DOOR/WINDOW DETECTOR

Introduction

This product can be included and operated in any Z-Wave network with other Z-Wave 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 reliability of the network.

In the front casing, there is button that is used to carry out include, exclude or reset factory default settings on PCB Board.

When power is first supplied, the LED will flash on and off alternately at one second intervals within 5 seconds if the detector has not been added a Z-Wave network. Please get familiar with the terms below before starting the operations.

Add the Sensor (Door/Window detector) to Z-Wave Network

1. Remove the sensor cover.
2. Make sure the sensor is powered.
3. Set Z-Wave controller or Z-Wave gateway into inclusion mode (Refer to the controller or gateway operating manual)
4. Press the button three times within 1.5 second, the device will enter inclusion mode. And the LED will flash on and off alternately five times.

Delete the Sensor (Door/Window detector) from Z-Wave Network

1. Remove the device cover.
2. Make sure the sensor is powered.
3. Set Z-Wave controller or Z-Wave gateway into exclusion mode (Refer to the controller or gateway operating manual)
4. Press the button three times within 1.5 second, the device will enter exclusion mode.

Restore the Sensor (Door/Window detector) to Factory Default Settings

Reset procedure will delete all information on the Z-Wave network and Z-Wave controller or Z-Wave Gateway, and restore the sensor to factory default settings.

1. Remove the device cover.
2. Make sure the sensor is powered.
3. Press and hold the button for 10 seconds,
4. Release the button.

Manual Wakeup the Sensor

You can press the button once to wake up the device and send wakeup notification to controller. If press successfully, the LED will blink one time.

Associations (Association Command Class Version 2)

This Sensor supports 4 association groups. This has the effect that when the sensor is triggered,

all devices associated with the sensor will receive the relevant reports. Through an association the sensor may control another Z-Wave network device, e.g. a alarm device, wall plug, lamp etc.

Every group can be support to associated 5 devices max.

GROUP 1 is lifeline service that assigned to Sensor (Door/Window detector) status – Open/Close. It enables the sensor to send reports and readings to Z-Wave Controller or Z-Wave Gateway whenever the sensor is triggered. This Group Support:

> NOTIFICATION_REPORT
> BATTERY_REPORT
> SENSOR_BINARY_REPORT
> DEVICE_RESET_LOCALLY_NOTIFICATION

GROUP 2 allows for sending control commands to associated devices such as relay module, lighting, etc. This association group is configured through the advanced parameters no. 1 and 2. This Group Support:

> BASIC_SET.

GROUP 3 allows for Send Notification to associated devices in this group. This Group Support:

> NOTIFICATION_REPORT

GROUP 4 allows for Send Notification to associated devices in this group. This Group Support:

> SENSOR_BINARY_REPORT

Advanced Configuration

1. Configuring the OFF Delay

This configuration parameter that can be used to adjust the amount of delay before the OFF command is transmitted. This parameter can be configured with the value of 0 through 65535, where 0 means send OFF command immediately and 65535 means 65535 seconds of delay.

Function:	On/Off Duration.
Parameter Number:	1.
Parameter Size:	2 Byte
Available Settings：	0 ~ 65535 (in seconds, each 1s).
Default Setting:	0 (s)

2. Basic Set Level

Basic Set Command will be sent where contains a value when the door/window is opened or closed, the receiver will take it for consideration; for instance, if a lamp module is received the Basic Set Command of which value is decisive as to how bright of dim level of lamp module shall be.

Function:	Basic Set
Parameter Number:	2
Parameter Size:	1 Byte
Available Settings：	0, 1 ~ 99 or 255

> 0 – OFF, Alarm cancelling or turning a device off

      1 ~ 99 or 255   – ON   (Binary Switch Device)

                        Dim Level (Multilevel Switch Device)

Default Setting: 255

Notification Command Class

Once the detector detects the magnet of sensor is to be opened, it will send NOTIFICATION_REPORT and SENSOR_BINARY_REPORT to the nodes of lifeline to inform there is an intrusion event. When the magnet is to be closed, NOTIFICATION_REPORT and SENSOR_BINARY_REPORT will be sent again to the nodes in lifeline.

For compliant to Z-Wave 300 Series, There also realize the Binary Sensor Command Class.

Notification Report Command:
Event Present:
Command Class: COMMAND_CLASS_NOTIFICATION
Command: NOTIFICATION_REPORT
Notification Type: NOTIFICATION_TYPE_ACCESS_CONTROL
Event: NOTIFICATION_EVENT_ACCESS_CONTROL_WINDOW_OR_DOOR_IS_OPENED
Event Clear:
Command Class: COMMAND_CLASS_NOTIFICATION,
Command: NOTIFICATION_REPORT
Notification Type: NOTIFICATION_TYPE_ACCESS_CONTROL
Event: NOTIFICATION_EVENT_ACCESS_CONTROL_WINDOW_OR_DOOR_IS_CLOSED

Binary Sensor Report Command:
Event Present:
Command Class: COMMAND_CLASS_SENSOR_BINARY
Command: SENSOR_BINARY_REPORT
Sensor Type: SENSOR_DOOR_WINDOW
Value: 0xFF
Event Clear:
Command Class: COMMAND_CLASS_SENSOR_BINARY
Command: SENSOR_BINARY_REPORT
Sensor Type: SENSOR_DOOR_WINDOW
Value: 0x00

Wakeup Command Class

The motion detector stays in sleep status for the majority of time in order to conserve battery life.
The minimum wakeup interval is 300s (5 minutes)
The maximum wakeup interval is 16,777,200s (about 194 days)
Allowable min step among each wakeup interval is 60 seconds, such as 360s, 420s, 480s…
Note: The default value is 12 hours. This value is longer, the battery life is greater.

Battery Check Command

The users can also enquire the battery status of the motion detector by sending BATTERY_GET command. Once the motion detector receivers the command, it will return BATTERY_REPORT command. The motion detector will send BATTERY_LEVEL = 0xFF command to the Z-Wave Controller to inform that the motion detector is in dead battery status, otherwise BATTERY_LEVEL value range is 0% to 100%.

Command Classes

This Sensor(Door/Windows Detector) supports Command Classes as Below:

* COMMAND_CLASS_ZWAVEPLUS_INFO (V2)
* COMMAND_CLASS_VERSION (V2)
* COMMAND_CLASS_MANUFACTURER_SPECIFIC (V2)
* COMMAND_CLASS_DEVICE_RESET_LOCALLY (V1)
* COMMAND_CLASS_POWERLEVEL (V1)
* COMMAND_CLASS_BATTERY (V1)
* COMMAND_CLASS_ASSOCIATION (V2)
* COMMAND_CLASS_ASSOCIATION_GRP_INFO (V1)
* COMMAND_CLASS_WAKE_UP (V2)
* COMMAND_CLASS_NOTIFICATION (V4)
* COMMAND_CLASS_SENSOR_BINARY (V2)
* COMMAND_CLASS_CONFIGURATION (V1)

SPECIFICATIONS

Battery type:	CR14250 (3.0V)
Power Consumption:	0.13W
Max Current:	35mA (In Radio Transmitter Mode)
EU Standards Compliance:	
Radio Protocol:	Z-Wave
Radio Frequency:	EU – 868.4MHz
	US – 908.4MHz
Valid Range:	Up to 60m outdoors
	Up to 30m indoors (Depending on terrain and building structure)
Operational Temperature:	0 – 40 ℃