

# SpaceLogic Sensors

## SXWS Button and Occupancy Covers



*Note: A subset of models shown.*

### Product Description

SXWS sensors are a family of living space sensors for use with MP and RP Series controllers that use the EcoStruxure Building Operation software user interface. These sensors use an RJ-45 sensor bus that provides communication and power from the controller.

SXWS living space sensors are modular and are ordered in two parts: the sensor base and the cover. Four SXWS communicating sensor base models are available that can be paired with any one of six covers.

The SXWSC3XSELXx 3-button covers offer setpoint and override control. Setpoint and override parameters are configured using EcoStruxure Building Operation software. Status is provided via LED halo at the bottom of the sensor.

The SXWSCBPSELXx occupancy sensor covers use a passive infrared (PIR) motion detector to determine occupancy status. The system may be configured using EcoStruxure Building Operation software to override comfort settings to occupied status when occupancy is detected during scheduled unoccupied periods.

The SXWSC3PSELXx 3-button and occupancy sensor covers offer both types of functionality.

### Features

- Medium matte white housing or optimum glass panel housing available in white or black
- LED halo provides mode status

### Applicable Documentation

Title	Description
SXWS Living Space Sensor Base	Installation instructions for all base variants
SXWS Living Space Sensor Blank Cover	Installation instructions for blank cover without occupancy sensor
SXWS Living Space Sensor Touchscreen Cover	Installation instructions for touchscreen models with and without occupancy sensors
SXWS Living Space LCD Temperature Sensor	LCD temperature sensor base and cover installation instructions
SXWS Living Space Resistive Temperature Sensor	Non-communicating temperature sensor installation instructions

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## Available Products

## SXWS Sensor Bases

Model Number	Description	Temp	RH	CO <sub>2</sub>	Cover	IP Controller Bus (Communicating)
SXWSBTXXXSXX	Sensor Base, Temperature	X			Not Included	X
SXWSBTHXXSXX	Sensor Base, Temperature, Humidity	X	X		Not Included	X
SXWSBTXCXSXX	Sensor Base, Temperature, CO <sub>2</sub>	X		X	Not Included	X
SXWSBTHCXSXX	Sensor Base, Temperature, Humidity, CO <sub>2</sub>	X	X	X	Not Included	X

## SXWS Covers\*

Model Number	61mm (2.4") Color Touchscreen with Light & Blind Control	Override	Setpoint	Off-Touchscreen Light & Blind Control Buttons	Off-Touchscreen Light Control Buttons	Occupancy Sensor (PIR)	Housing Finish
SXWSCDXSELXX	X	X	X				Medium, White
SXWSC3XSELXX**		X	X				Medium, White
SXWSCBXSELXX							Medium, White
SXWSCDPSELXX	X	X	X			X	Medium, White
SXWSC3PSELXX**		X	X			X	Medium, White
SXWSCBPSELXX**						X	Medium, White
SXWSCDXSELXW	X	X	X				Optimum, White
SXWSC3XSELXW**		X	X				Optimum, White
SXWSCBXSELXW							Optimum, White
SXWSCDPSELXW	X	X	X			X	Optimum, White
SXWSC3PSELXW**		X	X			X	Optimum, White
SXWSCBPSELXW**						X	Optimum, White
SXWSCDXSELXB	X	X	X				Optimum, Black
SXWSC3XSELXB**		X	X				Optimum, Black
SXWSCBXSELXB							Optimum, Black
SXWSCDPSELXB	X	X	X			X	Optimum, Black
SXWSC3PSELXB**		X	X			X	Optimum, Black
SXWSCBPSELXB**						X	Optimum, Black
SXWSC2XSELXW	X	X	X		X		Optimum, White
SXWSC4XSELXW	X	X	X	X			Optimum, White
SXWSC2PSELXW	X	X	X		X	X	Optimum, White
SXWSC4PSELXW	X	X	X	X		X	Optimum, White
SXWSC2XSELXB	X	X	X		X		Optimum, Black
SXWSC4XSELXB	X	X	X	X			Optimum, Black
SXWSC2PSELXB	X	X	X		X	X	Optimum, Black
SXWSC4PSELXB	X	X	X	X		X	Optimum, Black

\* SXWS covers will not work with combination base/cover sensors.

\*\* Covered by these installation instructions.

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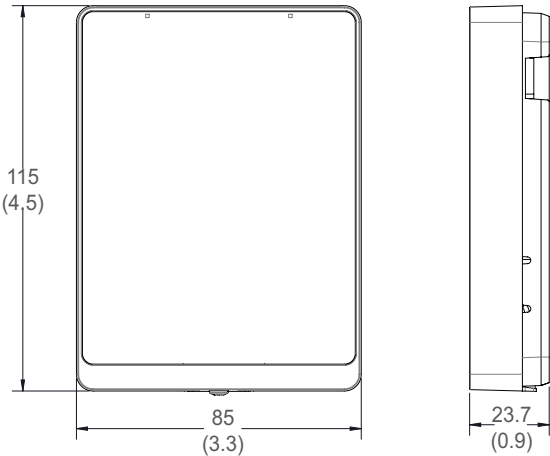
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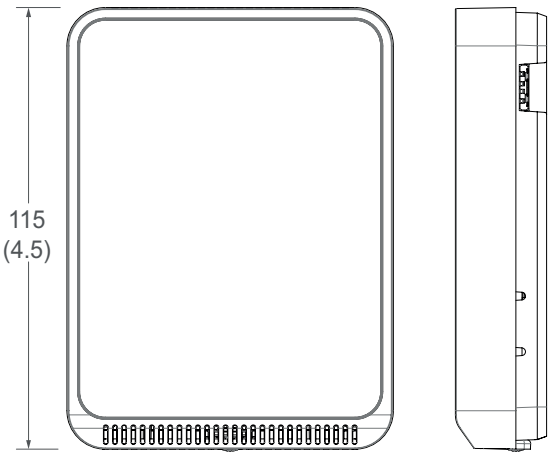
Specifications

3-Button Versions	
Setpoint	Temperature, Humidity or Fan Speed (setpoint type and allowable span set in EcoStruxure Building Operation software)
Override	Overrides unoccupied mode (duration and comfort parameters configured in EcoStruxure Building Operation software)
Buttons (3)	Change values +/- and override
LED halo	Heating, cooling or automatic
Occupancy Versions	
Occupancy sensor	Passive infrared
Lateral detection angle	140°
Horizontal detection angle	±15°
Detection range	4-6 m (13-20 ft.) angle dependent (see detection pattern diagram, page 3)
Operating Environment	
Operating temperature	0 to 50 °C (32 to 122 °F)
Operating humidity range	0 to 95% RH, non-condensing
Housing material	High impact ABS plastic Flammability rating UL 94 V-0
Mounting location	Not suitable for wet locations. For indoor use only.
Input power	Supplied by SXWS sensor base
Regulatory Information	
Agency approvals	UL 916
	European conformance CE: EN61000-6-3 EN61000 Series - industrial immunity std. FCC Part 15 Class B, REACH, RoHS, Green Premium, RCM (Australia), ICES-003 (Canada), EAC (Russia), UKCA (UK)

Dimensions mm (in.)  
Optimum Housing



Medium Housing



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## Precautions

- This product is not intended for life or safety applications.
- Do not install this product in hazardous or classified locations.
- Read and understand the instructions before installing the product.
- Turn off all power supplying equipment before working on it.
- The installer is responsible for conformance to all applicable codes.

If this product is used in a manner not specified by the manufacturer, the protection provided by the product may be impaired. No responsibility is assumed by the manufacturer for any consequences arising out of the use of this material.

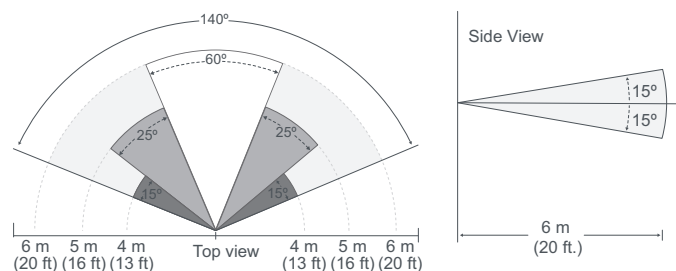
## Installation

1. With sensor base fully installed, align top of cover to mounting tabs on top of sensor base. Swing cover downward until it latches at the bottom.
2. Install locking screw to secure cover in closed position.

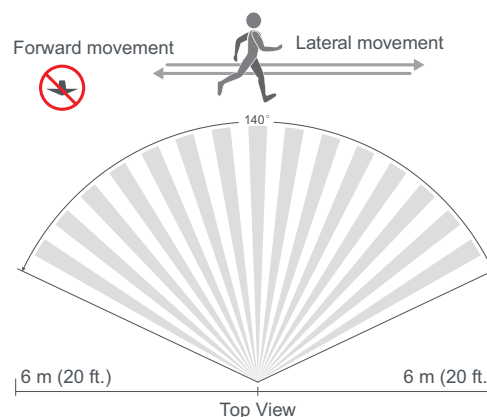


## Typical PIR Lens Detection Pattern

A typical detection pattern for the PIR cover is illustrated below.



## Fresnel Lens Beam and Detection Field



## PIR Installation Considerations

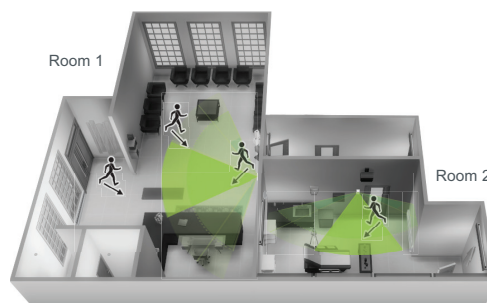
Install the SXWS room unit with occupancy sensor as close to a door as possible (but not blocked by the door) or in an area with high occupant movement.

The unit should be installed 1.35 m (4.5 ft.) above the floor surface to ensure the maximum detection range is achieved. Ensure that occupants will cross the lens beam in a perpendicular path within the prescribed detection zone.

## Recommended Installation Example

Room 1 shows one SXWS room unit with occupancy sensor installed beside a door in the middle of the room. Occupant traffic is high in several areas of the room. Occupant movement typically flows lateral to the PIR, maximizing detection and within the PIR detection range of 6 m (20 ft.) at 140°, and 5 m (16 ft.) between 15° to 30° laterally.

Room 2 shows one SXWS room unit with occupancy sensor installed adjacent to the door. Occupant traffic is high and ensures the occupant will almost always cross the PIR detection path laterally and within the detection range.



Non-recommended Installation Example

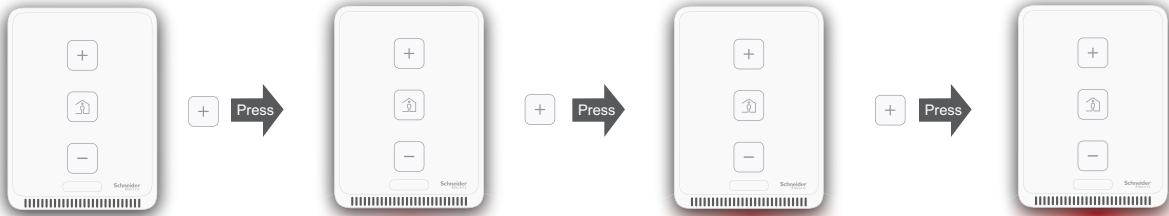
Room 1 shows one SXWS room unit with occupancy sensor installed near the entrance, and a second installed beside the reception area. The unit installed at the entrance behind the door may be blocked. For the unit installed beside the reception area, occupant traffic could fall outside the detection zone.

Room 2 shows one room unit with occupancy sensor installed in a low traffic area near the door, and a second installed on the wall directly opposite the door. The unit installed near the door could be blocked by the opened door, restricting PIR detection. The unit installed opposite the door could fall outside the specified detection zone and most occupant movement may not fall within lateral crossing patterns for PIR detection.



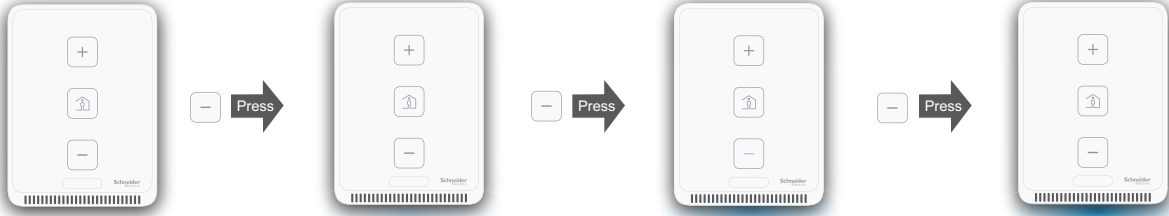
3-Button Operation

User wants it warmer:



The LED becomes brighter with each consecutive press.

User wants it cooler:



The LED becomes brighter with each consecutive press.

LED stays illuminated for 6 seconds.

LED flashes rapidly 3 times when maximum upper or lower setpoint is reached. It will also flash 3 times if the user tries to increase temperature beyond the maximum setpoint.

Override:



Unoccupied state. Constant green light (Eco mode).

Override state if programmed to cool on button press.

Override state if programmed to heat on button press.

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