Collection ‘2017
Range Introduction

Sensoria range of occupancy sensors from Crabtree are designed to deliver energy savings and control lighting and other similar loads in a range of commercial and domestic applications. The Sensoria sensors get activated automatically by presence of humans within coverage area & get deactivated when they leave. This is one of the easy & smart way to save energy in both commercial and residential applications.

According to the U.S. Department of Energy, lighting accounts for an average of 38 percent of electricity used in commercial buildings—more than any other building system. Utilizing occupancy sensors is a key strategy for saving lighting energy. In fact, Crabtree’s occupancy sensors can typically save 30 percent—and up to 60 percent—of lighting energy in a building.

Annual electricity use in commercial buildings

<table>
<thead>
<tr>
<th>Service</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lighting</td>
<td>38%</td>
</tr>
<tr>
<td>HVAC</td>
<td>29%</td>
</tr>
<tr>
<td>Other</td>
<td>26%</td>
</tr>
<tr>
<td>Office Equipment</td>
<td>7%</td>
</tr>
</tbody>
</table>

1 Energy Information Administration, released September 2008. 2003 Commercial Building Energy Consumption Survey (CBECS)

Features

The Sensoria range of Sensor deploys PIR and microwave sensing technology to provide effective presence detection. All products in the range have a built-in photocell, providing accurate light level detection. This allows sensors to harness natural daylight, delivering further energy savings by either holding off, switching lights off or regulating to maintain a constant light level.

- Built-in daylight sensor which provides light level detection
- Easy to install and program
- Flush and surface mounted variants available
- Ideal for most interior environments
- Switching and digital dimming detectors
- Ideal for retrofit and new build installations

Benefits

Energy Savings

Occupancy sensors are designed to optimize energy savings and enable sustainability. The product offering provides solutions for applications requiring energy code compliance. Using innovative detection technologies that maximize energy savings, we save you more!

Convenience

Sensors add convenience by eliminating the need to manually turn lights on or off. And because occupancy sensors automatically turn lights on, a person never has to enter a dark room.

Reliable Performance

Sensors from Crabtree is a leader in lighting control innovation, continuously developing technologies to enhance performance of our occupancy sensors and photocells providing trusted quality and reliability. We offer a broad selection of occupancy and daylight sensors to meet every application.

Ease of Installation

Sensors are easy to install. Electrician with basic knowledge can install the same without any problem.

LEED Credit

Sensors help meet the mandatory requirements set for building construction and renovation, as well as contribute to obtaining points in several LEED credit categories.
Type of Technology

Crabtree sensors use different types of technology.

Passive Infrared (PIR)

PIR technology works by detecting the difference between heat emitted from human body in motion and the background space in its line of sight view. Passive Infra-Red (PIR) occupancy sensors are best for detecting major motion like an occupant walking through a space.

Benefits
- Long range detection
- Reliable triggering
- Cost Effective

Microwave

Microwave technology works by sending out microwave pulses and measuring the reflection off a moving object. They cover a larger area than infrared sensors, but they are vulnerable to electrical interference and are more expensive. Such sensor is excellent for minor motion detection.

Benefits
- Detect minor motion
- Sees around obstructions

<table>
<thead>
<tr>
<th>Technology</th>
<th>Major Motion (Person walking 3 feet)</th>
<th>Minor Motion (Movements like extending your arm)</th>
<th>Fine Motion (Small Movements like tuning book pages)</th>
<th>Very Fine Motion (Minimal movements such as typing)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIR</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>PIR (High Sensitivity)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Microwave</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Passive Infrared Coverage Pattern

Microwave Coverage Pattern

Sensor Specification

<table>
<thead>
<tr>
<th>Technology</th>
<th>Power Source</th>
<th>Detection Range</th>
<th>Detection Distance</th>
<th>Daylight Sensor</th>
<th>Working Temperature</th>
<th>Hold Time</th>
<th>Power Consumption</th>
<th>Rated Load</th>
<th>Installation Height</th>
<th>Mount</th>
<th>System Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIR</td>
<td>220-240V/AC</td>
<td>360°</td>
<td>0.6-1.5m/s</td>
<td>-</td>
<td>20-40°C</td>
<td>10min</td>
<td>Approx 0.5W</td>
<td>Max 2000W</td>
<td>2.2-4m</td>
<td>Surface &amp; Flush Mount</td>
<td>ACSBA004 (Flush Mount)</td>
</tr>
<tr>
<td>Microwave</td>
<td>220-240V/AC</td>
<td>360°</td>
<td>0.6-1.5m/s</td>
<td>-</td>
<td>20-40°C</td>
<td>10min</td>
<td>Approx 0.5W</td>
<td>Max 2000W</td>
<td>2.2-4m</td>
<td>Surface &amp; Flush Mount</td>
<td>ACSBA006 (Surface Mount)</td>
</tr>
</tbody>
</table>

Application examples

Commercial
- Lobby
- Open Office
- Private Office
- Break Room
- Stairwell
- Corridors
- Warehouse
- Utility Room

Residential
- Hallway
- Bathroom
- Laundry Room
- Kitchen
- Garage
# Product Overview

## Microwave Technology Sensing

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Model Number</th>
<th>Mount</th>
<th>Sensing Technology</th>
<th>Type of Installation</th>
<th>IR Remote Controller (optional)</th>
<th>Dimming Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microwave Sensor</td>
<td>ACSBA001</td>
<td>Flush</td>
<td>PIR</td>
<td>Flush</td>
<td>IR Remote Control for ACSBA006</td>
<td>-</td>
</tr>
<tr>
<td>Microwave Sensor</td>
<td>ACSBA002</td>
<td>Surface</td>
<td>Surface</td>
<td>Surface</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Infrared Presence Sensor</td>
<td>ACSBA003</td>
<td>Surface</td>
<td>PIR</td>
<td>Surface</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PIR Motion Sensor</td>
<td>ACSBA004</td>
<td>Flush</td>
<td>PIR</td>
<td>Surface</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PIR Motion Sensor</td>
<td>ACSBA005</td>
<td>Surface</td>
<td>PIR</td>
<td>Surface</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PIR Motion Sensor with Dimming</td>
<td>ACSBA006</td>
<td>Surface</td>
<td>PIR</td>
<td>Surface</td>
<td>-</td>
<td>10%, 20%, 30%</td>
</tr>
<tr>
<td>PIR Motion Sensor with Dimming</td>
<td>ACSBA007</td>
<td>Surface</td>
<td>PIR</td>
<td>Surface</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IR Remote Control for ACSBA006</td>
<td>ACSBA008</td>
<td>Surface</td>
<td>PIR</td>
<td>Surface</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IR Remote Control for ACSBA007</td>
<td>ACSBA009</td>
<td>Surface</td>
<td>PIR</td>
<td>Surface</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

## PIR Sensing

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Model Number</th>
<th>Mount</th>
<th>Sensing Technology</th>
<th>Type of Installation</th>
<th>IR Remote Controller (optional)</th>
<th>Dimming Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incandescent Lamp</td>
<td>Max 2000W</td>
<td>Flush</td>
<td>PIR</td>
<td>Flush</td>
<td>IR Remote Control for ACSBA006</td>
<td>-</td>
</tr>
<tr>
<td>Halogen Lamp</td>
<td>Max 2000W</td>
<td>Surface</td>
<td>Surface</td>
<td>Surface</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Load1</td>
<td>Max 1000W</td>
<td>Surface</td>
<td>PIR</td>
<td>Surface</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Rated Voltage</td>
<td>220-240V/AC 50/60Hz</td>
<td>Surface</td>
<td>PIR</td>
<td>Surface</td>
<td>-</td>
<td>3V DC</td>
</tr>
<tr>
<td>Type of Installation</td>
<td>Flush</td>
<td>Surface</td>
<td>PIR</td>
<td>Surface</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IR Remote Controller (optional)</td>
<td>Surface</td>
<td>Surface</td>
<td>PIR</td>
<td>Surface</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Dimming Range</td>
<td></td>
<td></td>
<td>PIR</td>
<td>Surface</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
REGIONAL & BRANCH OFFICES:

NORTH - REGIONAL OFFICE: Corporate Office: QRG Towers, 2D, Sector-126, Expressway, Noida-201304, Tel: 0120-3331000, Delhi: Tel: 011-47676700, 23888200, Chandigarh: Tel: 0172-4232400-401, Dehradun: Tel: 0135-6670202, Noida / Haryana: Tel: 0120-3331000, Ludhiana: Tel: 0161-4676000 / 24, Jammu: Tel: 0191-2478330, 2479330, Sri Nagar: Tel: 0194-2490431, Jalandhar: Tel: 0141-3913465, 3982210, Jodhpur: Tel: 0291-9214201640 / 45, Lucknow: Tel: 0522-6672100, Kanpur: Tel: 0512-6710400, 6710409

Delhi:
Tel: 011-47676700, 23888200,
Chandigarh:
Tel: 0172-4232400-401,
Dehradun:
Tel: 0135-6670202,
Noida / Haryana:
Tel: 0120-3331000,
Ludhiana:
Tel: 0161-4676000 / 24,
Jammu:
Tel: 0191-2478330, 2479330,
Sri Nagar:
Tel: 0194-2490431,
Jalandhar:
Tel: 0141-3913465, 3982210,
Jodhpur:
Tel: 0291-9214201640 / 45,
Lucknow:
Tel: 0522-6672100,
Kanpur:
Tel: 0512-6710400, 6710409

EAST - REGIONAL OFFICE: Kolkata: ICC Tower, 5th Floor, 4 India Exchange Place, Kolkata-700001, Tel: 033-40129851/ 52, Bhubaneswar: Tel: 0674-6688101/102/103/104,
Guwahati: Tel: 0361-2134521, 246823, 2460355, Siliguri: Tel: 0353-2525907, Ranchi: 0651-2244861, 2244862, 2244864, 2244868, 2244869, Jamshedpur: Tel: 0657-6542492, 0923469436, Patna: Tel: 0612-2207221, 2207222, 2207223, 2655518

WEST - REGIONAL OFFICE: Mumbai: 1271, Solitaire Corporate Park, Bldg. No. 12, 7th Floor, Andheri - Ghatkopar Link Road, Chakala, Andheri (East), Mumbai- 400093. Ph.: 022 - 67298600-602, Ahmedabad: Tel: 079-40061111, 4006738-740, Indore: Tel: 0731-2572340-41, 4009998 (Airtel), Rajkot: Tel: 0281-2481112, 2921212, Nagpur: Tel: 0712-2240932, 2242692, 2242699, Pune: Tel: 020-64016413 / 14, Raipur: Tel: 0771-4243400 / 01, Surat: Tel: 0261-2350137, 997980137, Jabalpur: Tel: 0761-4064491


Representative Offices: • Goa • Solapur • Gwalior • Kathmandu • Bhopal

Havells India Ltd.
QRG Towers, 2D, Sector -126, Expressway, Noida - 201 304 (UP).
Ph. +91-120-3331000, E-mail: marketing@havells.com, www.crabtreeindia.com
Consumer Care No.: 1800 11 0303, 1800 103 1313 (All Connections), 011-4166 0303 (Landline)
Join us on Facebook at www.facebook.com/havells and share your ways to save the planet!
CIN - L31900DL1983PLC016304.