



Ecolink Intelligent Technology EU Z-WAVE DOOR WINDOW SENSOR H114101 Manual

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Ecolink Intelligent Technology

EU Z-WAVE DOOR WINDOW SENSOR

SKU: H114101





Quickstart

This is a

Alarm Sensor
for
CEPT (Europe).

Please make sure the internal battery is fully charged.

To add this device to your network execute the following action:

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 controllers inclusion mode. STEP ONE Start by placing the controller into inclusion mode. STEP TWO Activate inclusion mode for the sensor by removing the plastic pull-tab from the back of the sensor. When the inclusion process is complete, the LED on the sensor will be solid blue, then go out. STEP THREE Test the sensor. Place the magnet next to the sensor to represent a closed position (see Installation section to see where to position the magnet). 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.

Please refer to the [Manufacturers Manual](#) for more information.

Important safety information

Please read this manual carefully. Failure to follow the recommendations in this manual may be dangerous or may violate the law.

The manufacturer, importer, distributor and seller shall not be liable for any loss or damage resulting from failure to comply with the instructions in this manual or any other material.

Use this equipment only for its intended purpose. Follow the disposal instructions.

Do not dispose of electronic equipment or batteries in a fire or near open heat sources.

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.

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

Includes Brown & White covers
Sleek design virtually disappears
Easy-to-open case requires no special tools
Case tamper protection
Ideal for double-hung window
Up to 3 year battery life on 1 CR123A lithium battery
Uses rare earth magnet for up to 5/8th inch gap detection
Includes white and brown cases

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.

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.

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

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 controllers inclusion mode. **STEP ONE** Start by placing the controller into inclusion mode. **STEP TWO** Activate inclusion mode for the sensor by removing the plastic pull-tab from the back of the sensor. When the inclusion process is complete, the LED on the sensor will be solid blue, then go out. **STEP THREE** Test the sensor. Place the magnet next to the sensor to represent a closed position (see Installation section to see where to position the magnet). 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.

Exclusion

Exclusion mode on the sensor is initiated following the same exact procedure as inclusion.

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:

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.

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 NumberMaximum NodesDescription

1	5	This sensor has two Association groups of 5 nodes each. Group one is a lifeline group who will receive unsolicited messages relating to door/window open/close notifications, case tampering notifications, low-battery notifications, and sensor binary reports.
2	5	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.

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: Sending Basic Sets to Association group 2

Parameter 1 configures the sensor to send or not send Basic Set commands of 0x00 to nodes in Association group2 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.

Size: 1 Byte, Default Value: 0

SettingDescription

-1 – 0	0x00 off, 0xFF on
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Parameter 2: Sending sensor binary report

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.

Size: 1 Byte, Default Value: 0

SettingDescription

-1 – 0	0x00 off, 0xFF on
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Technical Data

Hardware Platform	ZM5202
Device Type	Notification Sensor
Network Operation	Reporting Sleeping Slave
Firmware Version	HW: 2 FW: 10.01
Z-Wave Version	6.51.06
Certification ID	ZC10-18056109
Z-Wave Product Id	0x014A.0x0004.0x0002
Sensors	
Supported Notification Types	
Frequency	XXfrequency
Maximum transmission power	XXantenna

Supported Command Classes

- Association Grp Info
- Association V2
- Basic
- Battery
- Configuration
- Manufacturer Specific V2
- Notification V5
- Powerlevel
- Sensor Binary V2
- Version V2
- Wake Up V2
- Zwaveplus Info V2

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 announce that it is able to communicate.
- **Node Information Frame** — is a special wireless message issued by a Z-Wave device to announce its capabilities and functions.