Cut ties with complexity
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Distributed Low-Voltage Power System

The Distributed Low-Voltage Power System blends the benefits of both AC and DC power distribution to reduce the total installed cost of a lighting project by up to 20% while providing a completely flexible and electrically efficient solution.

- Increased safety
- Centralized maintenance
- Reduced ROI
- Reduction in installation time, labor and materials
- Simplified installation and configuration
- Energy code compliance
- Enables greater adoption of LED fixtures over fluorescent technology
The DLVP System can be specified and ordered based on project needs

**LOW-VOLTAGE POWER MODULE**
300W & 600W MODELS

- Centralized power conversion and system brain
- Integrated wiring compartment
- 120-277VAC 50/60Hz Input
- AC - DC (Class 2) conversion (up to 100W/low-voltage circuit)
- Passively cooled and plenum rated
- Integrates centralized UL924 emergency power (remote relay)

**LOW-VOLTAGE LIGHTING CABLES**

- Standards-based Belden cable with Tyco connectors
- Black for silent ceiling applications
- Provides power and communications in the same cable
- Pre-terminated, plenum rated, standard lengths
- Intuitive polarized locking connectors

**LOW-VOLTAGE LED FIXTURES**

- Supports fixtures up to 75W
- Highly efficient and allows for daisy-chain wiring
- Integrated sensors and emergency battery packs available
- Multiple load types may exist on same low-voltage circuit
- Addressable fixtures ready for zone assignment

**CONTROL DEVICES**

- Occupancy sensors (occupancy and vacancy modes)
- Daylight / IR sensors
- Receptacle controls
- Wall station controllers
- Pre-terminated control cable connections
- NeoSwitch wall sensors

**HANDHELD REMOTES**

- Programming / configuration
- Personal control

**Features & benefits**

**Contractor Benefits**
- Simplified wiring with pre-terminated cables
- Up to 40% faster installation*
- Up to 20% lower installed system cost*
- Eliminates wiring errors
- Safer installation with low-voltage power
- Eliminates unnecessary line-voltage materials
- Easily configured by the installer
- Simplified energy-code compliance

**Office, Education and Healthcare applications**
- Configuration flexibility
- Reduced ROI, better value
- Energy code compliance
- Centralized maintenance
- Greater safety
- 1% dimming, dim to OFF

*versus room-based line voltage systems
System components

Low-Voltage Power Module
300W and 600W low-voltage power modules provide independent low-voltage circuits for on/off and dimming control by zone as well as coordinates all the actions from wallstations, daylight sensor and occupancy sensor.

Wallstation
Zone or scene wallstations provide an intuitive user interface for manual override with pre-engraved buttons describing their respective functionality.

Occupancy Sensor
Any Greengate low-voltage occupancy sensors can be used with the low-voltage power module; so select one to meet application requirements.

Daylight Sensor
Dimmable daylighting requirements have increased with the latest version of ASHRAE 90.1. The low-voltage power module daylight sensor allows up to three dimming zones to be controlled from a single open loop sensor.

Plug Load Control
Saving additional energy by shutting off vacated space plug loads is now part of ASHRAE 90.1, and is easily achieved with the Receptacle Switchpack paired with a low-voltage power module and occupancy sensing.

DISTRIBUTED LOW-VOLTAGE POWER SYSTEM COMPONENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>300W Low-Voltage Power Module</td>
<td>LVPM-03-100-03</td>
<td>Low-voltage power and control for areas up to 1,000 sq. ft.</td>
</tr>
<tr>
<td>600W Low-Voltage Power Module</td>
<td>LVPM-06-100-03</td>
<td>Low-voltage power and control for areas up to 2,000 sq. ft.</td>
</tr>
<tr>
<td>Scene Wallstations</td>
<td>RC-3TLB-P1-*</td>
<td>Programmable manual control</td>
</tr>
<tr>
<td>Zone Wallstations</td>
<td>RC-6TSB-P1-*</td>
<td>Pre-configured manual control</td>
</tr>
<tr>
<td></td>
<td>RC-6TSB-P2-*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RC-6TSB-P3-*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RC-6TSB-P4-*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RC-*</td>
<td></td>
</tr>
<tr>
<td>COMPONENT</td>
<td>DESCRIPTION</td>
<td>PART NUMBER</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Occupancy Sensor</td>
<td>Multiple coverage options from ceiling, wall / corner, or wall / switch mounted configurations</td>
<td>OAC-* OAWC-* ONW-*</td>
</tr>
<tr>
<td>Input/Output Device</td>
<td>Provides connection to any Greengate low-voltage occupancy sensor and BMS / egress system</td>
<td>OCC-RJ45</td>
</tr>
<tr>
<td>Daylight Sensor</td>
<td>Open loop sensor measuring natural light infiltration</td>
<td>DSRC-FMOIR</td>
</tr>
<tr>
<td>Receptacle Switchpack</td>
<td>20-amp on/off control of connected outlets</td>
<td>SPRC-R-20-120</td>
</tr>
<tr>
<td>Pre-terminated Control Cable</td>
<td>Cables, couplings and splitters for the simplified connection to sensors and control devices</td>
<td>GGRJ45-* GGRC-COUPLING GGRC-SPLITTER</td>
</tr>
<tr>
<td>Programming Remote / Personal Remote</td>
<td>Simplified connection to sensors and control devices</td>
<td>LVHH-01 LVHH-02</td>
</tr>
<tr>
<td>Low-Voltage Lighting Cable</td>
<td>Pre-terminated power and control connections for light fixtures</td>
<td>LVC-8P LVC-15P LVC-30P LVC-WP LVC-COPLER</td>
</tr>
<tr>
<td>Open ADR Dry Contact Device</td>
<td>Virtual End Node provides signal to lighting control system</td>
<td>EBOX-2B-DC</td>
</tr>
</tbody>
</table>
Compatible fixtures
### DISTRIBUTED LOW-VOLTAGE POWER SYSTEM FIXTURES

<table>
<thead>
<tr>
<th>Fixtures</th>
<th>SKU Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Corelite Bridge</strong></td>
<td>14BRG-*</td>
</tr>
<tr>
<td>1x4, 2x2 and 2x4 fixtures available</td>
<td>22BRG-*</td>
</tr>
<tr>
<td>• Available with or without integrated sensors</td>
<td>24BRG-*</td>
</tr>
<tr>
<td>• 7W and 14W emergency battery packs available</td>
<td></td>
</tr>
<tr>
<td><strong>Metalux Encounter</strong></td>
<td>12EN-*</td>
</tr>
<tr>
<td>1x2, 1x4, 2x2 and 2x4 fixtures available</td>
<td>14EN-*</td>
</tr>
<tr>
<td>• Available with or without integrated sensors</td>
<td>22EN-*</td>
</tr>
<tr>
<td>• 7W and 14W emergency battery packs available</td>
<td>24EN-*</td>
</tr>
<tr>
<td><strong>Metalux ArcLine</strong></td>
<td>14ALNG-*</td>
</tr>
<tr>
<td>1x4, 2x2 and 2x4 fixtures available</td>
<td>22ALNG-*</td>
</tr>
<tr>
<td>• Available with or without integrated sensors</td>
<td>24ALNG-*</td>
</tr>
<tr>
<td><strong>Metalux Cruze</strong></td>
<td>14CZ-*</td>
</tr>
<tr>
<td><strong>Metalux Cruze SE</strong></td>
<td>22CZ-*</td>
</tr>
<tr>
<td>1x4, 2x2 and 2x4 fixtures available</td>
<td>24CZ-*</td>
</tr>
<tr>
<td>• Available with or without integrated sensors</td>
<td></td>
</tr>
<tr>
<td>• 7W and 14W emergency battery packs available</td>
<td></td>
</tr>
<tr>
<td><strong>Metalux SkyRidge</strong></td>
<td>12SR-*</td>
</tr>
<tr>
<td>1x2, 1x4, 2x2 and 2x4 fixtures available</td>
<td>14SR-*</td>
</tr>
<tr>
<td>• Available with or without integrated sensors</td>
<td>22SR-*</td>
</tr>
<tr>
<td>• 7W and 14W emergency battery packs available</td>
<td>24SR-*</td>
</tr>
<tr>
<td><strong>Metalux FRLED</strong></td>
<td>22FR-*</td>
</tr>
<tr>
<td>2x2 and 2x4 fixtures available</td>
<td>24FR-*</td>
</tr>
<tr>
<td>• Integrated sensors currently unavailable for this model</td>
<td></td>
</tr>
<tr>
<td>• 7W and 14W emergency battery packs available</td>
<td></td>
</tr>
<tr>
<td><strong>Metalux GRLED</strong></td>
<td>14GR-*</td>
</tr>
<tr>
<td>1x4, 2x2 and 2x4 fixtures available</td>
<td>22GR-*</td>
</tr>
<tr>
<td>• Integrated sensors currently unavailable for this model</td>
<td>24GR-*</td>
</tr>
<tr>
<td>• 7W and 14W emergency battery packs available</td>
<td></td>
</tr>
<tr>
<td>DISTRIBUTED LOW-VOLTAGE POWER SYSTEM FIXTURES</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Neo-Ray Covera™ with WaveStream™ technology</strong></td>
<td>S930DIP.*</td>
</tr>
<tr>
<td>WaveStream LED</td>
<td></td>
</tr>
<tr>
<td>• The curved WaveStream™ optic bends light for an elegant look with premium light distribution</td>
<td></td>
</tr>
<tr>
<td>• Uses Eaton’s LuxWire™ for nearly invisible power through the suspension cables</td>
<td></td>
</tr>
<tr>
<td><strong>Neo-Ray Converge™ with WaveStream™ technology</strong></td>
<td>S920DIP.*  S921DIP.*</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>• Curved WaveStream™ optics bend light for an elegant look with premium light distribution</td>
<td></td>
</tr>
<tr>
<td>• Uses Eaton’s LuxWire™ for nearly invisible power through the suspension cables</td>
<td></td>
</tr>
<tr>
<td><strong>Portfolio LDSQA4A and LDSQA6A</strong></td>
<td>LDSQA4A*  LDSQA6A*</td>
</tr>
<tr>
<td>LED square adjustable accent/slope</td>
<td></td>
</tr>
<tr>
<td>• Requires Portfolio accessory kit</td>
<td></td>
</tr>
<tr>
<td><strong>Portfolio LD4B, LDSQ4B, LD6B, and LDSQ6B</strong></td>
<td>LD4B*  LDSQ4B*  LD6B*  LDSQ6B*</td>
</tr>
<tr>
<td>Round and square recessed downlight</td>
<td></td>
</tr>
<tr>
<td>• Requires Portfolio accessory kit</td>
<td></td>
</tr>
<tr>
<td><strong>Halo Commercial PD6</strong></td>
<td>PD6*  PD6RX*  PD6R*  PD56R*</td>
</tr>
<tr>
<td>6” LED downlighting</td>
<td></td>
</tr>
<tr>
<td>• Available with or without integrated sensors</td>
<td></td>
</tr>
<tr>
<td>• Emergency options available</td>
<td></td>
</tr>
<tr>
<td><strong>Halo Commercial PR8</strong></td>
<td>PR8*  PR8R*  PR8S*</td>
</tr>
<tr>
<td>8” LED downlighting with seleCCTable™</td>
<td></td>
</tr>
<tr>
<td>• Available with or without integrated sensors</td>
<td></td>
</tr>
<tr>
<td>• 7W and 14W emergency battery packs available (not available with PR8S)</td>
<td></td>
</tr>
</tbody>
</table>
## Built-in energy saving lighting control strategies

<table>
<thead>
<tr>
<th>STRATEGY</th>
<th>DESCRIPTION</th>
<th>ESTIMATED SAVINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Dimmer</td>
<td>Manual/personal dimming control – is one of five alternative methods to meet the multi-level lighting control requirements.</td>
<td>10-20%</td>
</tr>
<tr>
<td>Occupancy Sensor</td>
<td>Occupancy/vacancy sensing – provides Manual On/Automatic Off or Automatic On/Automatic Off and Partial Off capabilities.</td>
<td>20-60%</td>
</tr>
<tr>
<td>Daylighting Control</td>
<td>Daylight dimming – provides three daylight dimming zone that automatically adjust the lighting based on daylight available in the space, or fixture integrated sensors for completely granular daylighting control.</td>
<td>20-45%</td>
</tr>
<tr>
<td>Receptacle Control</td>
<td>Plug load control – automatically turns On receptacles upon occupancy regardless of light status. Ensures receptacles are turned Off when the space is vacant.</td>
<td>15-50% Controlled loads</td>
</tr>
<tr>
<td>Tuning Control</td>
<td>High-end/Task Tuning – lowers the maximum light level for automatic energy savings.</td>
<td>10-30%</td>
</tr>
<tr>
<td>Demand Response</td>
<td>Demand Response – automatically reduces light level based on signal from OpenADR device or BMS closure.</td>
<td>10-40%</td>
</tr>
<tr>
<td>Remote Signal Control</td>
<td>Remote Signal Control – Automatically sends a signal to the HVAC system based on occupancy.</td>
<td>20%</td>
</tr>
</tbody>
</table>

### Out-of-the-box control strategies

- Demand Response
- Occupancy Sensor
- Daylighting Control
- Receptacle Control
- Scheduling
- Manually Switched ON/OFF
Nonresidential indoor applications

**SPACE LEVEL (AREA CONTROL)**

- Must be accessible to occupants to operate the lighting

  ![Manually Switched ON/OFF](image)

  T24-2013 130.1(a)
  ASHRAE 90.1-2013 9.4.1.1.a
  IECC 2015 C405.2.2.3

**MULTI-LEVEL LIGHTING**

- Luminaire must provide uniform dimming
- Capable of reducing power by at least one of five control functions
- When a dimming luminaire is present, a manual dimmer is recommended. Other functional options available

  ![Luminaire Dimming](image)  ![Manual Dimmer](image)  ![Lumen Maintenance Control](image)  ![Tuning Control](image)  ![Daylighting Control](image)  ![Demand Response](image)

  (Choose at least one)

  T24-2013 130.1(b)
  ASHRAE 90.1-2013 9.4.1.1.d
  IECC 2015 C405.2.2.2

**SHUTOFF CONTROL**

- Luminaires turned off when vacant
- 120V receptacles only, one within 6 feet of uncontrolled
- Each 5,000 sq. ft. to have shutoff controls

  ![Manual On/Auto Off](image)  ![Occupancy Sensor](image)  ![Receptacle Control](image)

  (Choose one)

  T24-2013 130.1(c), 130.5(d)
  ASHRAE 90.1-2013 9.4.1.1.h, 9.4.1.1.i, 8.4.2
  IECC 2015 C405.2.1

**AUTOMATIC DAYLIGHTING CONTROL**

- Eliminate energy waste when natural light present
  - **Exceptions** when daylighting control not required:
    - No skylights
    - Glazing <24 sq. ft.
    - Daylit zone is less than 120W

  ![Luminaire Dimming](image)  ![Daylighting Control](image)

  T24-2013 130.1(d)
  ASHRAE 90.1-2013 9.4.1.1.e, 9.4.1.1.f
  IECC 2015 C405.2.3
Meeting energy codes with DLVP

The Distributed Low-Voltage Power System was designed to meet the energy codes requirements of virtually any space. This application illustrates how conference rooms can use daylight dimming in conjunction with natural light entering the space, while providing Scene Control/Automatic Off and receptacle control to achieve energy savings up to 65% and achieve higher quality lighting. Providing optional control of individual lighting zones and HVAC output will allow for even greater energy savings.

Example Space Assumptions

**Space**
100 sq. ft. or larger

**Electrical Load**
Greater than 0.5 watts per sq. ft. planned

**Daylighting**
Contains glazing larger than 24 sq. ft. total requiring daylighting for both primary and secondary sidelit zones

**Others**
The general lighting is not intended for continuous use (24/7, 365). Egress lighting is not part of the general lighting use

**Building**
When larger than 10,000 sq. ft., Demand Response is required (capable of lowering lighting power by 15%)
Suggested code requirements by space type

Eaton suggests applying the following energy saving sequences for each of the defined spaces below. Please consult local building code for specific space requirements.

<table>
<thead>
<tr>
<th>Minimum Control Type</th>
<th>Classroom lecture hall</th>
<th>Conference meeting</th>
<th>Private office &lt;=250sq. ft.</th>
<th>Private office &gt;=250sq. ft.</th>
<th>Corridor</th>
<th>Restroom</th>
<th>Stairwell</th>
<th>Storage room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local switch</td>
<td>✓</td>
<td>✔</td>
<td>✔</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Scheduling</td>
<td>✓</td>
<td>✔</td>
<td>✔</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Occ Sensor Automatic ON</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automatic Partial OFF</td>
<td>✓</td>
<td>✔</td>
<td>✔</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Automatic OFF</td>
<td>✓</td>
<td>✔</td>
<td>✔</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Multilevel Lighting</td>
<td>✓</td>
<td>✔</td>
<td>✔</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Multilevel Daylighting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receptacle Control</td>
<td>✓</td>
<td>✔</td>
<td>✔</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>Power Measurement</td>
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</tr>
<tr>
<td>Demand Response</td>
<td>✓</td>
<td>✔</td>
<td>✔</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td>Functional Testing</td>
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<td>✔</td>
<td>✔</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

- Suggested requirement for this space.
- Choose one of these requirements for this space.
- These requirements are optional for this space based on local code.
The luminaire-integrated sensor control system from Eaton’s Lighting business reduces the design time and complexity of meeting energy codes for both lighting and controls. The sensor system was designed to guarantee occupancy and daylight harvesting coverage from within the footprint of the luminaire, so the lighting design is the control design. And, the system achieves the lowest installed cost in small spaces compared to traditional control products.

No New Wires
An in-place fixture retrofit is all that’s needed to meet most energy codes in commercial spaces. The sensor system is factory wired to the luminaire, switching on or off based on occupancy, and dimming the light when enough daylight is available.

Lighting Controls Without Commissioning
The luminaire-integrated sensor system offers out-of-the-box operation using thoughtful default settings.

Flexibility and Individual Control
When the application demands more, the sensor system has the option to make changes using a remote control. The remote allows changes from the default settings for occupancy, target light level, preset lighting levels, and more.

Low Installed Cost
With a single product to mount, and a single electrical connection to make, a luminaire with an integrated sensor system saves money on the total installed cost when occupancy and daylighting harvesting controls are needed.

Worry-free Controls Planning
Ensure seamless coverage and performance with a sensor system built into every luminaire. The multi-technology sensor’s occupancy and light sensing coverage overlaps the area each fixture illuminates.

Daylight Dimming Independence
External open loop daylight sensors use the manual control zones for daylighting control. By using integrated sensors for daylighting, manual control zones are completely independent of daylighting control sets.

Sensor Remote Control
The optional remote can be used to change settings and to provide local control for one or more fixtures in the same area, allowing users to adjust light levels, even temporarily override automatic controls. Choose one per project, or one per space.
Best practices / FAQs

What lengths are DLVP low-voltage cables available?
DLVP low-voltage cables are available, pre-terminated, in 8, 15, and 30 foot lengths.

Can I make my own cables or pull my own wire?
Yes, there is an available low-voltage terminated pigtail that allows for the connection to unterminated standard cable. For proper system performance, specific cables must be used. Consult Eaton Lighting Systems for approved cable manufacturers and part numbers.

What is the maximum low-voltage cable distance with the DLVP System?
Similar to most low-voltage systems, the maximum cable distance from the low-voltage power module to the last device on a low-voltage circuit (regardless of the number of devices on that low-voltage circuit) cannot exceed 100-m (328-ft).

How does low-voltage cable length affect efficiency?
As is typical of electricity, the longer the cable length, the greater the losses and the lower the electrical efficiency. Shorter cable runs are more electrically efficient than longer runs.

Where should Low-Voltage Power Modules be installed?
Low-voltage power modules are passively cooled and plenum rated for installation in dry interior locations above ceilings, in open ceiling areas, or in electrical closets. Low-voltage power modules are intended to be distributed throughout a space and are not designed for rack mounting as in the case with many systems employing a centralized architecture.

How is emergency lighting accomplished with the DLVP System?
Emergency lighting with the DLVP System is possible through two approaches. At the fixture level, when ordering DLVP compatible LED fixtures, choose one of two low-voltage emergency battery pack (EBP) options. At the building level, pair a low-voltage power module with a Remote Relay Unit (RRU) connected to an emergency low-voltage circuit.

How many light fixtures can a DLVP System support?
Because the DLVP System is based on available Class 2 power low-voltage circuits and offers daisy chain wiring, the number of fixtures depends on the power consumption per fixture chosen. Based on available LED fixtures today below is a reference based on a single low-voltage power module.

How are DLVP Systems commissioned?
The DLVP System was designed so that configuration basically means assigning light fixtures to available zones. The contractor may configure the system through manual switches or through an IR interface as the installation is being completed. Additionally, the DLVP System may be reconfigured at any time without rewiring the system.

Are DLVP LED fixtures addressable?
Yes, DLVP light fixtures are addressable which allows them to be assigned to one of three available system control zones during installation or any time thereafter. When integrated sensors are used, these control zones are separate from daylighting zones.

Is DLVP compatible with incandescent, fluorescent, etc. technologies?
The DLVP System is ideal for digital low-voltage devices like LED light fixtures. If controlling other technologies, the DLVP System does integrate with the Room Controller to harmoniously control those other technologies which utilize line voltage power (see page 26 for Room Controller integration details).

<table>
<thead>
<tr>
<th>Low-Voltage Cable Power Loss</th>
</tr>
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<tbody>
<tr>
<td>LVC-8P</td>
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<tr>
<td>LVC-15P</td>
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<td>LVC-30P</td>
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<table>
<thead>
<tr>
<th>300W (3 Low-Voltage Circuit) Low-Voltage Power Module</th>
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</thead>
<tbody>
<tr>
<td>Fixture Type</td>
</tr>
<tr>
<td>2 x 2 Troffer</td>
</tr>
<tr>
<td>2 x 4 Troffer</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>600W (6 Low-Voltage Circuit) Low-Voltage Power Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixture Type</td>
</tr>
<tr>
<td>2 x 2 Troffer</td>
</tr>
<tr>
<td>2 x 4 Troffer</td>
</tr>
</tbody>
</table>
Design layout steps
Basic steps to design a DLVP System

1. SELECT AND LAYOUT FIXTURES
   Some models available with integrated sensors

2. CHOOSE AND LAYOUT EXTERNAL SENSORS & CONTROLS
   Occupancy / vacancy, daylight and receptacle control

3. SELECT AND LAYOUT MANUAL CONTROLS
   Programmable Scene Stations or pre-configured Zone Stations

4. SELECT AND LAYOUT LOW-VOLTAGE POWER MODULES
   Available in 300W and 600W models

5. SELECT AND LAYOUT FIXTURE CONNECTIONS
   Pre-terminated lengths (8, 15, and 30 feet), couplings, and wiring whips

6. SELECT AND LAYOUT CONTROLS CONNECTIONS
   Pre-terminated control cables available from 6 inches to 100 feet
1. SELECT AND LAYOUT FIXTURES

- Select DLVP enabled fixtures based on the lighting requirements and aesthetics of the space.
- Determine if integrated sensors are preferred for the application.
- DLVP value is maximized when fixtures are chosen with power levels that efficiently utilize the low-voltage power module's low-voltage circuits.
- Daisy-chained loads up to 90W are optimally efficient whereas homerun low-voltage circuits (25W per low-voltage circuit, for example) are less efficient.

2. CHOOSE AND LAYOUT EXTERNAL SENSORS & CONTROLS

- Use receptacle switchpack for plug-load control (if applicable)
- Skip to step 3 if fixture integrated sensors are used in step 1.
- DLVP was designed to allow EITHER use of standalone external or fixture integrated sensors for occupancy detection and daylight control. It is not recommended to use both integrated and stand-alone sensors in a space.
- If external sensors are used, they should be laid out per typical Greengate guidelines for occupancy coverage and stand-alone sensors in a space.
- For assistance selecting or laying out sensors, contact: SensorLayouts@Eaton.com

3. SELECT AND LAYOUT MANUAL CONTROLS

- For manual control, choose either Pre-configured Zone Stations or Programmable Scene Stations.
- Scene Stations may be preferred for their ability to be reprogrammed with LVHH-02 Personal Remotes.
- Zone Stations should be used when the control intent of the space is certain and not subject to change (note - zone stations are typically used to toggle on/off and are not field programmable).
- Up to twelve (12) manual control wall stations may be daisy-chain connected to a single low-voltage power module.

4. SELECT AND LAYOUT LOW-VOLTAGE POWER MODULES

- Without regard for control zones, group addressable fixtures and low-voltage lighting cables up to 90W total power consumed (see spec sheets or ControlSpec for fixture and cable power consumption). This is most effectively done with the ControlSpec layout and calculation tool. For access to ControlSpec, contact an Eaton sales agent.
- Determine the quantity of low-voltage power modules required by area by grouping the low-voltage circuits into blocks of three or six (for 300W or 600W low-voltage power modules, respectively). For example, nine (9) power low-voltage circuits could be accomplished with one (1) 600W and one (1) 300W low-voltage power module.
- Low-voltage power modules should then be located strategically in the space to minimize the line voltage material and the low-voltage cable runs while providing an easily accessible mounting location for serviceability. Low-voltage power modules are typically located above doorways, entry ways or at columns in open areas.

5. SELECT AND LAYOUT FIXTURE CONNECTIONS

- DLVP low-voltage lighting cables are available in pre-terminated 8, 15, and 30-foot increments for quick connection in typical spacing.
- 8-foot cables are available for typical downlight-to-downlight spacing (generally 4-6 feet on center).
- 15-foot cables are available for typical ambient-to-ambient spacing (generally 8-10 feet on center).
- The 8, 15, and 30-foot cable may be used from the low-voltage power module to the first fixture on any particular low-voltage circuit.
- It is important to use the correctly sized cable to maximize efficiency, minimize cost, and account for any obstructions in the ceiling space.
- Couplings (LVC-COUPLER) are available to extend cable lengths.
- Wiring pigtails (LVC-WP) are available to enable using unterminated Belden cable.

6. SELECT AND LAYOUT CONTROLS CONNECTIONS

- The connection between external devices and low-voltage power modules should utilize pre-terminated control cables. Low-voltage power modules have specific ports for connection to receptacle switchpacks, occupancy and daylight sensors, and wall stations for simplified energy code compliant operation.
- GGRJ45 pre-terminated cables are available in plenum rated lengths from 6 inches up to 100 feet. Couplings and splitters are also available.
Applications
Application: Private Office

Space Assumptions

**Space**
Less than 250 sq. ft.

**Electrical Load**
Greater than 0.5 watts per sq. ft. planned

**Daylighting**
Contains glazing larger than 24 square feet total requiring daylighting for both primary and secondary sidelit zones

**Building**
When larger than 10,000 square feet, Demand Response is required (capable of lowering lighting power by 15%)

Solutions

**Distributed Low-Voltage Power Components**
- Low-Voltage Power Module
- Wallstation
- Daylight Sensor
- Occupancy Sensor
- Input/Output Device
- Receptacle Switchpack
- Pre-Terminated Control Cable
- Low-Voltage Lighting Cable

**Available Fixtures**
- Metalux Encounter*
- Metalux SkyRidge*
- Metalux Cruze* / Cruze SE*
- Metalux ArcLine*
- Metalux GRLED
- Metalux FRLED
- Corelite Bridge*
  
*Available with integrated sensor

Functional Controls

- **Manually Switched ON/OFF**
- **Manual Dimmer**
- **Daylighting Control**
- **Tuning Control**
- **Demand Response**
- **Occupancy Sensor**
- **Receptacle Control**

Luminaire Controls

- UL924
- UL924 (Energy Back-up Circuit)

Sequence of Operations

**Occupied**
- Lights Manual ON or Automatic ON – 50%
- Receptacle ON
- HVAC occupancy closed
- Automatic daylight dimming
- Occupant uses wallstations to control lighting
- Demand Response dims lighting based on settings

**Unoccupied**
- Lights turn Off after sensor delay time
- Receptacle turns off after sensor delay time + 30 sec
- HVAC occupancy opens

*Available with integrated sensor
**Application: Open Office**

**Space Assumptions**

**Space**
250 sq. ft. or larger

**Electrical Load**
Greater than 0.5 watts per sq. ft. planned

**Daylighting**
Contains glazing larger than 24 square feet total requiring daylighting for both primary and secondary sidelit zones

**Building**
When larger than 10,000 square feet, Demand Response is required (capable of lowering lighting power by 15%)

**Solutions**

**Distributed Low-Voltage Power Components**
- Low-Voltage Power Module
- Wallstation
- Daylight Sensor
- Occupancy Sensor
- Input/Output Device
- Receptacle Switchpack
- Pre-Terminated Control Cable
- Low-Voltage Lighting Cable

**Available Fixtures**
- Metalux Encounter*
- Metalux SkyRidge*
- Metalux Cruze* / Cruze SE*
- Metalux ArcLine*
- Metalux GRLED
- Metalux FRLED
- Corelite Bridge*
- Neo-Ray Converge*
- Neo-Ray Covera*
- Halo Commercial PD6
- Halo Commercial PR8
- Portfolio

**Sequence of Operations**

**Occupied**
- Lights Manual ON or Automatic ON – 50%
- Receptacle ON
- HVAC occupancy closed
- Automatic daylight dimming
- Occupant uses wallstations to control lighting
- Demand Response dims lighting based on settings

**Unoccupied**
- Lights turn Off after sensor delay time
- Receptacle turns off after delay time + 30 sec
- HVAC occupancy opens

**Functional Controls**

- UL924
- (Energy Back-up Circuit)

**Luminaire Controls**

- Manually Switched ON/OFF
- Manual Dimmer
- Daylighting Control
- Tuning Control
- Demand Response
- Occupancy Sensor
- Receptacle Control

**Luminaire Controls**

- UL924
- UL924 (Energy Back-up Circuit)
- Luminaire Dimming
Application: Conference Room

**Space Assumptions**

**Space**
100 sq. ft. or larger

**Electrical Load**
Greater than 0.5 watts per sq. ft. planned

**Daylighting**
Contains glazing larger than 24 square feet total requiring daylighting for both primary and secondary sidelit zones

**Others**
The general lighting is not intended for continuous use (24/7) Egress lighting is not part of the general lighting use

**Building**
When larger than 10,000 square feet, Demand Response is required (capable of lowering lighting power by 15%)

**Solutions**

**Distributed Low-Voltage Power Components**

- Low-Voltage Power Module
- Wallstation
- Daylight Sensor
- Occupancy Sensor
- Input/Output Device
- Receptacle Switchpack
- Pre-Terminated Control Cable
- Low-Voltage Lighting Cable

**Available Fixtures**

- Metalux Encounter*
- Metalux SkyRidge*
- Metalux Cruze* / Cruze SE*
- Metalux ArcLine*
- Metalux GRLED
- Metalux FRLED
- Corelite Bridge*

*Available with integrated sensor

**Sequence of Operations**

**Occupied**
- Lights Manual ON or Automatic ON – 50%
- Receptacle ON
- HVAC occupancy closed
- Automatic daylight dimming
- Occupant uses wallstations to control lighting
- Demand Response dims lighting based on settings
- Programmable Scene Wallstations

**Unoccupied**
- Lights turn Off after sensor delay time
- Receptacle turns off after sensor delay time + 30 sec
- HVAC occupancy opens
Application: Corridor, hall or stairwell

### Space Assumptions

**Space**
Accessible areas

**Electrical Load**
Greater than 0.5 watts per sq. ft. planned

**Daylighting**
Contains glazing larger than 24 square feet total requiring daylighting for both primary and secondary sidelit zones

**Building**
When larger than 10,000 square feet, Demand Response is required (capable of lowering lighting power by 15%)

### Solutions

**Distributed Low-Voltage Power Components**

- Low-Voltage Power Module
- Wallstation
- Daylight Sensor
- Occupancy Sensor
- Input/Output Device
- Receptacle Switchpack
- Pre-Terminated Control Cable
- Low-Voltage Lighting Cable

**Available Fixtures**

- Metalux Encounter*
- Metalux SkyRidge*
- Metalux Cruze* / Cruze SE*
- Metalux ArcLine*
- Metalux GRLED
- Metalux FRLED
- Corelite Bridge*

*Available with integrated sensor

### Functional Controls

#### Luminaire Controls

- **UL924**
- UL924 (Energy Back-up Circuit)

#### Manual Dimmer

- Tuning Control
- Occupancy Sensor

- Demand Response

### Sequence of Operations

#### Occupied

- Lights Automatic ON
- Occupant uses wallstations to control lighting
- Demand Response dims lighting based on settings
- Programmable Scene Wallstations

#### Unoccupied

- Lights turn Off after or dim sensor delay time
- Timeclock turns lights off
Application: Classroom

Space Assumptions

**Space**
Less than 2000 sq. ft.

**Electrical Load**
Greater than 0.7 watts per sq. ft. planned

**Daylighting**
Contains glazing larger than 24 square feet total requiring daylighting for both primary and secondary sidelit zones

**Building**
When larger than 10,000 square feet, Demand Response is required (capable of lowering lighting power by 15%)

Solutions

**Distributed Low-Voltage Power Components**

- Low-Voltage Power Module
- Wallstation
- Daylight Sensor
- Occupancy Sensor
- Input/Output Device
- Receptacle Switchpack
- Pre-Terminated Control Cable
- Low-Voltage Lighting Cable

**Available Fixtures**

- Metalux Encounter*
- Metalux SkyRidge*
- Metalux Cruze* / Cruze SE*
- Metalux ArcLine*
- Metalux GRLED
- Metalux FRLED
- Corelite Bridge*

*Available with integrated sensor

---

**Luminaire Controls**

UL924

(energy back-up circuit)

**Functional Controls**

Manually Switched ON/OFF
Manual Dimmer
Daylighting Control
Tuning Control
Demand Response
Occupancy Sensor
Receptacle Control

---

**Sequence of Operations**

**Occupied**
- Lights Manual ON or Automatic ON
- Receptacle ON
- HVAC occupancy closed
- Three automatic daylight dimming zones
- Occupant uses wallstations to control lighting
- Demand Response dims lighting based on settings
- Programmable Scene Wallstations

**Unoccupied**
- Lights turn Off after sensor delay time
- Receptacle turns off after sensor delay time + 30 sec
- HVAC occupancy opens

---

*Available with integrated sensor
Typical applications
wiring diagrams
DLVP Emergency with Remote Relay Unit (RRU)
DLVP integration with centralized UL924 power sources

Normal power

Emergency power

UL 1008 transfer switch

Normal / emergency branch circuit breaker panel

*To meet path of egress requirements, light fixtures may be designated to illuminate to full bright during the emergency event. By default, all light fixtures will fully illuminate during the emergency condition. To disable this functionality in fixtures not required for path of egress, change the position of DIP switch 6 (from OFF to ON) on those light fixtures only.

Neutral = White (16 AWG)
Hot 120 VAC = Black
Hot 277 VAC = Orange

To Normal Power Source

To Normal Power Circuit (16 AWG)

SPST Relay

Red (14 AWG)
Black (14 AWG)

Disclaimer:
The information contained in this document is provided for general purposes only. Conditions in the field may vary from the assumptions on which the diagrams and information contained herein were based and we make no warranties or representations about the accuracy, completeness or suitability of the information herein for any specific site. The installation of the lighting, wiring, control, and other products contained in this document should only be performed by a qualified professional.
DLVP Low-Voltage Power Modules with Room Controller

OAC-DT-0501, OAC-DT-1000, OAC-DT-2000
Dual Technology Ceiling Occupancy/Vacancy Sensor
*Defaults to vacancy sensor mode. Manual ON/Automatic OFF (all loads) for maximum energy savings

SPRC-R-20-120
20A Receptacle Control
120V Receptacle circuit

DSRC-FMOIR
Daylight Sensor
Adjustable daylight sensor dome
*Immediately provides daylight dimming upon powerup

RC-6TSB-P2.*
Button 1: Programmable Scene
Button 2: Programmable Scene
Button 3: Programmable Scene
Button 4: Raise all dimmers / zones
Button 5: Raise all dimmers / zones
Button 6: All OFF

RC-6TSB-ZAD.*
Button 1: Zone 1 Raise
Button 2: Zone 1 Lower
Button 3: Zone 2 Raise
Button 4: Zone 2 Lower
Button 5: Zone 3 Raise
Button 6: Zone 3 Lower

Normal Power
Neutral Line
White/ORG or White/BLK Neutral
Black - Hot (120/277VAC)

Emergency Power
Neutral Power
WHT/ORG or WHT/BLK Neutral
Blue - Relay in (120V/277VAC)
Black - Hot (120V/277VAC)

Connect up to 90W per low-voltage circuit

OCC-RJ45
Occupancy Coupler
*Allows connection to any Greengate Occupancy / Vacancy Sensor

OCC-RJ45
Occupancy Coupler
*Assure that 300ohm resistor is in place between red and black terminals.
Classroom, 2x2 fixtures with integrated sensors

Sequence of operations

Lighting
Up to 3 dimmable zones

Occupancy
Out of the box vacancy mode
Optional auto on to 50%
Optional auto on to scene
Out of the box plug load turns on with occupancy
Automatic off of lighting and plug load on vacancy

Daylighting
Continuous dimming to off
Individual fixture daylight dimming
Not required in spaces without windows or that are less than 120W

Manual Controls
Programmable scenes
Individual dimming zone raise/lower
All off

Additional Features
Automatic demand response available with open ADR compliant device
UL924 emergency control capabilities with remote relay unit

Available Fixture Models
Metalux Encounter: 22EN-LD2-25-48V-L8XX-LV1-SLVPD1-U (22 watts)
Metalux SkyRidge: 22SR-LD2-29-C-48V-L8XX-LV1-SLVPD1-U (23 watts)
Metalux ArcLine: 22ALNG-LD4-25-48V-L8XX-LV1-SLVPD1-U (21 watts)
Metalux Cruze: 22CZ-LD5-24-48V-L8XX-LV1-SLVPD1-U (20 watts)
Corelite Bridge: BRG-WS-2LXX-LD2-48V-22-LV1-SV (23 watts)

XX= color temperature
35 - 3500K
40 - 4000K

Bill of Materials

<table>
<thead>
<tr>
<th>Qty</th>
<th>Catalog #</th>
<th>Description</th>
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<tr>
<td>1</td>
<td>LVPM-06-100-03</td>
<td>600W low-voltage power module</td>
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<tr>
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<td>RC-6TSB-P2-W</td>
<td>6 button scene station (white)</td>
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<tr>
<td>1</td>
<td>LVHH-02</td>
<td>DLVP personal remote</td>
</tr>
<tr>
<td>1</td>
<td>SPRC-20-120</td>
<td>20AMP receptacle control</td>
</tr>
<tr>
<td>1</td>
<td>GGRJ45-25P-G</td>
<td>pre-terminated control cable, 25 feet</td>
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<tr>
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<td>GGRJ45-50P-G</td>
<td>low-voltage lighting cable, 15 feet</td>
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<td>18</td>
<td>LVC-15P</td>
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</tbody>
</table>

Typical wiring detail

RC-6TSB-P2-W
Button 1: Programmable Scene
Button 2: Programmable Scene
Button 3: Programmable Scene
Button 4: Programmable Scene
Button 5: Programmable Scene
Button 6: All OFF

SPRC-R-20-120
20A Receptacle Control
120V Receptacle circuit

White/ORG or White/BLK Neutral
Neutral Line
Black - Hot (120/277VAC)
Normal Power

Connect up to 90W per low-voltage circuit
Classroom, 2x2 fixtures

Bill of Materials

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<td>1</td>
<td>OACT-DT-2000</td>
<td>2000 sqft. dual tech sensor</td>
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<td>OCC-RJ45</td>
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<td>DSRC-FMOIR</td>
<td>3 zone daylight sensor/ir receiver</td>
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<tr>
<td>1</td>
<td>LVHH-02</td>
<td>DLVP personal remote</td>
</tr>
<tr>
<td>1</td>
<td>SPRC-20-120</td>
<td>20AMP receptacle control</td>
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<td>GGRJ45-25P-G</td>
<td>pre-terminated control cable, 25 feet</td>
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<td>GGRJ45-50P-G</td>
<td>pre-terminated control cable, 50 feet</td>
</tr>
<tr>
<td>18</td>
<td>LVC-15P</td>
<td>low-voltage lighting cable, 15 feet</td>
</tr>
</tbody>
</table>

Sequence of operations

**Lighting**
- Up to 3 dimmable zones

**Occupancy**
- Out of the box vacancy mode
- Optional auto on to 50%
- Optional auto on to scene
- Out of the box plug load turns on with occupancy
- Automatic off of lighting and plug load vacancy

**Daylighting**
- Continuous dimming to off
- Out of the box 3 daylight zone support
- Not required in spaces without windows or that are less than 120W

**Manual Controls**
- Programmable scenes
- Individual dimming zone raise/lower
- All off

**Additional Features**
- Automatic demand response available with open ADR compliant device
- UL924 emergency control capabilities with remote relay unit
- Substitute any Greengate low-voltage occupancy sensor

**Available Fixture Models**
- Metalux Encounter: 22EN-LD2-25-48V-L8XX-LV1-U (22 watts)
- Metalux SkyRidge: 22SR-LD2-29-C-48V-L8XX-LV1-U (23 watts)
- Metalux ArcLine: 22ALNG-LD4-25-48V-L8XX-LV1-U (21 watts)
- Metalux Cruze: 22CZ-LD6-24-48V-L8XX-LV1-U (20 watts)
- Corelite Bridge: BRG-WS-2LXX-LD2-48V-22-LV1 (23 watts)

**XX= color temperature**
- 35 - 3500K
- 40 - 4000K

Typical wiring detail

- **OCC-RJ45**
  - Occupancy Coupler
  - *Allows connection to any Greengate Occupancy/Vacancy Sensor

- **DSRC-FMOIR**
  - Daylight Sensor
  - Adjustable daylight sensor dome
  - *Immediately provides daylight dimming upon powerup

- **SPRC-R-20-120**
  - 20A Receptacle Control

- **RC-6TSB-P2-W**
  - Button 1: Programmable Scene
  - Button 2: Programmable Scene
  - Button 3: Programmable Scene
  - Button 4: Programmable Scene
  - Button 5: Programmable Scene
  - Button 6: All OFF

- **White/ORG or White/BLK Neutral**

- **Normal Power**
  - Black - Hot (120/277VAC)

- **Neutral Line**
  - White/ORG or White/BLK Neutral

- **Normal Power**
  - Black - Hot (120/277VAC)

- **Connect up to 90W per low-voltage circuit**
Classroom, 2x4 fixtures with integrated sensors

**Sequence of operations**

**Lighting**
- Up to 3 dimmable zones

**Occupancy**
- Out of the box vacancy mode
- Optional auto on to 50%
- Optional auto on to scene
- Out of the box plug load turns on with occupancy
- Automatic off of lighting and plug load on vacancy

**Daylighting**
- Continuous dimming to off
- Individual fixture daylight dimming
- Not required in spaces without windows or that are less than 120W

**Manual Controls**
- Programmable scenes
- Individual dimming zone raise/lower
- All off

**Additional Features**
- Automatic demand response available with open ADR compliant device
- UL924 emergency control capabilities with remote relay unit

**Available Fixture Models**
- Metalux Encounter: 22EN-LD2-26-48V-L8XX-LV1-SLVPD1-U (22 watts)
- Metalux SkyRidge: 22SR-LD2-29-C-48V-L8XX-LV1-SLVPD1-U (23 watts)
- Metalux ArcLine: 22ALNG-LD4-25-48V-L8XX-LV1-SLVPD1-U (21 watts)
- Metalux Cruze: 22CZ-LD5-24-48V-L8XX-LV1-SLVPD1-U (20 watts)
- Metalux FRLED: 24FR-LD4-40-48V-L8XX-LV1-SLVPD1-U (35 watts)
- Corelite Bridge: BRG-WS-2LXX-LD2-48V-22-LV1 (23 watts)

**XX= color temperature**
- 35 - 3500K
- 40 - 4000K

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<td>20AMP receptacle control</td>
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<tr>
<td>1</td>
<td>GGRJ45-25P-G</td>
<td>pre-terminated control cable, 25 feet</td>
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<tr>
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<td>LVC-15P</td>
<td>low-voltage lighting cable, 15 feet</td>
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<tr>
<td>2</td>
<td>LVC-30P</td>
<td>low-voltage lighting cable, 30 feet</td>
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</tbody>
</table>

**Typical wiring detail**

**RC-6TSB-P2-W**
- Button 1: Programmable Scene
- Button 2: Programmable Scene
- Button 3: Programmable Scene
- Button 4: Programmable Scene
- Button 5: Programmable Scene
- Button 6: All OFF

**SPRC-R-20-120**
- 20A Receptacle Control
- 120V Receptacle circuit

**Neutral Line**
- Black - Hot (120/277VAC)
- Normal Power

**White/ORG or White/BLK Neutral**

**Connect up to 90W per low-voltage circuit**
Classroom, 2x4 fixtures

Sequence of operations

**Lighting**
- Up to 3 dimmable zones

**Occupancy**
- Out of the box vacancy mode
- Optional auto on to 50%
- Optional auto on to scene
- Out of the box plug load turns on with occupancy
- Automatic off of lighting and plug load vacancy

**Daylighting**
- Continuous dimming to off
- Out of the box 3 daylight zone support
- Not required in spaces without windows or that are less than 120W

**Manual Controls**
- Programmable scenes
- Individual dimming zone raise/lower
- All off

**Additional Features**
- Automatic demand response available with open ADR compliant device
- UL924 emergency control capabilities with remote relay unit
- Substitute any Greengate low-voltage occupancy sensor

**Available Fixture Models**
- Metalux Encounter: 22EN-LD2-25-48V-L8XX-LV1-U (22 watts)
- Metalux SkyRidge: 22SR-LD2-29-C-48V-L8XX-LV1-U (23 watts)
- Metalux ArcLine: 22ALNG-LD4-25-48V-L8XX-LV1-U (21 watts)
- Metalux Cruze: 22CZ-LD6-24-48V-L8XX-LV1-U (20 watts)
- Metalux GRLED: 22GR-LD4-F1-48V-L8XX-LV1-U (20 watts)
- Corelite Bridge: BRG-WS-2LXX-LD2-48V-22-LV1 (23 watts)

**Bill of Materials**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Catalog #</th>
<th>Description</th>
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<td>600W low-voltage power module</td>
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<tr>
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<td>2000 sq ft. dual tech sensor</td>
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<td>1</td>
<td>OCC-RJ45</td>
<td>3 zone daylight sensor/ir receiver</td>
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<td>LVHH-02</td>
<td>DLVP personal remote</td>
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<td>20AMP receptacle control</td>
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<td>LVC-30P</td>
<td>low-voltage lighting cable, 30 feet</td>
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**Typical wiring detail**

- **OCC-RJ45**
  - Occupancy Coupler
  - Optional demand response
  - Allows connection to any Greengate Occupancy / Vacancy Sensor

- **SPRC-R-20-120**
  - 20A Receptacle Control
  - 120V Receptacle circuit

- **RC-6TSB-P2-W**
  - Button 1: Programmable Scene
  - Button 2: Programmable Scene
  - Button 3: Programmable Scene
  - Button 4: Programmable Scene
  - Button 5: Programmable Scene
  - Button 6: All OFF
Conference room, 2x2 fixtures with integrated sensors

Sequence of operations

**Lighting**
Up to 3 dimmable zones

**Occupancy**
Out of the box vacancy mode
Optional auto on to 50%
Optional auto on to scene
Out of the box plug load turns on with occupancy
Automatic off of lighting and plug load on vacancy

**Daylighting**
Continuous dimming to off
Individual fixture daylight dimming
Not required in spaces without windows or that are less than 120W

**Manual Controls**
Programmable scenes
Individual dimming zone raise/lower
All off

**Additional Features**
Automatic demand response available with open ADR compliant device
UL924 emergency control capabilities with remote relay unit

**Available Fixture Models**
Metalux Encounter: 22EN-LD2-25-48V-L8XX-LV1-SLVPD1-U (22 watts)
Metalux SkyRidge: 22SR-LD2-29-C-48V-L8XX-LV1-SLVPD1-U (23 watts)
Metalux ArcLine: 22ALNG-LD4-25-48V-L8XX-LV1-SLVPD1-U (21 watts)
Metalux Cruze: 22CZ-LD5-24-48V-L8XX-LV1-SLVPD1-U (20 watts)
Corelite Bridge: BRG-WS-2LXX-LD2-48V-22-LV1 (23 watts)

**XX= color temperature**
35 - 3500K
40 - 4000K

Bill of Materials

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<tr>
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<td>RC-6TSB-P2-W</td>
<td>6 button scene station (white)</td>
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<td>1</td>
<td>RC-6TSB-ZAD-W</td>
<td>6 button raise/lower (white)</td>
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<td>3 zone daylight sensor/ir receiver</td>
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<td>1</td>
<td>LVHH-02</td>
<td>DLVP personal remote</td>
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<tr>
<td>1</td>
<td>GGRJ45-006-G</td>
<td>pre-terminated control cable, 6 inches</td>
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<td>GGRJ45-10P-G</td>
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<td>LVC-15P</td>
<td>low-voltage lighting cable, 15 feet</td>
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Typical wiring detail
**Conference room, 2x2 fixtures**

### Lighting
- Up to 3 dimmable zones
- Occupancy
  - Out of the box vacancy mode
  - Optional auto on to 50%
  - Optional auto on to scene
  - Out of the box plug load turns on with occupancy
  - Automatic off of lighting and plug load vacancy

### Daylighting
- Continuous dimming to off
- Out of the box 3 daylight zone support
- Not required in spaces without windows or that are less than 120W

### Manual Controls
- Programmable scenes
- Individual dimming zone raise/lower
- All off

### Additional Features
- Automatic demand response available with open ADR compliant device
- UL924 emergency control capabilities with remote relay unit
- Substitute any Greengate low-voltage occupancy sensor

### Available Fixture Models
- Metalux Encounter: 22EN-LD2-25-48V-L8XX-LV1-U (22 watts)
- Metalux SkyRidge: 22SR-LD2-29-C-48V-L8XX-LV1-U (23 watts)
- Metalux ArcLine: 22ALNG-LD4-25-48V-L8XX-LV1-U (21 watts)
- Metalux Cruze: 22CZ-LD5-24-48V-L8XX-LV1-U (20 watts)
- Metalux GRLED: 22GR-LD4-24-F1-48V-L8XX-LV1-U (20 watts)
- Corelite Bridge: BRG-WS-2LXX-LD2-48V-22-LV1 (23 watts)

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<td>RC-6TSB-P2-W</td>
<td>6 button scene station (white)</td>
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<tr>
<td>1</td>
<td>RC-6TSB-ZAD-W</td>
<td>6 button raise/lower (white)</td>
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<tr>
<td>1</td>
<td>OAWC-P-120W</td>
<td>500 sqft. dual tech sensor</td>
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<tr>
<td>1</td>
<td>OCC-RJ45</td>
<td>input/output device</td>
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<tr>
<td>1</td>
<td>SPRC-20-120</td>
<td>20AMP receptacle control</td>
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<tr>
<td>1</td>
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<td>6</td>
<td>LVC-15P</td>
<td>low-voltage lighting cable, 15 feet</td>
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</table>

### Typical wiring detail

**OAWC-P-120W**
- Dual Technology Wall Occupancy/Vacancy Sensor
  - *Defaults to vacancy sensor mode. Manual OFF/Auto OFF all loads for maximum energy savings*

**RC-6TSB-P2-**
- Button 1: Programmable Scene
- Button 2: Programmable Scene
- Button 3: Programmable Scene
- Button 4: Raise all dimmers / zones
- Button 5: Raise all dimmers / zones
- Button 6: All OFF

**RC-6TSB-ZAD-**
- Button 1: Zone 1 Raise
- Button 2: Zone 1 Lower
- Button 3: Zone 2 Raise
- Button 4: Zone 2 Lower
- Button 5: Zone 3 Raise
- Button 6: Zone 3 Lower

**OCC-RJ45**
- Occupancy Coupler
  - *Allows connection to any Greengate Occupancy / Vacancy Sensor*

**DSRC-FMOIR**
- Daylight Sensor
  - Adjustable daylight sensor dome
  - *Immediately provides daylight dimming upon powerup*

**SPRC-R-20-120**
- 20A Receptacle Control
  - 120V Receptacle circuit

*Connect up to 90W per low-voltage circuit*
Conference room, 2x2 fixtures and downlights

Sequence of operations

Lighting
Up to 3 dimmable zones

Occupancy
Out of the box vacancy mode
Optional auto on to 50%
Optional auto on to scene
Out of the box plug load turns on with occupancy

Daylighting
Continuous dimming to off
Out of the box 3 daylight zone support
Not required in spaces without windows or that are less than 120W

Manual Controls
Programmable scenes
Individual dimming zone raise/lower
All off

Additional Features
Automatic demand response available with open ADR compliant device
UL924 emergency control capabilities with remote relay unit
Substitute any Greengate low-voltage occupancy sensor

Available Fixture Models
- Metalux Encounter: 22EN-LD2-25-48V-L8XX-LV1-U (22 watts)
- Metalux SkyRidge: 22SR-LD2-29-C-48V-L8XX-LV1-U (23 watts)
- Metalux ArcLine: 22ALNG-LD4-25-48V-L8XX-LV1-U (21 watts)
- Metalux Cruze: 22CZ-LD6-48V-L8XX-LV1-U (20 watts)
- Corelite Bridge: BRG-WS-2LXX-LD2-48V-22-LV1 (23 watts)
- Portfolio: LD6B15DLV EU6B102080XX 6LBM1H (16 watts)
- Halo Commercial: PD615DLVB PDM6B8XX 61VH (14 watts)

XX= color temperature
35 - 3500K
40 - 4000K

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<tr>
<td>1</td>
<td>RC-6TSB-ZAD-W</td>
<td>6 button raise/lower (white)</td>
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<tr>
<td>1</td>
<td>OAWC-P-120W</td>
<td>500 sqft. dual tech sensor</td>
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<tr>
<td>1</td>
<td>OCC-RJ45</td>
<td>input/output device</td>
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<tr>
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<td>SPRC-20-120</td>
<td>20AMP receptacle control</td>
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<td>1</td>
<td>LVHH-02</td>
<td>DLPV personal remote</td>
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<tr>
<td>1</td>
<td>GGRJ45-006-G</td>
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<td>pre-terminated control cable, 25 feet</td>
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<td>2</td>
<td>LVC-8P</td>
<td>low-voltage lighting cable, 8 feet</td>
</tr>
<tr>
<td>4</td>
<td>LVC-15P</td>
<td>low-voltage lighting cable, 15 feet</td>
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Typical wiring detail

OAWC-P-120W
Dual Technology Wall Occupancy/Vacancy Sensor
*Defaults to vacancy sensor mode. Manual ON/Automatic OFF (all loads) for maximum energy savings

DSRC-FMOIR
Daylight Sensor
Adjustable daylight sensor dome
*Immediately provides daylight dimming upon powerup

Normal Power
Neutral Line
White/ORG or White/BLK Neutral

Black - Hot (120/277VAC)

Typical wiring detail

OAWC-P-120W
Dual Technology Wall Occupancy/Vacancy Sensor
*Defaults to vacancy sensor mode. Manual ON/Automatic OFF (all loads) for maximum energy savings

DSRC-FMOIR
Daylight Sensor
Adjustable daylight sensor dome
*Immediately provides daylight dimming upon powerup
Corridor/Hall, 2x4 fixtures with integrated sensors

**Sequence of operations**

**Lighting**
Up to 3 dimmable zones

**Occupancy**
Out of the box vacancy mode
Optional partial on/partial off
Optional auto on to scene
Automatic off of lighting on vacancy
Automatic partial off of lighting on vacancy

**Manual Controls**
On/off/raise lower
Single or multiple zones

**Additional Features**
Automatic demand response available with open ADR compliant device
UL924 emergency control capabilities with remote relay unit

**Available Fixture Models**
- Metalux Encounter: 22EN-LD2-25-48V-L8XX-LV1-SLVPD1-U (22 watts)
- Metalux SkyRidge: 22SR-LD2-29-C-48V-L8XX-LV1-SLVPD1-U (23 watts)
- Metalux ArcLine: 22ALNG-LD4-25-48V-L8XX-LV1-SLVPD1-U (21 watts)
- Metalux Cruze: 22CZ-LD5-24-48V-L8XX-LV1-SLVPD1-U (20 watts)
- Metalux FRLED: 24FR-LD4-40-48V-L8XX-LV1-SLVPD1-U (35 watts)
- Metalux GRLED: 22GR-LD4-24-F1-48V-L8XX-LV1-SLVPD1-U (20 watts)
- Corellete Bridge: BRG-WS-2LXX-LD2-48V-22-LV1 (23 watts)

**XX = color temperature**
- 35 - 3500K
- 40 - 4000K

**Bill of Materials**

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<th>Description</th>
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<tbody>
<tr>
<td>300W low-voltage power module</td>
<td>LVPM-03-100-03</td>
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<tr>
<td>3 button zone raise/lower (white)</td>
<td>RC-3TSB-Z1D-W</td>
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<tr>
<td>DLVP personal remote</td>
<td>LVHH-02</td>
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<td>pre-terminated control cable, 25 feet</td>
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<td>pre-terminated control cable, 50 feet</td>
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<td>low-voltage lighting cable, 8 feet</td>
<td>LVC-8P</td>
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<tr>
<td>low-voltage lighting cable, 15 feet</td>
<td>LVC-15P</td>
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**Typical wiring detail**

RC-3TSB-Z1D
- Button 1: Zone 1 on/off
- Button 2: Raise Zone 1
- Button 3: Lower Dimmer 1

Connect up to 90W per low-voltage circuit

Power Module

optional demand response

Wallstation

White/ORG or White/BLK Neutral

Neutral Line
Black - Hot (120/277VAC)
Normal Power
Corridor/Hall, 2x4 fixtures

Sequence of operations

Lighting
Up to 3 dimmable zones

Occupancy
Out of the box vacancy mode
Optional partial on/partial off
Automatic off of lighting on vacancy
Automatic partial off of lighting on vacancy

Manual Controls
On/off/raise lower
Single or multiple zones

Additional Features
Automatic demand response available with open ADR compliant device
UL924 emergency control capabilities with remote relay unit
Substitute any Greengate low-voltage occupancy sensor
Switchpack power supply may be needed to power more than two occupancy sensors

Available Fixture Models
Metalux Encounter: 22EN-LD2-25-48V-L8XX-LV1-U (22 watts)
Metalux SkyRidge: 22SR-LD2-29-C-48V-L8XX-LV1-U (23 watts)
Metalux ArcLine: 22ALNG-LD4-25-48V-L8XX-LV1-U (21 watts)
Metalux Cruze: 22CZ-LD5-24-48V-L8XX-LV1-U (20 watts)
Metalux FRLED: 24FR-LD4-40-48V-L8XX-LV1-U (35 watts)
Metalux GRLED: 22GR-LD4-24-F1-48V-L8XX-LV1-U (20 watts)
Corelite Bridge: BRG-WS-2LXX-LD2-48V-22-LV1 (23 watts)

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<td>DLVP personal remote</td>
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<td>pre-terminated control cable, 10 feet</td>
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<td>6</td>
<td>LVC-15P</td>
<td>low-voltage lighting cable, 15 feet</td>
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Typical wiring detail

OCC-RJ45
Occupancy Coupler
*Allows connection to any Greengate Occupancy/Vacancy Sensor

RC-3TSB-Z1D
Button 1: Zone 1 on/off
Button 2: Raise Zone 1
Button 3: Lower Dimmer 1

Connect up to 90W per low-voltage circuit

White/ORG or White/BLK Neutral
Neutral Line
Black - Hot (120/277VAC)
Normal Power
Executive office, 2x2 fixtures

Sequence of operations

**Lighting**
Up to 3 dimmable zones

**Occupancy**
Out of the box vacancy mode
Optional auto on to 50%
Optional auto on to scene
Automatic off of lighting on vacancy
Automatic partial off of lighting on vacancy

**Daylighting**
Continuous dimming to off
Out of the box 3 daylight zone support
Not required in spaces without windows or that are less than 120W

**Manual Controls**
Programmable scenes
Individual dimming zone raise/lower
All off

**Additional Features**
Automatic demand response available with open ADR compliant device
UL924 emergency control capabilities with remote relay unit
Substitute any Greengate low-voltage occupancy sensor

**Available Fixture Models**
Metalux Encounter: 22EN-LD2-25-48V-L8XX-LV1-U (22 watts)
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Metalux ArcLine: 22ALNG-LD4-25-48V-L8XX-LV1-U (21 watts)
Metalux Cruz: 22CZ-LD4-24-48V-L8XX-LV1-LV1-U (20 watts)
Metalux GRLED: 22GR-LD4-24-48V-L8XX-LV1-U (20 watts)
Corelite Bridge: BRG-WS-2LXX-LD2-48V-22-LV1 (23 watts)
Halco Commercial: PD615DLVB PDM6B8XX 61VH (14 watts)

XX= color temperature
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<td>LVC-8P</td>
<td>low-voltage lighting cable, 8 feet</td>
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<td>5</td>
<td>LVC-15P</td>
<td>low-voltage lighting cable, 15 feet</td>
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**Typical wiring detail**

**OAC-DT-0501, OAWC-P-120W, OAC-DT-2000**
Dual Technology Ceiling Occupancy/Vacancy Sensor
*Defaults to vacancy sensor mode. Manual ON/Automatic OFF (all loads) for maximum energy savings

**Normal Power**
Neutral Line
White/ORG or White/BLK Neutral
Black - Hot (120/277VAC)

**OCC-RJ45**
Occupancy Coupler
*Allows connection to any Greengate Occupancy / Vacancy Sensor

**DSRC-FMOIR**
Daylight Sensor
Adjustable daylight sensor dome
* Immediately provides daylightdimming upon powerup

**RC-6TSB-P4-**
* Programmable Scene
**Button 1:** Programmable Scene
**Button 2:** Room Scene
**Button 3:** Programmable Scene
**Button 4:** Raise all dimmers / zones
**Button 5:** Raise all dimmers / zones
**Button 6:** All OFF

**OAC-DT-0501**
Manual Switched ON/OFF
Manual Dimmer
Occupancy Sensor
Daylighting Control
Receptacle Control
UL924
UL924 (Energy Back-up Circuit)
Open office, 2x4 fixtures with integrated sensors and emergency

Typical wiring detail

Bill of Materials

<table>
<thead>
<tr>
<th>Qty</th>
<th>Catalog #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>LVPM-06-100-03</td>
<td>600W low-voltage power module</td>
</tr>
<tr>
<td>2</td>
<td>RC-6TSB-P4-W</td>
<td>6 button zone raise/lower (white)</td>
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<tr>
<td>1</td>
<td>LVHH-02</td>
<td>DLVP personal remote</td>
</tr>
<tr>
<td>1</td>
<td>SPRC-20-120</td>
<td>20AMP receptacle control</td>
</tr>
<tr>
<td>2</td>
<td>GGRJ45-10P.G</td>
<td>pre-terminated control cable, 10 feet</td>
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<tr>
<td>7</td>
<td>LVC-30P</td>
<td>low-voltage lighting cable, 30 feet</td>
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</table>

Sequence of operations

Lighting
Up to 3 dimmable zones

Occupancy
Out of the box vacancy mode
Optional auto on to 50%
Optional auto on to scene
Out of the box the plug load turns on with occupancy
Automatic off of lighting and plug load on vacancy

Daylighting
Continuous dimming to off
Individual fixture daylight dimming
Not required in spaces without windows or that are less than 120W

Manual Controls
Programmable scenes
Individual dimming zone raise/lower
All off

Additional Features
Automatic demand response available with open ADR compliant device
UL924 emergency control capabilities with remote relay unit

Available Fixture Models
Metalux Encounter: 22EN-LD2-25-48V-L8XX-LV1-U (22 watts)
Metalux SkyRidge: 22SR-LD2-29-C-48V-L8XX-LV1-U (23 watts)
Metalux ArcLine: 22ALNG-LD4-25-48V-L8XX-LV1-U (21 watts)
Metalux Cruze: 22CZ-LD3-24-48V-L8XX-LV1-U (20 watts)
Metalux FRLED: 24FR-LD4-40-48V-L8XX-LV1-U (35 watts)
Corelite Bridge: BRG-WS-2LXX-LD2-48V-22-LV1 (23 watts)

XX= color temperature
35 - 3500K
40 - 4000K

Connect up to 90W per low-voltage circuit
Open office, 2x4 fixtures with integrated sensors

**Sequence of operations**

**Lighting**
Up to 3 dimmable zones

**Occupancy**
Out of the box vacancy mode
Optional auto on to 50%
Optional auto on to scene
Out of the box plug load turns on with occupancy
Automatic partial off of lighting on vacancy

**Daylighting**
Continuous dimming to off
Individual fixture daylight dimming
Not required in spaces without windows or that are less than 120W

**Manual Controls**
Programmable scenes
Individual dimming zone raise/lower
All off

**Additional Features**
Automatic demand response available with open ADR compliant device
UL924 emergency control capabilities with remote relay unit

**Available Fixture Models**
- Metalux Encounter: 22EN-LD2-25-48V-L8XX-LV1-SLVPD1-U (22 watts)
- Metalux SkyRidge: 22SR-LD2-29-C-48V-L8XX-LV1-SLVPD1-U (23 watts)
- Metalux ArcLine: 22ALNG-LD4-25-48V-L8XX-LV1-SLVPD1-U (23 watts)
- Metalux Cruze: 22CZ-LD5-24-48V-L8XX-LV1-SLVPD1-U (20 watts)
- Metalux GRLED: 22GR-LD4-24-F1-48V-L8XX-LV1-SLVPD1-U (20 watts)
- Corelite Bridge: BRG-WS-2LXX-LD2-48V-22-LV1 (23 watts)

**Bill of Materials**

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<tr>
<th>Qty</th>
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<tbody>
<tr>
<td>2</td>
<td>LVPM-06-100-03</td>
<td>600W low-voltage power module</td>
</tr>
<tr>
<td>2</td>
<td>RC-6TSB-P2-W</td>
<td>6 button scene station (white)</td>
</tr>
<tr>
<td>1</td>
<td>LVHH-02</td>
<td>DLVP personal remote</td>
</tr>
<tr>
<td>1</td>
<td>SPRC-20-120</td>
<td>20AMP receptacle control</td>
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<tr>
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<td>GGRJ45-10P-G</td>
<td>pre-terminated control cable, 10 feet</td>
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<td>GGRJ45-25P-G</td>
<td>pre-terminated control cable, 25 feet</td>
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<td>pre-terminated control cable, 100 feet</td>
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<td>16</td>
<td>LVC-15P</td>
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<td>LVC-30P</td>
<td>low-voltage lighting cable, 30 feet</td>
</tr>
<tr>
<td>1</td>
<td>SPRC-R-20-120</td>
<td>20A Receptacle Control</td>
</tr>
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</table>

**XX= color temperature**
35 - 3500K
40 - 4000K

**Typical wiring detail**

- Connect up to 90W per low-voltage circuit
Open office, 2x4 fixtures

Bill of Materials

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<tr>
<td>2</td>
<td>RC-6TSB-P2-W</td>
<td>6 button scene station (white)</td>
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<td>2</td>
<td>OACT-DT-2000</td>
<td>2000 sqft. dual tech sensor</td>
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<td>OCC-RJ45</td>
<td>input/output device</td>
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<tr>
<td>1</td>
<td>DSRC-FMOIR</td>
<td>3 zone daylight sensor/r receiver</td>
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<tr>
<td>1</td>
<td>LVHH-02</td>
<td>DLVP personal remote</td>
</tr>
<tr>
<td>1</td>
<td>SPRC-20-120</td>
<td>20AMP receptacle control</td>
</tr>
<tr>
<td>1</td>
<td>GGRJ45-10P-G</td>
<td>R.J45 cable splitter</td>
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<td>GGRJ45-25P-G</td>
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<tr>
<td>2</td>
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<td>GGRJ45-100P-G</td>
<td>pre-terminated control cable, 100 feet</td>
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<td>4</td>
<td>LVC-8P</td>
<td>low-voltage lighting cable, 8 feet</td>
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<td>16</td>
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<td>low-voltage lighting cable, 15 feet</td>
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<tr>
<td>4</td>
<td>LVC-30P</td>
<td>low-voltage lighting cable, 30 feet</td>
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</table>

Sequence of operations

Lighting
Up to 3 dimmable zones

Occupancy
Out of the box vacancy mode
Optional auto on to 50%
Optional auto on to scene
Out of the box plug load turns on with occupancy
Automatic off of lighting and plug load on vacancy

Daylighting
Continuous dimming to off
Individual fixture daylight dimming
Not required in spaces without windows or that are less than 120W

Manual Controls
Programmable scenes
Individual dimming zone raise/lower
All off

Additional Features
Automatic demand response available with open ADR compliant device
UL924 emergency control capabilities with remote relay unit
Substitute any Greengate low-voltage occupancy sensor

Available Fixture Models
- Metalux Encouter: 22EN-LD2-25-48V-L8XX-LV1-U (22 watts)
- Metalux SkyRidge: 22SR-LD2-29-C-48V-L8XX-LV1-U (23 watts)
- Metalux Cruze: 22CZ-LD6-24-48V-L8XX-LV1-U (20 watts)
- Metalux FRLD: 24FR-LD4-40-48V-L8XX-LV1-U (35 watts)
- Metalux GRLED: 22GR-LD4-24-F1-48V-L8XX-LV1-U (20 watts)

XX= color temperature
35 - 3500K
40 - 4000K

Typical wiring detail

Connect up to 90W per low-voltage circuit
Open office, 2x4 fixtures with integrated sensors and emergency

Sequence of operations

**Lighting**
Up to 3 dimmable zones

**Occupancy**
Out of the box vacancy mode
Optional auto on to 50%
Optional auto on to scene
Out of the box plug load turns on with occupancy
Automatic off of lighting and plug load on vacancy

**Daylighting**
Continuous dimming to off
Individual fixture daylight dimming
Not required in spaces without windows or that are less than 120W

**Manual Controls**
Programmable scenes
Individual dimming zone raise/lower
All off

**Additional Features**
Automatic demand response available with open ADR compliant device
UL924 emergency control capabilities with remote relay unit

**Available Fixture Models**
- Metalux Encounter: 22EN-LD2-25-48V-L8XX-LV1-SLVPD1-U (22 watts)
- Metalux SkyRidge: 22SR-LD2-29-C-48V-L8XX-LV1-SLVPD1-U (23 watts)
- Metalux ArcLine: 22ALNG-LD4-25-48V-L8XX-LV1-SLVPD1-U (21 watts)
- Metalux Cruze: 22CZ-LD5-24-48V-L8XX-LV1-SLVPD1-U (20 watts)
- Metalux FRLED: 24FR-LD4-40-48V-L8XX-LV1-SLVPD1-U (35 watts)
- Metalux GRLED: 22GR-LD4-24-F1-48V-L8XX-LV1-SLVPD1-U (20 watts)
- Corelite Bridge: BRG-WS-2LXX-LD2-48V-22-LV1 (23 watts)

**XX= color temperature**
- 35 - 3500K
- 40 - 4000K

**Bill of Materials**

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<tbody>
<tr>
<td>1</td>
<td>LVPM-06-100-03</td>
<td>600W low-voltage power module</td>
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<tr>
<td>1</td>
<td>LVPM-03-100-03</td>
<td>300W low-voltage power module</td>
</tr>
<tr>
<td>1</td>
<td>RC-6TSB-P2-W</td>
<td>6 button scene station (white)</td>
</tr>
<tr>
<td>1</td>
<td>LVHH-02</td>
<td>DLVP personal remote</td>
</tr>
<tr>
<td>1</td>
<td>SPRC-20-120</td>
<td>20AMP receptacle control</td>
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<tr>
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<td>RRU-XXX</td>
<td>Remote Relay Unit 120v or 277v</td>
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<td>GGRJ45-10P-G</td>
<td>pre-terminated control cable, 10 feet</td>
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<tr>
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<td>GGRJ45-50P-G</td>
<td>pre-terminated control cable, 50 feet</td>
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<td>LVC-8P</td>
<td>low-voltage lighting cable, 8 feet</td>
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<tr>
<td>8</td>
<td>LVC-15P</td>
<td>low-voltage lighting cable, 15 feet</td>
</tr>
<tr>
<td>2</td>
<td>LVC-30P</td>
<td>low-voltage lighting cable, 30 feet</td>
</tr>
</tbody>
</table>

**Typical wiring detail**

**Relay Interface Module (RRU)**
- SPST Relay
- Neutral = White (16 AWG)
- Hot 120 VAC = Black
- Hot 277 VAC = Orange

**Neutral Line**
- White/ORG or White/BLK Neutral
- Black - Hot (120/277VAC)

**Normal/Emergency Power**
- Connect up to 90W per low-voltage circuit
Private office, 2x4 fixtures with integrated sensors

**Lighting**
Up to 3 dimmable zones

**Occupancy**
Out of the box vacancy mode
Optional auto on to 50%
Optional auto on to scene
Out of the box plug load turns on with occupancy
Automatic off of lighting and plug load on vacancy

**Daylighting**
Continuous dimming to off
Individual fixture daylight dimming
Not required in spaces without windows or that are less than 120W

**Manual Controls**
Programmable scenes
Individual dimming zone raise/lower
All off

**Additional Features**
Automatic demand response available with open ADR compliant device
UL924 emergency control capabilities with remote relay unit

**Available Fixture Models**
- Metalux Encounter: 22EN-LD2-25-48V-L8XX-LV1-U (39 watts)
- Metalux SkyRidge: 22SR-LD2-29-C-48V-L8XX-LV1-U (40 watts)
- Metalux ArcLine: 22ALNG-LD4-25-48V-L8XX-LV1-U (42 watts)
- Metalux Cruze: 22CZ-LD5-24-48V-L8XX-LV1-U (38 watts)
- Metalux FRLED: 24FR-LD4-40-48V-L8XX-LV1-U (35 watts)
- Metalux GRLED: 22GR-LD4-24-F1-48V-L8XX-LV1-U (38 watts)
- Portfolio: LD615DLV EU6B102080XX 6LBM1H (16 watts)
- Halo Commercial: PD615DLVB PDM6B8XX 61VH (14 watts)

**XX= color temperature**
- 35 - 3500K
- 40 - 4000K

**Typical wiring detail**

**Bill of Materials**

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<td>LVPM-03-100-03</td>
<td>300W low-voltage power module</td>
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<td>RC-5TSB-P2-W</td>
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<td>LVHH-02</td>
<td>DLVP personal remote</td>
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<tr>
<td>1</td>
<td>SPRC-20-120</td>
<td>20AMP receptacle control</td>
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<tr>
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<td>GGRJ45-10P-G</td>
<td>pre-terminated control cable, 10 feet</td>
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<td>GGRJ45-25P-G</td>
<td>pre-terminated control cable, 25 feet</td>
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<td>LVC-8P</td>
<td>low-voltage lighting cable, 8 feet</td>
</tr>
<tr>
<td>3</td>
<td>LVC-15P</td>
<td>low-voltage lighting cable, 15 feet</td>
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</tbody>
</table>

**Sequence of operations**

**Normal Power**
Neutral Line
White/ORG or White/BLK Neutral
Black - Hot

**SPRC-R-20-120**
20A Receptacle Control
120V Receptacle circuit

**RC-5TSB-OS2+**
Button 1: All zones on 50%
Button 2: All zones on 100%
Button 3: Raise all
Button 4: Lower all
Button 5: All off

Connect up to 90W per low-voltage circuit

**UL924** (Energy Back-up Circuit)
Private office, 2x4 fixtures

**Typical wiring detail**

**Bill of Materials**

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<tr>
<td>1</td>
<td>RC-5TSB-OS2-W</td>
<td>5 button scene station (white)</td>
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<td>OACT-DT-0501</td>
<td>500 sqft. dual tech sensor</td>
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<td>OCC-RJ45</td>
<td>input/output device</td>
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<tr>
<td>1</td>
<td>SPRC-20-120</td>
<td>20AMP receptacle control</td>
</tr>
<tr>
<td>1</td>
<td>DSRC-FMOIR</td>
<td>3 zone daylight sensor/ir receiver</td>
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<tr>
<td>1</td>
<td>LVHH-02</td>
<td>DLVP personal remote</td>
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<td>GGRJ45-006-G</td>
<td>pre-terminated control cable, 6 inches</td>
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<td>pre-terminated control cable, 25 feet</td>
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<td>LVC-8P</td>
<td>low-voltage lighting cable, 8 feet</td>
</tr>
<tr>
<td>3</td>
<td>LVC-15P</td>
<td>low-voltage lighting cable, 15 feet</td>
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</tbody>
</table>

**Available Fixture Models**

- Metalux Encounter: 22EN-LD2-25-48V-L8XX-LV1-U (39 watts)
- Metalux SkyRidge: 22SR-LD2-29-C-48V-L8XX-LV1-U (40 watts)
- Metalux ArcLine: 22ALNG-LD4-25-48V-L8XX-LV1-U (42 watts)
- Metalux Cruze: 22CZ-LD6-24-48V-L8XX-LV1-U (38 watts)
- Metalux FRLED: 24FR-LD4-40-48V-L8XX-LV1-U (35 watts)
- Metalux GRLED: 22GR-LD4-24-F1-48V-L8XX-LV1-U (38 watts)
- Portfolio: LD6B15DLV EU6B102080XX 6LBM1H (16 watts)
- Halo Commercial: PDE15DLVB PDM6B8XX 61VH (14 watts)

**XX= color temperature**

- 35 - 3500K
- 40 - 4000K

**Sequence of operations**

**Lighting**

- Up to 3 dimmable zones

**Occupancy**

- Out of the box vacancy mode
- Optional auto on to 50%
- Optional auto on to scene
- Out of the box plug load turns on with occupancy
- Automatic off of lighting and plug load on vacancy

**Daylighting**

- Continuous dimming to off
- Individual fixture daylight dimming
- Not required in spaces without windows or that are less than 120W

**Manual Controls**

- Programmable scenes
- Individual dimming zone raise/lower
- All off

**Additional Features**

- Automatic demand response available with open ADR compliant device
- UL924 emergency control capabilities with remote relay unit
- Substitute any Greengate low-voltage occupancy sensor

**OAC-P-120W**

Dual Technology Wall Occupancy/Vacancy Sensor

*Defaults to vacancy sensor mode. Manual ON/Automatic OFF (all loads) for maximum energy savings*

**DSRC-FMOIR**

Daylight Sensor

*Adjustable daylight sensor dome immediately provides daylight dimming upon powerup*

**SPRC-R-20-120**

20A Receptacle Control

120V Receptacle circuit

*Immediately provides daylight dimming upon powerup*
Private offices, 2x4 fixtures with integrated sensors

Sequence of operations

Lighting
Up to 3 dimmable zones/spaces

Occupancy
Out of the box vacancy mode
Optional auto on to 50%
Optional auto on to scene
Automatic off of lighting and plug load on vacancy

Daylighting
Continuous dimming to off
Individual fixture daylight dimming
Not required in spaces without windows or that are less than 120W

Manual Controls
Individual dimming zone raise/lower
All off

Additional Features
Automatic demand response available with open ADR compliant device
UL924 emergency control capabilities with remote relay unit

Available Fixture Models
Metalux Encounter: 22EN-LD2-25-48V-L8XX-LV1-SLVPD1-U (22 watts)
Metalux SkyRidge: 22SR-LD2-29-C-48V-L8XX-LV1-SLVPD1-U (23 watts)
Metalux ArcLine: 22ALNG-LD4-25-48V-L8XX-LV1-SLVPD1-U (21 watts)
Metalux Cruze: 22CZ-LD5-24-48V-L8XX-LV1-SLVPD1-U (20 watts)
Metalux FRLED: 24FR-LD4-40-48V-L8XX-LV1-SLVPD1-U (35 watts)
Metalux GRLED: 22GR-LD4-24-F1-48V-L8XX-LV1-SLVPD1-U (20 watts)
Corelite Bridge: BRG-WS-2LXX-LD2-48V-22-LV1 (23 watts)

XX= color temperature
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40 - 4000K

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<td>LVPM-03-100-03</td>
<td>300W low-voltage power module</td>
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<tr>
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<td>RC-3TLB-Z1D</td>
<td>3 button raise/lower toggle</td>
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<td>RC-3TLB-Z2D</td>
<td>3 button raise/lower toggle</td>
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<td>RC-3TLB-Z3D</td>
<td>3 button raise/lower toggle</td>
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<tr>
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<td>GGRJ45-10P-G</td>
<td>pre-terminated control cable, 10 feet</td>
</tr>
<tr>
<td>5</td>
<td>LVC-15P</td>
<td>low-voltage lighting cable, 15 feet</td>
</tr>
<tr>
<td>1</td>
<td>LVC-30P</td>
<td>low-voltage lighting cable, 30 feet</td>
</tr>
</tbody>
</table>

Typical wiring detail

RC-3TLB-Z1D-*
RC-3TLB-Z2D-*
RC-3TLB-Z3D-*
Button 1: Toggle On/Off
Button 2: Raise
Button 3: Lower

Normal Power
Neutral Line
White/ORG or White/BLK Neutral
Black - Hot (120/277VAC)

Connect up to 90W per low-voltage circuit

*Immediately provides daylight dimming upon powerup
Lighting Product Lines
Halo
Halo Commercial
Portfolio
Iris
RSA
Metalux
Corelite
Neo-Ray
Fail-Safe
MWS
Ametrix
Shaper
io
Lumark
McGraw-Edison
Invue
Ephesus
Lumière
Streetworks
Atlite
Sure-Lites

Controls Product Lines
Greengate
iLumin
Zero 88
Fifth Light Technology
iLight (International Only)

Connected Lighting Systems
LumaWatt Pro
WaveLinx
Distributed Low-Voltage Power
ConnectWorks