

# CLM

## Connected Lighting Module

Date: \_\_\_\_\_

Quantity: \_\_\_\_\_

Company: \_\_\_\_\_

Project: \_\_\_\_\_



The **Connected Lighting Module (CLM)** is a wireless device designed to easily add individual luminaire control to spaces, delivering the ultimate flexibility to building managers. The Encelium CLM design significantly reduces electrical contractor labor hours during on-site installation.

### Works with

- Encelium X
  - ▶ Wireless



### Key Features & Benefits

- Seamlessly enable tunable white applications with luminaire integrated control using DALI Type 8 LED driver
- Customize lighting scenes for tailored experiences and tasks
- The dimming interface allows control of single or multiple luminaires in a single space
- Significantly reduce installation labor hours with luminaire integrated lighting controls
- Optimized form factor is intended for installation into a standard PG-7 (0.5 inch) trade-size knock-out present on virtually every luminaire

## Specifications

### Control

- Wireless Communication

### Wireless Range

- 30 m (100 ft) line of sight, 15.2 m (50 ft) through standard walls

### Number of Control Outputs

- Each CLM is capable of handling 10 0-10V LED drivers or 4 DALI Drivers with Self-Powered DALI Link in parallel connection

### Dimming Output

- Single 0-10V dimming output, capable of sinking 3 mA (this is equivalent to 10 typical dimming ballasts/drivers)
- DALI and DALI Type 8 for Tunable White

## ELECTRICAL

### Power Consumption

- 0.3 W

### Input Voltage

- 12 VDC (0-10V with AUX connection ONLY)
- 18 to 24 VDC (DALI Driver with Self-Powered DALI Link)

### Input Current

- Typically <40 mA

### Radio Frequency

- 2.4 GHz

### Connection Ports

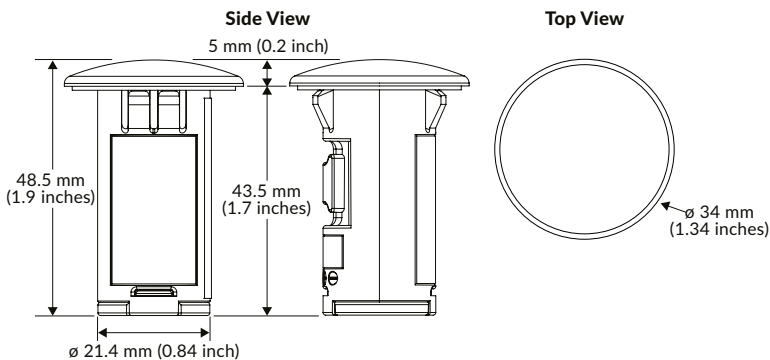
- DALI/DEXAL +
- DALI/DEXAL -
- DIM +
- DIM -
- VDC +
- VDC -

## ENVIRONMENTAL

### Operating Temperature

- -40° to 60°C (-40° to 140°F)

## Dimensions



### Operating Humidity

- 0% to 95%, non-condensing

## PHYSICAL

### Dimensions (H x W x D)

- 48.5 x 21.4 x Ø 34 mm (1.9 x 0.84 x Ø 1.34 inches)

### Weight

- 233 g (8.2 oz)

### Housing Color

- White

### Housing Material

- Nylon

### Mounting Option

- Luminaire Mount

### Mounting Hole Diameter

- PG-7 (0.5 inch) trade-size knock-out

## WARRANTY

- Standard warranty is in effect for a period of five (5) years from the date of shipment.<sup>1</sup>

## CERTIFICATIONS & SAFETY

### Approbations

- UL916 (Energy Management Equipment)
- UL924 cUL US Listed (Emergency Lighting Equipment)
- UL2043 Plenum Rated
- CE
- UK CA
- FCC
- RoHS Compliant

### Environmental Suitability

- IP54



### Footnotes:

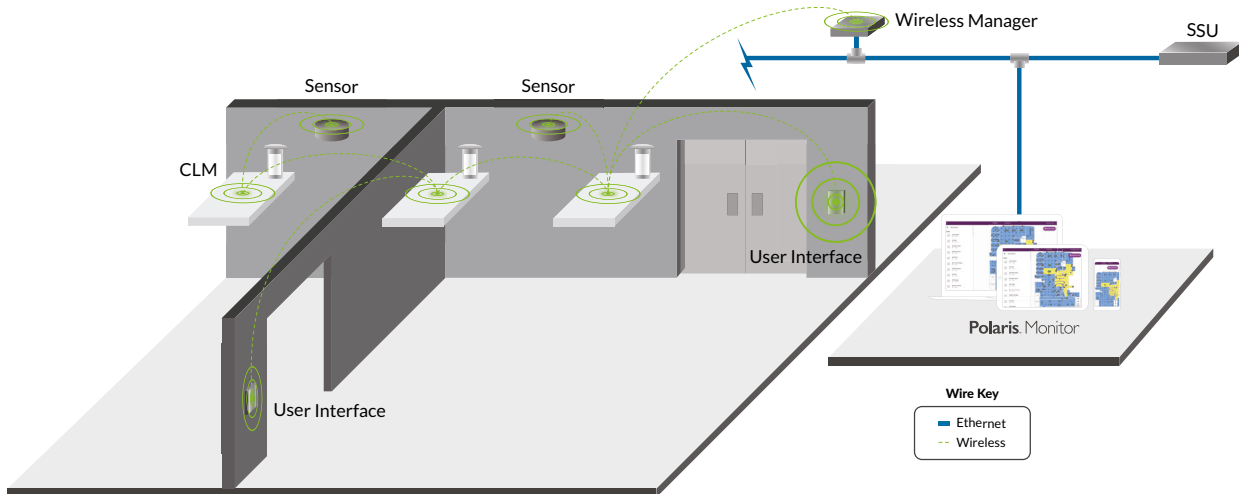
- <sup>1</sup> This does not apply to: (1) damage caused by accident, mishandling, or dropping; (2) materials which have been subject to unauthorized repair; (3) materials not used in accordance with instructions; (4) ordinary wear and tear.

## Ordering Information

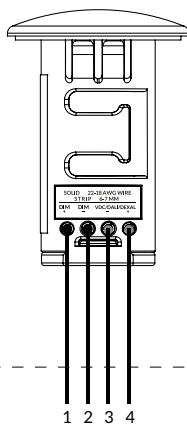
Catalog Number	Description	Approbations	Communication Network	Protocols
ZBHA-CLM-DIM	Zigbee Connected Lighting Module	UL and CE	Wireless	0-10V, DALI/DEXAL, DALI Type 8

## Wireless System Overview

This illustration shows how each component is easily integrated into the Encelium X Lighting Control System. The Connected Lighting Module (CLM) allows luminaires to be wirelessly controlled. The System Manager sends dedicated commands wirelessly to each CLM enabling individually controlled luminaires.

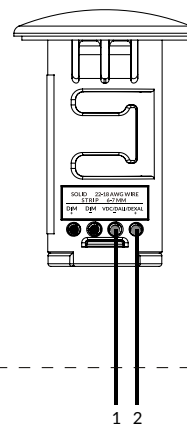


## CLM Wiring Diagrams



**CLM 0-10V DIM Port Identification**

- 1. DIM +
- 2. DIM -
- 3. 12 VDC -
- 4. 12 VDC +



**CLM DALI/DEXAL Port Identification**

- 1. DALI/DEXAL -
- 2. DALI/DEXAL +

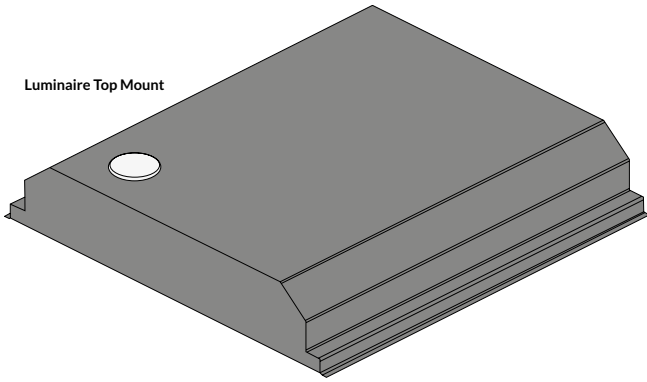
NOTE: DEXAL is a DALI driver with self-powered DALI link. See Installation Instructions for additional wiring methods.

## Mounting Option

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### Luminaire Mount

Luminaire Top Mount



Luminaire Side Mount

