# Passive Infrared Wireless Occupancy Sensor

* 1. WIRELESS OCCUPANCY SENSOR
     1. Ceiling Occupancy Sensor
        1. The Occupancy sensor shall be the Echoflex MOS-21U Series Occupancy Sensor by Echoflex Solutions, Inc., or equal.
        2. Mechanical
           1. The Sensor shall mount to a ceiling using screws or peel-and-stick attachment

The Sensor shall support optional mounting to an electrical box

* + - * 1. The Sensor shall be available in white
        2. The Sensor shall have a button for linking the sensor to a wireless controller

The button shall be accessible when the Sensor is mounted

* + - * 1. The Sensor shall have a red LED indicator located behind a lens to show that PIR functionality is present
        2. The Sensor shall be constructed of ABS injection molded plastic that fully encloses all components
        3. The Sensor shall support a start-assist battery option
        4. The Sensor shall provide 360 degree hemispherical PIR coverage from the sensor mounting location
      1. Electrical
         1. The Sensor shall utilize photovoltaic energy harvesting for power. Sensors that require low voltage power input or batteries for normal operation shall not be acceptable

###### The Sensor shall be capable of storing sufficient energy to provide normal operation for at least 225 hours without light when charged in 320 lux (30 FC) for a minimum of 6 hours

###### The Sensor shall begin operation within 3 minutes from a discharged state when charged at minimum 200 lux (19 FC)

###### The photovoltaic solar cells shall produce energy from natural or artificial light sources

* + - * 1. The Sensor shall use a 902 MHz EnOcean radio. Systems that use other radio frequencies shall not be acceptable
        2. The Sensor shall have a radio range of at least 80 feet laterally through walls and up to 300 feet in open space
        3. The Sensor shall comply with FCC Part 15.231, IC RSS-210 and CEC Title 24
      1. Functional
         1. The Sensor shall wirelessly transmit occupancy state and stored energy level when there is sufficient stored energy or sufficient solar energy for operation

###### PIR Coverage Area

MOS21-UA, 1000 square feet

MOS21-UB, 1900 square feet

MOS21-UC, 6300 square feet (high bay)

* + - * 1. The Sensor shall have the ability to provide for either occupancy or vacancy operation based on the configuration settings of the compatible linked wireless lighting controllers
        2. The Sensor shall transmit minimum every 120 seconds when the PIR is activated
        3. The Sensor shall support Simple Tap programming for configuration of compatible wireless lighting controllers
        4. The Sensor shall support a radio-range confirmation test mode

###### The Sensor shall provide visual indication of the communication signal strength with compatible lighting controllers when in this mode

* + - * 1. The Sensor shall support a light-level evaluation test mode

The Sensor shall provide visual indication of the ambient light level where the sensor is mounted when operating in this mode

* + - * 1. The Sensor shall support a walk-test test mode

The Sensor shall provide immediate visual indication of PIR activity when operating in this mode

* + - * 1. The Sensor shall support a PIR sensitivity adjustment test mode

The Sensor shall provide three levels of PIR sensitivity selectable when operating in this mode

* + - * 1. The Sensor shall have the ability to disable the LED indication of PIR activity

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