

Overview

The Echoflex RVS is a ceiling mount solar powered, passive infrared, wireless vacancy sensor. Optimized for spaces with ceiling heights of 8 to 10 feet, the RVS provides automatic OFF control, meeting today's strictest energy codes. The Resonate Vacancy Sensor combines a sleek, non-intrusive design with advanced power management circuitry to minimize solar harvesting requirements. The RVS will operate as a self-powered vacancy sensor in low light conditions. The RCS is identical to the RVS with the addition of a battery to provide power for support of auto-on occupancy sensor applications.

The Resonate Vacancy/Occupancy Sensors incorporate Echoflex's latest diagnostic and configuration features to ensure reliable communications and solar harvesting capability. The RVS/RCS supports range confirmation* technology whereby simple button press and hold sequences result in LED indication of signal strength. Solar energy harvesting level indication under existing light levels is also provided on demand through LED indication. An efficient power supply design takes advantage of every foot-candle so the sensor will operate as a vacancy sensor with just the energy from artificial lights.

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

The sensor transmits occupancy or vacancy states detected via the on-board motion detector. In vacancy sensor applications with a manual switch, the RVS sensor automatically triggers lights-off after the room is vacant and an egress timer expires. For occupancy sensor applications with the battery installed, the RCS transmits immediately upon a new occupied event allowing for full lights-on and lights-off automation.

The RVS/RCS Sensors are a key component in Echoflex's Smart Space solutions, delivering energy savings to classrooms, open office spaces and corridors.

*Note: Range Confirmation requires an "F series" Echoflex controller ("F" series is exclusive to 902 MHz at this time).



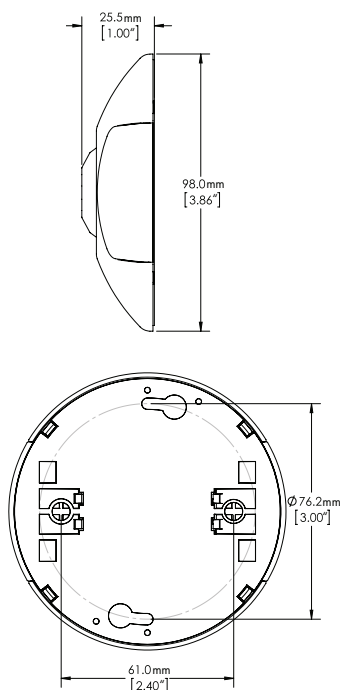
Features

- Sleek low-profile design for architectural design acceptance
- Solar powered wireless vacancy sensor (RVS) or battery powered occupancy sensor (RCS)
- Innovative technology for radio range verification, plus energy harvesting evaluation ensures ideal placement of sensor (patent pending)
- Reliable radio reception range of 24 m (80 ft) - commercial office spaces (typical), up to 100m (330 ft) line of sight
- RVS operates with natural or artificial light sources
- RVS operates in low light conditions, 65 lux (6 fc)
- Sensitivity adjustment to prevent nuisance triggering
- Walk test mode ensures motion range coverage
- Ceiling mount with 360° angle of detection
- Removable cover for easy mounting
- Mounting- Integrated magnets for T-Bar Ceiling, Wire Strap. Provision for screw mount, double sided tape (not included)
- Quick start-up operation:
RVS (no battery), 2 minutes @65 lux (6 f/c)
RCS (with battery), instantaneous

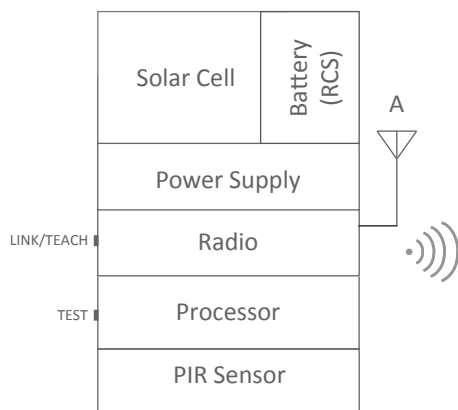
Ordering Information

Description	902 MHz Models	868 MHz Models
Resonate Vacancy Sensor - 450 sq. ft.	RVS-A-UW	RVS-A-YW
Resonate Vacancy Sensor - 1800 sq. ft.	RVS-B-UW	RVS-B-YW
Resonate Occupancy Ceiling Sensor - 450 sq. ft. - with Battery	RCS-A-UW	RCS-A-YW
Resonate Occupancy Ceiling Sensor - 1800 sq. ft. - with Battery	RCS-B-UW	RCS-B-YW

Dimensioned Diagram



Block Diagram



Equipment Profile

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

RVS - Vacancy Sensor	
Power Supply	Integrated Solar Cells
Operational Light Level	65 lux (6 fc)
Start-Up Period	< 2 minutes @ 65 lux
RCS 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 detection or heartbeat
Telegram Heartbeat	100 seconds min. - 1000 seconds max.
Inputs	Teach Button, Test 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 50°C (14°F to 122°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 bracket, screws (not supplied), double sided tape (not supplied)

Agency Listing & Compliance

CEC Title 24 Compliant

902 MHz model

FCC 15.231 - Remote Control Transmitter

IC RSS-210

868 MHz model

CE Marking



Specifications are subject to change without notification. Smart Click and Simple Tap are trademarks of Echoflex Solutions, Inc.
Range Confirmation Technology - Patent pending — Document 8DC-0670 | Revision 1.4

