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MONOPRICE

Z-Wave Plus® Recessed Door/Window Sensor

P/N 15268

User's Manual

CONTENTS

SAFETY WARNINGS AND GUIDELINES

- This device is intended for indoor use only.
- Do not expose this device to water or moisture of any kind. Do not place drinks or other containers with moisture on or near the device. If moisture does get in or on the device, immediately remove the battery and allow it to fully dry before reapplying power.
- Do not expose this device to excessively high temperatures. Do not place it in, on, or near heat sources, such as a fireplace, stove, radiator, etc. Do not leave it in direct sunlight.
- Clean using a soft, dry cloth only. Do not use chemical cleaners, solvents, or detergents. For stubborn deposits, moisten the cloth with warm water.
- This device has no user serviceable parts. Do not attempt to service or modify this device.
- This device includes a Lithium-ion battery. Dispose of the battery only in accordance with local, state, or federal regulations for electronic waste.

REGULATORY COMPLIANCE

Notice for FCC

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.
Modifying the equipment without Monoprice's authorization may result in the equipment no longer complying with FCC requirements for Class B digital devices. In that event, your right to use the equipment may be limited by FCC regulations, and you may be required to correct any interference to radio or television communications at your own expense.
This equipment has been tested and found to comply with the limits for a Class B digital device, 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 instructions, 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:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Radio Notice for FCC

Caution

This FCC Part 15 radio device operates on a non-interference basis with other devices operating at this frequency. Any changes or modification to said product not expressly approved by Monoprice, including the use of non-approved antennas, could void the user's authority to operate this device.

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.

Notice for Industry Canada

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Z-WAVE COMMAND CLASSES

This sensor supports the following Z-Wave command classes:

COMMAND_CLASS_ASSOCIATION_GRP_INFO
COMMAND_CLASS_ASSOCIATION_V2
COMMAND_CLASS_BATTERY
COMMAND_CLASS_DEVICE_RESET_LOCALLY
COMMAND_CLASS_FIRMWARE_UPDATE_MD_V2
COMMAND_CLASS_MANUFACTURER_SPECIFIC_V2
COMMAND_CLASS_NOTIFICATION_V4 (Mapping COMMAND_CLASS_BASIC)
COMMAND_CLASS_POWERLEVEL
COMMAND_CLASS_SECURITY
COMMAND_CLASS_VERSION_V2
COMMAND_CLASS_WAKE_UP_V2
COMMAND_CLASS_ZWAVEPLUS_INFO_V

The following table shows the command states and values for this sensor.

Function		Alarm Version 1	Notification Version 4
Alarm Type	Event Detected	0x06	
	Tamper Switch	0x07	
Alarm Level		OPEN: 0xFF CLOSE: 0x00	
Notification Type	Event Detected		0x06
	Tamper Switch		0x07
Notification Event	Event Detected		OPEN: 0x16 CLOSE: 0x17
	Tamper Switch		OPEN: 0x03 CLOSE: 0x00

TECHNICAL SUPPORT

Monoprice is pleased to provide free, live, online technical support to assist you with any questions you may have about installation, setup, troubleshooting, or product recommendations. If you ever need assistance with your new product, please come online to talk to one of our friendly and knowledgeable Tech Support Associates. Technical support is available through the online chat button on our website (**www.monoprice.com**) during regular business hours, 7 days a week.
You can also get assistance through email by sending a message to **tech@monoprice.com**

SPECIFICATIONS

Protocol: Z-Wave® (ZM5202)

Operating Frequency: 908.42 MHz

Operating Range: up to 100 feet line of sight

Operating Temperature: +5 ~ +140°F (-15 ~ +60°C)

Battery: 1x CR2

INTRODUCTION

Thank you for purchasing this Z-Wave Plus® Recessed Door/Window Sensor from Monoprice! This sensor is a wireless Z-Wave® enabled device and is fully compatible with any Z-Wave enabled network. Z-Wave is an interoperable, two-way RF mesh networking technology used for home automation and security. Every AC powered Z-Wave device acts as a signal repeater, so multiple devices result in more possible transmission routes, which helps eliminate RF "dead spots" in the network. Any Z-Wave enabled device displaying the Z-Wave logo can be used with Z-Wave devices from other manufacturers.

This Sensor mounts inside a door or window, detects when it is opened or closed, and sends a Z-Wave trigger signal to the network. It also has a tamper-proof switch, which will trigger a Z-Wave signal when the sensor's cap is removed. These trigger signals can be used to activate various other devices and perform preprogrammed tasks. When the sensor is included into a secured Z-Wave network, all communications will be encrypted using AES encryption.

FEATURES

- Mounts hidden inside a door or window
- Detects when a door or window is opened or closed
- Tamper sensor sends an alert to the controller if the sensor is tampered with
- Automatically checks for firmware updates
- Uses the latest backward compatible revision of Z-Wave® technology
- 3 RF channels provide reduced noise over wireless communications
- Z-Wave Plus® provides 50% more power than previous generations
- Z-Wave Plus provides 67% improvement in transmission range
- Z-Wave Plus offers Plug-n-Play inclusion network wide

CUSTOMER SERVICE

The Monoprice Customer Service department is dedicated to ensuring that your ordering, purchasing, and delivery experience is second to none. If you have any problem with your order, please give us an opportunity to make it right. You can contact a Monoprice Customer Service representative through the Live Chat link on our website **www.monoprice.com** during normal business hours (Mon-Fri: 5am-7pm PT, Sat-Sun: 9am-6pm PT) or via email at **support@monoprice.com**

PACKAGE CONTENTS

After receiving the product, please inventory the contents to ensure you have all the proper parts, as listed below. If anything is missing or damaged, please contact Monoprice Customer Service for a replacement.

1x Z-Wave Plus® Recessed Door/Window Sensor

1x Magnet

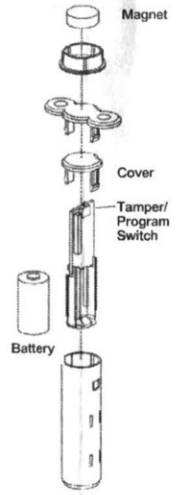
1x Spare Sensor Cap with Screw Mounting Holes

2x Mounting Screws

1x CR2 Lithium Battery

1x User's Manual

PRODUCT DIAGRAM



INSTALLATION

Note: If you are installing a complete Z-Wave® system for the first time, please refer to the installation guide of your Z-Wave Interface Controller before installing this sensor.

1. Using a flathead screwdriver, remove the sensor cap.

2. Remove the sensor circuit board/battery holder assembly from the sensor body. Note that there are grooves on the inside of the sensor body where the circuit board fits. This ensures that the flanges on the sensor cap depress the **Tamper/Program Switch** when the cap is installed.

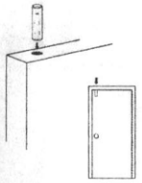
3. This door/window sensor is designed to be embedded within the door/window and frame, allowing the door/window to be actively monitored without unsightly sensors and magnets. Determine the mounting location, then mark the drilling locations using a marker or pencil.

4. Double check the drill marks to ensure that they are lined up directly across the gap from each other. Note that the gap between the sensor and magnet must be less than 0.75" (1.9cm).

5. Using an 11/16" (17.46mm) drill bit, drill the hole for the sensor to a depth of 2.5" (63.5mm).

6. Using the same drill bit, drill the hole for the magnet to a depth of 0.5" (12.7mm).

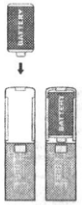
7. The holes just drilled are very slightly smaller than the actual diameters of the sensor body and magnet. While periodically checking the fit of the sensor in its hole, slowly enlarge the hole until the sensor just fits into the hole. If you make the hole too large and/or too deep, you can secure the sensor in the loose hole by using the spare sensor cap with screw holes. Alternatively, you can wrap tape around the sensor body to increase its diameter to the point where it fits snugly in the hole. Install the empty sensor body into the sensor hole.



8. While periodically checking the fit of the magnet in its hole, slowly enlarge the hole until the magnet just fits into the hole. If you make the hole too large and/or too deep, use tape around the edge of the magnet body to increase its diameter to the point where it fits snugly in the hole. Install the magnet into the magnet hole.

9. Position your Z-Wave controller within 3 feet (1 meter) of the sensor. Following the instructions that came with your controller, put it into "inclusion" mode.

10. Insert the included CR2 battery into the battery compart ment, taking care to ensure that the polarity is properly maintained, with the negative side in contact with the spring terminal and the positive side in contact with the terminal attached to the circuit board, as shown in the image to the right. The LED will start to flash slowly, indicating that it has not been "included" into a network yet.



11. Within 10 seconds of installing the battery, press the **Tamper/Program Switch** on the sensor to broadcast a Node Information Frame (NIF). If the sensor has not yet been included into your network, the LED will continue to flash. If it has already been included, the LED will glow steadily.

12. Following the instructions that came with your Z-Wave® controller, "include" the sensor into the network. When it is successfully "included", the LED will cease flashing and will illuminate steadily for 10 seconds. After 10 seconds, the sensor will go back to sleep and the LED will turn off.

Note that after 10 seconds of inactivity, the sensor will go to sleep. If you pressed the Tamper/Program switch but the sensor was not successfully included, the device will stay "Awake" for another 20 seconds. Momentarily press the ***Tamper/Program Switch*** *during this time to resend the NIF and put it back into "inclusion" mode for another 10 seconds. Repeat this step as necessary until the sensor is "included" into the network.*

13. Insert the sensor back into the sensor body, taking care to ensure the circuit board is fitted into the slots inside the sensor body.

14. Replace the sensor cap.

Congratulations, your sensor has been successfully installed and "included" into your Z-Wave® network!

INCLUSION

If you did not successfully "include" the sensor in your network during installation or if the sensor otherwise is not "included" in the network, perform the following steps to "include" it.

1. Bring your Z-Wave® Interface Controller (ZIC) to the sensor's location. The distance between the controller and the sensor should be less than 3 feet (1 meter) during the "inclusion" process.

2. Following the instructions that came with your controller, put it into "inclusion" mode.

3. Using a flathead screwdriver, remove the sensor cap, then slide the sensor assembly out of the sensor body.

4. Momentarily press the Tamper/Program Switch. The LED will begin flashing if it has not yet been "included" into the network, otherwise it will glow steadily. The sensor will send a Node Identification Frame (NIF) to the controller to be "included" in the network.

5. Following the instructions that came with your Z-Wave controller, "include" the sensor into the network. When it is successfully "included", the LED will cease flashing and will illuminate steadily for 10 seconds. After 10 seconds, the sensor will go back to sleep and the LED will turn off.

Note that after 10 seconds of inactivity, the sensor will go to sleep. If you pressed the Tamper/Program switch but the sensor was not successfully included, the device will stay "Awake" for another 20 seconds. Momentarily press the ***Tamper/Program Switch*** *during this time to resend the NIF and put it back into "inclusion" mode for another 10 seconds. Repeat this step as necessary until the sensor is "included" into the network.*

6. Slide the sensor back into the sensor body, taking care to ensure the circuit board is fitted into the slots inside the sensor body.

7. Replace the sensor cap.

EXCLUSION

If you wish to remove the sensor from your network, you will need to "exclude" it.

1. Using a flathead screwdriver, remove the sensor cap, then slide the sensor out of the sensor body.
2. Following the instructions that came with your Z-Wave® Controller, put it into "exclude" mode.
3. When prompted, press and hold the **Tamper/Program** switch on the sensor for about 1 second to complete the "exclusion"
4. Slide the sensor back into the sensor body, taking care to ensure the circuit board is fitted into the slots inside the sensor b

Note that the sensor will clear all network settings, the LED will begin flashing, and the sensor will reset back to factory default values w

ASSOCIATION

This sensor can be part of a single Association Group of up to 5 nodes. Follow the instructions that came with your Z-Wave Co

SLEEP/AWAKE MODE

Under normal operation, the sensor is in "sleep" mode. While asleep, the sensor is ready to detect a door/window open/close e with the network until it detects an event and sends an alarm signal.
When the sensor cap is removed, the sensor goes into "awake" mode, which allows it to receive and reply to commands from t been "included" in a network, the LED will begin to flash slowly and the sensor will broadcast a Node Identification Frame. If th network, the LED will glow solid and the sensor will broadcast a **WAKE UP NOTIFICATION** command to the controller and all a

The sensor will remain in this "awake" mode for 10 seconds or until it receives a **WAKE UP NO MORE INFORMATION** command

AUTO WAKE UP

The sensor will periodically go into "awake" mode, so that it can check with the controller for any possible firmware updates, c associated devices. By default, these checks are performed every six (6) hours, but you can adjust the amount of time from as l minute increments. Use the **WAKE UP** command class to adjust the period between checks.

Note: Once a firmware update has been successfully installed, the sensor should be first excluded from the network, then re-included into th

OPERATION

Opening the door or window will separate the magnet from the sensor, which is known as an "event". When an event occurs, t will broadcast an alarm signal (Type: **0x06, Level 0xFF**) to the controller and all associated devices.
If the sensor's rear cap is removed, the **Tamper/Program Switch** will trigger. The LED will illuminate steadily and the sensor will **0x07, Level: 0xFF**) and a **WAKE UP NOTIFICATION** signal. If the sensor receives a **WAKE UP NO MORE INFORMATION** signal o will turn off and the sensor will go back to sleep.

BATTERY CAPACITY DETECTION

Use the **BATTERY GET** command class to report the remaining battery capacity, as a percentage. Note that when the battery v sensor will broadcast a **LOW BATTERY AUTO REPORT** signal.

Refer to your controller's documentation for information on using this option.

TAMPERING

When the sensor cap is removed, the tamper switch will trigger, causing the sensor to send an Alarm Report to the controller a controller's device log for alarm report details.

FACTORY RESET

Perform the following steps to reset the sensor to the default settings it had when it shipped from the factory.

1. Using a flathead screwdriver, remove the sensor cap to put the sensor into "Awake" mode.

2. While the LED is illuminated, open and close the door/window 10 times within 10 seconds to trigger the reed switch. The s **LOCALLY NOTIFICATION** signal and will reset back to the factory default values.

3. Replace the sensor cap.