Phase Select Dimming Module Installation

Vive PowPak Phase Select Dimming module
Vive Emergency PowPak Phase Select Dimming module

Part of the Vive Family

041769
Rev. A
01/2021

RMJS-PNE-DV
RMJS-PNE-DV-EM

120/277 V~ 50/60 Hz

450 W Incandescent/Halogen
450 VA LED (reverse-phase)
3 A Lutron Hi-lume 1% 2-wire LED driver (13 drivers max)
200 W LED NEMA SSL 7A-2015
450 W ELV
400 VA MLV
400 VA Fluorescent
0 W minimum load

Important Notes: ***Please read before installing.***

For installation by a qualified electrician in accordance with all local and national electrical codes.

- **Note:** Use copper conductors only.
- Check to see that the device type and rating is suitable for the application.
- **DO NOT** install if product has any visible damage.
- If moisture or condensation is evident, allow the product to dry completely before installation.
- Operate between 0 °C and 40 °C (32 °F and 104 °F) ambient.
- 0% to 90% humidity, non-condensing.
- For indoor use only.
- For spec submittal, see http://www.lutron.com/TechnicalDocumentLibrary/3691150.pdf
- For application note, see http://www.lutron.com/TechnicalDocumentLibrary/048781.pdf
- Operation of a low-voltage circuit with removed or inoperative lamps may result in transformer overheating and premature failure. Lutron strongly recommends the following:
  a. Do not operate low-voltage circuits without operative lamps in place.
  b. Replace burned-out lamps as quickly as possible.
  c. Use transformers that incorporate thermal protection or fused transformer primary windings to prevent transformer failure due to overcurrent.

IMPORTANT SAFEGUARDS

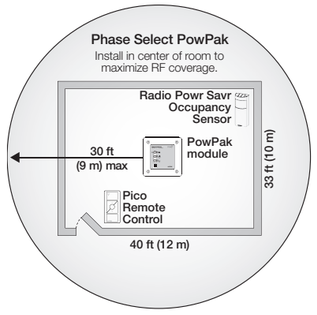
When using electrical equipment, basic safety precautions should always be followed including the following:

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

- Do not use outdoors.
- Do not mount near gas or electric heaters.
- Equipment should be mounted in locations and at heights where it will not be subjected to tampering by unauthorized personnel.
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- Do not use this equipment for other than its intended use.

SAVE THESE INSTRUCTIONS

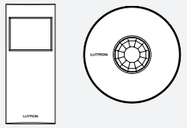
English



All Wireless Transmitters must be installed within 30 ft (9 m) of the PowPak module.

Default Functionality

Occupancy Sensors

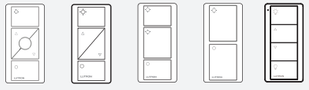


Occupied: All lights 100%.
Unoccupied: All lights off.

Daylight Sensor

All lights dim in response to daylight.

Wireless Controls

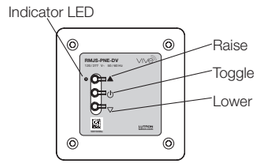


On	All lights 100%
Favorite	All lights 50%
Off	All lights off

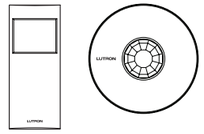
System Components

Customer Assistance www.lutron.com/support

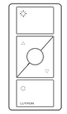
PowPak module



Wireless Transmitters

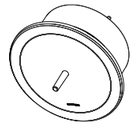


Radio Powr Savr Occupancy/Vacancy Sensor
(10 maximum per PowPak module)



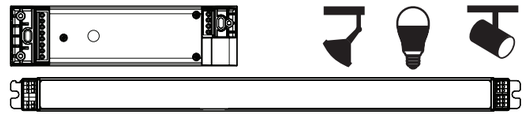
Pico Remote Control
(10 maximum per PowPak module)

Radio Powr Savr Daylight Sensor
(1 maximum per PowPak module)



Vive Hub

At least one phase dimmable lighting load (incandescent, halogen, LED, fluorescent, ELV, or MLV)
Consult third-party fixtures installation guide for fixture-specific wiring.



Note: All drivers and ballasts used with Vive wireless controls must comply with the limits pursuant to CAN ICES-005 and the FCC rules.

Start Here

1 Mount, Wire, and Install Phase Dimmable Devices and Lighting Fixtures

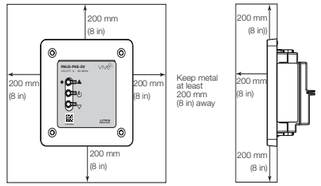
Consult third-party device installation guide

WARNING! Shock Hazard. May result in serious injury or death. Turn off power at circuit breaker before installing the unit.

NOTE: Output must NOT be used to control receptacles. Output must be directly connected to the load. Output breakers or switches must not be used.

2 Locate PowPak module

Suggested Installation Location: Center of room to ensure proper RF coverage of area. For optimal RF performance: PowPak module must not be fully enclosed in metal. No metal should exist anywhere within 200 mm (8 in) in front of the front plate of the PowPak module. Mount a minimum of 0.6 m (2 ft) away from the controlled fixture. Ensure the junction box is well grounded (preferably via a metal conduit between the controlled fixture and the PowPak module junction box).



A PowPak module must be installed in a **metal** 101.6 mm x 101.6 mm (4 in x 4 in) junction box (minimum depth 54 mm (2.125 in) with mounting screws (provided). Please consult local and national electric codes for proper installation. **Note:** if PowPak module cannot be fully seated into the junction box, try rotating the PowPak module 90, 180, or 270 degrees. Or move conduit hardware to a different knockout hole. If neither option works, an extension ring may be required.

3 Install PowPak module

A Connect bare copper wire from junction box to green ground screw, and power wires to appropriate power and load connections.
B Once installed, energize the PowPak module.
C Use the **Toggle** button "⏻" to toggle between high-end and OFF to verify ballasts or LED drivers wiring.
D Use the **Raise** "▲" and **Lower** "▽" buttons to verify control wiring.

Wire Connector Information

13 mm (1/2 in):
4.0, 2.5, & 1.5 mm²
(10, 12, & 14 AWG)

16 mm (5/8 in):
1.0 & 0.75 mm²
(16 & 18 AWG)

(1-3) 4.0 mm² (10 AWG)
(1-3) 2.5 mm² (12 AWG)
(1-3) 1.5 mm² (14 AWG)
(1-2) 4.0 mm² & (1) 2.5 mm² (10 & 12 AWG)
(1-2) 4.0 mm² & (1) 1.5 mm² (10 & 14 AWG)
(1-2) 2.5 mm² & (1) 1.5 mm² (12 & 14 AWG)
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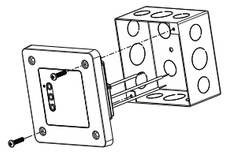
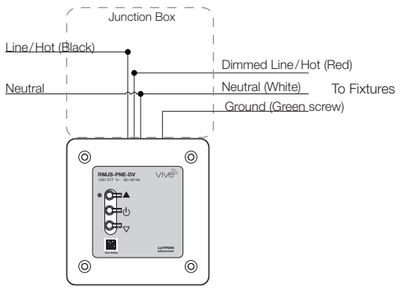




4 Phase Selection

Most loads are expected to use the default setting of reverse-phase, however some require forward-phase for proper functionality.

Load Type	Phase
Incandescent/Halogen	Reverse
LED	
NEMA SSL 7A-2015	Forward
Lutron Hi-lume 1% 2-wire LED driver	Forward
Other LED drivers and self-ballasted lamps	Reverse
ELV	Reverse
MLV	Forward
Fluorescent	Forward

A Enter Phase Selection mode. Press and hold **Raise** "△" & **Lower** "▽" buttons for 12 seconds. Indicator LED will flash and load will fade to OFF.
B Pressing the **Raise** button "△" sets the current phase to forward-phase, and pressing the **Lower** button "▽" sets the current phase to reverse-phase.
Indicator LED Feedback:
(Reverse-phase): Flashes 1 time with a 1 second interval and then turns OFF for 2 seconds
(Forward-phase): Flashes 2 times with a 1 second interval and then turns OFF for 1 second
C Press and hold the **Toggle** button for 6 seconds. Indicator LED will flash for 5 seconds. Load will fade to full ON.

Note: RMJS-PNE-DV-EM requires the use of an automatic transfer switch to change from normal to emergency power. Refer to 048628 for wiring diagrams on www.lutron.com
If installing an emergency PowPak module and the wiring needs to be verified, follow "Reset Factory Defaults" procedure to exit emergency mode.
Please note that any programming will be lost and will have to be reprogrammed. Only perform this step during initial installation and wiring verification.
Note: For periodic testing and maintanance of emergency systems, use a toggle switch or breaker to ensure proper operation. Refer to App Note # 781 (P/N 048781) on www.lutron.com for procedure.
Note: Momentary power outages can envoke emergency mode on the PowPak module. SeeTroubleshooting section for details.

Reset Factory Defaults

Note: In some instances, it may be necessary to reset the PowPak module and connected devices back to factory default settings. Before beginning, make sure that all devices are connected and powered.

A Triple-tap the **Toggle** button "⏻" on the PowPak module and hold until the LED begins to flash slowly; release button.
B Within 3 seconds of the start of flashing, triple-tap the same button again and the LEDs will flash rapidly indicating that the unit has been reset to factory defaults.

Note: Any associations or programming previously set up with the PowPak module will be erased and will need to be re-programmed.

Troubleshooting

Issue	Solution
Fixtures cannot be controlled locally from PowPak module.	• Ensure that the breaker(s) to the PowPak module are energized. • Ensure that the PowPak module dimmed hot lead is wired to the lighting fixture(s). • PowPak module may be in emergency mode. Reset PowPak module to factory defaults. See www.lutron.com/vivevideos
Lights do not dim as expected.	• Ensure that dimmed hot lead is wired properly. • PowPak module may be in emergency mode.
Lights do not respond to Wireless Transmitter(s) (Pico remotes and RPS sensors).	• Ensure that the breaker(s) to the PowPak module and any connected ballasts or LED drivers are energized. • Ensure that Wireless Transmitters are associated to the PowPak module. Reset PowPak module to factory defaults. See www.lutron.com/vivevideos
Lights are unstable at low-end (or high-end) or flash/flicker at turn-on or turn-off.	• Adjust low-end (or high-end) trim.
Wireless Transmitter(s) (Pico remotes or RPS sensors) cannot be associated to PowPak module.	• The maximum number of Wireless Transmitters have been associated to the PowPak module. To remove a previously set up Wireless Transmitter. See www.lutron.com/vivevideos

LUTRON Lutron Electronics Co., Inc. 7200 Suter Road
Coopersburg, PA 18036-1299 USA

See page 2 for Programming

Installation
Programming without a Vive Hub

Vive PowPak Phase Select Dimming module - additional options available through the Vive app

Part of the Vive Family

Start Here

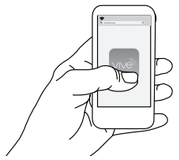
1 Programming with a Vive Hub

The Vive hub can be set-up easily with any Wi-Fi enabled iOS® or Android® compatible device.

A Download the Lutron Vive app.

Download on the App Store | GET IT ON Google Play

B Open the app and follow the instructions.



Note: For further information on set up, programming, and troubleshooting with a Vive system, please refer to the installation instructions included with the Vive hub or visit www.lutron.com/vive

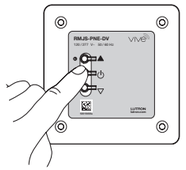
Note: For programming the PowPak module without a Vive hub see reverse side.

2 Associate Wireless Transmitters to PowPak module

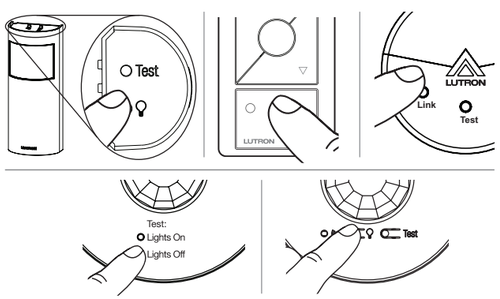
Before beginning this step, make sure that there are no other Vive devices being set up within the same building. It is possible that wireless transmitters from other systems can be incorrectly associated to this PowPak module.

A Enter association mode. On PowPak module, hold **Toggle** button "⏻" for 6 seconds until lights flash.

The indicator LED will begin flashing twice per second.



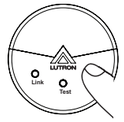
B Hold the indicated button on each transmitter for 6 seconds. Lights will flash to show that wireless transmitters have been associated.



C On PowPak module, hold **Toggle** button "⏻" for 6 seconds to save association. Lights will flash and LED will quickly blink for 2 seconds. **NOTE:** PowPak module will automatically exit association mode 10 minutes after the last activity. However, devices will be unresponsive until the timeout has occurred.

D Permanently install wireless transmitters (consult individual component installation guides for information).

3 Calibrate the Radio Powr Savr Daylight Sensor



Daylight Sensor will control all wired fixtures equally.

A Initiate calibration process. Press and release the "Cal." button on the Daylight Sensor.

B Set lights in room to desired light level using **Raise**/**Lower** buttons "▲/▽" buttons on a Pico remote or the PowPak module.

C Press and hold the "Cal." button for 6 seconds.

D Exit room for 5 minutes to complete calibration.
Note: When calibration has completed, all lights will flash and begin to respond to daylight.

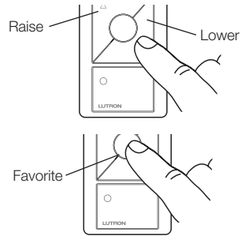
Multiple Daylight Rows *(Optional)*

For every row of daylighting, a separate PowPak module must be used. For detailed setup refer to the tuning section of the Radio Powr Savr Daylight Sensor installation guide.

- Select the PowPak module that you want to adjust by pressing the toggle button.

4 Set a Favorite Light Level (Optional)

For Pico remote controls with a **Favorite** Button.

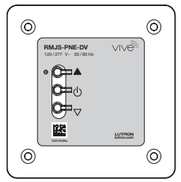


A Adjust lights to desired level:
Use the **Raise** button "△" or **Lower** button "▽" on the Pico remote control.

B Save favorite level:
Press and hold the **Favorite** button for 6 seconds. The load will flash 3 times to confirm that the Favorite level is saved.

5 Set Low-End Trim and High-End Trim (Optional)

For best results, minimize the amount of sunlight entering the room before performing the following procedures.



Notes:
Depending on the fixture manufacturer or load, low-end trim and high-end trim may need to be adjusted.

- Trim low-end to ensure a stable light level because some loads will flicker or drop out if trimmed too low.
- Be sure that you can turn on the lights to the low-end trim level without any abnormal operation.
- The factory default high-end trim is suitable for most applications but can be adjusted as desired.

Low-End Trim

A Enter low-end trim adjustment mode:
Press and hold the **Lower** button "▽" on the fixture control for 12 seconds.
The lights will flash and the indicator LED will begin flashing.

B Adjust the low-end trim:
Use the **Raise** button "▲" and **Lower** button "▽" on the fixture control to adjust and set the lights to the desired low-end (1 to 45%).

C Save the low-end trim:
Press and hold the **Toggle** button "⏻" for 6 seconds to save setting.
The indicator LED will begin flashing and then turn solid to indicate new level has been saved.

High-End Trim

A Enter high-end trim adjustment mode:
Press and hold the **Raise** button "▲" on the fixture control for 12 seconds. The lights will flash and the indicator LED will flash.

B Adjust the high-end trim:
Use the **Raise** button "▲" and **Lower** button "▽" on the fixture control to adjust and set the lights to the desired high-end (55 to 100%).

C Save the high-end trim:
Press and hold the **Toggle** button "⏻" for 6 seconds to save setting.
The indicator LED will begin flashing and then turn solid to indicate new level has been saved.

6 Set Minimum Light Level (Optional)

Certain applications (e.g., hallways), may require that the lights never turn off. For these areas, activate Minimum Light Level mode.

A Enter minimum light level adjustment mode:

Press and hold **Toggle** button "⏻" and **Lower** button "▽" for 12 seconds. Lights will flash high-low-high and LED will begin flashing.

If lights stop flashing and go to high-end, the minimum light level is set to OFF (default).

If lights stop flashing and go to low-end, the minimum light level is ON and set to low-end.

B Change the minimum light level:

Press **Raise** button "▲" to set minimum light level to low-end.

Press **Lower** button "▽" to set minimum light level to OFF.

C Save the minimum light level:

Press and hold **Toggle** button "⏻ " for 6 seconds. LED will quickly flash to indicate that new level has been saved.

7 Set Occupancy Light Levels (Optional)

Note: Unoccupied light level is always the minimum light level and cannot be adjusted.

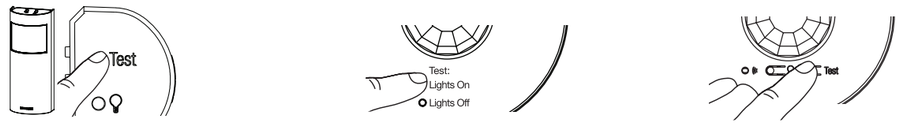
A Set desired occupancy light levels:

Use **Raise**/**Lower** buttons "▲/▽" on the PowPak module or **Raise**/**Lower** buttons "△/ ▽" on all associated Pico Remote Controls.

B Save occupancy light levels:

Press and hold **Test** button (or **Lights On** button) for 6 seconds on any associated Radio Powr Savr Occupancy Sensor. Release when Sensor lens starts to flash.

Or, press and hold **Lights On** button for 6 seconds on any associated Radio Powr Savr Occupancy Sensor. Release when Sensor lens starts to flash.



FCC/ IC Information:
This device complies with part 15 of the FCC Rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:
(1) This device may not cause interference, and
(2) this device must accept any interference, including interference that may cause undesired operation. Modifications not expressly approved by Lutron Electronics Co., Inc. could void the user's authority to operate this equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Customer Assistance:
U.S.A./Canada: 1.844.LUTRON1
www.lutron.com/support
Latin America/Mexico: 01614.481.1300
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Limited Warranty: www.lutron.com/TechnicalDocumentLibrary/369-119_Wallbox_Warranty.pdf

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