VISION ZP Series 4 in 1 Motion Sensor Instruction Manual

Contents

VISION ZP Series 4 in 1 Motion Sensor

Specifications

- Protocol: Z-Wave (TZM8202)
- Frequency Range: 865.22MHz (ZP3113IN-8)

Product Description
The ZP 3113 Multi-Sensor is a 4-in-1 motion sensor that includes temperature, humidity, and light sensors built-in. It operates on the Z-Wave protocol and has a frequency range of 865.22MHz.

Package Content

- 1 ZP 3113 Multi-Sensor
- 3 Adhesive tape for sensor
- 1 CR123A Lithium Battery

Command Class

- Association
- Association Group Info
- Battery Configuration
- Device Reset Locally

Installation & Operation Manual
4-in-1 Motion Sensor
(Temp./Humidity/Light Sensor Built-In)

- ZP3113IN-8
- ZP3113EU-8
- ZP3113RU-8
- ZP3113BR-8

- ZP3113IL-8
- ZP3113HK-8
- ZP3113TH-8
- ZP3113KR-8
- ZP3113JP-8
- ZP3113US(USLR)-8

Introduction

Thanks for choosing Vision's wireless 4-in-1 Motion sensor of the home security device. The new multi-sensor consists of motion, temperature, humidity & light sensor for combing several functionalities in one device; more attractive and economic consideration. 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 device 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 movement, and send Z-Wave signal when movement is detected inside the building. With Temperature, Humidity & Light sensor built inside, it will send the signal out when temperature, humidity & Lightness changed. When the device is secure included into Z-Wave network, above communication will be encrypted.

Product Description and Specification

Specification:	Package Content
Protocol: Z-Wave (TZM8202) Frequency Range: 865.22MHz (ZP3113IN-8) 868.42MHz (ZP3113EU-8) 869.00MHz (ZP3113RU-8) 908.42MHz (ZP3113US-8) 912.00MHz (ZP3113USLR-8) 916.00MHz (ZP3113IL-8) 919.80MHz (ZP3113HK-8) 921.42MHz (ZP3113BR-8) 920.00MHz~923.00MHz (ZP3113TH-8) 920.00MHz~923.00MHz (ZP3113KR-8) 922.00MHz~926.00MHz (ZP3113JP-8) Operating Range: Up to 100 feet line of sight Operating Temp.: -10°C~ +60°C (14°F ~ 140°F)	1pc ZP 3113 Multi-Sensor 3pc Adhesive tape for sensor 1pc CR123A Lithium Battery

Command Class

COMMAND CLASS NAME	VERSION	REQUIRED SECURITY CLASS
ASSOCIATION	2	S2
ASSOCIATION GROUP INFO	3	S2
BATTERY	1	S2
CONFIGURATION	4	S2
DEVICE RESET LOCALLY	1	S2
FIRMWARE UPDATE MD	5	S2
INDICATOR	3	S2
MANUFACTURER SPECIFIC	2	S2
MULTI CHANNEL ASSOCIATION	3	S2
SENSOR MULTILEVEL	11	S2
NOTIFICATION	8	S2
POWERLEVEL	1	S2
VERSION	3	S2
WAKE_UP	2	S2
APPLICATION STATUS	1	None
SECURITY_2	1	None
SUPERVISION	1	None
TRANSPORT_SERVICE	2	None
ZWAVEPLUS_INFO	2	None

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Configuration – Temperature

Configuration – Temperature

	Size	VALUE		Default
Parameter 1	1	°C	0x00	°C (0x00)
		°F	0x01	
Parameter 2	1	1~50 (Set up from 0.1°C~5°C)		3 (°C)

(Parameter 1) Choose the temperature scale (°C or °F)
(Parameter 2) Temperature difference X °C to auto report (every 5 minutes detect)

Configuration – Humidity

	Size	VALUE	Default
Parameter 3	1	1~50 (Set up from 1%~50%)	20%

(Parameter 3) Humidity difference X % to auto report (every 5 minutes detect)

Configuration – Light

	Size	VALUE	Default
Parameter 4	1	0,5~50 (Set up from 0 for Off or 5%~50%)	10%

(Parameter 4) Light difference X % to auto report (every 3 minutes detect).

Configuration – Motion Sensor

	Size	VALUE
Parameter 5 Parameter 6	2	15 ~ 900 (unsigned decimal) seconds (default: Security mode 15 seconds, Lighting mode 60 seconds)
	1	1 ~ 7 levels sensitivity, (default: 4)

(Parameter 5) Re-trigger duration: User can change value from 15 to 900 seconds to setup the re-trigger time when there is no movement detected in the period of time. Default : Security mode 15 seconds, Lighting mode 60 seconds
(Parameter 6) Infrared sensor sensitivity adjustment, 7 levels sensitivity,1 = most sensitive, 7 = most insensitive, default values= 4.

Configuration – LED Mode

	Size	VALUE (Default: Mode 1)
Parameter 7	1	1 ~ 3 (Mode 1 ~ Mode 3) Mode 1 LED Turn Off (Both Temp/PIR Trigger) Mode 2 LED Quick Flash (Temp. / PIR Trigger) Mode 3 PIR Trigger (Quick Flash) Temp. Trigger (LED Off)

(Parameter 7) Define the LED's working method.

Configuration – PIR Trigger Notification Re-sending Times

	Size	VALUE
Parameter 8	1	0~5(unsigned decimal) Times(default: 0 Time)

(Parameter 8) PIR Trigger Notification Re-sending Times: In order to prevent any gateway lost, user can change the value from 0 to 5 times to setup the notification re-sending times in case there is no ack from the gateway after sending the PIR Trigger Notification. Default is 0 Time.

Configuration – Supervision Report delayed reception time

	Size	VALUE	Default
Parameter 9	2	500 ~ 10000 (unsigned decimal) Unit: ms	500 ms.

(Parameter 9) To set up the Supervision Report delayed reception time.

Configuration – Temperature offset

	Size	VALUE	Default
Parameter 10	1	100(no offset) /0~99(-10.0 ~ -0.1 degree) 101~200 (+0.1 ~ +10.0 degree)	100

(Parameter 10) Offset unit in 0.1 degree (C/F)

Configuration –Humidity offset

	Size	VALUE	Default
Parameter 11	1	100(no offset) /0~99 (-10.0 ~ -0.1 %) 101~200 (+0.1 ~ +10.0 %)	100

(Parameter 11) Offset unit in 0.1 %

Configuration – Wake Up Test Mode

	Size	VALUE	Default
Parameter 224	1	0x00 (Off) 0xFF (Device always Wake-Up)	0x00 (Off)

(Parameter 224) To wake up the Test Mode for testing the command class and signal purpose only. Please do not try it out of these two purposes.

Limited Warranty

Vision Guarantees that every wireless PIR 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, Vision will replace it free of charge. Vision does not issue any refunds. This warranty is extended to the original end user purchase only and is not transferable. 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.visionsecurity.com**.
Federal Communications Commission Statement FCC Statement

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

To assure continued compliance, any changes or modifications not expressly approved by the party responsible

for compliance may void the user's authority to operate his equipment. (Example – use only shielded interface cables when connecting to computer or peripheral devices)

FCC Statement in User's Manual (for class B) FCC Section 15.105 "Federal Communi- cations Commission (FCC) 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 or more 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.

Configuration

1. This ZP3113-8 supports change capabilities by Configuration Command Class after receiving the wake up notification, but, no support this change on the power-on report's wake up notification, because the other devices are not ready so quickly.
2. The controller has to rediscover the product's capabilities after altering capabilities.
3. The controllers has to re-include the node in the network if the controller does not have any capability rediscovery option.

Operation

1. Using adhesive tape to mount ZP3113 at 2 meters above surface. To enhance proper operation, place ZP3113 on the location which can detect the room widely. The PIR needs one minute to be stable after initial power on, please proceed motion detection after that.
2. Walk in front of ZP3113, sensor will send Basic set On (0xFF) and Notification Report please refer to status report as (Table 2) below.
3. If no movement detected in three minutes (default is 15 seconds based on user's configuration setting, refer Parameter 5) will send Basic Set OFF (0x00) and Notification Report refer to status report as (Table 2) below.
4. The ZP3113 equipped with tamper switch. If the tamper switch is triggered (or remove the cover), the ZP3113 will send Notification Report refer to status report as (Table 2) .
5. If the motion detection or tamper switch state change, LED will flash once (default is LED Turn Off – based on user's configuration setting, refer to Parameter 7) .

	Notification V8 (Movement)	Notification V8 (Tamper Switch)
Alarm Type		
Alarm Level		
Notification Type	0x07	0x07
Notification Event	0x08(Motion detect)/ 0x00(Motion detect clear)	0x03(remove cover)/ 0x00(cover closed)
Notification Event Parameter	0x08(Motion detect clear)	0x03(cover closed)

6. Support OTA Firmware update from controller. Please refer to your controller manual. use COMMAND_CLASS_FIRMWARE_UPDATE_MD_V5. To proceed the OTA process. Once OTA function success, we recommend you exclusive the device & inclusive again before use the device after OTA.
7. ZP3113-8 is a Security Enabled Z-Wave Plus product, A Security Enabled Z-Wave controller must be used to fully utilize the product.
8. Factory Default Reset: Remove cover to trigged tamper switch, LED flash once & send out Notification Report. Press Program Switch 5 or more times within 10 seconds, ZP3113 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.)
9. Support SECURITY S2 UNAUTHENTICATED & SECURITY S2 AUTHENTI CATED.
10. Support SmartStart, please scan the QR Code from ZP3113 for Smart QR code and PIN is located on the device, also there is a Full DSK string on the enclosed DSK card. Please keep DSK card carefully for future inclusion needed.(P.S.: Z-Wave SmartStart aims to shift the tasks related to inclusion of an end device into a Z-Wave network away from the end device itself, and towards the more user-friendly interface of the gateway.)
11. The DSK label is on the backside of ZP3113. Scan the DSK label to access the SmartStart if gateway ‘s UI supports SmartStart
12. A security-enabled Z-wave controller must be used to fully utilize the products.
13. All the reset commands depend on Z-Wave standard
14. A Z-Wave Long Range device is able to join the Long Range network via SmartStart Inclusion.

Installation

*** For indoor use only ***
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 ZP3113.

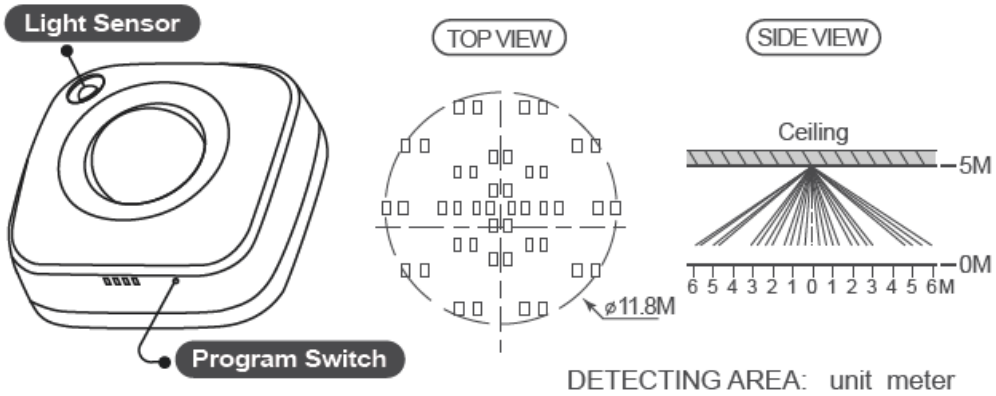
1. Release cover tab to open the cover and insert CR123A Lithium battery into the battery compartment and close the cover back to sensor. The LED color will be Red / Blue / Green sequentially after power on.
2. Press the program switch once, the LED will flash 5 times which means the sensor has not been “included” yet or flash once which means the sensor has been “included” already
3. For “Inclusion” in (adding to) a network: To add the ZP3113 to your Z-Wave network (inclusion), place your Z-Wave primary controller into inclusion mode. Press the Program Switch of ZP3113 once for sending the NIF. After sending NIF, Z-Wave will send the auto inclusion, otherwise, ZP3113 will go to sleep after 30 seconds.

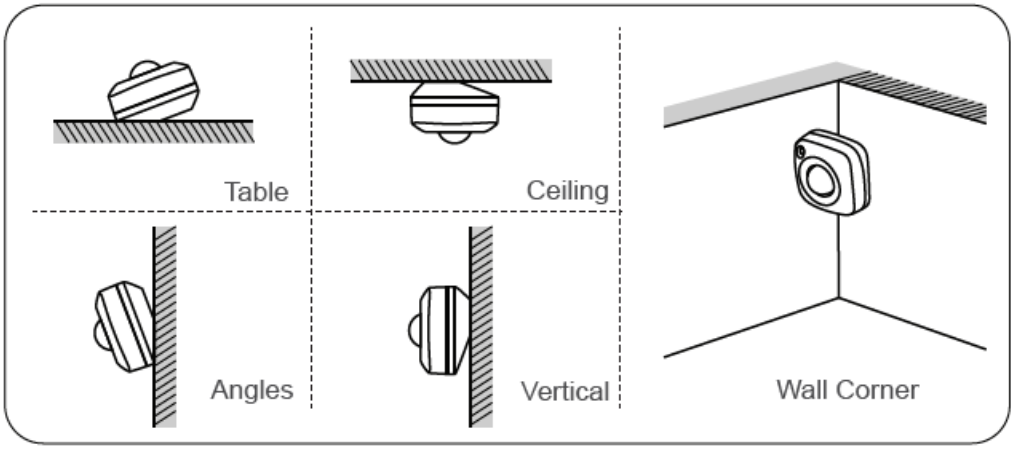
The LED indicator will be flashing while the inclusion is continued.

4. When ZP3113 is included successfully into Z-wave network, it will send Indicator report.
5. For “Exclusion” from (removing from) a network: To remove the ZP3113 from your Z-Wave network (exclusion), place your Z-Wave primary controller into “exclusion” mode, and following its instruction to delete the ZP3113 to your controller. Press the Program Switch of ZP3113 once to be excluded.
6. Association:
   - *Support 2 groups (every group supports 5 nodes).
   - *Group 1 = Lifeline (Battery, Reset Locally, Indicator, Notification)
   - *Group 2 = ON/OFF Control (Basic Set)
7. Wake Up Notification:
   Press “Program SW” once to send NIF and LED will flash once, it takes around 10 seconds to send “Wake Up Notification” for receiving all command classes or go to sleep mode after 10 seconds without receiving any command.
8. Auto Wake Up:
   Use “Wake Up” command to set up the awaking time and send the wake up notification to controller. User can use command to change the auto wake up from 10 minutes to 194 days, Interval increment is 200 seconds, the default Auto Wake Up interval is 24 hours.
9. Battery Capacity Detection:
   *Use “Battery Get” command to have the battery capacity back in % (in hexadecimal).
   *It will detect the battery capacity automatically.
   *Low Battery Auto Report when power is lower than 2.4V +/- 0.1V.
10. Humidity Report:
    Use SENSOR_MULTILEVEL_GET for getting the Humidity Report (in hexadecimal). If the present humidity is different with the sensor record and exceed the setting program, the sensor will report the present humidity.

Multilevel Sensor Report	
Sensor Type	0x05
Scale	0x00 (%)
Size and Precision	2

11. To switch to Lighting / Security PIR detection mode manually. To press program SW for 5 seconds then release (The default is Security Mode)
    - If to switch to Lighting Mode, red LED on for 1 sec.
    - If to switch to Security Mode, blue LED on for 1 sec.





When the device is included in controller/hub/gateway

- If to switch to Lighting Mode, it send Configuration Report.
- Parameter Number = 5, Size = 2, Configuration = 60
- If to switch to Security Mode, it send Configuration Report.
- Parameter Number = 5, Size = 2, Configuration = 15

12. Temperature: Use SENSOR_MULTILEVEL_GET for getting the Temperature Report (in hexadecimal). If the present temperature is different with the sensor record and exceed the setting program, the sensor will report the present temperature. LED flashes in every 3 minutes to represent the temperature or wake up by press the Program SW.

Temperature	LED Color
Under 15°C	Green
15~23°C	Blue
23~28°C	Yellow/YellowGreen
28~36°C	Purple
Over 36°C	Red

Multilevel Sensor Report	
Sensor Type	0x01
Scale	0x00 (°C)
	0x01 (°F)
Size and Precision	2

13. Light Report: There are 3 methods could activate the Light Report (in hexadecimal):
    - Use SENSOR_MULTILEVEL_GET for getting the Light Report.
    - If the present illumination is different with the sensor record and exceed the setting program, the sensor will report the present illumination.
    - Every 10% decreasing from 100% will report automatically.

Multilevel Sensor Report	
Sensor Type	0x03
Scale	0x00 (%)
Size and Precision	2

Documents / Resources

	VISION ZP Series 4 in 1 Motion Sensor [pdf] Instruction Manual ZP3113US-8, ZP3113-8, ZP Series 4 in 1 Motion Sensor, ZP Series, ZP Series Motion Sensor, 4 in 1 Motion Sensor, Motion Sensor, Sensor

References

- VISION AUTOMOBILE ELECTRONICS INDUSTRIAL CO., LTD.
- User Manual