



Occupancy Sensors Tip Sheet

Occupancy sensors turn off lighting or equipment when a space is unoccupied, cutting down on wasted energy. Occupancy sensors are relatively inexpensive and easy to install, making them cost-effective for many types of businesses.

Here are some answers to help you take advantage of occupancy sensors:

Q. Where should I mount occupancy sensors?

A. Occupancy sensors produce the best energy savings in spaces where lights are constantly left on or that workers occupy intermittently, such as restrooms, break rooms, hallways and storage closets. The sensors can either be wall-mounted or ceiling-mounted (best for large, open areas). Ideally, ceilings should be lower than 14 feet for a ceiling-mounted occupancy sensor.

Q. What type of occupancy sensor should I get?

A. There are several types of sensors, and some are specifically designed for particular types of spaces, such as restrooms, stairwells and hallways. Each one includes a motion sensor, an electronic control unit and a controllable switch.

Here are the three main types:

Passive Infrared (PIR): The most common type of occupancy sensor, requires no special wiring but has a smaller motion detection range.

Ultrasonic: Requires special wiring but has a larger motion detection range.

Dual/Multi-Technology: Incorporates both PIR and ultrasonic technology. It requires special wiring but is the most robust type of occupancy sensor.

Q. How much do occupancy sensors cost?

A. They generally cost \$50 to \$200 each, depending on type. Professional installation may add \$30 or more per sensor, depending on the equipment and the electrical wiring system. The California Energy Commission estimates that occupancy sensors' savings typically range from 35% to 45% for the space they cover, and pay for themselves in less than five years. (Many utilities offer customers rebates for occupancy sensors that can reduce the cost.)

Need help or have questions? Call Energy Smart at (651)292-4652.