

Overview

The Echoflex Dual-Tech Vacancy/Occupancy Sensor (RVS-D or RCS-D) are ceiling mount 360 degree dual technology wireless sensors. Optimized for spaces with ceiling heights of 8 to 10 feet, the RVS-D/RCS-D provide automatic OFF control of lights meeting today's strictest energy codes. The combination of passive infrared (PIR) and audio sensing technologies ensures positive occupant detection so lights stay ON when needed.

These dual technology sensors combine a sleek, non-intrusive design with advanced power management circuitry to minimize solar harvesting or battery requirements. The RVS-D and RCS-D are identical with the exception of an added battery to provide power to the RCS-D for support of automatic-ON occupancy applications.

Passive audio sensing technology provides coverage of audible human activity across much of the PIR detection range and innovative noise filtering is used to prevent false triggers that keep lights on in empty rooms. The sensors incorporate test and configuration features to ensure reliable communications, solar energy harvesting and occupant detection without extra tools or software. PIR and audio sensitivity adjustments can be made in-field to insure consistent desired operation.

As wireless sensors, they transmit both occupancy and vacant states to linked Echoflex lighting controllers within a radio range of 80 feet in normal commercial applications. In vacancy applications where a wireless switch is used to turn lights ON, the RVS-D sensor automatically triggers lights-OFF after the room becomes vacant and an egress timer expires. For occupancy applications the RCS-D transmits immediate response to new occupancy states making it an ideal solution for automatic-ON lighting applications.

Both the RVS-D and RCS-D are available in models providing PIR detection ranges suitable for small or larger motion detection.



Features

- Wireless dual-tech solar powered vacancy (RVS-D) or battery powered occupancy (RCS-D) sensors
- Sleek low-profile design for architectural design acceptance
- Passive audio detection of human activity with range of 18 feet diameter keeps the lights on when needed
- Integrated Range Confirmation® via tri-colored LED indication
- Walk test mode allows installers to test occupancy detection to ensure full motion range coverage
- Sensitivity adjustment of PIR or audio to prevent nuisance triggering
- Ceiling mount with 360° angle of PIR detection, for small or larger spaces
- Mounting options include integrated magnets for T-Bar Ceilings, wire straps for ceiling tiles, screw mount, or double sided tape (not included)
- Reliable radio reception range of 24 m (80 ft.) - commercial office spaces (typical), up to 100m (330 ft.) line of sight
- RVS models begin operation in under 2 minutes even in low light (65 lux or 6 fc) with natural or artificial light sources
- RCS models provide immediate response to motion detection even in a dark room
- Available in 902 MHz and 868MHz frequencies

Ordering Information

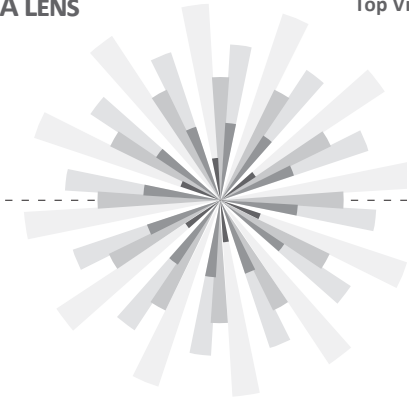
Description	902 MHz Models	902 MHz PN	868 MHz Models	868 MHz PN
Dual-Technology Vacancy Sensor - 450 sq. ft.	RVS-DA-UW	8188A1357-X-1	RVS-DA-YW	8188A1359-X-1
Dual-Technology Vacancy Sensor - 1800 sq. ft.	RVS-DB-UW	8188A1358X-1	RVS-DB-YW	8188A1360-X-1
Dual-Tech Occupancy Sensor - 450 sq. ft. - with battery	RCS-DA-UW	8188A1367-X-1	RCS-DA-YW	8188A1369-X-1
Dual-Tech Occupancy Sensor – 1800 sq. ft. - with battery	RCS-DB-UW	8188A1368-X-1	RCS-DB-YW	8188A1370-X-1

RVS-D/RCS-D

Lens Ray Diagrams

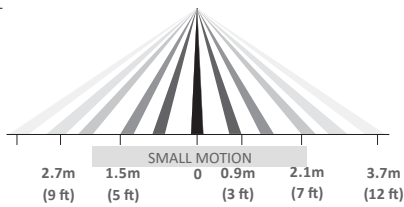
A LENS

Top View



Side View

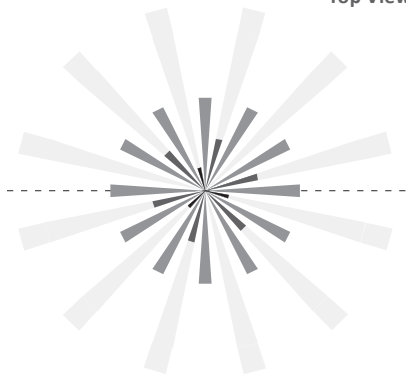
Typical ceiling height 8 ft (2.4 m)



Reliable audio detection > 18 ft provides overlapping coverage of monitored spaces

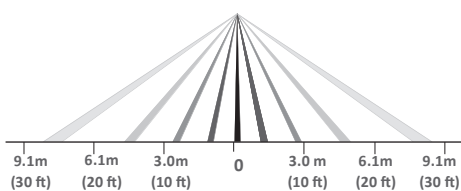
B LENS

Top View



Side View

Typical ceiling height 9 ft (2.7 m)



Equipment Profile

EEP A5-07-01	Motion Sensor: PIR on, PIR off. Supply voltage monitor
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Hardware Specifications

RVS-D - Vacancy Sensor	
Power Supply	Integrated Solar Cells
Operational Light Level	65 lux (6 fc) Audio On, 40 lux (3.7 fc) Audio Off
Start-Up Period	< 2 minutes @ 65 lux
RCS-D Occupancy Sensor	
Power Supply	CR1632 coin cell battery
Battery life expectancy	Shelf life as defined by the battery manufacturer or 5 years, whichever occurs first.

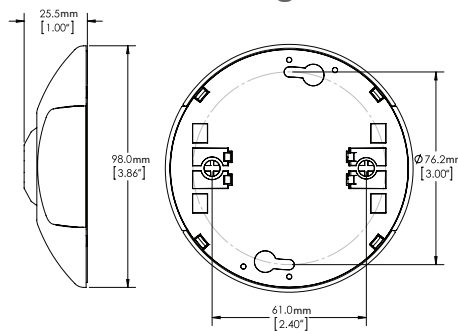
Communications

Radio Frequency	902 MHz(U) , 868 MHz(Y)
Antenna	Integrated whip
Transmission Range	24 m (80 ft) - commercial office spaces (typical), up to 100m (330 ft) line of sight
Telegram Transmission	Vacancy - On heartbeat Occupancy - Immediately upon motion or audio detection or heartbeat
Telegram Heartbeat	100 seconds min. - 1000 seconds max.
Inputs	Teach Button

Mechanical Specifications

Detection Area	A lens - 450 ft ² at 8 ft. - 800 ft ² at 10 ft. B lens - 1,800 ft ² at 8 ft. - 3,000 ft ² at 10 ft.
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	68 g (2.4 oz)
Dimensions	98.0mm. x 25.5mm. (3.86" x 1.00")
Mounting	Integrated magnets, wire strap, screws (not supplied), double sided tape (not supplied)

Dimensioned Diagram



Agency Listing & Compliance

CEC Title 24 Compliant

902 MHz model

FCC 15.231 - Remote Control Transmitter

IC RSS-210

868 MHz model

CE Marking



Range Confirmation is an Echoflex Solutions Inc. Patented technology

Specifications are subject to change without notification. | Document 8DC-0884 | Revision 1.0



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