

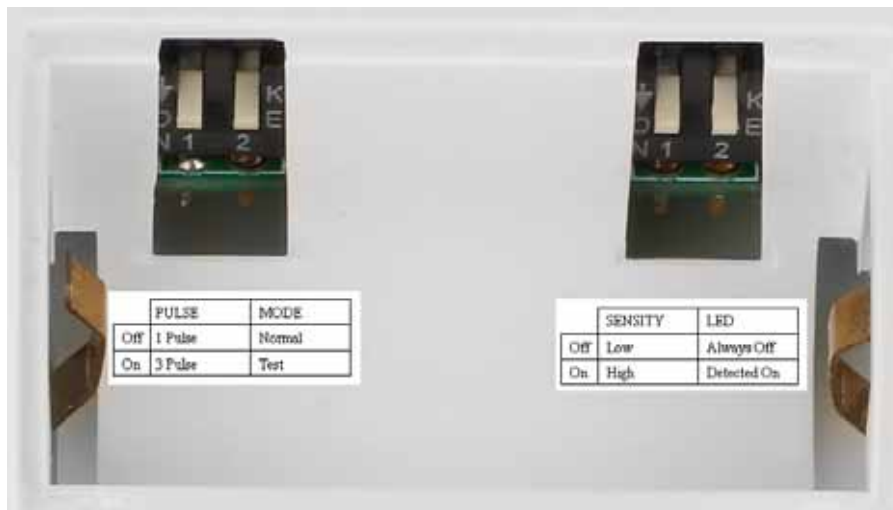
# Passive Infrared Detector

## User Manual

### ● Description

This product equips with precision spherical Fresnel lens, to improve the efficiency of energy reception, high sensitivity and to reduce false alarm rate.

The product is Z-Wave plus device which is wireless accessible and can quickly, easily included and operated in any Z-Wave network with other Z-Wave certified devices from any other manufacturers.



### ● Installation

**Note:** This product should not be installed in the following places make sure product working normally.

- Should not face lens on cold and heat sources;
- Should not face lens on sun directly;
- Should not install at the soft base;
- Should not install in the place close to power supply lines.

## ■ PIR configuration

- ◆ Mode: Normal – Trigger Alarm after 3 minutes from last detected; Test – Trigger Alarm as soon as detected.
- ◆ PULSE: 1 pulse – Trigger Alarm as soon as detect 1 pulse; 3 pulse – Trigger Alarm as soon as detect 3 pulse.
- ◆ SENSITY: Low – Low Amplifier of detect input; High – High Amplifier of detect input.
- ◆ LED: Off – Always off; On – Flash on as soon as detected.

## ■ Battery level status and Replacement

Low battery level was warning while sensor was triggered LED flash 3 times quickly, please replace new battery as soon as possible.

Please be noted, the same type of battery is recommended make sure battery using life.

## ● Z-Wave Network

### ■ Add into Z-Wave network

- 1) Make sure battery level is normally and the product is located within direct range of the Z-Wave controller.
- 2) Set the main controller into the inclusion/Add device mode (refer to main controller's operating manual).
- 3) Click the Add/Remove button on the left side of product triple times in 1.5 seconds.
- 4) The product will be detected and included in the Z-Wave network.

[Note:] During inclusion, LED will fast flash red light until inclusion process complete, normally it will stay in inclusion process around 60 seconds if there not any controller was detected. LED will light on 3 second notice inclusion is successful. After inclusion successful, the production will be stay in wakeup for 30 second in order to receive initial wakeup configuration from the main controller.

### ■ Remove from Z-Wave network

- 1) Make sure battery level is normally and the product is located within direct range of the Z-Wave controller.
- 2) Set the main controller into the exclusion/Remove device mode (refer to main controller's operating manual).
- 3) Click the Add/Remove button on the bottom side of product triple times in 1.5 seconds.
- 4) The product will be detected and excluded from the Z-Wave network.

[Note:] During exclusion, LED will fast flash red light until exclusion process complete, normally it will stay in exclusion process around 5 seconds if there not any controller was detected. LED will light on 3 second notice exclusion is successful.

### ■ Association report and control

Association allows for direct communication between Z-Wave network devices. Main controller does not take part in such communication. Using this mechanism the product could report sensor lifeline status to another Z-Wave network device, e.g. a Master Controller.

The product supports 7 association groups. Each group (#2~7#) supports associated 5 devices maximum except group #1 supports associated one device only. Please refer to the master controller's operating manual to add an association device and specify to which group and what devices are to be associated.

Group #1 is assigned to send unsolicited report of motion detection status, battery level and factory default reset to the associated device as soon while the status is change.

Group #2 assigned to send Notification report to other device while motion detected.

Group #3 assigned to send Binary sensor report to other device while motion detected.

Group #4 assigned to send Basic Set On Command to control other device while the PIR sensor detect motion.

Group #5 assigned to send Basic Set Off Command to control other device while the PIR sensor detect motion.

Group #6 assigned to send Basic Set On Command to control other device while the PIR sensor clear motion.

Group #7 assigned to send Basic Set Off Command to control other device while the PIR sensor clear motion.

## ■ Wakeup the product manually for Z-Wave configuration

The product is in battery power, you can set up the wake up time based in seconds. At each wake up, the product communicates with the master controller to updates parameters settings if necessary, e.g. receive the association group setting. The product will wake up at defined time interval and will ALWAYS try to communicate with the master controller. Longer time interval means less frequent communication and thus a longer battery life.

The product default wakeup interval is 86400 seconds. User can operate inclusion/exclusion process in order to trigger product wakeup manually, it will keeps 30 seconds in wakeup state without initial wakeup parameter setting and keeps 10 seconds in wakeup after initial wakeup parameter.

## ■ Application Requirement Reject

The Notification Reports cannot be deactivated. Application Rejected Request with status 0x00 occurs when the controller tries to deactivate/turn off the Notification Type in order to not trigger the specific Notification Report again.

## ■ Notification Types and Events

The product supports notification alarm type of "HOME\_SECURITY=0x07" and event type of "MOTION\_DETECTION\_UNKNOWN\_LOCATION=0x08" while detect PIR motion and "NO\_EVENT =0x00" if max 255 seconds (wakeup interval large than 255 seconds) no more PIR motion from last motion detected.

## ■ Binary Sensor Report

The product supports binary sensor report value of "DETECT AN EVENT =0xFF" while detect PIR motion and "IDLE=0x00" if max 255 seconds (wakeup interval large than 255 seconds) no more PIR motion from last motion detected.

## ■ OTA firmware update

The product supports update firmware by OTA. It is strong recommend replace with new brand battery before start OTA firmware update in order to make sure power supply during OTA firmware update processing.

## ■ Default factory reset

The factory default settings are restored when the device is removed from the network or press and hold the Add/Remove button on the left side of product excess 10 seconds.

Please use this procedure only when the network primary controller is missing or otherwise inoperable.

## ● Technical Parameters

Operating voltage:	3V (Battery Type: CR123A)
Quiescent current:	< 30uA
Alarm current:	< 20mA
Operating frequency :	868.42 MHz – China / Europe
	908.42 MHz – United States
	921.42 MHz – Australia
	869.22 MHz – Russia
The distance :	from the indoor distance of 30 meters
	Outdoor straight : distance of 40 meters
Operating temperature:	-10 ~ +50
Relative humidity :	≤95 %RH
Dimensions	D73mmx53 mm (PIR body)
	D60mmx22mm (install base)
Implementation of the standard	GB15209-2006

## ● Z-Wave Parameters

### Device Type:

Generic Deice Type = GENERIC\_TYPE\_SENSOR\_NOTIFICATION

Specific Device Type = SPECIFIC\_TYPE\_NOTIFICATION\_SENSOR

### Z-Wave Plus Role Type:

ZWAVEPLUS\_INFO\_REPORT\_ROLE\_TYPE\_SLAVE\_SLEEPING\_REPORTING

### Support Command Class:

COMMAND\_CLASS\_ZWAVEPLUS\_INFO,  
 COMMAND\_CLASS\_VERSION,  
 COMMAND\_CLASS\_MANUFACTURER\_SPECIFIC,  
 COMMAND\_CLASS\_WAKE\_UP,  
 COMMAND\_CLASS\_POWERLEVEL,  
 COMMAND\_CLASS\_FIRMWARE\_UPDATE\_MD,  
 COMMAND\_CLASS\_ASSOCIATION,  
 COMMAND\_CLASS\_ASSOCIATION\_GRP\_INFO,  
 COMMAND\_CLASS\_MULTI\_CHANNEL\_ASSOCIATION,  
 COMMAND\_CLASS\_BATTERY,  
 COMMAND\_CLASS\_NOTIFICATION,  
 COMMAND\_CLASS\_SENSOR\_BINARY,  
 COMMAND\_CLASS\_APPLICATION\_STATUS