## Specifications

<table>
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<tr>
<th>Technology</th>
<th>PIR</th>
<th>Multi-Tech</th>
<th>PIR</th>
<th>PIR</th>
<th>Ultrasonic</th>
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<td>Mounting</td>
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<td>Ceiling</td>
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<td>Adjustment</td>
<td>Self-Adjusting</td>
<td>Manual</td>
<td>Self-Adjusting, Self-Calibrating</td>
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<tr>
<td>Time Delay</td>
<td>30s - 20m</td>
<td>30s - 30m</td>
<td>20s - 15m</td>
<td>30 Seconds to 30 Minutes, 6 Second Test Mode</td>
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<tr>
<td>Voltage</td>
<td>120/277VAC</td>
<td>120-220-277</td>
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<tr>
<td>Wattage/VA</td>
<td>1200/2700</td>
<td>1800/4000</td>
<td>800/2700</td>
<td>800/2700</td>
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<tr>
<td>Power Pack</td>
<td>External Power Pack Not Required</td>
<td>Internal Photocell 20-3000 Lux Adjustable</td>
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<td></td>
<td></td>
<td>24VDC Required</td>
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<tr>
<td>Photocell</td>
<td>Internal</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>HVAC Relay</td>
<td>Not Applicable</td>
<td>Use -RDO or -R30 Relay with 0.5A 125VAC 1.0A30VDC Relay</td>
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<tr>
<td>Environmental Operating Temperature/ Humidity</td>
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<td>-32° F to 104° F / 0 to 95% Non-Condensing, Indoor Use Only</td>
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<td>Standards</td>
<td>UL/CSA, California Title 24, ASHRAE 90.1</td>
<td>cULus Listed, ANCE, NOM 057, CA Title 24 and ASHRAE 90.1</td>
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<td>Feature</td>
<td>S-P</td>
<td>S-P</td>
<td>Dual-Circuit</td>
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## Applications

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<th>Cafeteria</th>
<th>Closet Utility</th>
<th>Computer Room</th>
<th>Conference Room</th>
<th>Copy Room</th>
<th>File Room</th>
<th>Hallway</th>
<th>Loading Dock</th>
<th>Office Executive</th>
<th>Office Open</th>
<th>Office Private</th>
<th>Office Small</th>
<th>Office w/Cubicles</th>
<th>Open Area</th>
<th>Outdoor Grounds</th>
<th>Refrigerated Storage</th>
<th>Restroom Non-Partitioned</th>
<th>Restroom Partitioned</th>
<th>Security</th>
<th>Stairwell</th>
<th>Storage Room</th>
<th>Vending Room</th>
<th>Warehouse Aisles</th>
<th>Warehouse Open</th>
<th>Work Space General</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>A</td>
<td>A</td>
<td>B</td>
<td>A</td>
<td>B</td>
<td>A</td>
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## Specification Table

<table>
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<tr>
<th>Occupancy Sensor Series</th>
<th>OSC10-M0W</th>
<th>OSC05-M0W</th>
<th>OSW12-M0W</th>
<th>OWWW-10W</th>
<th>OSWHB-10W</th>
<th>OSWLR-10W</th>
<th>OFHB-ITW</th>
<th>PS200-10</th>
<th>PS200-1F</th>
<th>PS110-10</th>
<th>PS110-1F</th>
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</thead>
</table>

### Technology
- Multi-Technology
- PIR Passive Infrared
- PIR Passive Infrared

### Mounting
- Ceiling
- Wall, Corner, or Ceiling
- Fixture
- Outdoor Sensor

<table>
<thead>
<tr>
<th>Coverage Sq. Ft.</th>
<th>1000</th>
<th>500</th>
<th>1200</th>
<th>2500</th>
<th>35x7</th>
<th>100x14</th>
<th>1500**</th>
<th>4000</th>
<th>2500</th>
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<table>
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<tr>
<th>Pattern</th>
<th>360°</th>
<th>180°</th>
<th>110°</th>
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<th>8°</th>
<th>27°</th>
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<th>200°</th>
<th>110°</th>
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<table>
<thead>
<tr>
<th>Mounting Height</th>
<th>8’ - 15’</th>
<th>8’ - 15’</th>
<th>10’ - 40’</th>
<th>8’ - 15’</th>
<th>Up to 40’</th>
<th>8’ - 16’</th>
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</thead>
</table>

### Adjustment
- Self-Adjusting, Self Calibrating
- Manual

### Time Delay
- 30 Seconds to 30 Minutes, 6 Second Test Mode
- 20s-15m

### Voltage
- Utilizes 24VDC Power Packs and Add-A-Relays
- 120/277/347
- 120VAC

### Wattage/VA
- Unlimited through use of Power Packs and Add-A-Relays
- 800/1200/1500VA
- 1000W/500VA

### Power Pack
- 24VDC Required
- Line Voltage

### Photocell
- Internal Photocell 20-3000 Lux Adjustable
- Internal

### HVAC Relay
- Use -RD0 or -R30 Relay with 0.5A 125VAC 1.0A 30VDC Relay
- N/A

### Environmental Operating Temp. / Humidity
- -32° F to 104° F / 0 to 95% Non-Condensing, Indoor Use Only
- -14°F to 160°F
- 20 to 95% Non-Condensing

### Standards
- cULus Listed, ANCE, NOM 057, CA Title 24 and ASHRAE 90.1
- UL/CSA ASHRAE 90.1

### Warranty
- 5-Year Limited
- 5-Year

### Feature
- Wide View
- High Bay
- Long Range
- High Bay

### Applications

<table>
<thead>
<tr>
<th>Cafeteria</th>
<th>A</th>
<th>A</th>
<th>A</th>
<th>B</th>
<th>B</th>
<th>C</th>
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<tr>
<td>Closet Utility</td>
<td>A</td>
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<tr>
<td>Conference Room</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td></td>
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<tr>
<td>Copy Room</td>
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<tr>
<td>File Room</td>
<td>A</td>
<td>A</td>
<td>B</td>
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<td>Hallway</td>
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<td>B</td>
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<td>Loading Dock</td>
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<td>A</td>
<td>A</td>
<td>C</td>
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Power packs and add-a-relays available. See page N27
Rating Key: A = Best sensor for application, B = Better sensor for application, C = Good sensor for application
** 1:1 Ratio (40' Mounting height equals a 40' diameter.)

To learn more about Leviton devices or for answers to technical questions call our Techline at 1-800-824-3005 or visit us at: www.leviton.com

Courtesy of Steven Engineering, Inc.-230 Ryan Way, South San Francisco, CA 94080-6370-Main Office: (650) 588-9200-Outside Local Area: (800) 258-9200-www.stevenengineering.com
Energy Management & Dimming Products

Product Types

CENTURA™ SYSTEM

A modular lighting control system for dimming fluorescent ballasts that may include a power pack, several wall controllers, a handheld remote control, a photocell, and a SmartJack. Uses photocell to adjust lights to ambient light conditions for substantial energy savings. Optional Leviton software enables lighting control via computer.

OCCUPANCY SENSORS

Decora® Wall-Switch Infrared Occupancy Sensor
Features automatic “walk-through” sensing and self-adjusting delayed off. Dual relay versions available.

Self-Contained Infrared Ceiling-Mount Occupancy Sensor
Features built-in relay and 360° coverage. For small spaces.

Multi-tech Ceiling-Mount Occupancy Sensor
IR and ultrasonic combine for accurate monitoring while minimizing false triggers. For larger, open areas. Self adjusting.

Ultrasonic Ceiling-Mount Occupancy Sensor
Highly accurate small-motion detection. Self-adjusting sensitivity and time off.

Infrared Ceiling-Mount Occupancy Sensor
All-digital self-adjusting sensor with high accuracy monitoring. Ideal in small, commercial areas.

Infrared Outdoor Motion Sensor
Adjustable delayed-off plus sensitivity to reduce false triggers. For commercial and residential applications.

Multi-tech Wall-Mount Occupancy Sensor
IR and ultrasonic combine for accurate monitoring while minimizing false triggers. Fits in corner.

Infrared Indoor Wall-Mount Occupancy Sensor
All-digital self-adjusting sensors in wide-view, high-bay and long-range versions. For commercial applications. Fits in corner.

RELAY PANELS

Z-MAX™ / EZ-MAX Relay Systems
Combines time clock and switching controller functions. Networkable configurations, wall stations and other accessories available.

ELECTRONIC TIMERS

Decora Plus™ Preset Timer Switches
Timed control of lighting and appliances in a sleek Decora unit. Available in 4 interval options.

Decora® Programmable Timer Switches
14-hour, 24-hour, and countdown on/off timers.

miniZ™ Intelligent Daylight Management System
miniZ and Dual Room miniZ offer daylight harvesting in a single, easily installed package.

DAYLIGHT HARVESTING

To learn more about Leviton devices or for answers to technical questions call our Techline at 1-800-824-3005 or visit us at: www.leviton.com

Courtesy of Steven Engineering, Inc.-230 Ryan Way, South San Francisco, CA 94080-6370-Main Office: (650) 588-9200-Outside Local Area: (800) 258-9200-www.stevenengineering.com
Centura™ Overview

CENTURA™ FLUORESCENT ENERGY MANAGEMENT SYSTEM

Leviton’s Centura™ is a modular fluorescent lighting control system that brings increased energy efficiency to commercial spaces. Using a technique known as daylight harvesting, Centura automatically adjusts lighting to take advantage of ambient light conditions. Centura offers a PC lighting control interface that is especially useful where access to individual wall switches is impractical. Occupancy sensors can be incorporated into the system for even greater energy savings — up to a proven 50%!

- Daylight harvesting automatically adjusts lights to changing conditions
- Occupancy sensors automatically turn lights off when room is unoccupied
- Conserves energy and lowers electric bills; meets ASHRAE Standard 90.1 requirements
- Accessible through controllers or via Leviton Personal Dimmer software
- Can reduce eye fatigue — for optimum employee comfort and productivity
- Modular system design expands energy-saving options with an interface for building emergency systems, load shedding programs, and time clock systems

Available Colors

White  Ivory

NOTE: Not all models come in all colors. See listings for color availability for specific devices.
Centura™ Product Listing

CENTURA™ POWER PACK, PHOTOCELL & COMPATIBLE OCCUPANCY SENSORS

The key to Centura’s energy management functionality is the interplay between the system’s power pack, photocell units, and occupancy sensors. These technologies combine to automate lighting and create the optimal work atmosphere while also conserving energy. Leviton offers a number of compatible ceiling- and wall-mount occupancy sensors to accommodate a broad range of applications.

SPECIFICATIONS & FEATURES

Power Pack / System

• Provides low-voltage power supply for controllers, photocell, occupancy sensors and jack
• When hardwired to photocell, reduces electric usage through daylight harvesting
• When hardwired to occupancy sensor, provides hands-free lights-on when room is entered and turns lights off when room becomes vacant, for increased energy savings
• Retains all LCnet system settings such as addresses, light (including preset) levels, load shed and emergency status, unoccupied state, and 30-minute timeout state
• Features a built-in, low-voltage HVAC relay and a programmable (via PC) time clock
• Meets environmental regulations (including California’s Title 24) by defaulting to a 30-minute override of manually brightened settings

Photocell Only

• Measures light from any source in the visible spectrum within a 60° cone
• Provides continual measurements to the Dimming Power Pack
• Mounts on ceiling

TESTING & CODE COMPLIANCE

• CEC Title 24 compliant and meets ASHRAE Standard 90.1 requirements
• Power Pack and Photocell are UL Listed, CSA Certified, and FCC Part 15 (where applicable)
• Occupancy sensors are CUL/US Certified
• Centura Power Pack backed by a Limited Two-Year Warranty
• Photocell and Occupancy Sensors backed by a Limited Five-Year Warranty

NOTE: See “Applications” on Pages N10 and N11 for additional information on daylight harvesting, addressing, Centura design scenarios, and photocell and occupancy sensor placement.

Centura™ adjusts lights to automatically provide optimal lighting throughout the day.

Dims lights during a bright day.

Brightens lights when evening falls.

Turns lights off when space becomes unoccupied.
**CENTURA™ POWER PACK, PHOTOCELL & COMPATIBLE OCCUPANCY SENSORS**

**Centura Power Pack & Photocell**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>RATING</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centura Dimming Power Pack: On/off and dim/bright control of 0-10VDC dimming fluorescent ballasts. Responds to wall controller, occupancy sensor and photocell input, and provides ~24VDC power supply for these devices. Programmed via wall controller or via Leviton Personal Dimmer software from a PC. Secondary relay sends control signals to HVAC system.</td>
<td>CN100-DD0</td>
<td>2400VA @ 120VAC 60Hz, 5500VA @ 277VAC 60Hz. For use with 0–10VDC Advance Mark 7™, OSRAM Sylvania Quicktronic® Helios™ Energy Savings SuperDim™ and comparable ballasts only</td>
<td>Gray Metallic</td>
</tr>
<tr>
<td>Centura Photocell: Allows Centura system to maintain a programmed light level by constantly adjusting fluorescent light output to compensate for changes in ambient light.</td>
<td>ODC0P</td>
<td>No load rating. For use with CN100 only. 0–70 footcandles</td>
<td>White</td>
</tr>
</tbody>
</table>

Note: See Page N12 for wiring diagrams.

**Centura-Compatible Occupancy Sensors**

(Additional information on these sensors, including photos and dimensions, can be found on the pages indicated.)

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>COVERAGE</th>
<th>COLOR</th>
<th>PAGE NO.</th>
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<td>OSC05-M0W</td>
<td>180°, 500SF</td>
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<td>N21</td>
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<td>Multi-tech Ceiling Sensor</td>
<td>OSC10-M0W</td>
<td>360° 1000SF</td>
<td>White</td>
<td>N21</td>
</tr>
<tr>
<td>Multi-tech Ceiling Sensor</td>
<td>OSC20-M0W</td>
<td>360°, 2000SF</td>
<td>White</td>
<td>N21</td>
</tr>
<tr>
<td>Ultrasonic Ceiling Sensor</td>
<td>OSC05-U0W</td>
<td>180°, 500SF</td>
<td>White</td>
<td>N22</td>
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<tr>
<td>Ultrasonic Ceiling Sensor</td>
<td>OSC10-U0W</td>
<td>360° 1000SF</td>
<td>White</td>
<td>N22</td>
</tr>
<tr>
<td>Ultrasonic Ceiling Sensor</td>
<td>OSC20-U0W</td>
<td>360°, 2000SF</td>
<td>White</td>
<td>N22</td>
</tr>
<tr>
<td>Passive Infrared Ceiling Sensor</td>
<td>OSC04-I0W</td>
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<td>N23</td>
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<tr>
<td>Passive Infrared Ceiling Sensor</td>
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<td>360°, 1500SF</td>
<td>White</td>
<td>N23</td>
</tr>
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<td>Multi-tech Wall Sensor</td>
<td>OSW12-M0W</td>
<td>115°, 1200SF</td>
<td>White</td>
<td>N24</td>
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<tr>
<td>Passive Infrared Wide-View Sensor</td>
<td>OSWWV-I0W</td>
<td>115°, 2500SF</td>
<td>White</td>
<td>N25, N26</td>
</tr>
<tr>
<td>Passive Infrared Long Range Sensor</td>
<td>OSWLR-I0W</td>
<td>100ft. @ 10ft. high</td>
<td>White</td>
<td>N26</td>
</tr>
<tr>
<td>Passive Infrared High-Bay Sensor</td>
<td>OSWHB-I0W</td>
<td>55 ft., 7 ft. wide @ 30 ft. high</td>
<td>White</td>
<td>N26</td>
</tr>
</tbody>
</table>

NOTE: These Leviton occupancy sensors can be powered by the CN100. Within a Centura System, a separate Occupancy Sensor Power Pack is not required.
Centura™ Product Listing

CENTURA™ CONTROLLERS
A number of controllers (including an entry-pad dimmer, rocker style switch or dimmer and a handheld remote control) can be incorporated into a Centura system. All wall-mounted controllers feature sleek Decora® styling.

SPECIFICATIONS & FEATURES

<table>
<thead>
<tr>
<th></th>
<th>CN200</th>
<th>CN220</th>
<th>CN221</th>
<th>NE200</th>
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</thead>
<tbody>
<tr>
<td>Dimming and switching functionality</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>One-touch full brightness Max button</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Manual controls override automatic settings</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
<td>Compatible with a handheld remote control</td>
<td></td>
<td></td>
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<tr>
<td>Service switch temporarily cuts power to fixtures</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>For use programming Centura™ system</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>Sleek Decora styling</td>
<td>X</td>
<td>X</td>
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</table>

TESTING & CODE COMPLIANCE

• UL Listed
• CSA and NOM Certified
• FCC Part 15 and CEC Title 24 compliant (except for Remote Controller)
• Backed by a Limited Two-Year Warranty
### CENTURA™ WALL AND REMOTE CONTROLLERS

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>RATING</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centura Dimming Controller with Infrared Receiver:</td>
<td>CN200-00C</td>
<td>No load rating. For use with Centura</td>
<td>W + I*</td>
</tr>
<tr>
<td>Decora-style 5-button unit for on/off, dim/bright and max override.</td>
<td></td>
<td>Power Pack only</td>
<td></td>
</tr>
<tr>
<td>Built-in IR receiver for use with Centura NE200 Remote. Programs energy</td>
<td></td>
<td>management functions</td>
<td></td>
</tr>
<tr>
<td>Centura Switching Controller: Decora-style rocker for on/off switching</td>
<td>CN220-00C</td>
<td>Same as Above</td>
<td>W + I*</td>
</tr>
<tr>
<td>CN221-00C</td>
<td></td>
<td>Same as Above</td>
<td>W + I*</td>
</tr>
<tr>
<td>Centura Dimming Controller: Decora-style rocker for on/off switching with</td>
<td>CN221-00C</td>
<td>LED display indicates selected</td>
<td></td>
</tr>
<tr>
<td>built-in arrow-shaped rocker for dim/bright control. LED display indicates</td>
<td></td>
<td>brightness level. Back of wallplate</td>
<td></td>
</tr>
<tr>
<td>selected brightness level. Back of wallplate provides instruction label</td>
<td></td>
<td>that lines up with LEDs to facilitate</td>
<td></td>
</tr>
<tr>
<td>that lines up with LEDs to facilitate programming.</td>
<td></td>
<td>programming</td>
<td></td>
</tr>
<tr>
<td>Centura Handheld Infrared Remote Controller:</td>
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<td>No load rating. For use with CN200</td>
<td>Black</td>
</tr>
<tr>
<td>Convenient on/off, dim/bright control presets and programming.</td>
<td></td>
<td>Controller only</td>
<td></td>
</tr>
</tbody>
</table>

* Comes standard in White with matching Decora wallplate and Ivory Color Change Kit

Note: See Page N13 for wiring diagrams.
Energy Management & Dimming Products

CENTURA™ SMARTJACK/SOFTWARE PACKAGE

With Centura not only can lighting administrators view and control the entire lighting system from a PC, but the average user can also adjust lighting from his or her PC. Visit www.leviton.com/centura for the latest Centura software updates.

SPECIFICATIONS & FEATURES

- Provides PC interface for individual control of lights, to ease setup, and to back up settings
- CD includes Leviton HTTP Server, LPD, and LPDA software modules
- Comes with RJ11-to-DB9 cable
- LEDs blink red or green to confirm message status
- SmartJack fits inside a standard NEMA wallbox

TESTING & CODE COMPLIANCE

- UL Listed, CSA Certified
- Backed by a Limited Two-Year Warranty

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>RATING</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCnet SmartJack Package: Includes a cable for connecting the SmartJack to a PC and a mini-CD containing server, administrator, and user software. For the latest software updates, check Leviton's Web site: <a href="http://www.leviton.com">www.leviton.com</a></td>
<td>NE100-00C</td>
<td>No load rating. For use with Centura Power Pack</td>
<td>White + Ivory*</td>
</tr>
</tbody>
</table>

* Comes standard in White with matching Decora wallplate plus Ivory jack insert option (Ivory Decora wallplate sold separately).

Note: See Page N12 & N13 for wiring diagrams.
GENERAL APPLICATION
Leviton’s Centura™ Fluorescent Energy Management System is ideally suited to commercial environments in which at least one of the following needs is present:

• Saving money by reducing electric consumption
• Increasing employee productivity through optimal lighting that reduces eye fatigue
• Meeting environmental regulations and conserving energy
• Providing individual control of lighting to workers via a PC interface
• Offering hands-free convenience by automatically turning lights on and off when appropriate
• Linking emergency, time clock, HVAC and fluorescent lighting control systems to achieve optimal synergy and efficiencies

The key to Centura’s energy management feature is “daylight harvesting.” By using surrounding ambient light to supplement light from fixtures within the room, Leviton’s Centura System can maintain a constant lighting level while saving electricity. The “Light Maintain Level” must be programmed into the power pack either via Leviton-provided software, one of the wall-mounted controllers, or through a handheld remote control. Once wired, the power pack will receive the photocell’s comprehensive light measurement and, when necessary, adjust its own output to keep steady the Light Maintain Level within the photocell’s area of detection.

Typical Daylight Harvesting Operation within a 12-hour period

A comprehensive energy management system, such as Centura, does require planning and programming. A number of key issues to consider beforehand include:

• Ambient light conditions and usage of space to determine optimal photocell placement
• Selecting the appropriate occupancy sensors to monitor an area
• How the wiring should be laid out and which Centura components are needed to create the desired system (taking into account load capacity and addressing limitations)
• The appropriate addressing scheme and light levels that will need to be programmed

Addressing
The Centura Power Pack, all three wall controllers and the Leviton Personal Dimmer must be assigned addresses. More specifically, they must be programmed to the same address in order for a number of these components to work together. After all components that require it are addressed, either the Daylight Maintain Level or the Minimum Light Level may need to be set for each address. This will be the case if either (1) there is a photocell hooked up to the power pack or (2) the drawings require a Minimum Light Level above 0%.
Centura™ Applications

DESIGN SCENARIOS
Since each Centura™ system is configured based on job-specific requirements, each application must be clearly defined before a Centura system can be designed. Applications can be broken down into different system scenarios geared towards achieving specific goals within a certain type of space.

For illustrative purposes, a closed room is defined as a typical room with a window to the outside. If installing an energy management system in a closed room with no such window, there is no need to include a photocell. On the other hand, we define an open space as a large area where there is little if any natural light — and often plenty of cubicles. In general the lack of wall space in such areas makes standard wall switches impractical and PC control desirable.

The chart below presents a number of typical Centura applications, and which Centura components you might need to do the job.

<table>
<thead>
<tr>
<th>SAMPLE CENTURA APPLICATIONS</th>
<th>POWER PACK</th>
<th>OCCUPANCY SENSOR</th>
<th>PHOTOCELL</th>
<th>CONTROLLER + REMOTE</th>
<th>DIMMING CONTROLLER</th>
<th>SMARTJACK + SOFTWARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Energy Management System with maximum user control for closed rooms</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
<td>2. Basic Energy Management System for closed rooms</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>3. Dimming System with maximum user control for closed rooms</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Energy Management System for open spaces</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Dimming System with maximum user control for open spaces</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Application 1
In a closed room with at least one window to the outside, the fullest range of energy management features can be utilized: including a photocell and occupancy sensors. In an office where lighting needs may change with the task at hand — such as doing design work on a computer or projecting a presentation — automatic lighting control can be supplemented with a handheld remote control, a wall-mounted dimmer, as well as a Leviton Personal Dimmer on the computer.

Application 2
As long as there is a window to the outdoors every Centura energy management feature can be incorporated into the automatic lighting control system. The occupancy sensor and photocell take care of the automatic on/off as well as maintaining the Light Maintain Level. A CN221 controller is added to give the user the ability to set light levels and for the occasional, manual dim/bright or on/off adjustment. This scenario is ideal for offices where the user doesn’t need to change the level often and energy savings are a goal.

Application 3
Suited to a basic room where the user wants full control over all lighting and an automated system IS NOT desired. For instance: an Art Director’s office where a variety of light levels are necessary to perform daily tasks such as doing layout on the computer and making presentations to executives. Because no automation is required, this application requires no occupancy sensor or photocell. The user will have complete (including remote) control over all lighting without any unoccupied “timeouts” or automatic light adjustments.

Application 4
Ideal for the average cube farm or open space where the absence of walls makes it more practical for users to control lighting via computer. In this scenario, a Leviton Personal Dimmer is loaded onto each PC. Occupancy sensors are added to make sure that no load is inadvertently left on, therefore conserving energy and saving money. Leviton software can also be used by building management to track how individuals use lighting. This information can be used to devise methods for achieving even greater cost savings.

Application 5
In applications where automatic light adjustments are not required, Centura may be used simply as a comprehensive dimming system. In an open area, especially with cubicles, Centura is a superb choice because it provides a Leviton Personal Dimmer that can be loaded onto individual PCs. This allows occupants to adjust their lighting without having to walk across a large room to a wall switch that may be bunched up with so many other switches as to be hard to distinguish. The CN200 must be selected as a controller if remote controllability is also desired.

PHOTOCELL PLACEMENT
Installing a photocell can save electricity in any indoor space with windows or with substantial ambient light from adjacent indoor spaces. On the other hand, installing a photocell in a room without windows (especially an enclosed one) is of little value. In those applications where automatic light adjustments are desired, the placement of each photocell is a key factor in determining how daylight harvesting will work. Since light reflects off ceilings, walls, floors and furniture, ambient light levels can vary throughout different areas in a room. In order to ensure that lights brighten and dim appropriately, care must be taken in choosing a mounting location. Leviton recommends that the photocell be placed directly above the workspace where lighting is most critical. Tabletop or floor lamps can be used to supplement lighting. Only one photocell should be installed per power pack.

OCCUPANCY SENSOR SELECTION & PLACEMENT
Sensors can be mounted in the middle of walls, in corners, or on ceilings. In order to ensure motion is detected throughout an entire space, occupancy sensors must be intelligently placed. With a variety of models from which to choose, care should be taken to select the proper combination of sensors to cover an entire area with motion detection. Each sensor covers a specific pattern and square footage that must be taken into account. Additional factors include usage patterns, false-ons from nearby traffic, and airflow that can falsely register as motion. Additional information about Centura-compatible occupancy sensors can be found in the Occupancy Sensor section that follows.

Leviton provides a complimentary occupancy-sensor layout service. This service provides suggested sensor selection and placement on a customer’s drawings in either paper or electronic form, along with a bill of material detailing the components necessary for that layout. E-mail oslayout@leviton.com to request this service.
**WIRING**

**LEVITON CONTROL NETWORK**

Before installing individual Centura™ components, low-voltage communication wiring (the LCnet) must be installed. Leviton recommends using stranded Cat-5 premise patch cable for best performance. Power Packs chosen as the first and last nodes on the bus must be terminated if the wiring between LCnet components is longer than 10 feet.

*Note: Do not connect the 24VDC low voltage bus between two power packs.*

**LCnet Wiring Schematic**

**System Wiring Diagram**
**INDIVIDUAL COMPONENTS**

The SmartJack is powered by a power pack. Because it is not associated with any single address on the LCnet, the SmartJack’s power wires can be connected to whichever is the nearest power pack. We suggest that Controllers be wired to a power pack with the same address. Although it will function otherwise, powering Controllers from a pack within its own address makes troubleshooting and future expansion easier. Additional information on Centura-compatible occupancy sensors, including wiring diagrams and mounting illustrations, can be found in the Occupancy Sensor section that follows.

---

**LOAD CAPACITY**

Although numerous Centura peripherals (or components) in a multitude of combinations can be attached to the low-voltage bus, there is a limit to what can be attached to a single Centura Power Pack based on the pack's 500mA maximum load current. Most Centura components can be powered by ANY power pack because either its address determines which devices it talks to (as with controllers) or it listens to all messages (for example SmartJack). In contrast, occupancy sensors and photocells must be hardwired to a specific Centura Power Pack. Never connect two CN100 low-voltage power wires together.

**SOFTWARE**

To use a PC to set up and store settings, the PC must be connected to a SmartJack wired to the LCnet and the following software modules must be installed: HTTP Server, LPDA, and LPD (optional). See www.leviton.com/centura for software updates.

Operating System Requirements: Windows 95/98/Me/2000*/NT 4.0 Service Pack 6*/XP* (*with administrative access); see www.leviton.com for latest OS compatibility.
LEVITON OCCUPANCY SENSOR LIGHTING CONTROLS

Leviton’s wall and ceiling-mounted occupancy sensors use passive infrared and/or ultrasonic sensing technology to provide cost-effective lighting control. Leviton occupancy sensors can be used in everything from conference rooms to hallways and from restrooms to outdoor areas — turning lights on when motion is detected and off when it is not. Leviton’s comprehensive line includes commercial and residential, wide-view and high-bay, dual-relay, and even outdoor models that span a broad range of coverage areas and patterns. Accessories, including cages and power packs, are available for many models.

Available Colors

All devices come in white. Wall-switch occupancy sensors may also come in ivory, almond, light almond and gray.
DECORA® WALL-SWITCH INFRARED OCCUPANCY SENSORS

Convenient switch and occupancy sensor combo in sleek Decora® style unit. Advanced passive infrared technology provides highly accurate monitoring in a variety of commercial applications. The OSSMT Multi-Tech unit combines passive infrared and ultrasonic technologies to provide maximum sensitivity with immunity to false triggering.

SPECIFICATIONS & FEATURES

<table>
<thead>
<tr>
<th></th>
<th>ODS0D-ID</th>
<th>ODS0D-TD</th>
<th>ODS10</th>
<th>ODS15</th>
<th>PR150</th>
<th>PR180</th>
<th>OSSMT</th>
<th>OSSNL</th>
<th>OSS10</th>
<th>IPP15</th>
</tr>
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<tbody>
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<td>Three-position service</td>
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<td>Single-pole and 3-way</td>
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<tr>
<td>Elegant Decora styling</td>
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<td>Fits in standard</td>
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<td>Night Light dim feature</td>
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<td>Adjustable integral</td>
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<td>X</td>
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<td>X</td>
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</tr>
<tr>
<td>Manual ON/Auto OFF</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

IDEAL FOR USE IN:

ODS0D-ID/ODS0D-TD — Classrooms, multimedia and conference rooms, day care centers, office, lounges
ODS10-ID — Enclosed areas: small offices, conference rooms, storage rooms, copy rooms, closets
ODS15-ID — Small offices, conference rooms, classrooms, stockrooms, lounges, restrooms, warehouses
PR150-1L — Wide variety of residential applications
PR180-1L — Commercial areas: small offices, conference rooms, classrooms, stockrooms, lounges, restrooms, warehouses
OSSMT — Private and executive offices, conference rooms, storage areas, restrooms, classrooms, lounges, training areas
OSSNL/OSS10 — Hotel restrooms, hospital restrooms, conference rooms, classrooms, small offices, lounges, storage areas, and bathrooms
IPP15 — Kitchens, bathrooms, laundry rooms and garages

TESTING & CODE COMPLIANCE

- UL Listed; Cat. No. ODS0D-ID is CUL/US Certified
- CSA Certified
- CEC Title 24 compliant (ODSXX, OSS10, OSSMT and IPP15 models only) and meets ASHRAE Standard 90.1 requirements
- Backed by a Limited Five-Year Warranty; Limited Two-Year Warranty on PR1XX models
## DECORA® WALL-SWITCH INFRARED OCCUPANCY SENSORS

### OCCUPANCY SENSORS

**COMMERCIAL GRADE**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>RATING</th>
<th>COVERAGE</th>
<th>COLOR*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decora Wall-Switch PIR Occupancy Sensor</td>
<td>ODS10-ID</td>
<td>Incandescent: 800W @ 120V, Fluorescent: 1200VA @ 120V, 2700VA @ 277V. For 60Hz AC only. Motor: 1/4HP @ 120V</td>
<td>180°, 2100SF</td>
<td>W, I, A, T, G</td>
</tr>
<tr>
<td>Decora Wall-Switch PIR Occupancy Sensor with Self-adaptive Technology</td>
<td>ODS15-ID</td>
<td>Incandescent: 1800W @ 120V, Fluorescent: 1800VA @ 120V, 4000VA @ 277V. Motor: 1/4HP @ 120V</td>
<td>180°, 2100SF</td>
<td>W, I, A, T, G</td>
</tr>
<tr>
<td>Dual-Relay Decora Wall-Switch PIR Occupancy Sensor with Self-Adaptive Technology. Default setting = Conference Room mode, alternate setting = Classroom mode**</td>
<td>ODS0D-ID</td>
<td>Primary Relay–Fluorescent: 1200VA @ 120V, 2700VA @ 277V. Incandescent: 800W @ 120V. Secondary Relay–Fluorescent: 800VA @ 120V, 1200VA @ 277V. Incandescent: 800W @ 120V</td>
<td>180°, 2100SF</td>
<td>W, I, A, T, G</td>
</tr>
<tr>
<td>Decora Wall-Switch PIR Occupancy Sensor with LED Night Light</td>
<td>OSSNL-ID</td>
<td>Incandescent: 800W @ 120V, Fluorescent: 1200VA @ 120V, 2700VA @ 277V. Motor: 1/8 HP @ 120V</td>
<td>180°, 1200 SF</td>
<td>W, I, A, T, G</td>
</tr>
<tr>
<td>CEC Title 24 Compliant Decora Wall-Switch PIR Manual-ON Sensor with LED Night Light</td>
<td>OSS10-ID</td>
<td>Incandescent: 800W @ 120V, Fluorescent: 1200VA @ 120V, 2700VA @ 277V. Motor: 1/8 HP @ 120V</td>
<td>180°, 1200 SF</td>
<td>W, I, A, T, G</td>
</tr>
</tbody>
</table>

### OCCUPANCY SENSORS

**RESIDENTIAL GRADE**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>RATING</th>
<th>COVERAGE</th>
<th>COLOR*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decora Manual-ON Occupancy Sensor, CEC Title 24 Compliant, Single-Pole 3-Way or more when used with IPP0R Remote and/or Vizia™ Remotes and Remote Switches</td>
<td>IPP15-1L</td>
<td>Incandescent: 1800W @ 120V. Fluorescent: 1800VA @ 120V. Motor: 1/4HP @ 120V</td>
<td>180°, 900SF</td>
<td>W, I, A, T</td>
</tr>
<tr>
<td>Decora Manual-ON Occupancy Sensor Remote. For use with IPP15 Sensor or Vizia Dimmers.</td>
<td>IPP0R-1L</td>
<td>120VAC–No load rating. For use with IPP15 or Vizia Dimmers</td>
<td>180°, 900SF</td>
<td>W, I, A, T</td>
</tr>
<tr>
<td>Decora Wall-Switch PIR Occupancy Sensor, Single-Pole</td>
<td>PR150-1L</td>
<td>Incandescent: 500W. Fluorescent: 400VA rapid start magnetic only @ 120VAC. Motor: 1/8HP @ 120VAC</td>
<td>150°, 350SF</td>
<td>W, I</td>
</tr>
<tr>
<td>Decora Wall-Switch PIR Occupancy Sensor, Single-Pole, 3-Way</td>
<td>PR180-1L</td>
<td>Incandescent: 500W. Fluorescent: 400VA rapid start magnetic only @ 120VAC. Motor: 1/8HP @ 120VAC</td>
<td>180°, 400SF</td>
<td>W, I</td>
</tr>
</tbody>
</table>

### DECORA® WALL-SWITCH MULTI-TECH OCCUPANCY SENSORS

**COMMERCIAL GRADE**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>RATING</th>
<th>COVERAGE</th>
<th>COLOR*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decora Wall-Switch Multi-Tech Occupancy Sensor with Self-adaptive Technology</td>
<td>OSSMT-MD</td>
<td>Incandescent/Tungsten: 800W @ 120V. Fluorescent: 1200VA @ 120V, 2700VA @ 277V. Motor: 1/4HP @ 120V</td>
<td>180°, 1200 SF</td>
<td>W, I, A, T, G</td>
</tr>
</tbody>
</table>

---

* Add to end of catalog number suffix for color of switch: White (W), Ivory (I), Almond (A), Light Almond (T) and Gray (G). Wallplates sold separately.

** In Conference Room Mode, both primary and secondary relays respond to ambient light override. In Classroom Mode, primary relay responds only to ambient light override.

**Note:** See Page N32 for wiring diagrams, Page N17 for dimensioned photos and Page N18 for Field of View.
Occupancy Sensor Wall-Switch Dimensions

DECORA® WALL-SWITCH INFRARED OCCUPANCY SENSORS DIMENSIONS

- **ODS10-ID/ODS15-ID/IPP15**
  - 4.06 (103.2) in. Height
  - 1.75 (44.4) in. Width
  - 2.60 (66.1) in. Depth

- **ODS60-ID/ODS60-TD**
  - 4.11 (104.4) in. Height
  - 1.75 (44.5) in. Width
  - 2.66 (67.5) in. Depth

- **PR180-1L**
  - 4.06 (103.2) in. Height
  - 1.75 (44.4) in. Width
  - 2.60 (66.1) in. Depth

- **OSSNL-ID/OSS10-ID**
  - 4.11 (104.4) in. Height
  - 1.75 (44.5) in. Width
  - 2.66 (67.5) in. Depth

- **ODS0D-ID/ODS0D-TD**
  - 4.11 (104.4) in. Height
  - 1.75 (44.5) in. Width
  - 2.66 (67.5) in. Depth

- **OSSMT-MD**
  - 4.11 (104.4) in. Height
  - 1.75 (44.5) in. Width
  - 2.66 (67.5) in. Depth

*Shown with Night Light ON*
SELF-CONTAINED FIXTURE-MOUNT HIGH BAY SENSOR/POWER BASE ADAPTOR

SPECIFICATIONS & FEATURES

Fixture-Mount High Bay Occupancy Sensor
- Mounts directly to industrial-style fluorescent luminaires or electrical junction box
- Self-contained PIR sensor and relay turn individual fixtures ON/OFF based on occupancy
- Up to 40 ft mounting height
- Relay uses zero-crossing circuitry for enhanced reliability and long-life operation
- Delayed-OFF time adjustment from 30 sec to 20 min
- Cat. No. OSFOA-00W Offset AdapterAccessory snaps into 1/2" knockout to position sensor below fixture body for improved field of view with deep-body fixtures

Self-Contained Power Bases Adaptor
- Patent-pending design converts Leviton low-voltage ceiling sensors to line-voltage
- Ideal for both existing buildings with limited access to low-voltage wiring and new constructions with line-voltage circuiting only.

Mounts easily in standard 2.125" deep x 4" octagon or 2.125" deep x 4" square electrical box with a 2-gang mud ring; flying leads provide fast line voltage connections
- Two-piece terminal block provides fast, easy low-voltage connections to the sensor
- Relay uses zero-crossing circuitry for enhanced reliability and long-life operation

Ideal For Use In:
- OSFHB-1TW — Commercial facilities with high ceilings, including warehouses, manufacturing and others.
- OPB15-0DW — Lavatories, remodels in hard ceiling spaces, energy conservation retrofits and any installation with limited access for low-voltage wiring.

TESTING & CODE COMPLIANCE
- UL and cUL Listed
- NOM Certified (OPB15-0DW)
- CEC Title 24 compliant
- Backed by a Limited Five-Year Warranty

For OSFHB-1TW and OPB15-0DW wiring diagrams, see page N33.
SELF-CONTAINED INFRARED CEILING-MOUNT OCCUPANCY SENSORS

SPECIFICATIONS & FEATURES

• Ideal for use in storage areas, small bathrooms, copy rooms, and a variety of small spaces without wall switches
• Sensor and switching relay combined in a single, self-contained unit — no control unit (power pack) required
• Ambient light override option prevents lights from turning on when there is ample natural light
• Adjustable delayed-off-time settings from 20 seconds (for test mode) to 15 minutes
• Small, unobtrusive self-contained unit

TESTING & CODE COMPLIANCE

• UL Listed and CSA Certified
• CEC Title 24 compliant and meets ASHRAE Standard 90.1 requirements
• Backed by a Limited Five-Year Warranty

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>RATING</th>
<th>COVERAGE</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Contained Ceiling-Mount Infrared Occupancy Sensor and Switching Relay, 120V</td>
<td>ODC0S-I1W</td>
<td>Incandescent: 1000W @120V, Fluorescent: 1000VA @ 120V, Motor: 1HP @ 120V, For 60Hz AC only</td>
<td>360°, 530SF*</td>
<td>White</td>
</tr>
<tr>
<td>Self-Contained Ceiling-Mount Infrared Occupancy Sensor and Switching Relay, 220V</td>
<td>ODC0S-I2W</td>
<td>Incandescent: 1000W @220V, Fluorescent: 500VA @ 220V, For 50Hz AC only</td>
<td>360°, 530SF*</td>
<td>White</td>
</tr>
<tr>
<td>Self-Contained Ceiling-Mount Infrared Occupancy Sensor and Switching Relay, 277V</td>
<td>ODC0S-I7W</td>
<td>Fluorescent: 2700VA @277V, For 60Hz AC only</td>
<td>360°, 530SF*</td>
<td>White</td>
</tr>
<tr>
<td>Protective Cage</td>
<td>ODCCG</td>
<td></td>
<td></td>
<td>White</td>
</tr>
</tbody>
</table>

* When surface mounted on standard, 8-foot ceiling

NOTE: See Page N33 for wiring diagrams.
MULTI-TECHNOLOGY CEILING-MOUNT OCCUPANCY SENSORS

These advanced motion sensors combine infrared and ultrasonic technology for highly accurate monitoring without false triggers. All-digital self-adjusting technology provides "install and forget" solution for automatic lighting control. Available in a variety of coverage patterns to suit many applications. Use with Leviton Power Pack or, where compatible, with Centura Dimming Power Pack.

SPECIFICATIONS & FEATURES

- Ideal for use in classrooms, office areas with cubicles, cafeterias, and public areas in commercial facilities
- Ultrasonic sensing for maximum sensitivity combined with passive infrared (PIR) sensing to prevent false triggers from air conditioning and corridor activity
- Self-adjusting settings continuously analyze and adjust sensitivity, timer operation, and air current compensation for reliable, long-term performance
- Ambient light override to prevent lights from turning on when there is ample natural light
- Manual delayed-off-time settings of 30 seconds to 30 minutes
- Self-adjusting delayed-off-time interval settings for 30 seconds to 30 minutes
- Compensates for real-time occupancy patterns — preventing unnecessary on/off switching
- Non-volatile memory preserves all automatic and manual settings during power outages

Physical

- Small, unobtrusive unit blends in with any décor
- Fast, simple installation using 4 color-coded low-voltage wires and a single mounting post
- Compatible with Wiremold® surface raceways for mounting to hard ceilings

TESTING & CODE COMPLIANCE

- CUL/US, FCC and NOM Certified
- California Title 24 compliant and meets ASHRAE Standard 90.1 requirements
- Backed by a Limited Five-Year Warranty

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>OPERATING FREQUENCY</th>
<th>COVERAGE</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-tech Ceiling-Mount Occupancy Sensor*</td>
<td>OSC05-M0W</td>
<td>40kHz</td>
<td>180°, 500SF</td>
<td>White</td>
</tr>
<tr>
<td>Multi-tech Ceiling-Mount Occupancy Sensor*</td>
<td>OSC10-M0W</td>
<td>40kHz</td>
<td>360°, 1000SF</td>
<td>White</td>
</tr>
<tr>
<td>Multi-tech Ceiling-Mount Occupancy Sensor*</td>
<td>OSC20-M0W</td>
<td>32kHz</td>
<td>360°, 2000SF</td>
<td>White</td>
</tr>
<tr>
<td>Protective Cage</td>
<td>ODCG-000</td>
<td>—</td>
<td>—</td>
<td>White</td>
</tr>
</tbody>
</table>

*Compatible with Centura Fluorescent Energy Management System.

NOTE: Use low-voltage wiring to connect sensors to OSPXX Power Pack or if Centura-compatible, to a CN100 Power Pack (purchased separately). See Page N27 for information on OSP Power Packs.

To learn more about Leviton devices or for answers to technical questions call our Techline at 1-800-824-3005 or visit us at www.leviton.com.
ULTRASONIC CEILING-MOUNT OCCUPANCY SENSORS

Advanced ultrasonic sensing technology for highly accurate monitoring, including small-motion detection. All-digital self-adjusting technology provides “install and forget” solution for automatic lighting control. Use with Leviton Power Pack or, where compatible, Centura Dimming Power Pack.

SPECIFICATIONS & FEATURES

• Ideal for restrooms, office areas with cubicles, warehouse and storage facilities, cafeterias, and public areas in commercial facilities

Functional

• Ultrasonic sensing for maximum range and sensitivity combined with accurate small-motion detection
• Self-adjusting settings continuously analyze and adjust sensitivity, timer operation, and air current compensation for reliable, long-term performance
• Ambient light override to prevent lights from turning on when there is ample natural light
• Manual delayed-off-time settings of 30 seconds to 30 minutes
• Self-adjusting delayed-off time interval settings for 30 seconds to 30 minutes. Compensates for real-time occupancy patterns — preventing unnecessary on/off switching
• Non-volatile memory preserves all automatic and manual settings during power outages

Physical

• Small, unobtrusive unit blends in with any décor
• Fast, simple installation using 4 color-coded low-voltage wires and a single mounting post
• Compatible with Wiremold® surface raceways for mounting to hard ceilings

TESTING & CODE COMPLIANCE

• CUL/US Certified
• Meets ASHRAE Standard 90.1 requirements
• Backed by a Limited Five-Year Warranty

### COMMERCIAL GRADE

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>OPERATING FREQUENCY</th>
<th>COVERAGE</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultrasonic Ceiling-Mount Occupancy Sensor*</td>
<td>OSC05-U0W</td>
<td>40kHz</td>
<td>180°*, 500SF</td>
<td>White</td>
</tr>
<tr>
<td>Ultrasonic Ceiling-Mount Occupancy Sensor*</td>
<td>OSC10-U0W</td>
<td>40kHz</td>
<td>360°*, 1000SF</td>
<td>White</td>
</tr>
<tr>
<td>Ultrasonic Ceiling-Mount Occupancy Sensor*</td>
<td>OSC20-U0W</td>
<td>32kHz</td>
<td>360°*, 2000SF</td>
<td>White</td>
</tr>
<tr>
<td>Protective Cage</td>
<td>ODCCG-000</td>
<td>———</td>
<td>———</td>
<td>White</td>
</tr>
</tbody>
</table>

* Compatible with Centura Fluorescent Energy Management System.

NOTE: Use low-voltage wiring to connect sensors to OSPXX Power Pack Power Pack or if Centura-compatible, to a CN100 Power Pack (purchased separately). See Page N25 for information on OSP Power Packs.

NOTE: See Page N27 for wiring diagrams.
INFRARED CEILING-MOUNT OCCUPANCY SENSORS

SPECIFICATIONS & FEATURES

- Ideal for use in small offices, closets, open offices, and other areas in commercial facilities with unobstructed view of the sensor

Functional

- Self-adjusting settings continuously analyze and adjust sensitivity, timer operation, and long-term performance
- Ambient light override prevents lights from turning on when there is ample natural light
- Manual delayed-off-time settings of 30 seconds to 30 minutes
- Self-adjusting delayed-off-time interval settings for 30 seconds to 30 minutes. Compensates for real-time occupancy patterns — preventing unnecessary on/off switching
- Non-volatile memory preserves all automatic and manual settings during power outages

Physical

- Small, unobtrusive unit blends in with any décor
- Fast, simple installation using 4 color-coded low-voltage wires and a single mounting post
- Compatible with Wiremold® surface raceways for mounting to hard ceilings

TESTING & CODE COMPLIANCE

- CUL/US Certified
- Meets ASHRAE Standard 90.1 requirements
- Backed by a Limited Five-Year Warranty

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>COVERAGE</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrared Ceiling-Mount Occupancy Sensor*</td>
<td>OSC04-I0W</td>
<td>360°, 450SF</td>
<td>White</td>
</tr>
<tr>
<td>Infrared Ceiling-Mount Occupancy Sensor*</td>
<td>OSC15-I0W</td>
<td>360°, 1500SF</td>
<td>White</td>
</tr>
<tr>
<td>Protective Cage</td>
<td>ODCCG-000</td>
<td>—</td>
<td>White</td>
</tr>
</tbody>
</table>

*Compatible with Centura Fluorescent Energy Management System.

NOTE: Use low-voltage wiring to connect sensors to OSPXX Power Pack or if Centura-compatible, CN100 Power Pack (purchased separately). See Page N27 for information on OSP Power Packs.

NOTE: See Page N33 for wiring diagrams.
MULTI-TECHNOLOGY WALL-MOUNT OCCUPANCY SENSORS

SPECIFICATIONS & FEATURES

- Ideal for conference rooms, stairwells, high-ceiling rooms, open areas, storage rooms, and classrooms — including corner mounting in a variety of applications
- Ultrasonic sensing for maximum sensitivity combined with passive infrared (PIR) sensing to prevent false triggers from air conditioning and corridor activity
- Adjustable swivel neck rotates 80° vertically and 60° horizontally. Can be used for ceiling or wall mounting
- Self-adjusting settings continuously analyze and adjust sensitivity, timer operation, and air current compensation for reliable, long-term performance
- Ambient light override to prevent lights from turning on when there is ample natural light
- Manual delayed-off-time settings of 30 seconds to 3 minutes
- Self-adjusting delayed-off-time interval settings of 30 seconds to 30 minutes. Compensates for real-time occupancy patterns, preventing unnecessary on/off switching
- Non-volatile memory preserves all automatic and manual settings during power outages
- Fast, simple installation using 3 color-coded low-voltage wires and a single mounting post

TESTING & CODE COMPLIANCE

- CUL/US Certified
- Meets ASHRAE Standard 90.1 requirements
- Backed by a Limited Five-Year Warranty

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>OPERATING FREQUENCY</th>
<th>COVERAGE</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-tech Wall-Mount Occupancy Sensor *</td>
<td>OSW12-M0W</td>
<td>32kHz</td>
<td>115°, 1200SF</td>
<td>White</td>
</tr>
</tbody>
</table>

*Compatible with Centura Fluorescent Energy Management System.

NOTE: Use low-voltage wiring to connect sensors to OSPXX Power Pack or if Centura-compatible, to a CN100 Power Pack (purchased separately). See Page N27 for information on OSP Power Packs.

NOTE: See Page N34 for wiring diagrams.

OSW12-M0W Field of View (in feet)
INFRARED INDOOR WALL-MOUNT OCCUPANCY SENSORS

Advanced PIR technology for highly accurate monitoring. All-digital self-adjusting technology provides "install and forget" solution for automatic lighting control. Use with Leviton Power Pack or, where compatible, Centura Dimming Power Pack.

SPECIFICATIONS & FEATURES

• OSWWV-I: Ideal for conference rooms, stairwells, high-ceiling rooms, large open areas, parking garages, storage rooms, and rooms with pendant fixtures. Also ideal for corner mounting

• OSWHB-I & OSWLR-I: Ideal for monitoring long, narrow spaces such as warehouse aisles, hallways, closets, and storage areas. Also ideal for corner mounting

• Self-adjusting settings continuously analyze and adjust for optimum performance

• Adjustable swivel neck rotates 80° vertically and 60° horizontally. Can be used for ceiling or wall mounting

• Ambient light override prevents lights from turning on when there is ample natural light

• Manual delayed-off-time settings of 30 seconds to 30 minutes

• Self-Adjusting delayed-off-time interval settings for 30 seconds to 30 minutes. Compensates for real-time occupancy patterns — preventing unnecessary on/off switching

• Non-volatile memory preserves all automatic and manual settings during power outages

• Fast, simple installation using 3 color-coded low-voltage wires and a single mounting post

TESTING & CODE COMPLIANCE

• CUL/US Certified

• Meets ASHRAE Standard 90.1 requirements

• Backed by a Limited Five-Year Warranty
WIDE-VIEW, HIGH-BAY & LONG RANGE INFRARED WALL-MOUNT OCCUPANCY SENSORS

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>COVERAGE</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wide-View Infrared Wall-Mount Occupancy Sensor*</td>
<td>OSWWV-I0W</td>
<td>115°, 2500SF</td>
<td>White</td>
</tr>
<tr>
<td>High-Bay Infrared Wall-Mount Occupancy Sensor*</td>
<td>OSWHB-I0W</td>
<td>55 ft., 7 ft.</td>
<td>White</td>
</tr>
<tr>
<td></td>
<td></td>
<td>wide</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>@ 30 ft. high</td>
<td></td>
</tr>
<tr>
<td>Long-Range Infrared Wall-Mount Occupancy Sensor*</td>
<td>OSWLR-I0W</td>
<td>100ft., 110°</td>
<td>White</td>
</tr>
<tr>
<td></td>
<td></td>
<td>@ 10ft. high</td>
<td></td>
</tr>
</tbody>
</table>

*Compatible with Centura Fluorescent Energy Management System.

NOTE: Use low-voltage wiring to connect sensors to OSPXX Power Pack or if Centura-compatible, to a CN100 Power Pack (purchased separately). See Page N27 for information on OSP Power Packs.

NOTE: See Page N34 for wiring diagrams.
Occupyancy Sensor Product Listing

**OCCUPANCY SENSOR POWER PACKS**

Power packs provide power for occupancy sensors as well as load switching circuitry. A Leviton Power Pack is required with any low voltage occupancy sensor. Add-A-Relay units can be used to expand control capability.

**SPECIFICATIONS & FEATURES**

**Power Pack**
- For use with all OS Series occupancy sensors
- Power supply for OS Series occupancy sensors
- Switches incandescent, magnetic and electronic fluorescent, magnetic and electronic low voltage, and motor loads
- Compact size and light weight allows easy mounting through knockout in junction box (from either inside or outside the box) with a simple twist-on nut

**Add-A-Relay**
- Expands power pack load capacity by functioning as a supplementary relay
- Provides ability to switch loads in different voltage systems
- Compatible with electronic ballasts
- Same compact size and mounting features as Power Pack

**Nipple Adapter**
- Simplifies the connection of occupancy sensor to the low-voltage side of a power pack mounted inside a fluorescent ballast cavity
- 1/2” conduit lock nut included

**TESTING & CODE COMPLIANCE**
- CUL/US, FCC and NOM Certified
- Meets ASHRAE Standard 90.1 requirements
- Backed by a Limited Five-Year Warranty

### Power Packs and Accessories

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>POWER INPUT</th>
<th>RELAY RATING</th>
<th>CONTROL INPUT</th>
<th>POWER SUPPLY OUTPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Pack</td>
<td>OSP20-0D0</td>
<td>120/220/277VAC, 60Hz</td>
<td>20A Fluorescent/Incandescent @ 120V, 20A Fluor. @ 277V; 1HP @ 120V, 2HP @ 240V</td>
<td>5mA, 24VDC</td>
<td>150mA, 24VDC</td>
</tr>
<tr>
<td>Power Pack with HVAC relay</td>
<td>OSP20-RD0</td>
<td>120/220/277VAC, 60Hz</td>
<td>20A Fluorescent/Incandescent @ 120V, 20A Fluor. @ 277V; 1HP @ 120V, 2HP @ 240V, HVAC: 0.5A @ 125VAC, 1A @ 30VDC</td>
<td>5mA, 24VDC</td>
<td>150mA, 24VDC</td>
</tr>
<tr>
<td>Power Pack with HVAC relay</td>
<td>OSP15-R30</td>
<td>347VAC, 60Hz</td>
<td>15A Fluorescent @ 347V: 1HP @ 120V, 2HP @ 240V, HVAC: 0.5A @ 125VAC, 1A @ 30VDC</td>
<td>5mA, 24VDC</td>
<td>120mA, 24VDC</td>
</tr>
<tr>
<td>Add-A-Relay Unit with HVAC relay</td>
<td>OSA20-R00</td>
<td>—</td>
<td>15A Incandescent @ 120V, 20A Fluorescent @ 120V, 20A Fluor. @ 277V, 15A Fluor. @ 347V, HVAC: 0.5A @ 125VAC, 1A @ 30VDC</td>
<td>5mA, 24VDC</td>
<td>—</td>
</tr>
</tbody>
</table>

**Low-Voltage Nipple Adapter with 1/2” Lock Nut for Power Pack and Add-A-Relay units**

**OSPNA-000**

### Power Pack Capacity Formula

Leviton power packs can be used to provide power to one or more occupancy sensors. Since current consumptions of occupancy sensors may vary, the best way to ensure you order the correct number of power packs and add-a-relays is by using this formula:

\[
\text{# of sensor Model } A \times \text{Sensor A current consumption rating} + \text{# of sensor Model } B \times \text{Sensor B current consumption rating} + \text{# of Add a Relays} \times 50mA \leq 150mA \text{ per power pack}
\]

**SENSOR**

<table>
<thead>
<tr>
<th>CURRENT CONSUMPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSC04-I, OSC15-I, OSHWB-I, OSWLR-I, OSWWV-I</td>
</tr>
<tr>
<td>OSC05-M, OSC05-U, OSW12-M</td>
</tr>
<tr>
<td>OSC20-M, OSC20-U</td>
</tr>
<tr>
<td>OSC10-M, OSC10-U</td>
</tr>
<tr>
<td>OSA20-R00 Add a Relay</td>
</tr>
</tbody>
</table>

To learn more about Leviton devices or for answers to technical questions call our Techline at 1-800-824-3005 or visit us at: www.leviton.com

Courtesy of Steven Engineering, Inc.-230 Ryan Way, South San Francisco, CA 94080-6370-Main Office: (650) 588-9200-Outside Local Area: (800) 258-9200-www.stevenengineering.com
OUTDOOR MOTION SENSORS
Passive Infrared (PIR) outdoor motion sensors provide outstanding value in security lighting, as well as convenience, safety and energy savings for a wide range of commercial and residential applications.

SPECIFICATIONS & FEATURES
Professional Series
- Ideal for a wide range of commercial/industrial settings including parking areas, storage facilities, warehouses, loading docks, marina, garages, walkways, campus grounds, meat lockers, walk-in refrigerators/freezers, and outbuildings
- Adjustable sensitivity and immunity to RFI signals reduces false triggers
- Ambient light override prevents lights from turning on when there is ample natural light
- Surge suppression minimizes likelihood of damage due to electrical surges
- Temperature compensation feature ensures uniform performance in extreme hot or cold weather and during temperature fluctuations

Residential Series
- Ideal for a wide range of residential settings including backyards, garages, entranceways, porches, swimming pool areas, doorways, and private docks
- Adjustable sensitivity reduces false triggers

Both Series
- Sensor neck adjustment allows accurate monitoring: 110° vertical, 180° horizontal, 110° rotational
- With or without dual floodlight lampholder
- Adjustable delayed-off-time settings from 20 seconds (for test mode) to 15 minutes
- Provides automatic, test and continuous modes. Test mode simulates automatic operation with short delayed-off-time for easy adjustments. Continuous mode enables manual override for constant “lights on” operation (when used with standard on/off switch)

TESTING & CODE COMPLIANCE
- UL Listed and CSA Certified
- Meets ASHRAE Standard 90.1 requirements
- Backed by a Limited Five-Year Warranty
# Occupancy Sensor Product Listing

## Outdoor Motion Sensors
### Professional Series

<table>
<thead>
<tr>
<th>Description</th>
<th>Cat. No.</th>
<th>Rating</th>
<th>Coverage</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor PIR Motion Sensor</td>
<td>PS200-10</td>
<td>Incandescent: 1000W @ 120V. Fluorescent/Inductive: 500VA @ 120V. For 60Hz AC only</td>
<td>200°</td>
<td>White</td>
</tr>
<tr>
<td>Outdoor PIR Motion Sensor with Dual Floodlight Lampholder</td>
<td>PS200-1F</td>
<td>Same as Above</td>
<td>200°</td>
<td>White</td>
</tr>
<tr>
<td>Outdoor PIR Motion Sensor</td>
<td>PS110-10</td>
<td>Same as Above</td>
<td>110°</td>
<td>White</td>
</tr>
<tr>
<td>Outdoor PIR Motion Sensor with Dual Floodlight Lampholder</td>
<td>PS110-1F</td>
<td>Same as Above</td>
<td>110°</td>
<td>White</td>
</tr>
</tbody>
</table>

### Residential Series

<table>
<thead>
<tr>
<th>Description</th>
<th>Cat. No.</th>
<th>Rating</th>
<th>Coverage</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor PIR Motion Sensor</td>
<td>RS110-10W</td>
<td>Incandescent: 500W @ 120V. Fluorescent/Inductive: 500VA @ 120V. For 60Hz AC only</td>
<td>110°</td>
<td>White</td>
</tr>
<tr>
<td>Outdoor PIR Motion Sensor with Dual Floodlight Lampholder</td>
<td>RS110-1FW</td>
<td>Incandescent: 500W @ 120V. Fluorescent/Inductive: 500VA @ 120V. For 60Hz AC only</td>
<td>110°</td>
<td>White</td>
</tr>
</tbody>
</table>

---

**PS110/RS110 Field of View (in feet)**

**PS200 Field of View**
**Occupancy Sensor Applications**

### UNDERSTANDING SENSOR CATALOG NUMBERS

<table>
<thead>
<tr>
<th>First 2 Letters</th>
<th>3rd Character: type of product</th>
<th>Last 2 Characters</th>
<th>1st Character of Suffix: sensor technology</th>
<th>2nd Character of Suffix: voltage</th>
<th>3rd Character of Suffix: color</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS = Occupancy Sensor</td>
<td>OD = Occupancy Detector</td>
<td>C = Ceiling Mount</td>
<td>04 = 400sf</td>
<td>I = Infrared</td>
<td>1 = 120V</td>
</tr>
<tr>
<td>W = Wall Mount</td>
<td>P = Power Pack</td>
<td>05 = 500sf or 5A</td>
<td>M = Multi-technology</td>
<td>2 = 230V</td>
<td>I = Ivory</td>
</tr>
<tr>
<td>A = Add-A-Relay</td>
<td>S = Switch Replacement</td>
<td>10 = 1000sf or 10A</td>
<td>R = Relay (HVAC)</td>
<td>3 = 347V</td>
<td>A = Almond</td>
</tr>
<tr>
<td>F = Fixture Mount</td>
<td>15 = 15A</td>
<td>12 = 1200sf</td>
<td>T = California Title 24 Compliant</td>
<td>7 = 277V</td>
<td>T = Light Almond</td>
</tr>
<tr>
<td>0 = N/A</td>
<td>15 = 15A</td>
<td>20 = 2000sf</td>
<td>U = Ultrasonic</td>
<td>D = Dual Voltage 120/277V</td>
<td>G = Gray</td>
</tr>
<tr>
<td>0D = Dual relay</td>
<td>0S = Self-contained</td>
<td>0 = N/A</td>
<td>0 = N/A</td>
<td>0 = N/A</td>
<td>B = Brown</td>
</tr>
<tr>
<td>CG = Cage</td>
<td>HB = High Bay</td>
<td></td>
<td></td>
<td></td>
<td>0 = N/A</td>
</tr>
<tr>
<td>LR = Long Range</td>
<td>NA = Nipple Adapter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RA = Raceway Adapter</td>
<td>WV = Wide View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ABOUT SENSING TECHNOLOGIES

**Passive Infrared (PIR)**

Infrared occupancy sensors are passive devices designed to detect the movement of heat-emitting bodies. They are installed to monitor areas where there are no physical obstructions to block the sensor’s field of view. HOW IT WORKS: People naturally emit a small amount of infrared heat. As a person passes through the field of view, the sensor detects the motion as a change in the infrared background and responds by switching on area lights. After the field of view is unoccupied for a user-defined delayed-off time, the sensor will automatically turn off the lights.

**Ultrasonic (US)**

Ultrasonic sensing technology provides highly accurate small-motion detection. Leviton sensors employing ultrasonic technology are well suited to monitoring areas, especially smaller or narrow ones, with inanimate objects (such as furniture) that block the line of sight and hence are likely to block the field of view of PIR sensors. They are also ideal where more sensitive detection is required. HOW IT WORKS: Ultrasonic occupancy sensors generate high frequency sound waves beyond the capability of human hearing, due to the Doppler Effect. These controls are active: continually emitting sound waves and monitoring changes in the return time of the reflected sound waves. Movement in the sound wave field causes a change in wave frequency and the sensor responds by switching on area lights. When the change in frequency is no longer detected after a delayed-off time, the sensor turns off the lights. Leviton ultrasonic sensors operate at a frequency outside the range of most hearing aid products and will not interfere with their ability to operate properly.

**Multi-technology**

Multi-technology occupancy sensors combine ultrasonic sensing for maximum sensitivity with PIR technology to prevent false triggers from air conditioning and corridor activity. These sensors are ideal for large, open areas including office areas with cubicles, general workspaces, warehouse and storage facilities, cafeterias, and public areas in commercial facilities. HOW IT WORKS: Leviton multi-technology sensors utilize both sensor technologies to determine when to turn the lights off.

**Adaptive Definition**

A dedicated internal microprocessor continually analyzes the room environment and adjusts itself automatically. The internal timer, detection sensitivity and thresholds are automatically adjusted. Once installed, a sensor incorporating adaptive technology should never require manual adjustment or calibration.
Occupyancy Sensor Applications

**About Different Sensor Designs**

<table>
<thead>
<tr>
<th>Sensor Type</th>
<th>When to Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wall-Switch</td>
<td>When you don’t want to install a separate device, choose this sensor because it replaces an existing wall switch. Get both occupancy sensing and manual on/off switching in a single device.</td>
</tr>
<tr>
<td>Ceiling-Mount</td>
<td>For 180° or 360° coverage of an area (360° sensor shown).</td>
</tr>
<tr>
<td>Wall-Mount</td>
<td>For coverage of irregularly shaped areas and those with varying ceiling heights, as well as narrow hallway and high-bay corridor applications. For detection in spaces outside the field of view of other occupancy sensors. Can be pointed in different directions.</td>
</tr>
</tbody>
</table>

**Selection & Placement**

Sensors can be mounted in the middle of walls, in corners, or on ceilings. Occupancy sensors must be intelligently placed in order to ensure that motion is detected throughout an entire space. With a variety of models from which to choose, care should be taken to select the proper combination of sensors to cover an entire area with motion detection.

Factors to consider before selecting and placing an occupancy sensor include:

- Size and shape of area needing coverage compared to ranges of occupancy sensors
- Obstacles that may block the sensor's line of sight
- How much activity there is in a space
- Ceiling height
- Airflow that can falsely register as motion
- Location of HVAC ducts

Select a Centura-compatible occupancy sensor when installing an occupancy sensor within a Centura Energy Management System. In this case, the CN100 Power Pack provides power to the occupancy sensor (no OSPXX is required). Please note that Centura’s Dimming Power Pack also has its own built-in HVAC relay.

Leviton’s Lighting Management Systems Division provides a complimentary occupancy-sensor layout service. This service provides suggested sensor selection and placement on a customer’s drawings in either paper or electronic form, along with a bill of material detailing the components necessary for that layout. Send an e-mail to oslayout@leviton.com to request this service.

**Application Wiring Diagrams**

**Two Occupancy Sensors Controlling One Load**

- Manual Override Off

**Occupancy Sensor and Dimmer Controlling One Load**

- Manual Override Off

**3-Way Applications**

- For Manual-On Occupancy Sensor, Remote and Vizia Devices

To learn more about Leviton devices or for answers to technical questions call our Techline at 1-800-824-3005 or visit us at: www.leviton.com

Courtesy of Steven Engineering, Inc.-230 Ryan Way, South San Francisco, CA 94080-6370-Main Office: (650) 588-9200-Outside Local Area: (800) 258-9200-www.stevenengineering.com
WIRING DIAGRAMS

WALL-SWITCH OCCUPANCY SENSORS

ODS0D Wall-Switch Occupancy Sensor Wiring Diagram
(For Single Pole, Single Phase Applications)

ODS0D Wall-Switch Occupancy Sensor Wiring Diagram
(For Single Pole, Two Phase Applications)

ODS10/15 Wall-Switch Occupancy Sensor Wiring Diagram,
Single Location Control

ODS10/15 Wall-Switch Occupancy Sensor Wiring Diagram,
Two-Location Control

PR150 Wall-Switch Occupancy Sensor Wiring Diagram

PR180 Wall-Switch Occupancy Sensor 3-Way Wiring Diagram

Note: Ground must be connected
Occupancy Sensor Technical Information

CEILING-MOUNT OCCUPANCY SENSOR WIRING DIAGRAMS

OS-Series Ceiling Mount Occupancy Sensor (with Power Pack) Wiring Diagram

ODC0S-I2 Ceiling Mount Occupancy Sensor, Single-Location Wiring Diagram

ODC0S-I2 Ceiling Mount Occupancy Sensor, Two-Location Wiring Diagram

ODC0S-I7 Ceiling Mount Occupancy Sensor Wiring Diagram

OPB15-0DW Power Base Adapter

OSFBH-ITW Occupancy Sensor Wiring Diagram

*When the photocell function is not being used, connect the Blue Occupancy Sensor lead to the Blue Power Pack lead. When using the Photocell function, connect the Gray Occupancy Sensor lead to the Blue Power Pack lead – Do not use the Blue Occupancy Sensor lead for the photocell function.

To learn more about Leviton devices or for answers to technical questions call our Techline at 1-800-824-3005 or visit us at: www.leviton.com

Courtesy of Steven Engineering, Inc.-230 Ryan Way, South San Francisco, CA 94080-6370-Main Office: (650) 588-9200-Outside Local Area: (800) 258-9200-www.stevenengineering.com
**WALL-MOUNT OCCUPANCY SENSOR WIRING DIAGRAMS**

**OSWxx Occupancy Sensor Wiring Diagram with Single Power Pack**

**OSWxx Occupancy Sensor Wiring Diagram with Multiple Power Packs**

**OSWxx Occupancy Sensor Wiring Diagram with Power Pack and Add-A-Relay**

---

*When the photocell function is not being used, connect the Blue Occupancy Sensor lead to the Blue Power Pack lead. When using the Photocell function, connect the Gray Occupancy Sensor lead to the Blue Power Pack lead—Do not use the Blue Occupancy Sensor lead for the photocell function.*
DECORA® ELECTRONIC TIMER SWITCHES

The Leviton line of timer switches provides quiet, accurate electronic timing for reliable lighting and motor control. Electronic timers can be used not only to reduce energy costs, but automated switching also contributes to anti-theft measures if used when a home is left unoccupied; to general safety by turning lights on before you arrive home; and to convenience, for example, by turning on the pool filter automatically. A variety of preset electronic and fully programmable models feature specifications to fit every application. All switches come with matching Decora® or Decora Plus wallplates.

- Preset timers with settings from 2 minutes to 12 hours
- Programmable units initiate scheduled switching at the touch of a button (Second touch to turn load off)
- Programmable units retain schedule during power outages via backup batteries
- No moving parts to break or rotary wind-up ticking noise
- Contemporary styling coordinates with other Decora designer devices
- Install in single-gang wallboxes in place of standard switches — ideal for new construction, retrofitting, and remodeling

Available Colors

- White
- Ivory
- Almond
**DECORA PLUS™ PRESET ELECTRONIC TIMER SWITCHES**

Leviton timers add contemporary styling to any commercial or residential application. Built to the highest performance standards, Decora electronic timers provide long-lasting, trouble-free service life. Decora Plus preset timers are ideal for heat lamps, foyer and outdoor lights, hot tubs, spas, and attic and exhaust fans.

**SPECIFICATIONS & FEATURES**
- Four preset buttons plus Off for timed control of lights and appliances
- LEDs indicate time elapsed and last LED flashes a two-minutes-until-off warning
- Installs easily in single gang wallbox in place of standard switch
- Matching Decora Plus wallplate included

**TESTING & CODE COMPLIANCE**
- UL Listed and CSA and NOM Certified
- Meets ASHRAE Standard 90.1 requirements
- Backed by a Limited Two-Year Warranty

### 3-Wire Timer Switches (single pole, neutral required)

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>RATING</th>
<th>INTERVAL</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-Wire 15-minute Timer with 4 Preset Buttons &amp; Off</td>
<td>6215M</td>
<td>120VAC 60Hz, 1000W Incandescent, 20A Inductive, 1 HP @ 120V, Compatible with electronic ballasts</td>
<td>2-5-10-15 minutes</td>
<td>W, I, A*</td>
</tr>
<tr>
<td>3-Wire 30-minute Timer with 4 Preset Buttons &amp; Off</td>
<td>6230M</td>
<td>Same As Above</td>
<td>5-10-15-30 minutes</td>
<td>W, I, A*</td>
</tr>
<tr>
<td>3-Wire 1-hour Timer with 4 Preset Buttons &amp; Off</td>
<td>6260M</td>
<td>Same As Above</td>
<td>10-20-30-60 minutes</td>
<td>W, I, A*</td>
</tr>
<tr>
<td>3-Wire 12-hour Timer with 4 Preset Buttons &amp; Off</td>
<td>6212H</td>
<td>Same As Above</td>
<td>2-4-8-12 hours</td>
<td>W, I, A*</td>
</tr>
</tbody>
</table>

### 2-Wire Timer Switches (single pole)

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>RATING</th>
<th>INTERVAL</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-minute Timer with 4 Preset Buttons &amp; Off</td>
<td>6515M</td>
<td>120VAC 60Hz, 600W Incandescent, 5A Inductive, Not compatible with electronic ballasts</td>
<td>2-5-10-15 minutes</td>
<td>W, I, A*</td>
</tr>
<tr>
<td>60-minute Timer with 4 Preset Buttons &amp; Off</td>
<td>6560M</td>
<td>Same As Above</td>
<td>10-20-30-60 minutes</td>
<td>W, I, A*</td>
</tr>
<tr>
<td>12-hour Timer with 4 Preset Buttons &amp; Off</td>
<td>6512H</td>
<td>Same As Above</td>
<td>2-4-8-12 hours</td>
<td>W, I, A*</td>
</tr>
</tbody>
</table>

* Add suffix to catalog number for color: White (-W), Ivory (-I), Almond (-A). Comes with matching Decora wallplate.

**NOTE:** See Page N38 for guidelines to selecting the appropriate timer and Page N39 for wiring diagrams.
Energy Management & Dimming Products

Electronic Timer Switches

DECORA® ELECTRONIC PROGRAMMABLE TIMER SWITCHES
This residential line of programmable timers features Decora styling to enhance any interior. Impact-resistant thermoplastic face and quality construction provides long service life and superior performance.

SPECIFICATIONS & FEATURES

24-hour Timer
- Ideal for a wide variety of commercial and residential applications including outdoor lighting, pools, motors, sprinklers, exhaust and attic fans, bathroom heat lamps, hot tubs and spas, whole house exhaust fans, office lights, janitor closets, and landscape and security lighting
- Permits separate on or off scheduling for half-hour periods of the day; on/off manual control available
- Features easy-to-read LCD and easy-to-use programming buttons

14-hour Timer
- Ideal for residential incandescent lighting control including indoor, outdoor, and seasonal lighting
- Automatic daily control with manual override for set-it-and-forget-it convenience
- Automates daily switching program (up to 14 hours) by responding to dip switch on or off position for each hour; repeats until function switch is moved to manual or off mode

Countdown Timer
- For residential and light commercial applications including indoor and outdoor lighting, office lights, and ceiling fans
- Simple rotary-dial time selection of settings from 1 minute to 18 hours; on/off manual control available
- Illuminated LED indicates load is on. Blinking LED and annunciator sound indicate end of time cycle

TESTING & CODE COMPLIANCE
- UL Listed and CSA Certified

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>RATING</th>
<th>INTERVAL</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>24-Hour LCD Programmable Timer Switch</td>
<td>6124H</td>
<td>1200W Incandescent; 1200VA Inductive @ 120VAC 60Hz; Motor: 1 HP @ 120VAC 60Hz UL, 3/4 HP @ 120VAC 60Hz CSA. Neutral connection required. Compatible with electronic ballasts</td>
<td>24-Hour on/off scheduling in 30-minute intervals</td>
<td>W, I, A*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>RATING</th>
<th>INTERVAL</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-Hour Segment-Programmable Timer Switch</td>
<td>6651</td>
<td>40W min, 500W max. @120VAC 60Hz, Incandescent only. Neutral not required. Not compatible with electronic ballasts</td>
<td>14-Hour ON/OFF scheduling in hourly intervals</td>
<td>W, I, A*</td>
</tr>
<tr>
<td>Rotary-Dial Variable Countdown Timer Switch</td>
<td>6652</td>
<td>600W Incandescent; 20A Inductive Motor: 1 HP @ 120VAC 60Hz Neutral connection required. Compatible with electronic ballasts</td>
<td>1 Minute to 18 Hours</td>
<td>W, I, A*</td>
</tr>
</tbody>
</table>

* Add suffix to catalog number for color: White (-W), Ivory (-I), Almond (-A). Comes with matching Decora wallplate. (6124H cannot be used with Decora Plus Screwless Snap-On Wallplates.)

NOTE: See Page N38 for guidelines to selecting the appropriate timer and Page N39 for wiring diagrams.
## SELECTING THE RIGHT TIMER

<table>
<thead>
<tr>
<th>Primary Use</th>
<th>When to Use</th>
<th>Typical Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preset Electronic Timer</td>
<td>Prevent lights/appliances from being left on, for energy management</td>
<td>To ensure that whatever is turned on does not remain on after a certain period of time, while giving the user some flexibility as to how long this &quot;on&quot;-period lasts</td>
</tr>
<tr>
<td>24-Hour Programmable Timer</td>
<td>Automate light/appliance switching over a 24-hour period</td>
<td>When you want to schedule something to go on or off multiple times, that may span a period of up to 24 hours</td>
</tr>
<tr>
<td>14-Hour Programmable Timer</td>
<td>Automate light/appliance switching over a 14-hour period</td>
<td>When you want to schedule something to go on or off multiple times over a period no longer than 14 hours. For example, if you need something to go on and off only at night time (such as holiday lights that turn on in the evening and off later at night)</td>
</tr>
<tr>
<td>Variable Countdown Timer</td>
<td>Residential security systems</td>
<td>If you want lights and/or appliances to automatically turn on and off at somewhat random times each day. An ideal choice for giving your house a lived-in look while you are away, to help deter break-ins</td>
</tr>
</tbody>
</table>

### MAIN ADVANTAGES OF ELECTRONIC TIMERS OVER MANUAL TIMERS
- Retain programmed schedules during power outages
- Quieter: no moving parts means that electronic timers do not make noise while operating or programming
Electronic Timer Switch Technical Information

**ELECTRONIC TIMER SWITCH WIRING DIAGRAMS**

**6651 Timer Wiring Diagram, Single Pole Application**

- **Hot (Black)**
- **Black**
- **Blue**
- **Black**
- **White**
- **Load**
- **Green Ground**

Line 120V AC/CA 60Hz

**Neutral (White)**

**6651 Timer Wiring Diagram, 3-Way Application**

- **Hot (Black)**
- **Blue**
- **Yellow**
- **Brass Screw – Leave one traveler terminal unused**
- **Black Screw – Common Terminal**
- **Load**
- **Neutral (White)**

120V AC/CA, 60Hz

**6212H Timer Wiring Diagram**

- **Black (Hot)**
- **Load**
- **White (Neutral)**
- **Green**
- **Neutral**
- **Ground**

120V AC/CA, 60Hz

**Brass Screw**
Z-MAX™ Relay Overview

LIGHTING CONTROL RELAY SYSTEMS

The Leviton Z-MAX™ line of timed lighting controls and relays provides advanced scheduling of lighting and other loads in applications where a time clock is typically used in conjunction with switching contactors. All Z-MAX models feature easy-to-use menu-driven programming and configuration, a programmable time clock and output relays in a compact cabinet, and several optional accessories for remote control. Z-MAX relay panels are ideal for cafeterias, auditoriums, offices, parking facilities, gymnasiums, pools, educational facilities, and landscape and security lighting. A number of wall stations, flush trim kits and other accessories are available.

- In four versions: 8-relay non-networked and 8-relay, 24-relay, 48-relay networked
- Single-circuit relay cards simplify maintenance and expansion
- Integrated astronomical time clock
- Individually replaceable relays rated for all light sources as well as motors
- Single-pole and two-pole relays fit in the same location
- Normal or emergency panel capability
- Compatible with occupancy sensors, photocells, digital and low-voltage wall stations and more

Available Colors

Blue
Z-MAX™ RELAY CABINETS
Leviton Z-MAX relay cabinets come in four versions: 8-relay non-networked and 8-relay, 24-relay and 48-relay networked. Standalone cabinets are best suited to advanced scheduling of a single area, while networked cabinets provide centralized control for large multi-office and multi-building sites. The 24-relay and 48-relay models are available in slave versions. The main control module handles up to 96 inputs and 96 relays, and utilizes low voltage wiring as the panel interconnect. All cabinets are pre-wired and factory tested.

SPECIFICATIONS & FEATURES
- Easy-to-program keypad control module with LCD screen and straightforward menus — in plain English (not code)
- Internal time clock with astronomical clock, daylight savings time, and holiday scheduling features
- Generous wiring space and easy-to-wire terminals
- Switch inputs with override capability for each relay
- Hinged, removable door with keyed lock
- Works with analog controllers, low voltage switches, discrete and analog photocells, and occupancy sensors; Networkable versions also with Z-MAX Digital Switches, Dimensions D4200/D8000 and DMX 512 controllers

Accessories
- Telephone and modem interface modules
- Z-MAX Switch Stations
- Additional switch input board
- Ethernet module
- Photocell
- Flush trim kits
- Voltage barriers
- PC-based programming software

TESTING & CODE COMPLIANCE
- UL Listed (for individual load types) and CUL Listed
- CEC Title 24 compliant and meets ASHRAE Standard 90.1 requirements
- NOM certified
- Limited Two-Year Warranty on cabinet
- Ten-Year Warranty on relay cards
Z-MAX™ RELAY CABINETS

**8-Relay Z-MAX Cabinets**
With 8 switch inputs and 20A output relays

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>NETWORK VERSION</th>
<th>SLAVE VERSION</th>
<th>INPUT POWER</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard 8-Relay Cabinet (no relays)</td>
<td>R08ND-000</td>
<td>R08BD-000</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>8-Relay Cabinet with 4 standard relays</td>
<td>R08ND-104</td>
<td>R08BD-104</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>8-Relay Cabinet with 8 standard relays</td>
<td>R08ND-108</td>
<td>R08BD-108</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>8-Relay Cabinet with 4 2-pole relays</td>
<td>R08ND-204</td>
<td>R08BD-204</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>8-Relay Cabinet with 8 2-pole relays</td>
<td>R08ND-208</td>
<td>R08BD-208</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>8-Relay Cabinet with 4 347V relays</td>
<td>R08ND-C04</td>
<td>R08BD-C04</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>8-Relay Cabinet with 8 347V relays</td>
<td>R08ND-C08</td>
<td>R08BD-C08</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
</tbody>
</table>

**24-Relay Z-MAX Cabinets**
With 12 switch inputs and 20A output relays

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>MASTER VERSION</th>
<th>SLAVE VERSION</th>
<th>INPUT POWER</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard 24-Relay Cabinet (no relays)</td>
<td>R24MD-000</td>
<td>R24SD-000</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>24-Relay Cabinet with 12 standard relays</td>
<td>R24MD-112</td>
<td>R24SD-112</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>24-Relay Cabinet with 24 standard relays</td>
<td>R24MD-124</td>
<td>R24SD-124</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>24-Relay Cabinet with 12 2-pole relays</td>
<td>R24MD-212</td>
<td>R24SD-212</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>24-Relay Cabinet with 24 2-pole relays</td>
<td>R24MD-224</td>
<td>R24SD-224</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>24-Relay Cabinet with 12 347V relays</td>
<td>R24MD-C12</td>
<td>R24SD-C12</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>24-Relay Cabinet with 24 347V relays</td>
<td>R24MD-C24</td>
<td>R24SD-C24</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
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**48-Relay Z-MAX Cabinets**
With 12 switch inputs and 20A output relays

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>MASTER VERSION</th>
<th>SLAVE VERSION</th>
<th>INPUT POWER</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard 48-Relay Cabinet (no relays)</td>
<td>R48MD-000</td>
<td>R48SD-000</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>48-Relay Cabinet with 12 standard relays</td>
<td>R48MD-112</td>
<td>R48SD-112</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>48-Relay Cabinet with 24 standard relays</td>
<td>R48MD-124</td>
<td>R48SD-124</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>48-Relay Cabinet with 36 standard relays</td>
<td>R48MD-136</td>
<td>R48SD-136</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>48-Relay Cabinet with 48 standard relays</td>
<td>R48MD-148</td>
<td>R48SD-148</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>48-Relay Cabinet with 12 2-pole relays</td>
<td>R48MD-212</td>
<td>R48SD-212</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>48-Relay Cabinet with 24 2-pole relays</td>
<td>R48MD-224</td>
<td>R48SD-224</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>48-Relay Cabinet with 36 2-pole relays</td>
<td>R48MD-236</td>
<td>R48SD-236</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>48-Relay Cabinet with 48 2-pole relays</td>
<td>R48MD-248</td>
<td>R48SD-248</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>48-Relay Cabinet with 12 347V relays</td>
<td>R48MD-C12</td>
<td>R48SD-C12</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>48-Relay Cabinet with 24 347V relays</td>
<td>R48MD-C24</td>
<td>R48SD-C24</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>48-Relay Cabinet with 36 347V relays</td>
<td>R48MD-C36</td>
<td>R48SD-C36</td>
<td>120, 277, 347V</td>
<td>Blue</td>
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</tr>
<tr>
<td>48-Relay Cabinet with 48 347V relays</td>
<td>R48MD-C48</td>
<td>R48SD-C48</td>
<td>120, 277, 347V</td>
<td>Blue</td>
<td></td>
</tr>
</tbody>
</table>

**PHYSICAL DIMENSIONS**
8-Relay (Standalone and Networkable): 13.00 (330.2) x 13.00 (330.2) x 4.34 (110.6)
24-Relay Cabinet: 20.00 (514.4) x 34.00 (863.6) x 4.34 (110.6)
48-Relay Cabinet: 20.00 (514.4) x 54.00 (1371.6) x 4.34 (110.6)

**NOTE:** See Page N50 for wiring and mounting diagrams.
Z-MAX™ RELAY CABINETS WITH INTEGRATED ELECTRICAL DISTRIBUTION

Z-MAX Relay Panels with an integrated electrical distribution system offer the convenience of a single feed with the flexibility of our popular Z-MAX relay system. Each includes all the award winning features of the Z-MAX product line, integrated with a standard system of electrical distribution and over current protection. These integrated systems use commonly available Cutler-Hammer breakers.

SPECIFICATIONS & FEATURES

- Single or Three Phase configurations
- 120V, 277V or 347V systems
- Main lugs or main breaker
- Custom load center configuration
- Field replaceable standard breakers
- All standard Z-MAX operational features
- Uses Cutler-Hammer CH, GHO and GBH frame snap-in breakers, locked in place by the enclosure
- Ships as one complete pre-wired assembly
- Up to 100,000A AIC, short Circuit Current Rating, available on all panelboards (Consult factory for details)
- 277/480V panelboards, main lugs, 65k AIC @ 120/208V, 14k AIC @ 277/480V standard
- 277/480V panelboard, main breaker, 35k AIC standard
- 120/208V or 120/240V panelboards, main lugs, 10k AIC standard
- 120/208V or 120/240V panelboards, main breaker, 25k AIC standard depending on main breaker
- 347/600V panelboards, main lugs, 10k AIC standard
- 347/600V panelboards, main breaker, 19k AIC standard

TESTING & CODE COMPLIANCE

- UL and cUL Listed

ORDERING INFORMATION

Common configuration shown. Many custom configurations are available upon request. Contact quotations for additional information. Other Z-Max accessories may be applicable to your project. Reference Z-Max data sheets for information on these accessories.

<table>
<thead>
<tr>
<th>120V SYSTEMS</th>
<th>277V SYSTEMS</th>
<th>347V SYSTEMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RB423-L1C 120/208 3 Phase 42 Pole Breaker Cabinet w/Main Lugs</td>
<td>RB423-L2C 277/480 3 Phase Breaker Cabinet w/Main Lugs</td>
<td>RB423-L3C 347/600 3 Phase Cabinet, Custom/Configured, Main Lugs</td>
</tr>
<tr>
<td>RB423-B1C 120/208 3 Phase 42 Pole Breaker Cabinet w/Main Breaker</td>
<td>RB423-B2C 277/480 3 Phase Breaker Cabinet w/Main Breaker</td>
<td>RB423-B3C 347/600 3 Phase Cabinet, Custom/Configured, Main Breaker</td>
</tr>
<tr>
<td>RB421-L1C 120/240 1 Phase 42 Pole Breaker Cabinet w/Main Lugs</td>
<td>RB421-B1C 120/240 1 Phase 42 Pole Breaker Cabinet w/Main Breaker</td>
<td></td>
</tr>
</tbody>
</table>

RELAY SECTION

<table>
<thead>
<tr>
<th>Pick Only One</th>
<th>RELAY-STD</th>
<th>RELAY-2PL</th>
<th>RELAY-347</th>
<th>RELAY-LAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>RELAY-STD</td>
<td>Z-MAX Standard Relay Module, up to 277VAC, 20A Continuous</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RELAY-2PL</td>
<td>Z-MAX 2 Pole Relay Module, up to 480VAC, 20A Continuous</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RELAY-347</td>
<td>Z-MAX 347V 1 Pole Relay Module, up to 347VAC, 20A Continuous</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RELAY-LAT</td>
<td>Z-MAX Latching Relay Module, up to 277VAC, 20A Continuous or 15A at 347V</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

RELAY Modules (R48M2-00C on 277 & 347V panels)
RRP—REMOTE 4-RELAY PANEL (CONTROLLED BY Z-MAX™ MASTER CABINET)

The RRP (Remote Relay Panel) provides distributed switching of up to four 20 amp lighting circuits, enabling multiple units to be networked and controlled from a Z-MAX Master Relay Panel. With photocell, occupancy sensor and local switch inputs, the RRP is an ideal solution for applications such as school classrooms where daylight harvesting, occupancy sensor control, local switching and central control scheduling are desired. Revolutionary Z-MAX switching circuit with 10,000,000 cycle life employed in the 120-277V standard relay model.

SPECIFICATIONS & FEATURES
- Network ready for up to 96 total relays
- USB port for software updates and network configuration
- 120/277V dual voltage standard
- 347V available
- Removable interior allows rough-in without risk of damage to components
- Rated for 100% load capacity
- Handles in-rush currents in excess of 50 times load current
- Low-voltage switch inputs support Leviton low voltage switches and GE-style, ON/OFF switches with optional LED output

Accessories
- Low-voltage switch adapter (reduces required wire count of GE style switch by 1)
- 1–10 Button low voltage switches
- Indoor and outdoor 0-10V photocells
- Atrium and skylight 0-10V photocells

For more information on Z-MAX Remote Relay Panels and Accessories, refer to Z-MAX data sheets.

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Description</th>
<th>Cat. No.</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote Relay Panel with 4, Single Pole 20 Amp Relays for use with Z-MAX, 120/277V</td>
<td>RE4SD-104</td>
<td>20A per relay</td>
</tr>
<tr>
<td>Remote Relay Panel with 4, Double Pole 20 Amp Relays for use with Z-MAX, 120/277V</td>
<td>RE4SD-204</td>
<td>20A per relay</td>
</tr>
<tr>
<td>Remote Relay Panel with 4, Single Pole 20 Amp Relays for use with Z-MAX, 347V</td>
<td>RE4SD-304</td>
<td>20A per relay</td>
</tr>
</tbody>
</table>

Dimensions: 10.0 (254.0) W x 10.0 (254.0) H x 4.0 (101.6) D
EZ-MAX RELAY CABINETS

EZ-MAX relay lighting control panels combine the power and performance of the larger Z-MAX relay cabinets in a cost-effective four-circuit package that's housed in a compact 10" x 10" standard electrical enclosure. It is the ideal contractor friendly, quick-to-install solution for smaller, stand-alone applications that do not require the field configuration or advanced networking features of the larger Z-MAX cabinets. It serves as a smart replacement for time clock/contactor installations for any application requiring reliable and cost-effective automatic lighting control.

SPECIFICATIONS & FEATURES

- Refer to page N39 for Z-MAX general features
- 120-277V standard relay model features revolutionary, patent-pending Z-MAX switching circuit with an unprecedented 10,000,000 cycle life
- 347V available
- Low-voltage inputs allow connection of photocells, occupancy sensors and low-voltage switches for a comprehensive, easy-to-install energy management solution

TESTING & CODE COMPLIANCE

- ASHRAE 90.1 compliant
- CEC Title 24 compliant
- Ten-Year Warranty

Accessories

- Modem module for touch tone control or remote configuration
- Low-voltage switch adapter (reduces required wire count of GE style switch by 1)
- 1–4 Button low voltage switches
- Indoor and outdoor 0-10V photocells
- Atrium and skylight 0-10V photocells

For more information on EZ-MAX Relay Cabinets and Accessories, refer to EZ-MAX data sheets. Refer to pages N14–N34 for information on compatible Leviton Occupancy Sensors.

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>RE4BD-104</td>
<td>EZ-MAX with 4 120-277V relays</td>
<td>20A per relay</td>
</tr>
<tr>
<td>RE4BD-204</td>
<td>EZ-MAX with 4 208-480V 2-pole relays</td>
<td>20A per relay</td>
</tr>
<tr>
<td>RE4BD-C04</td>
<td>EZ-MAX with 4 120-347V relays</td>
<td>20A per relay</td>
</tr>
</tbody>
</table>

Dimensions: 10.0 (254.0) W x 10.0 (254.0) H x 4.0 (101.6) D
Z-MAX™ DIGITAL & LOW VOLTAGE SWITCH STATIONS

The Z-MAX system can incorporate either digital or low-voltage stations. Although they look identical, there are a few differences in how they operate. Both contain buttons that are programmable to a variety of functions and custom labels are available.

SPECIFICATIONS & FEATURES

Common Features
• Available in 8 configurations
• Programmable functions include: on, off, and group and scene select
• Compatible with standard and midway size Decora® wallplates
• Custom labeling available; contact a factory representative

Digital Station
• Wired via Luma-Net® to compatible products including D4200, D8000, a-2000, i Series e, i Series Quad, and Z-MAX Relay Cabinets
• Networks with up to 127 devices
• Compatible with handheld IR remote control

Low-Voltage Station
• Compatible with EZ-MAX and Z-MAX Relay Cabinets, MDS cabinets, a-2000 cabinets (with analog card), network protocol converter, and other low-voltage devices
• Cat. No. LV240 for use with miniZ Intelligent Daylight Management System, Z-MAX and EZ-MAX
• Cat. No. LV200 for use with miniZ Intelligent Daylight Management System only

WARRANTY
• Limited Two-Year Warranty

Z-MAX Switch Stations

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>DIGITAL SWITCH CAT. NO.*</th>
<th>LOW-VOLTAGE SWITCH CAT. NO.**</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>On/Off switch</td>
<td>ZMDSW-01W</td>
<td>LVS-01W</td>
<td>White</td>
</tr>
<tr>
<td>Zones 1 and 2</td>
<td>ZMDSW-02W</td>
<td>LVS-02W</td>
<td>White</td>
</tr>
<tr>
<td>Zones 1 to 3</td>
<td>ZMDSW-03W</td>
<td>LVS-03W</td>
<td>White</td>
</tr>
<tr>
<td>Zones 1 to 4</td>
<td>ZMDSW-04W</td>
<td>LVS-04W</td>
<td>White</td>
</tr>
<tr>
<td>Zones 1 to 5</td>
<td>ZMDSW-05W</td>
<td>LVS-05W</td>
<td>White</td>
</tr>
<tr>
<td>Zones 1 to 6</td>
<td>ZMDSW-06W</td>
<td>LVS-06W</td>
<td>White</td>
</tr>
<tr>
<td>Zones 1 to 8</td>
<td>ZMDSW-08W</td>
<td>LVS-08W</td>
<td>White</td>
</tr>
<tr>
<td>Zones 1 to 10</td>
<td>ZMDSW-10W</td>
<td>LVS-10W</td>
<td>White</td>
</tr>
</tbody>
</table>

Note: Wallplate sold separately

*Support network and master Z-MAX versions only

**Support EZ-MAX and Z-MAX stand-alone and slave versions only

miniz™ Low-Voltage Switch Stations

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-Button dimming controller with On/Off, for use with miniZ only.</td>
<td>LV200-00W</td>
<td>White</td>
</tr>
<tr>
<td>On/Off switch controller for use with miniZ, Z-MAX and EZ-MAX</td>
<td>LV240-00W</td>
<td>White</td>
</tr>
</tbody>
</table>

Dimensions: 4.31 (109.5) H x 1.13 (28.7) W x 1.75 (44.5) D
miniZ™ INTELLIGENT DAYLIGHT MANAGEMENT SYSTEM

miniZ combines occupancy sensing, daylight harvesting and flexible lighting control functions into a single, easily installed package. miniZ features several methods of ladderless commissioning, including the AutoCal™ feature, the world’s first 100% self-configuring daylight harvesting system. Installation requires little more than any other power-pack type product. The performance features and capabilities of the miniZ product provide a package that surpasses all others in the industry at a price anyone can afford.

DUAL ROOM miniZ™ INTELLIGENT DAYLIGHT MANAGEMENT SYSTEM

The dual room miniZ offers the same performance features as the miniZ, but instead of working in one room using one photocell to control three zones, it provides dual room/one zone per room daylight harvesting control using a separate photocell and occupancy sensor for each room.

SPECIFICATIONS & FEATURES

- Automatic Correction setting for Light Loss Factor (LLF) recognizes and corrects for lumen maintenance issues
- Cost-effective energy code compliance
- Ladderless Commissioning™ provides install-and-forget convenience
- Automatic closed-loop, multi-zone daylight control
- Convenient occupancy sensor and photocell integration
- Simplified daylight harvesting with 3% to 100% dimming capabilities (0-10V fluorescent dimming ballasts required)
- Autocal™ (patent pending) automatic photocell calibration
- Accepts external time clock inputs
- Simplified integration with emergency and building automation systems
- Automatic Daylight Harvest Mode provides optimum lighting output for additional energy savings potential
- Daylight switching full range 0-10V dimming and network models available
- Cost effective energy code compliance
- Accepts external time clock inputs
- Closed loop or open loop daylight control
- Isolated contacts for HVAC relay
- miniZ works in one room using one photocell and occupancy sensor to control three zones
- Dual Room miniZ controls one zone per room using a separate photocell and occupancy sensor for each room

NETWORK FEATURES

- Luma-CAN® Network support
- Network digital switch support
- Z-MAX master/slave network participation
- Remote shared network inputs
- Scalable system expansion

TESTING & CODE COMPLIANCE

- UL and cUL Listed
- CEC Title-24 Listed
- Limited Two-Year Warranty

miniZ ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Model</th>
<th>20A Power Circuits</th>
<th>0-10V Control Circuits</th>
<th>Control Input Voltage</th>
<th>Network Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>MZB00-102</td>
<td>2</td>
<td>0</td>
<td>100-277VAC</td>
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<tr>
<td>MZD20-102</td>
<td>2</td>
<td>2</td>
<td>100-277VAC</td>
<td>No</td>
</tr>
<tr>
<td>MZD30-101</td>
<td>1</td>
<td>3</td>
<td>100-277VAC</td>
<td>No</td>
</tr>
<tr>
<td>MZN20-102</td>
<td>2</td>
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<td>100-277VAC</td>
<td>Yes</td>
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<tr>
<td>MZN30-101</td>
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<td>3</td>
<td>100-277VAC</td>
<td>Yes</td>
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<tr>
<td>MZB00-C02</td>
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<td>200-347VAC</td>
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<td>MZD20-C02</td>
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<td>200-347VAC</td>
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<tr>
<td>MZD30-C01</td>
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<td>3</td>
<td>200-347VAC</td>
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<td>MZN20-C02</td>
<td>2</td>
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<td>200-347VAC</td>
<td>Yes</td>
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<tr>
<td>MZN30-C01</td>
<td>1</td>
<td>3</td>
<td>200-347VAC</td>
<td>Yes</td>
</tr>
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</table>

miniZ DUAL ROOM ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>0-10V Outputs</th>
<th>Relay Outputs</th>
<th>CAN Network</th>
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</thead>
<tbody>
<tr>
<td>MZB02-102</td>
<td>miniZ™ Basic, Dual Room, 2 Relay, 120V–277V</td>
<td>0</td>
<td>2</td>
<td>No</td>
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<tr>
<td>MZD22-102</td>
<td>miniZ™ Dimming, Dual Room, 2 Relay, 120V–277V</td>
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<td>No</td>
</tr>
<tr>
<td>MZN22-102</td>
<td>miniZ™ Dimming, Dual Room, 2 Relay, 120V–277V</td>
<td>2</td>
<td>2</td>
<td>Yes</td>
</tr>
<tr>
<td>MZB02-C02</td>
<td>miniZ™ Basic, Dual Room, 2 Relay, 347V</td>
<td>0</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>MZD22-C02</td>
<td>miniZ™ Dimming, Dual Room, 2 Relay, 347V</td>
<td>2</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>MZN22-C02</td>
<td>miniZ™ Dimming, Dual Room, 2 Relay, 347V</td>
<td>2</td>
<td>2</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Z-MAX™ RELAY CARDS & ACCESSORIES

The Z-MAX system offers several relay cards in addition to a number of accessories, including a modem that enables the system to be operated remotely. The standard, single-pole 20-amp relay card features proprietary circuitry that completely eliminates arc shower pitting at the contacts and thus provides an extended life over traditional relay circuits. This unique feature is the source of the Z-MAX name: Z-MAX stands for zero current maximum life.

SPECIFICATIONS & FEATURES

Relay Cards
- Rated at 20A for lighting loads
- Specifically designed to control electronic ballasts
- Rated for resistive, inductive, and capacitive sources
- Zero cross circuitry eliminates arcing at mechanical contacts when loads are switched — prolonging relay life to an average of 10,000,000 on/off cycles
- Handles inrush currents up to 50X greater than connected load

Handheld Remote Control
- Features 4, 8 or 16 selection buttons plus off
- Use with any Z-MAX Digital Station
- Operates at 56kHz frequency; 30- to 50-foot range

TESTING & CODE COMPLIANCE
- UL Listed (for individual load types) and CUL Listed under both Industrial Control Equipment and Energy Management Equipment
- NOM certified
- Limited Ten-Year Warranty

Z-MAX Relay Cards

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>INPUT POWER</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard 20A Single-Pole Relay Card*</td>
<td>RELAY-STD</td>
<td>120-277V</td>
<td>For incandescent, electronic fluorescent, magnetic fluorescent, electronic low voltage, neon cold cathode, high intensity discharge and motor loads</td>
</tr>
<tr>
<td>2-Pole 20A Relay Card</td>
<td>RELAY-2PL</td>
<td>240/480V</td>
<td>Same as Above</td>
</tr>
<tr>
<td>347V Single-Pole 20A Relay Card</td>
<td>RELAY-347</td>
<td>120-347V</td>
<td>Same as Above</td>
</tr>
<tr>
<td>Normally Closed Relay Card</td>
<td>RELAY-NCL</td>
<td>120-347V</td>
<td>Same as Above</td>
</tr>
</tbody>
</table>

*NOTE: Relay cabinets ship with RELAY-STD modules unless otherwise specified.

Accessories

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAT. NO.</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote Control with 4 selections</td>
<td>D42IR-04L</td>
<td>Black</td>
</tr>
<tr>
<td>Remote Control with 8 selections</td>
<td>D42IR-08L</td>
<td>Black</td>
</tr>
<tr>
<td>Remote Control with 16 selections</td>
<td>D42IR-16L</td>
<td>Black</td>
</tr>
<tr>
<td>Flush Trim Kit for 8-Relay Cabinet</td>
<td>RAC00-08F</td>
<td></td>
</tr>
<tr>
<td>Flush Trim Kit for 24-Relay Cabinet</td>
<td>RAC00-24F</td>
<td></td>
</tr>
<tr>
<td>Flush Trim Kit for 48-Relay Cabinet</td>
<td>RAC00-48F</td>
<td></td>
</tr>
<tr>
<td>Switch Input Board with 32 discrete inputs</td>
<td>RAC00-SIB</td>
<td></td>
</tr>
<tr>
<td>Modern with Touch Tone input capability (consult factory)</td>
<td>RAC00-MOD</td>
<td></td>
</tr>
<tr>
<td>Ethernet Module (consult factory)</td>
<td>RAC00-ETH</td>
<td></td>
</tr>
<tr>
<td>Voltage Barrier between relay cards</td>
<td>RAC00-VBR</td>
<td></td>
</tr>
</tbody>
</table>
CATALOG NUMBERING SYSTEM, RELAY CABINETS

R 24MD-224

No. of relays

Relay type
0 = No relays in cabinet
1 = Standard (single-pole 120V, 277V)
2 = 2-pole relay (240/480V)
C = International (single-pole, 347V)

Input Voltage for Control Module
D = Multi-volt 120V, 277V, 347V
F = International 100V, 220V, 230V, 240V

Control Module Type
B = Basic, for 8-relay cabinet only
N = Networkable, for 8-relay cabinet only
M = Master, for 24- and 48-relay cabinets only
S = Slave, for 24- and 48-relay cabinets only

Cabinet Size
(Maximum number of relays: 8, 24 or 48)

Z-MAX Applications

Basic Application
Relay systems are an excellent choice for providing time- and event-based switching on a customized schedule for everything from basic stand-alone applications to building and campus-wide energy management systems. Z-MAX™ Lighting Control Relay Systems are ideally suited to all sizes of applications where you need a system that switches lights on and off based on a customized schedule but do not require other functionality such as dimming or scene control. Z-MAX cabinets offer a single, integrated solution that takes the place of several individual components including: time clock, cabinet, terminal blocks and contactors.

Z-MAX Systems Benefit Applications Requiring:
• Control of various loads from one or more locations
• Time based lighting control ordinarily provided by separate time clock and lighting controllers
• Compliance with energy codes requiring automatic lighting control
• Integration of photocells and occupancy sensors into a centrally controlled switching system

Typical Z-MAX Relay Applications
• Auditoriums
• Parking facilities
• Gymnasiums and pools
• Educational facilities
• Warehouses
• Office buildings
• Arenas
• Landscape and security lighting

NOTE: Dimensions™ D4200 and D8000 controls are readily incorporated into a Z-MAX network cabinet system. Z-MAX 8-channel stand-alone cabinets use the 000-LVS series of low voltage entry stations.
CONTROL WIRING

Every Z-MAX relay cabinet is wired in exactly the same way and communicates via Luma-Net® III or DMX512. Through the use of the Network Protocol Converter, Z-MAX cabinets can be integrated with RS232 and standard 10/100 TCP/IP routers and networks. We strongly recommend the use of either Belden 9829 or Belden 9729 for the Luma-Net wire runs. A second pair of stranded wire is required for power. At the last control station or dimmer cabinet on both ends of the run, a small jumper wire must be run from the terminal labeled “Rem-” to the terminal marked “Term” on that last station. This jumper wire properly terminates the digital communications lines at the end of the line.

DMX Wiring to Connector

Luma-Net Wiring to Connector

BASIC MOUNTING DIAGRAMS

8-Relay Z-MAX

24-Relay (48-Relay) Z-MAX
Our Complete Line of Industrial Products

Just a click away:
www.leviton.com/industrial