HS-MS100+ Z-Wave Motion Sensor

OVERVIEW
HS-MS100+ is a compact, easy to install motion sensor. It is designed to control other Z-Wave devices directly or it may be used with a variety of Z-Wave certified home controllers to launch automation events or scenes.

Applications
- Use to activate Z-Wave wall switches or plug-in modules when motion is sensed.
- Use to trigger home automation events when motion is sensed.

Configuration
The unit may be powered using the included battery or with a USB power adapter (not included). The unit includes a Z-Wave network button (for inclusion/exclusion) and blue LED operation indicator. A magnetic mount allows for very easy installation.

Z-Wave Network Installation
Remove the back cover by rotating counter-clockwise and Install 1 CR123A battery (included) inside the unit. Alternately, you may power the unit with a micro USB connection. HS-MS100+ may be included into your Z-Wave network as a “secure” device or as a “non-secure” device. Use the instructions below to include or exclude HS-MS100+ to/from your Z-Wave network.

Secure Inclusion (recommended if your home controller supports “S0” or “S2” Z-Wave encryption)
1. Put your home controller into Z-Wave ‘inclusion’ mode.
2. Press and hold the Z-Wave network button for 5 seconds, then release it. Wait for the inclusion process to finish.

Non-Secure Inclusion
1. Put your home controller into Z-Wave ‘inclusion’ mode.
2. Quickly press and release the Z-Wave network button once. Wait for the inclusion process to finish.

Exclusion
1. Put your home automation controller into Z-Wave ‘exclusion’ mode.
2. Quickly triple-press the Z-Wave network button. Wait for the exclusion process to finish.

Reset (Use this procedure to reset HS-MS100+ to factory settings when the Z-Wave controller is missing or inoperable).
1. Press and hold the Z-Wave button for 20 seconds. Release the button once the LED stops blinking and glows solidly.

Physical Installation
Install the magnetic mount in the location of your choice using the supplied double-stick tape or screw. Then attach the main unit to the mount and point the sensor dome (lens) toward the location you wish to monitor.

Motion Sensor Operation
HS-MS100+ is designed to transmit a Z-Wave command when motion is sensed. It will also transmit another command when motion has not been sensed for a period of time. This “motion timeout” interval is adjustable using a Z-Wave parameter (see page 2). The default setting of 600 seconds (10 minutes) should yield a good balance of performance and battery life.

Shock Sensor Operation
The shock sensor is designed to transmit a Z-Wave command when HS-MS100+ has been physically moved. This sensor is especially helpful in determining whether the unit has been removed from its mount or tampered with.

Battery Sensor Operation
The battery sensor is designed to report battery level with a Z-Wave command every 43200 seconds (12 hours). If desired, HomeSeer users can adjust this interval (0-2678400 seconds) by accessing the settings on the Z-Wave tab of the root device.
**ADVANCED CONFIGURATION** (accessible via the “Root device” in a HomeSeer System. Before adjusting these settings, tap the network button 4 times to wake the unit.)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td><strong>Motion Sensor Sensitivity</strong>&lt;br&gt;Available: 0-8, 0=motion sensor disabled, 1=low sensitivity, 8=high sensitivity, Default: 8</td>
</tr>
<tr>
<td>14</td>
<td><strong>Enable / Disable Basic Set Command</strong>&lt;br&gt;Available: 0=disable, 1=enable</td>
</tr>
<tr>
<td>15</td>
<td><strong>Set Value for Basic Set Command</strong>&lt;br&gt;Available: 0=Sends 255 value when motion sensed, sends 0 value when motions times out&lt;br&gt;Available: 1=Sends 0 value when motion sensed, sends 255 value when motions times out</td>
</tr>
<tr>
<td>17</td>
<td><strong>Enable Shock Sensor</strong>&lt;br&gt;Available: 0=disable, 1=enable</td>
</tr>
<tr>
<td>18</td>
<td><strong>Motion Timeout Interval</strong>&lt;br&gt;Available: 0-65525 (seconds)</td>
</tr>
<tr>
<td>32</td>
<td><strong>Set Value for Low Battery</strong>&lt;br&gt;Available: 0-50 (%)</td>
</tr>
</tbody>
</table>

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Operating Temp Range</th>
<th>0ºC to 40ºC</th>
<th>For Indoor Use</th>
<th>Power</th>
<th>Requires (1) CR123A Battery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z-Wave Frequency</td>
<td>908 MHz (US)</td>
<td>Up To 300 Ft line of sight</td>
<td>Dimensions</td>
<td>Sensor with Mount: 2 x 2 x 2 (inches)</td>
</tr>
<tr>
<td>Z-Wave Certification</td>
<td>Z-Wave Plus</td>
<td></td>
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**LIMITED WARRANTY**

HomeSeer Technologies, LLC will repair or replace, at its option, any part of the device, which proves to be defective in workmanship or material under normal use, in the USA except in the states of Alaska or Hawaii, for a period of one year from the date the device is purchased. During the warranty period, HomeSeer Technologies, LLC will repair and provide all parts necessary to correct such defects, free of charge, provided the device has been operated in accordance with the manufacturer's guidelines. The Customer will return the device to HomeSeer Technologies, LLC for testing and repair or replacement. Should you need service, during warranty period or beyond, contact HomeSeer to obtain return authorization before shipping your device to HomeSeer Technologies, LLC.