



## Z-Wave Plus Flood/Freeze Sensor Installation Instructions

### Product Overview

- Z-Wave+™ enabled device which detects flood and freeze.
- Reports tamper condition when cover is open

### Product Specifications

- For indoor use only
- Operating frequency: 908.42 MHz
- Operating temperature: 0° – 49°C, 32° – 120°F (ambient temperature)
- Operating humidity 5-95% non-condensing
- Battery type required: 3V Lithium CR123A
- Battery life approximately 5 years



### Network Inclusion

The sensor must be added to a Z-Wave network prior to use. To include the sensor in a network both the sensor and the network controller must be in inclusion mode at the same time. *Refer to the instructions provided by the manufacturer of your specific controller for details on initiating the controller's inclusion mode.*

- 1) Verify that the Z-Wave Plus controller you are using is compatible with the Flood Freeze sensor.
- 2) Either mount or move the Flood Freeze sensor as close as possible to the location the sensor will remain. See installation section below.
- 3) Put your Z-Wave Plus Controller into add (inclusion) mode.
- 4) To add the sensor to an existing Z-Wave network, follow the directions to put your Z-Wave Controller into add (inclusion) mode. The Flood Freeze enters add and remove (inclusion/exclusion) when powered on (when battery is added). If the LED starts blinking continuously, the sensor has no node ID and was not successfully added, so start step C over again. Make sure to remove the battery for 10 seconds if adding to a Z-Wave network fails.
- 5) If after 5 seconds the LED is not blinking, look on the Z-Wave controller's interface for feedback on whether the sensor was added successfully. If you do not see any feedback that the sensor was added, follow directions for removing the sensor from a Z-Wave network, and then try adding the sensor again. If you are still having problems, you may need to add additional Z-Wave listening devices in-between the controller and the sensor.

### Network Exclusion

- 1) Any sensor can be removed from any Z-Wave Plus controller. Follow the directions to put your Z-Wave Plus Controller into exclusion mode. Please use this procedure only when the network primary controller is missing or otherwise inoperable.
- 2) Open the Flood Freeze case and remove the battery for 1 seconds. Replace the battery and the controller should remove the device from the Z-Wave network.

### Network Inclusion/Exclusion: Key Points to Remember

- *Controller inclusion/exclusion mode must be activated BEFORE starting sensor inclusion or exclusion mode.*
- *The sensor can only be included into one controller network at a time, and must be excluded from one network before inclusion in another.*
- *The plastic pull tab must be removed to enable sensor operation.*
- *The sensor automatically enters inclusion mode at power-up.*
- *Exclusion mode on the sensor is initiated following the same exact procedure as inclusion.*



## LED Status

The Flood Freeze is equipped with a single LED. The state of the LED will change based on the state of the device.

Device not included	= Light breathing (slow blink)
Flood Detected	= Single LED blink
Freeze Detected	= Single LED blink
Case Opened	= LED will remain on while case open

## Factory Default

The Flood Freeze sensor factory defaults on network exclusion.

## Testing

To test the RF transmission from the mounted position you can generate a tamper by removing the cover. This will send a signal to the control panel. To test flood/water detection, place the probe in a cup of water. Placing the sensor in a freezer to test freezing may not work if the signal cannot penetrate the appliance. You may place a bag of ice over the sensor to test freeze detection. (may take upwards of 30 minutes to detect)

## Replacing the Battery

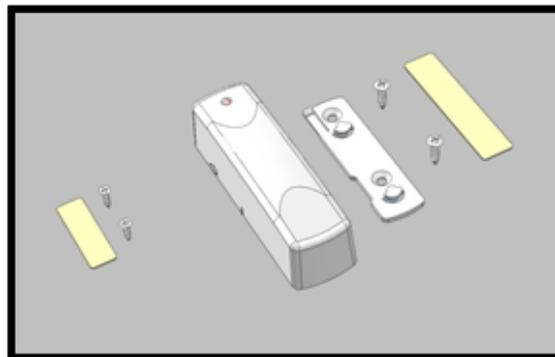
When the battery is low a low battery notification will be sent to the life line nodes. To replace the battery:

1. Remove the top cover to reveal the battery. This will send a tamper signal to the lifeline nodes.
2. Replace with a Panasonic CR123A battery ensuring the + side of the battery faces as indicated on the device.
3. Re-attach the cover, you should hear a click when the cover engages properly.

## Installation

The package contains the following:

- 1- Flood Sensor with Probe
- 1- Sensor Mounting Bracket
- 2- Screws for Sensor Mounting Bracket
- 1- Adhesive tape for Sensor Mounting Bracket
- 2- Screws for probe
- 1- Adhesive tape for mounting Probe.



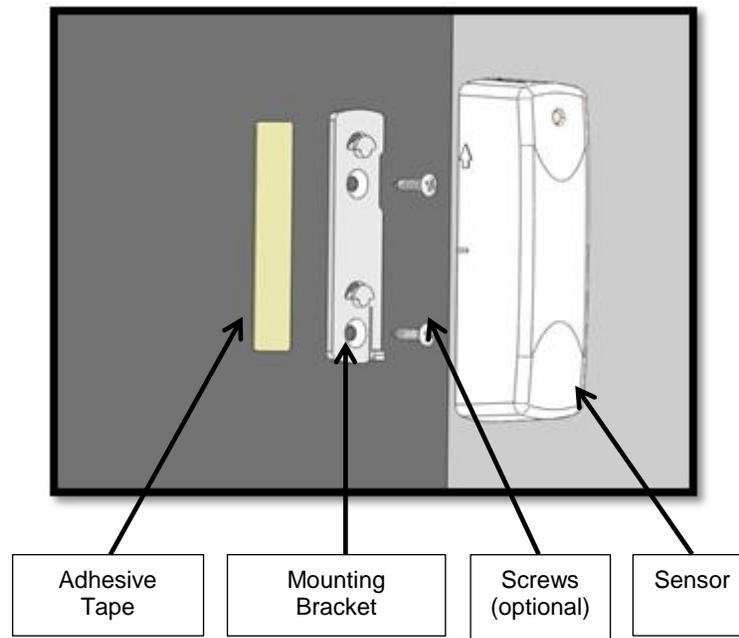
**STEP ONE Identify Location for Sensor:**

Determine where to place the probe sensor. The probe should be located where water is most likely to pool if a leak occurs.

The sensor needs to be mounted where the probe can reach the location described above.

**STEP TWO Mount the Sensor:**

Mount the sensor to a clean dry surface with the adhesive tape and/or the screws provided





**STEP THREE Mount the Probe:**

Mount the probe to a clean dry surface where water is most likely to pool if a leak occurs.



**ADDITIONAL NOTES AND SUMMARY:**

- The sensor can slide onto the mounting bracket in two different ways. To ensure that the sensor is securely fastened it is recommended that the tab on the bracket engage the back of the sensor.
- Before attaching the bracket to a surface note how the bracket will need to be oriented in order for the tab to engage the sensor. The required orientation of the sensor determines the bracket orientation.
- The sensor slides onto the bracket until the tab engages. Please be advised that adhesive tape may damage the surfaces to which it is attached.



## Z-Wave Plus Specific Information

Z-Wave Plus is a wireless mesh network and data protocol that allows devices from many different manufacturers to interoperate. This device implements Z-Wave Plus functionality, Network Wide Inclusion, and Explorer frames. This device is asleep most of the time but can respond to queries on a Wake Up Notification; however for test purposes, the device will stay awake while tampered for testing Z-Wave Plus command class functionality. The following information is intended for software engineers working on Z-Wave Plus controllers and home automation enthusiasts to integrate the Z-Wave Plus sensor into their system.

Device Classes	Generic Device Class	GENERIC_TYPE_SENSOR_NOTIFICATION
	Specific Device Class	SPECIFIC_TYPE_NOTIFICATION_SENSOR
Command Classes	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_NOTIFICATION_V5	v5
	COMMAND_CLASS_SENSOR_BINARY_V2	V2
	COMMAND_CLASS_ASSOCIATION	v2
	COMMAND_CLASS_ASSOCIATION_GRP_INFO	v1
COMMAND_CLASS_WAKE_UP	v2	
Manufacturer ID	MFG_ID_ECOLINK ( 0x014A )	
Product Type	0x05	
Product ID	0x0F	



### Z-Wave Plus Command Class Notification

These notifications are sent unsolicited to the lifeline Association group.

Notification Type	Event	Cause
Water (0x05)	Water Detected (0x02)	Probe submerged in water
	Water No longer Detected (0x04)	Probe no longer submerged in water
Home Security (0x07)	Tampering, Product Cover Removed (0x03)	Case Tampered
	Event Inactive (0x00)	Case Restored to Closed Position
Power Management (0x08)	Replace Battery Soon (0x0A)	Battery is Getting Low
	Replace Battery Now (0x0B)	Battery Needs Replacing



## Z-Wave Plus Command Class Sensor Binary

These notifications are sent unsolicited to the lifeline Association group.

Notification Type	Event	Cause
Water (0x06)	Water Detected (0xFF)	Probe submerged in water
	Water No longer Detected (0x00)	Probe no longer submerged in water
Freeze (0x07)	Freezing Temperature Detected (0xFF)	Temperature nearing Freeze Point
	Freeze no longer detected (0x00)	Temperature no longer near Freezing



## Z-Wave Plus Command Class Association

The Flood Freeze sensor supports one association group with up to 5 nodes. All notifications, and events are sent to association group one (lifeline).

### Association

This sensor has one Association groups of 5 nodes. Group one is a lifeline group who will receive unsolicited messages relating to flood/freeze notifications, case tampering notifications, low-battery notifications.

### Network Wide Inclusion

This sensor also supports Network Wide Inclusion such that the Sensor can be included into the Z-Wave network over the mesh network and not directly near the main controller. This mode is automatically activated after regular inclusion was not successful

### Wake-Up Notification

The sensor will wake up every so often and when the case is closed to send a Wake-Up Notification to allow the life line master node controller that the sensor is now available for any queued messages that the controller may have for the sensor. The time between Wake-Up Notifications can be configured with the Wake-Up Notification command class to be between 1 hour and 1 week with interval steps of 200 seconds. The sensor will also send a wakeup notification whenever the case is closed.

### FCC Compliance Statement

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.

This equipment has been tested and found to comply with the limits for Class B digital devices, 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 instruction manual, 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:

- Re-orient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment to an outlet on a different circuit from the receiver
- Consult the dealer or an experienced radio/TV contractor for help.

Warning: Changes or modifications not expressly approved by Ecolink Intelligent Technology Inc. could void the user's authority to operate the equipment.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

C'et appareil est conforme la norme d'Industrie Canada exempts de licence RSS. Son fonctionnement est soumis aux deux conditions suivantes: (1) c'et appareil ne peut pas provoquer d'interférences, et (2) c'et appareil doit accepter toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement de la dispositif.

**FCC ID: XQC-FLFZWAVE5 IC: 9863B- FLFZWAVE5**



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This limited warranty is provided by Ecolink Intelligent Technology (“Ecolink”) to you as the original purchaser of the product. Ecolink warrants this product to be free from defects in material and workmanship for a period of **one (1) year** from the date of original purchase. The determination of whether the product is defective shall be made by Ecolink in its sole discretion with consideration given to the overall performance of the product. If Ecolink determines that any product is defective, Ecolink’s sole obligation and your sole and exclusive remedy shall be that Ecolink will replace the product.

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This product covered by one or more claims of patents found at: <http://sipcollc.com/patent-list/>