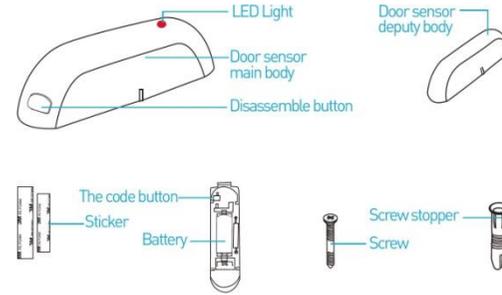# DOOR/WINDOW SENSOR

## User Manual

**Thank you for your support!**

Please read the user manual carefully before operating the device. Please keep the user manual for future reference.



### Product Introduction

The door/window sensor is an intelligent security equipment that can transmit through a Z-Wave network and radio waves. In the Z-Wave network communication, the door/window sensor can be connected to any Z-Wave controller. The door/window sensor can send messages to the Z-Wave controller and realize association with other devices.

In different countries or areas, the radio frequency may be different.

Each door/window sensor has a unique ID code. To add or remove a door/window sensor to / from a controller place it in the Z-Wave network range of the controller. Then you can easily find the door/window sensor through the device ID code. In the communication with the Z-Wave controller, the door/window sensor can only send messages to Z-Wave controller, but cannot receive any messages. When an alarm is triggered, the door/window sensor will send messages to the controller and the Z-Wave controller can display the current status of the door/window sensor. At the same time, the door/window sensor can realize associations with other devices through the Z-Wave controller. The door/window sensor is battery powered, small and easy to install on a door or window. When the door or the window is opened, the door/window sensor will be triggered, and through the association with other devices works to realize the goal of increased safety protection.

### Technical Parameters

- Power supply:           1x CR2   (3V)
- Battery life:             ~ 1 year
- Radio Protocol:         Z-Wave
- Compatible with:        Z-Wave 300 series and 500 series
- Radio Frequency:        868.4 MHz EU; 908.4 MHz US; 921.4 MHz ANZ; 869.2 MHz RU
- Wireless range:         up to 50 m outdoor, up to 30 m indoor
- Standby current:        2 µA
- Operating temperature:  0 - 40 °C
- Storage temperature:    0 - 60 °C
- Size    Main body (L x W x H):        71 x 20 x 22 mm
            Deputy body (L x W x H):      40 x 11 x 11 mm

### Technical Information

- Installed on a door or a window
- Battery powered
- Easy installation with screws or sticker
- Associate with other devices through a Z-Wave controller
- Compatible with any Z-Wave network

### Product Configuration



### Items List

- Door/window sensor main body        1 piece
- Door/window sensor deputy body       1 piece
- Battery CR2                   1 pieces
- Screw / Screw stopper             4 pieces each

- Sticker (double-side adhesive tape)     2 pieces
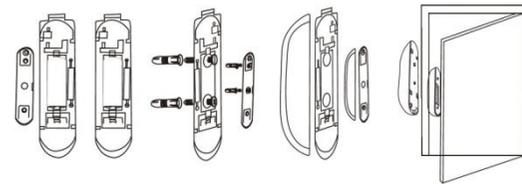- User manual                   1 piece

### Installation Steps

- Door/window sensor Installation
- Battery Installation

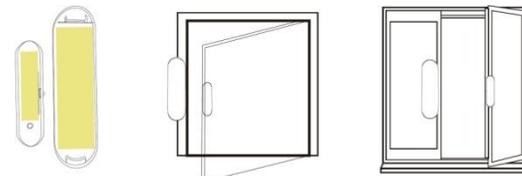### Door/window sensor Installation

**Option One**

Disassemble the main body and take out the battery. Fix the main body on the door/window frame with screws.

Disassemble the deputy body and fix it also with screws to the corresponding door/window position.
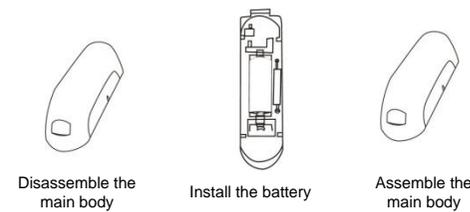


**Option Two**

Put the stickers (double-side adhesive tapes) on the bottom of both parts of the door/window sensor and fix them both accordingly.



**NOTE:** When installing the door/window sensor, the deputy body must be installed on the bulge side (marked with a groove) of the main body.

### Battery Installation



Disassemble the main body     Install the battery     Assemble the main body

### Battery Usage Tips

The battery life of the door/window sensor is approximately 1 year. The current battery level can be displayed in the Z-Wave controller. A red LED means the battery needs replacing and an app would receive a message "power level low, please replace the battery" from the controller. To avoid a false alarm, please disconnect the association of the door/window sensor with other devices, before replacing the battery.

**NOTE:** The door/window sensor is battery powered. Please use batteries in a correct way to avoid explosion. Dispose of batteries properly. For handling batteries please refer to environmental laws.

### Tips

1. When installing the door/window sensor, the distance between the main body and the deputy body should be less than 2 cm when the door/window is closed.

2. When the door/window is closed, that is to say the distance between the main body of the door/window sensor and deputy body is less than 2 cm, an app would display "door/window is closed".

3. When the door/window is opened, that is to say the distance between the main body of the door/window sensor and deputy body is more than 2 cm, an app would display "door/window is open".

   Through a controller, the door/window sensor can associate with an IP camera to take pictures, record video and/or siren an alarm.

4. Make sure the door/window sensor is placed in the Z-Wave network range of the controller.

### The status of the LED

1. When the door/window sensor is triggered, the LED flashes the red color 1 time.

2. When the door/window sensor is installed with a battery, the LED flashes the red color 5 times.

3. Add or remove of the door/window sensor to / from a Z-Wave network by quickly pressing the code button 3 times, the LED flashes the red color 5 times.

4. Press and hold the code button for 10-15 s, then the door/window sensor is restored to factory default settings. Meanwhile, the LED flashes the red color 5 times on and off alternately.

5. In the normal state the LED is "off".

### Add the door/window sensor to a Z-Wave network

The door/window sensor can be included to a Z-Wave network by using the code button.

1. Disassemble the main body by pressing the disassemble button and insert the battery. Please do not operate the code button within the first 20 s after inserting the battery. Make sure the device is located within the direct range of the Z-Wave controller.

2. Set the controller into the Add (inclusion) mode (refer to the controller user manual).

3. Press the code button of the door/window sensor quickly 3 times and it will enter the Add (inclusion) mode. The LED flashes red 5 times on and off alternately.

4. The door/window sensor will be detected and included into the Z-Wave network.

5. Wait for the controller to configure the door/window sensor.

### Remove the door/window sensor from the Z-Wave Network

The door/window sensor can be removed from the Z-Wave network by using the code button.

1. Disassemble the main body by pressing the disassemble button and make sure door/window sensor is powered on. Make sure the device is located within the direct range of the Z-Wave controller.

2. Set the controller into the Remove (exclusion) mode (refer to the controller user manual).

3. Press the code button of the door/window sensor quickly 3 times and it will enter the Remove (exclusion) mode. The LED flashes red 5 times on and off alternately.

4. Wait for controller to remove (delete) the door/window sensor.

### Restore the door/window sensor to factory default settings

The reset procedure will delete all information of the Z-Wave network and on the Z-Wave controller and restore the door/window sensor to factory default settings.

1. Disassemble the main body by pressing the disassemble button and make sure door/window sensor is powered on.

2. Make sure the device is located within the direct range of the controller.

3. Press and hold the code button for 10-15 s. The LED flashes red 5 times on and off alternately.

4. Release the button.

**NOTE:** During the process of resetting please make sure the door/window sensor is powered all the time.

### Associations

(Association Command Class Version 2)

This sensor supports 4 association groups. Each group supports max 5 associated nodes. This has the effect that when the sensor is triggered, all devices associated with it will receive relevant reports. Through association, the door/window sensor can control other Z-Wave devices, e.g. a siren alarm, a wall plug, a lamp etc.

**GROUP 1** is a lifeline service assigned to the sensor status (door/window detection) – Open / Close. It enables the sensor to send reports and readings to the Z-Wave controller whenever the sensor is triggered. This group supports:

- NOTIFICATION_REPORT
- BATTERY_REPORT
- SENSOR_BINARY_REPORT
- DEVICE_RESET_LOCALLY_NOTIFICATION

**GROUP 2** allows sending control commands to associated devices such as relay module, lighting, etc. This association group can be configured through the advanced parameters no. 1 and 2. This group supports:

- BASIC_SET

**GROUP 3** allows for sending a notification to associated devices in this group. This group supports:

- NOTIFICATION_REPORT

**GROUP 4** allows for sending a notification to associated devices in this group. This group supports:

- SENSOR_BINARY_REPORT

### Advanced Configuration

**1. Configure OFF Delay**

This configuration parameter can be used to adjust the amount of delay before the OFF command is transmitted. This parameter can be configured with the value of 0 through 65535, where 0 means send OFF command immediately and 65535 means 65535 seconds of delay.

| Function: | On/Off Duration |
|---|---|
| Parameter Number: | 1 |
| Parameter Size: | 2 Bytes |
| Available Settings: | 0 - 65535 (in seconds, each 1 s) |
| Default Setting: | 0 (s) |

**2. Basic Set Level**

The Basic Set Command is sent if it contains a value when the door/window is opened or closed. The Z-Wave controller takes the value into account if, for example, a lamp module receives the Basic Set Command and the value is decisive for how bright the dimming value of the lamp module should be.

| Function: | Basic Set |
|---|---|
| Parameter Number: | 2 |
| Parameter Size: | 1 Byte |
| Available Settings: | 0, 1 - 99 or 255 |

- *0 – OFF, Alarm cancelling or turning a device off;*
- *1 - 99 or 255 – ON (Binary Switch Device); Dim Level (Multilevel Switch Device)*

| Default Setting: | 255 |
|---|---|

**Notification Command Class**

Once the sensor detects that the door/window is being opened, it sends a NOTIFICATION_REPORT and a SENSOR_BINARY_REPORT to the nodes of the lifeline to inform there is an intrusion event.

When the door/window is being closed, the NOTIFICATION_REPORT and the SENSOR_BINARY_REPORT will be sent again to the nodes in the lifeline.

For compatibility with the Z-Wave Series 300 the Binary Sensor Command Class is also realized.

**Notification Report Command:**

*Event Present:*

| Command Class: | COMMAND_CLASS_NOTIFICATION |
|---|---|
| Command: | NOTIFICATION_REPORT |
| Notification Type: | NOTIFICATION_TYPE_ACCESS_CONTROL |
| Event: | NOTIFICATION_EVENT_ACCESS_CONTROL_WINDOW_OR_DOOR_IS_OPENED |

*Event Clear:*

| Command Class: | COMMAND_CLASS_NOTIFICATION |
|---|---|
| Command: | NOTIFICATION_REPORT |
| Notification Type: | NOTIFICATION_TYPE_ACCESS_CONTROL |
| Event: | NOTIFICATION_EVENT_ACCESS_CONTROL_WINDOW_OR_DOOR_IS_CLOSED |

**Binary Sensor Report Command:**

*Event Present:*

| Command Class: | COMMAND_CLASS_SENSOR_BINARY |
|---|---|
| Command: | SENSOR_BINARY_REPORT |
| Sensor Type: | SENSOR_DOOR_WINDOW |
| Value: | 0xFF |

*Event Clear:*

| Command Class: | COMMAND_CLASS_SENSOR_BINARY |
|---|---|
| Command: | SENSOR_BINARY_REPORT |
| Sensor Type: | SENSOR_DOOR_WINDOW |
| Value: | 0x00 |

**Wakeup Command Class**

The door/window sensor stays in sleep state for the majority of time in order to conserve the battery.

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The minimum wakeup interval is 300 s (5 minutes)
The maximum wakeup interval is 16'777'200 s (about 194 days)

Allowed min. step among each wakeup interval is 60 seconds, such as 360 s, 420 s, 480 s …

**NOTE:** The default value is 12 hours. The larger the value is, the greater the battery life is.

**Battery Check Command**

Users can enquire the battery status of the door/window sensor by sending the BATTERY_GET command. Once the door/window sensor receives the command, it will return the BATTERY_REPORT command.

The door/window sensor will send a BATTERY_LEVEL = 0xFF command to the Z-Wave controller to inform that it needs a new battery; otherwise the BATTERY_LEVEL value range is 0% to 100%.

**Command Classes**

The door/window sensor supports the Command Classes as below:

- COMMAND_CLASS_ZWAVEPLUS_INFO (V2)
- COMMAND_CLASS_VERSION (V2)
- COMMAND_CLASS_MANUFACTURER_SPECIFIC (V2)

- COMMAND_CLASS_DEVICE_RESET_LOCALLY (V1)
- COMMAND_CLASS_POWERLEVEL (V1)
- COMMAND_CLASS_BATTERY (V1)
- COMMAND_CLASS_ASSOCIATION (V2)
- COMMAND_CLASS_ASSOCIATION_GRP_INFO (V1)
- COMMAND_CLASS_WAKE_UP (V2)
- COMMAND_CLASS_NOTIFICATION (V4)
- COMMAND_CLASS_SENSOR_BINARY (V2)
- COMMAND_CLASS_CONFIGURATION (V1)

**Guarantee**

1. The Guarantee is provided by our company (hereinafter "Manufacturer")

2. The Manufacturer is responsible for equipment malfunction resulting from physical defects (manufacturing or material) for 12 months from the date of its purchasing.

3. During the Guarantee period, the Manufacturer shall repair or replace any defects, free of charge.

4. In special cases, when the device cannot be replaced with the device of the same type (e.g. the device is no longer available in the commercial offer), the Manufacturer may replace it with a different device which has similar technical parameters as the faulty one. Such activity shall be considered as fulfilling the obligations of the Manufacturer. The Manufacturer shall not refund money paid for the device.

5. The guarantee shall not cover:

- mechanical damages (cracks, fractures, cuts, abrasions, physical deformations caused by impact, falling or dropping the device or other objects, improper use or not observing the operating manual)
- damages resulting from external causes as e.g. flood, storm, fire, lightning, natural disasters, earthquakes, war, civil disturbance, force majeure, unforeseen accidents, theft, water damage, liquid leakage, battery spill, weather conditions, sunlight, sand, moisture, high or low temperature, air pollution
- damages caused by malfunctioning software, attack of a computer virus or by failure to update the software as recommended by the Manufacturer.

**Disposing and recycling your product**

When the device reaches its end of life, dispose it according to your local environmental laws, guidelines and regulations. The WEEE symbol on the product or the packaging means that according to local laws and regulations it needs to be disposed of separately from household waste.

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Once this product has reached the end of its life, please take it to a collection point (recycle facility) designated by your local authorities. By recycling the product and its packaging you help to conserve the environment and protect human health.

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