Tilt Sensor

Installation & Operation Manual

Introduction

This sensor is a Z-Wave enabled device (interoperable, two-way RF mesh networking technology) and is fully compatible with any Z-Wave enabled network. The Z-Wave wireless communication protocol allows for Z-Wave devices from different manufacturers to operate in the same Z-Wave network. The sensor detects deviations from the angle of its resting position. The tilt sensor is ideal for placement on garage doors as the sensor will begin to rotate when the door is opened.

Product Specification

For indoor use only
Operating Frequency: 908.42 MHz
Operating Range: Up to 100 feet line-of-sight
Operating Temperature: 0°C to 49°C
Battery: 3 Volt CR123A Litium Ion

Setup & Installation

Installation begins by including the tilt sensor into a Z-Wave network. Inclusion is the process of adding a new Z-Wave sensor to an existing Z-Wave network. If you are setting up a Z-Wave network for the first time, please refer to the installation guide provided by the manufacturer of your Z-Wave controller before installing the tilt sensor. When a Z-Wave network is in place, you are ready to include the sensor. Mount the sensor in the desired final location before including it into the network. This will ensure that the sensor is in communication range of other Z-Wave devices.

The sensor is in the upright position when the LED is slightly closer to the ground. If the sensor is mounted right-side-up, the case should be wider at the top than it is at the bottom. Once the sensor is mounted, follow the controller instructions and place the controller into "inclusion mode." With the controller in inclusion mode, insert the battery into the tilt sensor. Upon receiving power, the tilt sensor will send out a Z-Wave message to the controller requesting to be included.

If inclusion was successful, the LED will be off. If inclusion was not successful, the LED will flash and the inclusion process must be repeated. Repeat the inclusion process until the sensor has been successfully included.

> *If the inclusion process continues to fail, it is possible that the sensor has already been included in a different Z-Wave network. In this case, follow the procedure in the section titled "Exclusion" to exclude the sensor. The inclusion process should work after the exclusion process has been completed.*

Operation

1. When triggered (angle of tilt sensor deviates from resting position) the sensor will send a Z-Wave message of type “basic set 0xFF”. When the tilt sensor is restored to a closed position, a Z-Wave message of type “basic set 0x00” is transmitted.
2. The sensor unit is programmed with two Association groups. Group 1 can store the node ID of up to five controllers. Controllers will all receive a “basic set 0xFF” when triggered and “basic set 0x00” once the sensor is restored to normal position. Group 2 stores the node IDs for up to five devices that can be activated with a basic set of 0xFF when the sensor is triggered. Such devices include chimes, sirens, or light switches. Each device in group 2 listens for Z-Wave messages of type “basic set 0xFF”.
3. Exclusion is the process of removing a sensor from a Z-Wave network. To exclude the tilt sensor from a Z-Wave network, place the controller into “exclusion mode” (see controller manufacturer’s instructions to put the controller into exclusion mode). Once the controller is in exclusion mode, remove the battery from the tilt sensor. Wait ten seconds and then replace the battery. When the battery is replaced, check to see if exclusion mode was successful by observing the LED. If exclusion was successful, the LED will blink continuously.
4. The sensor enters sleep mode when not in use. However, the sensor must be “awake” to receive messages from the controller. To activate “stay-awake mode”, remove the front cover. This will wake up the sensor. Leave the cover off to enable the controller to query the sensor for device specific information and capabilities.

Federal Communications Commission 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.
2. This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by Ecolink Intelligent Technology, Inc. can void the users’ authority to operate the equipment.

This device complies with Industry Canada license-exempt RSS standards. 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.