

PowPak | Installation

Control Module with DALI

Part of the Vive Family

041797
Rev. A
02/2021

RMNS-DAL4-SZ

RMNS-DAL32-SZ

220–240 V~ 50/60 Hz 50 mA

DALI Control: 18 V_{DC}

Guaranteed Supply Current:

- 8 mA on 4-driver controller (RMNS-DAL4-SZ)
- 64 mA on 32-driver controller (RMNS-DAL32-SZ)

Maximum Supply Current: 250 mA

Important Notes: Please read before installing.

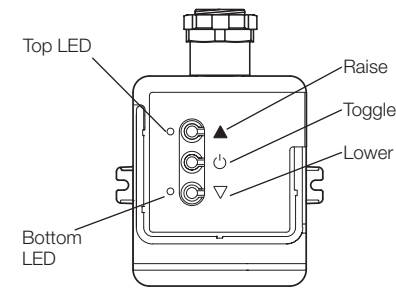
For installation by a qualified electrician in accordance with all local and national electrical codes.

- 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 ambient.
- 0% to 90% humidity, non-condensing.
- For indoor use only.

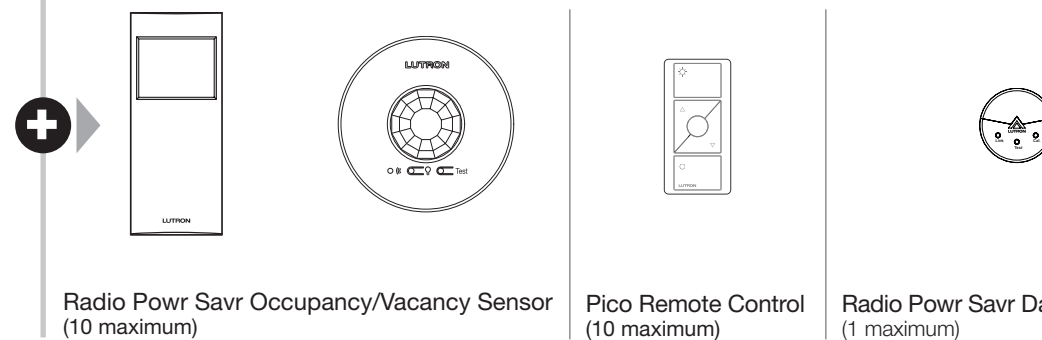
Required Components

For each system, ensure that you have:

One PowPak Control Module



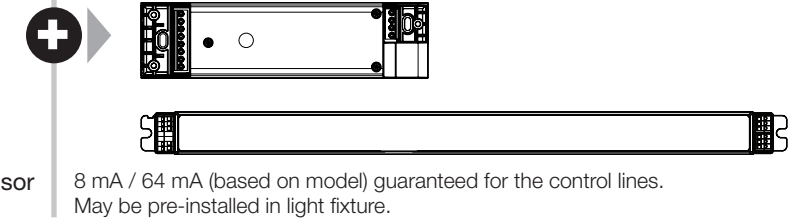
At least one Wireless Transmitter



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At least one DALI LED Driver or Fluorescent Ballast

Consult third-party DALI fixtures installation guide for fixture-specific wiring. This device can be installed on a fixture / troffer, junction box, or marshalling box using the conduit nut or with mounting screws. The device must NOT be mounted inside a fixture / troffer or other metallic enclosure. Improper installation can result in degraded wireless communication, intermittent or sustained communication failures, and will not be covered under warranty. For mounting and wiring best practices see Lutron Application Note #620 (P/N 048620).



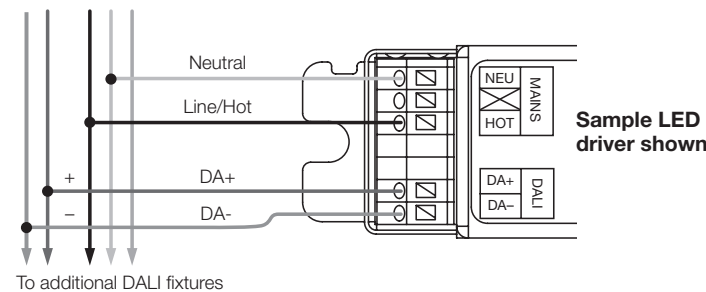
Start Here

1 Mount, Wire, and Install DALI 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.

- Connect mains wiring (hot, neutral) to each fixture.
- Connect DALI control to each fixture.

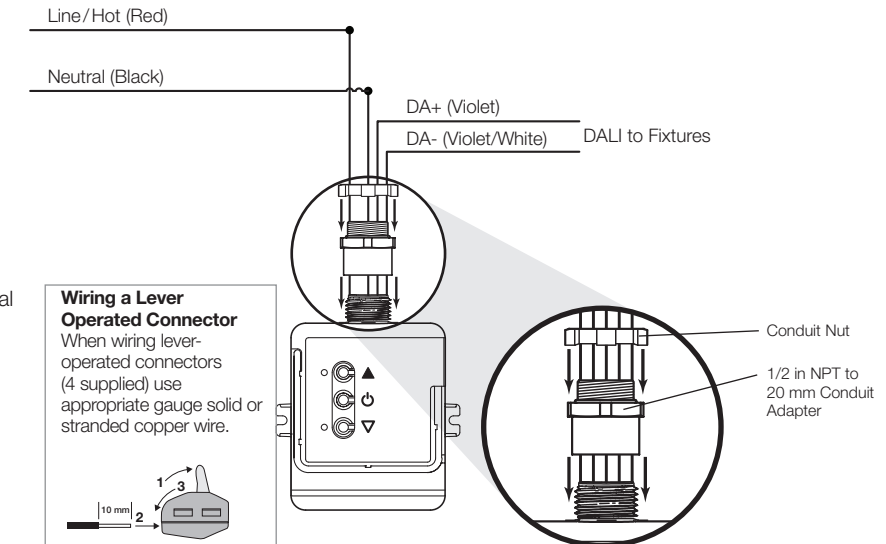


2 Install PowPak Control Module with DALI

Suggested Installation Location: Center of room to ensure proper RF coverage of area.

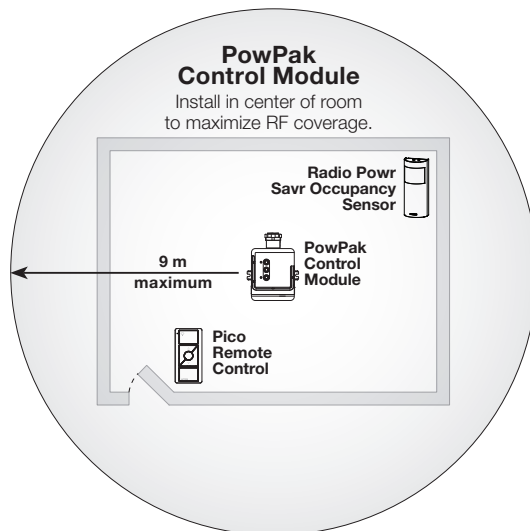
- Install the 1/2 in NPT to 20 mm conduit adapter (provided) onto the PowPak Control Module.
- The PowPak Control Module can be installed on a fixture / troffer, junction box, or marshalling box using the conduit nut (provided) or with mounting screws (not provided). Please consult local and national electric codes for proper installation.
- Once installed, energize the PowPak Control Module.
- Use the **Toggle** "⏻", **Raise** "▲" and **Lower** "▼" buttons to verify control wiring.

Wire Gauge	Total DALI-compliant Bus Wire Length
1.5 mm ² (14 AWG)	300 m
0.75 mm ² (18 AWG)	150 m
0.50 mm ² (20 AWG)	100 m



Wiring a Lever Operated Connector
When wiring lever-operated connectors (4 supplied) use appropriate gauge solid or stranded copper wire.

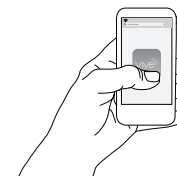
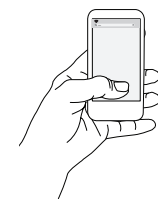
English



All Wireless Transmitters must be installed within 9 m of the PowPak Control Module with DALI.

3 Programming with a Vive Hub

- Use an iOS or Android compatible device.
- Download the Lutron Vive app.
- 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-europe

Note: For programming the PowPak Control Module with DALI without a Vive hub see reverse side.

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

Troubleshooting

Ballasts cannot be controlled locally from PowPak Control Module with DALI.	<ul style="list-style-type: none"> • Ensure that the breaker(s) to the PowPak Control Module are energized. • Ensure that the DALI control lines are wired to the lighting fixture(s). <p>Reset to factory defaults.</p>
Lights do not dim as expected.	<ul style="list-style-type: none"> • Ensure that DALI control lines are wired properly.
Lights do not respond to Wireless Transmitter(s).	<ul style="list-style-type: none"> • Ensure that the breaker(s) to the PowPak Control Module and drivers/ballasts are energized. • Ensure that Wireless Transmitters are associated to the PowPak Control Module. • Ensure that Wireless Transmitter(s) are within 9 m of the PowPak Control Module. <p>Reset to factory defaults.</p>
Lights are unstable at low-end or flash/flicker at turn-on or turn-off.	<ul style="list-style-type: none"> • Adjust the low-end trim.
Wireless Transmitter(s) cannot be associated to PowPak Control Module with DALI.	<ul style="list-style-type: none"> • Ensure that Wireless Transmitter(s) are within 9 m of the PowPak Control Module. • The maximum number of Wireless Transmitters have been associated to the PowPak Control Module. To remove a previously set up Wireless Transmitter, tap a Wireless Transmitter button three times; on the third tap hold for three seconds and then tap three more times.

www.lutron.com/vive

PowPak | Installation Programming without a Vive Hub

Control Module with DALI

Part of the Vive Family

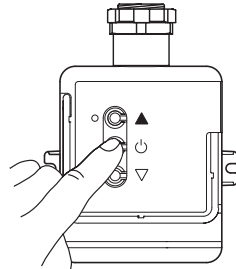
Start Here

1 Associate Wireless Transmitters to PowPak Control Module with DALI

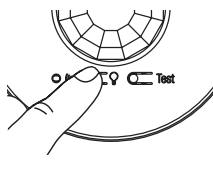
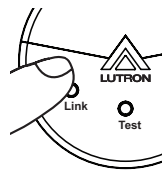
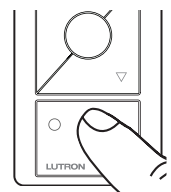
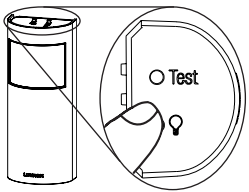
Before beginning this step, make sure that there are no other PowPak modules being set up within the same building. It is possible that wireless transmitters from other systems can be incorrectly associated to this module.

- A** On the PowPak Control Module, hold **Toggle** button “⏻” for 6 seconds until lights flash.

Both LEDs 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. LEDs also flash upon successful association.



- C** On the PowPak Control Module, hold the **Toggle** button “⏻” for 6 seconds to save association. Lights will return to high-end and LEDs will stop flashing.

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

Reset Factory Defaults

Note: In some instances, it may be necessary to reset the PowPak Control Module with DALI 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 Control Module and hold until both LEDs begin 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 will be erased and will need to be re-programmed.

2 Calibrate the Radio Powr Savr Daylight Sensor

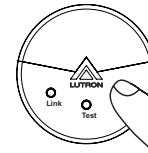
- A** Press and release the “Cal.” button on the Daylight Sensor.
- B** Set lights in room to desired light level.
- C** Press and hold the “Cal.” button for 6 seconds.
- D** Exit room for 5 minutes to complete calibration.

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 Control Module must be used. For detailed setup refer to the tuning section of the Radio Powr Savr Daylight Sensor installation guide.

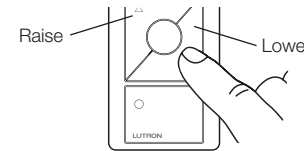
- Select the PowPak Control Module that you want to adjust by pressing the Toggle button.



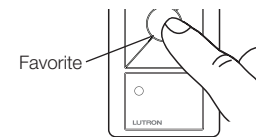
3 Set a Favorite Light Level (Optional)

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.



4 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

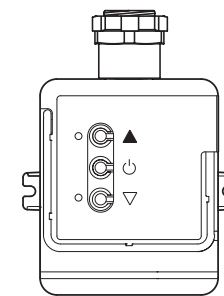
- Depending on the fixture manufacturer or load, low-end trim and high-end trim may need to be adjusted.
- Trim low-end to ensure a stable light level because some loads will flicker or drop out if trimmed too low.
 - Be sure that you can turn on the lights to the low-end trim level without any abnormal 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 bottom LED will begin flashing.
- B** Adjust the low-end trim:
Use the **Raise** button “▲” and **Lower** button “▼” on the PowPak Control Module to adjust and set the lights to the desired low-end (0.1 to 45%).
- Note:** Low-end depends on the minimum output of connected drivers or ballasts.
- C** Save the low-end trim:
Press and hold the **Toggle** button “⏻” for 6 seconds to save setting. The bottom 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 top LED will begin flashing.
- B** Adjust the high-end trim:
Use the **Raise** button “▲” and **Lower** button “▼” on the PowPak Control Module 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 load status LED will begin flashing and then turn solid to indicate new level has been saved.



5 Set Minimum Light Level (Optional)

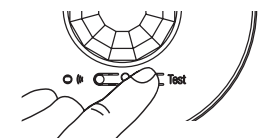
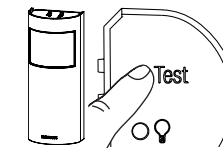
Certain applications (e.g., hallways), may require that the lights never turn off. For these areas, activate Minimum Light Level mode.

- 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 both LEDs will begin flashing.
If lights stop flashing and turn off, 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. Both LEDs will quickly flash to indicate that the new level has been saved.

6 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 the **Raise/Lower** buttons “▲/▼” on the PowPak Control Modules or the **Raise/Lower** buttons “▲/▼” on associated Pico Remote Controls to adjust lights to the desired level.
Note: Setting lights to OFF during this step will make that control module unaffected by occupancy (will function as vacancy only).
- B** Save occupancy light levels:
Press and hold **Test** button for 6 seconds on any associated Radio Powr Savr Occupancy Sensor without a **Lights On** button. Release when Sensor lens starts to flash.



Customer Assistance:

India: +91.124.439.0130
Other Countries: +1.610.282.3800
www.lutron.com/support

Limited Warranty: www.lutron.com/en-US/ResourceLibrary/warranty/Limited%20Comm.pdf

Hereby, Lutron Electronics Co., Inc. declares that the radio equipment type RMNS-DAL32-SZ and RMNS-DAL4-SZ is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: www.lutron.com/cedoc