

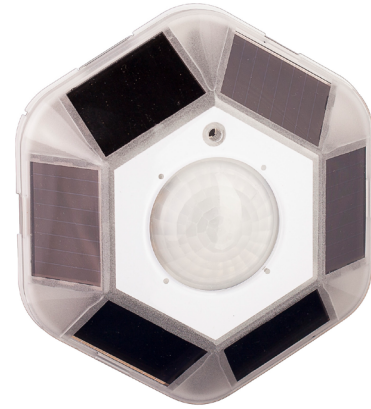
## Overview

The Dual Tech Ceiling Mount Sensor (MOS-DT) is a 360 degree ceiling sensor providing reliable battery-free occupancy detection that communicates wirelessly with Echoflex controllers. A combination of passive infrared (PIR) and audio sensing technologies ensures positive occupant detection.

The MOS-DT occupancy sensor is wireless and powered using solar energy harvesting from natural and artificial light sources. The advanced power management and efficient solar energy harvesting features make the optional battery redundant in normal workplace environments. 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 MOS-DT fits well in energy code vacancy applications (manual-ON + automatic-OFF) while providing immediate response to new occupancy states making it an ideal solution for automatic-ON lighting applications.

The MOS-DT incorporates test features that provides installers the ability to ensure reliable communications, sufficient energy harvesting and occupant detection without extra tools or software. PIR and audio sensitivity adjustments can be made to eliminate false tripping insuring reproducible operation.

The MOS-DT is available in two models providing PIR ranges suitable for small or larger motion detection, optimized for ceiling heights of 8-9 feet.



## Features

- Solar powered, wireless , dual technology occupancy/vacancy sensor
- Passive audio detection > 18 feet of human activity keeps the lights on even in quiet spaces
- Ceiling mount with 360° of detection
- Part of a seamless energy control solution when used with Echoflex lighting controllers
- Immediate response to motion even in a dark room
- Integrated Range Confirmation® via tri-colored LED indication
- Integrated Solar Harvesting Light Level LED indication
- Sensitivity adjustment (high, medium or low) to avoid nuisance triggering
- Walk-Test feature allows installers to test operation and installation location during commissioning
- Transmits occupied and unoccupied states
- Operates in low light conditions, 50 lux (5 fc)
- Up to 7 days operation in complete darkness in battery free applications
- Reliable radio reception range of 24 m (80 ft) - commercial office spaces (typical), up to 100m (330 ft) line of sight
- Available in 902 MHz and 868MHz frequencies
- Mounting - Integrated magnets for T-Bar Ceiling\*, Wire Strap\*. Provision for screw mount, double sided tape (not included)

\*included with 902 MHz models only (For 868 MHz model order auxiliary mounting plate kit pn: 8188K1003 if required)

## Ordering Information

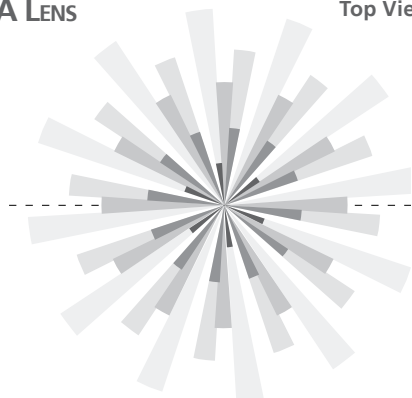
Description	902 MHz Models	902 MHz PN	868 MHz Models	868 MHz PN
Dual Tech Ceiling Mount Sensor, 1000 ft. <sup>2</sup> coverage	MOS-DT-UA	8188A1182-X-1	MOS-DT-YA	8188A1428-X-1
Dual Tech Ceiling Mount Sensor, 1900 ft. <sup>2</sup> coverage	MOS-DT-UB	8188A1183-X-1	MOS-DT-YB	8188A1429-X-1

# MOS-DT

## Lens Ray Diagrams

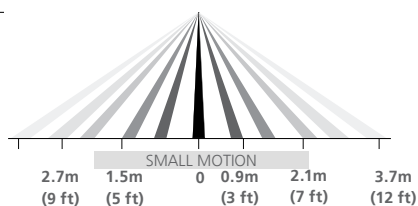
A LENS

Top View



Side View

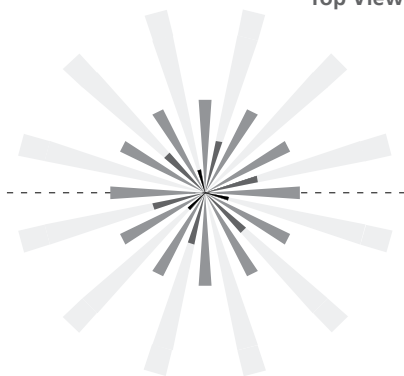
Typical ceiling height 8 ft (2.4 m)



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

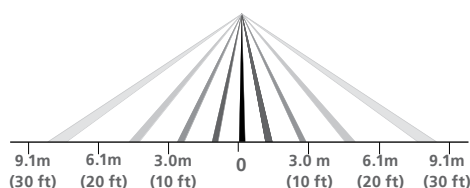
B LENS

Top View



Side View

Typical ceiling height 9 ft (2.7 m)



## Equipment Profile

<b>EEP A5-07-01:</b>	Occupancy Sensor - PIR ON, PIR OFF Supply Voltage 0...5.1V, linear n=0...255
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## Hardware Specifications

<b>Power Supply</b>	Integrated solar cell
<b>Operational Light Level</b>	20 lux (2fc) min., 50 lux (5fc) with audio enabled
<b>Minimum charge time to begin operation</b>	3 minutes @ 200 lux ( 20 fc)
<b>Maintain charge time</b>	2 hours per 24 hours @ 160 lux (16 fc)
<b>Maximum charge time</b>	6 hours @ 320 lux (32 fc)
<b>Operating life at full charge</b>	7 days in 0 lux
<b>Battery - start assist</b>	CR2032 coin cell optional - not included
<b>Input</b>	Teach button for assignment to receiver
<b>Output</b>	Test mode LEDs - red, green and amber

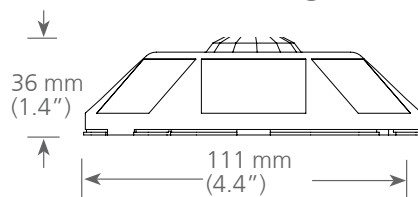
## Communications

<b>Radio Frequency</b>	902 MHz(U) or 868 MHz(Y)
<b>Antenna</b>	Integrated whip
<b>Transmission Range</b>	24 m (80 ft) - commercial office spaces (typical), up to 100m (330 ft) line of sight
<b>Telegram Transmission</b>	On motion or on heartbeat period
<b>Telegram Heartbeat Period</b>	Minimum 100 seconds

## Mechanical Specifications

<b>Operating Temperature</b>	-10°C to 45°C (14°F to 113°F)
<b>Storage Temperature</b>	-25°C to 65°C (-13°F to 149°F)
<b>Relative Humidity</b>	5% to 92% RH (non-condensing)
<b>Weight</b>	104 g (3.7 oz)
<b>Dimensions</b>	111 mm flat edges x 36 mm height (4.4" x 1.4")
<b>Mounting</b>	Integrated magnets*, wire bracket*, screws (not supplied), double sided tape (not supplied) *902 MHz models only

## Dimensioned Diagram



## Agency Listings & Compliance

CEC Title 24 Compliant

**902 MHz models**

FCC Part 15.231

Remote Control Transmitter

IC RSS-210

**868 MHz models**

CE Marking



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