ZWAVE PSM11 Door/Window Sensor Instruction Manual

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ZWAVE PSM11 Door/Window Sensor

The door/window sensor PSM11 has a door/window, based on ZWaveTM technology.
It is the Z-WaveTM plus product, it supports the security, OTA… Those newest features of the Z-WaveTM technology. Z-WaveTM is a wireless communication protocol designed for home automation, specifically 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 lighting, home access control, entertainment systems, and household appliances. This product can be included and operated in any Z-WaveTM network with other Z-WaveTM certified devices from other manufacturers and/or other applications. All non-battery-operated nodes within the network will act as repeaters regardless of vendor to increase the reliability of the network.

The device adopts the Z-WaveTM 700 series chip, when your Z-WaveTM the network system is all made by Z-WaveTM 700 series devices. The network system will have the advantages as below.

- Concurrent multi-channel support reduces external interference.
- Better RF range, improve about 10 meters in indoor.
- Support 100 Kbps transmit speed, speed up communication.

Specification

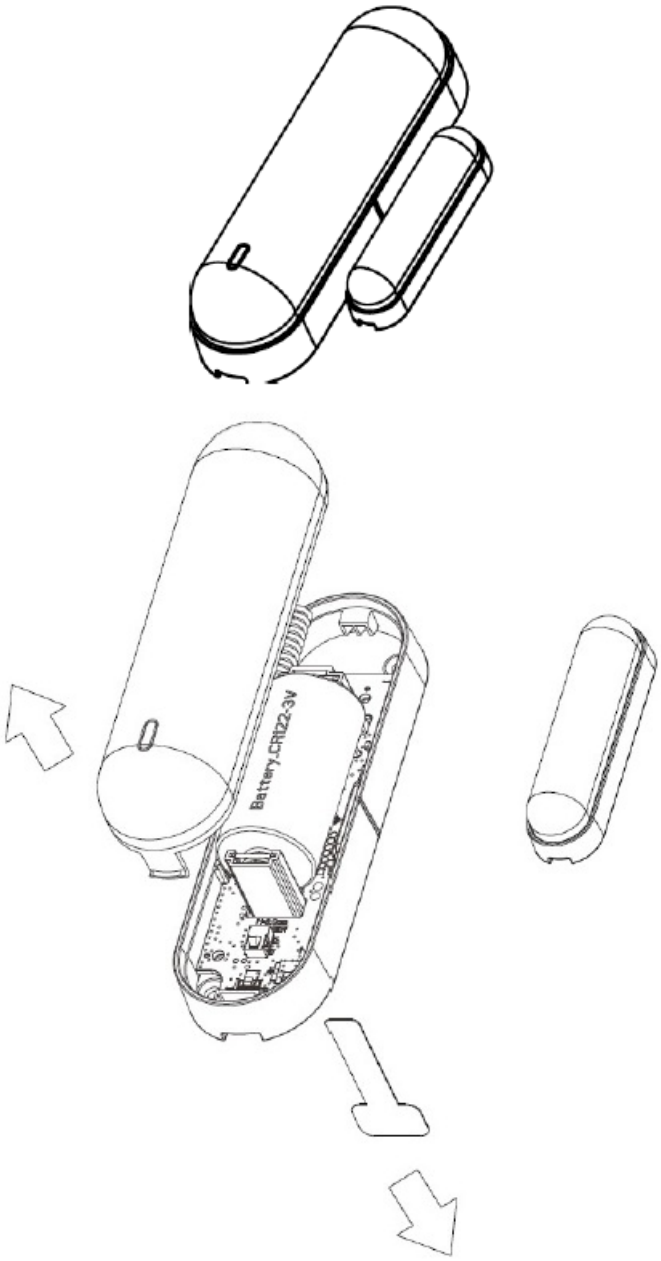
Power	3VDC (CR123A lithium battery)
Battery life	20 years
RF distance	Min. 40M indoor, 100M outdoor line of sight,
RF Frequency	868.40 MHz, 869.85 MHz(EU) 908.40 MHz, 916.00 MHz(US) 920.9MHz, 921.7MHz, 923.1MHz (TW/KR/Thai/SG)
RF Maximum Power	+10dBm (Peak), -10dBm (Average)
Function	door / window
Location	indoor use only
Operation temperature	-20oC ~ 50oC
Humidity	85%RH max
Dimension	Detector 85.87(L) x 24.97 (W) x 22(H)mm Magnet 45.91(L) x 12.08(W) x 11.5(H)mm
FCC ID	RHHPSM11

Specifications are subject to change and improvement without notice.
Indication of battery life : Alarm Report Window/Door: 60 times/Day, Auto Report: 4 times/Day, Auto Wake up 1 time/Day.

Symptom	Cause of Failure	Recommendation
The device can not join to Z-Wave ™ network	The device may in a Z- Wave™ network.	Exclude the device then include again.

For Instruction to **http://www.philio-tech.com**

Overview



CAUTION

- replacement of a battery with an incorrect type that can defeat a safeguard (for example, in the case of some lithium battery types);
- disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, which can result in an explosion;
- leaving a battery in an extremely high-temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas;
- a battery subjected to the extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas The marking information is located at the bottom of the apparatus.

Add to/Remove from Z-WaveTM Network
There are one tamper key in the backside of the device, It can add, remove, reset or associate from the Z-WaveTM network.
The first time, add the device to the Z-WaveTM network. First, make sure the primary controller is in the add mode. And then power on the device, just take out the insulation Mylar in the backside of the device. The device

will auto start the SmartStart Include mode.

Notice: Including a node ID allocated by Z-WaveTM Controller means “Add” or “Inclusion”. Excluding a node ID allocated by Z-WaveTM
Controller means “Remove” or “Exclusion”.

Function	**Description**
Add	1. Have Z-WaveTM Controller entered inclusion mode. 2. Pressing the tamper key three times within 1.5 seconds to enter the inclusion mode. 3. After add successful, the LED will light ON 1 second.
Remove	1. Have Z-WaveTM Controller entered exclusion mode. 2. Pressing tamper key three times within 1.5 seconds to enter the exclusion mode. 3. Node ID has been excluded.
Reset	***Notice: Use this procedure only in the event that the primary controller is lost or ot herwise inoperable.*** 1. Pressing tamper key four times within 1.5 seconds and do not release the tamper key in the 4th pressed, and the LED will light ON. 2. After 3 seconds the LED will turn OFF, after that within 2 seconds, release the tamper key. If successful, the LED will light ON one second.

	Otherwise, the LED will flash once. 3. IDs are excluded and all settings will reset to factory default.
SmartStart	1. Product has a DSK string, you can key in first five digit to increment SmartStart proc ess, or you can scan QR code. Ex: mydsk 10209-46687-52248-13629-04783-07465-15776-56519 2. SmartStart-enabled products can be added into a Z- Wave network by scanning the Z-Wave QR Code present on the product providing SmartStart inclusion. No further action i s required and the SmartStart product will be added automatically within 10 minutes of mi nutes On in the network vicinity. notice1:The QR code can be found on the device PSM11 or on the box.
Association	This machine provides two groups of nodes. Group 1 can set 1 Node. Group 2 can set 5 Nodes. Group 1 is called Lifeline the device will report: 1. Notification report 2. Device Reset Locally Notification 3. Battery Report 4. Indicator Report Group 2 is called the Basic set the device will report: 1. Basic Set
• Failed or successful in adding/removing the node ID can be viewed from Z-WaveTM Controller.	

Notice 1: Always RESET a Z-WaveTM device before trying to add it to a Z-WaveTM network

Z-WaveTM Notification
After the device adding to the network, it will wake up once 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 receiving the set commands.
The wake-up interval minimum setting is 30 minutes, and the maximum setting is 120 hours. And the interval step is 30 minutes. Press the tamper key once. The device will wake up in 10 seconds.

Z-WaveTM Message Report
By default, the device will use Notification Report to represent the tamper trigger and door/window trigger event.

Door / Window Report:
When the door/window state changes, the device will unsolicited to send the report to the nodes in group 1.

Notification Report (V8)

- Notification Type: Access Control (0x06)
- Event: Door/Window is open (0x16)
- Door/Window is closed (0x17)

Tamper Report:
The tamper key was pressed over 5 seconds. The device will into the alarm state. In that state, if the tamper key be released, the device will unsolicited to send the report to the nodes in group 1.

Notification Report (V8)

- Notification Type: Home Security (0x07)
- Event: Tampering. Product covering removed (0x03)

Timing Report:
Besides the event triggered could report messages, the device also supports the timing of unsolicited reports of the status.

- Battery level report: Every 6 hours report once in default. It could be changed by setting the configuration NO. 1.
- Low battery report: When the battery level is too low, every 30 minutes will report once.
- Door/window state report: Every 6 hours report once in default. It could be changed by setting configuration NO. 5.

Notice: The configuration NO. 1 could change the tick interval, the default value is 60, if set to 1, that means the minimum auto-report interval will be one minute.

Power Up Procedure

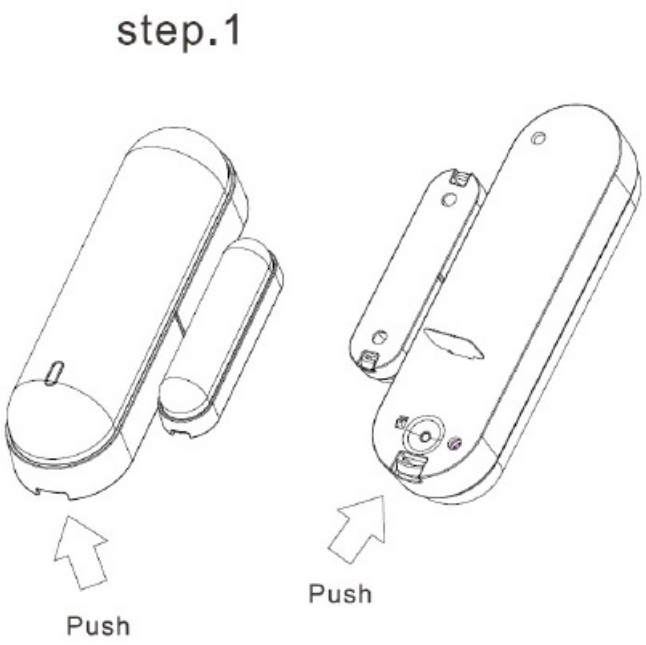
Battery Power Check
When the device is power up, the device will detect the power level of the battery immediately. If the power level is too low, the LED will flash three times. Please change to another new battery.

Wake
When the device is powered on, the device will wake for about 20 seconds. In this duration, the controller can communicate with the device. Normally
the device is always sleeping to save the battery energy.

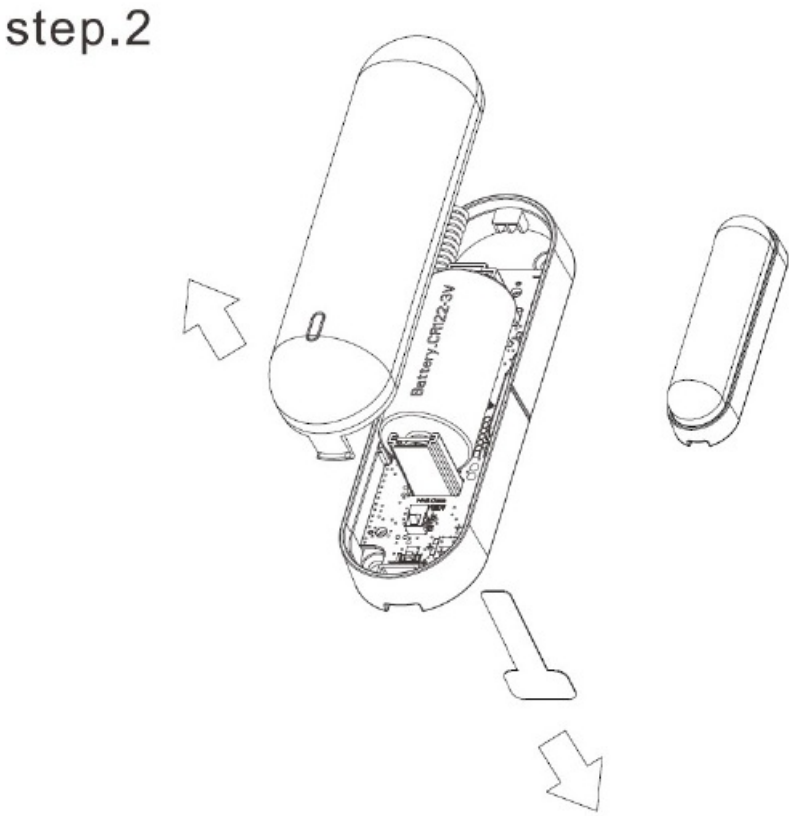
Over The Air (OTA) Firmware Update
The device supports the Z-Wave firmware update via OTA.
Let the controller into the firmware update mode, and then press the tamper key once to start the update.
After finishing the firmware download, please don’t remove the battery, otherwise, it will cause the firmware to break, and the device will no function.
After the LED stops flashing, it is recommended that the user power up the device. Caution: After removing the battery, please wait for about 30
seconds, and then re-install the battery.

Battery Installation

When the device reports a low battery message, users should replace the battery. The battery type is CR123A, 3.0V.



Installation



1. The first time, add the device to the Z-WaveTM network. First, make sure the primary controller is in the inclusion model. And then power on the device, just take out the insulation Mylar in the backside of the device. The device will auto start the SmartStart Include mode. You will see the LED light ON one second. (refer to fig. 1)
2. Let the controller associate with the device into the first group, any light switch that intends to be turned on when the device trig, please
   associate with the device into the second group.
3. In the accessory pack, There is double-coated tape. you can use a double-coated type for the test at the beginning. The right way for

a double-coated type installation is to stick it to the position of the back. the sensor will enter the test mode, You may test if the installed position is good or not by this way (refer to fig. 2 and fig. 3)

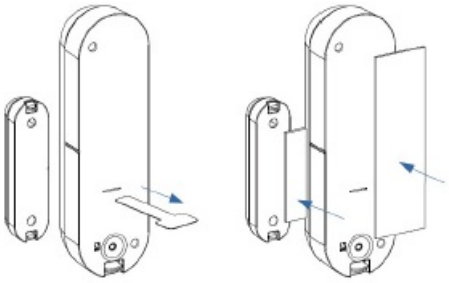


fig. 1 fig.2

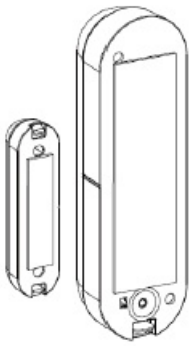


fig.3

Z-Wave Configuration Settings

Notice:

- For all of the configurations, the data size is 1.
- For all of the configurations after the removal, the setting is still kept, don’t reset to factory default. Unless the user executes the “RESET”
  procedure.
- The reserved bit or not supported bit is allowed any value, but no effect.

NO.	Name	Def.	Valid	Description
1	Auto Report Tick Interval	60	1 ~ 0xFF	The interval time for auto report each tick.(unit:minute)
2	Auto Report Battery Time	6	1 ~ 0xFF	The interval time for auto report the battery level.
3	Customer Function	3	All	Operation mode. Using bit to control.
		1		**Bit0**: Disable auto report battery function. 0 : Disable / 1 : Enable
		1		**Bit1**: Disable auto report door/window function. 0 : Disable / 1 : Enable
		0		**Bit2**: Reserve.
		0		**Bit3**: Reserve.
		0		**Bit4**: Reserve.
		0		**Bit5**: Reserve.
		0		**Bit6**: Reserve.
		0		**Bit7**: Reserve.
4	Basic ON	0xFF	All	Setting the BASIC command value.

NO.	Name	Def.	Valid	Description
	Level			When the door / window open(0xFF), send the BASIC CC to the group 2.
5	Auto Report Door/Window State	6	All	The interval time for auto report the door/window state.

Z-Wave Supported Command Class

Command Class	Version	Required Security Class
Z-Wave Plus™ Info	2	None
Security	1	None
Security 2	1	None
Supervision	1	None
Transport Service	2	None
Association	2	Highest granted Security Class
Association Group Information	3	Highest granted Security Class
Device Reset Locally	1	Highest granted Security Class
Firmware Update Meta Data	5	Highest granted Security Class
Indicator	3	Highest granted Security Class
Manufacturer Specific	2	Highest granted Security Class
Multi-Channel Association	3	Highest granted Security Class
Powerlevel	1	Highest granted Security Class
Version	3	Highest granted Security Class
Configuration	4	Highest granted Security Class
Notification	8	Highest granted Security Class
Battery	1	Highest granted Security Class

Disposal

This marking indicates that this product should not be disposed of with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmentally safe recycling.

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FCC Interference Statement

This equipment has been tested and found 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 instructions, 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 to correct the interference by one of the following measures:

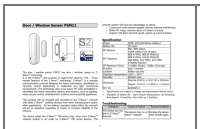
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Documents / Resources

	ZWAVE PSM11 Door/Window Sensor [pdf] Instruction Manual PSM11, Door Window Sensor, PSM11 Door Window Sensor

References

- philio-tech.com