2GIG-SHKDW1-345

Shock/Door/Window Contact Sensor

INSTALLATION INSTRUCTIONS

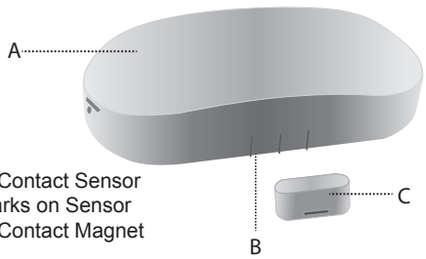
The Shock/Door/Window Contact Sensor (2GIG-SHKDW1-345) is designed for use on doors, windows, and other objects that open and close. It communicates with the control panel using the 345 MHz frequency. When the surface it is mounted on is struck with sufficient force, signals are sent to the control panel. Additionally, when the magnet (which is mounted near the sensor) moves away from or closer to the door contact's sensor, signals are transmitted to the control panel. For added protection, it is also equipped with a cover and magnetic tamper detection.

Magnetic Tamper Detection

The 2GIG Shock/Door/Window Contact Sensor is equipped with Magnetic Tamper Detection. When enabled (see Enable / Disable Magnet Detection) the device can detect if a foreign magnet is brought within it's detection range. This will trigger a Tamper alert to the control panel indicating a possible attempt to bypass the device.

If this were to occur, the device will stop transmitting and a Loss of Supervision will be noted at the control panel. To clear this event, the Shock/Door/Window Contact Sensor will need to be re-calibrated (see Calibrating Magnet Detection).

Figure 1. Shock/Door/Window Contact Sensor and Magnet



A Shock/Door/Window Contact Sensor
B Magnet alignment Marks on Sensor
C Shock/Door/Window Contact Magnet

Box Contents

Verify that the package includes the following:

- 1 — Shock/Door/Window Contact Sensor
- 1 — Rare Earth Magnet
- 2 — Phillips Head Mounting Screws
- 1 — Lithium Coin Battery (Installed)
- 2 — Adhesive Foam Tape (pre-applied on sensor and magnet)
- 1 — Window Warning Sticker

Testing The Shock/Door/Window Contact Sensor

Before mounting the contact at the desired location, learn it into the control panel. Then, perform a walk test utilizing a shock event as the test transmission to verify that it can establish good Radio Frequency (RF) communications with the control panel.

NOTE: To learn how to program and fully test the Shock/Door/Window Contact Sensor, see the control panel's *Installation and Programming Guide. For 2GIG panels using older irmware, this sensor may be learned in as a D/W device. Newer panel firmwares will support shock detector equipment code type 1066*.

Mounting Guidelines

Use these guidelines when installing the sensor:

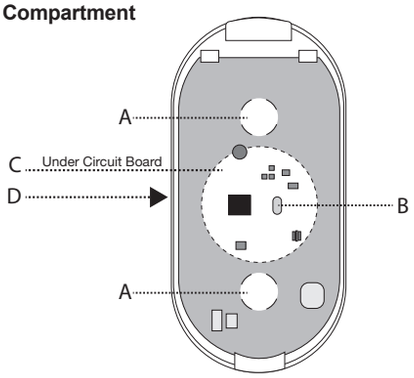
- **Mount Sensors within 100 ft (30 m) of the Control Panel.** Although the transmitter may have a range of over 500 ft (150m) open air, the sensor location can have a significant effect on range. In open/unobstructed situations, the transmitter range may be greater. In adverse wireless conditions, changing the sensor orientation may lead to improved range.
- **Mount Sensors at Least 4.7 in (12 cm) Above the Floor.** Placing sensors slightly above floor level helps to minimize possible sensor damage.
- **Window Shock and Sliding Door/Window Installation:** Mount the Shock/Door/Window Contact Sensor on the fixed pane window 1" from the frame for optimal performance. Place the sensor on the moving section of the door/window and the magnet in a stationary location. The included magnet must be within 2" of the sensor. If a wider gap is required, up to 5", use the optional DecoTrim Magnet (p/n 2GIG-DECOTRIM).
- **Do Not Expose Sensors to Moisture or Extreme Temperature.** It is best to mount sensors in a dry location where the operating temperature does not exceed 0° to 130°F (-18° to 54°C).
- **Keep Sensors and Magnets Away from Metal/Metallic Surfaces.** Keep sensors and magnets away from metal or metallic surfaces (for example, foil). You should also avoid mounting sensors in areas where there is a large quantity of metal or electrical wiring (for example, near a furnace or in a utility room).

  NOTE: Use on metal doors and windows with metal frames will significantly impair the performance of this sensor.

Mounting The Shock/Door/Window Contact Sensor

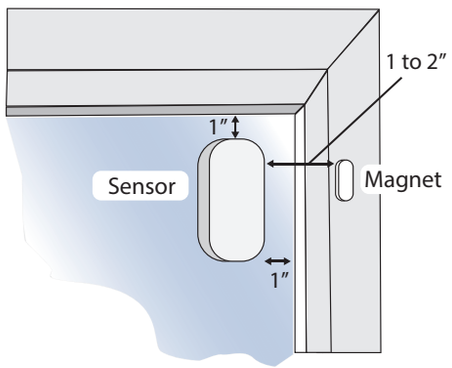
Use the figure below as a guideline when mounting the contact.

Figure 2. Backplate and Battery Compartment



A Screw mounting holes (on backplate)
B Programming Button
C CR2450 Lithium battery (under circuit board)
D Battery Access Slot

Figure 3. Standard Glass Mounting



Sensor: Install one inch from the edge of the glass.

Magnet: Install 1 to 2 inches from the Sensor.

To mount the Shock/Door/Window Contact Sensor:

Remove the backing form the pre-applied double-sided tape on the bottom of the Sensor and place in the desired location.

NOTE: When mounting on a glass window, place the device one inch from the top or bottom and side edge of the window.

2 If utilizing the integrated Door/Window capability, ensure that the magnet is lined up with the middle mark on the sensor. See "Calibrating Magnet Detection" on page 3 *(see Figure 1 Shock/ Door/Window Contact Sensor and Magnet)*.

NOTE: To utilize the Magnetic Contact, the sensor must be configured (*see "Configuring the Shock/Door/Window Sensor" section on page 2*).

3 Use the pre-applied adhesive tape to secure the magnet in place.

IMPORTANT: The magnet must be no more than 2.0" away from the sensor. If a wider Gap is required, use the optional DecoTrim Magnet (p/n 2GIG-DECOTRIM).

4 The sensor comes configured to mount on Glass with the Magnet Detection disabled. If this is the desired operation, skip to "Finalizing the Installation" section on page 3.

NOTE: If the shock sensor is being used on a door or wall, the sensor's sensitivity must be configured *(see "Configuring the Shock/ Door/Window Sensor" section on page 2)*.

CONFIGURING THE SHOCK/DOOR/WINDOW CONTACT SENSOR

The Sensor comes pre-configured to detect shock on a Glass door or window. If the Sensor is to be mounted on a different surface or if the integrated Magnetic Contact is to be used, it must be configured for optimal performance. To configure the sensor:

1 Mount the sensor and magnet as described in this these Installation Instructions.

2 If necessary, remove the cover by pressing in the Retaining Tab and gently swinging the top of the Sensor off the base.

3 Remove the battery pull tab making sure that the battery stays firmly in place.

NOTE: The LED should not be illuminated.

The program button may now be used to:	Initiated by these button presses:
Review the Sensor Settings	Press and release.
Set the Shock Sensor Sensitivity	Press and hold until the LED blinks once in Orange.
Enable/Disable Magnet Detection	Press and hold until the LED blinks Twice in Orange.
Restore the Factory Default settings	Press and hold until the LED blinks Three Time in Orange.

Review Sensor Settings

Press and hold the program button for less than 2 seconds:

- The Red LED will flash indicating the current shock sensor setting.
  - ○ One flash represents the low sensitivity setting
  - ○ Two flashes represents the medium sensitivity setting
  - ○ Three flashes represents the high sensitivity setting
  - ○ Four flashes represents the very high sensitivity setting
  - ○ Five flashes represents the glass mount setting (Default)
- The Green LED then flashes indicating the Magnet Detection setting:
  - ○ One flash represents magnet detection has been enabled
  - ○ Two flashes represents magnet detection has been disabled (Default)

Setting the Shock Sensor Sensitivity

To accommodate different surface types and environmental situations that may require more or less sensitivity in the detection of shock events, five selectable settings are available. To change the sensitivity level from the default Glass Mount to another setting, press and hold the program button for 2 to 5 seconds:

- Release the program button when the Orange LED flashes once indicating that the sensor has entered this programming mode.
- Press the program button to select the new shock sensor setting
  - ○ One button press selects the low sensitivity setting
  - ○ Two button presses selects the medium sensitivity setting
  - ○ Three button presses selects the high sensitivity setting
  - ○ Four button presses selects the very high sensitivity setting
  - ○ Five button presses selects the glass mount setting (Default)

Each time the button is pressed the Red LED will illuminate until the button is released.

NOTE: If the button is pressed six or more times such entries will be ignored and the LED will remain off and the sensor will retain the previous setting.

When the button has not been pressed for a period of five seconds, the programming mode will be exited and the Red LED will flash indicating the programmed Shock Sensitivity.

Enable / Disable the Magnet Detection

The 2GIG-SHKDW1-345 can be used as a Door / Window transmitter. The sensor is shipped with Magnet Detection disabled so this function must be enabled and calibrated if the sensor is to be used as a door/ window contact sensor.

Begin by pressing and holding the program button for 5 to 10 seconds:

- Release the program button after the Orange LED flashes twice.
- Press the program button to enable or disable the magnet detection capability.
  - ○ One button press enables magnetic detection
  - ○ Two button presses disables magnetic detection (Default)

Each time the button is pressed the Green LED will illuminate until the button is released.

NOTE: If the button is pressed three or more times such entries will be ignored and the and magnet detection default to the previous setting.

When the button has not been pressed for a period of five seconds, the programming mode will be exited and the Green LED will flash indicating the programmed Shock Sensitivity.

Calibrating Magnet Detection

When magnetic detection is first enabled, the RED LED will blink to indicate that it is not calibrated. THE SENSOR MAGNET CALIBRATION MUST BE COMPLETED TO OPERATE PROPERLY. IF NOT CALIBRATED THE SENSOR WILL NOT TRANSMIT OPEN/CLOSE INFORMATION TO THE CONTROL PANEL.

To calibrate the sensor:

1. Mount the sensor and magnet in it's final location as instructed earlier in this document.
2. Close the door or window.
3. Press the Program button.
4. LED will start blinking ORANGE.
5. Open the door or window completely.
6. Press the Program button again.
7. LED will start blinking green
8. Fully close door or window and press the Program Button within 10 seconds to complete the calibration process..
9. LED will illuminate green for 2 seconds and then turn off and the calibration is complete.

NOTE: If Magnet Detection is turned off then back on or if the battery is removed or replaced, the sensor will lose the Magnet Calibration setting and will have to be re-calibrated.

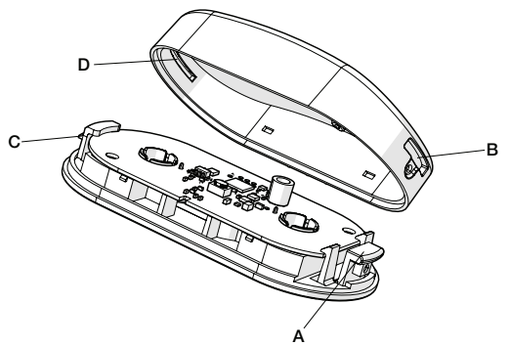
Installer Test Mode

To enter Installer Test Mode, remove the top housing from the sensor. In this mode the LED will blink to indicate specific conditions.

Event	LED Color	Duration
Shock Detected	Red	ON for 8 seconds
Magnetic Detection	Green	Single Blink
Magnetic Tamper	Orange	Single Blink
Magnetic Calibration Required	Red	Double Blink

Finalizing the Installation

Figure 4. Replacing Sensor Cover



1. Tilt the cover to align tab C through slot D.
2. Close the cover down, and press down until tab A snaps into slot B.

Shock Detection System Test - Glass Mounted

Firmly tap the glass twice with a hard plastic object (screwdriver handle) within 12 inches of the sensor. Verify that the shock event was received by the panel. It may take up to 2 seconds for the panel to receive the notification.

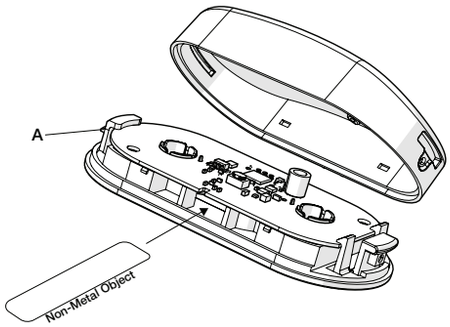
NOTE: Do not strike the surface hard enough to break the glass.

Inserting and Replacing the Batteries

To insert or replace the batteries:

1. Press in the Retaining Tab (A) and gently swing the top of the sensor up and off the base.
2. Place a small non-metal object in the slot on the side of the sensor *(see Part C,D in Figure 2, Shock / Door / Window Contact and Battery Compartment)*.
3. Carefully push the battery out through the Battery Access slot.

Figure 5. Remove/Replace Battery



IMPORTANT: Always dispose and/or recycle used batteries in accordance with the hazardous waste recovery and recycling regulations for your location. Your city, state, or country may also require you to comply with additional handling, recycling, and disposal requirements.

1. Insert the replacement battery in the compartment. The positive (+) sign on the battery should be facing down and the negative (–) side facing up.
2. The Green LED will illuminate for 2 seconds as the Device powers up.
3. Replace the top case *(see Finalizing the Installation, above)*.

WARNING: Failure to follow these warnings and instructions can lead to heat generation, rupture, leakage, explosion, fire, or other injury, or damage. Do not insert the battery into the compartment in the wrong direction. Always replace the battery with the same or equivalent type. Never recharge or disassemble the battery. Never place the battery in fire or water. Always keep batteries away from small children. If batteries are swallowed, promptly see a doctor.

Restore Factory Settings

Press and hold the program button for more than 10 seconds:

- Release the program button after the Orange LED flashes three times.
- Press and release the program button once more to confirm that factory defaults are to be restored. If this is not done within 5 seconds, the reset function will be terminated with no change to the programmed settings.

The Red LED will flash as per the programmed shock sensor setting then the Green LED will flash per the programmed Magnet Detection setting.

SPECIFICATIONS

Wireless Signal Range	500 ft (152 m), open air, with Wireless Control Panel
Code Outputs	Alarm; Alarm Restore; Supervisory; Low Battery; Tamper; Tamper Restore
Transmitter Frequency	345.00 MHz
Supervisory Interval	70 minutes
Status Messages	Shock - Loop 1 Door/Window - Loop 2
Magnet Dimensions (L x W x H)	0.91 x 0.47 x 0.35 in (23 x 12 x 9 mm)
Magnet Type	Rare Earth
Sensor Dimensions (L x W x H)	3.11 x 1.46 x 0.67 in (79 x 37 x 17 mm)
Weight	Sensor - 1.12 oz Magnet - 0.32 oz
Housing Material	PC-ABS Plastic
Color	White
Operating Temperature	0° to 130°F (-18° to 54°C)
Relative Humidity	5-95% Non-Condensing
Battery (included)	One (1) CR2450 Lithium batteries
Equipment Code	1066 - 2GIG Shock Sensor.
Certification	ETL, FCC, IC

REGULATORY INFORMATION

Intertek

We, Nortek Security & Control LLC of 5919 Sea Otter Place, Carlsbad, CA 92010, declare under our sole responsibility that the device, EUT MODEL# complies with Part 15 of the FCC rules.

FCC & IC Notice

This device complies with Part 15 of the FCC Rules and Industry Canada license exempt standard(s). 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 received that may cause undesired operation.

1. l'appareil ne doit pas produire de brouillage, et
2. l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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.

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 equip ent 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 to help.

WARNING:

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Limited Warranty

This Nortek Security & Control LLC product is warranted against defects in material and workmanship for two (2) years. This warranty extends only to wholesale customers who buy direct from Nortek Security & Control LLC or through Nortek Security & Control LLC's normal distribution channels. Nortek Security & Control LLC does not warrant this product to consumers. Consumers should inquire from their selling dealer as to the nature of the dealer's warranty, if any.

There are no obligations or liabilities on the part of Nortek Security & Control LLC for consequential damages arising out of or in connection with use or performance of this product or other indirect damages with respect to loss of property, revenue, or profit, or cost of removal, installation, or reinstallation. All implied warranties for functionality, are valid only until the warranty expires. This Nortek Security & Control LLC Warranty is in lieu of all other warranties expressed or implied.

Nortek Security & Control LLC | 2GIG

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Visit www.nortekcontrol.com for technical support hours of operation.

For technical support outside of the USA and Canada:

Contact your regional distributor.

Visit www.2gig.com/dealers/ for a list of distributors in your region.

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