



Type(s)

Project

Date

Notes

## GENERAL INFORMATION

The Echoflex Dual Tech Vacancy/Occupancy Sensor is a solar powered, passive infrared, wireless device. The ceiling mount sensor is optimized for spaces with ceiling heights of 2.4–3 m (8–10 ft). It uses passive infrared (PIR) and audio sensing technologies to ensure positive occupant detection, so lights stay ON when needed. The sensor combines a sleek, nonintrusive design with advanced power management circuitry to minimize solar harvesting requirements.

Available in two lens types to provide suitable PIR detection coverage. 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 Vacancy Sensor (RVS-D) and the Occupancy Sensor (RCS-D) models are technically the same, except that the RCS-D provides automatic ON control, for which it needs additional battery power. The RVS-D provides automatic OFF control to meet today's strict energy codes. An efficient power supply enables the RVS-D to operate as a self-powered vacancy sensor in low light conditions.

The RVS-D and RCS-D sensors incorporate Echoflex's latest diagnostic and configuration features to ensure reliable performance and solar harvesting capability. The sensor's integrated LEDs can indicate the level of solar energy available for harvest, verify the motion detection range during a walk-test, and confirm sensitivity to fine-tune the operation.

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

### APPLICATIONS

- Education: Classrooms, administration, corridors, cafeterias
- Hospitality: Banquet halls, suites, administration
- Healthcare: Clinics, administration
- Commercial office: Conference rooms, open areas, private offices, general assembly, cafeterias
- Retail: Showcase displays, store rooms

### FEATURES

- Sleek low-profile design
- Available in black and white finishes
- Solar powered wireless vacancy sensor (RVS-D) or battery powered occupancy sensor (RCS-D)
- Reliable radio reception range of 24 m (80 ft) - commercial office spaces (typical), up to 100 m (330 ft) line of sight
- RVS-D operates with natural or artificial light sources
- RCS-D operates in low light conditions, 65 lux (6 fc)
- Adjustable PIR and audio sensitivity to fine-tune detection level
- Walk test mode ensures motion range coverage
- Ceiling mount with 360° angle of detection
- Choice of lenses to optimize space coverage
- Removable cover for easy mounting
- Mounting: integration magnets for T-bar ceiling, wire staple, and screw or double-sided tape (not included)
- Quick start-up operation:
  - RVS-D (no battery), 2 minutes exposure at 65 lux (6 fc)
  - RCS-D (with battery), instantaneous

## ORDERING INFORMATION

### Dual Tech Vacancy/Occupancy Sensor

MODEL	DESCRIPTION
RVS-DA-U_	Dual Tech Vacancy Sensor - 42 m <sup>2</sup> at 2.4 m (450 sq. ft), 902 MHz
RVS-DB-U_	Dual Tech Vacancy Sensor - 167 m <sup>2</sup> at 2.4 m (1,800 sq. ft), 902 MHz
RVS-DA-Y_	Dual Tech Vacancy Sensor - 42 m <sup>2</sup> at 2.4 m (450 sq. ft), 868 MHz
RVS-DB-Y_	Dual Tech Vacancy Sensor - 167 m <sup>2</sup> at 2.4 m (1,800 sq. ft), 868 MHz
RCS-DA-U_	Dual Tech Occupancy Sensor - 42 m <sup>2</sup> at 2.4 m (450 sq. ft), 902 MHz, with battery
RCS-DB-U_	Dual Tech Occupancy Sensor - 167 m <sup>2</sup> at 2.4 m (1,800 sq. ft), 902 MHz, with battery
RCS-DA-Y_	Dual Tech Occupancy Sensor - 42 m <sup>2</sup> at 2.4 m (450 sq. ft), 868 MHz, with battery
RCS-DB-Y_	Dual Tech Occupancy Sensor - 167 m <sup>2</sup> at 2.4 m (1,800 sq. ft), 868 MHz, with battery

Color options: For white, add 'W' to the end of the model number. For black, add 'B' to the end of the model number.

## SPECIFICATIONS

### HARDWARE

- RVS-D - Dual Tech Vacancy Sensor
  - Power supply: Integrated solar cells
  - Operational light level: 65 lux (6 fc)
  - Start-up period: < 2 minutes at 65 lux
- RCS-D - Dual Tech Occupancy Sensor
  - Power supply: CR1632 coin cell battery
  - Battery life expectancy: Defined by the battery manufacturer or 5 years, whichever occurs first

### EQUIPMENT PROFILE

- EEP A5-07-01: Occupancy Sensor: PIR on, PIR off. Supply voltage monitor

### COMMUNICATIONS

- 902 MHz (U) or 868 MHz (Y) radio frequencies
- Wireless range of up to 24 m (80 ft) - commercial office spaces (typical), up to 100 m (330 ft) line of sight
- Integrated whip antenna
- Telegram heartbeat: 100 seconds minimum, 1,000 seconds maximum
- Input: Teach button
- Outputs: LEDs - red, green, and blue

### ENVIRONMENTAL

- Operating temperature: -10°C to 45°C (14°F to 113°F) ambient
- Relative humidity: 5–92% non-condensing, indoor use only

### MECHANICAL SPECIFICATIONS

- Detection area:
  - Lens A: 42 m<sup>2</sup> at 2.4 m (450 ft<sup>2</sup> at 8 ft) / 74 m<sup>2</sup> at 3.6 m (800 ft<sup>2</sup> at 10 ft)
  - Lens B: 167 m<sup>2</sup> at 2.4 m (1,800 ft<sup>2</sup> at 8 ft) / 279 m<sup>2</sup> at 3.6 m (3,000 ft<sup>2</sup> at 10 ft)
- Mounting options:
  - Integrated magnets, wire bracket, screws (not supplied), double-sided tape (not supplied)

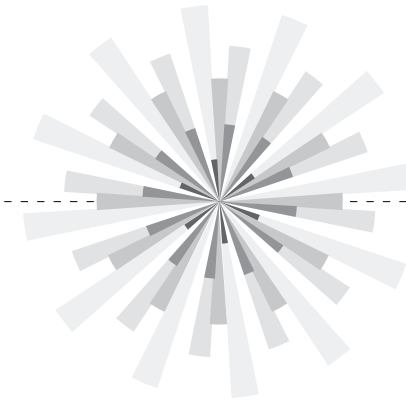
### REGULATORY AND COMPLIANCE

- Energy Code compliant including; International Energy Conservation Code (IECC), ASHRAE 90.1, California Energy Commission Title 24
- FCC Part 15.231 - Remote Control Transmitter
- Industry Canada RSS-210

## LENS COVERAGE DIAGRAMS

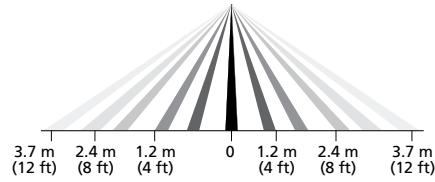
### LENS A

Top View



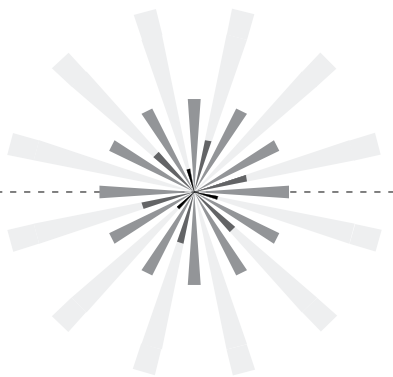
Side View

Typical ceiling height 2.4 m (8 ft)



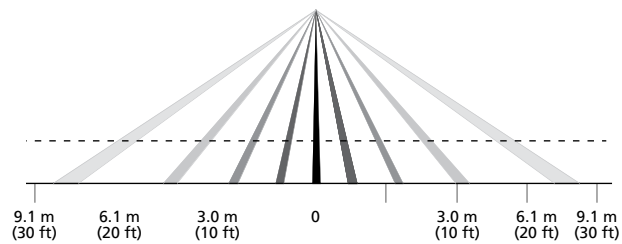
### LENS B

Top View



Side View

Typical ceiling height 2.7 m (9 ft)



## PHYSICAL

### Dual Tech Vacancy/Occupancy Sensor Weight and Dimensions†

MODEL	HEIGHT		WIDTH		DEPTH		WEIGHT	
	mm	in	mm	in	mm	in	g	oz
RVS-D/RCS-D	98.0	3.86	98.0	3.86	25.5	1.00	68	2.4

†Note: Mounts with integrated magnets, wire bracket, screws (not included), double-sided tape (not included)

