

OPERATING MANUAL

MOTION SENSOR HKZW-MS02-V1.0

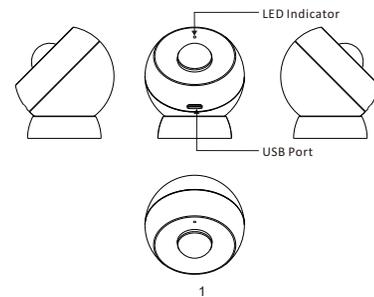
The Motion sensor is a Z-Wave based Sensor. It will send radio signals to associated Z-wave devices within its own Z-wave network when it detects IR changes. It is allowed to be installed on a shelf, in the corner of your room, anywhere on the wall and even in the ceiling.

Features list:

- (1) Latest Z-Wave protocol (500 series).
- (2) Supports security 0 and security 2 protected mode with AES-128 encryption.
- (3) Tamper alarm by vibration sensor.
- (4) Up to 1 year battery life.
- (5) Low battery alert.
- (6) Firmware OTA upgrade supported.

I. GENERAL INFORMATION ABOUT MOTION SENSOR

1. Product layout

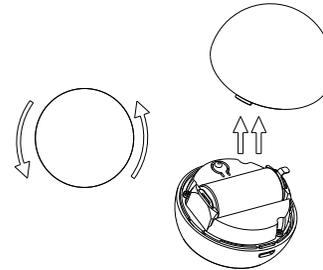


2. Specifications

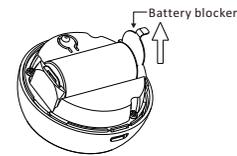
Power supply:	3V: 1*CR123A or USB
Storage environment:	-40 ~70°C
Operational temperature:	0~40°C
Radio protocol:	Z-Wave plus
Radio frequency:	868.42MHz (EU) 908.42MHz (US) 921.42MHz (ANZ)
Range:	More than 100m outdoors About 30m indoors
Dimensions:	50mm(Φ)
Working current:	About 50mA
Standby current:	About 55uA
Recommended installation height:	2m ~ 4m

II. INSTALLATION

1. Turn the cover counter-clockwise and open it.

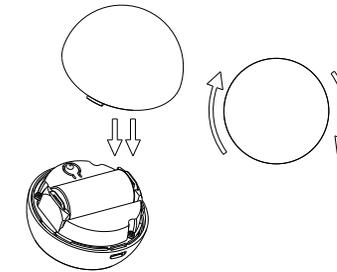


2. Remove the battery blocker.

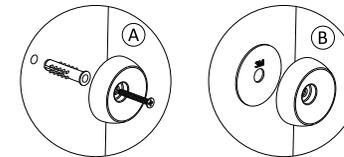


3. Add the device (see "Adding/removing the device" on page 6).

4. Close the cover and turn it clockwise.

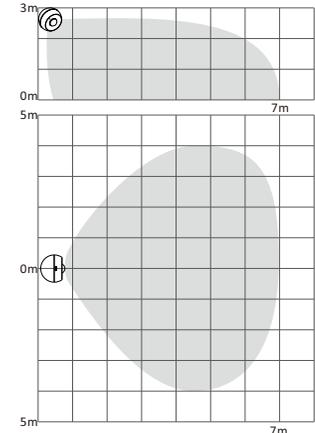


5. Place the sensor to anywhere you want.



III. INSTALLATION

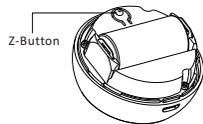
The Motion Sensor's motion detection area is shown as below. Actual range of the sensor can be influenced by environment conditions. Should false motion alarms be reported, check for any moving objects within the sensor's detection area, such as trees blowing in the wind, cars passing by, windmills. False motion alarms may be caused by moving masses of air and heat as well. If the device keeps on reporting false alarms, despite eliminating all of the above-mentioned factors, install the device in another place.



IV. ADDING/REMOVING THE DEVICE

Included as a non-secure device:

- 1) Open the cover.
- 2) Place the device within the direct range of your Z-Wave controller.
- 3) Set the main controller in Adding Mode (see the controller's manual).
- 4) Click the Z-button once or triple click the Z-button quickly, the LED indicator should blink fast.

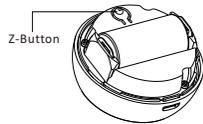


- 5) Wait for the adding process to end.

- 6) Successful adding will be confirmed by the Z-Wave controller's message.

Included as a secure device (S0 or S2)

- 1) Open the cover.
- 2) Place the device within the direct range of your Z-Wave controller.
- 3) Set the main controller in security add mode (see the controller's manual).
- 4) Press and hold the Z-button for more than 3 seconds and then release, the LED indicator should blink fast.



- 5) Wait for the adding process to end.
- 6) Successful adding will be confirmed by the Z-Wave controller's message.

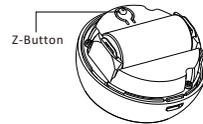


TIP:

If you want your motion sensor to be a security device that use secure/encrypted message to communicate in a Z-Wave network, then a security enabled Z-Wave controller is needed.

Removing

- 1) Open the cover.
- 2) Place the device within the direct range of your Z-Wave controller.
- 3) Set the main controller to Removing Mode (see the controller's manual).
- 4) Triple click the Z-button quickly, the LED indicator should blink fast.



- 5) Wait for the removing process to end.

- 6) Successful removing will be confirmed by the Z-Wave controller's message.

V. ASSOCIATION

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

VI. WAKE UP

Wake up interval:
Available settings: 0-2678400
Default setting: 0

Defining a time period by which the motion sensor sends a wake up notification command frame to communicate with the assigned device, update parameters, update software, detects battery level. Wake up interval sets to 0 disables the sending wake up notification command. In such configuration, manually wake the device up by pressing the Z-button.



NOTE:

60 seconds is the step of wake up interval time, which means motion sensor will send wake up notification command by a timeline that is multiple of 60 seconds. Setting examples:
0*59 = 0 second, the device will not wake up by itself.
60*119 = 60 seconds, the device will wake up every 60 seconds.

VII. RESETTING

Reset procedure clears the motion sensor's memory, including Z-Wave network controller information. To reset Motion sensor:
1) Power on the device,
2) Press and hold the Z button for more than 20 seconds,
3) After holding for 20 seconds, the LED indicator will keep on for 2 seconds, which means the reset is complete.
4) The reset feature works only when the device has been included into a Z-Wave network.



NOTE:

Use this procedure only in the event that the network primary controller is missing or otherwise inoperable.

VIII. ADVANCED CONFIGURATION

The Motion sensor offers a wide variety of advanced configuration settings. Below parameters can be accessed from main controllers configuration interface.

Parameter NO. 12 MOTION SENSOR'S SENSITIVITY

The higher the value, the more sensitive the PIR sensor.

0 - Disabled motion detection
Available settings: 1-8
Default setting: 8
Parameter size: 1 [byte]

Parameter No.14 ENABLE/DISABLE BASIC SET COMMAND

The Motion sensor can send BASIC SET command to nodes associated with group 2 when motion is triggered.

0 - Disable.
1 - Enable.
Default setting: 0
Parameter size: 1 [byte]

Parameter No.15 VALUE OF THE BASIC SET

The Motion Sensor can reverse its value of BASIC SET when motion is triggered.

0 - Send BASIC SET VALUE = 255 to nodes associated with group 2 when motion alarm is triggered.
Send BASIC SET VALUE = 0 to nodes associated with group 2 when motion alarm is canceled.
1 - Send BASIC SET VALUE = 0 to nodes associated with group 2 when motion alarm is triggered.
Send BASIC SET VALUE = 255 to nodes associated with group 2 when motion alarm is canceled.

Default setting: 0
Parameter size: 1[byte]

Parameter No.17 ENABLE/DISABLE SHOCK ALARM

0 - Disable.
1 - Enable.

Default setting: 0
Parameter size: 1[byte]

Parameter No.18 MOTION ALARM CANCELLATION DELAY

The Motion alarm will be cancelled in the main controller and the associated devices after 3 seconds, the alarm cancellation can be delay by this parameter. Any motion detected during the cancellation delay time countdown will result in the countdown being restarted.

Available settings: 0-65535 (seconds)
Default setting: 0 (seconds)
Parameter size: 2[byte]

Parameter No.32 LEVEL OF LOW BATTERY

Define a battery level as the "low battery".

Available settings: 10-50 (10-50%)
Default setting: 20 (20%)
Parameter size: 1[byte]

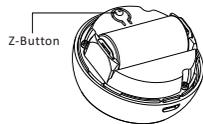
IX. FCC NOTICE

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

IV. ADDING/REMOVING THE DEVICE

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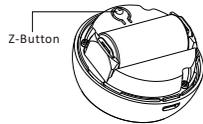


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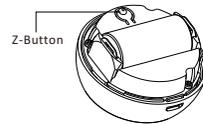


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