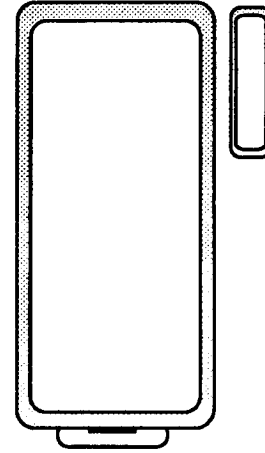# DOOR/WINDOW SENSOR (DWS)
ITI Part #60-135 (white)
ITI Part #60-151 (brown)

Description and Applications

Door/Window Sensors are designed to be used to protect doors, windows, gun cabinets, etc., anything that opens and closes. Each contains two built in magnetic reed switches and is designed to go into alarm by moving the supplied magnet away from one of the sensor's reed switches. The Sensor's cover has alignment marks to assist in magnet placement. The Sensor offers screw terminals that will accept normally closed hardwire devices (switches, motion detectors, etc.).

A Door/Window Sensor will transmit two signals during normal operation. When a door is opened, a "Violation" signal is sent to the CPU. When the door is closed a "Restore" signal is transmitted. **These signals are sent whether the system is armed or not.** If an attempt is made to arm the system when a sensor is in a violated state (door open, for example), the CPU will "protest" by emitting a long beep from the interior sirens and announce *"PING/PONG....SENSOR...nn IS OPEN....PLEASE SECURE OR BYPASS"* from the Touch Tone phone and refuse to arm to the desired level. The system can only be armed when all of the sensors used at a particular protection level are in the "Restore" condition or if the user deliberately "Bypasses" one or more sensors.

Supervision. Door Window Sensors send a supervisory signal to the CPU every 69 minutes. If no signals are received by the CPU during one of its 12 hour check periods, *"SENSOR nn FAILURE "* will be announced on the phone and reported to the Central Station.

Temperature Range. 10°F - 120°F.

Battery Power. The Door/Window sensors are powered by a 3.6 volt lithium battery which should have a life of 5 to 8 years. The battery is not monitored but the loss of supervisory signals from the unit when the battery has become exhausted will be recognized by the CPU and be announced and reported.

Tamper Switch. Door/Window Sensors contain a built-in tamper switch. Removing the sensor cover causes the switch to activate and the sensor to transmit a "Tamper" signal to the CPU. If the CPU is armed to a protection level in which the tampered sensor is active, an alarm will occur just as if the sensor was violated. If the tampered sensor is not active in the current protection level the CPU will interpret it as a trouble condition and announce "SENSOR nn TROUBLE" and report it to the Central Station. The tamper record in the CPU can only be cleared by replacing the cover then opening and closing the protected door or window. The tamper feature **cannot** be disabled.

Installing Door/Window Sensors

1. Considerations for Sensor Mounting.

- **DO NOT** mount within 5 inches of the floor on a door to avoid damage.
- **DO NOT** mount sensors or magnets on any metallic surfaces such as metal doors or foil wallpaper. If you must, then use spacers to keep sensor & magnet away from the metal.
- **DO** mount magnet on one door, sensor on the other for double door installation.
- **DO** mount sensors with #4 or #6 flathead or panhead screws, **not two sided tape.**
- **DO** try to keep all sensors within 100 feet of the CPU.

Note. Although the open air range of ITI sensors can be over 500 feet, the installation environment will influence this distance. The 100 foot distance recommendation is given as a starting guideline. In your actual installation, transmission range may be much greater.

- **DO** avoid locating sensors where it is likely to be exposed to moisture.
- **DO** install the sensor in a location where the temperature will not exceed the sensor's operating limits of 10 to 120 degrees F.
- **DO** watch for "over travel" on sliding glass doors that could dislodge sensor if closed hard.

## 2. Remove The Cover. Press on the end of the housing to release the locking tab holding the cover as shown.

To Open DWS Housing

Press Here
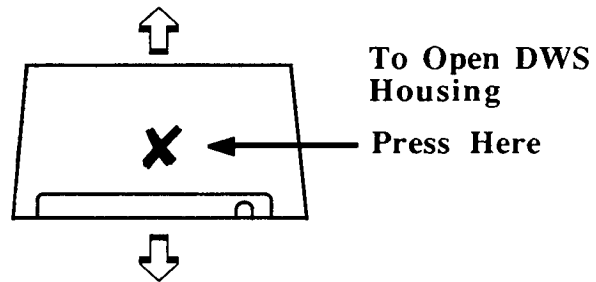
3. Program Before Installation. If you haven't already done so, **program the sensor** to one of the following groups using the CPU:

Note: When using the SX-V Handheld Programmer, mount the sensor base first, then replace the sensor board in the base and program the sensor. See page 31 for Handheld Programmer instructions.

⊡ ⓪ ⑥ **Perimeter instant** intrusion sensors.

⊡ ⓪ ⑦ **Perimeter delayed** intrusion sensors.

⊡ ⓪ ⑧ **Interior instant** intrusion sensors.

⊡ ① ⑥ **24 Hour** intrusion sensors. Active in all arming levels unless bypassed.

4. Carefully **remove the circuit board** by Pressing the tab as shown.

PRESS TO RELEASE BOARD
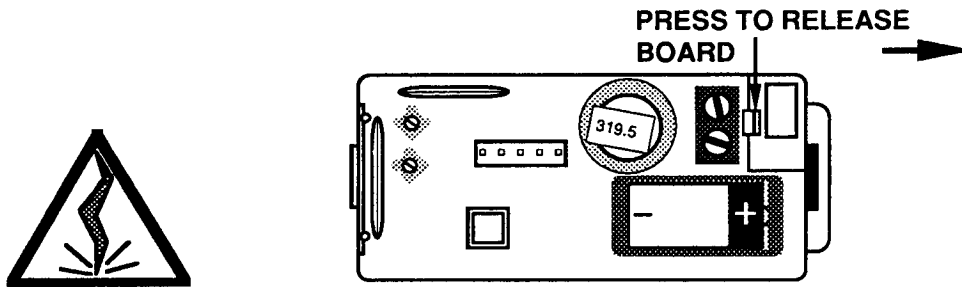
5. Mount the Sensor Base. The circuit board must be removed by pressing the tab and lifting the battery holder as shown. Two screw holes are provided, one is larger to allow sensor alignment. Use #4 or #6 flathead or panhead screws (or #18 wire nails in the small holes provided) to mount the sensor. Replace the circuit board by sliding it under the mounting tabs first and then snapping it into place by applying down pressure on the terminal strip. Spacers are available for use when mounting on a metallic surface or require height alignment.
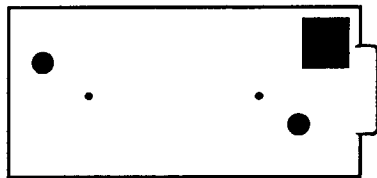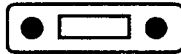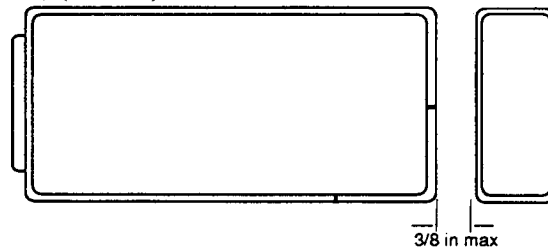

MAGNET SPACER

SENSOR SPACER

Door/Window Sensor Spacers (white) ITI Part #60-189, (brown) ITI Part #60-191
Magnet Spacers (white) ITI Part #60-188, (brown) ITI Part #60-190

6. Mounting the Magnet. Mount the magnet base within 3/8 inch and centered on one of the marks on the cover which show the position of a reed switch. Use #6 X 1/2 screws or #18 X 1/2 wire nails. A brad driver works well with wire nails.
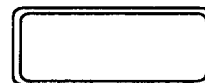

3/8 in max

• **Do** mount magnet within 3/8" of **one** of the sensors reed switches, centered on the switch.
• **Do** be sure magnet won't interfere with door or window opening.
• **Do** be sure to use a non-metallic spacer if mounting the magnet on metal.
• **Do** use only **one** magnet-reed switch location.
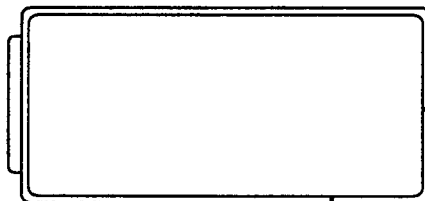

3/8 in max

Note. In high security installations, after determining which reed switch you will be using, you may want to remove the other switch by clipping its leads as close to the board as possible.

7. Replace circuit board and the DWS cover.

8. Testing Door/Window Sensors. Set the CPU arming level to ⊡ Ⓒ Ⓞ Ⓓ Ⓔ Ⓨ or ⊡ Ⓢ Ⓔ Ⓡ Ⓨ Ⓗ Ⓨ. Open and close protected openings and listen for the transmission beeps from the sirens or announcements from the alarm speakers.

Interfacing Remote Devices To a Door/Window Sensor

The Door/Window Sensor can be connected to Normally Closed (open on alarm) devices. Whenever anything is wired to the terminals in the Door/Window Sensor, a magnet placed near a reed switch renders the connected device inoperative. Therefore, unused reed switches should be removed.
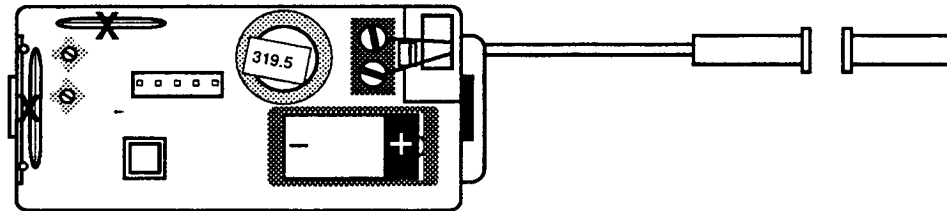
1. Interfacing Considerations

- **DO** make sure the device connected to the sensor is a hermetically sealed type, such as a sealed reed switch.
- **DO** make sure the device supplies a minimum 100 millisecond open or closure on alarm. **This is important! DO NOT** attempt to connect fast pulse devices such as Window Bugs to a sensor.

- **DO NOT** exceed 25 feet of twisted wire in any wire run.
- **DO** use stranded wire, not solid core wire.
- **DO NOT** connect more than 5 switches to a DWS. Fewer than 5 is preferred.
- **DO NOT** connect more than 1 alarm screen to a DWS
- **DO NOT** run wires within 18" of electrical wiring. Never run parallel to electrical wires, cross them at a 90 degree angle.
- **DO NOT** stuff excess wire in the DWS housing as it can effect transmission.

Note. Do not attempt to use the built-in reed <u>and</u> a remote device on the same Door/Window Sensor as the terminals and reed switches are in parallel.

Note. The GlasTrak™ GSU 2000 Glass Break detector will not function with SX-V or **CareTaker** equipment. Other alternatives to detect the breakage of glass, such as the Litton Terminus SP 3237 or Maximal SD-15 shock detectors, can be interfaced to the ITI Shock Sensor.