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.
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. Quickly triple-press the Z-Wave network button, then release it. 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.

Basic Command

Motion Sensor will send Basic Set to associated nodes when the PIR is triggered.

Notification command parameters

parameters	Value
Supported Notification Type	Home Security (07)
Supported Event	Motion Detection Unknown Location (08) Tampering Product covering removed (03)

a. When the PIR is triggered, send Motion Detection Unknown Location (08);

b. When PIR is released, send Previous Events cleared (00), Parameter 1 for Motion Detection Unknown Location (08)

c. When there is vibration / movement, send Tampering Product covering removed (03);

d. When there is vibration / movement, send Tampering Product covering removed (03);

e. Notification has a switch to Notification Status, and when it is 0xFF, there will be a Notification Report. When it is 0, there will be no Notification Report.

Z-Wave Association Information

HS-MS100+ supports two association groups.

Association allows   Motion sensor to control another Z-Wave device such as Smart Switch, Smart Dimmer, etc.

Motion sensor can max associate 5 nodes in each group.

Group 1 reports the motion detection and battery level.

Group 2 is assigned to send BASIC SET command.

Grouping Identifier	Max Nodes	Send Commands
Group 1	0x05	1. Notification Report. Sensor will send Notification Report to the associated nodes when **Motion Sensor** is removed or/and PIR is triggered. 2. Battery Report. **Motion Sensor** will send Battery Report when the battery level is low and the battery report's value is 0xFF. 3. Device Reset Locally Notification.
Group 2	0x05	1. Basic Set. **Motion Sensor** will send Basic Set to associated nodes when the PIR is triggered.

Notes

• If your home controller supports "S2" security encryption, the Leak Sensor may be added as a 'secure' device to your network.This will not effect the functionality of the unit.

ADVANCED CONFIGURATION

ADVANCED CONFIGURATION (accessible via the "Root device" in a HomeSeer System)

Parameter	Settings
12	**Motion Sensor Sensitivity** Available: 0-8, 0=motion sensor disabled, 1=low sensitivity, 8=high sensitivity, Default: 8 | Size: 1 byte
14	**Enable / Disable Basic Set Command** Available: 0=disable, 1=enable Default: 0 | Size: 1 byte
15	**Set Value for Basic Set Command** Available: 0=Sends 255 value when motion sensed, sends 0 value when motions times out Available: 1=Sends 0 value when motion sensed, sends 255 value when motions times out Default: 0 | Size: 1 byte
17	**Enable Shock Sensor** Available: 0=disable, 1=enable Default: 1 | Size: 1 byte
18	**Motion Timeout Interval** Available: 0-65525 (seconds) Default=600 | Size: 2 bytes
32	**Set Value for Low Battery** Available: 0-50 (%) Default=20 | Size: 1 byte

SPECIFICATIONS			
Operating Temp Range	0ºC to 40ºC	**Power**	Requires (1) CR123A Battery
Z-Wave Frequency | Range **Z-Wave Certification**	908 MHz (US) | Up To 300 Ft line of sight Z-Wave Plus	**Dimensions**	Sensor with Mount: 2 x 2 x 2 (inches)

• For more information, visit homeseer.com.

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.