Index

Wall and Ceiling Mount Sensors

H-MOSS®|MAXX™ Sensors

WL-Series Wireless Sensors and Controls

High Bay and Daylight Harvesting

HSI=GREEN℠

H-MOSS® Occupancy Sensors Combine Innovative Technologies for Industry Proven Performance.

Adaptive Technology

Adaptive Technology is a Hubbell breakthrough that delivers benefits to both building owners and occupants. The building owner achieves reduced energy costs, fewer adjustments and less maintenance, and the building occupant experiences fewer false-offs and disturbances.

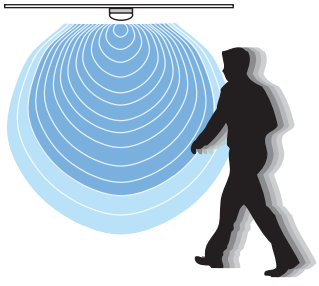
Adaptive technology occupancy sensors use microprocessors that make all the decisions for setting adjustments. Internal software constantly monitors the controlled area and automatically adjusts the sensitivity and timer based on environmental history. This means that instead of manually adjusting the sensor for seasonal changes, modified airflow, furniture layout or occupancy pattern changes, the sensor automatically adjusts itself. These automatic adjustments eliminate the need for multiple manual adjustments by maintenance personnel or outside contractors. Hubbell offers adaptive technology throughout its product offering—wall switches, ceiling and wall mount sensors—in conjunction with dual technology, ultrasonic and passive infrared products.

How to Select the Right Technology for the Proper Application

Dual Technology

Dual technology occupancy sensors combine both passive infrared (PIR) and ultrasonic (US) technologies for maximum reliability. Because US and PIR need to both detect occupancy to turn lighting on, dual technology sensors minimize the risk of lights coming on when the space is unoccupied—false triggering. Continued detection by only one technology then keeps lighting on as necessary. Dual technology sensors offer the best performance for most applications.

Ultrasonic (US)



Ultrasonic (US) technology senses occupancy by bouncing sound waves (32 kHz - 45 kHz) off of objects and detecting a frequency shift between the emitted and reflected sound waves. Movement by a person or object within a space causes a shift in frequency, which the sensor interprets as occupancy. While US occupancy sensors have a limited range, they are excellent at detecting even minor motion such as typing and filing, and they do not require an unobstructed line-of-sight. This makes US technology sensors ideal for an application like an office with cubicles or a restroom with stalls.

Passive Infrared (PIR)

Passive infrared (PIR) technology senses occupancy by detecting the movement of heat emitted from the human body against the background space. Unlike US technology, PIR sensors require an unobstructed line-of-sight for detection. These sensors use a segmented lens, which divides the coverage area into zones. Movement between zones is then interpreted as occupancy. PIR sensors are ideal for detecting major motion (e.g. walking), and they work best in small, enclosed spaces with high levels of occupant movement.

Typical Applications


Wall Switch


Ceiling Sensor


Wall Sensor

Applications are generalized. Consult your Hubbell representative for the type of technology and products that fit your needs.

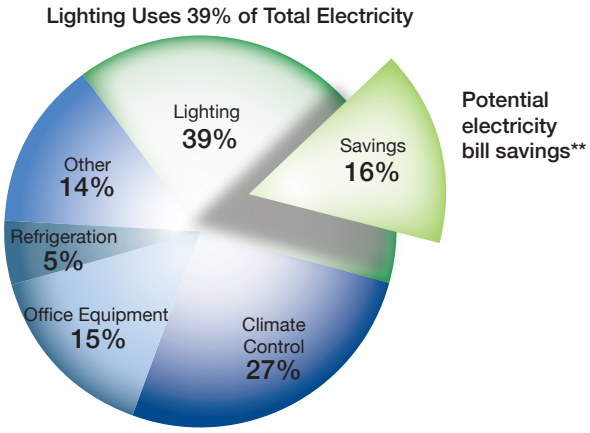
Application		Sensor Technology				Sensor Style		
		Adaptive	Dual	Ultrasonic	PIR	Wall Switch	Ceiling	Wall
Office	Small	✓+	✓+		✓	✓+	✓	
	Large	✓+	✓+	✓			✓+	
Open Office		✓+	✓	✓+			✓+	
Storage/ Warehouse	Small				✓+	✓+		
	Large	✓+			✓+		✓+	✓+
Rest Room	Small			✓+	✓+	✓+	✓	
	Large	✓+		✓+			✓+	
Conference Room	Small	✓+	✓+			✓+	✓	
	Large	✓+	✓+				✓+	
Classroom	Small	✓+	✓+			✓+	✓	
	Large	✓+	✓+				✓+	
Hall		✓+		✓+	✓		✓+	✓

Hubbell Occupancy Sensors Play a Key Role

In the U.S., lighting consumes 22% of electricity and represents $40 billion a year in energy costs. Using advanced technology, Hubbell's H-MOSS® Occupancy Sensors are doing their part to save energy and provide sustainability by automatically and effectively turning lights on when a room is occupied and off when a room is vacant. In a typical office building, where lighting accounts for 35 to 45% of energy use, H-MOSS Occupancy Sensors have the potential to reduce wasted lighting by 13% to 90% for a significant return on investment (ROI).

Hubbell offers a broad range of occupancy and vacancy sensors and lighting controls that meet the latest codes and standards, including ASHRAE/IESNA 90.1 and California Energy Commission (CEC) Title 24. H-MOSS Occupancy Sensors can also provide LEED® points in categories like Sustainable Sites, Energy and Atmosphere, Indoor Environmental Quality and Innovative Design Process.

Electrical bill impact for a typical office building*



*Note: *Energy Information Administration:*
- Commercial Buildings
- Energy Consumption Survey
***Based on 40% lighting savings from sensors. Actual results may vary.*

Backed by Hubbell Service and Support

H-MOSS® Occupancy Sensors are backed by Hubbell's GreenWise™ sustainability initiative and superior service and support including:

- Valuable online H-MOSS ROI worksheet for calculating energy savings
- Detailed H-MOSS online e-learning courses that can be taken anywhere, anytime
- Product selection guide for choosing the right H-MOSS Occupancy Sensor and technology
- Online specification assistance through spec wizard, AutoCAD drawings, templates, BIM objects and documentation
- Comprehensive design assistance for deploying occupancy sensors in a variety of applications
- Highly knowledgeable network of specification professionals and trained, dedicated sales staff
- Backed by Hubbell who is committed to safeguarding the environment through environmental stewardship, innovative products and efficient operations

Adaptive Dual Technology Wall Switches

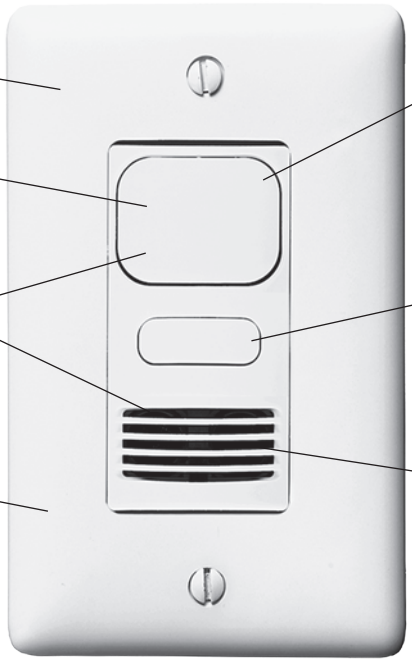
Features and Benefits

Available in ivory, white, black, gray and light almond

Impact resistant hard lens is standard and color matched to the switch

Dual technology sensing combines the individual advantages of passive infrared and ultrasonic detection

Designed for use on 120 or 277V AC circuits. No neutral needed for fast retrofits



Built in photocell with manual super saver mode for daylight harvesting

Auto or manual “On” operating modes. Available in either single relay or dual relay versions for enhanced savings with bi-level switching applications

Adaptive technology - “Install and forget” operation, analyzes environment and adjusts sensitivity and timer, eliminating the need for manual adjustment

AD2000W1
with **NP26W**

Adaptive Passive Infrared Wall Switches

Features and Benefits

Wall plate included for simplified ordering

High density 1200 square foot 180° coverage with tough tamper resistant lens

Photocell can prevent lights from turning on with sufficient natural light

Front press switch allows the occupant to switch the sensor from automatic operation to momentary off mode

Designed for use on 120 or 277V AC circuits. No neutral needed for fast retrofits

Heavy-duty relay controls up to 1000 watts at 120V AC or 1800 watts at 277V AC

Nightlight version available to provide minimum illumination when the lights are off

Tamper resistant push button covers the time-out, service switch, and vac/occ operation mode settings

ATP2000W

Adaptive Technology

- Adaptive technology - "Install and forget" operation
- All digital sensing technology
- Dual 120/277V AC operation. No neutral required
- Auto or manual "On" operating modes
- No minimum load requirements
- Hard lens (dual technology, passive infrared)
- Steel mounting strap
- Zero arc point switching
- Built in photocell with manual super saver mode for daylight harvesting
- Bi-level switching or dual load control (2 or 2N suffix)
- cULus

AD2000W1

Dual (Ultrasonic and Passive Infrared)

1000 square foot coverage with photocell, 800W Incandescent, 1000W Fluorescent at 120V AC, 1800W Fluorescent at 277V AC, 50/60Hz.

		Single Circuit		Dual Circuit	
Description	Color	1 button for manual/auto control	Auto control with no button	2 buttons for manual/auto control	Auto control with no button
Dual (ultrasonic and passive infrared)	Black	**AD2000BK1**	**AD2000BK1N**	**AD2000BK2**	**AD2000BK2N**
	Gray	**AD2000GY1**	**AD2000GY1N**	**AD2000GY2**	**AD2000GY2N**
	Ivory	**AD2000I1**	**AD2000I1N**	**AD2000I2**	**AD2000I2N**
	Light Almond	**AD2000LA1**	**AD2000LA1N**	**AD2000LA2**	**AD2000LA2N**
	White	**AD2000W1**	**AD2000W1N**	**AD2000W2**	**AD2000W2N**

Note: Wallplate sold separately. Neutral wire versions available. Use ADN prefix when ordering.
See pages E-16 and E-17 for coverage patterns and technical specifications.

AD2000W1N
AD2000W2N

AU2000W1

Ultrasonic

400 square foot coverage with photocell, 800W Incandescent, 1000W Fluorescent at 120V AC, 1800W Fluorescent at 277V AC, 50/60Hz.

		Single Circuit		Dual Circuit	
Description	Color	1 button for manual/auto control	Auto control with no button	2 buttons for manual/auto control	Auto control with no button
Ultrasonic	Black	**AU2000BK1**	**AU2000BK1N**	**AU2000BK2**	**AU2000BK2N**
	Gray	**AU2000GY1**	**AU2000GY1N**	**AU2000GY2**	**AU2000GY2N**
	Ivory	**AU2000I1**	**AU2000I1N**	**AU2000I2**	**AU2000I2N**
	Light Almond	**AU2000LA1**	**AU2000LA1N**	**AU2000LA2**	**AU2000LA2N**
	White	**AU2000W1**	**AU2000W1N**	**AU2000W2**	**AU2000W2N**

Note: Wallplate sold separately. Neutral wire versions available. Use AUN prefix when ordering.
See pages E-16 and E-17 for coverage patterns and technical specifications.

AU2000W2

Passive Infrared

1000 sq. ft. coverage with photocell, 800W Incandescent, 1000W Fluorescent at 120V AC, 1800W Fluorescent at 277V AC, 50/60Hz.

		Single Circuit		Dual Circuit	
Description	Color	1 button for manual/auto control	Auto control with no button	2 buttons for manual/auto control	Auto control with no button
Passive infrared	Black	**AP2000BK1**	**AP2000BK1N**	**AP2000BK2**	**AP2000BK2N**
	Gray	**AP2000GY1**	**AP2000GY1N**	**AP2000GY2**	**AP2000GY2N**
	Ivory	**AP2000I1**	**AP2000I1N**	**AP2000I2**	**AP2000I2N**
	Light Almond	**AP2000LA1**	**AP2000LA1N**	**AP2000LA2**	**AP2000LA2N**
	White	**AP2000W1**	**AP2000W1N**	**AP2000W2**	**AP2000W2N**

Note: Wallplate sold separately. Neutral wire versions available. Use APN prefix when ordering.
See pages E-16 and E-17 for coverage patterns and technical specifications.

AP2000W1

AP2000W2

AT1277W

ATP2000W

WS2000W
WS1000W

DT2000W

DT5030W

ACIPE

ACMG

AWSG

AWMG

Adaptive Technology, Passive Infrared

- Adaptive technology - "Install and forget" operation
- Passive infrared technology
- Dual 120/277V AC operation, no neutral required
- Heavy duty relay (AT1277xx)
- Audible alarm before turning lights off (AT1277xx)
- 1200 sq. ft. coverage
- Built in photocell for daylight harvesting
- Wallplate included
- Steel mounting strap
- cULus

Description	Color	Standard	w/ Nightlight	w/ Neutral	w/ Nightlight and Neutral
High load adaptive wall switch, 1800W @ 120V AC and 4166W @ 277V AC	Ivory White	**AT1277I** **AT1277W**	— —	— —	— —
Adaptive auto-adjusting; selectable manual/auto-on operation; dual-voltage 120/277V; 3-way capable	Gray Ivory Light Almond White	**ATP2000GY** **ATP2000I** **ATP2000LA** **ATP2000W**	**ATP2000NGY** **ATP2000NI** **ATP2000NLA** **ATP2000NW**	— **ATP2004I** — **ATP2004W**	— **ATP2004NI** — **ATP2004NW**

Note: See pages E-17 and E-18 for coverage patterns and technical specifications.

Passive Infrared Wall Switches

- Passive infrared technology
- Manual adjustment time delay (20 sec. to 30 min.)
- Photocell (WS2000 series)
- No neutral required
- 1200 sq. ft. coverage
- Wallplate included
- Steel mounting strap
- cULus

Description	Color	Standard	w/ Nightlight	w/ Neutral	w/ Nightlight and Neutral
Manual adjusting; selectable manual/auto-on operation; dual-voltage 120/277V; 3-way capable	Gray Ivory Light Almond White	**WS2000GY** **WS2000I** **WS2000LA** **WS2000W**	**WS2000NGY** **WS2000NI** **WS2000NLA** **WS2000NW**	— **WS2004I** — **WS2004W**	— **WS2004NI** — **WS2004NW**
Manual adjusting; auto-on operation; 120V AC only	Ivory White	**WS1000I** **WS1000W**	**WS1000NI** **WS1000NW**	— —	— —
Manual adjusting; Manual-on operation; 120V AC only	Ivory White	**WS1001I** **WS1001W**	**WS1001NI** **WS1001NW**	— —	— —

Note: See pages E-17 and E-18 for coverage patterns and technical specifications.

Digital Timer Wall Switch

Description	Color	Catalog Number
Dip switch enabled preset intervals, user adjustable up to 4 hours, 3-way capable, 960W @ 120V AC and 1200W @ 277V AC. Includes an on/off momentary push button switch feature	White	**DT2000W**

Count Down Timer Wall Switch

Description	Color	30 Minutes: Off, 5, 10, 20, 30	60 Minutes: Off, 15, 30, 45, 60	12 Hours: Off, 2, 4, 8, 12
1000W @ 120V AC and 1400W @ 277V AC	Ivory Light Almond White	**DT5030I** **DT5030LA** **DT5030W**	**DT5060I** **DT5060LA** **DT5060W**	**DT5012I** **DT5012LA** **DT5012W**

Ceiling Accessories

Description	Catalog Number
Ceiling sensor infrared NEMA 4X enclosure	**ACIPE**
Ceiling mount wire guard	**ACMG**
Ceiling mount raceway adapter	**ACMRA**

Wall Accessories

Description	Catalog Number
Wall switch wire guard	**AWSG**
Wall mount wire guard	**AWMG**

Adaptive Technology

- Adaptive technology - "Install and forget"
- All digital sensing technology
- Photocell for daylight harvesting and relay to interface with auxiliary systems such as HVAC (CRP models)
- Mounting base included with sensor
- Non-volatile memory settings retained after power outage
- Low voltage units: 24V DC, 33mA
- Line voltage units: 20A, 120-277V
- 32kHz (ATD/ATU500C and CRP - 40kHz)
- cULus

ATD2000C Series

Dual (Ultrasonic and Passive Infrared)

Combines the excellent minor motion detection of ultrasonic with the outstanding passive infrared (PIR) long-range major motion detection.

Description	Coverage	Color	Catalog Number
Low voltage sensor with photocell and isolated relay	2000 sq. ft. (360°)	White	**ATD2000CRP**
Low voltage sensor	2000 sq. ft. (360°)	White	**ATD2000C**
Line voltage sensor	2000 sq. ft. (360°)	White	**ATD2000CL**
Low voltage sensor with photocell and isolated relay	1000 sq. ft. (180°)	White	**ATD1000CRP**
Low voltage sensor	1000 sq. ft. (180°)	White	**ATD1000C**
Line voltage sensor	1000 sq. ft. (180°)	White	**ATD1000CL**
Low voltage sensor with photocell and isolated relay	500 sq. ft. (180°)	White	**ATD500CRP**
Low voltage sensor	500 sq. ft. (180°)	White	**ATD500C**

Note: Low voltage ATD ceiling sensors must use a CU series control units. See page E-8 for details.
See pages E-19 and E-20 for coverage patterns and technical specifications.

ATD1000C/ ATD500C Series

Ultrasonic

Excellent minor motion detection.

Description	Coverage	Color	Catalog Number
Low voltage sensor with photocell and isolated relay	2000 sq. ft. (360°)	White	**ATU2000CRP**
Low voltage sensor	2000 sq. ft. (360°)	White	**ATU2000C**
Line voltage sensor	2000 sq. ft. (360°)	White	**ATU2000CL**
Low voltage sensor with photocell and isolated relay	1000 sq. ft. (180°)	White	**ATU1000CRP**
Low voltage sensor	1000 sq. ft. (180°)	White	**ATU1000C**
Line voltage sensor	1000 sq. ft. (180°)	White	**ATU1000CL**
Low voltage sensor with photocell and isolated relay	500 sq. ft. (180°)	White	**ATU500CRP**
Low voltage sensor	500 sq. ft. (180°)	White	**ATU500C**

Note: Low voltage ATU ceiling sensors must use a CU series control units. See page E-8 for details.
See pages E-19 and E-20 for coverage patterns and technical specifications.

ATU2000C Series

ATU1000C/ ATU500C Series

Passive Infrared

Outstanding long range major motion detection.

Description	Coverage	Color	Catalog Number
Low voltage sensor with photocell and isolated relay	1500 sq. ft. (360°)	White	**ATP1500CRP**
Low voltage sensor	1500 sq. ft. (360°)	White	**ATP1500C**
Line voltage sensor	1500 sq. ft. (360°)	White	**ATP1500CL**
Low voltage sensor with photocell and isolated relay	450 sq. ft. (360°)	White	**ATP600CRP**
Low voltage sensor	450 sq. ft. (360°)	White	**ATP600C**
Line voltage sensor	450 sq. ft. (360°)	White	**ATP600CL**

Note: Low voltage ATP ceiling sensors must use a CU series control units. See page E-8 for details.
See pages E-19 and E-20 for coverage patterns and technical specifications.

ATP1500C/ ATP600C Series

Low Profile, Line Voltage Passive Infrared (PIR)

Outstanding long range major motion detection in a compact low profile housing.

Voltage	Coverage	Load Rating	Color	Catalog Number
120-347V AC with photocell and isolated relay	1500 sq. ft.	800W Inc. 1000W Fl. @ 120V AC 1800W Fl. @ 277V AC 2200W Fl. @ 347V AC	White	**LVPR1500R**

LVPR1500R

ATD1600W Series

Adaptive Technology Wall Mount Sensors

- Adaptive technology - "Install and forget" operation
- Swivel mounting bracket included for wall or ceiling mounting
- All digital sensing technology
- Photocell for daylight harvesting and relay interface with auxiliary systems such as HVAC (RP models)
- 24V DC, 33mA
- cULus

Dual (Ultrasonic and Passive Infrared)

Description	Coverage	Color	Catalog Number
Low voltage sensor 32kHz with photocell and isolated relay	1600 sq. ft.	White	**ATD1600WRP**
Low voltage sensor 32kHz	1600 sq. ft.	White	**ATD1600W**

ATP1600W, ATP120HB Series

Passive Infrared

Description	Coverage	Color	Catalog Number
Low voltage sensor with photocell and isolated relay	1600 sq. ft.	White	**ATP1600WRP**
	1600 sq. ft.	White	**ATP1600W**
Low voltage sensor for aisle and high bay applications, with photocell and isolated relay	120 linear ft.	White	**ATP120HBRP**
Low voltage sensor for aisle and high bay applications	120 linear ft.	White	**ATP120HB**

Note: All wall mount sensors must use a CU series control units. See below for details.
See pages E-19 and E-20 for coverage patterns and technical specifications.

Accessories

Control Units

CU300A(M), CU347A

The CU300 series provides 24V DC power supply for sensors or sensor/Add-A-Relay combinations The control units contain an internal relay for the control of an external lighting load. Control units are plenum rated cULus Listed.

Description	Catalog Number
Automatic-on operation, 120/277V AC, 50/60Hz for use with 1 to 4 ATD, ATU and ATP series ceiling/wall mount sensors	**CU300A**
Manual-on operation, 120/277V AC, 50/60Hz for use with 1 to 4 ATD, ATU and ATP series ceiling/wall mount sensors	**CU300M**
Auto or manual-on operation, 120/277V AC, 50/60Hz for use with 1 to 6 ATD, ATU and ATP series ceiling/wall mount sensors, heavy duty latching relay for reactive loads and plug-load control	**CU300HD**
Automatic-on operation, 347V AC, 60Hz, for use with 1 to 3 ATD, ATU and ATP series ceiling and wall mount sensors	**CU347A**

CU300HD

Note: See page E-25 for technical specifications.

Add-A-Relay

AAR

Hubbell AAR Add-A-Relay contains an internal relay for control of an external lighting load. The AAR requires a 24V DC power supply from the Hubbell CU series control unit. The AAR is typically used when: 1. It is desired to switch more than one circuit when occupancy is sensed. 2. The lighting load exceeds the maximum rating of the control unit.

Description	Catalog Number
For use with CU series control units and Hubbell ATD, ATU and ATP series ceiling and wall mount sensors	**AAR**

Low Voltage Switches

- Attractive, architectural design
- Available latching or momentary contact
- Mounts to standard single gang box
- 2-year warranty

Description	Color	Catalog Number
Low voltage switch, latching, 1 button	Ivory	**DSL30I1**
	White	**DSL30W1**
Low voltage switch, momentary, 1 button	Ivory	**DSM30I1**
	White	**DSM30W1**
Low voltage switch, momentary, 2 button	Ivory	**DSM30I2**
	White	**DSM30W2**

Note: Wallplate sold separately.

DSL30W1

Multi-Level Relays

Description	Catalog Number
Enclosed independent control for multiple ballast light fixtures from one existing wall switch, bi-level; 120/208-277V AC	**AARBL2**
Enclosed independent control for multiple ballast light fixtures from one existing wall switch, tri-level; 120/208-277V AC	**AARBL3**

AARBL2

Enclosed 10 Amp SPDT Relays

Description	Catalog Number
Enclosed relay 10 Amp SPDT with 10-30V AC/DC/120V AC coil	**AAR10C120**
Enclosed relay 10 Amp SPDT with 10-30V AC/DC/208-277V AC coil	**AAR10C277**

AAR10C277

OPTIMYZER® High Bay Controls

- Digital passive infrared (PIR) sensor
- Multiple (single and dual) output versions
- Single and dual timer operation
- Low-profile design
- Supports mounting heights up to 40 ft
- Area and aisle coverage
- Universal voltage (120/277/347V AC) models available
- No minimum load

HMHB21U

Standard

Description	Voltage	Catalog Number
Fluorescent high bay PIR sensor, 1 relay	120-347V AC	**HMHB21U**
Fluorescent high bay PIR sensor, 2 relays	120-347V AC	**HMHB22U**
Fluorescent high bay PIR sensor, 1 double pole relay	208/240V AC	**HMHB23A**
Fluorescent high bay PIR sensor, 1 double pole relay	480V AC	**HMHB23B**
Fluorescent high bay PIR sensor	24V DC	**HMHB2LV***

Daylight Harvesting (With Photocells)

Description	Voltage	Catalog Number
Fluorescent high bay PIR sensor, 1 relay with photocell	120-347V AC	**HMHB21UP**
Fluorescent high bay PIR sensor, 2 relays with photocell	120-347V AC	**HMHB22UP**
Fluorescent high bay PIR sensor, 1 double pole relay with photocell	208/240V AC	**HMHB23AP**
Fluorescent high bay PIR sensor, 1 double pole relay with photocell	480V AC	**HMHB23BP**
Fluorescent high bay PIR sensor with photocell	24V DC	**HMHB2LVP***

See pages E-20 for coverage patterns and technical specifications.

HMHBSA

OPTIMYZER® Accessories

Description	Catalog Number
High bay mounting extension adapter	**HMHBSA**
External daylight control	**HMHBEP**

DHADC

DHIP, DHOP

Daylight Harvesting

- Multiple calibration options
- Selectable 3- or 8-second dimming rate
- Low-profile design
- Light-sensitivity range of 0–500 foot candles

Description	Voltage	Catalog Number
Single zone continuous automatic dimming control	10V DC	**DHADC†**
Indoor photocell	24V DC	**DHIP▲**
Outdoor photocell	24V DC	**DHOP▲**
Atrium photocell	24V DC	**DHAP▲**
Skylight photocell	24V DC	**DHSP▲**
Control module	24V DC	**DHCM**
Daylight tracker with on/off control	24V DC	**DHT***
Daylight tracker with dimming control	24V DC	**DHTD†**

*Note: *For use with CU series control units. See page E-10 for details.*
†For use with 0-10V DC dimming ballasts.
▲For use with DHCM and CU series control units.

DHAP, DHSP

DHCM

DHT

H-MOSS®|MAXX™ Harsh Environment Occupancy Sensors

Features and Benefits

H-MOSS®|MAXX™ products provide users with methods to reduce energy usage in harsh environments. These applications often have lights being left on and ventilation/HVAC systems constantly working. **H-MOSS®**|MAXX™ products are designed to withstand these challenging environments and provide increased operating efficiency.

- IP66, NEMA 4X, outdoor rated
- Photocell makes sure lights stay off when there is sufficient daylight
- Isolated relay provides signalling to HVAC and ventalation systems
- Stainless steel hardware and settings access cover
- ½" threaded nipple (HAP4)
- Multiple mounting kits for existing work boxes and hubs; pendent or wall mounting flexibility
- Integrated lens guard protects against accidental damage
- Housing manufactured from chemical resistant Valox®

AHP1600WRP
with **HAP4**

- IP65, NEMA 3R watertight, and outdoor rated
- Two photocells for daylight harvesting
- Fixture or work box mounting with ½" threaded nipple
- Digital passive infrared (PIR) sensor
- Supplied with 360° lens; aisle, end-of-aisle and 180° lenses available separately

HMHB21UPCW

Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.

Watertight OPTIMYZER®

IP65, NEMA 3R, outdoor rated, -40°F to 149°F (-40°C to 65°C) operating temperature range.

Description	Voltage	Catalog Number
Pir sensor, relay with photocell	120-347V AC	**HMHB21UPCW**
Pir sensor, 2 relays with photocell	120-347V AC	**HMHB22UPCW**
Pir sensor, 1 double pole relay with photocell	208, 240V AC	**HMHB23APCW**
Pir sensor, 1 double pole relay with photocell	480V AC	**HMHB23BPCW**
Pir sensor, with photocell	24V DC	**HMHB2LVPCW***
180° Lens	—	**HMHBL180**
360° Lens (included)	—	**HMHBL360**
Aisle lens	—	**HMHBLA**
End of aisle lens	—	**HMHBLEA**

*Note: *For use with a CU series control unit: CU300HD (120/277V AC, 50/60 Hz), CU347A (347V AC, 60 Hz).*
See pages E-21 for coverage patterns and technical specifications.

HMHB21UPCW

Outdoor Rated Watertight Wall Mount PIR Sensor

IP66, NEMA 4X, heavy duty wall or pendant mount sensor with -40°F to 149°F (-40°C to 65°C) operating temperature range and 160° of coverage.

Description	Voltage	Catalog Number
PIR sensor, with isolated relay and photocell	24V DC	**AHP1600WRP**
Adaptor plate for 1-gang FS boxes	—	**HAP1**
Adaptor hub and nipple for Killark NJ series boxes	—	**HAP2**
Adaptor plate for Killark NV series boxes	—	**HAP3**
½" NPT threaded hub	—	**HAP4**

Note: For use with a CU series control unit: CU300HD (120/277V AC, 50/60 Hz), CU347A (347V AC, 60 Hz).
See pages E-21 for coverage patterns and technical specifications.

AHP1600WRP

Extreme Temperature PIR Ceiling Sensor

Upgraded ceiling sensor with -40°F to 149°F (-40°C to 65°C) operating temperature range.
Use ACIPE to make NEMA 4X watertight.

Description	Voltage	Catalog Number
PIR sensor, with isolated relay and photocell	24V DC	**AHP1500CRP**
NEMA 4X enclosure	—	**ACIPE**

Note: For use with a CU series control unit: CU300HD (120/277V AC, 50/60 Hz), CU347A (347V AC, 60 Hz).
See pages E-21 for coverage patterns and technical specifications.

AHP1500CRP

ACIPE

Heavy Duty Control Unit

Robust latching relay provides reliable performance over many different applications, including plug loads. 20A 100-277V AC, 1HP @ 120V, 2HP @ 240/277V. Auto or Manual-On operation. Powers up to six low voltage sensors.

Description	Voltage	Catalog Number
Heavy duty control unit	120-277V AC	**CU300HD**

Note: See page E-25 for technical specifications.

CU300HD

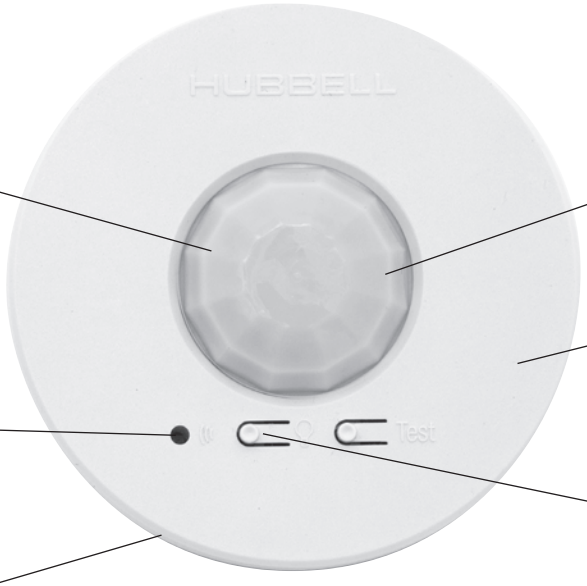
Three operation modes available: Auto-On, Auto-On Low-Light and Manual-On

Passive infrared motion detection with advanced digital signal processing for fine motion detection

Auto-On Low-Light feature will only turn lights on automatically if there is less than approximately 10 Lux (1 fc) of ambient light

10-year battery life design

Clear Connect™ Enabled



Lens illuminates during test mode to verify coverage

Adjustments available for Timeout, Activity, and Auto-On settings

Accessible test buttons make setup easy

WLP450C

8A lighting, 3A fan load capacity

Green LED provides operation and setup feedback

No neutral required, no leakage to ground

LED and CFL compatible with supplied load adaptor

Digital push button operation provides user control

Service switch prevents lights from coming on during re-lamping

WLS1278W
with **NP26W**

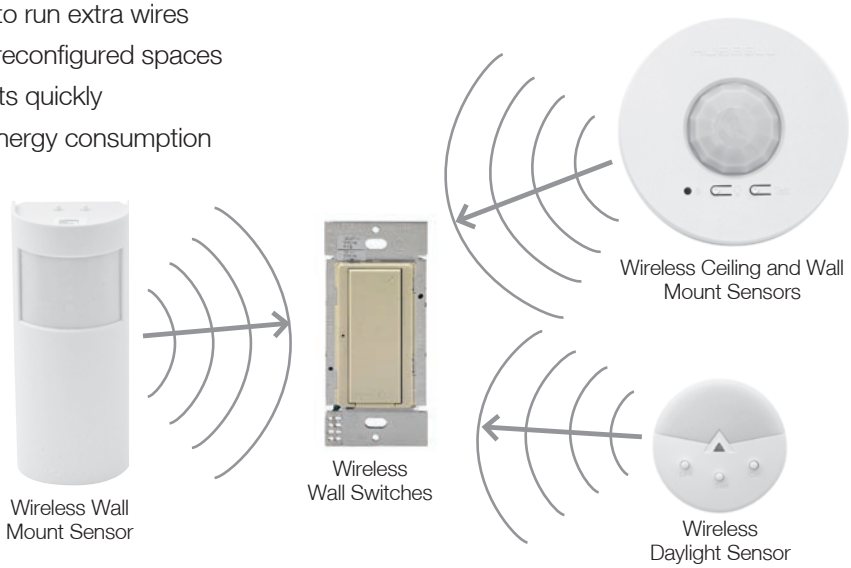
Clear Connect™ is a registered trademark of Lutron Electronics Co., Inc.

WL-Series Wireless Sensors and Controls

Featuring Passive Infrared Technology

Hubbell's WL-Series Wireless Sensors and Controls are the ideal solution for renovation projects aimed at reducing energy consumption. These sensors use DSP Enhanced passive infrared technology to detect movement of heat from people to turn lights on when a room is occupied and off when vacant. The sensors wirelessly transmit Clear Connect™ commands to the associated control devices, reducing the need for additional wiring for ease and speed of installation and energy savings.

- Eliminates need to run extra wires
- Supports highly reconfigured spaces
- Complete projects quickly
- Helps manage energy consumption



Wireless Ceiling Mount Sensor

Description	Color	Catalog Number
Ceiling mount 360° / 324-676 ft²	White	**WLP450C**

WLP450C

Wireless Wall Mount Sensor

- Detection at longer distances is best when motion occurs at right angles to the sensor
- Multiple sensors can be used to extend coverage
- Mount Hallway Sensor at the end of a hallway with a clear view down the length of a hall

Description	Wall mount 180° / 3000 ft²	Corner mount 90° / 2500 ft²	Hallway up to 150 linear ft
Color	White	White	White
Catalog Number	**WLP3000W**	**WLP2500W**	**WLP150H**

Compatible Controls: WSL1278xx switch, WLC316R control unit, or any Lutron Clear Connect enabled control device.

WLP150H

Wireless Wall Switches

Description	Color	Catalog Number
8A Lighting, 3A Fan (1/10 HP motor, 120V only), Spec Grade Electronic Switch 120–277V. No neutral wire required	Ivory White	**WLS1278I** **WLS1278W**
Accessory Switch 120V	Ivory White	**WLAS120I** **WLAS120W**
Accessory Switch 277V	Ivory White	**WLAS277I** **WLAS277W**

Compatible Transmitters: WLP series and WLDH sensors any Lutron Clear Connect enabled sensor.

WLS1278I

WLAS277W

Wireless Control Unit

Description	Catalog Number
Wireless load control unit with isolated relay, 16A, 120V or 277V AC	**WLC316R**

Compatible Transmitters: WLP series and WLDH sensors any Lutron Clear Connect enabled sensor.

WLC316R

Wireless Daylight Sensor

Description	Color	Catalog Number
Daylight sensor 0–107,000 Lux (0-10,000 fc)	White	**WLDH**

Compatible Controls: WSL1278xx switch, WLC316R control unit, or any Lutron Clear Connect enabled control device.
Note: See pages E-22 to E-24 for coverage patterns and technical specifications.

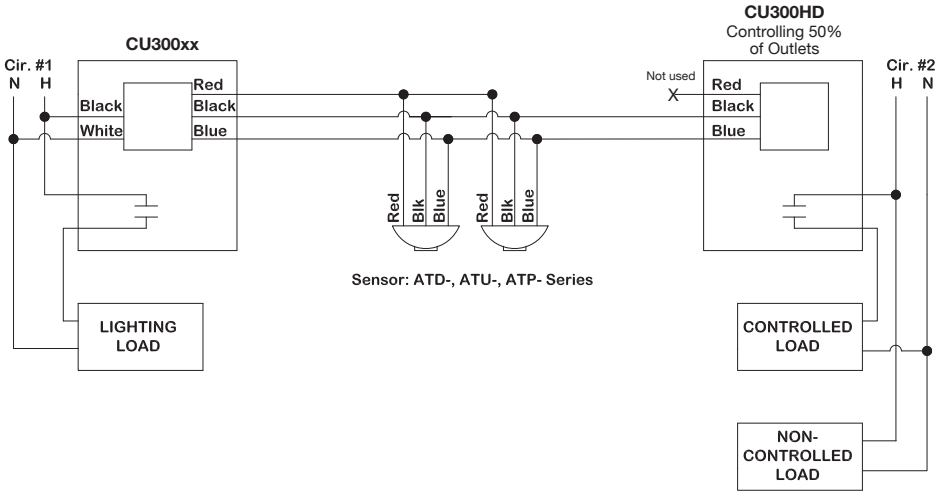
WLDH

DR20LA
Shown with adhesive label to denote the device is being automatically controlled. Labels provided with each plug load control unit.

ASHRAE 90.1-2010 mandates that 50% of all outlets in private offices, open offices, and computer classrooms must be automatically controlled by occupancy or time based schedules. This also includes outlets in modular furniture. Hubbell provides solutions for compliance that are cost effective and installer friendly. Bellow are two examples. Additional examples and design resources are located at www.hubbell-wiring.com/energy.aspx

Wired

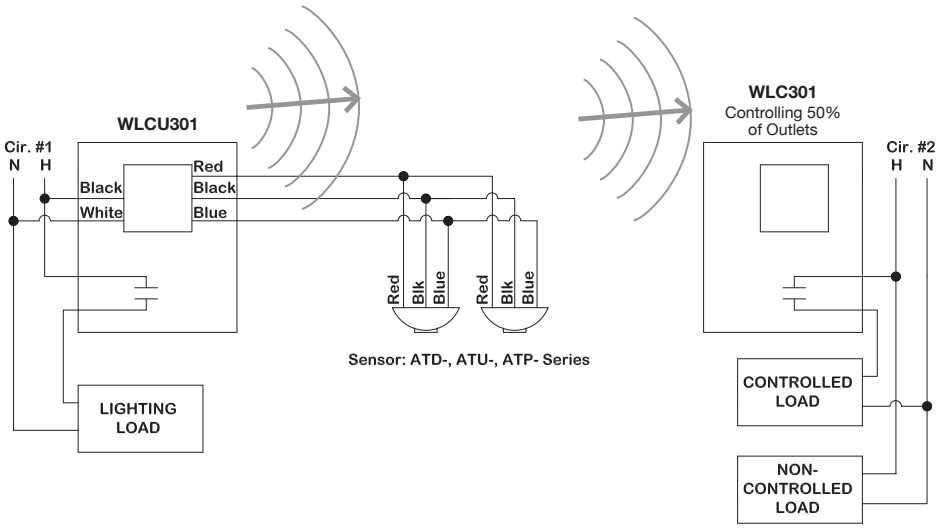
Utilizing low voltage wiring provides installers with a familiar method of wiring and installation. Specify CU300HD to control outlets and use AAR or CU300A to control the lighting. Utilize alternating outlet or split receptacle wiring as required to control at least 50% of the outlets in the space.



Wireless

Clear Connect™ Enabled

Wireless communication takes complexity out of retrofit and difficult installations by eliminating low voltage wires running between lighting and receptacle control units. This gives installers flexibility to quickly deploy, add additional devices, and configure and re-configure the system as needed. Hubbell's WL series controls utilize Lutron's proven Clear Connect™ communication and are compatible with other Clear Connect™ devices, such as Hubbell's wireless occupancy sensors.



Hubbell Plug Load Control Products

- Wired or wireless flexibility
- UL/cUL 916 listed for energy management equipment
- Listed for 20A enclosed switching
- Heavy duty 60A rated magnetic latching relay; silver alloy contacts
- Zero cross switching
- Expanded operating temperature range
- 24V DC, 250mA DC power output on applicable units
- Low voltage output short circuit protection
- UL2043 plenum rated except WLC402
- Controlled outlet labels provided with control units

Wired

Heavy Duty Control Unit

Robust latching relay provides reliable performance over many different applications, including plug loads. 20A 100-277V AC, 1HP @ 120V, 2HP @ 240/277V. Auto or manual-on operation. Power up to six low voltage sensors.

Description	Voltage	Catalog Number
Heavy duty control unit	100-277V AC	**CU300HD**

Note: See page E-25 for technical specifications.

CU300HD

Wireless

Operates in a “quiet” 434MHz FCC band. Communication range: 30 ft obstructed or 60 ft line of sight

LUTRON Clear Connect™ Enabled

Heavy Duty Control Unit with Wireless Transmit

CU300HD with functionality of WLCA integrated to wirelessly activate additional load control units. Takes the place of CU300A's normally used to control just lighting. 20A 100-277V AC, 1HP @ 120V, 2HP @ 240/277V. Auto or manual-on operation. Power up to six low voltage sensors.

Description	Voltage	Catalog Number
Heavy duty control unit with Clear Connect	100-277V AC	**WLCU301**

WLCU301

Wireless Status Transmitter

Low voltage powered unit transmits occupancy or timer status to associated load control receivers. Use with CU300xx and low voltage sensors/timers to upgrade existing lighting control systems to support plug load control.

Description	Voltage	Catalog Number
Wireless transmitter with Clear Connect, for use with CU300xx	24V DC	**WLCA**

WLCA

Heavy Duty Load Control Units with Wireless Receive

These units receive wireless Clear Connect™ commands to turn on and off power to downstream loads. Utilize these control units to wirelessly switch a circuit of receptacles or any other applicable load. 20A 100-277V AC, 1HP @ 120V, 2HP @ 240/277V.

Description	Voltage	Catalog Number
1 - Circuit heavy duty control unit with Clear Connect	100-277V AC	**WLC301**
2 - Circuit heavy duty control unit with Clear Connect	100-277V AC	**WLC302**

WLC301

Furniture Feed Box with Heavy Duty Relays and Wireless Receive

Furniture feed box receives wireless Clear Connect™ commands and controls 2-circuits in furniture electrical feeds. It supports wall mounting to existing 1 or 2-gang junction boxes. Additionally, the box can be secured to the furniture or on the floor. 20A 100-277V AC, 1HP @ 120V, 2HP @ 240/277V.

Description	Voltage	Catalog Number
2 - Circuit heavy duty furniture freed box with Clear Connect	100-277V AC	**WLC402W**

Note: See page E-26 for technical specifications.

WLC402W

Adaptive Dual Technology Wall Switches AD2000 Series

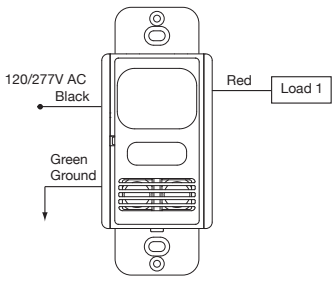
Electrical	
Power Supply	120/277V AC, 50/60Hz
Load Capacity	
Incandescent	0 to 800 watts
120V AC Ballast	0 to 1000 watts
277V AC Ballast	0 to 1800 watts
Agency Approvals	cULus Listed
Physical	
Housing	High impact plastic (UL-94-5V)
Lens	Dual element pyrometer and 12 element cylindrical hard lens
Dimensions	Face 2.59"H x 1.73"W, 0.37"D (from wall out)
Mounting Height	42 to 54 inches above floor
Environmental	
Operating	32°F to 104°F (0°C to 40°C); 0% to 95% non-condensing relative humidity
Controls	
Time Delay	Digital, adaptive 4 to 30 minutes
Ambient Light	Adjustable ambient light override, 10 to 500 foot candles
Front Press Switch	Auto/Off
Sensitivity	Adaptive 0% to 100%
Service Switch	Air gap off
Sensing Indicator	
Passive Infrared	Red LED
Ultrasonic	Green LED

Adaptive Technology Ultrasonic and PIR Wall Switches AP2000 and AU2000 Series

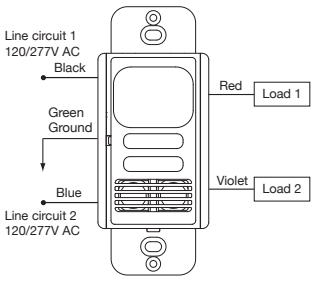
Electrical	
Power Supply	120/277V AC, 50/60Hz
Load Capacity	
Incandescent	0 to 800 watts
120V AC Ballast	0 to 1000 watts
277V AC Ballast	0 to 1800 watts
Agency Approvals	cULus Listed
Physical	
Housing	High impact plastic (UL-94-5V)
Lens	Dual element pyrometer and 12 element cylindrical hard lens (AP2000 only)
Dimensions	Face 2.59"H x 1.73"W, 0.37"D (from wall out)
Mounting Height	42 to 54 inches above floor
Environmental	
Operating	32° F to 104°F (0°C to 40°C); 0% to 95% non-condensing relative humidity
Controls	
Time Delay	Digital, adaptive 4 to 30 minutes 20 minutes default
Ambient Light	Adjustable ambient light override, 10 to 500 foot candles
Front Press Switch	Auto/Off
Sensitivity	Adaptive 0% to 100%
Service Switch	Air gap off
Sensing Indicator	
Passive Infrared	Red LED (AP series only)
Ultrasonic	Green LED (AU series only)

Wiring Schematic AD, AU, AP, 1277/2000 Series Wall Switch Sensors

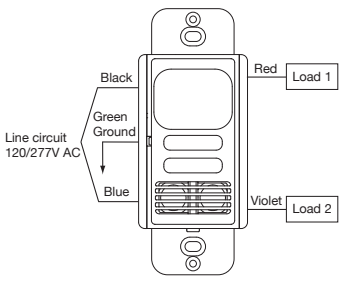
Single Circuit Wiring



Dual Circuit Sensor, Wired for Dual Circuits

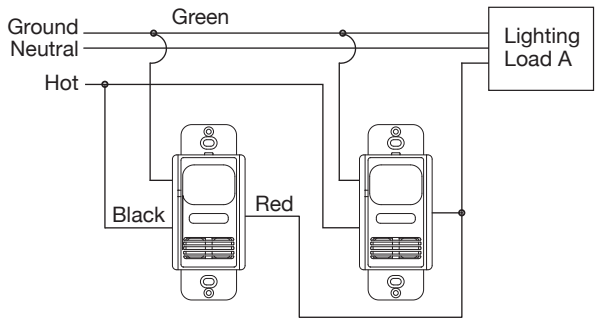


Dual Circuit Sensor, Wired for Single Circuit

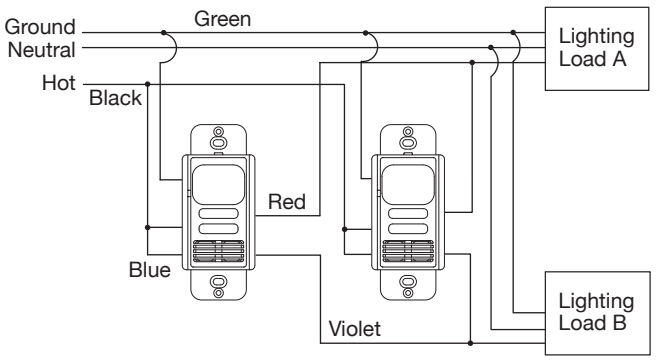


For step dimming, bi-level, and dual ballasted fixtures

Single Circuit Sensors, Wired as 3-Way Sensors*



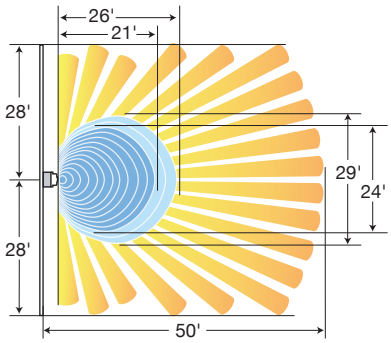
Dual Circuit Sensors, Wired as 3-Way Sensors*



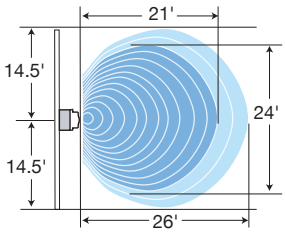
*Note: *Load can not exceed the rating of one switch.*
Sensor is shipped with all dip switches in the OFF position (factory default).

Wall Switches Coverage Patterns

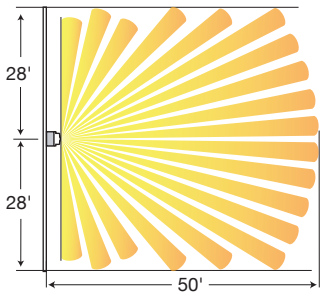
Minor Motion: Ultrasonic PIR **Major Motion:** Ultrasonic PIR



AD2000 Series



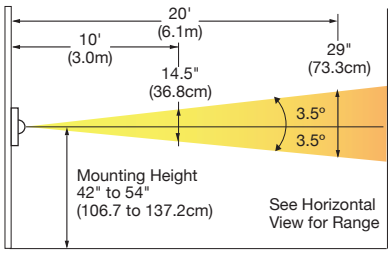
AU2000 Series



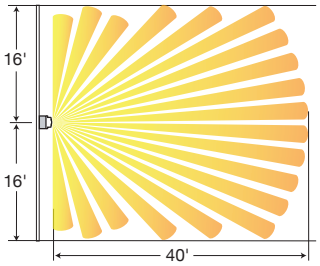
AP2000 Series

Wall Switches Coverage Patterns

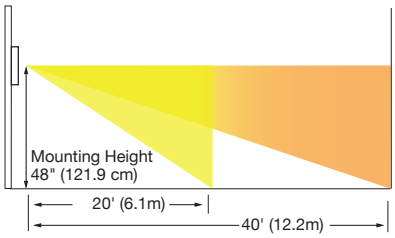
Minor Motion: PIR **Major Motion:** PIR



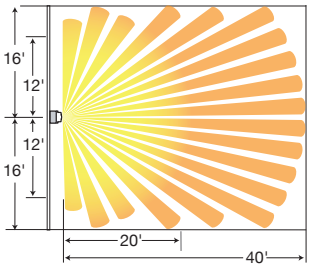
Vertical Coverage
AT1277 Series



AT1277 Series



Vertical Coverage
ATP2000, WS2000 Series



ATP2000, WS2000 Series

Adaptive Technology PIR Wall Switches AT1277 Series

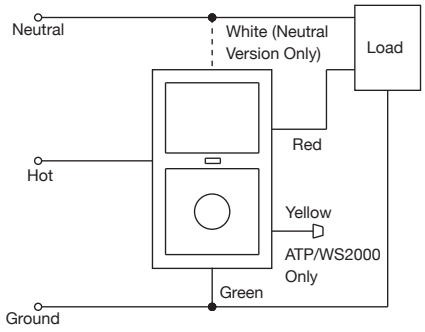
Electrical	AT1277 Series
Power Supply	120/277V AC, 50/60Hz
Load Capacity	
120V AC	0 to 1800 watts
277V AC	0 to 4155 watts
Agency Approvals	UL Listed, cULus Certified
Physical	
Housing	Flame retardant UL 94 V-0 ABS
Lens	Polyethylene
Dimensions	Face 2.61"H x 1.29"W, 0.73"D (from wall out)
Mounting Height	42 to 54 inches above floor
Environmental	
Operating	32°F to 122°F (0°C to 50°C) with rate of change not exceeding 20°F (11°C) per hour; 20% to 90% non-condensing relative humidity
Storage	-20°F to 150°F (-29°C to 65°C); 20% to 90% non condensing relative humidity
Controls	
Time Delay	Digital, test (15 seconds), Adaptive 5 to 30 minutes
Ambient Light	Digital, pushbutton, 30 to 300 foot candles
Front Press Switch	Auto/Momentary Off (30 minutes after last motion, switch returns to automatic mode)
Service Switch	Auto/Off
Sensing Indicators	
Passive Infrared	2-color LED (red, green)

Adaptive Technology PIR Wall Switches ATP2000, WS2000 and WS1000 Series

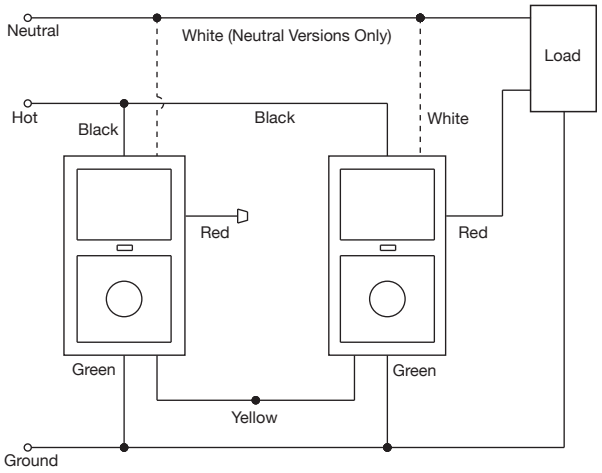
Electrical	ATP/WS2000 Series	WS1000 Series
Power Supply	120/277V AC, 60Hz	120V AC, 60Hz
Load Capacity		
Incandescent	0 to 1000 watts	0 to 500 watts
120V Ballast	0 to 1000 watts	0 to 500 watts
277V Ballast	0 to 1800 watts	N/A
Agency Approvals	cULus Listed	cULus Listed
Warranty	5 years	5 years
Physical	**ATP/WS2000 and WS1000 Series**	
Housing	Flame retardant UL 94 V-0 ABS	
Lens	Polyethylene	
Dimensions	Face 2.59"H x 1.30"W, 0.61"D (from wall out)	
Mounting Height	42 to 54 inches above floor	
Environmental	**ATP/WS2000 and WS1000 Series**	
Operating	32°F to 122°F (0°C to 50°C) with rate of change not exceeding 20°F (11°C) per hour; 20% to 90% non-condensing relative humidity	
Storage	-40°F to 150°F (-40°C to 65°C); 20% to 90% non condensing relative humidity	
Controls	**ATP/WS2000 Series**	**WS1000 Series**
Time Delay	ATP: Auto WS: Manual 20 seconds to 30 minutes	Manual 20 seconds to 30 minutes
Ambient Light	Digital, pushbutton, 10 to 500 foot candles	n/a
Front Press Switch	On/Off	On/Off
Service Switch	Off (service) Vac (manual-on) Occ (auto-on)	Off (service) On (normal operation)
Sensing Indicator	**ATP/WS2000 and WS1000 Series**	
Passive Infrared	Red LED	

Wiring Schematic ATP2000 and WS2000 Series Wall Switches

Normal Wiring



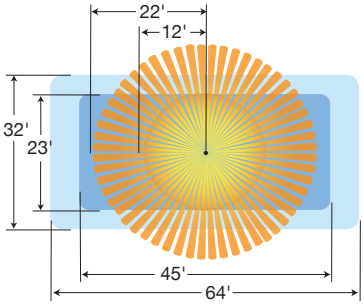
Sensors Wired as 3-Way Sensors*
(ATP/WS2000 Only)



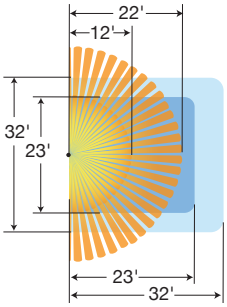
*Note: *Load can not exceed the rating of one switch.*

Ceiling Sensors Coverage Patterns

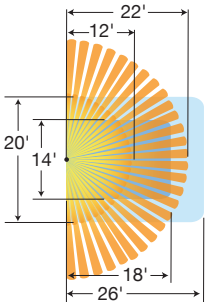
Minor Motion: Ultrasonic PIR **Major Motion:** Ultrasonic PIR



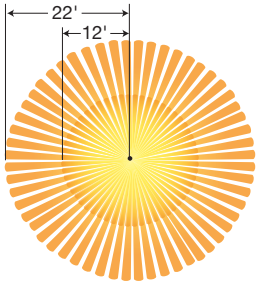
ATD2000C Series



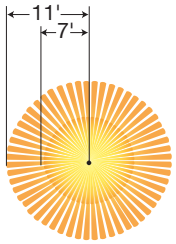
ATD1000C Series



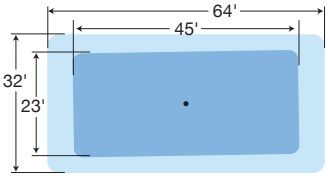
ATD500C Series



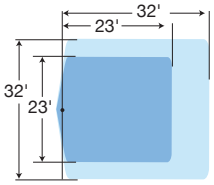
ATP1500C Series



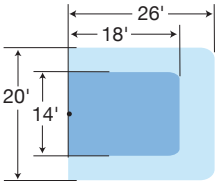
ATP600C Series



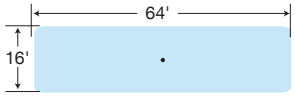
ATU2000C Series



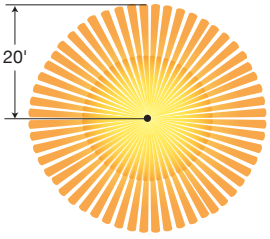
ATU1000C Series



ATU500C Series



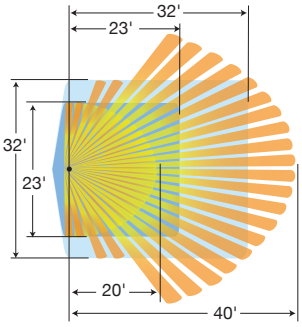
ATU2000C Series
Hallway Application



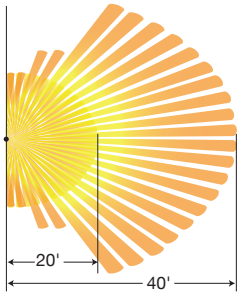
LVPR1500R(P)

Wall Mount Sensors Coverage Patterns

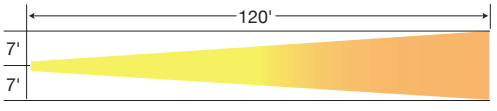
Minor Motion: Ultrasonic PIR **Major Motion:** Ultrasonic PIR



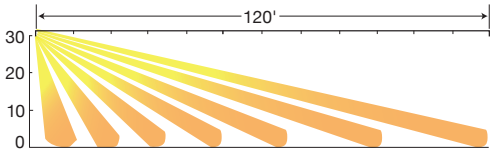
ATD1600W Series



ATP1600W Series



ATP120HB Series
Top View



Side View

Adaptive Dual Technology, Ultrasonic and Passive Infrared Ceiling and Wall Mount Sensors
ATD, ATU, and ATP Series

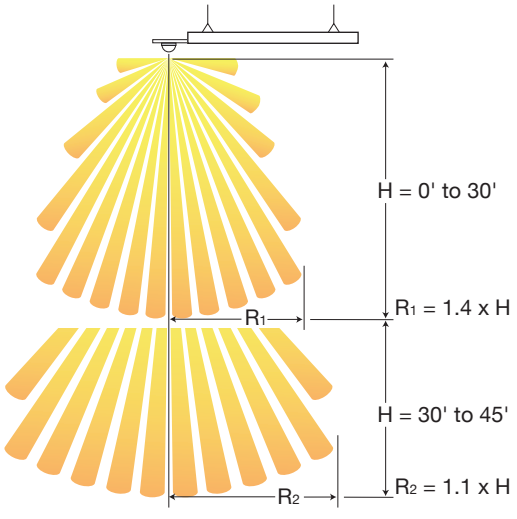
Electrical	
Power Requirements	24V DC nominal, 33mA from Hubbell CU series control unit
Isolated Relay (sensors with RP suffix)	Normally open and normally closed Terminals available
Agency Approvals	UL Listed
Physical	**Ceiling Sensors**
Housing	Flame retardant UL 94 V-0 ABS
Lens	Polyethylene
Dimensions	1.5"H x 4.5"D
Color	Office white
Mounting Height	8 to 12 feet
Physical	**Wall Mount Sensors**
Housing	Flame retardant UL 94 V-0 ABS
Lens	Polyethylene
Dimensions	6"H x 2"W x 1.5"D
Color	Office white
Mounting Height	8 to 12 feet, 8 to 30 feet (ATP120HB series)
Environmental	
Operating	32°F to 104°F (0°C to 40°C) with rate of change not exceeding 20°F (11°C) per hour; 0% to 95% non condensing relative humidity
Storage	-20°F to 150°F (-29°C to 65°C); 0% to 95% non-condensing relative humidity
Controls	
Time Delay	Test (8 seconds), adaptive 8 to 40 minutes
Ambient Light	1 to 1000 foot candles
Sensitivity	Adaptive 0 to 100%
Sensing Indicators	
Ultrasonic (ATD and ATU Series)	Green LED
Passive Infrared (ATD and ATP Series)	Red LED

OPTIMYZER® High Bay
HMHB Series

User Interface	2 four-pin dip switches (standard version) 3 four-pin dip switches (photosensor version)
Timer time-outs	Primary: 8-second test mode – 4, 8, 16 and 30 minute time-outs Secondary: Can be disabled – 30, 60 and 90 minute time-outs
Passive infrared	Dual element pyrometer and spherical Fresnel lens
Photosensor Range (Photosensor version only)	50 to 3000 foot candles, set point adjustable
Coverage	360° (includes masking kit for aisle and end-of-aisle applications). Lens: Below 30 ft: 1.4 – 42 ft radius; mounted @ 30 ft; up to 45 ft: 1.1 - 49.5 ft radius; mounted @ 45 ft
Load ratings (line voltage units)	120V AC: 0 to 800 watts watts 277V AC: 0 to 1200 watts ballast 347V AC: 0 to 1500 watts ballast 208/240V AC: 0 to 1200 watts ballast 480V AC: 0 to 2400 watts ballast ¼-HP motor load @ 120V AC, 1/6 HP @ 347V
Operating environment (Indoor use only)	Operating temperature: (standard version) 32°F to 149°F (0°C to 65°C); Relative humidity (non-condensing): 0% to 95%
Construction	Casing: High-impact injection-molded thermoplastic
Size and weight	Size: 4.4 inch x 3.6 inch x 2.0 inch; Weight: 7 oz.
Color	White
Mounting	Mounts directly to the end of a fixture through an extended ½ inch chase nipple. For deeper body fixtures, an optional Extender Adapter (available separately) positions the sensor flush or below the bottom of the reflector for a full field of view
Certifications	cULus Listed

Coverage Pattern

Minor Motion: PIR **Major Motion:** PIR

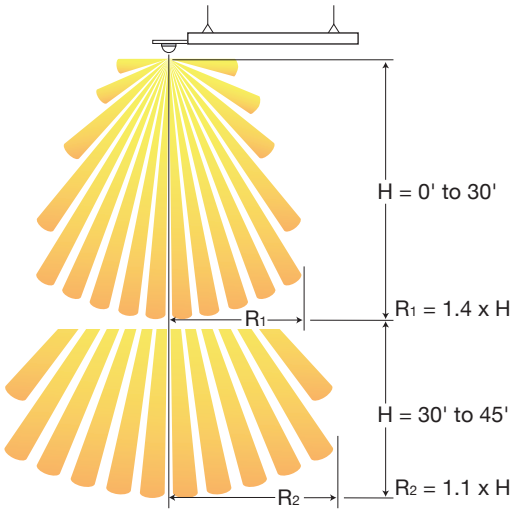


HMHBxxxUPCW Series

User Interface	2 four-pin dip switches (standard version) 3 four-pin dip switches (photosensor version)
Timer time-outs	Primary: 8-second test mode 4, 8, 16 and 30 minute time-outs Secondary: Can be disabled 30, 60 and 90 minute time-outs
Passive infrared	Dual element pyrometer and spherical Fresnel lens
Photosensor Range (Photosensor version only)	50 to 3000 foot candles, set point adjustable
Coverage	360° (includes masking kit for aisle and end-of-aisle applications) Lens: Below 30 ft: 1.4 – 42 ft radius; mounted @ 30 ft.; Up to 45 ft.: 1.1 - 49.5 ft. radius; mounted @ 45 ft.
Load ratings (line voltage units)	120V AC: 0 to 800 watts ballast or tungsten 277V AC: 0 to 1200 watts ballast 347V AC: 0 to 1500 watts ballast 208/240V AC: 0 to 1200 watts ballast 480V AC: 0 to 2400 watts ballast ¼-HP motor load @ 120V AC, 1/6 HP @ 347V
Operating environment (Indoor use only)	Operating temperature: (standard version) 32°F to 149°F (0°C to 65°C); (low temperature version): -40°F to 149°F (-40°C to 65°C) Relative humidity (non-condensing): 0% to 95%
Construction	Casing: High-impact injection-molded thermoplastic
Size and weight	Size: 4.4 inch x 3.6 inch x 2.0 inch; Weight: 7 oz.
Color	White
Mounting	Mounts directly to the end of a fixture through an extended ½ inch chase nipple. For deeper body fixtures, an optional Extender Adapter (available separately) positions the sensor flush or below the bottom of the reflector for a full field of view
Certifications	ETL, Conforms to UL STD 916, Certified to CAN/USA STD 22.2 No. 61010-1-04 and Title 24 Certified
Warranty	5 year limited

Coverage Pattern

Minor Motion: PIR **Major Motion:** PIR

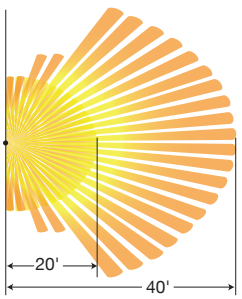


Harsh Environment Passive Infrared Ceiling and Wall Mount Sensors
AHP Series

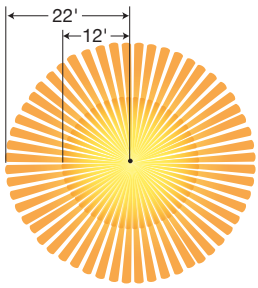
Electrical	
Power Requirements	24V DC nominal, 33mA from Hubbell CU series control unit
Isolated Relay (sensors with RP suffix)	Normally open and normally closed Terminals available
Agency Approvals	cULus Listed
Physical	**Ceiling Sensor**
Housing	Flame retardant UL 94 V-0 ABS
Protection	NEMA 4X, when used with ACIPE
Lens	Polyethylene
Dimensions	1.5"H x 4.5"D
Color	Office white
Mounting Height	8 to 12 feet
Physical	**Wall Mount Sensor**
Housing	Flame retardant UL 94 V-0 Valox®
Protection	NEMA 4X, IP66, outdoor use rated
Lens	Polyethylene
Dimensions	6"H x 2"W x 1.5"D
Color	Gray
Mounting Height	8 to 12 feet
Environmental	
Operating	-40°F to 149°F (-40°C to 65°C) with rate of change not exceeding 20°F (11°C) per hour; 0% to 95% non condensing relative humidity
Controls	
Time Delay	Test (8 seconds), adaptive 8 to 40 minutes
Ambient Light	1 to 1000 foot candles
Sensitivity	Adaptive 0 to 100%
Sensing Indicators	
Passive Infrared	Red LED

Coverage Pattern

Minor Motion: PIR **Major Motion:** PIR



AHP1600WRP

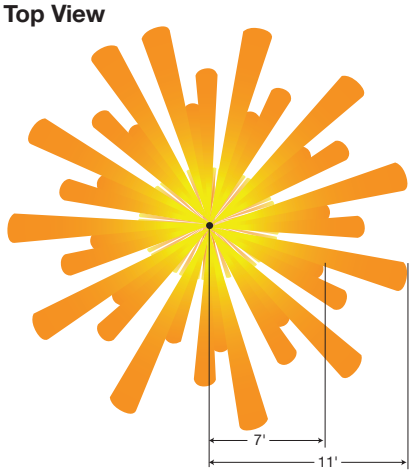


AHP1500CRP

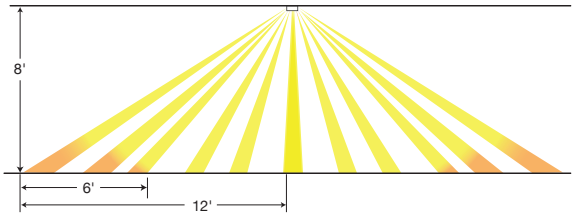
Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.

Wireless Ceiling Mount Sensor Coverage Patterns

Top View



Side View



WLP450C

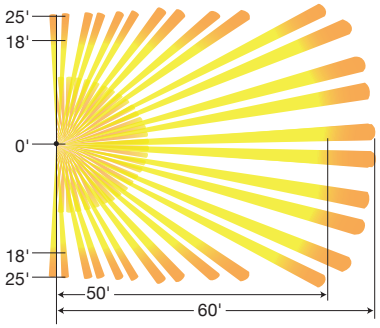
Sensor Coverage Chart (for sensor mounted in center of room)

Ceiling height	Maximum room dimensions for complete floor coverage*	
8 ft (2.4 m)	18 ft x 18 ft (5.5 m × 5.5 m)	324 ft^2 (30.2 m^2)
9 ft (2.7 m)	20 ft x 20 ft (6.1 m × 6.1 m)	400 ft^2 (37.2 m^2)
10 ft (3.0 m)	22 ft x 22 ft (6.7 m × 6.7 m)	484 ft^2 (44.9 m^2)
12 ft (3.7 m)	26 ft x 26 ft (7.9 m × 7.9 m	676 ft^2 (62.4 m^2)

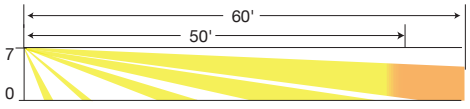
*Note: * 12 ft (3.7 m) is the recommended maximum mounting height*

Wireless Wall Mount Sensor Coverage Patterns

Top View



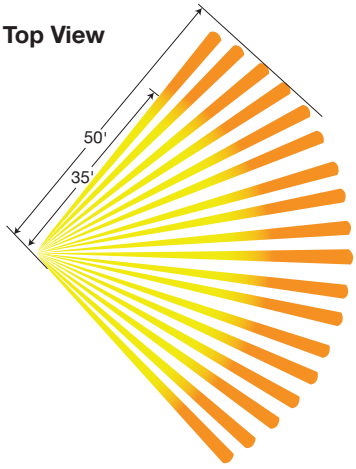
Side View



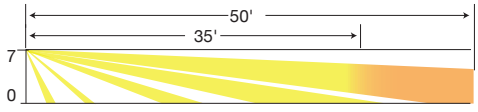
WLP3000W

Corner Mount Coverage Patterns

Top View



Side View



WLP2500W

*Note: *Sensor mounting shown at 7 ft (2.1 m). Mounting height should be between 6 and 8 ft (1.6 and 2.4 m).*

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Wireless Hallway Sensor Coverage Patterns

Top View

Side View

WPL150H

Sensor Coverage Chart (Hallway)

Width of Hall	Length of Hall
6 ft (1.0 m) or less	50 ft (15.2 m)
8 ft (2.4 m)	100 ft (30.5 m)
10 ft (3.0 m) or more	150 ft (45.7 m)

*Note: *Sensor mounting shown at 7 ft (2.1 m). Mounting height should be between 6 and 8 ft (1.6 and 2.4 m).*

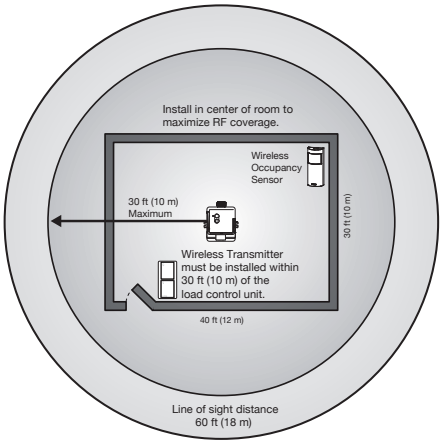
Specifications

Electrical	Operating voltage: 3V Operating current: 14 µA nominal 10-year battery life design Supplied with one CR 123 lithium battery Non-volatile memory (saved changes are stored during power loss)
Construction	High impact, UL 94-5V plastic
Operating Environment	Indoor use only Operating temperature: 32˚F to 104˚F (0˚C to 40˚C)
Range	RF range is 30 ft (10m) obstructed, 60 ft (18m) line of sight
Sensor Coverage Test	Dedicated test button Lens illuminates orange in response to motion during test mode
Wireless Communication Test	Dedicated test button; Turn associated loads on and off
Time Out Options	1 minute (intended for use in high-activity, briefly occupied areas only); 5 minutes; 15 minutes (default setting); 30 minutes
Auto-On Options	“Enabled” – Sensor turns lights ON and OFF automatically – default setting “Disabled” – Lights must be turned ON manually from a switching device Sensor turns lights OFF automatically
Sensitivity Options	Low Activity (default setting); Medium Activity; High Activity
Certifications	cULus Listed, FCC Certified, IC Certified Meets CA (USA) Energy Commission Title 24 requirements
Warranty	1 year

Wireless Control Unit (WLC316R)

Electrical	Operating voltage: 120/277V, 50/60Hz LED status indicator: displays load status and provides programming feedback Power failure memory: (Relay returns to previous level prior to interruption) Output is non-latching
Operating Environment	Indoor use only Ambient operating temperature: 32°F to 131°F (0°C to 55°C); Relative humidity: 0% to 90% humidity, non-condensing
Load	Maximum load: 16A general purpose. No minimum Motor rating: 0.5 HP (120V AC), 1.5 HP (277V AC)
Isolated Relay	Normally open (NO) and normally closed (NC) dry contacts Maintained latching output The isolated relay is not rated to control unclamped, inductive loads. Inductive loads include, but are not limited to relays, solenoids and motors. To control these types of equipment
Range	RF range is 30 ft (10m) obstructed, 60 ft (18m) line of sight
Certifications	UL Listed, UL 2043 Plenum Rated, FCC Approved. Complies with the limits for a Class B device, pursuant to Part 15 of the FCC rules. CSA and IC
Warranty	1 year

Range Diagram



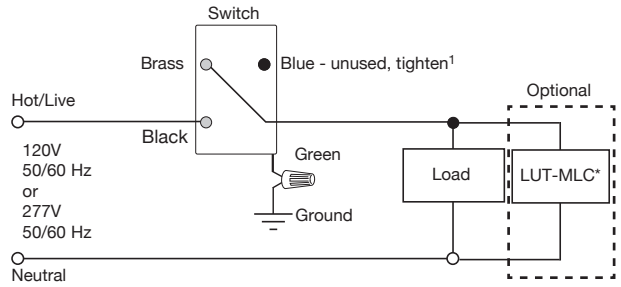
Contact Hubbell first for applications using foil-backed or metallic ceiling tiles.

Wireless Wall Switch (WLS1278xx)

Electrical	Operating voltage: 120/277V, 50/60Hz Green indicator light
Operating Environment	Indoor use only Ambient operating temperature: 32°F to 104°F (0°C to 40°C), Relative humidity: 0% to 90% humidity, non-condensing
Wire Size	#20 to 16 AWG (0.5 to 1.5mm^2) solid or stranded wire
Capacity	Up to 9 WLAS accessory switches can be configured to work together with one WLS1278
Range	RF range is 30 ft (10m) obstructed, 60 ft (18m) line of sight
Certifications	UL Listed, CSA Certified, FCC Approved Complies with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules
Warranty	1 year

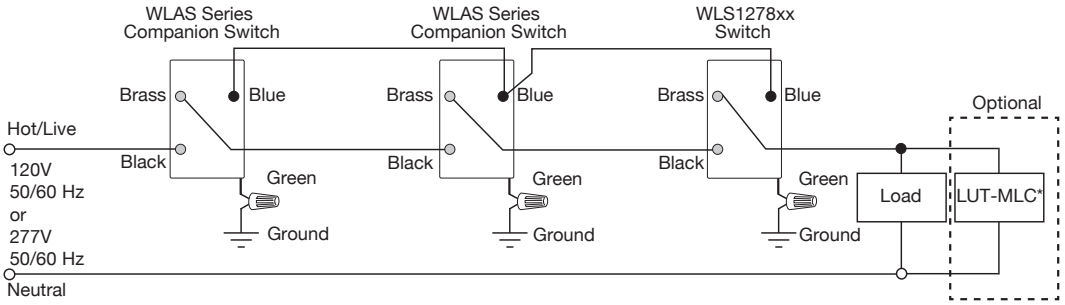
Wiring Diagram - Wireless Wall Switch (WLS1278xx)

Single Location Installation
WLS1278xx*



*Note: *The included LUT-MLC ensures proper function when fluorescent, CFL, or LED loads are used. Install the LUT-MLC inside a load fixture or in a separate J-box of the circuit.*
1 When using controls in single location installations, tighten the blue terminal without any wires attached. DO NOT connect the blue terminal to any other wiring or to ground.
2 Up to 9 Accessory Switches may be connected to the Wireless Switch. Total blue terminal wire length may be up to 250 ft (76m).
3 Requires WLAS120 for 120V applications, and WLAS277 for 277V applications.

Multi-Location Installation[2]
with WLAS1278xx or WLAS277xx[3]



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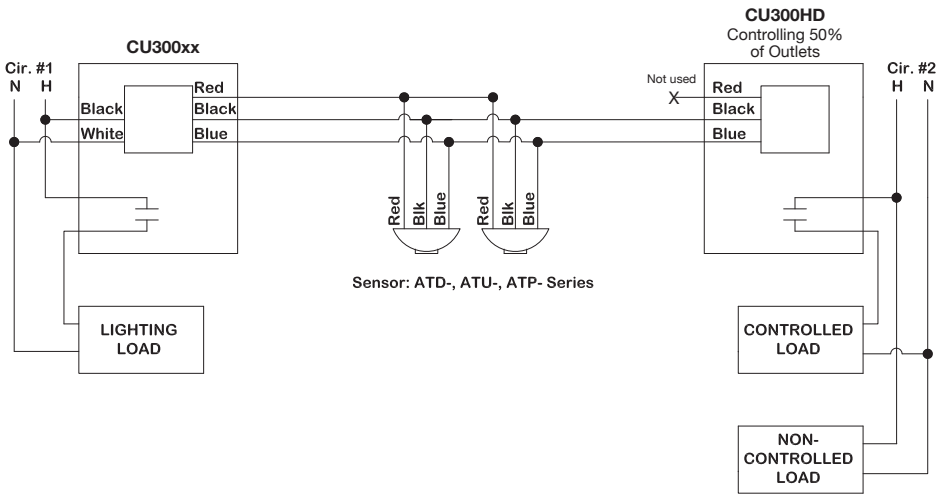
Control Units - CU300/347A Series

Electrical	CU300A(M)	CU347A	CU300HD
Power Supply	120-277V AC, 50/60Hz	347V AC, 60Hz	100-277V AC, 50/60 Hz
Power Output	24V DC, 150mA	24V DC, 100mA	24V DC 250mA
Load Capacity			
Incandescent	0 to 1800 watts	NA	100-277V, 20A Enclosed Switching
120V Ballast	0 to 2400 watts	NA	Motor Loads:
230V Ballast	NA	NA	1HP @ 120V
277V Ballast	0 to 5540 watts	NA	2HP @ 240/277V
347V Ballast	NA	0 to 5205 watts	
AT Sensor/AAR Capacity	1 to 4 combined	1 to 3 combined	1 to 6 combined
Agency Approvals	UL Listed, cULus Certified	UL Listed, cULus Certified	UL Listed, cULus
Physical			
Housing	Flame retardant UL 94-5VA thermoplastic		Flame retardant UL 94-5VA thermoplastic
Dimensions	3.69"L x 2.33"W x 1.36"H		4.00"L x 3.4"W x 1.73"H
Color	Black		Black
Environmental			
Operating	32°F to 104°F (0°C to 40°C); 0% to 90% non condensing relative humidity		See CU300HD data sheet for ratings
Storage	-20°F to 150°F (-29°C to 65°C); 0% to 90% non condensing relative humidity		

Add-A-Relay - AAR

Electrical	
Power Input	24V DC nominal, 33mA from Hubbell CU series control unit
Load Capacity	
Incandescent	0 to 1800 watts
120V Ballast	0 to 2400 watts
230V Ballast	0 to 3680 watts
277V Ballast	0 to 5540 watts
347V Ballast	0 to 5205 watts
Agency Approvals	UL Listed
Physical	
Housing	Flame retardant UL 94-5V thermoplastic
Dimensions	3.69"L x 2.33"W x 1.36"H
Color	Black
Environmental	
Operating	32°F to 104°F (0°C to 40°C); 0% to 90% non condensing relative humidity
Storage	-20°F to 150°F (-29°C to 65°C); 0% to 90% non condensing relative humidity

Wired Lighting and Plug Load Control

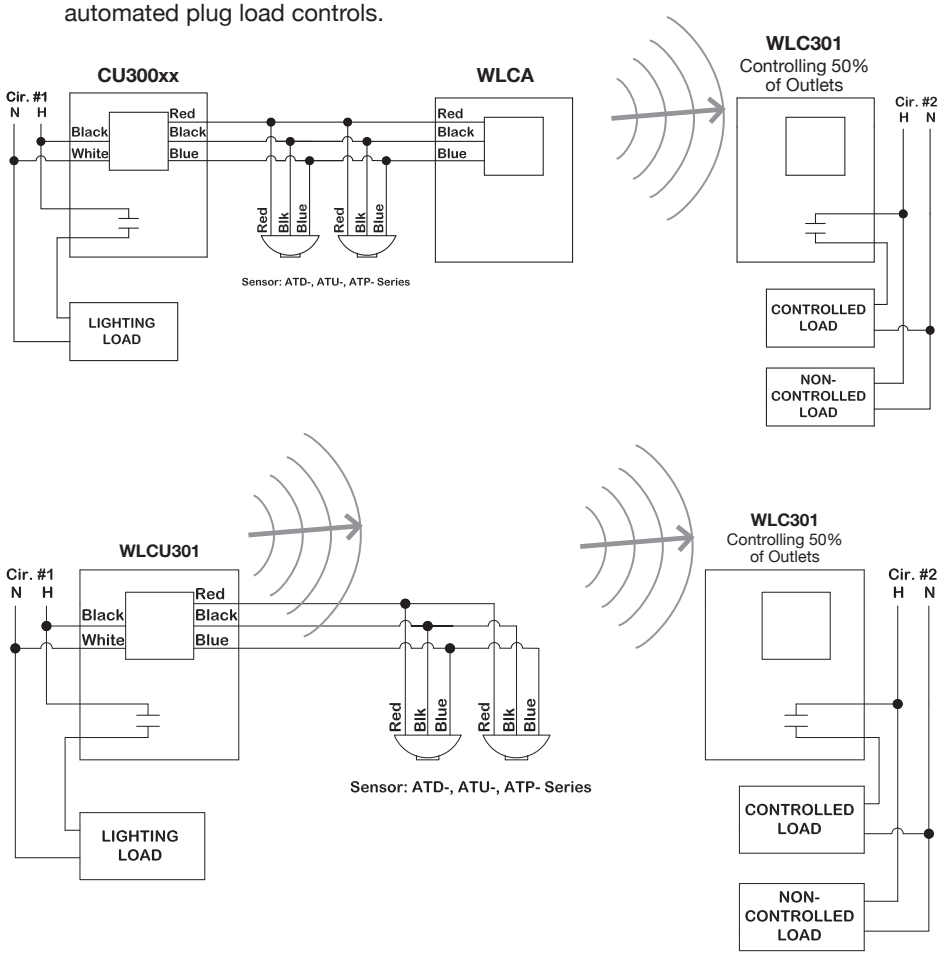


WLC Load Control with Wireless Clear Connect Communication

Electrical	WLCA	WLCU301	WLC301	WLC302	WLC402W
Power Supply	24V DC	100-277V AC, 50/60Hz	100-277V AC, 50/60Hz	100-277V AC, 50/60Hz	100-277V AC, 50/60Hz
Power Output	N/A	24V DC 250mA	N/A	N/A	N/A
Circuits Controlled	N/A	1	1	2	2
Load Capacity		100-277V, 20A 1HP @ 120V AC 2HP @ 240/277V	100-277V, 20A 1HP @ 120V AC 2HP @ 240/277V	100-277V, 20A 1HP @ 120V AC 2HP @ 240/277V	100-277V, 20A 1HP @ 120V AC 2HP @ 240/277V
Agency Approvals	UL Listed, cULus, FCC, IC				
Device Type (Transmit or Receive)	TX	TX	RX	RX	RX
Range (Standard/ Obtructed)	30 ft (10m)	30 ft (10m)	30 ft (10m)	30 ft (10m)	30 ft (10m)
Range (Unobstructed, line of site)	60 ft (30m)	60 ft (30m)	60 ft (30m)	60 ft (30m)	60 ft (30m)
Physical					
Housing	Flame retardant UL 94-5VA thermoplastic				
Dimensions	4.00"L x 3.4"W x 1.73"H				4.68"L x 4.94"W x 2.78"H
Color	Black	Black	Black	Black	White

Wireless Lighting and Plug Load Control

Easily upgrade existing occupancy based lighting control systems to support automated plug load controls.



Use WLC302 or 402 for dual circuit control)

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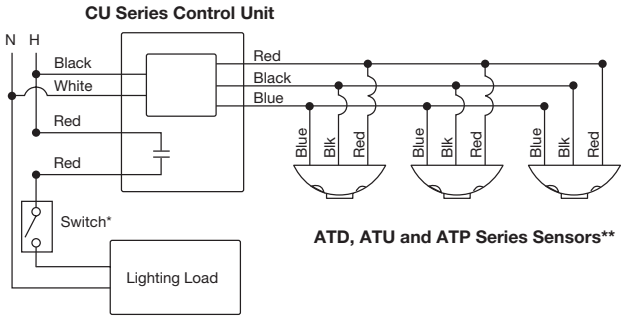
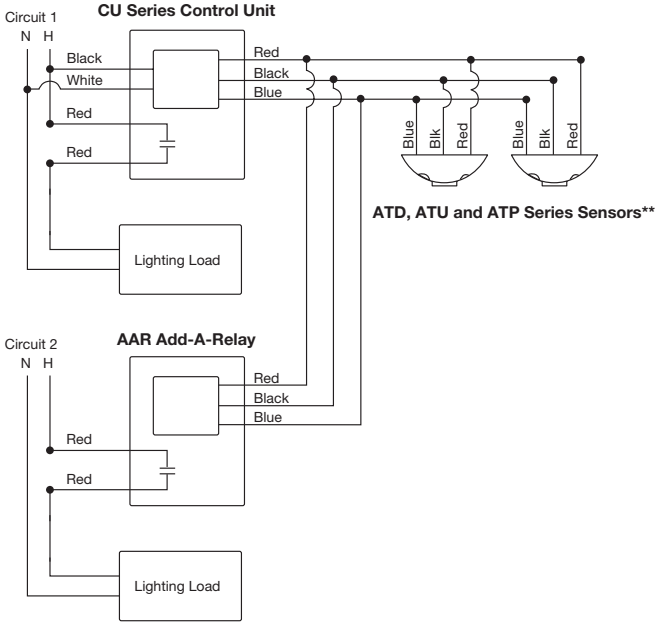
Adaptive Dual Technology, Ultrasonic, and Passive Infrared Ceiling and Wall Mount Sensors ATD, ATU and ATP Series

Single Circuit Application:
1 to 4 sensors wired to control unit with optional override off switch.



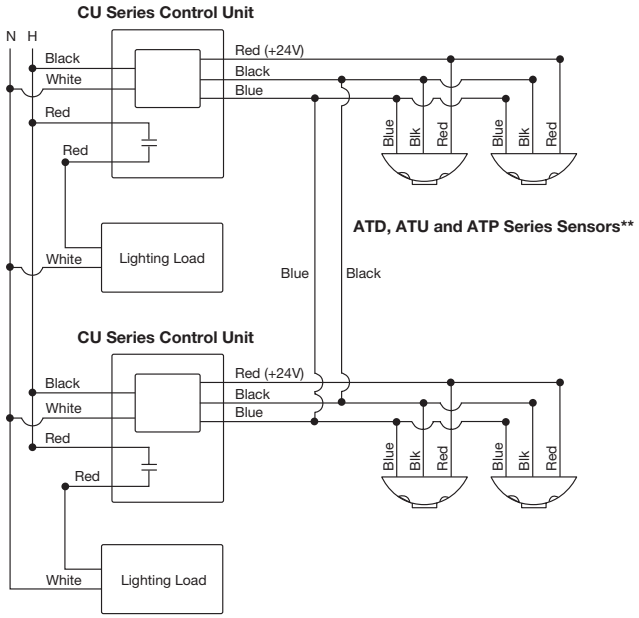
*Optional Override Off Switch

Two Circuit Application:
1 to 4 sensors wired to control unit and Add-A-Relay (control unit switches circuit 1, Add-A-Relay switches circuit 2).

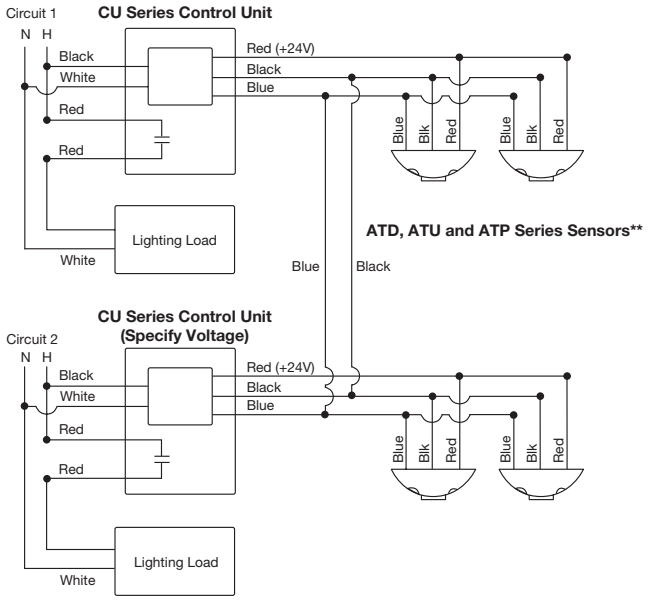


*Note: **For wiring sensors with isolated relay and photocell option (models with "RP" suffix): Photocell Option: Cap off Blue sensor wire. Connect Gray sensor wire to Blue control unit wire. Isolated Relay Option: Common-Blue/White wire, Normally Closed-Black/White wire, Normally Open-Yellow/White wire.*

Single Circuit Application:
Two control units wired in parallel to operate 5 to 8 sensors in a single zone. Maximum 4 sensors per control unit any sensor will activate lighting.

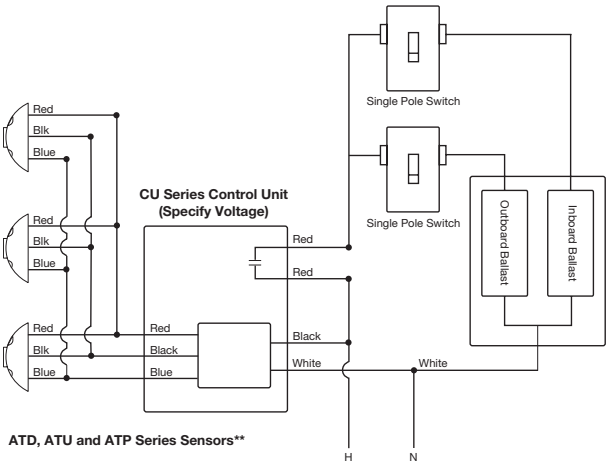


Two Circuit Application:
Two control units wired in two circuits to operate 2 to 8 sensors in a single zone. Maximum 4 sensors per control unit any sensor will activate both lighting loads.

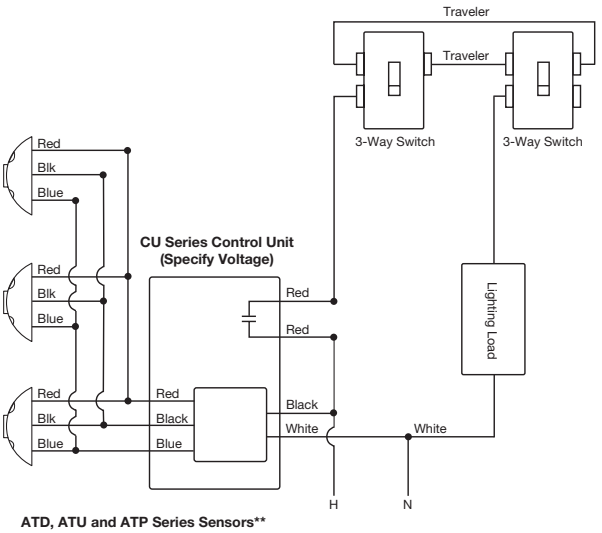


Adaptive Technology Dual, Ultrasonic, and Passive Infrared Ceiling and Wall Mount Sensors ATD, ATU and ATP Series

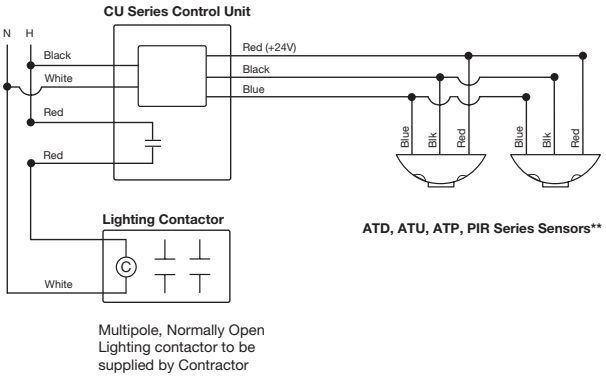
Single Circuit, Dual Level Switching Application:
1 to 4 sensors wired to control unit with optional override off switches.



Single Circuit, 3-Way Switching Application:
1 to 4 sensors wired to control unit with optional override off switches.

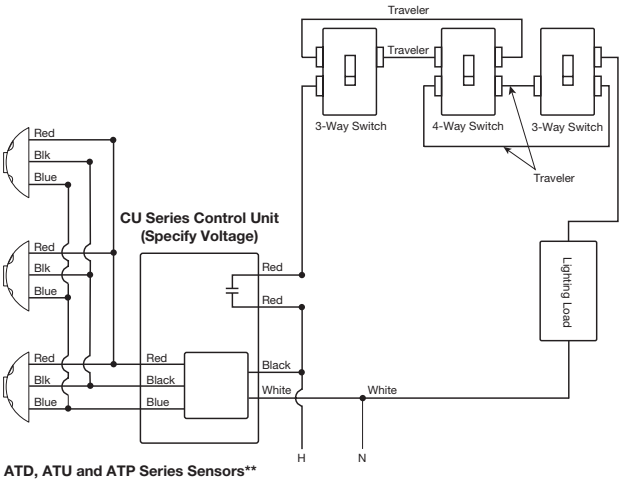


Multi-Circuit Application:
1 to 4 sensors wired to control unit that is wired to a multi-pole lighting contactor.



Multipole, Normally Open Lighting contactor to be supplied by Contractor

Single Circuit, 4-Way Switching Application:
1 to 4 sensors wired to control unit with optional override off switches.



*Note: **For wiring sensors with isolated relay and photocell option (models with "RP" suffix): Photocell Option: Cap off Blue sensor wire. Connect Gray sensor wire to Blue control unit wire. Isolated Relay Option: Common-Blue/White wire, Normally Closed-Black/White wire, Normally Open-Yellow/White wire.*