

# Water Sensor

## User Manual



Thank you for your support  
Please read the user manual carefully before operating.  
Please keep the user manual for future reference.

### Product Introduction

Water sensor is an intelligent security equipment that can transmit the Z-Wave network which has particular frequency. Different countries or areas, the radio frequency of Z-Wave is different. In the Z-Wave network communications, water sensor can work with any Z-Wave main controller. In the Z-Wave network communications, water sensor can send messages to the Z-Wave main controller, and realize association with other devices through the Z-Wave network. In the communication with the Z-Wave main controller, the water sensor can send messages to the Z-Wave main controller, but it can not receive messages from the Z-Wave main controller. When the water sensor is triggered, the LED light keeps on and the buzzer will make sound. The water sensor sends messages to the Z-Wave main controller at the same time, the Z-Wave main controller will display the current status of water sensor. Water sensor is battery powered, is small and can be installed easily.

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### Technical Parameters

- Flood detection
- Battery specification: CR2-3V x 1
- Standby current: 3uA
- Max current: 35 mA(In Radio Transmitter MODEL)
- Battery life: 2 years
- Radio Protocol: Z-Wave
- Radio Frequency: 868.4MHz EU;908.4MHz US
- Range: up to 80m outdoor;up to 40m indoor
- Operation temper: 0-40°C
- Storage temperature: 0-60°C
- Size (D x W x H): 68mm x 68mm x 34mm

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### Technical Information

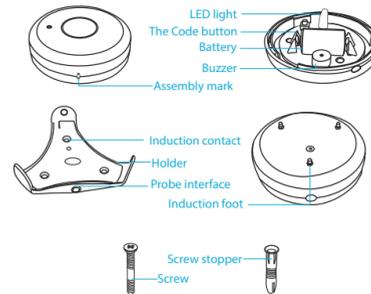
- When alarm triggered, LED light flashes in the detection area.
- Easily install with screws or sticker .
- Detecting the location of the overflow timely and accurately , reduce the economic losses caused by the overflow of water.
- Compatible with any Z-Wave main controller.
- High sensitivity and good stability.

### What's in the box ?

- Water sensor 1pc
- Holder 1pc
- Battery 1pc
- Screw 2pcs
- Screw stopper 2pcs
- Probe 1pc
- User manual 1pc

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### Product Configuration



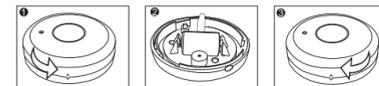
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#### 1. Holder Installation

Fix the holder with screws and screw stopper



#### 2. Battery Installation



Open the water sensor    Install the battery    Close the water sensor

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#### 3. Fix water sensor on the holder



With the detection cable, the detection range can be extended.

#### 4. Probe installation

- NOTE:**
1. When assembling the water sensor, please align the assembly mark.
  2. When fixing water sensor on the holder, please align the induction foot and the induction contact.

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### Tips

1. Make sure the water sensor is in the Z-Wave main controller's network.
2. Do not install in the place near water vapor or smoke.
3. Do not install the water sensor main body and the probe in the place where water is soaked.
4. The sensor probe should be placed on the surface of the water leakage.
5. Direct association is allowed between water sensor and other Z-wave network devices if preset association functionality. Z wave gateway does not take part in such communication. Using this mechanism, water sensor can communicate with other devices even when gateway is damaged.

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### LED Color Indicator

LED Color	LED Display Status	Description
Red	Blink 5 Times (1s Interval)	Power on and Not Add in Z-Wave Network
	Blink 5 Times (500ms Interval)	Press Button tripled, Adding siren in a Z-Wave Network or Send Node Info.
	Blink 5 Times (300ms Interval)	Power on and Already Add in a Z-Wave Network
	Blink 1 Time	Press the Button Long Time, Reset the Plug to restore default settings;
	Blink with Beep On/Off	Detect water leakage

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### Network Configuration

#### Add Water Sensor to Z-Wave Network

The water sensor can be included to the Z-Wave network by pressing the code button.

1. Disassemble the water sensor and insert the battery into the water sensor. Make sure the device locates within the network of the Z-Wave main controller.
2. Set the Z-Wave main controller into the learning mode (see main controller's operating manual).
3. Quickly, triple click the code button, LED light flashes red for 5 times.
4. Water sensor will be detected and included in the Z-Wave network.
5. Wait for the main controller to configure the water sensor.

**Note:**Power to the code, the device is plugged into the power 205 can not have any operation!

#### Remove Water Sensor from Z-Wave Network

1. Make sure the sensor is connected to power source.

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### Associations

2. Set the Z-Wave main controller into the learning mode (see main controller's operating manual).
3. Quickly, triple click the code button, LED light flashes red for 5 times.
4. Wait for the Z-Wave main controller to delete the sensor.

#### Restore the Water Sensor to Factory Default Settings

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

1. Remove the device cover.
2. Make sure the water sensor is connected to power source.
3. Press the reset button for 10 seconds, LED light flashes red for 1 times.
4. Release the button.

**Note:**When the water sensor is being restored factory settings, please make sure power source is connected.

#### Wakeup the Sensor Manual

User can press button once to wake-up this sensor to send wakeup notification to controller, the Led will be blink one time.

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### Associations

This Sensor supports 4 association groups. Each group supports max 5 associated nodes.

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. siren device, wall plug, lamp etc.

**GROUP 1** is lifeline service that assigned to Sensor (Water leakage detector) status. 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\_V4, BATTERY\_REPORT, SENSOR\_BINARY\_REPORT\_V2, 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. 7. If the sensor clears the Notification Event that a Basic Set with

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0x00 is sent to the nodes associated in Group 2 in order to turn off the device. This Group Support: BASIC\_SET.

**GROUP 3** allows for Send Notification to associated devices in this group. This Group Support: NOTIFICATION\_REPORT\_V4

**GROUP 4** allows for Send Notification to associated devices in this group. This Group Support: SENSOR\_BINARY\_REPORT\_V2

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### Advanced Configuration



#### 1. Configuring Alarm Duration Time

This configuration parameter that can be used to adjust the time for beep and LED turned on when water leakage is detected. If this parameter is set to '0', the beep and LED will be turn on always until water leakage is not detected. Prefer to Figure 1.  
Parameter Number: 1  
Parameter Size: 1  
Available Settings: 0-255min  
Default Setting: 120min

#### 2. Configure Alarm Interval

This Parameter defines beep on /off interval time when water leakage is

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detected. Prefer to Figure 1.

Parameter Number: 2  
Parameter Size: 1  
Available Settings: 1 – 255min.  
Default Setting: 1min

#### 3. Configure First Alarm On Time Duration

This parameter defines beep on duration first time when water leakage is detected. Prefer to Figure 1.  
Parameter Number: 3  
Parameter Size: 1  
Available Settings: 1 – 255s  
Default Setting: 60s

#### 4. Configure Alarm on Time Duration

This parameter defines beep on duration after first beep on when water leakage is detected. Prefer to Figure 1.  
Parameter Number: 4  
Parameter Size: 1  
Available Settings: 5-255s  
Default Setting: 5s

#### 5. Configure Alarm Enable/Disable

This parameter defines beep on is enabled or disabled when water leakage is detected. '0' indicate beep on is disable, but LED will be turned on when water leakage detected. '1' indicate beep on is enabled, the BEEP and LED will be turned on when water leakage detected.

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Parameter Number: 5

Parameter Size: 1  
Available Settings: 0,1  
Default Setting: 1

#### 6. Configure Water Leakage Detected Enable/Disable

This parameter defines the function than water leakage detect is enabled or disabled. '0' indicate disable water leakage detect, '1' indicate enable water leakage detect.  
Parameter Number: 6  
Parameter Size: 1  
Available Settings: 0,1  
Default Setting: 1

#### 7. 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.  
Command: SENSOR\_BINARY\_REPORT  
Sensor Type: SENSOR\_DOOR\_WINDOW  
Value: 0x00  
Parameter Number: 7  
Parameter Size: 1  
Available Settings: 0-99,255  
Default Setting: 255

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#### Notification Command Class

Once the detector detected a water leakage, it will send NOTIFICATION\_REPORT and SENSOR\_BINARY\_REPORT to the nodes of lifeline to inform there is a water leakage event. When water leakage is not detected, 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  
Event: NOTIFICATION\_TYPE\_WATER\_ALARM  
Event Clear:  
OWN\_LOCATION  
Command Class: COMMAND\_CLASS\_NOTIFICATION,  
Command: NOTIFICATION\_REPORT,  
Notification Type: NOTIFICATION\_TYPE\_WATER\_ALARM,  
Event: NOTIFICATION\_EVENT\_WATER\_ALARM\_WATER\_LEAK\_DETECTED\_UNKN

#### Binary Sensor Report Command:

Event Present:  
Command Class: COMMAND\_CLASS\_SENSOR\_BINARY  
Command: SENSOR\_BINARY\_REPORT  
Sensor Type: SENSOR\_WATER

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Value: 0xFF  
Event Clear:  
Command Class: COMMAND\_CLASS\_SENSOR\_BINARY  
Command: SENSOR\_BINARY\_REPORT  
Sensor Type: SENSOR\_WATER  
Value: 0x00

#### Battery Check Command

The users can also require the battery status of the water detector by sending BATTERY\_GET command. Once the water detector receives the command, it will return BATTERY\_REPORT command. The water detector will send BATTERY\_LEVEL = 0xFF command to the Z-Wave Controller to inform that the water detector is in dead battery status, otherwise BATTERY\_LEVEL value range is 0% to 100%.

#### Wakeup Command Class

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

### Command Classes

This Sensor 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)

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### Guarantee

1. The Guarantee is provided by our company (hereinafter "Manufacturer")
2. The Manufacturer is responsible for equipment malfunction resulting from physical defects (manufacturing or material) for 12 months from the date of its purchasing.
3. During the Guarantee period, the Manufacturer shall repair or replace any defects, free of charge.
4. In special cases, when the device cannot be r same type (e.g. the device is no longer available in the commercial offer), the Manufacturer may replace it with a different device which has similar technical parameters as the faulty one. Such activity shall be considered as fulfilling the obligations of the Manufacturer. The Manufacturer shall not refund money paid for the device.
5. The guarantee shall not cover:
  - a. mechanical damages (cracks, fractures, cuts, abrasions, physical deformations caused by impact, falling or dropping the device or other object, improper use or not observing the operating manual);
  - b. damages resulting from external causes, e.g.: flood, storm, fire, lightning, natural disasters, earthquakes, war, civil disturbance, force majeure, unforeseen accidents, theft, water damage, liquid leakage, battery spill, weather conditions, sunlight, sand, moisture, high or low temperature, air pollution
  - c. damages caused by malfunctioning software, attack of a computer virus, or by failure to update the software as recommended by the Manufacturer.

All above is for reference only, please see the subject products.

### FCC Warning

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. Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. 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. The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.