Occupancy Sensors
for an Energy Conscious World

HUBBELL® Building Automation, Inc.

T A B L E o f C O N T E N T S

I N T R O D U C T I O N

B U I L D I N G T Y P E S
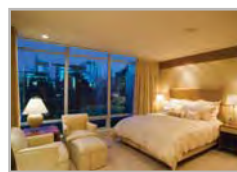
R O O M T Y P E S

Layout Capabilities and Technical Support

HBA representatives are available to answer all your questions and discuss any project—large or small. Sensor selection and layout services are available. Call 888-698-3242 for more info.

ENERGY CONSERVATION AT THE FOREFRONT

A significant energy conservation movement has been established across the globe in the form of local, state and national programs, standards and codes that call for energy efficiency in both commercial and residential buildings. These codes and standards include:
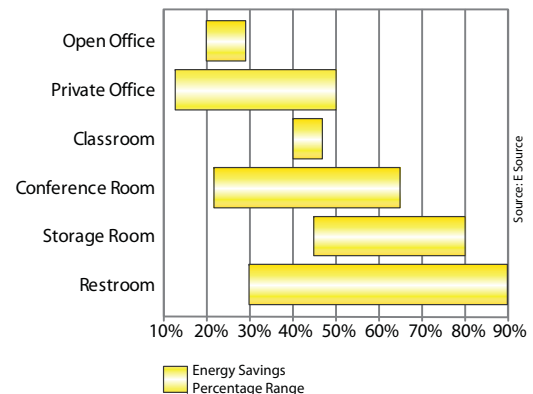
- LEED® (Leadership in Energy and Environmental Design) certification in new and renovated facilities through the U.S. Green Building Council (USGBC) promotes sustainable building design.

- California Energy Commission's (CEC) Title 24 program enforces stringent standards and regulations to reduce energy consumption, including automatic lighting control and shut-off.

- ASHRAE/IESNA 90.1 energy efficiency code requires interior lighting in buildings larger than 5000 sq. ft. to be controlled with automatic devices.

- IECC® (International Energy Conservation Code) compliance requires automatic shut-off of lighting which is now adopted by most states in some form.

As energy concerns increase, the "greening" of commercial and residential buildings will continue through more stringent standards and additional energy conservation initiatives like the EPA's ENERGY STAR program and the 2030 Challenge that aims to reduce energy use by 50% by 2030.

Hubbell Building Automation Occupancy Sensors Play a Key Role

In the U.S., lighting consumes 22% of electricity and represents $40 billion a year in energy costs. Using advanced technology, Hubbell Building Automation's Occupancy Sensors are doing their part to save energy and provide sustainability by automatically and effectively turning lights on when a room is occupied and off when a room is vacant. In a typical office building, where lighting accounts for 35 to 45% of energy use, HBA Occupancy Sensors have the potential to reduce wasted lighting by 13 to 90% for a significant return on investment (ROI).

HBA offers a broad range of occupancy and vacancy sensors and lighting controls that meet the latest codes and standards, including ASHRAE/ IESNA 90.1 and CEC's Title 24. HBA Occupancy Sensors can also provide LEED® points in categories like Sustainable Sites, Energy and Atmosphere, Indoor Environmental Quality and Innovative Design Process.

Open Office
Private Office
Classroom
Conference Room
Storage Room
Restroom

10% 20% 30% 40% 50% 60% 70% 80% 90%

Source: E Source

Energy Savings Percentage Range

Backed by HBA Service and Support

HBA Occupancy Sensors are backed by Hubbell Building Automation's sustainability initiative and superior service and support including:

- Valuable online ROI worksheet for calculating energy savings

- Product selection guide for choosing the right HBA Occupancy Sensor and technology

- Online specification assistance through HBAControls.com, AutoCAD drawings, templates and documentation

- Comprehensive design assistance for deploying occupancy sensors in a variety of applications

- Highly knowledgeable network of specification professionals and trained, dedicated sales staff

- Backed by Hubbell who is committed to safeguarding the environment through environmental stewardship, innovative products and efficient operations

For more information about Hubbell Building Automation's sustainability initiative and access to our complete suite of on-line tools, visit our website at www.hubbell-automation.com.

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IntelliDAPT™ Technology...
Smart Technology for Today's Needs

IntelliDAPT Technology is an HBA patented innovation that delivers benefits to both building owners and occupants. The building owner achieves reduced energy costs, fewer adjustments and less maintenance while the building occupant experiences fewer false on and offs and disturbances.

IntelliDAPT Technology occupancy sensors use microprocessors that make all the decisions for setting adjustments. Internal software constantly monitors the controlled area and automatically adjusts the sensitivity and timer based on environmental history. This means that instead of manually adjusting the sensor for seasonal changes, modified airflow, furniture layout or occupancy pattern changes, the sensor automatically adjusts itself. These automatic adjustments eliminate the need for multiple manual adjustments by maintenance personnel or outside contractors. HBA offers IntelliDAPT Technology throughout its product offering—wall switches, ceiling and wall mount sensors—in conjunction with dual technology, ultrasonic and passive infrared products.
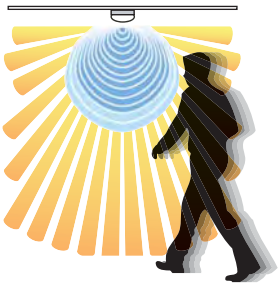
Benefits:
- "Install-and-forget" operation
- Adapts to space and needs
  - Seasons
  - Airflow
  - Occupancy Patterns
- Reduces false on and offs

How to Select the Right Technology for the Proper Application
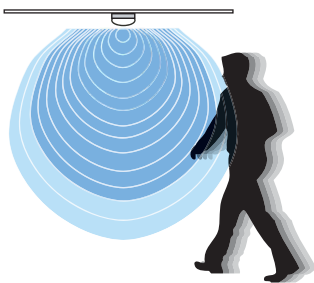
Dual Technology

Dual technology occupancy sensors combine both passive infrared (PIR) and ultrasonic (US) technologies for maximum reliability. Because US and PIR need to both detect occupancy to turn lighting on, dual technology sensors minimize the risk of lights coming on when the space is unoccupied—false triggering. Continued detection by only one technology then keeps lighting on as necessary. Dual technology sensors offer the best performance for most applications.

Benefits:
- Track occupancy on with two sensing methods
- Minimizes false triggering
- Consistent, reliable operation

Ultrasonic (US)

Ultrasonic (US) technology senses occupancy by bouncing sound waves (32 kHz or 45 kHz) off of objects and detecting a frequency shift between the emitted and reflected sound waves. Movement by a person or object within a space causes a shift in frequency, which the sensor interprets as occupancy. While US occupancy sensors have a limited range, they are excellent at detecting even minor motion such as typing and filing, and they do not require an unobstructed line-of-sight. This makes US technology sensors ideal for an application like an office with cubicles or a restroom with stalls.

Benefits:
- Detect small motion
- Sees around obstructions

Passive Infrared (PIR)
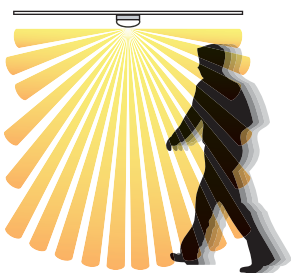
Passive infrared (PIR) technology senses occupancy by detecting the movement of heat emitted from the human body against the background space. Unlike US technology, PIR sensors require an unobstructed line-of-sight for detection. These sensors use a segmented lens, which divides the coverage area into zones. Movement between zones is then interpreted as occupancy. PIR sensors are ideal for detecting major motion (e.g. walking), and they work best in small, enclosed spaces with high levels of occupant movement.

Benefits:
- Long range detection
- Reliable triggering
- Cost efficient

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OFFICE SOLUTIONS

Pro Tip:

Sensors with photocells provide additional savings in areas with sufficient natural light by turning off lights whenever possible.

Success Factors:

• Reduce installation and maintenance labor by eliminating manual adjustments with adaptive sensors.

• Maximize savings with HBA's daylight harvesting products which precisely control lighting in response to available natural light.

• Open office spaces provide many placement and product selection challenges. Contact your local HBA sensor professional for layout and product assistance.

* Energy Information Administration: 2003 Commercial Buildings Energy Consumption Survey
** Based on 40% lighting savings from sensors. Actual results may vary.
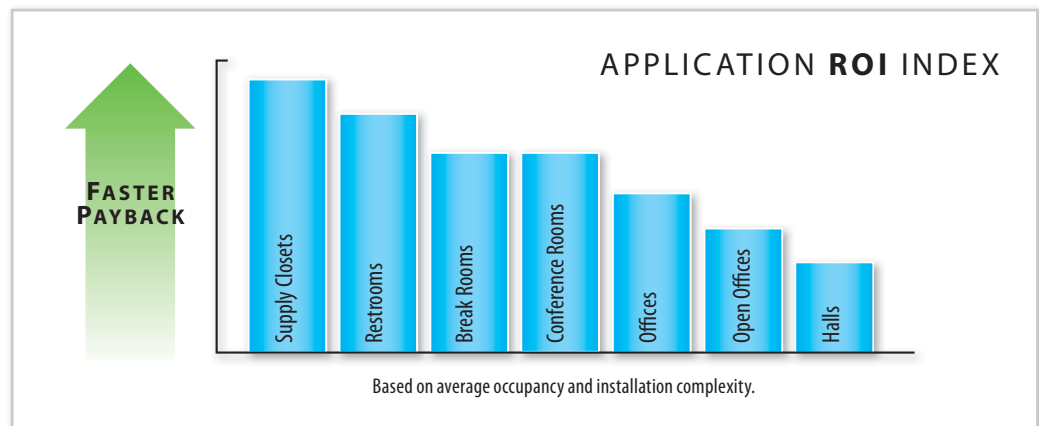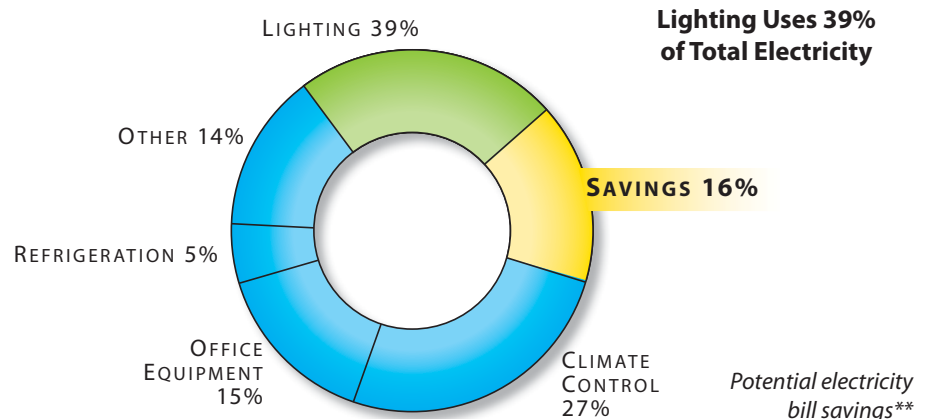
Eliminate energy waste and improve the bottom line.

Companies have always had to make tough decisions regarding resource allocation. In the past, energy consumption was often treated as a fixed overhead cost. With new regulations and the need for sustainable building design, this no longer holds true. Lighting is responsible for much of an office's electricity use, and occupancy sensors can provide significant energy savings by only lighting where and when it's needed.

Enhance reputation and maintain employee satisfaction.

Companies with LEED-certified facilities have a higher standing within their communities and among industry peers. LEED-certified work environments also result in higher levels of employee satisfaction and retention due to healthier, brighter working conditions. HBA's sensors can help gain LEED points and illustrate a company's commitment to protecting the

TYPICAL OFFICE ELECTRICITY USAGE AND SAVINGS*

LIGHTING 39%

Lighting Uses 39% of Total Electricity

OTHER 14%

SAVINGS 16%

REFRIGERATION 5%

OFFICE EQUIPMENT 15%

CLIMATE CONTROL 27%

*Potential electricity bill savings***

APPLICATION ROI INDEX

FASTER PAYBACK

Supply Closets
Restrooms
Break Rooms
Conference Rooms
Offices
Open Offices
Halls

Based on average occupancy and installation complexity.

6

EDUCATION SOLUTIONS

Electricity doesn't educate—teachers do.
Electricity bills are second only to payroll in today's restricted school budgets. Most of the electricity goes to keeping the lights on, even when they are not needed. Systematically turning lights off whenever possible significantly reduces a school's utility bill.

Regain budget control with HBA.
HBA's sensors provide a simple, automated and transparent system to make sure that lighting energy is used as needed. This protects school budgets from rate fluctuations, allowing educational institutions to more freely invest in teachers, programs and supplies that directly affect the quality of education.
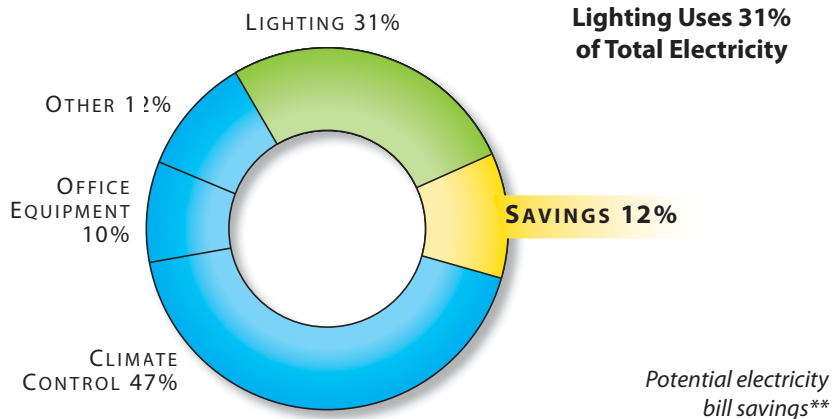
Energy Saving Locations:
Store Rooms
Restrooms
Cafeterias
Administration
Classrooms
Media Centers
Hallways

Pro Tip:
Dual technology sensors enhance minor motion detection reducing false off situations during periods of reading or testing.
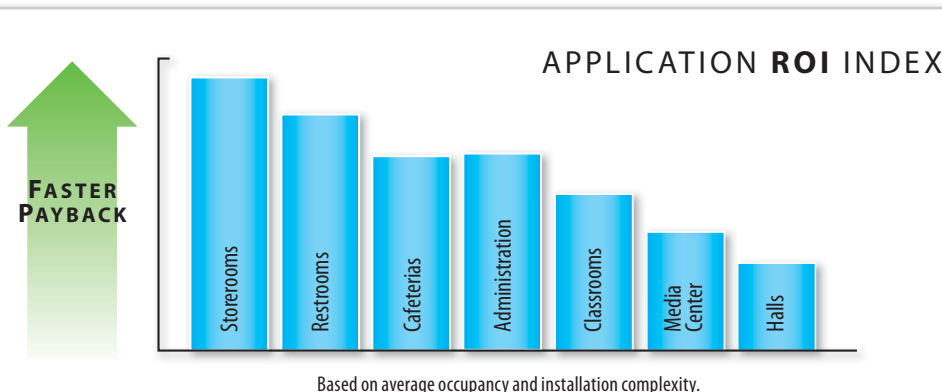
Success Factors:
- Provide advanced lighting control of two zones for projector use with dual circuit switches.
- Increase sensor longevity by specifying LHMT or LHIR series switch sensors with vandal resistant hard lenses or ultrasonic sensors.
- Simplify retrofits by eliminating the need to run new wires by utilizing line voltage wall switch and ceiling sensors.

* Energy Information Administration: 2003 Commercial Buildings Energy Consumption Survey
** Based on 40% lighting savings from sensors.
Actual results may vary.

TYPICAL EDUCATION ELECTRICITY USAGE AND SAVINGS*

LIGHTING 31%
OTHER 12%
OFFICE EQUIPMENT 10%
CLIMATE CONTROL 47%

Lighting Uses 31% of Total Electricity

SAVINGS 12%

*Potential electricity bill savings***

APPLICATION **ROI** INDEX

FASTER PAYBACK

Storerooms
Restrooms
Cafeterias
Administration
Classrooms
Media Center
Halls

Based on average occupancy and installation complexity.

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RETAIL SOLUTIONS

Illuminate sales potential and increase profit.

Retail establishments use a significant amount of electricity for lighting—both for overhead and display. After all, customers need to clearly see what they're buying. However, there are numerous areas in stores that don't require light all day like stock rooms, restrooms, and fitting rooms. Occupancy sensors in these areas can lower a store's electricity bill and increase profit.

The upgrade that pays back.

HBA's sensors provide a transparent, automated system that seamlessly makes sure lights are turned on when needed and off when they're not. Employees can carry goods in and out of stock rooms without worrying about lights, and patrons can enter instantly illuminated fitting rooms. Occupancy sensors also show customers that a retail establishment is committed to minimizing energy waste while saving money every day.

Energy Saving Locations:

Supply Closets
Restrooms
Changing Rooms
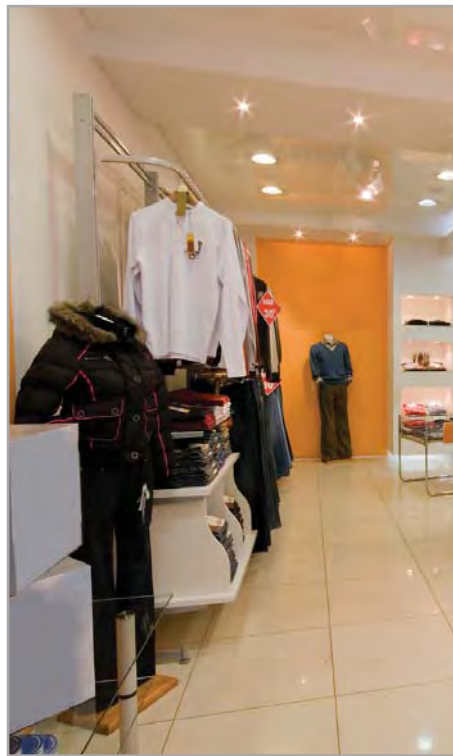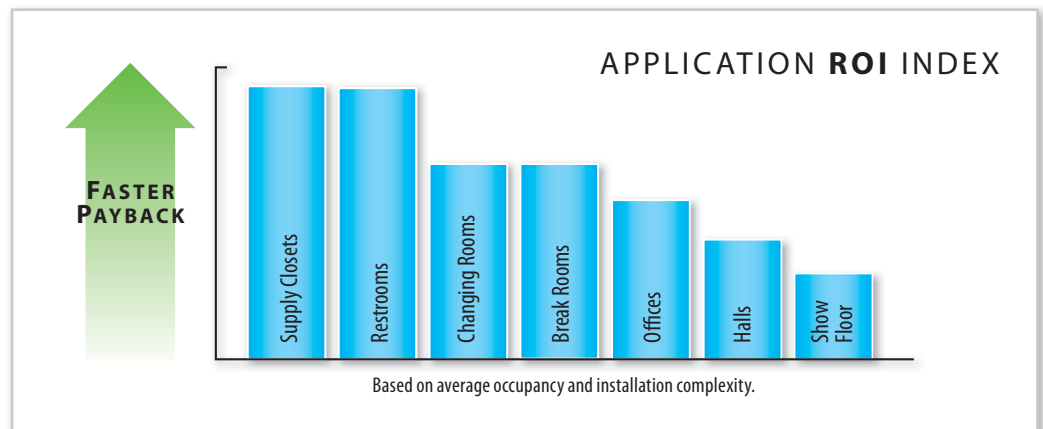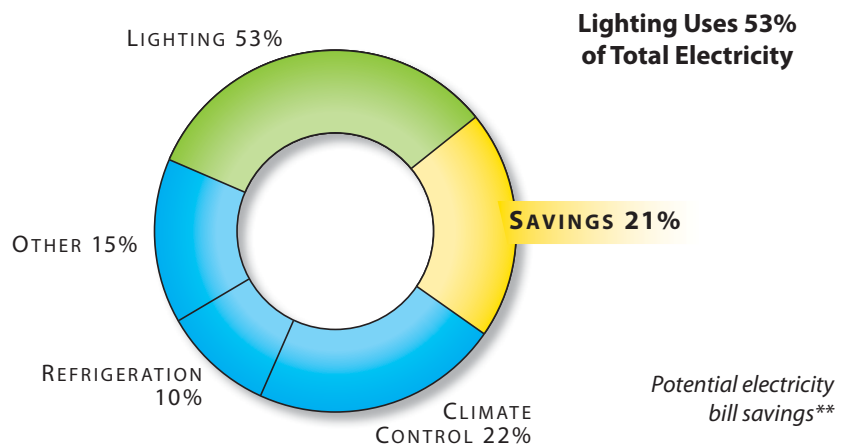Break Rooms
Offices
Hallways
Show Floor

Pro Tip:

Passive infrared is perfect for changing rooms, and break areas where ROI outweighs performance requirements.

Success Factors:

- Minimize cost and maximize savings in changing rooms with PIR sensors and short off delays.

- Reduce the chance for sensor damage by specifying LHMT or LHIR wall switch sensors with vandal resistant hard lenses.

- Contact you local HBA sensor professional for assistance with high bay storage and show floor solutions.

TYPICAL RETAIL ELECTRICITY USAGE AND SAVINGS*

LIGHTING 53%

Lighting Uses 53% of Total Electricity

OTHER 15%

SAVINGS 21%

REFRIGERATION 10%

CLIMATE CONTROL 22%

*Potential electricity bill savings**

APPLICATION ROI INDEX

FASTER PAYBACK

Supply Closets · Restrooms · Changing Rooms · Break Rooms · Offices · Halls · Show Floor

Based on average occupancy and installation complexity.

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* Energy Information Administration: 2003 Commercial Buildings Energy Consumption Survey

** Based on 40% lighting savings from sensors. Actual results may vary.

H O S P I T A L I T Y   S O L U T I O N S

Turn the lights off to keep the lights on.

Over 50% of a hotel's electricity bill goes to keeping lights on, even when guests are away from their rooms. This results in substantial waste that reduces an establishment's financial efficiency and sustainability. With occupancy sensors, the waste can be eliminated without affecting customer comfort and convenience.

Manual-on mode automates savings.

Hotel guests are on the go and often away from their rooms. As a result room lights are often left on, even in broad daylight. Specifically developed with the hospitality industry in mind, manual-on mode provides guests with a traditional on/off light control experience but then automatically turn off lights once a room is unoccupied for a period of time. This provides a simple and transparent method to ensuring that lights are off when necessary, significantly increasing a hotel's energy efficiency.
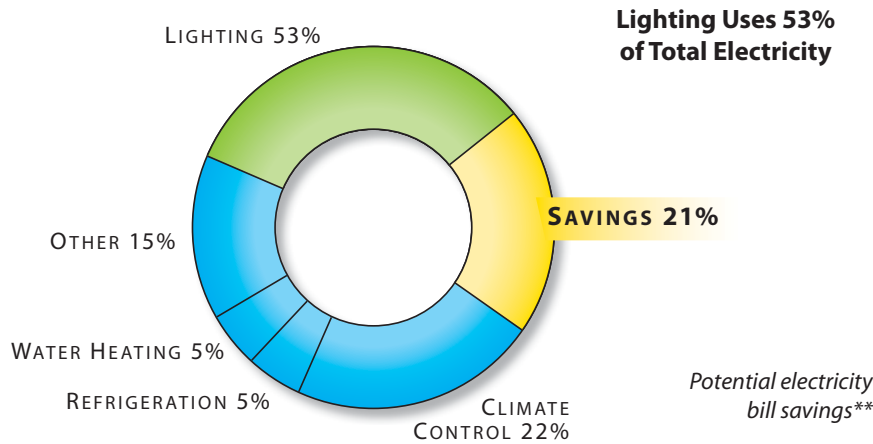
Energy Saving Locations:

Supply Closets
Restrooms
Exercise Rooms
Break Rooms
Meeting Rooms
Guest Rooms
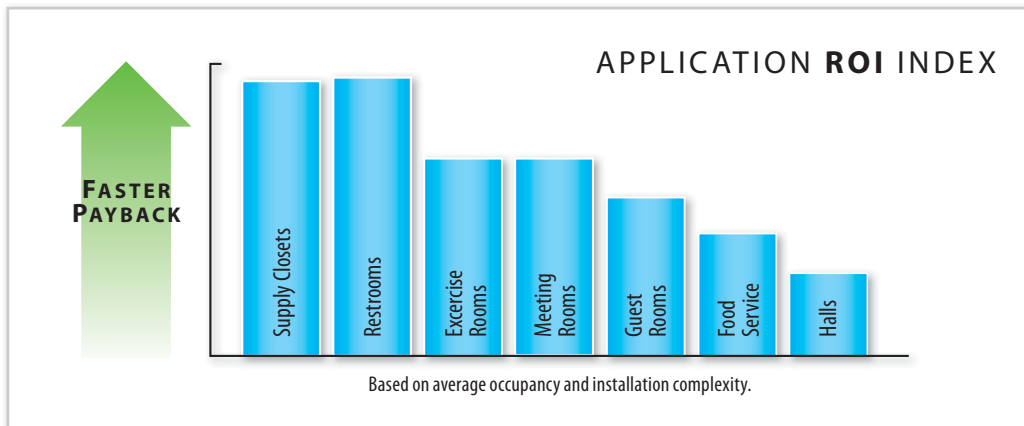Food Service
Hallways

Pro Tip:

Utilize manual-on setting to maximize savings by making sure lights are turned off when rooms are unoccupied while giving patrons a traditional on/off experience.

Success Factors:

• Let guest have traditional control by setting sensors to manual-on mode on LHIR, LHMT, and LHUS series products.

• Utilize free sunlight to light your lobbies and atriums with HBA's atrium daylight harvesting sensor.

TYPICAL HOSPITALITY ELECTRICITY USAGE AND SAVINGS*

LIGHTING 53%

Lighting Uses 53% of Total Electricity

OTHER 15%

SAVINGS 21%

WATER HEATING 5%

REFRIGERATION 5%

CLIMATE CONTROL 22%

*Potential electricity bill savings**

APPLICATION **ROI** INDEX

FASTER PAYBACK

Supply Closets
Restrooms
Exercise Rooms
Meeting Rooms
Guest Rooms
Food Service
Halls

Based on average occupancy and installation complexity.

*   Energy Information Administration: 2003 Commercial Buildings Energy Consumption Survey
** Based on 40% lighting savings from sensors.
    Actual results may vary.

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Energy Saving Locations:

Store Rooms

Restrooms

Break Rooms

Labs

Exam Rooms

Administration Offices

Circulation

Pro Tip:

IntelliDAPT Technology will automatically adjust for changes in shifts, usage, and seasons eliminating the need for manual adjustments and improving system performance.

Success Factors:

• Prevent lights from coming on at night in patient rooms by setting LHMT, LHIR and LHUS series products to manual-on mode.

• Minimize privacy curtains and carts from preventing sensor activation by utilizing Dual Technology or Ultrasonic sensors.

• Healthcare facilities have many special requirements and unique environments. Contact your local HBA sensor professional for layout and product selection assistance.

* Energy Information Administration: 2003 Commercial Buildings Energy Consumption Survey

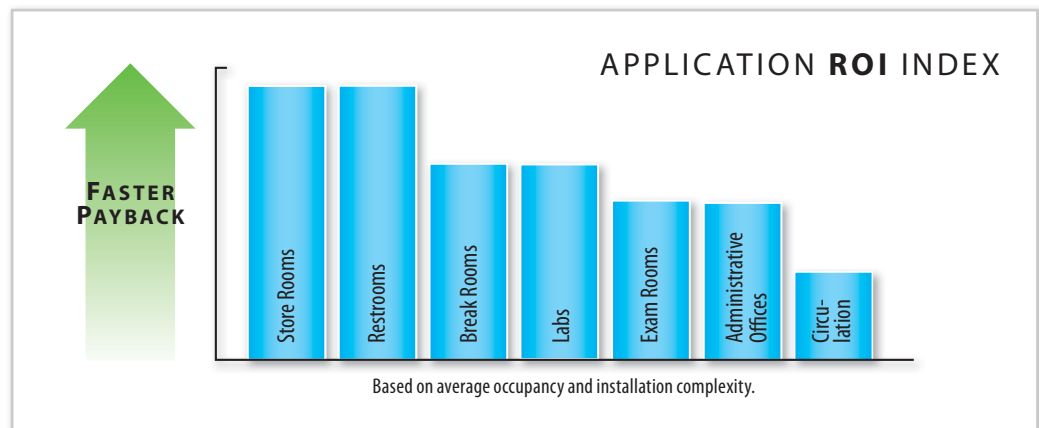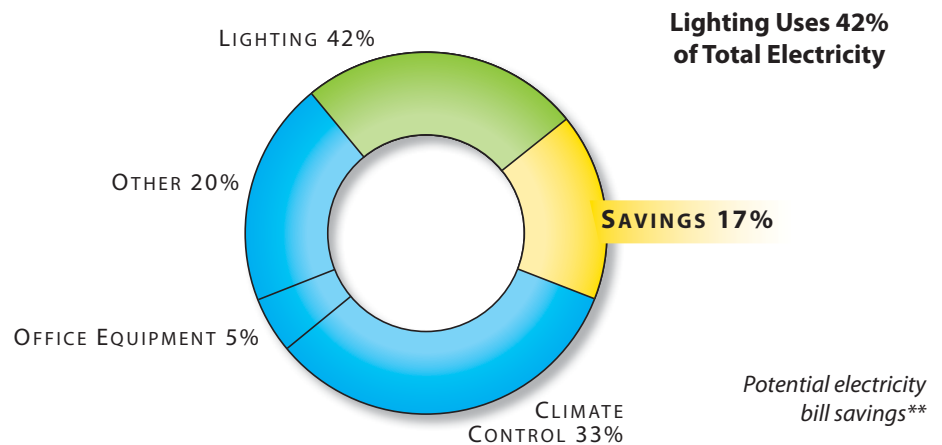** Based on 40% lighting savings from sensors. Actual results may vary.

Turning lights off should be the least of the worries.

Hospitals are a 24/7 operation where decisions and actions regarding the wellness of patients are critical. Consequently, lights are often left on when not needed. There are several areas throughout hospitals that can realize substantial efficiency improvements with little investment like administration offices, storerooms, closets and break rooms. Private practices, medical labs and outpatient care facilities have lower occupancy rates than hospitals and can further benefit from occupancy sensors.

Promote healthier environments.

Light switches are one of the most commonly touched surfaces, spreading diseases and bacteria. Installing occupancy sensors where appropriate eliminates the need to touch a switch, which can help reduce the spread of pathogens. At the same time, healthcare staff benefit from a simple, user-friendly method of controlling the lights.

TYPICAL HEALTHCARE ELECTRICITY USAGE AND SAVINGS*

Lighting Uses 42% of Total Electricity

LIGHTING 42%

OTHER 20%

OFFICE EQUIPMENT 5%

SAVINGS 17%

CLIMATE CONTROL 33%

*Potential electricity bill savings**

APPLICATION **ROI** INDEX

FASTER PAYBACK

Store Rooms · Restrooms · Break Rooms · Labs · Exam Rooms · Administrative Offices · Circulation

Based on average occupancy and installation complexity.

R E S I D E N T I A L   S O L U T I O N S

Is your home ready for the energy age?

Residential construction has changed significantly in recent years. Updated energy efficiency standards such as California Title 24 have pushed energy efficient products to the forefront. Today's homeowners are demanding the latest technologies to help them manage energy usage and stay green. The construction of multi-dwelling units has also become more prevalent with common areas that are ultimately powered on the building owner's bill.

Attract today's home buyers.

Energy efficiency is a selling feature that helps differentiate a new home from an existing home. HBA's residential vacancy sensors were developed specifically for homeowners by incorporating features such as manual on, alert to off and dimming. Incorporating HBA's sensors into the residence helps comply with the latest building codes while appealing to prospective home buyers.
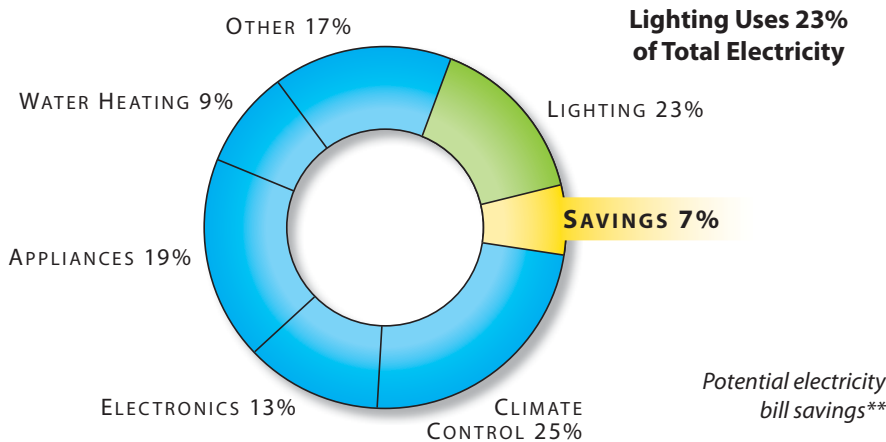
Energy Saving Locations:

Bathrooms
Closets
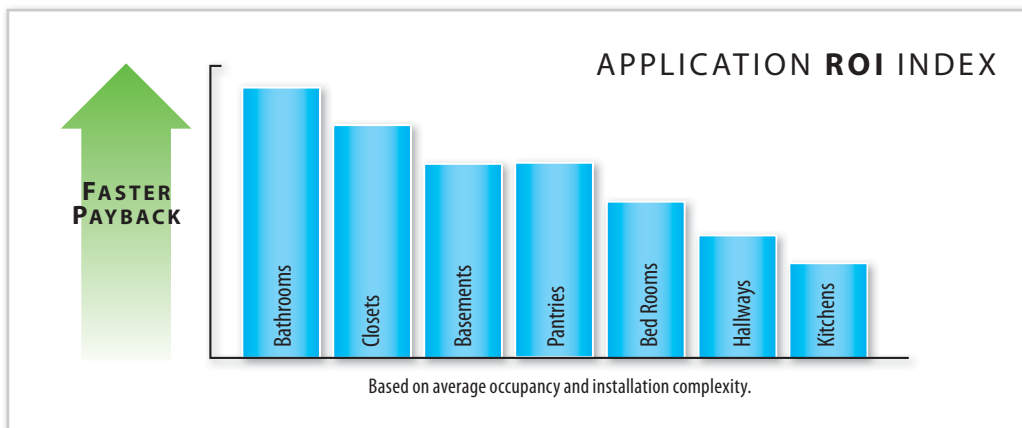Basements/Garages
Pantries
Bed Rooms
Hallways
Kitchens

Pro Tip:

Vacancy sensors use manual activation to eliminate false triggering by pets and walkthroughs. They also help meet California Title 24 compliance.

Success Factors:

- Replace switches in bedrooms, bathrooms, closets and basements to maximize ROI as these areas often have lights left on.

- Give homeowners even more control of lighting and savings with dimming sensors.

TYPICAL RESIDENTIAL ELECTRICITY USAGE AND SAVINGS*

OTHER 17%

WATER HEATING 9%

APPLIANCES 19%

ELECTRONICS 13%

CLIMATE CONTROL 25%

LIGHTING 23%

SAVINGS 7%

Lighting Uses 23% of Total Electricity

*Potential electricity bill savings**

APPLICATION **ROI** INDEX

FASTER PAYBACK

Bathrooms | Closets | Basements | Pantries | Bed Rooms | Hallways | Kitchens

Based on average occupancy and installation complexity.

* Source: US DOE Building Energy Data Book 2008
** Based on 40% lighting savings from sensors.
Actual results may vary.

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Energy Saving Areas:

Open Office

Administration

Private Offices

Teaming Areas

Pro Tip:

Line voltage ceiling sensors simplify retrofits. Also note door location and swing radius to position wall switch sensors correctly.

Products

Recommended
Wall Switch:
LHMT Series

Alternative
Wall Switches:
IWSZP Series
LHIR Series

Ceiling Sensors:
OMNIDT500
OMNIIR
(Must use a Power Pack)

PIR10P
(No Power Pack needed)

Occupancy trends are changing.
Due to the increased use of flexible work hours, telecommuting and adaptable workspaces, modern office spaces experience constant changing occupancy patterns. These trends have increased the amount of unnecessary illumination in today's offices, which can be minimized through proper utilization of occupancy sensors.

Modern technology for modern offices.
The ever-changing nature of today's office space poses challenges for traditional occupancy sensors. HBA's sensors, equipped with IntelliDAPT technology, constantly monitor and adjust to changing occupancy patterns, layouts and environmental conditions. HBA sensors take the guesswork out of setup and operation by providing an "install-and-forget" experience.

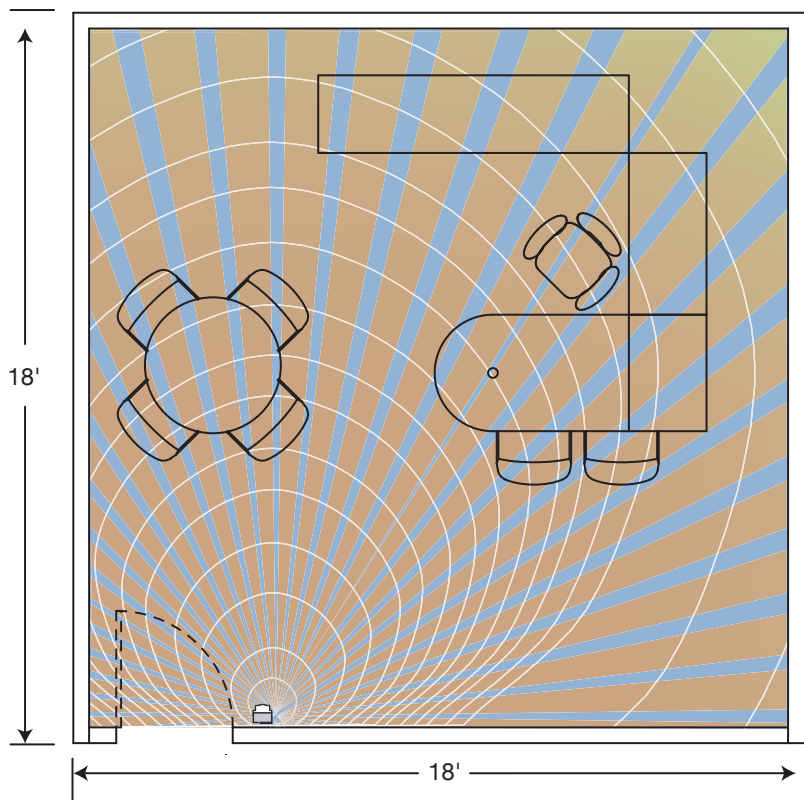## Typical Layouts and Coverage Patterns

Small Office
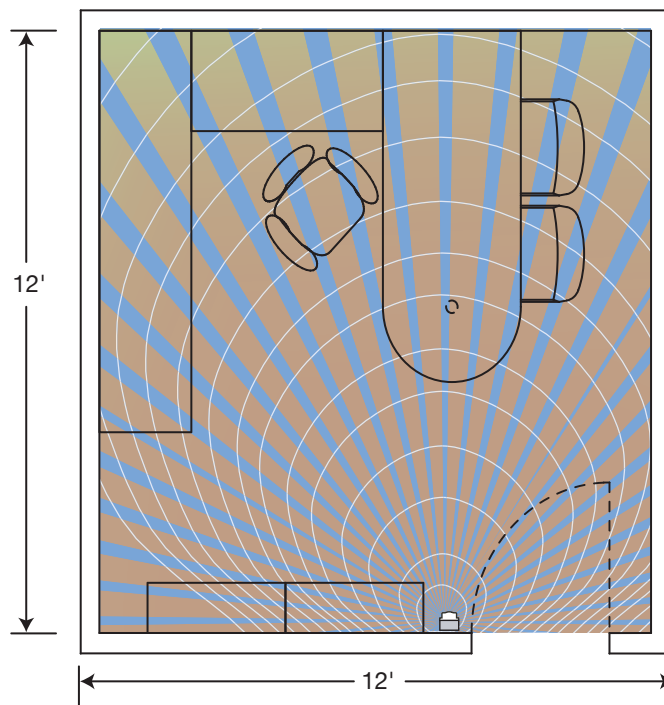
12'

12'

Technology
IntelliDAPT Dual Technology
(Recommended)

Suggested Installation
Make sure sensor is not obscured
by an open door.

Major Motion: ☐ Ultrasonic ☐ PIR **Minor Motion:** ☐ Ultrasonic ☐ PIR

Large Office

18'

18'

Technology
IntelliDAPT Dual Technology
(Recommended)

Suggested Installation
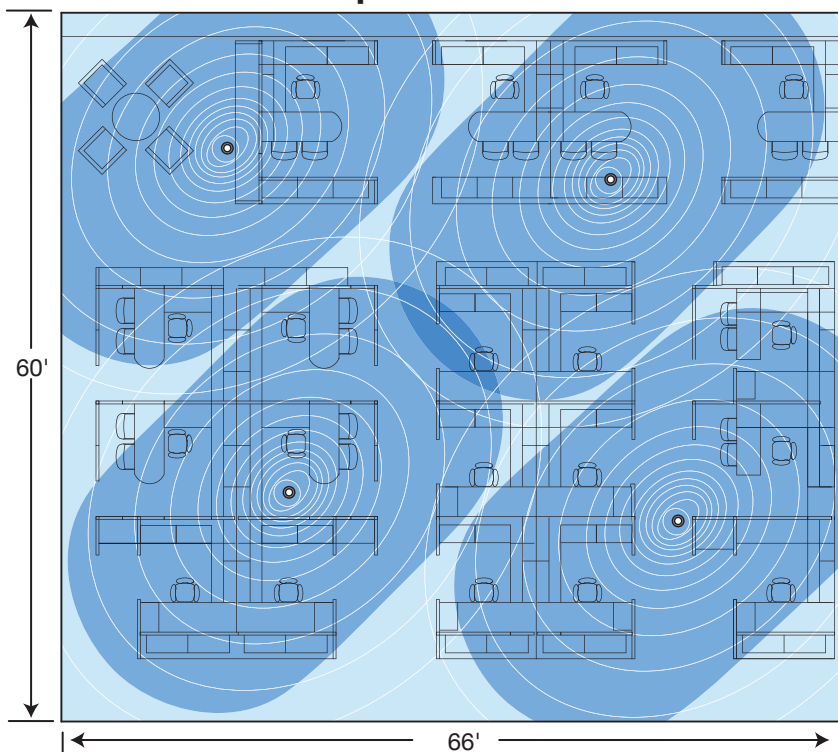Place sensor to view into the room
and not "see" hallway traffic.

Open Office

60'

66'

Technology
IntelliDAPT Ultrasonic Technology
(Recommended)

Suggested Installation
Position and angle sensors to maximize
minor motion detection over work space
concentrations.

Major Motion: ☐ Ultrasonic ☐ PIR **Minor Motion:** ☐ Ultrasonic ☐ PIR

Occupied or not?

Restrooms are typically occupied less than 50% of the day, and lights are often left on while no one is present. Restrooms are also isolated, making it difficult to determine if lights have been left on inadvertently. Significant savings can be achieved by systematically turning lights off when possible.

Promote savings and health.

HBA sensors intelligently sense occupation and control lights accordingly so facility managers no longer have to ensure that the lights are turned off in restrooms or when closing up. And because a switch is a common touch point for transmitting germs in bathrooms, using HBA sensors helps promote healthy buildings.

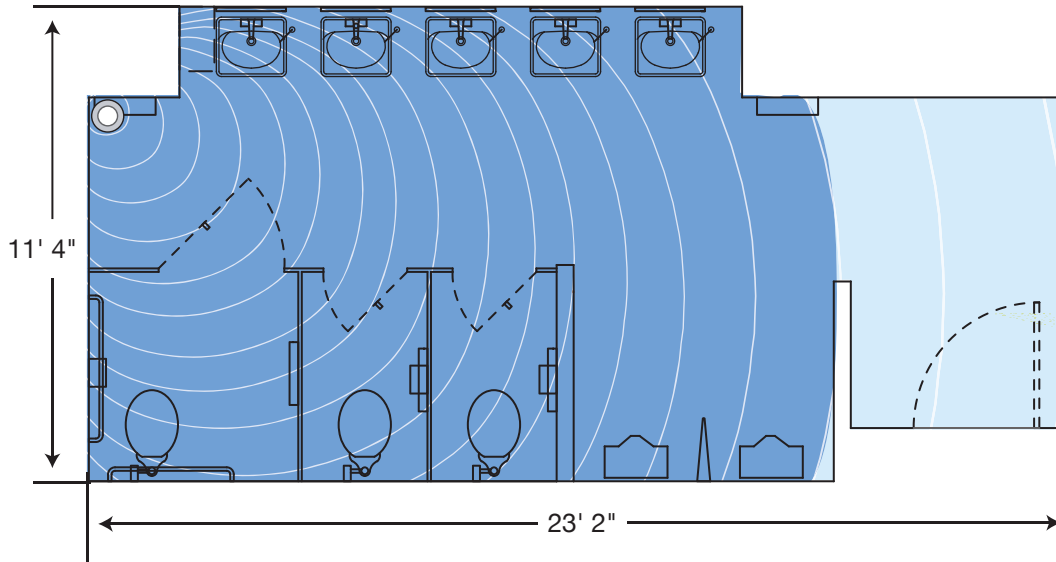## Typical Layouts and Coverage Patterns

Small Single Restroom

7' 2"

7'
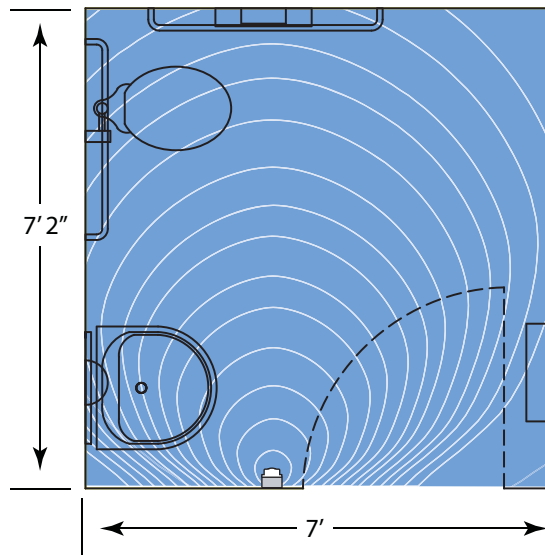
Technology
IntelliDAPT Ultrasonic Technology (Recommended)

Suggested Installation
Mount switch in location that limits chance for damage.

Energy Saving Areas:

Single Person

Multi Person

Locker Rooms

Powder Rooms

Pro Tip:

Dual circuit sensors can allow for control of lights and exhaust fan simplifying installation. Contact technical services regarding load and motor types supported.

Products

Recommended
Wall Sensors:
LHUS Series

Alternative
Wall Switches:
IWSZP Series
LHIR Series

Ceiling Sensors:
OMNIUS500
(Must use a Power Pack)
PIR10P
(No Power Pack needed)

Major Motion: ☐ Ultrasonic ☐ PIR   **Minor Motion:** ☐ Ultrasonic ☐ PIR

Large Restroom

11' 4"

23' 2"

Technology
IntelliDAPT Ultrasonic Technology
(Recommended)

Suggested Installation
Place sensor closer to stalls to maximize minor motion detection.

Large Restroom with Locker Room

23' 2"

24' 1"
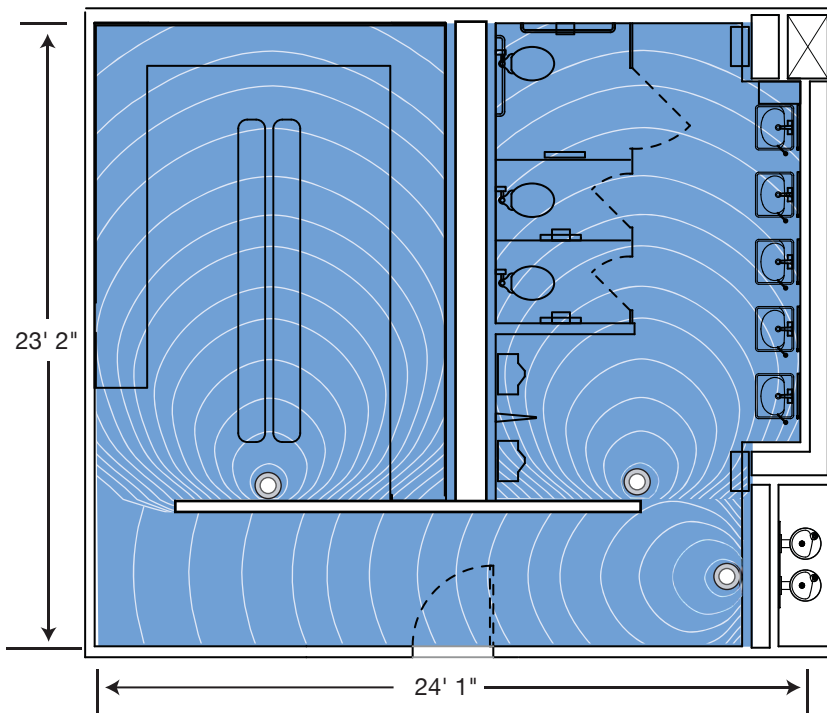
Technology
IntelliDAPT Ultrasonic Technology
(Recommended)

Suggested Installation
Multiple sensors provide complete coverage and allow selective lighting based on occupancy.

Products
Recommended
Ceiling Sensor:
OMNIUS500

(Must use a Power Pack)
UVPP

Alternat ve
Ceiling Sensors:
OMNIUS2000
(Must use a Power Pack)
OMNIUS2000BP1277
(No Power Pack needed)

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Major Motion: Ultrasonic PIR **Minor Motion:** Ultrasonic PIR

HBA Sensors – the teacher's new pet.

Lighting classrooms consumes a substantial amount of the education budget. However, significant savings can be realized by turning off lights when they are not needed. Occupancy sensors provide an inexpensive way to guarantee that energy waste is kept to a minimum. They can further enhance savings by using optional photo sensors that turn off the lights when enough natural light is detected.

Design for change.

Classrooms are multi-use spaces that accommodate school-day activities and after school programs. Field trips, vacations, events and cancellations all affect occupancy patterns. At the same time, seasonal environmental conditions are always changing. HBA's patented IntelliDAPT Technology automatically adjusts to these changes to minimize inadvertent activation and maximize savings. HBA provides one of the most complete sensor lines for effectively managing project cost and performance in educational institutions.

Typical Layouts and Coverage Patterns

Large Classroom
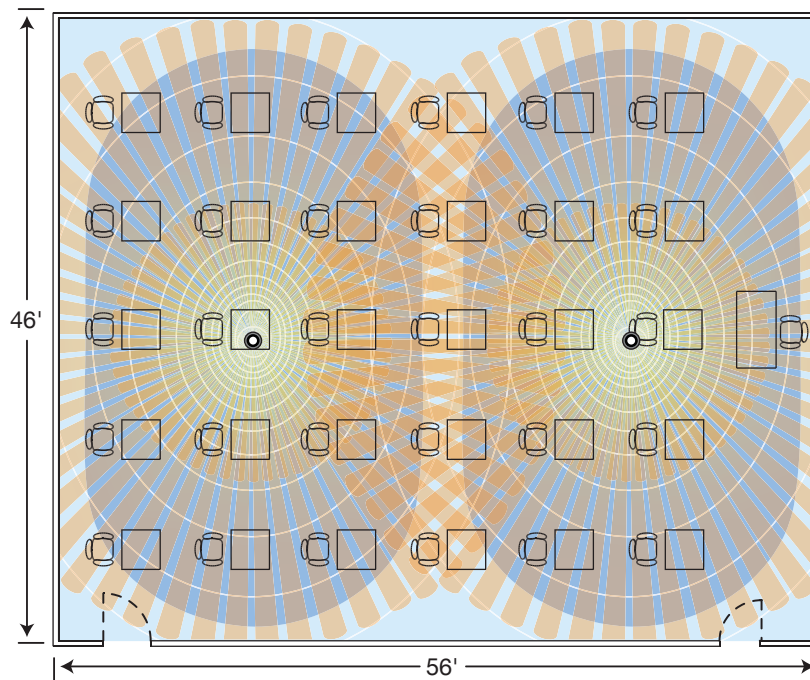
Technology
IntelliDAPT Dual Technology
(Recommended)

Suggested Installation
Provide teachers with manual override switches to turn off lights during A/V presentations.

Major Motion: ■ Ultrasonic ■ PIR **Minor Motion:** ■ Ultrasonic ■ PIR

Energy Saving Areas:

Classrooms

Conference Halls

Libraries

Pro Tip:

Dual technology provides reliable operation during periods of low activity such as testing. Manual on/off sensors provide control for movies and presentations.

Products
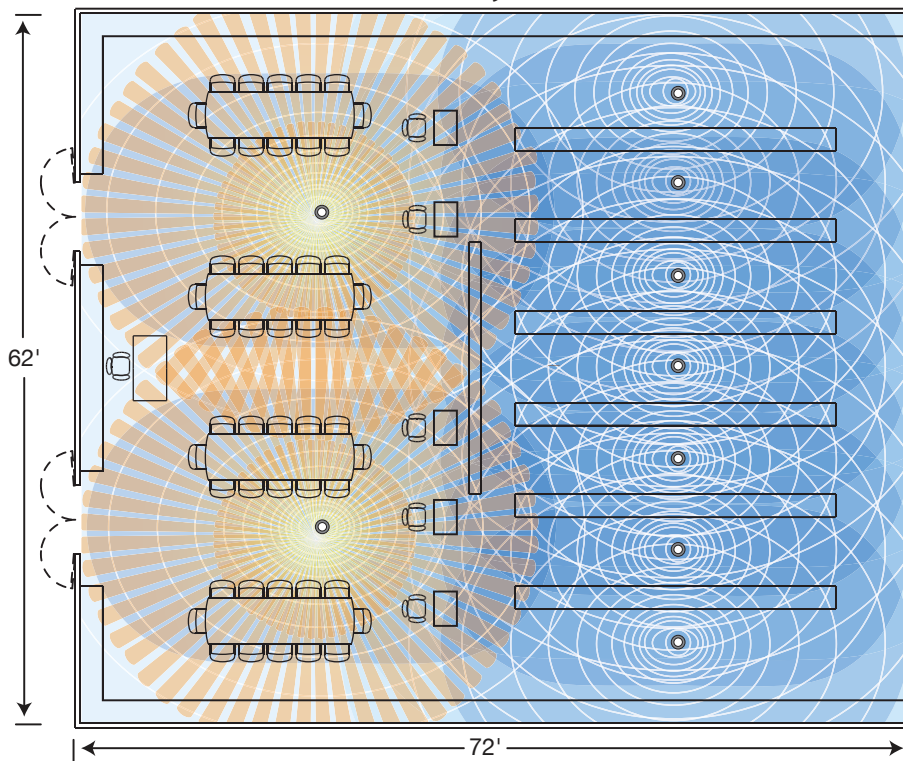
Recommended
Ceiling Sensor:
OMNIDT2000

(Must use a Power Pack)
UVPP

Alternative
Ceiling Sensor:
OMNIDT2000BP1277
(No Power Pack needed)
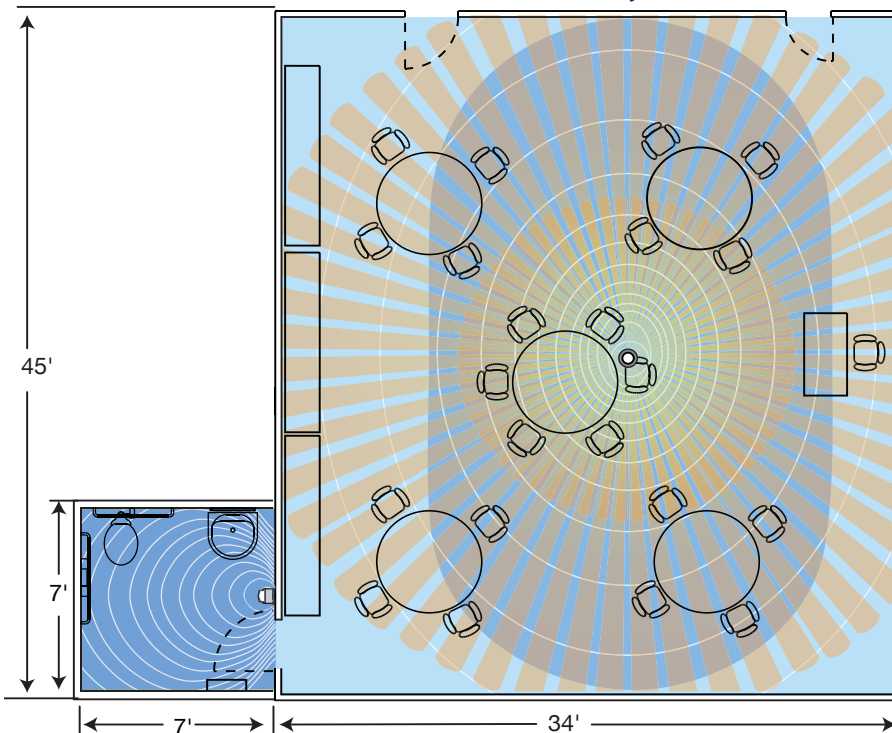
Library

62'

72'

Technology
IntelliDAPT Dual Technology
(Recommended for sitting area)
IntelliDAPT Ultrasonic Technology
(Recommended for browsing area)

Suggested Installation
Utilize ultrasonic sensors between book
case stacks to eliminate blind spots.

Lower Grade Elementary Class

45'

7'

7'

34'

Technology
IntelliDAPT Dual Technology
(Recommended for classroom)
IntelliDAPT Ultrasonic Technology
(Recommended for bathroom)

Suggested Installation
Provide teachers with manual override
switches to turn off lights for quiet times.

Major Motion: ▢ Ultrasonic ▢ PIR **Minor Motion:** ▢ Ultrasonic ▢ PIR

Products
Recommended
Ceiling Sensors:
OMNIDT2000

OMNIUS2000

(Not must use a
Power Pack)

UVPP

Products
Recommended
Ceiling Sensor:
OMNIDT2000

(Must use a Power Pack)

UVPP

Wall Switches:
LHUS Series

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LABORATORIES DESIGN GUIDE

Energy Saving Areas:

Pharmaceutical Labs

Quality Control Areas

Product Development Labs

Rapid Prototyping Shops

Pro Tip:

Use Dual Technology or Ultrasonic in labs with obstructions such as large filing cabinets or air flow hoods.

Products

Recommended
Wall Switches:
LHUS Series

Alternative
Wall Switches:
IWSZP Series
LHIR Series

Ceiling Sensors:
OMNIUS500
(Must use a Power Pack)
PIR10P
(No Power Pack needed)

Labs have unique requirements

Laboratory spaces are unique environments that have uncommon usage patterns and requirements, such as clean room classification. Lab technicians and scientists often have their hands occupied dealing with equipment, chemicals or biomaterials. In addition, occupancy constantly changes in labs. Even though lighting is often not needed for prolonged periods of time, lights are often left on.

Sensors – clean and efficient.

HBA's occupancy sensors provide a helpful way of automating energy savings. At the same time, they enhance the operation of the lab environment by allowing users to focus on their work instead of managing the lights. Ideal for the clean room environment, sensors have fewer moving parts that minimize foreign particulate generation and smooth surfaces that can be more easily cleaned. HBA's sensors not only save money, they provide a more efficient work environment.

Typical Layouts and Coverage Patterns
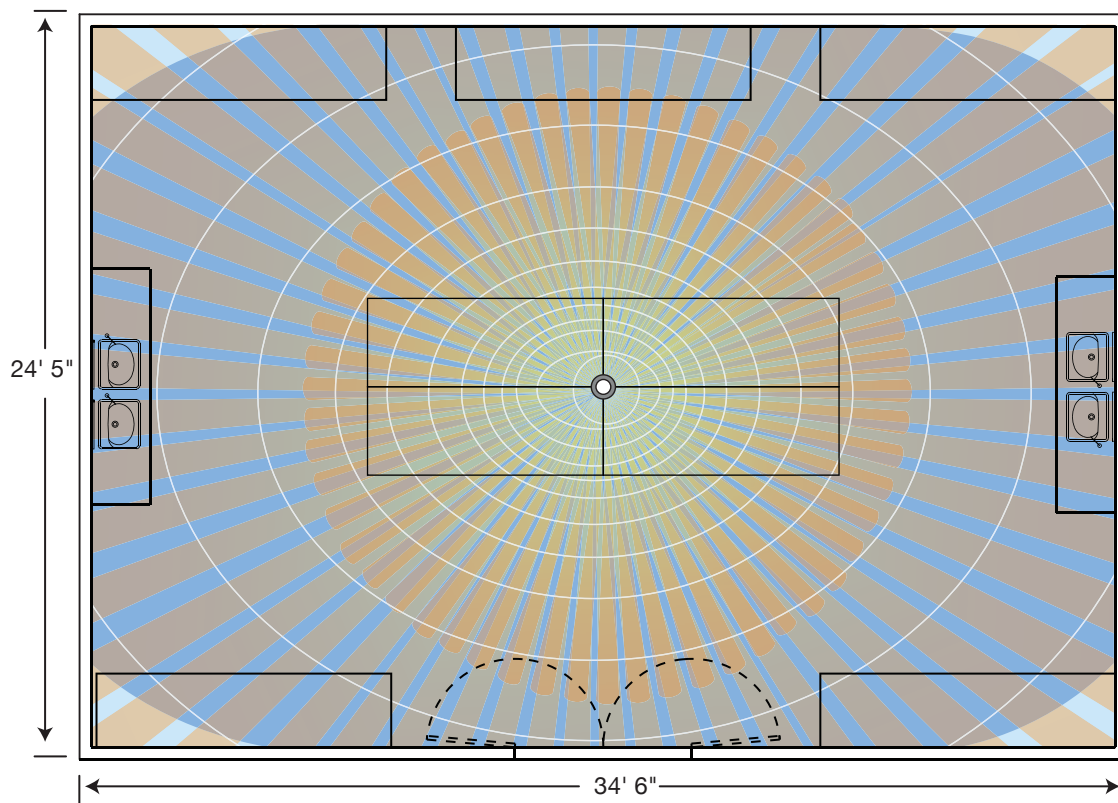
Small Laboratories
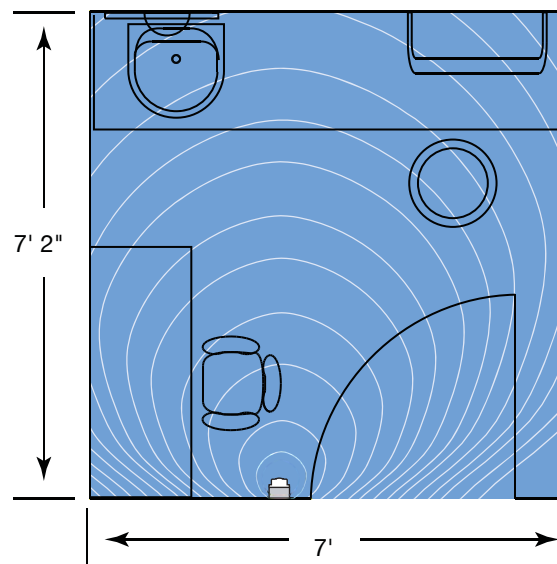
7' 2"

7'

Technology
IntelliDAPT Ultrasonic Technology
(Recommended)

Suggested Installation
Utilize PIR to prevent detection of minor equipment motions.

Major Motion: ▮ Ultrasonic ▮ PIR **Minor Motion:** ▮ Ultrasonic ▮ PIR
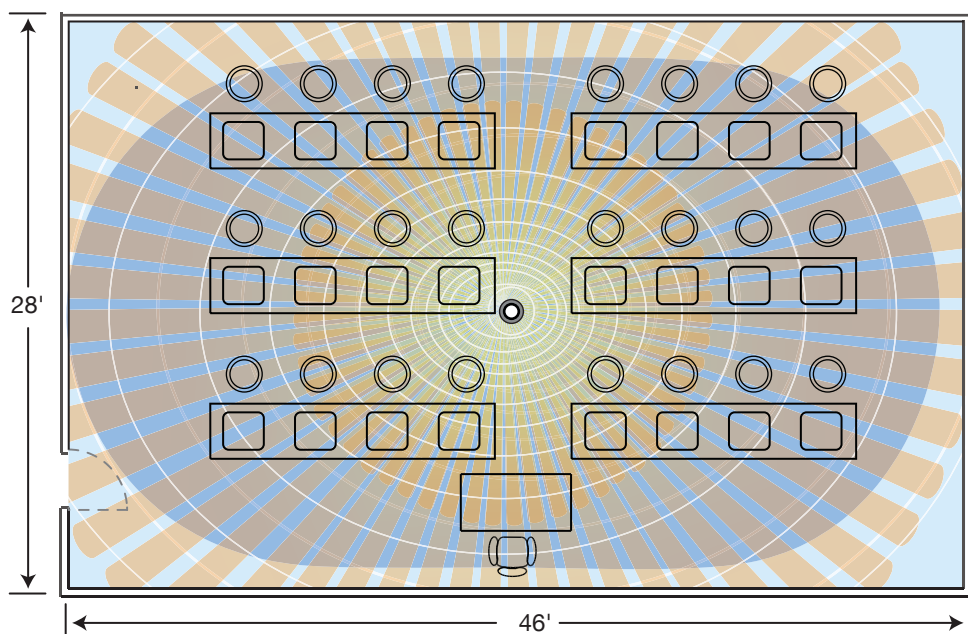
Large Laboratories

24' 5"

34' 6"

Technology
IntelliDAPT Dual Technology
(Recommended)

Suggested Installation
Determine equipment placement to
position sensors accordingly.
Multiple sensors may be required if large
equipment is present.

Computer Lab

28'

46'

Technology
IntelliDAPT Dual Technology
(Recommended)

Suggested Installation
Centering sensor over the seating area
maximizes detection of minor motion
like typing.

Major Motion: ■ Ultrasonic ■ PIR **Minor Motion:** ■ Ultrasonic ■ PIR

Products
Recommended
Ceiling Sensor:
OMNIDT2000

(Must use a Power Pack)

UVPP

Alternative
Ceiling Sensor:
CUI5002000P
(No Power Pack needed)

Products
Recommended
Ceiling Sensor:
OMNIDT2000

(Must use a Power Pack)

UVPP

Alternative
Ceiling Sensor:
OMNIDT2000BP1277
(No Power Pack needed)

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C O N F E R E N C E R O O M D E S I G N G U I D E

Energy Saving Areas:

Large Boardrooms

Small Boardrooms

Training Rooms

Teaming Areas

Pro Tip:

Use sensors with manual on/off control for projection of presentations.

Products

Recommended
Wall Switch:
LHMT Series

Alternative
Ceiling Sensor:
OMNIDT1000
(Must use a Power Pack)

A place of purpose

Conference rooms are critical, bringing great minds together to develop strategies for success, but these meetings of the minds don't always happen all day long. People come and go, and even day-long meetings often break for significant periods of time. Still, lights are often left on when meetings adjourn and conference rooms are left empty. In addition, productivity increases with natural light, often making lighting unnecessary where windows can take over.

Portraying the right image

The irregular occupancy pattern of conference rooms makes these spaces ideal for HBA occupancy sensors. The use of photocell sensors ensures productive natural light is utilized when detected. Manual controls avoid lights coming on during audio-visual projection despite movement in the room. Because conference rooms are also often frequented by guests, they portray an image to meeting guests and attendees. No better image could be portrayed than a commitment to the environment through the use of occupancy sensors.

Typical Layouts and Coverage Patterns
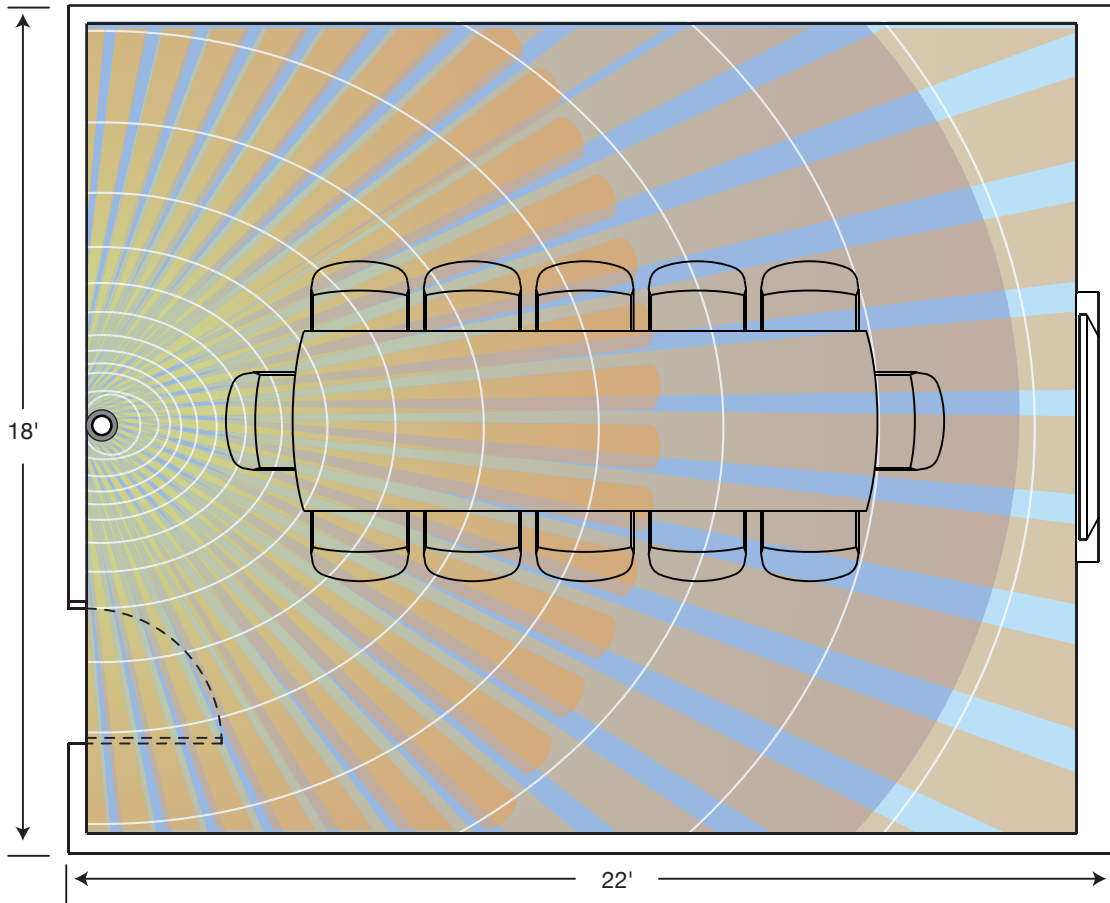
Small Conference Room
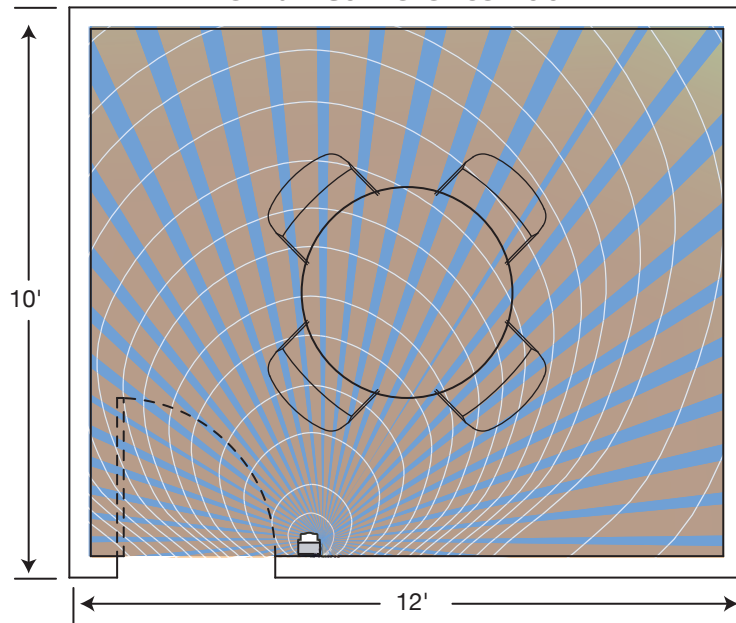
10'

12'

Technology
IntelliDAPT Dual Technology
(Recommended)

Suggested Installation
Make sure sensor is not obscured by presentation equipment like screens or easels.

Major Motion: ■ Ultrasonic ■ PIR   **Minor Motion:** ■ Ultrasonic ■ PIR

Large Conference Room

18'

22'

Technology
IntelliDAPT Dual Technology
(Recommended)

Suggested Installation
Dual circuit wall switches can be used to allow accent lighting during presentations if room size allows.

Major Motion: ■ Ultrasonic ■ PIR   **Minor Motion:** ■ Ultrasonic ■ PIR

Frequently forgotten

Closets and storerooms offer one the best environments for occupancy savings due to intermittent use. Furthermore, people leaving these spaces are often carrying supplies or merchandise, making turning off lights difficult. People then move on to the task at hand. Going back to turn off lights is frequently forgotten. Like restrooms, closets and storerooms are normally isolated, and it's difficult to determine if lights have been left on.

Easy in, easy out

With occupancy sensors, entering or leaving a storeroom with hands full is easily accomplished without worrying about the lights staying on and wasting energy. HBA breadth of products includes occupancy sensors with passive infrared technology that are ideal for small spaces of major movement, as well as options for covering large warehouse aisles and high-bay applications with 120-foot linear coverage.

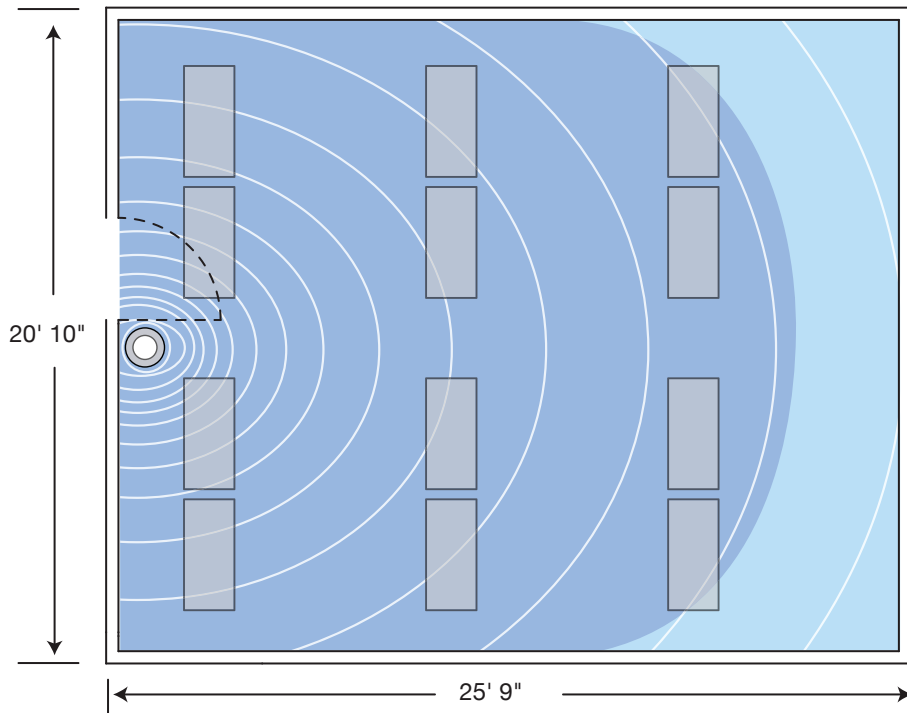## Typical Layouts and Coverage Patterns

Small Closet/Storeroom

6' 10"

10' 10"
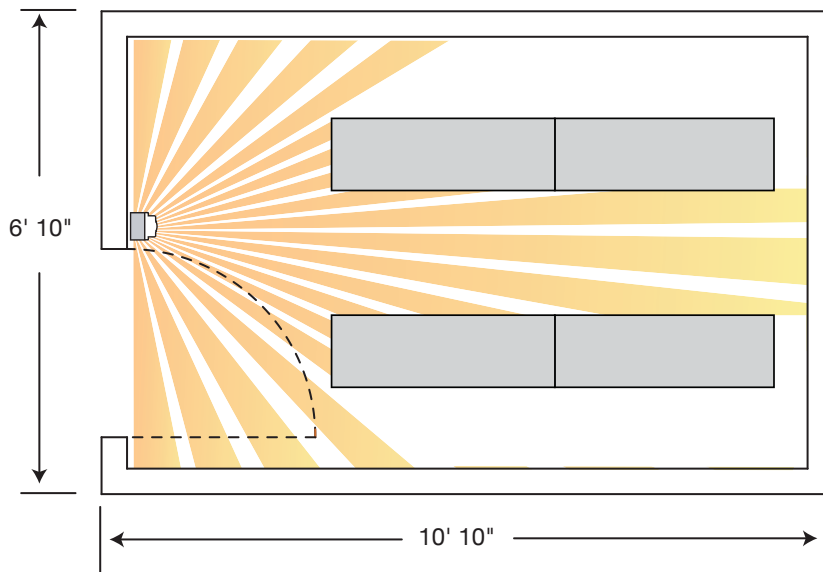
Technology
Passive Infrared Technology
(Recommended)

Suggested Installation
Position sensor close to door to make sure lights come on when the door is opened.

Major Motion: ☐ Ultrasonic ☐ PIR   Minor Motion: ☐ Ultrasonic ☐ PIR

Large Closet/Storeroom

20' 10"

25' 9"

Technology
IntelliDAPT Dual Technology
(Recommended)

Suggested Installation
Use a wall mount sensor if ceiling height is above 12ft.

Warehouse

68'

80'

Technology
Passive Infrared IntelliDAPT Technology
(Recommended)

Suggested Installation
Utilize fixture mount high bay sensors in larger areas or where wall sensors are not feasible.

Major Motion: ▮ Ultrasonic ▮ PIR **Minor Motion:** ▮ Ultrasonic ▮ PIR

Products

Recommended
Ceiling Sensor:
OMNIUS1000

(Must use a Power Pack)

UVPP

Alternative
Ceiling Sensor:
OMNIUS2000
(Must use a Power Pack)

Products

Recommended
Fixture Mount Sensor:
WASP2 Series

Alternative

Wall Fixture Sensor:
LOIRHB

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THE FIRST STEP TO SAVINGS

This brochure is merely a window into the possibilities that are available in lighting controls. Let our experts help you find the solutions that are particular to your application, so you can start saving money. Hubbell Building Automation offers the following services to help you get started:

- No obligation walk-thru of your building or campus
- Complimentary layout assistance with Performance Guarantee
- Payback analysis report
- Samples available for test installations
- Training for maintenance staff
- Toll free LIFETIME Technical Support
- Five year warranty on Occupancy Sensors

WIRELESS LIGHTING CONTROLS

HBA's wiHUBB™ Wireless Lighting Control System provides indoor and outdoor wireless controls. The use of wireless controls offers significant benefits over traditional wired solutions for both existing buildings and new construction. wiHUBB devices communicate through the air utilizing radio frequency (RF) waves, eliminating the need for expensive, dedicated control communications wiring.

LIGHTING CONTROL PANELS
NETWORKED SYSTEMS AND COMMERCIAL CONTROL

LX Networked Lighting Control – Multiple panels systems with intelligent devices that provide broad programming capabilities, interface to users via LAN/Internet or touch screen tablet and communications to Building Automation Systems.

CX Commercial Control – Master and secondary panels up to 24 relays per panel with simple easy to use programming and connections to a wide variety of low voltage devices.

OCCUPANCY | VACANCY SENSORS

HBA occupancy sensors meet a wide range of applications. Ceiling and wall-mounted sensors are available with the most advanced sensing technologies on the market today. HBA offers passive infrared and ultrasonic sensors as well as a dual technology version. HBA occupancy sensors provide simple installation, easy setup, and reliable maintenance free operation.

DAYLIGHT HARVESTING

HBA's suite of Daylight Harvesting controls provides the ideal solution to save energy by taking advantage of natural daylight. Daylight Harvesting systems consist of two basic types, dimmed and switched. Dimming control varies the artificial light output over a wide range to maintain the desired light level. Switching controls turn individual lamps off or on as required.

HIGH BAY LIGHTING CONTROLS

HBA delivers energy saving controls for most high bay lighting applications using HID and high-output fluorescent fixtures. The LightBAT uses passive infrared sensing for bi-level HID switching for up to 50 feet mounting heights. The HBA WASP offered in a wide variety of versions controls T5HO and T8 fixtures up to 45 feet high.

HUBBELL Building Automation, Inc.

HUBBELL – A NAME YOU CAN TRUST

Founded in 1888 by Harvey Hubbell II, Hubbell Inc. has been a long-time contributor to new product design and manufacturing innovation. In 1896, Hubbell invented the world's first lighting control device, the pull chain switch. Over 120 years later, Hubbell Building Automation, headquartered in Austin, Texas continues this tradition of innovation with the development of a vast array of innovative energy saving lighting controls.

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