

# H-MOSS® Occupancy Sensors

## Occupancy Sensors that Are Light Years Ahead

with Advanced Adaptive Technology Sensors



### Ceiling & Wall Switch Sensors

- ATD - Dual Ultrasonic and Passive Infrared
- ATU - Ultrasonic
- ATP - Passive Infrared

### Outdoor Sensors

### Control Units

### Add-A-Relay

### Digital Timer Wall Switch



Wiring Device-Kellems

[www.hubbell-wiring.com](http://www.hubbell-wiring.com)



## You don't adapt to it... ... It adapts to you

### **What is Adaptive Technology?**

Adaptive Technology is a Hubbell breakthrough that not only delivers benefits for those who occupy offices, conference rooms and other interior spaces, but significant advantages for architects, specifiers, contractors and building owners as well. That's because Adaptive Technology sensors use microprocessor-based technology to solve the three major problems of conventional occupancy sensors—false-ons, false-offs and the need for continuous manual adjustment.

Switching lights off accidentally, even when a space is occupied, is no longer a nuisance with Hubbell Adaptive Technology sensors. Likewise, the false-ons caused by HVAC systems and other factors are a thing of the past. Adaptive Technology Sensors Head a Complete Family of Hubbell Occupancy Sensors.

Hubbell offers a full line of occupancy sensors that incorporates all three sensing technologies: Dual Technology, Passive Infrared (PIR) and Ultrasonic. Adaptive Technology is offered on Dual Technology, PIR and Ultrasonic models. For non-critical areas and seldom used spaces such as storage closets, Hubbell also offers PIR wall switches without Adaptive Technology.

### **Automatically Adjust Time Delays**

Adaptive Technology sensors automatically adjust the time delay setting found in all occupancy sensors based on the activity level of the area's occupant or occupants. It literally "fingerprints" movements, motion patterns and occupancy habits by recording them in the microprocessor's memory. This prevents "false-offs" that result when a sensor's time delay is too short for the occupant's activity level.

### **Automatically Adjust Sensitivity**

Not only can seasonal temperature changes cause false-offs, changes in office layout, including arrangement and density of furniture and the number of occupants, can cause them as well. Conversely false-ons are caused by air currents created by HVAC systems and hallway traffic outside an area controlled by a non-adaptive sensor. Adaptive Technology sensors prevent these problems by automatically adjusting their sensitivity.

### **Put an End to False-Offs**

Many people have had the experience: They're sitting in an office, not moving much and, suddenly, the lights go off. They wave their arms to get them back on. The same problem may occur when a large room is occupied in off-peak hours. With an Adaptive Technology sensor, if motion is detected within 15 seconds of a lights-off command, it is logged as a major error by the microprocessor. A number of corrections are initiated automatically by the sensor to adapt to the areas usage pattern.

### **Passive Infrared, Ultrasonic or Dual Technology?**

**Passive Infrared (PIR) Technology** detects body heat in motion — the same natural body heat we all generate. PIR sensors require line of sight to detect occupancy. These sensors are best when people are moving across the pattern.

**Ultrasonic Technology** detects moving objects because they produce a change in the frequency of the sensor's sound waves. These sensors are best used in enclosed spaces or areas where obstacles prohibit the line of sight.

**Dual Technology** combines the individual advantages of PIR and Ultrasonic. These sensors do not require a "line of sight" to keep the lights on.



# H-MOSS® Occupancy Sensors

Wall Switches and Outdoor Sensor



## Dual Technology, Ultrasonic and Passive Infrared Wall Switches

### **Adaptive Technology Dual (Ultrasonic and Passive Infrared) Wall Switches**

The ATD series wall switch sensors incorporate both ultrasonic and passive infrared detection technologies. These dual technology sensors provide the most reliable means of automatic lighting control. The product offering includes standard and hard lens versions for high abuse applications. Hubbell dual technology wall switch sensors are the best choice for enclosed office applications.

### **Adaptive Technology Ultrasonic Wall Switches**

Hubbell ATU series wall switch sensors detect occupancy based on an ultrasonic signal. Since these sensors do not require line of sight to detect occupancy, they work particularly well in areas with obstructions such as storage areas and restrooms. The manual override switch is eliminated on the restroom model to prevent the light from being turned off.

### **Adaptive Technology Passive Infrared Wall Switches**

Hubbell AT1277 and ATP1277 series wall switch occupancy sensors utilize passive infrared technology to determine occupancy. These sensors require line of sight to detect body heat in motion. Wall switch occupancy sensors are best suited for small enclosed spaces such as offices, conference rooms, storage closets, small lunch rooms and copy rooms.

Hubbell AT1277 series wall switches feature a heavy duty relay and zero crossing circuitry to provide the ability to switch up to 15A lighting loads. In addition, they incorporate Adaptive Technology for performance critical applications such as enclosed offices and conference rooms. Adaptive Technology sensors automatically adjust the time delay setting to fit the application. This prevents false-offs that result when a sensor's time delay is set too short for the activity level of the occupant.

Hubbell ATP series Adaptive Technology wall switch sensors are dual voltage rated for use on 120V or 277V AC applications. These sensors feature a pushbutton ambient light level control that allows for quick, accurate setting of the ambient light level threshold.

### **Passive Infrared Wall Switches**

Hubbell WS1277 series wall switch sensors include a manual adjustment that allows the time delay to be set from 20 seconds to 30 minutes. This adjustment is concealed behind a front cover to prevent tampering. These sensors also feature a pushbutton ambient light level control that allows for quick, accurate setting of the ambient light level threshold.

Hubbell WS series wall switch sensors include a manual adjustment that allows the time delay to be set from 30 seconds to 30 minutes. These sensors provide the most economical means of automatic lighting control.

Hubbell WS1277W2 passive infrared wall switch sensor is a double pole, single throw wall switch with two separate relays. This wall switch can be used for dual level switching from one or two circuits.

### **Outdoor Sensor**

Hubbell OS270BZ is a passive infrared sensor specifically designed for outdoor applications. The OS270BZ features a rugged metallic housing with an integral lens guard for abuse resistance, a conformal coated printed circuit board to prevent premature failure caused by moisture ingress and a durable multi-segmented lens for improved coverage and reliability. The OS270BZ provides a 270 degree coverage pattern with a range of up to 100 feet. Hubbell OS270BZ offers energy savings, convenience and security in outdoor applications.



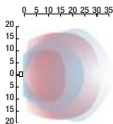
# H-MOSS® Occupancy Sensors

## Wall Switches

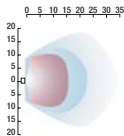


### Adaptive Technology, Dual (Ultrasonic and Passive Infrared).

Description	Catalog Numbers
40kHz, 120/277V AC, 25 to 600 watts at 120V AC, 60 to 1200 watts at 277V AC, 1000 sq. ft. coverage, with photocell, ivory.	<b>ATD1277I</b>
40kHz, 120/277V AC, 25 to 600 watts at 120V AC, 60 to 1200 watts at 277V AC, 1000 sq. ft. coverage, with photocell, white.	<b>ATD1277W</b>
40kHz, 120/277V AC, 25 to 600 watts at 120V AC, 60 to 1200 watts at 277V AC, 300 sq. ft. coverage, with photocell, hard lens, ivory.	<b>ATD1277HI</b>
40kHz, 120/277V AC, 25 to 600 watts at 120V AC, 60 to 1200 watts at 277V AC, 300 sq. ft. coverage, with photocell, hard lens, white.	<b>ATD1277HW</b>



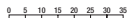
**ATD1277I, ATD1277W**



**ATD1277HI, ATD1277HW**

### Adaptive Technology, Ultrasonic.

Description	Catalog Numbers
40 kHz, 120/277V AC, 25 to 600 watts at 120V AC, 60 to 1200 watts at 277V AC, 1000 sq. ft. coverage, ivory.	<b>ATU1277I</b>
40 kHz, 120/277V AC, 25 to 600 watts at 120V AC, 60 to 1200 watts at 277V AC, 1000 sq. ft. coverage, white.	<b>ATU1277W</b>



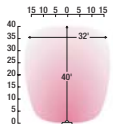
**ATU1277I, ATU1277W  
ATU1277RRI, ATU1277RRW**

Restroom Wall Switch*	Catalog Numbers
40 kHz, 120/277V AC, 25 to 600 watts at 120V AC, 60 to 1200 watts at 277V AC, 1000 sq. ft. coverage, ivory.	<b>ATU1277RRI</b>
40 kHz, 120/277V AC, 25 to 600 watts at 120V AC, 60 to 1200 watts at 277V AC, 1000 sq. ft. coverage, white.	<b>ATU1277RRW</b>

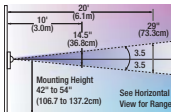


### Adaptive Technology, Passive Infrared.

Description	Catalog Numbers
120/277V AC, 1800 watts at 120V AC, 4155 watts at 277V AC, 1200 sq. ft. coverage, with photocell, ivory.	<b>AT1277I</b>
120/277V AC, 1800 watts at 120V AC, 4155 watts at 277V AC, 1200 sq. ft. coverage, with photocell, white.	<b>AT1277W</b>
120/277V AC, 800 watts at 120V AC, 1200 watts at 277V AC, 1200 sq. ft. coverage, with photocell, ivory.	<b>ATP1277I</b>
120/277V AC, 800 watts at 120V AC, 1200 watts at 277V AC, 1200 sq. ft. coverage, with photocell, white.	<b>ATP1277W</b>
120/277V AC, 800 watts at 120V AC, 1200 watts at 277V AC, 1200 sq. ft. coverage, with photocell, gray.	<b>ATP1277GY</b>



**Horizontal Coverage**



**Vertical Coverage**

Coverage Patterns



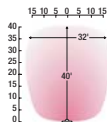
# H-MOSS® Occupancy Sensors

Wall Switches and Outdoor Sensor

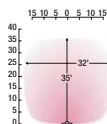


## Passive Infrared.

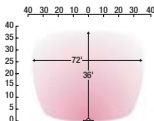
Description	Catalog Numbers
120/277V AC, 800 watts at 120V AC, 1200 watts at 277V AC, 1200 sq. ft. coverage, with photocell, ivory.	<b>WS12771</b>
120/277V AC, 800 watts at 120V AC, 1200 watts at 277V AC, 1200 sq. ft. coverage, with photocell, white.	<b>WS1277W</b>
120V AC, 800 watts incandescent, 1000 watts fluorescent, 900 sq. ft. coverage, ivory.	<b>WS120I</b>
120V AC, 800 watts incandescent, 1000 watts fluorescent, 900 sq. ft. coverage, white.	<b>WS120W</b>
277V AC, 1800 watts fluorescent, 900 sq. ft. coverage, ivory.	<b>WS277I</b>
277V AC, 1800 watts fluorescent, 900 sq. ft. coverage, white.	<b>WS277W</b>
Double pole, white, 120/277V AC, 600 watts per circuit at 120V AC incandescent, 1000 watts per circuit at 120V AC fluorescent, 1800 watts at 277V AC fluorescent, 1000 sq. ft. coverage, ivory.	<b>WS1277W2</b>
Wall switch adapter plate for Hubbell WS1277W2. Two-gang wall plate allows one WS1277W2 to mount to a two gang box.	<b>WSAP</b>



**WS12771, WS277W**



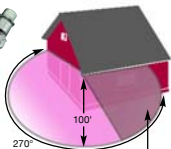
**WS120, WS277 Series**



**WS1277W2**

## Outdoor Sensor.

Description	Catalog Number
Outdoor sensor, passive infrared, bronze, 120V AC, 1000 watts, incandescent, with photocell.	<b>OS270BZ</b>
<b>Operating Characteristics</b>	
Time Out - Test (5 seconds), 1, 5 or 20 minutes.	
Horizontal field of view - 270 degrees.	
Vertical field of view - 3 levels of vertical fields.	
Recommended mounting height - 6-12 feet above ground.	
<b>Control Adjustments</b>	
The Hubbell OS270BZ motion detector has adjustments for time, sensitivity and range. The controls are located in a concealed control compartment on the bottom of the motion detector.	



**OS270BZ**

## Digital Timer Wall Switch.

Description	Catalog Number
120/277V AC, 800 Watts at 120V AC, 1200 Watts at 277V AC, white.	<b>DT1277W</b>
<b>Operating Characteristics</b>	
Dipswitch enabled preset intervals.	- 5, 15 or 30 minutes.
	- 1, 3, 6, 9 or 12 hours.
Includes an on/off momentary pushbutton switch feature.	



**DT1277W**



# H-MOSS® Occupancy Sensors

Ceiling and Wall Mount Sensors



## Dual Technology, Ultrasonic and Passive Infrared Ceiling and Wall Mount Sensors



### **Adaptive Technology Dual (Ultrasonic and Passive Infrared) Ceiling Sensors**

ATD series sensors incorporate both ultrasonic and passive infrared detection technologies. These dual technology sensors provide the most reliable means of automatic lighting control. Common applications include open office spaces, conference rooms, classrooms and executive offices where flawless performance is necessary. An isolated relay and photocell are included on models with "RP" suffix. A CU series control unit is required for use with ATD series ceiling sensors.

### **Adaptive Technology Ultrasonic Ceiling Sensors**

ATU series sensors detect occupancy based on an ultrasonic signal. Since these sensors do not require line of sight to detect occupancy, they work particularly well in areas with obstructions such as restrooms and storage rooms. Another common application is hallways. An isolated relay and photocell are included on models with "RP" suffix. A CU series control unit is required for use with ATU series ceiling sensors.

### **Adaptive Technology Passive Infrared Ceiling Sensors**

ATP series ceiling sensors detect occupancy based on a passive infrared signal. They are available with a wide view lens (ATP1500C series) for large areas with multiple occupants and a high density lens (ATP600C series) for areas with a single occupant where small motion detection is desired. Each sensor includes an infrared masking kit which can be used to reduce the coverage area. Models with an "RP" suffix include an isolated relay and photocell. A CU series control unit is required for use with ATP series ceiling sensors.

### **Adaptive Technology Dual and Passive Infrared Wall Mount Sensors**

The Adaptive Technology wall mount sensor offering includes dual technology and passive infrared sensors with a 1600 square foot coverage pattern as well as passive infrared sensors for high bay applications in warehouse aisle ways. The wall mount sensors include a swivel mounting bracket that allows the sensor to be ceiling or wall mounted. This makes them suitable for applications with ceiling heights over 12 ft. The ceiling bracket is also designed to accept surface raceway for hard ceiling applications. Models with "RP" suffix include an isolated relay and photocell. A CU series control unit is required for use with ATD and ATP series wall mount sensors.

### **Control Units**

CU series control units are required for use with Hubbell ATD, ATU and ATP series ceiling and wall mount sensors. The control units provide a 24V DC power supply for 1 to 3 sensors or sensor/Add-A-Relay combinations and contain an internal relay for the control of an external lighting load.

### **Add-A-Relay**

Add-A-Relay is designed for use with CU series control units and ATD, ATU and ATP series ceiling and wall mount sensors. The AAR 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.

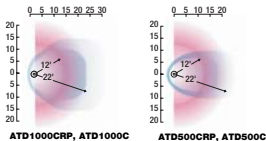
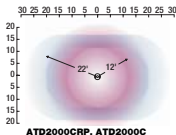
# H-MOSS® Occupancy Sensors

## Ceiling Sensors



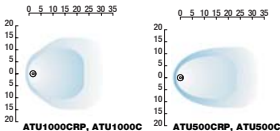
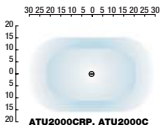
### Adaptive Technology, Dual (Ultrasonic and Passive Infrared).

Description	Catalog Numbers
32kHz, 2000 sq. ft. coverage, with isolated relay and photocell.	<b>ATD2000CRP</b>
32kHz, 2000 sq. ft. coverage.	<b>ATD2000C</b>
32kHz, 1000 sq. ft. coverage, with isolated relay and photocell.	<b>ATD1000CRP</b>
32kHz, 1000 sq. ft. coverage.	<b>ATD1000C</b>
40kHz, 500 sq. ft. coverage, with isolated relay and photocell.	<b>ATD500CRP</b>
40kHz, 500 sq. ft. coverage.	<b>ATD500C</b>



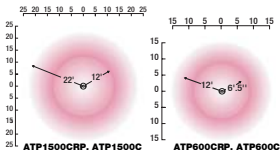
### Adaptive Technology, Ultrasonic.

Description	Catalog Numbers
32kHz, 2000 sq. ft. coverage, with isolated relay and photocell.	<b>ATU2000CRP</b>
32kHz, 2000 sq. ft. coverage.	<b>ATU2000C</b>
32kHz, 1000 sq. ft. coverage, with isolated relay and photocell.	<b>ATU1000CRP</b>
32kHz, 1000 sq. ft. coverage.	<b>ATU1000C</b>
40kHz, 500 sq. ft. coverage, with isolated relay and photocell.	<b>ATU500CRP</b>
40kHz, 500 sq. ft. coverage.	<b>ATU500C</b>



### Adaptive Technology, Passive Infrared.

Description	Catalog Numbers
1500 sq. ft. coverage, wide view lens, with isolated relay and photocell.	<b>ATP1500CRP</b>
1500 sq. ft. coverage, wide view lens.	<b>ATP1500C</b>
600 sq. ft. coverage, high density lens, with isolated relay and photocell.	<b>ATP600CRP</b>
600 sq. ft. coverage, high density lens.	<b>ATP600C</b>



Coverage Patterns



Passive Infrared



Ultrasonic

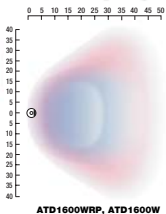
# H-MOSS® Occupancy Sensors

Wall Mount Sensors, Control Units, Add-A-Relay



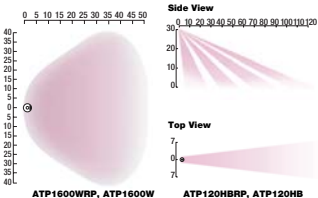
## Adaptive Technology, Dual (Ultrasonic and Passive Infrared).

Description	Catalog Numbers
32kHz, 1600 sq. ft. coverage, with isolated relay and photocell.	<b>ATD1600WRP</b>
32kHz, 1600 sq. ft. coverage.	<b>ATD1600W</b>



## Adaptive Technology, Passive Infrared.

Description	Catalog Numbers
1600 sq. ft. coverage, with isolated relay and photocell.	<b>ATP1600WRP</b>
1600 sq. ft. coverage.	<b>ATP1600W</b>
120 linear ft. coverage for aisle ways in high bay applications, with isolated relay and photocell.	<b>ATP120HBRP</b>
120 linear ft. coverage for aisle ways in high bay applications.	<b>ATP120HB</b>



## Control Unit.

Description	Catalog Numbers
120V AC, 60 Hz, for use with ATD, ATU and ATP series ceiling and wall mount sensors.	<b>CU120A</b>
230V AC, 50/60 Hz, for use with ATD, ATU and ATP series ceiling and wall mount sensors.	<b>CU230A</b>
277V AC, 60 Hz, for use with ATD, ATU and ATP series ceiling and wall mount sensors.	<b>CU277A</b>
347V AC, 60 Hz, for use with ATD, ATU and ATP series ceiling and wall mount sensors.	<b>CU347A</b>



**CU120A, CU230A, CU277A, CU347A**

## Add-A-Relay.

Description	Catalog Number
For use with CU series control units.	<b>AAR</b>



**AAR**