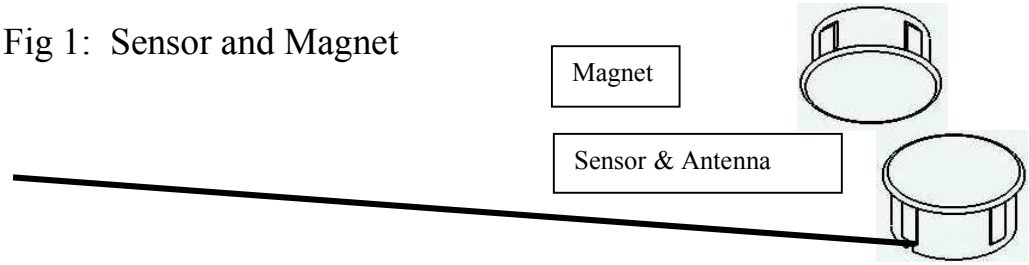
Embedded Window Frame Security Sensor

Installation Instructions

The Embedded Window Frame Sensor/Transmitter detects when a window is closed or opened, and transmits a wireless security message to the System Control Panel. This is accomplished through the use of a sensor unit (which contains the wireless transmitter and battery), and magnet unit. When the two are separated, by opening the window, the sensor transmits an OPEN signal to the System Control Panel. When the window is shut, the magnet is again within the sensor's range, and a CLOSE signal is sent.

Fig 1: Sensor and Magnet



The sensor sends supervisory signals to the panel every 64 minutes (approximately). The sensor is powered by a 3.0V, lithium battery, model CR1632. The sensor has been designed to draw little power, and provide long battery life. The entire package needs to be removed from the window frame for the battery to be replaced.

Required Tools for Installation

- Electric Drill
- SDI Custom Frame Drill Bit
- Pencil or chalk
- Installation Sheet for documenting sensor locations

Guidelines

The following guidelines will help ensure that installations are safe and efficient.

- A sensor can be mounted on any side of the window frame (top, side, or bottom), such that the opening of the window moves the magnet away from the sensor.
- Always try to mount the hardware such that the magnet, not the sensor, is in the moving window panel. The sensor can be installed in the moving window panel, but should be avoided.
- Do not install the sensor in the frame until after the Electronic Serial Number (ESN) has been entered into the panel, and the wireless sensor confirmed within range. The 6 digit (including HEX values) ESN is labeled on the device.
- Sensor's should be kept as close to the panel or repeater as possible. Try to chose locations where the separation is within 100 ft.
- Avoid mounting the sensor in a location where it will be exposed to moisture.
- Avoid mounting a sensor where temperatures are excessively hot or cold.
- This device cannot be mounted in a metal frame, as the frame will block the antenna (there is an external version of this device that will fit on the exterior of an aluminum frame).

WARNING:

Some installations may have electrical wiring running through the door or window frames. Use caution to avoid electrical shocks.

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Preparation

1. Determine a suitable location for the sensor and the magnet. These units are meant to be mounted inside the frame of the window. As such do not drill a mounting hole unless:
   - You are a qualified installer
   - There is sufficient room for the devices in the frame and window (Not all windows may have the necessary clearance).
   - You have read, and are familiar with the mounting instructions for the sensor and magnet (specifically the orientation required – see diagram included)
   - You have the custom drill bit to allow proper mounting of the sensor and magnet in the frame.

2. Measure and mark where the sensor and magnet will be installed in the window frame. Use the guide provided in Fig 2 for the location of the two holes. The magnet and the sensor need to be offset for correct performance.
3. Always ensure that the magnet is mounted on the side that the opening will occur on. Do not mount the magnet such that it has to travel over the sensor before it moves away from the sensor (Fig. 3).
4. Measure the distance between the window panel and frame. Ensure the separation is no more than 0.75" in height. Note: In cases where the separation may be greater, a larger magnet may be required. Contact the manufacturer for alternate magnets.
5. Verify the sensor will operate properly with the control panel, prior to drilling any holes.

Fig 2. Correct Positioning the Magnet and the Sensor relative to each other

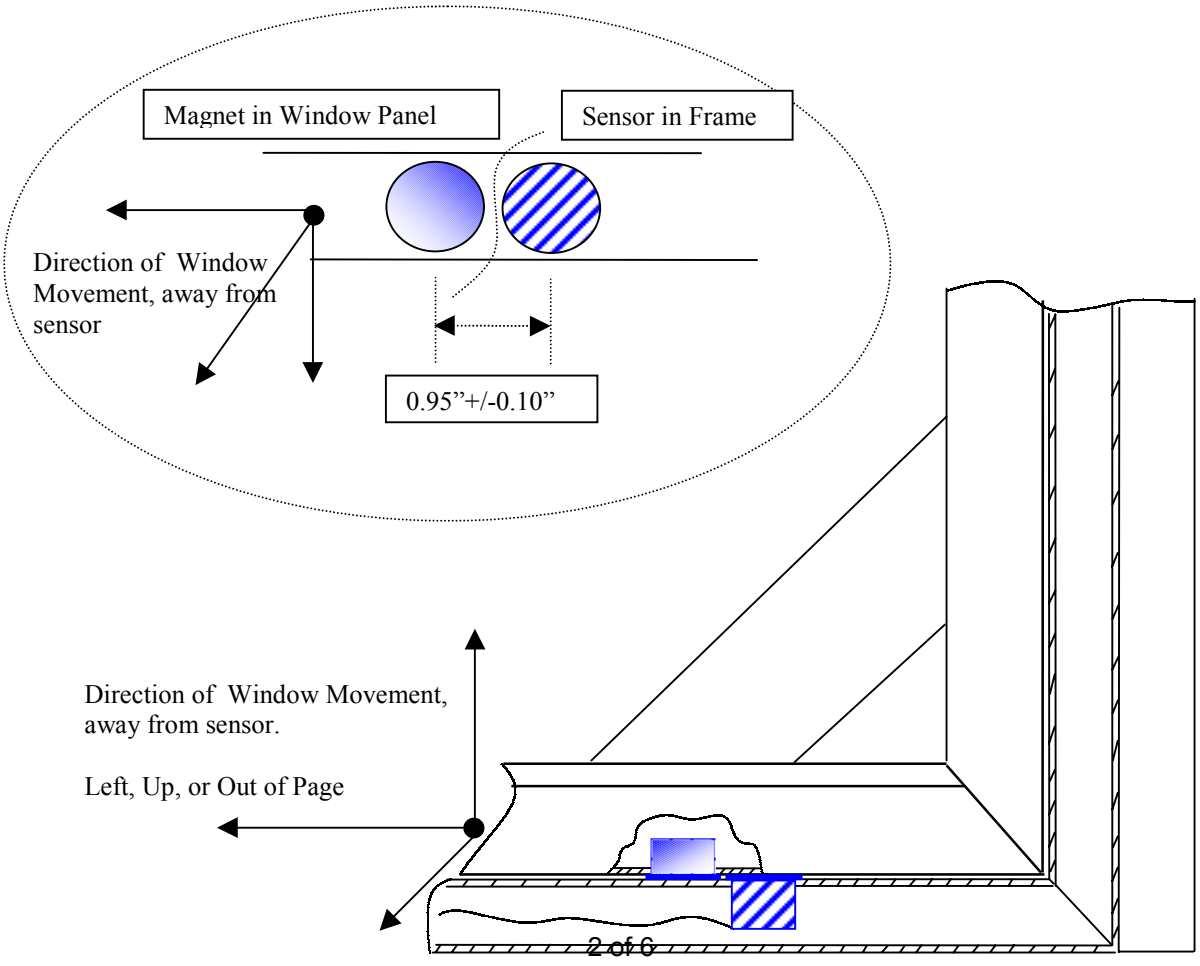

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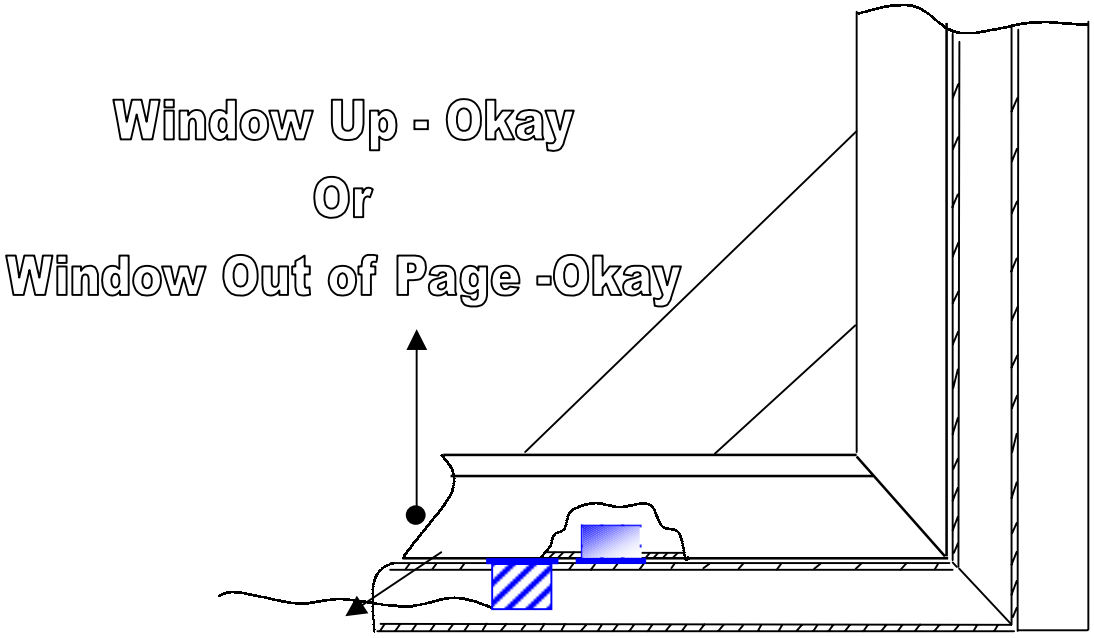
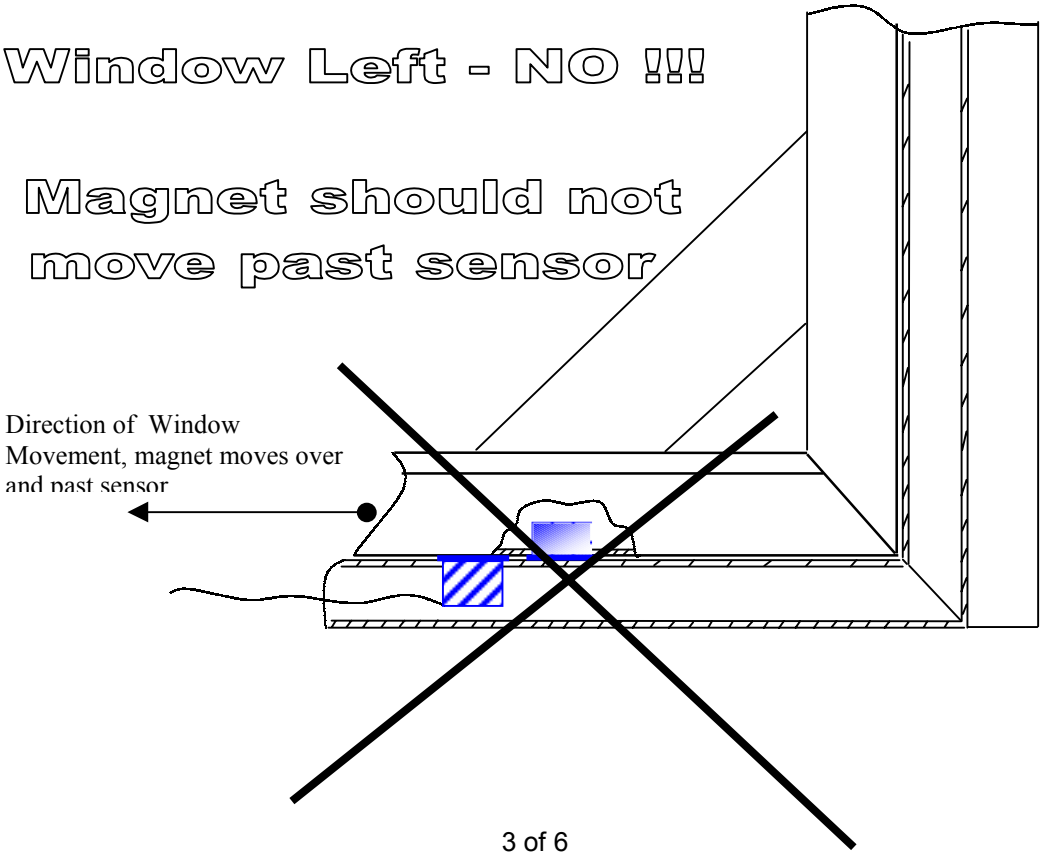
Fig 3: Incorrect Orientation of Magnet and Sensor





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Entering and Testing Sensors

The sensors need to be entered into the control panel memory. This is done by entering the 6 digit (including HEX values) ESN into the panel to record it. Refer to your *panel installation manual* for complete details.

To test the sensor, you need to enter the panel's wireless test mode. Then:

1. Trip the sensor. This is done by moving the magnet in, and out of position.
2. Verify the panel was able to read the sensor.
3. Repeat this with all the sensor's being installed.

Fig 4. Dowel Package, Dowel Lid, Sensor Electronics (including battery)

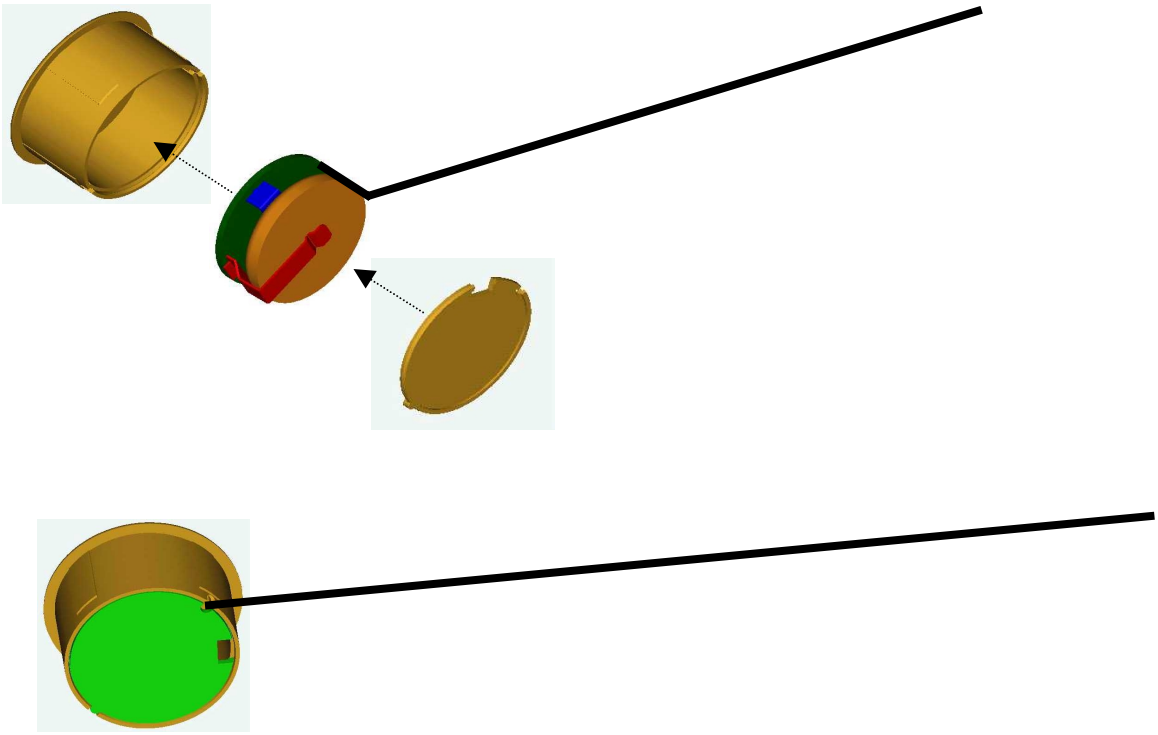

Fig. 5: Assembled Sensor

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Installation in Window Frame

1. Using the dealer provided window frame bit supplied with your dealer kit, drill a ¾" hole in the frame for the sensor, and one in the window panel for the magnet.
2. Both the sensor and the magnet have ribs on the outside that will provide a bite fit into the frame. First insert the wire into the inside of the frame, through the hole just drilled. Slowly press the sensor into the window frame until it's lid is flush with the frame base.
3. IMPORTANT !!! Ensure the Sensor is lined up in the window frame such that the ION Logo is pointing out the window. This is required to line the magnet and the sensing device properly.
4. The dealer has the option of using a sealing agent at this point if weather proofing is required. Note that if a sealant is used, it will have to be redone at some point in the future when the device's battery is replaced (typically every 10 years).

Replacing the Battery

The sensor requires a Lithium coin cell battery to operate. The type required for this sensor is a CR1632 battery. The battery holder is marked with positive "+" and negative "-" notation on the side of the clip., and the battery is also marked accordingly. Ensure the battery is replaced in the correct orientation.

The battery lifetime is affected by various factors, including temperature, frequency of window openings, and unit to unit variations. For a replacement battery, contact ION Digital.

Specifications

Dimensions:	Dowel Package Lid	0.850" diameter x 0.030" thick
	Dowel Package	0.750" diameter
	Wire Antenna	Approx. 9" x 0.050" diameter.
Power Source:		3.0V Lithium Coin Cell Battery CR1632
Transmit Range:		Typically >500 ft, open air
Compatibility:		433.92 MHz ION Digital Wireless Receiver Panels
Temperature Range:		10° to 120° F (-12° to 49° C)

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FCC Notice

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 INTERFERNCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

Changes or modifications not expressly approved by ION Digital LLP can void the user's authority to operate the equipment.

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