Popp

Water Leakage Sensor

SKU: POPE700052

Quickstart

This is a **Alarm Sensor** for **Europe**. To run this device please insert fresh **1 * CR14250** batteries. Please make sure the internal battery is fully charged. A single click on the Z-Wave button inside the device includes and excludes the device.

What is Z-Wave?

Z-Wave is the international wireless protocol for communication in the Smart Home. This device is suited for use in the region mentioned in the Quickstart section. (For more information about frequency regulations please refer to the frequency coverage overview at Sigma Designs Website).

Z-Wave ensures a reliable communication by reconfirming every message (**two-way communication**) and every mains powered node can act as a repeater for other nodes (**meshed network**) in case the receiver is not in direct wireless range of the transmitter.

This device and every other certified Z-Wave device can be **used together with any other certified Z-Wave device regardless of brand and origin** as long as both are suited for the same frequency range.

If a device supports **secure communication** it will communicate with other devices secure as long as this device provides the same or a higher level of security. Otherwise it will automatically turn into a lower level of security to maintain backward compatibility.

For more information about Z-Wave technology, devices, white papers etc. please refer to www.z-wave.info.

Product Description

The Flood Sensor is a universal Z-Wave compatible flood sensor indicating water leakage in Smart Homes. In case of a detected incident the device will send an alarm message to a central controller and can in parallel directly control a group of devices, e.g. to shut off water supply. On the device it self the water event will be indicated using a red LED and a buzzer. This behavior can be configured. The device can be mounted on a wall for easy maintenance and the water is detected using a cabled detector head. The cable is 90 cm long. The device can also be used without the mounting base and will then flow on the water surface.

Prepare for Installation / Reset

Please read the user manual before installing the product.

In order to include (add) a Z-Wave device to a network it **must be in factory default state.** Please make sure to reset the device into factory default. You can do this by performing an Exclusion operation as described below in the manual. Every Z-Wave controller is able to perform this operation however it is recommended to use the primary controller of the previous network to make sure the very device is excluded properly from this network.

Reset to factory default

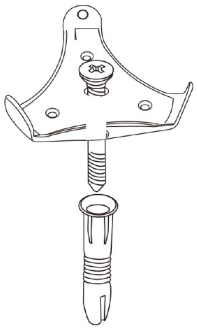
This device also allows to be reset without any involvement of a Z-Wave controller. This procedure should only be used when the primary controller is inoperable.

Reset to Default: 10s HOLD Device Reset (5seconds LED start blinking, success -> short beep)

Safety Warning for Batteries

The product contains batteries. Please remove the batteries when the device is not used. Do not mix batteries of different charging level or different brands.

Installation



The device can be placed on any flat surface in front or below home appliances such as dishwashers or washing machines as long as the opening gap is higher than 25 mm. The recommended way to install the device is to mount the mounting base on the lower part of the wall closed to the point of water leakage control. When mounted on a wall the device can be attached using the double sides tape on the backside of the device. However it is recommended to screw the device holder to the wall as seen above.

The detecting head is then connected to the base using a 90 cm long cable and can be placed even on placed with very limited room. To open the device turn the two parts of the enclosure against each other. The Z-Wave button is inside the enclosure.

Inclusion/Exclusion

On factory default the device does not belong to any Z-Wave network. The device needs to be **added to an existing wireless network** to communicate with the devices of this network. This process is called **Inclusion**.

Devices can also be removed from a network. This process is called **Exclusion**. Both processes are initiated by the primary controller of the Z-Wave network. This controller is turned into exclusion respective inclusion mode. Inclusion and Exclusion is then performed doing a special manual action right on the device.

Inclusion

Single click the internal Button. The red LED will light up to confirm the action.

Exclusion

Single click the internal Button. The red LED will light up to confirm the action.

Product Usage

Once placed on the desired location the device will alarm wirelessly and locally in case of a detected water leakage. The LED starts blinking and - if configured this way - the buzzer will sound. The sound will stop after 3 minutes even if the reason for the alarm was not removed. The LED will however continue to blink.

Node Information Frame

The Node Information Frame (NIF) is the business card of a Z-Wave device. It contains information about the device type and the technical capabilities. The inclusion and exclusion of the device is confirmed by sending out a Node Information Frame. Beside this it may be needed for certain network operations to send out a Node Information Frame. To issue a NIF execute the following action: Single click the internal Button. The red LED will light up to confirm the action.

Communication to a Sleeping device (Wakeup)

This device is battery operated and turned into deep sleep state most of the time to save battery life time. Communication with the device is limited. In order to communicate with the device, a static controller **C** is needed in the network. This controller will maintain a mailbox for the battery operated devices and store commands that can not be received during deep sleep state. Without such a controller, communication may become impossible and/or the battery life time is significantly decreased.

This device will wakeup regularly and announce the wakeup state by sending out a so called Wakeup Notification. The controller can then empty the mailbox. Therefore, the device needs to be configured with the desired wakeup interval and the node ID of the controller. If the device was included by a static controller this controller will usually perform all necessary configurations. The wakeup interval is a tradeoff between maximal battery life time and the desired responses of the device. To wakeup the device please perform the following action: Double click the internal Button. The red LED will light up to confirm the action.

Quick trouble shooting

Here are a few hints for network installation if things dont work as expected.

1. Make sure a device is in factory reset state before including. In doubt exclude before include.
2. If inclusion still fails, check if both devices use the same frequency.
3. Remove all dead devices from associations. Otherwise you will see severe delays.
4. Never use sleeping battery devices without a central controller.
5. Dont poll FLIRS devices.
6. Make sure to have enough mains powered device to benefit from the meshing

Association - one device controls an other device

Z-Wave devices control other Z-Wave devices. The relationship between one device controlling another device is called association. In order to control a different device, the controlling device needs to maintain a list of devices that will receive controlling commands. These lists are called association groups and they are always related to certain events (e.g. button pressed, sensor triggers, ...). In case the event happens all devices stored in the respective association group will receive the same wireless command wireless command, typically a 'Basic Set' Command.

Association Groups:

Group Number	Maximum Nodes	Description
1	5	Lifeline
2	5	Water is detected

Configuration Parameters

Z-Wave products are supposed to work out of the box after inclusion, however certain configuration can adapt the function better to user needs or unlock further enhanced features.

IMPORTANT: Controllers may only allow configuring signed values. In order to set values in the range 128 ... 255 the value sent in the application shall be the desired value minus 256. For example: To set a parameter to 200 it may be needed to set a value of 200 minus 256 = minus 56. In case of a two byte value the same logic applies: Values greater than 32768 may needed to be given as negative values too.

Parameter 1: Flood Alarm Basic On Value

This BASIC Command Value is sent on flood alarm to all devices in Association Group 2
Size: 1 Byte, Default Value: 255

Setting	Description
0 - 255	BASIC Command Value

Parameter 2: Flood Alarm Basic Off Value

This BASIC Command Value is sent on flood alarm clearance to all devices in Association Group 2
Size: 1 Byte, Default Value: 0

Setting	Description
0 - 255	Basic Command Value

Parameter 3: Enable Buzzer Sound on Alarm

Enable/Disable the Buzzer sound on active alarms. The LED will remain blinking even when the buzzer is deactivated.
Size: 1 Byte, Default Value: 1

Setting	Description
0	Disabled
1	Enabled

Technical Data

Dimensions	68 x 68 x 34 mm
Hardware Platform	ZM5202
IP Class	IP 44
Load	1.3 yA
Battery Type	1 * CR14250
Device Type	Notification Sensor
Generic Device Class	Binary Sensor
Specific Device Class	Alarm Notification Sensor
Network Operation	Reporting Sleeping Slave
Firmware Version	00.03
Z-Wave Version	04.05
Z-Wave Product Id	0154.0004.0008

Supported Command Classes

- Basic
- Sensor Binary
- Association Grp Info
- Device Reset Locally
- Zwaveplus Info
- Configuration
- Alarm
- Manufacturer Specific
- Powerlevel
- Battery
- Wake Up
- Association
- Version

Controlled Command Classes

- Basic

Explanation of Z-Wave specific terms

- **Controller** — is a Z-Wave device with capabilities to manage the network. Controllers are typically Gateways,Remote Controls or battery operated wall controllers.
- **Slave** — is a Z-Wave device without capabilities to manage the network. Slaves can be sensors, actuators and even remote controls.
- **Primary Controller** — is the central organizer of the network. It must be a controller. There can be only one primary controller in a Z-Wave network.
- **Inclusion** — is the process of adding new Z-Wave devices into a network.
- **Exclusion** — is the process of removing Z-Wave devices from the network.
- **Association** — is a control relationship between a controlling device and a controlled device.
- **Wakeup Notification** — is a special wireless message issued by a Z-Wave device to announces that is able to communicate.
- **Node Information Frame** — is a special wireless message issued by a Z-Wave device to announce its capabilities and functions.