VISION

The Ultimate in Security & Automation

Installation & Operation Manual

ZD2105BR-5

Recessed Door/ Window Sensor

Introduction

Thanks for choosing the Vision's wireless door/window sensor of the home security device. 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 and it's security framework. Every mains powered Z-Wave enabled device acts as a signal repeater and multiple devices result in more possible transmission routes which helps eliminate "RF dead-spots"

Z-Wave™ enabled devices displaying the Z-Wave™ logo can also be used with it regardless of the manufacturer, and ours can also be used in other manufacturer's Z-Wave™ enabled networks. This sensor monitors door/window and send Z-Wave™ signal when door or window is opened and closed. Recessed Door Sensors are easily installed inside the door or window frame to keep the sensor hidden from view. When the device is secure included into Z-Wave network, above communication will be encrypted.

Product Description and Specification

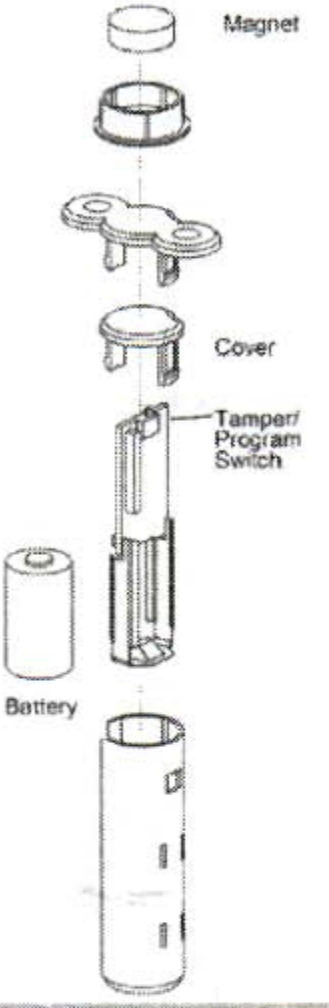
Specification:	Package Content:
Protocol: Z-Wave™ (ZM5202) Frequency Range: 865.22MHz (ZD2105IN-5) 868.10MHz (ZD2105MY-5) 868.42MHz (ZD2105EU-5) 869.00MHz (ZD2105RU-5) 908.42MHz (ZD2105US-5) 916.00MHz (ZD2105IL-5) 919~923MHz (ZD2105KR-5) 919.80MHz (ZD2105HK-5) 922~926MHz (ZD2105JP-5) 921.42MHz (ZD2105BR-5) Operating Range: Up to 100 feet line of sight Operating Temp.: -15°C~ 60°C (5°F ~140°F) Battery: CR2 * 1PC	1pc ZD 2105-5 sensor 1pc Magnet 1pc CR2 Lithium Battery 1pc Accessary pack 2pcs Screws for bracket/ sensor 1pc Installation & Operation manual

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_V2

Notification V4 Type

	SWITCH TYPE	STATUS
Notification Type	Reed Switch	0x06
	Tamper Switch	0x07
Event	Reed Switch	Close: 0x17, Open: 0x16
	Tamper Switch	Close:0x00; Open:0x03



V1 Alarm:

	Switch Type	Status
Alarm Type	Reed Switch	0x06
	Tamper Switch	0x07
Alarm Level	Close: 0x00; Open 0xFF	

Installation

Notice: If you are installing the entire Z-Wave™ system for the first time, please refer to the installation guide of Z-Wave™ Interface Controller before installing ZD2105.

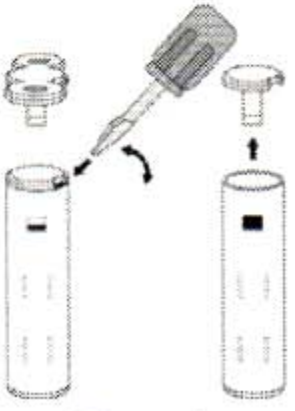
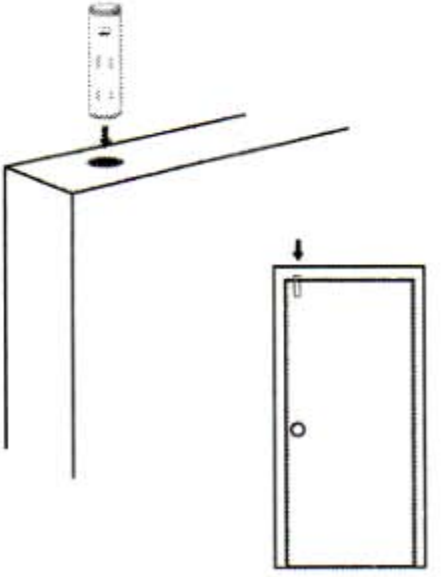


Figure 1

Figure 2



1. Use a flat head screw driver to access the ZD2105 to change tops or access the battery. (See figure 1).

NOTICE: Before removing the circuit board, notice that it fits inside a channel on the inside of the case. When replacing the board, ensure you fit it back into the same channel for proper fit.

2. Use care when installing the battery and observe the correct polarity, when the battery is inserted (see Figure 2).
3. It is important to select the proper placement of the recessed transmitter and magnet. The transmitter has two separate tops that allow a flush mount or screw mount in case you accidentally over drill the hole or require extra support to ensure the transmitter does not move. The magnet does not have a second top with a flange to screw it into place so you must be extra careful to ensure that the magnet is tightly in place once installed.

   Step 1) Select a location on the door or window frame for the ZD2105 and magnet to be installed. Use a marker or piece of clay to mark and ensure that the two holes you intend to drill are lined up directly across from each other.

   Step 2) Using an 11/16" (or 17.46mm) drill bit, slowly drill the first hole for the magnet. The ZD2105 was specifically designed to be slightly larger than an 11/16" (or 17.46mm) hole so you will need to carefully drill to fit by slowly routing the hole little by little to ensure a snug fit.

   Step 3) Drill the mating hole for the transmitter and use either the standard flush mount cap and insert the transmitter for a snug fit or use the flanged cap and use the included screws for mounting the transmitter to the door or window frame.

   If you accidentally drill the magnet side too big and it is loose, you can place the transmitter in that position and use the flanged cap to screw it into position.
4. Insert a CR2 battery into the battery compartment, LED will start to flash slowly and ZD2105 will go to sleep if user didn't press the tamper switch within 10 seconds or ZD2105 will send the NIF.

   LED Status for Z-Wave Network:
   After power on, if trigger the Tamper Switch, then the red LED will flash if the ZD2105 has not been included yet.
   After power on, if trigger the Tamper Switch, then the red LED will go on if the ZD2105 has been included. (The LED will turn on lasting 10 seconds then go off and go to sleep mode.)
5. For "**Inclusion**" in (adding to) a network: Put the Z-Wave™ Interface Controller into "inclusion" mode, and following its instruction to add the ZD2105 to your controller. To get in the "inclusion" mode, the distance between sensor and controller is suggested to be in one meter. Press the Program Switch of ZD2105 for sending the NIF. After sending NIF, Z-Wave will send the auto inclusion; otherwise, ZD2105 will go to sleep after 20 seconds.

   For **"Exclusion"** from (removing from) a network: Put the Z-Wave™ Interface Controller into "exclusion" mode, and following its instruction to delete the ZD2105 from your controller. Press the Program Switch of ZD2105 for 1 second at least to be excluded.

Note: All user and network settings will be cleared and the device reset to factory defaults when the device is excluded.

6. Put back the cover, the LED should go off.
7. Locate the Magnet close to the ZD2105 sensor, the distance between these two devices should be in 1.9cm.
8. **Awake Mode**:
   It will be triggering after opening the cover, also the red LED will keep on lasting 10 seconds and ZD2105 will send "Wake Up Notification" after 10 seconds. If ZD2105 received "Wake Up No More Information" command then the red LED will go off or it will wait 10 seconds then go off. It will proceed all the commands after sending the "Wake Up Notification"
9. **Auto Wake Up:**
   Use "Wake Up" command to set up the awaking time and send the wake up notification to controller. User can use command to change the auto wake up from 10 minutes to 1 week, Interval increment is 3 minutes.
10. **Battery Capacity Detection**:
    Use "Battery Get" command to have the battery capacity back in %. It will detect the battery capacity automatically. Low Battery Auto Report (low battery is set as 2.6+/-0.1 Voltage, detects every 2 hours).
11. **Association**:
    Support one group with 5 nodes. All triggering reports & low voltage report will be sent to the associated nodes.
12. Support OTA Firmware update from controller. Please refer to your controller manual. We recommend do exclude then include the devices from system after OTA.
13. Support Explorer Frame Function
14. All the rest commands depend on Z-Wave standard.
15. **Factory Default Reset:** open the cover to send the Alarm Report and trigger the reed switch (close & open) 10 times in 10 seconds, ZD2105 will send the "Device Reset Locally Notification" command and reset to the factory default.

Operation

1. Opening/Closing the door/window to separate the magnet from the sensor will send signal to any association nodes accordding to the Status/Signal table on page 2 and the LED will flash once.
2. Normal operation, the LED will not light.
3. If the cover of sensor is removed, the tamper switch will send signal according the Status/Signal table, and the LED will go solid and ZD2105 will send "Wake Up Notification" after 10 seconds. If ZD2105 received "Wake Up No More Information" command, the red LED will go off. If ZD2105 did not receive"Wake Up No More Information" command after 10 seconds the red LED will go off.
4. ZD2105 will send signal according the status / signal table after closing the cover back 2 seconds.

Federal Communications Commission Statement

This equipment has been followed 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 instruction, 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 and correct the interferene by one of the following measures:

-Reorient or relocate the receiving antenna,

-Increase the separation between the equipment and receiver,

-Connect the equipment into and outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

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 undersired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Limited Warranty

Vision Guarantees that every wireless door/window sensor is free from physical defects in material and workmanship under normal use for one year from the date of purchase. If the product proves defective during this one-year warranty period, Vision will replace it free of charge. Vision does not issue any refunds. This warranty is extended to the original end user purchase only and is not transferable. This warranty does not apply to: (1) damage to units caused by accident, dropping or abuse in handling, or any negligent use; (2) units which have been subject to unauthorized repair, taken apart, or otherwise modified; (3) units not used in accordance with instruction; (4) damages exceeding the cost of the product; (5) transit damage, initial installation costs, removal cost, or reinstallation cost. For information on addtional devices, please visit us at www.visionsecurity.com.tw