

Vive PowPak Dimming Module with 0–10 V_{DC} Control

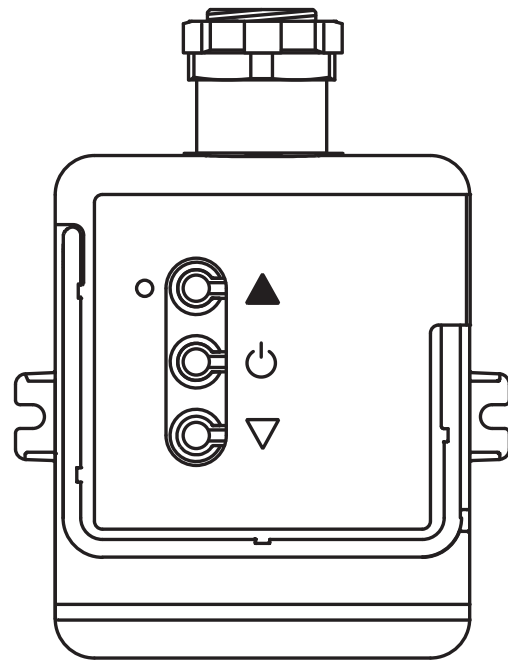
The PowPak Dimming Module with 0–10 V_{DC} Control is a radio frequency (RF) control that operates 0–10 V_{DC} controlled LED drivers or fluorescent ballasts based on input from Pico remote controls and Radio Powr Savr sensors. The Dimming Module with 0–10 V_{DC} Control is ideal for small areas (e.g., classrooms, conference rooms, private offices). Communication with RF input devices (e.g., Pico remote controls, Radio Powr Savr sensors) is accomplished by 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

- Controls up to 60 mA of 0–10 V_{DC} controlled fixtures together
- Switches up to 8 A total
- 0–10 V_{DC} control link automatically sources or sinks to the third-party fixtures
- Configurable high- and low-end trim
- Various operating voltages available; refer to model number chart on next page for details on voltage requirements
- 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 model number chart below for frequency band data
- 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-8T-DV-B	China	220–240 V _~	868.125–868.475 MHz

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

SPECIFICATION SUBMITTAL

Page

Job Name:	Model Numbers:
Job Number:	

Specifications

Power

- Operating voltage
220–240 V \sim 50/60 Hz

Output Ratings

- Switch rating of 8 A. Rated for resistive or capacitive loads as defined by IEC/EN 60669-2-1
- 0–10 V \Rightarrow control link for 60 mA maximum output, source or sink automatically configures

Other Power Specifications

- Standby power:
220–240 V \sim <1.0 W
- BTU/hour when fully loaded: 9
- Works with all drivers and ballasts that provide a current source that is compliant to IEC 60629 Annex E.2, and whose inrush current does not exceed NEMA410 standards for electronic driver/ballast

System Communication

- Operates using Clear Connect RF Technology for reliable wireless communication; refer to 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 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.
- 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 m² 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 40 °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

Job Name:	Model Numbers:
Job Number:	

Specifications *(continued)*

0–10 V_{DC} Control Link

- Communicates with up to 60 mA of fixtures
- Control link is IEC SELV
- 0–10 V_{DC} control can be installed using basic or double-insulated devices
- Terminals accept one 0.75 mm² to 1.5 mm² (18 AWG to 16 AWG) solid wire
- Always follow local wiring codes
- Compatible with ANSI E1.3 2001 (R2006), IEC 60929 Annex E

Default Operation

- Associated wireless input devices control all connected fixtures together
- Occupancy Sensors:
 - Occupied: 100%; Unoccupied: 0% (OFF)
- Pico Remote Controls:
 - On: 100%; Favorite Level: 50%; Off: 0% (OFF)
- Daylight Sensor: Decreases electric light in response to additional available daylight

Key Design Features

- LED status indicator shows load status and provides programming feedback
- Configurable high-end and low-end trim
- Power failure memory: If power is interrupted, connected loads will return to the previous level prior to interruption
- 0–10 V_{DC} control mis-wire protection up to 30 V_{DC}

<p>Job Name:</p> <p>Job Number:</p>	<p>Model Numbers:</p>
------------------------------------------------------	------------------------------

Advanced Configurations

Pico Remote Controls

- Up to 10 Pico remote controls
- Favorite levels can be set for each Pico remote control

Radio Powr Savr Daylight Sensor

- The Radio Powr Savr daylight sensor will affect all connected LED drivers and ballast equally
- For multiple rows of daylighting, a separate PowPak Dimming Module with 0–10 V_{DC} must be used for each daylighting row

Minimum Light Level Setting (optional)

- Certain applications, such as hallways, may require that the lights never turn off. For these areas, select the minimum light level option and the load will lower to programed low-end level. Default operation lowers to OFF.

High- and Low-End Trim

- High-end and low-end trim affect all connected fixtures equally, and can be configured from the PowPak Dimming Module.
- Adjustable low-end trim (0%–45%). Trimmable low-end can ensure a stable light level. Some fixtures will flicker or drop out if trimmed too low.
- The maximum light output of connected fixtures can be decreased down to 55% for energy savings in over-lit spaces.

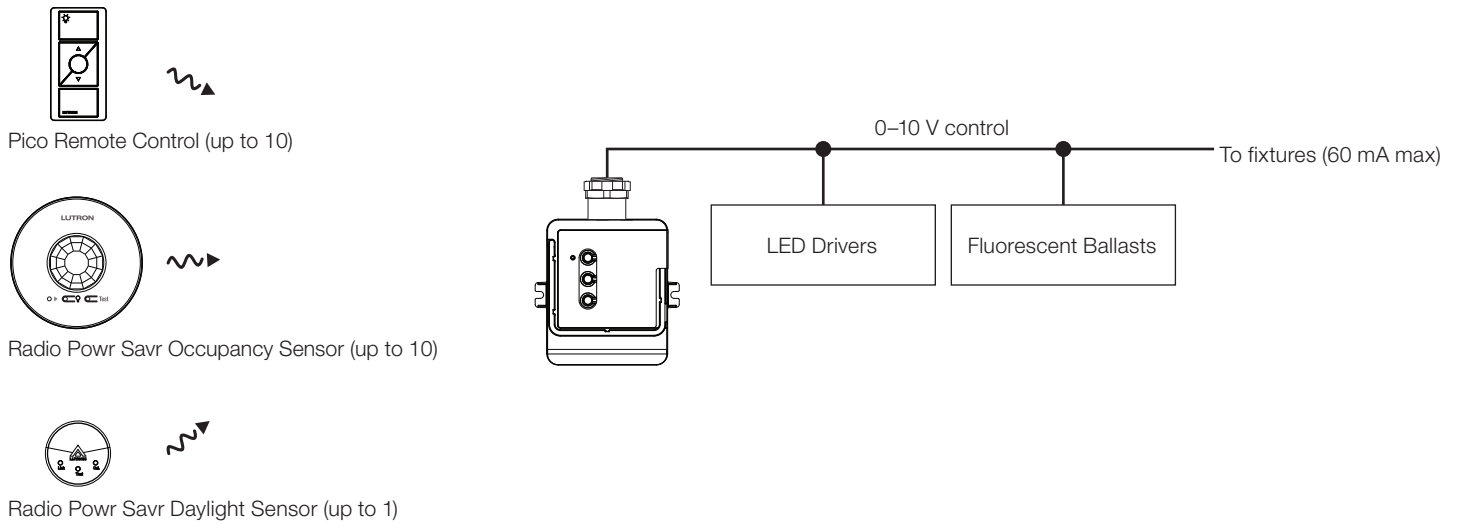
Note: The perceived light output of low-end trim may vary between fixture manufacturers and model numbers. For best results, do not mix different drivers or ballasts on the same 0–10 V_{DC} circuit.

Radio Powr Savr Occupancy Sensors

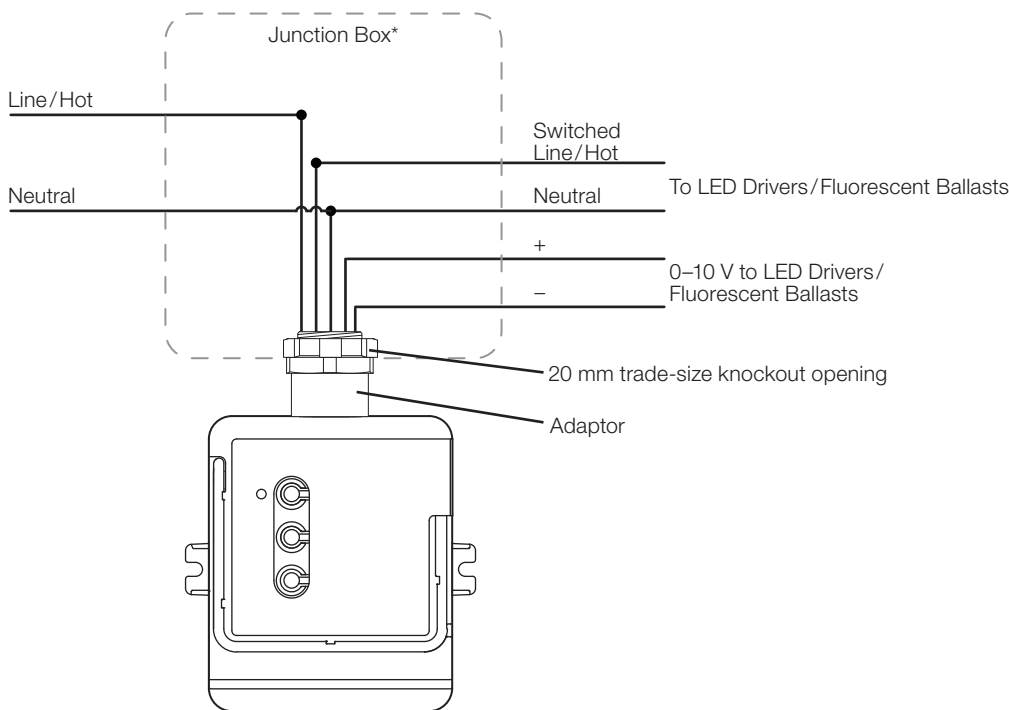
- Radio Powr Savr occupancy and vacancy sensors control all connected drivers or ballasts.
- Pico remote controls can be used to adjust the occupied levels of fixtures that they control from 1% to 100% (of output signal) or can make them unaffected by occupancy events.
- Vacancy events (area becomes unoccupied) turn all driver or ballast models off or to minimum light level.

<p>Job Name:</p> <p>Job Number:</p>	<p>Model Numbers:</p>
------------------------------------------------------	------------------------------

System Diagram



Wiring Schematic

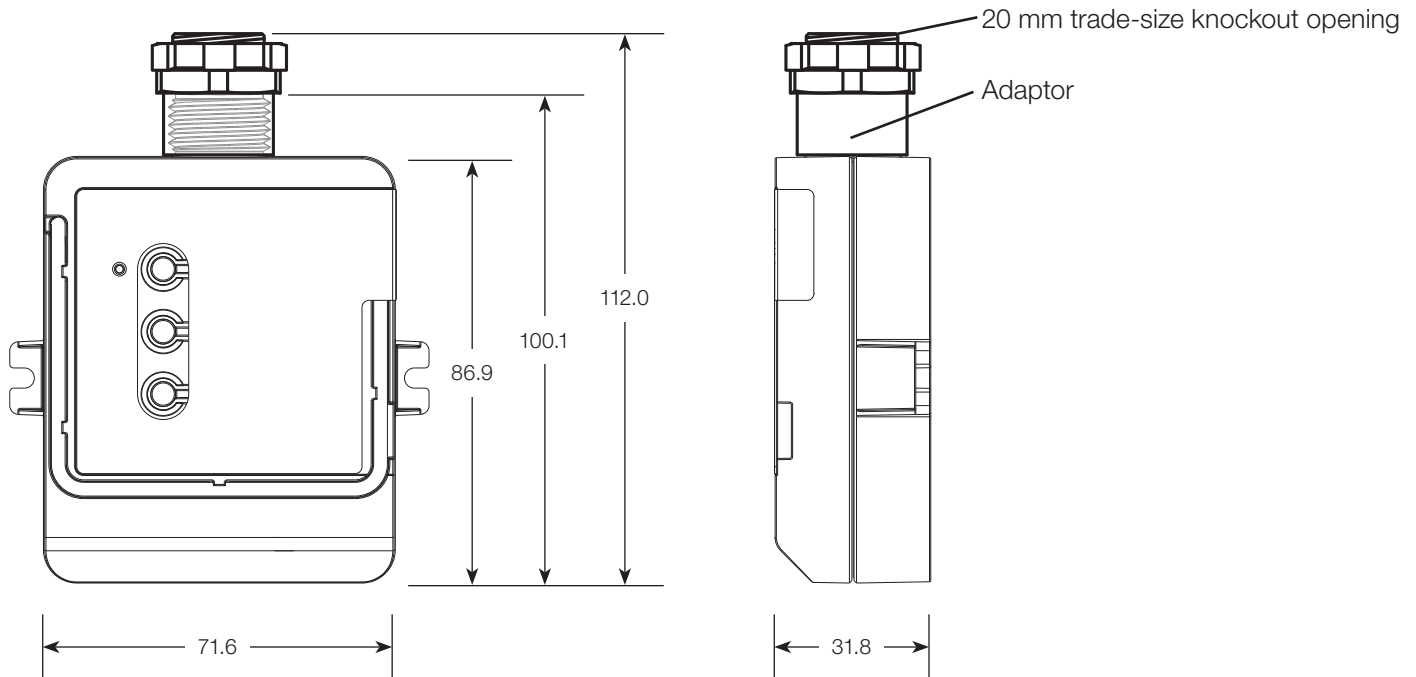


* **NOTE:** The control module mounts to the exterior of a junction box. Do not mount inside a metallic enclosure.

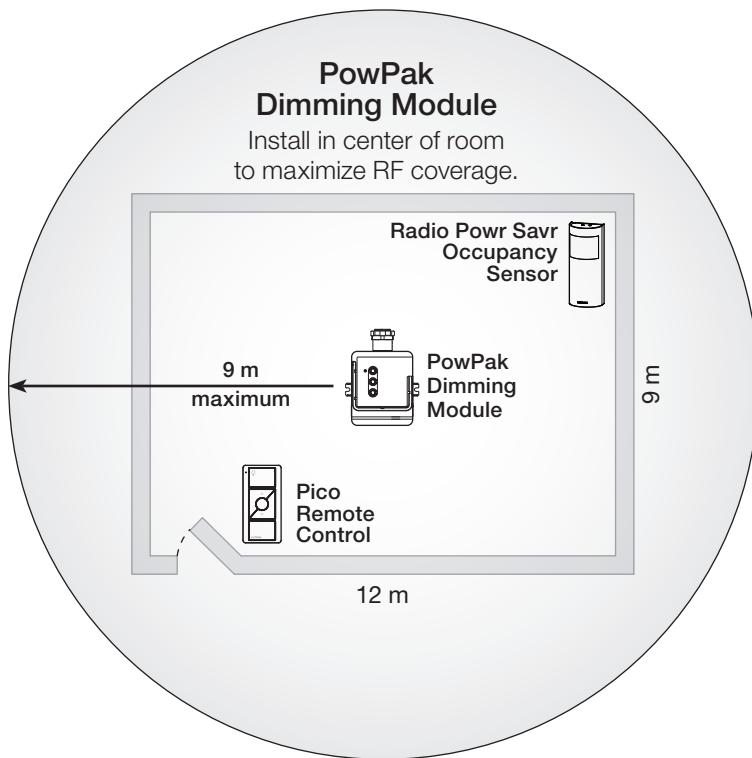
Job Name:	Model Numbers:
Job Number:	

Dimensions

Dimensions are shown as: mm



Range Diagram



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.
- 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 m² for each section. The overall space can be larger as long as there are non-metal sections bordering or intersecting the metal sections.

Lutron, Lutron, Clear Connect, Radio Powr Savr, PowPak, Pico, and Vive are trademarks or registered trademarks of Lutron Electronics Co., Inc. in the US and/or other countries.

Job Name:	Model Numbers:
Job Number:	