

Motion Sensors Buying Guide

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LEVITON®

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Occupancy and Vacancy Motion Sensor Light Switches provide automatic switching of lighting and motor loads, and are becoming a common fixture in the residential market – and with good reason. With regular use they provide the safety and convenience of hands-free lighting, so lights automatically turn off when the room is unoccupied, avoiding wasted energy. This touch-free solution also helps to create a cleaner environment throughout your home.

Today, sensors are designed to operate with a wide range of bulbs including LED, CFL, Incandescent, Halogen, Magnetic Low Voltage, Electronic Low Voltage, Fluorescent as well as motor loads.



Choosing the Right Motion Sensor Light Switch

Automatic ON or Manual ON models are available based on your needs and local code requirements.

Model	Description	Application	Recommended Rooms
Occupancy Sensor (Auto ON/Auto OFF)	Lights automatically turn ON when motion is detected and OFF when the room is vacant and motion is no longer detected.	Convenient, hands-free switching, useful in rooms where residents might have their hands full and when reaching for a light switch would be difficult and possibly hazardous.	Basement, closet, garage, laundry room, pantry, storage area, mudroom.
Vacancy Sensor (Manual ON/Auto OFF)	Lights must be manually turned ON but will automatically turn OFF when the room is vacant and motion is no longer detected.	Ideal in high traffic areas where lights might be inadvertently left on.	Bathroom, child's bedroom, hallway.

Sensor Type

Leviton offers a wide range of sensor options to select from to meet the needs of any application and wiring considerations. The chart below breaks down our solutions.

Sensor Type	Application	Recommended Rooms
Wall Switch Motion Sensor	These sensors can replace an existing wall switch to turn lights on and/or off automatically. Available in occupancy or vacancy models.	Basement, closet, garage, laundry room, pantry, storage area, mudroom, bathroom, child's bedroom and hallways.
Humidity Sensor and Fan Control	This sensor/fan control combination is used to control ventilation in areas with high humidity, dampness, or rooms prone to condensation and mildew by detecting excess moisture and activating the ventilation fan or fan/light combinations.	Bathroom, basement, laundry room and home spa.
LED Lampholder with Occupancy Sensor	This ceiling mounted LED light and sensor all-in-one is the perfect replacement for an existing incandescent ceiling mounted fixture with pull chain.	Closet, workroom, basement, storage area, utility room and attic.

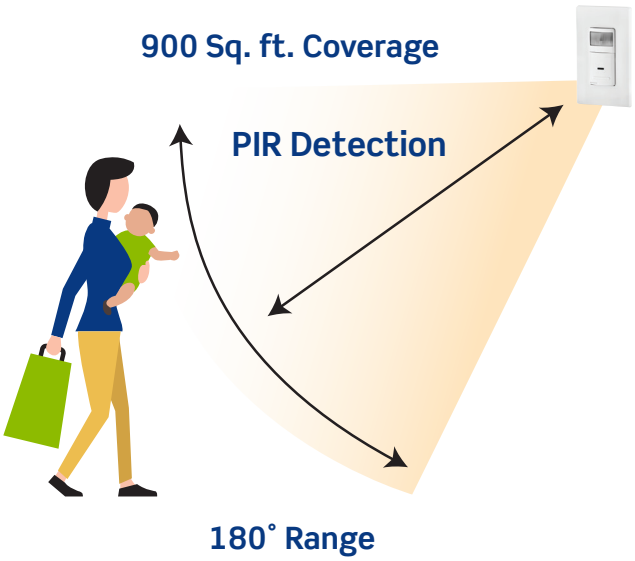
Advantages of Installing Motion Sensors

Increased safety and the convenience of hands-free switching are excellent reasons for installing sensors. The ease of installation makes sensors a cost-effective solution for new construction and replacement applications.

Installation and Placement Considerations

Leviton motion sensors use passive infrared (PIR) technology to detect movement. In order to achieve optimal performance, the following factors should be taken into consideration prior to installation.

- The space requires an unobstructed line-of-sight for accurate detection. Obstructions such as furniture, walls, etc. that block the sensor's view can affect the detection of motion
- Size and shape of the area needing coverage should be in line with the range of the sensor
- Locate with a clear line-of-view of the area to be covered, perpendicular to the likely movement
- Type of activity in a space - will there be minor or major motion
- Mounting height of the sensor and obstacles within the space
- Airflow, HVAC ducts and heat sources nearby that can falsely register as motion



FAQs

If I have pets, will their movement trigger the occupancy motion sensor switch to turn the lights on?
There is a possibility that the movement of a pet or small child within 8 feet of an occupancy motion sensor switch will trigger the lights to turn on. However, the sensor sensitivity setting can be adjusted, or the sensor can be set to manual-on so it functions as a vacancy (manual-on) sensor.

Can a motion sensor light switch be triggered by humidity or a heat source?
In general, this is highly unlikely. However, in some instances if the sensor is placed too close to a heat source such as a dryer, stove or heating vent, the heat generated may trigger the lights to turn on or prevent them from turning off. For optimal performance, the sensor should be installed a reasonable distance away from heat sources.

Can an occupancy sensor be converted to a vacancy sensor?
Yes, Leviton's occupancy sensors have a switch that can convert them to a vacancy (manual-on) sensor. This setting is beneficial for certain activities such as watching a movie. It can also be adjusted to meet code requirements. See the product instruction guide for details.

When using motion sensor light switches, can I manually turn the lights on or off?
Yes, all motion sensor light switches can be manually turned on or off by pressing the button on the face of the device.

Can I adjust how long the lights stay on after the space is vacated?
Yes, all motion sensor light switches have a timer setting that can be adjusted for the duration of time for which the light remains on since the last detection of motion. Once a setting is chosen, the light will turn off at the selected interval of time when motion is no longer detected.

Is there a way to reduce the detection area?
Yes, the motion sensors have 3 sensitivity settings. The default is set to the medium range, but you can increase the sensitivity range to high or reduce the sensitivity range to low for smaller spaces.

If there is sufficient daylight in an area, will the occupancy sensor switch still automatically turn the lights on?
Leviton's occupancy sensor switches incorporate an ambient light override setting which, when enabled, will prevent the sensor from switching the lights on when there is ample daylight in the space.

Do Leviton's motion sensor switches require a neutral wire connection?
The DOS02/DVS02 and DOS05/DVS05 motion sensor switches have flexible wiring options with a wire that can be connected to a neutral or a ground connection. It is recommended to only connect to the ground if there is not a neutral wire present in the wallbox. The DOS15 and DVS15 motion sensors require a neutral wire for installation.

Can motion sensors be used to control exhaust fans or a light/fan combination in a bathroom?
Yes, models with higher ratings such as the DOS05, DVS05, DOS15 and DVS15 are designed to control bathroom exhaust fans. Be sure to review product specifications to ensure the sensor has a motor load rating.

Can motion sensor light switches operate on a 3-way?
Yes. The DOS05 and DVS05 models can be wired in a 3-way application using either a single pole switch or a 3-way switch.

The DOS15 and DVS15 models can be used in multi-location (multi-way) installations when paired with a DD0SR switch companion. They can also be used in multi-sensor applications by using two DOS15 or DVS15 sensors where a single motion sensing switch will not cover the entire room with line of site (such as stairways, hallways and L-shaped rooms). See product instructions for more details.

What bulb types can be used with the motion sensors?
Leviton motion sensor switches are designed to operate with a wide range of bulbs including LED, CFL, Incandescent, Halogen, Electronic Low Voltage, Magnetic Low Voltage and Fluorescent. There are also models that can control motor loads such as exhaust fans. Be sure to confirm by checking the product package or instructions for load requirements before installation.

Is there a minimum load (watts) required for a motion sensor switch to operate properly?
No minimum load is required.

Are there specific sensors that can be used to meet the California Title 24, Part 6 Vacancy Control Device Requirements?
Yes, all Leviton vacancy sensor models can be used to comply with the 2019 California Title 24, Part 6 Vacancy Control Device Requirements. There are also occupancy sensor models DOS02, DOS05 and DOS15 that can be switched to a vacancy control to comply. See product instructions for more details.

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

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