

PIR OCCUPANCY & VACANCY SENSOR

21 SERIES

MOS-21

Overview

The MOS-21 (Motion Occupancy Sensor) is designed to provide a reliable and simple method to increase energy savings by adding occupancy detection to your wireless control system.

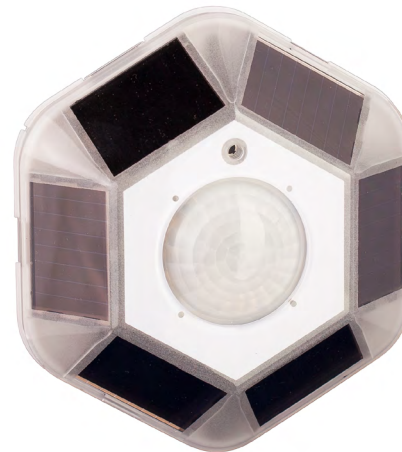
This ceiling mount Passive Infra Red (PIR) occupancy sensor is wireless and is powered using solar energy harvesting. Vacancy sensing mode (manual On / Auto Off) is available for Title 24 requirements. An efficient power supply and tuned sensor circuitry allows the MOS-21 to provide immediate response to new occupancy states, making it also an ideal solution for Auto-ON applications.

Used for indoor applications, the sensor is optimized for ceiling heights of 8 to 12 feet. A selection of two lens provides motion detection coverage from 1000 sq.ft. to 1900 sq.ft.

Batteries are not required for everyday operation due to the advanced solar energy harvesting and power management features of the sensor. Upon installation, the sensor will operate in as little as 3 minutes at 200 Lux (20 fc). The MOS-21 is capable of operating over 225 hours in darkness from maximum charge levels.

The MOS-21 sensor incorporates our latest diagnostic and configuration features to ensure reliable communications and solar harvesting capability. The MOS-21 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.

A walk-test feature allows installers to test and verify sensor operation on location without extra tools or software. Installers can verify correct sensor placement insuring reproducible operations. False occupancy state tripping through pet movements or from other elements can be reduced with sensitivity adjustment options. Note: Range Confirmation requires an "F series" Echoflex controller ("F" series is exclusive to 902 MHz at this time).



Features

- Solar powered wireless PIR motion occupancy/vacancy sensor
- Ceiling mount with 360 ° angle of detection
- Works in conjunction with Echoflex Lighting controllers
- Provides immediate response to motion even in a dark room
- Vacancy Sensing mode available (Manual On / Auto-Off)
- Integrated Range Confirmation via tricolored LED indication (patent pending)
- Integrated Solar Harvesting Light Level LED indication
- Sensitivity adjustment (high, medium or low) to avoid nuisance triggering
- Instant sensing for Auto-ON applications
- Sends occupied and unoccupied (PIR ON / OFF) telegrams
- Operates in light conditions as low as 20 lux (2 fc)
- Up to 225 hours operation in complete darkness
- Walk-Test feature allows installers to test operation and installation location during commissioning
- Transmission range of 24 m (80 ft) for interior spaces
- Available in 315MHz, 868 and 902 MHz frequencies
- Batteries not required, start assist battery option available

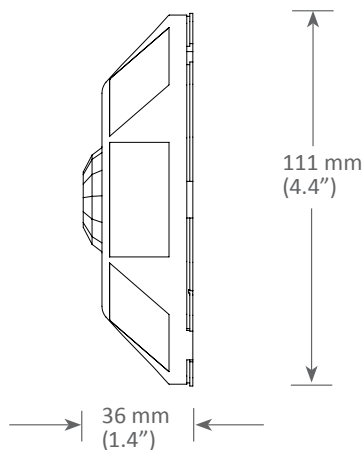
Ordering Information

Model	Description	Part # - 902 MHz	Part # - 315 MHz	Part # - 868 MHz
MOS-21(*)A	PIR Motion Sensor , 1000 sq. ft. coverage	002-8379 * = U	002-1379 * = C	002-6379 * = Y
MOS-21(*)B	PIR Motion Sensor , 1900 sq. ft. coverage	002-8381 * = U	002-1381 * = C	002-6381 * = Y

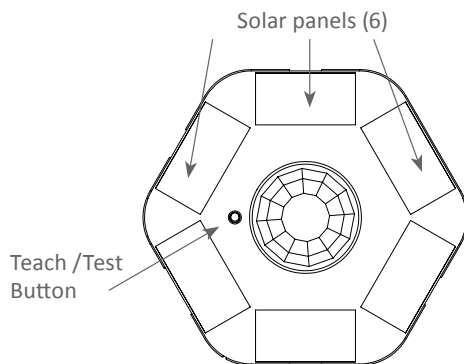


MOS-21

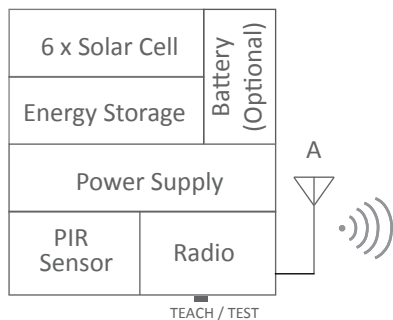
Dimensioned Diagram



Functional Diagram



Block Diagram



Equipment Profiles

EEP A5-07-01:

Occupancy Sensor - PIR ON, PIR OFF

Hardware Specifications

Power Supply	Integrated solar cell
Operational light level	20 lux (2 fc) minimum
Minimum charge time to begin operation	3 minutes @ 200 lux (20 fc)
Maintain charge time	2 hours per 24 hours @ 160 lux (16 fc)
Maximum charge time	6 hours @ 320 lux (32 fc)
Operating life at full charge	225 hours in 0 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), 315 MHz(C) or 868 MHz(Y)
Antenna	Integrated whip
Telegram Heartbeat period	100 seconds
Telegram Transmission	On motion or on heartbeat period
Transmission Range	24 m (80 ft) - commercial office space (typical)

Mechanical Specifications

Operating 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 Listing & Compliance

(902 MHz and 315 MHz models only)

FCC Part 15.231 - Remote Control Transmitter

IC RSS-210



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 Range Confirmation Technology - Patent pending
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