

Overview

The IoT Ceiling Sensor (MOS-MT) is the ideal starting point for enhancing building performance and personnel productivity through the aggregation of wireless data.

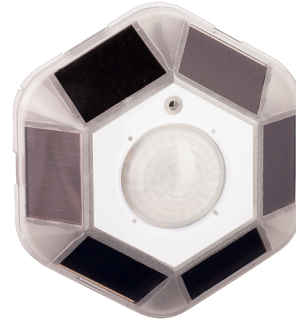
The IoT sensor is a self-powered wireless sensor offering occupant detection, light level, temperature and sound level monitoring for the collection of and sharing of data for Internet of Things applications.

Today's hot-desking office neighborhoods provide employees with choices; on background noise, ambient light, and office environment. The IoT sensor provides feedback on each space's utilization and environmental conditions in real-time so employees can find a workplace that suits their individual needs.

Facility operations use the IoT sensor data via gateways or interfaces to track occupancy levels and environment mapping for building-use optimization. Areas not being used can be placed into set-back mode to conserve energy.

The sensor is 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.

Wireless, battery-free sensing: no maintenance, no invasive wire runs, and no down-time during installation. A great starting point for staying on budget, enhancing employee satisfaction and improve building performance.



Features

- Solar powered wireless IoT sensor
- Ceiling mount occupancy and vacancy sensing
- Light level sensing: up to 380 foot candles (4095 lux)
- Temperature sensing: 32 .. 104 °F (0 .. 40°C)
- Sound level monitoring: 40 to 80 dBA
- Small area lens (1000 sq. ft.) models or large area lens (1900 sq. ft.) models offered
- Battery and super capacitor voltages are monitored and transmitted
- Stores energy for full functionality even in a dark room with no battery
- Uses open, standardized communication protocols for interoperability
- EEP configuration mode allows standard EnOcean EEP or Generic Profile
- Embedded test features allows installers to verify operation during installation and commissioning
- Operates in 5 foot candles of light
- Reliable radio reception range of 80 ft. in typical office spaces and up to 330 ft. line of sight
- Available in radio frequencies for North America, Asia and Europe
- Mounting - Integrated magnets for T-Bar Ceiling, Wire Strap. Provision for screw mount, double sided tape (not included)

Ordering Information

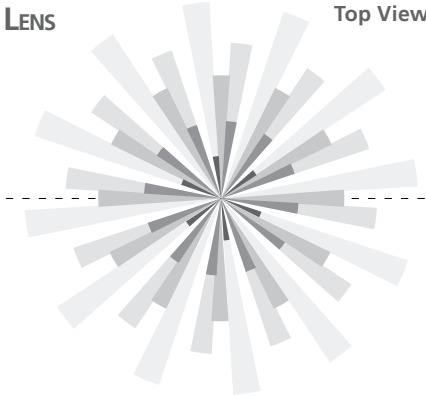
Description	902 MHz Models	902 MHz Part #	868 MHz Models	868 MHz Part #	928 MHz Models	928 MHz Part #
IoT ceiling mount sensor small office coverage	MOS-MT-UA	8188A1287-X-1	MOS-MT-YA	8188A1430-X-1	MOS-MT-JA	8188A1703-X-1
IoT ceiling mount sensor large office coverage	MOS-MT-UB	8188A1288-X-1	MOS-MT-YB	8188A1431-X-1	MOS-MT-JB	8188A1704-X-1

MOS-MT

PIR Lens Ray Diagrams

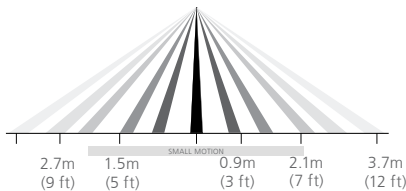
A LENS

Top View



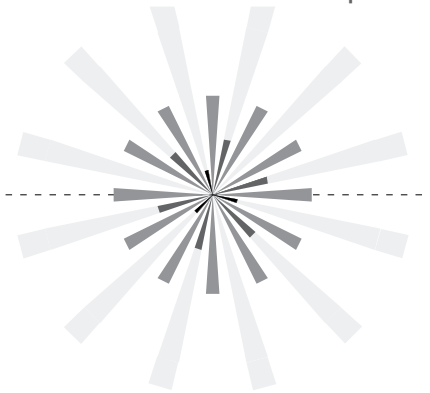
Typical ceiling height 8 ft (2.4 m)

Side View



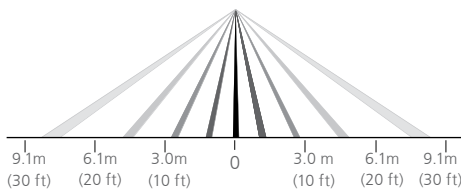
B LENS

Top View

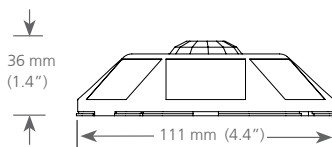


Typical ceiling height 9 ft (2.7 m)

Side View



Dimensioned Diagram



Equipment Profile

EEP D2-14-52	Sound, Pressure, Illumination, Presence and Temperature Sensor
Generic Profile Telegram	(selectable - via EEP configuration mode)

Measured Parameters

Light level	0-380 foot candles, 0-4095 lux
Temperature	32-104 °F (0-40°C)
Occupancy	Vacant or occupied
Sound level RMS	40.0 - 80.0 dBA,
Battery voltage	0-5.5 VDC
Super cap voltage	0-5.5 VDC

Hardware Specifications

Power Supply	Integrated solar cell
Operational Light Level	5 fc (54 lux) minimum
Minimum charge time to begin operation	3 minutes @ 20 fc (215 lux)
Maintain charge time	2.5 hours per 24 hours @ 46 fc (500 lux)
Maximum charge time	6 hours @ 32 fc (345 lux)
Operating life at full charge	115 hours in 0 fc/lux
Battery - start assist	CR2032 coin cell, optional - not included
Input	Teach button for assignment to receiver
Output	Test mode LEDs - red, green and amber

Communications

Radio Frequency	902 MHz(U) or 868 MHz(Y) or 928 MHz (J)
Antenna	Integrated whip
Transmission Range	24 m (80 ft) - commercial office spaces (typical), up to 100m (330 ft) line of sight
Telegram Transmission	On motion or on heartbeat period
Telegram Heartbeat Period	Minimum 100 seconds

Mechanical Specifications

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	104 g (3.7 oz)
Dimensions	111 mm flat edges x 36 mm height (4.4" x 1.4")
Mounting	Screws or double sided tape (not supplied)

Agency Listings & Compliance

CEC Title 24 Compliant

ROHS compliant

902 MHz models	FCC Part 15.231 - Remote Control Transmitter IC RSS-210	
868 MHz models	CE Marking	
928 MHz models	Japanese Radio Law	

Specifications are subject to change without notification