## Wireless Lighting Control

# Vive PowPak CCO Module

The PowPak CCO Module is a low-voltage radio frequency (RF) control that provides a single dry contact closure output based on input from Pico remote controls and Radio Powr Savr occupancy and daylight sensors. It can be powered by to 24 V $\sim$  or 24 V== for easy connection and integration into building management, HVAC, VAV, and other third-party systems.

Communication with RF input devices, such as Pico remote controls and Radio Powr Savr sensors, is accomplished using Lutron Clear Connect RF Technology.

These products are also compatible with the Vive hub which enables a simple setup process using a standard web browser on any Wi-Fi enabled phone, tablet or computer. It also enables control and monitoring of all Vive devices. The Vive hub can be added at any time. System reprogramming will be required. For a complete list of features supported with the Vive hub, see specification submittal 3691044-04 at www.lutron.com Note for Replacement: RMMS- the "S" model can replace the non-"S" model.

#### **Features**

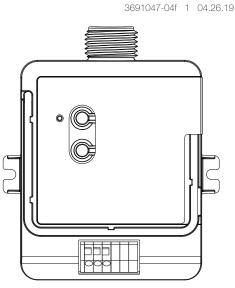
- Single contact closure output including both normally open (NO) and normally closed (NC) dry contacts
- Maintained output type
- Operates at 24 V~ or 24 V===
- Receives wireless inputs from up to 10 Pico remote controls, 10 Radio Powr Savr occupancy/vacancy sensors, and 1 Radio Powr Savr daylight sensor
- Utilizes Lutron Clear Connect RF Technology refer to the model number chart below for frequency band data
- Screw tabs provided for surface mounting (recommended); or mounts to the exterior of a 100 mm x 100 mm square junction box through a 20 mm knockout

## **Models**

Model Number	Region	Operating Voltage	Frequency Band
RMMS-CCO1-24-B	China	24 V~ or 24 V===	868.125-868.475 MHz

**NOTE:** Contact Lutron for frequency band compatibility for your geographic region if it is not indicated above.

Job Name: Model Numbers:	
JOD Name.   Model Numbers.	
Job Number:	



RMMS-CCO1-24-B model shown

#### PowPak CCO Module

## **Specifications**

#### Power

- IEC SELV/PELV
- Operating voltage: 24 V∼/24 V=
- Operating current, nominal: 45 mA (24 V $\sim$ )
  - 35 mA (24 V===)
- Standby Power Consumption: < 1.0 W

#### System Communication

- Operates using Clear Connect RF Technology for reliable wireless communication; refer to the model number chart on page 1 for frequency band details
- Wireless sensors and controls must be located within 9 m of the associated control module.

#### Mounting

- This device can be installed on a junction box through a 20 mm knockout or with mounting screws. The device must NOT be mounted inside a metallic enclosure. Improper installation can result in degraded wireless communications and intermittent or sustained communications failures and will not be covered under warranty. Refer to the installation instructions and consult local and national electric codes for proper installation.
- The PowPak should be installed in an accessible location and in a way that avoids exposure to high voltage, particularly in those installations where button programming is used. Record where it is mounted so that it can be easily located later.

NOTICE: Improper installation can result in degraded wireless communication and/or intermittent or sustained communication failures. and will not be covered under warranty.

### Metal Ceiling Mounting

- Metal ceiling grids must have a >3 mm gap of nonmetal material which extends the entire length of the tile on at least one edge. This is often achieved by foam spacers that are used to prevent tile-to-tile rattling.
- Metal ceiling grids which are continuous (with no gap) or those that are interlocked, must have a total surface area that is less than 81 m<sup>2</sup> for each section. The overall space can be larger as long as there are non-metal sections bordering or intersecting the metal sections.

#### Environment

- Ambient operating temperature: 0 °C to 55 °C
- 0% to 90% humidity, non-condensing
- For indoor use only
- All drivers and ballasts used with Vive wireless controls must comply with EN 55015/CISPR 15

#### SPECIFICATION SUBMITTAL

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Job Number:		

## **Specifications** (continued)

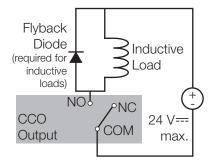
#### **Contact Closure Output**

 Accepts input voltages of 0−24 V~/0−24 V==; see chart below for load switching capacities

Switching Voltage	Resistive Load
0-24 V===	1.0 A
0-24 V~	0.5 A

- Provides both normally open (NO) and normally closed (NC) dry contacts
- Maintained output type
- CCO terminals accept 0.5 mm<sup>2</sup> to 1.5 mm<sup>2</sup> (20 AWG to 16 AWG) solid or stranded wire
- Output is latching

• The CCO is not rated to control unclamped, inductive loads. Inductive loads include, but are not limited to, relays, solenoids, and motors. To control these types of equipment, a flyback diode must be used (DC voltages only). See diagram below. For more information, please see Application Note #434 (P/N 048434) at www.lutron.com



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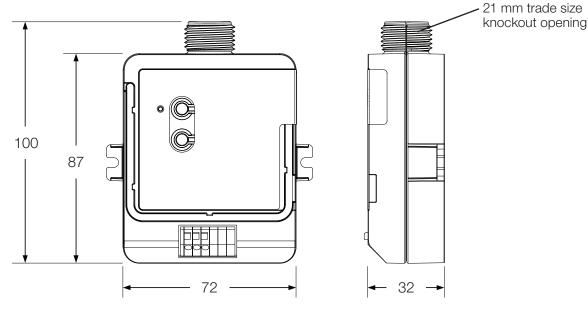
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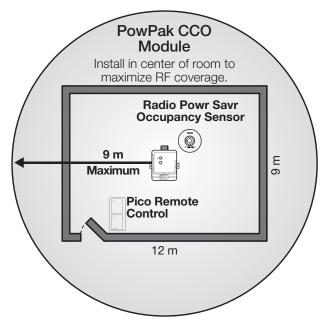
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## Dimensions

Dimensions are shown as: mm



## **Range Diagrams**



**NOTE:** Wireless sensors and controls must be located within 9 m of the associated control module.

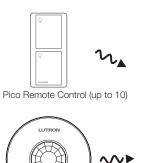
- Metal ceiling grids must have a ≥3 mm gap of non-metal material which extends the entire length of the tile on at least one edge. This is often achieved by foam spacers that are used to prevent tile-to-tile rattling.
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# System Diagram

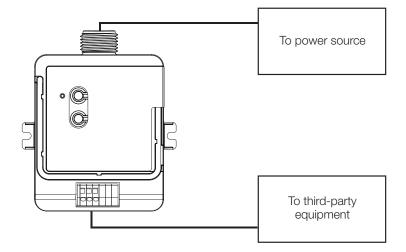


Radio Powr Savr Occupancy Sensor (up to 10)

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Radio Powr Savr Daylight Sensor (up to 1)



# **Default Operation**

| Transmitting Device                 | Transmitted Command                 | CCO Default Action    |
|-------------------------------------|-------------------------------------|-----------------------|
| Pico                                | On                                  | NO = Close, NC = Open |
| Remote Control                      | Off                                 | NO = Open, NC = Close |
|                                     | Raise                               | NO = Close, NC = Open |
|                                     | Lower                               | No Action             |
|                                     | Preset                              | NO = Close, NC = Open |
| Radio Powr Savr<br>Occupancy Sensor | Occupied                            | NO = Close, NC = Open |
|                                     | Unoccupied                          | NO = Open, NC = Close |
| Radio Powr Savr<br>Vacancy Sensor   | Occupied                            | No Action             |
|                                     | Unoccupied                          | NO = Open, NC = Close |
| Radio Powr Savr<br>Daylight Sensor  | Ambient Light Below<br>Target Level | NO = Close, NC = Open |
|                                     | Ambient Light Above<br>Target Level | NO = Open, NC = Close |

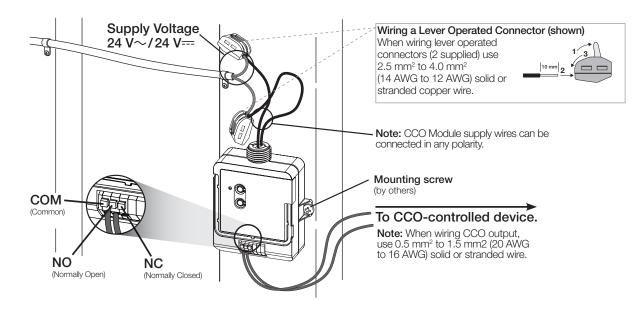
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# Wiring Diagram (Recommended)

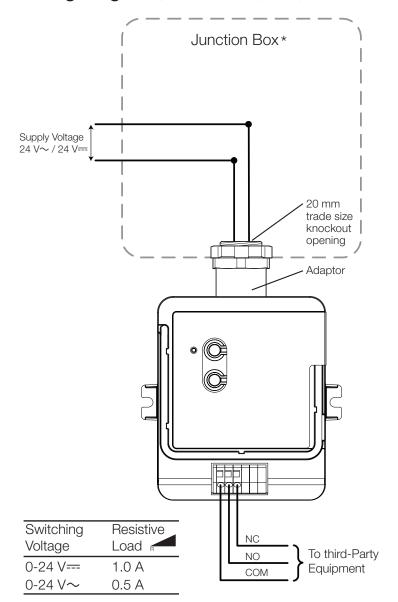


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### Wiring Diagram (Junction Box Optional)



\* NOTE: The control module mounts to the exterior of a junction box. Do not mount inside a metallic enclosure.

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