# Wireless Window and Door Sensor Switch

## Wireless Sensor

### Window and Door Switch

#### The Window and Door Switch shall be the Echoflex MC-21U Series Contact Switch by Echoflex Solutions, Inc., or equal.

#### Mechanical

##### The Switch shall be constructed of ABS injection molded plastic

##### The Switch shall provide a button for manual linking to controllers

##### The Switch shall mount using screws or peel-and-stick using double sided tape or Velcro

##### The Switch shall be available in white

##### The Switch shall have a fully enclosed electronics assembly

##### The Switch shall utilize a magnetic switch to detect open status of a window or door

##### The Switch shall support start assist battery option

##### The Switch shall have a channel to expose the antenna externally from the enclosure

#### Electrical

##### The Switch shall utilize photovoltaic energy harvesting for power. Sensors that require low voltage power input for normal operation shall not be acceptable

###### The Switch shall begin operation within 6 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

##### The Switch shall be capable of full operation for at least 100 hours in complete darkness after fully charging

##### The Switch shall use a 902 MHz EnOcean radio. Systems that use other frequencies radios shall not be acceptable

##### The Switch shall have a range of at least 80 feet through walls (laterally) up to 300 feet in open space

##### The Switch shall comply with FCC Part 15.231 and IC RSS-210

#### Functional

##### The Switch shall support linking to a compatible controller as an occupancy state latch or for the purpose of switching lighting or miscellaneous electrical load control

##### The Switch shall support a radio-range confirmation test mode

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

##### The Switch shall support a light-level evaluation test mode

###### The Sensor shall provide visual indication of the ambient light level where the sensor is mounted

##### The Switch shall support a magnet placement test mode

###### The Sensor shall provide visual indication of the switch state to verify magnet placement

##### The Switch shall allow selection of the trigger event to transmission mode

###### The Sensor shall provide selection of what triggers transmission:

On each open or close event and heartbeat

Open events and heartbeat

Closed events and heartbeat

Only on heartbeat

##### The Switch shall allow selection of the heartbeat period:

100 seconds

1000 seconds

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