



Go *GREEN* with Hubbell

H-MOSS® Occupancy and Vacancy Sensors

HUBBELL

- Reduce Energy Consumption.
- Obtain LEED Credits.
- Optimize Energy Performance.
- Improve The Environment.
- Increase Facility Cost Savings.



Applications:

- Hotels
- Hospitals
- Schools/Universities
- Office Buildings
- Government



Recycle • Reuse • Reduce





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Reduce Energy Consumption and Meet Federal and State Standards and Guidelines

Reduction of energy consumption at all levels: local, state and national is critical. Today's buildings, both commercial and residential - new and renovated - must follow new state and federal standards and codes, which call for energy efficiency throughout a facility.

LEED

LEED (Leadership in Energy and Environmental Design) which is sponsored by the U.S. Green Building Council (USBC) has created a rating system to define what constitutes a green building by establishing common standards of measurement, and promoting integrated and whole building design. This certification applies to both new and renovated commercial buildings. Points are awarded by category and there are four levels of certification- certified, silver, gold and platinum.

H-MOSS, Hubbell Motion Sensor Switches offer a large array of occupancy sensors, which can be utilized to help increase energy efficiency in the following categories:

LEED Credit Categories

Sustainable Sites- SS
Light pollution reduction

Energy and Atmosphere- EA
Optimize energy performance

Indoor Environment Quality- EQ
Controllability of systems, lighting

Innovation & Design Process- ID
Innovation in design

Energy Savings and Codes

ASHRAE/IESNA 90.1 Standard

Among the requirements in this standard is that a building of 5,000 sq. ft. or more, except for lighting operated 24 hours per day, must incorporate automatic control devices to turn off all lighting.

California Energy Commission (CEC) Title 24 Program

California's Title 24 Program sets up some of the most stringent standards and regulations in the country to reduce energy consumption in both commercial and residential structures.

Some of the key provisions are:

Multi-level lighting control

Any enclosed space 100 sq. ft. or larger, which has a connected lighting load that exceeds 0.8 watts per sq. ft. and has more than one light source (luminaire) shall be controlled so that the load for lights may be reduced by a minimum of 50%.

Area controls

Each area enclosed by ceiling height partitions must have an independent switching or control device- occupancy sensor or manual switch.

Automatic shut-off controls

For every floor, all indoor lighting must have a separate automatic control, capable of automatically shutting off the lighting.

Residential buildings

In 2005, Title 24 simplified and expanded the standard to include use of high efficacy luminaires, manual-on occupancy sensors, fluorescent lights or dimmers in most rooms of the home such as bedrooms, bathroom, garage, living room, hallway, and utility room.

Hubbell offers many models of occupancy, vacancy and dimmers (all CEC Title 24 compliant) that will enable builders, contractors and homeowners to meet these new requirements.

IECC 2003 Lighting Control Provision

The International Energy Conservation Code (IECC) which has been adopted by some states, affects new construction, additions and alterations for all commercial buildings, including residential structures with four or more stories above grade. It requires an automatic shutoff of all lighting for buildings larger than 5,000 sq. ft. with occupancy sensors as one way to achieve this goal.

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Typical Savings Utilizing Hubbell Occupancy Sensors:

Lamps..... 4 @ F32T8
 Before: Hours "ON".....12
 After: Hours "ON"..... 6
 Kilowatt Cost Per Hour\$ 0.0784
 Room Annual Savings*.....\$90.02

* Based on 12 operating hours per day, five days per week at a 50% estimated savings utilizing the Hubbell sensor.



The More The Lamps, The Higher The Utility Cost...The Bigger The Savings!

Adaptive Technology Wall Switches

(For Use With 120/277V AC Applications)

Passive Infrared

Description	Max Wattage		Color	Hubbell Catalog #	Grainger Catalog #
	120V	277V			
1200 sq. ft. coverage.	1800 ^(I)	4155 ^(F)	Ivory	AT1277I	3AY96
With photocell.	1800 ^(I)	4155 ^(F)	White	AT1277W	3AY97
1200 sq. ft. coverage, With photocell.	800 ^{(I)(F)}	1200 ^(F)	Ivory	ATP1277I	1VD92
	800 ^{(I)(F)}	1200 ^(F)	White	ATP1277W	1VD94
	800 ^{(I)(F)}	1200 ^(F)	Gray	ATP1277GY	1VD90



3AY97



1VD94

Ultrasonic Restroom Wall Switch.

Description	Max Wattage		Color	Hubbell Catalog #	Grainger Catalog #
	120V	277V			
400 sq. ft. coverage.	800 ^(I) 1000 ^(F)	1800 ^(F)	Ivory	AU1277I1N	1MEA3
With photocell, hard lens.	800 ^(I) 1000 ^(F)	1800 ^(F)	White	AU1277W1N	1MEA4

*Restroom wall switches do not have an on/off override switch.



1MEA4



1MEB1

Dual (Ultrasonic and Passive Infrared).

Description	Max Wattage		Color	Hubbell Catalog #	Grainger Catalog #
	120V	277V			
1000 sq. ft. coverage, With photocell, hard lens.	800 ^(I)	1800 ^(F)	Ivory	AD1277I1	1MEA9
	1000 ^(F)	1800 ^(F)	White	AD1277W1	1MEB1

^(I) Incandescent ^(F) Fluorescent Wall Plates Included with all above wall Switch Sensors

Passive Infrared Wall Switches - Non Adaptive

(For Use With 120/277V AC Applications)

Passive Infrared

Description	Max Wattage		Color	Hubbell Catalog #	Grainger Catalog #
	120V	277V			
1200 sq. ft. coverage, with photocell.	800	1200	Ivory	WS1277I	1VD96
	800	1200	White	WS1277W	1VD98

^(I) Incandescent ^(F) Fluorescent Wall Plates Included with all above wall Switch Sensors (except 1ND66).



1VD98

Adaptive Technology Wall Mount Sensors

Passive Infrared

Description	Hubbell Catalog #	Grainger Catalog #
1600 sq. ft. coverage.	ATP1600WRP*	1ND58
1600 sq. ft. coverage.	ATP1600W	5HH91
120 linear ft. coverage for aisle and high bay applications.	ATP120HB	5HH90

Dual (Ultrasonic and Passive Infrared)

Description	Hubbell Catalog #	Grainger Catalog #
1600 sq. ft. coverage.	ATD1600WRP*	1ND51
1600 sq. ft. coverage.	ATD1600W	1ND50

Wall Mount Sensors must use a Control Unit.



1ND58, 5HH91, 5HH90



1ND51, 1ND50

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Adaptive Technology Ceiling Sensors

Passive Infrared

Description	Hubbell Catalog #	Grainger Catalog #
1500 sq. ft. coverage, wide view lens.	ATP1500CRP*	1ND57
	ATP1500C	1ND56
450 sq. ft. coverage, high density lens.	ATP600CRP*	1ND59
	ATP600C	5HH92

* With isolated relay and photocell.

Ultrasonic

Description	Hubbell Catalog #	Grainger Catalog #
2000 sq. ft. coverage.	ATU2000CRP*	1ND63
	ATU2000C	1ND62
1000 sq. ft. coverage.	ATU1000CRP*	1ND61
	ATU1000C	1ND60
500 sq. ft. coverage.	ATU500CRP*	1ND65
	ATU500C	1ND64

* With isolated relay and photocell.

Dual (Ultrasonic and Passive Infrared)

Description	Hubbell Catalog #	Grainger Catalog #
2000 sq. ft. coverage.	ATD2000CRP*	1ND53
	ATD2000C	1ND52
1000 sq. ft. coverage.	ATD1000CRP*	1ND49
	ATD1000C	1ND48
500 sq. ft. coverage.	ATD500CRP*	1ND55
	ATD500C	1ND54

* With isolated relay and photocell.

Control Unit

For use with ATP, ATU & ATD Series Ceiling & Wall Mount Sensors.

Description	Hubbell Catalog #	Grainger Catalog #
120/277V AC, 50/60 Hz.	CU300A	2YCJ4

Line Voltage Ceiling Sensors

Ultrasonic

Description	Hubbell Catalog #	Grainger Catalog #
120V AC; 1500 sq. ft., White	LVUS1500R120	4KTX7
277V AC; 1500 sq. ft., White	LVUS1500R277	4KTX8
120V AC; 2000 sq. ft., White	LVUS2000R120	4KTX5
277V AC; 2000 sq. ft., White	LVUS2000R277	4KTX6

Passive Infrared (PIR)

Description	Hubbell Catalog #	Grainger Catalog #
120-347V AC with photocell and isolated relay; 1500 sq. ft., White	LVPR1500R	4KTX9

Dual Technology Passive Infrared/Ultrasonic

Description	Hubbell Catalog #	Grainger Catalog #
120V AC; 2000 sq. ft., White	LVDT2000R120	4KTX3
277V AC; 2000 sq. ft., White	LVDT2000R277	4KTX4



1ND57, 1ND56, 1ND59, 5HH92



1ND63, 1ND62



1ND61, 1ND60, 1ND65, 1ND64



1ND53, 1ND52



1ND49, 1ND48, 1ND55, 1ND54



2YCJ4



4KTX7, 4KTX8



4KTX5, 4KTX6



4KTX3, 4KTX4



4KTX9

AVAILABLE THROUGH

GRAINGER
FOR THE ONES WHO GET IT DONE

HUBBELL
Wiring Device-Kellems

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