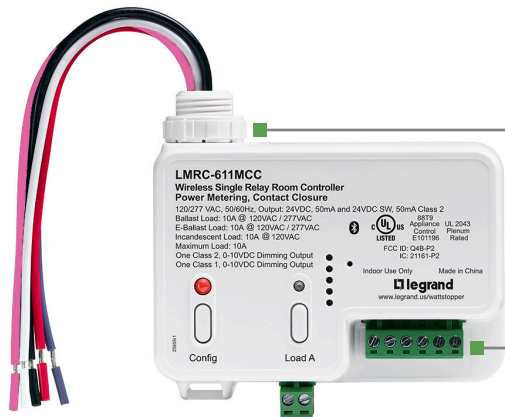# WIRELESS ON/OFF/0-10 VOLT DIMMING ROOM CONTROLLER W/ METERING & CONTACT CLOSURE

LMRC-611MCC

- Built-in IPv6 Mesh and Bluetooth® low energy technology antenna provides robust signal strength and reliable communication
- Plug n' Go™ automatic configuration with pre-programmed sequence of operations profiles in DLM Configuration App
- Quick and easy KO mounting and wireless communication to other wireless room devices
- Uses IPV6 Mesh to establish network communication with all DLM wireless devices.
- Plenum-rated wireless room controller with 0-10 volt dimming output
- Contact closure for easy integration with HVAC or other VAV systems
- Commissioning using DLM Configuration App

DESCRIPTION

The LMRC-611MCC is a wireless DLM room controller, part of the foundation of the NEW wireless Digital Lighting Management (DLM) system which includes occupancy sensors, daylighting controls, and switches for energy-efficient control, as well as wireless bridges and a border router to network rooms together. The LMRC-611MCC includes one relay to switch a total of 10 amps, a high-efficiency switching power supply, and both Class 1 and Class 2 0–10 volt outputs for control of dimmable loads including compatible LED drivers and electronic ballasts.

OPERATION

The LMRC-611MCC room controller is wired to a single 120 or 277 volt circuit. It communicates via a self formed wireless IPv6 mesh network to sensors and switches in DLM local network. Once installed it forms a wireless mesh network by automatically connecting to the edge DLM devices in the room (wireless DLM switches and sensors) drastically reducing installation time and eliminating wiring errors. Plug n' Go commissioning is then accomplished through one of three options:

1. **DLM Configuration App** available for iOS® or Android®. Simply walk through the on screen prompts to connect the wireless DLM devices in the room and choose from Sequence of Operations profiles. Plug n' Go automatic configuration assigns all loads connected to dimming room controllers to the dimming switch upon system startup.

2. **Push-to-Pair** by pushing the "config" button on each wireless device in the room to pair them together.

3. **LMCS for networked projects.** Wattstopper LMCS software provides an easy method for commissioning the entire building and applying desired settings to devices on the network.

After commissioning, Plug n' Go automatically configures system components for the most energy-efficient operation. During commissioning a pre-programmed sequence of operations profile can be selected for different standard energy codes within the DLM Configuration App. The room controller then dims or switches lighting or motor loads in response to input from the communicating devices. When a dimming input is received, the relay switches on automatically when the dimmed level rises above zero, and off when it reaches zero. It also monitors the current and voltage of the connected load. Each room controller stores up to 16 scene preset levels for its dimmed output.

APPLICATIONS

LMRC-611MCC room controllers are ideal for single or multiple zone on/off or dimming control applications including private offices, open offices, conference rooms and classrooms. Built-in metering helps facility managers track building power usage for lighting or other loads. A wireless border router (LMBR-650) is required to expose DLM local network power measurement readings to the DLM software or BAS.

PROJECT		LOCATION/ TYPE	

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PLUG N' GO AUTOMATIC CONFIGURATION

DLM room controllers manage Plug n' Go automatic system configuration, which establishes functionality based on the installed components. Each LMRC-611MCC includes a Bluetooth low energy technology radio to communicate with the DLM Configuration App on the installer's mobile device. Dimming and system parameters may also be customized using Push n' Learn or through LMCS.

When room controllers are connected only to wireless occupancy sensors, the system defaults to automatic on/off operation. If a wireless wall switch is added to a system with one load, the load defaults to manual-on/automatic-off operation. If there is a wall switch and multiple loads, load one turns on automatically, while additional loads default to manual-on control; all loads turn off automatically. At system startup, default dimming parameters are established including: levels for scene presets 1-4; fade times; and fade and ramp rates.
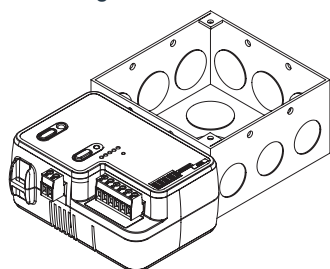
FEATURES

- Component of the NEW wireless Digital Lighting Management integrated control system
- Robust and reliable BACnet IPv6 Mesh Network based on open standards & protocols
- Device Validation: Trusted hardware chips prevent outside devices from connecting to the lighting control network.
- Zero touch provisioning: Pre-loaded digital identity and security profile increases system security level.
- Ongoing AES encryption: Communication between devices is protected by AES128 symmetric key encryption
- Three options for commissioning: the DLM Configuration App for iOS or Android, Push n' Learn, or LMCS for networked projects
- Built-in IPv6 Mesh/Bluetooth low energy technology antenna provides robust signal strength and reliable communication
- On/Off/Dim local override button for each load
- Firmware can easily be updated over the air using the DLM Configuration App (which communicates via Bluetooth low energy technology) or LMCS software.

- Push n' Learn™ functionality for personalization without the need for tools or a PC
- A fully networked DLM system, paired with RACCESS remote support, allows updates to be pushed to the entire building from the Wattstopper Remote Operations Center (ROC), avoiding downtime or service calls.
- IPv6 Mesh wireless standard delivers reliable, long range, low latency wireless communication that is scalable for a single room or entire buildings with thousands of rooms
- Blue LED for load status
- 0-10V signal opens on loss of LMRC power
- Instantaneous current and voltage measurement of connected load
- Zero-crossing circuitry for each relay for reliability and increased product life
- UL 2043 plenum rated
- Contact closure based on occupancy status, for easy integration with HVAC systems.
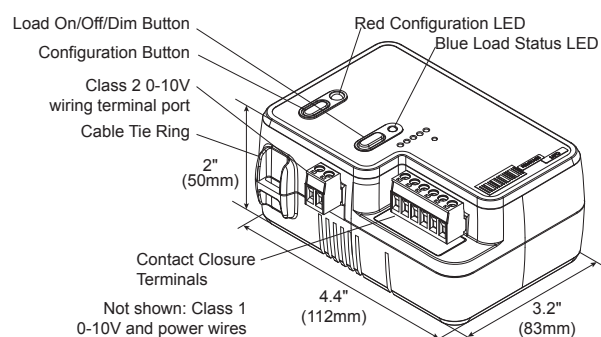- The product meets the materials restrictions of RoHS

SPECIFICATIONS

- Input Voltage: 120/277VAC, 50/60Hz
- Load Requirements:
  - Incandescent: 10A @ 120VAC
  - Ballast and E-ballast: 10A @ 120/277VAC
- Contact Closure Terminals: NO and NC, 500mA max; 24V and 24V Switched, 50mA max.
- Class 1 & 2 Dimming Output, 0-10V sinks up to 50mA per channel
- Connection to DLM Network: Wireless IPv6 Mesh
- Wireless Standards supported:
  - IPv6 Mesh (6LoWPAN / 802.15.4 / 2.4GHz), range up to 100 ft.
  - Bluetooth low energy (802.15.4 / 2.4GHz), range up to 30 ft.
- Device Security: -Factory provisioned trusted hardware

- Wireless Encryption: AES 128-bit symmetric key
- Built-in Antenna: IPv6 Mesh and Bluetooth low energy
- Other
  - Compatible Border Router: Wattstopper LMBR-650
  - BACnet IPv6 capable
- DLM local network parameters:
- Up to 48 loads
  - Up to 48 communicating devices
- Operating conditions: for indoor use only; @120/277V: 32-131°F (0-55°C); 5-95% RH, non-condensing
- UL and cUL listed (E101196)
- FCC part 15 compliant
- Five year warranty

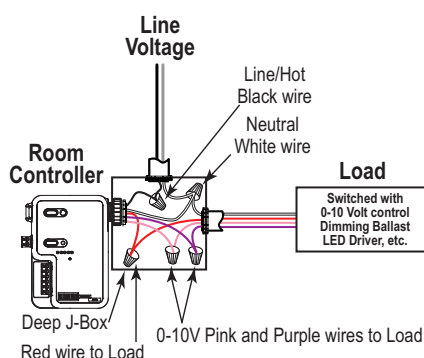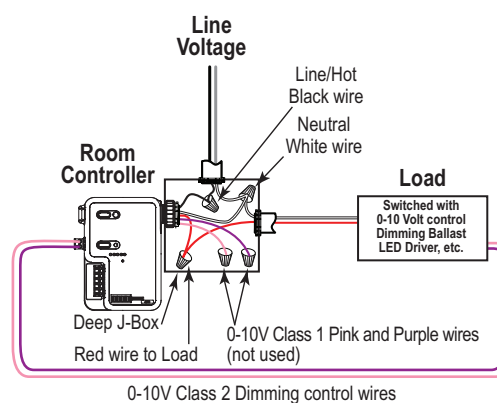designed to be better.

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MOUNTING & CONTROLS

Mounting

Mount to 1/2" KO on a deep J-box

Controls and Dimensions

Load On/Off/Dim Button
Configuration Button
Class 2 0-10V wiring terminal port
Cable Tie Ring
2" (50mm)
Red Configuration LED
Blue Load Status LED

Contact Closure Terminals
Not shown: Class 1 0-10V and power wires
4.4" (112mm)
3.2" (83mm)

Contact Closure Functionality	
PIN (left to right)	Function
Black	NO contact on Relay
White	COM on Relay
Red	NC contact on Relay
Yellow	24V output supply
Violet	Switched on Occupancy 24V (WRC blue wire)
Gray	Ground

WIRING

Class 1 Dimming

Line Voltage
Line/Hot Black wire
Neutral White wire
Room Controller
Load
Switched with 0-10 Volt control Dimming Ballast LED Driver, etc.
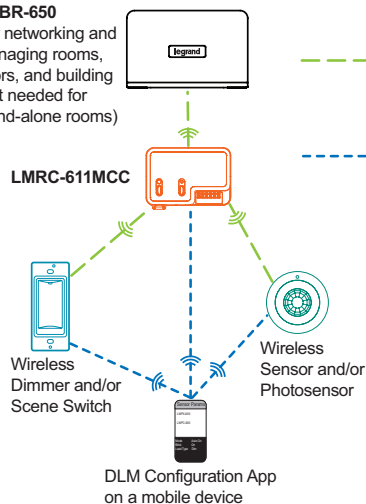Deep J-Box
Red wire to Load
0-10V Pink and Purple wires to Load

NOTE: Per UL, the 0-10V negative dimming wire color has been changed from gray to pink.

Class 2 Dimming

Line Voltage
Line/Hot Black wire
Neutral White wire
Room Controller
Load
Switched with 0-10 Volt control Dimming Ballast LED Driver, etc.
Deep J-Box
Red wire to Load
0-10V Class 1 Pink and Purple wires (not used)
0-10V Class 2 Dimming control wires

WIRELESS CONNECTION

LMBR-650
For networking and managing rooms, floors, and building (not needed for stand-alone rooms)

LMRC-611MCC

IPv6 Mesh for networking of DLM rooms and devices over 6LoWPAN

Bluetooth low energy communication for **mobile App support**

Wireless Dimmer and/or Scene Switch

Wireless Sensor and/or Photosensor

DLM Configuration App on a mobile device

Distance Recommendations:

30' maximum between LMRC-611MCC and mobile device

60' maximum between LMRC-611MCC and battery device

10' minimum and 100' maximum between LMBR-650 and LMRC-611MCC

ORDERING INFORMATION

	Catalog #	Description	Voltage	Total Rating
☐	LMRC-611MCC	1 Relay Wireless Room Controller, 0-10V dimming, with metering and contact closure	120/277VAC	10A ballast, E-ballast or incandescent
☐	LMRC-611MCC-U	1 Relay Wireless Room Controller, 0-10V dimming, with metering and contact closure BAA/TAA compliant*		

*Product is compliant with Buy American Act and Trade Agreement Act

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