Echoflex Ceiling Vacancy/Occupancy Sensor

Type(s)	
Project	
Date	
Notes	

GENERAL INFORMATION

The Echoflex Ceiling Vacancy/Occupancy Sensor is a solar powered, passive infrared, wireless device. The sensor is optimized for spaces with ceiling heights of 2.4–3 m (8–10 ft). 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 detection coverage.

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

The RVS and RCS 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 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 transmits immediately upon a new occupied event allowing for full lights-on and lights-off automation.

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

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) or battery powered occupancy sensor (RCS)
- Reliable radio reception range of 24 m (80 ft) - commercial office spaces (typical), up to 100 m (330 ft) line of sight
- RVS operates with natural or artificial light sources
- RVS operates in low light conditions, 65 lux (6 fc)
- Adjustable 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 (no battery), 2 minutes exposure at 65 lux (6 fc)
  - RCS (with battery), instantaneous

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ORDERING INFORMATION

Ceiling Vacancy/Occupancy Sensor

MODEL	DESCRIPTION
RVS-A-U_	Ceiling Vacancy Sensor - 42 m^2 at 2.4 m (450 sq. ft), 902 MHz
RVS-B-U_	Ceiling Vacancy Sensor - 167 m^2 at 2.4 m (1,800 sq. ft), 902 MHz
RVS-A-Y_	Ceiling Vacancy Sensor - 42 m^2 at 2.4 m (450 sq. ft), 868 MHz
RVS-B-Y_	Ceiling Vacancy Sensor - 167 m^2 at 2.4 m (1,800 sq. ft)., 868 MHz
RCS-A-U_	Ceiling Occupancy Sensor - 42 m^2 at 2.4 m (450 sq. ft), 902 MHz, with battery
RCS-B-U_	Ceiling Occupancy Sensor - 167 m^2 at 2.4 m (1,800 sq. ft), 902 MHz, with battery
RCS-A-Y_	Ceiling Occupancy Sensor - 42 m^2 at 2.4 m (450 sq. ft), 868 MHz, with battery
RCS-B-Y_	Ceiling Occupancy Sensor - 167 m^2 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 - Vacancy Sensor
  - Power supply: Integrated solar cells
  - Operational light level: 65 lux (6 fc)
  - Start-up period: < 2 minutes at 65 lux
- RCS - 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:
  - A lens: 42 m^2 at 2.4 m (450 ft^2 at 8 ft) / 74 m^2 at 3.6 m (800 ft^2 at 10 ft)
  - B lens: 167 m^2 at 2.4 m (1,800 ft^2 at 8 ft) / 279 m^2 at 3.6 m (3,000 ft^2 at 10 ft)
- Mounting options:
  - Integrated magnets, wire bracket, screws (not supplied), double-sided tape (not supplied)

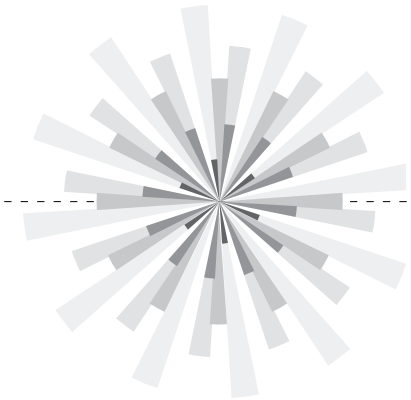
REGULATORY AND COMPLIANCE

- Complies with UL 916
- 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

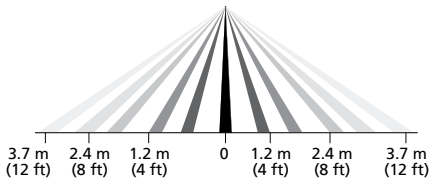
LENS COVERAGE DIAGRAMS

LENS A

Top View

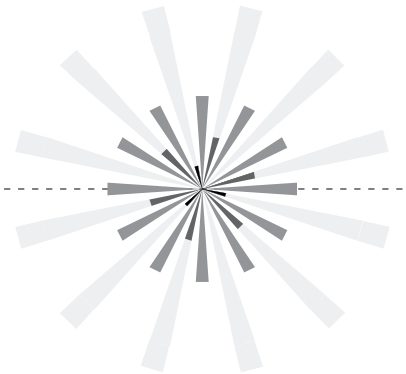


Side View
Typical ceiling height 2.4 m (8 ft)

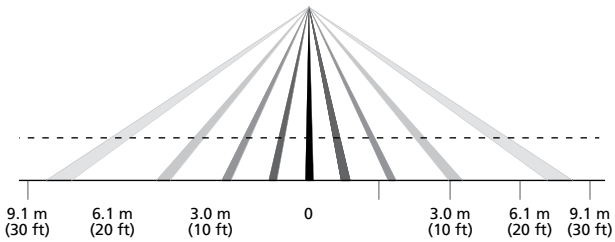


LENS B

Top View



Side View
Typical ceiling height 2.7 m (9 ft)

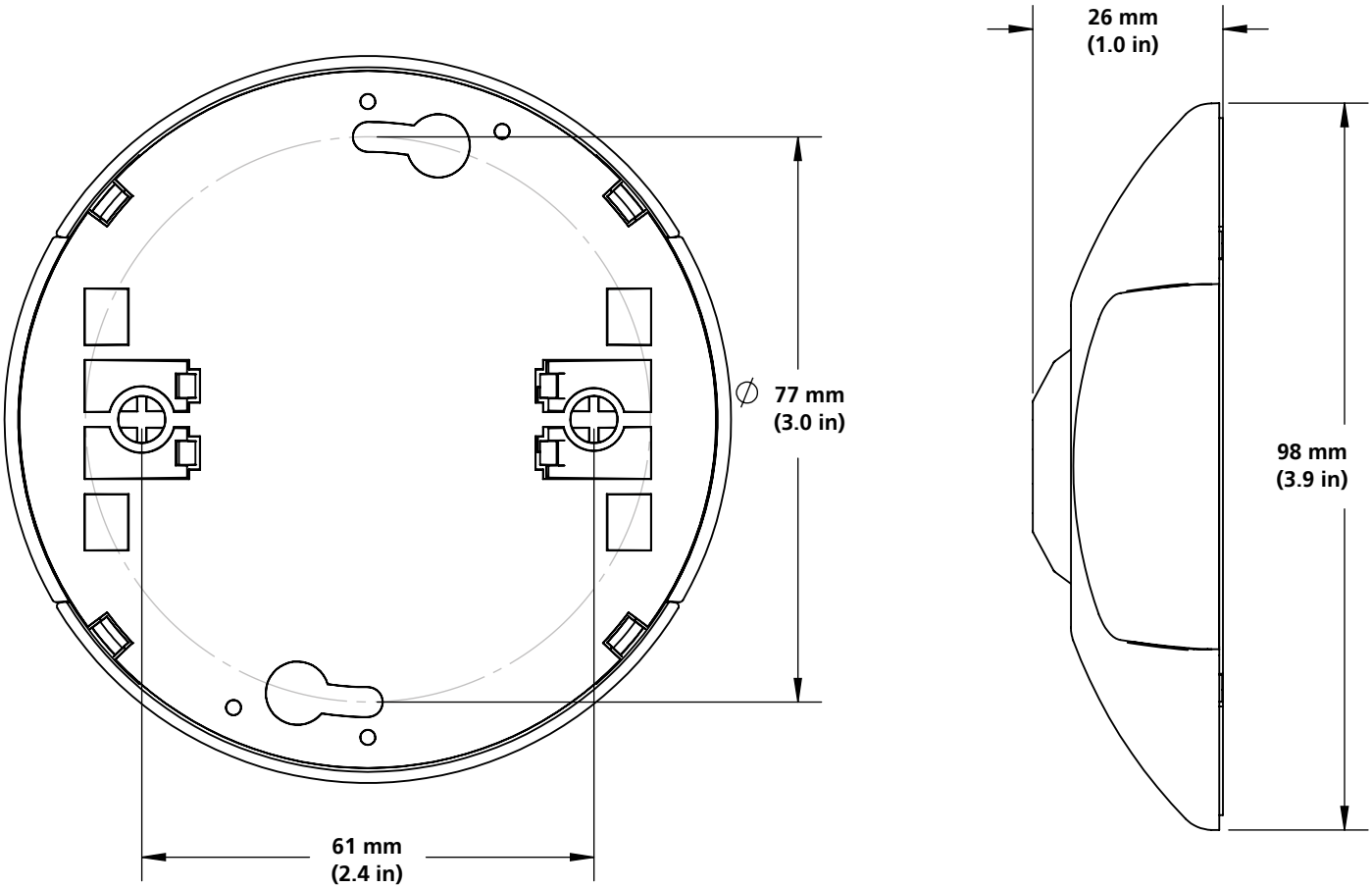


PHYSICAL

Ceiling Vacancy/Occupancy Sensor Weight and Dimensions†

MODEL	HEIGHT		WIDTH		DEPTH		WEIGHT	
	mm	in	mm	in	mm	in	g	oz
RVS/RCS	98	3.9	98	3.9	26	1.0	68	2.4

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



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