



## **Installation & Operation Manual**

**HSC-ZD2102US-5**

**Wireless Door/ Window Sensor**

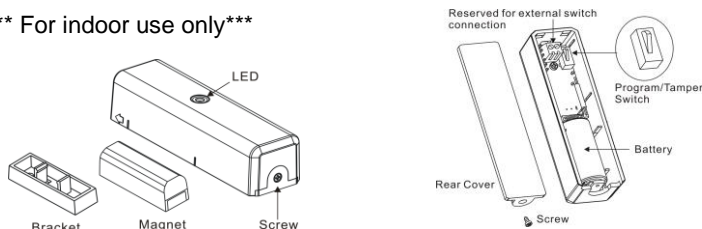
## Introduction

Thanks for choosing the Horus wireless door/window sensor of the home security device. This sensor is a Z-Wave™ enabled device (interoperable, two-way RF mesh networking technology) and is fully compatible with any Z-Wave™ enabled network and it's security framework. Every mains powered Z-Wave enabled device acts as a signal repeater and multiple devices result in more possible transmission routes which helps eliminate "RF dead-spots"

Z-Wave™ enabled devices displaying the Z-Wave™ logo can also be used with it regardless of the manufacturer, and ours can also be used in other manufacturer's Z-Wave™ enabled networks. This sensor monitors door/window and send Z-Wave™ signal when door or window is opened and closed. When the device is secure included into Z-Wave network, above communication will be encrypted.

## Product Description and Specification

\*\*\* For indoor use only\*\*\*



Specification:	Package Content:
Protocol: Z-Wave™	1pc HSC-ZD2102US-5 sensor
Frequency Range:	1pc Bracket for Contact Magnet
908.42MHz (HSC-ZD2102US-5)	1pc Magnet
	2pcs Adhesive tape for Magnet / sensor
Operating Range: Up to 100 feet line of sight	1pc CR123A Lithium Battery
Operating Temp.: -15°C~ 60°C (5°F ~140°F)	4pcs Screws for bracket/ sensor
Battery: Panasonic CR123A * 1PC	1pc Installation & Operation manual

Z-Wave Command Classes:

COMMAND\_CLASS\_ASSOCIATION\_GRP\_INFO  
 COMMAND\_CLASS\_ASSOCIATION\_V2  
 COMMAND\_CLASS\_BATTERY  
 COMMAND\_CLASS\_CONFIGURATION  
 COMMAND\_CLASS\_DEVICE\_RESET\_LOCALLY

COMMAND\_CLASS\_FIRMWARE\_UPDATE\_MD\_V2  
 COMMAND\_CLASS\_MANUFACTURER\_SPECIFIC\_V2  
 COMMAND\_CLASS\_NOTIFICATION\_V4 (Mapping COMMAND\_CLASS\_BASIC)  
 COMMAND\_CLASS\_POWERLEVEL  
 COMMAND\_CLASS\_SECURITY  
 COMMAND\_CLASS\_VERSION\_V2  
 COMMAND\_CLASS\_WAKE\_UP\_V2  
 COMMAND\_CLASS\_ZWAVEPLUS\_INFO\_V2

### Notification V4 Type:

	SWITCH TYPE	STATUS
Notification Type	Reed Switch External Switch (When Enable)	0x06
	Tamper Switch	0x07
Event	Reed Switch External Switch (When Enable)	Close: 0x17, Open: 0x16
	Tamper Switch	Close:0x00; Open:0x03

### V1 Alarm:

	Switch Type	Status
Alarm Type	Reed Switch & External Switch (When Enable)	0x06
	Tamper Switch	0x07
Alarm Level	Close: 0x00; Open 0xFF	

### Configuration - External Switch

Parameter Number: 0x01

Size: 1

	VALUE
ENABLE	0xFF
DISABLE (Default)	0x00

## Installation

Notice: If you are installing the entire Z-Wave™ system for the first time, please refer to the installation guide of Z-Wave™ Interface Controller before installing HSC-ZD2102US-5.

1. Unscrew the screw fastening the rear cover and slide the rear cover down.
2. Using the screws or adhesive tape to affix the rear cover on the frame along the opening edge of door / window.
3. Insert a CR123A battery into the battery compartment, LED will start to flash slowly and HSC-ZD2102US-5 will go to sleep if user didn't press the tamper switch within 10 seconds or HSC-ZD2102US-5 will send the NIF.

LED Status for Z-Wave Network:

\* After power on, the red LED will flash if the HSC-ZD2102US-5 has not been included yet.

\* After power on, the red LED will go on if the HSC-ZD2102US-5 has been included. (The LED will turn on lasting 10 seconds then go off and go to sleep mode.)

4. For **"Inclusion"** in (adding to) a network: Put the Z-Wave™ Interface Controller into "inclusion" mode, and following its instruction to add the HSC-ZD2102US-5 to your controller. To get in the "inclusion" mode. Quick press the program switch of HSC-ZD2102US-5 for sending the NIF. After sending NIF, Z-Wave will send the auto inclusion; otherwise, HSC-ZD2102US-5 will go to sleep after 15 seconds.

For **"Exclusion"** from (removing from) a network: Put the Z-Wave™ Interface Controller into "exclusion" mode, and following its instruction to delete the HSC-ZD2102US-5 from your controller. Quick press the program switch of HSC-ZD2102US-5 to be excluded.

**Note:** All user and network settings will be cleared and the device reset to factory defaults when the device is excluded.

6. Slide back the rear cover and screw fastening with the front cover, the LED should go off.
7. Fix the Magnet by using the adhesive tape or fixing screws, locate the Magnet close to the HSC-ZD2102US-5 sensor the distance between these two devices should be in 1.9cm.
8. External Switch: If your window needs two sensors for fully monitoring. You could use an external switch to connect with the HSC-ZD2102US-5 for extending detection. The HSC-ZD2102US-5 has 2 normally closed contact terminals. These can be used for additional external switch wired contacts. (Remark: Either reed switch or external switch has been opened means "open", but, both of them should be closed at the same time means "close".)

9. **Awake Mode:**

It will be triggering after opening the rear cover, also the red LED will keep on lasting 10 seconds and HSC-ZD2102US-5 will send "Wake Up Notification" after 10 seconds.

If HSC-ZD2102US-5 received "Wake Up No More Information" command then the red LED will go off or it will wait 10 seconds then go off. It will proceed all the commands after sending the "Wake Up Notification"

10. **Auto Wake Up:**

Use "Wake Up" command to set up the awakening time and send the wake up notification to controller. User can use command to change the auto wake up from 10 minutes to 1 week, Interval increment is 3 minutes.

11. **Battery Capacity Detection:**

- \* Use "Battery Get" command to have the battery capacity back in %
- \* It will detect the battery capacity automatically
- \* Low Battery Auto Report (low battery is set as 2.6+/-0.1 Voltage, detects every 2 hours)

12. **Association:**

- \* Support one group with 5 nodes
- \* Support grouping identifier: 1
- \* All triggering reports & low voltage report will be sent to the associated nodes

13. **Power Level Control:**

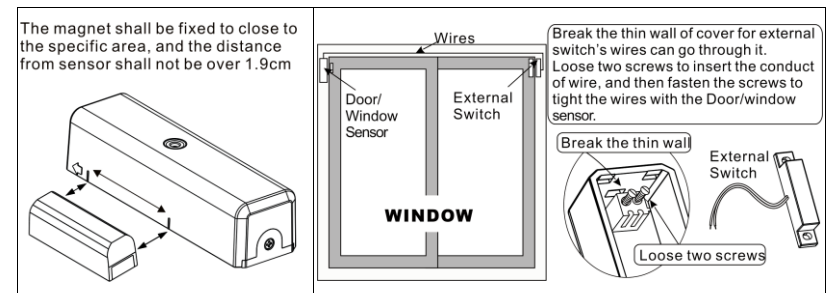
- \* Use "Power Level Set" to set up the RF strength
- \* Use "Power Level Test Node Set" to test specific node's RF sensitivity

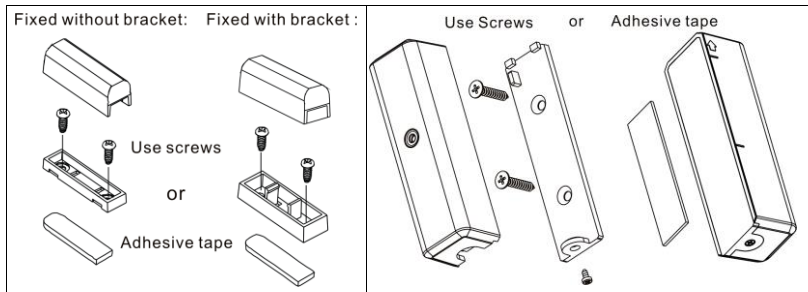
14. Support Explorer Frame Function

15. Support OTA Firmware update from controller. Please refer to your controller manual. Once OTA function success, **please make sure to exclude the device & include again before use the device.**

16. All the rest commands depend on Z-Wave standard

17. **Factory Default Reset:** Trigger the rear cover switch to send the Alarm Report and trigger the reed switch (close & open) 5 times in 10 seconds, ZD2102 will send the "Device Reset Locally Notification" command and reset to the factory default. (Remark: This is to be used only in the case of primary controller being inoperable or otherwise unavailable.)





## Operation

1. Opening/Closing the door/window to separate the magnet from the sensor will send signal to any association nodes according to the Status/Signal table on page 2 and the LED will flash once.
2. Normal operation, the LED will not light.
3. If the cover of sensor is removed, the tamper switch will send signal according to the Status/Signal table, and the LED will go solid and HSC-ZD2102US-5 will send "Wake Up Notification" after 10 seconds. If HSC-ZD2102US-5 received "Wake Up No More Information" command, the red LED will go off. If HSC-ZD2102US-5 did not receive "Wake Up No More Information" command after 10 seconds the red LED will go off.
4. HSC-ZD2102US-5 will send signal according to the status / signal table after closing the rear cover back 2 seconds..
5. Security enabled: Z-Wave controller must be used to fully utilize the product.

## Federal Communications Commission Statement

This equipment has been followed to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one of the following measures:

Reorient or relocate the receiving antenna,

Increase the separation between the equipment and receiver,

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

## Limited Warranty

Horus Guarantees that every wireless door/window sensor is free from physical defects in material and workmanship under normal use for one year from the date of purchase. If the product proves defective during this one-year warranty period, Horus will repair or replace it free of charge. This warranty does not apply to: (1) damage to units caused by accident, dropping or abuse in handling, or any negligent use; (2) units which have been subject to unauthorized repair, taken apart, or otherwise modified; (3) units not used in accordance with instruction; (4) damages exceeding the cost of the product; (5) transit damage, initial installation costs, removal cost, or reinstallation cost. For information on additional devices, please visit us at [www.horus-sc.com](http://www.horus-sc.com)