Hank

Flood Sensor

SKU: HNKEFLD01

Quickstart

This is a **secure Water Sensor** for **Europe**. Please make sure the internal battery is fully charged. To add this device to your network execute the following action:

Click the Z-button once or triple click the Z-button quickly, the LED indicator should blink fast in blue.

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

Flood Sensor is capable of both detecting leaks and floods and when the level of water gets too low in pool or tank, Flood Sensor can work with your z-wave network to prevent emergencies such as burst water boiler to leaking air conditioners. With Z-Wave, the scope to save money is endless.

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.

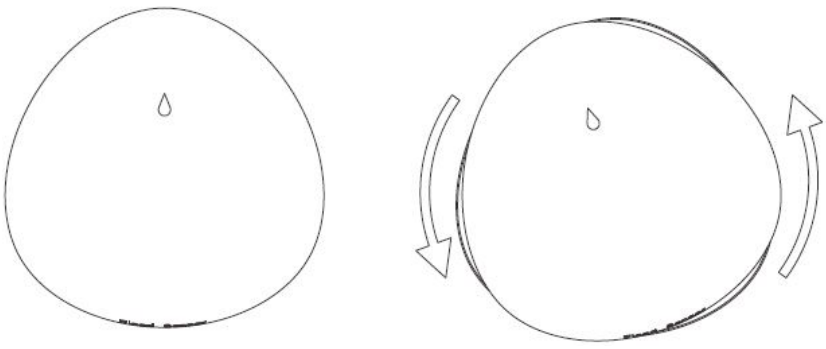
Reset to factory default

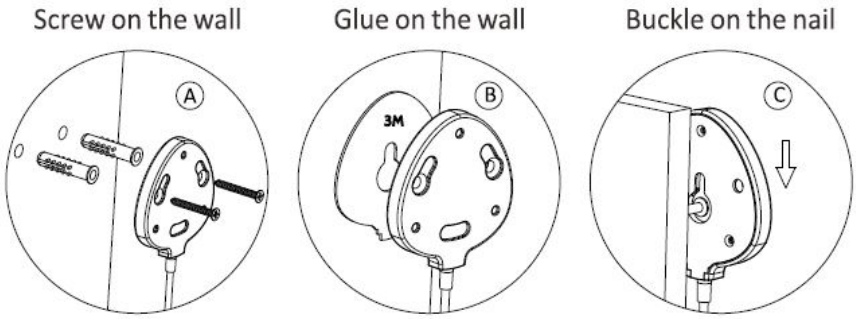
This device also allows to be reset without any involvement of a Z-Wave controller. This procedure should only be used when the primary controller is inoperable.

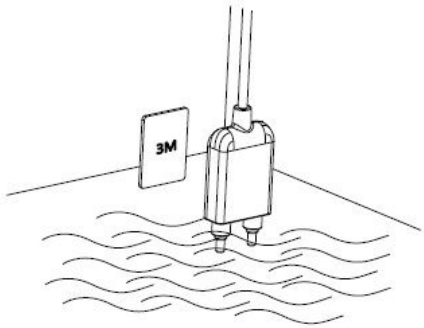
Press and hold the Z-button for more than 20 seconds.

Installation

Flood Sensor should not be mounted directly on or near metal framing or other large metallic objects since metal objects may weaken the radio signal strength. After “activation” process, the sensor can work without any installation. Furthermore, you can
use the extension probe to fix sensor body.







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

Click the Z-button once or triple click the Z-button quickly, the LED indicator should blink fast in blue.

Exclusion

Click the Z-button once or triple click the Z-button quickly, the LED indicator should blink fast in orange.

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: Press Z-Button

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	On/Off Control -- Note parameter 14

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 14: Enable/Disable BASIC SET command

Flood sensor can send BASIC SET command to nodes associated with group 2.

Size: 1 Byte, Default Value: 0

Setting	Description
0	Disable
1	Enable

Parameter 15: Value of the BASIC SET

Flood sensor can reverse its value of BASIC SET when flooding is triggered.

Size: 1 Byte, Default Value: 0

Setting	Description
0	Send BASIC SET VALUE = 255 to nodes associated with group 2 when flooding alarm is triggered. Send BASIC SET VALUE = 0 to nodes associated with group 2 when flooding alarm is canceled.
1	Send BASIC SET VALUE = 0 to nodes associated with group 2 when flooding alarm is triggered. Send BASIC SET VALUE = 255 to nodes associated with group 2 when flooding alarm is canceled.

Parameter 17: Enable/Disable flooding alarm

Size: 1 Byte, Default Value: 1

Setting	Description
0	Disable
1	Enable

Parameter 18: Enable/Disable shock alarm

Size: 1 Byte, Default Value: 0

Setting	Description
0	Disable
1	Enable

Parameter 19: Temperatur report Time

The sensor measure the temperaure every ten minutes, change of 1 degree Celsius will be reported. By default, it must report at least once a day.

Size: 1 Byte, Default Value: 144

Setting	Description
3 - 240	Report time

Parameter 20: Set the high temperature alarm trigger value

Size: 2 Byte, Default Value: 400

Setting	Description
-550 - 1250	- 55 - +125°C

Parameter 21: Enable/Disable low temperature alarm

Size: 0 Byte, Default Value: 1

Setting	Description
0	Disable
1	Enable

Parameter 22: Set the low temperature alarm trigger value

Size: 2 Byte, Default Value: 0

Setting	Description
-550 - 1250	-55 - +125°C

Parameter 24: Enable/Disable blinking LED when alarm being triggered

Size: 1 Byte, Default Value: 1

Setting	Description
0	Disable
1	Enable

Parameter 32: Level of low battery

This parameter defines a battery level as the “low battery”.

Size: 1 Byte, Default Value: 20

Setting	Description
10 - 50	%

Technical Data

Dimensions	0.0680000x0.0250000x0.0680000 mm
Weight	34 gr
Hardware Platform	ZM5101
EAN	6925312930026
IP Class	IP 20
Voltage	3,6V
Device Type	Water Sensor
Network Operation	Sleeping device
Firmware Version	01.02
Z-Wave Version	04.3d
Certification ID	ZC10-17125894
Z-Wave Product Id	0x0208.0x0200.0x000f

Supported Command Classes

- Basic
- Sensor Binary
- Sensor Multilevel
- Transport Service
- Association Grp Info
- Device Reset Locally
- Zwaveplus Info
- Supervision
- Configuration
- Alarm
- Manufacturer Specific
- Powerlevel
- Firmware Update Md
- Battery
- Wake Up
- Association
- Version
- Security
- Security 2

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.
