Vive Application Guide

Wireless lighting control solutions at an affordable price
# Table of Contents

## Introduction
- Lutron overview ........................................ 2
- Energy-saving light control strategies ............... 2
- How to design a system ................................. 4
- How to use this guide ................................. 6
- Vive Local Solutions Layout .......................... 8
- Working with Marshalling Boxes .................. 10
- Working with Junction Boxes ....................... 11

## Applications

### Open Office
- Switching (Marshalling Box) .......................... 12
- Dimming (Marshalling Box) .......................... 14
- Dimming (Junction Box) .............................. 16

### Private Office
- Switching (Marshalling Box) .......................... 18
- Dimming (Marshalling Box) .......................... 20
- Dimming (Junction Box) .............................. 22

### Conference Room
- Switching (Marshalling Box) .......................... 24
- Dimming (Marshalling Box) .......................... 26
- Scenes (Marshalling Box) ............................. 28
- Scenes (Junction Box) .................................. 30

### Restroom
- Switching (Junction Box) ............................. 32
- Dimming (Junction Box) ............................. 34
- Automatic flush (Junction Box) ..................... 36

### Classroom
- Switching (Marshalling Box) .......................... 38
- Dimming (Marshalling Box) .......................... 40
- Dimming (Junction Box) .............................. 42

### Corridor
- Stand alone (Junction Box) ........................... 44
- Corridor Hold (Junction Box) ......................... 46

### Break Room
- Dimming (Marshalling Box) .......................... 58
Why Lutron?
Lutron is a global organization committed to delivering value to its customers. We developed the first solid state dimmer. Today, we continue to develop innovative, energy-saving lighting control solutions that provide flexibility, ambiance, and comfort in residential and commercial applications.

The company offers:
- Proven technology: 2,500 active patents
- Upfront project service support
- After-sales support
- Reduced end-user callbacks
- Products designed and manufactured for reliability with 100% pre-shipment inspection
- Significant portfolio to cover all your project requirements: +15,000 SKUs

Why Invest in Lighting Controls?
- **Occupant comfort** — Increased productivity and well being
- **Meet demand** — Lighting controls are growing in popularity to improve the aesthetics, functionality, and value of any space
- **Increase revenue** — Lighting controls provide an additional revenue opportunity for the contractor
- **Comply with legislation** — Evolving rules are requiring stricter requirements for energy efficiency, while allowances are also being made for lighting controls

Energy-saving lighting control strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Potential savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupancy/vacancy sensing</td>
<td>20–60% Lighting*</td>
</tr>
<tr>
<td>Daylight harvesting</td>
<td>25–60% Lighting*</td>
</tr>
<tr>
<td>High-end trim</td>
<td>10–30% Lighting*</td>
</tr>
<tr>
<td>Personal dimming control</td>
<td>10–20% Lighting**</td>
</tr>
<tr>
<td>Scheduling</td>
<td>10–20% Lighting**</td>
</tr>
<tr>
<td>HVAC integration</td>
<td>5–15% HVAC†</td>
</tr>
<tr>
<td>Load shedding</td>
<td>30–50% Peak Period†</td>
</tr>
<tr>
<td>System Optimization Service</td>
<td>Variable</td>
</tr>
</tbody>
</table>

*Go to lutron.com/ references for more information

Annual electricity use in commercial buildings

![Annual electricity use in commercial buildings chart]

Lutron solutions can help your clients save energy

- Save 60% of lighting energy
- Save 5-15% of HVAC energy

Lutron Product Capabilities: Commercial Applications

<table>
<thead>
<tr>
<th>Local Solutions</th>
<th>Vive with wireless hub</th>
<th>Panel Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wallbox</td>
<td>Vive</td>
<td>Energi Savr Node</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Wallbox</th>
<th>Vive</th>
<th>Vive with wireless hub*</th>
<th>Energi Savr Node</th>
<th>Quantum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupancy sensing</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Multi-level lighting control</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Daylight harvesting</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Timeclock</td>
<td>*</td>
<td>**</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Demand response</td>
<td>*</td>
<td>†</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Energy monitoring</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>BACnet integration</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

* For the latest information on products compatible with the Vive wireless hub go to lutron.com/vive-europe.
† Requires Q5 timeclock.
‡ Automated Demand Response capability requires signal from a third-party device.
Define your space

The appropriate control solution is defined by the needs of the space and its occupants. Use the following steps to plan and design an ideal energy-saving solution.

**Step 1**

**Control your loads**

- Select the controller appropriate for the loads on your job.
- Options available for:
  - 0-10V, DALI
  - Switching CCO
- Simply wire control with power into your circuit.

**Step 2**

**Control your lights where you need to**

- Wireless devices can be mounted to any surface with no wiring needed.
- Controls communicate wirelessly to the controls in the ceiling.
- 10 year battery life

**Step 3**

**Add sensors to your job**

- Occupancy/vacancy sensors turn lights on and/or off for convenience and energy savings.
- Wireless devices can be mounted to any surface with no wiring needed.
- Controls communicate wirelessly to the controls in the ceiling.
- 10 year battery life

Flexible, wireless controls and sensors for simple, scalable design

Add wireless hubs for centralised control and integration (optional)
How to Use this Guide

This application guide is designed to help specifiers and contractors understand Lutron controls in a simple manner. Each of the pages will lay out different spaces, the corresponding lighting control products for those spaces, and the way the system must be installed, the way the system must operate, and to order the correct products visible in the space.

For Specifiers
Use this application guide for design suggestions, to understand the way the system operates and to specify the relevant products for each space.

For Contractors
Use this application guide to understand how the system is installed, the way the system must operate, and to order the correct products for each application.

This guide offers up to three solutions per space type.

Switching: Basic functionality and energy savings.
Dimming: Increased control, ambiance, and energy savings.
The Recommended Solutions have advanced functionality for greater comfort and energy savings.

### School Classroom | Dimming using a Junction Box

#### Visible System Components

- Pico wireless control
- Radio Powr Savr wireless day/night vacancy sensor and daylight sensor

#### Control Functionality

**Occupant Enters:** Lights do not automatically turn on when an occupant enters the space; lights must be turned on manually. Maximum light level is set to 80%.

**When Occupied:**
- Automatic: Overhead lights dim/brighten based on daylight availability. There is one perimeter daylight zone.
- Manual: Occupant uses wall dimmers to set desired light levels for both general and whiteboard lights.

**Occupant Exits:**
- All lights automatically shut off 15 minutes (by default) after all occupants exit.

Add a Vive wireless hub to enable simple setup and control. System monitoring, dimming functionality, and advanced integration.

#### Control Strategies

- Auto occupancy/Vacancy
- Daylight harvesting
- High-end Trim/Tuning
- Personal Dimming

#### Lighting Energy Savings

60%

*See lutron.com/References for more information.*

#### Table of Products

<table>
<thead>
<tr>
<th>Sorted</th>
<th>Model/Number</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RMK-10-L-BL 4</td>
<td>Pico wireless control</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>RMKS-DAL4-2-TAW</td>
<td>Pico Single Zone Module with DALI</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>LRF3-DBR-P-WH</td>
<td>Radio Powr Savr wireless day/night vacancy sensor</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>LRF3-DBR-P-WH</td>
<td>Radio Powr Savr wireless day/night vacancy sensor</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>LRF3-DBR-P-WH</td>
<td>Radio Powr Savr wireless day/night vacancy sensor</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>LRF3-DBR-P-WH</td>
<td>Radio Powr Savr wireless day/night vacancy sensor</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>RMKS-DAL32-SZ</td>
<td>PowPak Single Zone Module with DALI</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>LPFP-PK2-3BRL-TAW</td>
<td>Pico Wireless Control On/Off and Raise/Lower</td>
<td>2</td>
</tr>
</tbody>
</table>

Understand how the products are laid out in the space

Learn what strategies are implemented in the space

Learn about the products used in the space

Learn what energy savings you achieve over manual shut-off

Understand how the space functions with the installed system
This is a high-level overview of the local solutions layout. For individual room requirements refer to the detailed room type solutions in this guide. A single PowPak module can control single or multiple fixtures. The products shown here are representative of local solutions. Multiple product options are available to meet the needs of the space.

- Vive wireless hub*
- PowPak module
- Occupancy sensor
- Pico wireless remote control
- Daylight sensor

**Vive wireless hub features:**
- Central control, management, and monitoring of Vive devices via web browser
- Supports astronomic and time-of-day events
- Two contact closure inputs for third-party integration, such as Automatic Demand Response
- Wi-Fi access for easy commissioning
- Control up to 929 m² (10,000 ft²) with a single hub
- Optional BACnet integration

* Go to [lutron.com/vive-europe](http://lutron.com/vive-europe) for complete compatibility and design details.
Lutron PowPaks offer unparalleled versatility as lighting control modules. They work for both retrofit and new construction, allowing for easy upgrade of any building into a smart building. They can be wired into a junction box or into a marshalling box for maximum flexibility.

**Marshalling Boxes**
- Ideal for installations with drop ceilings
- Lutron's PowPaks work with any marshalling box. Simply connect PowPak through a knockout and wire it to the terminals inside the wiring compartment
- Connect multiple PowPaks to a marshalling box that has multiple circuits for additional functionality

**Junction Boxes**
- Ideal for installations with exposed services, avoiding clutter in the ceiling
- Simply connect the PowPak through a knockout and wire it using the terminals provided with PowPak
- Connect multiple PowPaks to a junction box if you want to split circuits for added functionality
Visible System Components

- Pico wireless control
- Radio Powr Savr wireless ceiling-mount occupancy sensor

Lighting Functionality

**Occupant Enters:**
All lights automatically turn on.

**When Occupied:**
Manual: Occupant uses wall switches to turn zones on and off.

**Occupant Exits:**
All lights automatically shut off 15 minutes (by default) after all occupants exit.

Control Strategies

- Occupancy/Vacancy

Add a Vive wireless hub to enable simple setup and rezoning, system monitoring, timeclock functionality, and advanced integration.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Model Number</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RMKS-16R-DV-B</td>
<td>PowPak 16A Relay Module</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>LRF3-OCR2B-P-WH</td>
<td>Radio Powr Savr Wireless Ceiling Occupancy Sensor</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>PK2-2B-TAW-L01</td>
<td>Pico Wireless Control 2 Button On/Off</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>LPFP-S2-TAW</td>
<td>Pico Wireless Faceplate (Dual)</td>
<td>1</td>
</tr>
</tbody>
</table>

Lighting Energy Savings*

35%

* Go to lutron.com/references for more information.
Visible System Components

Lighting Functionality

**Occupant Enters:**
All lights automatically turn on to maximum light level. Maximum light level is set to 80%.

**When Occupied:**
Automatic: Overhead lights dim/brighten based on daylight availability. There is one perimeter daylight zone.

Manual: Occupant uses wall dimmers to set desired light levels for all lights.

**Occupant Exits:**
All lights automatically shut off 15 minutes (by default) after all occupants exit.

Add a Vive wireless hub to enable simple setup and rezoning, system monitoring, timeclock functionality, and advanced integration.

Control Strategies

Occupancy/Vacancy

Daylight Harvesting

High-end Trim/Tuning

Lighting Energy Savings*

55%

* Go to lutron.com/references for more information.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Model Number</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMKS-DAL32-SZ</td>
<td>PowPak Single Zone Module with DALI</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>LRF3-OCR2B-P-WH</td>
<td>Radio Powr Savr Wireless Ceiling Occupancy Sensor</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>LRF3-DCRB-P-WH</td>
<td>Radio Powr Savr Wireless Daylight Sensor</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>PK2-3BRL-TAW-L01</td>
<td>Pico Wireless Control On/Off and Raise/Lower</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>LPFP-S2-TAW</td>
<td>Pico Wireless Faceplate (Dual)</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
Open Office | Dimming using a Junction Box

Visible System Components

- Pico wireless control
- Radio Powr Savr wireless ceiling-mount occupancy sensor and daylight sensor

Lighting Functionality

**Occupant Enters:**
All lights automatically turn on to maximum light level. Maximum light level is set to 80%.

**When Occupied:**
Automatic: Overhead lights dim/brighten based on daylight availability. There is one perimeter daylight zone.

Manual: Occupant uses wall dimmers to set desired light levels for all lights.

**Occupant Exits:**
All lights automatically shut off 15 minutes (by default) after all occupants exit.

Control Strategies

- Occupancy/Vacancy
- Daylight Harvesting
- High-end Trim/Tuning

Add a Vive wireless hub to enable simple setup and re-zoning, system monitoring, timeclock functionality, and advanced integration.

Lighting Energy Savings*

55%

* Go to lutron.com/references for more information.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Model Number</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMKS-DAL32-SZ</td>
<td>PowPak Single Zone Module with DALI</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>LRF3-OCR2B-P-WH</td>
<td>Radio Powr Savr Wireless Ceiling Occupancy Sensor</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>LRF3-DCRB-P-WH</td>
<td>Radio Powr Savr Wireless Daylight Sensor</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>PK2-3BRL-TAW-L01</td>
<td>Pico Wireless Control On/Off and Raise/Lower</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>LPFP-S2-TAW</td>
<td>Pico Wireless Faceplate (Dual)</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
Visible System Components

- Pico wireless switch
- Radio Powr Savr wireless ceiling-mount occupancy sensor

Control Functionality

**Occupant Enters:**
Lights do not automatically turn on when an occupant enters the space; lights must be turned on manually.

**When Occupied:**
- Manual: Occupant uses wall switch to turn on and turn off all lights.

**Occupant Exits:**
All lights automatically shut off 15 minutes (by default) after all occupants exit.

Add a Vive wireless hub to enable simple setup and rezoning, system monitoring, timeclock functionality, and advanced integration.

Control Strategies

- Occupancy/Vacancy

Symbol | Model Number | Description | Qty
--- | --- | --- | ---
RMKS-16R-DV-B | PowPak 16A Relay Module | 1
LRF3-OCR2B-P-WH | Radio Powr Savr Wireless Ceiling Occupancy Sensor | 1
PK2-2B-TAW-L01 | Pico Wireless Control 2 Button On/Off | 1
LPFP-S1-TAW | Pico Wireless Faceplate (Single) | 1

Private Office | Switching using a Marshalling Box

Lighting Energy Savings*

30%

* Go to lutron.com/references for more information.
Private Office | Dimming using a Marshalling Box

Visible System Components

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Model Number</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RMKS-DAL4-SZ</td>
<td>PowPak Single Zone Module with DALI</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>LRF3-OCR2B-P-WH</td>
<td>Radio Powr Savr Wireless Ceiling Occupancy Sensor</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>LRF3-DCRB-P-WH</td>
<td>Radio Powr Savr Wireless Daylight Sensor</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>PK2-3BRL-TAW-L01</td>
<td>Pico Wireless Control On/Off and Raise/Lower</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>LPFP-S1-TAW</td>
<td>Pico Wireless Faceplate (Single)</td>
<td>1</td>
</tr>
</tbody>
</table>

Control Functionality

**Occupant Enters:** Lights do not automatically turn on when an occupant enters the space; lights must be turned on manually.

**When Occupied:**
- Automatic: Overhead lights dim/brighten based on daylight availability.
- Manual: Occupant uses wall dimmer to set desired light levels for all lights.

**Occupant Exits:** All lights automatically shut off 15 minutes (by default) after all occupants exit.

Add a Vive wireless hub to enable simple setup and rezing, system monitoring, timeclock functionality, and advanced integration.

Control Strategies

- Occupancy/Vacancy
- Daylight Harvesting
- High-end Trim/Tuning
- Personal Dimming

Lighting Energy Savings*

60%

* Go to lutron.com/references for more information.
Visible System Components

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Model Number</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Symbol" /></td>
<td>RMKS-DAL4-SZ</td>
<td>PowPak Single Zone Module with DALI</td>
<td>1</td>
</tr>
<tr>
<td><img src="image2.png" alt="Symbol" /></td>
<td>LRF3-OCR2B-P-WH</td>
<td>Radio Powr Savr Wireless Ceiling Occupancy Sensor</td>
<td>1</td>
</tr>
<tr>
<td><img src="image3.png" alt="Symbol" /></td>
<td>LRF3-DCRB-P-WH</td>
<td>Radio Powr Savr Wireless Daylight Sensor</td>
<td>1</td>
</tr>
<tr>
<td><img src="image4.png" alt="Symbol" /></td>
<td>PK2-3BRL-TAW-L01</td>
<td>Pico Wireless Control On/Off and Raise/Lower</td>
<td>1</td>
</tr>
<tr>
<td><img src="image5.png" alt="Symbol" /></td>
<td>LPFP-S1-TAW</td>
<td>Pico Wireless Faceplate (Single)</td>
<td>1</td>
</tr>
</tbody>
</table>

Control Functionality

**Occupant Enters:**
Lights do not automatically turn on when an occupant enters the space; lights must be turned on manually.

**When Occupied:**
- Automatic: Overhead lights dim/brighten based on daylight availability.
- Manual: Occupant uses wall dimmer to set desired light levels for all lights.

**Occupant Exits:**
All lights automatically shut off 15 minutes (by default) after all occupants exit.

Add a Vive wireless hub to enable simple setup and rezing, system monitoring, timeclock functionality, and advanced integration.

Control Strategies

- **Occupancy/Vacancy**
- **Daylight Harvesting**
- **High-end Trim/Tuning**
- **Personal Dimming**

Lighting Energy Savings*

60%

* Go to lutron.com/references for more information.
Visible System Components

Control Strategies

Occupancy/Vacancy

Control Functionality

Occupant Enters:
Lights do not automatically turn on when an occupant enters the space; lights must be turned on manually.

When Occupied:
Manual: Occupant uses wall switch to turn on and turn off all lights.

Occupant Exits:
All lights automatically shut off 15 minutes (by default) after all occupants exit.

Add a Vive wireless hub to enable simple setup and rezing, system monitoring, timeclock functionality, and advanced integration.

Lighting Energy Savings* 40%

* Go to lutron.com/references for more information.
Visible System Components

Control Functionality

Occupant Enters:
Lights do not automatically turn on when an occupant enters the space; lights must be turned on manually.

When Occupied:
Automatic: Overhead lights dim/brighten based on daylight availability.
Manual: Occupant uses wall dimmer to set desired light levels for all lights.

Occupant Exits:
All lights automatically shut off 15 minutes (by default) after all occupants exit.

Add a Vive wireless hub to enable simple setup and rezing, system monitoring, timeclock functionality, and advanced integration.

Control Strategies

Occupancy/Vacancy

Daylight Harvesting

High-end Trim/Tuning

Personal Dimming

Table:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Model Number</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RMKS-DAL32-SZ</td>
<td>PowPak Single Zone Module with DALI</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>LRF3-OKLB-P-WH</td>
<td>Radio Powr Savr Wireless Corner Occupancy Sensor</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>LRF3-DCRB-P-WH</td>
<td>Radio Powr Savr Wireless Daylight Sensor</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>PK2-3BRL-TAW-L01</td>
<td>Pico Wireless Control On/Off and Raise/Lower</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>LPFP-S2-TAW</td>
<td>Pico Wireless Faceplate (Dual)</td>
<td>1</td>
</tr>
</tbody>
</table>

Lighting Energy Savings*

55%

* Go to lutron.com/references for more information.
Visible System Components

- Pico wireless control
- Radio Powr Savr wireless corner-mount vacancy sensor and daylight sensor

Control Functionality

**Occupant Enters:**
Lights do not automatically turn on when an occupant enters the space; lights must be turned on manually.

**When Occupied:**
- Automatic: Overhead lights dim/brighten based on daylight availability.
- Manual: Occupant uses wall dimmer to set desired light levels for all lights.

**Occupant Exits:**
All lights automatically shut off 15 minutes (by default) after all occupants exit.

**Advanced Functionality:**
Set the right lighting by using the 4 button Pico, which can be easily configured manually or through the Hub.

Add a Vive wireless hub to enable simple setup and rezing, system monitoring, timeclock functionality, and advanced integration.

Control Strategies

- **Occupancy/Vacancy**
- **Daylight Harvesting**
- **High-end Trim/Tuning**
- **Personal Dimming**

Lighting Energy Savings*

55%

* Go to lutron.com/references for more information.
Conference Room | Scenes using a Junction Box

**Visible System Components**

**Control Functionality**

**Occupant Enters:**
Lights do not automatically turn on when an occupant enters the space; lights must be turned on manually.

**When Occupied:**
- Automatic: Overhead lights dim/brighten based on daylight availability.
- Manual: Occupant uses wall dimmer to set desired light levels for all lights.

**Occupant Exits:**
All lights automatically shut off 15 minutes (by default) after all occupants exit.

**Advanced Functionality:**
Set the right lighting by using the 4 button Pico, which can be easily configured manually or through the Hub.

Add a Vive wireless hub to enable simple setup and rezing, system monitoring, timeclock functionality, and advanced integration.

**Control Strategies**

**Occupancy/Vacancy**

**Daylight Harvesting**

**High-end Trim/Tuning**

**Personal Dimming**

**Lighting Energy Savings***

55%  
* Go to lutron.com/references for more information.

---

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Model Number</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image.png" alt="icon" /></td>
<td>RMKS-DAL32-SZ</td>
<td>PowPak Single Zone Module with DALI</td>
<td>1</td>
</tr>
<tr>
<td><img src="image.png" alt="icon" /></td>
<td>RMKS-DAL4-SZ</td>
<td>PowPak Single Zone Module with DALI</td>
<td>1</td>
</tr>
<tr>
<td><img src="image.png" alt="icon" /></td>
<td>LRF3-OKLB-P-WH</td>
<td>Radio Powr Savr Wireless Corner Occupancy Sensor</td>
<td>1</td>
</tr>
<tr>
<td><img src="image.png" alt="icon" /></td>
<td>LRF3-DCRB-P-WH</td>
<td>Radio Powr Savr Wireless Daylight Sensor</td>
<td>1</td>
</tr>
<tr>
<td><img src="image.png" alt="icon" /></td>
<td>PK2-3BRL-TAW-L01</td>
<td>Pico Wireless Control On/Off and Raise/Lower</td>
<td>1</td>
</tr>
<tr>
<td><img src="image.png" alt="icon" /></td>
<td>PK2-4BT-TAW-L01</td>
<td>Pico Wireless Control 4 Button</td>
<td>1</td>
</tr>
<tr>
<td><img src="image.png" alt="icon" /></td>
<td>LPFP-S2-TAW</td>
<td>Pico Wireless Faceplate (Dual)</td>
<td>1</td>
</tr>
</tbody>
</table>
# Restroom | Switching using a Junction Box

## Visible System Components
- Pico wireless switch
- Radio Powr Savr wireless ceiling-mount occupancy sensor

## Control Functionality
- **Occupant Enters:** All lights automatically turn on.
- **When Occupied:** Manual: Occupant uses wall switch to turn all lights off.
- **Occupant Exits:** All lights automatically shut off 15 minutes (by default) after all occupants exit.

Add a Vive wireless hub to enable simple setup and re-zoning, system monitoring, time-clock functionality, and advanced integration.

## Control Strategies
- **Occupancy/Vacancy**

## Lighting Energy Savings*

50%

* Go to lutron.com/references for more information.

### Symbol | Model Number | Description | Qty
--- | --- | --- | ---
![](symbol) | RMKS-16R-DV-B | PowPak 16A Relay Module | 1
![](symbol) | LRF3-OCR2B-P-WH | Radio Powr Savr Wireless Ceiling Occupancy Sensor | 2
![](symbol) | PK2-2B-TAW-L01 | Pico Wireless Control 2 Button On/Off | 1
![](symbol) | LPFP-S1-TAW | Pico Wireless Faceplate (Single) | 1
Restroom | Dimming using a Junction Box

Visible System Components

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Model Number</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Symbol" /></td>
<td>RMKS-DAL4-SZ</td>
<td>PowPak with DALI</td>
<td>1</td>
</tr>
<tr>
<td><img src="image2.png" alt="Symbol" /></td>
<td>LRF3-OCR2B-P-WH</td>
<td>Radio Powr Savr Wireless Ceiling Occupancy Sensor</td>
<td>2</td>
</tr>
<tr>
<td><img src="image3.png" alt="Symbol" /></td>
<td>PK2-3BRL-TAW-L01</td>
<td>Pico Wireless Control On/Off and Raise/Lower</td>
<td>1</td>
</tr>
<tr>
<td><img src="image4.png" alt="Symbol" /></td>
<td>LPFP-S1-TAW</td>
<td>Pico Wireless Faceplate (Single)</td>
<td>1</td>
</tr>
</tbody>
</table>

Control Functionality

- **Occupant Enters:** All lights automatically turn on to maximum light level. Maximum light level is set to 80%.
- **When Occupied:** Manual: Occupant uses wall dimmer to set desired light levels for all lights.
- **Occupant Exits:** All lights automatically shut off 15 minutes (by default) after all occupants exit.

Add a Vive wireless hub to enable simple setup and rezoning, system monitoring, timeclock functionality, and advanced integration.

Control Strategies

- **Occupancy/Vacancy**
- **High-end Trim/Tuning**

Lighting Energy Savings*

60%

* Go to lutron.com/references for more information.
Visible System Components

Control Functionality

**Occupant Enters:**
All lights automatically turn on to maximum light level. Maximum light level is set to 80%.

**When Occupied:**
Manual: Occupant uses wall dimmer to set desired light levels for all lights.

**Occupant Exits:**
All lights automatically shut off 15 minutes (by default) after all occupants exit.

**Advanced Functionality:**
The CCO PowPak triggers the solenoid for an automatic flush.

Add a Vive wireless hub to enable simple setup and rezonig, system monitoring, timeclock functionality, and advanced integration.

Control Strategies

- Occupancy/Vacancy
- High-end Trim/Tuning

**Lighting Energy Savings**

60%

* Go to lutron.com/references for more information.
Visible System Components

Control Strategies

Occupancy/Vacancy

Control Functionality

Occupant Enters:
Lights do not automatically turn on when an occupant enters the space; lights must be turned on manually.

When Occupied:
Manual: Occupant uses wall switches to turn on and turn off general and whiteboard lights.

Occupant Exits:
All lights automatically shut off 15 minutes (by default) after all occupants exit.

Add a Vive wireless hub to enable simple setup and rezoning, system monitoring, timeclock functionality, and advanced integration.

Lighting Energy Savings*

45%

* Go to lutron.com/references for more information.

---

School Classroom | Switching using a Marshalling Box

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Model Number</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Symbol" /></td>
<td>RMKS-16R-DV-B</td>
<td>PowPak 16 A Relay Module</td>
<td>2</td>
</tr>
<tr>
<td><img src="image2.png" alt="Symbol" /></td>
<td>LRF3-OKLB-P-WH</td>
<td>Radio Powr Savr Wireless Corner Occupancy Sensor</td>
<td>1</td>
</tr>
<tr>
<td><img src="image3.png" alt="Symbol" /></td>
<td>PK2-2B-TAW-L01</td>
<td>Pico Wireless Control 2 Button On/Off</td>
<td>2</td>
</tr>
<tr>
<td><img src="image4.png" alt="Symbol" /></td>
<td>LPFP-S2-TAW</td>
<td>Pico Wireless Faceplate (Dual)</td>
<td>1</td>
</tr>
</tbody>
</table>

---

School Classroom | Switching using a Marshalling Box

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Model Number</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Symbol" /></td>
<td>RMKS-16R-DV-B</td>
<td>PowPak 16 A Relay Module</td>
<td>2</td>
</tr>
<tr>
<td><img src="image2.png" alt="Symbol" /></td>
<td>LRF3-OKLB-P-WH</td>
<td>Radio Powr Savr Wireless Corner Occupancy Sensor</td>
<td>1</td>
</tr>
<tr>
<td><img src="image3.png" alt="Symbol" /></td>
<td>PK2-2B-TAW-L01</td>
<td>Pico Wireless Control 2 Button On/Off</td>
<td>2</td>
</tr>
<tr>
<td><img src="image4.png" alt="Symbol" /></td>
<td>LPFP-S2-TAW</td>
<td>Pico Wireless Faceplate (Dual)</td>
<td>1</td>
</tr>
</tbody>
</table>
Visible System Components

Control Functionality

Occupant Enters:
Lights do not automatically turn on when an occupant enters the space; lights must be turned on manually. Maximum light level is set to 80%.

When Occupied:
Automatic: Overhead lights dim/brighten based on daylight availability. There is one perimeter daylight zone.

Manual: Occupant uses wall dimmers to set desired light levels for both general and whiteboard lights.

Occupant Exits:
All lights automatically shut off 15 minutes (by default) after all occupants exit.

Add a Vive wireless hub to enable simple setup and rezoning, system monitoring, timeclock functionality, and advanced integration.

Control Strategies

- Occupancy/Vacancy
- Daylight Harvesting
- High-end Trim/Tuning
- Personal Dimming

Lighting Energy Savings*

60%

* Go to lutron.com/references for more information.
## Visible System Components

- **Pico wireless control**
- **Radio Powr Savr wireless corner-mount vacancy sensor and daylight sensor**

## Control Functionality

**Occupant Enters:**
Lights do not automatically turn on when an occupant enters the space; lights must be turned on manually. Maximum light level is set to 80%.

**When Occupied:**
- **Automatic:** Overhead lights dim/brighten based on daylight availability. There is one perimeter daylight zone.
- **Manual:** Occupant uses wall dimmers to set desired light levels for both general and whiteboard lights.

**Occupant Exits:**
All lights automatically shut off 15 minutes (by default) after all occupants exit.

Add a Vive wireless hub to enable simple setup and rezoning, system monitoring, timeclock functionality, and advanced integration.

## Control Strategies

- **Occupancy/Vacancy**
- **Daylight Harvesting**
- **High-end Trim/Tuning**
- **Personal Dimming**

## Symbol Model Number Description Qty

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Model Number</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Symbol" /></td>
<td>RMKS-DAL32-SZ</td>
<td>PowPak Single Zone Module with DALI</td>
<td>1</td>
</tr>
<tr>
<td><img src="image2" alt="Symbol" /></td>
<td>RMKS-DAL4-SZ</td>
<td>PowPak Single Zone Module with DALI</td>
<td>2</td>
</tr>
<tr>
<td><img src="image3" alt="Symbol" /></td>
<td>LRF3-OKLB-P-WH</td>
<td>Radio Powr Savr Wireless Corner Occupancy Sensor</td>
<td>1</td>
</tr>
<tr>
<td><img src="image4" alt="Symbol" /></td>
<td>LRF3-DCRB-P-WH</td>
<td>Radio Powr Savr Wireless Daylight Sensor</td>
<td>1</td>
</tr>
<tr>
<td><img src="image5" alt="Symbol" /></td>
<td>PK2-3BRL-TAW-L01</td>
<td>Pico Wireless Control On/Off and Raise/Lower</td>
<td>2</td>
</tr>
<tr>
<td><img src="image6" alt="Symbol" /></td>
<td>LPFP-S2-TAW</td>
<td>Pico Wireless Faceplate (Dual)</td>
<td>1</td>
</tr>
</tbody>
</table>

## Lighting Energy Savings*

*Go to lutron.com/references for more information.*
Corridor using a Junction Box

Visible System Components

- Radio Powr Savr wireless corner-mount occupancy sensor

Control Functionality

**Occupant Enters:**
All corridor lights automatically turn on.

**Occupant Exits:**
Corridor lighting remains on while connected rooms are occupied.

Add a Vive wireless hub to enable simple setup and re-zoning, system monitoring, time-clock functionality, and advanced integration.

Control Strategies

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Model Number</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RMKS-DAL32-SZ</td>
<td>PowPak Single Zone Module with DALI</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>LRF3-OKLB-P-WH</td>
<td>Radio Powr Savr Wireless Corner Occupancy Sensor</td>
<td>1</td>
</tr>
</tbody>
</table>

Application uses a Junction box instead of a Marshalling box.

Lighting Energy Savings*

30%

* Go to lutron.com/references for more information.
Corridor Hold using a Junction Box

Visible System Components

Radio Powr Savr
wireless corner-mount
occupancy sensor

Control Functionality

Occupant Enters:
All corridor lights automatically turn on.

Occupant Exits:
Corridor lighting remains on while connected rooms
are occupied.

Advanced Functionality:
The lights in the corridor stay on while the
classrooms are being used.

Add a Vive wireless hub to enable simple setup
and rezoning, system monitoring, timeclock
functionality, and advanced integration.

Control Strategies

Occupancy/Vacancy

Symbol | Model Number | Description | Qty
--- | --- | --- | ---
RMKS-DAL32-SZ | PowPak Single Zone Module with DALI | 1
LRF3-OKLB-P-WH | Radio Powr Savr Wireless Corner Occupancy Sensor | 3

Lighting Energy Savings*

30%

* Go to lutron.com/references for more information.
Control Functionality

**Occupant Enters:**
Lights do not automatically turn on when an occupant enters the space; lights must be turned on manually.

**When Occupied:**
Manual: Occupant uses wall switch to turn all lights off.

**Occupant Exits:**
All lights automatically shut off 15 minutes (by default) after all occupants exit.

Add a Vive wireless hub to enable simple setup and rezoning, system monitoring, timeclock functionality, and advanced integration.

Visible System Components

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Model Number</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMKS-DAL32-SZ</td>
<td>PowPak Single Zone Module with DALI</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>LRF3-OILB-P-WH</td>
<td>Radio Powr Savr Wireless Corner Occupancy Sensor</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>PK2-3BRL-TAW-L01</td>
<td>Pico Wireless Control On/Off and Raise/Lower</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>LPFP-S1-TAW</td>
<td>Pico Wireless Faceplate (Single)</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Control Strategies

**Occupancy/Vacancy**

Lighting Energy Savings*

40%

* Go to lutron.com/references for more information.
Further Information

Please visit lutron.com/vive-europe for more information, including videos and our Vive Wireless online training courses.

For more information or to join Vive training near you, please contact Lutron.

EUROPEAN HEADQUARTERS
LUTRON EA LTD.
4TH FLOOR, 52 LEADENHALL STREET
LONDON EC3A 2EB, UK

EUROPEAN EXPERIENCE CENTRE AND REGISTERED ADDRESS:
4TH FLOOR, 125 FINSBURY PAVEMENT
LONDON EC2A 1NQ, UK

FREephone: 0800 282 107
TEL: +44 (0) 207 702 0657
FAX: +44 (0) 207 480 6899
LUTRONLONDON@LUTRON.COM

© 12/2018 Lutron Electronics Co., Inc. | P/N 367-2673/EA REV B

The Lutron logo, Lutron, Energi Savr Node, Pico, PowPak, Quantum, Radio Pover Savr, and Vive are trademarks or registered trademarks of Lutron Electronics Co., Inc., in the U.S. and/or other countries.