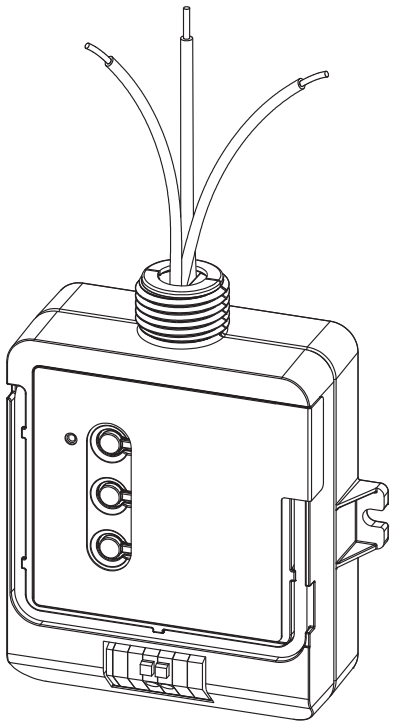
PowPak® Dimming Module with 0–10 V Control

The PowPak® Dimming Module with 0–10 V Control is a radio frequency (RF) control that operates 0–10 V controlled fluorescent ballasts or LED drivers based on input from Pico® wireless controls and Radio Powr Savr™ sensors. The Dimming Module with 0–10 V Control is ideal for small areas (e.g., classrooms, conference rooms, private offices).

Communication with RF input devices (e.g., Pico® wireless controls, Radio Powr Savr™ sensors) is accomplished by using Lutron® Clear Connect® RF Technology.



Features

- Controls up to 60 mA of 0–10 V controlled fixtures together
- Switches up to 5 A total
- 0–10 V 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 below for details on voltage requirements
- Receives input from up to nine Pico® wireless controls, six Radio Powr Savr™ occupancy/vacancy sensors, and one Radio Powr Savr™ daylight sensor
- Utilizes Lutron® Clear Connect® RF Technology; refer to model number chart below for frequency band data
- Mounts to a US-style junction box through a standard-size knockout
- Complies with requirements for use in a compartment handling environmental air (plenum) per NEC® 2011 300.22(C)(3) (RMJ- and URMJ-)

Models Available

Model Number	Region	Operating Voltage	Frequency Band
RMJ-5T-DV-B	U.S.A., Canada, Mexico	120/277 V~	431.0–437.0 MHz
URMJ-5T-DV-B	U.S.A. (BAA Compliant)	120/277 V~	431.0–437.0 MHz
RMQ-5T-DV-B	Hong Kong, Macau	110–127/220–240 V~	433.05–434.79 MHz
RMM-5T-DV-B	China, Singapore	220–240 V~	868.125–868.475 MHz
RMK-5T-DV-B	Europe, U.A.E.	220–240 V~	868.125–868.850 MHz
RMN-5T-DV-B	India	220–240 V~	865.5–866.5 MHz
RMP-5T-DV-B	Japan	100–200 V~	313.3–314.8 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

RMJ- and URMJ- models only

- UL Listed
- UL 2043 Plenum-Rated
- FCC approved. Complies with the limits for a Class B device, pursuant to Part 15 of the FCC rules
- CSA and IC (Canada)
- COFETEL (Mexico)
- NOM (Mexico)

RMN- model

- WPC Type Approved (India)

RMK- model

- CE (European Union)
- TRA Type Approved (United Arab Emirates)

RMP- model

- PSE certified (Japan)

Power

- Operating voltage
  - ***RMJ-***, ***URMJ- models:*** 120/277 V~ 50/60 Hz
  - ***RMQ- model:*** 110–127/220–240 V~ 50/60 Hz
  - ***RMM- model:*** 220–240 V~ 50/60 Hz
  - ***RMK- model:*** 220–240 V~ 50/60 Hz
  - ***RMN- model:*** 220–240 V~ 50/60 Hz
  - ***RMP- model:*** 100–200 V~ 50/60 Hz

Output Ratings

- Switch rating of 5 AX. Rated for resistive or capacitive loads as defined by IEC/EN 60669-2-1
- 0–10 V control link for 60 mA maximum output, source or sink automatically configures

Other Power Specifications

- Standby power:
  - 240–277 V~ 610 mW
  - 120 V~ 550 mW
- BTU/hour when fully loaded: 9

System Communication

- Operates using Clear Connect® RF Technology for reliable wireless communication; refer to model number chart on page 1 for frequency band details
- RF range is 30 ft (9 m)

Environment

- Ambient operating temperature: 32 °F to 104 °F (0 °C to 40 °C)
- 0% to 90% humidity, non-condensing
- For indoor use only

0–10 V Control Link

- Communicates with up to 60 mA of fixtures
- Control link is IEC SELV/NEC® Class 2
- 0–10 V control can be installed using NEC® Class 1 or Class 2 wiring methods. Alternately, it can be wired to basic or double-insulated devices
- Terminals accept one 18 to 16 AWG (0.75 to 1.5 mm^2) solid wire
- Always consult 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® Wireless Controls:
  - On: 100%; Favorite Level: 50%; Off: 0% (OFF)
- Daylight Sensor: Decreases electric light in response to additional available daylight

Job Name:	Model Numbers:	
Job Number:		

Specifications (continued)

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 control miswire protection up to 30 V⎓
- Programming lockout can be enabled for public spaces
- 0–10 V control can be programmed to be inverted for 10–0 V control
- Daylight override: Pressing the raise button on an associated Pico® wireless control will temporarily override daylighting for all fixtures wired to the PowPak® Dimming Module with 0–10 V control
  - Daylighting will be re-enabled for all the fixtures wired to the PowPak® Dimming Module with 0–10 V control when one of the following occurs:
    - Two hours have passed since the override.*
    - ON, OFF or Preset button has been pressed on a Pico® wireless device controlling the fixtures wired to the PowPak® Dimming Module with 0–10 V control.
    - All associated Occupancy Sensors have reported unoccupied.

  * Each time a daylighting override occurs for any control associated to the PowPak® Dimming Module with 0–10 V control, the two-hour timer is reset.

Advanced Configurations

Pico® Wireless Controls

- Up to nine Pico® wireless controls
- Favorite levels can be set for each Pico® wireless control

Radio Powr Savr™ Daylight Sensor

- The Radio Powr Savr™ daylight sensor will affect all connected ballast and LED drivers equally
- For multple rows of daylighting, a separate PowPak® Dimming Module with 0–10 V 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 or from any associated Pico® wireless control when unit is not in programming lock-out mode
- 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 ballasts or drivers on the same 0–10 V circuit.

Radio Powr Savr™ Occupancy Sensors

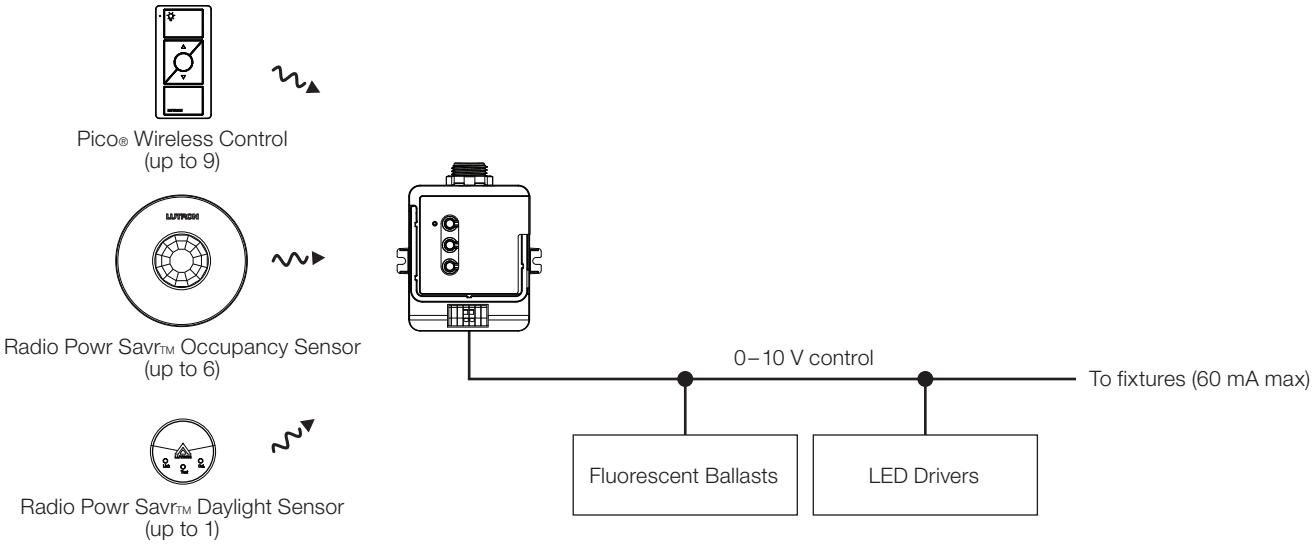
- Radio Powr Savr™ occupancy and vacancy sensors control all connected ballasts or drivers
- Pico® wireless controls can be used to adjust the Occupied levels of fixtures that they control from 1% to 100% (of output signal) or can make them unaffected by Occupancy events
- Vacancy events (area becomes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

Programming Lockout

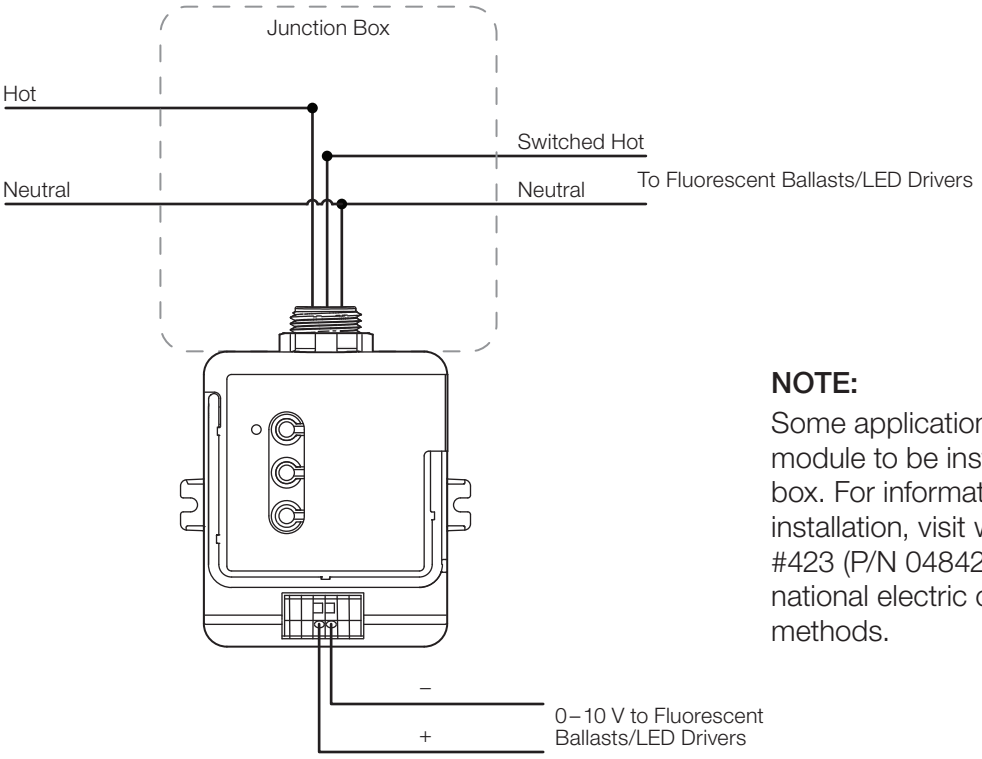
- Once enabled, all Pico® wireless controls can no longer perform programming or set favorite levels
- To change settings, programming lockout must be unlocked by a button combination directly on the PowPak® Dimming Module.

Job Name:	Model Numbers:	
Job Number:		

System Diagram (RMJ-, URMJ-, RMQ-, and RMM- models)



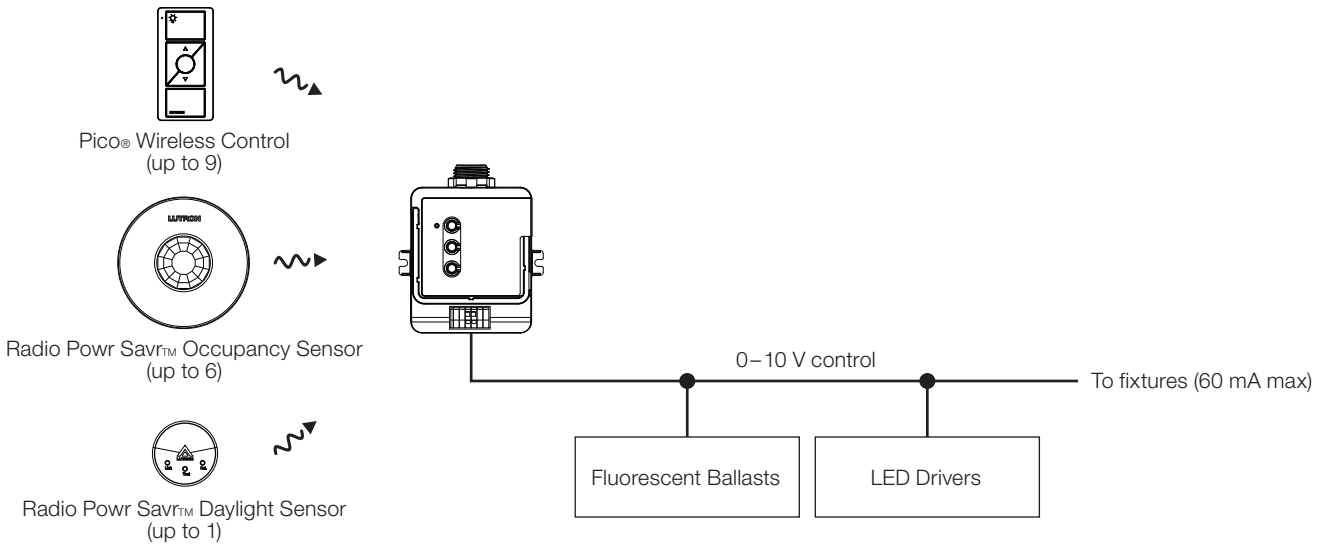
Wiring Schematic (RMJ-, URMJ-, RMQ-, and RMM- models)



NOTE:
Some applications (in the USA) require the PowPak® module to be installed inside an additional junction box. For information about how to perform this installation, visit www.lutron.com, Application Note #423 (P/N 048423). Please consult all local and national electric codes for proper installation methods.

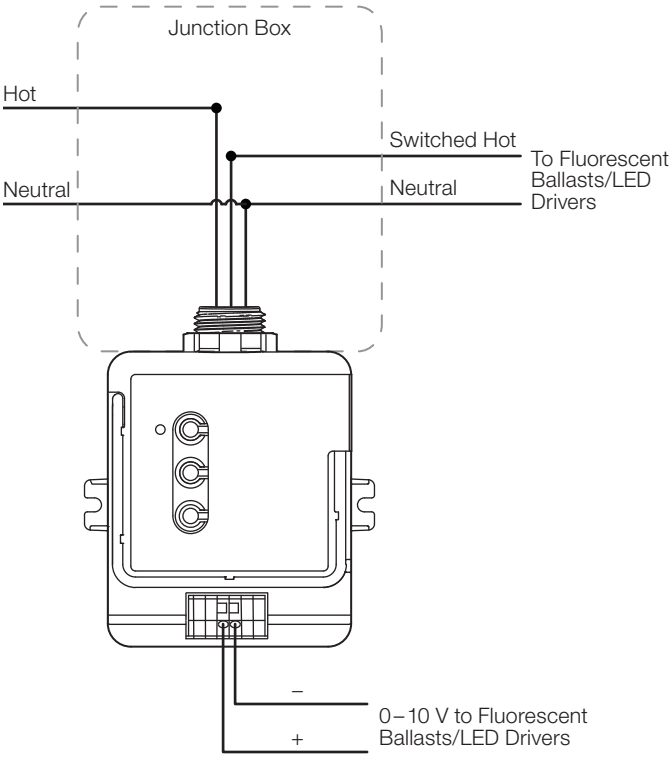
Job Name:	Model Numbers:	
Job Number:		

System Diagram (RMP- models)

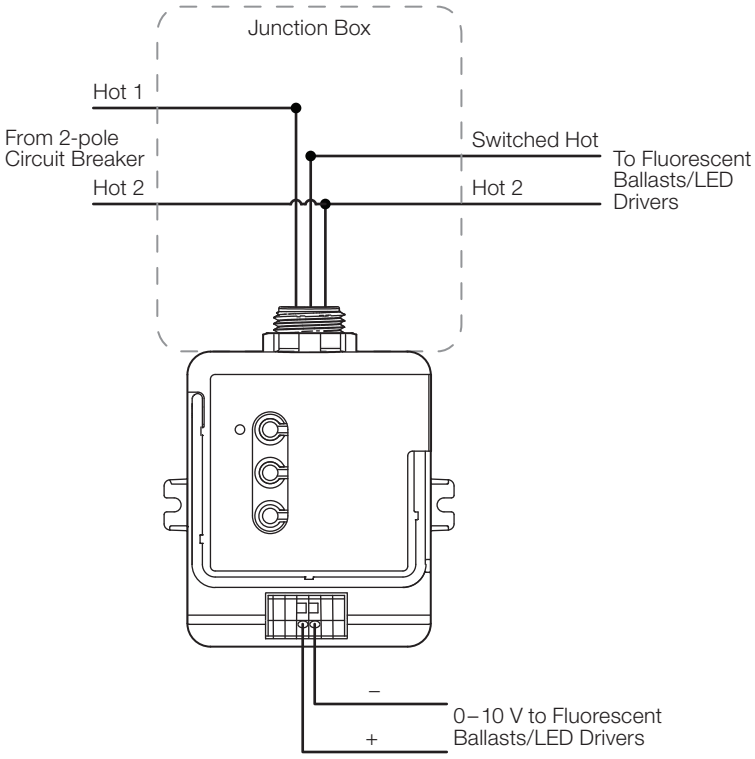


Wiring Schematic (RMP- models)

100 V~

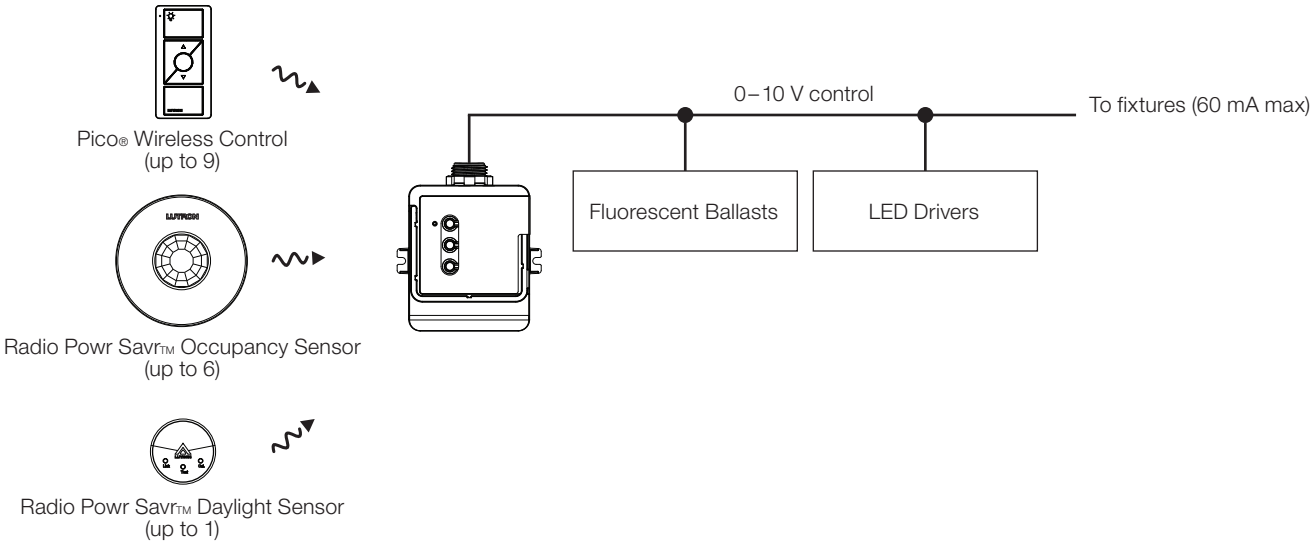


200 V~

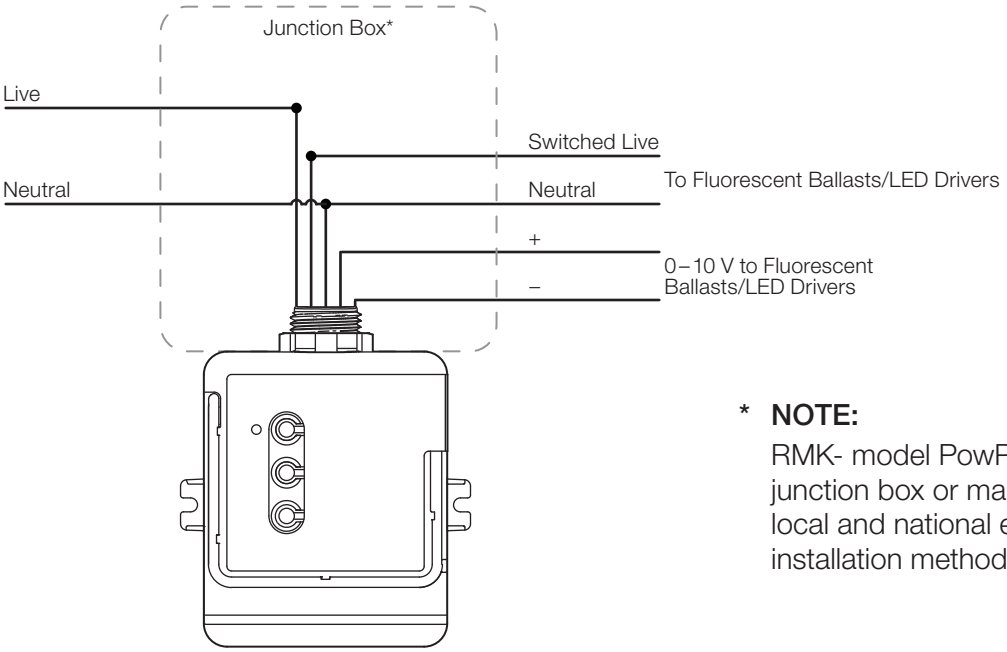


Job Name:	Model Numbers:	
Job Number:		

System Diagram (RMK- and RMN- models)



Wiring Schematic (RMK- and RMN- models)

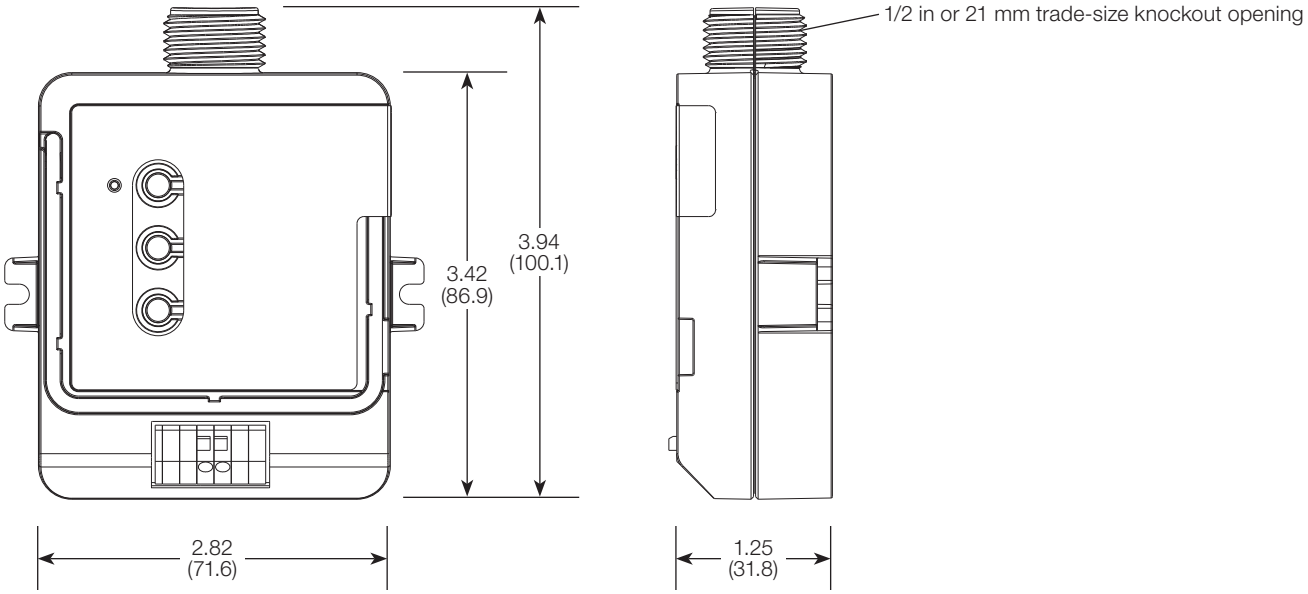


* **NOTE:**
RMK- model PowPak® module can be installed in a junction box or marshalling box. Please consult all local and national electric codes for proper installation methods.

Job Name:	Model Numbers:	
Job Number:		

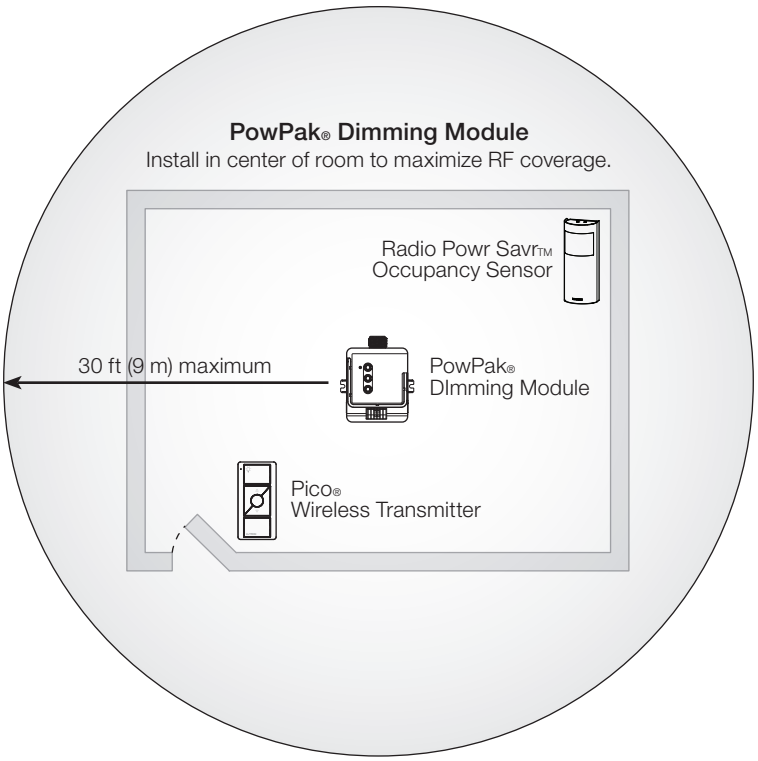
Dimensions

Dimensions are shown as: in (mm)



Range Diagram

All wireless transmitters must be installed within 30 ft (9 m) of the PowPak® Dimming Module.



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

Job Name:	Model Numbers:	
Job Number:		