PSM09-A/B

Recessed Door Sensor + Door lock Sensor

The PSM09 can detect the the door is open or not, and lock or unlock.
The Recessed door sensor PSM09 is Base on Z-Wave™ technology.
It is the Z-Wave™ plus product, it support the security, OTA... Those newest features of the Z-Wave™ technology. Z-Wave™ 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.
Notice: if user use some command,it have to check device is security bootstrap otherwise some command can not increment.

Function Compare A/B

	Door Sensor	Door lock Sensor
PSM09-A	V	V
PSM09-B	V	

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, that 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 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.

Specification

Operating Voltage	DC3.6V 1000mAh (ER14250 Li-Battery)
Range	Minimum 40M in door and 100M in outdoor, line of sight
Operating Temperature	-10°C ~ 40°C (85% humidity)
Storage Temperature	-20 C ~ 60°C
Location	Indoor use only
Frequency Range	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 (peak)	+5dBm (peak)
RF Maximum Power (Average)	-10dBm (Average)
FCC ID	RHHPSM09
Patent number	US 10,287,801 B1/ 3215012 (JP) 202017107537.0 (DE)

** Specifications are subject to change and improvement without notice.

Troubleshooting

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

Add to/Remove from Z-Wave™ Network

There are one tamper key in the device,the key is in the front side. Both of them can add, remove, reset or association from Z-Wave™ network.

SmartStart enabled products can be added into a Z-Wave network by scanning the Zwave QR Code present on the product providing SmartStart inclusion. No further action is required and the SmartStart product will be added automatically within 10 minutes of minutes On in the network vicinity

Notice: Including a node ID allocated by Z-Wave™ Controller means "**Add**" or "**Inclusion**". Excluding a node ID allocated by Z-Wave™ Controller means "**Remove**" or "**Exclusion**".

Function	Description
Add	1. Have Z-Wave™ Controller entered inclusion mode. Pressing tamper key three times within 3 seconds to enter the inclusion mode. If the learning code is successful, the LED will flash slowly.
Remove	1. Have Z-Wave™ Controller entered exclusion mode. Pressing tamper key three times within 3 seconds to enter the exclusion mode. If the removal is successful, the code light will flash for 30 seconds. Node ID has been excluded.
Reset	**Notice: Use this procedure only in the event that the primary controller is lost or otherwise inoperable.** 1. In 3 seconds, press the button 3 times continuously, after 3 successful, then slowly flash for 1 second, press the fourth button, do not release the button, the LED will light up, after about three seconds, the LED will off, and in two seconds Release the button internally. If the clearing is successful, the LED will flash slowly. If it fails, the LED will flash quickly.

Association	1. Have Z-Wave™ Controller entered association mode. Pressing tamper key three times within 3 seconds to enter the association mode. Note: This machine provides a group of groups. Each group can set 5 Nodes. Group 1: Used for event return. Example: Reed trigger state Battery.
• Failed or success in add/remove the node ID can be viewed from Z-Wave™ Controller.	

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

Z-Wave™ Notification

When the door/windows triggered or the lock tongue triggered, the device will report the trigger event .

In default the device will using Notification Report to represent the trigger event, it can be changed to lock tongue detection by setting the configuration NO.2.

Z-Wave™ Wake up

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 receive the setting commands.
The wake-up interval minimum setting is 30 minutes, and maximum setting is 120 hours. And the interval step is 30 minutes.

If the user want to wake-up the device immediately, please press the tamper key once. The device will wake-up 10 seconds.

Z-Wave™ Auto Report

After the device adding to the network, it will auto-report every 6 hours in default. When it auto-report, it will Notification report message door/windows status, lock tongue status and battery level to the network.

The auto report minimum setting is 30 minutes, and the interval step is 30 minutes, it can be changed by setting the configuration NO.1.

* Battery level report:

Battery level report: Every 6 hours report once in default.
There are only two battery states, 0x64(100%) and 0xFF(low battery), for battery level report.

* Low Battery level report:
When the battery level is too low, every 30 minutes will report once.

* Door/Window and lock tongue Report:

When the door/window opened or closed, it will change the door/window state.
When the door/window state changed or lock tongue state changed, the device will unsolicited to send the notification report.

Notification Report (V4)
Notification Type: Access Control (0x06)

Event: Door/Window is open   (0x16)
       Door/Window is closed   (0x17)
       lock tongue is lock   (0x01)
       lock tongue is unlock   (0x02)

Z-Wave Configuration Settings

A	B	NO.	Name	Default	Valid	Description
☑	☑	1	Auto report state time	12	0 ~ 127	The interval time for auto report the door/window & Lock state & battery level. 0 means turn off auto report state. Units of 30 minutes.
☑		2	Door lock detect function switch	1	0~1	0 means turn off Door lock detect funtion. 1 means turn on Door lock detect funtion.
☑		3	Door lock detect timer	15	1~127	Units of 4 seconds.
☑		4	Door lock detect level	10	1~10	When an error condition occurs in the door lock detection. Can reduce its level to avoid door lock detection errors.

Notice:

* All of the configuration, the data size is 1.

* The configuration mark with star(*), means after the remove the setting still keep, don't reset to factory default. Unless the user execute the "RESET" procedure.
* The reserve bit or not supported bit is allowed any value, but no effect.

Security Network

The device supports the security function. When the device included with a security controller, the device will auto switch to the security mode. In the security mode, the follow commands need using Security CC wrapped to communicate, otherwise it will not response.

```
COMMAND_CLASS_ZWAVEPLUS_INFO
COMMAND_CLASS_SUPERVISION
COMMAND_CLASS_WAKE_UP
COMMAND_CLASS_CONFIGURATION
COMMAND_CLASS_TRANSPORT_SERVICE_V2
COMMAND_CLASS_SECURITY
COMMAND_CLASS_SECURITY_2
COMMAND_CLASS_VERSION
COMMAND_CLASS_ASSOCIATION
COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION_V2
COMMAND_CLASS_ASSOCIATION_GRP_INFO
COMMAND_CLASS_MANUFACTURER_SPECIFIC
COMMAND_CLASS_DEVICE_RESET_LOCALLY
COMMAND_CLASS_POWERLEVEL
COMMAND_CLASS_BATTERY
COMMAND_CLASS_NOTIFICATION_V3
COMMAND_CLASS_FIRMWARE_UPDATE_MD_V4
```

Over The Air Firmware Update

The device support the Z-Wave firmware update via OTA.
Let the Z-Wave™ Controller into the firmware update mode, chose the hex file to update. Wait for 10~15 minutes.
At that time, ***please don't remove the battery***, otherwise it will cause the firmware broken, and the device will no function.
Result will show in Z-Wave™ Controller log.

Battery installation

Overview

Learn Key
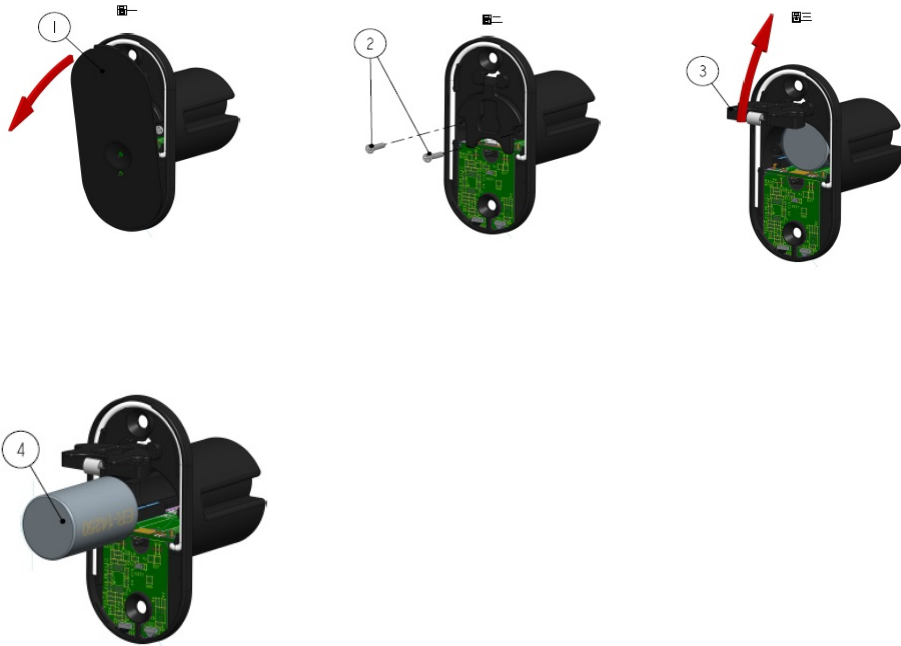
Installation

1.Choosing a Suitable Location

1.1 The recommended mounting position is above the bolt and the distance from the lock tongue is less than 4 cm.

1.2 Infrared detection hole must be aligned downward with the lock tongue.

1.3 As close as possible to the lock tongue, the better.

2.Correct the position of the lock tongue

2.1 The infrared detection hole must be aligned with the bolt and a reflective tape between the two.

2.2 Press and hold the button for 3 seconds, then let go, the LED light will be on for 20 seconds. Before the light is off, close the door. After the door is closed, lock the lock tongue in 5 seconds. When 5 seconds is reached,

The infrared will be emitted and the received signal will be stored as a standard on the lock. When the calibration is completed, the status will be reported from Z-Wave.

Disposal

This marking indicates that this product should not be disposed 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 environmental safe recycling.

Company: Philio Technology Corporation
Address: 8F., No.653-2, Zhongzheng Rd., Xinzhuang Dist., New Taipei City 24257, Taiwan (R.O.C)
www.philio-tech.com

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.

Warning

Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities. Contact your local government for information regarding the collection systems available. 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.

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

警語**:**

「取得審驗證明之低功率射頻器材,非經核准,公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

低功率射頻器材之使用不得影響飛航安全及干擾合法通信;經發現有干擾現象時,應立即停用,並改善至無干擾時方得繼續使用。

前述合法通信,指依電信管理法規定作業之無線電通信。低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。」