

# INSTALLATION INSTRUCTIONS

## ZWN-SD Wireless Smoke Detector Sensor



### ◆ SPECIFICATIONS

Power Supply.....	9V battery
Static Current.....	≤15uA
Sound Level.....	85dB/m
Operation Temperature.....	32-104°F
Range.....	Up to 100 feet line of sight
Detection Area.....	20m <sup>2</sup>
Z-Wave Frequency.....	908.42MHz

### ◆ FEATURE

- Ease of installation
- Low battery indication
- Do not act as a repeater in a Z-Wave network
- Interoperable with other Z-Wave enabled devices
- Built-in audible alarm and red LED lighting when smoke is detected

### ◆ DESCRIPTION

The ZWN-SD smoke detector sensor is a Z-Wave enabled device and is fully compatible with other Z-Wave certified devices. This detector sensor is designed to sense smoke that comes into the detector chamber and send Z-Wave signal when the detector sensor detects a certain density of smoke then the horn of detector will sound.

### ◆ INSTALLATION

#### Warning and safety tips:

Keep smoke detector sensor clean, and test them weekly. Replace them immediately if they are not working properly. Smoke detector sensor that do not work cannot alert you to a fire. Keep at least one working fire extinguisher on every floor, and an additional one in the kitchen. Have fire escape ladders or other reliable means of escape from an upper floor in case stairs are blocked.

1. Remove the bracket from the detector sensor by rotating it counter-clockwise.
2. Place the bracket when you are going to install the detector sensor (normal mounted on the center of the ceiling).
3. Open the battery cover to insert the 9V battery (noting the proper orientation).
4. Attach the detector sensor with bracket by rotating it clockwise.

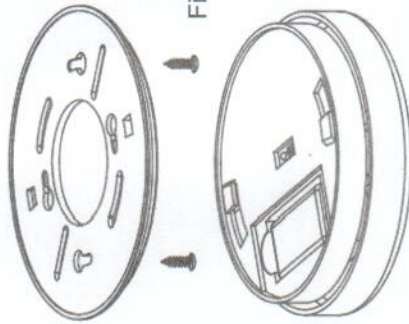
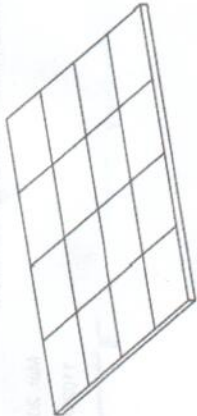


Figure 1

### ◆ OPERATION

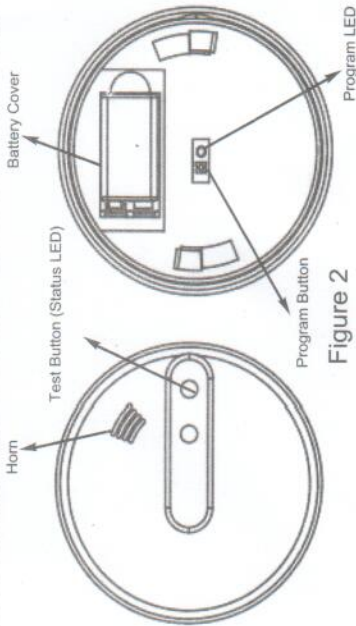


Figure 2

### Z-Wave network adding and deleting

At the back of ZWN-SD, there is a program button which is used to add, delete, and association. The smoke detector sensor will be triggered each time it senses certain density of smoke. The status LED on the detector sensor will be blink.

#### Adding

1. Set a Z-Wave controller into adding mode.
2. Press and release the program button of ZWN-SD will cause the detector sensor into learn mode (send NIF, Node Information Frame).
3. If succeeds, program LED lit up for 5-second, and then turn off.

#### Deleting

1. Set a Z-Wave controller into deleting mode.
2. Press and release the program button of ZWN-SD will cause the detector sensor into learn mode (send NIF, Node Information Frame).
3. If succeeds, program LED will turn off immediately.

#### Association

To complete Z-Wave association, please refer to your controller's manual. Each controller has its own association method. If your controller needs detector to wake up, please press and hold the program button for 2-second, then release, the ZWN-SD will wake up manually.

**Note: If the smoke detector sensor is not included in Z-Wave network, program LED will blink three times when power applied or program button pressed.**

### ◆ ADVANCED FEATURE

#### Test mode

This Smoke Detector Sensor is designed for users to test the basic function, such as buzzer and status LED. Press and release the test button on the front of the detector sensor, the status LED flashes and buzzer sounds 3 times.

#### Association command class

The smoke detector sensor can control devices by using this command class and COMMAND\_CLASS\_BASIC. If one Z-Wave device associated with smoke detector sensor, it receives signal from ZWN-SD when detecting smoke. This smoke detector sensor only supports one group with 5 nodes association.

#### Wakeup command class

The smoke detector sensor will send a wakeup notification command if it has been included into a Z-Wave network. The smoke detector sensor will wake up periodically (default is 30 minutes) as desired depending on time interval you set from wakeup command class and

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resend the wakeup notification command unless configured for another time interval. The smoke detector sensor will stay awake for 10 seconds and then go back to sleep to conserve battery life. It will also go to sleep when it receives command WAKEUP\_NO\_MORE\_NOTIFICATION. The smoke detector sensor can be woken up manually: press and hold the program button for 2-second, when release the button it will send wakeup notification to master node ID or associated devices, or broadcast.

## Battery command class

The smoke detector sensor will check the battery power level every day and report the battery level by sending broadcast BATTERY\_REPORT. When battery level goes down to 1%, it will send broadcast low power warning command (BATTERY\_REPORT, value 0xFF). User needs to replace new batteries.

## Sensor alarm command class

Once the smoke detector sensor has been triggered by smoke, it will send SENSOR\_ALARM\_REPORT (Sensor\_State=0xFF) to the nodes of Grouping 1 to inform them there is a smoke event, wait till the smoke is discharged, SENSOR\_ALARM\_REPORT (Sensor\_State = 0x00) will be sent to the associated devices.

## SENSOR\_ALARM\_REPORT

Event Present: [Command Class Sensor Alarm, Sensor Alarm Report, Sensor Type Smoke Alarm State = 255 (0 x FF), Seconds = 0x00]

Event Clear:

[Command Class Sensor Alarm, Sensor Alarm Report, Sensor Type Smoke Alarm State = 0, Seconds = 0x00]

## ◆ TROUBLESHOOTING

### Cannot carry out adding and deleting

1. Check to see if the battery is running out.
2. Make sure the battery is in right place.
3. Check if the wireless distance is too far
4. Check if the detector sensor has been added into a Z-Wave network.

### The detector sensor does not working

1. Check to see if the battery is running out.
2. Check if the wireless distance is too far
3. Look for any nearby source of infrared energy that may interfere .

## WARRANTY INFORMATION

Our company warrants this product to be free of defects in materials and workmanship for a period of two(2) years. There are no obligations or liabilities on the part of our company for consequential damages arising out of, or in connection with, the use or performance of this product or other indirect damages with respect to loss of property, revenue or profit, or cost of removal, installation or reinstallation.

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# INSTALLATION INSTRUCTIONS

SM-20

## Wireless Smoke Detector Sensor



Model No. SM-20  
 Static Current: 100µA  
 Operating Temperature: -10°C to 50°C  
 Operating Humidity: 10% to 90% RH  
 Dimensions: 100mm (D) x 100mm (H)  
 Weight: 100g

◆ **REQUIREMENTS**  
 - Power supply: 3V CR123A (not included)  
 - Battery: CR123A (not included)  
 - Installation: The sensor must be installed in a well-ventilated area, away from drafts, heat sources, and other environmental factors that may affect its performance.

◆ **INSTALLATION**  
 1. Choose a location for the sensor that is centrally located in the room, away from drafts, heat sources, and other environmental factors.  
 2. Drill a hole in the ceiling for the sensor.  
 3. Insert the sensor into the hole and secure it with the provided mounting bracket.

◆ **TESTING**  
 After installation, test the sensor by pressing the test button. The sensor should emit a series of beeps, indicating that it is working properly.