

Vive PowPak Relay Module with Softswitch

The PowPak Relay Module with Softswitch is a radio-frequency (RF) device that uses Lutron patented Softswitch technology to control general-purpose loads based on input from Pico remote controls and Radio Powr Savr occupancy and daylight sensors. An optional, low-voltage dry contact closure output (CCO) is available to communicate occupancy status to 3rd-party systems such as HVAC controllers.

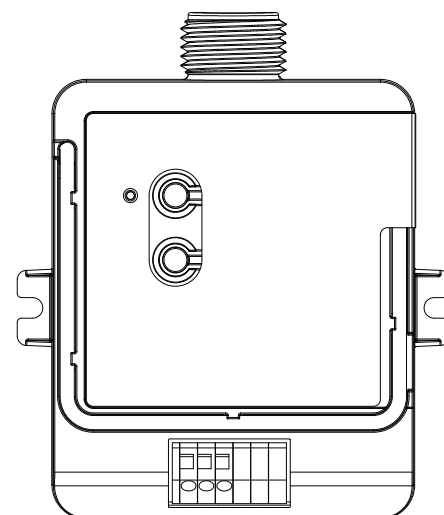
Communication with RF input devices, such as Pico remote controls and Radio Powr Savr sensors, is accomplished using Lutron Clear Connect RF Technology.

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 369902 at www.lutron.com

Note for Replacement: RMJS/URMJS - the "S" model can replace the non-"S" model.

Features

- Softswitch: Lutron patented technology prevents arcing of relay contacts, extending product lifetime
- Various operating voltages available — refer to model number chart on next page for details on voltage requirements
- Capable of switching general-purpose loads
- Model (RMJS-16R-DV-B-EM) available for use with emergency lighting. See page 4 for operating details.¹
- Optional low-voltage dry contact closure output provides integration to building management systems, HVAC, VAV, etc.
- 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 on next page for frequency band data
- Mounts to the exterior of a U.S. style junction box through a standard size knockout



RMJS-16RCCO1DV-B model shown

¹ See App Note #628 (P/N 048628) on www.lutron.com for emergency lighting applications.

LUTRON SPECIFICATION SUBMITTAL

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Job Name:	Model Numbers:
Job Number:	

Model Numbers

Description	Model Number	Region	Operating Voltage	Frequency Band
PowPak Relay Module with Softswitch	RMJS-16R-DV-B	U.S.A., Canada, Mexico	120/277 V~	431.0–437.0 MHz
		Israel, Hong Kong	220–240 V~	433.05–434.79 MHz
	RMJS-5R-DV-B	U.S.A., Canada, Mexico	120/277 V~	431.0–437.0 MHz
		Israel, Hong Kong	220–240 V~	433.05–434.79 MHz
	URMJS-16R-DVB	U.S.A. (BAA Compliant)	120/277 V~	431.0–437.0 MHz
RMJS-16R-DV-B-EM	U.S.A., Canada, Mexico	120/277 V~	431.0–437.0 MHz	
PowPak Relay Module with Softswitch and Occupancy-Status CCO	RMJS-16RCCO1DV-B	U.S.A., Canada, Mexico	120/277 V~	431.0–437.0 MHz
		Israel, Hong Kong	220–240 V~	433.05–434.79 MHz
	RMJS-5RCCO1-DV-B	U.S.A., Canada, Mexico	120/277 V~	431.0–437.0 MHz
		Israel, Hong Kong	220–240 V~	433.05–434.79 MHz
URMJS-16RCCO1DVB	U.S.A. (BAA Compliant)	120/277 V~	431.0–437.0 MHz	

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

Job Name:	Model Numbers:
Job Number:	

Specifications

Regulatory Approvals

RMJS-/URMJS- Models

- UL® Listed (U.S.A.)
- cUL CSA 22.2 No. 141-15 Listed (RMJS-16R-DV-B-EM only)
- FCC approved. Complies with the limits for a Class B device, pursuant to Part 15 of the FCC rules. (U.S.A.)
- Complies with requirements for use in other spaces used for environmental air (plenums) per NEC® 2014 300.22(C)(3)
- Classified in accordance with CAN/ULC-S142 as discrete product certified for installation in an air-handling space.
- CSA or cUL and IC (Canada) (RMJS- only)
- COFETEL (Mexico) (RMJS- only)
- NOM (Mexico) (RMJS- only)

Power

- Operating voltage: 120/277 V~ 50/60 Hz
- Standby Power Consumption (all models): < 1.0 W

System Communication

- Operates using Clear Connect RF Technology for reliable wireless communication; refer to model number chart on page 2 for band frequency details
- RF range is 30 ft (9 m)
- Wireless sensors and controls must be located within 60 ft (18 m) line of sight, or 30 ft (9 m), through walls, of the associated control module. The 60 ft (18 m) range is not reduced by a ceiling tile obstruction.
- Contact Lutron first for applications using foil-backed or metallic ceiling tiles.

Environment

- Ambient operating temperature: 32 °F to 131 °F (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 the limits for a Class A device pursuant to Part 15 of the FCC Rules

Key Design Features

- LED status indicator shows current load status and provides programming feedback
- Power failure memory: If power is interrupted, connected loads will return to the previous level prior to interruption

Mounting

- This device can be installed on a junction box or marshalling box using the conduit nut or with mounting screws. The device must NOT be mounted inside a metallic enclosure – only on the exterior of a junction box, or marshalling box. Improper installation can result in degraded wireless communications and intermittent or sustained communications failures and will not be covered under warranty. For applications (in U.S.A.) where code requires the PowPak control to be installed inside an additional junction box, please see Lutron Application Note #423 (P/N 048423) at www.lutron.com for how to perform this installation. For all other installations, refer to the installation instructions and consult local and national electric codes for proper installation. The PowPak control needs to be accessible for some programming steps. Record where it is mounted so that it can be easily located later.

Load

- **-16R models:** 16 A; **-5R models:** 5 A; **RMJS-16R models:** No minimum load requirements.
- Load types include (but are not limited to): Incandescent, MLV, ELV, Resistive, Inductive, Magnetic fluorescent, Electronic fluorescent
- Motor rating: **RMJS-16R- and URMJS-16R- models:** 1/2 HP (120 V~), 1½ HP (277 V~) **RMJS-5R- and URMJS-5R- models:** 1/6 HP (120 V~), 1/3 HP (277 V~)

Softswitch

- Patented Softswitch circuit eliminates relay arcing at mechanical contacts
- Extends relay life to an average of 1 million cycles
- Output is non-latching

(continued on next page . . .)

Job Name: Job Number:	Model Numbers:
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Specifications (continued)

Emergency Model Sequence of Operation

With a Vive hub:

- **Normal mode:** The RMJS-16R-DV-B-EM can switch loads as normal and respond to local button presses, Pico wireless controls, and occupancy/daylight sensors.
- **Emergency mode:** Emergency override mode can be entered on the emergency PowPak either by receiving an override signal* from the Vive hub or by losing power for greater than 3 seconds then being powered on again. When in emergency override mode the PowPak will go to full output / relay closed. It will not respond to any local button presses, Pico wireless controls, occupancy sensors, daylight sensors, timeclock events, or preset scene calls. The emergency light level of the emergency PowPak can be configured using the Vive hub.
- **Return from emergency mode to normal mode:** When normal power is restored to the Vive hub or the override signal* from the Vive hub is cleared, and power is restored to the emergency PowPak, the emergency PowPak will return to the previous light level in most cases within 3 minutes, but guaranteed within 10 minutes of normal power being restored. It will again respond to local button presses, Pico wireless controls, occupancy sensors, daylight sensors, timeclock events, and preset scene calls.

Without a Vive hub:

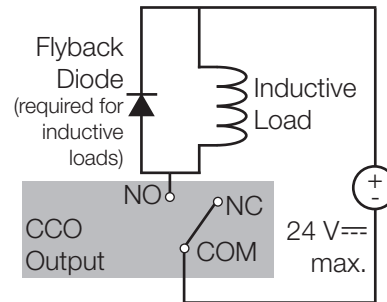
- **Normal mode:** The RMJS-16R-DV-B-EM can switch loads as normal and respond to local button presses, Pico wireless controls, and occupancy/daylight sensors.
- **Emergency mode:** If the emergency PowPak loses power for greater than 3 seconds, it will automatically go into emergency mode (full output, relay closed) for 90 minutes, when emergency power is restored to the PowPak. The RMJS-16R-DV-B-EM will not respond to all local button presses, Pico wireless controls, occupancy and daylight sensors for 90 minutes.
- **Return from emergency mode to normal mode:** When normal power is restored, the emergency PowPak will remain in emergency mode for 90 minutes (full output, relay closed). It will then return to the previous light level and accept local button control, inputs from Pico wireless controls, and occupancy/daylight sensors.

Note: See App Note #628 (P/N 048628) on www.lutron.com for emergency lighting applications.

Contact Closure Output (CCO version only)

- Provides occupancy status to 3rd-party equipment such as building management systems, HVAC, and VAV controllers
- Provides both normally open (NO) and normally closed (NC) dry contacts
- Maintained output type
- CCO terminals accept 20 AWG to 16 AWG (0.5 mm² to 1.5 mm²) solid or stranded wire
- Output is latching
- Not for voltages greater than 24 V_{DC}
- 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).

Switching Voltage	Resistive Load
0-24 V _{DC}	1.0 A
0-24 V _{AC}	0.5 A



Warranty

- 1 year limited warranty. The customer can register the product to increase the warranty period from 1 year to 5 years. Please visit www.lutron.com/TechnicalDocumentLibrary/369-119_Wallbox_Warranty.pdf for warranty details.

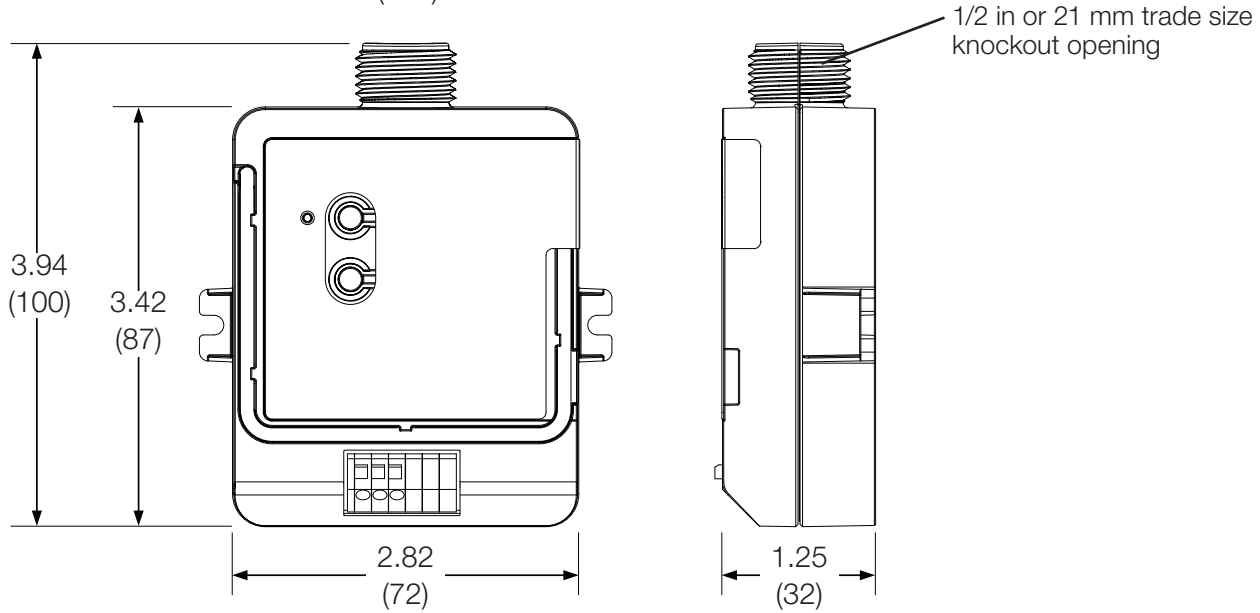
* Override signal triggered from the contact closure #2 on the Vive hub from one of the following inputs:
 – Fire alarm control panel
 – Security system
 – LUT-ELI-3PH
 For more information on the functionality of contact closure #2 on the Vive hub, see the Vive hub spec sheet (P/N 369902) at www.lutron.com.

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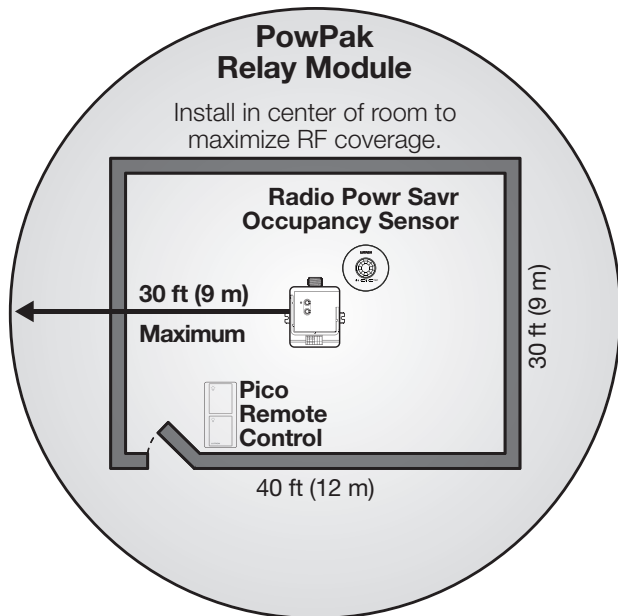
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Job Number:	

Dimensions

Dimensions are shown as: in (mm)



Range Diagrams

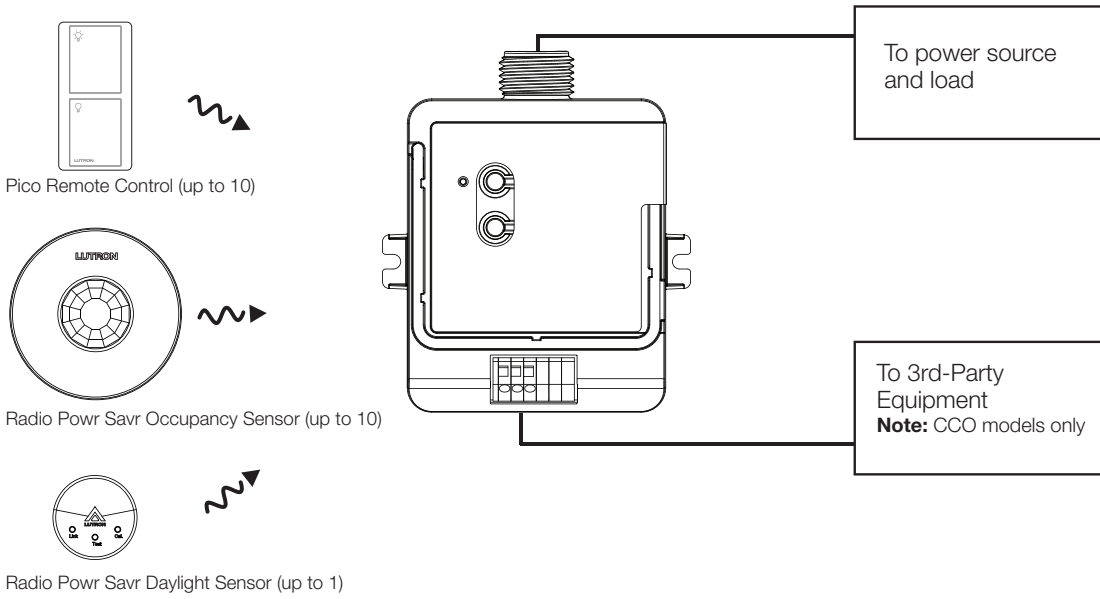


- Contact Lutron first for applications using foil-backed or metallic ceiling tiles.

NOTE: Wireless sensors and controls must be located within 60 ft (18 m) line of sight, or 30 ft (9 m), through walls, of the associated control module. The 60 ft (18 m) range is not reduced by a ceiling tile obstruction.

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Job Number:	

System Diagram



Default Operation

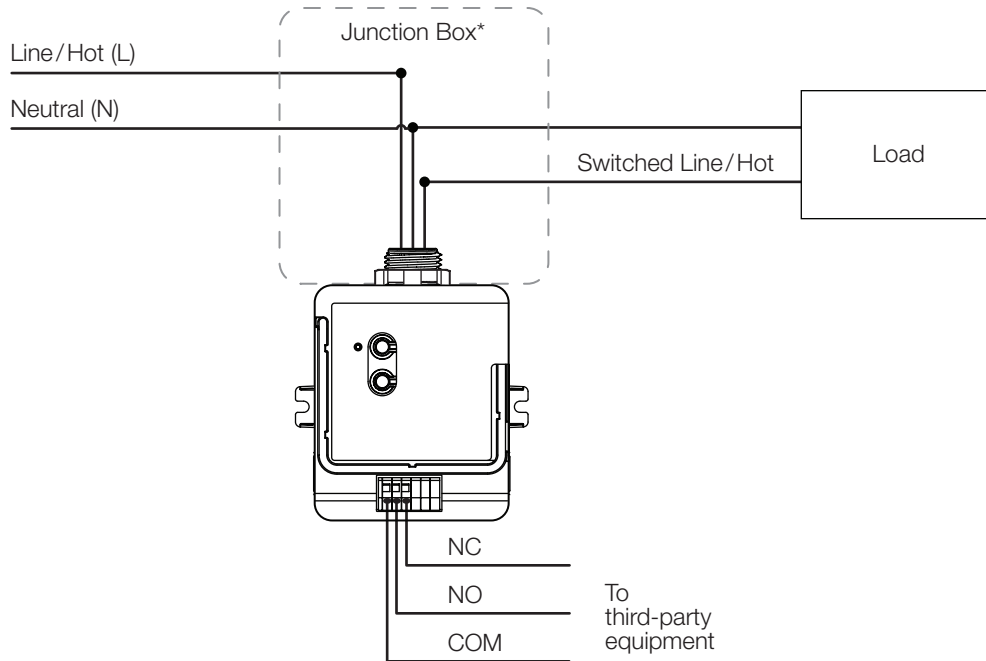
Transmitting Device	Transmitted Command	Softswitch Relay Default Action	CCO Default Action ¹
Pico Remote Control	On	Close	No Action
	Off	Open	No Action
	Raise	Close	No Action
	Lower	No Action	No Action
	Preset	Close	No Action
Radio Powr Savr Occupancy Sensor	Occupied	Close	NO = Close, NC = Open
	Unoccupied	Open	NO = Open, NC = Close
Radio Powr Savr Vacancy Sensor	Occupied	No Action	NO = Close, NC = Open
	Unoccupied	Open	NO = Open, NC = Close
Radio Powr Savr Daylight Sensor	Ambient Light Below Target Level	Close	No Action
	Ambient Light Above Target Level	Open	No Action

NOTES:

¹ CCO models only.

Job Name:	Model Numbers:
Job Number:	

Wiring Diagram (RMJS- and URMJS- models)



* **NOTE:** The control module mounts to the exterior of a U.S.-style junction box.

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