

Smart Ceiling Mount 0-10V Dimming Sensors (CMS)

Easy-to-Install Self-Contained Lighting Control Solution



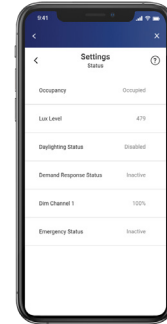
PIR-Only Sensor



Multi-Tech Sensor



Light Pipe



Status Screen



Daylighting Screen

Description

The Leviton exclusive Smart Ceiling Mount Sensor (CMS) offers high performance, code compliant, advanced room configuration in one easy-to-install device. Installers can download the Smart Sensor App for quick-and-easy room configuration with any iOS or Android device.

The CMS's features meet advanced design requirements for standalone occupancy/vacancy sensing, dimming and daylight harvesting applications, offering easy configuration and operational testing for one or two 0-10V dimming zones, options for one or two daylight harvesting zones, partial-ON, partial-OFF, area control, demand response, plug load or receptacle control, and UL924 emergency lighting.

Easy Room Configuration

CMS allows you to configure the sensor based on how the space is used and to meet energy code requirements. All of the configuration is done using the Smart Sensor App. The Leviton Smart Sensor App is compatible with both Android and iOS smartphones or tablets. The app is easy to use with simple, intuitive on-screen menu options.

- Automatic Daylight Harvesting Calibration (AutoCal)
- Passive infrared (PIR) and ultrasonic (U/S) sensor sensitivity adjustments to reduce false ONs and false OFFs
- Ability to wirelessly network with other Smart Ceiling Mount Sensors to expand FOV coverage
- Define inputs as low voltage switch, demand response, or emergency lighting
- PLVSW Low Voltage Keypads, SBK00 Wireless Switch, Dimmer, and Keypads can be used for manual lighting control

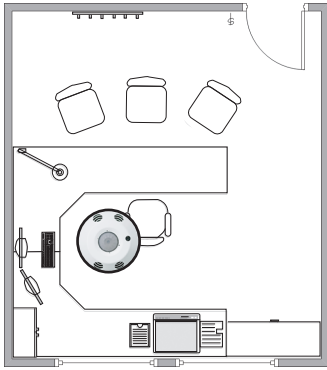
Features

- Can be used to comply with IECC, ASHRAE 90.1. and 2025 Title 24, Part 6 requirements:
 - Occupancy/vacancy sensing
 - 0-10V dimming
 - Daylight harvesting
 - Partial-ON, partial-OFF
 - Demand response
 - Plug load or receptacle control
- Available in 450 to 2,000 square foot field-of-view units
- All configuration is done using the Smart Sensor App
- For larger spaces, up to five Smart Ceiling Mount Sensors can be connected wirelessly to expand the FOV up to 10,000 sq ft
- Passive infrared (PIR) and multi-tech (PIR + ultrasonic) models available
- Manual area control available for 3-way/multi-way applications with the PLVSW Low Voltage Keypads or SBK00 Wireless Switch, Dimmer, and Keypads
- Glass mounting kit for Wireless Companion Devices available
- For dual relay models (ACY15-DIW and ACY20-DMW), two keypads can be connected for manual control of each relay/lighting zone
- UL924 listed for emergency lighting:
 - Can be connected to BMS (Building Management System) to force the lights full ON in case of emergency
- AutoCal feature—automatically calibrates for daylight harvesting applications
- Simplified daylight harvesting control of primary and secondary daylighting zones with full range 0-10V dimming
 - Primary zone dimmed up and down from photocell
 - Secondary zone dimmed up and down with offset from primary zone
- Two light pipes are included for both open (angled) and closed loop (flat and angled) daylight harvesting
 - The angled light pipe provides directional fine tuning and alignment to natural light source for open and closed loop applications

Features (Cont'd)

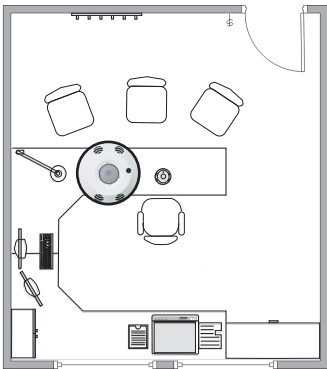
- Includes two interchangeable lenses for 8-12' mounting heights and 13-20' mounting heights as well as aisleway masks
- Ladderless Commissioning™ and programming through Bluetooth-enabled iOS or Android smart devices
- Visual RGB LED indicator for status and troubleshooting
- Scheduling:
 - Change level, operating mode, daylighting mode (based on day of week and/or time of day)
- Connect an OPP20 Power Pack to a dual relay CMS for a plug load control solution
- Industry-exclusive H.I.S. (High Inrush Stability) technology
 - Tested to 1.2 million switching cycles under standard loads
 - Zero-crossing circuitry for extended life of the relay
 - Latching relay provides dependability and robust performance for all load types
- Industry-exclusive “fail safe” circuitry: in the event of product failure, return-to-close feature causes the relay to default ON which eliminates life safety concerns

Placement Diagrams



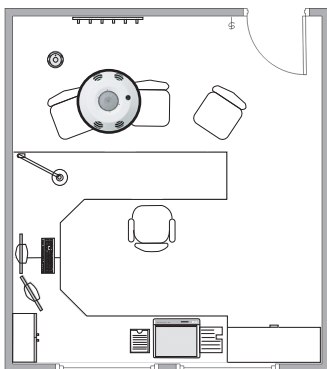
Open Loop Mode

- Angled light pipe
- Mounted within 4 feet of window



Closed Loop Mode

- Flat light pipe
- Mounted 6-8 feet from window or within the primary daylighting zone
- Mounted above work surface



Closed Loop Mode

- Angled light pipe is angled toward work surface
- Mounted 12 feet from window
- Mounted in location optimized to prevent false occupancy triggers

App Features

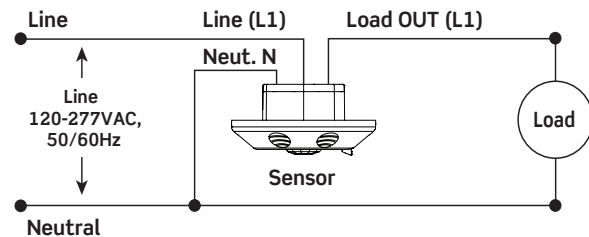
Download the Smart Sensor App to an iOS or Android smart device and pair to the CMS using Bluetooth technology.

- Create custom templates for quick multi-room replication of sensor settings
- Select between auto-ON/auto-OFF and manual-ON/auto-OFF
- Enable/disable partial-ON and partial-OFF and set the partial-ON and partial-OFF levels
- Set occupancy sensor time-out
- Set secondary timer for partial-OFF to full-OFF state
- Enable/disable receptacle/HVAC control for secondary relay
- Initiate field-of-view walk test
- Select sensing technology for either PIR, U/S or multi-tech (PIR and U/S)
 - Set PIR or U/S sensitivity independently
- Monitor status of all inputs
 - Integrated occupancy sensor(s)
 - Integrated photocell
 - Local wall keypad
 - Plug load
 - Emergency UL924
 - Demand response
- Enable 24 hour automatic daylight harvesting calibration
- Set the offset of the secondary daylighting zone based off the primary daylighting zone
- Daylight harvesting adjustments: open loop, closed loop, increase/decrease DDL, fade rate, dim to min, dim to OFF
- Manually adjust DDL set point to fine tune for room type after auto-configuration
- Over-the-Air (OTA) updates: allows user to update CMS firmware in the field via the App
- Reset to factory defaults

Wiring Diagrams

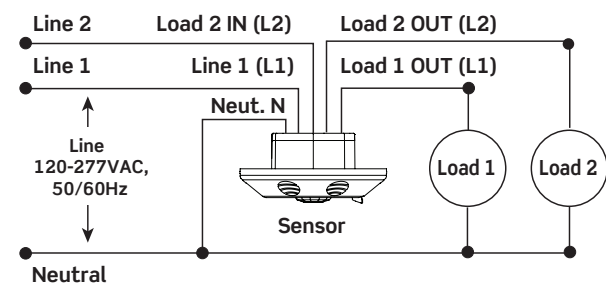
Single Relay Models

Line Voltage



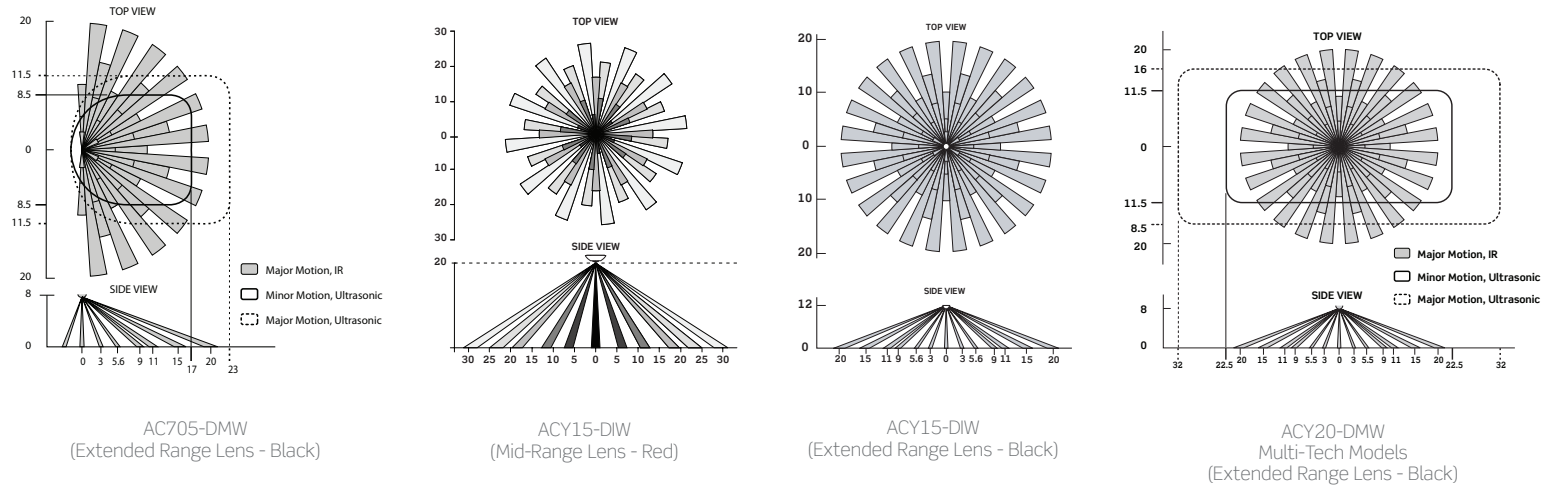
Dual Relay Models

Line Voltage (both lines MUST be fed from the same phase)



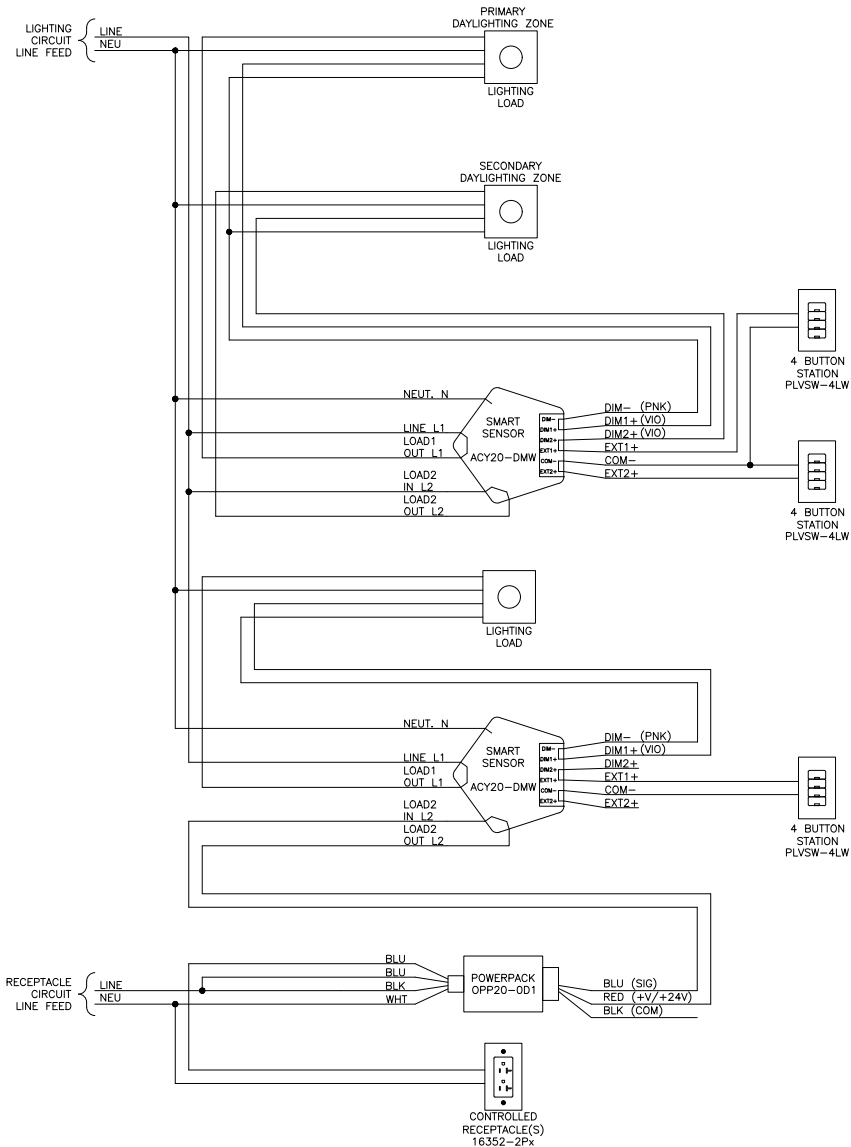
0-10V runs CLASS 1 or CLASS 2 per NEC standards

Field of View Diagrams



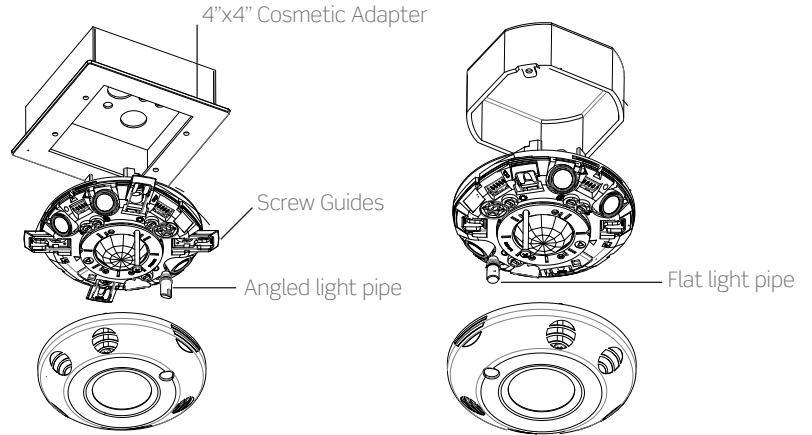
Application Diagram

Classroom

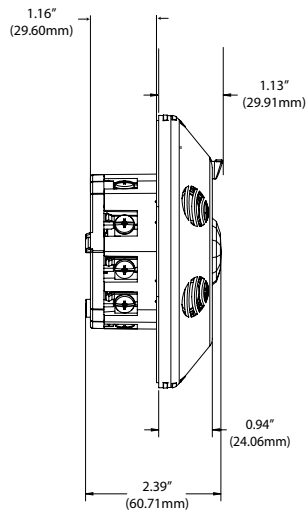


Installation

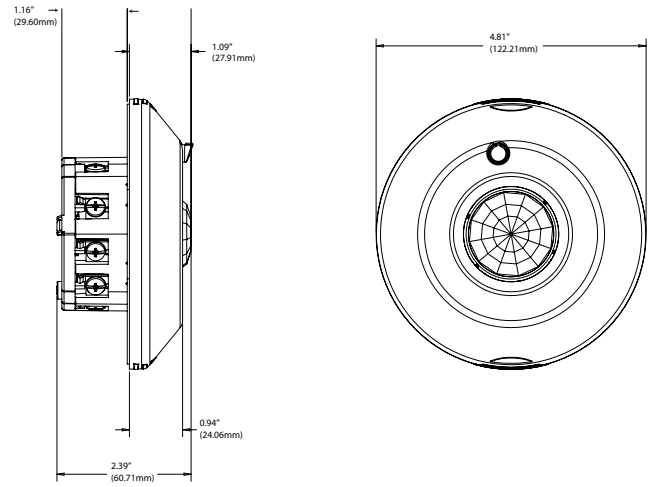
- Easy installation into junction boxes with Leviton-exclusive screw guides, coasters and terminal blocks
- Front cover snaps on and off for ease of installation
- Sensors conveniently mount to a standard 4" x 4" square or octagon electrical box per NEC standards. The square junction box requires a mud ring
- Color matching via paintable front cover - does not affect warranty as long as the CMS is properly masked



Dimensions



Multi-Tech
Occupancy Sensor



PIR-Only
Occupancy Sensor

Wireless Companion Switch, Dimmer, Keypads, Glass Mounting Plate, and Low Voltage Keypads*



*Available in 1, 2, and 4 button options. See ordering information or the Low Voltage Keypads data sheet for more information.

Wiring PLVSW's in Parallel:

- For best results, PLVSW's wired in parallel should be the same model
- PLVSW-4LW can be wired in parallel with PLVSW-2LW
- PLVSW-1LW can only be wired in parallel with other PLVSW-1LW

Specifications

Electrical	120V	277V
Input Voltage	120V 50/60Hz	277V 50/60Hz
Current Consumptions	8A, LED/Electronic Ballast/LED Driver, 800W (VA), Tungsten, Ballast, 1/4 HP	5A, LED/Electronic Ballast/LED Driver, 1,200W (VA), Ballast, 1/3 HP
Low Voltage Wiring	Class 2 0-10V Wiring	
	18 gauge stranded recommended, 0-10V sinking 50mA max	
	Class 2 Low Voltage Wiring	
	18 gauge stranded recommended, maximum wiring: 500 feet total system, 0-28VDC, 2mA-50mA	
General		
Daylighting Zones	Single and dual zone daylighting available	
Dimming Area Control	Single area control (independently control primary and secondary daylighting zones)	
Field of View	PIR	MT
	450 sq ft to 1,500 sq ft with included lenses	500 sq ft and 2,000 sq ft
Ultrasonic Frequency	32 Khz	
Photocell	0-200FC (0-2,000 LUX)	
Wireless		
Bluetooth	2.4 Ghz, 50ft max	
Environmental		
Operating Temperature	32 to 104°F (0 to 40°C)	
Storage Temperature	-15 to 160°F (-26 to 71°C)	
Relative Humidity	0-90% non-condensing	
Other		
Energy Codes	Can be used to comply with IECC, ASHRAE 90.1, and 2025 Title 24, Part 6 occupancy/vacancy sensing, 0-10V dimming, partial-ON, partial-OFF, daylight harvesting, demand response and plug load or receptacle control requirements	
Listings	UL773A (Occupancy Standard), UL924 (Emergency Equipment), cUL Listed, NOM Certified, RoHS Compliant, NY LLC48 Compliant	
Warranty	5-Year Limited Warranty	

Ordering Information

Smart Ceiling Mount Sensor	
Cat. No.	Description
ACY15-DIW	Smart Ceiling Mount Sensor, PIR, 0-10V dimming, 2-zone, 450-1,500 sq ft coverage, 120-277VAC
AC705-DMW	Smart Ceiling Mount Sensor, Multi-tech, 0-10V dimming, 1-zone, 500 sq ft coverage, 120-277VAC
ACY20-DMW	Smart Ceiling Mount Sensor, Multi-tech, 0-10V dimming, 2-zone, 2,000 sq ft coverage, 120-277VAC
Smart Sensor App	Download for free from Google Play or the Apple App Store

Wireless Companion Switch, Dimmer, Keypads, and Glass Mounting Kit	
Cat. No.	Description
SBK00-CSW	Wireless Companion Switch, Battery powered, White
SBK00-CDW	Wireless Companion Dimmer, Battery powered, White
SBK00-4DW	Wireless Companion Keypad, 4-Button (ON, OFF, Raise, Lower), White
SBK00-4PW	Wireless Companion Keypad, 4-Button (MAX, MID, LOW, OFF), White
WPN01-00W	Glass Mounting Kit for Wireless Companion Devices

Low Voltage Keypads	
Cat. No.	Description
PLVSW-1LW	Low Voltage Keypad, 1-button ON/OFF controller for use with Smart Ceiling Mount Sensors
PLVSW-2LW	Low Voltage Keypad, 2-button ON/OFF controller for use with Smart Ceiling Mount Sensors
PLVSW-4LW	Low Voltage Keypad, 4-button ON/OFF controller for use with Smart Ceiling Mount Sensors
RDGSW-1Ex*	1-button Color Change Kit (blank)
RDGSW-2Ex*	2-button Color Change Kit (blank)
RDGSW-4Ex*	4-button Color Change Kit (blank)
RDGSW-1Fx*	1-button Custom Engraved Color Change Kit
RDGSW-2Fx*	2-button Custom Engraved Color Change Kit
RDGSW-4Fx*	4-button Custom Engraved Color Change Kit

*Replace x to indicate color: White (W), Ivory (I), Light Almond (T), Gray (G), Black (E) and Red (R). Color change kits are blank and available for custom engraving for button markings.

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Visit our Website at: www.leviton.com/cms

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