Operating Voltage	1* CR123A
Range	Minimum 40m in door 70m outdoor line of sight
Operating Temperature	0℃~40℃
Frequency Range	868.4MHz(EU) 908.42MHz(US) 921.42MHz(AUS)

Specifications subject to change without notice due to continuing product.

Warning:

1.Do not dispose of electrical appliances as unsorted municipal waste , use separate collection facilities.

2.Contact your local government for information regarding the collection systems available.

3.If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.

4.When replacing old appliances with new one, the retailer is legally obligated to take back your old appliance for disposal at least for free of charge.

TSM10-V1.0-20170318

Slim sensor TSM10

The slim sensor TSM10 has door/window sensor based on Z-Wave™ technology.

Z-Wave™ is a wireless communication protocol designed for home automation, specially to remotely control applications in residential and light commercial environments. The technology uses a low-power RF radio embedded or retrofitted into home electronics devices and systems such as home access control, entertainment systems and household appliances.

This device is designed to work with all other Z-Wave™ enabled devices in a home control network. The device adopt the Z-Wave™ 500 series chip, when your Z-Wave™ network system is all made by Z-Wave™ 500 series devices.

．Better RF range, improve about 10 meters in indoor.

．Support 100Kbps transmit speed, speed up communication.

Adding to Z-Wave™ Network

There is one tamper key in the device. It can inclusion, exclusion, reset or association from Z-Wave™ network. In the first time, add the device into the Z-Wave™ network.

First, make sure the primary controller is in the inclusion mode. And then power on the device .The device will auto start the NWI (Network Wide Inclusion) mode. And it should included in 30 seconds. You will see the LED light ON one second.

Function	Description	LED Indication
No node ID	The Z-Wave controller does not allocate a node ID to the Switch	1-second on, 1-second off
Add	1.Have Z-Wave controller entered inclusion mode.	Press on, for off Press off, for on
	2.Pressing On/Off button three times within 1.5 seconds will enter inclusion mode.	
Remove	1.Have Z-Wave controller entered inclusion mode.	Press on, for off Press off, for on
	2.Pressing On/Off button three times within 1.5 seconds will enter exclusion mode.	
	Node ID has been excluded.	1-second on, 1-second off
Reset	1.Pressing On/Off button three times within 1.5 seconds will enter reset mode.	Press on, for on Press off, for off
	2.Within 5 second,press On/Off button again for 1 seconds until LED is off	
	3.IDs are excluded.	
Association	1.Have Z-Wave Controller entered association mode. Or Pressing On/Off button three times within 1.5 seconds will enter association mode	Press on, for on Press off, for off
	2. There are two groups in the sensor. (it can associate max five devices).	

※ Including a node ID allocated by Z-Wave controller means Add. Excluding anode ID allocated by Z-Wave controller means Remove.
※ Failed or success in including/excluding the node ID can be viewed from the Z-Wave controller.
※ Association:it can be associated by Z-Wave devices with association
※ Use the"Reset" procedure only in the event that the network primary controller is missing or otherwise inoperable

※ The group identifier: "Group 1".
   Association group info report command class
   Group Profile: General Lifeline (Profile MSB = 0, Profile LSB = 1)
   Group name: Lifeline
※ The group identifier: "Group 2".
   Association group info report command class
   Group Profile: Control Key01 (Profile MSB = 0x20, Profile LSB = 1)
   Group name: lightcontrol

Z-Wave™ Notification

After the device adding to the network, it will wake-up twice per day in default. When it wake-up it will broadcast the "Wake Up Notification" message to the network, and wake-up 10 seconds for receive thesetting commands.The wake-up interval minimum setting is 1 hour, and maximum setting is 7 days. And the interval step is 1 hour.

*Door/Window Report:
When the Door/Window state changed, the device will unsolicited to send the "Sensor Binary Report" to the nodes in the group 1.
Sensor Type: Door/Window (0x0A)
Sensor Value: 0x00 is closed, 0xFF is opened.
*Timing Report:
Beside the event triggered could report message, the device also support the timing unso -licited report of the status.
• Door/window state report: Every 12 hours report once in default.It could be changed by configuration setting NO. 3.

Power Up Procedure

*Battery Power Check
When the power up, the device will detect the power level of the battery immediately. If the power level is too low, the LED will continue flash about 3 seconds. Please change another new battery.

*NWI

When the power on, the device will check is it already adding to the network? If doesn't, it will auto start the NWI mode. The LED will flash in every second and continue 30 seconds. Until timeout or the device successful to inclusion by controller.

*Wake

When the power on, the device will wake about 10 seconds. In this duration, the contr -oller can communicate with the device. Normally the device is always sleeping to save the battery energy.

Operation Mode

There are three operation modes of the device. The user can choosing the suitable mode for application.

"Test Mode" is for the user test the sensor function when installation.

"Home Automation Mode" focus in automatic to control the lighting equipment. For conven- ience and save energy.

"Security Mode" focus in surveillance, warning.

When the event triggered, normally the LED won't indicated, unless the battery is in the low level, the LED will flash once. And in the "Test Mode" the LED also will light ON one second.

When the event triggered, the device will report the messages to the nodes in the group 1.

In the Home Automation Mode . When the event triggered,the device will emit the signal to turn ON the lighting equipment, those nodes in the group 2.And delay a while to turn OFF the lighting equipment. The delay time is setting by the configuration setting NO. 1.If the NO.5 configuration setting is 0,when the door/window close will emit the signal to turn off the equipment in the group 2.

Note: When the tamper key of the back side is in the released state,the device always in the "Test Mode".

Test Mode

Security Mode
Home Automation Mode

Light Control
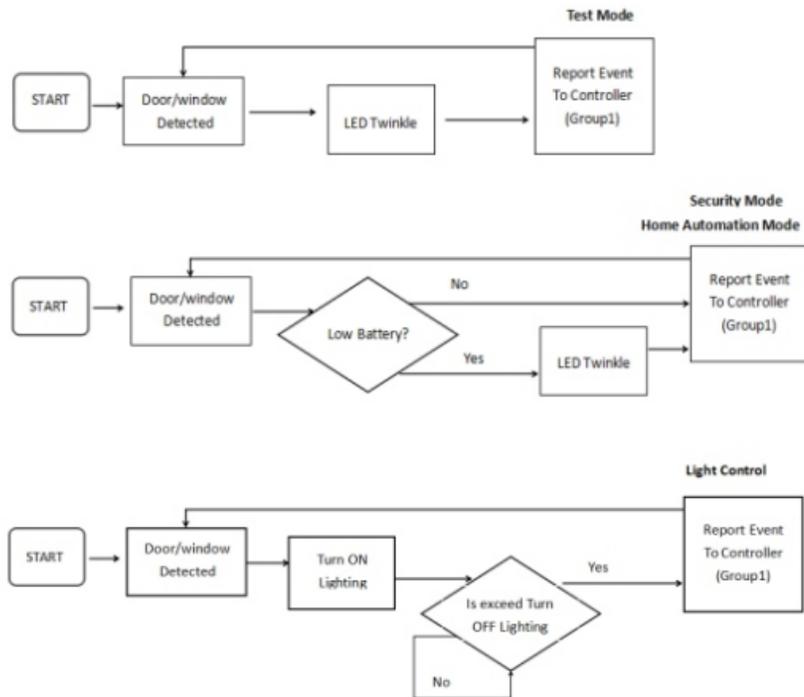
Battery Installation

When the device report the low battery message. The user should replace the battery to new one.The way to open the front cover please follow below steps.
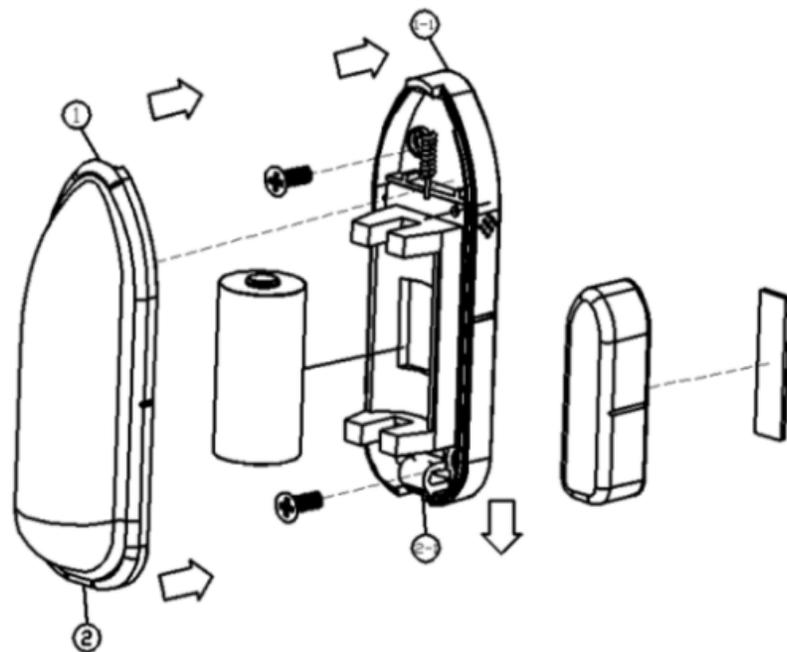 1. Using a tool like (1) to press 1-1 till hear a click sound
 2. Hold the front cover and pull back
 3. Hold the front cover and pull up
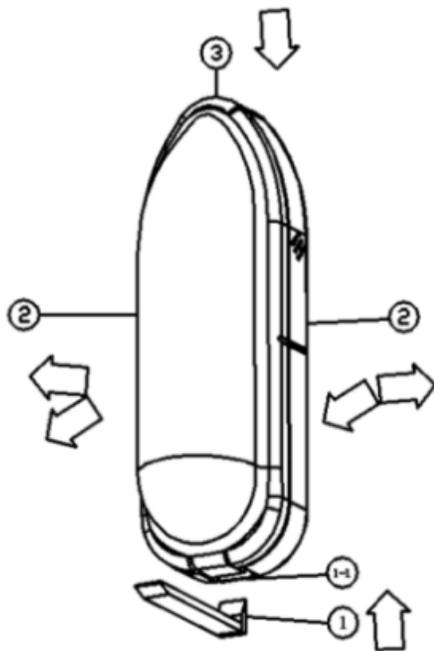
Replace the new battery and install the cover back.
 1. Put the front cover bottom to 1-1, and press down.
 2. Push the front cover top to 2-1.

Installation

1. In the first time, add the device into the Z-WaveTM network. First,
make sure the primary controller is in the inclusion mode. And then power on the device.The device will auto start the NWI (Network Wide Inclusion) mode. And it should be included in 30 seconds. You will see the LED light ON one second.

2.Do not close the tamper key ,so the sensor will enter the test mode, you may Test if installed position is good or not by this way.

3.After finish the test and decide to fix, mounting the sensor by using tape .This Will close the tamper key and let the sensor enter normal mode.
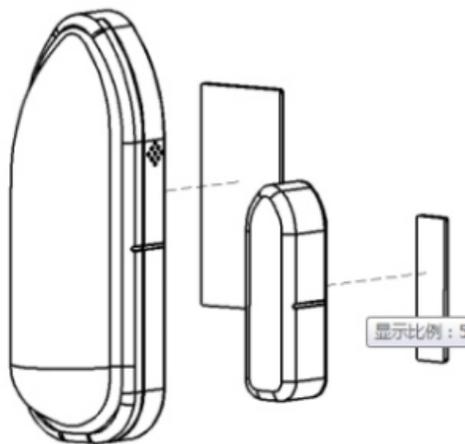
Z-Wave Configuration Settings

Notice:The data size of the configuration settings is 1.

NO	Function	Default	Valid Values	Description
1	Turn Off Light Time	3	3~127	After turn on the light, setting the delay time to turn off the light.10 seconds per tick, and minimum time is 30 seconds, default tick 3 (30 seconds).
2	Basic Set Level	255	1-99, 255	Setting the BASIC command value toturn on the light. The 255 means turn on the light. For dimmer equipment 1 to 99 means the light strength.
3	Auto report Time	12	1~168	The interval time for auto report the door/window state.1 hour per tick and minimum time is 1 hour, default tick is 12 (12 hours).
4	Operation Mode	1	1~2	1 means security mode, 2 means home automation mode.
5	Ingnore Magnetic Off	1	0~1	0 light control action with the door/win -dow close 1 ignore the door/window close

Z-Wave Supported Command Class

COMMAND_CLASS_CONFIGURATION
COMMAND_CLASS_VERSION
COMMAND_CLASS_SENSOR_BINARY_V2
COMMAND_CLASS_ASSOCIATION_V2
COMMAND_CLASS_MANUFACTURER_SPECIFIC_V2
COMMAND_CLASS_WAKE_UP_V2
COMMAND_CLASS_BATTERY
COMMAND_CLASS_BASIC