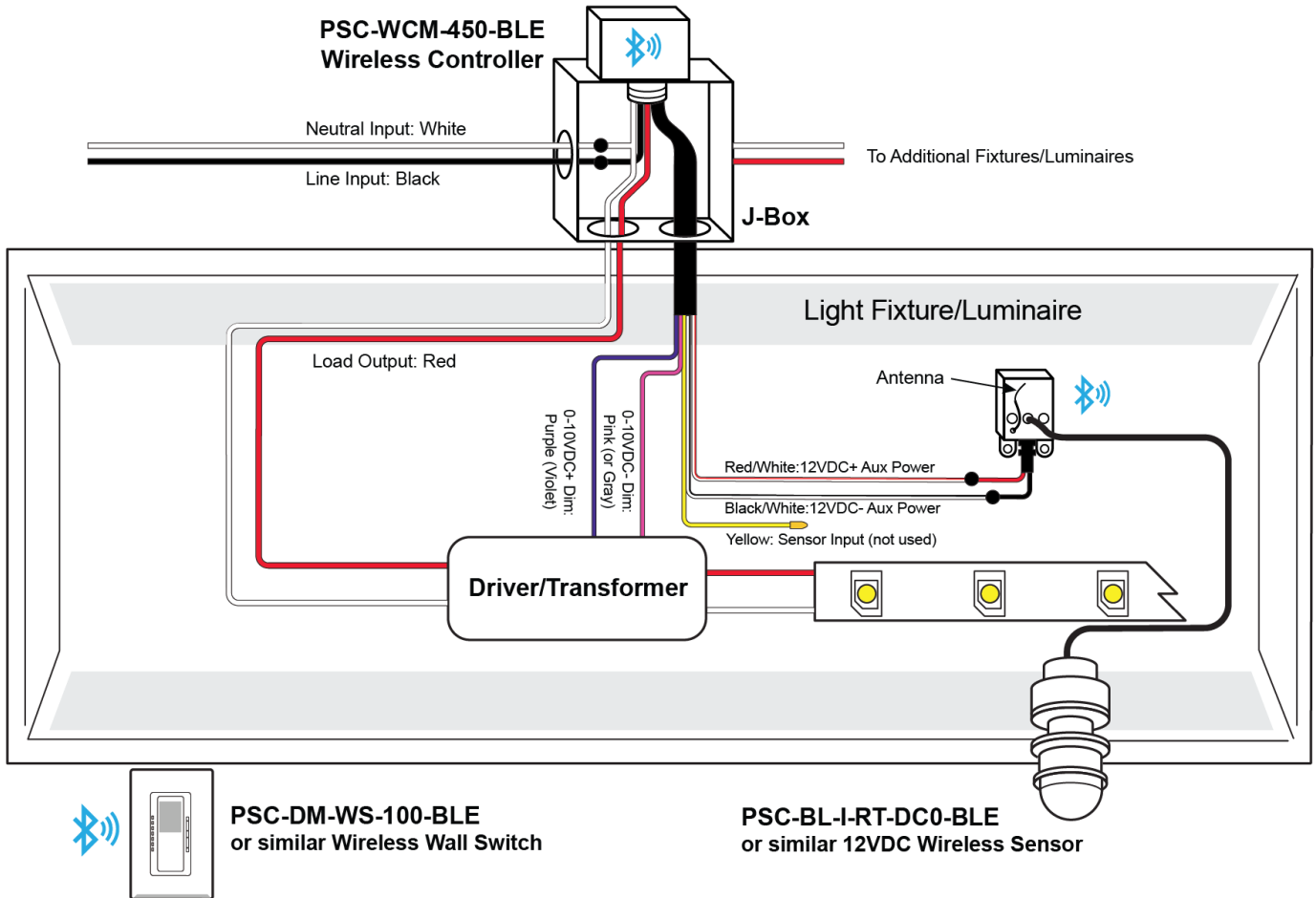
Physical Dimensions



Wiring Application Example: Controller Installed in Electrical Enclosure with Wireless Sensor and Wireless Switch



Wiring Application Example: Controller Installed In Electrical Enclosure with Wired Sensor in Fixture and Wireless Switch



Wiring Table

| Wire | Designation | Notes | Size |
|-----------------|---------------------------------------|---|--|
| Black | Line Input (120-277VAC) | Connect to Line Power (120 to 277 VAC, 50 or 60 Hz) | #12 AWG, 180+/- 20mm, Strip 10, Tin Plated |
| White | Neutral Input (120-277VAC) | Connect to Neutral Power and Luminaire Power Input | |
| Red | Load Output | Connect to Luminaire Power Input (Voltage matches Line Input) | |
| Red/White | Aux Power Output (12VDC+) | Connect to Auxiliary Device Power Input (12VDC+) | #22 AWG, 180+/-20mm, Strip 10mm Tin Plated |
| Black/White | Aux Power Output (12VDC-) | Connect to Auxiliary Device Power Input (12VDC-) | |
| Purple (Violet) | 0-10VDC+ Dim Output (Current Sinking) | Connect to Current Sourcing Luminaire Dim Input (0-10VDC+) | |
| Pink (or Gray) | 0-10VDC- Dim Output (Current Sinking) | Connect to Current Sourcing Luminaire Dim Input (0-10VDC-) | |
| Yellow | Load Control Input (12VDC) | Connect to Sensor Output or Similar Device (Active High) | |

How To Order

| Model No. | Description | Input Voltage | Relay | Dimming Output | Aux. Output | Sensor Input |
|--------------------|---|---------------|-------|----------------|-------------|--------------|
| PSC-WCM-450-BLE-SR | TruBlu™ Mesh Line Voltage Single Channel Wireless Room Controller with Integral Relay | 120-277VAC | 20A | 0-10V, 100mA | 12V,300mA | YES |

Design and specifications are subject to change without notice.