



# ENERGY EFFICIENCY EXPERTS

Sensors maximize energy savings by ensuring that lights are turned off or to a lower level when spaces are unoccupied or adequate daylight exists.

WattStopper's sensors provide convenient automatic-on or manual-on control and are packed with innovative features and options. Many models are available in line or low voltage, and wireless options, for flexibility in placement and wiring. Occupancy and vacancy sensors use passive infrared, ultrasonic and WattStopper's patented dual technology.

Daylighting sensors offer stand-alone, single-zone, switching or dimming control.

Additional controls, including plug load controls, time switches and hotel card-key switches, round out this comprehensive product line.

## IN THIS SECTION:

<b>Product Line Introduction</b>	<b>C1-C6</b>
<b>Product Matrix</b>	<b>C7-C10</b>
<b>Wireless Occupancy Sensors</b>	<b>C11-C20</b>
<b>Wall Switch Sensors</b>	<b>C21-C84</b>
<b>Ceiling/Wall Mount Sensors</b>	<b>C85-C114</b>
<b>Power Packs</b>	<b>C115-C130</b>
<b>Wall Switch Sensor Dimmers</b>	<b>C131-C138</b>
<b>Plug Load Controls</b>	<b>C139-C142</b>
<b>Outdoor Sensors</b>	<b>C143-C148</b>
<b>Accessories</b>	<b>C149-C156</b>
<b>Daylighting Sensors</b>	<b>C157-C162</b>
<b>Services</b>	<b>C163-C164</b>







# PROVEN PERFORMANCE AT EVERY PRICE POINT

WattStopper offers the most comprehensive portfolio of sensors from the highest performance wall switch and ceiling sensors to innovative daylighting control solutions. Our popular stand-alone lighting controls offer proven performance for virtually every application, whether at work or at home. And you can rely on WattStopper to help solve energy code compliance issues cost effectively.

## Occupancy and Vacancy Sensors

Occupancy-based sensors maximize energy savings by ensuring that lights are turned off when spaces are unoccupied. Most occupancy sensors can be set for manual-on or automatic-on operation to meet energy code requirements in commercial spaces. Vacancy sensors are similar, but only allow manual-on operation, as required by certain energy codes, including California's Title 24.

WattStopper's low-profile sensors are available in a choice of detection technologies to ensure optimal coverage in different types of spaces, and prevent false triggering. Many models are available in line or low voltage for flexibility in placement and wiring. Advanced sensor options include integral nightlighting, dual relays for bi-level control, multi-way control and dimming capability.

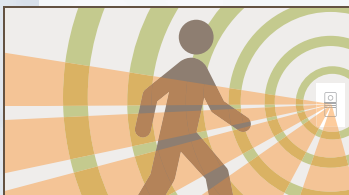
### IT'S EASY TO CHOOSE THE RIGHT SENSOR TECHNOLOGY...



**PIR**  
Passive Infrared technology detects heat emitted from a human body in motion and relies on a clear line of sight.



**Ultrasonic**  
Ultrasonic technology detects occupant movement within a room and has the ability to detect movement around partitions.



**Dual-Technology**  
Combines PIR and ultrasonic technology for hard to sense spaces when maximized sensitivity is required.



### Wireless Occupancy Sensors **NEW**

Flexible enough for applications where re-wiring isn't possible, WattStopper's new wireless sensors enable easy retrofit solutions that meet energy code requirements for Manual-on and Auto on to 50%. The devices demonstrate a renewed commitment to sustainability, with solar cells for self-powered operation and no batteries for reduced waste.

### Plug Load Control

Plug-in products are a leading source of energy consumption. In fact, plug loads can account for up to 15 to 20% of the energy consumed by commercial buildings and homes. WattStopper helps you manage power outlets for maximum efficiency.

### Daylighting Control

WattStopper leads the industry in innovative automatic daylighting controls with features such as automatic calibration. Use on/off switching control for areas of transient activity with high levels of ambient light. Dimming control, which can subtly change lighting levels, is ideal for spaces where occupants must concentrate on their activities.

Capture energy savings for your customers and grow your business with proven lighting controls

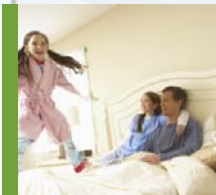




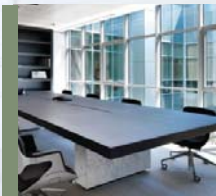
# BRING ENERGY SAVINGS TO COMMON APPLICATIONS



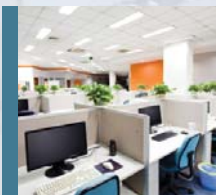
**Small Offices**  
Potential Energy Savings:  
15 to 30%



**Bedrooms & Living Rooms**  
Potential Energy Savings:  
Up to 50%



**Conference Rooms**  
Potential Energy Savings:  
Up to 40%



**Open Offices**  
Potential Energy Savings:  
Up to 30%



**Halls & Stairs**  
Potential Energy Savings:  
40 to 80%

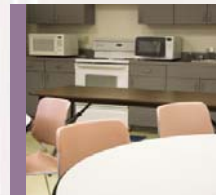




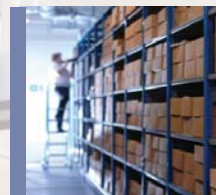
**Restrooms**  
Potential Energy Savings:  
50 to 70%



**Partitioned Restrooms**  
Potential Energy Savings:  
50 to 70%



**Lunch & Break Rooms**  
Potential Energy Savings:  
15 to 30%



**Storage Rooms**  
Potential Energy Savings:  
20 to 30%














**Exteriors**  
Potential Energy Savings:  
20 to 40%












# PRODUCT MATRIX

WIRELESS OCCUPANCY SENSORS	MODEL AND PAGE #	TECHNOLOGY	VOLTAGE				UNIQUE FEATURES	COVERAGE	NEUTRAL REQ.	APPLICATIONS															
			120V	277V	347V	24VPP				SO	BLR	CR	HS	R	PR	LBR	SR								
WIRELESS OCCUPANCY SENSOR																									
	<b>NEW</b> EOPC-100 P. C13-14	PIR					RF; self-powered	360°; up to 1200 ft <sup>2</sup>		●	●														
	<b>NEW</b> EOSW-101 P. C15-16		▲	▲			1-relay; RF; Default Manual-on			●	●														
	<b>NEW</b> EOSW-102 P. C15-16		▲	▲			2-relay; RF. Default Auto on to 50%			●	●														
	<b>NEW</b> EOSW-111 P. C15-16		▲	▲			1-relay; RF; Default Manual-on		■	●	●														
	<b>NEW</b> EOSW-112 P. C15-16		▲	▲			2-relay; RF. Default Auto on to 50%		■	●	●														
	<b>NEW</b> EORS-101 P. C17-18						Self-powered wireless RF 1-button switch			●	●														
	<b>NEW</b> EORS-102 P. C17-18						Self-powered wireless RF 2-button switch			●	●														
	<b>NEW</b> EOHR-101 P. C19-20						Handheld 1-button RF switch			●	●														
	<b>NEW</b> EOHR-102 P. C19-20						Handheld 2-button RF switch			●	●														
	<b>NEW</b> EOKT-101 P. C13-14	PIR	▲	▲			Sensor and 1-button RF switch	360°; up to 1200 ft <sup>2</sup>		●	●														
	<b>NEW</b> EOKT-102 P. C13-14	PIR	▲	▲			Sensor and 2-button RF switch	360°; up to 1200 ft <sup>2</sup>		●	●														

WALL SWITCH SENSORS	MODEL AND PAGE #	TECHNOLOGY	VOLTAGE				UNIQUE FEATURES	COVERAGE	NEUTRAL REQ.	APPLICATIONS															
			120V	277V	347V	24VPP				SO	BLR	CR	HS	R	PR	LBR	SR								
VACANCY SENSOR																									
	CS-50 P. C23-24	PIR	▲				Field Customizable	600 ft <sup>2</sup>		●	●				●										
	RS-150BA-N P. C25-26	PIR	▲				Nightlight	600 ft <sup>2</sup>	■		●			●	●										
	CS-350-N P. C27-28	PIR	▲				Dual Relay/Nightlight	600 ft <sup>2</sup>	■	●	●			●	●										
	CH-250 P. C29-30	PIR	▲				Multi-Way	600 ft <sup>2</sup>	■	●	●			●	●										
	CU-250 P. C31-32	Ultrasonic	▲				Multi-Way	600 ft <sup>2</sup>	■						●										

APPLICATION LEGEND			
■	SO-Small Offices	■	R-Restrooms
■	BLR-Bedrooms & Living Rooms	■	PR-Partitioned Restrooms
■	CR-Conference Rooms	■	LBR-Lunch & Break Rooms
■	OO-Open Offices	■	SR-Storage Rooms
■	HS-Hallways & Stairs	■	E-Exteriors

VOLTAGE LEGEND	
■	115V
■	277V
■	120V
■	347V
■	240V
■	480V
■	24VPP = Power Pack Required



WALL SWITCH SENSORS	MODEL AND PAGE #	TECHNOLOGY	VOLTAGE				UNIQUE FEATURES	COVERAGE	NEUTRAL REQ.	APPLICATIONS														
			120V	277V	347V	24VPP				SO	BLR	CR	HS	R	PR	LBR	SR							
<b>CONVERTIBLE OCCUPANCY SENSOR</b>																								
	RS-250 P. C33-34	PIR	▲				Light Level Sensor	600 ft <sup>2</sup>	■	●	●			●		●	●							
	RH-250 P. C35-36	PIR	▲				Multi-Way/Light Level Sensor	600 ft <sup>2</sup>	■	●	●		●	●										
	RH-253 P. C37-38	PIR	▲				Multi-Way/Light Level Sensor	600 ft <sup>2</sup>	■	●	●		●	●										
<b>OCCUPANCY SENSOR</b>																								
	WS-250 <sup>1</sup> P. C39-40	PIR	▲	▲	▲		Light Level Sensor	900 ft <sup>2</sup>		●	●			●		●	●							
	<b>NEW</b> WS-301 P. C41-42	PIR	▲	▲	▲		Optional Neutral Connection	900 ft <sup>2</sup>	▣	●	●			●		●	●							
	PW-100 Series <sup>1</sup> P. C43-44,47-48	PIR	▲	▲	▲	▲	Low Profile, Selectable Operation Mode	1050 ft <sup>2</sup>		●	●			●		●	●							
	PW-101 <sup>1</sup> P. C45-46	PIR	▲	▲			Low Profile, Selectable Operation Mode	1050 ft <sup>2</sup>	■	●	●			●		●	●							
	PW-103N <sup>1</sup> P. C49-50	PIR	▲	▲			Nightlight, Multi-Way, Selectable Operation Mode	1050 ft <sup>2</sup>	■	●	●		●	●		●	●							
	PW-200 <sup>1</sup> P. C51-52	PIR	▲	▲	▲		Dual Relay, Selectable Operation Mode	1050 ft <sup>2</sup>	■	●	●			●		●	●							
	PW-201 P. C53-54	PIR	▲	▲			Dimmer, Vandal Resistant Lens	300 ft <sup>2</sup>		●														
	PW-203 <sup>1</sup> P. C55-56	PIR	▲	▲			Dual Relay, Multi-Way, Selectable Operation Mode	1050 ft <sup>2</sup>	■	●	●		●	●		●	●							
	<b>NEW</b> PW-301 P. C57-58	PIR	▲	▲			Optional Neutral Connection, Multi-way	1050 ft <sup>2</sup>	▣	●	●			●		●	●							
	<b>NEW</b> PW-302 P. C59-60	PIR	▲	▲	▲		Optional Neutral Connection, Multi-way, Dual Relay	1050 ft <sup>2</sup>	▣	●	●			●		●	●							
	UW-100 Series <sup>1</sup> P. C61-64	Ultrasonic	▲	▲	▲	▲	High Sensitivity, Selectable Operation Mode	400 ft <sup>2</sup>	■	●			●	●	●		●							
	UW-200 <sup>1</sup> P. C65-66	Ultrasonic	▲	▲			Dual Relay, Selectable Operation Mode	400 ft <sup>2</sup>	■	●			●	●	●		●							
	DSW-100 <sup>1</sup> P. C67-68	Dual-Technology	▲	▲			PIR Trigger, Selectable Operation Mode	1050 ft <sup>2</sup>	■	●	●			●	●	●								
	DSW-200 <sup>1</sup> P. C69-70	Dual-Technology	▲	▲			Dual Relay, PIR Trigger	1050 ft <sup>2</sup>	■	●	●			●	●	●								
	<b>NEW</b> DSW-301 P. C71-72	Dual-Technology	▲	▲	▲		Optional Neutral Connection, Multi-way	1050 ft <sup>2</sup>	▣	●	●			●	●	●								
	<b>NEW</b> DSW-302 P. C73-74	Dual-Technology	▲	▲	▲		Optional Neutral Connection, Multi-way, Dual Relay	1050 ft <sup>2</sup>	▣	●	●			●	●	●								
	DW-100 Series <sup>1</sup> P. C75-78	Dual-Technology	▲	▲	▲	▲	Premium Performance, Selectable Trigger Mode	1050 ft <sup>2</sup>	■	●	●		●	●	●	●								
	DW-103 <sup>1</sup> P. C79-80	Dual-Technology	▲	▲			Multi-Way, Selectable Trigger Mode	1050 ft <sup>2</sup>	■	●	●			●	●	●								
	DW-200 <sup>1</sup> P. C81-82	Dual-Technology	▲	▲			Dual Relay, Selectable Trigger Mode	1050 ft <sup>2</sup>	■	●	●			●	●	●								
	DW-203 <sup>1</sup> P. C83-84	Dual-Technology	▲	▲			Dual Relay, Multi-Way, Selectable Operation Mode	1050 ft <sup>2</sup>	■	●	●		●	●	●	●								

▣ Optional neutral connection

<sup>1</sup> Multiple voltage options available. Please visit [www.wattstopper.com](http://www.wattstopper.com) for detailed product information.





# PRODUCT MATRIX

CEILING/ WALL MOUNT SENSORS	MODEL AND PAGE #	TECHNOLOGY	VOLTAGE				UNIQUE FEATURES	COVERAGE	APPLICATIONS															
			120V	277V	347V	24VPP			SO	CR	OO	HS	R	PR	LBR	SR								
<b>CEILING MOUNT SENSOR</b>																								
	CI-242 P. C87-88	PIR				▲	37mA, Low Profile	500 - 1200 ft <sup>2</sup>	●	●						●	●							
	CI-200/205 <sup>2</sup> P. C89-90	PIR				▲	Isolated Relay, Light Level, 20mA; 11mA, Low Profile	500 - 1200 ft <sup>2</sup>	●	●						●	●							
	CI-300/305 <sup>2</sup> P. C91-92	PIR				▲	Isolated Relay, Light Level, 20mA; 9mA, Low Profile	500 - 1200 ft <sup>2</sup>	●	●						●	●							
	CI-355 <sup>1 2</sup> P. C93-94	PIR	▲	▲	▲		Line Voltage, No Power Pack required	500 - 1200 ft <sup>2</sup>	●	●							●							
	W series <sup>2</sup> P. C95-96	Ultrasonic				▲	16mA, 25kHz	500 - 2000 ft <sup>2</sup> , 90 ft linear	●	●	●	●	●	●										
	UT-300/305 <sup>2</sup> P. C97-98	Ultrasonic				▲	Isolated Relay, 40mA; 30mA, 40kHz	500 - 2000 ft <sup>2</sup>	●	●			●	●										
	WT series <sup>2</sup> P. C99-100	Ultrasonic				▲	27mA; 30mA; 37mA; 40mA; Isolated Relay	600 - 2200 ft <sup>2</sup> , 90 ft linear	●	●	●	●	●	●										
	UT-355 <sup>1 2</sup> P. C101-102	Ultrasonic	▲	▲	▲		Line Voltage, No Power Pack required	500 - 2000 ft <sup>2</sup>	●	●			●	●										
	DT-300/305 P. C103-104	Dual Technology				▲	Isolated Relay, Light Level, 35mA, 43mA, Selectable Trigger Mode;	1000 ft <sup>2</sup>	●	●			●	●	●	●								
	DT-355 <sup>1</sup> P. C105-106	Dual Technology	▲	▲	▲		Line Voltage, No Power Pack required	1000 ft <sup>2</sup>	●	●			●	●	●	●								
<b>WALL MOUNT SENSOR</b>																								
	WPIR P. C107-108	PIR				▲	Well Defined Coverage	300 ft <sup>2</sup>	●				●			●	●							
	CX-100/105 <sup>2</sup> P. C109-110	PIR				▲	Isolated Relay, Light Level, 8mA, 19mA	300-2000 ft <sup>2</sup> , 50 - 120 ft linear	●	●	●	●				●	●							
	CB-100 <sup>2</sup> P. C111-112	PIR				▲	Cold Location	2000 ft <sup>2</sup> , 90 - 120 ft linear									●							
	DT-200/205 <sup>2</sup> P. C113-114	Dual Technology				▲	Isolated Relay, Light Level, 35mA, 43mA, Selectable Trigger Mode	2000 ft <sup>2</sup>	●	●	●	●			●		●							

POWER PACKS	MODEL AND PAGE #	VOLTAGE				UNIQUE FEATURES
		120V	277V	347V	480V	
<b>ON/OFF</b>						
	BZ-50 P. C117-118	▲	▲			Automatic On/Off
	BZ-50RC P. C119-120	▲	▲			Automatic On/Off
	BZ-150 P. C121-122	▲	▲			Automatic or Manual On/Off
	BD-100E-P P. C123-124	▲	▲			Hold-On, Hold-Off, Din Rail Mount
	BD-100M P. C123-124	▲	▲			Manual-On, Din Rail Mount
	B347-P P. C125-126			▲		Automatic On/Off
	BZ-480 P. C127-128				▲	Two-Phase
<b>AUXILIARY POWER PACKS</b>						
	AT-120 P. C129	▲				
	A120C-P P. C129	▲				Form C
	C120E-P P. C129	▲				2-Relay
	AT-277 P. C129		▲			
	A277C-P P. C129		▲			Form C
	C277E-P P. C129		▲			2-Relay
	S120/277/347E-P P. C127-128	▲	▲	▲		Two-Phase




APPLICATION LEGEND	
SO	Small Offices
BLR	Bedrooms & Living Rooms
CR	Conference Rooms
OO	Open Offices
HS	Hallways & Stairs
R	Restrooms
PR	Partitioned Restrooms
LBR	Lunch & Break Rooms
SR	Storage Rooms
E	Exteriors


VOLTAGE LEGEND	
115V	277V
120V	347V
240V	480V
24VPP	= Power Pack Required



<sup>1</sup> Multiple voltage options available. Please visit [www.wattstopper.com](http://www.wattstopper.com) for detailed product information.



<sup>2</sup> Models with different coverage options available. Please visit [www.wattstopper.com](http://www.wattstopper.com) for detailed product information.





WALL SWITCH SENSOR DIMMERS	MODEL AND PAGE #	TECHNOLOGY	LOAD TYPE	VOLTAGE		UNIQUE FEATURES	COVERAGE	APPLICATIONS						
				120V	277V			SO	BLR	CR	HS	R		
VACANCY SENSOR/DIMMER														
	CD-250 P. C133-134	PIR	Incandescent	▲		Up to 600W	600 ft <sup>2</sup>	●	●					
CONVERTIBLE OCCUPANCY SENSOR/DIMMER														
	RD-250 P. C135-136	PIR	Incandescent	▲		Multi-Way, Up to 600W	600 ft <sup>2</sup>	●	●		●	●		
OCCUPANCY SENSOR/DIMMER														
	PW-100D PW-101D P. C137-138	PIR	Incandescent, Fluorescent	▲	▲	Vandal Resistant Lens	600 ft <sup>2</sup>	●	●	●				

PLUG LOAD CONTROL	MODEL AND PAGE #	TECHNOLOGY	VOLTAGE	UNIQUE FEATURES
			120V	
	IDP-3050 P. C141-142	PIR	▲	Power strip w/ Personal Sensor for automatic control of Plug Loads

OUTDOOR SENSOR	MODEL AND PAGE #	TECHNOLOGY	LOAD TYPE	VOLTAGE		UNIQUE FEATURES	COVERAGE
				120V	277V		
	EW-200 P. C145-146	PIR	Incandescent	▲		Up to 600W	600 ft <sup>2</sup>
	EW-205-24 P. C147-148	PIR	Incandescent				

ACCESSORIES	MODEL AND PAGE #	UNIQUE FEATURES
	MB-1 P. C151 MB-2 P. C151 WC-1 P. C152	Up to 600W
	IT-200 P. C153-154 HS-100 P. C155-156 HS-150 P. C155-156	Low voltage Line voltage

DAYLIGHTING CONTROLS	MODEL AND PAGE #	VOLTAGE	UNIQUE FEATURES	APPLICATIONS					
		24VPP		SO	HS	LBR	CR	OO	
ON/OFF SWITCHING									
	LS-102 P. C159-160	▲	Automatic calibration; adjustable deadband, setpoints and time delay		●	●			
DIMMING CONTROL									
	LS-301 P. C161-162	▲	Handheld setup and occupant remotes; adjustable sliding setpoint control	●			●		●

SERVICES	P. C163-164	Comprehensive services include design, startup, onsite training and troubleshooting as necessary.
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## WIRELESS OCCUPANCY SENSORS

When re-wiring is not an option, wireless occupancy sensors, RF switches and wireless remotes are the perfect choice for energy efficiency upgrades.

WattStopper's wireless products incorporate the company's single- and dual-relay options with code-compliant manual-on default operation. And these sustainable self-powered devices require no batteries, reducing waste and maintenance requirements. Photovoltaics power the sensors, while remote switches harness kinetic energy.







# EOPC-100 Wireless RF PIR Occupancy Sensor

Self-powered extended range ceiling mount sensor

Photovoltaic panels power sensor; no batteries required

Reversible snap mounting disc



Transmitter for wireless communication with RF wall switches

Works with 1- and 2-relay RF wall switches

Adds energy code compliance without the need for rewiring

PROJECT

LOCATION/TYPE

## Product Overview

### Description

The EOPC-100 Wireless RF PIR Occupancy Sensor works with EOSW-100 Series RF Wall Switches to turn lights on and off based on occupancy. The sensor mounts on the ceiling and provides 360° passive infrared coverage.

### Operation

EOPC-100 wireless sensors operate on power supplied by two photovoltaic panels capable of reaching a full charge in 6 hours when the ambient light level is 20 footcandles (215 lux). Each sensor can be paired with multiple loads controlled by RF wall switches. Paired loads configured for automatic-on operation turn on when a sensor transmits an RF signal that it has detected occupancy. As long as the sensor detects occupancy it continues transmitting signals to the paired wall switch receivers. All paired loads turn off when no occupancy has been detected for the duration of the selected time delay.

### RF Communications

The EOPC-100 sensor includes a non-directional helical antenna, so the sensor does not need to be oriented in a specific direction during installation. The RF (radio frequency) communication range is approximately 50' to 100', depending on product placement.

### Applications

Wireless RF occupancy sensors are ideal for retrofit applications where it is difficult to install wiring to a ceiling mount sensor. The extended range EOPC-100 sensors are perfect for applications including small conference rooms, private offices, executives office, hallways and storage rooms. They detect minor motion up to 15' away and major motion up to 22' away when mounted at 8'. Coverage depends on a clear line of sight to the motion.

## Features

- Wireless RF occupancy sensors work with EOSW-100 Series RF wall switches
- Detection Signature Processing to eliminate false triggers and provide immunity to RFI and EMI
- Trim pot for sensitivity adjustment
- Test mode allows quick and easy set up
- Includes plate for mounting to single- or double-gang junction boxes or ceiling tile
- Reversible magnetic/adhesive disc for surface mounting
- Sensor coverage tested to NEMA Guide Publication WD 7-2000

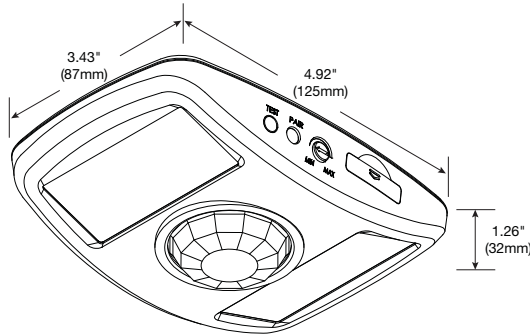


## Specifications

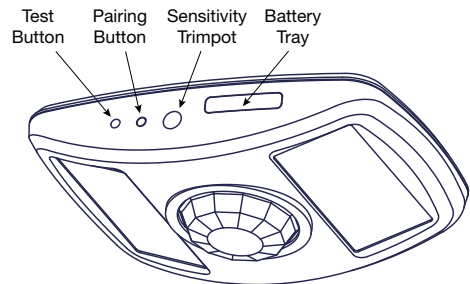
- Powered by 2 photovoltaic panels; operates for up to 72 hours in total darkness
- Photovoltaic panel operating range: 3-100 footcandles (32-1076 lux)
- Optional battery (CR2032, or equivalent)
- Multilevel Fresnel lens provides 360° coverage
- Adjustable PIR sensitivity
- Pairs with RF Wall Switch(es)
- Frequency: 902 MHz, helical antenna
- Mounting options: ceiling tile, junction box, surface mount (adhesive or magnetic)
- Operating conditions: for indoor use only; 32-131°F (0-55°C); 5-95% RH, non condensing
- UL and cUL listed
- FCC part 15 compliant
- Five year warranty

## Dimensions & Controls

### Dimensions

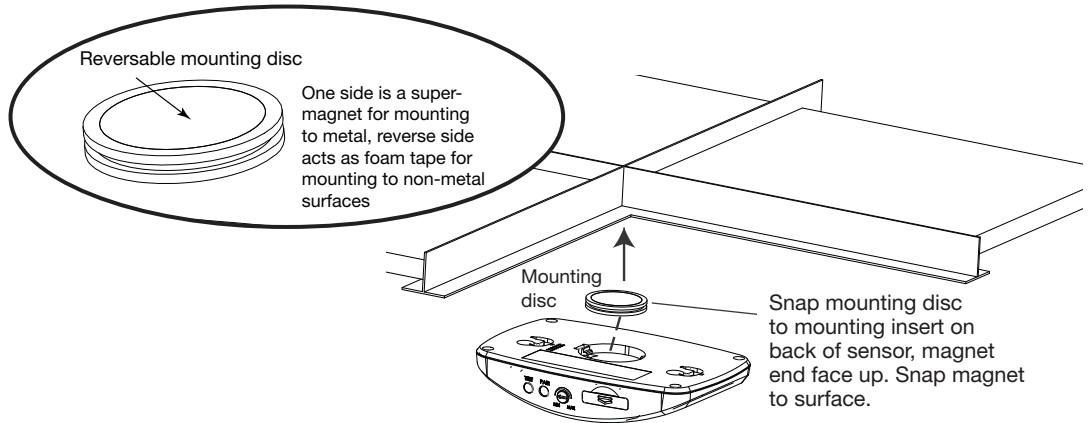


### Product Controls



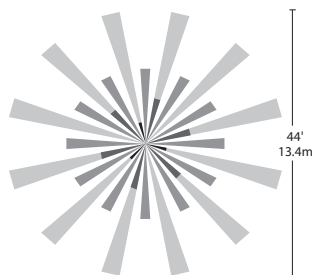
## Mounting

### Surface Mounting Options



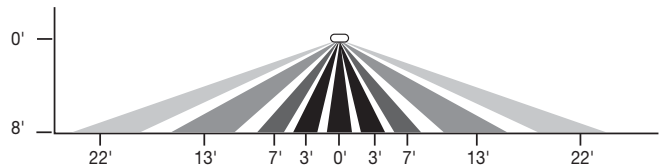
## Coverage

### Coverage Patterns



Major motion:  
Up to 44' diameter coverage when mounted at 8'

Minor motion:  
Up to 30' diameter coverage when mounted at 8'



## Ordering Information

Catalog No.	Color	Description	Coverage
<input type="checkbox"/> EOPC-100	White	Wireless self powered RF PIR occupancy sensor	360°; up to 1200 ft <sup>2</sup> (111.5 m <sup>2</sup> )
<input type="checkbox"/> EOKT-101-W	White	Wireless RF sensor 1 load kit (EOPC-100 and EOSW-101-W single relay RF wall switch, no neutral)	
<input type="checkbox"/> EOKT-102-W	White	Wireless RF sensor 2 load kit (EOPC-100 and EOSW-102-W dual relay RF wall switch, no neutral)	

# EOSW-100 Series RF Wall Switches

Single and dual relay  
120/277 VAC RF-enabled  
switches

Replace standard wall switches  
for energy code compliance  
without the need for rewiring



Receiver for wireless  
communication with RF occupancy  
sensors and remote switches

Default settings for most energy efficient  
operating mode out of the box

Loads can be assigned to either  
button (dual relay switches)

PROJECT
LOCATION/TYPE

## Product Overview

### Description

EOSW-100 Series RF Wall Switches work with EOPC-100 wireless occupancy sensors, and optional EORS-100 and EOHR-100 remote switches, to turn lights on and off based on occupancy. Models are available to control one or two switched legs in applications with or without neutral wires at the switch box.

### Operation

Both single and dual relay RF wall switches fit in single gang junction boxes for direct control of one or two loads. Each wall switch can be paired with one or more EOPC-100 wireless sensors for occupancy-based control. By default, single relay wall switches operate in manual-on/automatic-off mode. Dual relay switches are factory set for auto-on to 50%; relay 1 is automatic on/off, and relay 2 is manual-on/automatic-off. When occupancy is no longer detected and the time delay elapses, lights automatically turn off. These sequences of operation, and other default settings, may be changed using hidden configuration buttons.

### Control Options and RF Communications

EOSW-100 RF dual relay switches allow for separate pairing of each controlled load (relay) to the integral switch buttons. Additionally, each load may be paired with selected wireless occupancy sensors and selected buttons on RF remote switches. The RF transmission range is approximately 50' to 150' depending on product placement.

### Applications

RF wall switches are ideal for retrofit applications with or without neutral wires where the switch location is not suitable for sensing occupancy, and it is difficult to install a wired ceiling sensor. Paired with wireless occupancy sensors, EOSW-100 RF switches are perfect for retrofitting small conference rooms, private offices, executives office, hallways and storage rooms.

## Features

- RF wall switches work with EOPC-100 wireless occupancy sensors
- Zero-crossing for long relay life
- Choice of manual-on or auto-on operation
- EOSW-111 and EOSW-112 comply with 2011 NEC requirements
- Selectable time delay
- Test mode allows quick and easy set up
- Compatible with decorator wall plates

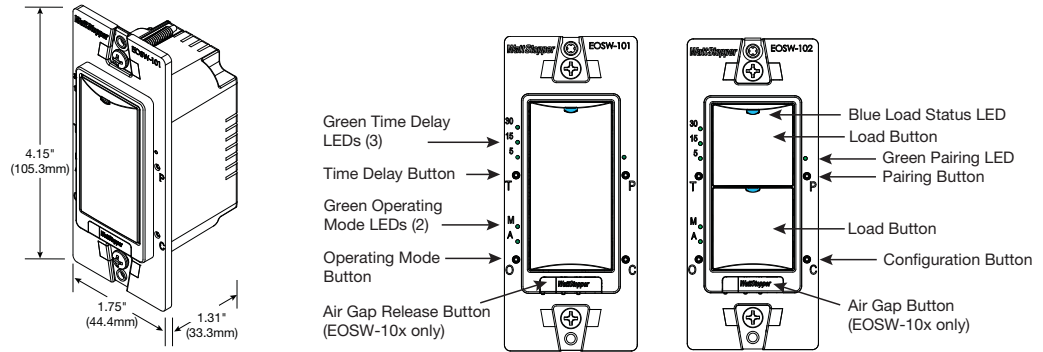


# Specifications

- 120/277VAC; 60 Hz
- Load rating, per relay:
  - Ⓢ 120VAC, 800W ballast, LED driver, ELV, MLV or tungsten, or 1/6hp motor (EOSW-10x, 15W minimum for load 1)
  - Ⓢ 277VAC, 1200W ballast, LED driver, ELV or MLV (EOSW-10x, 30W minimum for load 1)
- Relay Type: Form A latching relay
- 1 or 2 load buttons, each with LED status indicator
- Time Delays: 5, 15, 30 minutes (default 15 min.)
- Memory: Stores up to 10 transmitter IDs
- Frequency: 902MHz, integrated whip antenna
- Operating conditions: for indoor use only; 5-95% RH, non condensing
- Operating temperature: EOSW-10x: 32-104°F (0-40°C); EOSW-11x: 32-131°F (0-55°C)
- UL and cUL listed
- FCC part 15 compliant
- Five year warranty

# Controls & Settings

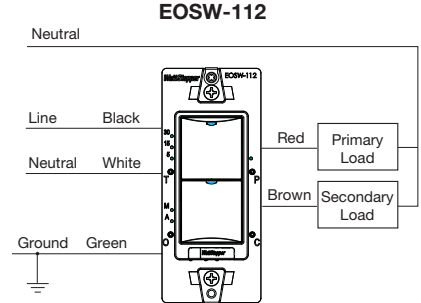
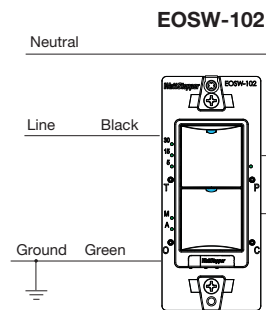
## Product Dimensions and Controls



# Wiring Diagrams

## Dual relay switch, no neutral

## Dual relay switch, with neutral wire



# Ordering Information

Catalog No.	Color	Description	Voltage	Load Rating, per relay
<input type="checkbox"/> EOSW-101-W	White	Single relay RF wall switch, no neutral	120/277 VAC; 60 Hz	Load 1: Ⓢ 120VAC, 15-800W or 1/6hp Ⓢ 277VAC, 30-1200W
<input type="checkbox"/> EOSW-101-LA	Lt. Almond			
<input type="checkbox"/> EOSW-101-I	Ivory			
<input type="checkbox"/> EOSW-101-G	Grey			
<input type="checkbox"/> EOSW-101-B	Black			
<input type="checkbox"/> EOSW-102-W	White	Dual relay RF wall switch, no neutral	120/277 VAC; 60 Hz	Load 2: Ⓢ 120VAC, 0-800W or 1/6hp Ⓢ 277VAC, 0-1200W
<input type="checkbox"/> EOSW-102-LA	Lt. Almond			
<input type="checkbox"/> EOSW-102-I	Ivory			
<input type="checkbox"/> EOSW-102-G	Grey			
<input type="checkbox"/> EOSW-102-B	Black			
<input type="checkbox"/> EOSW-111-W	White	Single relay RF wall switch, with neutral	120/277 VAC; 60 Hz	Loads 1 & 2: Ⓢ 120VAC, 0-800W or 1/6hp Ⓢ 277VAC, 0-1200W
<input type="checkbox"/> EOSW-111-LA	Lt. Almond			
<input type="checkbox"/> EOSW-111-I	Ivory			
<input type="checkbox"/> EOSW-111-G	Grey			
<input type="checkbox"/> EOSW-111-B	Black			
<input type="checkbox"/> EOSW-112-W	White	Dual relay RF wall switch, with neutral	120/277 VAC; 60 Hz	Loads 1 & 2: Ⓢ 120VAC, 0-800W or 1/6hp Ⓢ 277VAC, 0-1200W
<input type="checkbox"/> EOSW-112-LA	Lt. Almond			
<input type="checkbox"/> EOSW-112-I	Ivory			
<input type="checkbox"/> EOSW-112-G	Grey			
<input type="checkbox"/> EOSW-112-B	Black			

Order wall plate separately.



# EORS-100 Series Self-powered RF Remote Switches

Wireless 1- and 2-button wall switches

Mount in standard J-box

Provide multi-way control with no wiring or batteries



Transmitter for wireless communication with RF wall switches

Work with 1- and 2-relay RF wall switches

Radio transmission range up to 150'

PROJECT

LOCATION/TYPE

## Product Overview

### Description

EORS-100 Series remote switches provide wireless remote control of lighting loads wired to EOSW-100 Series RF Wall Switches. They do not require any electrical connections or any batteries for operation. Models are available with one or two control buttons in a single-gang device.

### Operation

Prior to use, each control button on an EORS-100 remote switch must be paired with selected load(s). The remote switches operate using kinetic energy generated when a user pushes a control button. The button action transmits an RF signal to the paired RF Wall Switch(es) connected to the controlled load(s) to toggle the load(s) on or off.

### RF Communications

The RF transmission range is approximately 50' to 150', depending on product placement.

### Applications

Self-powered remote switches are ideal for retrofit applications where rewiring is prohibitive. Paired with RF wall switches and wireless occupancy sensors, EORS-100 remote switches are perfect for retrofitting small conference rooms, private offices, executives office, hallways and storage rooms.

## Features

- Remote switches work with EOSW-100 RF wall switches
- Provide multi-way control without wires
- Self powered switches do not require batteries
- Compatible with decorator wall plates

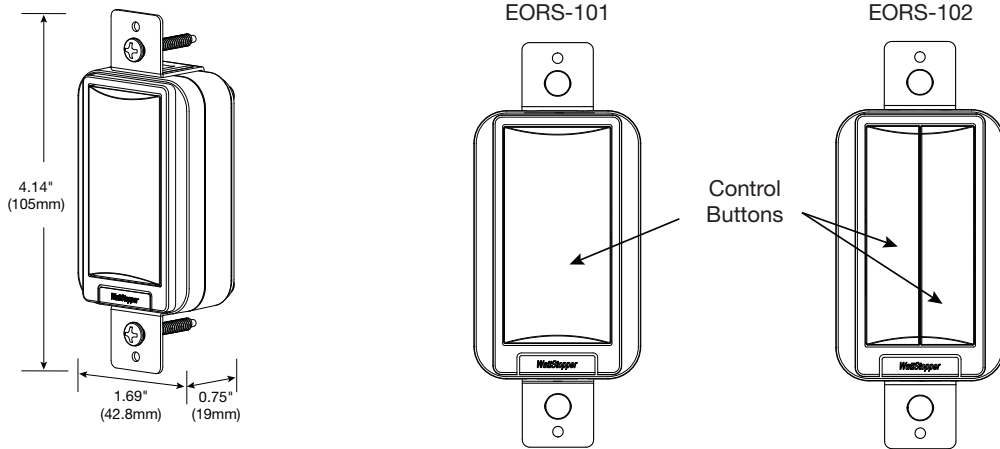


# Specifications

- Self-powered when switch is pressed
- 1 or 2 control buttons
- Pair with RF Wall Switch(es)
- Frequency: 902 MHz, integrated whip antenna
- Operating conditions: for indoor use only; 32-104°F (0-40°C); 5-95% RH, non condensing
- UL and cUL listed
- FCC part 15 compliant
- Five year warranty

## Controls & Settings

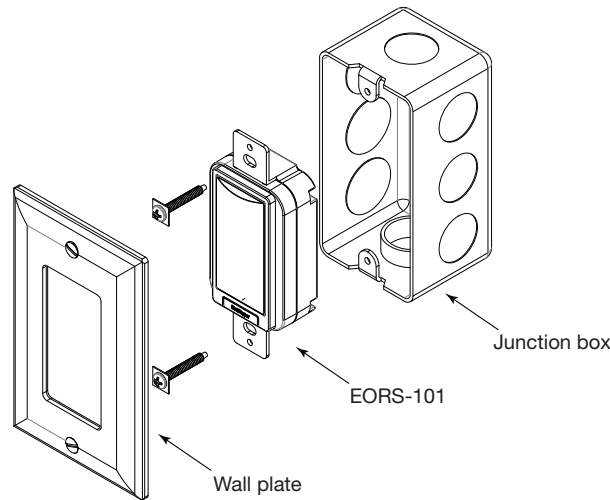
### Product Dimensions and Controls



## Mounting Diagram

### Mounting in Standard Electrical Box

Armando to update image of wall plate



## Ordering Information

Catalog No.	Color	Description	Voltage
<input type="checkbox"/> EORS-101-W	White	1-button RF remote wall switch	Self-powered when switch is pressed
<input type="checkbox"/> EORS-101-LA	Lt. Almond		
<input type="checkbox"/> EORS-101-I	Ivory		
<input type="checkbox"/> EORS-101-G	Grey		
<input type="checkbox"/> EORS-101-B	Black		
<input type="checkbox"/> EORS-102-W	White	2-button RF remote wall switch	
<input type="checkbox"/> EORS-102-LA	Lt. Almond		
<input type="checkbox"/> EORS-102-I	Ivory		
<input type="checkbox"/> EORS-102-G	Grey		
<input type="checkbox"/> EORS-102-B	Black		

Order wall plate separately.

# EOHR-100 Series Self-powered RF Handheld Remotes

Wireless 1- and 2-button handheld or wall mount switches

Provide multi-way control without wiring or batteries



Transmitter for wireless communication with RF wall switches

Work with 1- and 2-relay RF wall switches

Radio transmission range up to 150'

PROJECT

LOCATION/TYPE

## Product Overview

### Description

EOHR-100 Series handheld remotes provide wireless remote control of lighting loads wired to EOSW-100 Series RF Wall Switches. They do not require any electrical connections or any batteries for operation. Models are available with one or two control buttons.

### Operation

Prior to use, each control button on an EOHR-100 remote must be paired with selected load(s). The remote switches operate using kinetic energy generated when a user pushes a control button. The button action transmits an RF signal to the paired RF Wall Switch(es) connected to the controlled load(s) to toggle the load(s) on or off.

### RF Communications

The RF transmission range is approximately 50' to 150', depending on product placement.

### Applications

Self-powered handheld remotes are ideal for mounting on wall surfaces without the need for a junction box, and for portable lighting control. Paired with RF wall switches and wireless occupancy sensors, EOHR-100 remote switches are perfect for retrofitting small conference rooms, private offices, executives office, hallways and storage rooms.

## Features

- Handheld remotes work with EOSW-100 RF wall switches
- Provide multi-way control without wires
- Self powered switches do not require batteries
- Include holster for optional mounting

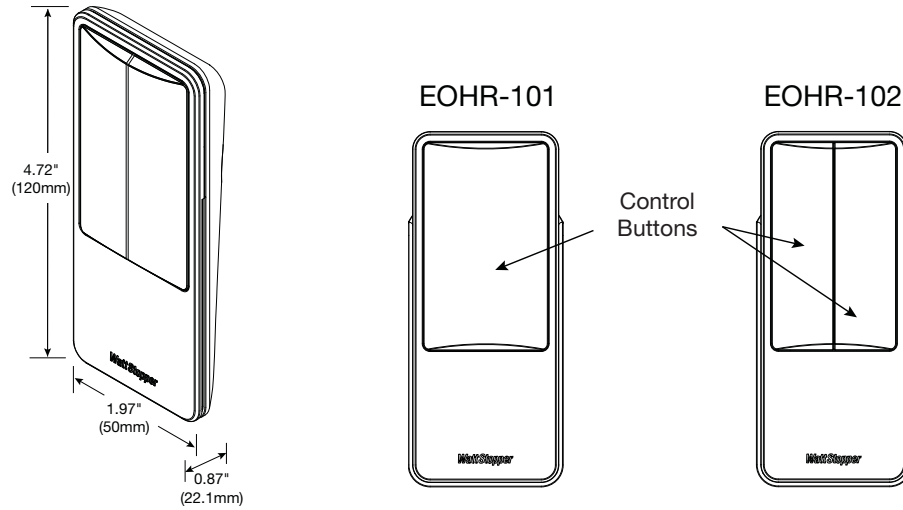


# Specifications

- Self-powered when switch is pressed
- 1 or 2 control buttons
- Pairs with RF Wall Switch(es)
- Frequency: 902 MHz, integrated whip antenna
- Operating conditions: for indoor use only; 32-104°F (0-40°C); 5-95% RH, non condensing
- FCC part 15 compliant
- Five year warranty

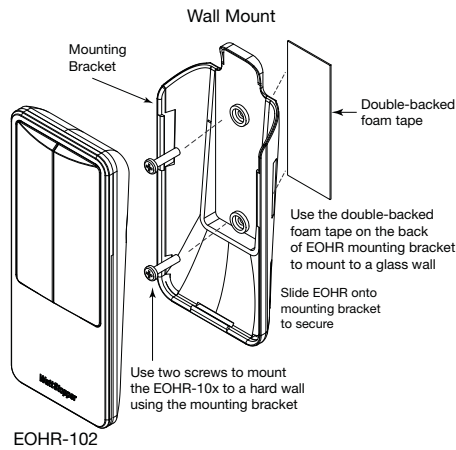
## Controls & Settings

### Product Dimensions and Controls



## Mounting Diagram

### Mounting on Glass Wall



## Ordering Information

Catalog No.	Color	Description	Voltage
<input type="checkbox"/> EOHR-101-W	White	1-button RF handheld remote	Self-powered when switch is pressed
<input type="checkbox"/> EOHR-101-LA	Lt. Almond		
<input type="checkbox"/> EOHR-101-I	Ivory		
<input type="checkbox"/> EOHR-101-G	Grey		
<input type="checkbox"/> EOHR-101-B	Black		
<input type="checkbox"/> EOHR-102-W	White	2-button RF handheld remote	
<input type="checkbox"/> EOHR-102-LA	Lt. Almond		
<input type="checkbox"/> EOHR-102-I	Ivory		
<input type="checkbox"/> EOHR-102-G	Grey		
<input type="checkbox"/> EOHR-102-B	Black		





## WALL SWITCH SENSORS

Occupancy sensors maximize energy savings by ensuring that lights are turned off when spaces are unoccupied.

WattStopper's wall switch sensors provide convenient automatic-on or manual-on control and are packed with innovative features and options. Many models are available in line or low voltage for flexibility in placement and wiring. Sensors use passive infrared, ultrasonic and WattStopper's patented dual technology.





# CS-50 PIR Wall Switch Vacancy Sensor

Manual-on/automatic-off control



Adjustable time delay

LED status indicator

Two-wire sensor; no neutral connection

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The CS-50 Passive Infrared (PIR) Vacancy Sensor provides automatic shutoff for single-pole lighting control applications. It is engineered to comply with specific provisions of California's Title 24-2013 energy code.

### Operation

The CS-50 operates as a manual-on sensor. Users must press the pushbutton to turn on lighting. The CS-50 employs PIR technology to sense the difference between the infrared energy from a person in motion and the background space. It keeps lighting on as long as motion is detected and provides automatic shutoff, following a user-selected time delay, when motion is no longer detected. Users may turn the lighting off manually.

### Adjustable Time Delay

The CS-50 is shipped preset for a 30 minute time delay, and does not require any adjustment after installation. If desired, the time delay may be easily reduced to 25, 20, 15, 10 or 5 minutes or to 30 seconds. The time delay should be set relative to the anticipated duration of stay and level of activity in the room; 30 minutes for guest room and executive restroom, and 5 to 10 minutes for pantries and laundry rooms.

### Applications

The CS-50 is ideal for many residential and light commercial applications where the switch location has an unobstructed line of sight of the room. It does not require a neutral wire in the switch box and may be used to switch lighting or fan motors.

## Features

- Replaces single-pole switches
- Adjustable time delay, 30 seconds to 30 minutes
- If enabled, status indicator blinks when motion is detected
- Low-profile styling
- Choice of five decorator colors; lens is color-matched to device
- Operates most common types of lighting or fan motors
- Relay-based switching
- No current leakage to load in off mode for safety
- Compatible with decorator wall plates
- CA Title 24 compliant



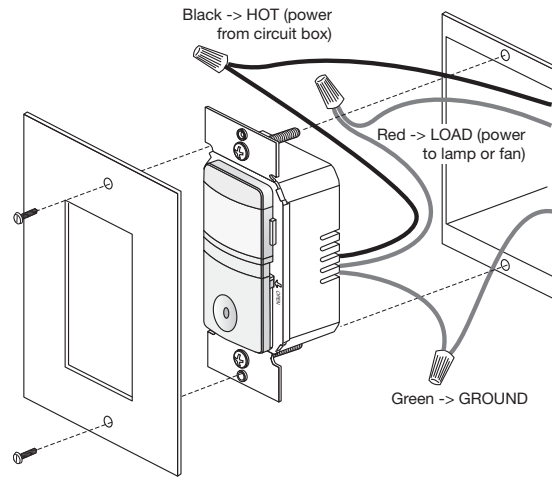


## Specifications

- 120 VAC, 60 Hz
- Load ratings: 0-600W incandescent, LED, fluorescent, compact fluorescent (CFL), magnetic low voltage (MLV) or electronic low voltage (ELV) or 1/6 hp motor
- Time delay settings: 30 seconds, 5, 10, 15, 20, 25, 30 minutes
- PIR coverage: 180°, 600 ft<sup>2</sup> [56 m<sup>2</sup>]
- LED to indicate motion detection
- 2.67" x 1.73" x 1.77" (68mm x 44mm x 45mm) L x W x D
- Operating conditions: 32-131°F (0-55°C), 95% RH, non-condensing; for indoor use only
- UL and cUL listed
- Five year warranty

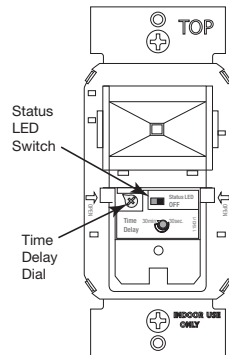
## Installation & Wiring

### Wiring Diagram



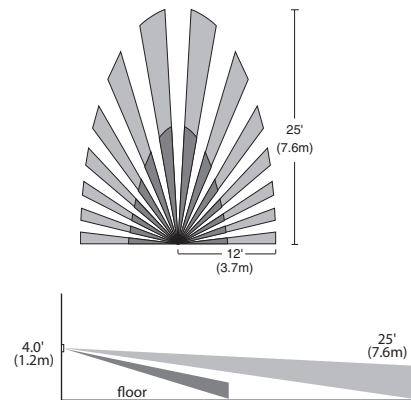
## Adjustments & Coverage

### Accessing Adjustments



Adjustment controls are located behind the front cover of the unit and are clearly labeled.

### Coverage Pattern



## Ordering Information

Catalog No.	Color	Description	Voltage	Load Rating	Coverage
<input type="checkbox"/> CS-50-W	White	PIR Wall Switch Vacancy Sensor	120 VAC, 60 Hz	0-600W incandescent, LED, fluorescent, CFL, MLV, ELV or 1/6 hp motor	180°, max. 600 ft <sup>2</sup> [56m <sup>2</sup> ]
<input type="checkbox"/> CS-50-I	Ivory				
<input type="checkbox"/> CS-50-LA	Light Almond				
<input type="checkbox"/> CS-50-A	Almond				
<input type="checkbox"/> CS-50-B	Black				

Order wall plate separately.



# RS-150BA-N PIR Wall Switch Vacancy Sensor with Nightlight

Manual-on/automatic-off control

Ideal for bathrooms

Integral LED nightlight

Fixed 30-minute time delay



PROJECT
LOCATION/TYPE

## Product Overview

### Description

The RS-150BA-N Passive Infrared (PIR) Vacancy Sensor provides automatic shutoff for single-pole lighting control applications. It is engineered to comply with specific provisions of California's Title 24-2013 energy code.

### Operation

The RS-150BA-N operates as a manual-on sensor. Users must press the on/off pushbutton to turn on lighting. The RS-150BA-N employs PIR technology to sense the difference between the infrared energy from a person in motion and the background space. It keeps lighting on as long as motion is detected and provides automatic shutoff, following a 30-minute time delay, when motion is no longer detected. Users may turn the lighting off manually.

### Integral Nightlight

The integral nightlight helps preserve night vision by providing low-level illumination when the connected lighting is off. The nightlight uses energy-efficient LEDs.

### Applications

The RS-150BA-N PIR Vacancy Sensor requires no adjustment and is ideal for bathroom and bedroom applications where the switch location has an unobstructed line of sight of the room.

## Features

- Complies with 2011 NEC requirements
- Replaces single-pole switches
- Fixed 30-minute time delay; no adjustment necessary
- Amber LED nightlight illuminates whenever connected load is off
- Lighted switch for visibility in darkened rooms
- Low-profile styling
- Choice of five decorator colors; lens is color-matched to device
- Operates most common types of lighting or fan motors
- Relay-based switching
- No current leakage to load in off mode for safety
- Compatible with decorator wall plates
- CA Title 24 compliant

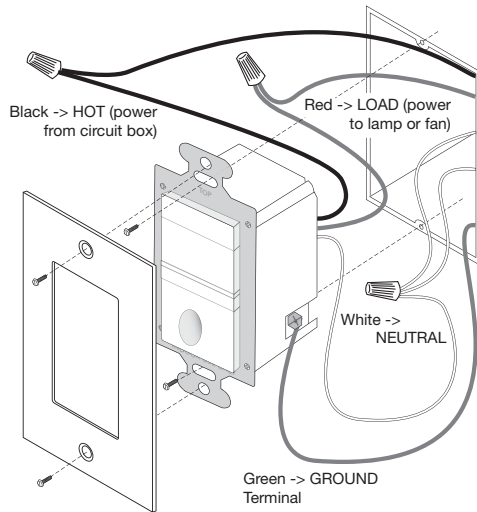


## Specifications

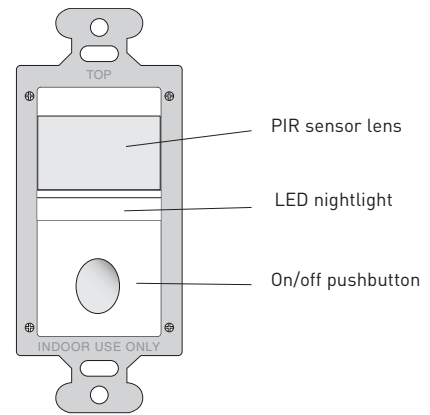
- 120 VAC, 60 Hz; neutral required
- Load ratings: 0-600W incandescent, LED, fluorescent, compact fluorescent (CFL), magnetic low voltage (MLV) or electronic low voltage (ELV) or 1/6 hp motor
- Fixed time delay: 30 minutes
- PIR coverage: 180°, 600 ft<sup>2</sup> (56 m<sup>2</sup>)
- 2.63" x 1.69" x 1.88" (67.8mm x 42.9mm x 47.8mm) L x W x D
- Operating conditions: 32-131°F (0-55°C), 95% RH, non-condensing; for indoor use only
- UL and cUL listed
- Five-year warranty

## Wiring & Controls

### Wiring Diagram

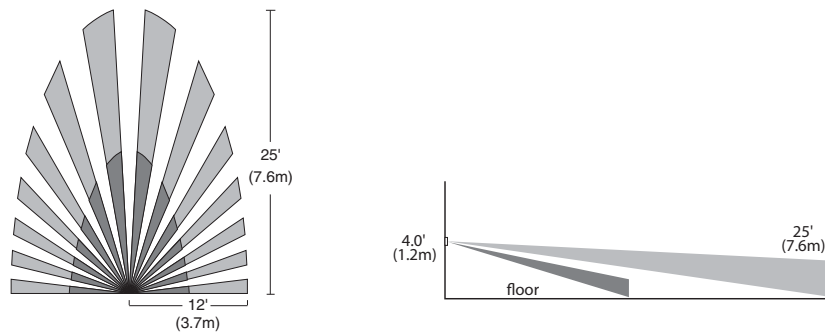


### Product Controls



## Coverage

### Coverage Pattern



## Ordering Information

Catalog No.	Color	Description	Voltage	Load Rating	Coverage
<input type="checkbox"/> RS-150BA-N-W	White	PIR Wall Switch Vacancy Sensor with Nightlight	120 VAC, 60 Hz	0-600W incandescent, LED, fluorescent, CFL, MLV, ELV or 1/6 hp motor	180°, max. 600 ft <sup>2</sup> (56m <sup>2</sup> )
<input type="checkbox"/> RS-150BA-N-I	Ivory				
<input type="checkbox"/> RS-150BA-N-LA	Lt. Almond				
<input type="checkbox"/> RS-150BA-N-A	Almond				
<input type="checkbox"/> RS-150BA-N-B	Black				

Order wall plate separately.



# CS-350-N PIR Dual Relay Wall Switch Vacancy Sensor with Nightlight

Manual-on/automatic-off control of two separate loads

Integral LED nightlight



Ideal for bathrooms

Adjustable time delay

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The CS-350-N Passive Infrared (PIR) Dual Relay Vacancy Sensor provides automatic lighting shutoff for applications that require separate switching of two loads. It is engineered to comply with specific provisions of California's Title 24-2013 energy code.

### Operation

The CS-350-N operates as a manual-on sensor. Users must press one or both of the on/off pushbuttons to turn on the connected loads. The CS-350-N employs PIR technology to sense the difference between the infrared energy from a person in motion and the background space. It keeps the loads on as long as motion is detected and provides automatic shutoff, following a user-selected time delay, when motion is no longer detected. Users may turn the connected loads off manually.

### Integral Nightlight

The integral nightlight helps preserve night vision by providing low-level illumination when the connected loads are off. The nightlight uses energy-efficient LEDs.

### Applications

The CS-350-N PIR Dual Relay Vacancy Sensor is appropriate anywhere that manually-activated control of two loads from a single location is desired (e.g. in a bathroom to control the light and exhaust fan). It is also a suitable device for light commercial applications like small offices or storage areas. By providing control of two loads from a single gang device, the CS-350-N helps reduce wall clutter.

## Features

- Complies with 2011 NEC requirements
- Replaces standard switches for control of lighting and/or fans
- Contains two relays to control two independent lighting loads or circuits
- Adjustable time delay, 15 seconds to 30 minutes
- Amber LED nightlight illuminates whenever connected loads are off
- Lighted switch for visibility in darkened rooms
- Low-profile styling
- Choice of five decorator colors; lens is color-matched to device
- Operates most common types of lighting or fan motors
- Relay-based switching
- No current leakage to load in off mode for safety
- Compatible with decorator wall plates
- CA Title 24 compliant

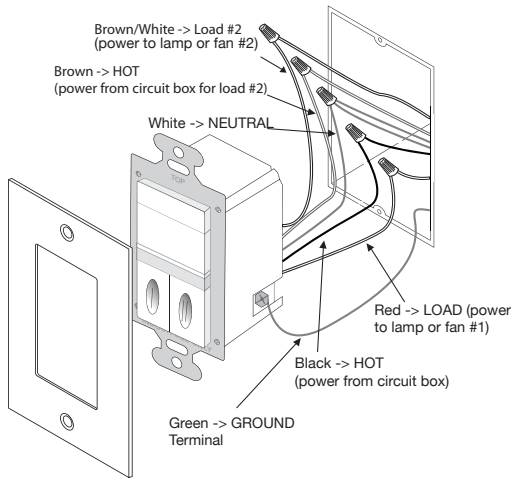


### Specifications

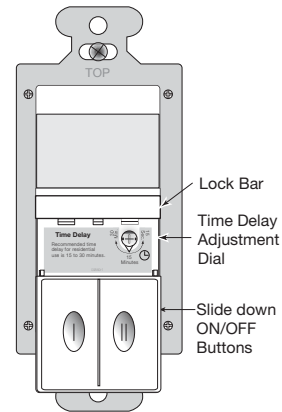
- 120 VAC, 60 Hz; neutral required
- Load ratings: 0-600W incandescent, LED, fluorescent, compact fluorescent (CFL), magnetic low voltage (MLV) or electronic low voltage (ELV) or 1/6 hp motor
- Adjustable time delay from 15 seconds to 30 minutes
- PIR coverage: 180°, 600 ft² (56 m²)
- 2.63" x 1.69" x 1.88" (67.8mm x 42.9mm x 47.8mm) L x W x D
- Operating conditions: 32-131°F (0-55°C), 95% RH, non-condensing; for indoor use only
- UL and cUL listed
- Five-year warranty

### Wiring & Controls

#### Wiring Diagram



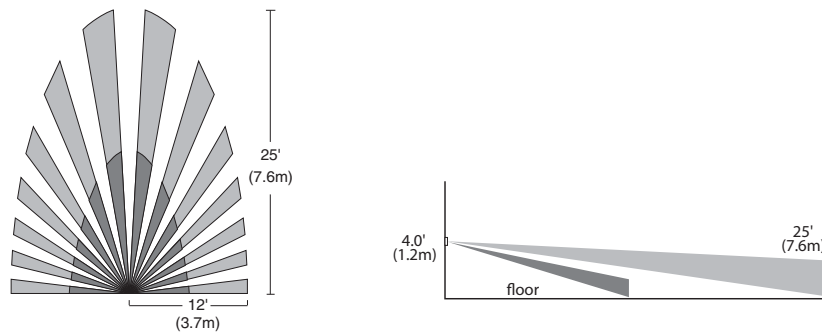
#### Product Controls



To access adjustment dial, gently pull the lock bar away from the switch face and slide the on/off buttons down.

### Coverage

#### Coverage Pattern



### Ordering Information

Catalog No.	Color	Description	Voltage	Load Rating	Coverage
<input type="checkbox"/> CS-350-N-W	White	PIR Dual Relay Wall Switch Vacancy Sensor with Nightlight	120 VAC, 60 Hz	0-600W incandescent, LED, fluorescent, CFL, MLV, ELV or 1/6 hp motor	180°, max. 600 ft² (56m²)
<input type="checkbox"/> CS-350-N-I	Ivory				
<input type="checkbox"/> CS-350-N-LA	Lt. Almond				
<input type="checkbox"/> CS-350-N-A	Almond				
<input type="checkbox"/> CS-350-N-B	Black				

Order wall plate separately.

# CH-250 PIR Multi-way Wall Switch Vacancy Sensor

Manual-on/automatic-off control with multi-way capability

Ideal for hallways, stairwells and large rooms with multiple entrances

Lighted pushbutton for visibility in darkened rooms



Adjustable time delay

PROJECT

LOCATION/TYPE

## Product Overview

### Description

The CH-250 Passive Infrared (PIR) Multi-way Vacancy Sensor provides automatic lighting shutoff for a variety of applications including those with multiple switch locations. It is engineered to comply with specific provisions of California's Title 24-2013 energy code.

### Operation

The CH-250 operates as a manual-on sensor. Users must press the pushbutton to turn on lighting. The CH-250 employs PIR technology to sense the difference between the infrared energy from a person in motion and the background space. It keeps lighting on as long as motion is detected and provides automatic shutoff, following a user-selected time delay, when motion is no longer detected. Users may turn the connected load off manually.

### Multi-way Operation

A CH-250 connected to other CH-250s and/or RH-253 Decorator Single Pole Momentary Switches provides true multi-way on/off control. An occupant simply presses the on/off pushbutton of any connected device to turn on the lighting. Lights remain on as long as one of the CH-250s continues to detect occupancy. The user may turn off the lighting by pressing the on/off button on any of the connected devices. If the room becomes vacant and lights are on, they will be switched off automatically following the time delay of the last CH-250 to detect occupancy.

### Applications

CH-250s are appropriate for residential and light commercial applications where the switch location has an unobstructed line of sight of the room. Multiple CH-250s are ideal for hallways, stairwells and large rooms with multiple entrances, as each sensor expands the coverage area.

## Features

- Complies with 2011 NEC requirements
- Replaces single- or multi-pole switches
- Provides multi-way control when used with other CH-250s or RH-253s
- Adjustable time delay, 15 seconds to 30 minutes
- Lighted switch for visibility in darkened rooms
- Low-profile styling
- Choice of five decorator colors; lens is color-matched to device
- Operates most common types of lighting
- Relay-based switching
- No current leakage to load in off mode for safety
- Compatible with decorator wall plates
- CA Title 24 compliant

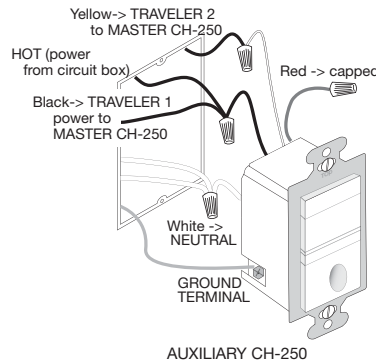
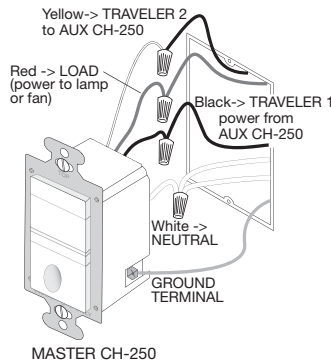


# Specifications

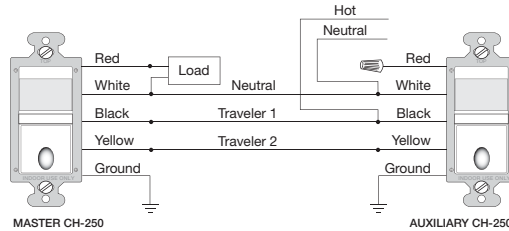
- 120 VAC, 60 Hz; neutral required
- Load ratings: 0-600W incandescent, LED, fluorescent, compact fluorescent (CFL), magnetic low voltage (MLV) or electronic low voltage (ELV) or 1/6 hp motor
- Time delay settings: 15 seconds, 5, 15, 30 minutes
- PIR coverage: 180°, 600 ft<sup>2</sup> (56 m<sup>2</sup>)
- 2.67" x 1.73" x 1.77" (68mm x 44mm x 45mm) L x W x D
- Operating conditions: 32-131°F (0-55°C), 95% RH, non-condensing; for indoor use only
- UL and cUL listed
- Five year warranty

# Installation & Wiring

## Wiring Diagrams

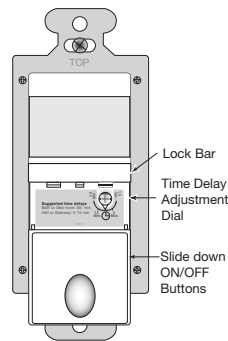


For single pole applications, cap off the yellow wire. Up to four multi-location sensors may be connected together. For details on connecting RH-253s for multi-location control, see the RH-253 cut sheet.



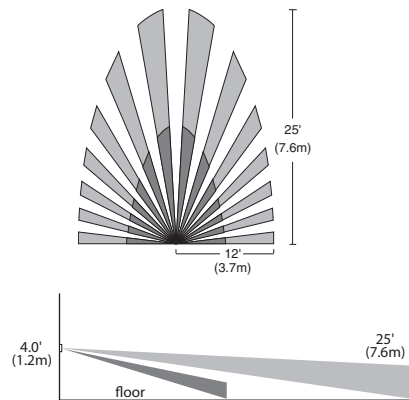
# Controls & Coverage

## Product Controls



To access adjustment dial, gently pull the lock bar away from the switch face and slide the on/off button down.

## Coverage Pattern



# Ordering Information

Catalog No.	Color	Description	Voltage	Rating	Coverage
<input type="checkbox"/> CH-250-W	White	PIR Multi-way Wall Switch Vacancy Sensor	120 VAC, 60 Hz	0-600W incandescent, LED, fluorescent, CFL, MLV, ELV lighting load or 1/6 hp motor load	180°, max. 600 ft <sup>2</sup> (56m <sup>2</sup> )
<input type="checkbox"/> CH-250-I	Ivory				
<input type="checkbox"/> CH-250-LA	Light Almond				
<input type="checkbox"/> CH-250-A	Almond				
<input type="checkbox"/> CH-250-B	Black				

Order wall plate separately.



# CU-250 Ultrasonic Multi-way Wall Switch Vacancy Sensor

Manual-on/automatic-off control with multi-way capability

Ideal for bathrooms, L-shaped rooms and spaces with obstructions

Lighted pushbutton for visibility in darkened rooms



Adjustable sensitivity and time delay

PROJECT

LOCATION/TYPE

## Product Overview

### Description

The CU-250 Ultrasonic Multi-way Vacancy Sensor provides automatic lighting shutoff for a variety of applications including those with multiple switch locations. It is engineered to comply with specific provisions of California's Title 24-2013 energy code.

### Operation

The CU-250 operates as a manual-on sensor. Users must press the pushbutton to turn on lighting. The CU-250 employs 40kHz high frequency ultrasound to sense motion within an enclosed space, and does not require a clear line of sight for proper operation. It keeps lighting on as long as motion is detected and provides automatic shutoff, following a user-selected time delay, when motion is no longer detected. Users may turn the connected load off manually.

### Multi-way Operation

A CU-250 connected to other CU-250s and/or RH-253 Decorator Single Pole Momentary Switches provides true multi-way on/off control. An occupant simply presses the on/off pushbutton of any connected device to turn on the lighting. Lights remain on as long as one of the CU-250s continues to detect occupancy. The user may turn off the lighting by pressing the on/off button on any of the connected devices. If the room becomes vacant and lights are on, they will be switched off automatically following the time delay of the last CU-250 to detect occupancy.

### Applications

CU-250s are ideal for bathrooms, L-shaped rooms, storage areas and other applications where the sensor may have an obstructed view of the covered area.

## Features

- Complies with 2011 NEC requirements
- Replaces single- or multi-pole switches
- Provides multi-way control when used with other CU-250s or RH-253s
- Adjustable time delay, 15 seconds to 30 minutes
- Adjustable sensitivity
- Lighted switch for visibility in darkened rooms
- Low-profile styling
- Choice of five decorator colors
- Operates most common types of lighting
- Relay-based switching
- No current leakage to load in off mode for safety
- Compatible with decorator wall plates
- CA Title 24 compliant

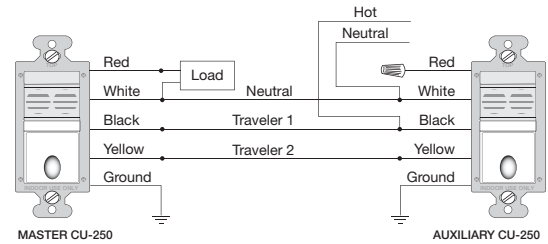
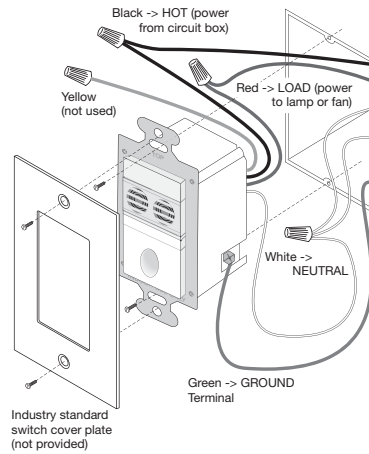


# Specifications

- 120 VAC, 60 Hz; neutral required
- Load ratings: 0-600W incandescent, LED, fluorescent, compact fluorescent (CFL), magnetic low voltage (MLV) or electronic low voltage (ELV) or 1/6 hp motor
- Time delay settings: 15 seconds, 5, 15, 30 minutes
- Coverage: 180°, 600 ft<sup>2</sup> (56 m<sup>2</sup>)
- 2.67" x 1.73" x 1.77" (68mm x 44mm x 45mm) L x W x D
- Operating conditions: 32-122°F (0-50°C); for indoor use only
- UL and cUL listed
- Five year warranty

# Installation & Wiring

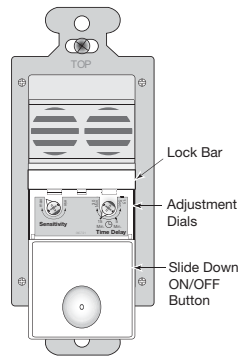
## Wiring Diagrams



Up to four multi-location sensors may be connected together. For details on connecting RH-253s for multi-location control, see the RH-253 cut sheet.

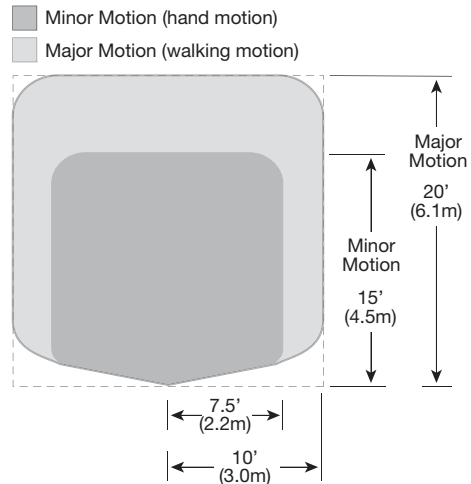
# Controls & Coverage

## Product Controls



To access adjustment dials, gently pull the lock bar away from the switch face and slide the on/off buttons down.

## Coverage Pattern



# Ordering Information

Catalog No.	Color	Description	Voltage	Rating	Coverage
<input type="checkbox"/> CU-250-W	White	Ultrasonic Multi-way Wall Switch Vacancy Sensor	120 VAC, 60 Hz	0-600W incandescent, LED, fluorescent, CFL, MLV, ELV lighting load or 1/6 hp motor load	180°, max. 600 ft <sup>2</sup> (56m <sup>2</sup> )
<input type="checkbox"/> CU-250-I	Ivory				
<input type="checkbox"/> CU-250-LA	Light Almond				
<input type="checkbox"/> CU-250-A	Almond				
<input type="checkbox"/> CU-250-B	Black				

Order wall plate separately.

# RS-250 PIR Wall Switch Occupancy Sensor

Automatic-off control

Adjustable time delay

Lighted pushbutton for visibility in darkened rooms



Light level sensor for added energy savings when automatic-on operation is selected

Choice of manual-on or automatic-on operation

PROJECT

LOCATION/TYPE

## Product Overview

### Description

The RS-250 Passive Infrared (PIR) Occupancy Sensor provides automatic lighting shutoff for single-pole lighting control applications. It offers optional automatic lighting activation.

### Operation

The RS-250 operates either as a manual- or automatic-on sensor. When in manual-on mode, users must press the pushbutton to turn on lighting. The RS-250 employs PIR technology to sense the difference between the infrared energy from a person in motion and the background space. It keeps lighting on as long as motion is detected and provides automatic shutoff, following a user-selected time delay, when motion is no longer detected. Users may turn the lighting off manually.

### Light Level Sensor

When automatic-on operation has been selected, the adjustable light level sensor may be set to prevent lights from turning on automatically if sufficient daylight is present.

### Applications

The RS-250 is ideal for many residential and light commercial applications where the switch location has an unobstructed line of sight of the room. It should be used in manual-on mode for small offices, bedrooms and bathrooms. Automatic-on mode may be selected for convenience in spaces such as laundry rooms, storage rooms or closets.

## Features

- Complies with 2011 NEC requirements
- Replaces single-pole switches
- Adjustable time delay, 15 seconds to 30 minutes
- Lighted switch for visibility in darkened rooms
- If enabled, light level sensing prevents automatic-on when adequate daylight exists
- Low-profile styling
- Choice of five decorator colors; lens is color-matched to device
- Operates most common types of lighting
- Relay-based switching
- No current leakage to load in off mode for safety
- Compatible with decorator wall plates
- Compliant with Nonresidential CA Title 24 requirements

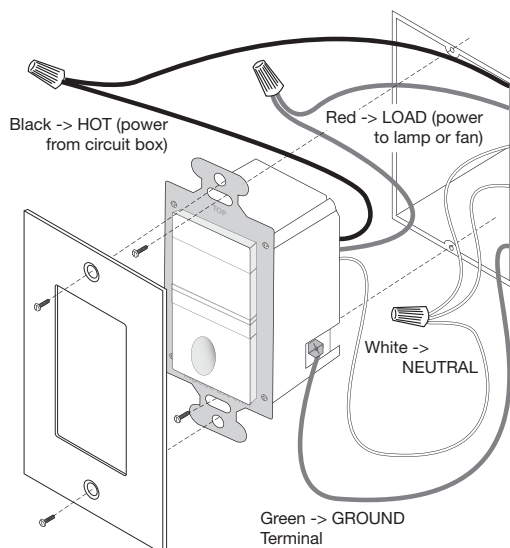


## Specifications

- 120 VAC, 60 Hz; neutral required
- Load ratings: 0-600W incandescent, LED, fluorescent, compact fluorescent (CFL), magnetic low voltage (MLV) or electronic low voltage (ELV) or 1/6 hp motor
- Adjustable time delay from 15 seconds to 30 minutes
- Adjustable light level setting from 10-150 fc (100-1500 lux) for daylight sensing
- PIR coverage: 180°, 600 ft<sup>2</sup> (56 m<sup>2</sup>)
- 2.67" x 1.73" x 1.77" (68mm x 44mm x 45mm) L x W x D
- Operating conditions: 32-131°F (0-55°C), 95% RH, non-condensing; for indoor use only
- UL and cUL listed
- Five year warranty

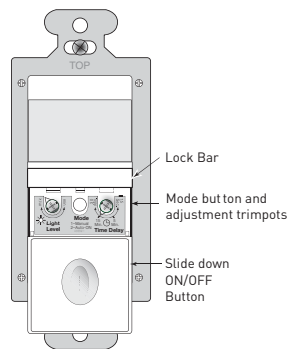
## Installation & Wiring

### Wiring Diagram



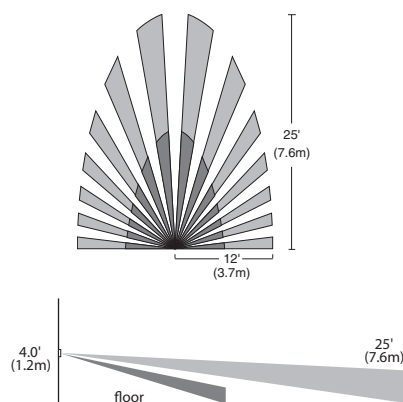
## Controls & Coverage

### Product Controls



To access adjustment dial, gently pull the lock bar away from the switch face and slide the on/off button down.

### Coverage Pattern



## Ordering Information

Catalog No.	Color	Description	Voltage	Rating	Coverage
<input type="checkbox"/> RS-250-W	White	PIR Wall Switch Convertible Occupancy Sensor	120 VAC, 60 Hz	0-600W incandescent, LED, fluorescent, CFL, MLV, ELV lighting load or 1/6 hp motor load	180°, max. 600 ft <sup>2</sup> (56m <sup>2</sup> )
<input type="checkbox"/> RS-250-I	Ivory				
<input type="checkbox"/> RS-250-LA	Light Almond				
<input type="checkbox"/> RS-250-A	Almond				
<input type="checkbox"/> RS-250-B	Black				

Order wall plate separately.

# RH-250 PIR Multi-way Wall Switch Occupancy Sensor

Automatic-off control with multi-way capability

Adjustable time delay

Lighted pushbutton for visibility in darkened rooms



Ideal for hallways, stairwells and large rooms with multiple entrances

Choice of manual-on or automatic-on operation

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The RH-250 Passive Infrared (PIR) Multi-way Occupancy Sensor provides automatic lighting shutoff for a variety of applications including those with multiple switch locations. It offers optional automatic lighting activation.

### Operation

The RH-250 operates either as a manual- or automatic-on sensor. When in manual-on mode, users must press the pushbutton to turn on lighting. The RH-250 employs PIR technology to sense the difference between the infrared energy from a person in motion and the background space. It keeps lighting on as long as motion is detected and provides automatic shutoff, following a user-selected time delay, when motion is no longer detected. Users may turn the lighting off manually.

When automatic-on operation has been selected, the adjustable light level sensor may be set to prevent lights from turning on automatically if sufficient daylight is present.

### Multi-way Operation

An RH-250 connected to other RH-250s and/or RH-253 Decorator Single Pole Momentary Switches provides true multi-way on/off control. An occupant simply presses the on/off pushbutton of any connected device to turn on the lighting. Lights remain on as long as one of the RH-250s continues to detect occupancy. The user may turn off the lighting by pressing the on/off button on any of the connected devices. If the room becomes vacant and lights are on, they will be switched off automatically following the time delay of the last RH-250 to detect occupancy.

### Applications

RH-250s are ideal for applications where the switch location has an unobstructed line of sight of the room. Multiple RH-250s can be used for lighting control in hallways, stairwells and large rooms with multiple entrances, as each sensor expands the coverage area.

## Features

- Complies with 2011 NEC requirements
- Replaces single- or multi-pole switches
- Provides multi-way control when used with other RH-250s or RH-253s
- Adjustable time delay, 15 seconds to 30 minutes
- Lighted switch for visibility in darkened rooms
- If enabled, light level sensing prevents automatic-on when adequate daylight exists
- Low-profile styling
- Choice of five decorator colors; lens is color-matched to device
- Operates most common types of lighting
- Relay-based switching
- No current leakage to load in off mode for safety
- Compatible with decorator wall plates
- Compliant with Nonresidential CA Title 24 requirements



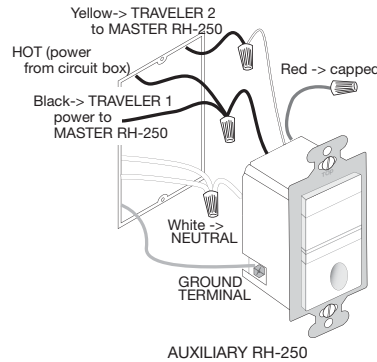
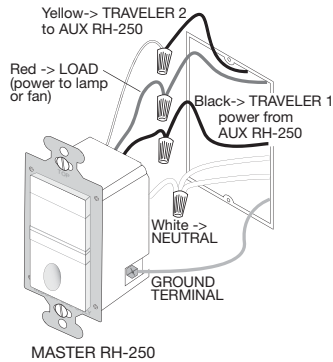


# Specifications

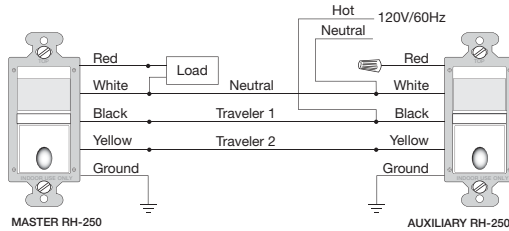
- 120 VAC, 60 Hz; neutral required
- Load ratings: 0-600W incandescent, LED, fluorescent, compact fluorescent (CFL), magnetic low voltage (MLV) or electronic low voltage (ELV) or 1/6 hp motor
- Time delay settings: 15 seconds, 5, 15, 30 minutes
- Adjustable light level setting from 10-150 fc (100-1500 lux) for daylight sensing
- PIR coverage: 180°, 600 ft<sup>2</sup> (56 m<sup>2</sup>)
- 2.67" x 1.73" x 1.77" (68mm x 44mm x 45mm) L x W x D
- Operating conditions: 32-131°F (0-55°C), 95% RH, non-condensing; for indoor use only
- UL and cUL listed
- Five year warranty

# Installation & Wiring

## Wiring Diagrams

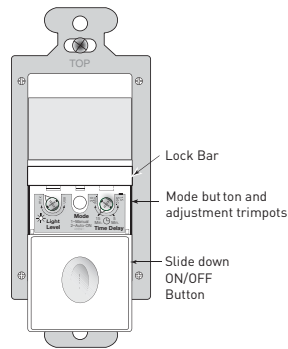


For single pole applications, cap off the yellow wire. Up to four multi-location sensors may be connected together. For details on connecting RH-253s for multi-location control, see the RH-253 cut sheet.



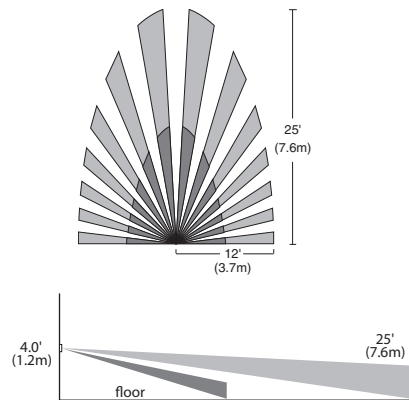
# Controls & Coverage

## Product Controls



To access adjustment dial, gently pull the lock bar away from the switch face and slide the on/off button down.

## Coverage Pattern



# Ordering Information

Catalog No.	Color	Description	Voltage	Rating	Coverage
<input type="checkbox"/> RH-250-W	White	PIR Multi-way Wall Switch Convertible Occupancy Sensor	120 VAC, 60 Hz	0-600W incandescent, LED, fluorescent, CFL, MLV, ELV lighting load or 1/6 hp motor load	180°, max. 600 ft <sup>2</sup> (56m <sup>2</sup> )
<input type="checkbox"/> RH-250-I	Ivory				
<input type="checkbox"/> RH-250-LA	Light Almond				
<input type="checkbox"/> RH-250-A	Almond				
<input type="checkbox"/> RH-250-B	Black				

Order wall plate separately.

# RH-253 Decorator Single Pole Momentary Switch

On/off switch for multi-way operation of occupancy and vacancy sensors

Permits control from up to four locations



Ideal for stairways, hallways, large spaces and bathrooms with multiple entrances

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The RH-253 is a single pole momentary switch for on/off control. It is typically used with multi-way occupancy and vacancy sensors for applications requiring multiple switch locations.

### Operation

Users tap the switch to turn connected lighting on or off. The RH-253 provides true multi-way on/off control when connected to one or more CH-250, CU-250, CD-250, RH-250 or RD-250 wall switch sensors.

### Applications

RH-253 switches provide economical control for three-, four- and multi-way lighting applications. Use RH-253s where additional sensor coverage is not needed, such as in a Jack and Jill bathroom.

## Features

- Replaces three-way or four-way switches when used with multi-way sensors
- Works with CH-250, CU-250 and RH-250 sensors and CD-250 and RD-250 sensor dimmers.
- Low-profile styling
- Choice of five decorator colors
- Compatible with decorator wall plates

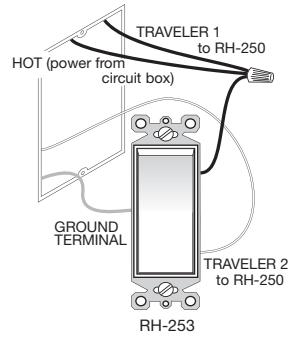


## Specifications

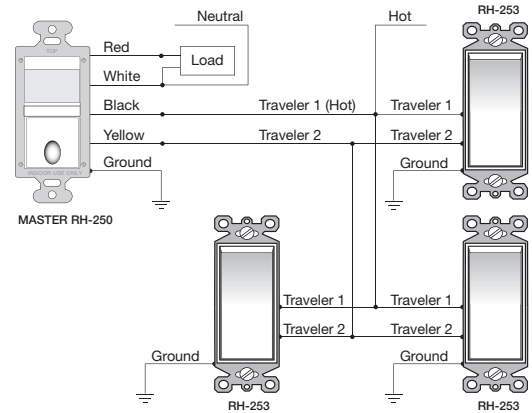
- 120 VAC, 60 Hz
- 2.67" x 1.73" x 1.77" (68mm x 44mm x 45mm) L x W x D
- Operating conditions: 32-131°F (0-55°C), 95% RH, non-condensing; for indoor use only
- UL and cUL listed
- Five year warranty

## Installation & Wiring

### Installation



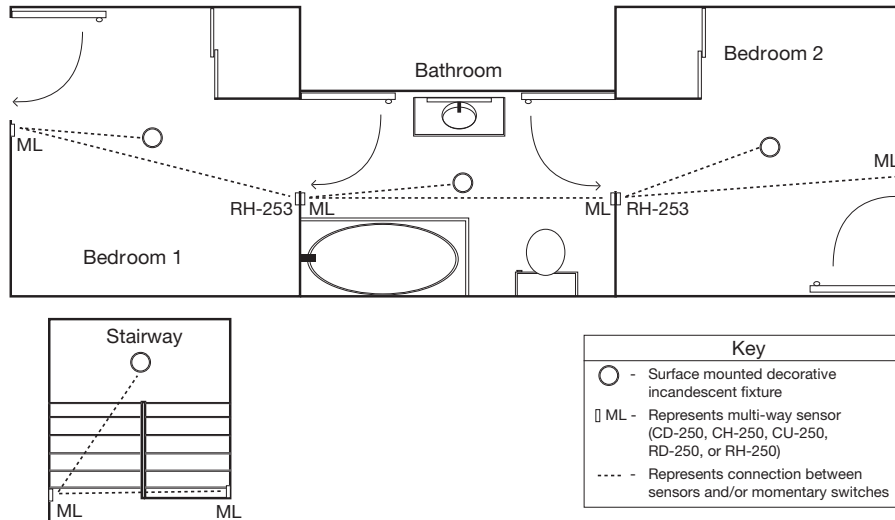
### Wiring for Multi-way Sensor Operation



The RH-253 may be used with the RH-250, as shown in these drawings, or with a CH-250, CD-250, CU-250 or RD-250 multi-way sensor in place of the RH-250.

## Applications

### Bedroom, Jack & Jill Bathroom, and Stairway Applications



## Ordering Information

Catalog No.	Color	Description	Voltage	Rating	Coverage
<input type="checkbox"/> RH-253-W	White	Decorator	120 VAC, 60 Hz	N/A	N/A
<input type="checkbox"/> RH-253-I	Ivory	Single Pole			
<input type="checkbox"/> RH-253-LA	Light Almond	Momentary Switch			
<input type="checkbox"/> RH-253-B	Black				

Order wall plate separately.



# WS-250 Passive Infrared Wall Switch Occupancy Sensor

180° coverage, maximum of 900 ft<sup>2</sup>

Shallow (1") back housing and flying leads for easy installation

Built-in light level sensor



Button provides positive tactile feedback

Dual voltage model, 120/277 VAC

Compatible with all electronic ballasts

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The WS-250 Passive Infrared (PIR) Wall Switch Sensor turns lighting on and off based on occupancy and ambient light level. It replaces existing wall switches and fits behind a standard decorator wall plate.

### Operation

The WS-250 utilizes advanced PIR technology to detect occupancy. Detection occurs when the WS-250 senses the difference between infrared energy from a human body in motion and the background space. Lighting automatically turns on when occupancy is detected. After a user-specified length of time when no occupancy is detected, lighting automatically switches off. The sensor can also be used with line voltage switches for multi-level lighting.

### Light Level Sensor

The WS-250 features a built-in light level sensor. This feature holds lighting systems off when natural light levels are above the preset level. Once lights are switched on, the sensor will not switch them off even if daylight levels increase. Using the light level feature is optional and the setting is adjustable by the user.

### Applications

The WS-250 has the flexibility to work in a variety of applications including offices, conference rooms, break rooms and utility rooms. Energy savings for these areas can be as high as 60% since lighting will no longer remain on once the room is vacant. With a competitive price, low installation cost, and high energy savings, paybacks are usually well under two years.

## Features

- Pulse Count Processing eliminates false offs without reducing sensitivity
- Detection Signature Processing eliminates false triggers; provides immunity to RFI and EMI
- Zero crossing circuitry reduces stress on the relay and results in increased sensor life
- Time delay adjustment from 30 seconds up to 30 minutes
- Adjustable unit sensitivity from 20% to 100%
- Light level sensor holds lights off when ambient lighting is above the preset level
- Custom two-tier Fresnel lens enhances detection at the desktop level
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Patented voltage drop protection
- For safety, there is no leakage to load in the off mode and sensor is safety grounded
- LED indicates occupancy detection
- Compatible with decorator wall plates
- Qualifies for ARRA-funded public works projects



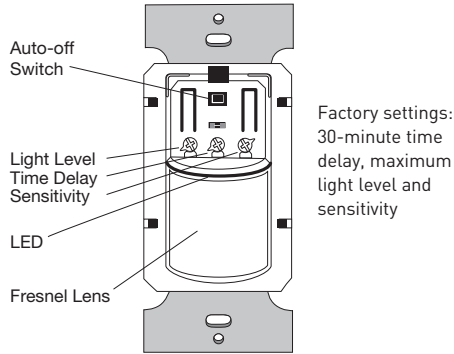
# Specifications

- 120/277VAC, 60Hz, or 347VAC, 60Hz
- Time delay adjustable from 30 seconds up to 30 minutes
- Adjustable unit sensitivity from 20% to 100%
- Adjustable light level setting of 2 to 200 foot-candles (21.5 to 2,153 lux)
- Compatible with all electronic ballasts and PL lamp ballasts

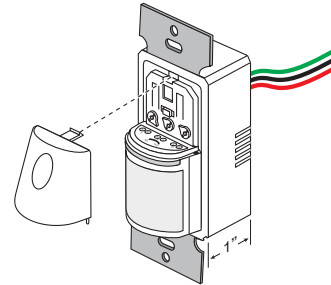
- Coverage: Major motion 35' x 30'  
Minor motion 20' x 15'
- Dimensions: 2.6" x 1.7" x 1.55" (66.0mm x 43.1mm x 39.4mm) L x W x D
- UL and cUL listed
- Five year warranty

# Controls & Installation

## Product Controls



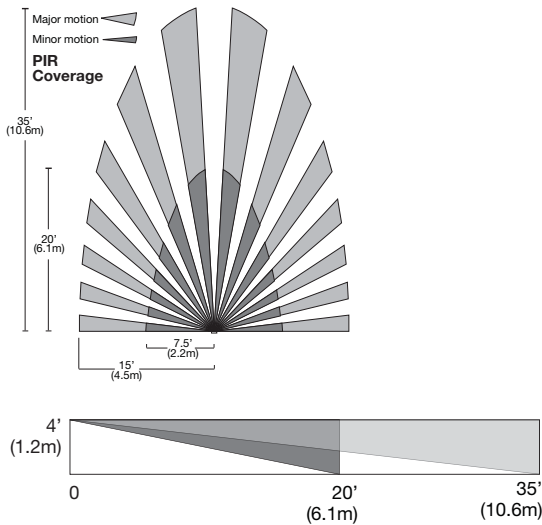
## Installation



Extremely shallow (1") back housing and 6" flying leads facilitate quick installation in standard wall box

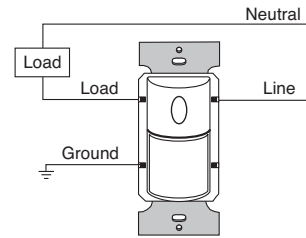
# Coverage & Wiring

## Coverage Pattern

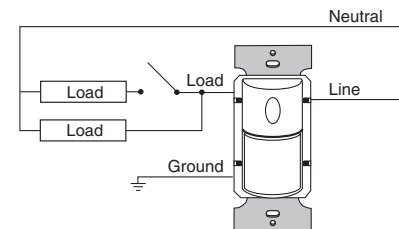


For best performance, WattStopper recommends using this sensor in spaces no larger than 15' x 12'.

## Single Level Lighting



## Manual Bi-level Lighting



# Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> WS-250-W	White	120 VAC; 60 Hz or 277 VAC; 60 Hz	@ 120 VAC, 0-800 W ballast or tungsten or 1/6 hp @ 277 VAC 0-1200 W ballast
<input type="checkbox"/> WS-250-W-U			
<input type="checkbox"/> WS-250-LA	Light Almond		
<input type="checkbox"/> WS-250-I	Ivory		
<input type="checkbox"/> WS-250-I-U			
<input type="checkbox"/> WS-250-G	Gray	347 VAC; 60 Hz	0-1200 W ballast
<input type="checkbox"/> WS-250-B	Black		
<input type="checkbox"/> WS-250-347-W	White		
<input type="checkbox"/> WS-250-347-I	Ivory		
<input type="checkbox"/> WS-250-347-G	Gray		
<input type="checkbox"/> WS-250-347-B	Black		

Order wall plate separately.  
-U = ARRA compliant. Product produced in the U.S.





# WS-301 Passive Infrared Wall Switch Occupancy Sensor

180° coverage, maximum of 900 ft<sup>2</sup>

Shallow (1") back housing and flying leads for easy installation

Built-in light level sensor



Optional neutral connection with break off tab to expose neutral terminals

120/277 VAC and 347 VAC models

Button provides positive tactile feedback

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The WS-301 Passive Infrared (PIR) Wall Switch Sensor turns lighting or fan loads on and off based on occupancy and ambient light level. The sensor replaces existing wall switches and fits behind a standard decorator wall plate.

### Operation

The WS-301 senses the difference between infrared energy from a human body in motion and the background space to turn on lighting automatically when occupancy is detected. After a user-specified length of time when no occupancy is detected, lighting automatically switches off. The sensor can also be used with line voltage switches for multi-level lighting.

### Optional Neutral Connection

The WS-301 sensor uses a patent pending Neutral Sense Technology. Any WS-301 sensor can be used for a two-wire or three wire application, either to work with existing wiring, or to meet local or national code requirements. An easy-to-break plastic tab covers neutral screw terminals. Once the sensor is connected to neutral it complies with all codes that restrict current leakage to ground.

### Applications

The WS-301 is great for retrofit projects and has the flexibility to work in a variety of applications including offices, conference rooms, break rooms and utility rooms. Energy savings for these areas can be as high as 60% since lighting will no longer remain on once the room is vacant. With a competitive price, low installation cost, and high energy savings, paybacks are usually well under two years.

## Features

- Complies with 2011 NEC requirements
- Zero crossing circuitry reduces stress on the relay and results in increased sensor life
- Adjustable time delay and sensitivity
- Custom two-tier Fresnel lens enhances detection at the desktop level
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Light level sensor holds lights off when ambient lighting is above the preset level
- Patented voltage drop protection
- For safety, there is no leakage to load in the off mode and sensor is safety grounded
- LED indicates occupancy detection

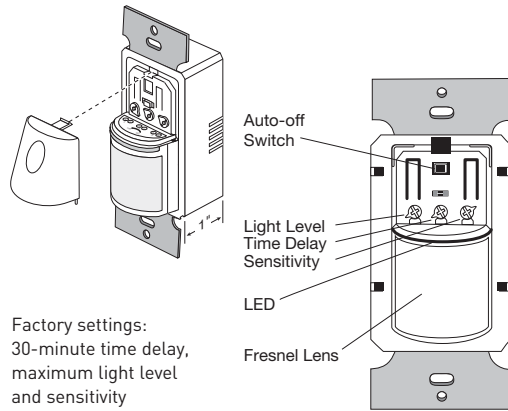


# Specifications

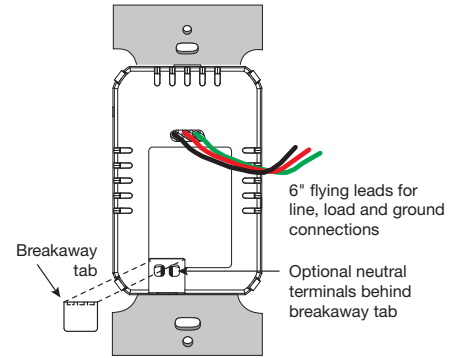
- WS-301: 120/277VAC; 50/60Hz, 1/6 hp @ 120VAC, 0-1000W ballast, LED, and tungsten @ 277VAC, 0-1200W ballast and LED
- WS-301-347: 347VAC; 50/60Hz, 1/6 hp; 0-1500W ballast and LED
- Time delay adjustable from 30 seconds up to 30 minutes
- Adjustable sensitivity from 20% to 100%
- Adjustable light level setting of 10 to 200 foot-candles (107.6 to 2,153 lux)
- Coverage: Major motion 35' x 30' Minor motion 20' x 15'
- Dimensions (L x W x D):
  - WS-301: 4.1" x 1.58" x 1" (104.6mm x 40.3mm x 26.5mm)
  - WS-301-347: 4.5" x 1.58" x 1.39" (114.36mm x 40.3mm x 35.5mm)
- UL and cUL listed
- Five year warranty

# Controls & Installation

## Product Controls



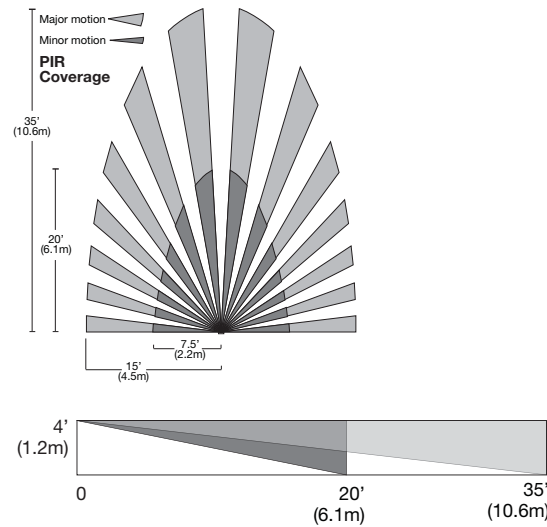
## Neutral Option



Simple optional neutral connection allows installation in any 2-wire or 3-wire application.

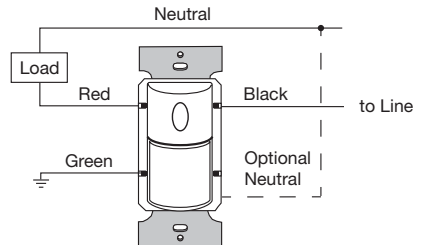
# Coverage & Wiring

## Coverage Pattern

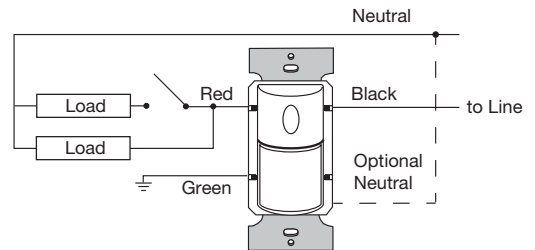


For best performance, WattStopper recommends using this sensor in spaces no larger than 15' x 12'.

## Single Level Lighting



## Manual Bi-level Lighting



# Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> WS-301-W	White	120VAC; 50/60Hz or 277VAC; 50/60Hz	@ 120VAC, 0-1000W ballast, LED, tungsten, 1/6 hp or @ 277VAC 0-1200W ballast, LED, 1/6 hp
<input type="checkbox"/> WS-301-LA	Light Almond		
<input type="checkbox"/> WS-301-I	Ivory	347VAC; 50/60Hz	0-1500W ballast & LED, 1/6 hp
<input type="checkbox"/> WS-301-G	Gray		
<input type="checkbox"/> WS-301-B	Black		
<input type="checkbox"/> WS-301-347-W	White		
<input type="checkbox"/> WS-301-347-I	Ivory		
<input type="checkbox"/> WS-301-347-B	Black		

Order wall plate separately.

# PW-100 Passive Infrared Wall Switch Occupancy Sensor

High sensitivity and dense coverage for exceptional performance

No neutral wire required

Color-matched lens and low profile for appealing design



Selectable operation, walk-through, test and presentation modes for increased energy savings and convenience

Defaults to Manual-ON operation for maximum energy savings

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The PW-100 passive infrared (PIR) wall switch sensor can turn lights OFF and ON based on occupancy. It is characterized by high sensitivity to small and large movements, appealing aesthetics, and a variety of features.

### Operation

The PW-100 replaces existing wall switches and fits in a single gang junction box. It uses advanced PIR technology to detect occupancy and keep lighting ON when it is needed. Once the space is vacated and the time delay elapses, lights automatically turn OFF. DIP switch settings allow for a variety of control options such as Auto-ON operation, walk-through and test modes.

### Manual-on Control

Factory default operation is for Manual-ON, so that users turn lights on only when needed. This control strategy is proven to save more energy than Auto-ON, and is in ASHRAE 90.1-2010. If desired, the PW-100 may be reconfigured to turn lights on automatically.

### Applications

The PW-100 sensor is well suited for small, enclosed spaces with clear line of sight of the occupant. Common applications include small office, small conference room and lunch/break rooms.

## Features

- Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
- Zero-crossing for long relay life
- Vandal resistant lens combines precise coverage with durability
- Choice of Manual-ON or Auto-ON operation
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy adjustments
- Selectable audible and/or visual alerts for impending shutoff
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- LED indicates occupancy detection
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates
- Qualifies for ARRA-funded public works projects

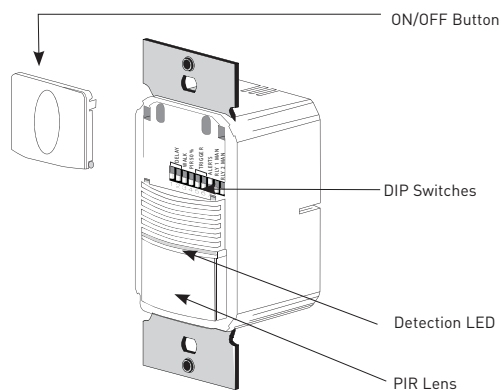


# Specifications

- PW-100: 120/277 VAC; 50/60 Hz @ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp @ 277 VAC, 0-1200 W ballast
- PW-100-347: 347 VAC; 50/60Hz; 0-1500 W ballast
- Time delays: 5, 10, 15, 20, 25 or 30 minutes, walk-through, test-mode
- Coverage: Major motion 35' x 30' Minor motion 20' x 15'
- Sensitivity adjustment: PIR (high/low)
- Dimensions: 2.73" x 1.76" x 1.83" (69.3mm x 44.7mm x 46.5mm) L x W x D
- UL and cUL listed
- Five year warranty

# Controls & Settings

## Product Controls



## DIP Switch Settings

<b>Time Delay</b>	1	2	3
Test	↓	↓	↓
5 minutes	↓	↓	↓
10 minutes	↓	↓	↓
15 minutes	↓	↓	↓
20 minutes	↓	↓	↓
25 minutes	↓	↓	↓
30 minutes	↓	↓	↓
Service	↓	↓	↓

<b>Walk-Through</b>	4
Disabled	↓
Enabled	↑

<b>PIR Sensitivity</b>	5
High	↓
Low, 50%	↑

<b>Visible Alert</b>	6
Disabled	↓
Enabled	↑

<b>Audible Alert</b>	7
Disabled	↓
Enabled	↑

<b>ON Mode</b>	8
Auto On	↓
Manual On	↑

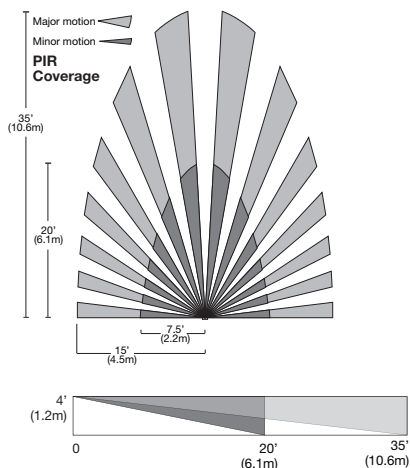
Switch 9 is not used

↑=ON ↓=OFF  
◀=Factory Setting

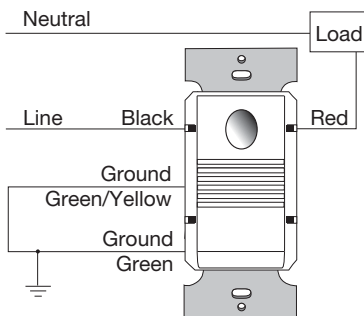
Service bypasses occupancy & light level functions. Control the load manually using ON/OFF button.

# Coverage & Wiring

## Coverage Pattern



## Wiring Diagrams



For best performance, WattStopper recommends using this sensor in spaces no larger than 15' x 12'.

# Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> PW-100-W	White	120/277 VAC; 50/60 Hz 2-wire sensor; no neutral connection	@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp @ 277 VAC, 0-1200 W ballast
<input type="checkbox"/> PW-100-W-U			
<input type="checkbox"/> PW-100-LA	Lt. Almond		
<input type="checkbox"/> PW-100-I	Ivory		
<input type="checkbox"/> PW-100-I-U			
<input type="checkbox"/> PW-100-G	Grey		
<input type="checkbox"/> PW-100-B	Black		
<input type="checkbox"/> PW-100-347-W	White	347 VAC; 50/60 Hz 2-wire sensor; no neutral connection	0-1500 W ballast
<input type="checkbox"/> PW-100-347-LA	Lt. Almond		
<input type="checkbox"/> PW-100-347-I	Ivory		
<input type="checkbox"/> PW-100-347-G	Grey		
<input type="checkbox"/> PW-100-347-B	Black		

Order wall plate separately.  
-U = ARRA compliant. Product produced in the U.S.

# PW-101 Passive Infrared Wall Switch Occupancy Sensor

High sensitivity and dense coverage for exceptional performance

Includes neutral wire to meet NEC 2011 code

Color-matched lens and low profile for appealing design



Selectable operation, walk-through, test and presentation modes for increased energy savings and convenience

Defaults to Manual-ON operation for maximum energy savings

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The PW-101 passive infrared (PIR) wall switch sensor can turn lights OFF and ON based on occupancy. It is characterized by high sensitivity to small and large movements, appealing aesthetics, and a variety of features.

### Operation

The PW-101 replaces existing wall switches and fits in a single gang junction box. It uses advanced PIR technology to detect occupancy and keep lighting ON when it is needed. Once the space is vacated and the time delay elapses, lights automatically turn OFF. DIP switch settings allow for a variety of control options such as Auto-ON operation, walk-through and test modes.

### Manual-on Control

Factory default operation is for Manual-ON, so that users turn lights on only when needed. This control strategy is proven to save more energy than Auto-ON, and is in ASHRAE 90.1-2010. If desired, the PW-101 may be reconfigured to turn lights on automatically.

### Applications

The PW-101 sensor is well suited for small, enclosed spaces with clear line of sight of the occupant. Common applications include small office, small conference room and lunch/break rooms.

## Features

- Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
- Zero-crossing for long relay life
- Vandal resistant lens combines precise coverage with durability
- Choice of Manual-ON or Auto-ON operation
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy adjustments
- Selectable audible and/or visual alerts for impending shutoff
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- LED indicates occupancy detection
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Neutral required to meet NEC 2011 code
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates



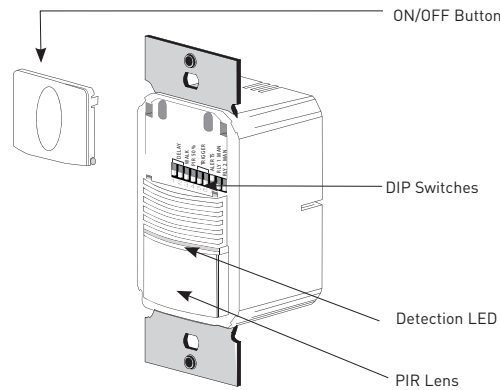


# Specifications

- PW-101: 120/277 VAC; 50/60 Hz  
@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp  
@ 277 VAC, 0-1200 W ballast
- Time delays: 5, 10, 15, 20, 25 or 30 minutes, walk-through, test-mode
- Coverage: Major motion 35' x 30'  
Minor motion 20' x 15'
- Sensitivity adjustment: PIR (high/low)
- Dimensions: 2.73" x 1.76" x 1.83"  
(69.3mm x 44.7mm x 46.5mm) L x W x D
- UL and cUL listed
- Five year warranty

# Controls & Settings

## Product Controls



## DIP Switch Settings

<b>Time Delay</b>	<b>1</b>	<b>2</b>	<b>3</b>
Test	↓	↓	↓
5 minutes	↓	↓	↑
10 minutes	↓	↓	↑
15 minutes	↓	↓	↑
20 minutes	↑	↑	↑
25 minutes	↑	↑	↑
30 minutes	↑	↑	↑
⊗ Service	↑	↑	↑

<b>Walk-Through</b>	<b>4</b>
Disabled	↓
Enabled	↑

<b>PIR Sensitivity</b>	<b>5</b>
High	↓
Low, 50%	↑

<b>Visible Alert</b>	<b>6</b>
Disabled	↓
Enabled	↑

<b>Audible Alert</b>	<b>7</b>
Disabled	↓
Enabled	↑

<b>ON Mode</b>	<b>8</b>
Auto On	↓
Manual On	↑

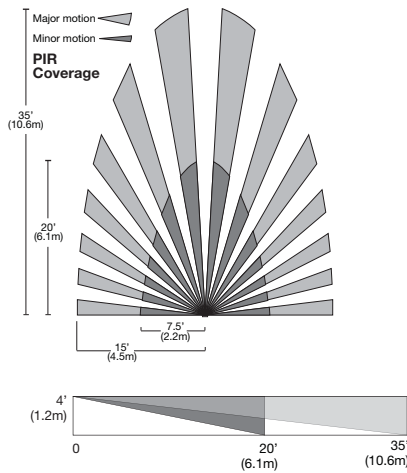
Switch 9 is not used

↑ = ON ↓ = OFF  
◀ = Factory Setting

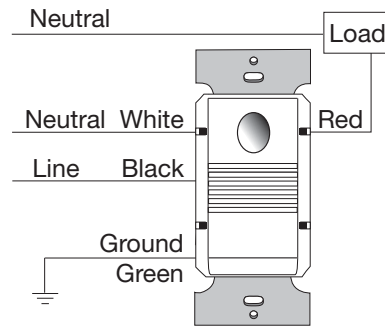
⊗ Service bypasses occupancy & light level functions. Control the load manually using ON/OFF button.

# Coverage & Wiring

## Coverage Pattern



## Wiring Diagrams



For best performance, WattStopper recommends using this sensor in spaces no larger than 15' x 12'.

# Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> PW-101-W	White	120/277 VAC; 50/60 Hz 3-wire sensor; requires neutral connection	@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp @ 277 VAC, 0-1200 W ballast
<input type="checkbox"/> PW-101-LA	Lt. Almond		
<input type="checkbox"/> PW-101-I	Ivory		
<input type="checkbox"/> PW-101-G	Grey		
<input type="checkbox"/> PW-101-B	Black		

Order wall plate separately.

# PW-100-24 Passive Infrared Low Voltage Wall Switch Occupancy Sensor



PROJECT
LOCATION/TYPE

## Product Overview

### Description

The PW-100-24 passive infrared (PIR) low voltage wall switch sensor can turn lights OFF and ON based on occupancy. It is characterized by high sensitivity to small and large movements, appealing aesthetics, and a variety of features.

### Operation

Factory default operation is for Manual-ON, so that users turn lights on only when needed. The PW-100-24 uses advanced PIR technology to detect occupancy and keep lighting ON when it is needed. Once the space is vacated and the time delay elapses, lights automatically turn OFF. DIP switch settings allow for a variety of control options such as Auto-ON operation, walk-through and test modes.

### Low Voltage

Low voltage wall switch sensors can offer advantages over line voltage models. Using an isolated form-C relay output, the PW-100-24 sensor integrates seamlessly with VAV or other building systems for greater energy savings. Multiple PW-100-24 sensors can also be connected on a single circuit and can switch loads that exceed the rating of a standard line voltage switch. In addition, low voltage sensor installations do not require the use of conduits reducing installation costs and making relocation easier.

### Applications

The PW-100-24 is the perfect choice for locations where line voltage wiring is not possible or for jurisdictions prohibiting the use of 277V switches. It is well suited for small enclosed spaces with clear line of sight of the occupant. Common applications include small offices, small conference rooms, and lunch/break rooms.

## Features

- Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
- Zero-crossing for long relay life
- Vandal resistant lens combines precise coverage with durability
- Choice of Manual-ON or Auto-ON operation
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy adjustments
- LED indicates occupancy detection
- Selectable audible and/or visual alerts for impending shutoff
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates



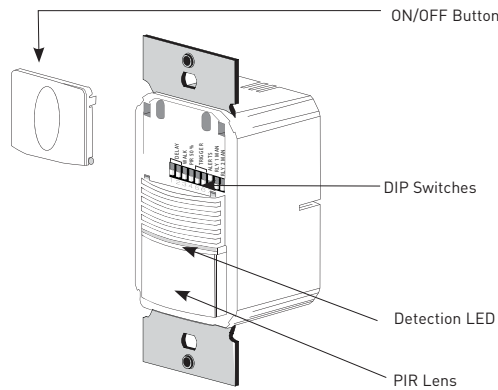
# Specifications

- 18-24 VDC, 24 VAC and halfwave rectified AC
- Current consumption: 20 mA
- PW-100-24 contains single-pole, double-throw isolated relay rated for 1 A @ 30 VDC
- Time delays: 5, 10, 15, 20, 25 or 30 minutes, walk-through, test-mode

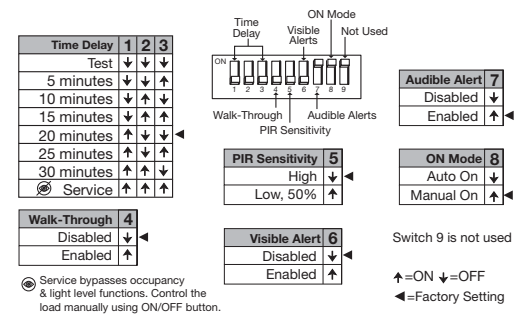
- Coverage: Major motion 35' x 30'  
Minor motion 20' x 15'
- Sensitivity adjustment: PIR (high/low)
- Dimensions: 2.73" x 1.76" x 1.83"  
(69.3mm x 44.7mm x 46.5mm) L x W x D
- UL and cUL listed
- Five year warranty

# Controls & Settings

## Product Controls

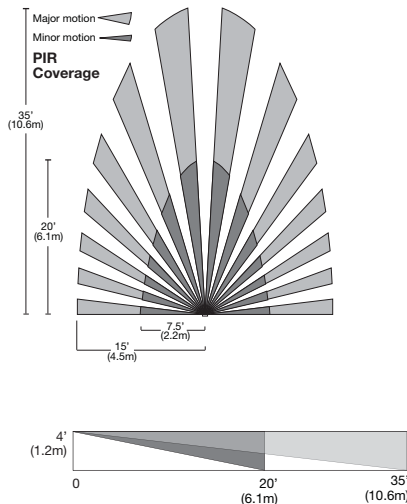


## DIP Switch Settings



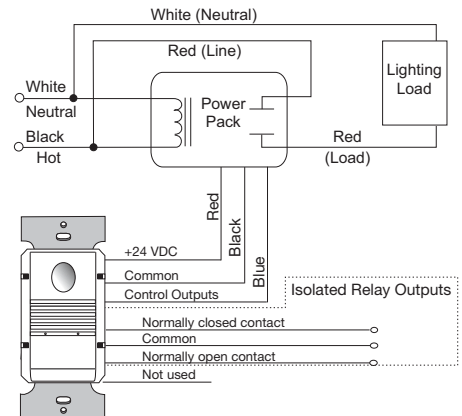
# Coverage & Wiring

## Coverage Pattern



For best performance, WattStopper recommends using this sensor in spaces no larger than 15' x 12'.

## PW-100-24 Low Voltage Wiring



# Ordering Information

Catalog No.	Color	Voltage
<input type="checkbox"/> PW-100-24-W	White	18-24 VDC, 24 VAC and halfwave rectified AC
<input type="checkbox"/> PW-100-24-LA	Lt. Almond	
<input type="checkbox"/> PW-100-24-I	Ivory	
<input type="checkbox"/> PW-100-24-G	Grey	
<input type="checkbox"/> PW-100-24-B	Black	

Order wall plate separately.

# PW-103N Passive Infrared Multi-way Wall Switch Occupancy Sensor with Nightlight

High sensitivity and dense coverage for exceptional performance

Optional nightlight with choice of three colors and two light levels

Color-matched lens and low profile for appealing design



Allows multi-way control from one of up to four control locations

Selectable operation, walk-through, test and presentation modes for increased energy savings and convenience

Defaults to Manual-ON operation for maximum energy savings

PROJECT

LOCATION/TYPE

## Product Overview

### Description

The PW-103N passive infrared (PIR) multi-way wall switch sensor can turn lights OFF and ON based on occupancy. It provides high sensitivity to small and large movements, appealing aesthetics, a field selectable nightlight and a variety of features.

### Operation

The PW-103N replaces existing wall switches and fits in a single gang junction box. It uses advanced PIR technology to detect occupancy and keep lighting ON when it is needed. Once the space is vacated and the time delay elapses, lights automatically turn OFF. DIP switch settings allow control options including Auto-ON operation, walk-through and test modes. The PW-103N has an LED nightlight that can be set to high or low intensity and to amber, white or blue, or to off. Multiple PW-103N sensors may be used for control of one or more loads from up to four locations.

## Features

- Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
- Zero-crossing for long relay life
- Vandal resistant lens combines precise coverage with durability
- Choice of Manual-ON or Auto-ON operation
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy adjustments
- Selectable audible and/or visual alerts for impending shutoff

## Multi-way Control

The PW-103N offers true multi-way functionality. When connected sensors are in Manual-ON mode (default), an occupant must press the ON/OFF button of one of the sensors to turn the load ON. When sensors are in Auto-ON mode, the load will automatically turn ON when occupancy is detected by one of the sensors. Lights will remain ON as long as occupancy is detected. The last sensor to detect occupancy will turn the load OFF after the time delay has elapsed. In either operating mode, an occupant may turn the load OFF manually.

## Applications

The PW-103N sensor is well suited for spaces with multiple doorways or switch locations, or spaces that would benefit from nightlighting. Common applications include private offices, small conference rooms, lunch/break rooms, individual restrooms and hotel guest bathrooms.

- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- LED indicates occupancy detection
- Field selectable high or low intensity amber, white or blue nightlight
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates

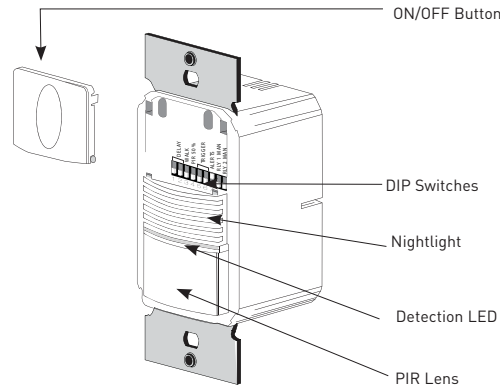


# Specifications

- PW-103N: 120/277 VAC; 50/60 Hz  
@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp  
@ 277 VAC, 0-1200 W ballast
- Time delays: 5, 10, 15, 20, 25 or 30 minutes, walk-through, test-mode
- Coverage: Major motion 35' x 30'  
Minor motion 20' x 15'
- Sensitivity adjustment: PIR (high/low)
- Dimensions: 2.73" x 1.76" x 1.83"  
(69.3mm x 44.7mm x 46.5mm) L x W x D
- UL and cUL listed
- Five year warranty

# Controls & Settings

## Product Controls



## DIP Switch Settings

<b>Time Delay</b>	<b>1</b>	<b>2</b>	<b>3</b>
Test	↓	↓	↓
5 minutes	↓	↓	↑
10 minutes	↓	↑	↑
15 minutes	↑	↑	↓
20 minutes	↑	↓	↓
25 minutes	↑	↑	↑
30 minutes	↑	↑	↑
Service	↑	↑	↑

<b>Walk-Through</b>	<b>4</b>
Enabled	↑
Disabled	↓

<b>Visible Alert</b>	<b>6</b>
Enabled	↑
Disabled	↓

<b>PIR Sensitivity</b>	<b>5</b>
Low, 50%	↑
High	↓

<b>Audible Alert</b>	<b>7</b>
Enabled	↑
Disabled	↓

<b>On Mode</b>	<b>8</b>
Manual On	↑
Auto On	↓

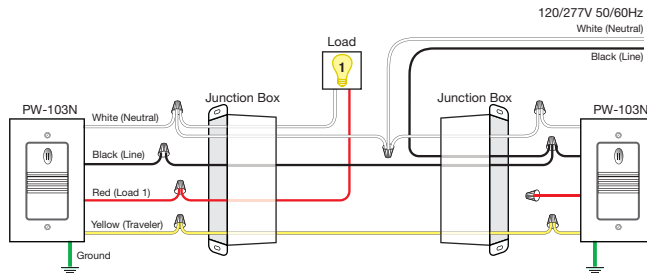
  

<b>Nightlight</b>	<b>9</b>
Enabled	↑
Disabled	↓

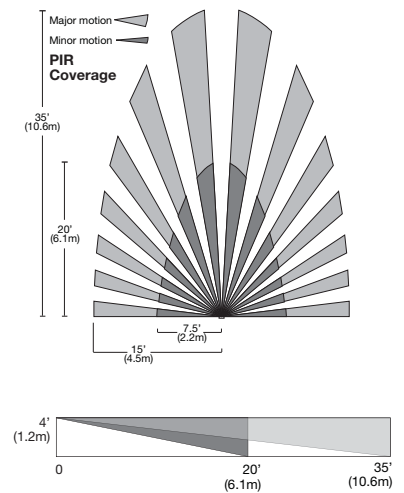
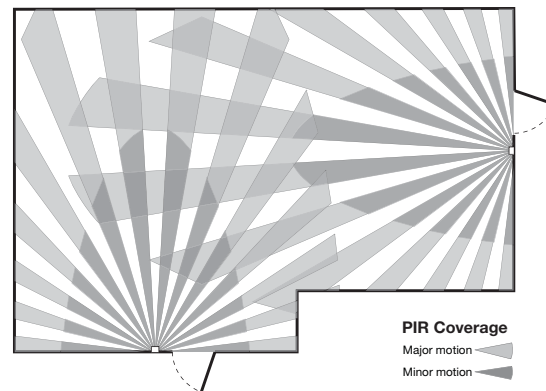
Service bypasses occupancy & light level functions. Control the load manually using ON/OFF button.    ↑=ON ↓=OFF    ◀=Factory Setting

# Coverage & Wiring

## Multi-way Wiring Diagram



## Coverage Pattern



For best performance in single location applications, WattStopper recommends using this sensor in spaces no larger than 15' x 12'. In multi-way applications, each connected sensor expands the coverage area.

# Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> PW-103N-W	White	120/277 VAC; 50/60 Hz	@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp @ 277 VAC, 0-1200 W ballast
<input type="checkbox"/> PW-103N-LA	Lt. Almond		
<input type="checkbox"/> PW-103N-I	Ivory		
<input type="checkbox"/> PW-103N-G	Grey		
<input type="checkbox"/> PW-103N-B	Black		

Order wall plate separately.



# PW-200 Passive Infrared Dual Relay Wall Switch Occupancy Sensor

High sensitivity and dense coverage for exceptional performance

Two relays for control of two separate lighting loads or circuits

Color-matched lens and low profile for appealing design



Selectable operation, walk-through, test and presentation modes for increased energy savings and convenience

Defaults to Auto-ON to 50% operation for maximum energy savings

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The PW-200 passive infrared (PIR) wall switch sensor turns lights ON and OFF based on occupancy. It contains two relays for controlling two independent lighting loads or circuits, and a variety of features.

### Operation

The PW-200 replaces existing wall switches and fits in a single gang junction box. Each of the PW-200's relays can control a separate lighting load. It uses advanced PIR technology to detect occupancy and turn the first relay ON. Once the space is vacated and the time delay elapses, lights automatically turn OFF. Dual ON/OFF buttons allow the user to manually turn on and off each of the loads. DIP switch settings allow for a variety of control options such as Manual-ON or Auto-ON for each relay, walk-through and test modes.

### Bi-Level Control

The PW-200 features a built-in light level sensor that controls the second (secondary) relay. If adequate daylight is present, the sensor will hold secondary lights off until daylight levels drop, providing increased energy savings. The PW-200 satisfies energy codes requiring bi-level or daylight control switching. The two relays in the sensor give it the ability to control two lighting loads independently. This provides A/B switching where the user can achieve half-lighting (or another desired portion) from a single switch.

### Applications

The PW-200 sensor is well suited for small, enclosed spaces with a clear line of sight of the occupant. In addition, its dual relays allow bi-level switching or control of a secondary load. Common applications include small office, small conference room and lunch/break rooms.

## Features

- Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
- Zero-crossing on both relays for long relay life
- Vandal resistant lens combines precise coverage with durability
- Choice of Manual-ON or Auto-ON operation, selectable for each relay
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy adjustments
- LED indicates occupancy detection
- Selectable audible and/or visual alerts for impending shutoff
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates
- Qualifies for ARRA-funded public works projects

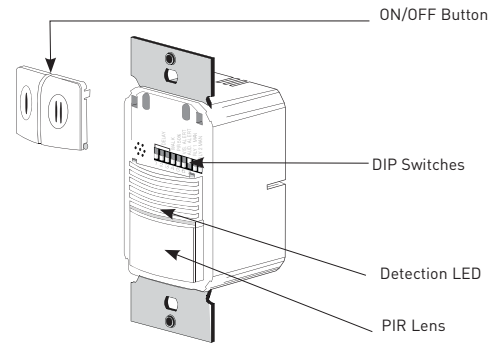


# Specifications

- PW-200: 120/277 VAC; 50/60 Hz @ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp @ 277 VAC, 0-1200 W ballast
- PW-200-347: 347 VAC; 50/60 Hz; 0-1500 W ballast
- Time delays: 5, 10, 15, 20, 25 or 30 minutes, walk-through, test-mode
- Coverage: Major motion 35' x 30' Minor motion 20' x 15'
- Sensitivity adjustment: PIR (high/low)
- Dimensions: 2.73" x 1.76" x 1.83" (69.3mm x 44.7mm x 46.5mm) L x W x D
- UL and cUL listed
- Five year warranty

# Controls & Settings

## Product Controls



## DIP Switch Settings

<b>Time Delay</b>	1	2	3
Test	↓	↓	↓
5 minutes	↓	↑	↑
10 minutes	↓	↑	↑
15 minutes	↑	↑	↑
20 minutes	↑	↑	↑
25 minutes	↑	↑	↑
30 minutes	↑	↑	↑
⊗ override	↑	↑	↑

<b>Walk-Through</b>	4
Disabled	↓
Enabled	↑

<b>PIR Sensitivity</b>	5
High	↓
Low, 50%	↑

<b>Visible Alert</b>	6
Disabled	↓
Enabled	↑

<b>Audible Alert</b>	7
Disabled	↓
Enabled	↑

<b>Relay 1 Mode</b>	8
Auto On	↓
Manual On	↑

<b>Relay 2 Mode</b>	9
Auto On	↓
Manual On	↑

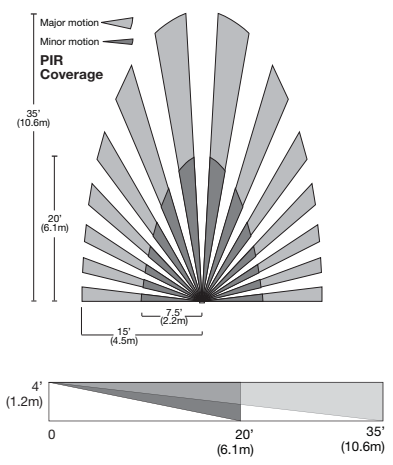
  

Factory Settings:  
 ◀ All models  
 ▲ PW-100 series  
 ▲ PW-200 series

↑=ON ↓=OFF

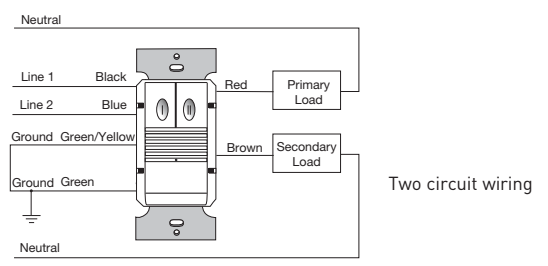
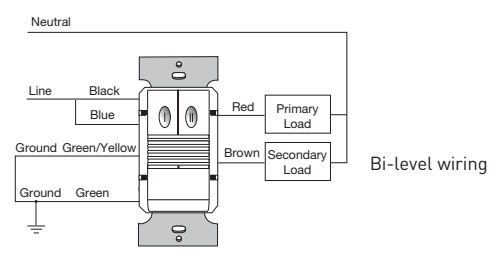
# Coverage & Wiring

## Coverage Pattern



For best performance, WattStopper recommends using this sensor in spaces no larger than 15' x 12'.

## Wiring Diagrams



# Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> PW-200-W	White	120/277 VAC; 50/60 Hz 2-wire sensor; no neutral connection	@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp @ 277 VAC, 0-1200 W ballast
<input type="checkbox"/> PW-200-W-U			
<input type="checkbox"/> PW-200-LA	Lt. Almond		
<input type="checkbox"/> PW-200-I	Ivory		
<input type="checkbox"/> PW-200-I-U			
<input type="checkbox"/> PW-200-G	Grey	347 VAC; 50/60 Hz 2-wire sensor; no neutral connection	0-1500 W ballast
<input type="checkbox"/> PW-200-B	Black		
<input type="checkbox"/> PW-200-347-W	White		
<input type="checkbox"/> PW-200-347-LA	Lt. Almond		
<input type="checkbox"/> PW-200-347-I	Ivory		
<input type="checkbox"/> PW-200-347-G	Grey		
<input type="checkbox"/> PW-200-347-B	Black		

Order wall plate separately.  
 -U = ARRA compliant. Product produced in the U.S.

# PW-201 Passive Infrared Dual Relay Wall Switch Occupancy Sensor

High sensitivity and dense coverage for exceptional performance

Two relays for control of two separate lighting loads or circuits

Color-matched lens and low profile for appealing design



Includes neutral wire to meet NEC 2011 code

Selectable operation, walk-through, test and presentation modes for increased energy savings and convenience

Defaults to Auto-ON to 50% operation for maximum energy savings

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The PW-201 passive infrared (PIR) wall switch sensor turns lights ON and OFF based on occupancy. It contains two relays for controlling two independent lighting loads or circuits, and a variety of features.

### Operation

The PW-201 replaces existing wall switches and fits in a single gang junction box. Each of the PW-201's relays can control a separate lighting load. It uses advanced PIR technology to detect occupancy and turn the first relay ON. Once the space is vacated and the time delay elapses, lights automatically turn OFF. Dual ON/OFF buttons allow the user to manually turn on and off each of the loads. DIP switch settings allow for a variety of control options such as Manual-ON or Auto-ON for each relay, walk-through and test modes.

### Bi-Level Control

The PW-201 features a built-in light level sensor that controls the second (secondary) relay. If adequate daylight is present, the sensor will hold secondary lights off until daylight levels drop, providing increased energy savings. The PW-201 satisfies energy codes requiring bi-level or daylight control switching. The two relays in the sensor give it the ability to control two lighting loads independently. This provides A/B switching where the user can achieve half-lighting (or another desired portion) from a single switch.

### Applications

The PW-201 sensor is well suited for small, enclosed spaces with a clear line of sight of the occupant. In addition, its dual relays allow bi-level switching or control of a secondary load. Common applications include small office, small conference room and lunch/break rooms.

## Features

- Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
- Zero-crossing on both relays for long relay life
- Vandal resistant lens combines precise coverage with durability
- Choice of Manual-ON or Auto-ON operation, selectable for each relay
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy adjustments
- LED indicates occupancy detection
- Selectable audible and/or visual alerts for impending shutoff
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- Neutral required to meet NEC 2011 code
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates

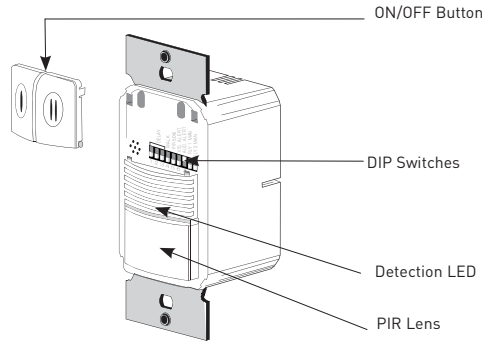


# Specifications

- PW-201: 120/277 VAC; 50/60 Hz  
@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp  
@ 277 VAC, 0-1200 W ballast
- Time delays: 5, 10, 15, 20, 25 or 30 minutes, walk-through, test-mode
- Coverage: Major motion 35' x 30'  
Minor motion 20' x 15'
- Sensitivity adjustment: PIR (high/low)
- Dimensions: 2.73" x 1.76" x 1.83"  
(69.3mm x 44.7mm x 46.5mm) L x W x D
- UL and cUL listed
- Five year warranty

# Controls & Settings

## Product Controls



## DIP Switch Settings

<b>Time Delay</b>	1	2	3
Test	↓	↓	↓
5 minutes	↓	↑	↓
10 minutes	↓	↑	↓
15 minutes	↑	↑	↓
20 minutes	↑	↑	↓
25 minutes	↑	↑	↓
30 minutes	↑	↑	↓
⊗ override	↑	↑	↑

<b>Walk-Through</b>	4
Disabled	↓
Enabled	↑

<b>PIR Sensitivity</b>	5
High	↓
Low, 50%	↑

<b>Visible Alert</b>	6
Disabled	↓
Enabled	↑

<b>Audible Alert</b>	7
Disabled	↓
Enabled	↑

<b>Relay 1 Mode</b>	8
Auto On	↓
Manual On	↑

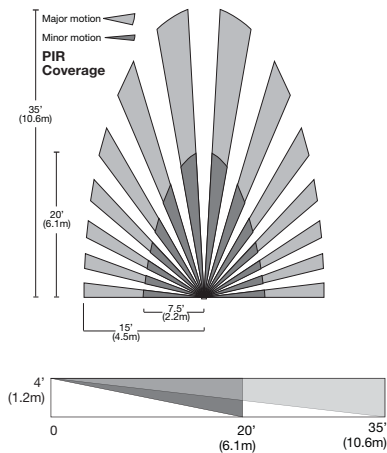
<b>Relay 2 Mode</b>	9
Auto On	↓
Manual On	↑

Factory Settings:  
 ◀ All models  
 ▲ PW-100 series  
 ▲ PW-200 series

↑=ON ↓=OFF

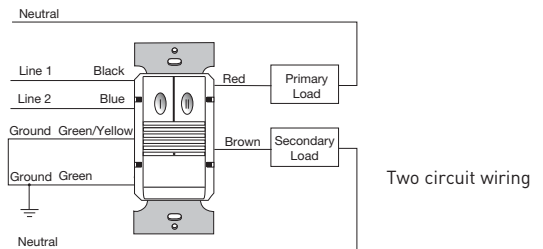
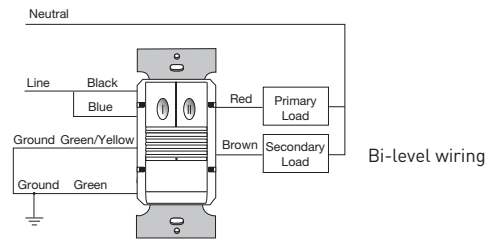
# Coverage & Wiring

## Coverage Pattern



For best performance, WattStopper recommends using this sensor in spaces no larger than 15' x 12'.

## Wiring Diagrams



# Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> PW-201-W	White	120/277 VAC; 50/60 Hz 3-wire sensor; requires neutral connection	@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp @ 277 VAC, 0-1200 W ballast
<input type="checkbox"/> PW-201-LA	Lt. Almond		
<input type="checkbox"/> PW-201-I	Ivory		
<input type="checkbox"/> PW-201-G	Grey		
<input type="checkbox"/> PW-201-B	Black		

Order wall plate separately.

# PW-203 Passive Infrared Multi-way Dual Relay Wall Switch Occupancy Sensor

High sensitivity and dense coverage for exceptional performance

Two relays for control of two separate lighting loads

Color-matched lens and low profile for appealing design



Allows multi-way control from one of up to four control locations

Selectable operation, walk-through, test and presentation modes for increased energy savings and convenience

Defaults to Auto-ON operation for greatest energy savings

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The PW-203 passive infrared (PIR) multi-way wall switch sensor turns lights ON and OFF based on occupancy. It contains two relays for controlling two independent lighting loads and a variety of features.

### Operation

The PW-203 replaces existing wall switches and fits in a single gang box. Each of the PW-203's relays can control a separate lighting load. It uses advanced PIR technology to detect occupancy and turn the first relay ON. Once the space is vacated and the time delay elapses, lights automatically turn OFF. Dual ON/OFF buttons allow the user to manually switch each of the loads, and each relay can be set for Manual-ON or Auto-ON. The PW-203 features a built-in light level sensor that controls the second relay. If adequate daylight is present, the sensor will hold the second relay off until daylight levels drop for increased energy savings.

### Multi-way Control

Multiple PW-203 sensors may be connected for control from up to four locations, and provide true multi-way functionality. When Manual-ON mode is active, an occupant must press an ON/OFF button on one of the sensors to turn a load ON. When Auto-ON mode is active, the load will automatically turn ON when occupancy is detected by one of the sensors. Lights will remain ON as long as occupancy is detected. The last sensor to detect occupancy will turn the loads OFF after the time delay has elapsed. In either operating mode, an occupant may turn the load OFF manually.

### Applications

The PW-203 sensor is well suited for spaces requiring bi-level lighting control, or control of two independent loads, that have multiple doorways or switch locations. Common applications include small offices, small conference rooms and lunch/break rooms.

## Features

- Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
- Zero-crossing on both relays for long relay life
- Vandal resistant lens combines precise coverage with durability
- Choice of Manual-ON or Auto-ON operation, selectable for each relay
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy adjustments
- Selectable audible and/or visual alerts for impending shutoff
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- LED indicates occupancy detection
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates

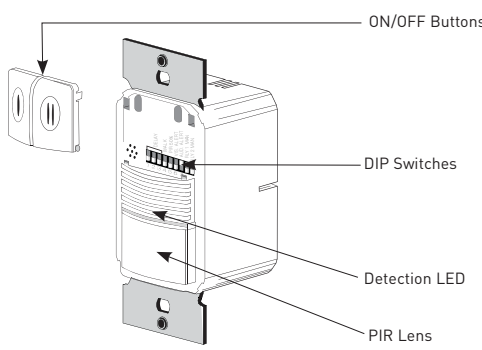


# Specifications

- 120/277 VAC; 50/60 Hz  
 @ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp  
 @ 277 VAC, 0-1200 W ballast
- Time delays: 5, 10, 15, 20, 25 or 30 minutes, walk-through, test-mode
- Coverage: Major motion 35' x 30'  
 Minor motion 20' x 15'
- Sensitivity adjustment: PIR (high/low)
- Dimensions: 2.73" x 1.76" x 1.83"  
 (69.3mm x 44.7mm x 46.5mm) L x W x D
- UL and cUL listed
- Five year warranty

# Controls & Settings

## Product Controls



## DIP Switch Settings

<b>Time Delay</b>	<b>1</b>	<b>2</b>	<b>3</b>
Test	↓	↓	↓
5 minutes	↓	↓	↑
10 minutes	↓	↑	↓
15 minutes	↑	↑	↑
20 minutes	↑	↑	↓
25 minutes	↑	↓	↑
30 minutes	↑	↑	↓
Service	↑	↑	↑

<b>Walk-Through</b>	<b>4</b>
Disabled	↓
Enabled	↑

<b>Visible Alert</b>	<b>6</b>
Disabled	↓
Enabled	↑

<b>Relay 1 Mode</b>	<b>8</b>
Auto On	↓
Manual On	↑

<b>Relay 2 Mode</b>	<b>9</b>
Auto On	↓
Manual On	↑

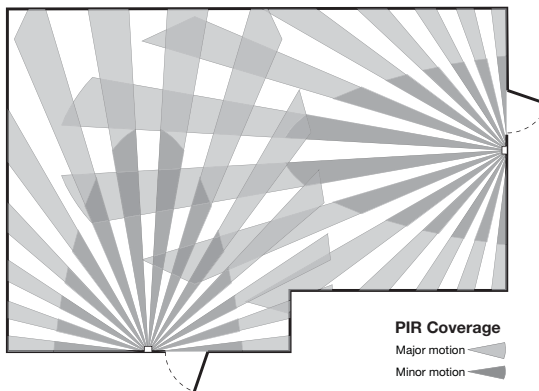
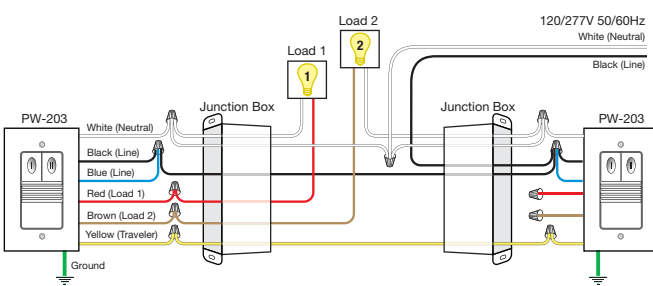
  

Service bypasses occupancy & light level functions. Control the load manually using ON/OFF button.

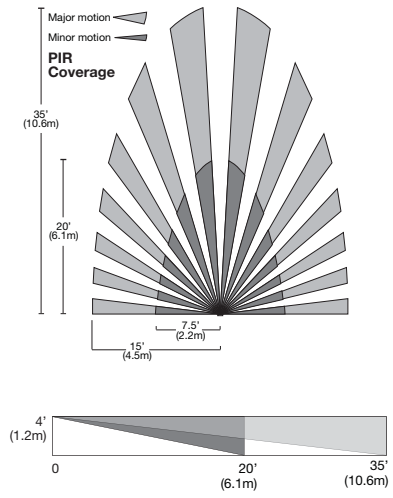
↑=ON ↓=OFF ◀=Factory Setting

# Coverage & Wiring

## Multi-way Bi-level Wiring Diagram



## Coverage Patterns



For best performance in single location applications, WattStopper recommends using this sensor in spaces no larger than 15' x 12'. In multi-way applications, each connected sensor expands the coverage area.

# Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> PW-203-W	White	120/277 VAC; 50/60 Hz	@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp @ 277 VAC, 0-1200 W ballast
<input type="checkbox"/> PW-203-LA	Lt. Almond		
<input type="checkbox"/> PW-203-I	Ivory		
<input type="checkbox"/> PW-203-G	Grey		
<input type="checkbox"/> PW-203-B	Black		

Order wall plate separately.





# PW-301 Passive Infrared Wall Switch Occupancy Sensor

High sensitivity and dense coverage for exceptional performance

Defaults to Manual-ON operation for maximum energy savings

Color-matched lens and low profile for appealing design



Optional neutral connection with break off tab to expose neutral terminals

120/277 VAC and 347 VAC models

Allows multi-way control from one of up to four control locations

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The PW-301 passive infrared (PIR) wall switch sensor can turn lights OFF and ON based on occupancy. It is characterized by high sensitivity to small and large movements, appealing aesthetics, and a variety of features.

### Operation

The PW-301 replaces existing wall switches and installs in a single gang junction box with or without either neutral wiring. Factory default operation is for Manual-ON, so that users turn lights on only when needed. It uses advanced PIR technology to detect occupancy and keep lighting ON when it is needed. Once the space is vacated and the time delay elapses, lights automatically turn OFF. DIP switch settings allow for a variety of control options such as Auto-ON operation, walk-through and test modes. Multiple sensors may be used for control of one or more loads from up to four locations.

### Optional Neutral Connection

The PW-301 sensor uses a patent pending Neutral Sense Technology. Any PW-301 sensor can be used for a two-wire or three wire application, either to work with existing wiring, or to meet local or national code requirements. An easy-to-break plastic tab covers neutral screw terminals. Once the sensor is connected to neutral it complies with all codes that restrict current leakage to ground.

### Applications

The PW-301 sensor is great for retrofit projects and well suited for small, enclosed spaces with clear line of sight of the occupant. Common applications include small offices, small conference rooms and lunch/break rooms.

## Features

- Complies with 2011 NEC requirements
- Zero-crossing for long relay life
- Vandal resistant lens combines precise coverage with durability
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy adjustments
- Selectable audible and/or visual alerts for impending shutoff
- LED indicates occupancy detection
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates

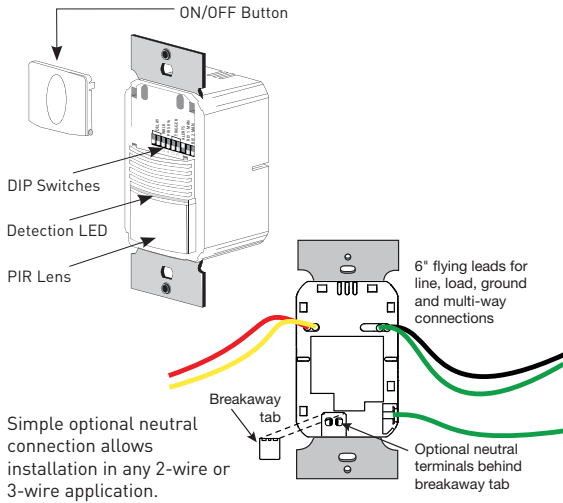


# Specifications

- PW-301: 120/277VAC; 50/60Hz, 1/6 hp @ 120VAC, 0-1000W ballast, LED, and tungsten @ 277VAC, 0-1200W ballast and LED
- PW-301-347: 347VAC; 50/60Hz, 1/6 hp; 0-1500W ballast and LED
- Time delays: 5, 10, 15, 20, 25 or 30 minutes, walk-through, test-mode
- Coverage: Major motion 35' x 30' Minor motion 20' x 15'
- Sensitivity adjustment: PIR (high/low)
- Dimensions (L x W x D):
  - PW-301: 4.1" x 1.58" x 1.39" (104.6mm x 40.3mm x 35.5mm)
  - PW-301-347: 4.5" x 1.58" x 1.39" (114.36mm x 40.3mm x 35.5mm)
- UL and cUL listed
- Five year warranty

# Controls & Settings

## Product Controls & Neutral Option



## DIP Switch Settings

<b>Time Delay</b>	1	2	3
Test/20 min	↓	↓	↓
5 minutes	↓	↓	↑
10 minutes	↓	↓	↑
15 minutes	↑	↑	↑
20 minutes	↑	↑	↑
25 minutes	↑	↑	↑
30 minutes	↑	↑	↑
☉ Service	↑	↑	↑

<b>Walk-Through</b>	4
Enabled	↑
Disabled	↓

☉ Service bypasses occupancy & light level functions. Control the load manually using ON/OFF button.

<b>Visible Alert</b>	6
Enabled	↑
Disabled	↓

<b>PIR Sensitivity</b>	5
Low, 50%	↑
High	↓

<b>Audible Alert</b>	7
Enabled	↑
Disabled	↓

<b>Relay 1 Mode</b>	8
Manual On	↑
Auto On	↓

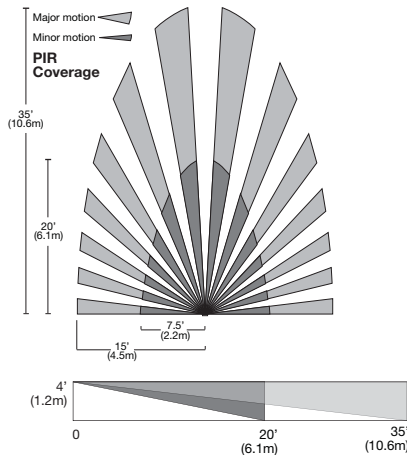
PW-302 ONLY	
<b>Relay 2 Mode</b>	9
Manual On	↑
Auto On	↓

Factory Settings:  
 ▲ All models  
 ▲ PW-301 series  
 ▲ PW-302 series

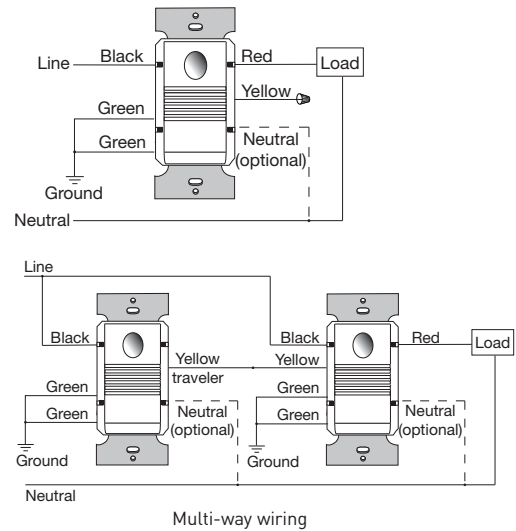
# Coverage & Wiring

## Coverage Pattern



For best performance, WattStopper recommends using this sensor in spaces no larger than 15' x 12'.

## Wiring Diagrams



# Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> PW-301-W	White	120VAC; 50/60Hz or 277VAC; 50/60Hz	@ 120VAC, 0-1000W ballast, LED, tungsten, 1/6 hp or @ 277VAC 0-1200W ballast, LED, 1/6 hp
<input type="checkbox"/> PW-301-LA	Lt. Almond		
<input type="checkbox"/> PW-301-I	Ivory		
<input type="checkbox"/> PW-301-G	Grey		
<input type="checkbox"/> PW-301-B	Black	347VAC; 50/60Hz	0-1500W ballast & LED, 1/6 hp
<input type="checkbox"/> PW-301-347-W	White		
<input type="checkbox"/> PW-301-347-LA	Lt. Almond		
<input type="checkbox"/> PW-301-347-I	Ivory		
<input type="checkbox"/> PW-301-347-G	Grey		
<input type="checkbox"/> PW-301-347-B	Black		

Order wall plate separately.

# PW-302 Passive Infrared Dual Relay Wall Switch Occupancy Sensor

High sensitivity and dense coverage for exceptional performance

Two relays for control of two separate lighting loads or circuits

Defaults to Auto-ON to 50% operation for maximum energy savings



Optional neutral connection with break off tab to expose neutral terminals

120/277 VAC and 347 VAC models

Allows multi-way control from one of up to four control locations

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The PW-302 passive infrared (PIR) wall switch sensor turns lights ON and OFF based on occupancy. It contains two relays for controlling two independent lighting loads or circuits, and a variety of features.

### Operation

The PW-302 replaces existing wall switches and installs in a single gang junction box with or without either neutral wiring. Each of the PW-302's relays can control a separate lighting load. The device uses advanced PIR technology to detect occupancy and turn the first relay ON. The other relay must be manually engaged to turn remaining lights on. Once the space is vacated and the time delay elapses, all lights automatically turn OFF. Dual ON/OFF buttons allow the user to manually turn on and off each of the loads. DIP switch settings allow for a variety of control options such as Manual-ON or Auto-ON for each relay, walk-through and test modes. Multiple sensors may be used for control of one or more loads from up to four locations.

### Optional Neutral Connection

The PW-302 sensor uses a patent pending Neutral Sense Technology. Any PW-302 sensor can be used for a two-wire or three wire application, either to work with existing wiring, or to meet local or national code requirements. An easy-to-break plastic tab covers neutral screw terminals. Once the sensor is connected to neutral it complies with all codes that restrict current leakage to ground.

### Applications

The PW-302 sensor is great for retrofit projects and well suited for small, enclosed spaces with a clear line of sight of the occupant. In addition, its dual relays allow bi-level switching or control of a secondary load. Common applications include small office, small conference room and lunch/break rooms.

## Features

- Complies with 2011 NEC requirements
- Zero-crossing on both relays for long relay life
- Vandal resistant lens combines precise coverage with durability
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy adjustments
- LED indicates occupancy detection
- Selectable audible and/or visual alerts for impending shutoff
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- Optional light level sensor holds secondary lights off when ambient lighting is above the preset level
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates

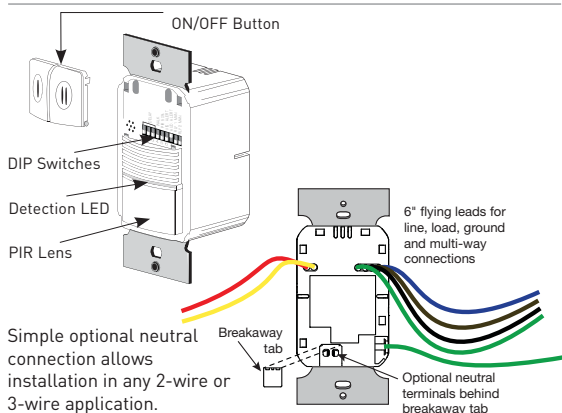


## Specifications

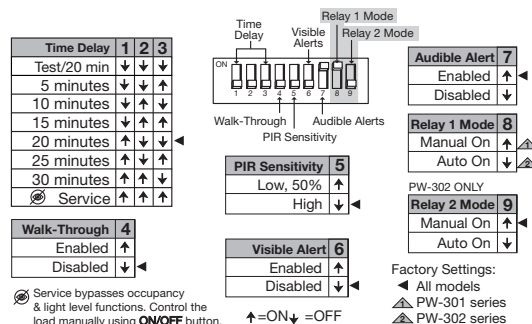
- PW-302: 120/277VAC; 50/60Hz, 1/6 hp @ 120VAC, 0-800W ballast, LED, and tungsten @ 277VAC, 0-1000W ballast and LED
- PW-302-347: 347VAC; 50/60Hz, 1/6 hp; 0-1200W ballast and LED
- Time delays: 5, 10, 15, 20, 25 or 30 minutes, walk-through, test-mode
- Coverage: Major motion 35' x 30'  
Minor motion 20' x 15'
- Sensitivity adjustment: PIR (high/low)
- Dimensions (L x W x D):
  - PW-302: 4.1" x 1.58" x 1.39" (104.6mm x 40.3mm x 35.5mm)
  - PW-302-347: 4.5" x 1.58" x 1.39" (114.36mm x 40.3mm x 35.5mm)
- UL and cUL listed
- Five year warranty

## Controls & Settings

### Product Controls & Neutral Option

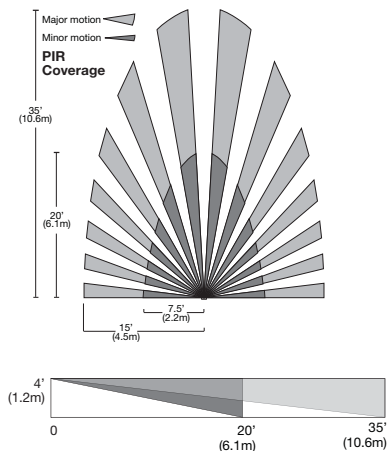


### DIP Switch Settings



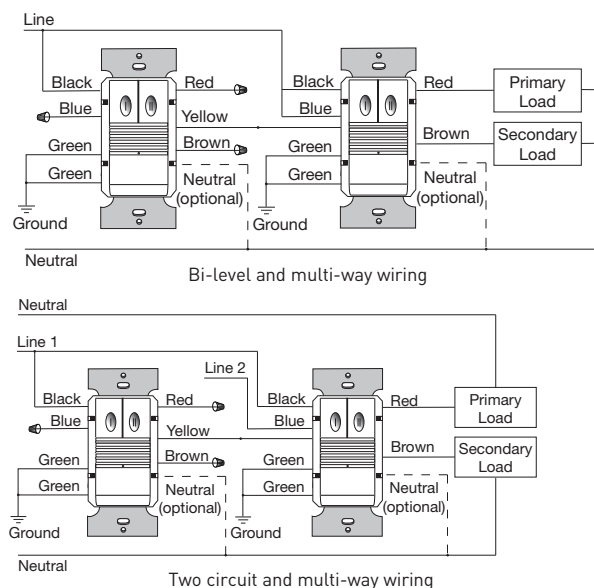
## Coverage & Wiring

### Coverage Pattern



For best performance, WattStopper recommends using this sensor in spaces no larger than 15' x 12'.

### Wiring Diagrams



## Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> PW-302-W	White	120VAC; 50/60Hz	@ 120VAC, 0-800W ballast, LED, tungsten, 1/6 hp
<input type="checkbox"/> PW-302-LA	Lt. Almond	or 277VAC; 50/60Hz	or @ 277VAC 0-1000W ballast, LED, 1/6 hp
<input type="checkbox"/> PW-302-I	Ivory		
<input type="checkbox"/> PW-302-G	Grey		
<input type="checkbox"/> PW-302-B	Black		
<input type="checkbox"/> PW-302-347-W	White	347VAC; 50/60Hz	0-1200W ballast & LED, 1/6 hp
<input type="checkbox"/> PW-302-347-LA	Lt. Almond		
<input type="checkbox"/> PW-302-347-I	Ivory		
<input type="checkbox"/> PW-302-347-G	Grey		
<input type="checkbox"/> PW-302-347-B	Black		

Order wall plate separately.

# UW-100 Ultrasonic Wall Switch Occupancy Sensor

High sensitivity for exceptional performance

Low profile design



Selectable operation, walk-through, test and presentation modes for increased energy savings and convenience

Defaults to Manual-ON operation for maximum energy savings

Part of a comprehensive line of PIR, Ultrasonic and Dual Technology wall switch sensors

PROJECT

LOCATION/TYPE

## Product Overview

### Description

The UW-100 ultrasonic wall switch sensor can turn lights OFF and ON based on occupancy. It is characterized by high sensitivity to small and large movements, appealing aesthetics, and a variety of features.

### Operation

The UW-100 fits in a single junction box. It uses high frequency (40kHz) ultrasound to detect occupancy and keep lighting ON when it is needed. Once the space is vacated and the time delay elapses, lights automatically turn OFF. DIP switch settings allow for a variety of control options such as Auto-ON operation, walk-through and test modes.

### Manual-on Control

Factory default operation is for Manual-ON, so that users turn lights on only when needed. This control strategy is proven to save more energy than Auto-ON, and is in ASHRAE 90.1-2010. If desired, the UW-100 may be reconfigured to turn lights on automatically.

### Applications

The UW-100 sensor is ideal for applications where the sensor may have a partially obstructed line of sight of the occupant. Common applications include individual restrooms, restrooms with two stalls and utility/storage rooms.

## Features

- Complies with 2011 NEC requirements
- Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
- Zero-crossing for long relay life
- Choice of Manual-ON or Auto-ON operation
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Selectable audible and/or visual alerts for impending shutoff
- Test mode allows quick and easy adjustments
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- LED indicates occupancy detection
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates



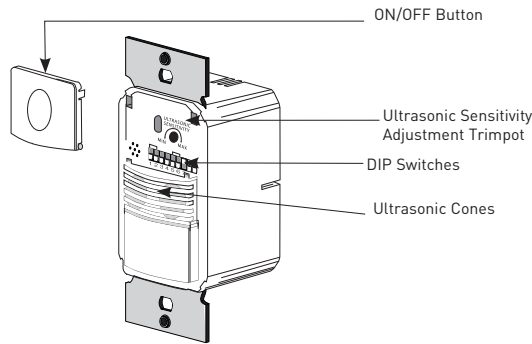
# Specifications

- UW-100: 120/277 VAC; 50/60 Hz  
@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp  
@ 277 VAC, 0-1200 W ballast
- UW-100-347: 347 VAC; 50/60Hz, 0-1500 W ballast
- Time delays: 5, 10, 15, 20, 25 or 30 minutes, walk-through, test-mode

- Coverage: Major motion 20' x 20'  
Minor motion 15' x 15'
- Sensitivity adjustment: Ultrasonic (fully variable)
- Dimensions: 2.73" x 1.76" x 1.83"  
(69.3mm x 44.7mm x 46.5mm) L x W x D
- UL and cUL listed
- Five year warranty

# Controls & Settings

## Product Controls



## DIP Switch Settings

Time Delay	1	2	3
Test	↓	↓	↓
5 minutes	↓	↓	↑
10 minutes	↓	↑	↑
15 minutes	↓	↑	↑
20 minutes	↑	↑	↓
25 minutes	↑	↑	↑
30 minutes	↑	↑	↓
Service	↑	↑	↑

Service bypasses occupancy & light level functions. Disables ultrasonic transmissions. Manual load control with ON/OFF button.

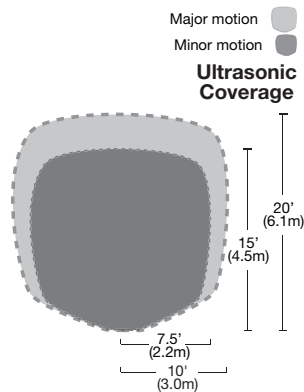
Audible Alert	6
Disabled	↓
Enabled	↑

ON Mode	7
Auto On	↓
Manual On	↑

Switches 8 & 9 are not used.  
↑ = ON ↓ = OFF  
◀ = Factory Setting

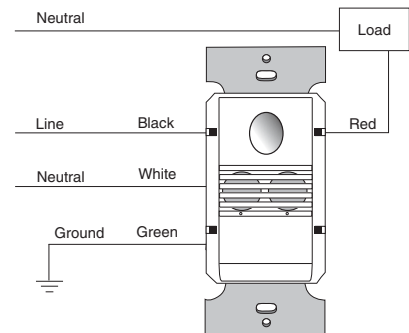
# Coverage & Wiring

## Coverage Pattern



For best performance, WattStopper recommends using this sensor in spaces no larger than 15' x 15'.

## Wiring Diagram



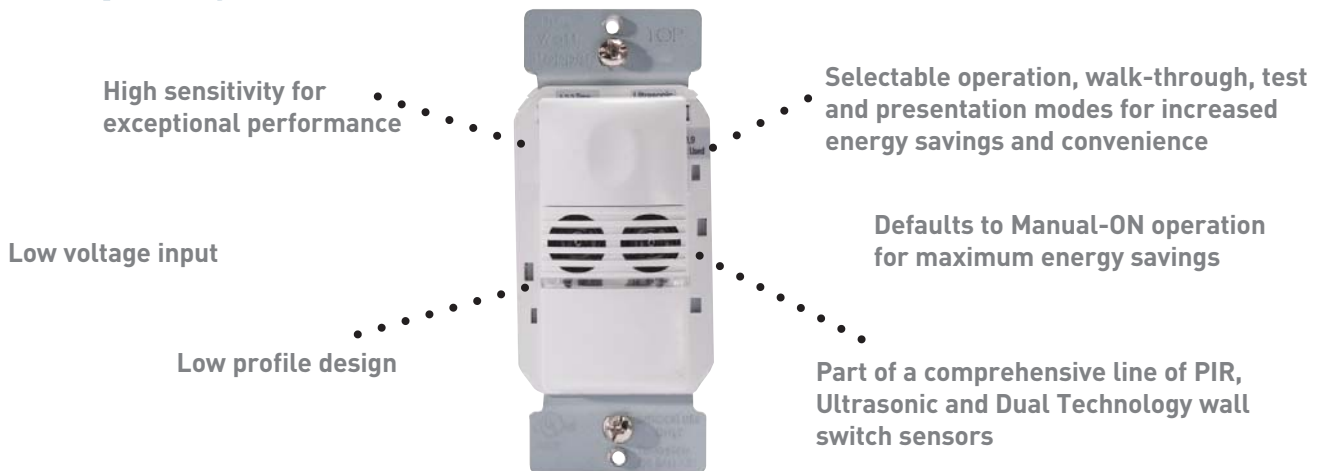
# Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> UW-100-W	White	120/277 VAC; 50/60 Hz	@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp @ 277 VAC, 0-1200 W ballast
<input type="checkbox"/> UW-100-LA	Lt. Almond		
<input type="checkbox"/> UW-100-I	Ivory		
<input type="checkbox"/> UW-100-G	Grey		
<input type="checkbox"/> UW-100-B	Black		
<input type="checkbox"/> UW-100-347-W	White	347 VAC; 50/60 Hz	0-1500 W ballast
<input type="checkbox"/> UW-100-347-LA	Lt. Almond		
<input type="checkbox"/> UW-100-347-I	Ivory		
<input type="checkbox"/> UW-100-347-G	Grey		
<input type="checkbox"/> UW-100-347-B	Black		

Order wall plate separately.



# UW-100-24 Ultrasonic Low Voltage Wall Switch Occupancy Sensor



PROJECT
LOCATION/TYPE

## Product Overview

### Description

The UW-100-24 ultrasonic low voltage wall switch sensor can turn lights OFF and ON based on occupancy. It is characterized by high sensitivity to small and large movements, appealing aesthetics, and a variety of features.

### Operation

Factory default operation is for Manual-ON, so that users turn lights on only when needed. The UW-100-24 uses high frequency (40kHz) ultrasound to detect occupancy and keep lighting ON. Once the space is vacated and the time delay elapses, lights automatically turn OFF. DIP switch settings allow for a variety of control options such as Auto-ON operation, walk-through and test modes.

### Low Voltage

Low voltage wall switch sensors can offer advantages over line voltage models. Using an isolated form-C relay output, the UW-100-24 sensor integrates seamlessly with VAV or other building systems for greater energy savings. Multiple UW-100-24 sensors can also be connected on a single circuit and can switch loads that exceed the rating of a standard line voltage switch. In addition, low voltage sensor installations do not require the use of conduits reducing installation costs and making relocation easier.

### Applications

The UW-100-24 is the perfect choice for locations where line voltage wiring is not possible or for jurisdictions prohibiting the use of 277V switches. It is well suited for applications where the sensor may have a partially obstructed line of sight of the occupant such as individual restrooms, restrooms with two stalls and utility/storage rooms.

## Features

- Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
- Zero-crossing for long relay life
- Choice of Manual-ON or Auto-ON operation
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy adjustments
- Selectable audible and/or visual alerts for impending shutoff
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- LED indicates occupancy detection
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates



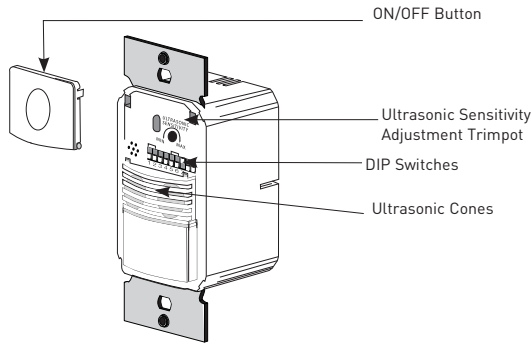
# Specifications

- 18-24 VDC, 24 VAC and halfwave rectified AC
- Current consumption: 35 mA
- UW-100-24 contains single-pole, double-throw isolated relay rated for 1 A @ 30 VDC
- Time delays: 5, 10, 15, 20, 25 or 30 minutes, walk-through, test-mode

- Coverage: Major motion 20' x 20'  
Minor motion 15' x 15'
- Sensitivity adjustment: Ultrasonic (fully variable)
- Dimensions: 2.73" x 1.76" x 1.83"  
(69.3mm x 44.7mm x 46.5mm) L x W x D
- UL and cUL listed
- Five year warranty

# Controls & Settings

## Product Controls



## DIP Switch Settings

Time Delay	1	2	3
Test	↓	↓	↓
5 minutes	↓	↓	↑
10 minutes	↓	↑	↑
15 minutes	↓	↑	↑
20 minutes	↑	↑	↑
25 minutes	↑	↑	↑
30 minutes	↑	↑	↑
Service	↑	↑	↑

Service bypasses occupancy & light level functions. Disables ultrasonic transmissions. Manual load control with ON/OFF button.

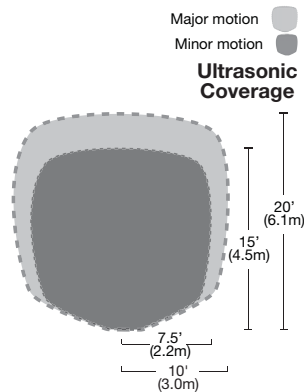
Audible Alert	6
Disabled	↓
Enabled	↑

ON Mode	7
Auto On	↓
Manual On	↑

Switches 8 & 9 are not used.  
↑=ON ↓=OFF  
◀=Factory Setting

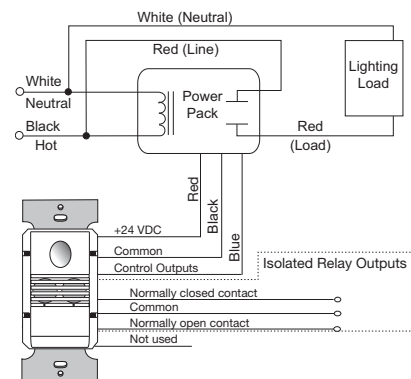
# Coverage & Wiring

## Coverage Pattern



For best performance, WattStopper recommends using this sensor in spaces no larger than 15' x 15'.

## UW-100-24 Low Voltage Wiring




# Ordering Information

Catalog No.	Color	Voltage
<input type="checkbox"/> UW-100-24-W	White	18-24 VDC, 24 VAC and halfwave rectified AC
<input type="checkbox"/> UW-100-24-LA	Lt. Almond	
<input type="checkbox"/> UW-100-24-I	Ivory	
<input type="checkbox"/> UW-100-24-G	Grey	
<input type="checkbox"/> UW-100-24-B	Black	

Order wall plate separately.

# UW-200 Ultrasonic Dual Relay Wall Switch Occupancy Sensor



High sensitivity for exceptional performance

Two relays for control of two separate lighting loads or circuits

Low profile design

Selectable operation, walk-through, test and presentation modes for increased energy savings and convenience

Defaults to Auto-ON to 50% operation for maximum energy savings

Part of a comprehensive line of PIR, Ultrasonic and Dual Technology wall switch sensors

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The UW-200 ultrasonic wall switch sensor turns lights ON and OFF based on occupancy. It contains two relays for controlling two independent lighting loads or circuits and a variety of features.

### Operation

The UW-200 fits in a single gang junction box. Each of the UW-200's relays can control a separate lighting load. It uses high frequency (40kHz) ultrasound to detect occupancy and turn the first relay ON. Once the space is vacated and the time delay elapses, lights automatically turn OFF. Dual ON/OFF buttons allow the user to manually turn on and off each of the loads. DIP switch settings allow for a variety of control options such as Manual-ON or Auto-ON for each relay, walk-through and test modes.

### Bi-Level Control

The UW-200 features a built-in light level sensor that controls the second (secondary) relay. If adequate daylight is present, the sensor will hold secondary lights off until daylight levels drop, providing increased energy savings. The UW-200 satisfies energy codes requiring bi-level or daylight control switching. The two relays in the sensor give it the ability to control two lighting loads independently. This provides A/B switching where the user can achieve half-lighting (or another desired portion) from a single switch.

### Applications

The UW-200 sensor is ideal for applications where the sensor may have a partially obstructed line of sight of the occupant. In addition, its dual relays allow bi-level switching or control of a secondary load such as an exhaust fan. Common applications include individual restrooms, restrooms with two stalls and utility/storage rooms.

## Features

- Complies with 2011 NEC requirements
- Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
- Zero-crossing on both relays for long relay life
- Choice of Manual-ON or Auto-ON operation, selectable for each relay
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy adjustments
- Selectable audible and/or visual alerts for impending shutoff
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- LED indicates occupancy detection
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates



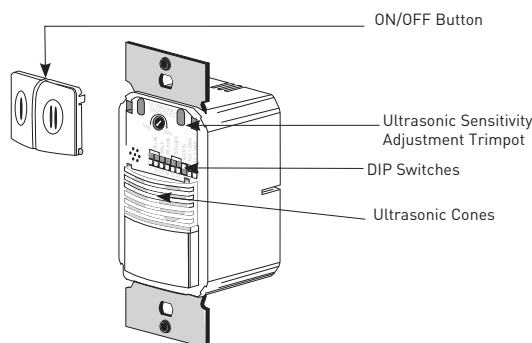
# Specifications

- 120/277 VAC; 50/60 Hz  
@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp  
@ 277 VAC, 0-1200 W ballast
- Time delays: 5, 10, 15, 20, 25 or 30 minutes, walk-through, test-mode

- Coverage: Major motion 20' x 20'  
Minor motion 15' x 15'
- Sensitivity adjustment: Ultrasonic (fully variable)
- Dimensions: 2.73" x 1.76" x 1.83"  
{69.3mm x 44.7mm x 46.5mm} L x W x D
- UL and cUL listed
- Five year warranty

# Controls & Settings

## Product Controls



## DIP Switch Settings

Time Delay	1	2	3
Test	↓	↓	↓
5 minutes	↓	↓	↑
10 minutes	↓	↑	↑
15 minutes	↓	↑	↑
20 minutes	↑	↓	↓
25 minutes	↑	↓	↓
30 minutes	↑	↓	↓
Service	↑	↑	↑

Walk-Through	4
Disabled	↓
Enabled	↑

Visible Alert	5
Disabled	↓
Enabled	↑

Audible Alert	6
Disabled	↓
Enabled	↑

Relay 1 Mode	7
Auto On	↓
Manual On	↑

UW-200 ONLY

Relay 2 Mode	8
Auto On	↓
Manual On	↑

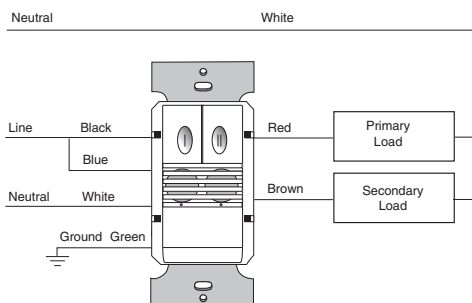
  

No Function	9
Factory Settings:	
◀ All models	
▲ UW-100 series	
▲ UW-200 series	

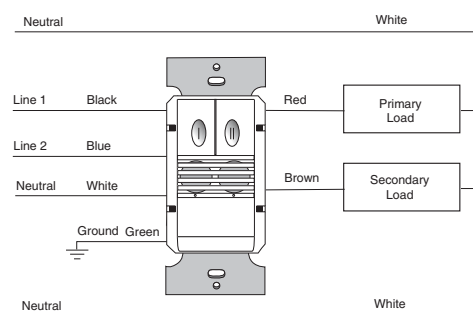
Service bypasses occupancy & light level functions. Control loads manually using ON/OFF buttons.

# Wiring

## UW-200 Bi-level Wiring

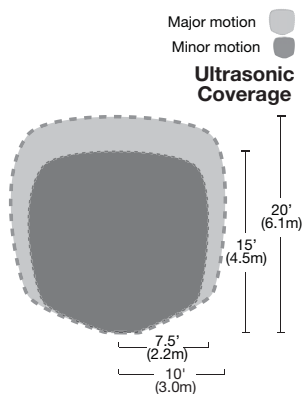


## UW-200 Two Circuit Wiring



# Coverage

## Coverage Pattern



For best performance, WattStopper recommends using this sensor in spaces no larger than 15' x 15'.

# Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> UW-200-W	White	120/277 VAC; 50/60 Hz	@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp @ 277 VAC, 0-1200 W ballast
<input type="checkbox"/> UW-200-LA	Lt. Almond		
<input type="checkbox"/> UW-200-I	Ivory		
<input type="checkbox"/> UW-200-G	Grey		
<input type="checkbox"/> UW-200-B	Black		

Order wall plate separately.

# DSW-100 Dual Technology Wall Switch Occupancy Sensor

High sensitivity and dense coverage for exceptional performance

Color-matched lens and low profile for appealing design



Selectable operation, walk-through, test and presentation modes for increased energy savings and convenience

Defaults to Manual-ON operation for maximum energy savings

Part of a comprehensive line of PIR, Ultrasonic and Dual Technology wall switch sensors

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The DSW-100 dual technology wall switch sensor turns lights OFF and ON based on occupancy. It combines the benefits of passive infrared (PIR) and ultrasonic detection technologies, and is characterized by high sensitivity to small and large movements. The DSW-100 replaces existing wall switches and fits behind a standard decorator wall plate.

### Operation

Once the lights are ON, detection by either PIR or ultrasonic technology holds lights ON until occupancy is no longer detected and the time delay elapses. DIP switch settings allow for a variety of control options including Auto-ON operation, walk-through and test mode. In Auto-ON mode, the DSW-100 turns lighting on when the PIR sensor detects occupancy. Additional DIP switch settings allow the user to choose which sensing technologies hold ON or retrigger the lighting.

### Manual-on Control

Factory default operation is for Manual-ON mode, so that users turn light on only when needed. This control strategy is proven to save more energy than Auto-ON, and is required in ASHRAE 90.1-2010. Installers can easily reconfigure the DSW-100 to turn lights on automatically. In Auto-on, walk-through mode can increase energy savings by quickly turning lights off following occupancy of less than 30 seconds.

### Applications

WattStopper's dual technology has the flexibility to work in a variety of applications where one technology alone may not be sufficient. Common applications include small and executive offices, small and medium conference rooms and lunch/break rooms. In addition, dual technology sensors are the perfect choice for ADA-compliant buildings due to lower mounting height requirements.

## Features

- Complies with 2011 NEC requirements
- Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
- Zero-crossing for long relay life
- Vandal resistant lens combines precise coverage with durability
- Choice of Manual-ON or Auto-ON operation
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy adjustments
- Selectable audible alert for impending shutoff
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- Four occupancy logic options give users the ability to customize control to meet application needs
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates

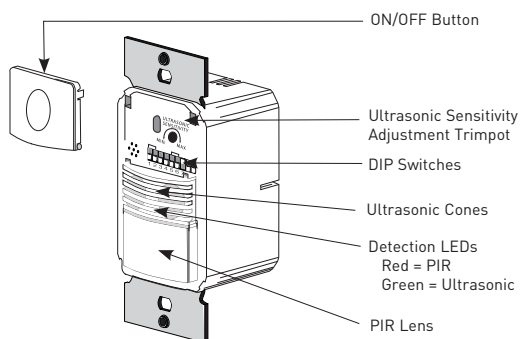


# Specifications

- 120/277 VAC; 50/60 Hz  
 @ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp  
 @ 277 VAC, 0-1200 W ballast
- Time delays: 5, 15 or 30 minutes, walk-through, test-mode/20 minutes
- Coverage:  
 Major motion, PIR 35' x 30', Ultrasonic 20' x 20'  
 Minor motion, PIR 20' x 15', Ultrasonic 15' x 15'
- Sensitivity adjustment: PIR (high/low), Ultrasonic (fully variable)
- Dimensions: 2.73" x 1.76" x 1.83" (69.3mm x 44.7mm x 46.5mm) L x W x D
- UL and cUL listed
- Five year warranty

# Controls & Settings

## Product Controls



## DIP Switch Settings

<b>Time Delay</b> 1 2	Time Delay	Trigger Mode	Relay 1 not used	<b>Audible Alert</b> 7
Test/20 min ↓	ON	Initial Occupancy	Walk-Through	Enabled ↑
5 minutes ↓	1	Primary Occupancy	Audible Alerts	Disabled ↓
15 minutes ↑	2	Re-trigger (seconds duration)	PIR Sensitivity	<b>Relay 1 On Mode</b> 8
30 minutes ↑	3			Manual On ↑
				Auto On ↓
<b>Walk-Through</b> 3				
Enabled ↑				
Disabled ↓				
<b>PIR Sensitivity</b> 4				
Low, 50% ↑				
High ↓				

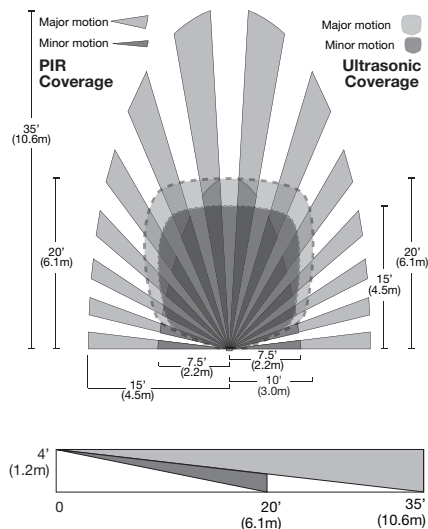
  

<b>Trigger Mode</b> 5 6	Initial Occupancy	Primary Occupancy	Re-trigger (seconds duration)
Standard	PIR	Either	Either
Option A	PIR	PIR	PIR
Option B	PIR	Both	Both
Option C	PIR	Both	Both

↑ = ON ↓ = OFF  
 ◀ = Factory Settings

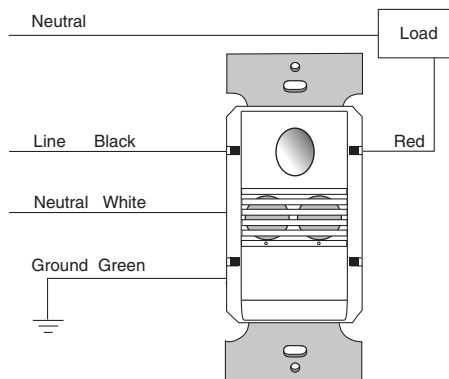
# Coverage & Wiring

## Coverage Pattern



For best performance, WattStopper recommends using this sensor in spaces no larger than 18' x 15'.

## Wiring Diagram



# Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> DSW-100-W	White	120/277 VAC; 50/60 Hz	@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp @ 277 VAC, 0-1200 W ballast
<input type="checkbox"/> DSW-100-LA	Lt. Almond		
<input type="checkbox"/> DSW-100-I	Ivory		
<input type="checkbox"/> DSW-100-G	Grey		
<input type="checkbox"/> DSW-100-B	Black		

Order wall plate separately.



# DSW-200 Dual Technology Dual Relay Wall Switch Occupancy Sensor

High sensitivity and dense coverage for exceptional performance

Two relays for control of two separate lighting loads or circuits

Color-matched lens and low profile for appealing design



Selectable operation, walk-through, test and presentation modes for increased energy savings and convenience

Defaults to Auto-ON to 50% operation for maximum energy savings

Part of a comprehensive line of PIR, Ultrasonic and Dual Technology wall switch sensors

## Product Overview

### Description

The DSW-200 dual technology wall switch sensor turns lights ON and OFF based on occupancy and contains two relays for controlling two independent lighting loads or circuits. It combines the benefits of passive infrared (PIR) and ultrasonic detection technologies for high sensitivity to small and large movements. The DSW-200 replaces existing wall switches and fits a standard decorator wall plate.

### Operation

Each of the DSW-200's relays can control a separate lighting load. By default, when the PIR sensor detects occupancy, relay 1 turns ON automatically. Detection by either PIR or ultrasonic technology holds lights ON. When occupancy is no longer detected and the time delay elapses, lights automatically turn OFF. Dual ON/OFF buttons allow the user to turn on and off each of the loads manually. DIP switch settings allow for a variety of control options such as Auto-ON or Manual-ON for each relay, walk-through, and test mode.

## Features

- Complies with 2011 NEC requirements
- Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
- Zero-crossing on both relays for long relay life
- Vandal resistant lens combines precise coverage with durability
- Choice of Manual-ON or Auto-ON operation, selectable for each relay
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy adjustments
- Selectable audible alert for impending shutoff
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- Four occupancy logic options give users the ability to customize control to meet application needs
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates

PROJECT

LOCATION/TYPE

### Bi-Level Control

The DSW-200 features a built-in light level sensor that controls the second (secondary) relay. If adequate daylight is present, the sensor will hold secondary lights off until daylight levels drop, providing increased energy savings. The DSW-200 satisfies energy codes requiring bi-level or daylight control switching. The two relays in the sensor give it the ability to control two lighting loads independently. This provides A/B switching where the user can achieve half-lighting (or another desired portion) from a single switch.

### Applications

The DSW-200 has the flexibility for applications where one technology alone may not be sufficient. In addition, its dual relays allow bi-level switching or control of two loads. Applications include small and executive offices, small and medium conference rooms and lunch/break rooms. This sensor is also a perfect choice for ADA-compliant buildings due to lower mounting height requirements.

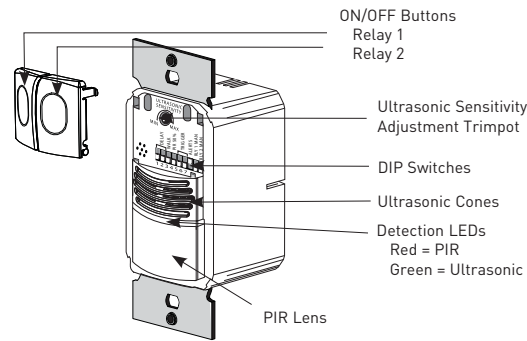


# Specifications

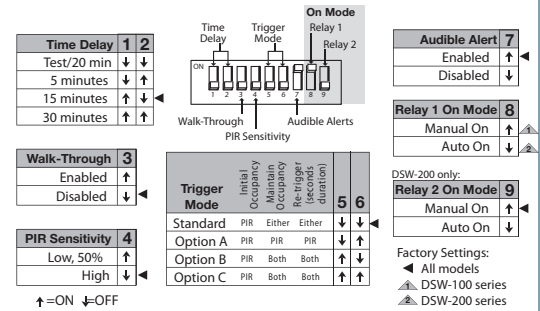
- 120/277 VAC; 50/60 Hz  
@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp  
@ 277 VAC, 0-1200 W ballast
- Time delays: 5, 15 or 30 minutes), walk-through, test-mode/20 minutes
- Coverage:  
Major motion, PIR 35' x 30', Ultrasonic 20' x 20'  
Minor motion, PIR 20' x 15', Ultrasonic 15' x 15'
- Sensitivity adjustment: PIR (high/low), Ultrasonic (fully variable)
- Dimensions: 2.73" x 1.76" x 1.83" (69.3mm x 44.7mm x 46.5mm) L x W x D
- UL and cUL listed
- Five year warranty

# Controls & Settings

## Product Controls

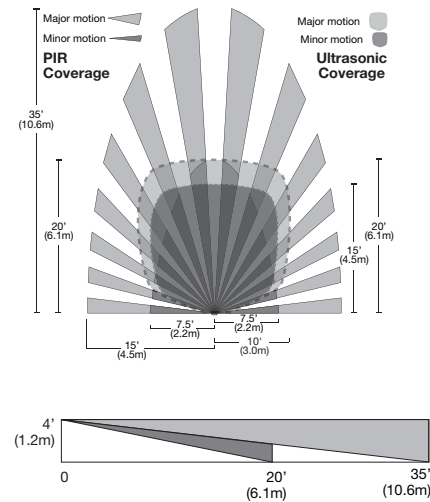


## DIP Switch Settings



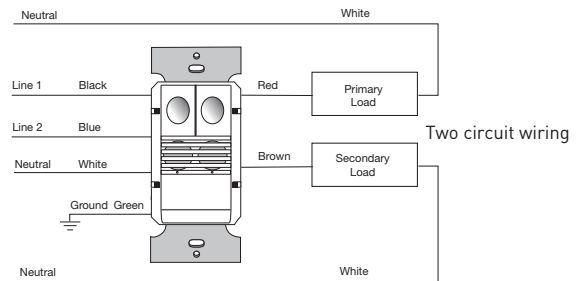
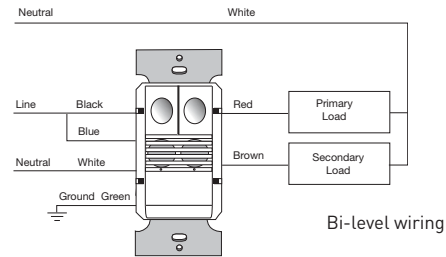
# Coverage & Wiring

## Coverage Pattern



For best performance, WattStopper recommends using this sensor in spaces no larger than 18' x 15'.

## Wiring Diagrams



# Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> DSW-200-W	White	120/277 VAC; 50/60 Hz	@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp @ 277 VAC, 0-1200 W ballast
<input type="checkbox"/> DSW-200-LA	Lt. Almond		
<input type="checkbox"/> DSW-200-I	Ivory		
<input type="checkbox"/> DSW-200-G	Grey		
<input type="checkbox"/> DSW-200-B	Black		

Order wall plate separately.

# DSW-301 Dual Technology Wall Switch Occupancy Sensor

High sensitivity and dense coverage for exceptional performance

Allows multi-way control from one of up to four control locations

Color-matched lens and low profile for appealing design



Optional neutral connection with break off tab to expose neutral terminals

120/277 VAC and 347 VAC models

Defaults to Manual-ON operation for maximum energy savings

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The DSW-301 dual technology wall switch sensor turns lights OFF and ON based on occupancy. It combines the benefits of passive infrared (PIR) and ultrasonic detection technologies. The DSW-301 replaces existing wall switches and fits behind a standard decorator wall plate.

### Operation

Once the lights are ON, detection by either technology holds lights ON until occupancy is no longer detected and the time delay elapses. Factory default operation is for Manual-ON, so that users must turn lights on. DIP switch settings allow for a variety of control options including Auto-ON operation, walk-through and test mode. In Auto-ON mode, the DSW-301 turns lighting on when the PIR sensor detects occupancy. Additional DIP switch settings allow the user to choose which sensing technologies hold ON or retrigger the lighting. Multiple sensors may be used for control of one or more loads from up to four locations.

### Optional Neutral Connection

The DSW-301 sensor uses a patent pending Neutral Sense Technology. Any DSW-301 sensor can be used for a two-wire or three wire application, either to work with existing wiring, or to meet local or national code requirements. An easy-to-break plastic tab covers neutral screw terminals. Once the sensor is connected to neutral it complies with all codes that restrict current leakage to ground.

### Applications

The DSW-301 sensor is great for retrofit projects and WattStopper's dual technology has the flexibility to work in a variety of applications where one technology alone may not be sufficient. Common applications include small and executive offices, small and medium conference rooms, small classrooms and lunch/break rooms. In addition, dual technology sensors are the perfect choice for ADA-compliant buildings due to lower mounting height requirements.

## Features

- Complies with 2011 NEC requirements
- Zero-crossing for long relay life
- Vandal resistant lens combines precise coverage with durability
- Selectable walk-through mode turns lights off three minutes after initial occupancy if no motion is detected after the first 30 seconds
- Test mode allows quick and easy adjustments
- Selectable audible alert for impending shutoff
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- Four occupancy logic options to customize control to meet application needs
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000

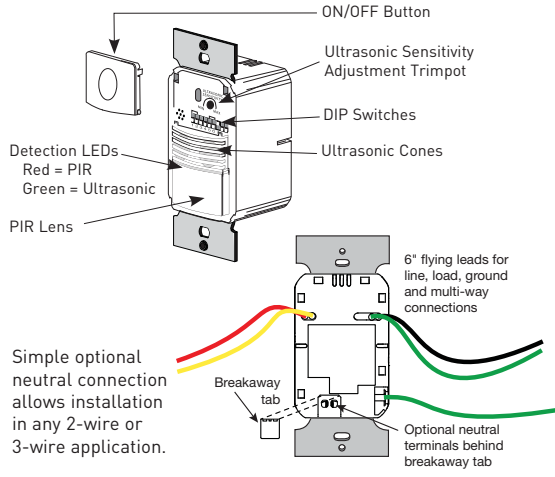


## Specifications

- DSW-301: 120/277VAC; 50/60Hz, 1/6 hp @ 120VAC, 0-1000W ballast, LED, and tungsten @ 277VAC, 0-1200W ballast and LED
- DSW-301-347: 347VAC; 50/60Hz, 1/6 hp; 0-1500W ballast and LED
- Time delays: 5, 15 or 30 minutes, walk-through, test-mode/20 minutes
- Sensitivity adjustment: PIR (high/low), Ultrasonic (fully variable)
- Coverage:
  - Major motion, PIR 35' x 30', Ultrasonic 20' x 20'
  - Minor motion, PIR 20' x 15', Ultrasonic 15' x 15'
- Dimensions (L x W x D):
  - DSW-301: 4.1" x 1.58" x 1.39" (104.6mm x 40.3mm x 35.5mm)
  - DSW-301-347: 4.5" x 1.58" x 1.39" (114.36mm x 40.3mm x 35.5mm)
- UL and cUL listed
- Five year warranty

## Controls & Settings

### Product Controls & Neutral Option



### DIP Switch Settings

<b>Time Delay</b> 1 2	Test/20 min ↓ ↑	5 minutes ↓ ↑	15 minutes ↓ ↑	30 minutes ↓ ↑
<b>Walk-Through</b> 3	Enabled ↑	Disabled ↓		
<b>PIR Sensitivity</b> 4	Low, 50% ↑	High ↓		

<b>Audible Alert</b> 7	Enabled ↑	Disabled ↓
<b>Relay 1 On Mode</b> 8	Manual On ↑	Auto On ↓
<b>Relay 2 On Mode</b> 9	Manual On ↑	Auto On ↓

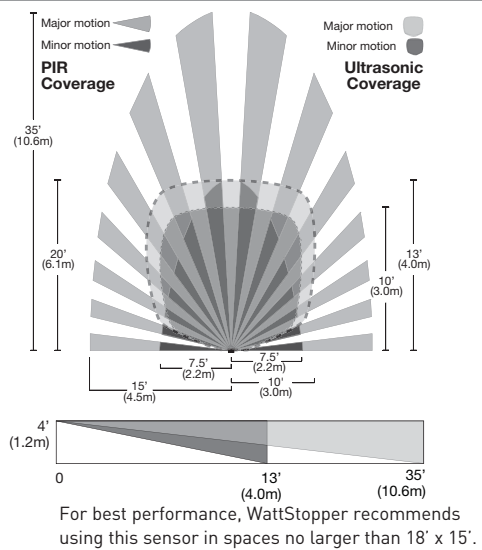
  

<b>Trigger Mode</b> 5 6	Standard Both	Either Either (5)	Either Either (5)
<b>Option A</b>	PIR	PIR	PIR (5)
<b>Option B</b>	PIR	PIR	PIR (5)
<b>Option C</b>	Both	Both	Both (5)

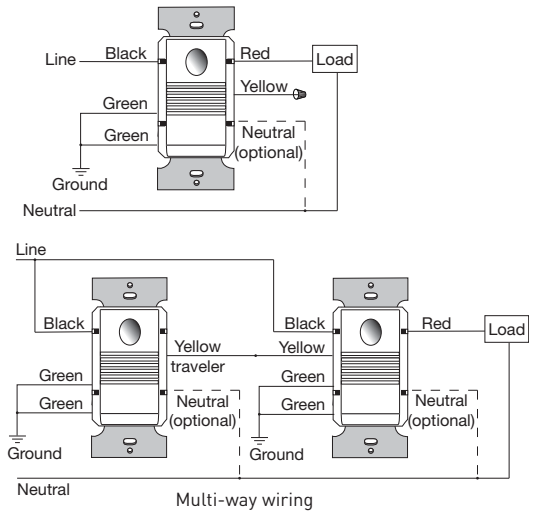
↑ = ON ↓ = OFF

## Coverage & Wiring

### Coverage Patterns



### DIP Switch Settings



## Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> DSW-301-W	White	120VAC; 50/60Hz	@ 120VAC, 0-1000W ballast, LED, tungsten, 1/6 hp or @ 277VAC 0-1200W ballast, LED, 1/6 hp
<input type="checkbox"/> DSW-301-LA	Lt. Almond	or	
<input type="checkbox"/> DSW-301-I	Ivory	277VAC; 50/60Hz	
<input type="checkbox"/> DSW-301-G	Grey		
<input type="checkbox"/> DSW-301-B	Black		
<input type="checkbox"/> DSW-301-347-W	White	347VAC; 50/60Hz	0-1500W ballast & LED, 1/6 hp
<input type="checkbox"/> DSW-301-347-LA	Lt. Almond		
<input type="checkbox"/> DSW-301-347-I	Ivory		
<input type="checkbox"/> DSW-301-347-G	Grey		
<input type="checkbox"/> DSW-301-347-B	Black		

# DSW-302 Dual Technology Dual Relay Wall Switch Occupancy Sensor

High sensitivity and dense coverage for exceptional performance

Two relays for control of two separate lighting loads or circuits

Allows multi-way control from one of up to four control locations

Color-matched lens and low profile for appealing design



Optional neutral connection with break off tab to expose neutral terminals

120/277 VAC and 347 VAC models

Defaults to Auto-ON to 50% operation for maximum energy savings

## Product Overview

### Description

The DSW-302 dual technology wall switch sensor turns lights ON and OFF based on occupancy and contains two relays for controlling two independent lighting loads or circuits. It combines the benefits of passive infrared (PIR) and ultrasonic detection technologies for high sensitivity to small and large movements. The DSW-302 replaces existing wall switches and fits a standard decorator wall plate.

### Operation

Each of the DSW-302's relays can control a separate lighting load. By default, when the PIR sensor detects occupancy, relay 1 turns ON automatically. Remaining lighting must be turned on manually. Detection by either PIR or ultrasonic technology holds lights ON. When occupancy is no longer detected and the time delay elapses, lights automatically turn OFF. Dual ON/OFF buttons allow the user to turn on and off each of the loads manually. DIP switch settings allow for a variety of control options such as Auto-ON or Manual-ON for each relay, walk-through, and test mode. Multiple sensors may be used for control of one or more loads from up to four locations.

## Features

- Complies with 2011 NEC requirements
- Zero-crossing on both relays for long relay life
- Vandal resistant lens combines precise coverage with durability
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Selectable audible alert for impending shutoff
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- Test mode allows quick and easy adjustments
- Four occupancy logic options to customize control to meet application needs
- Optional light level sensor holds secondary lights off when ambient lighting is above the preset level
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000

PROJECT

LOCATION/TYPE

### Optional Neutral Connection

The DSW-302 sensor uses a patent pending Neutral Sense Technology. Any DSW-302 sensor can be used for a two-wire or three wire application, either to work with existing wiring, or to meet local or national code requirements. An easy-to-break plastic tab covers neutral screw terminals. Once the sensor is connected to neutral it complies with all codes that restrict current leakage to ground.

### Applications

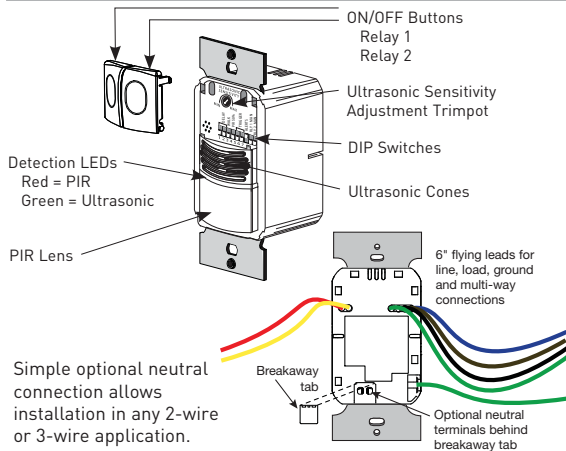
The DSW-302 sensor is great for retrofit projects and has the flexibility for applications where one technology alone may not be sufficient. In addition, its dual relays allow bi-level switching or control of two loads. Applications include small and executive offices, small and medium conference rooms and lunch/break rooms. This sensor is also a perfect choice for ADA-compliant buildings due to lower mounting height requirements.

# Specifications

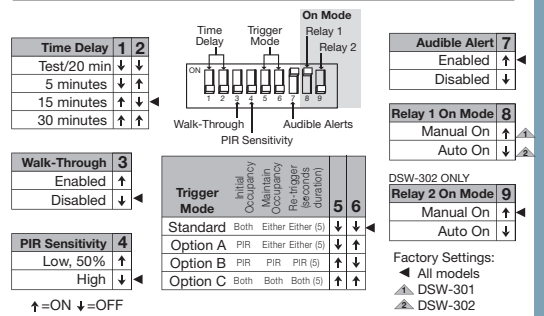
- DSW-302: 120/277VAC; 50/60Hz, 1/6 hp @ 120VAC, 0-800W ballast, LED, and tungsten @ 277VAC, 0-1000W ballast and LED
- DSW-302-347: 347VAC; 50/60Hz, 1/6 hp; 0-1200W ballast and LED
- Time delays: 5, 15 or 30 minutes), walk-through, test-mode/20 minutes
- Sensitivity adjustment: PIR (high/low), Ultrasonic (fully variable)
- Coverage: Major motion, PIR 35' x 30', Ultrasonic 20' x 20' Minor motion, PIR 20' x 15', Ultrasonic 15' x 15'
- Dimensions (L x W x D): - DSW-302: 4.1" x 1.58" x 1.39" (104.6mm x 40.3mm x 35.5mm) - DSW-302-347: 4.5" x 1.58" x 1.39" (114.36mm x 40.3mm x 35.5mm)
- UL and cUL listed
- Five year warranty

# Controls & Settings

## Product Controls & Neutral Option

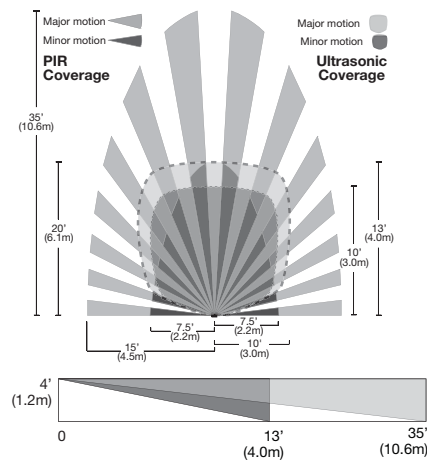


## DIP Switch Settings

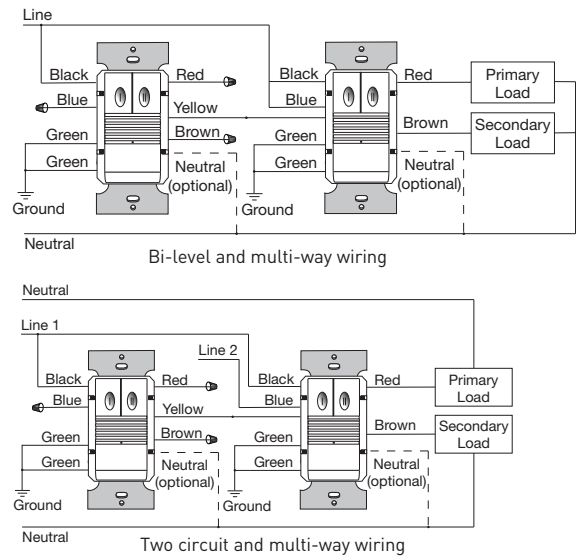


# Coverage & Wiring

## Coverage Pattern



## Wiring Diagrams



# Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> DSW-302-W	White	120VAC; 50/60Hz or 277VAC; 50/60Hz	@ 120VAC, 0-800W ballast, LED, tungsten, 1/6 hp or @ 277VAC 0-1000W ballast, LED, 1/6 hp
<input type="checkbox"/> DSW-302-LA	Lt. Almond		
<input type="checkbox"/> DSW-302-I	Ivory		
<input type="checkbox"/> DSW-302-G	Grey		
<input type="checkbox"/> DSW-302-B	Black		
<input type="checkbox"/> DSW-302-347-W	White	347VAC; 50/60Hz	0-1200W ballast & LED, 1/6 hp
<input type="checkbox"/> DSW-302-347-LA	Lt. Almond		
<input type="checkbox"/> DSW-302-347-I	Ivory		
<input type="checkbox"/> DSW-302-347-G	Grey		
<input type="checkbox"/> DSW-302-347-B	Black		



# DW-100 Dual Technology Wall Switch Occupancy Sensor

High sensitivity and dense coverage for exceptional performance

Color-matched lens and low profile for appealing design



Selectable operation, walk-through, test and presentation modes for increased energy savings and convenience

Defaults to Manual-ON operation for maximum energy savings

Part of a comprehensive line of PIR, Ultrasonic and Dual Technology wall switch sensors

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The DW-100 dual technology wall switch sensor combines the benefits of passive infrared (PIR) and ultrasonic technologies, and can turn lights OFF and ON based on occupancy. It is characterized by high sensitivity to small and large movements, appealing aesthetics, and a variety of features.

### Operation

The DW-100 fits in a single gang junction box. Once the lights are ON, detection by either technology holds lights ON until occupancy is no longer detected and the time delay elapses. DIP switch settings allow for a variety of control options including Auto-ON operation, walk-through and test mode. By default, Auto-ON turns lighting on when both PIR and ultrasonic technologies detect occupancy. Additional DIP switch settings allow the user to choose which sensing technologies turn ON and hold ON the lighting.

### Manual-on Control

Factory default operation is for Manual-ON, so that users turn lights on only when needed. This control strategy is proven to save more energy than Auto-ON, and is required in ASHRAE 90.1-2010. If desired, the DW-100 may be reconfigured to turn lights on automatically.

### Applications

WattStopper's dual technology has the flexibility to work in a variety of applications where one technology alone may not be sufficient. Common applications include small and executive offices, small and medium conference rooms and lunch/break rooms. In addition, dual technology sensors are the perfect choice for ADA-compliant buildings due to lower mounting height requirements.

## Features

- Complies with 2011 NEC requirements
- Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
- Zero-crossing for long relay life
- Vandal resistant lens combines precise coverage with durability
- Choice of Manual-ON or Auto-ON operation
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy adjustments
- Selectable audible alert for impending shutoff
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- Four occupancy logic options give users the ability to customize control to meet application needs
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates
- Qualifies for ARRA-funded public works projects

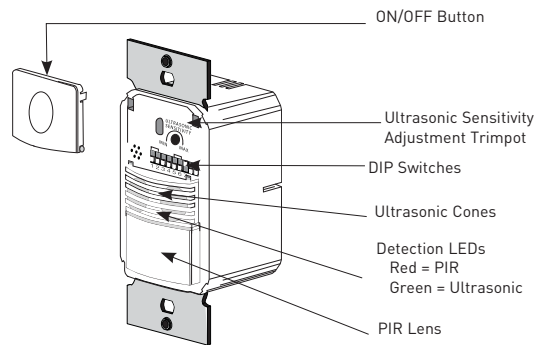


## Specifications

- DW-100: 120/277 VAC; 50/60 Hz  
@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp  
@ 277 VAC, 0-1200 W ballast
- DW-100-347: 347 VAC; 50/60Hz, 0-1500 W ballast
- Time delays: 5, 15 or 30 minutes, walk-through, test-mode
- Coverage:  
Major motion, PIR 35' x 30', Ultrasonic 20' x 20'  
Minor motion, PIR 20' x 15', Ultrasonic 15' x 15'
- Sensitivity adjustment: PIR (high/low), Ultrasonic (fully variable)
- Dimensions: 2.73" x 1.76" x 1.83"  
(69.3mm x 44.7mm x 46.5mm) L x W x D
- UL and cUL listed
- Five year warranty

## Controls & Settings

### Product Controls



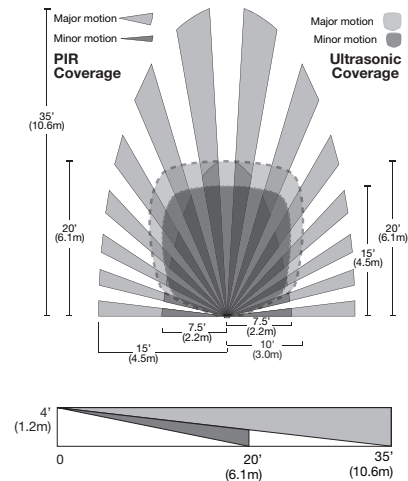
### DIP Switch Settings

<b>Time Delay</b> 1 2	Time Delay	Trigger Mode	Not Used	<b>Audible Alert</b> 7
Test	↓	Walk-Through	↓	Disabled
5 minutes	↓	PIR Sensitivity	↓	Enabled
15 minutes	↑	Initial Occupancy	↓	
30 minutes	↑	Minority Occupancy	↓	
		PIR Sensitivity	↓	
		Trigger Mode	↓	
<b>Walk-Through</b> 3	Disabled	Standard	Both	<b>ON Mode</b> 8
Enabled	↑	Option A	PIR	Auto On
		Option B	PIR	Manual On
		Option C	Both	
<b>PIR Sensitivity</b> 4	High			
Low, 50%	↑			

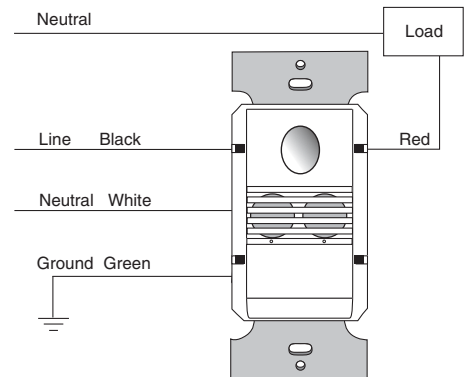
Switch 9 is not used  
↑ = ON ↓ = OFF  
◀ = Factory Setting

## Coverage & Wiring

### Coverage Pattern



### Wiring Diagram



For best performance, WattStopper recommends using this sensor in spaces no larger than 18' x 15'.

## Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> DW-100-W	White	120/277 VAC; 50/60 Hz	@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp @ 277 VAC, 0-1200 W ballast
<input type="checkbox"/> DW-100-W-U			
<input type="checkbox"/> DW-100-LA	Lt. Almond		
<input type="checkbox"/> DW-100-I	Ivory		
<input type="checkbox"/> DW-100-I-U			
<input type="checkbox"/> DW-100-G	Grey		
<input type="checkbox"/> DW-100-B	Black	347 VAC; 50/60 Hz	0-1500 W ballast
<input type="checkbox"/> DW-100-347-W	White		
<input type="checkbox"/> DW-100-347-LA	Lt. Almond		
<input type="checkbox"/> DW-100-347-I	Ivory		
<input type="checkbox"/> DW-100-347-G	Grey		
<input type="checkbox"/> DW-100-347-B	Black		

Order wall plate separately.

-U = ARRA compliant. Product produced in the U.S.

# DW-100-24 Dual Technology Low Voltage Wall Switch Occupancy Sensor

High sensitivity and dense coverage for exceptional performance

Low voltage input

Color-matched lens and low profile for appealing design



Selectable operation, walk-through, test and presentation modes for increased energy savings and convenience

Defaults to Manual-ON operation for maximum energy savings

Part of a comprehensive line of PIR, Ultrasonic and Dual Technology wall switch sensors

PROJECT

LOCATION/TYPE

## Product Overview

### Description

The DW-100-24 dual technology low voltage wall switch sensor combines the benefits of passive infrared (PIR) and ultrasonic technologies to turn lights OFF and ON based on occupancy. It is characterized by high sensitivity to small and large movements, appealing aesthetics, and a variety of features.

### Operation

Factory default operation is for Manual-ON, so that users turn lights on only when needed. Once the lights are ON, detection by either technology holds lights ON until occupancy is no longer detected and the time delay elapses. DIP switch settings allow for a variety of control options including Auto-ON operation, walk-through and test mode. By default, Auto-ON turns lighting on when both PIR and ultrasonic technologies detect occupancy. Additional DIP switch settings allow the user to choose which sensing technologies turn ON and hold ON the lighting.

### Low Voltage

Low voltage wall switch sensors can offer advantages over line voltage models. Using an isolated form-C relay output, the DW-100-24 sensor integrates seamlessly with VAV or other building systems for greater energy savings. Multiple DW-100-24 sensors can also be connected on a single circuit and can switch loads that exceed the rating of a standard line voltage switch. In addition, low voltage sensor installations do not require the use of conduits reducing installation costs and making relocation easier.

### Applications

WattStopper's dual technology has the flexibility to work in a variety of applications where one technology alone may not be sufficient. The DW-100-24 is the perfect choice for locations where line voltage wiring is not possible or for jurisdictions prohibiting the use of 277V switches. Common applications include small and executive offices, small and medium conference rooms and lunch/break rooms.

## Features

- Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
- Zero-crossing for long relay life
- Vandal resistant lens combines precise coverage with durability
- Choice of Manual-ON or Auto-ON operation
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy adjustments
- Selectable audible alert for impending shutoff
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- Four occupancy logic options give users the ability to customize control to meet application needs
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates
- Qualifies for ARRA-funded public works projects

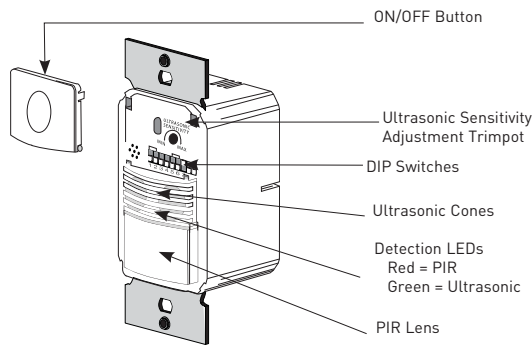


# Specifications

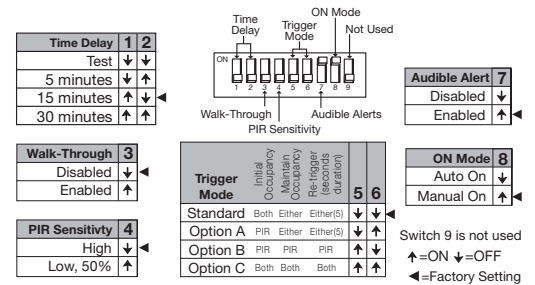
- 18-24 VDC, 24 VAC and halfwave rectified AC
- Current consumption: 35 mA
- DW-100-24 contains single-pole, double-throw isolated relay rated for 1 A @ 30 VDC
- Time delays: 5, 15 or 30 minutes, walk-through, test-mode
- Coverage:
  - Major motion, PIR 35' x 30', Ultrasonic 20' x 20'
  - Minor motion, PIR 20' x 15', Ultrasonic 15' x 15'
- Sensitivity adjustment: PIR (high/low), Ultrasonic (fully variable)
- Dimensions: 2.73" x 1.76" x 1.83" (69.3mm x 44.7mm x 46.5mm) L x W x D
- UL and cUL listed
- Five year warranty

# Controls & Settings

## Product Controls

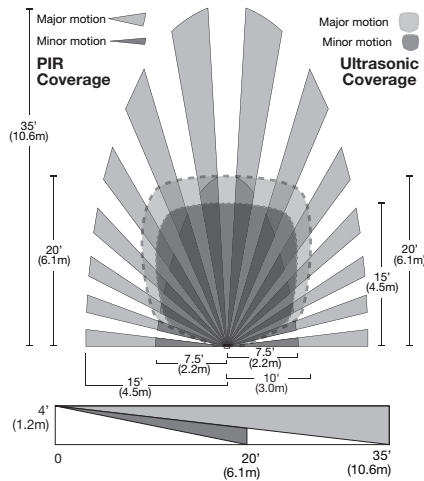


## DIP Switch Settings

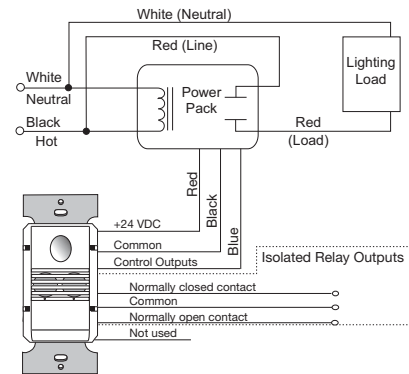


# Coverage & Wiring

## Coverage Pattern



## DW-100-24 Low Voltage Wiring



For best performance, WattStopper recommends using this sensor in spaces no larger than 18' x 15'.

# Ordering Information

Catalog No.	Color	Voltage
<input type="checkbox"/> DW-100-24-W	White	18-24 VDC, 24 VAC and halfwave rectified AC
<input type="checkbox"/> DW-100-24-W-U		
<input type="checkbox"/> DW-100-24-LA	Lt. Almond	
<input type="checkbox"/> DW-100-24-I	Ivory	
<input type="checkbox"/> DW-100-24-G	Grey	
<input type="checkbox"/> DW-100-24-B	Black	

Order wall plate separately.  
 -U = ARRA compliant. Product produced in the U.S.

# DW-103 Dual Technology Multi-way Wall Switch Occupancy Sensor

High sensitivity and dense coverage for exceptional performance

Defaults to Manual-ON operation for maximum energy savings

Color-matched lens and low profile for appealing design



Allows multi-way control from one of up to four control locations

Selectable operation, walk-through, test and presentation modes for increased energy savings and convenience

Part of a comprehensive line of PIR, Ultrasonic and Dual Technology wall switch sensors

PROJECT

LOCATION/TYPE

## Product Overview

### Description

The DW-103 dual technology multi-way wall switch sensor combines the benefits of passive infrared (PIR) and ultrasonic technologies, and can turn lights OFF and ON based on occupancy. It provides high sensitivity to small and large movements, appealing aesthetics and a variety of features.

### Operation

The DW-103 replaces existing wall switches and fits in a single gang junction box. Factory default operation is for Manual-ON, and detection by either technology keeps lights ON until occupancy is no longer detected and a time delay elapses. DIP switch settings allow control options including Auto-ON operation, walk-through and test modes. Additional DIP switches determine which sensing technologies turn ON and hold ON the lighting. Multiple DW-103 sensors may be used for control of one or more loads from up to four locations.

## Features

- Complies with 2011 NEC requirements
- Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
- Zero-crossing for long relay life
- Vandal resistant lens combines precise coverage with durability
- Choice of Manual-ON or Auto-ON operation
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy adjustments

## Multi-way Control

The DW-103 offers true multi-way functionality. When connected sensors are in Manual-ON mode, an occupant must press the ON/OFF button of one of the sensors to turn the load ON. When sensors are in Auto-ON mode, the load will automatically turn ON when occupancy is detected by one of the sensors. Lights will remain ON as long as occupancy is detected. The last sensor to detect occupancy will turn the load OFF after the time delay has elapsed. In either operating mode, an occupant may turn the load OFF manually.

## Applications

WattStopper's dual technology is recommended for spaces where one technology alone may not be sufficient. Common applications include private offices, conference rooms and lunch/break rooms. Additionally, dual technology sensors may be mounted at a height suitable for ADA compliance.

- Selectable audible alert for impending shutoff
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- Four occupancy logic options give users the ability to customize control to meet application needs
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates

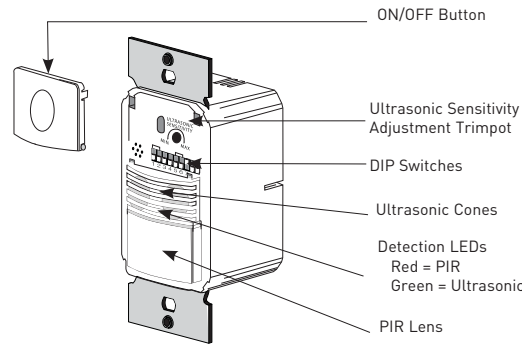


# Specifications

- DW-103: 120/277 VAC; 50/60 Hz  
@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp  
@ 277 VAC, 0-1200 W ballast
- Time delays: 5, 15, or 30 minutes, walk-through, test-mode
- Coverage:  
Major motion, PIR 35' x 30', Ultrasonic 20' x 20'  
Minor motion, PIR 20' x 15', Ultrasonic 15' x 15'
- Sensitivity adjustment: PIR (high/low), Ultrasonic (fully variable)
- Dimensions: 2.73" x 1.76" x 1.83"  
(69.3mm x 44.7mm x 46.5mm) L x W x D
- UL and cUL listed
- Five year warranty

# Controls & Settings

## Product Controls



## DIP Switch Settings

<b>Time Delay</b>	1	2	
Test	↓	↓	
5 minutes	↑	↑	
15 minutes	↑	↑	
30 minutes	↑	↑	

<b>Walk-Through</b>	3	
Disabled	↓	
Enabled	↑	

<b>PIR Sensitivity</b>	4	
High	↓	
Low, 50%	↑	

<b>Audible Alert</b>	7	
Disabled	↓	
Enabled	↑	

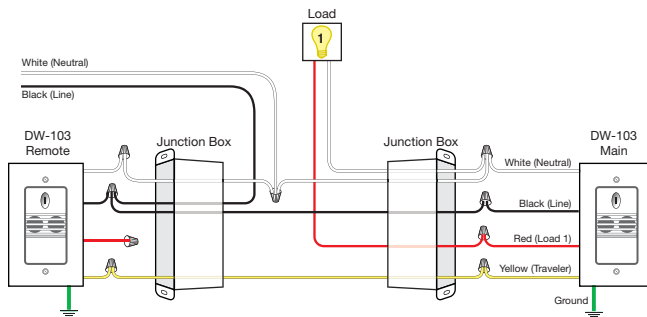
  

<b>ON Mode</b>	8	
Auto On	↓	
Manual On	↑	

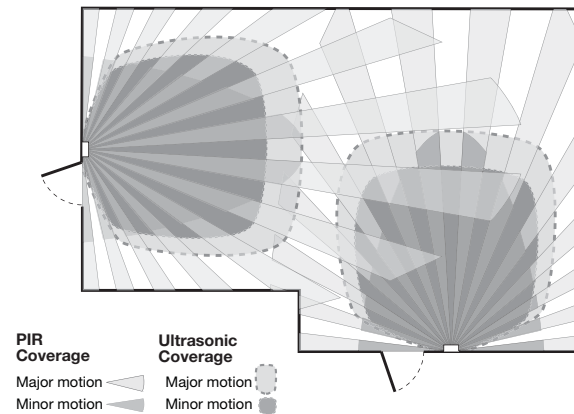
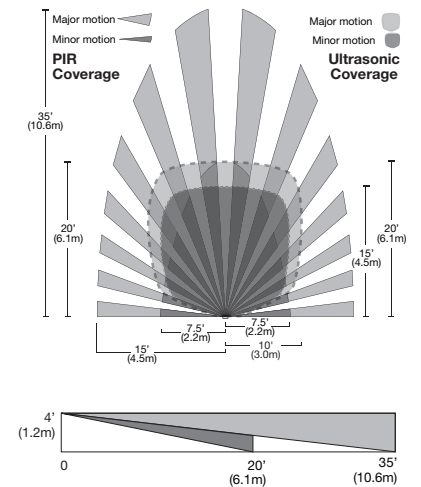
Switch 9 is not used  
 ↑ = ON ↓ = OFF  
 ⇐ = Factory Setting

# Wiring & Coverage

## Multi-way Wiring Diagram



## Coverage Patterns



For best performance in single location applications, WattStopper recommends using this sensor in spaces no larger than 18' x 15'. In multi-way applications, each connected sensor expands the coverage area.

# Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> DW-103-W	White	120/277 VAC; 50/60 Hz	@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp @ 277 VAC, 0-1200 W ballast
<input type="checkbox"/> DW-103-LA	Lt. Almond		
<input type="checkbox"/> DW-103-I	Ivory		
<input type="checkbox"/> DW-103-G	Grey		
<input type="checkbox"/> DW-103-B	Black		

Order wall plate separately.



# DW-200 Dual Technology Dual Relay Wall Switch Occupancy Sensor

High sensitivity and dense coverage for exceptional performance

Two relays for control of two separate lighting loads or circuits

Color-matched lens and low profile for appealing design



Selectable operation, walk-through, test and presentation modes for increased energy savings and convenience

Defaults to Auto-ON to 50% operation for maximum energy savings

## Product Overview

### Description

The DW-200 dual technology wall switch sensor combines the benefits of passive infrared (PIR) and ultrasonic technologies to turn lights ON and OFF based on occupancy. It contains two relays for controlling two independent lighting loads or circuits and a variety of features.

### Operation

The DW-200 fits in a single gang junction box. Each of the DW-200's relays can control a separate lighting load. By default, when both PIR and ultrasonic technologies detect occupancy, relay 1 turns ON automatically. Detection by either technology holds lights ON. When occupancy is no longer detected and the time delay elapses, lights automatically turn OFF. Dual ON/OFF buttons allow the user to manually turn on and off each of the loads. DIP switch settings allow for a variety of control options such as Auto-ON or Manual-ON for each relay, walk-through, and test mode.

## Features

- Complies with 2011 NEC requirements
- Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
- Zero-crossing on both relays for long relay life
- Vandal resistant lens combines precise coverage with durability
- Choice of Manual-ON or Auto-ON operation, selectable for each relay
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy adjustments
- Selectable audible alert for impending shutoff
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- Four occupancy logic options give users the ability to customize control to meet application needs
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates
- Qualifies for ARRA-funded public works projects

PROJECT

LOCATION/TYPE

## Bi-Level Control

The DW-200 features a built-in light level sensor that controls the second (secondary) relay. If adequate daylight is present, the sensor will hold secondary lights off until daylight levels drop, providing increased energy savings. The DW-200 satisfies energy codes requiring bi-level or daylight control switching. The two relays in the sensor give it the ability to control two lighting loads independently. This provides A/B switching where the user can achieve half-lighting (or another desired portion) from a single switch.

## Applications

The DW-200 has the flexibility for applications where one technology alone may not be sufficient. In addition, its dual relays allow bi-level switching or control of two loads. Applications include small and executive offices, small and medium conference rooms and lunch/break rooms. This sensor is also a perfect choice for ADA-compliant buildings due to lower mounting height requirements.

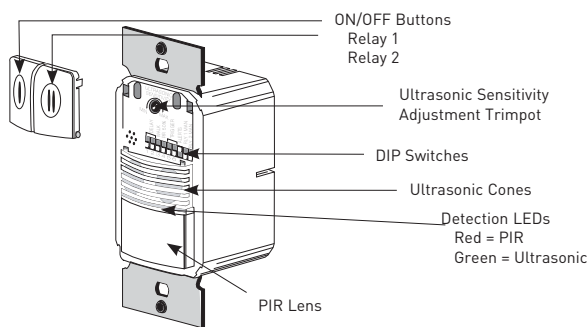


# Specifications

- 120/277 VAC; 50/60 Hz  
@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp  
@ 277 VAC, 0-1200 W ballast
- Time delays: 5, 15 or 30 minutes, walk-through, test-mode
- Coverage:  
Major motion, PIR 35' x 30', Ultrasonic 20' x 20'  
Minor motion, PIR 20' x 15', Ultrasonic 15' x 15'
- Sensitivity adjustment: PIR (high/low), Ultrasonic (fully variable)
- Dimensions: 2.73" x 1.76" x 1.83" (69.3mm x 44.7mm x 46.5mm) L x W x D
- UL and cUL listed
- Five year warranty

# Controls & Settings

## Product Controls



## DIP Switch Settings

<b>Time Delay</b>	1	2
Test	↓	↑
5 minutes	↓	↑
15 minutes	↑	↓
30 minutes	↑	↑

<b>Walk-Through</b>	3
Enabled	↑
Disabled	↓

<b>PIR Sensitivity</b>	4
Low, 50%	↑
High	↓

<b>Audible Alert</b>	7
Enabled	↑
Disabled	↓

<b>Relay 1 ON Mode</b>	8
Manual On	↑
Auto On	↓

<b>Relay 2 ON Mode</b>	9
Manual On	↑
Auto On	↓

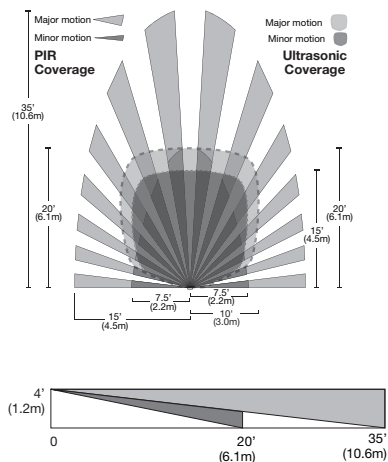
  

Factory Settings:  
 ◀ All models  
 ▲ DW-100 series  
 ▲ DW-200 series

↑=ON ↓=OFF

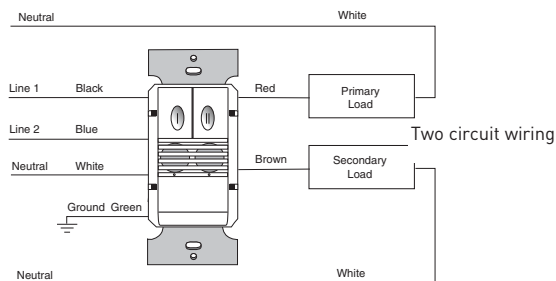
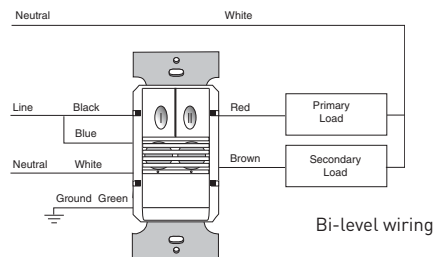
# Coverage & Wiring

## Coverage Pattern



For best performance, WattStopper recommends using this sensor in spaces no larger than 18' x 15'.

## Wiring Diagrams



# Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> DW-200-W <input type="checkbox"/> DW-200-W-U	White	120/277 VAC; 50/60 Hz	@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp @ 277 VAC, 0-1200 W ballast
<input type="checkbox"/> DW-200-LA	Lt. Almond		
<input type="checkbox"/> DW-200-I <input type="checkbox"/> DW-200-I-U	Ivory		
<input type="checkbox"/> DW-200-G	Grey		
<input type="checkbox"/> DW-200-B	Black		

Order wall plate separately.  
 -U = ARRA compliant. Product produced in the U.S.

# DW-203 Dual Technology Multi-way Dual Relay Wall Switch Occupancy Sensor

High sensitivity and dense coverage for exceptional performance

Two relays for control of two separate lighting loads or circuits

Color-matched lens and low profile for appealing design



Allows multi-way control from one of up to four control locations

Selectable operation, walk-through, test and presentation modes for increased energy savings and convenience

Part of a comprehensive line of PIR, Ultrasonic and Dual Technology wall switch sensors

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The DW-203 dual technology multi-way wall switch sensor combines the benefits of passive infrared (PIR) and ultrasonic technologies to turn lights ON and OFF based on occupancy. It has two relays for controlling two independent lighting loads or circuits and a variety of features.

### Operation

The DW-203 fits in a single gang box. By default, when both PIR and ultrasonic technologies detect occupancy, it turns the first relay ON. Continued detection by either technology keeps lights ON until occupancy is no longer detected and a time delay elapses. Dual ON/OFF buttons allow the user to manually switch each load, and each relay may be set to Manual-ON or Auto-ON. The DW-203 features a light level sensor that controls the second relay when it is in Auto-ON mode. If adequate daylight is present, the sensor will hold the second relay off until daylight levels drop.

## Features

- Complies with 2011 NEC requirements
- Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
- Zero-crossing for long relay life
- Vandal resistant lens combines precise coverage with durability
- Choice of Manual-ON or Auto-ON operation, selectable for each relay
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy adjustments

## Multi-way Control

Multiple DW-203 sensors may be connected for control from up to four locations, and provide true multi-way functionality. When Manual-ON mode is active, an occupant must press an ON/OFF button on one of the sensors to turn a load ON. When Auto-ON mode is active, the load will automatically turn ON when occupancy is detected by one of the sensors. Lights will remain ON as long as occupancy is detected. The last sensor to detect occupancy will turn the loads OFF after the time delay has elapsed. In either operating mode, an occupant may turn the load OFF manually.

## Applications

Dual technology is recommended for spaces where one technology alone may not be sufficient. Applications include private offices, conference rooms and lunch/break rooms with multiple switch locations. Dual technology sensors may be mounted at a height suitable for ADA compliance.

- Selectable audible alert for impending shutoff
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- Four occupancy logic options give users the ability to customize control
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates

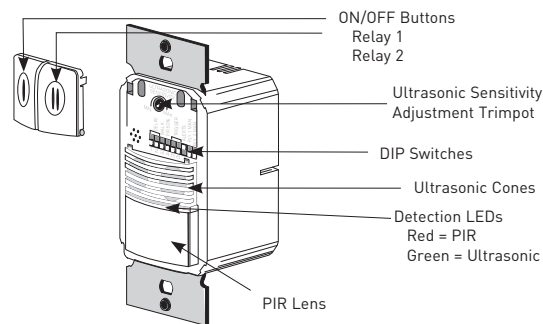


## Specifications

- DW-203: 120/277 VAC; 50/60 Hz  
 @ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp  
 @ 277 VAC, 0-1200 W ballast
- Time delays: 5, 15, or 30 minutes, walk-through, test-mode
- Coverage:  
 Major motion, PIR 35' x 30', Ultrasonic 20' x 20'  
 Minor motion, PIR 20' x 15', Ultrasonic 15' x 15'
- Sensitivity adjustment: PIR (high/low), Ultrasonic (fully variable)
- Dimensions: 2.73" x 1.76" x 1.83"  
 (69.3mm x 44.7mm x 46.5mm) L x W x D
- UL and cUL listed
- Five year warranty

## Controls & Settings

### Product Controls



### DIP Switch Settings

<b>Time Delay</b>	1	2
Test	↓	↓
5 minutes	↓	↑
15 minutes	↑	↓
30 minutes	↑	↑

<b>Walk-Through</b>	3
Enabled	↑
Disabled	↓

<b>PIR Sensitivity</b>	4
Low, 50%	↑
High	↓

<b>On Mode</b>	Relay 1	Relay 2
Enabled	↑	↑
Disabled	↓	↓

<b>Relay 1 ON Mode</b>	8
Manual On	↑
Auto On	↓

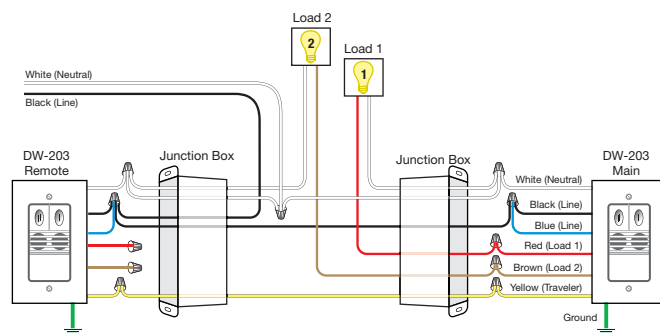
<b>Relay 2 ON Mode</b>	9
Manual On	↑
Auto On	↓

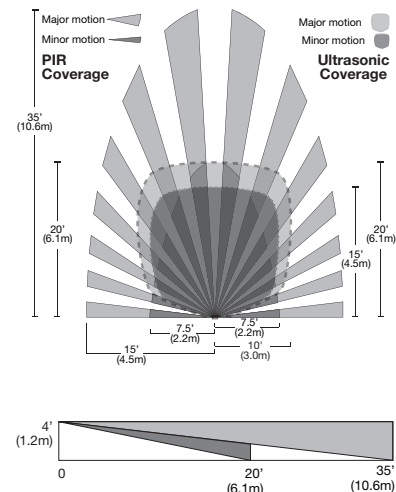
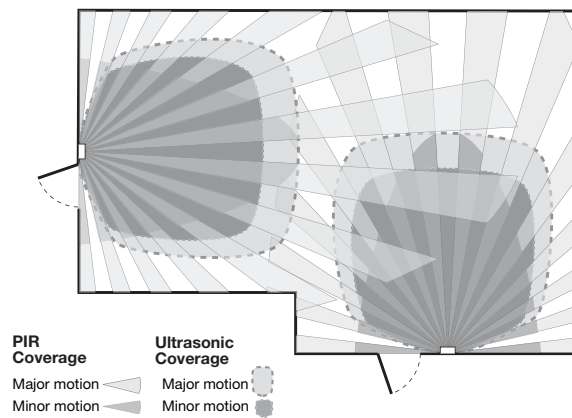
Factory Settings:  
 ▲ All models  
 ▲ DW-100 series  
 ▲ DW-200 series

## Wiring & Coverage

### Multi-way Bi-level Wiring Diagram



### Coverage Patterns



For best performance in single location applications, WattStopper recommends using this sensor in spaces no larger than 18' x 15'. In multi-way applications, each connected sensor expands the coverage area.

## Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> DW-203-W	White	120/277 VAC; 50/60 Hz	@ 120 VAC, 0-800 W ballast or tungsten, 1/6 hp @ 277 VAC, 0-1200 W ballast
<input type="checkbox"/> DW-203-LA	Lt. Almond		
<input type="checkbox"/> DW-203-I	Ivory		
<input type="checkbox"/> DW-203-G	Grey		
<input type="checkbox"/> DW-203-B	Black		

Order wall plate separately.



## CEILING/WALL MOUNT SENSORS

WattStopper's ceiling and wall mount sensors provide robust control and many innovative features and options. Models are available in line or low voltage for flexibility in placement and wiring. Sensors use passive infrared, ultrasonic and WattStopper's patented dual technology.









# CI-24 Passive Infrared HVAC/BAS Ceiling Sensor



PROJECT
LOCATION/TYPE

## Product Overview

### Description

WattStopper's CI-24 ceiling mount passive infrared occupancy sensor reduces energy waste in unoccupied building spaces by communicating occupancy to EMS and HVAC systems.

### Operation

The CI-24 occupancy sensor integrates with building control systems via an internal isolated relay. The isolated relay has normally open and normally closed outputs and is rated for 1 Amp at 24 VAC/VDC. The CI-24 connects to 24 VAC or 24 VDC building control systems. Power pack use is not necessary. When occupancy is detected, the sensor signals a building control system that in turn either turns on devices, such as heating or air conditioning, or increases their levels. Likewise, when the controlled area is vacated, the building control system will reduce airflow and fan speed or turn devices off.

### Coverage

Sensor coverage can reach up to 1200 square feet using the Extended Range lens and 500 square feet using the High Density lens (circular pattern) for walking motion. For typical desktop level activity, coverage can reach up to 300 square feet.

### Applications

The CI-24 offers an easy way to reduce energy consumption in a large variety of building spaces. By working directly with a Building Automation System, the cost of purchasing power packs and the cost of labor for power pack installation is eliminated. Furthermore, the sensor's low unit cost and reduction in energy consumption result in fast paybacks.

## Features

- Detection Signature Analysis eliminates false triggers; provides immunity to RFI and EMI
- Digital time delay adjustment from 30 seconds to 30 minutes
- Two levels of sensitivity (minimum or maximum) are selectable through the DIP switch
- Multi-level Fresnel lens for superior desktop detection
- LED indicates occupancy detection
- Qualifies for ARRA-funded public works projects

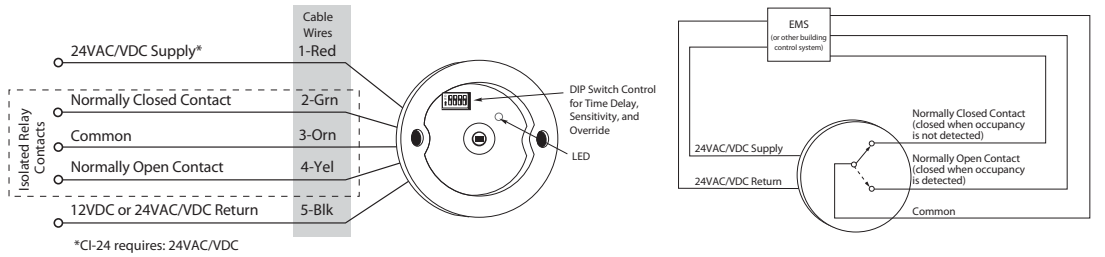


# Specifications

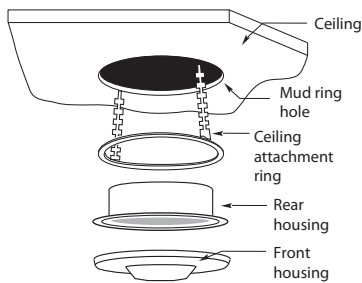
- Dual-element, temperature compensated pyro-electric sensor
- Time delay adjustment from 30 seconds to 30 minutes
- Isolated relay with normally open and normally closed outputs; rated 1 Amp @ 24 VDC/VAC
- Operates at 24 VAC or 24 VDC +/- 10%
- Mounting options: ceiling tile or round mudring
- Dimensions: 3.3" diameter x 2.2" depth (85mm x 56mm), extends approximately 0.36" (9.1mm) from ceiling
- UL and cUL listed
- Five year warranty

# Wiring, Mounting & Settings

## Wiring Diagram



## Mounting



## DIP Switch Settings

DIP Switch #	1	2	3	4
<b>Time Delays</b>				
30 seconds	●	●		
10 minutes	●	-		
20 minutes	-	●		
30 minutes	-	-		

Sensitivity	
Minimum	-
Maximum	●

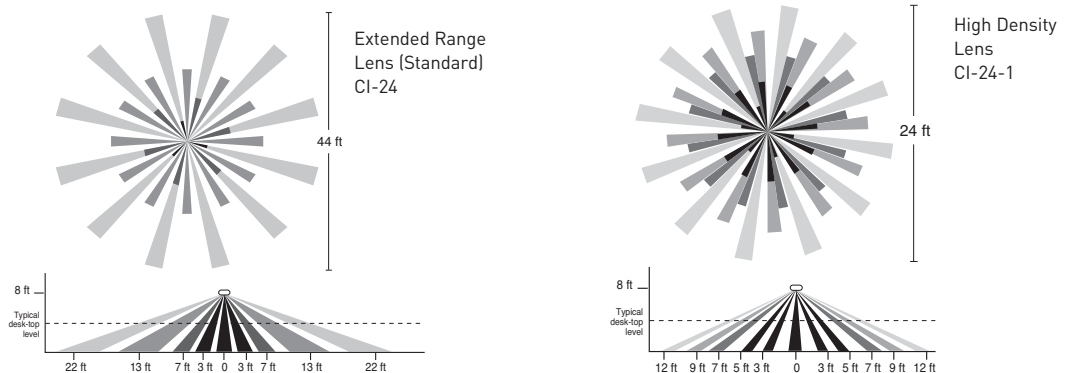
  

Override	
Normal	-
Override	●

● = ON    - = OFF  
◀ = factory presets

# Coverage

## Coverage Patterns



Coverage shown is maximum and represents coverage for half-step walking motion. Under ideal conditions, with no barriers or obstacles, coverage for half-step walking motion can reach up to 1200 ft<sup>2</sup> using the Extended Range lens and up to 500 ft<sup>2</sup> using the High Density lens. For typical desk-top level of activity, coverage can reach up to 300 ft<sup>2</sup> using the High Density lens.

# Ordering Information

Catalog No.	Voltage	Current	Coverage
<input type="checkbox"/> CI-24	24 VAC or 24 VDC	37 mA	360°; up to 1200 ft <sup>2</sup> [111.5 m <sup>2</sup> ]
<input type="checkbox"/> CI-24-U	24 VAC or 24 VDC	37 mA	360°; up to 1200 ft <sup>2</sup> [111.5 m <sup>2</sup> ]
<input type="checkbox"/> CI-24-1	24 VAC or 24 VDC	37 mA	360°; up to 500 ft <sup>2</sup> [46.5 m <sup>2</sup> ]
<input type="checkbox"/> CI-24-1-U	24 VAC or 24 VDC	37 mA	360°; up to 500 ft <sup>2</sup> [46.5 m <sup>2</sup> ]

Units are white  
-U = Product produced in the U.S.

# CI-200 Series Passive Infrared Ceiling Sensors



PROJECT
LOCATION/TYPE

## Product Overview

### Description

WattStopper's CI-200 Series Passive Infrared (PIR) Ceiling Sensors provide 360° coverage to detect occupancy in the controlled area. These low-profile sensors reliably control lighting in a variety of applications.

### Operation

The CI-200 Series Sensors are 24 VDC and control lighting through WattStopper power packs. Utilizing the latest PIR technology, they turn lighting on when a difference is detected between the infrared energy from a human being in motion and the background space within the controlled area. After the area is vacated for a user-adjustable time delay, lighting automatically turns off.

### Coverage

Coverage from the CI-200 Series Sensors can reach up to 1200 square feet using the Extended Range Lens, and 500 square feet using the High Density Lens (circular pattern) for walking motion. For typical desktop-level activity, coverage can reach up to 300 square feet.

### Applications

Applications include open office spaces, computer rooms, conference rooms, classrooms and warehouses. Areas with high ceilings or with two-level lighting can also be controlled. Due to low initial cost and the great energy saving potential, the sensors offer fast paybacks.

## Features

- ASIC technology reduces components and enhances reliability
- Pulse Count Processing eliminates false off without reducing sensitivity
- Detection Signature Analysis eliminates false triggers and provides immunity to RFI and EMI
- Low-profile design ensures a clean and uncluttered ceiling appearance
- User-adjustable time delay from 15 seconds to 30 minutes by two-minute increments
- Sensitivity is programmed through a DIP switch which has four settings ranging from minimum to maximum
- Light-level output can create bi-level lighting for added convenience and energy savings
- Isolated relay can be used to interface with HVAC, EMS or an additional lighting load
- LED indicates occupancy detection
- Qualifies for ARRA-funded public works projects

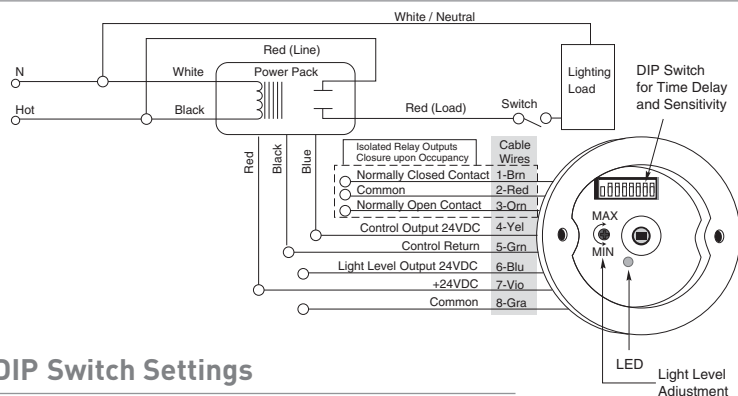


## Specifications

- Dual-element, temperature compensated pyroelectric sensor
- CI-200 contains isolated relay with N/O and N/C outputs; rated for 1 Amp at 24 VDC/VAC
- Adjustable digital time delay: 15 seconds to 30 minutes with  $\pm 2\%$  tolerance
- Integrated light level sensor: 4-190 footcandles (43-2,045 lux)
- Mounting options: ceiling tile, round mud ring
- Max. CI-200s per power pack: B = 5, BZ = 7
- Max. CI-205s per power pack: B = 10, BZ = 13
- Dimensions: 3.3" x 2.2" (84mm x 56mm) diameter x depth; extends approximately .36" (9.1mm) from ceiling
- UL and cUL listed
- Five year warranty

## Wiring, Mounting & Settings

### Wiring Diagram

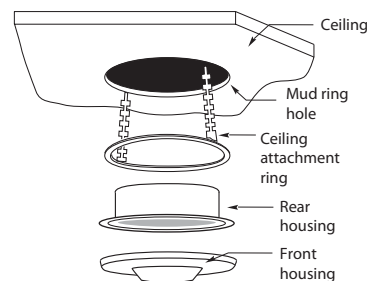


### DIP Switch Settings

DIP Switch #	1	2	3	4	5	6	DIP Switch #	7	8
<b>Time Delays</b>							<b>Sensitivity</b>		
15 seconds	●	●	●	●	●	●	Minimum	-	-
2 minutes	-	-	●	●	●	●	Medium Low	-	●
4 minutes	-	-	●	●	●	●	Medium High	●	-
6 minutes	-	-	●	●	●	●	Maximum	●	●
8 minutes	-	-	●	●	●	●			
10 minutes	-	-	●	●	●	●			
12 minutes	-	-	●	●	●	●			
14 minutes	-	-	●	●	●	●			
16 minutes	-	-	●	●	●	●			
18 minutes	-	-	●	●	●	●			
20 minutes	-	-	●	●	●	●			
22 minutes	-	-	●	●	●	●			
24 minutes	-	-	●	●	●	●			
26 minutes	-	-	●	●	●	●			
28 minutes	-	-	●	●	●	●			
30 minutes	-	-	●	●	●	●			
<b>Override</b>									

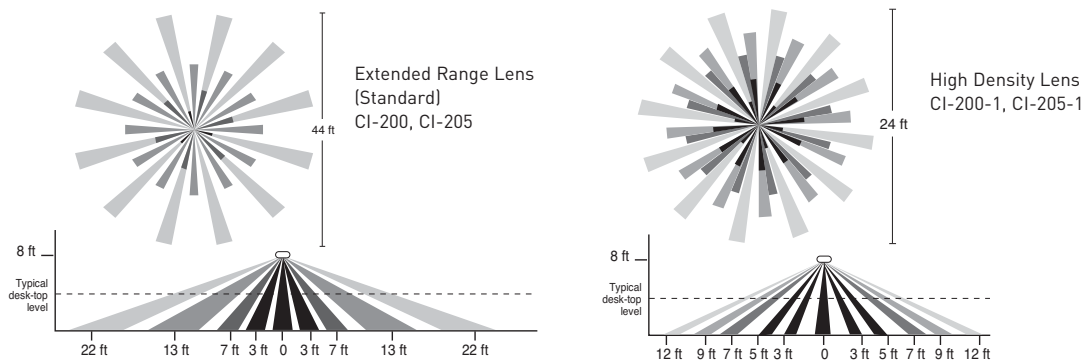
● = ON - = OFF  
▶ = Factory Presets

### Mounting



## Coverage

### Coverage Patterns



## Ordering Information

Catalog No.	Voltage	Current	Coverage	Features
<input type="checkbox"/> CI-200	24 VDC	20 mA	360°; up to 1200 ft <sup>2</sup> (111.5 m <sup>2</sup> )	Isolated relay, light level
<input type="checkbox"/> CI-200-U				
<input type="checkbox"/> CI-200-1	24 VDC	20 mA	360°; up to 500 ft <sup>2</sup> (46.5 m <sup>2</sup> )	Isolated relay, light level
<input type="checkbox"/> CI-205	24 VDC	11 mA	360°; up to 1200 ft <sup>2</sup> (111.5 m <sup>2</sup> )	
<input type="checkbox"/> CI-205-U				
<input type="checkbox"/> CI-205-1	24 VDC	11 mA	360°; up to 500 ft <sup>2</sup> (46.5 m <sup>2</sup> )	
<input type="checkbox"/> MB-1	Industrial Mounting Bracket			
<input type="checkbox"/> MB-2	Industrial Mounting Bracket for HID fixtures			

Pub. No. 3710 rev. 5/2013

All units are white and use WattStopper power packs. Current consumption can be slightly higher when only one sensor per power pack is used.

-U = ARRA compliant. Product produced in the U.S.

# CI-300 Series Low Voltage PIR Ceiling Sensors

Architecturally appealing low-profile appearance

Plug terminal wiring for quick and easy installation

Accepts low-voltage switch input for manual-on operation

Walk-through mode increases savings potential

Automatic or manual-on operation when used with a BZ-150 Power Pack

360° coverage



PROJECT
LOCATION/TYPE

## Product Overview

### Description

WattStopper's CI-300 Passive Infrared (PIR) Ceiling Sensors automatically turn lighting on and off based on occupancy. The sensor mounts on the ceiling with a flat, low-profile appearance and provides 360 degrees of coverage.

### Operation

CI-300 Series Sensors operate on 24 VDC, VAC or halfwave rectified. Utilizing the latest PIR technology, they automatically turn lighting on when a difference is detected between infrared energy from a human body in motion and the background space. When no occupancy is detected for the length of the time delay, lighting automatically turns off. For manual-on operation, the CI-300 will operate with a low-voltage momentary switch.

### Time Delay Options

The CI-300 is factory set for a 20 minute time delay, ideal for both energy savings and user satisfaction in most applications. Installers can quickly select other fixed time delays (5, 10, 15 or 30 minutes) via DIP switches. Fixed time delays eliminate the occupant dissatisfaction associated with an automatically adjusted time delay option, and reduce callbacks. Walk-through mode may be enabled for added energy savings in spaces with frequent transient traffic.

### Applications

CI-300 Series Sensors have the flexibility to work in a variety of applications that include open office spaces, computer rooms, conference rooms, classrooms and warehouses. Areas with high ceilings or with two-level lighting can also be controlled. The convenient mounting system keeps installation costs down to speed up the product's payback.

## Features

- Advanced control logic based on RISC microcontroller provides:
  - Detection Signature Processing to eliminate false triggers and provide immunity to RFI and EMI
  - Walk-through Mode turns lights off three minutes after the area is initially occupied – ideal for brief visits such as mail delivery
  - Built-in light level sensor featuring simple, one-step setup
- LED indicates occupancy detection
- CI-300 Series Sensors work with low-voltage momentary switches for manual control
- DIP switch simplifies sensor adjustments
- Clip-mounting system simplifies ceiling tile installation
- Plug terminal wiring system for quick and easy installation
- Available with isolated relay for integration with BAS or HVAC
- Sensor coverage tested to NEMA Guide Publication WD 7-2000

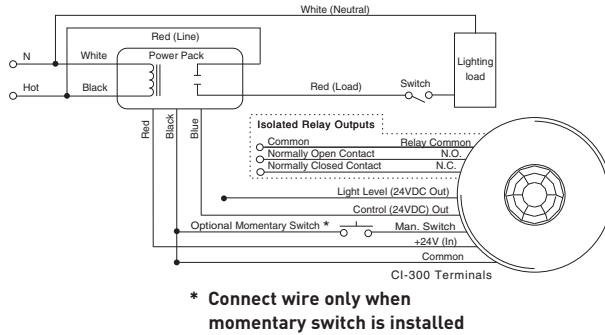


# Specifications

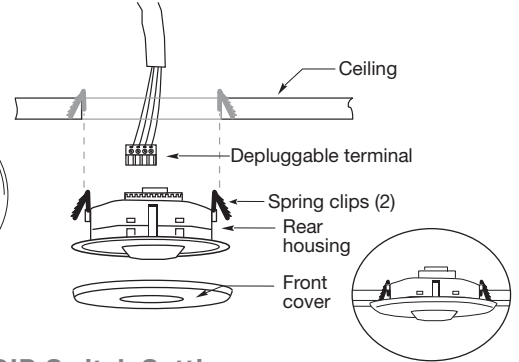
- 24 VDC/VAC
- Time delays: 5, 10, 15, 20, or 30 minutes, walk-through, test mode
- Sensitivity adjustment: PIR (high/low)
- Multilevel Fresnel lens provides 360° coverage
- CI-300 contains isolated relay with N/O and N/C outputs; rated for 1 Amp at 30 VDC/VAC
- CI-300 built-in light level sensor: 10 to 300 footcandles (107.6 to 3,229.2 lux)
- Mounting options: ceiling tile; 4" square junction box with double-gang mud ring
- Max. CI-300s per power pack: B=5, BZ=7
- Max. CI-305s per power pack: B=12, BZ=16
- Dimensions: 4.5" x 1.02" (114.3mm x 25.9mm) diameter x depth
- UL and cUL listed
- Five year warranty

# Wiring & Mounting

## Wiring Diagram

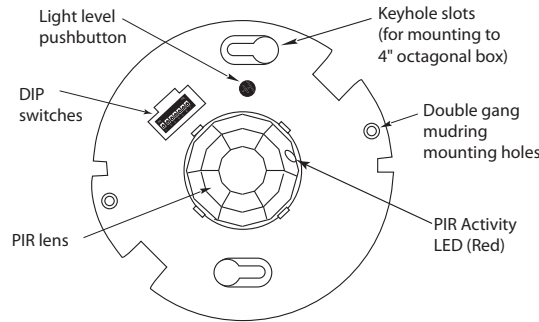


## Ceiling Mounting



# Controls & Settings

## Product Controls



## DIP Switch Settings

	Switch#	1	2	3
<b>Time Delay</b>				
Test Mode/20 min		↓	↓	↓
30 seconds		↓	↓	↑
5 minutes		↓	↑	↑
10 minutes		↓	↑	↑
15 minutes		↑	↓	↓
20 minutes		↑	↓	↓
25 minutes		↑	↓	↓
30 minutes		↑	↑	↑
<b>Walk-Through</b>	4			
Enabled		↑		
Disabled		↓	←	
<b>PIR Sensitivity</b>	5			
Minimum		↑		
Maximum		↓	←	

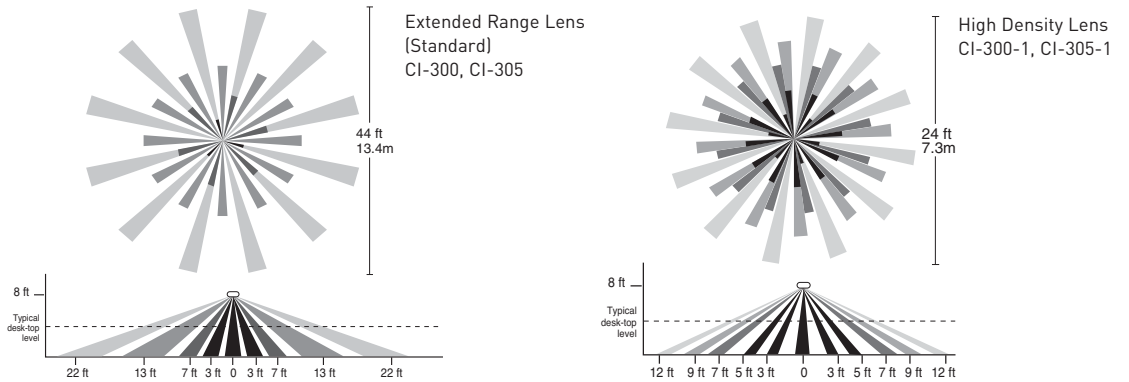
  

Service	6
Service	↑
Normal	↓ ←
<b>On Mode</b>	7
Manual On	↑
Auto On	↓ ←

← = Factory Setting  
 ↑ = ON  
 ↓ = OFF

# Coverage

## Coverage Patterns



# Ordering Information

Catalog No.	Voltage	Current	Coverage	Features
<input type="checkbox"/> CI-300	24 VDC	20 mA	360°; up to 1200 ft <sup>2</sup> (111.5 m <sup>2</sup> )	Isolated relay, light level
<input type="checkbox"/> CI-300-1	24 VDC	20 mA	360°; up to 500 ft <sup>2</sup> (46.5 m <sup>2</sup> )	Isolated relay, light level
<input type="checkbox"/> CI-305	24 VDC	9 mA	360°; up to 1200 ft <sup>2</sup> (111.5 m <sup>2</sup> )	
<input type="checkbox"/> CI-305-1	24 VDC	9 mA	360°; up to 500 ft <sup>2</sup> (46.5 m <sup>2</sup> )	

Pub. No. 16807 rev. 5/2013

Sensors are white.



# CI-355 Passive Infrared Line Voltage Ceiling Sensor

Architecturally appealing  
low profile appearance

360° coverage



• Terminal wiring for quick  
and easy installation

Operates at 120, 230  
(single phase), 277 or  
347 VAC, 50/60 Hz

Walk-through mode  
increases savings potential

PROJECT

LOCATION/TYPE

## Product Overview

### Description

WattStopper's CI-355 passive infrared (PIR) occupancy sensor automatically turns lighting on and off based on occupancy. The sensor mounts on the ceiling with a flat, low-profile appearance and provides 360 degrees of coverage.

### Operation

The CI-355 is line voltage and operates on a single phase at 120, 230, 277 or 347 VAC. The sensor uses passive infrared technology (PIR) to sense occupancy and automatically turn lighting on. PIR works by sensing the difference between infrared energy from a human body in motion and the background space. When no occupancy is detected for the length of the time delay, lighting automatically turns off.

### Time Delay Options

The CI-355 is factory set for a 20 minute time delay, ideal for both energy savings and user satisfaction in most applications. Installers can quickly select other fixed time delays (5, 10, 15 or 30 minutes) via DIP switches. Fixed time delays eliminate the occupant dissatisfaction associated with an automatically adjusted time delay option, and reduce callbacks. Walk-through mode may be enabled for added energy savings in spaces with frequent transient traffic.

### Applications

The CI-355 works well in open office spaces, computer rooms, conference rooms, classrooms, and warehouses. It is a good choice for areas with high ceilings or with two-level lighting. The convenient mounting system keeps installation costs down. It also eliminates the need for a power pack by using line voltage wiring.

## Features

- Advanced control logic based on RISC micro-controller provides:
  - Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
  - Walk-through mode turns lights off 3 minutes after the area is initially occupied – ideal for brief visits such as mail delivery
  - Built-in light level sensor featuring simple, one-step set-up
- Zero-crossing for long relay life
- LED indicates occupancy detection
- DIP switch simplifies sensor adjustments
- Clip mounting system makes ceiling tile installation simple
- Uses existing line voltage wiring and doesn't require a power pack
- Sensor coverage tested to NEMA Guide Publication WD 7-2000

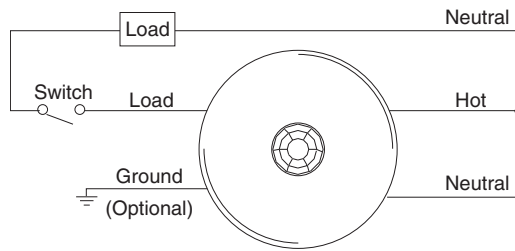


## Specifications

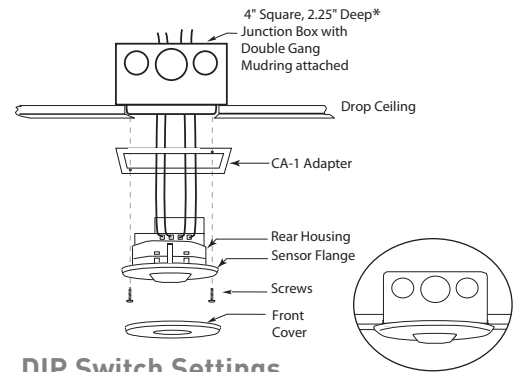
- 120/230 (single phase)/277/347 VAC, 50/60 Hz
- Time delays: 5, 10, 15, 20, or 30 minutes, walk-through, test-mode
- Sensitivity adjustment: PIR (high/low)
- Multi-level, 360° Fresnel lens for superior occupancy detection
- Built-in light level sensor – works from 10 to 300 footcandles (107.6 to 3,229.2 lux)
- Mounting options: 4 square junction box with double gang mudring; 4 inch octagonal j-box
- Dimensions: 4.5" diameter x 1.45" deep (114.3mm x 25.9mm)
- UL and cUL listed
- Five year warranty

## Wiring & Mounting

### Wiring Diagram

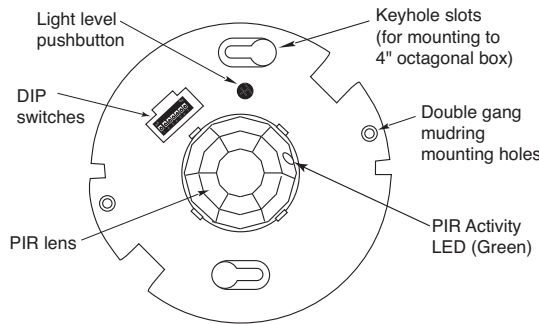


### Ceiling Mounting



## Controls & Settings

### Product Controls



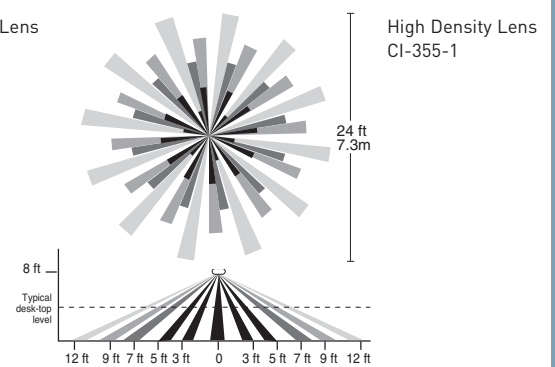
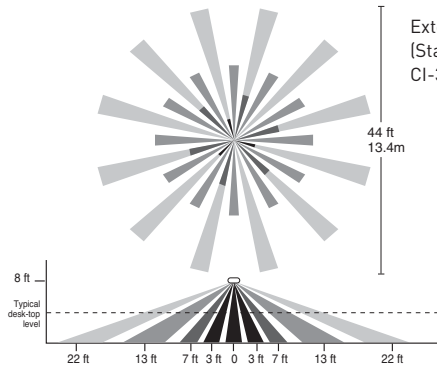
### DIP Switch Settings

Feature	Switch#	Setting	
<b>Time Delay</b>	1	3	
	2	3	
	3	3	
	Test Mode/20 min	↓ ↓ ↓	
	30 seconds	↓ ↓ ↑	
	5 minutes	↓ ↓ ↑	
<b>PIR Sensitivity</b>	5	5	
	Minimum	↑	
	Maximum	↓	
	<b>Service</b>	6	6
		Service	↑
Normal		↓	

◀ = Factory Setting  
 ↑ = ON  
 ↓ = OFF

## Coverage

### Coverage Patterns



## Ordering Information

Catalog No.	Voltage	Load Rating	Coverage
<input type="checkbox"/> CI-355	120 VAC, 50/60 Hz 230 VAC (single phase), 50/60 Hz 277 VAC, 50/60 Hz 347 VAC, 50/60 Hz	0-800W Ballast/Tungsten/LED 0-1200W Ballast/LED 0-1500W Ballast/LED	360°; up to 1200 ft <sup>2</sup> (111.5 m <sup>2</sup> )
<input type="checkbox"/> CI-355-1	120 VAC, 50/60 Hz 230 VAC (single phase), 50/60 Hz 277 VAC, 50/60 Hz 347 VAC, 50/60 Hz	0-800W Ballast/Tungsten/LED 0-1200W Ballast/LED 0-1500W Ballast/LED	360°; up to 500 ft <sup>2</sup> (46.5 m <sup>2</sup> )
<input type="checkbox"/> CA-1	Cosmetic adapter for ceiling installations with 4" square j-box or Wiremold #V5752 box		

Sensors are white.

A Group brand Legrand

# W Series Ultrasonic Ceiling Sensors

Turns lights on and off based on occupancy to reduce energy costs

Adjustable time delay from 15 seconds to 15 minutes



Hallway and 500, 1000 and 2000 square foot coverage available

Ideal for open office areas, conference rooms and restrooms

Advanced Signal Processing (ASP) circuitry automatically adjusts detection threshold

Automatic or manual-on operation when used with a BZ-150 Power Pack

PROJECT

LOCATION/TYPE

## Product Overview

### Description

WattStopper's W Series Ultrasonic Ceiling Sensors are versatile motion detectors that control lighting in a wide variety of applications. W Series Sensors can be used individually or as part of an integrated system of WattStopper lighting control products.

### Operation

The 24 VDC W Series Sensors utilize advanced omni-directional, ultrasonic technology to sense occupancy. When movement is detected in a controlled area, the W Series Sensors will switch lights on via low-voltage wiring through to a WattStopper power or auxiliary pack. Once the area is vacated and the user-adjustable time delay (15 seconds to 15 minutes) has elapsed, lighting systems automatically switch off.

### Manual-on Option

To comply with code or for additional control options, W Series Sensors can be used with a BZ-150 power pack for manual-on/auto-off control. If this option is selected, occupants utilize a low-voltage momentary wall switch to turn on lights. Lights automatically turn off after the area is vacated and the user-adjustable time delay has elapsed.

### Applications

Ultrasonic sensors effectively control offices, restrooms, utility areas, open office spaces and warehouses. The W-500A is perfect for offices, conference rooms, restrooms and other areas up to 500 square feet. The W-1000A fits in larger spaces, such as storage areas. The W-2000A is ideal for open office areas or large warehouses and can control partitioned open office spaces when configured in highly versatile zone patterns. The W-2000H reliably covers hallways with walls.

## Features

- ASP circuitry helps to eliminate false on
- Utilizes advanced omni-directional, ultrasonic technology for reliable occupancy detection
- Omni-directional transmission provides 360° of coverage
- Time delay adjustable from 15 seconds to 15 minutes
- 500, 1000, 2000-square foot and hallway coverage available to fit needs of specific applications
- Optional on override by installing the Override Pin provided with the sensor
- LED indicates occupancy detection
- Qualifies for ARRA-funded public works projects

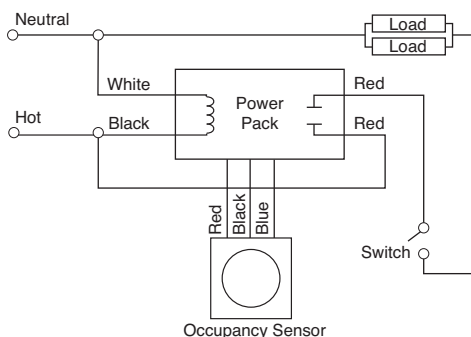


# Specifications

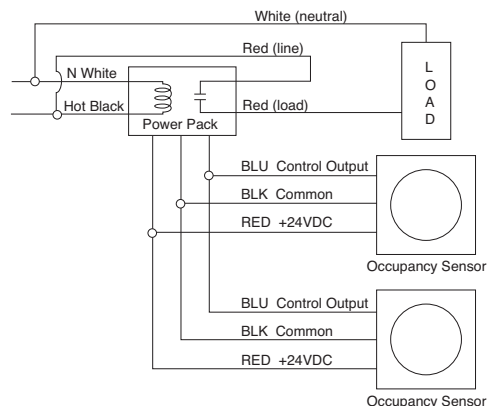
- Solid state, crystal-controlled (25 kHz ± 0.005%)
- Temperature and humidity-resistant 25 kHz receivers: W-500A contains one receiver, other models contain two receivers
- Adjustable time delay: 15 seconds to 15 minutes
- Mounting options: ceiling tile, 4" sq. junction box
- Max. units per power pack: B = seven; BZ = nine
- Dimensions: 4.5" x 4.5" x 1.25" (115mm x 115mm x 32mm) W x L x D
- UL listed
- Five year warranty

# Wiring

## Standard Wiring Diagram

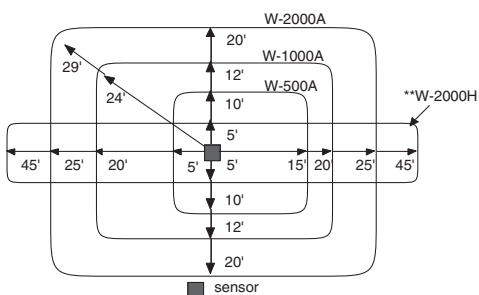


## Multiple Sensor Wiring Diagram



# Coverage, Installation & Placement

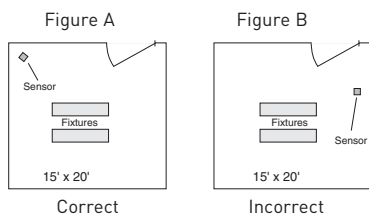
## Coverage Pattern



Coverage shown represent half-step walking motion. Actual coverage can vary for each application depending on the shape and the use of space and the obstacles present. Coverage may be reduced if product is mounted greater than 12 feet high.

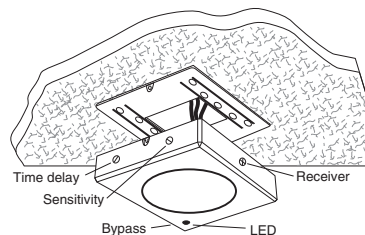
The W-2000H drawing is not drawn to scale. Coverage is 10' x 90' in a hallway; enclosed spaces enhance coverage.

## Enclosed Office Sensor Placement



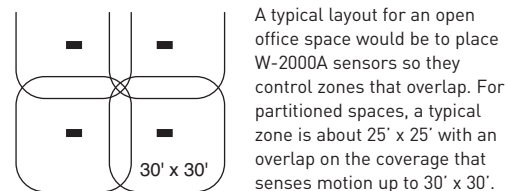
For enclosed spaces, place sensors as in Figure A. Sensors placed as in Figure B may see out the door and cause false triggers.

## Installation



Attach sensor to a vibration-free surface. Mount the sensors with the receivers facing the area of coverage. Note: Ultrasonic sensors should be placed 4" away from supply ducts, 6" from horizontal discharge ducts, and 6" from power packs.

## Open Office Sensor Placement



A typical layout for an open office space would be to place W-2000A sensors so they control zones that overlap. For partitioned spaces, a typical zone is about 25' x 25' with an overlap on the coverage that senses motion up to 30' x 30'.

# Ordering Information

Catalog No.	Voltage	Current	Coverage
<input type="checkbox"/> W-500A <input type="checkbox"/> W-500A-U	24 VDC	16 mA	360°; 500 ft <sup>2</sup> (46.5 m <sup>2</sup> )
<input type="checkbox"/> W-1000A <input type="checkbox"/> W-1000A-U	24 VDC	16 mA	360°; 1000 ft <sup>2</sup> (92.9 m <sup>2</sup> )
<input type="checkbox"/> W-2000A <input type="checkbox"/> W-2000A-U	24 VDC	16 mA	360°; 2000 ft <sup>2</sup> (185.8 m <sup>2</sup> )
<input type="checkbox"/> W-2000H <input type="checkbox"/> W-2000H-U	24 VDC	16 mA	360°; 90 linear ft (27.4 m)**

All units are white and use WattStopper power packs.  
 \*\*Coverage for an enclosed hallway is 10' x 90' (see pattern above).  
 -U = ARRA compliant. Product produced in the U.S.



# UT-300 Series Ultrasonic Low Voltage Ceiling Sensors



PROJECT
LOCATION/TYPE

## Product Overview

### Description

WattStopper's UT-300 Ultrasonic Ceiling Sensors automatically turn lighting on and off based on occupancy. The sensors mount on the ceiling with a flat, unobtrusive appearance and provides 360° coverage.

### Operation

UT-300 Series Sensors operate on 24 VDC, VAC or halfwave rectified. They use 40 KHz high frequency ultrasound to sense occupancy and automatically turn lighting on. When no occupancy is detected for the length of the time delay, lighting automatically turns off. For manual-on operation, the units work with a low-voltage momentary switch.

### Time Delay Options

The UT-300 is factory set for a 20 minute time delay, ideal for both energy savings and user satisfaction in most applications. Installers can quickly select other fixed time delays (5, 10, 15 or 30 minutes) via DIP switches. Fixed time delays eliminate the occupant dissatisfaction associated with an automatically adjusted time delay option, and reduce callbacks. Walk-through mode may be enabled for added energy savings in spaces with frequent transient traffic.

### Application

UT-300 Series Sensors offer excellent control of lighting for many spaces, including restrooms, large offices, open office areas and hallways. They can control large partitioned office spaces when configured in zone patterns. Unit performance combined with ease of installation will provide fast payback and many years of energy savings.

## Features

- Advanced control logic based on RISC microcontroller provides:
  - Advanced Signal Processing eliminates false triggers and provides immunity to RFI and EMI
  - Walk-through mode turns lights off three minutes after the area is initially occupied – ideal for brief visits such as mail delivery
- LED indicates occupancy detection
- Coverage 500-2,000 square feet
- Available with isolated relay for integration with BAS or HVAC
- DIP switch simplifies sensor adjustments
- Patented ultrasonic diffusion technology spreads coverage to a wider area
- UT-300 Series Sensors work with low-voltage momentary switches for manual control
- Clip mounting system makes ceiling tile installation simple
- Uses plug terminal wiring system for quick and easy installation
- Qualifies for ARRA-funded public works projects
- Sensor coverage tested to NEMA Guide Publication WD 7-2000

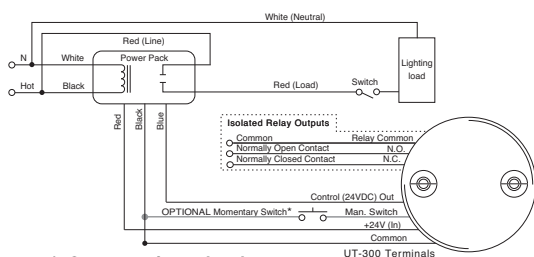


## Specifications

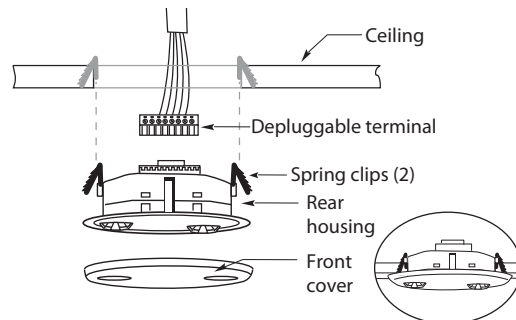
- 24 VDC/VAC
- Time delays: 5, 10, 15, 20 or 30 minutes, Walk-through/Test Modes
- Sensitivity adjustment: variable with trimpot
- Ultrasonic frequency: 40 kHz
- UT-300 contains isolated relay with N/O and N/C outputs; rated for 1 Amp at 30 VDC/VAC
- Mounting options: ceiling tile; 4" square junction box with double-gang mud ring
- Max. UT-300s per power pack: B=2, BZ=3
- Max. UT-305s per power pack: B=3, BZ=4
- Dimensions: 4.5" x 1" (114.3mm x 25.9mm) diameter x depth
- UL and cUL listed
- Five year warranty

## Wiring & Mounting

### Wiring Diagram

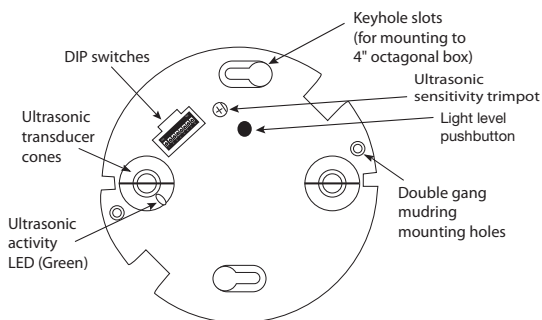


### Ceiling Mounting



## Controls & Settings

### Product Controls



### DIP Switch Settings

Feature	Switch#	1	2	3
<b>Time Delay</b>				
Test Mode/20 min		↓	↓	↓
30 seconds		↓	↓	↓
5 minutes		↓	↑	↓
10 minutes		↓	↑	↑
15 minutes		↑	↓	↓
20 minutes		↑	↓	↑
25 minutes		↑	↑	↓
30 minutes		↑	↑	↑

Walk-Through	4
Enabled	↑
Disabled	↓ ◀

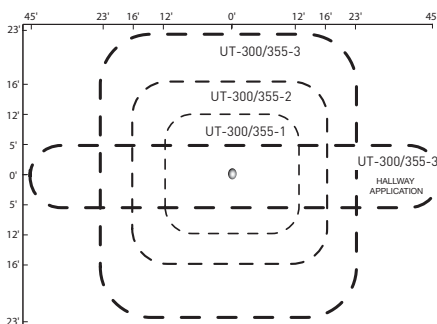
  

Service	5
Service	↑
Normal	↓ ◀

◀ = Factory Setting  
 ↑ = ON  
 ↓ = OFF

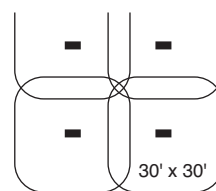
## Coverage & Placement

### Coverage Patterns



Coverages shown represent half-step walking motion when sensor is mounted 8'-10' high. Actual coverage can vary for each application depending on the shape and use of space and the obstacles present.

### Placement



Typical layout for open office space would be to place UT-300-3 sensors so they control zones that overlap. For partitioned spaces, a typical zone is about 25' x 25' with an overlap on the coverage up to 30' x 30'.

## Ordering Information

Catalog No.	Voltage	Current	Coverage	Feature
<input type="checkbox"/> UT-300-1	24 VDC	40 mA	500 ft <sup>2</sup> (46.5 m <sup>2</sup> )	Isolated relay
<input type="checkbox"/> UT-300-1-U	24 VDC	40 mA	500 ft <sup>2</sup> (46.5 m <sup>2</sup> )	Isolated relay
<input type="checkbox"/> UT-300-2	24 VDC	40 mA	1000 ft <sup>2</sup> (92.9 m <sup>2</sup> )	Isolated relay
<input type="checkbox"/> UT-300-2-U	24 VDC	40 mA	1000 ft <sup>2</sup> (92.9 m <sup>2</sup> )	Isolated relay
<input type="checkbox"/> UT-300-3	24 VDC	45 mA	2000 ft <sup>2</sup> (185.8 m <sup>2</sup> )	Isolated relay
<input type="checkbox"/> UT-300-3-U	24 VDC	45 mA	2000 ft <sup>2</sup> (185.8 m <sup>2</sup> )	Isolated relay
<input type="checkbox"/> UT-305-1	24 VDC	30 mA	500 ft <sup>2</sup> (46.5 m <sup>2</sup> )	
<input type="checkbox"/> UT-305-2	24 VDC	30 mA	1000 ft <sup>2</sup> (92.9 m <sup>2</sup> )	
<input type="checkbox"/> UT-305-3	24 VDC	35 mA	2000 ft <sup>2</sup> (185.8 m <sup>2</sup> )	

All units are white and use WattStopper power packs. Current consumption can be slightly higher when only one sensor per power pack is used. -U = ARRA compliant. Product produced in the U.S.



# WT Ultrasonic Ceiling Sensors

Ultrasonic technology with 32 KHz frequency

Automatic or manual-on operation when used with a BZ-150 Power Pack

Advanced Signal Processing circuitry automatically adjusts detection threshold



User-adjustable DIP switch time delay and sensitivity settings

Hallway and 600, 1100 and 2200 square foot coverages available

Isolated relay allows sensor to interface with building control systems

PROJECT

LOCATION/TYPE

## Product Overview

### Description

WattStopper's WT Ultrasonic Ceiling Sensors utilize 32 KHz frequency ultrasonic technology to detect occupancy. The sensors are available in several models to control lighting in a wide variety of applications.

### Operation

WT Sensors are 24 VDC and utilize advanced, omni-directional, ultrasonic technology. When movement is detected in a controlled area, it switches lighting on through a WattStopper power or auxiliary pack. The sensor controls the power pack through low voltage wiring. Once the area is vacated and the time delay has elapsed, lighting systems automatically switch off.

### Advanced Signal Processing (ASP)

WT Sensors use WattStopper's ASP circuitry, which filters out moving air noise by checking for small cyclical changes found in turbulent air. This helps to eliminate false on problems found in sensors without ASP.

### Applications

WT sensors offer excellent control of lighting for many areas of a building. The sensors are designed to effectively control offices, restrooms, storage areas and open office areas, and can control large partitioned office spaces when configured in zone patterns. The WT can be used with BD Din Rail Mounted Power Packs and low-voltage momentary wall switches to achieve manual-on/auto-off control. The WT sensors' superior performance and ease of installation will provide fast paybacks and many years of energy savings.

## Features

- ASP circuitry helps to eliminate false on
- Advanced, omni-directional, ultrasonic technology for reliable occupancy detection
- Angled transmitter and receiver pairs help optimize sensitivity while eliminating unwanted detection from ceiling air movement
- Coverage ranges from 600 to 2200 square feet, and 90 linear feet for hallways
- Isolated relay can interface with HVAC, EMS or an additional lighting load
- DIP switch-adjustable time delay and sensitivity
- LED indicates occupancy detection
- Qualifies for ARRA-funded public works projects

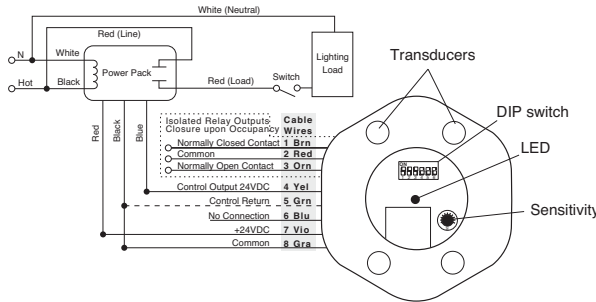


# Specifications

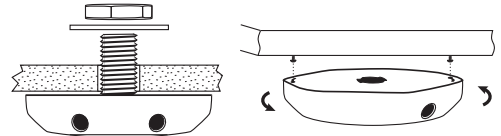
- Solid state, crystal-controlled (32.768 kHz ± 0.002%)
- Omni-directional transmission (360° coverage)
- Temperature and humidity resistant 32 kHz receivers
- Digital DIP switch time delay: 15 seconds to 30 minutes
- Isolated relay with N/O and N/C outputs; rated for 1 Amp @ 30 VDC/VAC
- Mounts to ceiling tile or Wiremold V5738-WH box
- Max. WT-605s per power pack: B=4, BZ=5
- Max. WT-600s per power pack: B= 3, BZ=4
- Max. WT-1105s, WT-2205s, WT-2255s: B=3, BZ=5
- Max. WT-1100s, WT-2200s, WT-2250s: B=2, BZ=3
- Dimensions: 4.8" x 1.5" (122mm x 38mm) diameter x depth
- UL and cUL listed
- Five year warranty

# Wiring, Installation & Placement

## Wiring & Controls



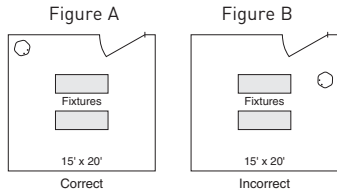
## Installation



Mount the sensors to a vibration-free surface with the receivers facing the area of coverage.

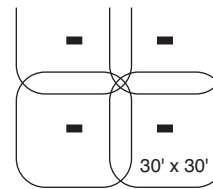
Note: Place 4' away from supply ducts, 6' from horizontal discharge ducts and 6" from power packs.

## Enclosed Office Placement



For enclosed spaces, place sensors as in Figure A. Sensors placed as in Figure B may see out the door and cause false triggers.

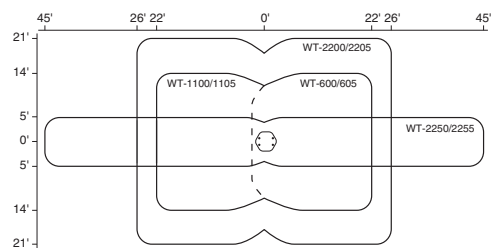
## Open Office Placement



A typical layout for an open office space would be to place WT-2200 or WT-2205 sensors so they control zones that overlap. For partitioned spaces, a typical zone is about 25' x 25' with an overlap on the coverages that senses motion up to 30' x 30'.

# Coverage & Settings

## Coverage Pattern



Coverages shown represent half-step walking motion. Actual coverages can vary for each application depending on the shape and use of space and the obstacles present. Coverage may be reduced if product is mounted greater than 12 feet high.

## DIP Switch Settings

◀ = factory preset  
● = ON    - = OFF

Time Delay	DIP Switch #					
	1	2	3	4	5	6
15 seconds	●	-	-	-	-	-
2 minutes	-	●	-	-	-	-
4 minutes	-	-	●	-	-	-
6 minutes	-	●	●	-	-	-
8 minutes	-	-	-	●	-	-
10 minutes	-	●	●	●	-	-
12 minutes	-	-	●	●	●	-
14 minutes	-	●	●	●	●	-
*16 minutes	-	-	-	-	●	-
18 minutes	-	-	●	-	-	-
20 minutes	-	-	-	●	-	-
22 minutes	-	-	-	-	●	-
24 minutes	-	-	●	-	-	-
26 minutes	-	-	-	●	-	-
28 minutes	-	-	-	-	●	-
30 minutes	-	-	●	●	●	-
Output Disable	-	-	-	-	-	-
Override	-	-	-	-	-	●

# Ordering Information

Catalog No.	Voltage	Current	Coverage	Feature
<input type="checkbox"/> WT-605	24 VDC	27 mA	180° one-sided, 600 ft <sup>2</sup> (55.7 m <sup>2</sup> )	
<input type="checkbox"/> WT-600	24 VDC	37 mA	180° one-sided, 600 ft <sup>2</sup> (55.7 m <sup>2</sup> )	Isolated relay
<input type="checkbox"/> WT-1105	24 VDC	30 mA	360° two-sided, 1100 ft <sup>2</sup> (102.2 m <sup>2</sup> )	
<input type="checkbox"/> WT-1100	24 VDC	40 mA	360° two-sided, 1100 ft <sup>2</sup> (102.2 m <sup>2</sup> )	Isolated relay
<input type="checkbox"/> WT-2205	24 VDC	30 mA	360° two-sided, 2200 ft <sup>2</sup> (204.4 m <sup>2</sup> )	
<input type="checkbox"/> WT-2200	24 VDC	40 mA	360° two-sided, 2200 ft <sup>2</sup> (204.4 m <sup>2</sup> )	Isolated relay
<input type="checkbox"/> WT-2255	24 VDC	30 mA	360° two-sided, 90 linear ft (27.4 m)	
<input type="checkbox"/> WT-2250	24 VDC	40 mA	360° two-sided, 90 linear ft (27.4 m)	Isolated relay

All units are white and use WattStopper power packs. Current consumption can be slightly higher when only one sensor per power pack is used.

# UT-355 Ultrasonic Line Voltage Ceiling Sensor

Architecturally appealing low-profile appearance

Operates at 120, 230 (single phase), 277 or 347 VAC, 50/60 Hz

Utilizes advanced, omni-directional, ultrasonic technology

Terminal wiring for quick and easy installation

Ultrasonic diffusers provide more comprehensive coverage

Walk-through mode increases savings potential



PROJECT
LOCATION/TYPE

## Product Overview

### Description

WattStopper's low-profile UT-355 Ultrasonic Line Voltage Ceiling Sensor automatically turns lighting on and off based on occupancy. The sensor mounts on the ceiling with a flat, unobtrusive appearance and provides 360° coverage.

### Operation

The UT-355 is line voltage and operates on a single phase at 120, 230, 277, or 347 VAC. It uses high frequency (40 KHz) ultrasound to sense occupancy and automatically turn lighting on. When no occupancy is detected for the length of the time delay, lighting automatically turns off.

### Time Delay Options

The UT-355 is factory set for a 20 minute time delay, ideal for both energy savings and user satisfaction in most applications. Installers can quickly select other fixed time delays (5, 10, 15 or 30 minutes) via DIP switches. Fixed time delays eliminate the occupant dissatisfaction associated with an automatically adjusted time delay option, and reduce callbacks. Walk-through mode may be enabled for added energy savings in spaces with frequent transient traffic.

### Application

UT sensors offer excellent control of lighting for many spaces, including restrooms and large offices. The UT sensors' performance and ease of installation will provide fast paybacks and many years of energy savings.

## Features

- Advanced control logic based on RISC microcontroller provides:
  - Advanced Signal Processing to eliminate false triggers and provide immunity to RFI and EMI
  - Walk-through Mode to turn lights off three minutes after the area is initially occupied, ideal for brief visits such as mail delivery
- Zero-crossing for long relay life
- LED indicates occupancy detection
- Coverage 500-2,000 square feet
- DIP switch simplifies sensor adjustments
- Patented ultrasonic diffusion technology spreads coverage to a wider area
- Clip mounting system makes ceiling tile installation simple
- Terminal wiring system provides quick and easy installation
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Qualifies for ARRA-funded public works projects

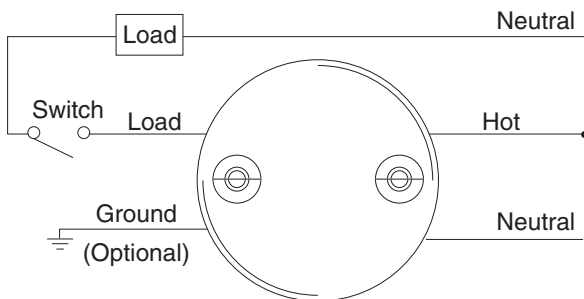


# Specifications

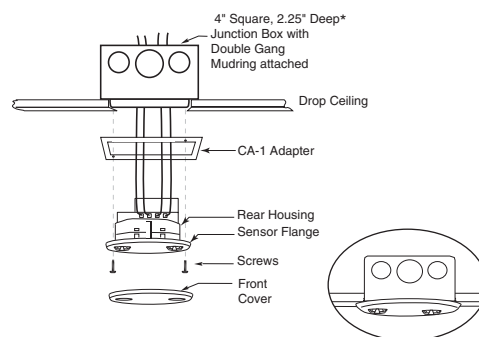
- 120/230 (single phase)/277/347 VAC, 50/60 Hz
- Time delays: 5, 10, 15, 20, or 30 minutes, Walk-through & Test modes
- Sensitivity adjustment: variable with trimpot
- Ultrasonic frequency of 40 kHz
- Mounting options: 4" square junction box with double-gang mud ring; 4" octagonal junction box
- Dimensions: 4.5" x 1.45" (114.3mm x 25.9mm) diameter x depth
- UL and cUL listed
- Five year warranty

## Wiring & Mounting

### Wiring Diagram

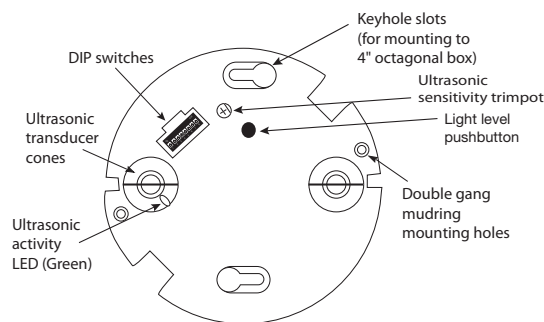


### Ceiling Mounting



## Controls & Settings

### Product Controls



### DIP Switch Settings

Feature	Switch#	1	2	3
<b>Time Delay</b>				
Test Mode/20 min		↓	↓	↓
30 seconds		↓	↓	↓
5 minutes		↓	↑	↓
10 minutes		↓	↑	↑
15 minutes		↑	↓	↓
20 minutes		↑	↓	↑
25 minutes		↑	↑	↓
30 minutes		↑	↑	↑

Walk-Through	4
Enabled	↑
Disabled	↓ ◀

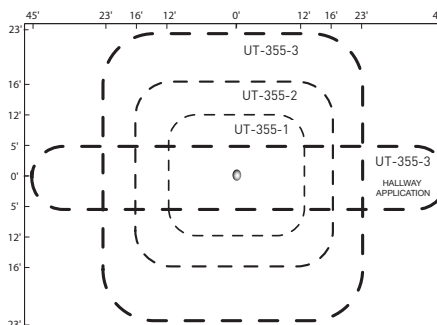
  

Service	5
Service	↑
Normal	↓ ◀

◀ = Factory Setting  
 ↑ = ON  
 ↓ = OFF

## Coverage & Placement

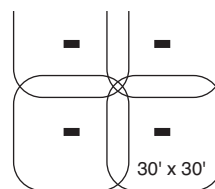
### Coverage Patterns



10' Maximum Mounting Height

Coverages shown represent half-step walking motion when sensor is mounted 8'-10' high. Actual coverage can vary for each application depending on the shape and use of space and the obstacles present.

### Placement



Typical layout for open office space would be to place UT-355-3 sensors so they control zones that overlap. For partitioned spaces, a typical zone is about 25' x 25' with an overlap on the coverage up to 30' x 30'.

## Ordering Information

Catalog No.	Voltage/Description	Load Rating	Coverage
<input type="checkbox"/> UT-355-1	120 VAC, 50/60 Hz;	0-800 W Ballast/Tungsten/LED	500 ft <sup>2</sup> (45.5 m <sup>2</sup> )
<input type="checkbox"/> UT-355-1-U	230 VAC (single phase)50/60 Hz;		
<input type="checkbox"/> UT-355-2	277 VAC, 50/60 Hz; or	0-1200 W Ballast/LED, or 0-1500 W Ballast/LED	1000 ft <sup>2</sup> (92.9 m <sup>2</sup> )
<input type="checkbox"/> UT-355-2-U	347 VAC, 50/600 Hz		
<input type="checkbox"/> UT-355-3			2000 ft <sup>2</sup> (185.8 m <sup>2</sup> )
<input type="checkbox"/> UT-355-3-U			
<input type="checkbox"/> CA-1	Cosmetic adapter for ceiling installations with 4" square j-box or Wiremold #V5752 box		

Sensors are white.  
 -U = ARRA compliant. Product produced in the U.S.

# DT-300 Series Low Voltage Dual Technology Ceiling Sensors

Architecturally appealing low-profile appearance

Plug terminal wiring for quick and easy installation

Walk-through mode increases savings potential

Accepts low-voltage switch input for manual-on operation

Ultrasonic diffusers give more comprehensive coverage

Supports automatic or manual-on operation



PROJECT
LOCATION/TYPE

## Product Overview

### Description

The DT-300 Series Dual Technology Ceiling Sensors combine the benefits of passive infrared (PIR) and ultrasonic technologies to detect occupancy. Sensors have a flat, unobtrusive appearance and provide 360 degrees of coverage.

### Operation

Low voltage DT-300 Series sensors utilize a WattStopper power pack to turn lights on when both PIR and ultrasonic technologies detect occupancy. They can also work with a low voltage switch for manual-on operation. PIR technology senses motion via a change in infrared energy within the controlled area, whereas ultrasonic uses 40KHz high frequency ultrasound. Once lights are on, detection by either technology holds them on. When no occupancy is detected for the length of the time delay, lights turns off. DT-300 Series Sensors can also be set to trigger lights on when either technology or both detect occupancy, or to require both technologies to hold lighting on.

### Time Delay Options

The DT-300 is factory set for a 20 minute time delay, ideal for both energy savings and user satisfaction in most applications. Installers can quickly select other fixed time delays (5, 10, 15 or 30 minutes) via DIP switches. Fixed time delays eliminate the occupant dissatisfaction associated with an automatically adjusted time delay option, and reduce callbacks. Walk-through mode may be enabled for added energy savings in spaces with frequent transient traffic.

### Application

DT-300 Series Dual Technology Sensors have the flexibility to work in a variety of applications, where one technology alone could cause false triggers. Ideal applications include classrooms, open office spaces, large offices and computer rooms. The DT-300 Series mounting system makes them easy to install in ceiling tiles or to junction boxes, providing the flexibility to be used in a wide range of spaces.

## Features

- Advanced control logic based on RISC microcontroller provides:
  - Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
  - Walk-through mode turns lights off three minutes after the area is initially occupied – ideal for brief visits such as mail delivery
  - Available with built-in light level sensor featuring simple, one-step setup
- Sensors work with low-voltage momentary switches to provide manual control
- Patented ultrasonic diffusion technology spreads coverage to a wider area
- LEDs indicate occupancy detection
- Uses plug terminal wiring system for quick and easy installation
- Eight occupancy logic options provide the ability to customize control to meet application needs
- Available with isolated relay for integration with BAS or HVAC
- Qualifies for ARRA-funded public works projects
- Sensor coverage tested to NEMA Guide Publication WD 7-2000



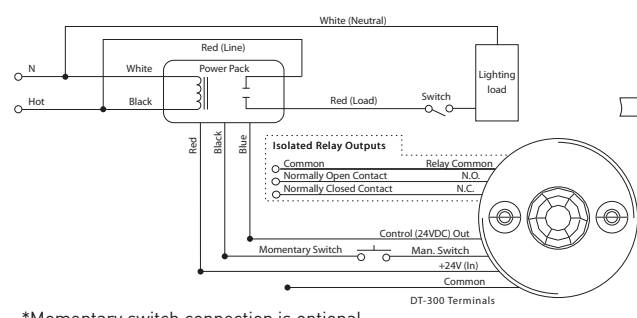
## Specifications

- 24 VDC/VAC
- Ultrasonic frequency: 40kHz
- Time delays: 5, 10, 15, 20, or 30 minutes, Walk-through/Test Modes
- Sensitivity adjustment: High/low (PIR); variable with trim pot (ultrasonic)
- Built-in light level sensor: 10 to 300 footcandles (107.6 to 3,229.2 lux)
- Low-voltage, momentary switch input for manual on or off operation

- DT-300 contains an isolated relay with N/O and N/C outputs; rated for 1 Amp @ 30 VDC/VAC
- Multi-level Fresnel lens provides 360° coverage
- Mounting options: ceiling tile; 4" octagonal J-box, 1.5" deep
- Max DT-300s per power pack: B=2, BZ=3
- Max DT-305s per power pack: B=3, BZ=4
- Dimensions: 4.50" diameter x 1.02" deep (114.3mm x 25.9mm)
- UL and cUL listed
- Five year warranty

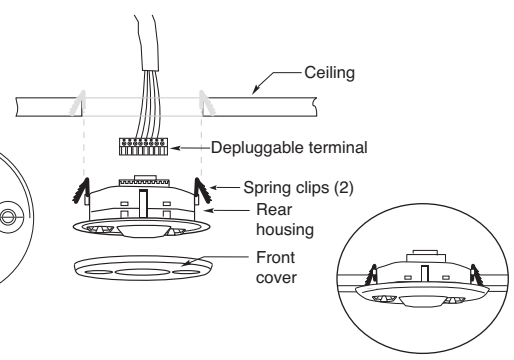
## Wiring & Mounting

### Wiring Diagram



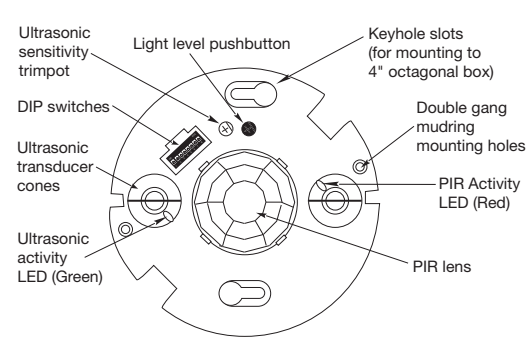
\*Momentary switch connection is optional.  
Connect only when momentary switch is installed.

### Ceiling Mounting



## Controls & Settings

### Product Controls



### DIP Switch Settings

Feature	Switch#	1	2	3
<b>Time Delay</b>				
Test Mode/20 min		↓	↓	↓
30 seconds		↓	↓	↑
5 minutes		↓	↑	↓
10 minutes		↑	↑	↑
15 minutes		↑	↓	↓
20 minutes		↑	↑	↓
25 minutes		↑	↑	↑
30 minutes		↑	↑	↑
<b>Walk-Through</b>	<b>4</b>			
Enabled		↑		
Disabled		↓		
<b>PIR Sensitivity</b>	<b>5</b>			
Minimum		↑		
Maximum		↓		

Occupancy Logic	Settings			
	6	7	8	
	Standard	↑	↓	↓
	Option 1	↑	↑	↓
	Option 2	↑	↓	↓
	Option 3	↑	↑	↓
	Option 4	↑	↑	↑
	Option 5	↑	↑	↑
Option 6	↑	↑	↑	
Option 7	↑	↑	↑	

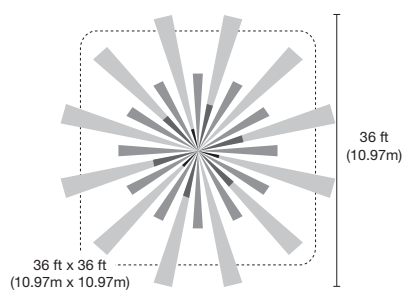
  

Occupancy Logic	Trigger			
	Initial Occupancy	Maintain Occupancy	Re-trigger (seconds duration)	
	Standard	Both	Either	Either(5)
	Option 1	Either	Either	Either(5)
	Option 2	PIR	Either	Either(5)
	Option 3	Both	PIR	Both(5)
	Option 4	PIR	PIR	PIR(5)
	Option 5	Either	PIR	Either(5)
Option 6	Man.	Either	Either(30)	
Option 7	Man.	PIR	Both(30)	

▲ = Factory Setting  
 ↑ = ON  
 ↓ = OFF

## Coverage

### Coverage Pattern



Coverage shown is maximum and represents half-step walking motion. Under ideal conditions, coverage for half-step walking motion can reach up to 1000 ft<sup>2</sup>.

The control technology (occupancy logic) is selectable. The default setting requires both technologies to trigger on, either to hold on, and is recommended for most applications.

## Ordering Information

Catalog No.	Voltage	Current	Coverage	Features
<input type="checkbox"/> DT-300	24 VDC/VAC	43 mA	up to 1000 ft <sup>2</sup> (92.9 m <sup>2</sup> )	Isolated relay, light level
<input type="checkbox"/> DT-300-U				
<input type="checkbox"/> DT-305	24 VDC/VAC	35 mA	up to 1000 ft <sup>2</sup> (92.9 m <sup>2</sup> )	
<input type="checkbox"/> DT-305-U				

Sensors are white and use WattStopper power packs. Current consumption can be slightly higher when only one sensor per power pack is used.  
-U = ARRA compliant. Product produced in the U.S.



# DT-355 Dual Technology Line Voltage Ceiling Sensor

Architecturally appealing, low profile appearance

Operates at 120, 230 (single phase), 277 or 347 VAC, 50/60 Hz

Terminal wiring for quick and easy installation

Ultrasonic diffusers give more comprehensive coverage

Walk-through mode increases savings potential



PROJECT
LOCATION/TYPE

## Product Overview

### Description

WattStopper's low profile DT-355 dual technology occupancy sensor combines the benefits of passive infrared (PIR) and ultrasonic technologies. The sensor mounts on the ceiling with a flat, unobtrusive appearance and provides 360 degrees of coverage.

### Operation

The DT-355 is line voltage and operates on a single phase at 120, 230, 277 or 347 VAC. The sensor turns lighting on when both PIR and ultrasonic technologies detect occupancy. PIR technology senses the difference between infrared energy from a human body in motion and the background space. Ultrasonic technology uses high frequency (40KHz) ultrasound to sense motion within the space. Once lighting is on, detection by either technology holds lighting on. When no occupancy is detected for the length of the time delay, lighting turns off. The DT-355 can also be set so that only one technology is needed to trigger or both technologies are needed to hold lighting on.

### Time Delay Options

The DT-355 is factory set for a 20 minute time delay, ideal for both energy savings and user satisfaction in most applications. Installers can quickly select other fixed time delays (5, 10, 15 or 30 minutes) via DIP switches. Fixed time delays eliminate the occupant dissatisfaction associated with an automatically adjusted time delay option, and reduce callbacks. Walk-through mode may be enabled for added energy savings in spaces with frequent transient traffic.

### Application

WattStopper's patented dual technology has the flexibility to work in a variety of applications, where one technology alone could encounter false triggers. Ideal applications include classrooms, open office spaces, large offices, and computer rooms. In addition, because the DT-355 can be mounted onto a variety of junction boxes, the sensor has the flexibility to be used in a wide range of spaces. The sensors eliminate the need for a power pack by using line voltage wiring.

## Features

- Advanced control logic based on RISC micro-controller provides:
  - Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
  - Walk-through mode turns lights off 3 minutes after the area is initially occupied – ideal for brief visits such as mail delivery
  - Built-in light level sensor featuring simple, one-step setup
- Zero-crossing for long relay life
- Ultrasonic diffusion technology spreads coverage to a wider area (patent pending)
- DIP switch simplifies sensor adjustments
- LEDs indicate occupancy detection
- Uses existing line voltage wiring and doesn't require a power pack
- Six occupancy logic options give users the ability to customize control to meet application needs
- Qualifies for ARRA-funded public works projects
- Sensor coverage tested to NEMA Guide Publication WD 7-2000

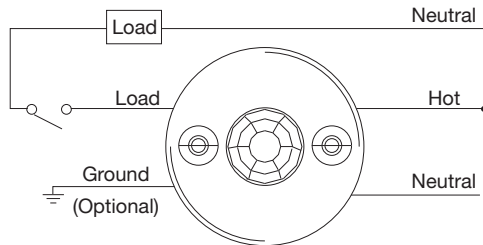


# Specifications

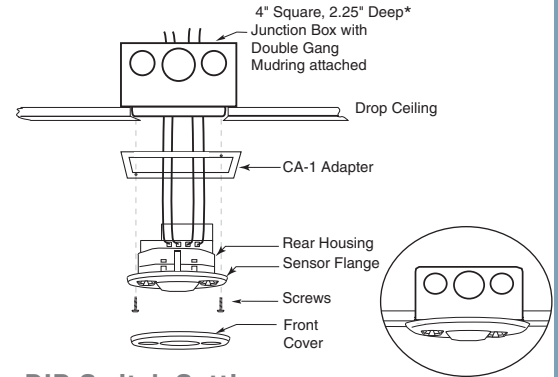
- 120/230 (single phase)/277/347 VAC, 50/60 Hz
- Ultrasonic frequency of 40kHz
- Time delays: 5, 10, 15, 20, or 30 minutes, walk-through, test-mode
- Sensitivity adjustment: High/low (for PIR sensitivity); ultrasonic sensitivity is variable with trimpot
- Built-in light level sensor – works from 10 to 300 footcandles (107.6 to 3,229.2 lux)
- Multi-level, 360° Fresnel lens for superior occupancy detection
- Mounting options: 4 square junction box with double gang mudring; 4 inch octagonal junction box
- Dimensions: 4.50" diameter x 1.45" deep (114.3mm x 25.9mm)
- UL and cUL listed
- Five year warranty

# Wiring & Mounting

## DT-355 Wiring Diagram

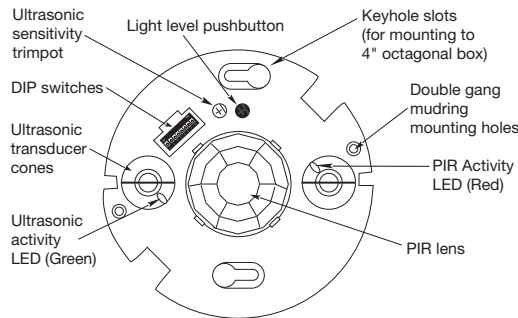


## Ceiling Mounting



# Controls & Settings

## Product Controls



## DIP Switch Settings

Feature	Switch#	1	2	3
<b>Time Delay</b>				
Test Mode/20 min		↓	↓	↓
30 seconds		↓	↓	↓
5 minutes		↓	↑	↑
10 minutes		↓	↑	↑
15 minutes		↑	↑	↓
20 minutes		↑	↑	↓
25 minutes		↑	↑	↓
30 minutes		↑	↑	↓
<b>Walk-Through</b>	<b>4</b>			
Enabled		↑		
Disabled		↓	◀	
<b>PIR Sensitivity</b>	<b>5</b>			
Minimum		↑		
Maximum		↓	◀	

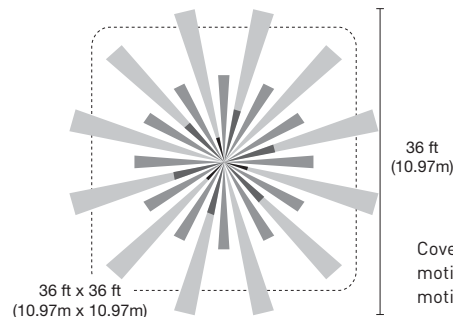
Settings	6	7	8
<b>Occupancy Logic</b>			
Standard	↓	↓	◀
Option 1	↑	↓	↓
Option 2	↑	↓	↓
Option 3	↑	↓	↓
Option 4	↑	↓	↓
Option 5	↑	↓	↓
Option 6	↑	↓	↓
Option 7	↑	↓	↓

Occupancy Logic	Initial Occupancy	Maintain Occupancy	Re-trigger (seconds duration)
<b>Trigger</b>			
Standard	Both	Either	Either(5)
Option 1	PIR	Either	Either(5)
Option 2	PIR	Either	Both(5)
Option 3	Both	PIR	Both(5)
Option 4	PIR	PIR	PIR(5)
Option 5	Either	PIR	Either(5)
Option 6	Man.	Either	Either(30)
Option 7	Man.	PIR	Both(30)

◀ = Factory Setting  
 ↑ = ON  
 ↓ = OFF

# Coverage

## Coverage Pattern



The control technology (occupancy logic) is selectable. The default setting requires both technologies to trigger on, either to hold on, and is recommended for most applications.

Coverage shown is maximum and represents half-step walking motion. Under ideal conditions, coverage for half-step walking motion can reach up to 1000 ft² (92.9 m²).

# Ordering Information

Catalog No.	Voltage	Load Rating	Coverage
<input type="checkbox"/> DT-355	120 VAC, 50/60 Hz	0-800W Ballast/Tungsten/LED	up to 1000 ft², (92.9 m²)
<input type="checkbox"/> DT-355-U	277 VAC, 50/60 Hz 347 VAC, 50/60 Hz	0-1200W Ballast/LED 0-1500W Ballast/LED	
<input type="checkbox"/> CA-1	Cosmetic adapter for ceiling installations with 4" square j-box or Wiremold #V5748-2 box		

Sensors are white.  
 -U = ARRA compliant. Product produced in the U.S.

# WPIR Passive Infrared Ceiling Sensor

PIR sensor turns lights on and off based on occupancy

User-adjustable time delay of 30 seconds to 30 minutes

Automatic or manual-on operation when used with a BZ-150 Power Pack



ASIC technology reduces components and provides greater reliability

30-segment, multi-element Fresnel lens

PROJECT

LOCATION/TYPE

## Product Overview

### Description

WattStopper's WPIR Sensor is a versatile ceiling-mount sensor that utilizes the latest passive infrared (PIR) technology to turn lights on and off based on occupancy. The WPIR controls lighting in a wide variety of applications, but is especially adept at controlling small spaces with well-defined coverage.

### Operation

The WPIR Ceiling Sensor utilizes the latest PIR technology to detect the difference between the infrared energy from a person in motion and the background space within the controlled area. When occupancy is detected, this 24 VDC sensor turns lighting or HVAC systems on through a WattStopper power pack controlled through low voltage wiring. When occupants leave the area, lighting is switched off after the user-adjustable time delay has elapsed.

### Fresnel Lens and Coverage

The WPIR is equipped with a multi-element Fresnel lens that allows the sensor to efficiently collect infrared energy and provides optical gain over a defined field of view. The profile of each groove facet is determined by computer simulation to produce the sharpest images possible from a distant object. The use of a 30-segment lens allows overlapping coverage within the defined field of view. The coverage is partially determined by the view available to the sensor. Mounted to a wall, the WPIR will produce a completely different viewing pattern. Zone 4 and 5 (see diagram on back) are then capable of sensing up to 45 feet.

### Applications

The WPIR can effectively cover small offices, utility areas or computer rooms. Additional applications include racquetball courts, garage areas, library aisles and storage rooms.

## Features

- ASIC technology enhances reliability and provides immunity to RFI and EMI
- Uses the latest PIR technology to reliably control lighting in a variety of applications
- User-adjustable time delay of 30 seconds to 30 minutes
- Incorporated daylight filter prevents short-wavelength infrared waves, such as those emitted by the sun, from affecting WPIR
- Multi-element Fresnel lens allows the sensor to efficiently collect infrared energy and provide optical gain over a defined field of view
- Alternate viewing patterns depending on mounting choice
- Optional on override through logic key/on bypass
- LED indicates occupancy detection

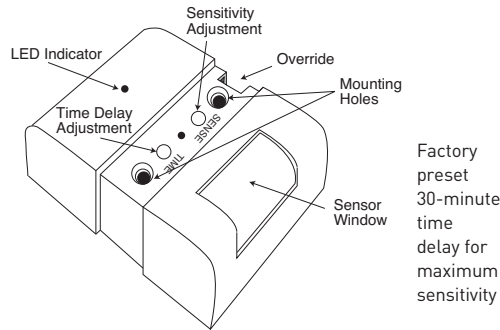


## Specifications

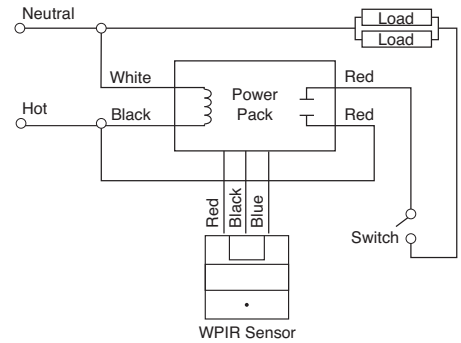
- Dual-element, temperature compensated pyroelectric sensor
- Adjustable time delay: 30 seconds to 30 minutes
- Poly IR4 lens, optical filter material
- Control output: 100mA maximum
- Max. units per power pack: B = 8; BZ = 10
- Dimensions: 2.5" x 2.5" x 1.14" (64mm x 64mm x 29mm) W x L x D
- UL and cUL listed
- Five year warranty

## Wiring & Controls

### Product Controls

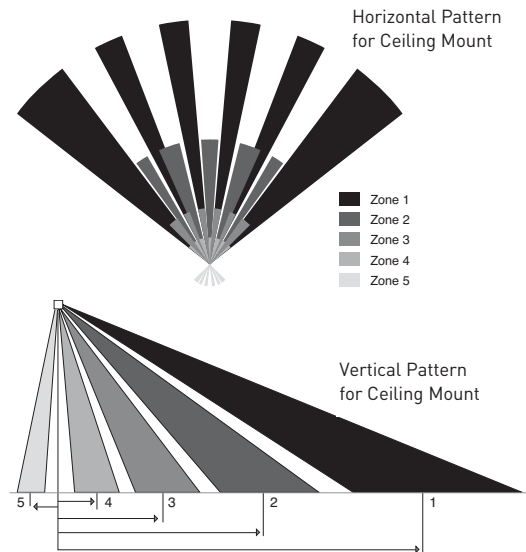


### Wiring Diagram

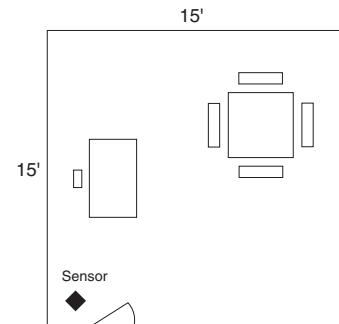


## Coverage & Placement

### Coverage Pattern

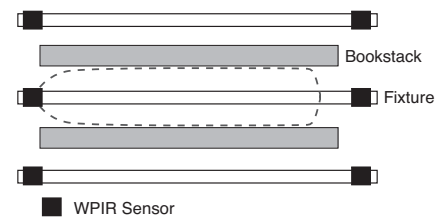


### Typical Office Placement



For an enclosed office, the WPIR should be placed in the corner of the room so that it will detect occupants as they enter the room. For the aisleway between bookstacks, the WPIR should be placed at the end of each bookstack to detect occupancy upon entrance to the aisle way from either direction. For longer bookstacks, two or more WPIRs can be used.

### Aisleway Library Bookstack Placement



Ceiling Height	Detection Zones				
	Zone 5	Zone 4	Zone 3	Zone 2	Zone 1
8'	-1	1	4	8	15
10'	-1.5	1.5	5	10	19
12'	-2	2	6	12	23
15'	-2.5	2.5	8	15	29
20'	-3	3	10	18	36
25'	-4	4	12	23	45
*8'	50	40	25	15	5

\* Wall mounted Horizontally

## Ordering Information

Catalog No.	Voltage	Current	Coverage
□ WPIR	24 VDC	14 mA	300 ft <sup>2</sup> (27.9 m <sup>2</sup> )

All units are white and use WattStopper power packs.

# CX-100 Series Passive Infrared Ceiling/Wall Sensors

Turns lights on and off based on occupancy

User-adjustable time delay and sensitivity

ASIC technology reduces components and provides greater reliability



Choice of four coverage patterns

Built-in light level sensor

Isolated relay for use with HVAC or other control systems

Automatic or manual-on operation when used with a BZ-150 Power Pack

PROJECT

LOCATION/TYPE

## Product Overview

### Description

WattStopper's CX-100 Series Passive Infrared (PIR) Ceiling/Wall Sensors detect occupancy to control lighting in a wide variety of applications. These sensors provide superior coverage and performance with great energy savings.

### Operation

CX-100 Series Sensors are 24 VDC and control lighting systems through WattStopper power packs. Utilizing the latest PIR technology, they turn lights on when a difference is detected between infrared energy from a human body in motion and the background space. After the area is vacated and the time delay elapses, lighting automatically turns off.

## Features

- ASIC technology reduces components and enhances reliability
- Pulse Count Processing eliminates false off without reducing sensitivity
- Detection Signature Analysis eliminates false triggers and provides immunity to RFI and EMI
- Digital time delay adjustable from 15 seconds to 30 minutes
- Adjustable sensitivity enables occupancy detection to match the level of activity for each space
- LED indicates occupancy detection

## Coverage Choices

The CX-100 Series Sensors are available with a choice of coverage patterns. The standard lens offers coverage up to 1000 square feet for typical desktop activity. When using the CX-100/105-1 or -3 lens, motion moving toward sensors will begin to be detected at 55 to 60 feet.

## Applications

The CX sensors are ideal for large areas and can cover up to 2000 square feet of walking motion. By choosing the proper lens pattern for each application, the sensors can reliably cover large offices, computer rooms, classrooms, aisleways, warehouses and open offices where coverage cut-off is desired. Corner mounting to a wall or ceiling adds versatility and more control to the coverage.

- The CX-100's integrated light level sensor can create bi-level control for added energy savings
- Multilevel Fresnel lens for superior desktop occupancy detection with four lens patterns
- Isolated relay can interface with HVAC, EMS and monitoring systems, or with an additional lighting load
- Dual-element, temperature compensated pyroelectric sensor
- Swivel mounting bracket for convenient corner mounting to wall or ceiling
- Qualifies for ARRA-funded public works projects

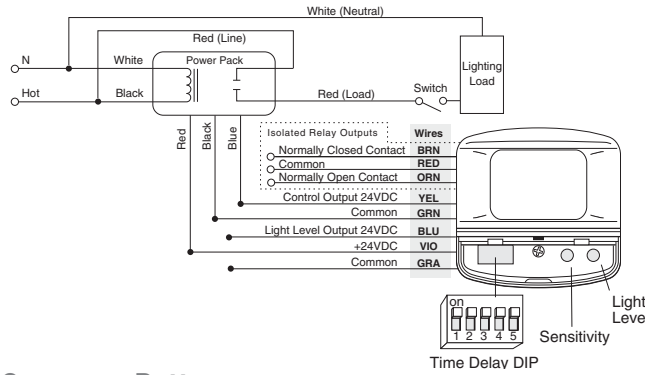


# Specifications

- Dual-element, temperature compensated pyroelectric sensor
- CX-100 contains isolated relay with N/O and N/C outputs; rated for 1 Amp at 24 VDC/VAC
- Adjustable time delay: 15 seconds to 30 minutes
- CX-100 integrated light level sensor: three to 200 footcandles (32 to 2,152 lux)
- Max. CX-100s per power pack: B=6, BZ=8
- Max. CX-105s per power pack: B=14, BZ=18
- Dimensions: 3.3" x 3.3" x 2.1" (83.8mm x 83.8mm x 53.3mm) W x L x D
- UL and cUL listed
- Five year warranty

# Wiring & Settings

## Wiring Diagram



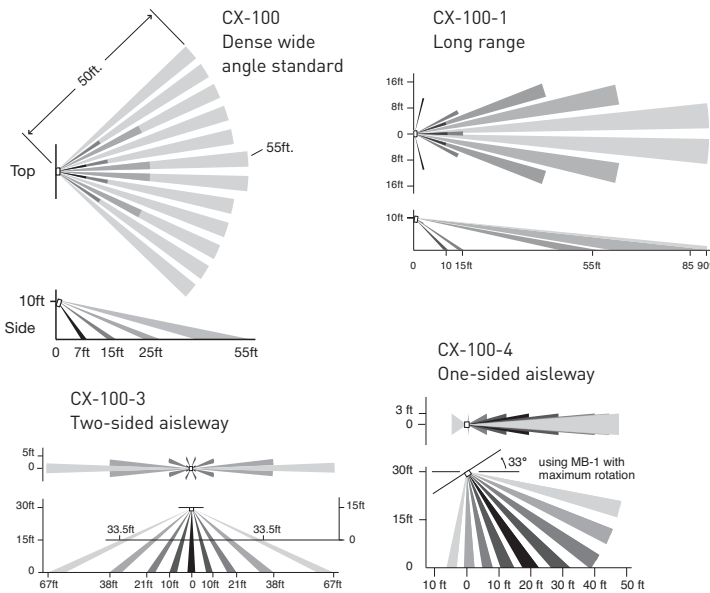
## DIP Switch Settings

Time Delays	DIP Switch #				
	1	2	3	4	5
15 seconds	●	●	●	●	●
2 minutes	●	●	●	●	■
4 minutes	●	●	●	●	■
6 minutes	●	●	●	●	■
8 minutes	●	●	●	●	■
10 minutes	●	●	●	●	■
12 minutes	●	●	●	●	■
14 minutes	●	●	●	●	■
16 minutes	●	●	●	●	■
18 minutes	●	●	●	●	■
20 minutes	●	●	●	●	■
22 minutes	●	●	●	●	■
24 minutes	●	●	●	●	■
26 minutes	●	●	●	●	■
28 minutes	●	●	●	●	■
30 minutes	●	●	●	●	■
Override	●	■	■	■	■

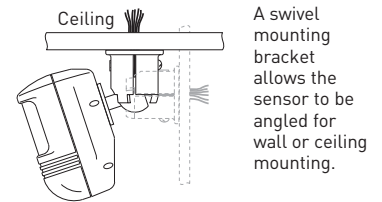
●=on ■=off ◆=factory preset

# Coverage & Mounting

## Coverage Patterns



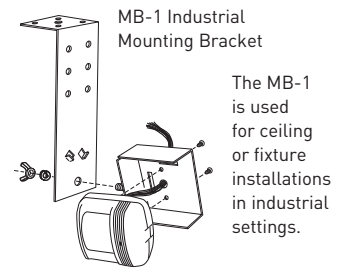
## Mounting



A swivel mounting bracket allows the sensor to be angled for wall or ceiling mounting.

Grooves on the bracket help to achieve desired angle for coverage.

## Industrial Mounting



The MB-1 is used for ceiling or fixture installations in industrial settings.

Coverages shown are maximum and represent half-step walking motion. Under ideal conditions with no barriers or obstacles, coverage for half-step walking motion with the standard lens can reach up to 2000 ft<sup>2</sup>, while coverage for typical desktop activity can reach up to 1000 ft<sup>2</sup>. When using the CX-100/105-1 or -3 lens, motion moving toward sensors will begin to be detected at 55 to 60 feet.

# Ordering Information

Catalog No.	Voltage	Current	Coverage	Features
<input type="checkbox"/> CX-100	24 VDC	19 mA	up to 2000 ft <sup>2</sup> (185.8 m <sup>2</sup> )	isolated relay, light level
<input type="checkbox"/> CX-100-1	24 VDC	19 mA	up to 90 linear ft (27.4 m)	isolated relay, light level
<input type="checkbox"/> CX-100-3	24 VDC	19 mA	up to 120 linear ft (36.6 m)	isolated relay, light level
<input type="checkbox"/> CX-100-4	24 VDC	19 mA	up to 50 linear ft (15.2 m)	isolated relay, light level
<input type="checkbox"/> CX-105	24 VDC	8 mA	up to 2000 ft <sup>2</sup> (185.8 m <sup>2</sup> )	
<input type="checkbox"/> CX-105-U				
<input type="checkbox"/> CX-105-1	24 VDC	8 mA	up to 90 linear ft (27.4 m)	
<input type="checkbox"/> CX-105-1-U				
<input type="checkbox"/> CX-105-3	24 VDC	8 mA	up to 120 linear ft (36.6 m)	
<input type="checkbox"/> CX-105-4	24 VDC	8 mA	up to 50 linear ft (15.2 m)	
<input type="checkbox"/> MB-1	Industrial Mounting Bracket (recommended for use with -3 and -4 lenses)			
<input type="checkbox"/> MB-2	Industrial Mounting Bracket for HID fixtures			

All units are white and use WattStopper power packs. Current consumption can be slightly higher when only one sensor per power pack is used.  
 -U = ARRA compliant. Product produced in the U.S.



# CB Low Temperature Passive Infrared Occupancy Sensor

PIR occupancy sensor for areas of extreme low temperature

Watertight enclosure prevents moisture and dust from affecting detection

Isolated relay contact for use with HVAC or other control systems



Choice of three coverage patterns

Convenient DIP switch adjustments of time delay and sensitivity

Ideal for cold storage rooms, freezers and outdoor locations

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The CB-100 passive infrared (PIR) occupancy sensor was engineered for installation in cold and damp conditions including the outdoors. It uses electronic components to allow for reliable operation in extreme temperature and environmental conditions.

### Operation

The CB-100 operates on 24 VDC and controls lighting through WattStopper power packs. It is equipped with a swivel mount bracket for convenient installation. The unit detects occupancy and turns lighting on when it senses a change in infrared heat radiated within the controlled area. After the area is vacated and after a user-adjustable time delay, lighting automatically turns off.

### Cold Application Engineering

Specifically designed for low temperature applications, the CB-100 features a gasketed, watertight enclosure which prevents moisture and dust from entering the sensor and affecting occupancy detection. By operating in areas as low as -40° F, the CB-100 saves energy in areas that would not typically be suited for occupancy based control.

### Applications

The CB-100 has been manufactured for the specification of lighting control in low temperature areas. With this sensor, areas such as cold storage rooms, freezers, and unconditioned spaces subject to extreme low temperatures can receive the same reliable lighting control and energy savings as other building areas. Using the isolated relay contact to interface with HVAC, EMS or other building control systems will also increase savings.

## Features

- Operates in areas with temperatures as low as -40°F
- Gasketed, watertight enclosure prevents moisture and dust from entering the sensor and affecting occupancy detection
- Choice of three different coverage patterns depending on needs of the application
- Swivel mount bracket for convenient installation
- Convenient DIP switch adjustable digital time delay of 15 seconds, 5 minutes or 10 minutes
- DIP switch adjustable sensitivity has 4 settings ranging from minimum to maximum
- Isolated relay can interface with HVAC, EMS systems, monitoring systems, or with an additional lighting load
- Red LED indicates occupancy detection

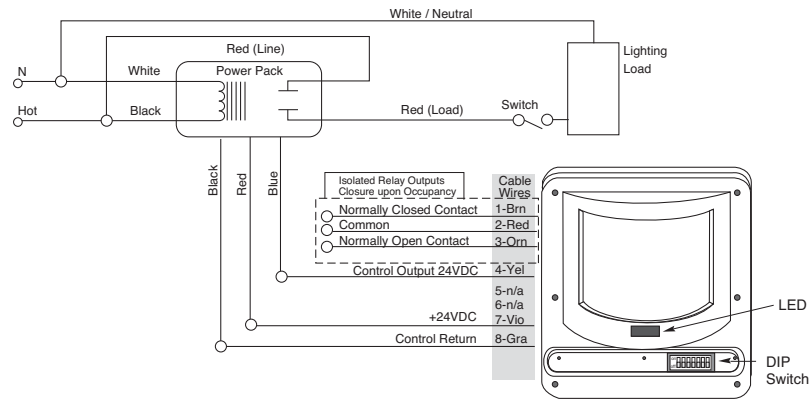


# Specifications

- Dual-element, temperature compensated pyro-electric sensor
- Temperature range: -40°F (-40°C) to +95°F (+35°C) (The CB-100 can function at temperatures greater than 95°F but coverage may be reduced)
- Isolated relay with N/O and N/C outputs; rated for 1 Amp at 24 VDC/VAC
- Digital time delay settings of 15 seconds, 5 minutes, or 10 minutes
- Units per power pack: up to 5 (B); up to 7 (BZ)
- Dimensions: 3.94" x 3.74" x 2.36" (100mm x 95mm x 60mm) L x W x D
- UL and cUL listed
- Five year warranty

# Wiring, Mounting & Settings

## Wiring Diagram



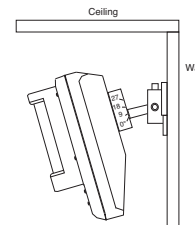
## DIP Switch Settings

Sensitivity	1	2
Maximum	-	-
Med High	●	-
Med Low	●	-
Minimum	●	●

● = ON    - = OFF  
 ◀ = factory preset

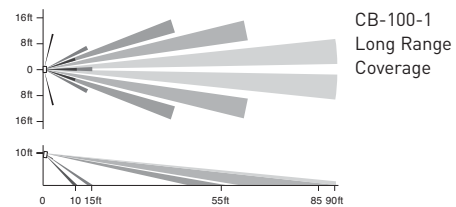
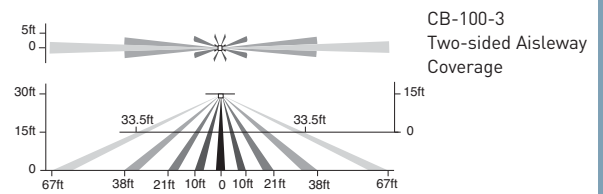
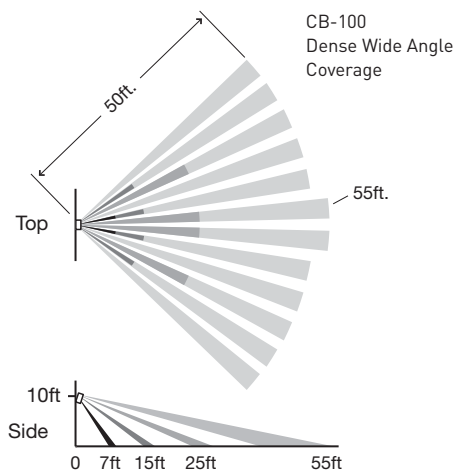
Time Delay	3	4
10 minutes	-	-
5 minutes	●	-
15 seconds	●	●

## Wall Mounting



# Coverage

## Coverage Patterns



# Ordering Information

Catalog No.	Voltage	Current	Coverage
<input type="checkbox"/> CB-100	24 VDC	20 mA	up to 2000 ft <sup>2</sup> (185.8m <sup>2</sup> )
<input type="checkbox"/> CB-100-1	24 VDC	20 mA	up to 90 linear ft (27.4m)
<input type="checkbox"/> CB-100-3	24 VDC	20 mA	up to 120 linear ft (36.6m)

Units are beige and use WattStopper power packs

# DT-200 Series Dual Technology Ceiling/Wall Sensors

Combines passive infrared (PIR) and ultrasonic technologies

Auto set automatically selects optimal settings for each space

Walk-through mode increases savings potential



Built-in light level sensor

Accepts low-voltage switch input for manual-on operation

Automatic or manual-on operation when used with a BZ-150 Power Pack

PROJECT
LOCATION/TYPE

## Product Overview

### Description

WattStopper's DT-200 Series Dual Technology Ceiling Sensors combine PIR and ultrasonic technologies into one unit to achieve precise coverage in detecting occupancy.

### Operation

Low voltage DT-200 Series Sensors utilize a WattStopper power pack to turn lights on when both PIR and ultrasonic technologies detect occupancy. They can also work with a low voltage switch for manual-on operation. PIR technology senses motion via a change in infrared energy within the controlled area, whereas ultrasonic uses 40 kHz high frequency ultrasound. Once on, detection by either technology holds lights on. When no occupancy is detected for the length of the time delay, lights turns off. DT-200 Series Sensors can also be set to trigger lights on when either technology or both detect occupancy, or to require both technologies to hold lighting on.

### Auto set

The DT-200 requires no adjustment at installation. Auto set continuously monitors the controlled space to identify usage patterns. Based on these patterns, units automatically adjust time delay and sensitivity settings for optimal performance and energy efficiency. Sensors assign short delays (as low as five minutes) for times when the space is usually vacant, and longer delays (up to 30 minutes) for busier times.

### Application

DT-200 Series Sensors have the flexibility to work in a variety of applications. Mounted at ten feet, the sensors can cover up to 2000 square feet of walking motion and 1000 square feet of desktop motion. The sensors are designed to control lighting in difficult applications where one technology alone could encounter false triggers. The DT-200 works well in classrooms, warehouses, large offices, open office spaces and computer rooms.

## Features

- Advanced control logic based on RISC microcontroller provides:
  - Detection Signature Processing to eliminate false triggers and provides immunity to RFI and EMI
  - Walk-through Mode turns lights off three minutes after the area is initially occupied – ideal for brief visits, such as mail delivery
  - Available with built-in light level sensor featuring simple, one-step setup
- Sensors work with low-voltage momentary switches to provide manual control
- LEDs indicate occupancy detection
- Eight occupancy logic options provide the ability to customize control to meet application needs
- Available with isolated relay for integration with BAS or HVAC
- Swivel mounting bracket for convenient corner mounting to wall or ceiling
- Qualifies for ARRA-funded public works projects

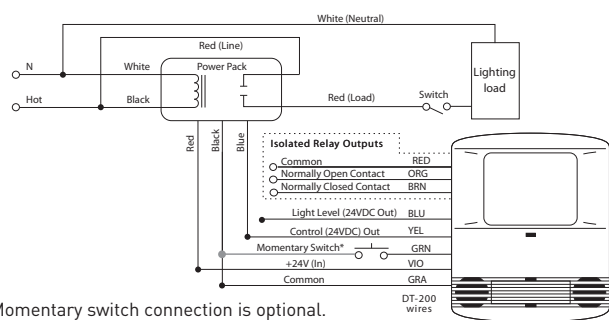


## Specifications

- 24 VDC/VAC and halfwave rectified AC
- 40 kHz frequency ultrasonic transmission
- Time delays: Auto set, fixed (5, 10, 15, 20 or 30 minutes), Walk-through/Test Modes
- Sensitivity adjustment: Auto set; reduced sensitivity (PIR); variable with trim pot (ultrasonic)
- Built-in light level sensor: 2 to 200 footcandles (21 to 2,152 lux)
- Low voltage, momentary switch input for manual operation
- DT-200 contains an isolated relay with N/O and N/C outputs; rated for 1 Amp at 24 VDC/VAC
- 2000 ft<sup>2</sup> of walking motion mounted at 10 ft; 1000 ft<sup>2</sup> of desktop motion
- Max. DT-200s per power pack: B=2, BZ=3  
Max. DT-205s per power pack: B=3, BZ=4
- Dimensions: 4.4" x 3.4" x 2" (110.3mm x 85.9mm x 49.6mm) L x W x D
- UL and cUL listed
- Five year warranty

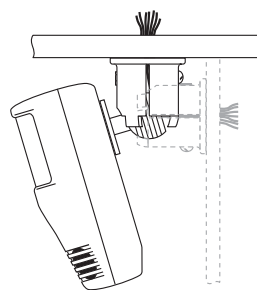
## Wiring & Mounting

### Wiring Diagram



\*Momentary switch connection is optional. Connect only when momentary switch is installed.

### Mounting



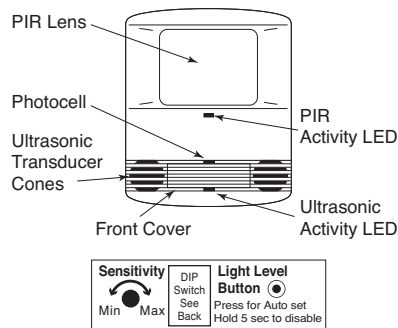
A swivel mounting bracket attached to the sensor allows the sensor to be angled for wall or ceiling mounting.

Grooves on the bracket help to achieve desired angle for coverage.

Mount to mud ring.

## Controls & Settings

### Product Controls



### DIP Switch Settings

◀ = Factory Setting  
● = ON  
- = OFF

Logic	Switch#		
	1	2	3
Standard	-	-	-
Option 1	●	-	-
Option 2	-	●	-
Option 3	-	-	●
Option 4	-	-	●
Option 5	-	●	●
Option 6	-	●	●
Option 7	●	●	●

Occupancy Logic	Trigger		
	Initial Occupancy	Maintain Occupancy	Re-trigger (seconds duration)
Standard	Both	Either	Either(5)
Option 1	Either	Either	Either(5)
Option 2	PIR	Either	Either(5)
Option 3	Both	Both	Both(5)
Option 4	PIR	PIR	PIR(5)
Option 5	Ultra	Ultra	Ultra(5)
Option 6	Man.	Either	Either(30)
Option 7	Man.	Both	Both(30)

LEDs	7
Disabled	-
Enabled	●

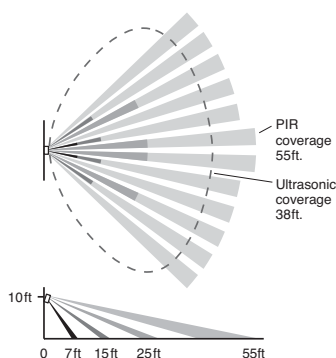
PIR Sensitivity	8
Minimum	-
Max./SmartSet	●

Time Delay	4	5	6
5 sec/SmartSet	-	-	-
5 minutes	-	●	●
10 min.	-	●	●
10 minutes	-	●	●
15 min.	●	●	●
15 minutes	●	●	●
20 minutes	●	●	●
30 min.	●	●	●

⏏ = walk-through mode

## Coverage

### Coverage Pattern



Coverages shown are maximum and represent half-step walking motion. Under ideal conditions with no barriers or obstacles, coverage for half-step walking motion can reach up to 2000 ft<sup>2</sup>, while coverage for typical desktop activity can reach up to 1000 ft<sup>2</sup>.

## Ordering Information

Catalog No.	Voltage	Current	Coverage	Features
<input type="checkbox"/> DT-200	24 VDC	43 mA	2000 ft <sup>2</sup> (185.8 m <sup>2</sup> )	light level, isolated relay
<input type="checkbox"/> DT-205	24 VDC	35 mA	2000 ft <sup>2</sup> (185.8 m <sup>2</sup> )	

Sensors are white and use WattStopper power packs. Current consumption can be slightly higher when only one sensor per power pack is used.



## POWER PACKS

WattStopper power packs are the cornerstone of any low voltage lighting control system. They reliably switch high voltage loads in response to low voltage signals – from control devices such as occupancy sensors, daylighting controls, lighting control panels, and switches.

Just as no two applications are alike in terms of their lighting control needs, the same is true of power packs. That's why WattStopper offers more choices in power pack configurations and models than any other controls manufacturer. We recognize that unique applications demand unique solutions.









# BZ-50 Universal Voltage Power Pack

High-efficiency switching power supply

Overcurrent protection (low-voltage)

Plenum rated

120/277VAC, 50/60Hz

Zero crossing for reliability and increased product life



PROJECT
LOCATION/TYPE

## Product Overview

### Description

The BZ-50 Universal Voltage Power Pack provides 24 VDC operating voltage to WattStopper's low-voltage occupancy sensors. This device is constructed with environmentally friendly materials and is RoHS-compliant.

### Operation

The BZ-50 consists of a high-efficiency switching power supply and a high-current relay. It has an input of 120/277 VAC, 50/60Hz, and an output of 24VDC, 225mA. It turns the connected load on and off automatically based on occupancy sensor input.

### Plenum Rated

The BZ-50 Power Pack is comprised of Teflon-coated low-voltage leads and an ABS, UL 2043 and 94V-0 plastic resin enclosure that is plenum-rated. As a result, the BZ-50 does not require installation into the junction box, but can be cost-effectively installed directly into the plenum.

### Applications

The BZ-50 Power Pack is designed to be flexible enough to control almost any lighting or HVAC load, such as lighting circuits, self-contained air conditioners, pumps, fans, motors, VAV systems, motorized damper controls and setback thermostats. The BZ-50 is well-suited for any application which requires high-voltage switching through low-voltage controls. By linking power packs and sensors, an almost unlimited number of configurations can be obtained.

## Features

- Self-contained power supply relay system
- Efficient switching power supply providing optimized current output based on number of sensors
- LED indicates status of relay or if there is a low-voltage overcurrent
- RoHS-compliant
- Zero crossing circuitry for reliability and increased product life
- UL 2043 plenum rated for cost-effective installation
- 1/2" snap-in nipple attaches to standard electrical enclosures through 1/2" knockouts
- 14 AWG wires on the relay for 20A operation
- Qualifies for ARRA-funded public works projects

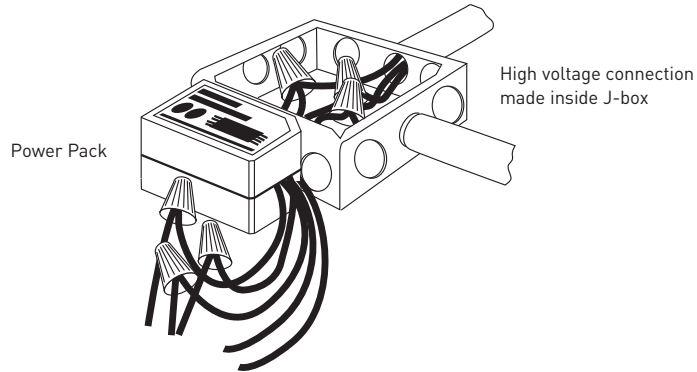


# Specifications

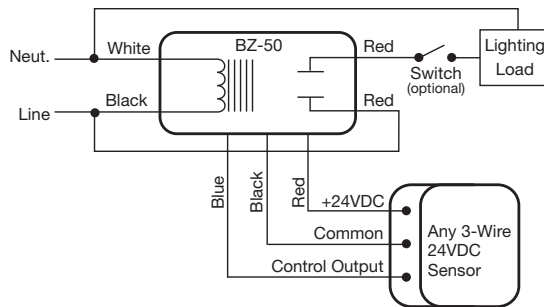
- 120/277VAC, 50/60Hz voltage input
- Secondary voltage of 24 VDC
- Secondary output of 225 mA (with relay connected)
- Low-voltage leads are rated for 300 volts
- UL-rated 94 V-0 grey plastic enclosure
- Dimensions: 1.6" x 2.75" x 1.6" (40.6mm x 69.9mm x 40.6mm) H x W x D with a 1/2" (12.7mm) snap-in nipple
- UL and cUL listed
- Five year warranty

# System Layout & Wiring

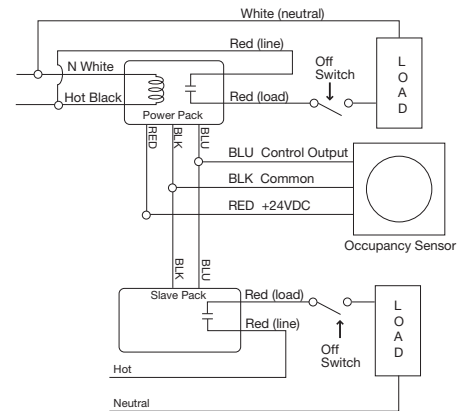
## Installation Diagram



## Wiring with Occupancy Sensor



## Auxiliary Relay Pack with Sensor



# Ordering Information

Catalog No.	Input Voltage	Load Ratings			Output
		Ballast(A)	Incan(A)	Motor(HP)	
<input type="checkbox"/> BZ-50	120/277VAC; 50/60Hz	20	20	1*	24 VDC; 225 mA**
<input type="checkbox"/> BZ-50-U					

\*1 Hp rated at 120/250 VAC. \*\*Output is 225 mA with relay connected.  
 -U = ARRA compliant. Product produced in the U.S.

# Installation Notes

- 1) All WattStopper power packs should be installed in accordance with state, local, and national electrical codes and requirements.
- 2) Power packs are designed to attach to existing or new electrical enclosures with .5" 125.40mmJ knockout (check electrical codes in your area).
- 3) Most applications require UL-listed, 18-22 AWG, 3-conductor, Class 2 cables for low-voltage wiring. For plenum return ceilings use UL-listed plenum-approved cables.

# BZ-50RC Universal Voltage Power Pack

High-efficiency switching power supply

Overcurrent protection (low-voltage)

RJ45 connection

Hold ON and Hold OFF inputs



Zero crossing for reliability and increased product life

Plenum rated

PROJECT

LOCATION/TYPE

## Product Overview

### Description

The BZ-50RC Universal Voltage Power Pack provides 24 VDC operating voltage to WattStopper's low-voltage occupancy sensors equipped with RJ45 jacks. This device is constructed with environmentally friendly materials and is RoHS-compliant.

### Operation

The BZ-50RC consists of a high-efficiency switching power supply and a high-current relay. It has an input of 120/277 VAC, 50/60Hz, and an output of 24VDC, 225mA. It switches line voltage in response to the signal coming from the occupancy sensor. The BZ-50RC can be attached to existing junction boxes or mounted into fixture wiring trays.

### Plenum Rated

The BZ-50RC Power Pack is comprised of Teflon-coated low-voltage leads and an ABS, UL 2043 and 94V-0 plastic resin enclosure that is plenum-rated. As a result, the BZ-50RC does not require installation into the junction box, but can be cost-effectively installed directly into a lighting fixture.

### Applications

The BZ-50RC Power Pack is designed to be flexible enough to control almost any lighting or HVAC load, such as lighting circuits, self-contained air conditioners, pumps, fans, motors, VAV systems, motorized damper controls and setback thermostats. The BZ-50RC is well-suited for any application which requires high-voltage switching through low-voltage controls. By linking power packs and sensors, an almost unlimited number of configurations can be obtained.

## Features

- Self-contained power supply relay system
- Efficient switching power supply providing optimized current output based on number of sensors
- LED indicates status of relay or if there is a low-voltage overcurrent
- Zero crossing circuitry for reliability and increased product life
- UL 2043 plenum rated for cost-effective installation
- 1/2" snap-in nipple attaches to standard electrical enclosures through 1/2" knockouts
- 14 AWG wires on the relay for 20A operation
- Easy RJ45 connection
- RoHS-compliant

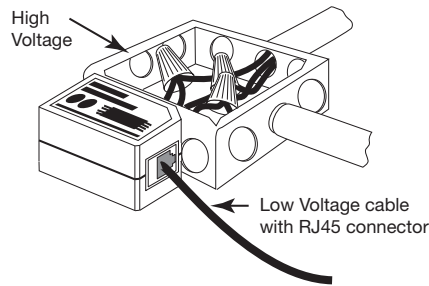


## Specifications

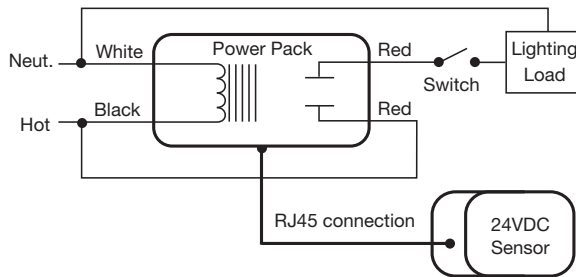
- 120/277VAC, 50/60Hz voltage input
- Load requirements:  
Ballast: 20 amp @ 120/277 VAC  
Incan: 20 amp @ 120 VAC  
Motor: 1 hp @ 120/250 VAC
- Secondary voltage of 24 VDC
- Secondary output of 225 mA (with relay connected)
- Connection:  
BZ-50RC with RJ45 connections
- UL-rated 94 V-0 grey plastic enclosure
- Dimensions: 1.6" x 2.75" x 1.6" (40.6mm x 69.9mm x 40.6mm) H x W x D with a 1/2" (12.7mm) snap-in nipple
- UL and cUL listed
- Five year warranty

## System Layout & Wiring

### Installation Diagram



### Wiring with Occupancy Sensor



## Ordering Information

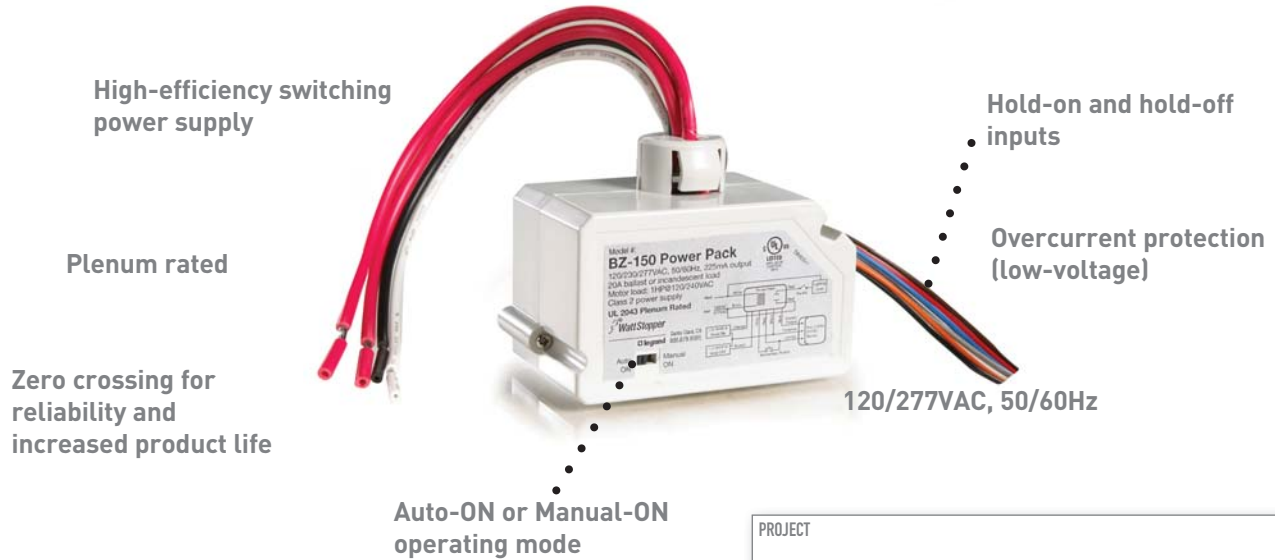
Catalog No.	Description	Load Ratings			Output
		Ballast(A)	Incan(A)	Motor(HP)	
<input type="checkbox"/> BZ-50RC	Universal Power Pack with RJ45 connection	20	20	1*	24 VDC; RJ45 connection
<input type="checkbox"/> FS-C1	10' cable with shielded RJ45 male connectors at each end				
<input type="checkbox"/> FS-C2	6" cable with 3 flying leads at one end and a shielded RJ45 male connector on the other				
<input type="checkbox"/> FS-C3	3' cable with shielded 90° male RJ45 on one end and a shielded straight male RJ45 at the other				
<input type="checkbox"/> FS-C4	Shielded RJ45 splitter with female to dual female receptacles				
<input type="checkbox"/> FS-C5	Shielded RJ45 male to male coupler				

\*1 Hp rated at 120/250 VAC. \*\*Output is 225 mA with relay connected.

## Installation Notes

- 1) All WattStopper power packs should be installed in accordance with state, local, and national electrical codes and requirements.
- 2) Power packs are designed to attach to existing or new electrical enclosures with .5" 125.40mmJ knockout (check electrical codes in your area).
- 3) Most applications require UL-listed, 18-22 AWG, 3-conductor, Class 2 cables for low-voltage wiring. For plenum return ceilings use UL-listed plenum-approved cables.

# BZ-150 Universal Voltage Power Pack



PROJECT
LOCATION/TYPE

## Product Overview

### Description

The BZ-150 Universal Voltage Power Pack is full featured and can provide 24 VDC operating voltage to WattStopper's low-voltage occupancy sensors. In addition, the BZ-150 enables manual-on, hold-on, hold-off and load shed applications when used with lighting control panels or building management systems. This device is constructed with environmentally friendly materials and is RoHS-compliant.

### Operation

The BZ-150 consists of a high-efficiency switching power supply and a high-current relay. It has an input of 120/277 VAC, 50/60Hz, and an output of 24VDC, 225mA. It turns the connected load on and off automatically based on occupancy sensor input, or manually with a low-voltage momentary switch. The dip switch setting allows the user to select Auto ON or Manual ON as the operating mode. Additional low-voltage inputs provide hold-on and hold-off features for broader applications.

### Manual On and Bi-level Switching

Energy codes require automatic off. Some codes and EPAct require bi-level switching. The BZ-150 meets both of these requirements, while seamlessly integrating manual on for maximum energy savings. When used with a low-voltage wall switch, Auto ON and Manual ON can be selected while in the field by using the conveniently located dip switch on the front. Combining switches, power packs and sensors provides easy and cost-effective code-compliant solutions.

### Applications

The BZ-150 can control lighting circuits, self-contained air conditioners, pumps, fans, motors, VAV systems, motorized damper controls and setback thermostats. By using two low-voltage switches, a ceiling sensor and two BZ-150s (one set to Auto ON and one set to Manual ON) bi-level switching with manual-on operation can be achieved. The hold-on input is ideal for retail and commercial facilities that want to override an occupancy sensor and force lighting on during normal business hours. After hours, a time clock signals the BZ-150 to cancel the hold-on lighting mode, allowing the sensor to resume control. The hold-off input can be used for load shedding or security systems.

## Features

- Self-contained power supply relay system
- Efficient switching power supply providing optimized current output based on number of sensors
- LED indicates status of relay or if there is a low-voltage overcurrent
- Hold-on and hold-off inputs integrate with BMS, lighting control panels & other building systems
- Integrates with low-voltage momentary switch to control any 24VDC occupancy sensor
- RoHS-compliant
- Provides auto-on or manual-on field-selectable operating mode
- Zero crossing circuitry for reliability and increased product life
- UL 2043 plenum rated for cost-effective installation
- 1/2" snap-in nipple attaches to standard electrical enclosures through 1/2" knockouts
- 14 AWG wires on the relay for 20A operation
- Qualifies for ARRA-funded public works projects

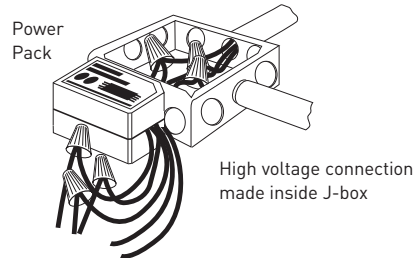


# Specifications

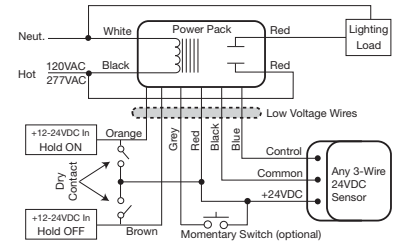
- 120/277VAC, 50/60Hz voltage input
- Secondary voltage of 24 VDC
- Secondary output of 225 mA (with relay connected)
- Low-voltage leads are rated for 300 volts
- UL-rated 94 V-0 grey plastic enclosure
- Dimensions: 1.6" x 2.75" x 1.6" (40.6mm x 69.9mm x 40.6mm) H x W x D with a 1/2" (12.7mm) snap-in nipple
- UL and cUL listed
- Five year warranty

# System Layout & Wiring

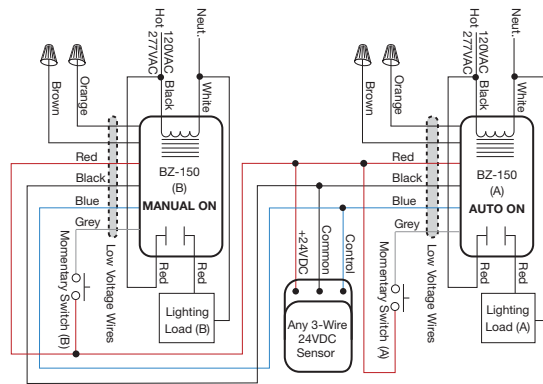
## Installation Diagram



## Wiring with Occupancy Sensor



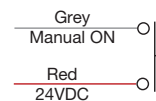
# Manual-on & Bi-level Switching



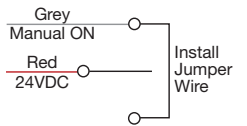
By using two low-voltage switches, a ceiling sensor and two BZ-150s (one set to Auto ON and one set to Manual ON) bi-level switching with manual-on operation can be achieved.

## Low-voltage Momentary Switch Options

### Two-wire Switch

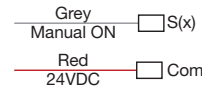


### Three-wire Switch



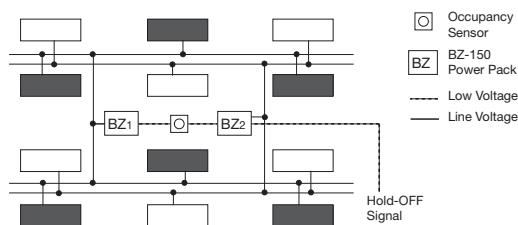
### Multibutton Switch

Do not use pilot or locator light connects



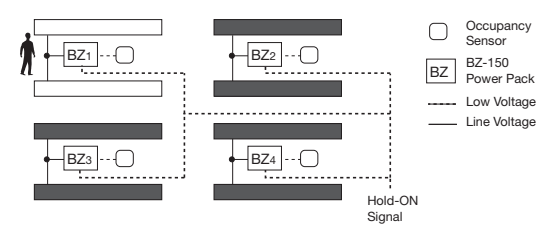
# Hold-off & Hold-on Applications

## Load Shed (Hold-off) Application for Open Office Spaces



The occupancy sensor connected to each BZ-150 keeps all lights on when the space is occupied. When the load shed command is given (by utility meter, BMS, etc.), lights connected to BZ<sub>2</sub> are held off. Remaining lights (connected to BZ<sub>1</sub>) are still controlled by occupancy sensor.

## Retail (Hold-on) Application



During store hours, a signal from a time clock to the BZ-150 holds lights on, regardless of occupancy. After hours, the clock schedule cancels the hold-on and occupancy sensor control takes over.

# Ordering Information

Catalog No.	Input Voltage	Load Ratings			Output
		Ballast(A)	Incan(A)	Motor	
<input type="checkbox"/> BZ-150	120/277VAC; 50/60Hz	20	20	1 HP 120/250 VAC-rated	24 VDC 225 mA w/relay connected
<input type="checkbox"/> BZ-150-U					

For a complete listing of Multibutton Low-voltage and Momentary Toggle Switches that will provide manual-on switching with the BZ-150, please refer to the product cut sheets in the section on Lighting Control Systems.  
-U = ARRA compliant. Product produced in the U.S.

# Installation Notes

- 1) All WattStopper power packs should be installed in accordance with state, local, and national electrical codes and requirements.
- 2) Power packs are designed to attach to existing or new electrical enclosures with .5" 125.40mmJ knockout (check electrical codes in your area).
- 3) Most applications require UL-listed, 18-22 AWG, 3-conductor, Class 2 cables for low-voltage wiring. For plenum return ceilings use UL-listed plenum-approved cables.



# BD Din Rail Mounted Power Packs

DIN rail mounted

Zero crossing for reliability and increased product life

Hold-ON and hold-OFF inputs (BD-100E-P)



Fully self-contained transformer and relay

Manual-ON option (BD-100M)

120/277 VAC input  
24 VDC/175 mA output

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The BD-100 is a versatile, DIN rail mounted power pack supplying 24 VDC operating voltage to low voltage occupancy sensors and other lighting controls. The BD-100 is available in two models, the BD-100E-P with hold-ON and hold-OFF functions, and the BD-100M for manual-ON applications.

### Operation

BD power packs consist of a transformer and a high-current relay. The transformer has a high voltage input of 120/277 VAC. The secondary output, which provides the operating power for occupancy sensors and lighting control devices, is 24 VDC, 175 mA. This 175 mA output is available with the power pack's relay connected. The power packs receive input from occupancy sensors, switches or light level sensors to switch lighting on and off. For example, when an occupancy sensor detects motion, it electronically closes an internal circuit which sends 24 VDC to the power pack. This closes the power pack relay and turns lights on. The BD-100M works with low voltage momentary switches for manual ON/OFF as well as automatic OFF control.

### DIN Rail

The BD can mount to any junction box or electrical housing fitted with a DIN rail. This means that the power pack is seated in a junction box by snapping it into place onto the DIN rail. Once attached, the BD-100 accepts line voltage on one side and low voltage on the other, keeping the two voltages separate.

### Applications

BD-100E-P power packs control lighting circuits, self-contained VAV systems, and setback thermostats. The hold-OFF input can be used to perform load shedding. During a power alert or peak demand, a signal from a BMS or utility meter triggers the BD to shed non-critical lighting loads. The hold-ON input is ideal for retail and commercial facilities that want to hold certain lighting ON during normal business hours. After-hours, a time clock signals the BD to no longer hold lights ON, allowing occupancy sensors to resume control. The BD-100M is well suited to applications where users require manual ON/OFF control.

## Features

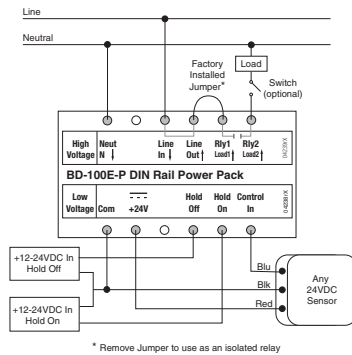
- Self-contained transformer relay system
- LED indicates status of relay or if there is an overcurrent on the low voltage output
- Hold-ON and hold-OFF inputs integrate with lighting control panels, BMS and other building systems (BD-100E-P)
- Hold-OFF input can provide load shedding function (BD-100E-P)
- Hold-ON input enables method to override occupancy sensor and hold lighting ON (BD-100E-P)
- Zero crossing for reliability and increased product life
- Manual-ON inputs require a low voltage momentary switch (with an attached automatic control device) to provide manual ON/OFF and automatic OFF control (BD-100M)

## Specifications

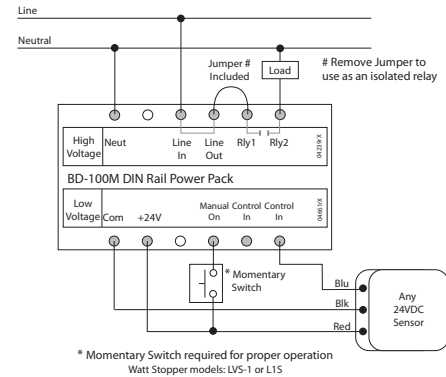
- 120/277 VAC; 50/60 Hz
- Max load ratings:
  - Ballast 20 A @ 120/277 VAC
  - Incandescent 20 A @ 120 VAC
  - Motor 1HP @ 120/240 VAC
- Output: 175 mA @24 VDC ( with relay connected)
- Low voltage inputs: Control On +12-24 VDC; Manual ON +12-24 VDC
- Terminal torque: 4/428 inch-pound force 0.5Nm
- Operating temperature 32°-131°F (0°-55°C)
- UL 94 VO rated plastic enclosure
- CE listed for 230 VAC applications
- Dimensions: 2.78" x 3.44" x 2.63" [71mm x 87mm x 67mm]
- UL and cUL listed
- Five year warranty

## System Layout & Wiring

### BD-100E-P Wiring Diagram

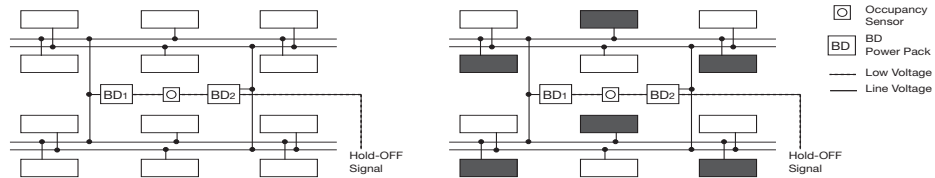


### BD-100M Wiring Diagram



## Hold-ON/OFF Function

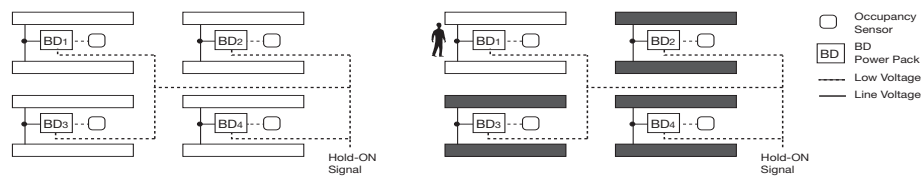
### Hold-ON Retail Application



During store hours, a signal from a time clock to the BD holds lights on, regardless of occupancy.

After hours, the clock schedule cancels the hold on and occupancy sensor control takes over.

### Load Shed (Hold-OFF) Application for Open Office Spaces



The occupancy sensor, connected to each BD, keeps all lights on when the space is occupied.

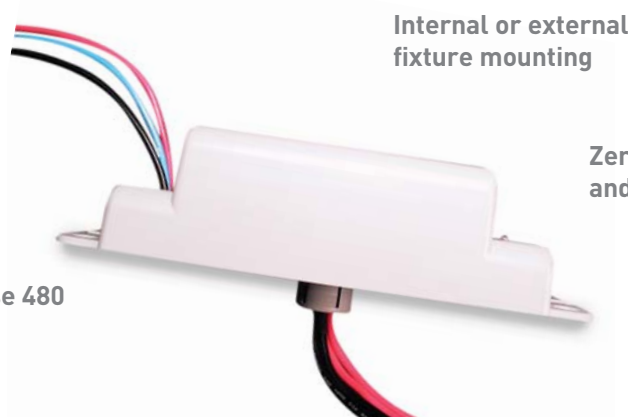
When the load shed command is given (by utility meter, BMS, etc.), lights connected to the BD2 are held off. Remaining lights, (BD1) are controlled by occupancy sensor.

## Ordering Information

Catalog No.	Description	Input Voltage	Load Ratings			Output
			Ballast (A)	Incan. (A)	Motor (hp)	
<input type="checkbox"/> BD-100E-P	Power Pack	120/277 VAC; 50/60 Hz	20	20	1	24 VDC; 175 mA (relay connected)
<input type="checkbox"/> BD-100M	Power Pack	120/277 VAC; 50/60 Hz	20	20	1	24 VDC; 175 mA (relay connected)
Optional Switches: (Use of BD-100M requires use of 1 low voltage switch)						
<input type="checkbox"/> L1S*	Single Button switch, contract rating 25mA @ 50 VDC, max pilot load 10mA *Add to the end of catalog number: -2 Ivory, -4 Almond, -7 White, -9 Grey					
<input type="checkbox"/> LVS-1**	Momentary toggle switch, single-pole; double throw with center position rest, 3A, 24VAC/DC **Add to the end of catalog number: -W White, -I Ivory, -G Grey					

# BZ-480 Two-Phase Power Pack

Fully self-contained transformer and relay



Internal or external fixture mounting

Zero crossing for reliability and increased product life

Switches two-phase 480 VAC loads

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The BZ-480 is a versatile power pack designed to switch two-phase 480 VAC loads and provide 24 VDC operating voltage to WattStopper low voltage occupancy sensors and other control devices. The BZ-480 is offered in two different models with internal (BZ-480-I), or external (BZ-480-E) mounting abilities.

### Operation

The BZ-480 power packs consist of a transformer and a high-current relay. The transformer has a primary input of 480 VAC. The secondary output, which provides the operating power for WattStopper occupancy sensors and other lighting control devices, is 24 VDC, 130 mA. This 130 mA output is available with the power pack's relay connected.

### Mounting

The power packs can mount to any lighting fixture, wiring tray or junction box with 1/2" knockouts. The BZ-480-I is designed to mount inside of lighting fixtures, wiring trays, or junction boxes, while the BZ-480-E is designed to mount outside of them.

### Applications

WattStopper BZ-480 power packs are designed to control 480 VAC two-phase loads with low voltage devices. Applications include warehouses, gymnasiums, parking structures and other industrial areas. The versatility of the BZ-480 with its mounting abilities offers a broad range of configurations to address different lighting control needs.

## Features

- Switches two-phase 480 VAC loads and provides 24 VDC power
- Zero crossing for reliability and increased product longevity
- Fully self-contained transformer and relay
- Two options for mounting; internal or external of lighting fixtures, wiring trays and junction boxes
- Capable of switching up to a 6 amp load
- LED indicates status of relay or if there is an overcurrent

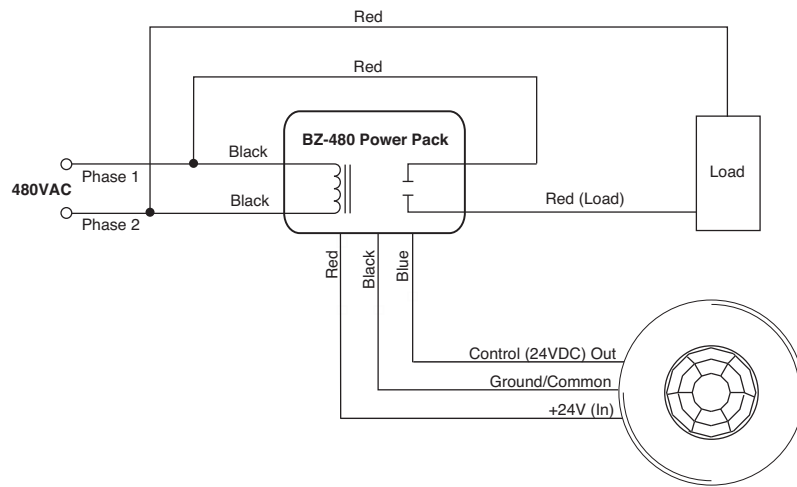


# Specifications

- 480 VAC, 60 Hz
- Load ratings (isolated relay):
  - General 20A @ 120/277 VAC
  - Ballast 6A @ 480 VAC
  - Motor 1HP @ 120/240/480 VAC
- Output:
  - 150 mA @ 24 VDC (maximum without relay connected)
  - 130 mA @ 24 VDC (with relay connected)
- Control input requirements; 0.2 mA @ 24 VDC
- Operating temperature: 32°-131°F (0°-55°C)
- Operating humidity: 5-95% RH, non-condensing
- UL 94 V-0 rated plastic enclosure; units are dark grey
- Dimensions:
  - 6.7"(L) x 2.5"(W) x 1.6"(H)
  - 170.2 mm(L) x 63.5mm(W) x 40.6mm(H)
- UL and cUL listed
- Five year warranty

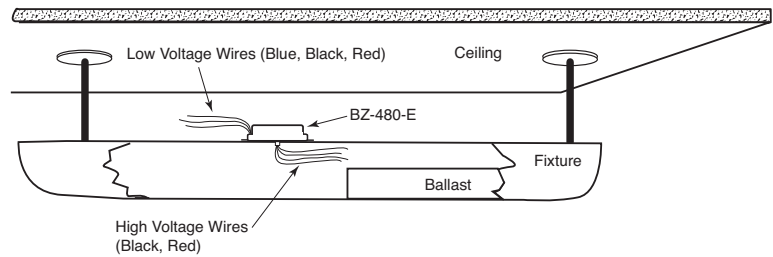
# Wiring & Mounting

## BZ Power Pack Wiring Diagram

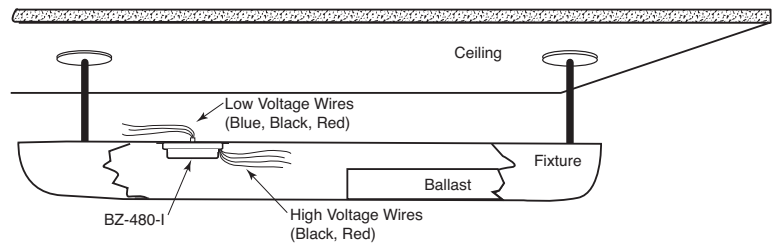


## Mounting

### BZ-480-E



### BZ-480-I



# Ordering Information

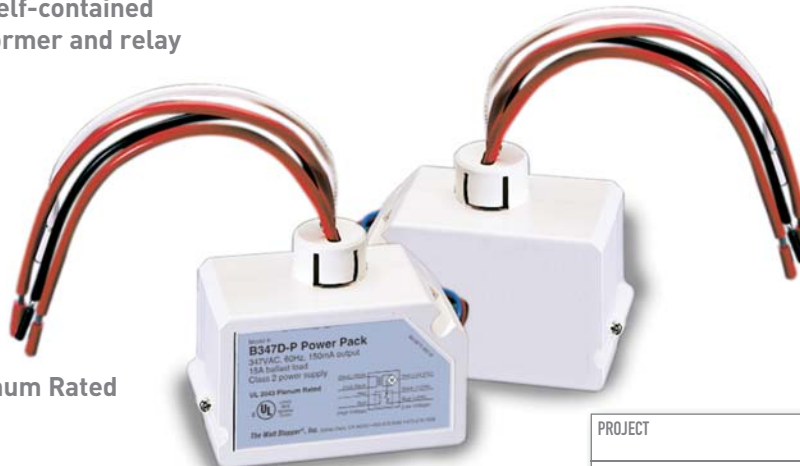
Catalog No.	Description/Type	Input Voltage	Load Ratings		Output
			Ballast (A)	Motor (HP)	
<input type="checkbox"/> BZ-480-E	Power Pack External Mount	480 VAC; 60 Hz	6	1	24 VDC; 150 mA*
<input type="checkbox"/> BZ-480-I	Power Pack Internal Mount	480 VAC; 60 Hz	6	1	24 VDC; 150 mA*

\* 130mA with relay connected

# B347D-P Power and Auxiliary Relay Packs

Fully self-contained transformer and relay

Snaps in for easy installation



UL 2043 Plenum Rated

Essential component for ceiling mounted occupancy sensor

PROJECT
LOCATION/TYPE

## Product Overview

### Description

WattStopper B347D-P Power Packs provide 24VDC operating voltage to all WattStopper 24VDC occupancy sensors and daylighting controllers. Auxiliary Relay Packs are similar to power packs, but only have an isolated relay and no transformer power supply.

### Operation

B347D-P Power Packs consist of a transformer and high-current relay combined in one small, powerful package. The transformer has a primary high voltage input and a secondary, low voltage output (24 VDC, 114 mA with relay connected). The secondary voltage provides operating power to WattStopper sensors. When the occupancy sensors detect motion or daylighting sensors detect inadequate ambient light, they electrically close an internal circuit, which sends 24 VDC back to the Power or Auxiliary Relay Packs that control the lighting system.

### Plenum Rated

The B347D-P Power Pack is UL 2043 plenum rated with teflon coated low voltage leads and plenum rated plastic. This means that the Power Packs do not need to be installed in the junction box, but can be installed in the plenum. They are housed in ABS, UL-rated 94V-0 plastic enclosures.

### Applications

WattStopper Power and Auxiliary Relay Packs are designed to be flexible enough to control almost any lighting or HVAC load. For example, B347D-P Power Packs can control lighting circuits, self-contained air conditioners, pumps, fans, motors, VAV systems, motorized damper controls and setback thermostats. They are excellent for any application which requires high voltage switching through low voltage controls. By linking power packs and sensors, an almost unlimited number of configurations can be obtained.

## Features

- Self-contained transformer relay system
- Available for 347 volt systems
- Capable of switching up to 20 Amps of electrical load (ballast) at 120/277V for S120/277/347 models, 15A at 347V for all models
- Low voltage leads are teflon coated for use in plenum applications
- Can be used as a low voltage switch for other applications or as stand-alone, low voltage switch
- 1/2 inch snap-in nipple attaches to standard electrical enclosures via 1/2 inch knockouts
- Installation in junction box not required
- Qualifies for ARRA-funded public works projects

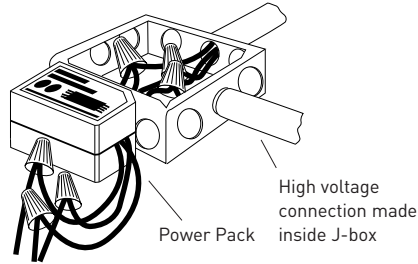


# Specifications

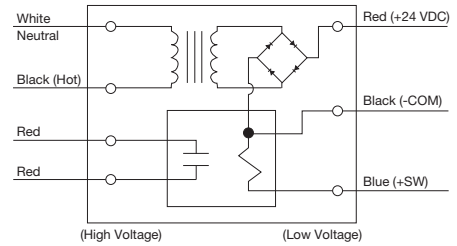
- Secondary voltage of 24 VDC
- Secondary output of 150 mA, 114 mA with relay connected
- Low voltage leads are rated for 300 volts
- UL-rated 94V-0 plastic enclosure
- UL 2043 plenum rated
- Dimensions: 1.7" x 2.91" x 1.62" (43.2mm x 73.9mm x 41.1mm) H x W x D with a 1/2" (12.7mm) snap-in nipple
- UL and cUL listed
- Five year warranty

# System Layout

## Power Pack Installation

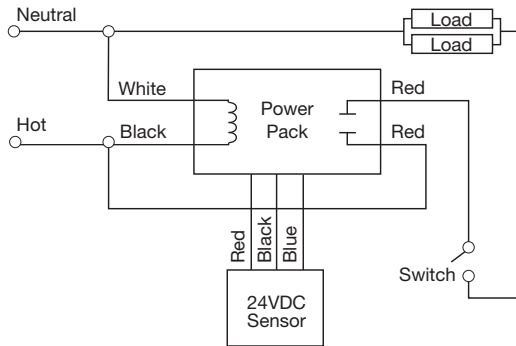


## Power Pack Schematic

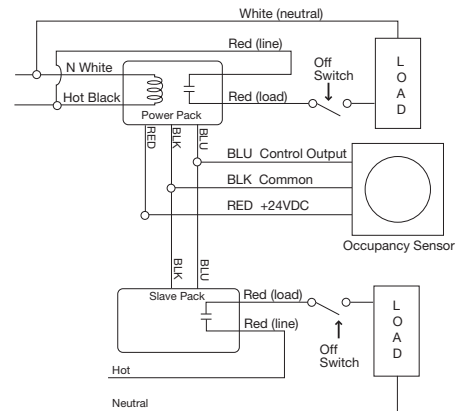


# Wiring Diagrams

## Power Pack with Ceiling Sensor



## Auxiliary Relay Pack with Sensor



# Ordering Information

Catalog No.	Description	Input Voltage	Load Ratings			Output
			Ballast(A)	Incan(A)	Motor(HP)	
<input type="checkbox"/> B347D-P	Power Pack	347 VAC; 60 Hz	15	-	-	24 VDC; 150 mA*
<input type="checkbox"/> S120/277/347E-P	Aux. Relay Pack	120/277/347 VAC; 60 Hz	20/20/15	13/-/-	1/-/-	
<input type="checkbox"/> S120/277/347E-P-U						

\*Output is 150 mA before relay is connected and 114 mA after relay is connected.  
 Power packs are white; auxiliary relay packs are black.  
 -U = ARRA compliant. Product produced in the U.S.

# Installation Notes

1. All WattStopper power packs should be installed in accordance with state, local, and national electrical codes and requirements.
2. Power packs are designed to attach to existing or new electrical enclosures with 1/2 inch knockouts (check electrical codes in your area).
3. Most applications require UL listed, 18 AWG, 3-conductor, Class 2 cable for low voltage wiring. For plenum return ceilings use UL listed plenum-approved cables.



# Special Power Packs & Supplies

PROJECT
LOCATION/TYPE

## Product Overview

## AT Power Supply

### Description

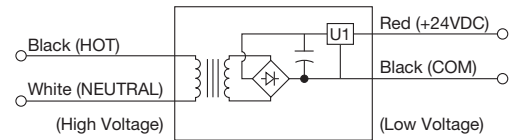
WattStopper has several power packs and power supplies that fill the needs of a variety of special applications. These products help to make lighting control installations more cost efficient and flexible.

### AT Power Supplies

The AT-120 and AT-277 power supplies provide up to 800 mA of 24 VDC to WattStopper occupancy sensors and control products. They contain a transformer and no relay. WattStopper power and/or auxiliary packs are needed to do the switching. The AT-120 and AT-277 are useful for applications with a large number of sensors such as open offices and warehouses.

### AT Specifications & Wiring

- Up to 800 mA of 24 VDC power
- Secondary voltage of 24 VDC
- Housed in NEMA 1 enclosure



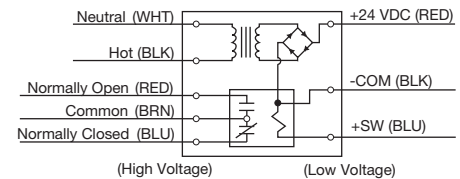
## Form C Power Pack

### Form C Power Packs

The Form C power packs contain a single pole, double-throw isolated relay with a normally open and normally closed output. These power packs can be used with a standard occupancy sensor to interface with HVAC or other systems. Special attention needs to be made to the load ratings as they vary and are significantly lower than standard power packs.

### Form C Specifications & Wiring

- Up to 100 mA of 24 VDC power before relay is connected; 64 mA after relay is connected
- Secondary voltage of 24 VDC
- UL rated 94V-0 plastic enclosure with snap-in installation



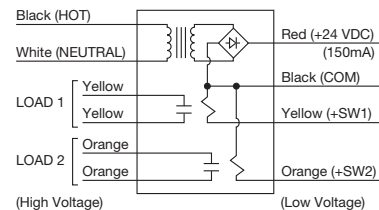
## 2 Relay Power

### 2 Relay Power Packs

The WattStopper C-Series power packs contain 2 isolated relays. These power packs can be used where 2 circuits need to be controlled at the same point. They provide a convenient alternative to using 2 power packs thus reducing installation time and costs. They are also useful where installation space is limited.

### 2 Relay Specifications & Wiring

- Up to 150 mA of 24 VDC power before relays are connected; 114 mA after single relay is connected, 78 mA when both relays are connected
- Secondary voltage of 24 VDC
- Housed in 4" metal junction box



## Ordering

Catalog No.	Description/Type	Input Voltage	Load Ratings			Output
			Ballast (A)	Incan (A)	Motor (HP)	
<input type="checkbox"/> AT-120	Power Supply	120 VAC, 60 Hz	-	-	-	24 VDC; 800 mA
<input type="checkbox"/> AT-277	Power Supply	277 VAC, 60 Hz	-	-	-	24 VDC; 800 mA
<input type="checkbox"/> A120C-P	Form C Power Pack	120 VAC, 60 Hz	8NO/5NC	5NO/3NC	1NO/.25NC	24 VDC; 100 mA*
<input type="checkbox"/> A277C-P	Form C Power Pack	277 VAC, 60 Hz	6NO/3NC	5NO/2.5NC	2NO/.5NC	24 VDC; 100 mA*
<input type="checkbox"/> C120E-P	2 Relay Power Pack	120 VAC, 60 Hz	20**	13**	1**	24 VDC; 150 mA
<input type="checkbox"/> C277E-P	2 Relay Power Pack	277 VAC, 60 Hz	20**	-	-	24 VDC; 150 mA

\*Contains an isolated relay with normally open (NO) and normally closed (NC) contacts. \*\*Rating per relay.

Output shown is before relay connection





## WALL SWITCH SENSOR DIMMERS

Occupancy sensors maximize energy savings by turning lighting on and off. Extend those savings by managing light levels whenever lighting is on.

WattStopper's wall switch sensor dimmers provide both control strategies in a single form factor for greater convenience.





# CD-250 PIR Dimming Multi-way Wall Switch Vacancy Sensor

Manual-on/automatic-off control with full-range dimming and multi-way capability

Lighted pushbutton for visibility in darkened rooms



Ideal dimming and occupancy control for any small room with incandescent lighting

Adjustable time delay

PROJECT

LOCATION/TYPE

## Product Overview

### Description

The CD-250 PIR Dimming Multi-way Vacancy Sensor provides preset dimming control and automatic lighting shutoff for a variety of applications including those with multiple switch locations. It is engineered to comply with specific provisions of California's Title 24-2013 energy code.

### Operation

The CD-250 operates as a manual-on sensor. Users must press the pushbutton to turn on lighting. Once lighting is on, the dimming level may be adjusted by pressing and holding the pushbutton. The CD-250 employs PIR technology to sense the difference between the infrared energy from a person in motion and the background space. It keeps lighting on as long as motion is detected and provides automatic shutoff, following a user-selected time delay, when motion is no longer detected. Users may turn the lighting off manually. The next time the CD-250 is turned on, the lighting will come on to the last light level.

### Dimming and Multi-way Control

The CD-250 can dim incandescent loads from a minimum level of 10% to a maximum level of 100%. When the pushbutton is pressed and held, the CD-250 will fade the lights up and down in a continuous cycle until the pushbutton is released. The dimming direction may be reversed by momentarily releasing the pushbutton and then pressing it again.

Lighting may be controlled from multiple locations by connecting additional CD-250s and/or RH-253 Single Pole Momentary Switches. When additional CD-250s are connected, each device provides full on/off and dimming control. Connected RH-253s provide on/off control only.

### Applications

The CD-250 is ideal for bedrooms, living rooms, dining rooms, family rooms and other areas requiring dimming control from one or more locations coupled with automatic shutoff. It helps homeowners and facility managers maximize energy savings and enjoy the most pleasing light level for a given task.

## Features

- Replaces single- or multi-pole switches or incandescent dimmers
- Provides multi-way control when used with other CD-250s or RH-253s
- Adjustable time delay, 15 seconds to 30 minutes
- Lighted switch for visibility in darkened rooms
- Low-profile styling
- Choice of five decorator colors; lens is color matched to device
- Soft-start technology to prolong lamp life
- Air gap isolation switch for safe relamping
- Compatible with decorator wall plates
- CA Title 24 compliant

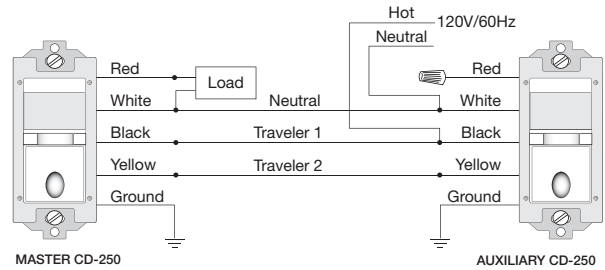
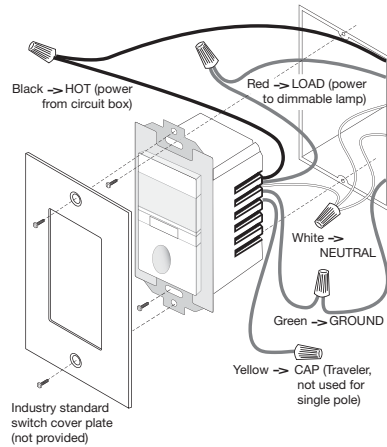


# Specifications

- 120 VAC, 60 Hz; neutral required
- Operates incandescent lighting from 25-500W
- Time delay settings: 15 seconds, 5, 15, 30 minutes
- PIR coverage: 180°, 600 ft<sup>2</sup> (56 m<sup>2</sup>)
- 2.67" x 1.73" x 1.77" (68mm x 44mm x 45mm) L x W x D
- Operating conditions: 32-104°F (0-40°C), 95% RH, non-condensing; for indoor use only
- UL listed
- Five year warranty

# Installation & Wiring

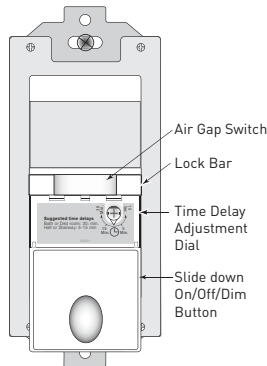
## Wiring Diagrams



Up to four multi-location sensors may be connected together. For details on connecting RH-253s for multi-location control, see the RH-253 cut sheet.

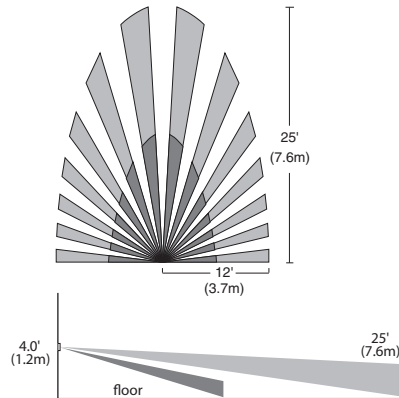
# Controls & Coverage

## Product Controls



To access adjustment dial, gently pull the lock bar away from the switch face and slide the on/off button down.

## Coverage Pattern



# Ordering Information

Catalog No.	Color	Description	Voltage	Load Rating	Coverage
<input type="checkbox"/> CD-250-W	White	PIR Dimming	120 VAC, 60 Hz	25-500W incandescent lighting	180°, max. 600 ft <sup>2</sup> (56 m <sup>2</sup> )
<input type="checkbox"/> CD-250-I	Ivory	Multi-Way Wall			
<input type="checkbox"/> CD-250-LA	Light Almond	Switch Vacancy			
<input type="checkbox"/> CD-250-A	Almond	Sensor			
<input type="checkbox"/> CD-250-B	Black				

Order wall plate separately.



# RD-250 PIR Dimming Multi-way Wall Switch Convertible Occupancy Sensor

Automatic-off control with full-range dimming and multi-way capability

Adjustable time delay and light level sensor

Lighted pushbutton for visibility in darkened rooms



Ideal dimming and occupancy control for any small room with incandescent lighting

Choice of manual-on or automatic-on operation

PROJECT

LOCATION/TYPE

## Product Overview

### Description

The RD-250 PIR Dimming Multi-way Convertible Occupancy Sensor provides preset dimming control, automatic lighting shutoff and optional automatic lighting activation.

### Operation

The RD-250 operates either as a manual- or automatic-on sensor. When in manual-on mode, users must press the pushbutton to turn on lighting. Once lighting is on, the dimming level may be adjusted by pressing and holding the pushbutton. The RD-250 employs PIR technology to sense the difference between the infrared energy from a person in motion and the background space. It keeps lighting on as long as motion is detected and provides automatic shutoff, following a user-selected time delay, when motion is no longer detected. Users may turn the lighting off manually. The next time the RD-250 is turned on, the lighting will come on to the last light level.

When automatic-on operation has been selected, the adjustable light level sensor may be set to prevent lights from turning on automatically if sufficient daylight is present.

## Features

- Replaces single- or multi-pole switches or incandescent dimmers
- Provides multi-way control when used with other RD-250s or RH-253s
- Adjustable time delay, 15 seconds to 30 minutes
- If enabled, light level sensing prevents automatic-on when adequate daylight exists
- Lighted switch for visibility in darkened rooms

## Dimming and Multi-way Control

The RD-250 can dim incandescent loads from a minimum level of 10% to a maximum level of 100%. When the pushbutton is pressed and held, the RD-250 will fade the lights up and down in a continuous cycle until the pushbutton is released. The dimming direction may be reversed by momentarily releasing the pushbutton and then pressing it again.

Lighting may be controlled from multiple locations by connecting additional RD-250s and/or RH-253 Single Pole Momentary Switches. When additional RD-250s are connected, each device provides full on/off and dimming control. Connected RH-253s provide on/off control only.

## Applications

The RD-250 is ideal for bedrooms, living rooms, dining rooms, family rooms and senior living facilities requiring dimming control in one or more locations coupled with automatic shutoff. It helps occupants maximize energy savings and enjoy the most pleasing light level for a given task.

- Low-profile styling
- Choice of five decorator colors; lens is color matched to device
- Soft-start technology to prolong lamp life
- Air gap isolation switch for safe relamping
- Compatible with decorator wall plates
- Compliant with Nonresidential CA Title 24 requirements

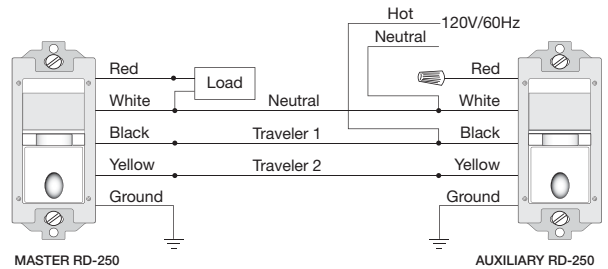
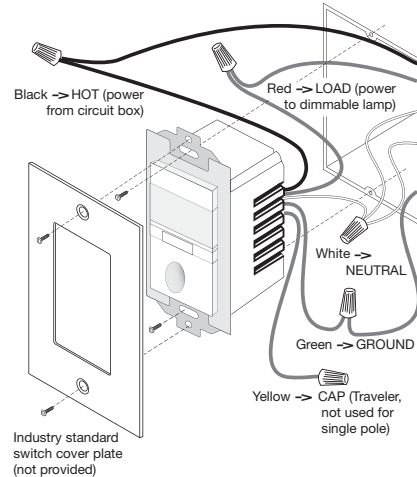


## Specifications

- 120 VAC, 60 Hz; neutral required
- Operates incandescent lighting from 25-500W
- Time delay settings: 15 seconds, 5, 15, 30 minutes
- Adjustable light level setting from 10-150 fc (100-1500 lux) for daylight sensing
- PIR coverage: 180°, 600 ft<sup>2</sup> (56 m<sup>2</sup>)
- 2.67" x 1.73" x 1.77" (68mm x 44mm x 45mm) L x W x D
- Operating conditions: 32-104°F (0-40°C), 95% RH, non-condensing; for indoor use only
- UL listed
- Five year warranty

## Installation & Wiring

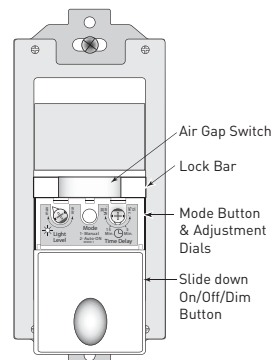
### Wiring Diagrams



Up to four multi-location sensors may be connected together. For details on connecting RH-253s for multi-location control, see the RH-253 cut sheet.

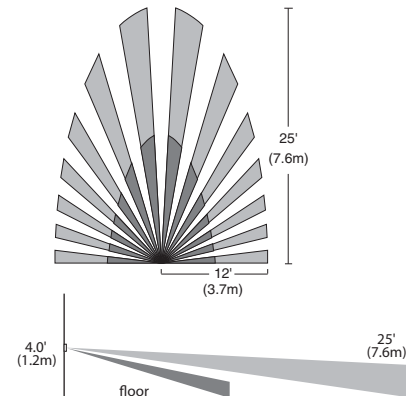
## Controls & Coverage

### Product Controls



To access adjustment dials, gently pull the lock bar away from the switch face and slide the on/off button down.

### Coverage Pattern



## Ordering Information

Catalog No.	Color	Description	Voltage	Load Rating	Coverage
<input type="checkbox"/> RD-250-W	White	PIR Dimming	120 VAC, 60 Hz	25-500W incandescent lighting	180°, max. 600 ft <sup>2</sup> (56 m <sup>2</sup> )
<input type="checkbox"/> RD-250-I	Ivory	Multi-Way Wall			
<input type="checkbox"/> RD-250-LA	Light Almond	Switch Convertible			
<input type="checkbox"/> RD-250-A	Almond	Occupancy Sensor			
<input type="checkbox"/> RD-250-B	Black				

Order wall plate separately.

# PW-100D Passive Infrared Dimmable Wall Switch Occupancy Sensor

High sensitivity and dense coverage for exceptional performance

Defaults to Manual-ON operation for maximum energy savings

Color-matched lens and low profile for appealing design



Pushbutton dimming control and optional locked preset level for many lighting types

Selectable operation, walk-through, test and presentation modes for increased energy savings and convenience

Part of a comprehensive line of PIR, Ultrasonic and Dual Technology wall switch sensors

PROJECT

LOCATION/TYPE

## Product Overview

### Description

The PW-100D passive infrared (PIR) dimmable wall switch sensor can turn light OFF and ON based on occupancy. It is characterized by high sensitivity to small and large movements, appealing aesthetics, and a variety of features.

### Operation

The PW-100D replaces existing wall switches and fits in a single gang junction box. Factory default operation is for Manual-ON. It uses advanced PIR technology to detect occupancy and keep lighting on when it is needed. Once the space is vacated and the time delay elapses, lights automatically fade OFF. The ramp and fade times can be fast or slow. DIP switch settings allow for control options including Auto-ON to the last used level or a locked preset level, walk-through and test modes.

## Features

- Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
- Zero-crossing for long relay life
- Vandal resistant lens combines precise coverage with durability
- Choice of Manual-ON or Auto-ON operation
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy adjustments
- Selectable audible and/or visual alerts for impending shutoff
- Can dim lights to any level without affecting the preset level
- Preset ramp and fade times
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- LED indicates occupancy detection
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- 2-wire and 3-wire models available for applications with or without neutral wire
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates

## Dimming Control

The PW-100D can dim lighting from a minimum level of 10% to full output. When the pushbutton is pressed and held, lighting will ramp up or dim down. The dimming direction is reversed when the pushbutton is momentarily released and then pressed and held again. To save energy and increase lamp life, the PW-100D is shipped with a factory preset of 85%. This preset level may be changed to any lighting level.

## Applications

The PW-100D sensor is well suited for small, enclosed spaces with clear line of sight of the occupant. Common applications include small offices and small conference rooms.

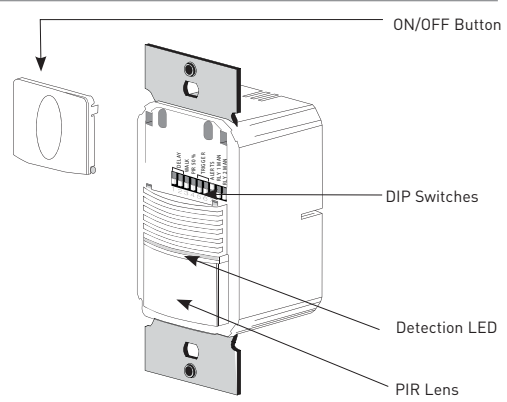


## Specifications

- 120/277 VAC; 50/60 Hz
  - @ 120 VAC, 0-600 W
  - @ 277 VAC, 0-1200 W
- PW-100D: Incandescent or two-wire fluorescent ballast
- PW-101D: Incandescent, MLV, ELV, cold cathode or two-wire fluorescent ballast
- Time delays: 5, 10, 15, 20, 25 or 30 minutes, walk-through, test-mode
- Fade rates: Ramp on, 1.5 seconds; fade off, 5 seconds
- Coverage: Major motion 35' x 30'  
Minor motion 20' x 15'
- Sensitivity adjustment: PIR (high/low)
- Dimensions: 2.73" x 1.76" x 1.83"  
(69.3mm x 44.7mm x 46.5mm) L x W x D
- UL and cUL listed
- Five year warranty

## Controls & Settings

### Product Controls



### DIP Switch Settings

Time Delay	1	2	3
Test/20 min	↓	↓	↓
5 minutes	↓	↑	↑
10 minutes	↓	↑	↑
15 minutes	↓	↑	↑
20 minutes	↓	↑	↑
25 minutes	↑	↑	↑
30 minutes	↑	↑	↑
Service	↑	↑	↑

Walk-Through	4
Enabled	↑
Disabled	↓

Time Delay	1	2	3	4
Preset Light Level	1	2	3	4
Walk-Through	1	2	3	4
Audible Alerts	1	2	3	4
PIR Sensitivity	1	2	3	4

PIR Sensitivity	5
Low, 50%	↑
High	↓

Preset Light Level	6
Locked level*	↑
Last level set	↓

Audible Alert	7
Enabled	↑
Disabled	↓

ON Mode	8
Manual On	↑
Auto On	↓

Load Type	9
Fluorescent	↑
Incandescent	↓

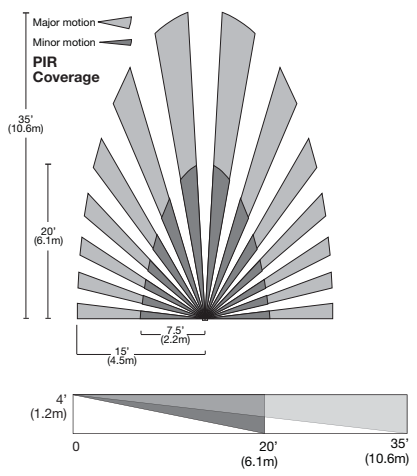
Service bypasses occupancy & light level functions. Control the load manually using the ON/OFF button.

\*Factory default 85%

↑=ON ↓=OFF ◀=Factory Setting

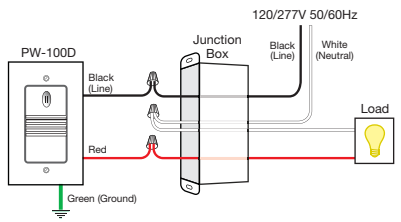
## Coverage & Wiring

### Coverage Pattern

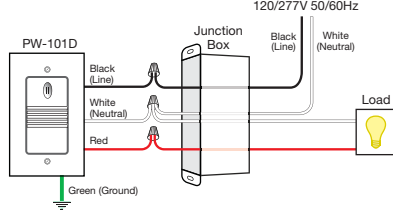


\* For best performance, WattStopper recommends using this sensor in spaces no larger than 15' x 12'.

### Wiring Diagrams



Wiring for PW-100D with no neutral wire run to the dimmer.



Wiring for PW-101D with a neutral connection.

## Ordering Information

Catalog No.	Color	Voltage	Load Rating
<input type="checkbox"/> PW-100D-W	White	120/277 VAC; 50/60 Hz	@ 120 VAC, 0-600 W Incandescent or 2-wire fluorescent dimming ballast (Advance Mark 10 or equivalent) @ 277 VAC, 0-1200 W 2-wire fluorescent dimming ballast (Advance Mark 10 or equivalent)
<input type="checkbox"/> PW-100D-LA	Lt. Almond	2-wire sensor; no neutral connection	
<input type="checkbox"/> PW-100D-I	Ivory		
<input type="checkbox"/> PW-100D-G	Grey		
<input type="checkbox"/> PW-100D-B	Black		
<input type="checkbox"/> PW-101D-W	White	120/277 VAC; 50/60 Hz	@ 120 VAC, 0-600 W Incandescent, MLV, ELV, cold cathode or 2-wire fluorescent dimming ballast (Advance Mark 10 or equivalent) @ 277 VAC, 0-1200 W 2-wire fluorescent dimming ballast (Advance Mark 10 or equivalent)
<input type="checkbox"/> PW-101D-LA	Lt. Almond	3-wire sensor; requires neutral connection	
<input type="checkbox"/> PW-101D-I	Ivory		
<input type="checkbox"/> PW-101D-G	Grey		
<input type="checkbox"/> PW-101D-B	Black		

Order wall plate separately.



## PLUG LOAD CONTROLS

Plug loads account for an increasing percentage of the total energy consumed by buildings—as much as 15-20% in commercial buildings and much of this energy is wasted. According to the EPA, “energy consumption by office equipment represents the fastest growing use of electricity in the country.”

WattStopper’s stand alone Isolé plug load controls end the energy waste by turning plug loads on and off based on occupancy.









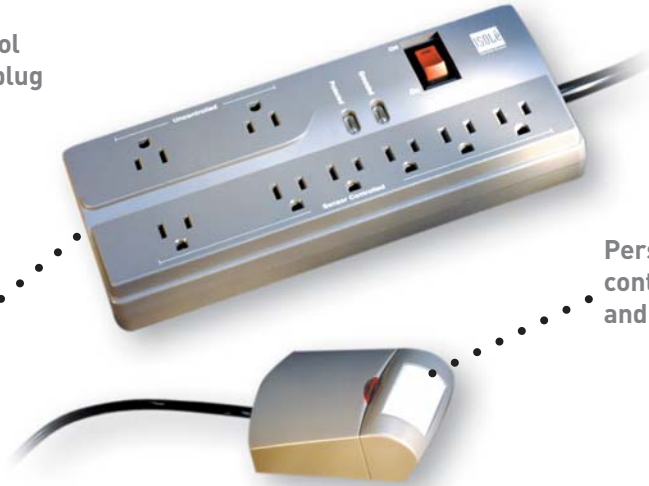
# Isolé IDP-3050 Power Strip with Personal Sensor

Energy-saving control system for desktop plug load equipment

Six outlets are controlled by occupancy; two outlets are uncontrolled

Eight-outlet power strip with surge protection

Personal sensor signals controlled equipment on and off based on occupancy



PROJECT
LOCATION/TYPE

## Product Overview

### Description

The Isolé IDP-3050 is an energy-saving control system that provides maximum surge and noise suppression while keeping plug load equipment off when there is no occupancy. It consists of an eight-outlet power strip and a personal occupancy sensor.

### Operation

The IDP-3050 turns plug load devices on and off based on occupancy. The personal sensor connects to the eight-outlet power strip with the attached cable. The power strip contains six outlets controlled by occupancy and two outlets that are uncontrolled. The IDP-3050 automatically turns all controlled devices on when the workspace is occupied, and off when the workspace has been unoccupied for the user-defined time delay. Uncontrolled devices remain on regardless of occupancy.

### Surge Suppression

The power strip provides a high degree of surge suppression that protects connected equipment against threats like power surges, lightning strikes and voltage spikes. It features a resettable circuit breaker and two LEDs that indicate that the outlet is wired and grounded properly and the surge protection is functioning.

### Application

The IDP-3050 is ideal for controlling task lighting and computer monitors. Additional devices for the controlled outlets include space heaters, fans and other equipment that can be turned off during unoccupied periods. Devices such as CPUs and fax machines should be plugged into the uncontrolled outlets. Applications include workstations, open office cubicles, offices and engineering stations.

## Features

### Power Strip

- Eight outlets; six controlled, two uncontrolled
- Surge and noise suppression protects desktop equipment
- Ground protected for safety; will not operate without a grounded outlet
- Two LEDs to indicate: 1) correct wiring and grounding; 2) surge protection is functioning
- Installation requires no hardwiring
- Flat offset plug for wire management
- One uncontrolled outlet and one controlled outlet are wall-transformer-enabled
- Plugs into a standard three-prong outlet

### Personal Sensor

- Uses latest passive infrared (PIR) technology to detect occupancy
- User-adjustable time delay of 30 seconds to 30 minutes
- Multi-level Fresnel lens for superior occupancy detection
- 120° coverage, up to 300 square feet
- ASIC technology reduces components and enhances reliability
- Instantaneous response time



# Specifications

## Power Strip:

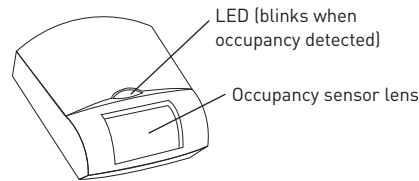
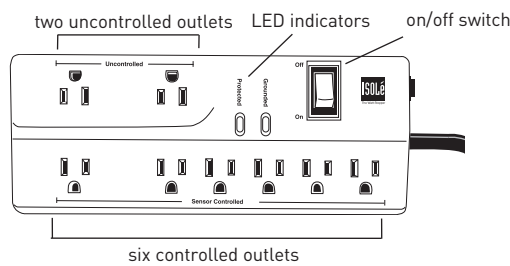
- Electrical rating: 120VAC, 12A, 50/60 Hz
- 12A dry contact relay
- 6 ft. black cord
- Transformer provides power to sensor
- Mounts with screws or double-sided tape
- UL 1449 3rd Edition rating: 600V
- Circuit: High-energy, multistage hybrid
- Noise filtration: 0-25db (94.38%)
- Joule rating: 740 joules
- Maximum surge amperage: 48,000 Amps
- Protection modes: 500V L-N, 600V L-G, 600V N-G
- Response time: instantaneous
- Let-through voltage: 140V
- Initial clamping voltage: 200V
- UL and cUL listed
- Five year warranty

## Personal Sensor:

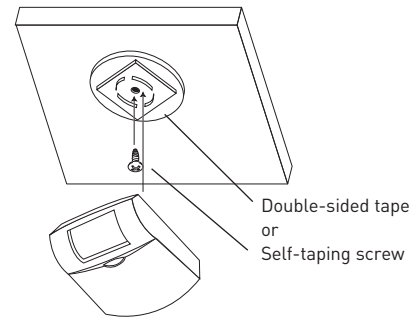
- 9 ft. connector cable
- Supply voltage: 12 VDC
- 30 sec. to 30 min. Time Delay via Trim Pot (30 min. default)
- UL and cUL listed
- Five year warranty

# Controls & Mounting

## Product Controls



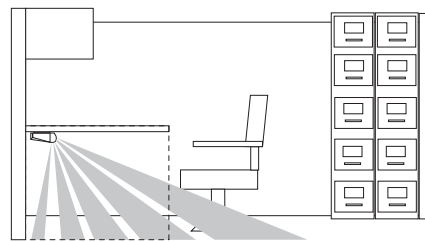
## Personal Sensor Mounting



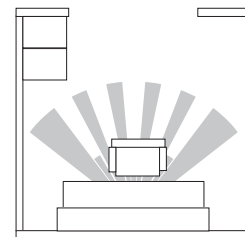
Sensor mounts under desk or binder bin with double-sided tape or self-taping screw

# Coverage

## Side Coverage Pattern



## Overhead Coverage Pattern



# Ordering Information

Catalog No.	Description
<input type="checkbox"/> IDP-3050-A	Eight-outlet power strip with personal sensor
<input type="checkbox"/> DI-110	Auto-on personal sensor

Products are dark grey



## OUTDOOR SENSORS

Controlling lights outdoors is just as important as indoors. With WattStopper's outdoor motion sensors, building owners not only save energy, they achieve a safer, more secure environment.

Outdoor sensors turn lights on when a person or vehicle enters the area, and off after the space is vacated. Designed for use in all weather conditions, the raintight and weatherproof sensors mount anywhere—under an eave or on a wall without overhead covering.







# EW Outdoor Motion Sensor

Optional model with lampholders

Rated for use in temperature range of -40° to 130°F

Weatherproof and raintight for reliable performance



Isolated relay enables interface with security systems or other loads

Adjustable light level and time delay settings

270 degree field of view

PROJECT

LOCATION/TYPE

## Product Overview

### Description

WattStopper's EW outdoor motion sensors provide occupancy based control of outdoor lighting. Raintight and rated for -40°F to 130°F, EW sensors perform reliably in all weather conditions.

### Operation

EW sensors operate at line voltage and can be mounted onto a standard, outdoor junction box. Utilizing advanced PIR technology, the sensors detect the difference between infrared energy in motion and the background space to turn lighting on when a person or vehicle enters the coverage area. After the area is vacated and the time delay elapses, lighting automatically turns off. The EW's dual PIR detectors and three level lens increase the detection density as well as the accuracy of motion detection.

### Lampholders

For situations when a complete outdoor sensor package is desired, the EWF models include durable, polycarbonate lamp holders that accept PAR 20 or 38 lamps. They are UV and impact resistant and are impervious to weathering. The EWF features a unique dual-adjustment aiming system that allows the lamps to be angled and locked into position without the use of tools. The lamp holders' unique silicon seals allow them to be aimed above horizontal in damp or wet areas.

### Applications

Applications for commercial settings include walkways, parking lots, dock lighting and warehouses. Typical uses outside a home include garages, backyards, entrance ways and porches.

## Features

- Sensors can be mounted on walls, eaves, or ceilings for installation convenience
- 270° coverage
- Front rotates for easy coverage adjustment
- Precision, double-shot tooling with internal silicon gaskets prevents water and dust contamination
- No tools needed to aim or adjust lamp holders for speedier installation
- Optional override-ON to turn lights on remotely for the length of the time delay
- ON/OFF control based on daylight levels via adjustable light level setting
- Zero crossing circuitry reduces stress on the relay and results in increased sensor life
- ASIC enhances reliability and helps to eliminate false triggers
- Pulse Count Processing eliminates false triggers and provide RFI and EMI immunity
- Patented Voltage Drop Protection
- Solid state digital microprocessor offers increased reliability
- User-adjustable time delay from 12 seconds to 16 minutes

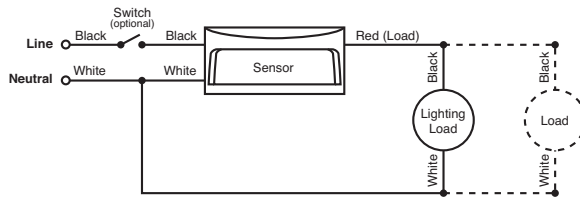


# Specifications

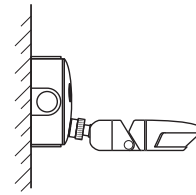
- 120 VAC or 277 VAC operation
- UL 773A rated raintight; UL 1571 rated for wet locations
- Operating temperature: -40° to 130°F (-40 to 54°C)
- Adjustable light level of 0.5 to 200 footcandles (5.4 - 2,152.8 lux)
- Isolated relay with N/O and N/C outputs; rated for 1 Amp @ 30 VDC/VAC (EW-200)
- 1/2" threaded nipple fits standard NEMA weatherproof fixture fitting
- Lamp holders use PAR 20 or 38 lamps, up to 150W each lamp\*
- Compatible with all electronic ballasts and PL lamp ballast systems
- Sensor dimensions: 6.7" x 3.2" x 2.2" (170mm x 80mm x 55mm)
- UL and cUL listed
- Five year warranty

# Wiring, Mounting & Installation

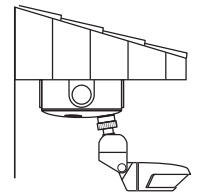
## Wiring Diagram



## Mounting Diagrams

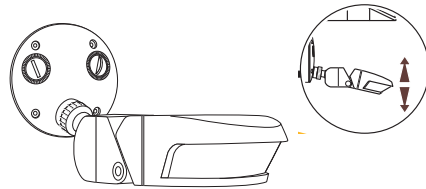


Wall or pole mounting

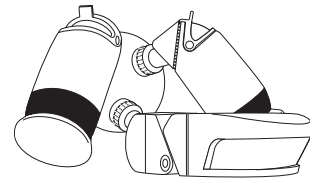


Ceiling/eave mounting

## Installation & Positioning

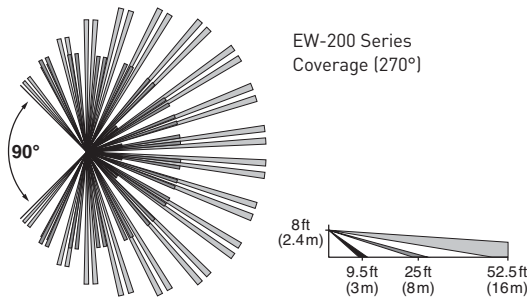


## Sensor with Lampholders



# Coverage

## Coverage Pattern



# Ordering Information

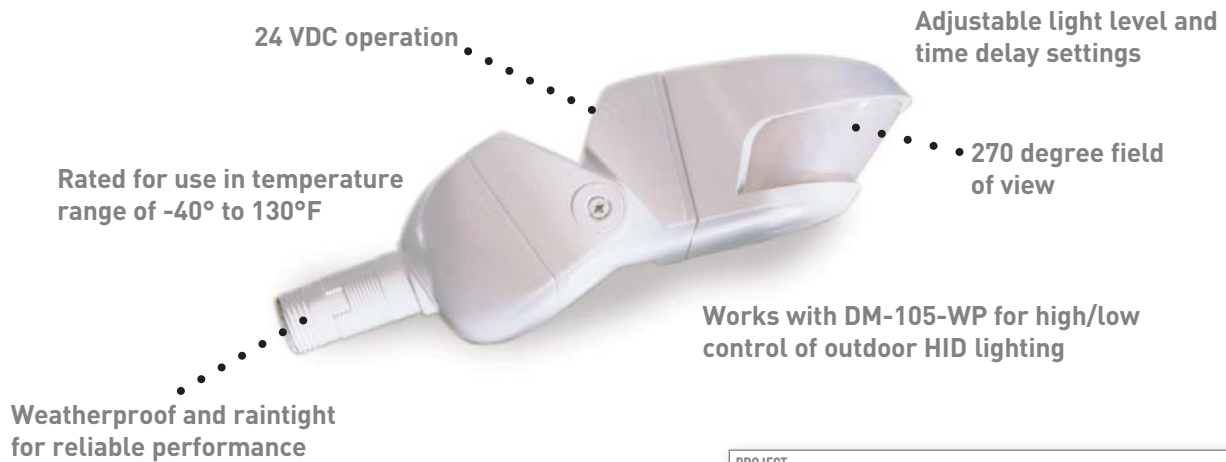
Catalog No.	Color	Voltage	Load Rating	Coverage	Features
<input type="checkbox"/> EW-200-120-W	Arctic white	120 VAC; 60 Hz	0-1000 watt ballast, tungsten	270°	Isolated relay
<input type="checkbox"/> EW-200-120-G	Arch. grey				
<input type="checkbox"/> EW-200-277-W	Arctic white	277 VAC; 60 Hz	0-1000 watt ballast	270°	Isolated relay
<input type="checkbox"/> EWF-205-120-W	Arctic white	120 VAC; 60 Hz	0-1000* watt ballast, tungsten	270°	Lamp holders

\*The sensors with lamp holders may use up to 300 watts for lamps even though they have a 0-1000 watt load rating





# EW Low Voltage Outdoor Motion Sensor



PROJECT
LOCATION/TYPE

## Product Overview

### Description

WattStopper's EW outdoor motion sensors provide occupancy based control of outdoor lighting. Raintight and rated for -40°F to 130°F, EW sensors perform reliably in all weather conditions.

### Operation

EW sensors operate at 24 VDC and are mounted onto a standard, outdoor junction box. Utilizing advanced passive infrared (PIR) technology, the sensors detect the difference between infrared energy in motion and the background space to turn lighting on when a person or vehicle enters the coverage area. After the area is vacated and the time delay elapses, lighting automatically turns off. The EW's dual PIR detectors and three level lens increase the detection density as well as the accuracy of motion detection.

### Applications

The low voltage EW sensors are ideal to use in conjunction with WattStopper DM-105-WP outdoor HID control module. Here, the EW allows the outdoor HID lighting to switch between high and low based on motion detection. Applications include walkways, parking lots, dock lighting and warehouses. When used with a power pack, the low voltage EW also provides an outdoor lighting control solution for areas where line voltage is not available or where the load is too large for a single line voltage sensor to handle.

## Features

- Sensors can be mounted on walls, eaves, or ceilings for installation convenience
- 270° coverage pattern
- Front rotates for easy coverage adjustment
- Precision, double-shot tooling with internal silicon gaskets prevents water and dust contamination
- Optional override-ON to turn lights on remotely for the length of the time delay
- User-adjustable time delay from 12 seconds to 16 minutes
- Adjustable light level setting allows users to set the level at which lighting will turn on upon occupancy
- ASIC enhances reliability and helps to eliminate false triggers
- Pulse Count Processing eliminates false triggers and provide RFI and EMI immunity
- Includes hardware for mounting sensor to standard 4" round outdoor junction box

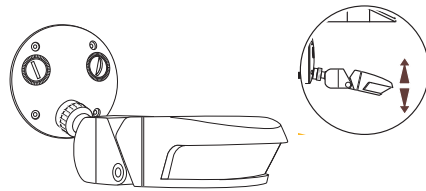


# Specifications

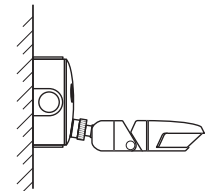
- Operating temperature range -40°F to +130°F
- UL 773A rated raintight
- 24 VDC operation
- 270° coverage
- Adjustable light level of 0.5 to 200 footcandles (5.4 - 2,152.8 lux)
- 1/2" threaded nipple fits standard NEMA weatherproof fixture fitting
- Sensor dimensions: 6.7" x 3.2" x 2.2" (170mm x 80mm x 55mm)
- UL and cUL listed
- Five year warranty

# Wiring & Installation

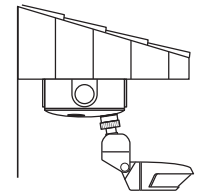
## Installation & Positioning



## Mounting Diagrams

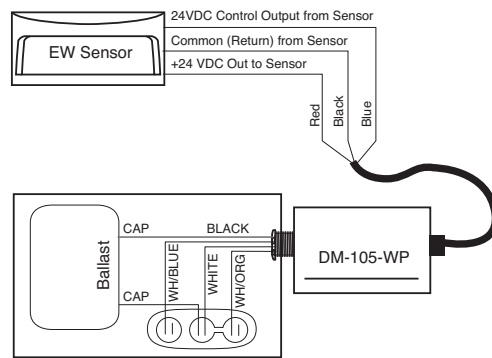


Wall or pole mounting

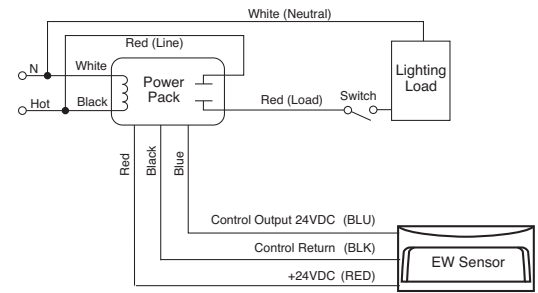


Ceiling/eave mounting

## EW Wiring with DM-105-WP HID Control

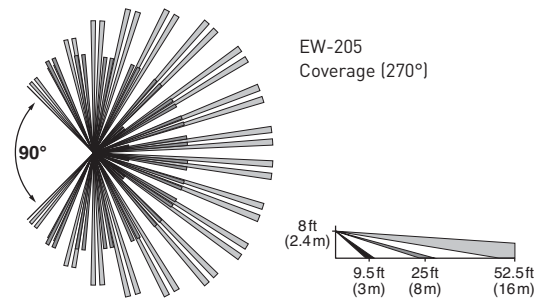


## EW and Power Pack Wiring



# Coverage

## Coverage Pattern



# Ordering Information

Catalog No.	Color	Voltage	Current	Coverage
<input type="checkbox"/> EW-205-24-W	Arctic white	24 VDC	7 mA	270°
<input type="checkbox"/> EW-205-24-G	Arch. grey	24 VDC	7 mA	270°



## ACCESSORIES

Specialty accessories include mounting brackets and cages for optimizing sensor installation.

In addition, take advantage of data loggers to identify expected energy savings from occupancy sensor installation.

Finally, consider card key switches for a unique energy-efficient control solution in spaces such as hospitality and healthcare guestrooms.

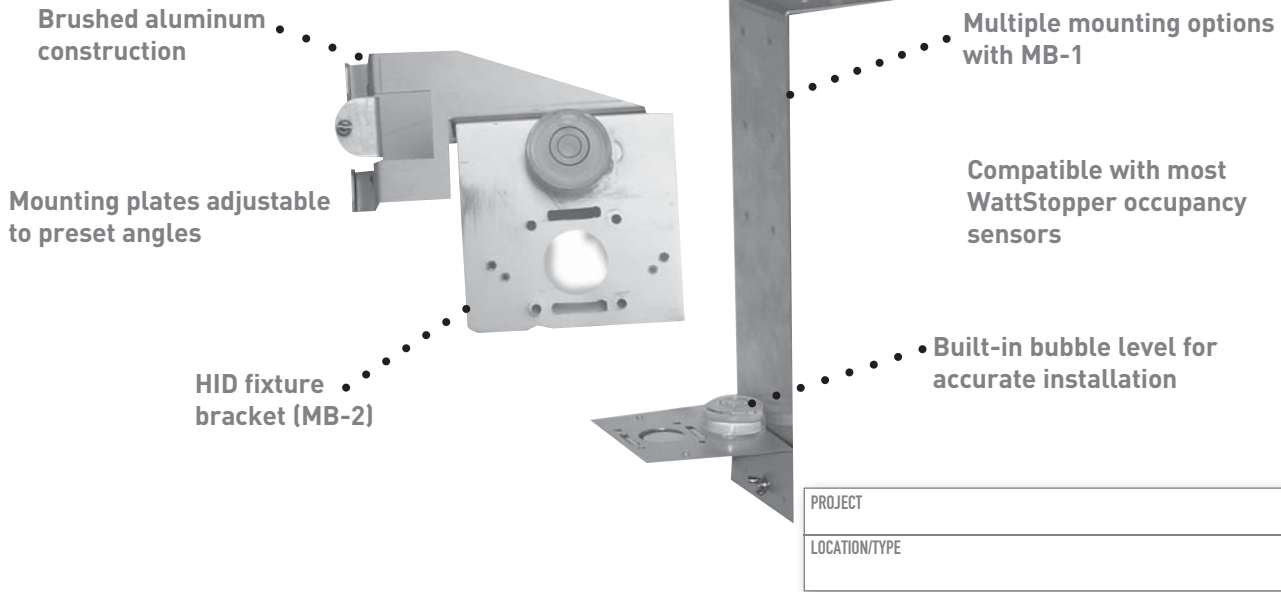








# MB Sensor Mounting Brackets



PROJECT
LOCATION/TYPE

## Product Overview

### Description

The MB-1 and MB-2 are durable mounting brackets used to install occupancy sensors in a variety of settings. Both brackets include adjustable mounting plates that allow sensor rotation to achieve the desired angle for optimal coverage. The brackets also include built-in bubble levels that afford the installer reliable guides to ensure the bracket is correctly positioned before adjusting the sensor. The MB-1 and MB-2 are constructed of aluminum with a clear powder coating finish.

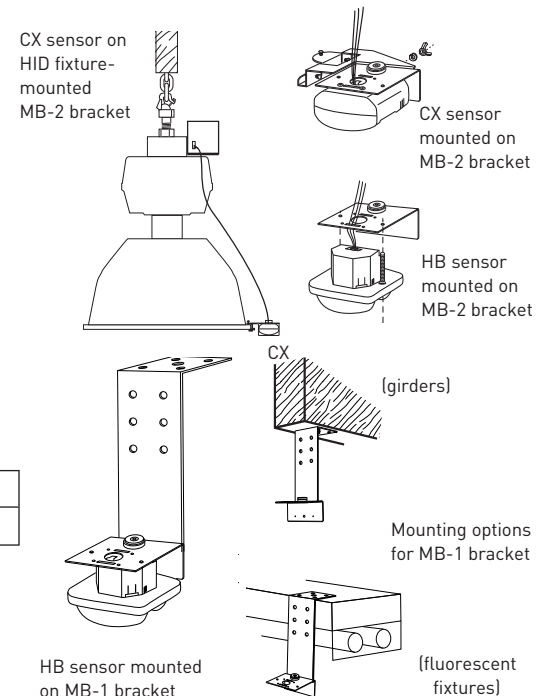
### MB-2

With the MB-2, sensors can be attached directly to High Intensity Discharge (HID) fixtures, mounting to the bottom rim of the HID reflector bell and secured to the rim with three clamping screws. Sensors recommended for use with the MB-2 bracket include the CX, CI and HB sensors. The MB-2 includes a J-shaped bracket and a sensor mounting plate. The MB-2 also comes with extension wires that can be used, if needed, to connect the attached sensor to the DM HID controller.

### MB-1

The MB-1 bracket enables users to mount sensors to a variety of structures, including fluorescent fixtures, walls, shelves, and girders. Among the many sensors compatible for use with the MB-1 bracket are the WPIR, CX, CI, and HB sensors. The MB-1 features an L-shaped bracket and a sensor mounting plate. When installed, this mounting plate can be rotated to direct the sensor toward the floor or along an aisle way at up to a 33° angle. In addition, the L-shaped bracket can be molded or reshaped to provide other mounting options.

### Bracket Diagrams



## Ordering Information

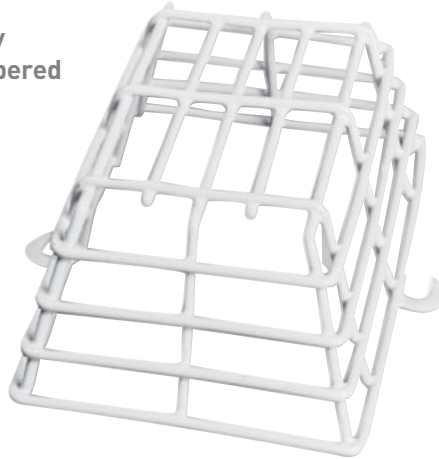
Catalog No.	Description
<input type="checkbox"/> MB-1	L-Plate Industrial Mounting Bracket
<input type="checkbox"/> MB-2	J-Plate HID Mounting Bracket



# Protective Cage for Occupancy Sensors

Helps prevent occupancy sensors from being tampered with or damaged

Constructed from strong, durable coated steel wire



Simple installation

## Product Overview

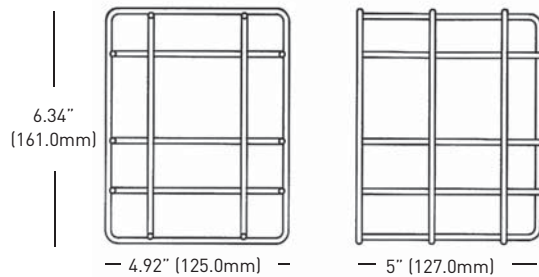
### Description

WattStopper protective wire cages enclose our occupancy sensors in a safe cage that prevents the units from being tampered with or damaged. The cages use a strong, durable, web-like design and are constructed with 3/16" coated steel wire. They are ideal for installation in gymnasiums, racquetball courts, classrooms and other institutional facilities, or any area susceptible to vandalism. They are low in cost and simple to install. By protecting occupancy sensors from damage, they also reduce maintenance costs.

PROJECT
LOCATION/TYPE

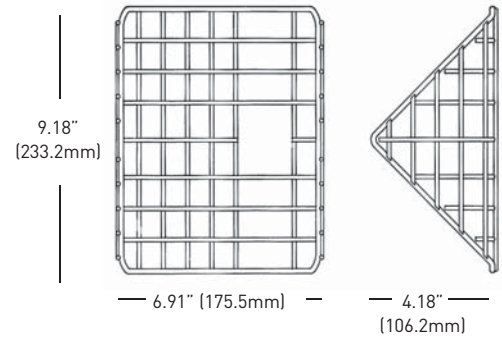
## Specifications

### WC-1



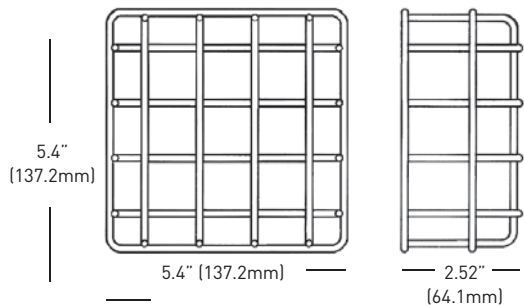
Fits: DT-200, CX-100, CB-100 for wall mounts

### WC-2



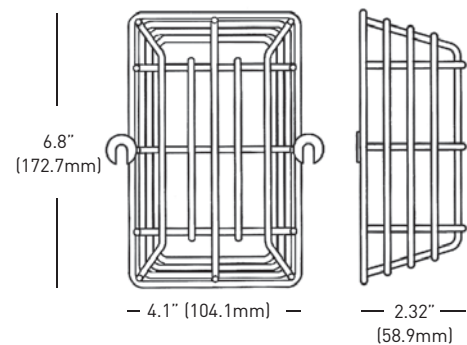
Fits: DT-200, CX-100, CB-100 for corner mounts

### WC-3



Fits: W-500A, W-1000A, W-2000A, W2000H, WT, CI-200, WPIR, DT-300, UT-300, CI-300

### WC-4



Fits: PW, UW, DW, WS, WN, WD, AS, TS

Catalog No.

<input type="checkbox"/> WC-1	<input type="checkbox"/> WC-2	<input type="checkbox"/> WC-3	<input type="checkbox"/> WC-4
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## Ordering Information

**WattStopper**  
www.wattstopper.com  
800.879.8585

Pub. No. 16605 rev. 10/2009



# IT-200 IntelliTimer® Pro Logger

Determines energy savings potential from occupancy sensor use

Adjustable light pipe observes lighting level

Logs when a space is occupied/vacant and when lighting is on/off



IT-ProSoft Software provides single-step data retrieval, storage, analysis, printing

Lithium battery with average life of 10 years

Small and lightweight for ease of use and portability

PROJECT

LOCATION/TYPE

## Product Overview

### Description

The IntelliTimer Pro (IT-200) is a revolutionary occupancy and light logger that establishes the energy saving potential when using occupancy sensors. With this versatile tool, spaces for lighting control use can be pinpointed and savings can be verified.

### Operation

The IT-200 records a log entry every time there is a change in either the occupancy status or lighting status and stores a detailed history of these events for retrieval by PC. It utilizes passive infrared technology to detect occupancy. It observes the light level through a clear, plastic light pipe to determine if lights are on or off. The logger distinguishes artificial lighting from natural lighting to give accurate "lights-on" readings. To log data, a user places the logger so that its lens has a clear view of the workspace and the light-pipe aims towards the nearest light fixture.

## Features

- Reports show graphs of occupancy and lighting and projects savings and statistical information
- Users set logging parameters for more accurate savings projection
- Powered by a lithium battery, with an extended life span of approximately ten years
- Small and lightweight for ease of use and portability
- Installs quickly and conveniently and requires no wiring

## Software

Included with the IT-200 is IT-ProSoft 2.0 software. In a single keystroke or mouse click, users can retrieve, store, analyze, or print data reports. These reports can be directly exported to Microsoft Excel® for further analysis. IT-ProSoft also enables users to operate multiple units in multiple locations while ensuring that each logger's identity and logging site information will be correctly merged. Once the logged information is retrieved, the unit can be reset and used to log information at another test site. Users may group logging data from different areas and automatically receive separate reports by utilizing the IT-200's bookmarking feature.

## Applications

The IT-200 offers a simple and cost-effective method of auditing any building space for wasted lighting. Since the logger is portable and battery operated, it is convenient to quickly move it from one location to download to a computer, and on to the next location for another logging session.

- IT-ProSoft 2.0 operates in six languages (English, French, German, Spanish, Swedish, and Norwegian) with appropriate currency/date/time formats, and energy and HVAC defaults
- Occupancy detection LED helps users confirm that logger is detecting motion in desired space
- Light level LED helps users set logger to identify the on and off lighting levels of different locations
- The LEDs work for a 60 second test period to preserve battery life

## Specifications

### InteliTimer Pro

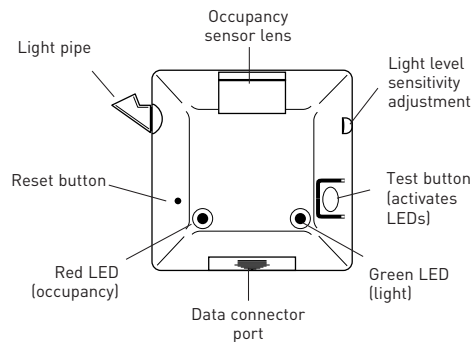
- Lithium battery operated. Average battery life ~ 10 years. Battery life indicator
- Test button activates LEDs for 60 seconds during which sensitivity is set and proper location for occupancy detection is verified
  - Red LED blinks during occupancy detection
  - Green LED blinks when lighting is detected
- Recessed reset switch
- Coverage up to 150 ft<sup>2</sup> (45.7m<sup>2</sup>)
- Stores a maximum of 4096 entries
- Stores site name to identify the area being monitored
- Connects to computer (PC) for data retrieval via serial connector cable
- Includes a serial to USB adapter for computers without serial ports

### IT-ProSoft Software

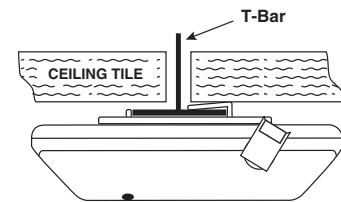
- Lists all log entries: entry number, date/time of entry, lighting status, occupancy status
- Users set logging parameters (energy cost/kWh, size of load, site name, sensor time-outs) for more accurate savings projection
- Reports show daily graphs of occupancy and lighting data, and lighting/occupancy analysis projecting savings and statistical information
- HVAC factor enables calculation of additional potential savings due to reduced HVAC load
- While connected, software can reset the logger in preparation for a new logging session
- Merge log capability combines outputs from multiple loggers monitoring a single location
- Compatible with Windows XP Professional with SP3, Windows Vista Business, and Windows 7 Professional (32 or 64-bit)
- Downloadable at [www.wattstopper.com](http://www.wattstopper.com)

## Controls & Installation

### Product Controls



### T-bar Ceiling Installation



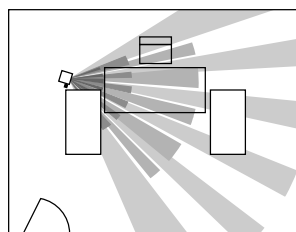
The IT-200 simply clips to a T-bar of a ceiling tile - no wiring is needed. For installation onto other surfaces, the unit comes with a flat bracket and double-stick tape.

## Coverage & Software Reports

### Logged Entries Report

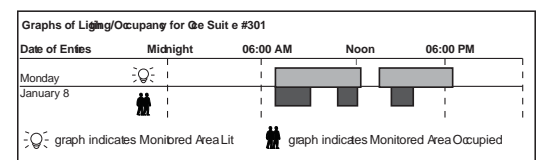
Entries: 42	Cost/kWhr: \$0.080
From: Sun, Aug 14, 1995 at 12:00:00 PM	HVAC Adder: 15%
To: Thu, Aug 18, 1995 at 9:32:00 PM	Load Size: 180W
1 Sun, Aug 14, 1995 at 12:00:00 PM	Lights ON Occupied
2 Sun, Aug 14, 1995 at 2:25:00 PM	Lights ON Vacant
3 Mon, Aug 15, 1995 at 7:50:00 AM	Lights ON Occupied
4 Mon, Aug 15, 1995 at 10:15:00 AM	Lights ON Vacant
5 Mon, Aug 15, 1995 at 10:50:00 AM	Lights ON Occupied
6 Mon, Aug 15, 1995 at 12:15:00 PM	Lights OFF Vacant

### Office Placement Example

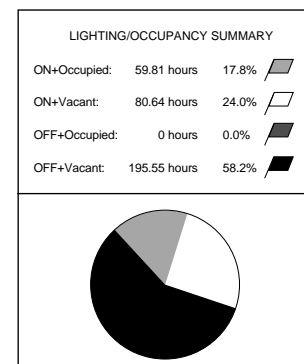


The IT-200 monitors an area of up to 150 ft<sup>2</sup> (13.9m<sup>2</sup>). The unit should be placed near the light source with the light pipe aimed at the light and the lens facing the occupant's main work area.

### Lighting & Occupancy Graph



### Lighting & Occupancy Graph



## Ordering Information

Catalog No.	Description
IT-200	Occupancy and light logger with software for PC

All units are white

# HS Series Card Key Switches

Room key activated master switch for hotel guest room lighting

Line and low voltage models

30-second egress time



Facilitates energy savings in hotels, motels and boarding houses

Backlit card key slot for visibility in darkened rooms

Optional key fob for rooms that do not use a card key

PROJECT

LOCATION/TYPE

## Product Overview

### Description

The HS Series Card Key Switch turns electrical circuits on or off when a card key or HS-FOB Key Fob is inserted or removed from its slot.

### Operation

Inserting a door entry card key or HS-FOB into the HS Card Key Switch energizes the controlled circuits and loads. Removing the card key initiates a 30-second time delay to allow safe egress from the hotel room. Once this time delay elapses, the power to the circuits is terminated. To restore power to the room's controlled circuits, reinsert the card key into the HS Card Key Switch.

### Low and Line Voltage Models

The HS-100 is a low voltage unit with a normally open and normally closed isolated relay, allowing it to interface with third-party energy and lighting management control systems. Additionally, the HS-100 can connect to one or more WattStopper Power Pack(s). The HS-150 is a line voltage unit that serves as a master switch for a single guest room circuit.

### Applications

HS Card Key Switches are ideal for guest rooms in hotels, motels, boarding houses, senior residences or similar applications with guest rooms. Once installed, they function as control devices located at the main entry door, controlling all permanently installed luminaires.

## Features

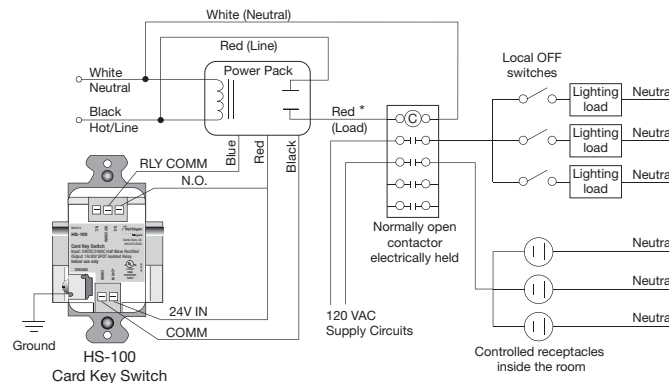
- Attractive low-profile styling
- Choice of five decorator colors
- Backlit card key slot provides visibility in darkened rooms
- 30-second egress time delay
- Zero crossing for reliability and increased product longevity (HS-150)
- HS-100 can connect with one or more WattStopper Power Packs
- Uses the same card key that unlocks the door
- Compatible with Building Automation Systems, Energy Management Systems, and Lighting Control Panels

# Specifications

- HS-100: Input: 24VDC/24VAC Half Wave Rectified, Max. 25mA DC/10mA AC  
Output: 1A/30VDC/VAC SPDT Isolated Relay
- HS-150: 120/277 VAC; 50/60Hz  
Load rating @120VAC: 0-1800W tungsten and ballast, 500W compact fluorescent, 1/2hp  
Load rating @277VAC: 0-1200W ballast
- Zero crossing (HS-150)
- Egress time delay: 30 seconds
- Compatible with building automation/energy management systems, lighting control panels and WattStopper power packs
- Dimensions: 2.63" x 1.69" x 1.88" (67.8mm x 42.9mm x 47.8mm) L x W x D  
Accepts standard hotel card keys with dimensions of: 2.125"W x 3.375"H x 0.034"D (53.975mm x 85.725mm x 0.8636mm)
- UL and cUL listed
- Five year warranty

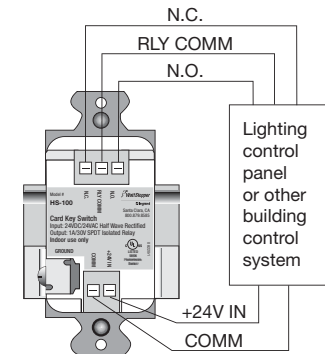
# Installation & Wiring

## HS-100 Wiring with Power Pack

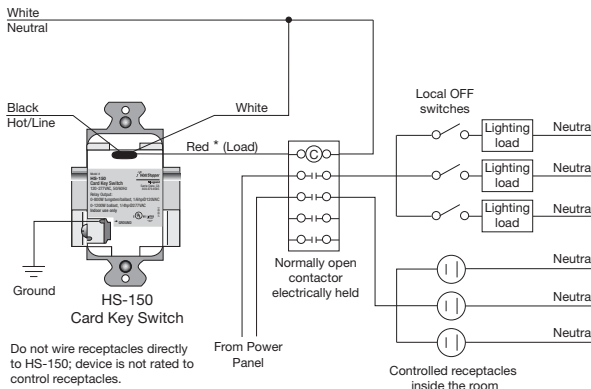


Do not wire receptacles directly to HS-100; device is not rated to control receptacles.  
\* Do not exceed the power pack's maximum load rating.

## HS-100 with BAS or LCP

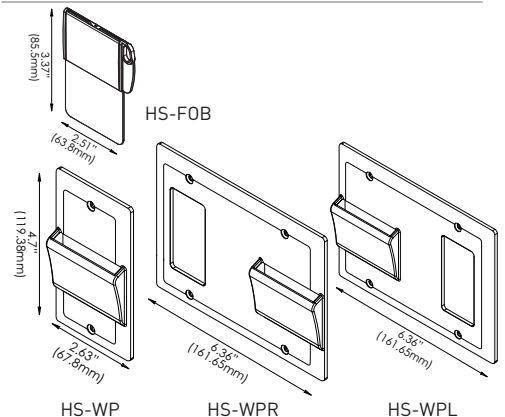


## HS-150 Wiring



Do not wire receptacles directly to HS-150; device is not rated to control receptacles.  
\* Do not exceed the HS-150's maximum load rating

## Cover Plates and Key Fob



# Ordering Information

Catalog No.	Color	Description	Catalog No.	Color	Description
<input type="checkbox"/> HS-100-W	White	Low voltage Card Key Switch	<input type="checkbox"/> HS-150-W	White	Line voltage
<input type="checkbox"/> HS-100-LA	Light Almond		<input type="checkbox"/> HS-150-LA	Light Almond	Card Key Switch
<input type="checkbox"/> HS-100-I	Ivory		<input type="checkbox"/> HS-150-I	Ivory	
<input type="checkbox"/> HS-100-B	Black		<input type="checkbox"/> HS-150-B	Black	
<input type="checkbox"/> HS-100-G	Gray		<input type="checkbox"/> HS-150-G	Gray	
<b>Accessories</b>					
<input type="checkbox"/> HS-FOB-W	White	Optional Key Fob for guest rooms that are not equipped with card key locks	<input type="checkbox"/> HS-WPR-W	White	Cover plate for three-gang box with decorator switch option; card slot on the right
<input type="checkbox"/> HS-FOB-LA	Light Almond		<input type="checkbox"/> HS-WPR-LA	Light Almond	
<input type="checkbox"/> HS-FOB-I	Ivory		<input type="checkbox"/> HS-WPR-I	Ivory	
<input type="checkbox"/> HS-FOB-B	Black		<input type="checkbox"/> HS-WPR-B	Black	
<input type="checkbox"/> HS-FOB-G	Gray		<input type="checkbox"/> HS-WPR-G	Gray	
<input type="checkbox"/> HS-WP-W	White	Cover plate for single-gang box	<input type="checkbox"/> HS-WPL-W	White	Cover plate for three-gang box with decorator switch option; card slot on the left
<input type="checkbox"/> HS-WP-LA	Light Almond		<input type="checkbox"/> HS-WPL-LA	Light Almond	
<input type="checkbox"/> HS-WP-I	Ivory		<input type="checkbox"/> HS-WPL-I	Ivory	
<input type="checkbox"/> HS-WP-B	Black		<input type="checkbox"/> HS-WPL-B	Black	
<input type="checkbox"/> HS-WP-G	Gray		<input type="checkbox"/> HS-WPL-G	Gray	

One HS-WP included with each Card Key Switch







## DAYLIGHTING SENSORS

WattStopper leads the industry in innovative automatic daylighting control, one of the most effective ways to capture additional potential energy savings. Choose from On/Off switching or dimming closed loop stand-alone devices for single zone control. For system based daylighting controls refer to Digital Lighting Management (Section A) in this guide.









# LightSaver® LS-102 Switching Photosensor



PROJECT
LOCATION/TYPE

## Product Overview

### Description

The LS-102 Daylighting Controller is a single zone, on/off switching device designed to be installed in a closed loop application. A self-contained 24 VDC device with an extended range of 1-1400 footcandles, the LS-102 requires a low voltage power pack to operate. The controller consists of an advanced digital multi-band photosensor, an on-board microcontroller, and an LCD display. This photosensor is positioned behind a 100° cone that cuts off unwanted light, preventing false triggers.

### Operation

Setpoints can be selected either automatically or manually. When ambient light levels exceed the off setpoint, the controller turns lighting off. It will turn lighting systems back on when the on setpoint is triggered. Because of its automatic calibration feature, many applications require little or no adjustment of the settings. The LS-102 can be paired with a low voltage wall switch to enable manual override, or with an occupancy sensor to enable its 'Hold On While Occupied' feature.

## Features

- Easy-to-read LCD display prompts installer through set-up
- Four user-adjustable parameters: on setpoint, off setpoint, off setpoint time delay, and 'Hold On While Occupied' Mode (if wired with an occupancy sensor)
- Test mode overrides programmed time delay, enabling installer to verify accuracy of settings
- Control load status verification allows testing and confirmation that wiring is correct
- Form factor designed to eliminate misalignment

### Automatic Startup/Calibration

The LS-102 features automatic setpoint calculations. The device initiates a procedure to select an appropriate value for the on setpoint. As part of the process, the controlled load is first turned on for a brief interval to warm up the lamps, and then switched off. This process is repeated several times. At the completion of the calibration, a new value for the on setpoint will have been selected. Other adjustable settings include deadband and time delay settings. If desired, the deadband can be adjusted to a value of 25, 50, 75, or 100 percent above the setpoint. The time delay can be adjusted to 3, 10, 20 or 30 minutes.

### Applications

The LS-102 Daylighting Controller can be used to control any type of lighting: incandescent, fluorescent, compact fluorescent (CFL), HID, and LEDs. The devices work in peripheral offices, skylit areas, cafeterias, warehouses and any other indoor area with natural light contribution.

- LED status indicator identifies when device is in override or test mode, or if device has switched lights on or off
- Mounting options for top- or side-lit applications
- One-hour manual override capability (when wired with low voltage, pushbutton wall switch)
- Programmable in most daylight conditions
- Qualifies for use on ARRA-funded public works projects

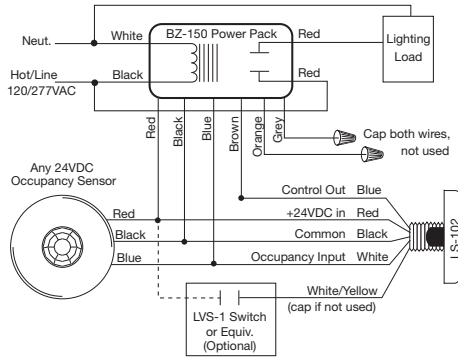


# Specifications

- Automatic setpoint calculation
- Digital Multi-Band Photosensor Range: 1-1400 footcandles
- ON Setpoint Range: 1-850 footcandles
- Status Indicator: Multi-function green LED
- Power Requirements: 12/24 VDC; 7 mA typical
- Output Signal: 24VDC; maximum 120 mA
- Location: Suitable for dry interior locations
- Environment: 32-120°F (0-49°C), less than 90% relative humidity
- Dimensions: 2.4" diameter x 0.7" deep (61mm x 17mm)
- Five year warranty
- UL listed

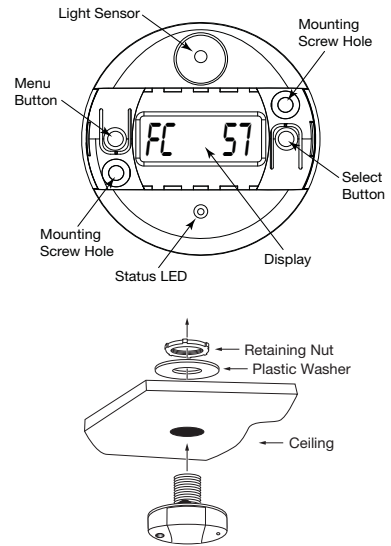
# Wiring, Installation & Location

## Wiring Diagram

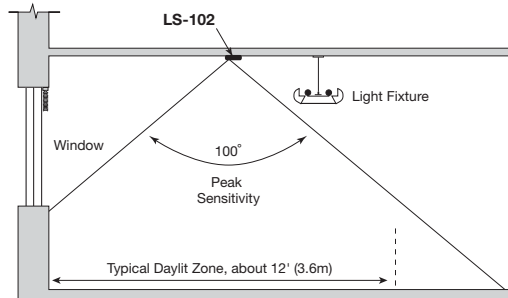


For other wiring diagrams, please visit the CAD Resource Center at [www.wattstopper.com](http://www.wattstopper.com)

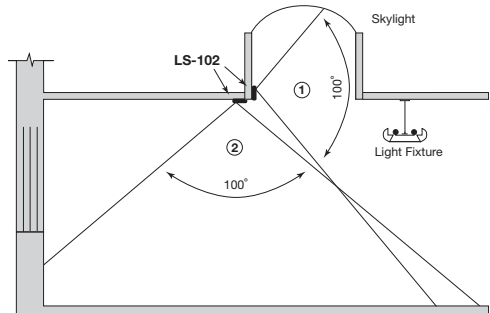
## Mounting and LED Display



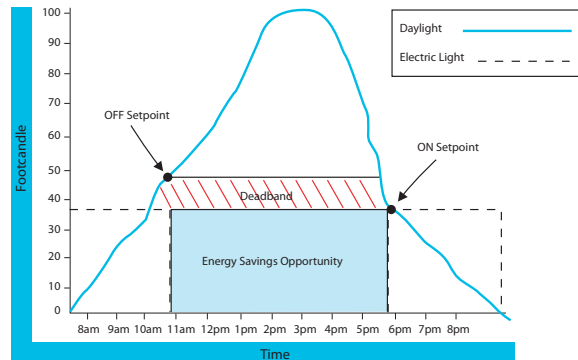
## Side Lighting Application



## Top Lighting Application



# Deadband Level Chart



If the LS-102's photosensor lighting level drops below the on setpoint, the lights will remain on. If the sensor's lighting level rises above the off setpoint, the LS-102 will automatically turn the lights off. If the sensor's lighting level remains in the predetermined deadband range (25%, 50%, 75% or 100%) the lighting will be passive until the sensor's level reaches the high or low setpoints.

# Ordering Information

Catalog No.	Description	Footcandle Range	Deadband Adjustment Range
<input type="checkbox"/> LS-102	On/Off Switching Photosensor	1-1400 fc	25%, 50%, 75% & 100% above on setpoint
<input type="checkbox"/> LS-102-U	On/Off Switching Photosensor, ARRA-compliant*	1-1400 fc	25%, 50%, 75% & 100% above on setpoint

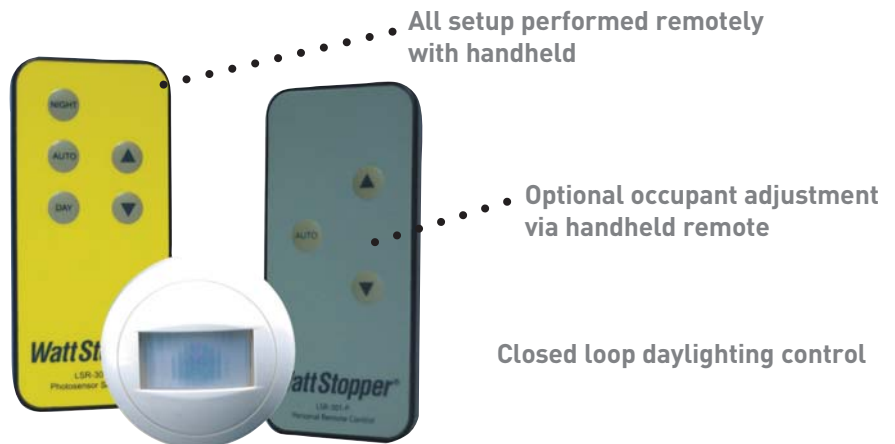
\*Product produced in the U.S.

# LightSaver® LS-301 Dimming Photosensor

Automatic dimming based on ambient light levels

Controls standard 0-10 VDC electronic dimming ballasts or compatible LED drivers

Single zone control



All setup performed remotely with handheld

Optional occupant adjustment via handheld remote

Closed loop daylighting control

PROJECT
LOCATION/TYPE

## Product Overview

### Description

The LightSaver LS-301 is a closed loop, ceiling mount, low voltage indoor photosensor that works with standard, 0-10 VDC electronic dimming ballasts or compatible LED drivers to dim lighting as daylight increases.

### Operation

The LS-301 mounts on a ceiling and utilizes a spectral filtering system to measure daylight and electric light levels. A closed loop daylighting system, the LS-301 measures the total light level from daylight and electric light in the controlled area to adjust electric lighting levels. As the daylight contribution increases, the lights dim down. The photosensor utilizes sliding setpoint control, which responds to the different spatial distribution qualities of electric light and daylight. The LS-301 calculates the required light level for current daylight contribution based on two setpoints. One represents the target level when no daylight is present (night setpoint) and the other when significant daylight is present (day setpoint).

### Adjustment via Handheld Remote Control

All LS-301 adjustments are made with one of two handheld remotes. The LSR-301-S provides five buttons for initial set-up, which is easily completed by first raising or lowering electric light levels to desired levels, then programming this target level into the photosensor. The LSR-301-P provides three buttons for occupants to adjust light levels. With this optional tool, users can increase target light levels by up to 25% or reduce them to the lamp/ballast minimum level. Pressing the "Auto" button returns the control to programmed levels.

### Applications

The LS-301 is designed to blend into its surroundings when installed in any environment. It provides one zone of daylighting control in a private office or classroom. In these applications, the LS-301 can be combined with an occupancy sensor. Often, it is possible for the LS-301 to share a single power pack with occupancy sensor(s).

## Features

- Provides precise control of lighting to maintain desired light level
- Extremely linear photocell response with greater than 1% accuracy
- Designed to measure light as the human eye perceives it, eliminating "overreporting" illumination levels provided by daylight
- California Title 24-2013 compliant
- Separate handheld remote controls for setup and occupant adjustment to prevent tampering
- Boosts energy savings by reducing maximum lamp output, often resulting in a 20% reduction or more compared with lights at full output
- Achieves lumen maintenance by holding target light level as lamp output decreases over time
- Qualifies for use on ARRA-funded public works projects

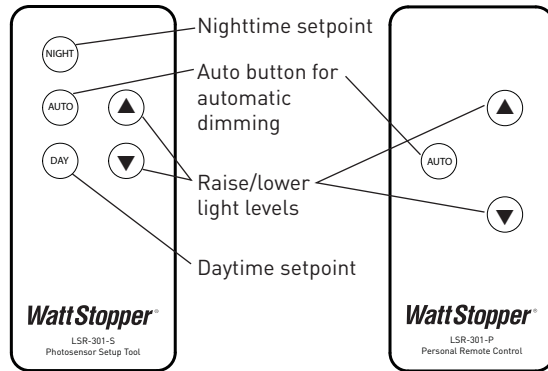


# Specifications

- Full range dimming: .2 VDC (minimum) to 10 VDC (100% lighting) output voltage
- Current consumption: 30 mA @ 24 VDC
- In typical applications, setpoints are adjustable from 20-60 footcandles (210-640 lux)
- Controls up to 50 standard dimming ballasts in one zone
- Sensor leads: gray and violet to dimming ballast, red and black to 24 VDC
- Dimensions: 2.35" diameter. x 0.875" depth (60mm x 22mm), threaded piece extends 1.25" (31.8mm) from back, fits .5" knockout
- Five year warranty

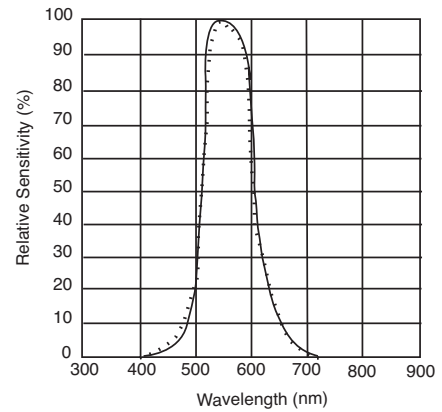
# Product Controls

## Remote Controls



Remote handheld (left) enables easy set-up while optional occupant remote provides adjustability for individual lighting preferences.

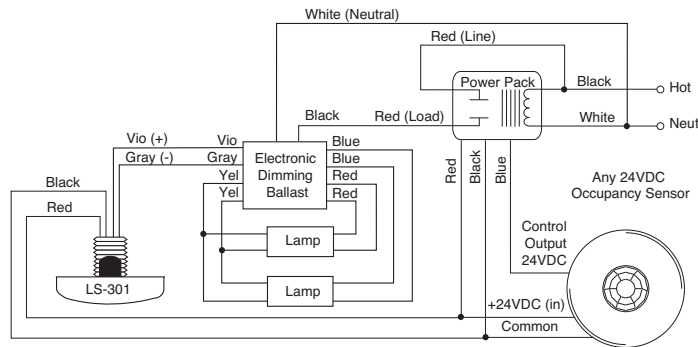
## Spectral Response Curve



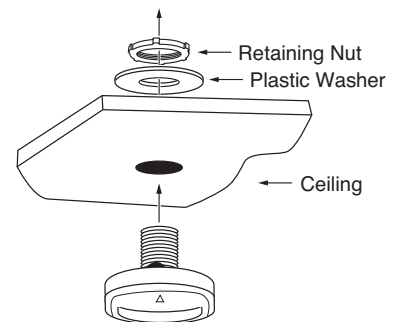
The spectral response of the LS-301 photocell closely matches the sensitivity of the human eye.

# Wiring & Installation

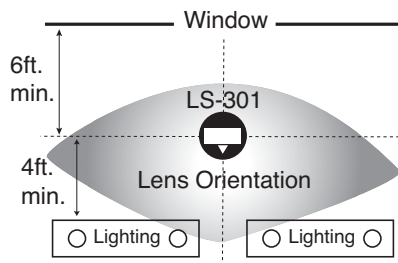
## Wiring



## Mounting and Installation



# Coverage



### Placement Guidelines

- Mount photocell between 6 and 12 feet (1.8m - 3.7m) from window.
- Do not mount directly above direct/indirect pendant fixtures. Mount at least 4 feet (1.2m) from pendant fixtures.

# Ordering Information

Catalog No.	Description	Input Voltage
<input type="checkbox"/> LS-301	Dimming Photosensor	24 VDC
<input type="checkbox"/> LS-301-U	Dimming Photosensor, ARRA-compliant*	24 VDC
<input type="checkbox"/> LSR-301-S	Setup Remote Control	
<input type="checkbox"/> LSR-301-P	Occupant Remote Control	

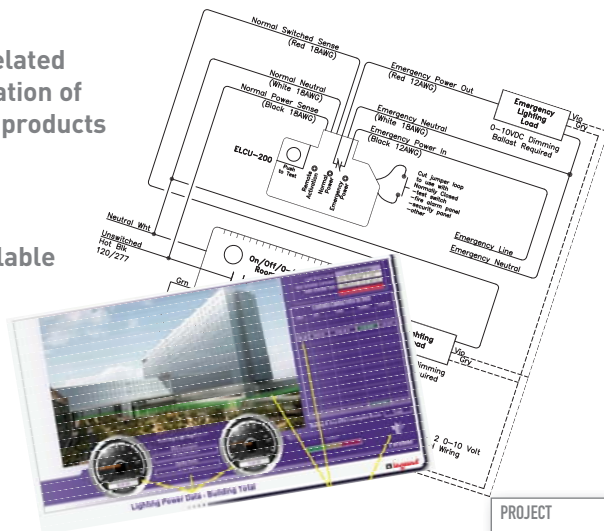
LS-301 works with WattStopper power packs

\*Product produced in the U.S.

# Lighting Control System Services

Technical services related to design and installation of WattStopper control products

Extended warranties available



Free telephone technical support for purchased product(s)

Complete project assistance

Startup and training services

PROJECT

LOCATION/TYPE

## Product Overview

### Description

Comprehensive services include design, startup, onsite training and troubleshooting as necessary.

### Project Engineering

Engineering services provide complete design and implementation using WattStopper products. The (SDRAWSYS) services include submittal packages with system one-line diagram (or reflected ceiling plan when applicable) showing system components and quantities for all products. Drawings can include system riser diagrams, individual panel and room controls to show hardware configuration, panel numbering and wiring schedules showing circuit/relay/load relationships as well as occupant overrides, sensors, wiring diagrams for each component, installation instructions and testing procedures for each component. SDRAWSYS provides ongoing Project Management support throughout the installation phase, through to the final startup and project acceptance.

### Programming

Programming Services (SPROGSYS) provide custom programming for special applications requiring advanced logic and customized control solutions including BACnet integration.

Graphical interface screens are customizable to enhance efficiency and provide user friendly control of the system (WCGRSCRN).

### Startup

Highly qualified technicians are available for onsite services and maintenance assistance. Comprehensive startup service (SCOM) includes a WattStopper factory-trained technician to verify that all WattStopper system hardware on the bill of material (including standalone occupancy sensors) is installed and configured in accordance with product documentation and project requirements. The service tests and verifies systems are operating as intended, implements sequences of operation (SOO) as directed, or provides a basic starting program configuration. SCOM also includes owner training to review programming, operation and maintenance.

Alternate startup service (SCOMEXSEN) provides a WattStopper factory-trained technician to verify all WattStopper system hardware **except** standalone occupancy sensors as described above.

Other services are available to assist commissioning agents with testing, provide system troubleshooting and repair, implement system upgrades or energy optimization, and perform auditing.

### Training

Additional training services (STRAIN) include a WattStopper factory-trained technician to provide additional and separate site visits to conduct system training to review all system hardware, software, and adjustments.



# Sample Project Engineering Documents

WattStopper®

## Room Summary for JHS Office Building - 2010 WDE TURBOENCABULATOR OFFICE in WS-CSF-3.2

Room: JHS/WS-CSF-3.2: 2010 WDE TURBOENCABULATOR OFFICE  
 After Hours Enabled: Network Bridge Present Number of Profiles: 1

Schedule and Control			
Device	TW Sheet	TW Detail	Control Sequence
LMRC-212	1	1.6	LMLS-400 Zone 1; LMPX-100; LMDM-101 Rocker; LMDM-101 Rocker;
01[A]: Load a			LMLS-400 Zone 1; LMPX-100; LMDM-101 Rocker; LMDM-101 Rocker;
02[B]: Load b			LMLS-400 Zone 1; LMPX-100; LMDM-101 Rocker; LMDM-101 Rocker;
LMLS-400	2	2.3	Zone 1: Load 01[A]; Load a, Load 02[B]; Load b;
LMPX-100	2	2.1	Load 01[A]; Load a; Load 02[B]; Load b;
LMDM-101	1	1.8	Load 01[A]; Load a; Load 02[B]; Load b;
Rocker - Rocker			Load 01[A]; Load a; Load 02[B]; Load b;
LMDM-101	1	1.8	Load 01[A]; Load a; Load 02[B]; Load b;
Rocker - Rocker			Load 01[A]; Load a; Load 02[B]; Load b;
LNBC-300 [2010 WDE TURBOENCABULATOR OFF	1	1.3	

Controller	Circuit	Line Voltage (Volts)	Load	Load Type	Operating Mode	Fade Time (Sec)	Fade Rate	Fade Trip Point Up (%)	Fade Trip Point Down (%)	High Trim Level (%)	Low Trim Level (%)	Sensor Mode	Enter Mode	Blank Warn	Grace Period (Min)	On/Off Delay (Min)	Temporary Auto-On (Sec)	Blank User Override	Power Up Mode	Transition State	Transition Level
LMRC-212			01[A] Loads	Switched	Normal Hours	2	50	1	0	100	0	Follow On and Off	On and Off	False	5	0	10	False	Last State	Nothing	25
					After Hours	2	50	1	0	100	0	Follow Off Only	On and Off	False	5	120	10	False	Last State	Relinquish	25
					Normal Hours	2	50	1	0	100	0	Follow Off Only	On and Off	False	5	0	10	False	Last State	Nothing	25
					After Hours	2	50	1	0	100	0	Follow Off Only	On and Off	False	5	120	10	False	Last State	Relinquish	25

# Sample Graphic Interface Screens

# Ordering Information

Catalog No.	Description
<input type="checkbox"/> SDRAWSYS	Factory project engineering services
<input type="checkbox"/> SPROGSYS	Custom factory programming
<input type="checkbox"/> WSGRSCRN	Custom graphic interface screen(s)
<input type="checkbox"/> SCOM	Onsite startup/training for all WattStopper products
<input type="checkbox"/> SCOMXSEN	Onsite startup/training excluding occupancy sensors
<input type="checkbox"/> STRAIN	Day(s) Onsite training for WattStopper control products
<input type="checkbox"/> SERVICE	On-site support for commissioning assistance, system optimization, troubleshooting and repair
<input type="checkbox"/> HWARRANTY-1	Year(s) extended warranty for hardware