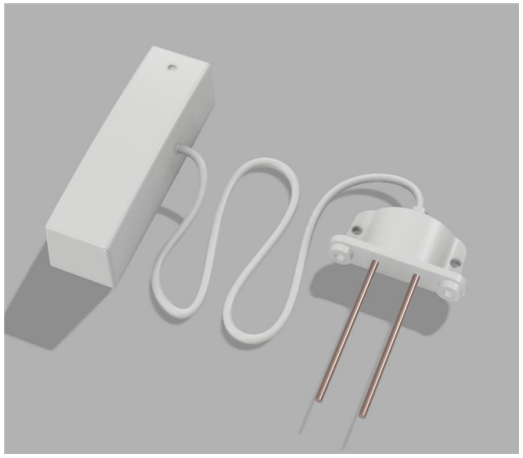
DWWZWAVE2.5-ECO
Z-Wave Plus Water Sensor Installation Instructions



Product Overview

- Z-Wave+™ enabled device which detects water when used in conjunction with probe
- Transmits open/closed status
- Reports tamper condition when cover is open

Product Specifications

- For indoor use only
- Operating Frequencies: 908.42 and 916 MHz
- Operation range: Up to 100 feet (30.5 meters) line-of-sight
- Operating temperature: 0°– 49℃, 32°– 120℉ (ambient temperature)
- Battery type required: 3V Lithium CR123A
- Battery life approximately 3 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 Water Sensor.
2) Either mount or move the Water 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. Activate inclusion mode for the sensor by removing the plastic pull-tab from the back of the sensor. When the inclusion process in complete, the LED on the sensor will be solid blue, then go out.
5) Test the sensor. With the flood probe connected, place the probe in a cup of water, or short the contacts of the probe causing the sensor to represent a closed position. If the LED flashes ONE TIME, it is successfully communicating on your Zwave network. If the LED on the sensor flashes slow and steady for 5 seconds, you need to repeat the inclusion process.

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 Water Sensors case and remove the battery for 10 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 senor is initiated following the same exact procedure as inclusion.*

LED Status

The Water Sensor 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)
State Change: Water Detected or Removed from Probes	= Single LED blink
Case Opened	= LED will remain on while case open

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 Z-Wave controller.
To test water detection, place the probe in a cup of water and remove, this will toggle the status state from open to closed.

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.

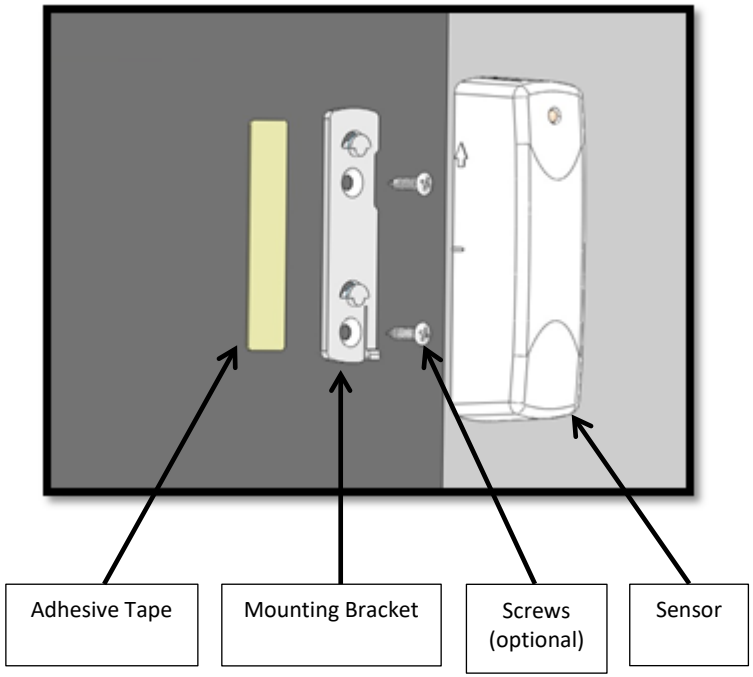
Installation

The package contains the following:

1- Water 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.
1- Wire Clip

STEP ONE **Mount the Sensor:**

Mount the sensor to a clean dry surface with the bracket, screws, and adhesive tape provided where it will not be immersed or splashed with water.



STEP TWO **Mount the Probe:**

Mount the probe to a clean dry surface where water detection is needed.

ADDITIONAL NOTES AND SUMMARY:

- With either mounting method the first step is to attach the sensor mounting bracket to the mounting surface. (The mounting bracket is used regardless of choice of screws or tape).
- 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.

SENSOR CONDITION	COMMAND CLASS and VALUE	ASSOCIATION GROUP	CONFIGURABLE?
Probes are DRY (sensor open)	Notification Report of Access Control (0x06), Door/Window is open (0x16)	1	Yes via Notification Set of notification Type (0x06) and status of 0x00: This type of notification turned off 0xFF: This type of notification turned on
	Sensor Binary Report of 0xFF Sensor Type: 0xFF	1	Yes via Configuration Command Class Parameter Number: 2 Size: 1 A Configuration Value: 0xFF (On) / 0x00 (Off)
	Basic set of 0xFF (On)	2	No
Probes are WET (sensor closed)	Notification Report of Access Control (0x06), Door/Window is closed (0x17)	1	Yes via Notification Set of notification Type (0x06) and status of 0x00: This type of notification turned off 0xFF: This type of notification turned on
	Sensor Binary Report of 0x00 Sensor Type: 0xFF	1	Yes via Configuration Command Class Parameter Number: 2 Size: 1 A Configuration Value: 0xFF (On) / 0x00

			(Off)
	Basic Set of 0x00 (Off) By factory default this feature is disabled and must be enabled via Configuration Command Class.	2	Yes via Configuration Command Class Parameter Number: 1 Size: 1 A Configuration Value: 0xFF (On) / 0x00 (Off) Parameter Number: 2
Sensor Case Removed	Notification Report of Home Security (0x07), Tampering product cover removed (0x03)	1	Yes via Notification Set of notification Type (0x07) and status of 0x00: This type of notification turned off 0xFF: This type of notification turned on
Sensor Case Fastened	Wake-Up Notification	1	Yes via Wake-Up Notification Command Class
Battery Level Dipped Below 2.6v	Notification Report of Power Management (0x08), Replace battery now (0x0B)	1	Yes via Notification Set of notification Type (0x08) and status of 0x00: This type of notification turned off 0xFF: This type of notification turned on

What is Z-Wave?

The Z-Wave protocol is an interoperable, wireless, RF-based communications technology designed specifically for control, monitoring and status reading applications in residential and light commercial environments. Mature, proven and broadly deployed (with over 35 million products sold worldwide), Z-Wave is by far the world market leader in wireless control, bringing affordable, reliable and easy-to-use 'smart' products to many millions of people in every aspect of daily life. Certified Z-Wave devices regardless of manufacturer can work together to form a Z-Wave mesh network. Always on Z-Wave devices can act as repeaters in the mesh increasing range and redundancy.

For a more complete look at Z-Wave technology for non-technologists, and to learn more about Z-Wave's role as a key enabling technology for the Internet of Things and connected objects, please visit www.z-wave.com.

Z-Wave Device Class and Command Class Information

This Z-Wave sensor is a Z-Wave generic Device Class of GENERIC_TYPE_SENSOR_NOTIFICATION, and a specific device class of SPECIFIC_TYPE_NOTIFICATION_SENSOR, and the supported command classes are COMMAND_CLASS_ZWAVEPLUS_INFO, COMMAND_CLASS_VERSION, COMMAND_CLASS_MANUFACTURER_SPECIFIC, COMMAND_CLASS_POWERLEVEL, COMMAND_CLASS_BATTERY, COMMAND_CLASS_NOTIFICATION_V4, COMMAND_CLASS_ASSOCIATION, COMMAND_CLASS_ASSOCIATION_GRP_INFO, COMMAND_CLASS_WAKE_UP, COMMAND_CLASS_SENSOR_BINARY, COMMAND_CLASS_CONFIGURATION, COMMAND_CLASS_BASIC.

Manufacturer Specific

Manufacturer ID: 0x014A

Product Type: 4
Product ID: 2

Factory Default

To restore this sensor to factory default settings, follow the instructions in this manual to exclude this sensor from the Z-Wave network. Upon completion of removal from the network the sensor will restore itself to factory default settings automatically. Use this procedure only in the event that the network primary controller is missing or otherwise inoperable.

Keeping Awake for Testing and Configuration

To save power, this sensor sleeps most of the time and is therefore not awake to receive messages from a gateway for testing. Removing the top case from the sensor will put in device into a tampered mode in which the sensor will stay awake and able to receive messages. Most of the time an end user would not do this, but if the sensor needs to be configured after inclusion, an end user can follow the instructions below for sending Wake-Up notifications.

Association

This sensor has two Association groups of 5 nodes each. Group one is a lifeline group who will receive unsolicited messages relating to open/close notifications, case tampering notifications, low-battery notifications, and sensor binary reports. Group 2 is intended for devices that are to be controlled i.e. turned on or off (on only by default) with a Basic Set. On inclusion the controller should put its node ID in group 1 but not group 2.

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.

Configuration

The sensor has two configuration parameters. Parameter 1 configures the sensor to send or not send Basic Set commands of 0x00 to nodes in Association group 2 turning the devices off when the sensor is in a restored state i.e. the door is closed. By default, the sensor does NOT send Basic Set commands of 0x00.

Parameter 2 configures the sensor to either to send or not to send Sensor Binary Report commands to Association Group 1 when the sensor is faulted and restored. If the controller is fully compatible with the Notification Command Class thereby making the Sensor Binary Reports

redundant, the controller can disable the Sensor Binary Report Commands completely. The following table shows the values to enable and disable the two configuration parameters.

Configuration Set Values	Effect
Parameter Number: 1 Size: 1 Configuration Value: 0x00	(Default) Sensor does NOT send Basic Sets to Node IDs in Association Group 2 when the sensor is restored (i.e. Door/Window Closed).
Parameter Number: 1 Size: 1 Configuration Value: 0xFF	Sensor sends Basic Sets of 0x00 to nodes in Association Group2 when sensor is restored.
Parameter Number: 2 Size: 1 Configuration Value: 0x00	(Default) Sensor sends Sensor Binary Reports when sensor is faulted and restored for backwards compatibility in addition to Notification Reports.
Parameter Number: 2 Size: 1 Configuration Value: 0xFF	Sensor will send only Notification Reports and NOT Sensor Binary Reports when the sensor is faulted and restored.

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-DWWZ25 IC: 9863B-DWWZ25

LIMITED WARRANTY

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.

This warranty does not apply to damage caused by shipping or handling, or damage caused by accident, abuse, misuse, misapplication, ordinary wear, improper maintenance, failure to follow instructions or as a result of any unauthorized modifications. The foregoing limited warranty is and shall be in lieu of any and all other warranties, whether expressed or implied and of all other obligations or liabilities on the part of Ecolink. Ecolink neither assumes responsibility for, nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product. It is recommended that the customer check their equipment on a regular basis for proper operation.

DISCLAIMER AND LIMITATION OF LIABILITY

OTHER THAN THE LIMITED WARRANTY ABOVE, ECOLINK MAKES NO OTHER WARRANTY OR REPRESENTATION, AND HEREBY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. YOU ACKNOWLEDGE THAT YOU ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE INTENDED USE.

IN NO EVENT SHALL ECOLINK OR ANY OF ITS AFFILIATES BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT, CONSEQUENTIAL, OR MULTIPLE DAMAGES, INCLUDING BUT NOT LIMITED TO, LOST PROFITS, LOSS OR DAMAGE TO SOFTWARE OR DATA, OR DAMAGE TO EQUIPMENT ARISING OUT OF THE USE OF ANY PRODUCT, EVEN IF ECOLINK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. FURTHER, IN NO EVENT SHALL THE LIABILITY OF ECOLINK OR ITS AFFILIATIES EXCEED THE INDIVIDUAL PRICE OF THE PRODUCT ON WHICH LIABILITY IS ASSERTED.

By the act of use, setup or assembly of the product, you accept all resulting liability. If you as the purchaser or user are not prepared to accept the liability associated with the use of the product, you are advised to return the product immediately in new and unused condition to the place of purchase. Some states do not allow the exclusion or limitation of incidental or consequential damage, so the above limitations may not apply to you.

RETURN POLICY

Please visit us at www.discoverecolink.com/returns to view our return policy.

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