

# Occupancy Sensors

## General Information

Lighting can account for as much as 40% of a building's electrical usage. Much of this is wasted on unoccupied spaces. The addition of occupancy sensors to your lighting design or retrofit can offer a reliable and convenient solution to stop this waste. In most cases, occupancy sensors offer greater energy savings and more flexibility than other forms of control. With sensors, during business hours, lights will be turning on and off as spaces are used. Occupancy sensors have proven to work effectively in a variety of applications. Are they right for your building? The following questions should help determine the answer:

- Does the building space have periods of time when it is unoccupied and the lights can be off?
- Is energy being wasted due to lights being left on in unoccupied spaces?
- Do cleaning crews leave the lights on overnight and during weekends?

Each application within a building has a unique set of characteristics that must be understood before sensor choices are made. Because different sensor technologies work best under different circumstances, understanding the application's characteristics will lead to the best sensor choices.

Review the Physical Characteristics:

- Room/space size and shape
- Location of walls, doors, windows and drapes
- Ceiling height
- Partition height and location
- Location of shelves, book cases, file cabinets, and large equipment
- Large objects that would block or alter a sensor's coverage
- Location of HVAC ducts and fans
- Areas with available sunlight for added light level sensing
- Location of desk/workspace - orientation with regards to walls, partitions and other obstacles
- Type of activity taking place
- Main area(s) of activity within the space

Check for:

- High level of vibration
- High level of air flow
- Extreme temperature conditions
- Unusually low levels of activity

Learning about occupancy sensor technologies and their applications will help to ensure successful lighting control projects with a high degree of energy savings.

1. Understand the areas to be controlled by noting the physical characteristics of the spaces.
2. Have a clear idea of the optimum results. Look at the occupancy patterns of the spaces to be controlled and determine how long the lights should be on, when lights should not be off and if high natural light levels are present.
3. Choose the correct technology and sensor model. Use controlled space's physical characteristics and sensor technology information to match the sensor to the application.
4. Correct placement: Choose the correct amount of sensors and place each so it has the best view of the coverage area. Again, refer to sensor technology information to avoid placement that would cause false ONs or false OFFs. For example, ultrasonic sensors should be placed away from air supply diffusers. Use coverage templates provided by the manufacturer to layout sensors on to blueprints.
5. Correct installation: Installing and wiring the sensors correctly will eliminate problems and damage to the sensors.
6. Correct adjustments: Specify and use time-delay and sensitivity settings to match the activity level of the space.

*Information on this page provided by "The Watt Stopper, Inc"*

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DISC carries occupancy sensors manufactured by *The Watt Stopper, Inc.*; *Sensor switch, Inc.*; *Uneco Electronics, Inc.*; and *Novitas*.

The manufactures offer "Limited Warranties" on their products and will repair/replace the item for up to 5 years after purchase.

The Watt Stopper's NSNs are on a long term contract and are available within 21 days after receipt of order.

And, there is only two percent restocking fee for Watt Stopper items returned if you should order more than needed.

For detailed technical information on any of the occupancy sensors, call

**1-800-DLA-BULB  
(800-352-2852)**