



*Never forget to turn the lights off again.*

**MAXCOR**<sup>TM</sup>

**Motion  
Sensors**

by **NICOR**<sup>®</sup>  
Shining Brighter<sup>TM</sup>

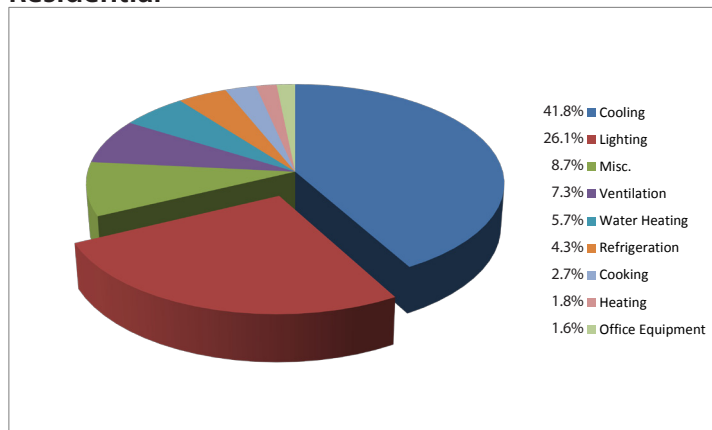
# Why use motion sensors?

Everyone knows that you can save energy by turning off lights when they're not being used. Even so, sometimes we forget or don't notice that we've left lights on. Then there are situations where there is enough natural light present that we don't need the lights on, but turn them on out of habit. **MAXCOR** motion sensors, by **NICOR**, are an inexpensive way to make a dramatic reduction in energy costs by helping to control lighting and ensure that lights are only on when and where they are really needed.

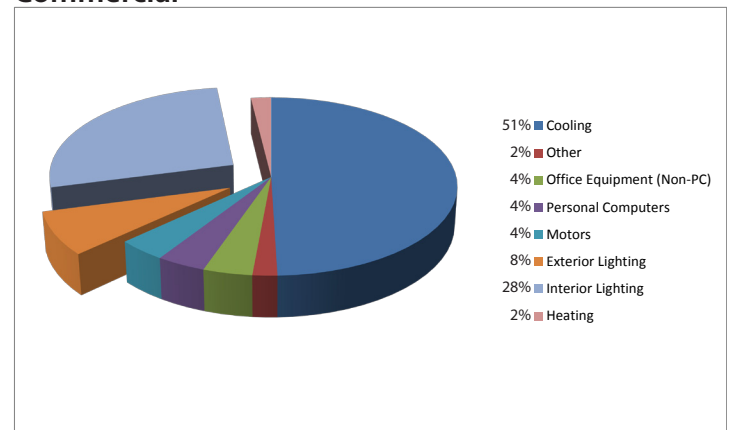
## Where is the most energy consumed?

Whether it's commercial or residential, lighting easily represents over 25% of total energy consumption. It's an important part of our productivity, however, lighting can be costly when not used efficiently.

### Residential



### Commercial



Source: EIA energy Intensity data from CBECS and MECS, EPRI, and other third party energy-use data sets.

Applications can vary, but typically sensors are mounted as replacements for standard wall mounted light switches or as ceiling mounts in larger spaces. **MAXCOR** Motion Sensors utilize Passive Infrared (PIR) technologies, and are sometimes combined with Ultrasonic technologies, to control lighting. Many of our sensors offer self-adjusting features, taking into account ambient lighting, and are smart enough to know when you are not intending to occupy a room. Some of them can even learn your occupancy habits and make adjustments automatically. Our Motion Sensors are built with the latest advances in technology ensuring that false triggering is a thing of the past.

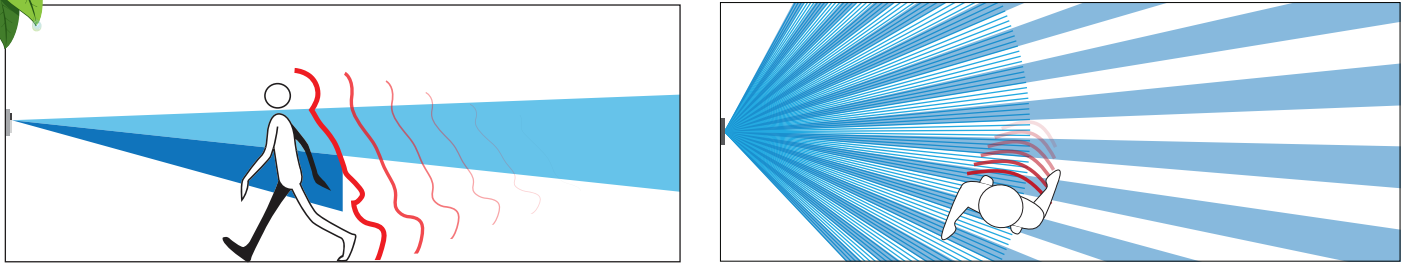
## Motion Sensors will save an average of 40% on total energy costs.

### Basic Motion Sensor Benefits:

- Lower Operating Costs
- Higher Employee Productivity
- Lower Financing Costs
- Higher Operational Profits
- Higher Building Valuations
- Potentially Significant Return on Investment

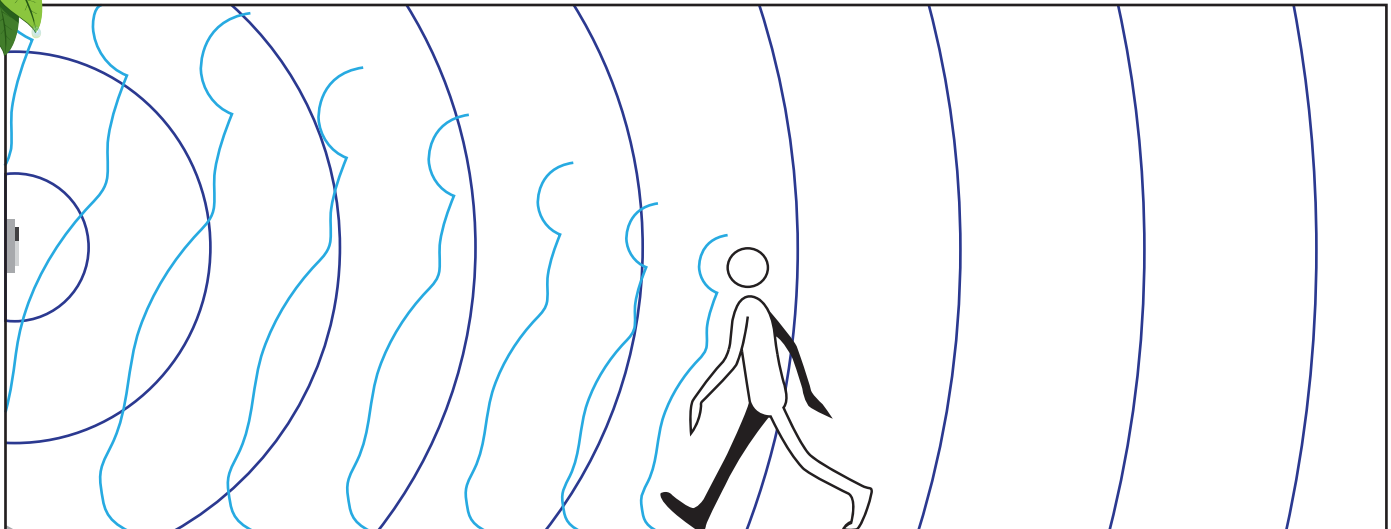
Space Type	Savings Potential
Private office	13-50%
Conference room	22-65%
Classroom	40-46%
Restrooms	30-90%
Corridors	30-80%
Store areas (including warehouses)	45-80%

### Passive Infrared Technology (PIR) Sensors



This is the most common type of motion sensor. PIR sensors monitor the patterns of background heat energy in a given space. That is, if you sit still for a long time, the sensor will think of your static heat signature as a normal condition and return to “Off” mode. When movement of a heat source is detected the sensor turns “On”. When the sensor does not detect the heat source movement it returns to “Off” mode. PIR sensing technology is great for avoiding false triggers.

### Ultrasonic Sensors



This is a more advanced form of motion sensor. It works similarly to radar by sending out high-frequency sound waves, at frequencies undetectable by the human ear. The waves are bounced back by walls, objects and the movement of people and even pets. The sensor detects changes in the sound waves that are bounced back to it, setting it to “On” mode. When the sound waves stabilize due to inactivity, the sensor switches to “Off” mode. Ultrasonic sensors can “see” around objects due to the bouncing of its sound waves. Ultrasonic sensing technologies are good at picking up small movements, even around objects.

### Multi-Technology (Dual-Technology)

This is the best of both technologies. Multi-Technology sensors, sometimes called dual technology sensors, use a combination of PIR and Ultrasonics for the best possible occupancy and vacancy sensing. Built specifically for use in larger areas, difficult to cover spaces, and where security or safety concerns are important. Multi-Technology sensors trigger with PIR sensors and stay on per input from Ultrasonic sensors.

# Selecting the Right Lighting Controls



## Commercial

**MAXCOR** Commercial sensors are ideal for use in small office applications. Placing these sensors high on the walls or ceilings will work best in these spaces. Multi-technology, or ultrasonic sensors, may be preferred in offices with cubicles or other potential barriers to assure that people are “seen” while occupying the space.



## Residential

Vacancy and occupancy sensors from **MAXCOR** offer a great energy savings for use in the home or private office. Because occupancy/vacancy sensors automatically turn lights off and on, you’ll never forget to turn the lights out again.



## Ceiling (Industrial)

Since many warehouses and gymnasiums have converted from out-dated HID fixtures to high-intensity fluorescent, they offer the perfect environment for potentially huge energy savings with motion sensors from **MAXCOR**. Using our sensors to control individual lamps or large groups of fixtures will allow your large office space or warehouse to run more efficiently without the extra effort.

## Common Terms Defined

- ✦ **Walk-Through** - This mode will turn lights off shortly after a momentary occupation instead of using normal occupancy on/off times. Helps to decrease energy usage when you merely “walk-through” a room. Can be turned off.
- ✦ **Zero Crossing** - Relay switching is synchronized with 60Hz power signal to prolong switch life and product durability.
- ✦ **Self Adaptive** - The motion sensor learns occupancy habits to prevent false triggering and unwanted shut down.
- ✦ **Multi-Technology** - Sometimes called Dual-Technology. Switch uses more than one type of sensor to interpret room occupancy.
- ✦ **Adjustable Sensitivity** - Size control of area monitored by sensors.
- ✦ **Adjustable Ambient Light Level** - Minimum ambient light level for which sensor will not turn on.
- ✦ **Adjustable time** - user adjustable time after last motion detected (5 s – 30 min), before switch turns off.
- ✦ **Passive Infrared (PIR)** - Sensor technology that uses background heat levels to detect human presence.
- ✦ **Ultrasonic** - Sensor technology that uses high frequency waves to detect movement.

# MAXCOR™ Motion Sensors

## Investment Comparison By The Numbers

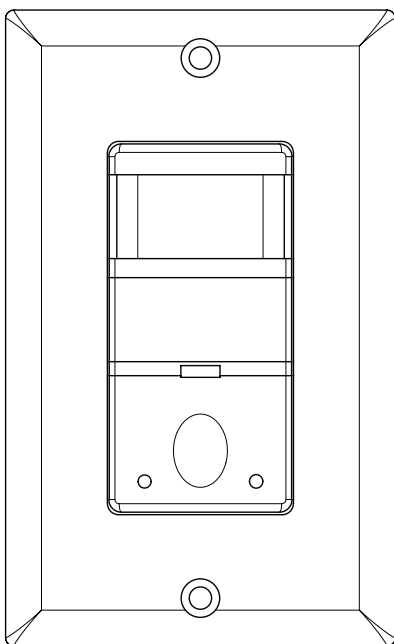
T2 LED Troffers w/out Motion Sensor	Vs.	T2 LED Troffers w/ Motion Sensor
10	Number of Fixtures	10
4380	Hours/year	2628
360 (36/troffer)	Watts	360 (36/troffer)
1281 lbs.	Coal used	769 lbs.
1652 lbs.	CO <sub>2</sub> released/year	991 lbs.
1576	kWh used per year	946
\$189.21	Electricity cost per year	\$113.47

**Motion Sensors will save an average of 40% on total energy costs.**

Sources/Notes:

- + CO<sub>2</sub> released per kWh used: from <http://www.epa.gov/cleanenergy/energy-resources/refs.html>
- + Based upon a standard conference room utilizing 10 MAXCOR T2 LED Troffers, 12 hours of daily usage, 4380 AoH @ \$0.12/kWh

### DOS180



### Occupancy/Vacancy Sensor

#### Passive Infrared Wall Switch

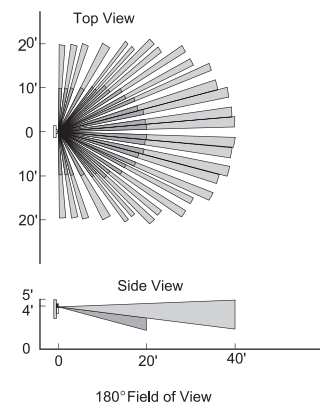
**Features:**

- 180° field of view
- Turns lights On/Off automatically
- Built-in On/Off push-button
- Built-in OCC/VAC slide button offers manual or auto on, always turns lights off automatically
- Time delay Off setting, adjustable from 15 seconds to 30 minutes
- Zero crossing function
- Adjustable sensitivity settings
- Adjustable ambient light level setting
- Standard decorator wall plate included
- Two year warranty
- Available in White and Ivory

**Typical Applications:**

- + Offices
- + Copy Rooms
- + Storage Closets
- + Small Conference Rooms
- + Small Rest rooms
- + Maintenance Closets
- + Break Rooms

**Coverage Pattern:**



**Ratings:**

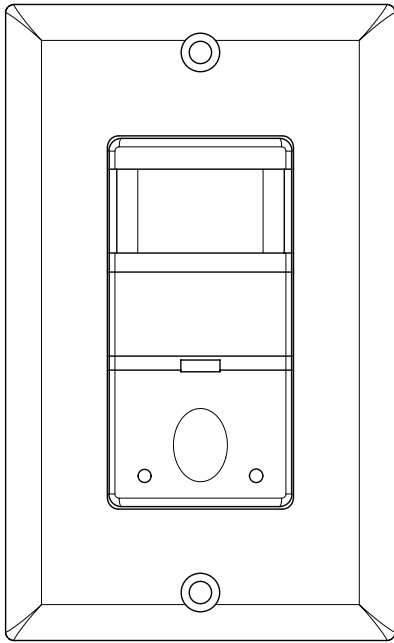
Incandescent:	800W @ 120VAC
Fluorescent:	800VA @ 120VAC
Motor	1/4 HP @ 120VAC

**180° Field of View**

180°, 1200 sq. ft.  
Best: 320 sq. ft.  
Regular: 800 sq. ft.  
Maximum: 1200 sq. ft.



## DOS180NL



### Occupancy/Vacancy Sensor

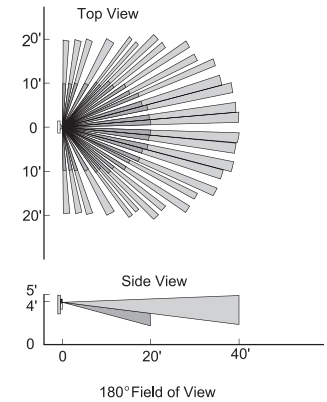
#### Passive Infrared Wall Switch, with Night Light

**Features:**

- 180° field of view
- Operates at 120V~277V
- Turns lights On/Off automatically
- Built-in On/Off push-button
- Built-in OCC/VAC slide button offers manual or auto on, always turns lights off automatically
- Time delay Off setting, adjustable from 15 seconds to 30 minutes
- Built-in night light
- Zero crossing function
- Adjustable sensitivity settings
- Adjustable ambient light level setting
- Standard decorator wall plate included
- Two year warranty
- Available in White and Ivory

**Typical Applications:**

- ✦ Offices
- ✦ Copy Rooms
- ✦ Storage Closets
- ✦ Small Conference Rooms
- ✦ Small Rest rooms
- ✦ Maintenance Closets
- ✦ Break Rooms

**Coverage Pattern:****Ratings:**

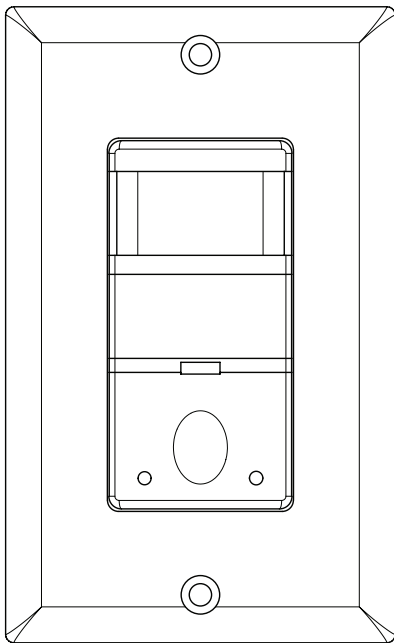
Incandescent:	800W @ 120VAC
Fluorescent:	800VA @ 120VAC 1600VA @ 277VAC
Motor	1/4 HP @ 120VAC

**180° Field of View**

180°, 1200 sq. ft.  
Best: 320 sq. ft.  
Regular: 800 sq. ft.  
Maximum: 1200 sq. ft.



## DOS180-120-277



### Occupancy/Vacancy Sensor

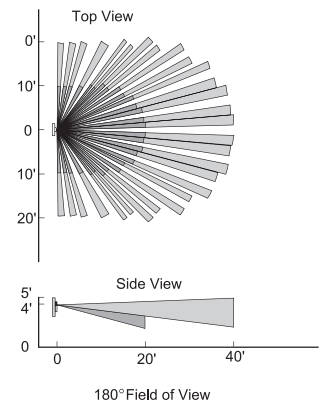
#### Passive Infrared Wall Switch, Multi-Voltage

**Features:**

- 180° field of view
- Operates at 120V~277V
- Turns lights On/Off automatically
- Built-in On/Off push-button
- Built-in OCC/VAC slide button offers manual or auto on, always turns lights off automatically
- Time delay Off setting, adjustable from 15 seconds to 30 minutes
- Zero crossing function
- Adjustable sensitivity settings
- Adjustable ambient light level setting
- Standard decorator wall plate included
- Two year warranty
- Available in White and Ivory

**Typical Applications:**

- ✦ Offices
- ✦ Copy Rooms
- ✦ Storage Closets
- ✦ Small Conference Rooms
- ✦ Small Rest rooms
- ✦ Maintenance Closets
- ✦ Break Rooms

**Coverage Pattern:****Ratings:**

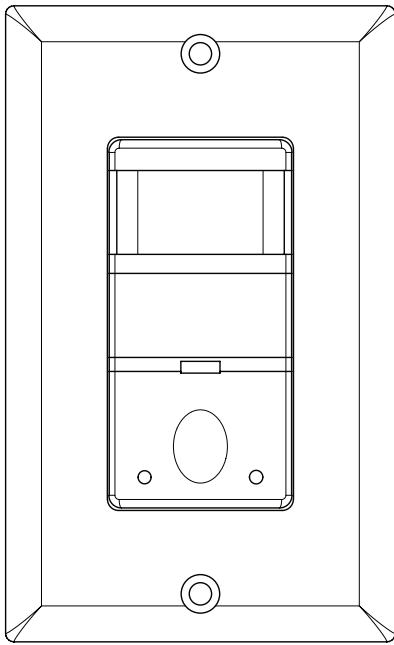
Incandescent:	800W @ 120VAC
Fluorescent:	800VA @ 120VAC 1600VA @ 277VAC
Motor	1/4 HP @ 120VAC

**180° Field of View**

180°, 1200 sq. ft.  
Best: 320 sq. ft.  
Regular: 800 sq. ft.  
Maximum: 1200 sq. ft.



## DOS180LP



## Occupancy/Vacancy Sensor Passive Infrared Wall Switch

### Features:

- 180° field of view
- Low power. No neutral wire required. No minimum load required.
- Operates at 120~277V
- Built-in OCC/VAC slide button offers manual on or auto on, always turns lights off automatically
- Time delay Off, adjustable from 15 seconds to 30 minutes
- "Walk-through" sensing mode increases energy savings by turning light Off after momentary occupation
- Self adaptive feature automatically adjusts time delay based on occupants behavior patterns
- Zero crossing function
- Adjustable sensitivity settings
- Standard decorator wall plate included
- Two year warranty
- Available in White and Ivory

### Ratings:

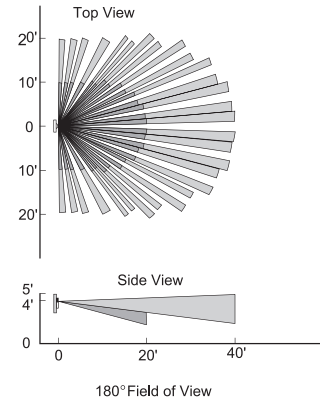
Incandescent:	800W @ 120VAC
Fluorescent:	800VA @ 120VAC 1600VA @ 277VAC
Motor	1/4 HP @ 120VAC



### Typical Applications:

- ✦ Offices
- ✦ Copy Rooms
- ✦ Storage Closets
- ✦ Small Conference Rooms
- ✦ Small Rest rooms
- ✦ Maintenance Closets
- ✦ Break Rooms

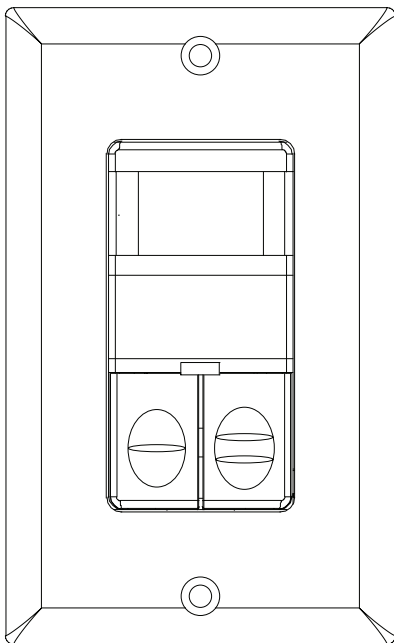
### Coverage Pattern:



### 180° Field of View

180°, 1200 sq. ft.  
Best: 320 sq. ft.  
Regular: 800 sq. ft.  
Maximum: 1200 sq. ft.

## DOS180LP-D



## Occupancy/Vacancy Sensor Passive Infrared Wall Switch, Dual Relay

### Features:

- 180° field of view
- Low power. No neutral wire required. No minimum load required.
- Operates at 120~277V
- Controls two separate loads. Bi-level wiring
- Turns lights On/Off automatically
- Built-in On/Off push-button
- Built-in OCC/VAC slide button offers manual or auto on, always turns lights off automatically
- Time delay Off setting, adjustable from 15 seconds to 30 minutes
- Zero crossing function
- Adjustable sensitivity settings
- Standard decorator wall plate included
- Two year warranty
- Available in White and Ivory

### Ratings:

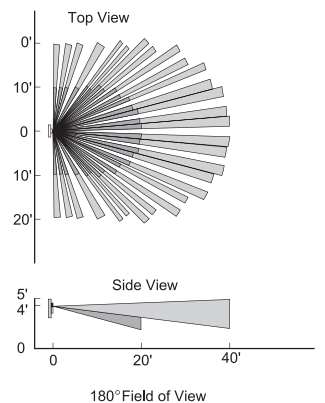
Incandescent:	800W @ 120VAC
Fluorescent:	800VA @ 120VAC 1600VA @ 277VAC
Motor	1/4 HP @ 120VAC



### Typical Applications:

- ✦ Offices
- ✦ Copy Rooms
- ✦ Storage Closets
- ✦ Small Conference Rooms
- ✦ Small Rest rooms
- ✦ Maintenance Closets
- ✦ Break Rooms

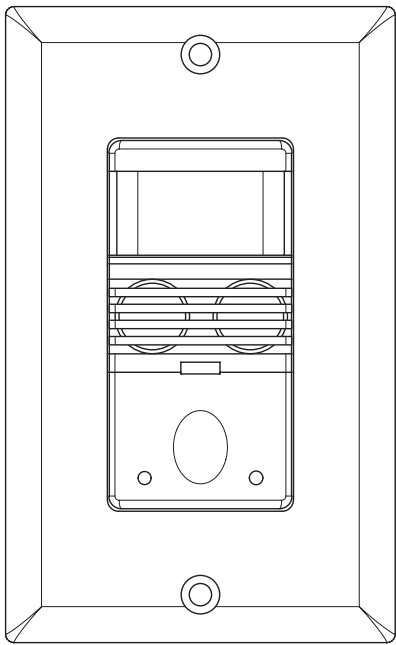
### Coverage Pattern:



### 180° Field of View

180°, 1200 sq. ft.  
Best: 320 sq. ft.  
Regular: 800 sq. ft.  
Maximum: 1200 sq. ft.

# MTOS180



## Occupancy/Vacancy Sensor Multi-Technology Wall Switch

### Features:

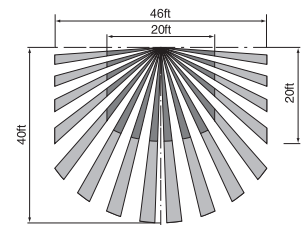
- 180° field of view
- Operates at 120~277V
- Combines passive infrared and ultrasonic technologies
- Time delay Off, adjustable from 15 seconds to 30 minutes
- Manual or automatic on option. Always automatic off
- "Walk-through" sensing mode increases energy savings by turning lights Off shortly after momentary occupancy
- Adjustable sensitivity settings
- Adjustable Ambient light level setting
- Standard decorator wall plate included
- Two year warranty
- Available in White and Ivory

### Typical Applications:

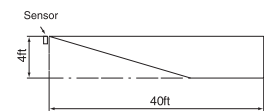
- ✦ Offices
- ✦ Copy Rooms
- ✦ Storage Closets
- ✦ Small Conference Rooms
- ✦ Small Rest rooms
- ✦ Maintenance Closets
- ✦ Break Rooms

### Coverage Pattern:

180° Field-of-view(Horizontal)



180° Field-of-view(Vertical)



### 180° Field of View

180°, 1200 sq. ft.



### Ratings:

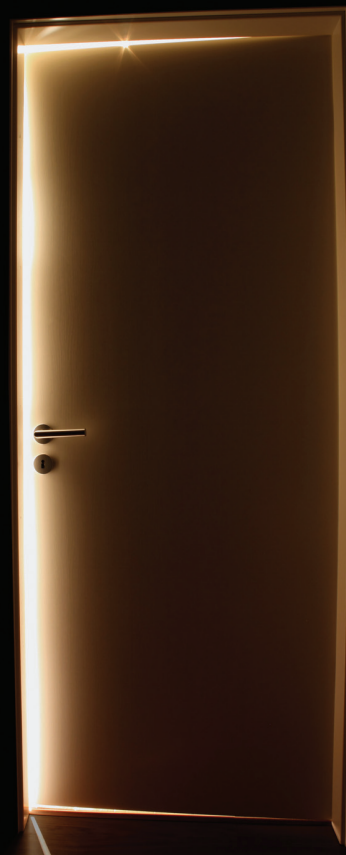
Incandescent:	800W @ 120VAC
Fluorescent:	800VA @ 120VAC
	1600VA @ 277VAC
Motor	1/4 HP @ 120VAC

## Never walk into a dark room again.

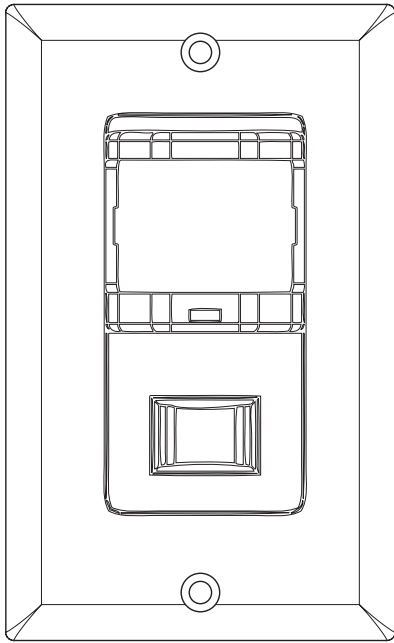
(And save yourself some money while you're at it)

# MAXCOR™

Motion  
Sensors



## OS150B



### Occupancy Sensor Passive Infrared Wall Switch

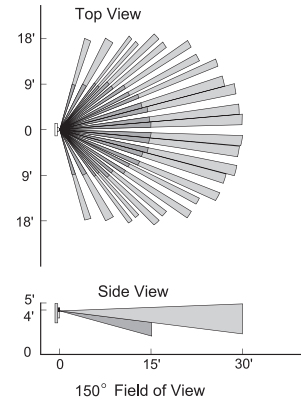
#### Features:

- 150° field of view
- Turns lights On/Off automatically
- Time delay Off, adjustable from 15 seconds to 30 minutes
- Adjustable sensitivity settings
- Adjustable ambient light level setting
- Standard decorator wall plate included
- Two year warranty
- Available in White and Ivory

#### Typical Applications:

- ✦ Bedrooms
- ✦ Bathrooms
- ✦ Laundry Rooms
- ✦ Closets
- ✦ Garages
- ✦ Kitchens
- ✦ Home Offices

#### Coverage Pattern:



#### Ratings:

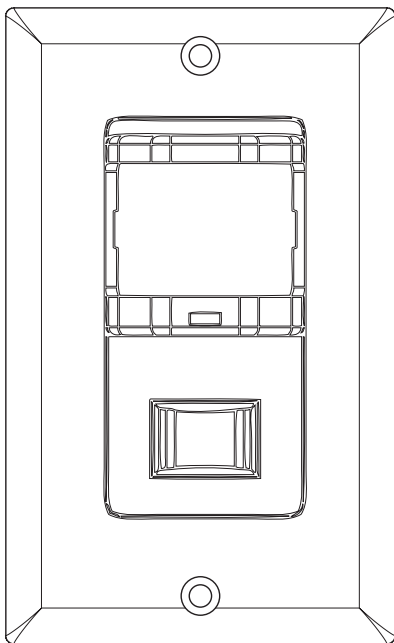
Incandescent:	500W @ 120VAC
Fluorescent:	500VA @ 120VAC
Motor	1/8 HP @ 120VAC

#### 150° Field of View

150°, 980 sq. ft.  
Best: 260 sq. ft.  
Regular: 650 sq. ft.  
Maximum: 980 sq. ft.



## VS150



### Vacancy Sensor Passive Infrared Wall Switch

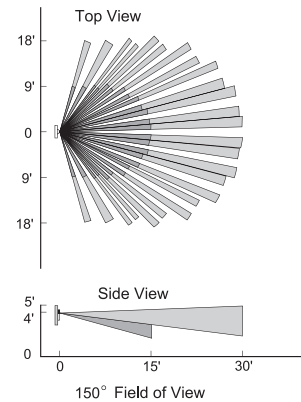
#### Features:

- 150° field of view
- Manual On only
- Automatic Off after time-delay or turn off manually
- Time delay Off, adjustable from 15 seconds to 30 minutes
- Adjustable sensitivity settings
- Adjustable ambient light level setting
- Standard decorator wall plate included
- Two year warranty
- Available in White and Ivory

#### Typical Applications:

- ✦ Bedrooms
- ✦ Bathrooms
- ✦ Laundry Rooms
- ✦ Closets
- ✦ Garages
- ✦ Kitchens
- ✦ Home Offices

#### Coverage Pattern:



#### Ratings:

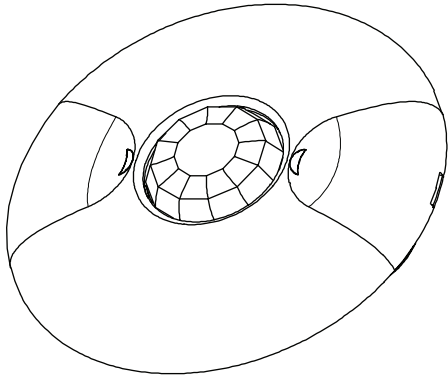
Incandescent:	500W @ 120VAC
Fluorescent:	500VA @ 120VAC
Motor	1/8 HP @ 120VAC

#### 150° Field of View

150°, 980 sq. ft.  
Best: 260 sq. ft.  
Regular: 650 sq. ft.  
Maximum: 980 sq. ft.



## COS360



### Occupancy Sensor

Passive Infrared Ceiling Mounted, Line Voltage

#### Features:

- 360° field of view, 1200 sq. ft. coverage area
- Line voltage (no power pack needed), 120~277V
- Simple, easy installation
- Adjustable time delay
- Multi-level, fresnel lens offers superior occupancy detection
- Adjustable sensitivity setting
- Adjustable ambient light level setting
- Walk-through sensing mode
- Standard decorator trim plate included
- Two year warranty

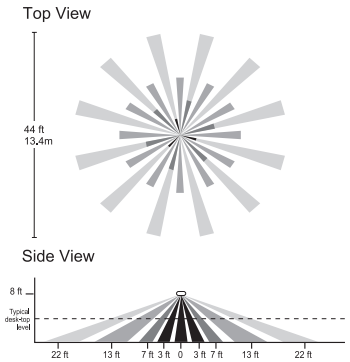
#### Ratings:

Input Voltage	120-277VAC
Incandescent:	800W @ 120VAC
Fluorescent:	800VA @ 120VAC 1600VA @ 277VAC
Resistive:	800W @ 120VAC
Motor:	1/4HP, 120VAC

#### Typical Applications:

- ✦ Storage Areas
- ✦ Small Bathrooms
- ✦ Copy Rooms
- ✦ Computer Rooms
- ✦ Conference Rooms
- ✦ Classrooms
- ✦ Warehouses

#### Coverage Pattern:

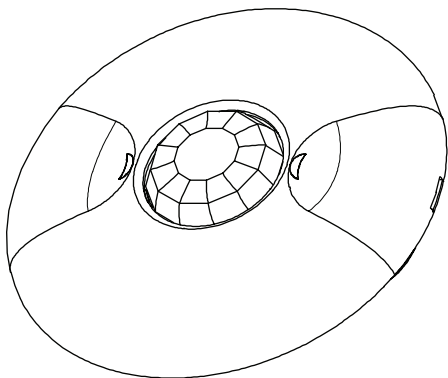


#### 360° Field of View

360°, 1200 sq. ft.



## COS360L



### Occupancy Sensor

Passive Infrared Ceiling Mounted, Low Voltage

#### Features:

- 360° field of view, 1200 sq. ft. coverage area
- Low voltage (power pack needed. Item# PP24)
- Simple, easy installation
- Adjustable time delay
- Multi-level, fresnel lens offers superior occupancy detection
- Adjustable sensitivity setting
- Adjustable ambient light level setting
- Walk-through sensing mode
- Standard decorator trim plate included
- Two year warranty

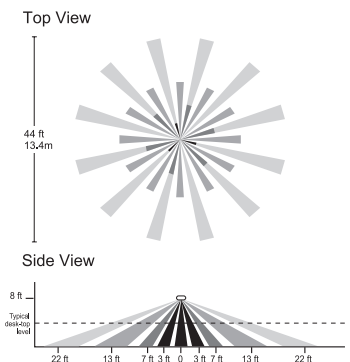
#### Ratings:

Input Voltage:	24VDC
Consumption:	9mA
Incandescent:	800W @ 120VAC
Fluorescent:	800VA @ 120VAC 1600VA @ 277VAC
Resistive:	800W @ 120VAC
Power Supply:	PP24 Power Pack

#### Typical Applications:

- ✦ Storage Areas
- ✦ Small Bathrooms
- ✦ Copy Rooms
- ✦ Computer Rooms
- ✦ Conference Rooms
- ✦ Classrooms
- ✦ Warehouses

#### Coverage Pattern:



#### 360° Field of View

360°, 1200 sq. ft.



NOTE: One power pack can power up to six COS360L Sensors

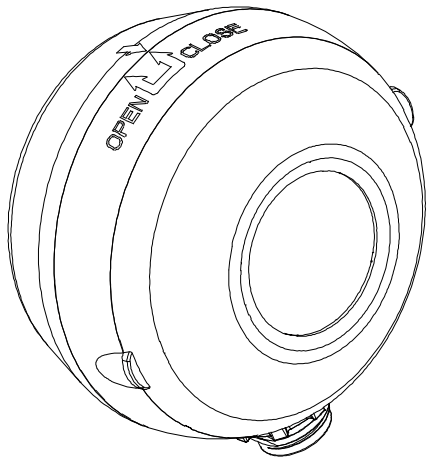
# HBOS360

## Occupancy Sensor

Passive Infrared High Bay Mount, Line Voltage

### Features:

- 360° field of view, 2800sq. ft. coverage area
- Line voltage (no power pack needed), 120~277V
- Simple, easy installation
- Adjustable time delay
- Multi-level, fresnel lens offers superior occupancy detection
- Adjustable sensitivity setting
- Adjustable ambient light level setting
- Two lenses included
- Two year warranty



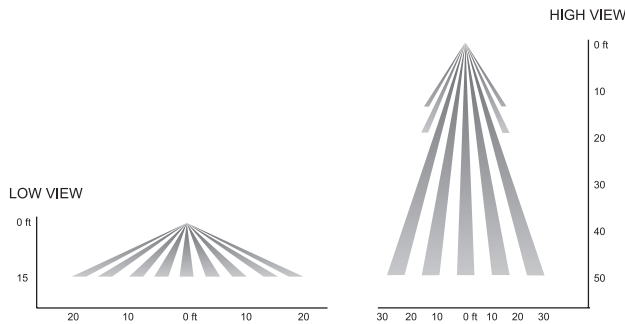
### Typical Applications:

- ✦ Warehouses
- ✦ Manufacturing
- ✦ High Ceilings

### Ratings:

Input Voltage:	120-277VAC, 50/60Hz
Consumption:	9mA
Incandescent/ Tungsten:	800W @ 120VAC, 50/60Hz
Fluorescent/ Ballast:	800VA @ 120VAC 1200VA @277VAC, 50/60Hz
Motor:	1/4HP, 120V
No Minimum Load Required	

### Coverage Pattern:



### 360° Field of View

High: 360°, 1200 sq. ft.  
Low: 360°, 2800 sq. ft.

Comes with 2 faceplates:

- High View
- Low View



# MAXCOR™

## Motion Sensors

For **MAXIMUM** energy savings use **MAXCOR** Motion Sensors with **MAXCOR** LED Downlights and LED troffers.

Visit [www.maxcor-led.com](http://www.maxcor-led.com) for more on MAXCOR.



by **NICOR**®  
Shining Brighter™