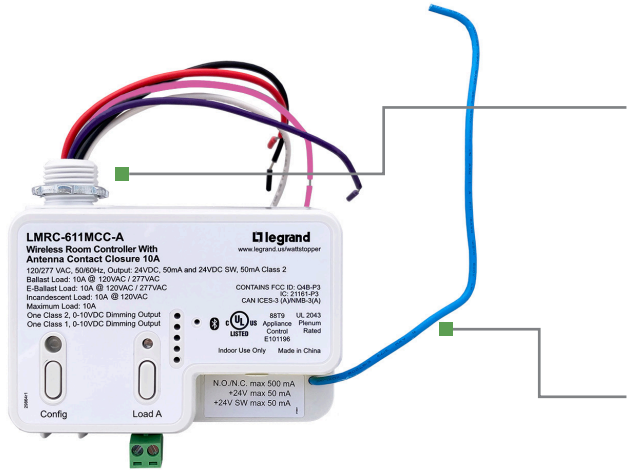
WIRELESS DIMMING ROOM CONTROLLER WITH CONTACT CLOSURE AND ANTENNA

LMRC-611MCC-A



- Built-in IPv6 Mesh and Bluetooth® low energy technology antenna provides robust signal strength and reliable communication
- 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 and Plug n' Go automatic configuration
- Contact closure for easy integration with HVAC or other VAV systems
- External antenna provides signal strength and reliable communication while controller is installed inside a junction box
- Commissioning using DLM Configuration App

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DESCRIPTION

The LMRC-611MCC is a wireless DLM room controller, part of the wireless Digital Lighting Management (DLM) system which includes occupancy sensors, daylighting controls, and switches for energy-efficient room control. The LMRC-611MCC-A 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-A 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 two options:

1. **DLM Configuration App** available for iOS® or Android®. Simply walk through the on screen prompts to connect and configure wireless DLM devices in the room. Plug n' Go automatic configuration assigns all loads connected to dimming room controllers to the dimming switch upon system startup.
2. **Push-to-Pair** – Press the "config" button on each wireless device in the room to pair them together.

After commissioning, Plug n' Go automatically configures system components for the most energy-efficient operation. 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 meters the current and voltage of the connected load. Each room controller stores up to 16 scene preset levels for its dimmed output.

APPLICATIONS

The LMRC-611MCC-A wireless room controller with external antenna is ideal for installations where electrical devices are required to be mounted in a sealed junction box (Chicago Plenum) or to meet local codes where all high and low voltage wiring is required to be inside rigid electrical conduit.

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-611-16M includes a Bluetooth low energy technology radio to communicate with the DLM Configuration App on the installer's mobile device, instead of configuring settings using the LMCT-100 IR remote. Dimming and system parameters may also be customized using Push n' Learn.

When room controllers are connected, the system defaults to automatic on/off operation. At system startup, default dimming parameters are established including: levels for scene presets 1-4; fade times; and fade and ramp rates.

PROJECT		LOCATION/ TYPE	

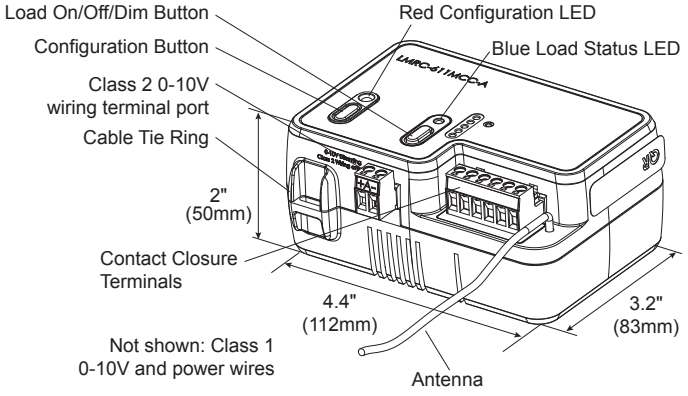
FEATURES

- Component of the wireless Digital Lighting Management integrated control system
- External antenna provides reliable communication while controller is mounted inside a junction box Robust and reliable BACnet IPv6 Mesh Network based on open standards & protocols
- Includes sealed KO connectors for antenna (LMRC-AG) and room controller wiring conduit adapter (LMRC-1CA)
- 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
- Multiple options for commissioning: the DLM Configuration App for iOS or Android, Push n' Learn
- Push n' Learn™ functionality for personalization without the need for tools or a PC
- 0-10V signal opens on loss of LMRC power
- Contact closure based on occupancy status, for easy integration with HVAC systems.
- Firmware can easily be updated over the air using the DLM Configuration App (which communicates via Bluetooth low energy technology).
- On/Off/Dim local override button for each load
- 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
- Instantaneous current and voltage measurement of connected load
- Zero-crossing circuitry for each relay for reliability and increased product life
- UL 2043 plenum rated
- 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 Communication:
  - IPv6 Mesh range between wire powered devices (LMBR-650, LMBC-650, LMRC-6xx, LMPL-6xx): up to 100 ft.
  - IPv6 Mesh range for battery powered devices: up to 60 ft.
  - Bluetooth low energy range: up to 30 ft.
- Device Security: Factory provisioned trusted hardware
- Wireless Encryption: AES 128-bit symmetric key
- External Antenna: IPv6 Mesh and Bluetooth low energy
- 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; UL924, intended for Indoor Dry Locations; UL60730, This model is Complementary Listed to "Emergency Lighting Equipment".
- Five year warranty
- Recommended junction box (j-box) for Chicago Plenum or conduit requirements*: Garvin Industries 4-11/16 Chicago Plenum Air Tight Junction Box, 2-1/8 in. Deep, 3/4 in. Knockouts, item #72171-3/4-VT or equivalent
  * sold separately by others

CONTROLS



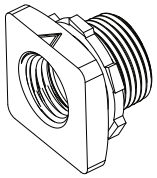
Contact Closure Functionality	
PIN (left to right)	Function
Black	NO contact on Relay
White	COM on Relay
Red	NC contact on Relay
Yellow	24V output supply
Violet	Switched on Occupancy 24V (WRC blue wire)
Gray	Ground

MOUNTING AND WIRING

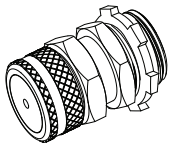
The LMRC-611MCC-A can be installed in a deep junction box with 3/4" knockouts. (See the Specifications section for recommendations).

The included conduit adapter is required when installing the LMRC within a box.

The included antenna gland is used to secure the antenna and can be installed on any 3/4" knockout. Feed the antenna through the antenna gland and tighten. Once the antenna is secured through the gland, you may tighten it by rotating the screw portion of the gland.



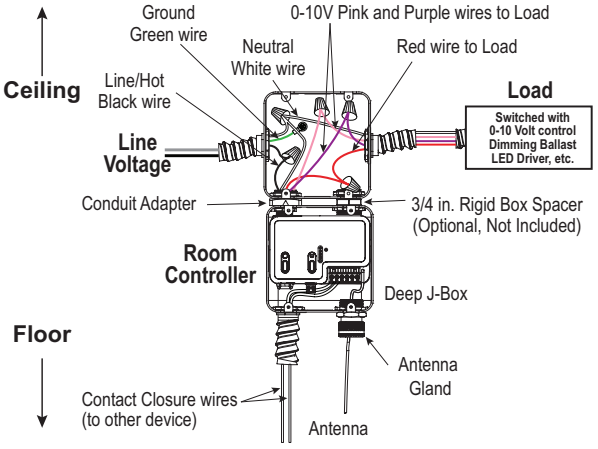
Conduit Adapter



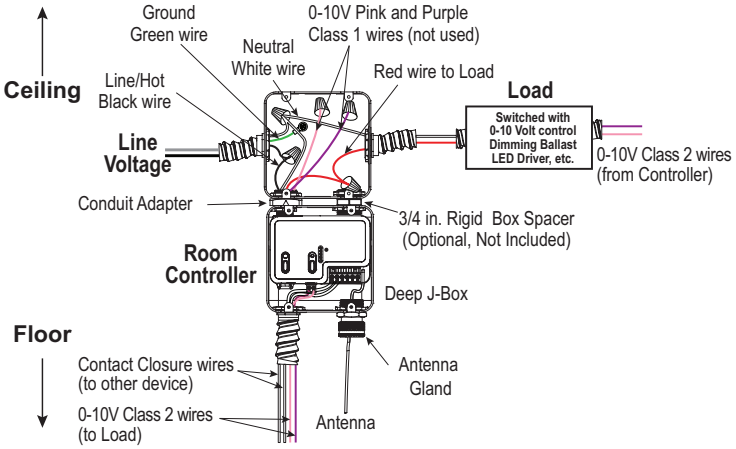
Antenna Gland

The LMRC-611MCC-A should be mounted with the **antenna pointing down**.

Class 1 Dimming



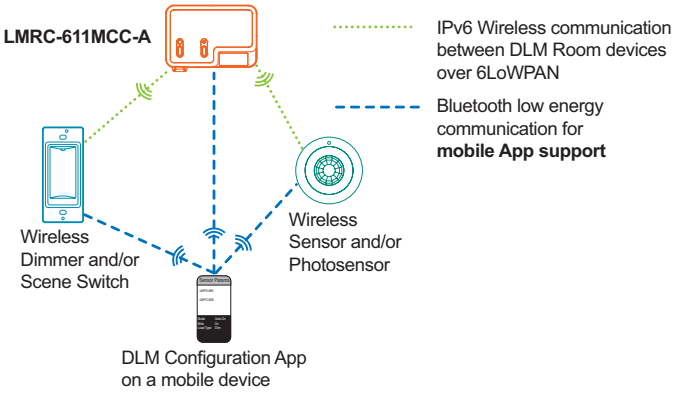
Class 2 Dimming



NOTE: Ensure Antenna is oriented below metal enclosures.

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

CONNECTION



Distance Recommendations:

6" minimum and 100' maximum between any LMRC-6xx, LMPL-6xx load controller

30' maximum between LMRC-611MCC-A and a mobile device running the DLM Config App

60' maximum between LMRC-611MCC-A and a wireless DLM battery device

ORDERING INFORMATION

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

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