RESONATE OCCUPANCY SENSOR

ROS

Overview

The Resonate family of occupancy sensors deliver affordable, reliable operation for your retrofit or new construction projects.

The design of the Resonate sensors provides for easy installation and maintenance. Key items in deploying our wireless technology are the sensors' ability to provide visual feedback of energy harvesting levels for proposed sensor placement and Range Confirmation® of the sensors signal strength by a linked receiver with Range Confirmation® capability.

Echoflex has incorporated a diagnostic walk-test feature that verifies motion detection plus sensitivity adjustment to prevent false motion triggers.

Solar energy harvesting at the device level allows for wireless control without the cost of scheduled battery replacements. An efficient design takes advantage of every foot-candle so the sensor will continue to operate long after the lights are off, up to 8 days in complete darkness.

The ROS sensor transmits occupancy or vacancy state detected via the on-board passive infrared (PIR) motion detector. Telegrams sent on a heartbeat timer and immediately upon a new occupied event allow for full lights-on and lights-off automation. In vacancy sensor applications with a manual switch, the ROS sensor automatically triggers lights-off after the room is vacant and an egress timer expires.

The Resonate occupancy sensor family includes models for hallway end-of-aisle, hallway, wide angle and corner mount applications. The Resonate sensors are a key component in Echoflex's Smart Space solutions, delivering energy savings to classrooms, open office spaces and corridors.

Features

- Solar powered wireless occupancy sensor
- Innovative technology for radio range verification, plus energy harvesting evaluation ensures ideal placement of sensor
- Reliable radio reception range of 24 m (80 ft) - commercial office spaces (typical), up to 100m (330 ft) line of sight
- Operates with no light on a full charge for over 200 hours
- Operates in low light conditions, under 25 lux (2.5 fc)
- Sensitivity adjustment to prevent nuisance triggering
- Walk test mode ensures motion range coverage
- Hallway, corner mount and wide angle mounting applications
- Removable back plate for easy mounting
- Optional battery start assist
- Quick start-up operation, under 3 minutes @ 200 lux (20 fc)

Ordering Information

Description	902 MHz Models	902 MHz PN	868 MHz Models	868 MHz PN	928 MHz Models	928 MHz PN
Wall mount, Wide Angle OS	ROS-WA-UW	8188A1154-X-1	ROS-WA-YW	8188A1354-X-1	ROS-WA-JW	8188A1654-X-1
Wall mount, hallway OS	ROS-HW-UW	8188A1155-X-1	ROS-HW-YW	8188A1355-X-1	ROS-HW-JW	8188A1655-X-1
Wall mount, corner OS	ROS-KM-UW	8188A1156-X-1	ROS-KM-YW	8188A1356-X-1	ROS-KM-JW	8188A1656-X-1

Mounting Brackets are separate order items. **Mounting brackets are required for corner mount applications (BR-2, BR-3 OR EWM-BR).**
For wall mount and wide angle application sensors; brackets are only required if angular displacement is desired.

BR-1 – Wall mount
PN: 7188K1001

BR-2 – Corner mount
PN: 7188K1002

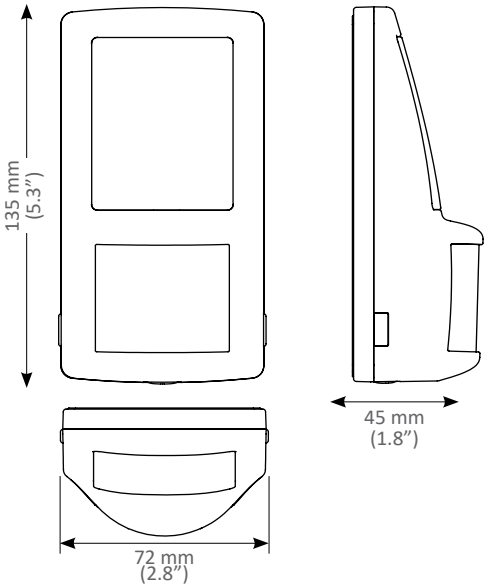
BR-3 – Ceiling mount
PN: 7188K1003

EWM-BR – Wall mount bracket
PN: 8188K1000

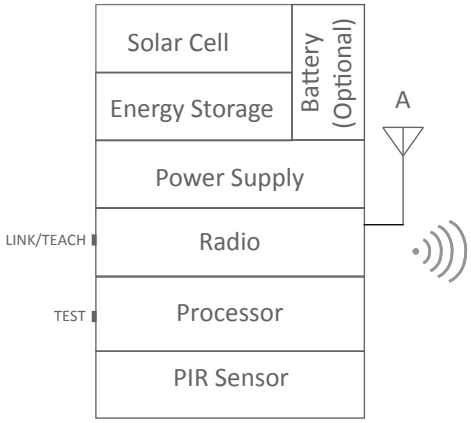
echoflex an ETC Company

Echoflex Solutions
38924 Queens Way, Unit #1, Squamish, BC, V8B 0K8, Canada ▪ +1 778-733-0111
echoflexsolutions.com ▪ Document Part # 8DC-0416 ▪ Rev 3.1 10/20

Dimensioned Diagram



Block Diagram



Equipment Profile

EEP A5-07-01	Motion sensor supply voltage 0...5.1V, linear n=0...255

Hardware Specifications

Power Supply	Integrated solar cell
Operational light level	25 lux (2.5 fc)
Charging light level	Above 100 lux (10 fc)
Charging Period	12 hours full charge @ 300 lux (30 fc)
Full charge operation	over 200 hours with no battery
Maintain charge time	2 hours every 24 @ 200 lux (20 fc)
Battery - start assist	CR2032 coin cell
Battery life expectancy	Shelf life as defined by the battery manufacturer or 5 years, whichever occurs first.
Communications	
Radio Frequency	902 MHz(U) or 868 MHz(Y) or 928 MHz (J)
Antenna	Integrated whip
Transmission Range	24 m (80 ft) - commercial office spaces (typical), up to 100m (330 ft) line of sight
Telegram Transmission	Immediately upon motion detection or on heartbeat
Telegram Heartbeat	100 seconds
Inputs	Teach button, Test button

Mechanical Specifications

Operating Temperature	-10°C to 45°C (14°F to 113°F)
Storage Temperature	-25°C to 65°C (-13°F to 149°F)
Relative Humidity	5% to 92% RH (non-condensing)
Weight	130 g (4.5 oz)
Dimensions	135 x 72 x 45 mm (5.315 x 2.835 x 1.772 “)
Mounting	screws or double sided tape (not supplied) Mounting brackets are required for corner mount applications. 4 varieties of mounting brackets are available as separate order item. (see ordering info)

Agency Listing & Compliance

CEC Title 24 Compliant

ROHS compliant

902 MHz models	FCC Part 15.231 - Remote Control Transmitter IC RSS-210
868 MHz models	CE Marking
928 MHz models	Japanese Radio Law

Coverage Diagram

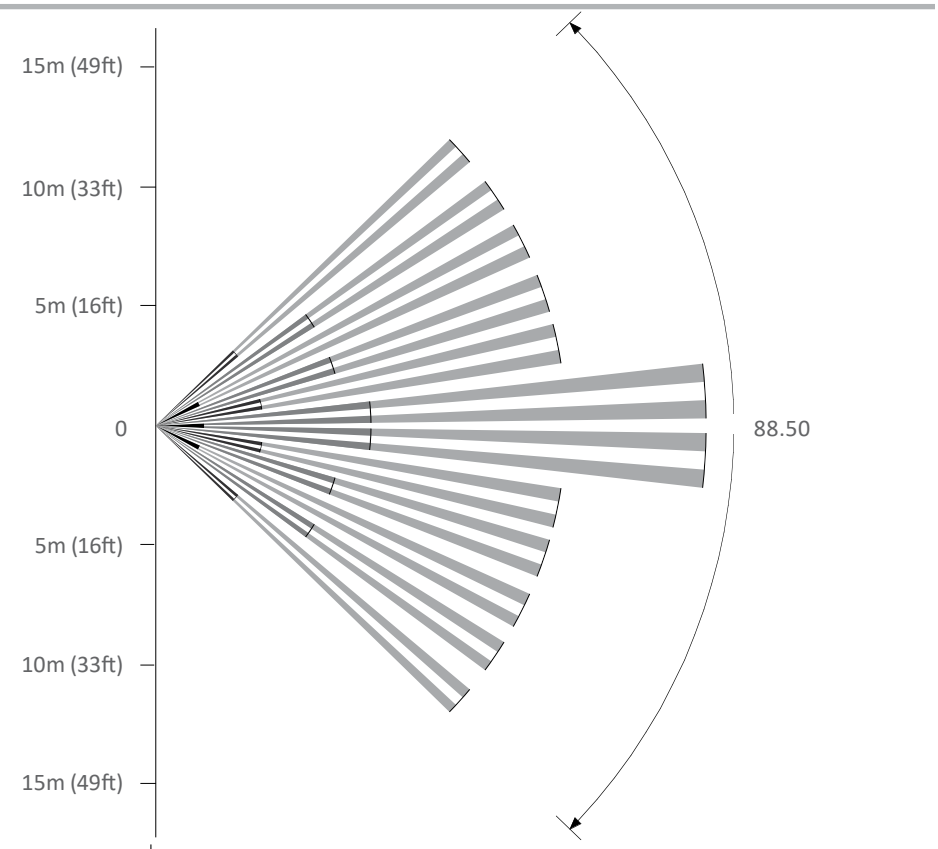
Corner Mount Sensors

Optimal Mounting height: 2.1 m (6.8 ft)

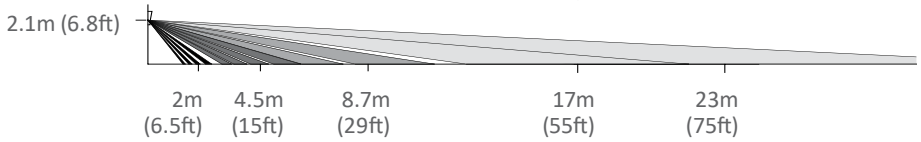
Minor Motion: 115 m² (1236 ft²)

Major Motion: 260 m² (2646 ft²)

TOP VIEW



SIDE VIEW



ROS-HW

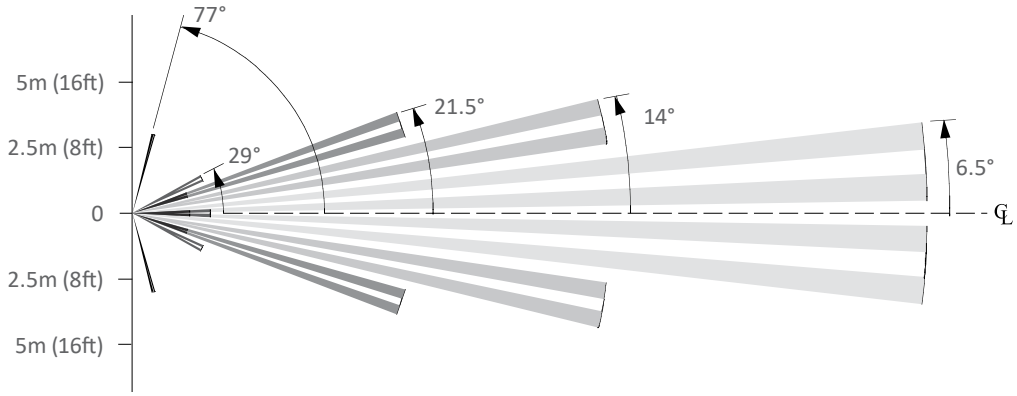
Coverage Diagram

Wall mount - Hallway sensor

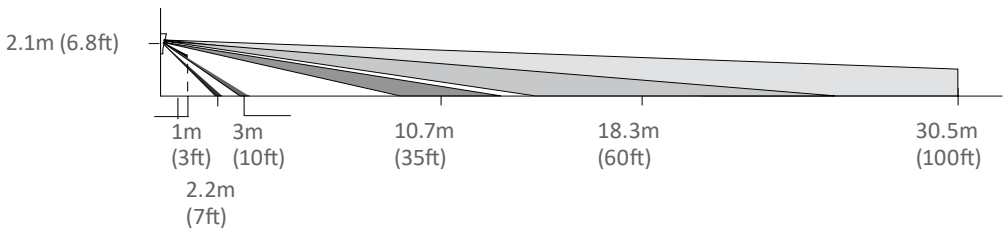
Optimal mounting height: 2.1m (6.8 ft)

Hallway length: 30.5 m x 6 m wide (100 ft x 20 ft)

TOP VIEW



SIDE VIEW



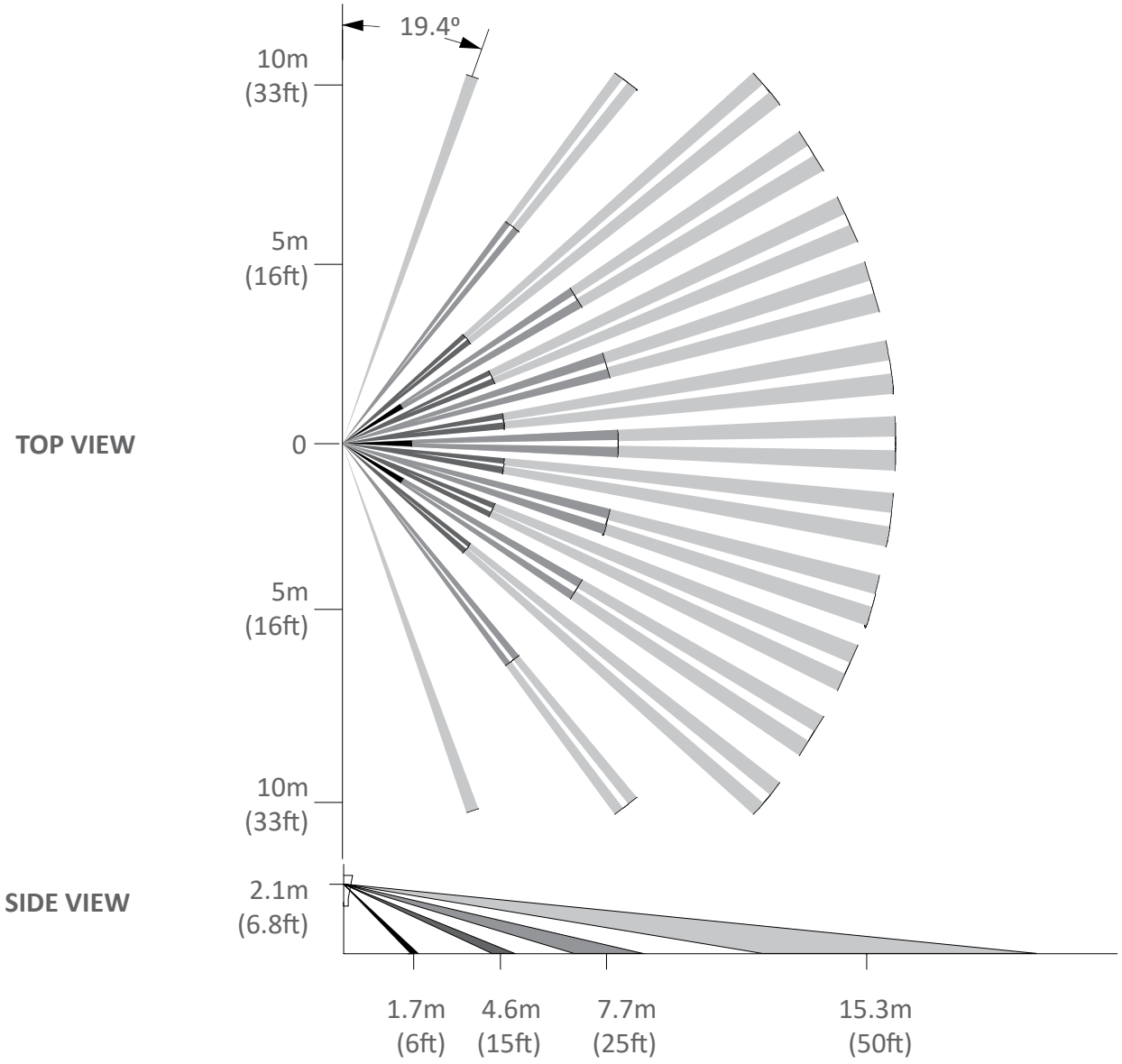
Coverage Diagram

Wall Mount - Wide Angle

Optimal Mounting height: 2.1 m (6.8 ft)

Minor Motion: 103 m² (1100 ft²)

Major Motion: 258 m² (2770 ft²)



Range Confirmation is an Echoflex Solutions Inc. Patented technology |
Specifications are subject to change without notification