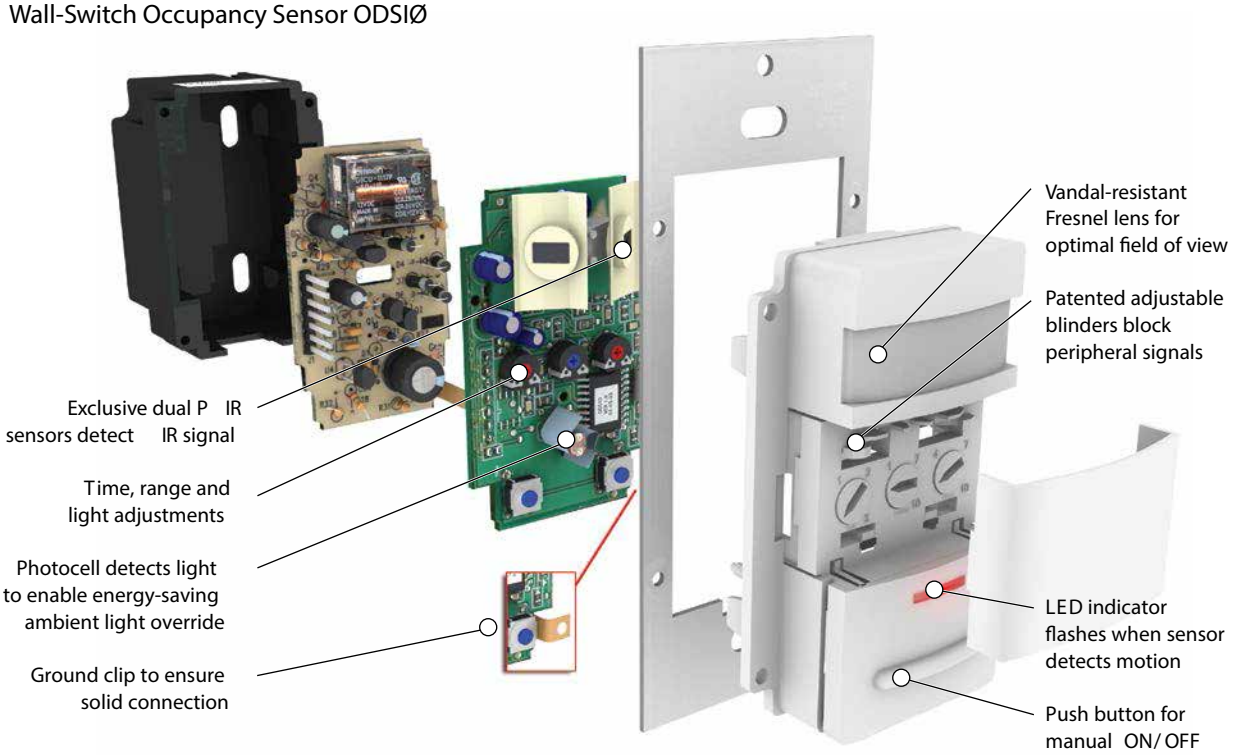
Energy Management

N

Occupancy/Vacancy Sensing Control

Leviton offers a wide selection of occupancy and vacancy sensors for residential and commercial applications. From wall and ceiling mounted to wall switch and wireless, with passive infrared, ultrasonic or multi-technology sensing; Leviton sensors provide smart energy saving solutions for both indoor and outdoor use.

Wall-Switch Occupancy Sensor ODSIØ



Color Choices

Occupancy Sensing control devices are offered in a wide range of colors. To order colors, add suffix to Cat. No.

White (-W)	Ivory (-I)	Light Almond (-T)	Gray (-G/-GY)	Black (-E)	Red (-R)

Note: Not all models come in all colors. Color Change Kits available for specific devices. See listings for details

Definition of Occupancy, Vacancy, Motion and Humidity Sensors

Type of Sensor	Definition
Occupancy	A device with which the lights/load automatically turn ON when motion is detected within an area and automatically OFF after a designated period of time passes from the point the area was vacated.
Vacancy	A device with which the lights/load must be manually turned ON but will automatically turn OFF after a designated period of time passes from the point the area was vacated.
Motion	An occupancy sensor used for exterior areas.
Humidity	Detects excess humidity in a room and activates the ventilation fan to lesson condensation, will automatically turn OFF the fan when the humidity level has dropped.

Decora® Wall Switch Occupancy, Vacancy and Humidity Sensors

The residential offering is a selection of universal sensors. These sensors combine state-of-the-art technology with a sleek new look to provide optimal management of lighting and motor loads and a choice of either Manual-ON (Vacancy Sensor) or Automatic-ON (Occupancy Sensor) switching. The Humidity Sensor and Fan Control detects excess humidity and automatically activates the ventilation fan.

Features and Benefits

- Available in Automatic-ON or Manual-ON models
- Provides 180° Field of View, 900 sq. ft. coverage
- Adjustable delay OFF time can be set for 30 seconds, 5 minutes, 15 minutes or 30 minutes
- Adjustable ambient light sensor prevents Auto ON when there is ample natural sunlight
- No neutral required (except IPS15/IPV15 models)
- Vacancy models are California Title 24/20 Compliant
- Occupancy sensors can be adjusted so they function as vacancy sensors
- Screw terminals for easier installation
- Compatible with Decora Plus™ screwless wallplates and Decora® wallplates
- Packaged with three colors in one box: white, ivory and light almond. Other package options also available

Dimming Sensor — IPSD6/IPVD6
- Single pole or 3-way when used with a 3-way switch
- For use with dimmable LED/CFL and incandescent loads

Relay Sensor — IPS02/IPV02, IPS05/IPV05
- Single pole only
- For use with LED, CFL, incandescent, fluorescent and motor loads

Relay Sensor — IPS06
- Single pole or 3-way when used with a 3-way switch
- For use with incandescent and LED loads
- 600W max load (incandescent)

Relay Sensor — IPS15/IPV15
- Single pole or 3-way when used with IPV0R sensor remote or with VP0SR Vizia +® switch remote
- For use with LED, CFL, incandescent, fluorescent ballast or motor loads, 1800W max load

Sensor Remote — IPV0R
- For use in 3-way applications with the IPS15 or IPV15 sensor
- 900 to 1800 sq. ft. coverage

Decora® Residential Grade Wall Switch Infrared Occupancy and Vacancy Sensors U S

Description	Cat. No.	Color	Rating
Relay Vacancy Sensor, single pole, Field 180° of View, 900 sq. ft. coverage	IPV02-1L	W, T	300W Incandescent/FL Ballast 150W LED/CFL, 1/6 HP Motor
Relay Occupancy Sensor, single pole, Field 180° of View, 900 sq. ft. coverage	IPS02-1L	W, I, T	
Vacancy Relay Sensor, single pole, 180° of Field of View, 900 sq. ft. coverage	IPV05-1L	Z	600W Incandescent/FL Ballast 150W LED/CFL, 1/6 HP Motor
Occupancy Relay Sensor, single pole, 180° of Field of View, 900 sq. ft. coverage	IPS05-1L	Z	
Occupancy Sensor, single pole or 3-Way, Field 180° of View, 900 sq. ft. coverage	IPS06-1L	W	600W Incandescent/Halogen 150W LED/CFL
Dimming Vacancy Sensor, single pole or 3-Way, Field of View, 900 sq. ft. coverage	IPVD6-1L	Z	600W Incandescent 150W LED/CFL
Dimming Occupancy Sensor, single pole or 3-Way, Field of View, 900 sq. ft. coverage	IPSD6-1L	Z	
Relay Vacancy Sensor, single pole or 3-Way, Field 180° of View, 900 sq. ft. coverage, neutral required	IPV15-1L	Z	1800W Incandescent, 600W LED/CFL 1800VA Fluorescent Ballast, 1/2 HP
Relay Occupancy Sensor, single pole or 3-Way, Field 180° of View, 900 sq. ft. coverage, neutral required	IPS15-1L	Z	
Sensor Remote, 120V AC, Manual-ON, Auto-OFF for use with IPS15 or IPV15 Sensor	IPV0R-1L	Z	No Load Rating


IPV05-1 L


IPV D6-1 L

Z — Comes packaged with three colors: White, Ivory and Light Almond.

Continued on next page

Visit www.leviton.com/sensors for more information

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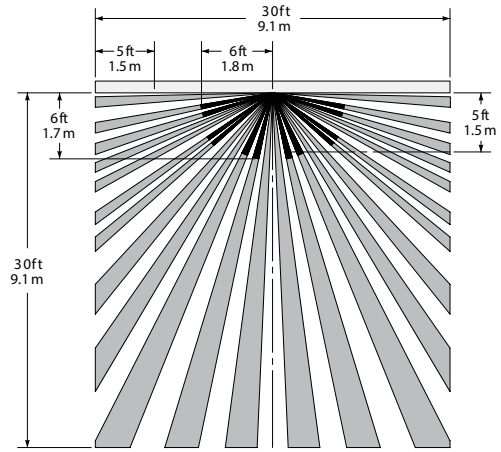
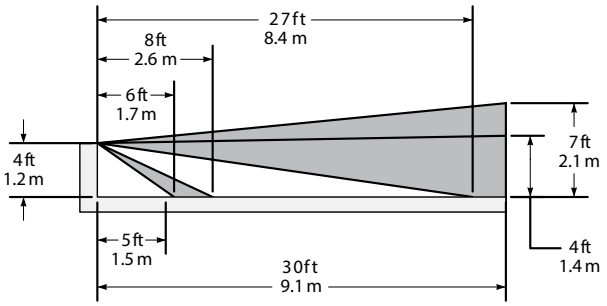
SENSING CONTROL | Decora® Wall Switch Infrared | Decora® Humidity Sensors

Field of View for Decora® Residential Wall Switch Infrared Occupancy and Vacancy Sensors

Field-of-View (Horizontal in feet)



Field-of-View (Side, Vertical in feet)



Decora® Residential Grade Wall Switch Humidity Sensor and Fan Control

Features and Benefits

- Replaces a single pole switch for control of a ventilation fan or a fan/light combination
- Automatically detects excess humidity and activates a ventilation fan
- Manual ON option to address immediate ventilation needs
- Neutral wire is required for operation
- Microprocessor control with digital sensing technology
- Meets CALGREEN and CA Title 24 requirements
- Air Cycle mode for continuous operation with hourly pre-set time outs
- Green LED functions as a status indicator
- Compatible with Incandescent, LED, CFL and Fluorescent lighting loads
- Use with existing or new ventilation fans up to 1/6 HP, 3 Amp
- Compatible with Decora Plus™ screwless wallplates and Decora® wallplates

Decora® Residential Grade Wall Switch Humidity Sensor and Fan Control U S

Description	Cat. No.	Color	Rating
Humidity Sensor & Fan Control	IPHS5-1L	W, I,T	600W Incandescent 150W LED/CFL 400VA MLV/Fluorescent 1/6 HP (3A) Fan

IPHS5-W

Color Change Kits for Sensors

Color Change Kits U S

Description	Cat. No.	Color
Color Change Kits for Sensors , No Fan Icon	IPDKT-00	W, I, T, E, B

Color

To order colors, add suffix to catalog number as follows: Z includes White (-W), Ivory (-I) and Light Almond (-T). Color Change Kits available in the following colors: White (-W), Ivory (-I), Light Almond (-T), Black (-E) and Brown (-B).

Decora® Commercial Wall Switch Infrared Occupancy and Vacancy Sensors

Features and Benefits

All ODS Wall Switch Sensors
- Leviton wall switch sensors are designed for operation in a variety of voltages, reducing the need for additional SKUs
- Photocell with ambient light override prevents these devices from switching lights ON when there is ample natural sunlight
- Push-button manual override is used to turn lights ON at any time, regardless of the override setting
- 180° field of view, 2100 sq. ft. of coverage
- One unit can be used for 120V or 277V AC 60Hz incandescent, low voltage and fluorescent lighting with either magnetic or electronic ballasts, and motor loads
- Exclusive dual PIR sensors
- Patented adjustable blinders
- Vandal-resistant Fresnel lens
- Fits in standard wallbox; gangable
- Elegant Decora® wallplate
- Vacancy sensors feature auto-OFF switching on vacancy after manual-ON switch and are Title 20, Title 24, and NYC L48 compliant
- Auto-ON/Auto-OFF only sensors prevent an occupant from being able to turn the lights OFF
- Lev-Lok® sensors combine the energy savings of wall switch sensors and time saving Lev-Lok® wiring technology
- Backed by a limited 5-year warranty

ODS15-ID PIR Occupancy Sensor
- For use in small offices, conference rooms, classrooms, stockrooms, lounges, restrooms, warehouses and commercial areas
- Exclusive automatic "Walk-Through" sensing increases energy savings by shutting lights within 2 1⁄2 minutes after momentary occupancy
- Delayed-OFF time interval (10, 20 and 30 minutes) compensates for real-time occupancy patterns, preventing unnecessary ON/OFF switching — with 30-second test mode

ODS10-ID PIR Occupancy Sensor
- For use in enclosed offices, storage rooms, copier rooms and closets
- Delayed-OFF time settings: 10, 20 and 30 minutes with 30-second test mode

ODS06-ID PIR Occupancy Sensor
- For use in small offices, conference rooms and lounges
- Delayed -OFF time settings: 10, 20 and 30 minutes with 30-second test mode

All Night Light Wall Switch Sensors
- For use in conference rooms, classrooms, small offices, lounges, hotel/hospital/office restrooms
- 180° field of view, 1200 sq. ft. of coverage
- Night light with dim feature

OSSNL-ID PIR Occupancy Sensor
- Manual delayed-off time settings: 30 seconds test mode, 30 minutes, 1 hour, 2 hours

Dual-Relay PIR Occupancy Sensors
- Ideal for classrooms, multimedia and conference rooms, day care centers, office, and lounges
- Exclusive automatic "walk-through" sensing
- Provides automatic switching for 2 separate banks of fluorescent, incandescent or low-voltage lighting from a single unit
- Delayed-OFF time interval (10, 20 and 30 minutes) compensates for real-time occupancy patterns, preventing unnecessary ON/OFF switching — with 30-second test mode
- Backed by a limited 5-year warranty

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S ENS ING CONTROL | Decora® Wall Switch Infrared

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Decora® Commercial Wall Switch Infrared Occupancy and Vacancy Sensors

Commercial Grade Decora® Wall Switch Infrared Occupancy and Vacancy Sensors* U S

Description	Cat. No.	Color	Rating	Coverage
Decora® Wall Switch PIR Occupancy Sensor	ODS06-ID	W, I	Incandescent: 600W @ 120V. Fluorescent: 800VA @ 120V, 1500VA @ 277V. 50/60Hz. Motor: 1/4 HP @ 120V	180°, 2100SF
Decora® Wall Switch PIR Occupancy Sensor	ODS06-IN	W, I		
Decora® Wall Switch PIR Occupancy Sensor 347V Only Model	ODS10-I3	W	Incandescent: 3470W @ 347V. Fluorescent: 3470W @ 347V. 50/60/Hz. Motor: 1/4HP @ 347V	
Decora® Wall Switch PIR Occupancy Sensor	ODS10-ID	W, I, T, G, E, R	Incandescent: 800W @ 120V. Fluorescent: 1200VA @ 120V, 2700VA @ 277V. For 60Hz AC only. Motor: 1/4HP @ 120V	
Decora® Wall Switch PIR -Vacancy Model	ODS10-TD	W, I, T		
Decora® Wall Switch PIR - Auto-ON/Auto-OFF Only Model	ODS10-IQ	W, I, E		
Decora® Wall Switch PIR - Lev-Lok® Model	MDS10-I**	W, I, T, G, E		
Decora® Wall Switch PIR Occupancy Sensor with Self-Adaptive Technology	ODS15-ID	W, I, T, G, E	Incandescent: 1800W @ 120V. Fluorescent: 1800VA @ 120V, 4000VA @ 277V. 50/60Hz. Motor: 1/4HP @ 120V	
Decora® Wall Switch PIR with Self-Adaptive Technology -Vacancy Model	ODS15-TD	W, I, T		
Decora® Wall Switch PIR with Self-Adaptive Technology - Lev-Lok® Model	MDS15-ID**	W, I, T, G, E		
Decora® Dual-Relay Wall Switch PIR Occupancy Sensor with Self-Adaptive Technology. Default setting = Conference Room Mode*** Alternate setting = Classroom mode****	ODS0D-ID	W, I, T, G, E, R	Primary Relay — Fluorescent: 1200VA @ 120V, 2700VA @ 277V. Incandescent: 800W @ 120V. Secondary Relay — Fluorescent: 800VA @ 120V, 1200VA @ 277V. Incandescent: 800W @ 120V. 50/60Hz	
Decora® Wall Switch PIR Occupancy Sensor with LED Night Light	OSSNL-ID	W, I, T, G, E	Incandescent: 800W @ 120V. Fluorescent: 1200VA @ 120V, 2700VA @ 277V. Motor: 1/8 HP @ 120V	180°, 1200SF
Decora® Wall Switch PIR with LED Night Light, CA Title 24 - Vacancy Model	OSS10-IN	W, I, E		
Protective Cage for Wall Switch Sensors	OSWWG-P0W	W	—	—

*Consult with factory for 208, 220, 230, and 240V models. **For Lev-Lok® wiring modules see ordering information below.
***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

Lev-Lok® Occupancy Sensor Modules, 20A, 347V U S

Description	Cat. No.	Color
Stranded	MSPSW-XST	Yellow
Solid	MSPSW-XSD	Yellow

ODS06- INW/ ODS06- IDW
ODS10- IDW/ ODS15- IDW

OSSNL -IDW

ODS0D-IDW

Decora® Commercial Wall Switch Multi-Technology Occupancy and Vacancy Sensors

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

Features and Benefits

- Wall Switch Sensors are designed for operation in a variety of voltages, reducing the need for additional SKUs

OSSMT-MD, OSSMT-GD, OSSMD-MD, OSSMD-GD

- OSSMT ideal for private and executive offices, conference rooms, storage areas, restrooms, classrooms, lounges, and training areas, or areas where minor motion is likely to occur
- OSSMD ideal for bi-level offices, partitioned areas and restrooms or other areas where minor motion is likely to occur
- Photocell with ambient light override prevents lights from turning on when there is ample natural light
- Manual override turns lights on at any time regardless of override setting
- Exclusive automatic "walk-through" sensing increases energy savings by shutting lights OFF within 2 1/2 minutes after momentary occupancy
- Manual delayed-off-time settings (10, 20, and 30 minutes) compensate for real-time occupancy patterns, preventing unnecessary ON/OFF switching — with 30-second test mode
- Single-pole and 3-way wiring
- Adjustable integral blinders with 180° to 32° field-of-view
- Manual ON/Auto OFF operation for CA Title 24 compliance
- Backed by a limited 5-year warranty

Commercial Grade Decora® Wall Switch Multi-Technology (PIR & US) Occupancy and Vacancy Sensors* U S

Description	Cat. No.	Color	Rating	Coverage
Decora® Wall Switch Multi-Technology Occupancy Sensor with Self-Adaptive Technology	OSSMT-MD	W, I, T, G, E, R	Incandescent/Tungsten: 800W @ 120V. 180°, Fluorescent: 1200VA @ 120V, 2700VA @ 277V. Motor: 1/4HP @ 120V.	2400SF
Decora® Wall Switch Multi-Technology with Self-Adaptive Technology Vacancy Model	OSSMT-TM	W, I, T		
Decora® Wall Switch Multi-Technology with Self-Adaptive Technology - Auto-ON/Auto-OFF Only Model	OSSMT-MQ	W, I, E		
Decora® Wall Switch Multi-Technology with Self-Adaptive Technology Only Model	OSSMT-M3	W, I	Incandescent/Tungsten: 800W @ 120V. Fluorescent: 1200VA @ 120V, 2700VA @ 277V, 1500VA @347V. Motor: 1/4HP @ 120V.	

*Consult with factory for 208, 220, 230, and 240V models

Continued on next page

OSS MT-MDT/ OSS MT-GDT

OSS MD-MDW/ OSS MD-GDW

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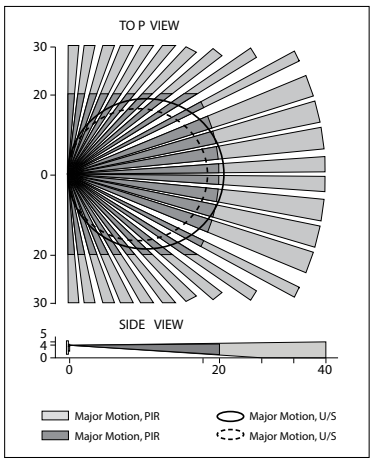
Decora® Commercial Wall Switch Multi-Technology Occupancy and Vacancy Sensors

Commercial Grade Decora® Wall Switch Multi-Technology (PIR & US) Occupancy and Vacancy Sensors*				U S
Description	Cat. No.	Color	Rating	Coverage
Decora® Wall Switch Multi-Technology Occupancy Sensor. No neutral wire required for installation	OSSMT-GD	W, I, T, G, E, R	Incandescent/Tungsten: 800W @ 120V. Fluorescent: 1200VA @ 120V, 2700VA @ 277V. Motor: 1/4HP @ 120V, 50/60 Hz.	180°, 2400SF
Decora® Wall Switch Multi-Technology with No Neutral - Vacancy Model	OSSMT-GT	W, I, T		
Decora® Wall Switch Multi-Technology with No Neutral - Auto-ON/Auto-OFF Only Model	OSSMT-GQ	W, I, E		
Decora® Wall Switch Multi-Technology with No Neutral - Lev-Lok® Model**	MSSMT-GD**	W, I, T, G, E		
Decora® Dual-Relay Wall Switch Multi-Technology Occupancy Sensor with Self-Adaptive Technology	OSSMD-MD	W, I, T, G, E	Primary Relay — Fluorescent 1200VA @ 120V, 2700VA @ 277V. Incandescent: 800W @ 120V. Secondary Relay — Fluorescent: 800VA @ 120V, 1200VA @ 277V; Incandescent: 800W @ 120V. Motor: 1/4HP @ 120V, 50/60 Hz.	
Decora® Dual-Relay Wall Switch Multi-Technology Occupancy Sensor. No neutral wire required for installation	OSSMD-GD	W, I, T, G, E		
Protective Cage for Wall Switch Sensors	OSWWG-P0W	W	—	—

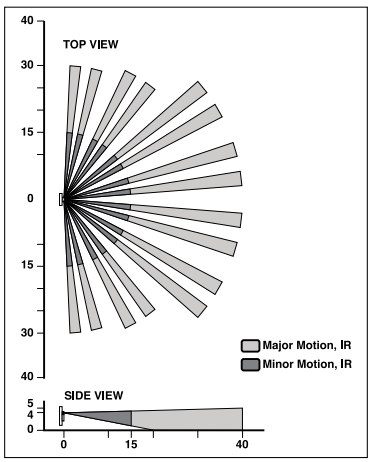
*Consult with factory for 208, 220, 230, and 240V models.
**For Lev-Lok Occupancy Sensor wiring modules see ordering information on page N-6

Field of View for Commercial Grade Decora® Wall Switch Sensors

OSS MD/ OSS MT (in feet)



ODS XX- ID/ OSS XX- ID/ ODSOD (in feet)



Line Voltage Occupancy/Vacancy Sensors

Self-Contained Infrared Ceiling Mount Occupancy Sensors

PIR Occupancy Sensor with built-in relay — separate Power Pack not required.

Features and Benefits

- 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
- ODC and ODW Power Base Combo Sensors combine sensors with the OPB15 Power Base Adapter to convert low voltage sensors into self-contained line voltage sensors for immediate energy savings
- Adjustable delayed-OFF-time settings from 20 seconds (for test mode) to 15 minutes
- Small, unobtrusive self-contained unit

Ideal Uses

- Storage areas, small bathrooms, copy rooms, and a variety of small spaces without wall switches

Self-Contained Infrared Ceiling Mount Occupancy Sensors — U S

Description	Cat. No.	Color	Rating	Coverage
Self-Contained PIR Ceiling Mount Occupancy Sensor and Switching Relay, 120V	ODC0S-I1W	W	Incandescent: 1000W @ 120V. Fluorescent: 1000VA @ 120V. Motor: 1HP @ 120V. 50/60Hz	530 360°,
Self-Contained Ceiling PIR Mount Occupancy Sensor and Switching Relay, 220V	ODC0S-I2W	W	Incandescent: 1000W @ 220V. Fluorescent: 500VA @ 220V. For 50Hz AC only.	
Self-Contained Ceiling PIR Mount Occupancy Sensor and Switching Relay, 277V	ODC0S-I7W	W	Fluorescent: 2700VA @ 220V. 50/60Hz	
Protective Cage for Ceiling Mount Sensors	ODCCG-000	—	—	

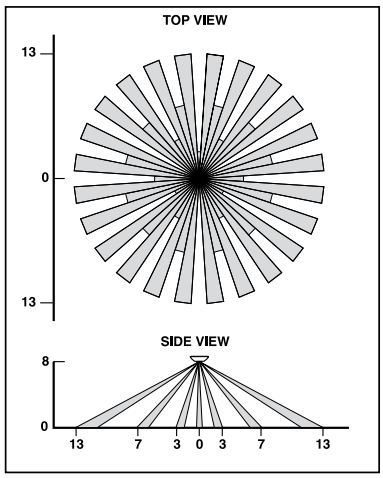
*When surface mounted on standard, 8 foot ceiling

ODC0S-I1W

ODCCG-000

Field of View for Self-Contained Infrared Ceiling Mount Occupancy Sensors

ODC0S-I (in feet)



LEVITON

S ENS ING CONTROL | Line Voltage Wall Mount

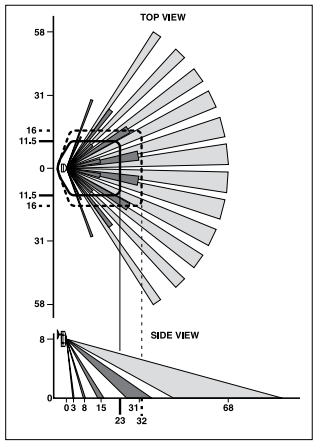
Line Voltage Sensors

Line Voltage Sensors with OPB15 Power Base Adapter Combos U S				
Description	Cat. No.	Color	Coverage	Input Voltage, Rating
Line Voltage Wall Mount Multi-Technology Occupancy Sensor with Power Base Combo	ODW12-MDW	W	1200SF	15A Incandescent, Electronic or Magnetic Fluorescent Ballast Motor: 3/4 HP @ 120V
Line Voltage Wall Mount PIR Wide View Occupancy Sensor with Power Base Combo	ODWWV-IDW		115°, 2500SF	
Line Voltage Wall Mount PIR Wide View Occupancy Sensor with Power Base Combo	ODWHB-IDW		55ft., 7ft. side @ 30ft. high	
ine Voltage Wall Mount PIR Long Range Occupancy Sensor with Power Base Combo	ODWLR-IDW		100ft., 110° @ 10ft. high	

ODW12-M DW

Field of View for Line Voltage Multi-Technology Wall-Mount Occupancy Sensors

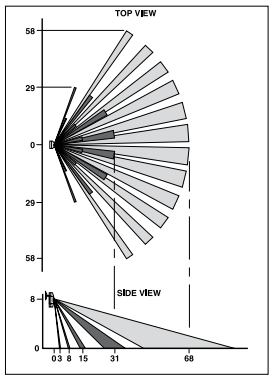
ODW12-M0W (in feet)



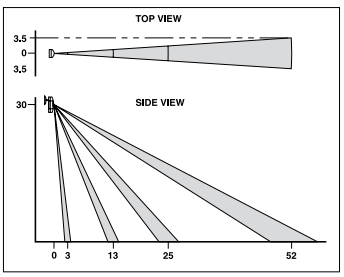
Minor Motion, IR
Major Motion, IR
Minor Motion, Ultrasonic
Major Motion, Ultrasonic

Field of View for Line Voltage Infrared Indoor Wall-Mount Occupancy Sensors

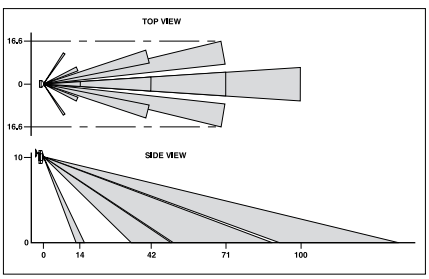
ODWWV Field of View (in feet)



ODWHB Field of View (in feet)



ODWLR Field of View (in feet)



Minor Motion, IR
Major Motion, IR

Provolt™ Self-Contained Sensors — Daylight Harvesting Capable Models

The Leviton Provolt™ Series of Occupancy Sensors features self-contained line-voltage occupancy sensors and photocells in one unit. The integrated design alleviates the need for separate power pack, occupancy sensor and photocell wiring, making it a low-cost and efficient energy management solution for new construction and retrofits. For true Daylight Harvesting applications, integrated photocells provide consistent Daylight Design Levels by actively switching the connected load(s) ON and OFF in response to available natural light to maximize energy savings. The Provolt™ Series also includes a line of vacancy sensors that feature self-contained line-voltage vacancy sensing technology.

Features and Benefits

- Includes occupancy sensing, daylight harvesting, and manual-ON/auto-OFF override control in a single unit
- Provides additional energy savings with true daylight harvesting capabilities
  - — Occupancy sensor models include an angled light pipe and flat light pipe for open loop and closed loop daylight harvesting applications
  - — Auto-Calibration – photocell intelligently measures light levels to determine optimal daylight design levels for closed loop applications
- Models include single or dual relay
- Dual relay modes include: auto-ON/auto-OFF, manual ON/auto-OFF, auto-ON/manual-ON, fan control, stairwell control, step dimming - alternating daylighting levels, step dimming - load 1 primary
- Auto-adapting - time delay and sensitivity are continually adjusted to room occupancy pattern
- Output short circuit protection - protection against low voltage wiring errors
- BMS input/emergency override
- Industry-exclusive self-configuring local manual switch input supports momentary and maintained switches — special control stations required
- Industry-exclusive "fail-safe" circuitry assures lights to not turn OFF during life safety requirements
- Industry-exclusive High Inrush Stability (H.I.S.) technology for unmatched durability and service
- Mechanically held 10A latching relay provides dependability and robust performance for all load types
- Zero-crossing circuitry for extended life of the relay
- Simplified commissioning
- Visual LED status indicators
- Lenses are easily replaceable and color-coded for contractors and end-users to easily identify lenses from the ground:
  - — Mid-Range: Red — included with multi-technology and PIR models
  - — High Density: Blue
  - — Extended Range: Black
- Integrated photocell tested to less than 1 FC accuracy
- Easy installation into junction boxes with Leviton exclusive screw guides, coasters and terminal blocks
- Tested to exceed 2 million switching cycles under standard loads
- Passed rigorous NEMA 410 testing for electronic ballast rating
- CA Title 24 Compliant, UL773A (Occupancy Standard), UL924 (Emergency Equipment), cUL Listed, CE Compliant, NOM Certified, RoHS Compliant, NY LLC48 Compliant

Provolt™ Self-Contained Ceiling Mount Occupancy Sensors — Daylight Harvesting Capable U S

Description	Cat. No.	Coverage	Color	Input Voltage, Rating
Provolt™ Line Voltage Ceiling Mount PIR Occupancy Sensor w/Integrated Photocell, High-Density Lens installed, Mid-Range Lens included	ODC04-IDW	450SF	W	120V, 50/60Hz 8A, Electronic Ballast, 800W/VA, Tungsten Ballast, 1/4 HP Motor
Provolt™ Line Voltage Ceiling Mount PIR Occupancy Sensor w/Integrated Photocell, Extended Range Lens installed, Mid-Range Lens included	ODC15-IDW	1500SF	W	230V, 50Hz 6A/6AX, Electronic Ballast, Magnetic Ballast, 1200W/VA, 1/3 HP Motor
Provolt™ Line Voltage Ceiling Mount U/S Occupancy Sensor w/Integrated Photocell, Extended Range Lens installed	ODC05-UDW	500SF	W	120V, 50/60Hz 800W/VA, Tungsten Ballast, Mid-Range Lens included, 1/4 HP Motor
Provolt™ Line Voltage Ceiling Mount U/S Occupancy Sensor w/Integrated Photocell, Extended Range Lens installed	ODC10-UDW	1000SF	W	230V, 50Hz 6A, Electronic Ballast, 1200VA, 1/3 HP Motor

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S ENS ING CONTROL | Line Voltage Ceiling Mount

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Provolt™ Self-Contained Sensors — Daylight Harvesting Capable Models

Provolt™ Self-Contained Ceiling Mount Occupancy Sensors — Daylight Harvesting Capable				U S
Description	Cat. No.	Coverage	Color	Input Voltage, Rating
Provolt™ Line Voltage Ceiling Mount U/S Occupancy Sensor w/ Integrated Photocell, Extended Range Lens installed	ODC20-UDW	2000SF	W	277V, 50/60Hz 5A, Electronic Ballast, 1200W/VA, Tungsten Ballast, 1/3 HP Motor 230V, 50Hz 6A/6AX, Electronic Ballast, Magnetic Ballast, 1200W/VA, 1/3 HP Motor 277V, 50/60Hz 5A, Electronic Ballast, 1200VA, 1/3 HP Motor
Provolt™ Line Voltage Ceiling Mount Multi-Technology Occupancy Sensor w/Integrated Photocell, Extended Range Lens installed	ODC05-MDW	500SF		
Provolt™ Line Voltage Ceiling Mount Multi-Technology Occupancy Sensor w/Integrated Photocell, Extended Range Lens installed, Mid-Range Lens included	ODC10-MDW	1000SF		
Provolt™ Line Voltage Ceiling Mount Multi-Technology Occupancy Sensor w/Integrated Photocell, Extended Range Lens installed, Mid-Range Lens included	ODC20-MDW	2000SF		

Provolt™ Dual Relay Self-Contained Ceiling Mount Occupancy Sensors — Daylight Harvesting Capable				U S
Description	Cat. No.	Coverage	Color	Input Voltage, Rating
Provolt™ Line Voltage Ceiling Mount PIR Dual Relay Occupancy Sensor w/Integrated Photocell, High-Density Lens installed, Mid-Range Included	O2C04-IDW	450SF	W	120V, 50/60Hz 8A, Electronic Ballast, 800W/VA, Tungsten Ballast, 1/4 HP Motor 230V, 50Hz 6A/6AX, Electronic Ballast, Magnetic Ballast, 1200W/VA, 1/3 HP Motor 277V, 50/60Hz 5A, Electronic Ballast, 1200VA, 1/3 HP Motor
Provolt™ Line Voltage Ceiling Mount PIR Dual Relay Occupancy Sensor w/Integrated Photocell, Extended Range Lens installed, Mid-Range included	O2C15-IDW	1500SF		
Provolt™ Line Voltage Ceiling Mount U/S Dual Relay Occupancy Sensor w/Integrated Photocell, Extended Range Lens installed	O2C05-UDW	500SF		
Provolt™ Line Voltage Ceiling Mount U/S Dual Relay Occupancy Sensor w/Integrated Photocell, Extended Range Lens installed	O2C10-UDW	1000SF		
Provolt™ Line Voltage Ceiling Mount U/S Dual Relay Occupancy Sensor w/Integrated Photocell, Extended Range Lens installed	O2C20-UDW	2000SF		
Provolt™ Line Voltage Ceiling Mount Multi-Technology Dual Relay Occupancy Sensor w/Integrated Photocell, Extended Range Lens installed	O2C05-MDW	500SF		
Provolt™ Line Voltage Ceiling Mount Multi-Technology Dual Relay Occupancy Sensor w/Integrated Photocell, Extended Range Lens installed, Mid-Range included	O2C10-MDW	1000SF		
Provolt™ Line Voltage Ceiling Mount Multi-Technology Dual Relay Occupancy Sensor w/Integrated Photocell, Extended Range Lens installed, Mid-Range included	O2C20-MDW	2000SF		

Provolt™ Self-Contained Ceiling Mount Vacancy Sensors	U S			
Description	Cat. No.	Coverage	Color	Input Voltage, Rating
Provolt™ Line Voltage Ceiling Mount PIR Vacancy Sensor	O3C15-IDW	1500SF	W	120V, 50/60Hz 8A, Electronic Ballast, 800W/VA, Tungsten Ballast, 1/4 HP Motor 230V, 50Hz 6A/6AX, Electronic Ballast, Magnetic Ballast, 1200W/VA, 1/3 HP Motor 277V, 50/60Hz 5A, Electronic Ballast, 1200V 1/3 HP Motor
Provolt™ Line Voltage Multi-Technology Ceiling Mount Vacancy Sensor	O3C10-MDW	1000SF		
Provolt™ Line Voltage Multi-Technology Ceiling Mount Vacancy Sensor	O3C20-MDW	2000SF		

Provolt™ Self-Contained Ceiling Mount Vacancy Sensors	U S			
Description	Cat. No.	Coverage	Color	Input Voltage, Rating
Provolt™ Line Voltage Ceiling Mount PIR Dual Relay Vacancy Sensor	O4C15-IDW	1500SF	W	120V, 50/60Hz 8A, Electronic Ballast, 800W/VA, Tungsten Ballast, 1/4 HP Motor 230V, 50Hz 6A/6AX, Electronic Ballast, Magnetic Ballast, 1200W/VA, 1/3 HP Motor 277V, 50/60Hz 5A, Electronic Ballast, 1200V 1/3 HP Motor
Provolt™ Line Voltage Multi-Technology Ceiling Mount Vacancy Sensor	O4C10-MDW	1000SF		
Provolt™ Line Voltage Multi-Technology Ceiling Mount Vacancy Sensor	O4C20-MDW	2000SF		

ODC20-M DW

ODC20-M DW (top view)

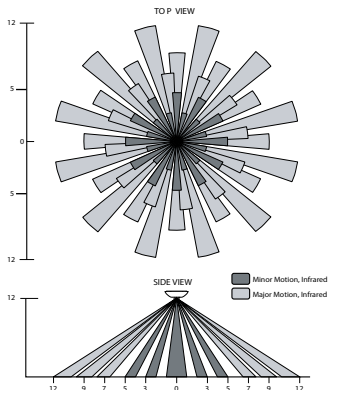
Flat Light Pipe

Angled Light Pipe

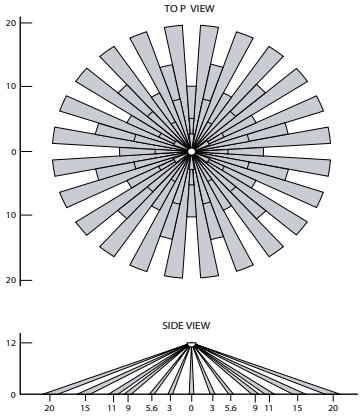
O3C20-M DW

Field of View for Provolt™ Self-Contained Ceiling Mount Sensors

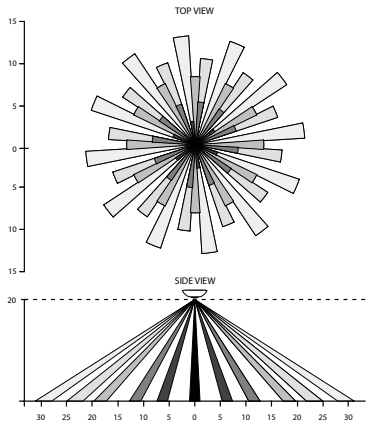
Provolt™ Series Infrared Sensors (in feet)



ODC04- IDW (High Density: Blue Lens), O2C04- IDW

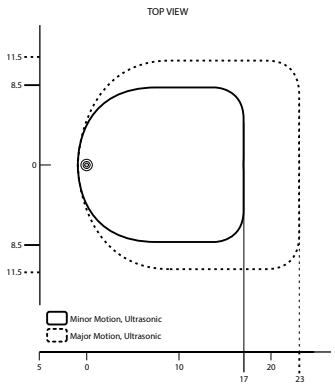


ODC15- IDW, O3C15- IDW, O2C15- IDW (Extended Range: Black Lens), O4C15- IDW

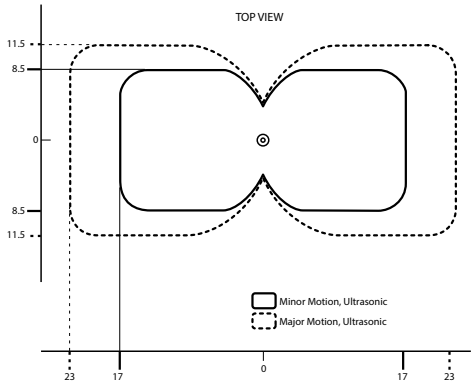


Mid-Range Lens — Mounting up to 20 feet (Included with all P IR and Multi- Tech Models)

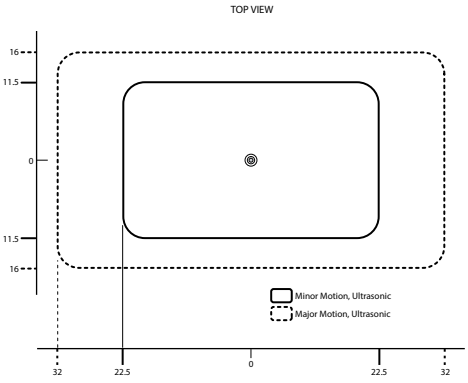
Provolt™ Series Ultrasonic Sensors (in feet)



ODC05-U DW, O2C05-U DW



ODC10-U DW, O2C10-U DW



ODC20-U DW, O2C20-U DW

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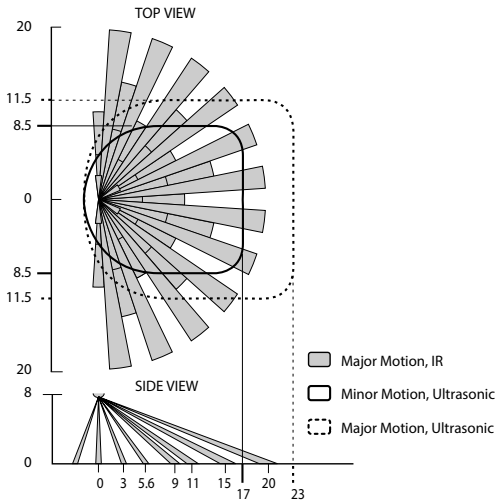
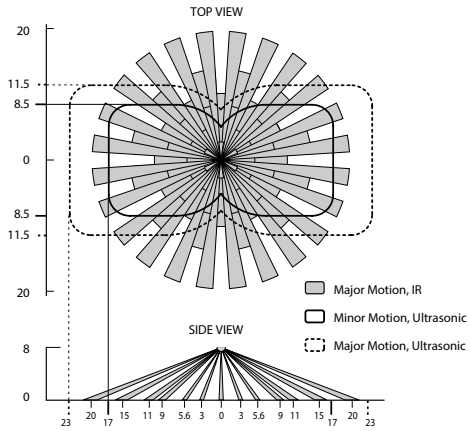
Field of View for Provolt™ Self-Contained Ceiling Mount Sensors

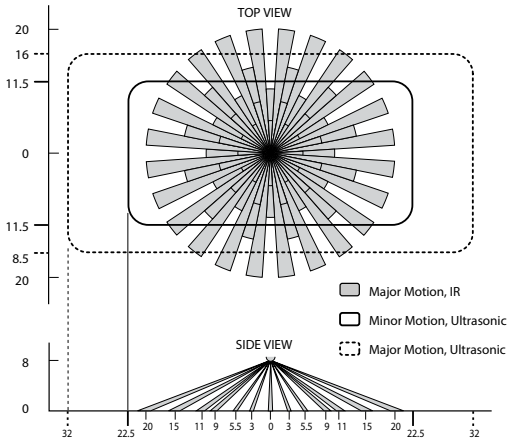
Provolt™ Series Multi- Technology Sensors (in feet)



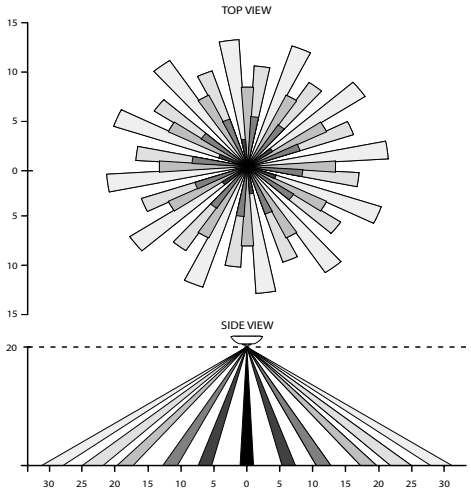
ODC05-M DW (High Density: Blue Lens),
O2C05-M DW



ODC10-M DW, O3C10-M DW, O2C10-M DW
(Extended Range: Black Lens), O4C10-M DW



ODC20-M DW, O3C20-M DW,
O2C20-M DW, O4C20-M DW



Multi-Range Lens — Mounting up to 20 feet
(Included with all P IR and Multi- Tech Models)

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S ENS ING CONTROL | Line Voltage High Bay and Integral Luminaire

Self-Contained P IR High Bay and Integral Luminaire Occupancy Sensors

Features and Benefits

PIR Fixture Mount High Bay Occupancy Sensor

- Universal unit includes two interchangeable lenses for 360° high bay and 360° low bay at no additional cost
- Cold storage models for applications as low as -40° F and 480V models available in non-neutral versions
- Mounts directly to industrial-style fluorescent luminaire or electrical junction box
- Self-contained PIR sensor and relay turn individual fixtures ON/OFF based on occupancy
- Up to 40 ft mounting height and quick and easy installation with long 42" leads
- Relay uses zero-crossing circuitry for enhanced reliability and long-life operation
- Bright green LED status indicator blinks to signify that the sensor is functioning properly
- Delayed-OFF time adjustment from 30 sec to 20 min
- Offset Adapter Accessory snaps into 1/2" knockout to position sensor below fixture body for improved field of view with deep-body fixtures

PIR Infrared Fixture Mount Integral Luminaire Occupancy Sensor

- Easy installation with longer 38" leads allows for easy connection to any ballast, eliminating the need to splice additional wiring
- Integrated photocell prevents lights from turning ON when room is illuminated by natural light for maximum energy savings
- 8' to 10' mounting heights
- Adjustable Time Delay and Light Level dials located on sensor housing for easy access

Self-Contained Infrared High Bay Occupancy Sensors * U S

Coverage

360° high-bay lens — 2:1 spacing to mounting height under 20 ft. and 1.5:1 spacing to mounting height @ 40 ft.
360° low-bay lens — 2:1 spacing to mounting height @ 8 ft. to 20 ft.

Description	Rating	Models	Cat. No.
Fixture Mount High-Bay PIR Occupancy Sensor with Two Interchangeable Lenses, for 360º High-Bay and 360º Low-Bay	Fluorescent: 800VA @ 120V, Fluorescent: 1200VA @ 277V, Fluorescent: 1500VA @ 347V, 50/60Hz (OSFHU-x4W models only). Motor: 1/4 HP @ 120V	120-230-277-347V	OSFHU-ITW
		120-230-277-347V, Cold Storage	OSFHU-CTW
		240/480V	OSFHU-I4W
		240/480V, Cold Storage	OSFHU-C4W

*Consult with factory for 208, 220, 230, and 240V models

Continued on next page

OSFHU-ITW

Continued from previous page

Self-Contained Infrared High Bay and Integral Luminaire Occupancy Sensors

Self-Contained Infrared High Bay Occupancy Sensors * U S

Coverage

360° high-bay lens — 2:1 spacing to mounting height under 20 ft. and 1.5:1 spacing to mounting height @ 40 ft.
360° low-bay lens — 2:1 spacing to mounting height @ 8 ft. to 20 ft.

Description	Rating	Models	Cat. No.
Fixture Mount High-Bay PIR Sensor with Interchangeable Lenses and Light Sensor, Low Voltage	Input: 20mA Output: 120mA HVAC: 1A, 30V DC	24V	OSFHP-ILW
Fixture Mount High-Bay PIR Sensor with Two Interchangeable Lenses and Light Sensor	Fluorescent: 800VA @ 120V, Fluorescent: 1000VA @ 230V AC, Fluorescent: 1200VA @ 277V AC, Fluorescent: 1500VA @ 347V AC, Fluorescent: 2000VA @ 480V AC, 50/60Hz. Motor: 1/4 HP @ 120V	120-230-277-347V 240/480V 120-230-277-347V, Dual Relay 120-230-277-347V, Dual Relay, Cold Storage	OSFHP-ITW OSFHP-I4W OSFHD-ITW OSFHD-CTW
Fixture Mount High-Bay PIR Sensor with Two Interchangeable Lenses Alternating Relay	Fluorescent: 800VA @ 120V, Fluorescent: 1000VA @ 230V AC, Fluorescent: 1200VA @ 277V AC, Fluorescent: 1500VA @ 347V AC, Fluorescent: 2000VA @ 480V AC, 50/60Hz. Motor: 1/4 HP @ 120V	120-230-277V Cold Storage	OSFHD-IAW OSFHD-CAW
Surface Mount High-Bay PIR Occupancy Sensor	Fluorescent: 800VA @ 120V, Fluorescent: 1200VA @ 277V AC, Fluorescent: 1500VA @ 347V AC, Motor: 1/4 HP @ 120V	—	OSFHS-ITW

Coverage

360° — 1:1 spacing to mounting height up to 8 ft.

Description	Rating	Models	Cat. No.
Fixture Mount Integral Luminaire Occupancy Sensor	Incandescent: 598W @ 120V. Fluorescent: 800VA @ 120V, Fluorescent: 1000VA @ 230V AC, Fluorescent: 1200VA @ 277V AC, 50/60Hz	120-230-277V (Integrated Unit) 120-230-277V, Sensor Head 120-230-277V, Power Pack 36" Connection Cable	OSF10-IOW OSF10-IUW OSF10-PPW OSFCA-36W

*Consult with factory for 208, 220, 230, and 240V models

OSFHP

OSFHD

OSFHS

OSF10- IUW and OSF10-PPW

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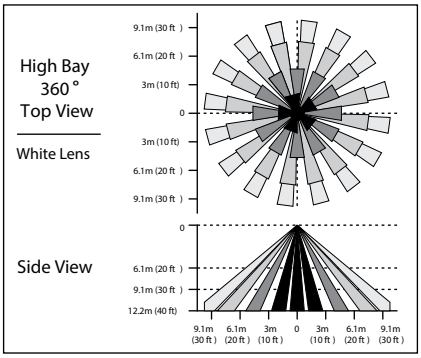
S ENS ING CONTROL | Line Voltage High Bay and Integral Luminaire

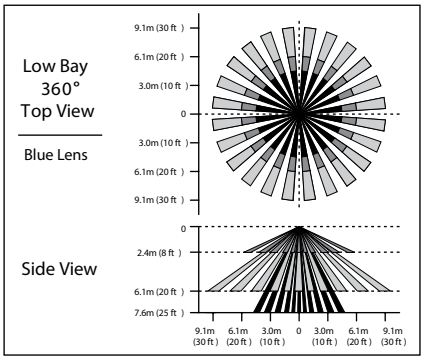
Self-Contained Infrared High Bay Occupancy Sensor Accessories U S	
Description	Cat. No.
High Bay Lenses for High-Bay Sensors	OSFLN-00W
Low Bay Lens for High-Bay Sensors	OSFLN-00B
Offset Adapter Accessory for Fixture-Mount Occupancy Sensor	OSFOA-00W
Offset Adapter Accessory for High-Bay Occupancy Sensor	OSFLO-00W
Protective Cage for High-Bay Mount Sensors	OSFCG-00W

OSF0A

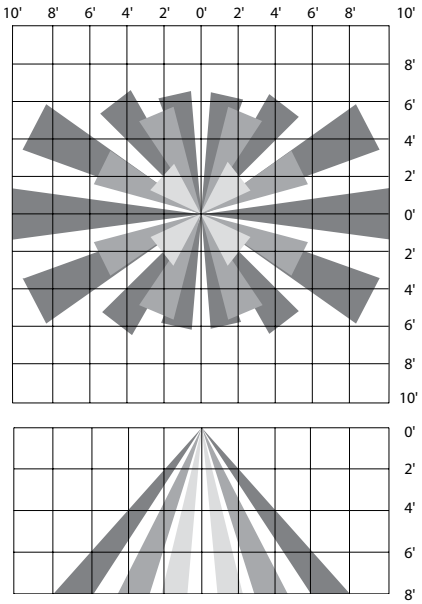
Field of View for Fixture-Mount High Bay Occupancy Sensors

OSFHU/ OSFHP/ OSFHD (in feet)





OSF10 (in feet)



Low Voltage Occupancy Sensors

Ceiling Mount Multi-Technology 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.

Features and Benefits

Functional

- 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
- Isolated relay supports HVAC or other Class 2 low voltage signals
- Supports both 24V AC/VDC power supplies
- 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

Ceiling Mount Multi-Technology Occupancy Sensors and Accessories U S

Description	Cat. No.	Coverage	Rating	Color
Multi-Technology Ceiling Mount Occupancy Sensor	OSC05-M0W	40kHz	180 SF	Off-White
Multi-Technology Ceiling Mount Occupancy Sensor	OSC10-M0W	40kHz	360 SF	Off-White
Multi-Technology Ceiling Mount Occupancy Sensor	OSC20-M0W	32kHz	360 SF	Off-White
Multi-Technology Ceiling Mount Occupancy Sensor with Isolated Relay	OSC05-RMW	40kHz	180 SF	White
Multi-Technology Ceiling Mount Occupancy Sensor with Isolated Relay	OSC10-RMW	40kHz	360 SF	White
Multi-Technology Ceiling Mount Occupancy Sensor with Isolated Relay	OSC20-RMW	32kHz	360 SF	White
Power Base Adapter	OPB15-0DW	—	—	Off-White
Cosmetic Adapter	OPBCA-00W	—	—	Off-White
Protective Cage for Ceiling Mount Sensors	ODCCG-000	—	—	—

Note: Use low-voltage wiring to connect sensors to OSPXX Power Pack

Continued on next page

OSC05-M0W

OSC20-M0W

Related Products

Low-voltage wiring is used to connect Leviton Occupancy Sensors to Cat. No. OPP20 Super Duty Power Packs and OSP20 Power Packs, or OPB15 Power Base Adapter (purchased separately). See pages N-26 to N-29 for more information.

S ENS ING CONTROL | Low Voltage Multi-Technology Ceiling Mount

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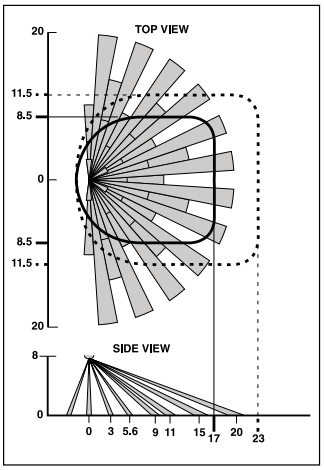
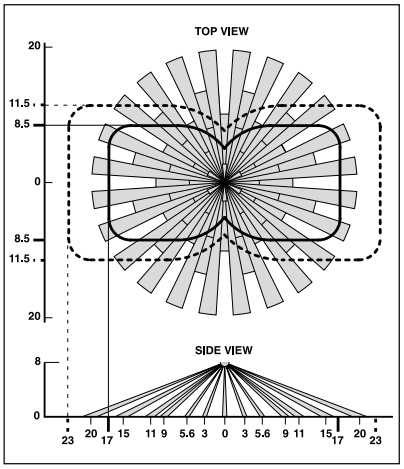
Field of View for Low Voltage Multi-Technology Ceiling Mount Occupancy Sensors

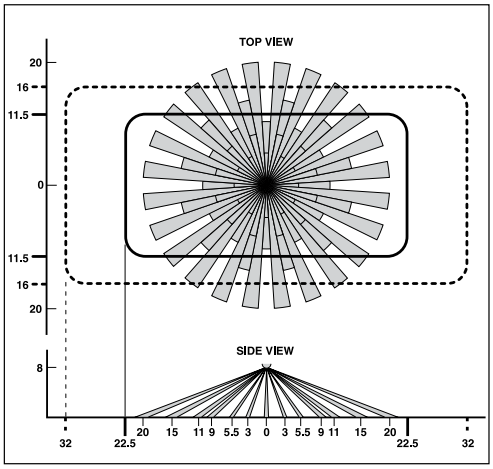
OS C05-M0W (in feet)



OS C10-M0W (in feet)



OS C20-M0W (in feet)



Major Motion, IR Minor Motion, Ultrasonic Major Motion, Ultrasonic

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Occupancy Sensor Layout Services

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Ultrasonic Ceiling Mount Occupancy Sensors

Advanced ultrasonic sensing technology for highly accurate monitoring, including small-motion detection. All-digital self-adjusting technology provides an "install and forget" solution for automatic lighting control. Use with Leviton Power Pack.

Features and Benefits

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

Ultrasonic Ceiling Mount Occupancy Sensors and Accessories for use with Leviton Power Pack — US

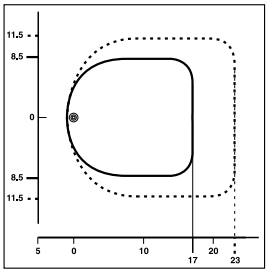
Description	Cat. No.	Rating	Coverage	Color
U/S Ceiling Mount Occupancy Sensor	OSC05- U0W	40kHz	180º, 500SF	Off-White
U/S Ceiling Mount Occupancy Sensor	OSC10- U0W	40kHz	360º, 1000SF	Off-White
U/S Ceiling Mount Occupancy Sensor	OSC20- U0W	32kHz	360º, 2000SF	Off-White
U/S Ceiling Mount Occupancy Sensor with Isolated Relay	OSC05-RUW	40kHz	180º, 500SF	White
U/S Ceiling Mount Occupancy Sensor with Isolated Relay	OSC10-RUW	40kHz	360º, 1000SF	White
U/S Ceiling Mount Occupancy Sensor with Isolated Relay	OSC20-RUW	32kHz	360º, 2000SF	White
Power Base Adapter	OPB15-0DW	—	—	Off-White
Cosmetic Adapter	OPBCA-00W	—	—	Off-White
Protective Cage for Ceiling Mount Sensors	ODCCG-000	—	—	White

Note: Use low-voltage wiring to connect sensors to OPP20 or OSPxx Power Pack or OPB15 Power Base Adapter

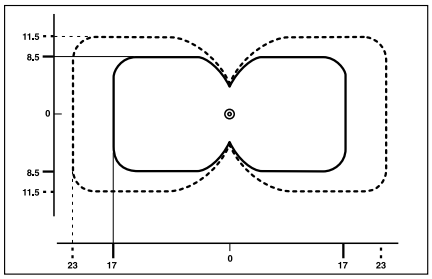
OSC05-U0W

Field of View for Low Voltage Ultrasonic Ceiling Mount Occupancy Sensors

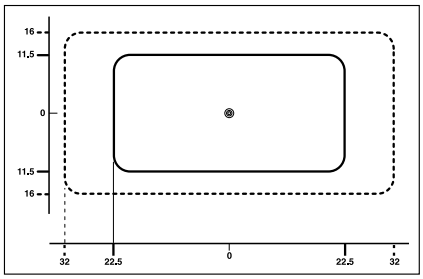
OSC05-U0W Field of View (in feet)



OSC10-U0W Field of View (in feet)



OSC20-U0W Field of View (in feet)



Minor Motion, Ultrasonic Major Motion, Ultrasonic

Related Products

Low-voltage wiring is used to connect Leviton Occupancy Sensors to Cat. No. OPP20 Super Duty Power Packs and OSP20 Power Packs, or OPB15 Power Base Adapter (purchased separately). See pages N-26 to N-29 for more information.

LEVITON

S ENS ING CONTROL | Low Voltage Infrared Ceiling Mount

Ceiling Mount P IR Occupancy Sensors

Features and Benefits

Functional

- Self-adjusting settings continuously analyze and adjust sensitivity, timer operation, and long-term performance
- Isolated relay supports HVAC or other Class 2 low voltage signals
- Supports both 24V AC/VDC power supplies
- 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 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

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

Infrared Ceiling Mount Occupancy Sensors and Accessories for use with Leviton Power Pack U S

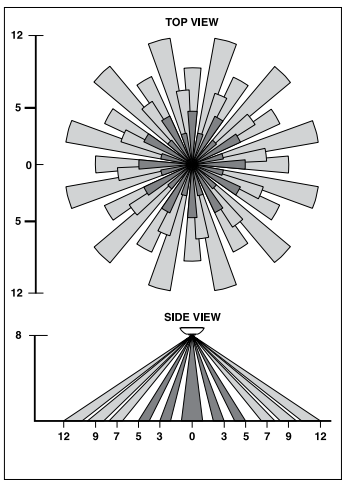
Description	Cat. No.	Coverage	Color
PIR Ceiling Mount Occupancy Sensor	OSC04-I0W	360 5,0 sq. ft	Off-White
PIR Ceiling Mount Occupancy Sensor	OSC15-I0W	360 5,00 sq. ft	Off-White
PIR Ceiling Mount Occupancy Sensor with Isolated Relay	OSC04-RIW	360 5,0 sq. ft	White
PIR Ceiling Mount Occupancy Sensor with Isolated Relay	OSC15-RIW	360 5,00 sq. ft	White
Power Base Adapter	OPB15-0DW	—	Off-White
Cosmetic Adapter	OPBCA-00W	—	Off-White
Protective Cage for Ceiling Mount Sensors	ODCCG-000	—	White

Note: Use low-voltage wiring to connect sensors to OPP20 or OSPxx Power Pack or OPB15 Power Base Adapter

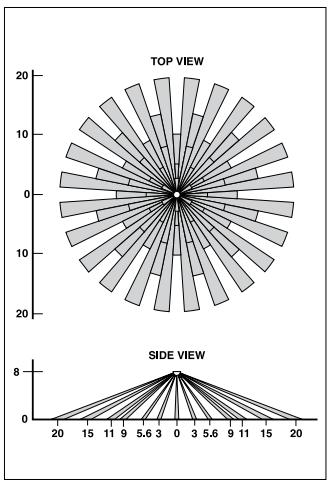
OSC04- I0W

Field of View for Low Voltage PIR Ceiling Mount Occupancy Sensors

OSC04- I0W (in feet)



OSC15- I0W (in feet)



Minor Motion, IR Major Motion, IR

Wall Mount Multi-Technology Occupancy Sensors

Advanced motion sensors combine infrared and ultrasonic technology for highly accurate monitoring without false triggering. Advanced Passive Infrared technology for highly accurate monitoring in a variety of commercial applications. All-digital self-adjusting technology provides "install and forget" solution for automatic lighting control.

Features and Benefits

- Ultrasonic sensing for maximum sensitivity combined with passive infrared (PIR) sensing to prevent false triggers from air conditioning and corridor activity
- Isolated relay supports HVAC or other Class 2 low voltage signals
- Supports both 24V AC/VDC power supplies
- 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 30 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

Multi-Technology Wall Mount Occupancy Sensors and Accessories for use with Leviton Power Pack or Power Base Adapter U S

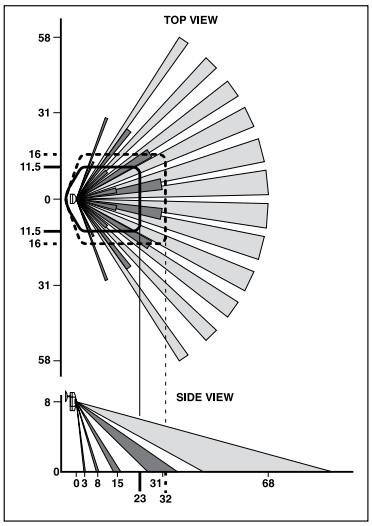
Description	Cat. No.	Rating	Operating Frequency	Color
Wall Mount Multi-Technology Occupancy Sensor	OSW12-M0W	1200SF	32kHz	Off-White
Wall Mount Multi-Technology Occupancy Sensor with Isolated Relay	OSW12-RMW	1200SF	—	White
Power Base Adapter	OPB15-0DW	—	—	Off-White
Cosmetic Adapter	OPBCA-00W	—	—	Off-White
Protective Cage for Ceiling Mount Sensors	OSWCG-P0W	—	—	White

Note: Use low-voltage wiring to connect sensors to OPP20 or OSPxx Power Pack or OPB15 Power Base Adapter

OSW12-M0W
Wall Mount

Field of View for Low Voltage Multi-Technology Wall Mount Occupancy Sensors

OSW12-M0W (in feet)



Minor Motion, IR
Major Motion, IR
Minor Motion, Ultrasonic
Major Motion, Ultrasonic

Related Products
Low-voltage wiring is used to connect Leviton Occupancy Sensors to Cat. No. OPP20 Super Duty Power Packs and OSP20 Power Packs, or OPB15 Power Base Adapter (purchased separately). See pages N-26 to N-29 for more information.

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S ENS ING CONTROL | Low Voltage Infrared Wall Mount

Infrared Indoor Wall Mount Occupancy Sensors

Advanced PIR technology for highly accurate monitoring. All-digital self-adjusting technology provides an "install and forget" solution for automatic lighting control. Use with Leviton Power Pack.

Features and Benefits

- Self-adjusting settings continuously analyze and adjust for optimum performance
- Isolated relay supports HVAC or other Class 2 low voltage signals
- Supports both 24V AC/VDC power supplies
- 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

Infrared Indoor Wall Mount Occupancy Sensors and Accessories for use with Leviton Power Pack or Power Base Adapter U S

Description	Cat. No.	Coverage	Color
Wall Mount PIR Wide-View Occupancy Sensor	OSWWW-I0W	1125,500SF	Off-White
Wall Mount PIR High-Bay Occupancy Sensor	OSWHB-I0W	55 ft. x 7 ft. wide @ 10 ft. high	Off-White
Wall Mount PIR Long-Range Occupancy Sensor	OSWLR-I0W	100 ft. x 14 ft. @ 10 ft. high	Off-White
Wall Mount PIR Wide-View Occupancy Sensor with Isolated Relay	OSWWV-RIW	1152,500SF	White
Wall Mount PIR High-Bay Occupancy Sensor with Isolated Relay	OSWHB-RIW	55 ft. x 7 ft. wide @ 30 ft. high	White
Wall Mount PIR Long-Range Occupancy Sensor with Isolated Relay	OSWLR-RIW	100 ft., 110° @ 10 ft. high	White
Power Base Adapter	OPB15-0DW	—	Off-White
Cosmetic Adapter	OPBCA-00W	—	Off-White
Protective Cage for Ceiling Mount Sensors	OSWCG-P0W	—	White

Note: Use low-voltage wiring to connect sensors to OPP20 or OSPxx Power Pack or OPB15 Power Base Adapter

Continued on next page

OSWHB- I0W

Related Products
Low-voltage wiring is used to connect Leviton Occupancy Sensors to Cat. No. OPP20 Super Duty Power Packs and OSP20 Power Packs, or OPB15 Power Base Adapter (purchased separately). See pages N-26 to N-29 for more information.

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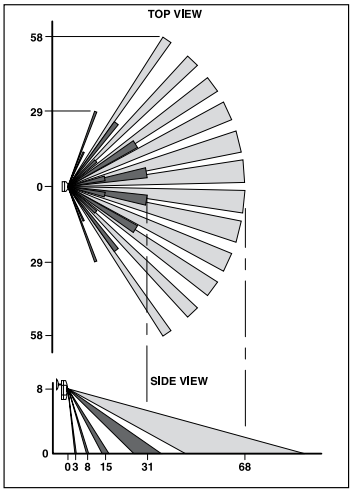
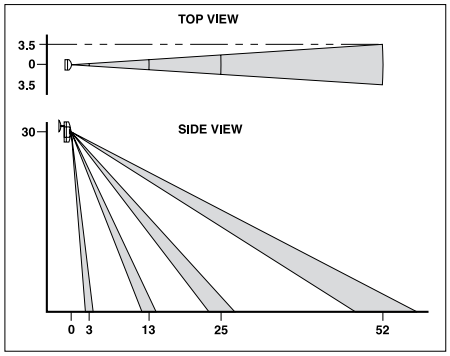
Infrared Indoor Wall Mount Occupancy Sensors

Field of View for Low Voltage Wall Mount PIR Indoor Occupancy Sensors

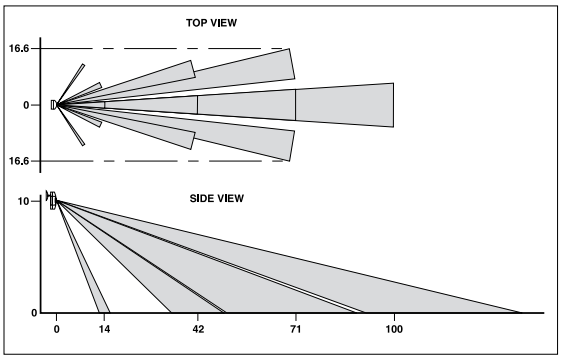
OSWWV Field of View (in feet)



OSWHB Field of View (in feet)



OSWLR Field of View (in feet)



Minor Motion, IR

Major Motion, IR

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Leviton California Title 24 Online Design Guide

Take advantage of Leviton's California Title 24 Design Guide on your laptop or mobile device. This comprehensive online guide is searchable by recommended Leviton solution, code article or application. To register go to title24.leviton.com or download the Leviton California Title 24 mobile app, go to leviton.com/apps

Power Packs and Power Base Adapter

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.

Features and Benefits

OPP20 Super Duty Power Pack

- Robust and reliable mechanically held 20A latching relay provides dependability and robust performance for all load types and provides power savings over electrically held relay power packs
- Industry exclusive fail-safe circuitry - in the event of product failure, Return-to-Closed capability causes relay to default to a closed position (ON) for safe operation and alleviates safety concerns
- Industry exclusive H.I.S. (High Inrush Stability) circuit designed to handle high inrush electronic ballast loads
- Submitted and passed for stringent testing
  - Tested over 1,500,000 loaded cycles
  - Passed NEMA 410 testing for electronic ballast current overload at 16A
  - UL/cUL 916 Listed for Energy Management Equipment
- Multiple compliance and regulatory UL and CSA testing - consult factory for details
- Output short circuit protection
- Optimal installation flexibility
  - Class 2 wires are Teflon coated for UL2043 Plenum Rated applications
  - Mounts inside or outside fluorescent ballast cavity
  - Mounts inside or outside junction box

OPP20-0D2

- Exclusive self-detect configurable local switch input - momentary or maintained
- Configurable for Auto-ON and Manual-ON occupancy sensor inputs
- Complies with CA Title 24

OPP20-RD3

- Auto-ON occupancy sensor input
- Photocell (switching only) ready

OPP20-RD4

- Exclusive self-detect configurable local switch input - momentary or maintained
- Configurable for Auto-ON and Manual-ON occupancy sensor inputs
- Photocell (switching only) ready
- Complies with CA Title 24

OSP20-RDH Power Pack

- Auto-ON and manual-ON inputs for occupancy sensors (OSP20-RDH)
- Hold-ON and Hold-OFF capabilities (OSP20-RDH)
- 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

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Power Packs and Power Base Adaptor

Features and Benefits

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
- Zero-crossing switching circuitry for outstanding durability

Nipple Adaptor
- 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

Commercial Grade Occupancy Sensor Power Packs

Occupancy Sensor Power Packs U S

Description	Cat. No.	Power Input*	Relay Rating	Control Input	Power Supply Output
Super Duty Power Pack with Auto-ON, Manual-ON, and Local Switch Inputs, CA Title 24	OPP20-0D2	120-230-277V AC, 50/60 Hz	20A, 2400W @ 120V — Resistive 20A, 2400W @ 120V — General Purpose 20A, 2400W @ 120V — Incandescent 20A, 2400W @ 120V — Fluorescent 20A, 5540W @ 277V — Resistive 20A, 5540W @ 277V — General Purpose 20A, 5540VA @ 277V — Fluorescent 16A, 4430VA @ 277V — Electronic Ballasts 1/2 HP @ 120V — Motor Load 2 HP @ 240/277V — Motor Load	2mA, 24V DC 225mA,	
Super Duty Power Pack with Auto-ON and Photocell Input	OPP20-RD3				
Super Duty Power Pack with Auto-ON, Manual-ON, Switch, and Photocell Input, CA Title 24. Suitable for general purpose plug load control	OPP20-RD4				

*Consult with factory for 208, 220, and 240V models

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OPP20

S ENS ING CONTROL | Power Packs and Power Base Adaptor

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Commercial Grade Occupancy Sensor Power Packs

Occupancy Sensor Power Packs U S					
Description	Cat. No.	Power Input*	Relay Rating	Control Input	Power Supply Output
Power Pack with HVAC Relay with Auto-ON and Manual-ON Inputs for Occupancy Sensors	OSP20-RDH	120-230-277V AC, 50/60Hz	20A Incandescent @ 120V; 20A Fluorescent @ 120-230-277/347VAC; 1/2HP @ 120V, 2HP @ 240-277V; HVAC: 0.5A @ 120VAC, 1A @ 30VDC	5mA, 24VDC	225mA, 24VDC
Power Pack with HVAC Relay	OSP15-R30	347V AC, 60Hz	15A fluorescent @ 347V; 1HP @ 120V, 2HP @ 240V; HVAC: 0.5A @ 120V AC, 1A @ 30VDC		120mA, 24VDC
Add-A-Relay Unit with HVAC Relay	OSA20-R00	—	15A incandescent @ 120V, HVAC: 0.5A @ 125V AC, 1A @ 30VDC		—

*Consult with factory for 208, 220, and 240V models

OSP20

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Leviton Energy Code Apps

ASHRAE 90.1 and Title 24 apps, gain easy access to a wealth of the lighting control code requirements on your mobile device. These valuable reference tools allow you to search by application, article language and recommended Leviton solutions. Get inspiration for designing energy code compliant applications by viewing diagrams and summaries of the requirements met for recommended solutions. Go to leviton.com/apps for more information.

Title 24 ASHRAE

Power Packs and Power Base Adaptor and Accessories

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:

Sensor	Current Consumption
OSC04-I, OSC15-I, OSWHB-I, OSWLR-I, OSWWV-I	10-15mA
OSC05-M, OSC05-U, OSW12-M	25mA
OSC10-M, OSC10-U	30mA
OSC20-M, OSC20-U	40mA
OSA20-R00 Add-A-Relay	50mA
ODC0P-S0W	10mA

(Number of Model A sensors X Sensor A current consumption rating) + (Number of Model B sensors X Sensor B current consumption rating) + (Number of Add-A-Relays X 50mA) = 225mA

Self-Contained Power Base Adaptor

Converts any Leviton low voltage ceiling or wall mount occupancy sensor to a self-contained, line voltage unit with 15A, 120/277V load capacity.

Features and Benefits

- 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 construction with line-voltage circuiting only
- Mounts easily in standard 2 1/8" deep x 4" octagon or 2 1/8" 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

Power Base Adaptor* U S

Description	Cat. No.	Power Input/Output	Rating	Color
Power Base Adaptor — Converts select Leviton low-voltage ceiling or wall occupancy sensor models to self-contained line voltage unit	OPB15-0DW	Power Input: 120-230-277V AC, 50/60Hz 15A Control Input: 24VDC, 5mA Power Output: 120V AC @15A incandescent; 277V AC @ 15A fluorescent; Motor: 120V AC 3/4HP, 277V AC 2HP Control Output: 24VDC, 40mA	Off-White	
Cosmetic Adaptor	OPBCA-00W	—	—	Off-White

Agency Listings & Code Compliance: NOM Certified.
*Available in Off-White only.
Consult with factory for 208, 220, 230 and 240V models.
Note: Coverts OSCxx-I, OSCxx-M and OSCxx-U. Does not convert OSCxx-R

OPB15-0 DW (Occupancy Sensor not included)

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.

Features and Benefits

Professional Series
- 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)

Commercial Grade Outdoor Motion Sensors — U S

Description	Cat. No.	Rating	Coverage	Color
Outdoor PIR Motion Sensor	PS 200-10W	Incandescent: 1000W @ 120V Fluorescent/Inductive: 500VA @ 120V. For 60Hz AC only	200°	White
Outdoor PIR Motion Sensor with Dual Floodlight Lampholder	PS 200-1 FW			
Outdoor PIR Motion Sensor	PS 110-10W		110°	
Outdoor PIR Motion Sensor with Dual Floodlight Lampholder	PS 110-1 FW			
Outdoor PIR Motion Sensor	PS 200-70 W	220-277V AC, 50/60Hz. 10A incandescent, 5A ballasts	200°	
Outdoor PIR Motion Sensor with Dual Floodlight Lampholder	PS 200-7 FW			
Outdoor PIR Motion Sensor	PS200-40W	220-240V AC, 50/60Hz. 10A incandescent, 5A ballasts		
Outdoor PIR Motion Sensor with Dual Floodlight Lampholder	PS200-4FW			
Outdoor PIR Motion Sensor	PS 110-70 W	220-277V AC, 50/60Hz. 10A incandescent, 5A ballasts	110°	
Outdoor PIR Motion Sensor with Dual Floodlight Lampholder	PS 110-7 FW			

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PS 200-10W

PS 110-10W

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Outdoor Motion Sensors

Commercial Grade Outdoor Motion Sensors U S				
Description	Cat. No.	Rating	Coverage	Color
Outdoor PIR Motion Sensor	PS110-40W	220-240V AC, 50/60Hz. 10A incandescent, 5A ballasts	110°	White
Outdoor PIR Motion Sensor with Dual Floodlight Lampholder	PS110-4FW	220-240V AC, 50/60Hz. 10A incandescent, 5A ballasts		

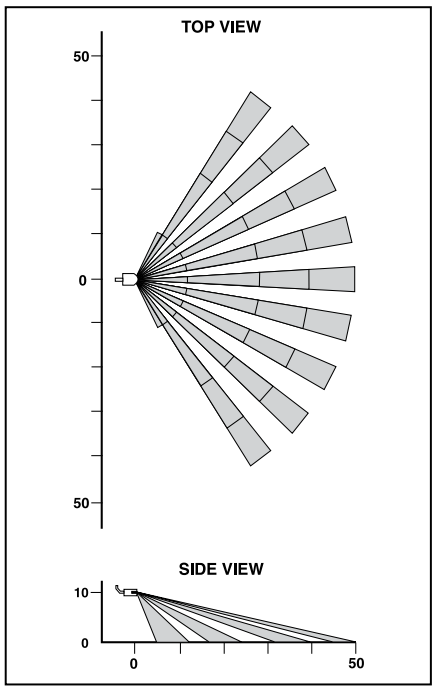
Residential Grade Outdoor Motion Sensors U S				
Description	Cat. No.	Rating	Coverage	Color
Outdoor PIR Motion Sensor	RS110-10W	Incandescent: 500W @ 120V. For 60Hz only.	110°	White
Outdoor PIR Motion Sensor with Dual Floodlight Lampholder	RS110-1 FW	Incandescent: 500W @ 120V. For 60Hz only.		

RS110-10W

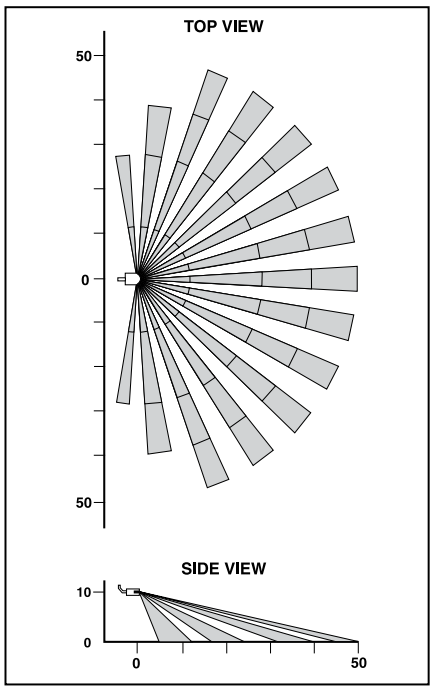
RS110-1FW

Field of View for Outdoor Motion Sensors

PS110/R S110 (in feet)



PS200 (in feet)



Photocells

Leviton's Photocell sensors precisely monitor either task or ambient light levels. As part of a Leviton energy management system, photocells work with other components in the system to automatically adjust light levels to a user-defined level. Photocells are most suitable for installation in rooms with windows and open spaces receiving substantial ambient light. Photocells must be hardwired to a compatible Leviton lighting control system. The photocell measures ambient light in a specific area and sends this data to a dimmer or relay that, in turn, adjusts fixtures to a constant lighting level as measured in that specific area. Daylight Harvesting is achieved as lights in a room (with windows or significant, artificial ambient light) automatically brighten or dim depending on how much light the photocell detects.

Daylight Harvesting
With Daylight Harvesting, ambient (often natural) light supplements in-room, artificial light in order to keep a constant lighting level while saving energy. This constant level is programmed into a compatible control device. Once hardwired to the photocell, the dimmer or relay will receive the photocell's real-time light measurement and maintain a steady level within the photocell's area of detection.

Features and Benefits

- Indoor photocells are designed with a flat Fresnel lens that looks downward in a 60° cone of reference to measure actual light on the work surface, reducing the influence of stray light striking the photocell from nearby windows or incidental side lighting
- Outdoor photocells are IP54 rated to guarantee ultimate protection from dirt, dust, oil, and other non-corrosive material
- Measures light from any source in the visible spectrum within a 60° cone or 180° angle of response depending on the model
- Constant lighting at the optimal level for greater visual comfort and acuity, which contributes to improved productivity
- Provides convenient, automatic hands-free daylight harvesting when integrated with Leviton lighting control products
- Lowers electric bills by reducing usage of lighting where ambient natural light is also present
- Lumen maintenance opportunity compatible

Photocells

Description	Cat. No.	Lens	Sensing Range	Color
Photocell	ODC0P-00W	Clear	1-1600fc	White
Switching Photocell	ODC0P-S0W	Clear	1-1600fc	White
Dimming Photocell	ODC0P-D0W	Clear	1-1600fc	White
Line Voltage Photocell	PCCxD-00W	Clear	1-1600fc	White
Line Voltage Photocell	PCCxS-00W	Clear	1-1600fc	White
Line Voltage Photocell	PCCSD-00W	Clear	1-1600fc	White
Indoor Photocell	PCIND-000	Fresnel	75-800fc	White
Indoor Photocell	PCIND-0SV	Diffuse	3, 30, 300 or 600fc	White
Outdoor Photocell	PCOUT-000	Clear Hood	50-750fc	White
Outdoor Photocell	PCOUT-0SV	Diffuse	3, 30, 300 or 600fc	White
Atrium Photocell	PCATR-000	Dome/Frost	215-2690fc	White
Skylight Photocell	PCSKY-000	Dome/Frost	1,076-8,072 fc	White

ODCOP-00W

Room Control

LevNet RF™ Energy Harvesting Wireless Solutions

LevNet RF™ is Leviton's family of energy harvesting radio frequency products based on EnOcean's technology. EnOcean-based products, including the LevNet RF ™ products, have three common features. They are:

• Energy Harvesting Technology

• Wireless (Radio Frequency)

• Interoperable within an RF-Based Network

Energy harvesting technology allows LevNet RF ™ transmitters (i.e., occupancy sensors and switches), to operate indefinitely without external power or batteries. Self-powered transmitters receive power from the motion of a switch actuation, light on a solar cell or temperature differentials in the environment for a true zero-maintenance energy harvesting device. Operating in the 902 MHz band provides minimal competing traffic and greater transmission range than other technologies. With no additional or new wiring required, LevNet RF™ delivers easy-to-install energy harvesting lighting controls with little to no interruption to a customer's operations and without damage to the customer's property.

Product Overview

There are two main types of LevNet RF ™ products:

— A TRANSMITTER , such as a switch, generates a wireless RF control signal (e.g., "ACTUATE RELAY"). All transmitters are self-powered products that can be located anywhere and send transmission signals. Transmitters are available in occupancy sensor, control extender, Decora ® rocker station, and handheld remote varieties.

— A RECEIVER receives a control signal from a transmitter and performs the appropriate action (e.g., activate or deactivate the relay). All receivers are connected to a power source and a load that the receiver operates when the RF signal is received. Receivers are available in Decora ® rocker, wall switch, relay power pack, receptacle, and area and fixture controller varieties.

Features and Benefits

- Easy to install for new construction and retrofit applications, requiring minimal labor disruption to operations
- Requires no new wiring and installs in ¼ the time of hardwired sensors, translating into faster turnaround and reduced costs
- With no batteries to replace and no maintenance to perform, plus annual energy savings and rebates that can total up to 80% in reduced costs, LevNet RF™ revolutionizes efficiency and savings
- Lowest power consumption of any RF device with less than one Watt per device used annually, saving approximately 70% over other RF devices
- LevNet RF™ is the only energy harvesting wireless solution that fulfills LEED requirements to earn LEED points for both wireless control and no battery
- Operation at 902 MHz band reduces interference and increases transmission range
- Range: 50 to 150 feet
- FCC Certified for Wireless Communication (U.S.), I.C. Certified (Canada)
- Backed by a limited 5-year warranty

NAFTA and Made in USA models available — visit www.leviton.com/NAFTA or www.leviton.com/USA
Visit www.leviton.com/levnetrf for more information

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LevNet RF™ Energy Harvesting Wireless System

Basic System Selection

STEP 1 Determine Which LOADS You Want to Control: Lighting, HVAC, Lamp, TV, etc.

STEP 2 Pick the Appropriate RF RECEIVER

LevNet RF™ Wireless/ Wired-In Receivers

Receiving

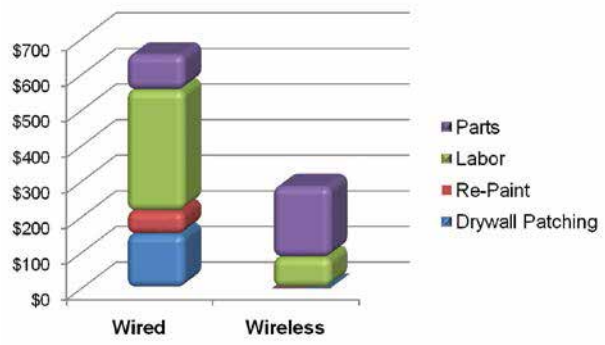
STEP 3 Pick the Appropriate Energy Harvesting Wireless RF Transmitter (Sensor or Switch)

LevNet RF ™ Sensor or Switch

Transmitting

Tip A good way to visualize your wireless system is to imagine that the "wires" connecting each device are invisible wires or "unique addresses."

Wired vs. Wireless Cost



*Installation time per device: 45-50 minutes for hardwired vs. 10-15 minutes for wireless devices

LevNet RF™ Receivers

Advanced Wall Switch Receivers with Color Change Kit U S		
	Neutral Model	Non-Neutral Model
Cat. No.	WSS20-N9N	WSS20-G9N
Description	Use for larger rooms with multiple loads. Pairing for rocker, momentary and toggle	
Input Voltage	120-230-277V AC	
Power Consumption	120V < 1/2 Watt; 277V < 2/3 Watt	
Memory	Stores up to 20 Transmitter IDs	
Button Pairing Modes	Rocker, Momentary and Toggle	
Vacancy Confirmation	30 seconds	
Mode	Presentation/Viewing	
Time Delay	2 min (test), 10, 20, 30 min	
Load Rating	General Duty: 10A LED: 400W 120V Incandescent: 800W @ 120V Fluorescent Ballasts: 1200VA @ 120V Fluorescent Ballasts: 2700VA @ 277V Motor: 1/4 HP Load @ 120V	LED: 400W 120V Incandescent: 800W @ 120V Fluorescent Ballasts: 1200VA @ 120V Motor: 1/4 HP Load @ 120V 25W minimum load required (reduce range by 15')
Additional Listings	ETL/C-ETL: UL508, Title 24 Compliant, CAN/CSA C22.2 #14	

Color Change Kit ships with White, Ivory and Light Almond faceplates

WSS 20

Coordinating Faceplates for LevNet Wall Switch Receivers		
Cat. No.	Color	Quantity
WSSCC-00G	Gray	25 per package
WSSCC-00E	Black	25 per package

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Lev Net RF™

For more information on our wireless self-powered solutions, including technical reference, LEED credits, programming videos, and software downloads go to www.leviton.com/levnetrf

LevNet RF™ Receivers

Relay Receivers			
	Fixture Controller	Area Controller	Relay Power Pack
Cat. No.	WSD05-9D0	WSD20-9D0	WSP20-9D0
Power Supply Input	120-277V AC, 50/60Hz	120-277V AC, 50/60Hz	100-277V AC, 50/60Hz
Max Loads	Metal Halide Sodium Vapor Induction Fluorescent LED Other 20 Amps all loads 0-10V sink 100mA 0-10V Source 1mA	Metal Halide Sodium Vapor Induction Fluorescent LED Other 3 Amps all loads 0-10V sink 100mA 0-10V Source 1mA	Metal Halide Sodium Vapor Induction Fluorescent LED Other 20 Amps all loads 1 HP Motor Loads
Memory	Stores up to 20 Transmitter IDs	Stores up to 20 Transmitter IDs	Stores up to 20 Transmitter IDs
Output Channels	1 — Latching Form A Relay, Selectable N.O. or N.C. power up state 1 — 0-10V output signal 1 — 12VDC output (WSD20-9D0 only)	1 — Latching Form A Relay, Selectable N.O. or N.C. power up state 1 — 0-10V output signal 1 — 12VDC output (WSD20-9D0 only)	1 — Latching Form A Relay, Selectable N.O. or N.C
Time Delay	15 min		
Additional Listings	IEC60730 and UL 2043 C-ETL: CSA C22.2 #1405		

RF Receptacle		
	Receptacle for Wireless Plug Load Control	
Cat. No.	WSG15-S9W	WSG5-D9W
Power Supply	125V AC, 60Hz, 15A	
Power Consumption	120V AC @10mA AC (320mW typical)	
Switched Side: Max Loads/ Contact Ratings	General Use/Resistive: 15A, Incandescent: 1800W, Inductive: 1800VA, 1/2HP, 120V AC	
Controlled	Single (Top)	Dual
Additional Listings	CA Title 24 Compliant, ASHRAE Standard 90.1 2010 Compliant, TR Receptacle	

Note: Comes packaged with five color faceplates: White, Ivory, and Light Almond

WSD20

WSG15- D9W

LevNet RF™ Transmitters

Sensors

	Ceiling Mount Occupancy Sensors	Wall Mount Occupancy Sensors
Cat. No.	WSC12-M9N	WSWDR-H9W
Coverage	1200SF	1600SF
Power Consumption	Zero	Zero
Photocell	—	—
Transmission	60 seconds (+/- 10 sec)	30 minutes @ 0.5FC (5 LUX); 15 minutes @ 1.0FC (10 LUX); 30 seconds @ 20FC (200 LUX)
Minimum Light Required to Initiate	FC (50 LUX)	1.5FC (15 LUX)
Minimum Charge Time to Begin Operation	1 minute @ 20FC (200 LUX)	1 minute @ 1.5FC (15 LUX); 5 seconds @ 20FC (200 LUX)
Maintain Charge Time	3 hours per 24 hours @ 20FC (200 LUX)	3 hours per 24 hours @ 20FC (200 LUX)
Operating Life at Full Charge	80 hours	48 hours
Additional Listings	CA Title 24 Compliant, FCC Certified for Wireless Communication (U.S.), I.C. Certified (Canada)	

WSC12-M9 N

WSWDR

Wall Stations — Controls Virtually Any On/Off Device

	Single/Dual Rocker Decora™ Wall Stations*		Handheld 4-Button Remote
Cat. No.	WSS0S-S9x	WSS0S-D9x	WSS0S-R0W
Buttons	2 Buttons (1 Rocker)	4 Buttons (2 Rockers)	4 Buttons (2 Rockers)
Card Slot	—		
Output Channels	Only limited by number of Receivers in range		
Addressing	Factory set to unique ID (1 of 4 billion)		

*Available in White (-W), Ivory (-I), Light Almond (-T), Gray (-G) and Ebony (-E).

Continued on next page

Note: Wall Stations are both switches and dimmers depending on the receiver they are paired to — see Wall Stations Data Sheet on Leviton.com/levnetrf for details

WSS 0S-D9x

WSS 0S-ROW

LEVITON

Continued from previous page

LevNet RF™ Transmitters

Control Extender

Communicates with Receivers	
Cat. No.	WSTLT-9D0
Supply Power Input	100-277VAC, 50/60 Hz
Addressing	Factory set unique ID (1 of 4 billion)
Additional Listings	UL 60730 (Safety), UL 2043 (Plenum), CSA C22.2#14-05 (Safety), CE-IEC 60730, CA Title 24 Compliant

WSTLT

Hospitality Key Card Switches

Leviton key card switches are designed to provide energy savings for the hospitality industry by ensuring that no devices are left on when the room is not in use. These switches control electrical circuits by simply inserting or removing the guest's access card into the device. Both line voltage and low voltage switches are available for application flexibility.

Features and Benefits

- Functions as dependable vacancy sensor when guest leaves and removes card
- Reduce energy costs by ensuring circuits are ON only during occupancy (when keycard is in switch)
- Attractive low profile design with color change kit to meet the most common room designs or décor
- LED lighting illuminates the card slot for easy location in a dark room
- High Inrush Stability (H.I.S. Technology)
  - — Zero crossing circuitry optimizes relay operation for reliable, long-life operation
  - — Robust mechanical latching relay is durable for all load types
- No neutral model (HKSWP-GDX) is specially designed for retrofit applications where neutral wires are not available
- Low voltage model is compatible with applica tions utilizing building automation systems, energy management systems, and lighting control panels
- Fully rated to protect the entire circuit with UL Listing and 20A relay

Hospitality Key Card Switches

Cat. No.	Description
HKSWP-0DX*	Hospitality Key Card switch with color change kit, 120-277V
HKSWP-GDX*	Hospitality Key Card switch with color change kit, 120-277V, no neutral
HKSWP-0LX*	Hospitality Key Card switch with color change kit, 24V
HKSWP-00G*	Faceplate, Gray, 25 pack
HKSWP-00E*	Faceplate, Ebony, 25 pack

*All HKSWP models ship with the Color Change kit — includes a White, Ivory and Light Almond faceplate

HKSWP

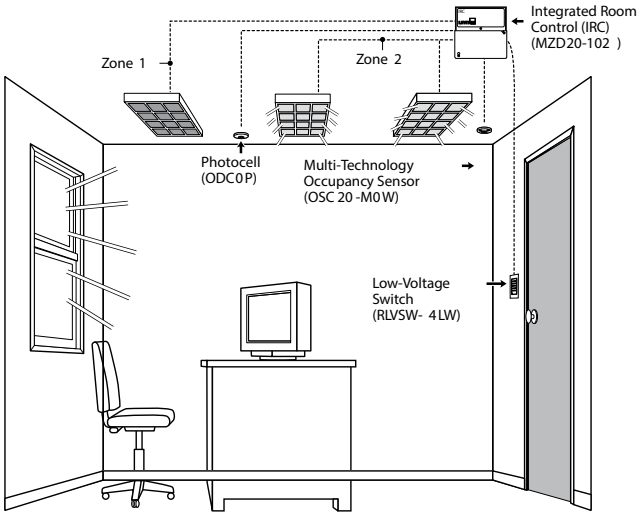
Integrated Room Control (IRC) Daylight Management System

The Leviton Integrated Room Control (IRC) combines single room occupancy sensing, daylight harvesting, 0-10V dimming, Partial ON, Partial OFF and demand response capabilities into a single, easily installed package. IRC features several methods of Ladderless Commissioning™ for install-and-forget convenience. The performance, features and capabilities of the IRC product provide a simple and cost-effective stand-alone energy management solution to maximize energy efficiency and meet energy code mandates for virtually any commercial room control application.

Features and Benefits

- Stand-alone, simplified daylight harvesting with full range dimming
- Demand response capabilities
- 2- or 3-zone control for LED lighting
- Kitted with factory configured sensor, photocell and 4-button switch
- 4-button switch available with ON, Bright, Dim and ON/OFF buttons with optional engraving
- 2 entry stations for individual manual zone control included with 2 zone, 2 relay kit (RCD20-102)
- CA Title 24 2013 Stairwell Application Control
- Provides plug load control when paired with OPP20 Super Duty Power Pack
- Cost-effective energy code compliance
- Ladderless Commissioning provides install-and-forget convenience
- Convenient occupancy sensor and photocell integration
- Autocal automatic photocell target level calibration
- Accepts external time clock input to provide an OFF Sweep Function or modify the partial OFF function
- Simplified integration with emergency systems
- Controls maximum lighting output for additional energy savings potential and Task Tuning
- Daylight switching, full range 0-10V dimming
- Partial ON control for initial light level in either manual switch or occupancy sensor auto modes
- Partial OFF control for minimum continuous light level
- Adjustable minimum light level shut off value
- Emergency input drives auxiliary zones to full

Typical IRC Installation



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Leviton AS HRAE Standard 90.1 2010 Resources

Take advantage of Leviton's wealth of information and tools relating to ASHRAE Standard 90.1 2010. Gain access to code, product, and application information; download the latest design guides as well as the Leviton ASHRAE app. Find it all by going to leviton.com/ashrae

INTE GRATED ROOM CONTROL (IRC) | Daylight Management System

Integrated Room Control (IRC) Load Ratings

- 20A per relay, 120/277V
- 15A per relay, 347V
- Fluorescent, non-dimmed and 0-10V dimmed
- 0-10VDC LED drivers
- 120mA power output for operation of occupancy sensors, etc.

ROOM-IN-A-BOX KITS — Order a Complete System with One Part Number	
Cat. No.	Description
RCD20-102	IRC Dimming Room Control Kit, includes Low Voltage devices; 2-Zone Room Controller w/ (2) 0-10V outputs and (2) 120/277V relays, M/T Occupancy Sensor (OSC20-M0W), 4-Button Switch (RLVSW-4LW), Photocell (ODC0P-00W), 120/277VAC, 50/60Hz
RCD30-101	IRC Dimming Room Control Kit, includes Low Voltage devices; 3-Zone Room Controller w/ (3) 0-10V outputs and (1) 120/277V relay, M/T Occupancy Sensor (OSC20-M0W), 4-Button Switch (RLVSW-4LW), Photocell (ODC0P-00W), 120/277VAC, 50/60Hz
RCD20-C02	IRC Dimming Room Control Kit, includes Low Voltage devices; 2-Zone Room Controller w/ (2) 0-10V outputs and (2) 347V relays, M/T Occupancy Sensor (OSC20-M0W), 4-Button Switch (RLVSW-4LW), Photocell (ODC0P-00W), 347VAC Canadian model, 50/60Hz
RCD30-C01	IRC Dimming Room Control Kit, includes Low Voltage devices; 3-Zone Room Controller w/ (3) 0-10V outputs and (1) 347V relay, M/T Occupancy Sensor (OSC20-M0W), 4-Button Switch (RLVSW-4LW), Photocell (ODC0P-00W), 347VAC Canadian model, 50/60Hz

Individual IRC for Kits	
Cat. No.	Description
MZD20-102	IRC Dimming Version, 2 zone, 2 relay, 120V or 277VAC
MZD30-101	IRC Dimming Version, 3 zone, 1 relay, 120V or 277VAC
MZD20-C02	IRC Dimming Version, 2 zone, 2 relay, 347VAC
MZD30-C01	IRC Dimming Version, 3 zone, 1 relay, 347VAC

IRC

Integrated Room Control (IRC) Lighting Controller

The Integrated Room Control (IRC) Lighting Controller is a Decora ® device for controlling non-dimmable and dimmable luminaries connected to the IRC Controller. The IRC Lighting Controller provides a unique control station with multi-function capabilities available in a 4-button or simple 2-button configuration.

IRC Controller	
Cat. No.	Description
RLVSW-4LW	4-button dimming ON/OFF controller for use with IRC System
RLVSW-2LW	2-button ON, Raise, Lower, OFF controller for use with IRC System
RLVSW-1LW	1-button ON/OFF controller for use with IRC System
RDGSW-4EX*	Color Change Kits
RDGSW-4FX*	Engraved Color Change Kits

*Replace X to indiciate color: White (W), Ivory (I), Light Almond (T), Gray (G), Black (E) and Red (R)

IRC Controller

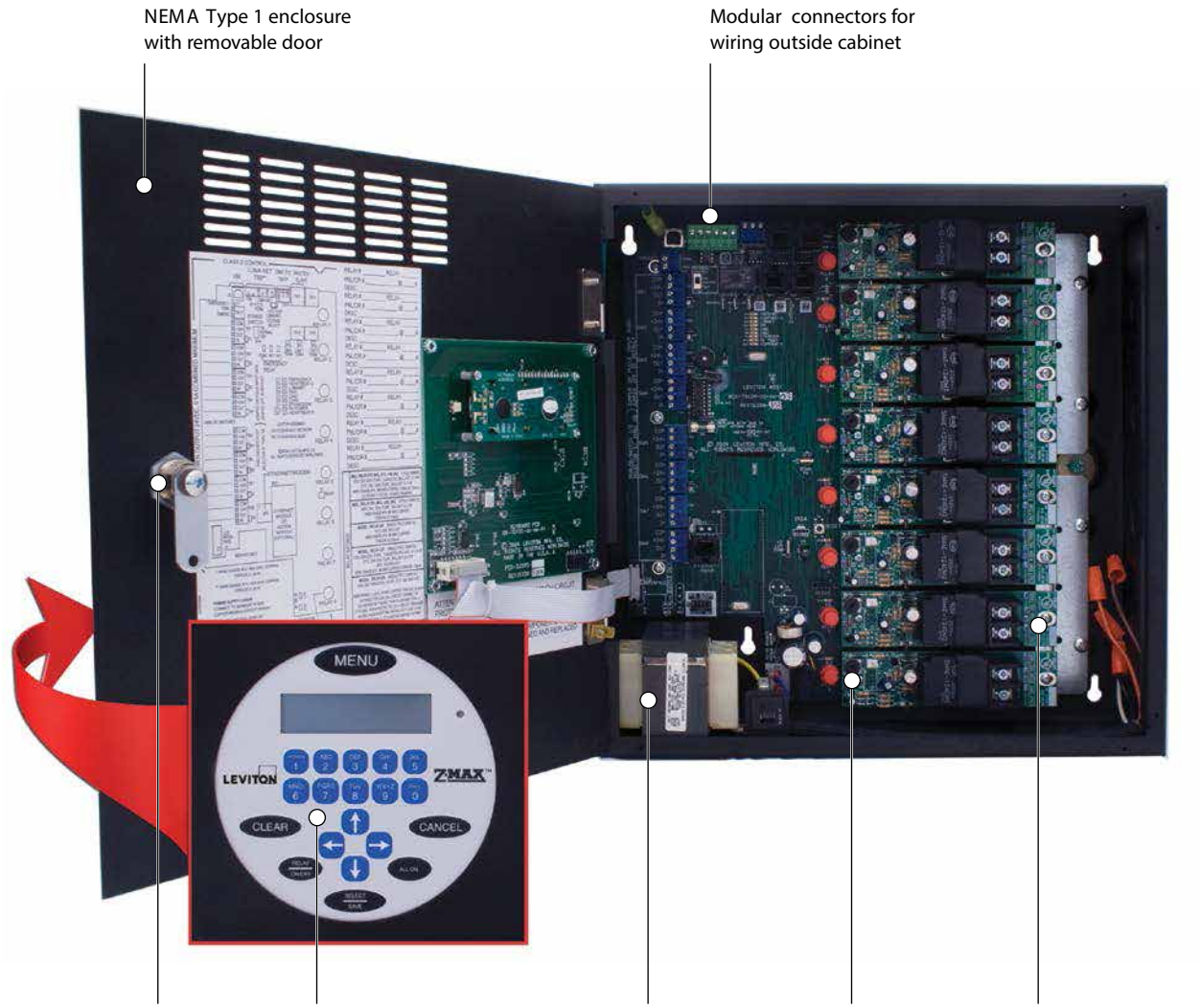
Centralized Control

EZ-MAX ® PLUS Relay Control Panels

EZ-MAX® Plus relay lighting control panels pack power and performance in compact and cost-effective 8-circuit and 24-circuit models. EZ-MAX ® Plus is the ideal solution for smaller, stand-alone applications that do not require field configuration or advanced networking features.

Programming is easy with the EZ-MAX ® Plus with a large LCD screen on the panel or an off-line editor. EZ-MAX ® Plus includes standard programming configurations for occupancy sensors and photocells as well as a built-in astronomical time clock (ATC) with 101 major city and states programmed into the system.

R08BD



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CENTRAL IZED CONTROL | EZ-MAX®

Continued from previous page

EZ-MAX® Plus Relay Control Panels

Features and Benefits

- Large, bright LCD screen with oversized buttons for easy programming
- Easy standard programming configuration:
  - — Occupancy sensors: manual-ON or auto-ON applications
  - — Photocells: interior or exterior application modes
  - — Photocell light level trip points: ON or OFF
- Built-in astronomical time clock and scheduler
  - major cities and states programmed for easy astronomical setup
  - — Sunrise/sunset time clock events
- Auto detection/auto assign of installed network switches
- Enable/disable of low voltage and digital input devices minimizes power consumption
- Clearly labeled access points allow installer to locate optimum knock-out locations
- UL and cUL Listed Industrial Control Equipment and Emergency Lighting Equipment for 120V, 277V and 347V Panels
- ASHRAE 90.1 compliant for 120V, 277V and 347V panels
- CA Title 24 compliant for 120V, 277V and 347V panels
- Rated for 100% load capacity
- Backed by a limited 10-year warranty on relays and a limited 2-year warranty on panels

EZ-MAX® Plus Relay Control Panels

Cat. No.	Description
R08BD-000	EZ-MAX® Plus 8 Panel, 120V, 277V, and 347V, No Relays
R08BD-L04	EZ-MAX® Plus 8 Panel, 120V, 277V, and 347V, (4) 30A (NO/NC) Relays
R08BD-L08	EZ-MAX® Plus 8 Panel, 120V, 277V, and 347V, (8) 2-Pole (NO) Relays
R24BD-000	EZ-MAX® Plus 24 Panel, 120V, 277V, and 347V, No Relays
R24BD-L16	EZ-MAX® Plus 24 Panel, 120V, 277V, and 347V, (16) 30A (NO/NC) Relays
R24BD-L24	EZ-MAX® Plus 24 Panel, 120V, 277V, and 347V, (24) 30A (NO/NC) Relays
R24BD-216	EZ-MAX® Plus 16 Panel, 120V, 277V, and 347V, (16) 2-Pole (NO) Relays
R24BD-224	EZ-MAX® Plus 24 Panel, 120V, 277V, and 347V, (24) 2-Pole (NO) Relays
R08BF-000	EZ-MAX® Plus 8 Panel, 230V, No Relays
R08BF-L08	EZ-MAX® Plus 8 Panel, 230V, (8) 30A (NO/NC) Relays
R08BF-208	EZ-MAX® Plus 8 Panel, 230V, (8) 2-Pole (NO) Relays
R24BF-000	EZ-MAX® Plus 24 Panel, 230V, No Relays

Visit www.leviton.com/ezmaxplus for more information

R088 D

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Leviton California Title 24 Online Design Guide

Take advantage of Leviton's California Title 24 Design Guide on your laptop or mobile device. This comprehensive online guide is searchable by recommended Leviton solution, code article or application. To register go to title24.leviton.com or download the Leviton California Title 24 mobile app, go to leviton.com/apps

EZ-MAX® Plus Relay Cards

EZ-MAX® Plus Panels use individual relay cards for each circuit allowing for the most flexibility in matching the relay type to your specific load requirements. The benefit of a single relay card for a single circuit is that it allows an infinite arrangement of relay types to position in your system and supports individual replacement should the need ever occur.

Features and Benefits

- For maximum equipment protection, standard 30A relay card has a Short Circuit Current Rating (SCCR) of 20,000A
- Relay cards individually replaceable
- Mechanical attachment to panel of each relay card is with a single screw
- Listed for use with ballasted loads
- From the panel, each relay card can be controlled as follows:
  - — Override ON
  - — Override OFF
  - — Locked Override ON
  - — Locked Override OFF
  - — Timed ON
  - — Timed Override OFF
- Backed by a limited 10-year warranty on relays

Relay Cards

Cat. No.	Description
RELAY-L30	1-Pole, N/O or N/C Relay Card with Manual Override, 30A, 120-277V, 347V, 20A Ballast
RELAY-2PL	2-Pole, N/O Relay Card, 20A, 208-480V
RELAY-347	347V, N/O Relay Card, 20A, 347V

RELAY-L30

Accessories

Cat. No.	Description
RAC00-2SB	Low-Voltage Switch Adaptor, reduces required wire count of GE style switch by 1. (installed at the switch itself, cabinet has terminations for ON/OFF/LED/+1/com)
00LVS-xxW*	Button, Low Voltage Switch, White
ZMDSW-xxW*	Button, Digital Switch, White
PCOUT-000	Outdoor Photocell, 0-10V, 50-750FC
PCIND-000	Indoor Photocell, 0-10V, 50-750FC
PCATR-000	Atrium Photocell, 0-10V, 200-2500FC
PCSKY-000	Skylight Photocell, 0-10V, 1000-7500FC

*x = 01, 02, 04, 05, 06, 08 or 10 button switch

GreenMAX® Relay Control Panels

Smart Lighting Control

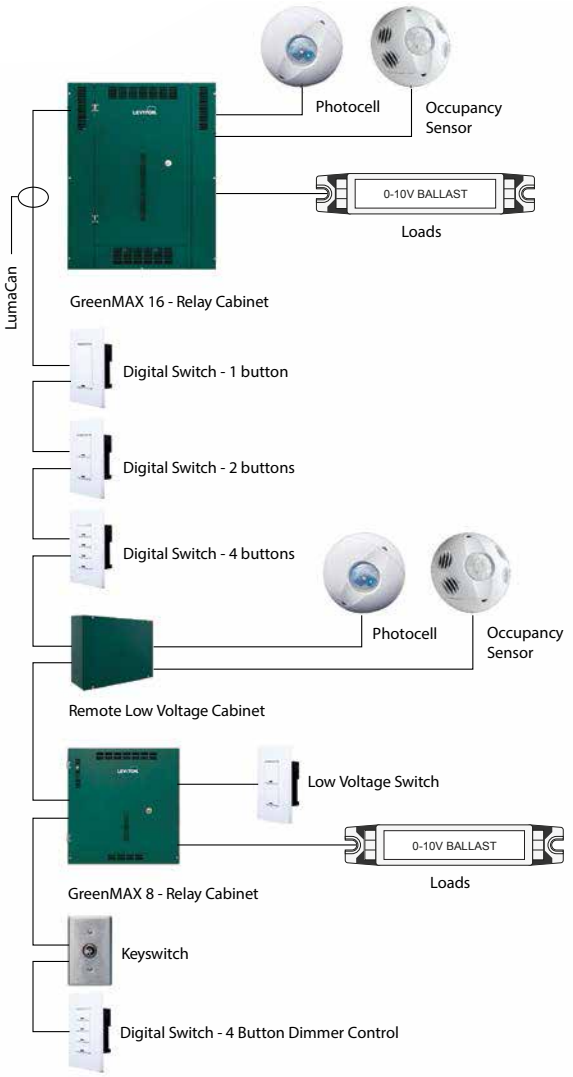
Designed for the contractor, specifier and end user, GreenMAX® Relay Control Panels offer the best performance, reliability, flexibility and energy savings of any relay control available. GreenMAX® easily integrates lighting control strategies that include switching, dimming, pulse control, behavior controls, scheduling, occupancy sensing and daylight harvesting.

Features and Benefits

- Scalable solution offers future expansion opportunities
- Easy energy code compliance and LEED point eligibility
- California Title 24 2013 code compliance, including demand response
- ASHRAE Standard 90.1 2010 compliance
- Eligible for LEED certification points
- Highest Short Circuit Current Rating (SCCR) of 25,000A 277VatAC for maximum equipment reliability
- Robust latching Relay Modules are rated 30A general fluorescent ballast and 20A electronic ballast in 1-pole and 2-pole configurations with the same footprint, available with or without the Return to Closed (RTC) functionality
- 0-10V dimming control with dimming and switching relay modules
- 0-10V and timed control using Leviton's exclusive behavioral design — use with low voltage sensors, photocells and switches
- Daylight harvesting capabilities
  - — Dimming
  - — Switching
  - — Open Loop
  - — Closed Loop
- Programming and monitoring of the system is conveniently done with a portable Handheld Display Unit (HDU) and simplified Behavior settings in the space being controlled rather than from the electrical room
- Modular system was designed to ship the empty cabinet enclosure, complete with doors and covers, to the job site to make installation of the cabinet and conduits easier
- Supports native network communication protocols — BACnet/IP, Ethernet, and LumaCAN — to simplify configuration and ensure start-up simplicity
- Accommodates low voltage inputs such as occupancy sensors, photocells, contact closures, and switches
- Wiring area covers and isolation barriers conceal the circuit wiring and provide maximum arc flash protection when installed allowing work to be done with power on without chance of exposure to high voltage — no Arc Flash Suit needed
- Custom engraving available on digital switches and wall plates
- Relay pulse control provides control of large mechanical contactors

Visit www.leviton.com/greenmax for more information

GreenMAX® Relay Control Panel System

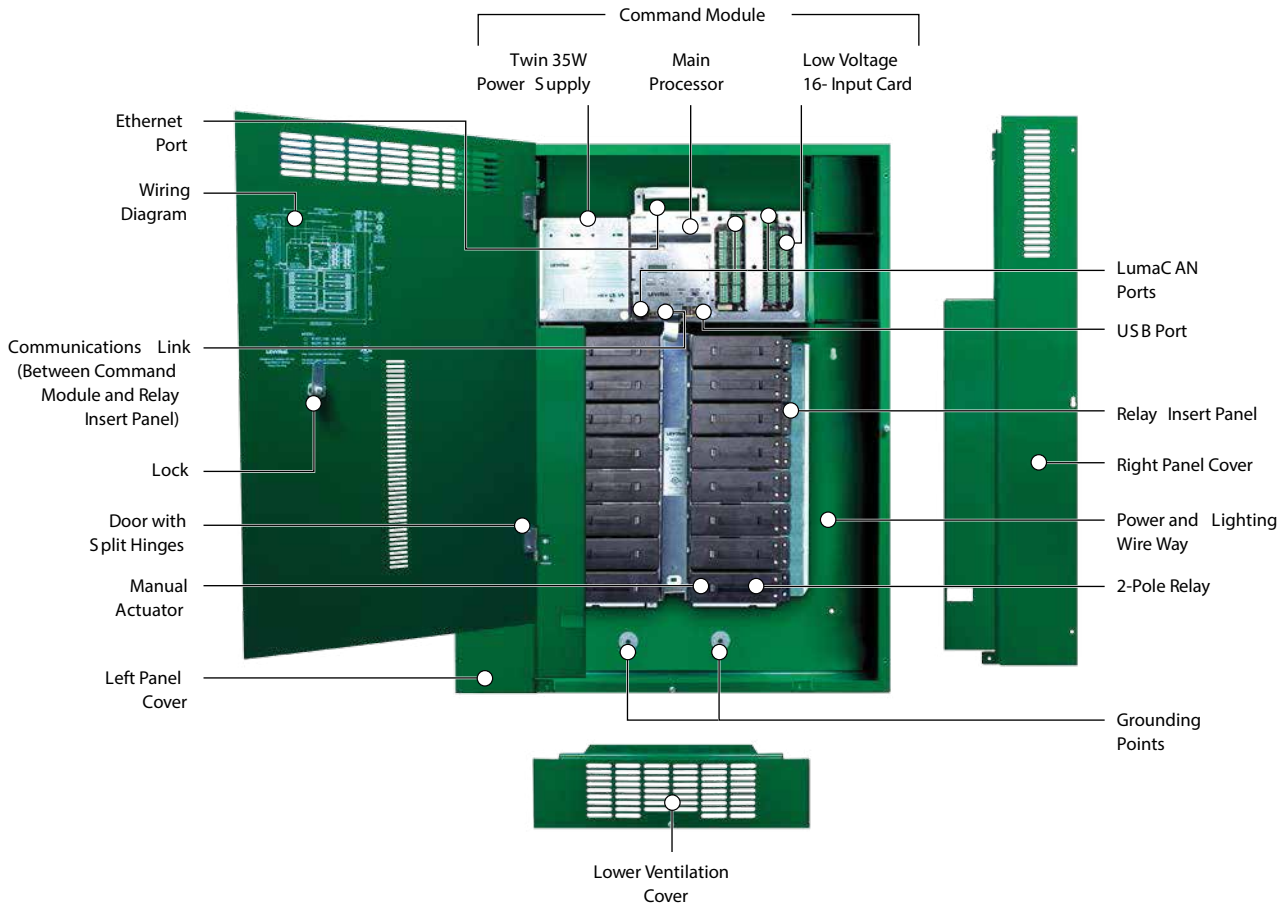


GreenMAX ® Innovation System

Features and Benefits

- Industry leading 25,000A Short Circuit Rating (SCCR) at 277 V AC withstands circuit faults for increased safety
- Native communications network protocols — BACnet IP, Ethernet and LumaCAN — are built into each Command Module to offer unparalleled connectivity; no additional parts or adapters are needed to communicate with other products utilizing these protocols
- CA Title 24 2013 Compliant and Listed
- Meets ASHRAE 90.1 requirements
- Meets California Energy Commission demand response requirements
- Modular system includes separate empty Cabinet enclosures, Command Modules and Relay Insert Panels to minimize handling and subsequent damage during the installation process
- Easy updates — loading firmware is automated and only requires plugging in a flash memory card and pressing a button
- System can be connected via Ethernet or LumaCAN networks
- All network connections are made with RJ45 connectors and cabling is standard CAT6
- Low Voltage Remote Input Card can be combined with LevNet RF™ Self-Powered Wireless Solutions to create a wireless hybrid system of inputs
- All programming and configurations are stored on a MicroSD memory card, which eliminates the need for non-volatile memory
- BMS interface through BACnet I/P

GreenMAX ® Innovative System



CENTRAL IZED CONTROL | GreenMAX® Relay Cabinets and Modules

GreenMAX® Relay Cabinets

Features and Benefits

- GreenMAX system connects together with Cat6 cable and RJ45 connectors; power is provided to devices over this network running the LumaCAN protocol
- Empty cabinet enclosures ship separately from electronic components — Command Module and Relay Insert Panel — making the cabinets lighter and easier to handle and require less effort to install
- Empty cabinet also provides unobstructed access to conduit entry points and reduces the risk of damaging electronics
- Relay cabinets can hold 8, 16, 32 and 48 relays — each with unlimited and flexible configuration capabilities (the 0-10 VDC dimming and switching relay models can be installed in any available relay slot)
- Increased arc flash protection — the cabinet door opens to expose only the low voltage area of the cabinet
- Remote Low Voltage Panels allow the connection points of the low voltage wiring enclosure to be installed closer to the devices it serves, reducing wiring and labor costs and making commissioning or troubleshooting easier
- Takes only eight screws to assemble the internal Relay Insert Panels and Command Module of a 48-Relay GreenMAX® cabinet
- A single relay or group of relays can be separated by sliding an isolation barrier between relays to eliminate the need for an additional cabinet to handle emergency loads and to allow voltages from mixed sources in the same cabinet
- Native communications network protocols — BACnet/IP and Ethernet — are built into each Command Module to offer unparalleled connectivity; no additional devices are needed to communicate with other products utilizing these protocols

R16 TC

GreenMAX® Relay Modules

Features and Benefits

- All GreenMAX® relay modules have a 25,000A at 277 V AC Short Circuit Current Rating (SCCR) for increased reliability and durability
- Rated at 30A general fluorescent ballast and 20A incandescent, HID, electronic ballast, and LED
- All GreenMAX® Relay Modules are 1-pole or 2-pole latching relay types that reduce parasitic energy use. All relay modules are the same physical size, allowing the optimal mix of relays for each application
- Self-contained Dimming and Switching Relay Module in 1-pole configurations features daylight harvesting capabilities
- All four wires required for 0-10V dimming ballast wiring connect directly to the module — no additional control board required
- All relays are latching with a manual actuator that allows users to manually bypass the system to turn lights ON or OFF without CPU power
- LED Ready

RELAY-1 DS

Handheld Display Unit (HDU)

Features and Benefits

- Allows programming, system configuration and scheduling to be done in the space being controlled rather than in the electrical room to make commissioning and set-up functions easier
- Configure and control the entire GreenMAX® system (or multiple systems) from any convenient network access point — relay cabinets, switches or remote low voltage cabinets with just one HDU
- Provides interface with all devices and relays in the system
- Can be stored in the cabinet or designated docking station
- Communicate via LumaCAN
- 7 hour run time on a single full charge ; batteries charge when plugged into the LumaCAN network
- Astronomical clock — sunrise/sunset
- HDU need not be connected to system during operation. The full computing power of a PC remains in the palm of your hand
- Comes complete with a set of rechargeable batteries

Handheld Display Unit (H DU)

GreenMAX® Switches

Features and Benefits

- GreenMAX® digital key switches provide secure button presses on the network
- Available in 1, 2, 4 and 8 button configurations, and key switch version
- Custom engraved labeling available on switch buttons and plastic screwless wallplates; engraving not available on stainless steel wallplate
- Switch colors available: White, Light Almond, Ivory, Gray, Black, and Red; all come with a matching wallplate; key switch comes with a stainless steel wallplate and tamper-resistant screws (tool included)
- Each digital switch button has a green LED pilot light to report the corresponding relay state
- 1, 2, 4, and 8 button switches can be ganged together in wallboxes (multi-gang wallplate sold separately)
- RJ45 connectors to provide inline connection to the LumaCAN network
- Any 4-button switch model can be configured to control 0-10 VDC dimming circuits
- Easy-to-access port on top of switch provides connectivity for the GreenMAX® HDU


RDGSW-1DW


RDGSW-2DW


RDGSW-4DW


RDGSW-1KS
Front with Faceplate

LEVITON

Programming GreenMAX® with Lighting Behaviors

Lighting Customization

GreenMAX® controls allow different behavior settings to be programmed throughout the day. Using the HDU, any room can be set with just a few button selections:

- Select the behavior desired and the time behavior will take place
- Choose any additional behavior transitions and the time transition will take place
- Optional override to sunrise/sunset astronomical clock prevents lights from activating prematurely in summer or too late in winter
- Set behaviors to scale on a daily, weekly, monthly or holiday schedule
- Up to 24 behaviors per 24 hour period can be programmed and can be as close together as one minute

Simple and Easy Programming

- Using the HDU, select the number on the screen corresponding with the desired behavior
- Enter time and dates to be in effect and any corresponding behavior modifiers. Behaviors can be set for entire system or individual rooms/relays

GreenMAX® Lighting Behaviors

Number	Description	Occupancy Sensor	Photocell	Switch	Time
B1	Lights turned ON with the switch. Can be turned OFF with switch. Occupancy sensor will turn OFF upon vacancy.	OFF	—	ON/OFF	—
B2	Lights turned ON with the occupancy sensor. Can be turned OFF/ON with switch. Occupancy sensor will turn OFF upon vacancy.	ON/OFF	—	ON/OFF	—
B3	Occupancy sensor turns lights ON/OFF.	ON/OFF	—	—	—
B4	Switch ON/OFF.	—	—	ON/OFF	—
B5	Turns ON, triggers a Blink Warn sequence, an OFF blink followed by variable ON delay. Switch interrupts sequence and starts override timer. Will automatically turn OFF relay if override timer reaches zero.	—	—	ON/OFF	Blink/OFF
B6	Turn ON at specific time.	—	—	—	ON
B7	OFF at specific time.	—	—	—	OFF
B8	Occupancy sensor turns ON lights with occupancy. Measured light level above photocell trigger point turns OFF or keeps lights OFF. Below setpoint allows control by Occupancy Sensor. Occupancy sensor turns OFF lights with vacancy.	ON/OFF	OFF	—	—
B9	Switch turns ON/OFF lights. Measured light levels above Photocell trigger point turns OFF or keeps lights OFF. Below setpoint allows control by occupancy sensor. Occupancy sensor turns OFF lights with vacancy.	OFF	OFF	ON/OFF	—
B10	Occupancy sensor turns ON lights with occupancy. Measured light level above photocell trigger point turns OFF or keeps lights OFF. Below setpoint allows occupancy sensor control. Switch can turn ON/OFF lights by overriding occupancy sensor control. Occupancy sensor will turn OFF lights upon vacancy.	ON/OFF	OFF	ON/OFF	—
B11	Switch ON/OFF. Measured light level above photocell trigger point turns OFF or keeps lights OFF. Below setpoint allows switch control.	—	OFF	ON/OFF	—
B12	Turns ON at specified time. Measured light level above photocell trigger point turns OFF or keeps lights OFF. Below setpoint relinquishes control to the constant ON state.	—	OFF	—	ON

Behavior Details		
Behavior	Description	Coverage
Switch OFF Delay	When relay is turned ON with the switch, length of time before relay will automatically turn OFF.	2.5, 5, 10, 15, 30, 60, 90, 120 minutes, and Constant ON
Occupancy Sensor OFF Delay	When vacancy is determined, length of time before relay will automatically turn OFF.	0, 0.5, 2.5, 5, 10, 20, 30 minutes
Photocell Delay	Delay before action is taken after a photocell trigger point has been crossed.	0, 0.5, 2.5, 5, 10, 20 minutes
Blink Warn - Duration	Length of the OFF Blink used to notify occupants that an OFF sequence has been initiated.	0.5-25.4 seconds
Blink Warn -Delay	Specified period of time that follows the Blink. If button is pressed during this period, the delay timer stops and the Override Time starts. If no buttons are pressed, the lights will turn OFF.	1-254 minutes
Blink Warn - Override Time	The relay will remain ON for the duration of this timer. A new Blink Warn sequence will be initialized at the end of this period. If the relay had been OFF previously and a button is pressed to turn the relay ON, this timer will be started again.	4-254 minutes

SPOTLIGHT
Leviton ASHRAE Standard 90.1 2010 Resources

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LEVITON

CENTRAL IZED CONTROL | GreenMAX® Components

GreenMAX® Innovation System

GreenMAX® Innovation System Components	
Cat. No.	Description
Tubs and Covers (all cabinets are surface mount with a locking door)	
R08TC-100	GreenMAX® Relay Cabinet, 8-Relay Size, NEMA 1
R16TC-100	GreenMAX® Relay Cabinet, 16-Relay Size, NEMA 1
R32TC-100	GreenMAX® Relay Cabinet, 32-Relay Size, NEMA 1
R48TC-100	GreenMAX® Relay Cabinet, 48-Relay Size, NEMA 1
Command Modules (includes power supply and main processor unit, option 24Vdc Low Voltage Input Card)	
RPM00-300	Main Command Module, 100-277V AC, 50/60 Hz, no inputs, LumaCAN3
RPM08-308	Main Command Module with 8-Port Low Voltage Input Card, 100-277V AC, 50/60Hz, LumaCAN3
RPM16-316	Main Command Module with 16-Port Low Voltage Input Card, 100-277V AC, 50/60Hz, LumaCAN3
Panel Interiors (all panels are 16-position, rated 30A, 120-230-277/347V AC, 50/60Hz)	
R0800-000	Relay Insert Panel, Empty with 8 Spaces
R1600-000	Relay Insert Panel, Empty with 16 Spaces
R1616-1CB	Relay Insert Panel with 16 1-Pole Basic Relays
R1616-1DS	Relay Insert Panel with 16 1-Pole Dimming and Switching Relays
R1616-1TB	Relay Insert Panel with 16 1-Pole Basic Relays
R1616-2CB	Relay Insert Panel with 16 2-Pole RTC Relays
R1616-2TB	Relay Insert Panel with 16 2-Pole Basic Relays
Handheld Display Unit (HDU)	
RHDU1-300	Handheld Display Unit, Cabinet Mounting, LumaCAN3
RHDU1-001	Handheld Display Unit, Mounting Bracket Requires 2 Gang Back Box
Remote Inputs with Power Supply (all cabinet power supplies rated 120-277V AC, 50/60Hz)	
RLV08-308	Remote Low Voltage Input Cabinet, 8 Inputs, NEMA 1 Enclosure, LumaCAN3
RLV16-316	Remote Low Voltage Input Cabinet, 16 Inputs, NEMA 1 Enclosure, LumaCAN3
Relays	
RELAY-1CB	GreenMAX® Latching Relay, 1-Pole RTC Basic
RELAY-1DS	GreenMAX® Latching Relay, 1-Pole dimming and switching, 0-10VDC Dimming, Sinking, LED Control
RELAY-1TB	GreenMAX® Latching Relay, 1-Pole Basic
RELAY-2CB	GreenMAX® Latching Relay, 2-Pole RTC
RELAY-2TB	GreenMAX® Latching Relay, 2-Pole Basic
RELAY-BFM	Blank Filler Module
Digital Switches and Color Change Kits	
RDGSW-1Cx*	GreenMAX® Digital Switch, 1-Button, LumaCAN3
RDGSW-2Cx*	GreenMAX® Digital Switch, 2-Button, LumaCAN3
RDGSW-4Cx*	GreenMAX® Digital Switch, 4-Button, LumaCAN3
RDGSW-8Cx*	GreenMAX® Digital Switch, 8-Button, LumaCAN3
RDGSW-1KS	GreenMAX® Keyswitch
RDGSW-1Ey**	GreenMAX® 1-Button Color Change Kit
RDGSW-2Ey**	GreenMAX® 2-Button Color Change Kit
RDGSW-4Ey**	GreenMAX® 4-Button Color Change Kit
RDGSW-8Ey**	GreenMAX® 8-Button Color Change Kit
RDGSW-1Fy**	GreenMAX® 1-Button Engraved Color Change Kit
RDGSW-2Fy**	GreenMAX® 2-Button Engraved Color Change Kit
RDGSW-4Fy**	GreenMAX® 4-Button Engraved Color Change Kit
RDGSW-8Fy**	GreenMAX® 8-Button Engraved Color Change Kit
Cabinet Accessories	
RGBAR-008	GreenMAX® Voltage Barriers for 8-Relay Cabinets
RGBAR-016	GreenMAX® Voltage Barriers for 16-, 32- and 48-Relay Cabinets

*Replace x with the following color codes — (W) White, (I) Ivory, (T) Light Almond and (G) Gray .
**Replace y with the following color codes — (W) White, (I) Ivory (T) Light Almond, (G) Gray, (E) Black, (R) Red

Track Light Limiting Panel (TLLP)

The Track Light Limiting Panel (TLLP) enables designer lighting to easily meet energy code watt density requirements. Limiting branch circuit volt-amperage rating with the TLLP sets a fixed power consumption limit for lighting installations instead of calculated values based on watts per linear foot of the track. Track lighting can now be specified for as many linear feet of track as desired without violating code specifications.

Features and Benefits

- Enables designer lighting to easily meet energy code watt density requirements
- Assists track lighting schemes in meeting energy code regulations including Title 24 2013, ASHRAE 90.1 and City of Seattle guidelines
- California Title 24 2013 Track Light Supplementary Overcurrent Protection Panel
- Simplifies load calculations by using volt-ampere rating of the breaker as opposed to calculated values on the track
- Reduces installation costs
- Available in 16 or 32 circuit panels
- NEMA 1 surface or flush mount enclosure
- Factory configured to your specifications —arrives ready to install

Track Light Limiting Panel (TLLP)

Track Light Limiting Panel (TLLP) Ordering Information

G ☐☐ ☐ ☐ - 1 ☐

SPACES	MOUNT	VOLTAGE	# OF NEMA 1 CIRCUIT BREAKERS INSTALLED
16 = 16 Spaces 32 = 32 Spaces	F = Flush Mount S = Surface Mount	1 = 120V AC 7 = 277V AC	Indicate 2-digit multiple of 2, available from 02-32*

Note: Specify breaker size and configuration on configuration form.
Note: Completed configuration form must accompany order.
*Available breaker sizes: 0.5A, 1A, 2A, 3A, 4A, 5A, 6A, 7A, 8A, 10A, 13A, 15A, 16A, 20A, 25A, 30A, 32A, 40A, 50A, 60A

Distributed Control
S ECTOR ® Intelligent Digital Lighting Control System

The S ECTOR ® Intelligent Ballast and Lighting Control System line combines occupancy sensing, daylighting and flexible dimming lighting control in one conveniently integrated system that saves time, money and energy. This topology-free, polarity-free system allows the entire network to be installed using the same wiring for all components and accessories, making it one of the easiest lighting control systems to install. All components are on a single bus, with accessories connected to the network and not the ballast. The S ECTOR ® family of products provides a scalable solution that offers maximum flexibility and coverage in any application — from a single room to a campus of buildings in retrofit or new construction projects.

Features and Benefits

S ECTOR ® Intelligent Digital Lighting Control System

- California Title 24 2013 and ASHRAE Standard 90.1 2010 compliant
- Topology free
- Polarity free — Class 1 and Class 2 wiring/standard building wiring in same conduit as power wiring
- No special terminations or installation requirements
- Personal workspace lighting control from user's desktop for user comfort
- Easy to commission — ultimate flexibility in design, installation and configuration using a drag-and-drop GUI interface with Illustrator layout tool
- Easy to design, easy to install and easy to maintain
- Sector 5-button digital switch has five lighting levels for switched lighting applications:
  - — Max – Lights are at maximum level, system is in override status
  - — Bright – Turns individual zones ON and OFF depending on daylighting levels
  - — On – Lights are on for Daylight Harvesting
  - — Off - Lights are completely OFF
- Sector 2-Button digital switch - ON/OFF only

Ideal for Use In

- Hospitals, offices buildings, medical offices, universities, labs, restaurants, government facilities, and any other locations that could benefit from the cost savings and energy efficiency of a controlled lighting environment

Advantages

- Easy to Use with 0-10V LED drivers
- Easy to Design — scalable system for small and large applications; devices that connect directly to the network can be installed anywhere in the system
- Simple to Install — topology free, polarity independent, and operates on standard Class 1 or Class 2 wiring throughout the entire system to reduce installation costs by as much as 35%; standard wire is found everyin contractor's inventory
- Flexible to Commission — configuration and commissioning is completed from the PC application without physically having to go to each device
- Ultimate time-saving design flexibility: Easily integrate various lighting control strategies — switching, distributed dimming, scheduling, occupancy sensing, and daylight harvesting — in one system offering future expansion opportunities
- Easy energy code compliance and eligibility for LEED points
- Control and customization from occupant's desktop as well as remote control and administrator software interface
- SectorFlex system controls S ECTOR ® and non- S ECTOR ® 0-10V ballasts or LED dimmers by any manufacturer, allowing for flexibility in implementation
- Minimal installation time — color coded easy-insert connectors simplify wiring and minimize installation time
- Miswire protection protects from lamp failure if wired incorrectly
- Smooth fade through dimming range of 1% to 100% for flicker-free dimming
- Lamps turn on at any dimmed level without flashing to full brightness, extending lamp life and providing a better user experience
- Non-volatile memory restores all ballast settings after power failure

Visit www.leviton.com/sector for more information

SECTOR® Intelligent Component Features

SECTOR® Intelligent Dimming Fluorescent Ballasts

- Intelligent dimming offers higher energy savings and more flexibility than traditional switching
- Dimming fluorescent ballasts allow 100% to 1% dimming capabilities
- Ballasts have an addressable labeling system for easy programming and personal lighting control

SECTOR® Relay

- Provides switching control for non-dimming devices and 1-10V control for synching and sourcing controllable loads like LED drivers, ballasts and incandescent dimmers
- Used for both switching-only loads and dimming loads controllable with a 1-10V control signal
- Provides additional system design options, allowing control of ballast, incandescent, LED, cold cathode or other sources that may attempt a 0-10VDC control input

SECTOR® Bus Controller

- Contains the brain and power supply for the SECTOR® system in a single component
- Controls a maximum of 64 devices on a system with the ability to expand and include a maximum of 250 systems

SECTOR® Occupancy Sensors

- Turns lights ON/OFF based on vacancy or occupancy
- Multi-technology and Infrared (PIR) models available
- Self-adjusting settings continuously analyze and adjust sensitivity, timer operation and long-term performance for reduced user complaints

SECTOR® Photocell

- Daylight harvesting capabilities offer consistent lighting at desired level for greater visual comfort

SECTOR® Digital Switch

- User controls desired light level at the push of a button
- 5-button (MAX, BRIGHT, DIM, OFF, Daylight Harvesting ON)
- 2-button (ON, OFF) available

SECTOR® Low Voltage Interface

- Allows integration of SECTOR® System with non- SECTOR® occupancy sensors and photocells
- Provides for cost and installation-time savings by utilizing existing site components

SECTOR® Handheld Remote

- User controls desired light level at the push of a button (ON, MAX, BRIGHT, DIM, OFF)

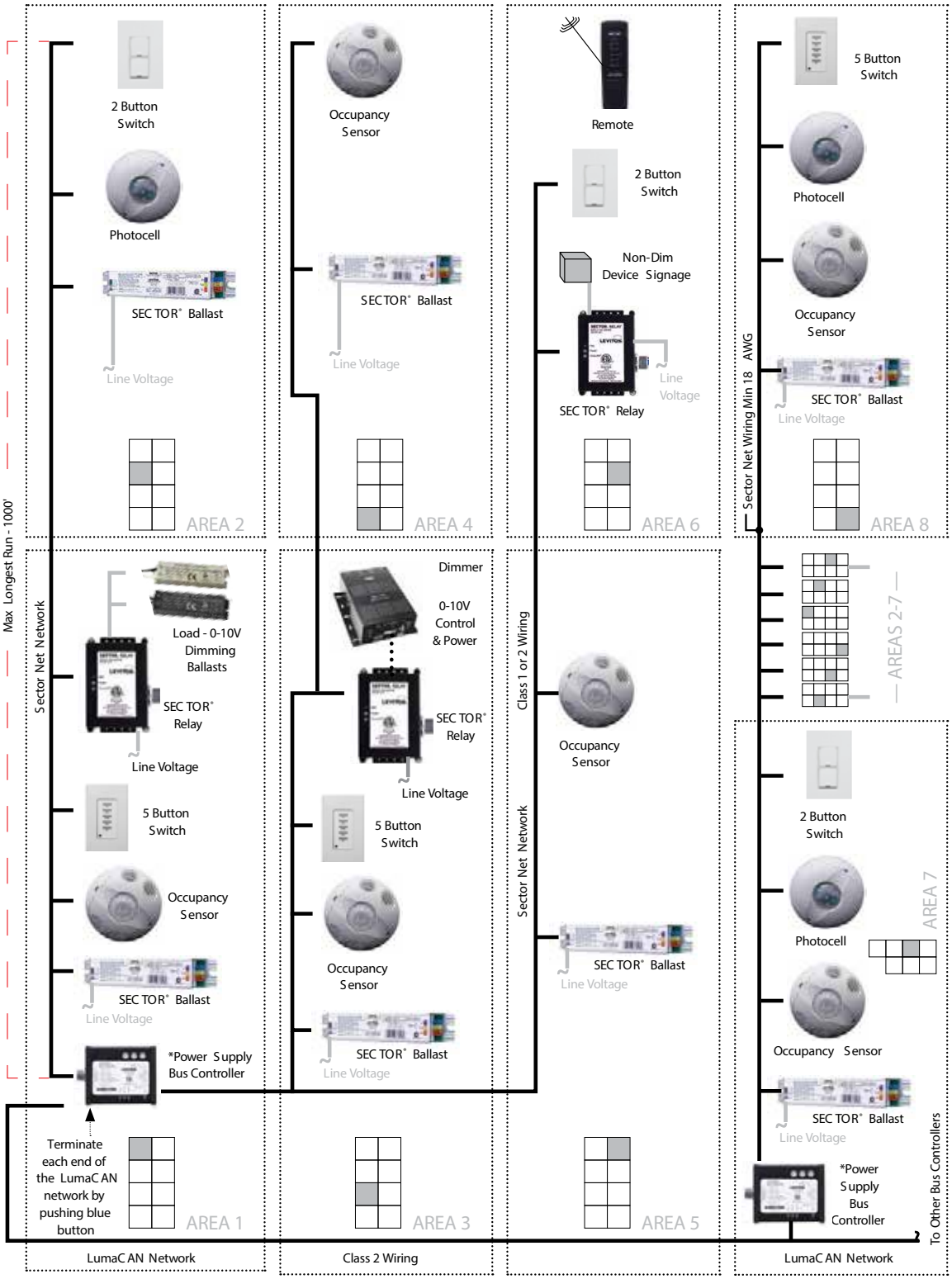
SectorNET Software

- Personal Dimming Option (PDO) — individual control for the lights above a user's workspace from their desktop PC
- Central control — facility personnel and lighting administrators can reconfigure control as needed with Illustrator layout tool
- Computer needed only to initially configure system. Afterward, SECTOR® can run as an independent system
- Commissioning quickly associates fixtures to SECTOR® devices for easy configuration that can be remotely controlled
- Data acquisition for energy usage monitoring
- Ladderless commissioning — remotely configure and control system components
- 3 levels of load shed allow user to automatically adjust power consumption across the entire system by simply clicking a button

LEVITON

DISTR IBUTED CONTROL | SECTOR ® Components Systems

S ECTOR ® Intelligent Component Systems



- Wiring may follow any topology (daisy chain, star, home run, etc.) or "T" at any point in the network. SectorNet Network is also polarity free
- Up to 8 areas per Bus Controller
- Max 256mA per Power Supply
- 64 SectorNet devices per Bus Controller
- Max distance between Bus Controller & last device on line is 1,000'/304 Meters
- Max 32 input devices (Switch, Photocell, or Occupancy Sensor)
- Up to 250 devices are supported on each LumaCAN subnet. A Bus Controller counts as (1) device

SECTOR® System Component Ordering Information

Features and Benefits

- Light level dimming range from 1% to 100% — <1% dimming for no more cost than 10% dimming
- Universal input — works with both 120/277V and 50/60Hz
- Flexible — integrates into existing installations with a variety of off-the-shelf fixtures
- Cost savings and energy conservation enabled when combining dimming, daylight harvesting and demand response controls

SECTOR® System Components

Cat. No.	Description
SBP00-00M	SECTOR® Bus Controller/Power Supply, 120-277V, 50/60Hz
SBCS0-L00	SECTOR® Relay, 120-347V 20A Output, 120-277V, 50/60Hz Input
SEN04-000	SECTOR® 4-Module Enclosure (to hold a maximum of 4 Bus Controllers)
OSC04-ISW	SECTOR® PIR Occupancy Sensor, White, 450SF
OSC20-MSW	SECTOR® Multi-Technology Occupancy Sensor, White, 2000SF
ODC0P-0SW	SECTOR® Photocell
SDS00-15W	5-Button Digital Switch, White
SDS00-12W	2-Button Digital Switch, White
SHH00-000	SECTOR® Handheld Infrared Remote Controller
SLM00-000	USB-to-LumaCAN Adapter
SIF00-000	SectorNET Administrative Software
SIFPD-000	SectorNET Client Software
SLIQD-000	SectorNET Low Voltage Interface Module for Occupancy Sensors and Photocells
SLIQS-000	SectorNET Low Voltage Interface Module for Switches, 5-Channel

SBCS0-L00

SECTOR® Intelligent Dimming Ballasts Ordering Information

SECTOR® T-8 Ballasts — S □ □ □ 8 - □□ M

- BALLASTS: D = SectorNet ballasts
- # OF LAMPS: 1 or 2
- CAN SIZE: F = 9.5" can; J = 16.5" can
- WATTAGE: 17 = 17 Watts; 25 = 25 Watts; 32 = 32 Watts

SECTOR® T-5 Ballasts — S □ □ J 5 - □□ M

- BALLASTS: D = SectorNet ballasts
- # OF LAMPS: 1 or 2
- WATTAGE: 14 = 14 Watts; 21 = 21 Watts; 28 = 28 Watts; 35 = 35 Watts

SECTOR® T-5HO Ballasts — S □ 1 J 5 - □□ M

- BALLASTS: D = SectorNet ballasts
- WATTAGE: 24 = 24 Watts; 39 = 39 Watts; 54 = 54 Watts

VerifEye™ Submetering Solutions

SMARTer Metering. SMARTer Control. REAL Savings.

The Benefits of Submetering

Leviton VerifEye™ submeters determine exactly when and where energy is being used; information that can be both a powerful motivator and a significant money-saver to help organizations better manage costs and conserve energy. Studies have proven that once tenants became accountable for their energy consumption, it is significantly reduced. This kind of accountability can result in long-term cost savings from 15 to 20 percent.

Excellence Comes Standard

- ModBus RTU only for Series 4000
- ModBus RTU (RS485) and Pulse output as standard features
- Ethernet Options for Series 3500:
  - — ModBus TCP/IP
  - — BACnet IP
- Isolated Pulse Outputs (10Wh and 1kWh), all models
- Large LCD displays
- Available as kits with required Current Transformers (CTs)
- Work with Leviton VerifEye™ Submetering Solutions communications products and software options
- Conform to all applicable standards of ANSI C12.1, ANSI C12.20, and UL/cUL Listed Energy Monitor per CCN FTRZ
- Utilize split core, solid core, and Rogowski (Series 4000 only) CTs
- Installer-friendly feedback features with reverse phase indicator lights
- Leviton Series 1000, 2000, and 3500 meters are available in an indoor steel or outdoor NEMA 4X enclosure; Series 4000 and 4100 meters available as DIN rail and NEMA 4X
- Measure and verify energy usage for load management, tenant billing, energy tracking, LEED rating certification, etc.

Leviton Metering Philosophy

Consultative Approach

Each project is tailored to each customer's needs — from a basic meter hardware system to an advanced communication system that includes BAS/BMS integration

Open Protocol

Options for future upgrades and additions are available with Leviton's flexible solution — no need to purchase an entire new system

Scalable System

Ease of communication with use of Leviton Automated Metering (AMR) and Data Acquisition Hub (DAS) equipment

SPOTLIGHT
Leviton Energy Code Apps

ASHRAE 90.1 and Title 24 apps, gain easy access to a wealth of the lighting control code requirements on your mobile device. These valuable reference tools allow you to search by application, article language and recommended Leviton solutions. Get inspiration for designing energy code compliant applications by viewing diagrams and summaries of the requirements met for recommended solutions. Go to leviton.com/apps for more information.

VerifEye™ System Architecture

Leviton offers a versatile range of meters, communication products and software engineered to suit a wide range of data requirements and applications. Below is an overview of a typical submetering system, product choices may vary depending upon specific system requirements. See the pages listed below or visit www.leviton.com/verifeye for more information.

Metering

VerifEye™ Meters and Meter Kits

See pages N-60 to N-70 for complete offering

Series 1000
Outdoor Single Phase Meter

Series 3500
Indoor Advanced Multi-Function Meter

Large Mini Meter
Multiple Meter Unit MMU

Series 8000
Multiple-Point High Density Meter

Series 4000
Industrial ModBus Meter

Water

Gas

Steam

VerifEye™ Communications Systems

See pages N-71 to N-75 for complete offering

Communication Protcols:
- ModBus RS485 Serial Network
- ModBus TCP
- Pulse, Analog

A8810
EMB Hub Data Acquisition Server

A8911
HD Pulse Module
Metering Communication Module

R9120
ModHopper
Metering Communication Expansion Component

Data Pushed:
- HTTP
- FTP
- CSV/XML

LAN

Cloud

Data Collection

VerifEye™ Software

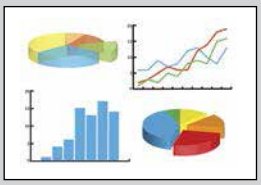
See pages N-76 to N-80 for complete offering

VerifEye™ BillSuite Software
Energy Usage Analysis

Building Management System

VerifEye™ Energy Manager
Annual Report

VerifEye™ Building Manager Online (BMO)
2.0 Status Report



3rd Party Software

Onsite Software | Web-Based Software

N

Energy Management

LEVITON

VER IFE Y E™ | Comparison Guide

VerifEye™ Metering Solutions Quick Comparison Guide

Residential			Residential/Commercial	
Specifications	Mini Meter™ Kits	0.5% Mini Meter Kits	Series 8000 Multiple Point High Density Meter	EMH+ Integrated Meter & Hub
kWh Meter			kWh Meter	
Phase/Wiring	1PH 3W	1PH 3W	1PH 2W 1PH 3W WYE 3PH 3W Delta 3PH 4W WYE	3PH 3W Delta 3PH 3W WYE 1PH 2W 3PH 4W WYE
Voltage Configurations	120/208/240	120/208/240	120/208 120/240 240/416 277/480 480*	208-480 120, 240, 277
Amperage	100-200A 100, 200	200A	100-5000A 100, 200, 400, 800, 1600, 3000, 5000	100-5000A 100, 200, 300, 400, 600, 1600
Measuring Parameters	kWh	kWh	kWh	kWh, kVARh, kW, kVAR, kVA, Voltage L-L, L-N, Current, Power Factor, Frequency Per Phase: Voltage L-L, L-N, Current, Power, Power Factor
Communications Protocol (Standard)	Isolated Pulse Output	Embedded line powered AMR equipment, wireless network	ModBus TCP ModBus RTU (RS-485) BACnet IP	ModBus/RTU, ModBus/TCP, TCP/IP, PPP, HTTP/HTML, FTP, NTP, XML, SNMP-Trap. Optional BACnet/IP
Current Transformer Options	Split Core Solid Core	Solid Core	Split Core	Split Core
Enclosure Options	OEM Module Indoor Plastic Flush Mount NEMA 1 Outdoor NEMA 4x MMU NEMA 4x	Indoor Flush Mount Indoor Surface Mount	Indoor JIC Steel NEMA (MMU)	Indoor Plastic Surface Mount
Display Type	LCD or Mechanical Counter	LCD	Local LCD, Scroll	LCD Touch Screen
Accuracy	C12.10 +/- 0.5% with paired CTs	C12.20 0.5% with paired CTs	C12.10 & C12.20 +/- 0.5%	C12.10 1% from 2% to 100% of full scale
Multiple Meter Unit (MMU) Configuration	Medium: 2-4 Meters Large: 5-8 Meters Extra-Large: 9-19 Meters	—	3PH: 8 points 2PH: 12 points 1PH: 24 points	—
Data Storage	Last Reading — Cumulative	Last Reading — Cumulative	Last Reading — Cumulative, Data in 15 min intervals	Last reading — 1 to 60 minutes, User Selectable (default 15 minutes)

*With potential transformer — consult factory for availability



VerifEye™ Metering Solutions Quick Comparison Guide

Commercial										
Specifications	Series 1000 Single Phase Meter Kits		Series 2000 Three Phase Meter Kits	Series 3500 Multi-Function Ethernet Meter Kits				Series 4000 Industrial ModBus Meter Kits	Series 4100 Industrial ModBus RTU Meter Kits
	kWh Meter w/Optional Demand			kWh Meter Communications Protocols				kWh Meter	
Phase/Wiring	1PH 2W	1PH 3W	3PH 4W WYE	1PH 3W WYE	3PH 3W Delta	3PH 4W WYE	3PH 4W High Leg Delta	3PH 3W/4W	3PH 3W/4W
Voltage Configurations	120 277	120/208 120/240 277/480	120/208 277/480	Universal Voltage (120-480V)				Universal Voltage (90-600V AC)	Universal Voltage (90-600V AC)
Amperage	100-800A 100, 200, 400, 800		100-1200A 100, 200, 400, 800, 1200	100-5000A 100, 200, 400, 800, 1600, 3000, 5000				Split Core: 100, 200, 400, 800A Rogowski: 20-5000A	Split Core: 100, 200, 400, 800A Rogowski: 20-5000A
Measuring Parameters	kWh Optional kW (peak demand reset)		kWh Optional kW (peak demand reset)	kWh kW (peak demand reset) Meter Totals: kVAR, kVA, Power Factor & kw By Phase: Volts, Watts, Amps, Power Factor Interval Data				kVARh, kW, kVAR, kVA, Voltage L-L, L-N, Current, Power Factor, Frequency	kVARh, kW, kVAR, kVA, Voltage L-L, L-N, Current, Power Factor, Frequency
Communications Protocol (Standard)	Isolated Pulse Output		Isolated Pulse Output	—		Isolated Pulse Output Ethernet ModBus TCP/IP BACnet IP		Isolated Pulse Output ModBus/RTU	ModBus/RTU and BACnet MS/TP
Current Transformer Options	Split Core Solid Core		Split Core Solid Core	Split Core Solid Core				Split Core .333V secondary output only Rogowski Coil: lengths available in 12", 18" and 24"	Split Core .333V secondary output only Rogowski Coil: lengths available in 12", 18" and 24"
Enclosure Options	Indoor JIC Steel NEMA 1 Outdoor NEMA 4x		Indoor JIC Steel NEMA 1 Outdoor NEMA 4x MMU JIC Steel NEMA 1	Indoor JIC Steel NEMA 1 Outdoor NEMA 4x				Indoor DIN Rail Mount Outdoor NEMA 4X	Indoor DIN Rail Mount Outdoor NEMA 4X
Display Type	Local LCD		Local LCD	Local LCD, Scroll				LCD, Scroll	LCD, Scroll
Accuracy	C12.10 & C12.20 +/- 0.5%		C12.10 & C12.20 +/- 0.5%	C12.10 & C12.20 +/- 0.5%				C12.20	C12.20 +/- 0.5%
Multiple Meter Unit (MMU) Configuration	—		Medium: 2-4 Meters Large: 5-8 Meters Extra-Large: 9-19 Meters	—				—	—
Data Storage	Last Reading — Cumulative, Peak Demand with Key Reset (optional)		Last Reading — Cumulative, Peak Demand with Key Reset (optional)	Last Reading — Cumulative, Peak Demand with Key Reset, Data in 15 mi Intervals				Last Reading — Present and Peak Demand for kW and kVAR	Last Reading — Present and Peak Demand for kW and kVAR

Visit www.leviton.com/verifeye for more information




LEVITON

VER IFE Y E™ | Series 1000 Three Phase Meters

VerifEye™ Series 1000 Single Phase Meter Kits

Features and Benefits

- Kits include meter, specified enclosure and required current transformers
- kWh meter with optional demand functionality (includes reset key)
- 100-800 Amps
- Isolated Pulse output (standard)
- Large LCD display
- Certified to all applicable standards of ANSI C12.1
- Utilizes split and solid core current transformers (CTs) that are certified to all revenue grade accuracy standards
- Up to three sets of CTs per phase can be paralleled per meter

Series 1000 Single Phase Meter Kits* — Indoor Enclosure

Voltage	Amps	CTs Included	Cat. No.
120V 1PH 2W	100	1 Split CT	1K120-01W
	200	1 Split CT	1K120-02W
	400	1 Split CT	1K120-04W
	800	1 Split CT	1K120-08W
	100	1 Solid CT	1K120-1SW
	200	1 Solid CT	1K120-2SW
120/208V 1PH 3W or	100	2 Split CTs	1K240-01W
120/240V 1PH 3W (Split Phase)	200	2 Split CTs	1K240-02W
	400	2 Split CTs	1K240-04W
	800	2 Split CTs	1K240-08W
	100	2 Solid CTs	1K240-1SW
	200	2 Solid CTs	1K240-2SW
1P2W 277V	100	1 Split CT	1K277-01W
	200	1 Split CT	1K277-02W
	400	1 Split CT	1K277-04W
	800	1 Split CT	1K277-08W
	100	1 Solid CT	1K277-1SW
	200	1 Solid CT	1K277-2SW

Indoor Series 1000 Single Phase Meter

Outdoor Series 1000 Single Phase Meter

Series 1000 Single Phase Meter Kits* — Outoor Enclosure

Voltage	Amps	CTs Included	Cat. No.
120V 1PH 2W	100	1 Split CT	1O120-01W
	200	1 Split CT	1O120-02W
	400	1 Split CT	1O120-04W
	800	1 Split CT	1O120-08W
120/208V 1PH 3W or	100	2 Split CTs	1O240-01W
120/240V 1PH 3W (Split Phase)	200	2 Split CTs	1O240-02W
	400	2 Split CTs	1O240-04W
	800	2 Split CTs	1O240-08W
1P2W 277V	100	1 Split CT	1O277-01W
	200	1 Split CT	1O277-02W
	400	1 Split CT	1O277-04W
	800	1 Split CT	1O277-08W

*Kits include meter, specified enclosure and required current transformers

VerifEye™ Series 2000 Three Phase Meter Kits

Features and Benefits

- Kits include meter, specified enclosure and required transformers
- kWh meter with optional demand functionality (includes reset key)
- 120/208V or 277/480V 3PH 4W WYE only
- 100-1200 Amps
- Pulse output — standard
- Large LCD Display
- Certified to all applicable standards of ANSI C12.1
- Utilizes split and solid core current transformers (CTs) that are certified to all revenue grade accuracy standards
- Up to three sets of CTs per phase can be paralleled per meter

Series 2000 3-Phase Meter Kits* — Indoor Enclosure

Voltage	Amps	CTs Included	Cat. No.
120/208V 3PH 4W WYE kWh Meter	100	3 Split CTs	2K208-01W
	200	3 Split CTs	2K208-02W
	400	3 Split CTs	2K208-04W
	800	3 Split CTs	2K208-08W
	1200	3 Split CTs	2K208-12W
	100	3 Solid CTs	2K208-1SW
	200	3 Solid CTs	2K208-2SW
277/480V 3PH 4W WYE kWh Meter	100	3 Split CTs	2K480-01W
	200	3 Split CTs	2K480-02W
	400	3 Split CTs	2K480-04W
	800	3 Split CTs	2K480-08W
	1200	3 Split CTs	2K480-12W
	100	3 Solid CTs	2K480-1SW
	200	3 Solid CTs	2K480-2SW
120/208V 3PH 4W WYE Demand Meter	100	3 Split CTs	2K208-01D
	200	3 Split CTs	2K208-02D
	400	3 Split CTs	2K208-04D
	800	3 Split CTs	2K208-08D
	1200	3 Split CTs	2K208-12D
277/480V 3PH 4W WYE Demand Meter	100	3 Split CTs	2K480-01D
	200	3 Split CTs	2K480-02D
	400	3 Split CTs	2K480-04D
	800	3 Split CTs	2K480-08D
	1200	3 Split CTs	2K480-12D

Indoor Series 2000 Three Phase Meter

Outdoor Series 2000 Three Phase Meter

Series 2000 3-Phase Meter Kits* — Outdoor Enclosure

Voltage	Amps	CTs Included	Cat. No.
120/208V 3PH 4W WYE kWh Meter	100	3 Split CTs	2O208-01W
	200	3 Split CTs	2O208-02W
	400	3 Split CTs	2O208-04W
	800	3 Split CTs	2O208-08W
	1200	3 Split CTs	2O208-12W
277/480V 3PH 4W WYE kWh Meter	100	3 Split CTs	2O480-01W
	200	3 Split CTs	2O480-02W
	400	3 Split CTs	2O480-04W
	800	3 Split CTs	2O480-08W
	1200	3 Split CTs	2O480-12W

*Kits include meter, specified enclosure and required current transformers

VER IFE Y E™ | Series 3500 Multi-Function Meter

VerifEye™ Series 3500 Advanced Multi-Function Meter Kits

Features and Benefits

- Kits include meter, specified enclosure and required current transformers
- Advanced communications protocols:
  - — Enabled by Ethernet, uses ModBus TCP/IP and BACnet IP
  - — Isolated pulse output
- Integrates easily with building management systems
- Highly accurate: 0.5% accuracy class
- Delivers universal voltage performance
- 208/480V 2PH 2W, 120/208V 2PH 3W, 240/480V 3PH 3W, 120/208V, 277/480V 3PH 4W, 240/480V 3PH 4W DELTA
- 100-5000 Amps
- Outputs kWh, Demand - Instant & Peak, Per Phase & — Total kWh, kW, kVAR, VAR, AMPS Interval Data
- Certified to all applicable standards of ANSI C12.1
- Utilizes split and solid core current transformers (CTs) that are certified to all revenue grade accuracy standards
- Up to three sets of CTs per phase can be paralleled per meter

VerifEye™ Series 3500 Advanced Multi-Function Ethernet Meter Kits

Series 3500 Meter Kits* — Indoor Enclosure

Voltage	Amps	CTs Included	Cat. No.
208-480V AC	100	3 Split CTs	3KUMT-01M
3P 3W/4W	200	3 Split CTs	3KUMT-02M
ModBus TCP/BACnet IP	400	3 Split CTs	3KUMT-04M
	800	3 Split CTs	3KUMT-08M
	1600	3 Split CTs	3KUMT-16M
	100	3 Solid CTs	3KUMT-1SM
	200	3 Solid CTs	3KUMT-2SM
	400	3 Solid CTs	3KUMT-4SM
	3000	3 Split CTs	3KUMT-30M
	5000	3 Split CTs	3KUMT-50M

*Kits include meter, specified enclosure and required current transformers

Indoor Series 3500 Advanced Multi-Function Meter

Series 3500 Meter Kits* — Outdoor Enclosure

Voltage	Amps	CTs Included	Cat. No.
208-480V AC	100	3 Split CTs	3OUMT-01M
3P 3W/4W	200	3 Split CTs	3OUMT-02M
ModBus TCP/BACnet IP	400	3 Split CTs	3OUMT-04M
	800	3 Split CTs	3OUMT-08M
	1600	3 Split CTs	3OUMT-16M
	100	3 Solid CTs	3OUMT-1SM
	200	3 Solid CTs	3OUMT-2SM
	3000	3 Split CTs	3OUMT-30M
	400	3 Solid CTs	3OUMT-4SM
	5000	3 Split CTs	3OUMT-50M

*Kits include meter, specified enclosure and required current transformers

VerifEye™ Series 4000 Industrial ModBus Meter Kits

Features and Benefits

- Kits include meter, specified enclosure and Split Core or Rogowski Coil current transformers
- Industrial Temperature Range -22°F to 158°F (-30°C to 70°C)
- 50/60Hz
- 90-600V versatility including 347V (L-N) and 600V (L-L)
- ANSI 12.20 0.5% Accuracy, IEC 62053-22 Class 0.5S
- Amperages
  - — Split Core: 100, 200,400, 800A
  - — Rogowski Coil: 20-5000A
- DIN Rail Mount
- NEMA 4X Enclosure
- Energy monitoring for AMR/BAS/BMS/EMS systems
- Tenant cost allocation
- Energy conservation and cost reduction
- Green building initiatives and government mandates
- Measurement and verification
- Load profiling and benchmarking

Series 4000 Indoor Meter Kits — Din Rail Mount

Voltage	Amps	CTs Included	Cat. No.
Universal 3PH 3W/4W	100	3 Split Core CTs	4KUMR-01M
	200	3 Split Core CTs	4KUMR-02M
	400	3 Split Core CTs	4KUMR-04M
	800	3 Split Core CTs	4KUMR-08M
	20-5000	3, 12" Rogowski Coil CTs	4KUMR-R12
	20-5000	3, 18" Rogowski Coil CTs	4KUMR-R18
	20-5000	3, 24" Rogowski Coil CTs	4KUMR-R24

Stand Alone Meters

Voltage	Amps	CTs Included	Cat. No.
Universal 3PH 3W/4W	100, 200, 400, 800	Split Core CTs Only	4KUMR-00M
	20-5000	Rogowski Coil CTs Only	4KUMR-00R

Series 4000 Indoor

VERIFEYE™ | Series 4000 Three-Phase Meter Kits

VerifEye™ Series 4000 Industrial ModBus Meter Kits

Series 4000 Outdoor NEMA Enclosure			
Voltage	Amps	CTs Included	Cat. No.
Universal 3PH 3W/4W	100	3 Split Core CTs	4OUMR-01M
	200	3 Split Core CTs	4OUMR-02M
	400	3 Split Core CTs	4OUMR-04M
	800	3 Split Core CTs	4OUMR-08M
	20-5000	3, 12" Rogowski Coil CTs	4OUMR-R12
	20-5000	3, 18" Rogowski Coil CTs	4OUMR-R18
	20-5000	3, 24" Rogowski Coil CTs	4OUMR-R24

Series 4000 Components		
Amps	Description	Cat. No.
100	Split Core CTs	CTV01-K21
200	Split Core CTs	CTV02-K21
400	Split Core CTs	CTV04-K40
800	Split Core CTs	CTV08-K40
—	Fuse Pack, 1/2A, 600VAC, slow blow	CTV00-FK3
20-5000	12" Rogowski Coil CTs	CRV50-K62
20-5000	18" Rogowski Coil CTs	CRV50-K93
20-5000	24" Rogowski Coil CTs	CRV50-KC2

Series 4000 Outdoor

CTV01-K21

SPOTLIGHT
Leviton Energy Code Apps

ASHRAE 90.1 and Title 24 apps, gain easy access to a wealth of the lighting control code requirements on your mobile device. These valuable reference tools allow you to search by application, article language and recommended Leviton solutions. Get inspiration for designing energy code compliant applications by viewing diagrams and summaries of the requirements met for recommended solutions. Go to leviton.com/apps for more information.

VerifEye™ Series 4100 Bidirectional ModBus RTU and BACnet MS/TP Meter Kits

The VerifEye™ Series 4100 Bidirectional ModBus RTU and BACnet MS/TP Meter Kits feature bidirectional monitoring specifically designed for renewable energy applications. The Series 4100 Meter Kits measure power imported from the utility grid and power exported from renewable energy sources like solar panels. The Series 4100 Meter Kits are available in a standalone DIN rail mount or NEMA 4X enclosures and come with either split core or flexible rope-style Rogowski Current Transformers (CTs).

Features and Benefits

- Bidirectional monitoring
- Industrial temperature range: -22-158°F (-30-70°C)
- 50/60 Hz
- 90-600V versatility including 347V with fewer models to stock
- Options for 100, 200, 400 and 800A Split Core CTs and Rogowski CTs (20-5000A)
- DIN rail mount for easy installation
- One device serves multiple locations
- User-enabled password protection to protect meter from tampering
- Bright, backlit LCD for installation in dark areas and viewing real time data
- Energy monitoring for AMR/BAS/BMS/EMS systems
- Renewable energy applications such as solar panels and wind
- System integration via ModBus RTU — RS-485 Serial (BACnet MS/TP Protocol)
- CSI approval for California Solar Initiative

Series 4100 Indoor — Din Rail Mount ModBus Meter Kits

Voltage	Amps	CTs Included	Cat. No.
Universal 3PH 3W/4W ModBus	100	Split Core CTs	4DUMR-01B
	200	Split Core CTs	4DUMR-02B
	400	Split Core CTs	4DUMR-04B
	800	Split Core CTs	4DUMR-08B
	20-5000	12" Rogowski Coil CTs	4DUMR-12R
	20-5000	18" Rogowski Coil CTs	4DUMR-18R
	20-5000	24" Rogowski Coil CTs	4DUMR-24R

Series 4100 Indoor — Din Rail Mount BACnet MS/TP Meter Kits

Voltage	Amps	CTs Included	Cat. No.
Universal 3PH 3W/4W BACnet/ MS/TP	100	Split Core CTs	4DUBM-01B
	200	Split Core CTs	4DUBM-02B
	400	Split Core CTs	4DUBM-04B
	800	Split Core CTs	4DUBM-08B
	20-5000	12" Rogowski Coil CTs	4DUBM-12R
	20-5000	18" Rogowski Coil CTs	4DUBM-18R
	20-5000	24" Rogowski Coil CTs	4DUBM-24R

Series 4100 Outdoor — NEMA Enclosure ModBus Meter Kits

Voltage	Amps	CTs Included	Cat. No.
Universal 3PH 3W/4W ModBus	100	Split Core CTs	41OUM-01B
	200	Split Core CTs	41OUM-02B
	400	Split Core CTs	41OUM-04B
	800	Split Core CTs	41OUM-08B
	20-5000	12" Rogowski Coil CTs	41OUM-12R
	20-5000	18" Rogowski Coil CTs	41OUM-18R
	20-5000	24" Rogowski Coil CTs	41OUM-24R

Series 4100 Outdoor — NEMA Enclosure BACnet MS/TP Meter Kits

Voltage	Amps	CTs Included	Cat. No.
Universal 3PH 3W/4W BACnet/ MS/TP	100	Split Core CTs	41OUB-01B
	200	Split Core CTs	41OUB-02B
	400	Split Core CTs	41OUB-04B
	800	Split Core CTs	41OUB-08B
	20-5000	12" Rogowski Coil CTs	41OUB-12R
	20-5000	18" Rogowski Coil CTs	41OUB-18R
	20-5000	24" Rogowski Coil CTs	41OUB-24R

Series 4100 Indoor

Series 4100 Indoor with Enclosure

LEVITON

VER IFE Y E™ | Mini Meters

VerifEye™ Mini Meter Kits

Equitable Tenant Billing

Some multi-tenant residential properties include energy costs in rental fees and generally charge tenants for energy based on the square footage occupied. To be truly equitable, tenants should pay only for what they actually use. With Leviton VerifEye™ Mini Meters, building managers can easily and fairly track and allocate energy usage costs to multiple tenants, as well as recoup energy expenses from common-use areas (parking lots, hall lighting, etc.). Tenants benefit by paying only for the energy they use; and when they focus on conserving energy, they can see direct financial benefits from their efforts.

Features and Benefits

- Kits include meter, specified enclosure and required current transformers
- kWh Meter
- 100-200 Amps
- Pulse Output — standard
- Available in indoor flush mount or surface mount enclosure
- Available in indoor flush mount and surface mount enclosures and NEMA 4X outdoor individual meter enclosures and Multiple Meter Units (MMUs) from 2 to 19 meters
- Select surface mount and flush mount models include built in tamper proof switch or built in wireless AMR and temperature sensing capabilities
- Revenue grade accuracy: 0.5% accuracy class
- Use with solid core CTs to achieve 0.5% accuracy — also available with split core CTs
- Up to three sets of CTs per phase can be paralleled per meter with no multipliers
- Components of Mini Meter Kits are UL/cUL Listed Energy Usage Monitor per CCN FTRZ

Mini Meter Kits

Mini Meter Kits* — Indoor Flush Mount Enclosure

Voltage	Amps	CTs Included	Cat. No.
120/208V 3W or 120/240V 1PH 3W (Split Phase)	100A	2 Solid CTs	MK240-1SW
	200A	2 Solid CTs	MK240-2SW

*Kits include meter, specified enclosure and required current transformers

Indoor Flush Mount Mini Meter

Mini Meter Kits* — Outoor Enclosure

Voltage	Amps	CTs Included	Cat. No.
120/208V 3W or 120/240V 1PH 3W (Split Phase)	100A	2 Solid CTs	MO240-1SW
	200A	2 Solid CTs	MO240-2SW
120/208V 2PH 3W or 120/240V 1PH 3W (Split Phase)	100A	2 Split CTs	MO240-01W
	200A	2 Split CTs	MO240-02W

*Kits include meter, specified enclosure and required current transformers

Outdoor Mini Meter

VerifEye™ Mini Meter Kits

0.5% Mini Meter Kits* — Indoor Flush Mount Enclosure			
Voltage	Amps	CTs Included	Cat. No.
120/208/240V 2PH 3W	200A	2 Solid CTs	6P201-C02
120/208/240V 2PH 3W (includes Time of Use {TOU*} enabled kWh Transceiver and Tamper Proof Switch)	200A	2 Solid CTs	6W201-C02
120/208/240V 2PH 3W (includes Time of Use {TOU*} and Temperature enabled kWh Transceiver and Tamper Proof Switch)	200A	2 Solid CTs	6W201-D02
120/208/240V 2PH 3W (includes Time of Use {TOU*} and Temperature enabled kWh Transceiver and Tamper Proof Switch)	200A	2 Solid CTs	6W201-E02
120/208/240V 2PH 3W (OEM Module Kit)	200A	Solid 2 CTs	7H201-S02

*TOU = Time of Use, providing 15-minute time-stamped kWh interval data

Indoor Surface Mount Mini Meter

0.5% Mini Meter Kits** — Indoor Surface Mount Enclosure			
Voltage	Amps	CTs Included	Cat. No.
120/208/240V 2PH 3W	200A	2 Solid CTs	6PSMT-C02
120/240V 1PH 3W (includes Time of Use {TOU*} enabled kWh Transceiver and Tamper Proof Switch)	200A	2 Solid CTs	MMSMT-C02
120/240V 1PH 3W (includes Time of Use {TOU*} & Temperature enabled kWh Transceiver and Tamper Proof Switch)	200A	2 Solid CTs	MMSMT-D02
120/240V 1PH 3W (includes Time of Use {TOU*} & Delta Temperature enabled kWh Transceiver and Tamper Proof Switch)	200A	2 Solid CTs	MMSMT-E02

*TOU = Time of Use, providing 15-minute time-stamped kWh interval data.
**For a complete wireless Automatic Meter Reading (AMR) system, data transceivers and other wireless network components (DCAPs and Repeaters) are required as dictated by building construction

Wireless Repeaters and Data Concentrating Access Points (DCAPs)

Wireless Repeater	
Description	Cat. No.
Repeater, 5V, includes 5VDC 1A plug-in power supply and internal backup battery	T101R-05V

Wireless Data Concentrating Access Points (DCAPs)*	
Description	Cat. No.
Data Concentrating Access Point (DCAP), Low Capacity (150 meter points max), built-in radio receiver	T201E-151
DCAP, High Capacity (1000 meter points max), built-in radio receiver	T201E-102

*All DCAPs and Gateways shipped with 6VDC, minimum 1.5 Amp power supply, Ethernet cable and USB cable

LEVITON

VERIFEYE™ | Multiple Meter Units

VerifEye™ Multiple Meter Units (MMUs)

For both retrofit and new construction, Leviton VerifEye™ Multiple Meter Units (MMUs) are fast and easy to install. They come pre-wired per project configuration sheets with clearly labeled connections, minimizing the electrical installation time and saving money. All Leviton MMUs are UL Listed assemblies, giving your customers extra assurance at no extra cost. Choose from an indoor steel model in 4/8/16 unit single- or three-phase configurations utilizing Series 2000 meters or a weatherproof outdoor enclosure in 4/8/19 unit single-phase configurations utilizing Mini Meters. If your application requires a different configuration, Leviton is ready to help.

VerifEye™ Mini Meter MMUs

Medium Mini Meter MMU — 2-4 Meters		
Voltage	Description	Cat. No.
120/240V 1PH 3W	2 Dual Element Meters	6M202-CFG
	3 Dual Element Meters	6M203-CFG
	4 Dual Element Meters	6M204-CFG
120/208V 3PH4W	2 Dual Element Meters	6M302-CFG
	3 Dual Element Meters	6M303-CFG
	4 Dual Element Meters	6M304-CFG

Large Mini Meter
Multiple Meter Unit (MMU)

Large Mini Meter MMU — 5-8 Meters		
120/240V 1PH 3W	5 Dual Element Meters	6L205-CFG
	6 Dual Element Meters	6L206-CFG
	7 Dual Element Meters	6L207-CFG
	8 Dual Element Meters	6L208-CFG
120/208V 3PH 4W	5 Dual Element Meters	6L305-CFG
	6 Dual Element Meters	6L306-CFG
	7 Dual Element Meters	6L307-CFG
	8 Dual Element Meters	6L308-CFG

Extra Large Mini Meter
Multiple Meter Unit (MMU)

Extra-Large Mini Meter MMU — 9-19 Meters, NEMA 4X Enclosure		
120/240V 1PH 3W	9 Dual Element Meters	6X209-CFG
	10 Dual Element Meters	6X210-CFG
	11 Dual Element Meters	6X211-CFG
	12 Dual Element Meters	6X212-CFG
	13 Dual Element Meters	6X213-CFG
	14 Dual Element Meters	6X214-CFG
	15 Dual Element Meters	6X215-CFG
	16 Dual Element Meters	6X216-CFG
	17 Dual Element Meters	6X217-CFG
	18 Dual Element Meters	6X218-CFG
	19 Dual Element Meters	6X219-CFG
120/208V 3PH 4W	9 Dual Element Meters	6X309-CFG
	10 Dual Element Meters	6X310-CFG
	11 Dual Element Meters	6X311-CFG
	12 Dual Element Meters	6X312-CFG
	13 Dual Element Meters	6X313-CFG
	14 Dual Element Meters	6X314-CFG
	15 Dual Element Meters	6X315-CFG
	16 Dual Element Meters	6X316-CFG
	17 Dual Element Meters	6X317-CFG
	18 Dual Element Meters	6X318-CFG
	19 Dual Element Meters	6X319-CFG

VerifEye™ Series 2000 MMUs

Medium Series 2000 MMU — 2-4 Meters

Voltage	Description	Cat. No.
120/208V 3PH 3W	2 Three Element Meters	2M202-CFG
	3 Three Element Meters	2M203-CFG
	4 Three Element Meters	2M204-CFG
277/480V 3PH4W	2 Three Element Meters	2M402-CFG
	3 Three Element Meters	2M403-CFG
	4 Three Element Meters	2M404-CFG

Medium Series Meter
Multiple Meter Unit (MMU)

Large Series 2000 MMU — 5-8 Meters

120/208V 3PH 4W	5 Three Element Meters	2L205-CFG
	6 Three Element Meters	2L206-CFG
	7 Three Element Meters	2L207-CFG
	8 Three Element Meters	2L208-CFG
277/480V 3PH 4W	5 Three Element Meters	2L405-CFG
	6 Three Element Meters	2L406-CFG
	7 Three Element Meters	2L407-CFG
	8 Three Element Meters	2L408-CFG

Extra-Large Series 2000 MMU — 9-19 Meters

120/208V 3PH 3W	9 Three Element Meters	2X209-CFG
	10 Three Element Meters	2X210-CFG
	11 Three Element Meters	2X211-CFG
	12 Three Element Meters	2X212-CFG
	13 Three Element Meters	2X213-CFG
	14 Three Element Meters	2X214-CFG
	15 Three Element Meters	2X215-CFG
	16 Three Element Meters	2X216-CFG
277/480V 3PH 4W	9 Three Element Meters	2X409-CFG
	10 Three Element Meters	2X410-CFG
	11 Three Element Meters	2X411-CFG
	12 Three Element Meters	2X412-CFG
	13 Three Element Meters	2X413-CFG
	14 Three Element Meters	2X414-CFG
	15 Three Element Meters	2X415-CFG
	16 Three Element Meters	2X416-CFG

View energy usage data with our exclusive BMO 2.0 measurement & verification (M&V) software — available at no cost with the purchase of an EMH, EMB Hub or EMB HubLite. See page N-77 for more information

SPOTLIGHT MMUs

All MMUs are customizable and field upgradable for individual projects. Each meter order requires submittal of a Configuration Form. Go to leviton.com/verifeye for more information.

VERIFEYE™ | Series 8000 Multi-Point High Density Meter

VerifEye™ Series 8000 Multiple Point High-Density Smart Meter

VerifEye™ Series 8000 Multiple Point High Density Meters are designed to meter high-density applications such as multi-tenant office and residential buildings, medium-sized retail stores and institutional facilities. For easy data accessibility, the Series 8000 design is based on an open protocol network to transmit data over ModBus and BACnet. Combining revenue-grade electrical submetering with building automation communications technology, the Series 8000 complies with all regulatory electric safety and communications requirements and meets stringent ANSI 0.5% Accuracy Class standards.

Features and Benefits

- Allows for revenue grade metering of up to 24 individual circuits in one device
- Provides multiple electric loads in one device
- Monitors up to 24 current transformers
  - — 8 circuits, 3 phase loads
  - — 12 circuits, 2 phase loads
  - — 24 circuits, 1 phase loads
- Branch circuit monitoring
- Universal voltage
- 100-5,000 Amp current transformers
- Native communications protocol — ModBus TCP, ModBus RTU (RS-485) and BACnet IP standard
- Measures kilowatt hours, kW demand, volts and amps
- Interval and net metering
- Configurable via Ethernet or ModBus RTU network to BMS or VerifEye™ software solutions

Series 8000 Multiple-Point High Density Smart Meter

Voltage	Description	Cat. No.
Residential		
120/208/240V	Phase Config 3x2 with Wiring Harness	S8120-032
120/208/240V	Phase Config 6x2 with Wiring Harness	S8120-062
120/208/240V	Phase Config 9x2 with Wiring Harness	S8120-092
120/208/240V	Phase Config 12x2 with Wiring Harness	S8120-122
120/208V	Phase Config 8x3 with Terminal Strips	S8UTS-083
120/208V	Phase Config 12x2 with Terminal Strips	S8UTS-122
120/208V	Phase Config 24x1 with Terminal Strips	S8UTS-241
120/208V	Phase Config 8x3 with Wiring Harness	S8UWH-083
120/208V	Phase Config 12x2 with Wiring Harness	S8UWH-122
Commercial and Residential		
277/480V	Phase Config 8x3 with Terminal Strips	277TS-083
277/480V	Phase Config 12x2 with Terminal Strips	277TS-122
277/480V	Phase Config 24x1 with Terminal Strips	277TS-241
277/480V	Phase Config 8x3 with Wiring Harness	277WH-083
277/480V	Phase Config 12x2 with Wiring Harness	277WH-122
277/480V	Phase Config 24x1 with Wiring Harness	277WH-241
Potential Transformer (Optional)		
277/480V	Delta PTs with Enclosure	S480V-011

Series 8000 Multiple-Point High Density Meter

SPOTLIGHT
Leviton ASHRAE Standard 90.1 2010 Resources

Take advantage of Leviton's wealth of information and tools relating to ASHRAE Standard 90.1 2010. Gain access to code, product, and application information; download the latest design guides as well as the Leviton ASHRAE app. Find it all by going to leviton.com/ashrae

VerifEye™ Metering Communications Systems

To create a data network between Leviton VerifEye™ submeters and stakeholders (BAS, third party billing, Leviton Energy Manager software, etc.), Leviton offers VerifEye™ Metering Communications Systems. These solutions transmit data from meters to end systems, creating a seamless transition between data collection and data display. Leviton's metering communications systems also enable facilities to create metering systems that can easily share data through open protocols such as ModBus and IP-based data transfer through HTTP/FTP of .csv or XML files. The results are robust and reliable networks scalable to accommodate future expansion, with data made accessible from any internal or external location.

Data Acquisition Hubs

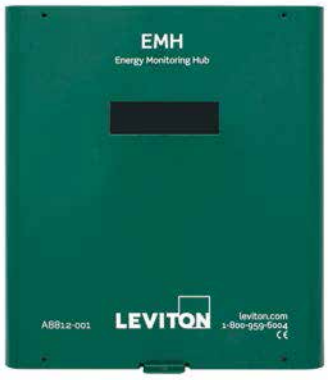
Data Acquisition Hubs, including the Energy Monitoring Hub (EMH), EMB and EMBLite, are intelligent, flexible data acquisition servers allowing users to collect energy data from meters and environmental sensors. Designed to connect to IP-based applications such as enterprise energy management, demand response and smart grid programs, Hub servers let you connect thousands of energy points, benchmark energy usage and reduce energy costs.

Features and Benefits

- Collects and logs data from connected wired or wireless devices based on user-set intervals
- Pushes or pulls data via HTTP, XML, FTP or any custom protocol using an Ethernet (LAN) connection
- No software required — Information can be accessed through any web browser in any location
- Plug and play connectivity
- Compatible with nearly any front-end software platform allowing customers to a variety of reporting tools
- Push or pull meter data to energy dashboards, kiosks and software applications
- Monitor performance of critical systems (lighting, HVAC, PDUs, inverters, etc.)
- BMO 2.0 Software is FREE with purchase of any VerifEye™ Data Acquisition Hub

Metering Communications Hubs

Cat. No.	Description
A8812-001	Energy Monitoring Hub — Configured for Leviton Energy Manager
A8812-000	Energy Monitoring Hub — Non-Configured
A8810-000	EMB Hub
A7810-000	EMB HubLite
YBM07-010	Power Supply for EMB Hub and EMB HubLite



A8812
Energy Monitoring Hub

A7810
EMB Hub Lite

V ER IF EY E™ | High Density Pulse and Flex I/O Modules

VerifEye™ Metering Communications Expansion Modules

High Density Pulse Module

The High Density Pulse Module provides a convenient way to expand a Leviton VerifEye™ Metering System by connecting the HD Pulse Module to an Energy Monitoring Hub (EMH) and/or ModHopper for system expansion. The HD Pulse Module accepts up to 23 standard pulse sensors and can function as a slave device with any ModBus master. This data can easily be integrated to a network of other critical energy sensors to provide a comprehensive energy monitoring solution. The HD Pulse Module is ideal for applications with a high density of pulse output devices, giving users access to meters that would previously require multiple modules.

Features and Benefits

- External communications handled via shielded twisted pair 18-22 gauge wire allow communication up to 4000 feet — and pulse input communication up to 200 feet (consult factory for longer runs) using 18-24 gauge control wire
- DIN or wall mounting make installation quick and easy
- Device verification — LED indicators for each pulse input allow for fast indication and verification of pulses to reduce installation and troubleshooting time
- Non-volatile memory retains configuration and pulse count totals during power failures for reliable data collection and retention
- Easily add pulse meters to ModBus network for a scalable, open protocol solution
- Field upgradable firmware for user-friendly future upgrades and expansion

Flex I/O Module

The Flex I/O Module is a cost-effective way to collect data from meters or sensors and bring the information into a ModBus network or energy monitoring system. As a stand-alone or bundled package, the Leviton Flex I/O can be incorporated with data acquisition and metering devices to provide a cost-effective energy monitoring solution. The Flex I/O is compatible with virtually any ModBus master, allowing customers the flexibility to use it in existing ModBus networks. Use with the Leviton Energy Monitoring Hub (EMH).

Features and Benefits

- Easily add meters and sensor to ModBus network
- 8x user selectable inputs
- 2x output relays
- 2x pulse replicator
- Non-volatile memory
- Industrial temperature range: -30°C to 70°C
- LEDs for visual verification/status reduce installation and troubleshooting time
- DIN or wall mount for easy installation
- Field upgradable firmware for user-friendly future upgrades and expansion

SPOTL IG HT
Leviton California Title 24 Online Design Guide

Take advantage of Leviton's California Title 24 Design Guide on your laptop or mobile device. This comprehensive online guide is searchable by recommended Leviton solution, code article or application. To register go to title24.leviton.com or download the Leviton California Title 24 mobile app, go to leviton.com/apps

VerifEye™ EMH+ Integrated Meter and HUB

The VerifEye™ EMH+ combines an onboard revenue-grade power meter, a Leviton Data Acquisition HUB and web server in a flexible all-in-one package. Installation time and costs are reduced with no external power supply needed. The device draws power from the connected voltage sense lines. CT amperages are field configurable. No additional software is required. VerifEye ™ EMH+ uses an Ethernet (LAN) connection allowing end users to pull data via HTTP, XML, FTP or any custom protocol by utilizing the EMH+ Module to build their own applications. VerifEye ™ EMH+ monitors three phase loads and can be easily expanded to support water, gas and steam monitoring applications for a comprehensive snapshot of a facility's total energy usage.

Features and Benefits

Meters
- Data Collection
  - — Logs and collects data on user selected intervals
  - — Non-volatile memory stores data until the next scheduled upload or manual download
- Compatible with VerifEye™ BMO 2.0* — allowing users to quickly access energy consumption information from a web-based platform
- Tracks real-time energy usage for demand response programs
- Meter data can be transferred to energy dashboards, kiosks and software applications
- Up to 32 ModBus meters can be added downstream
- Supports BACnet and other protocols on one device
- Seamlessly integrates with BMS and BAS systems

LCD Touch Screen
- Similar SmartPhone layout
- System set up from touch screen
- Set meter configurations from the full color touch screen

Measured Parameters
- Meter Totals
  - — kWh Net, Total Delivered, Received
  - — kVARh Delivered, Received
  - — kW instantaneous, block demand
  - — kVAR, kVA instantaneous
  - — Voltage L-L, L-N
  - — Current
  - — Power Factor
  - — Frequency
- Per Phase
  - — Voltage L-L, L-N
  - — Current
  - — Power
  - — Power Factor

*VerifEye™ BMO 2.0 is available at no cost with the purchase of VerifEye™ EMH+

EMH+

EMH+ Integrated Meter and HUB

Description	Amps	CTs Included	Cat. No.
Data Acquisition Server EMH+ with 3-Phase Meter. Power Supply Included.	100A	3 Split CTs	A8814-1S3
	200A	3 Split CTs	A8814-2S3
	300A	3 Split CTs	A8814-3S3
	400A	3 Split CTs	A8814-4S3
	600A	3 Split CTs	A8814-6S3
	800A	3 Split CTs	A8814-8S3
	1600A	3 Split CTs	A8814-163
	3000A	3 Split CTs	A8814-303
	5000A	3 Split CTs	A8814-503

A8814

LEVITON

VER IFE Y E™ | Current Transformers

Submetering Current Transformers

The better the equipment, the better the measurement. Leviton meters utilize highly accurate current transformers for revenue-grade performance certified to ANSI standards. Competing products use current sensors that do not provide the same level of performance. Leviton meter kits include Current Transformers (CTs) for high-quality, long-term accuracy and reliability. Options include split and solid core models. For added safety, all Leviton current transformers come with built-in voltage suppression devices that prevent hazardous voltages from developing on CT secondaries should they become disconnected from a meter with load current present. Compact and cost-effective solid core CTs slip over power lines to measure the electrical current flowing through the line. They are compact and cost effective. For solid core CT installation, power must be de-energized and the circuit opened, in order to slip the CT over the power line.

Singles

Solid Core — For use with Series 8000 Meters, Mini Meters and MMUs

Cat. No.	Amp	Description
CDE01-K11	100:0.1A	Solid Core, 0.67", Black
CDE01-L11	100:0.1A	Solid Core, 0.67", Blue
CDE01-R11	100:0.1A	Solid Core, 0.67", Red
CDA01-K12	100:0.1A	Solid Core, 0.72", Black
CDA01-L12	100:0.1A	Solid Core, 0.72", Blue
CDA01-R12	100:0.1A	Solid Core, 0.72", Red
CDE02-K11	200:0.1A	Solid Core, 0.67", Black
CDE02-L11	200:0.1A	Solid Core, 0.67", Blue
CDE02-R11	200:0.1A	Solid Core, 0.67", Red
CDA02-K12	200:0.1A	Solid Core, 0.72", Black
CDA02-L12	200:0.1A	Solid Core, 0.72", Blue
CDA02-R12	200:0.1A	Solid Core, 0.72", Red
CDF04-K24	400:0.1A	Solid Core, 1.5", Black

Split Core — For use with Series 1000, 2000, 3500 and 8000 Meters, and Series 2000 (MMUs) Only

Cat. No.	Amp	Description
CTD01-K16	100:0.1A	Split Core, .75" x .75"
CTD02-K16	200:0.1A	Split Core, 1" x 1"
CTD04-K23	400:0.1A	Split Core, 1.5", x 1.5"
CTC08-K46	800:0.1A	Split Core, 3" x 3.5"
CTC12-K46	1200:0.1A	Split Core, 4" x 6"
CTC16-K96	1600:0.1A	Split Core, 4" x 6"
CTC30-57B	3000:0.1A	Split Core, 5" x 7"
CTC50-57B	5000:0.1A	Split Core, 5" x 7"

Split Core — For use with Series 4000 Industrial ModBus Meter Kits Only

Cat. No.	Amp	Description
CTV01-K21	100:0.333V	Split Core, 1.6" x 2.1"
CTV02-K21	200:0.333V	Split Core, 2.2" x 2.8"
CTV04-K40	400:0.333V	Split Core, 6" x 5.2"
CTV08-K40	800:0.333V	Split Core, 6" x 5.2"

Rogowski Coil — For use with Series 4000 Industrial ModBus Meter Kits Only

Cat. No.	Amp	Description
CRV50-K62	20-5000A	Rogowski Coil, 12"
CRV50-K93	20-5000A	Rogowski Coil, 18"
CRV50-KC2	20-5000A	Rogowski Coil, 24"

Kits — For use with Mini Meters and MMUs Only

Cat. No.	Amp	Description
CDE01-211	100:0.1A	CT Kit, 0.67", Red, Black
CDE01-311	100:0.1A	CT Kit, 0.67", Blue, Red, Black
CDA01-212	100:0.1A	CT Kit, 0.72", Red, Black
CDA01-312	100:0.1A	CT Kit, 0.72", Blue, Red, Black
CDE02-211	200:0.1A	CT Kit, 0.67", Red, Black
CDE02-311	200:0.1A	CT Kit, .067", Blue, Red, Black
CDA02-212	200:0.1A	CT Kit, 0.72", Red, Black
CDA02-312	200:0.1A	CT Kit, 0.72", Blue, Red, Black

Solid Core Current Transformers For use with Series 8000 Meters, Mini Meters and MMUs Only

Split Core Current Transformers For use with Series 1000, 2000, 3500 and 8000 Meters, and Series 2000 (MMUs) Only

Split Core Current Transformers For use with Series 4000 Industrial ModBus Meter Kits Only

Rogowski Coil Current Transformer For use with Series 4000 Industrial ModBus Meter Kits Only

Metering Communications Expansion

ModHopper

The ModHopper is a breakthrough mesh technology design that makes connecting ModBus RTU (RS485) and pulse devices simple and cost effective. Our "smart" ModHopper transceivers eliminate the need for costly wiring runs, allowing users to capture meter data in the most challenging retrofit and campus environments. Collect meter points in existing buildings with minimum downtime or disruption of day-to-day operations.

Features and Benefits

- Designed specifically for wireless metering and Leviton VerifEye™ Metering Solutions for guaranteed compatibility
- No software or programming required — devices automatically configure when powered, reducing labor costs and installation time
- Wireless "mesh" network — self-healing, self-optimizing for ease of installation and maintenance
- Connect up to 32 ModBus and 2 pulse devices per ModHopper for the ultimate expandable solution
- Long distance communication (3000ft indoor/14 miles LOS) for flexibility of placement and easier future expansion
- Multiple independent network capability
- Reliable, constant two-way communication and packet verification
- Point to multi-point communication
- Field upgradable firmware for user-friendly future upgrades and expansion

VerifEye™ Metering Communications Expansion Components and Bundles

Metering Communications Expansion Components

Cat. No.	Description
A8911-000	High Density Pulse Module, 23 Inputs
A8332-000	Flex I/O Module, 8 User Selectable Inputs, 2 Relay Outputs
R9120-500	ModHopper and Power Supply

NEMA Communication Bundles

Cat. No.	Description
A8810-PS1	Energy Monitoring EMB Hub with line voltage power supply, NEMA 4X enclosure
A7810-PS1	Energy Monitoring EMB HubLite with line voltage power supply, NEMA 4X enclosure
A8911-PS1	HD Pulse Module with line voltage power supply, NEMA 4X enclosure
A8332-PS1	Flex I/O Module with line voltage power supply, NEMA 4X enclosure

A8911
High Density Pulse Module

A8332
Flex I/O Module

R9120
Modhopper


A8810-P S1
Energy Monitoring EMB Hub

LEVITON

VERIFEYE™ | Software Solutions

VerifEye™ Software Solutions

Save Energy, Reduce Costs, Be Sustainable

With a competitive global economy, soaring energy prices, increasing environmental issues and technology-based decision making, your profitability depends on the ability to analyze and control operating costs. Better energy management saves money and translates to an improved bottom line.

Verification Software Includes			
Measurement & Verification (M&V)	Page #	Tenant Billing	Page #
Building Manager Online (BMO) 2.0 Web-based interval data collection software platform	N-77	BillSuite Provides individual tenant billing capabilities to ensure accurate and complete recovery of tenant energy costs	N-79
Energy Manager Energy monitoring platform which interprets submeter data and exports real-time reports in selected time increments, stretching from hour-by-hour to year-by-year	N-78		

Measurement & Verification (M&V) Software

Measure. Monitor. Manage. If You Don't Measure It, You Can't Manage It.

Energy monitoring and reporting is the key to measuring and managing energy efficiency and cost.

Decision makers everywhere are turning to VerifEye™ Measurement & Verification (M&V) Software solutions to get the information they need to make smart energy choices. An advanced web based platform that provides real time data for your entire enterprise, Leviton Building Manager Online (BMO) 2.0 and Energy Manager deliver the most sophisticated tools to drive energy efficiencies, reduce operating costs and create more sustainable, environmentally sound facilities.

How VerifEye™ Measurement & Verification (M&V) Software Works

Simple, Effective, Turnkey Solution to Monitor Energy in Real Time

- Meters record real-time consumption data
  Energy Monitoring Hub (EMH) receives meter data and pushes it to Energy Manager data center
  Data Center stores, manages and reports data in real time
  VerifEye™ M&V software analyzes, formats and reports the data
  User logs into VerifEye™ M&V software website and accesses data and reports

Leviton Submeters | Energy Monitoring Hub (EMH) | Leviton Energy Manager Data Center | User Interface BMO 2.0 or Energy Manager Software

Measurement & Verification (M&V) Software
Building Manager Online (BMO) 2.0

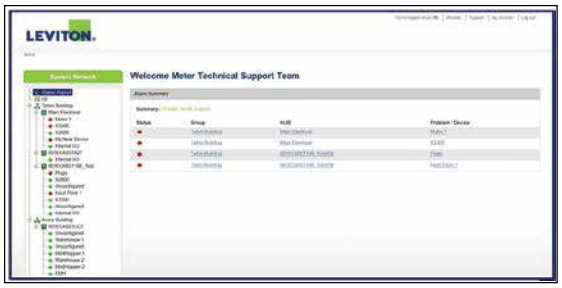
Features and Benefits

- Leviton hosted software application — no software installation required
- Set alarms and view graphical and historical data in intervals from one year to as short as an hour
- Provides a daily view summary of load profiles to help identify high and low consumption days and visual daily trending patterns
- Shows the effects of energy conservation measures by tracking load profiles over a given time period
- Quickly view any building or end-user for a summary of operating parameters
- Export data to spreadsheets for analysis (.csv files)
- Plot charts to show trends and provide analytical charts with demand profiling
- Select date ranges to display information
- Copy and paste graphs into your own reports with BMO's convenient legends

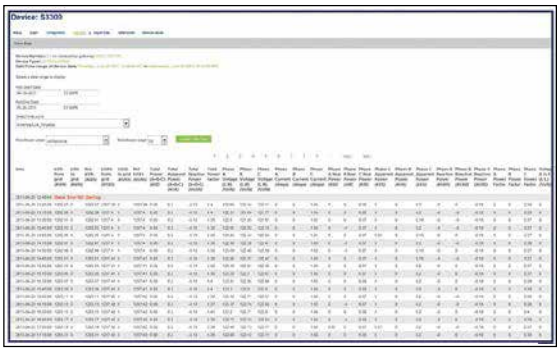
Building Manager Online Software

Description

Available at no cost with purchase of any VerifEye™ Data Acquisition Hub. Visit www.levitonbmo.com for more information.



BMO 2.0 Welcome Screen



BMO 2.0 Roll Up Report

BMO 2.0 Status Graph

BMO 2.0 Status Report

LEVITON

VER IFE Y E™ | Measurement & Verification (M&V) Software

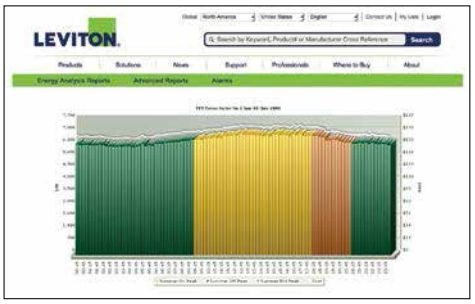
VerifEye™ Energy Manager Software — Detailed reporting in just three clicks

Features and Benefits

- Simplified, easy to use with intuitive drilldown functionality
- Identify cost saving measures that can lead to greater profitability
- Discover energy inefficiencies that may be difficult to see
- Establish baselines, budgets and allocation of energy use & costs within an enterprise
- Measure and monitor the enterprise's carbon footprint
- Enhance LEED certification ratings with credits for measuring, monitoring and verification
- Adopt best-business practices for efficient energy use
- Track and trend consumption and site performance versus goals
- Highlight maintenance issues — identify and address equipment that need immediate attention
- Trend, compare and validate utility bills
- Advanced, intuitive energy management reporting in just 3 clicks

Energy Manager Monitoring Software

Cat. No.	Description
LEMSB-000	Energy Manager Software — Base License Program - includes (8) control points and (1) user account
LEMSP-000	Energy Manager Software — Additional Points License - includes (8) control points
LEMSB-R00	Energy Manager Software — Base License Program Renewal
LEMSP-R00	Energy Manager Software — Additional Points License Renewal



Daily Report

Energy Center Report

Annual Report

Carbon Emissions Report

Comparison Report

Multiple Meter Analysis Report

BillSuite Tenant Billing Software
Measure. Monitor. Manage. Bill.

BillSuite is a PC based software program that provides individual tenant billing capabilities to ensure accurate and complete recovery of tenant energy costs. BillSuite provides graphical profiling of interval data and generates charts and graphs of consumption and demand data. This software solution automates the tenant billing process by eliminating manual meter readings for simplified, more accurate measurement and verification.

Features and Benefits

Key Benefits

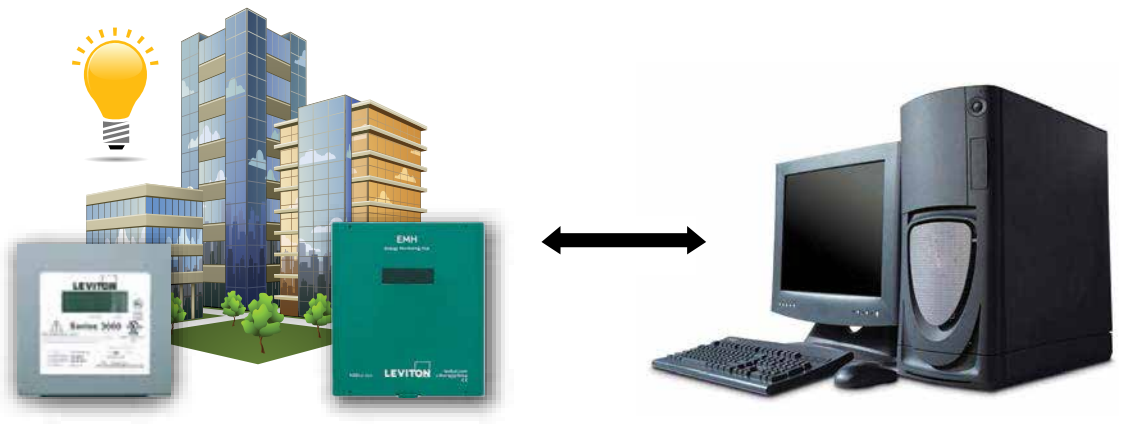
- Generate monthly electricity bills for each tenant
- Improve cash flow and increase net operating income
- Eliminate uncertainty of variable utility costs
- Delegate energy usage accountability to tenants
- Improve tenant satisfaction and retention
- Increase property value
- Enables facility manager to identify and fix energy waste and reduce overall cost

Key Features

- Monitor energy consumption of each tenant or whole building on a 24x7 basis
- Meters can be in a basement, wire closet or individual unit
- Billing of each tenant from the convenience of your PC
- Monthly and periodic billing reports for any or all meters
- Energy profile to identify peak demand and energy waste

How Leviton BillSuite Works

Simple, Effective, Turnkey Solution to Monitor & Bill Energy Usage



Leviton Submeters

Energy Monitoring Hub (EMH)

BillSuite (Data collection, monitoring, billing & reporting)

Continued on next page

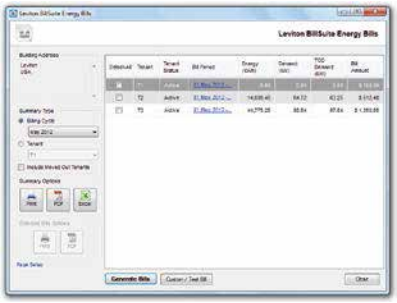
VER IFE Y E™ | BillSuite Tenant Billing Software

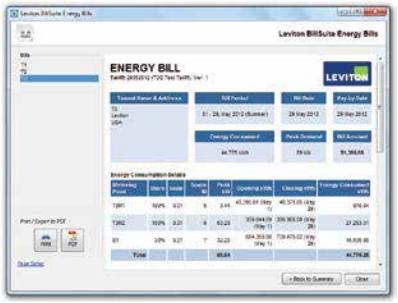
Continued from previous page

BillSuite Tenant Billing Software

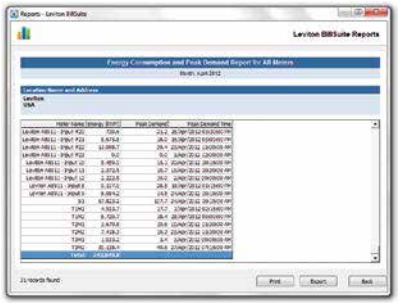
Real-Time Energy Data Monitoring
BillSuite generates individual bills for user definable dates by using data automatically downloaded from the Leviton metering system.

Powerful & Flexible Tenant Billing
Very powerful and flexible billing system — intuitive and fully customizable with custom billing tariffs.





Energy Usage Analysis for Energy Management
Energy management is the key to smart energy use and cost control. It consists of collecting, storing, analyzing and reporting data to give end users the information they need to make smart, effective energy decisions.



Note: Other submeters such as gas, water, BTU, etc. can be added to tenant bill

BillSuite Tenant Billing Software	
Cat. No.	Description
LBSSW-01L	BillSuite Software 1 - 50 Meters
LBSSW-02L	BillSuite Software 51 - 100 Meters
LBSSW-03L	BillSuite Software 101 - 200 Meters
LBSSW-04L	BillSuite Software 201 - 300 Meters
LBSSW-05L	BillSuite Software 301 - 400 Meters
LBSSW-06L	BillSuite Software 401 - 550 Meters
LBSSW-07L	BillSuite Software 551 - 750 Meters
LBSSW-08L	BillSuite Software 751 - 1000 Meters