# ELK-6023 Wireless Recessed Door Sensor



# SPECIFICATIONS:

Frequency: 902 Mhz - 928 Mhz frequency hopping Tamper: Microswitch detects removal of cover. Dimensions: .75"D x 2.5"L Mag: .75"D x 1"L Maximum Operating Gap of Reed: 3/4" Operating Temperature: 32° to 120° F (-0° to 49°C) Location: Designed for wood (non-metal) or vinyl doors only Relative Humidity: 5-85% Non-Condensing Battery: 3.6V Lithium 1/2 AA size - See Battery Installation Unique TXID Code: Over 1 million combinations

# Sensor Location & Mounting

Choose a location on the lock "latch" side of the door. Do not mount on hinge side! Install the sensor in the jamb and the magnet in the door. There must be a minimum 1/8" gap between the door and door jamb. For best wireless operation install at least 5' or higher above the finished floor.

Not recommended for use on metal doors. Metal can negatively affect the wireless performance. Observe temperature and humidity specs. Do not install in areas of high moisture/humidity

WARNING: Carefully read and follow directions below before drilling or attempting to install. When drilling, use caution to avoid striking or drilling into any door glass or sidelights.

- 1. Remove sensor end plug using a small flat screwdriver to gently pry up in the slot provided. Do not misplace plug.
- 2. Using fingers only, grasp the edge of the circuit board and pull straight out to remove board from the housing.
- 3. Enroll the sensor into control using either of the two methods outlined in next section. After enrollment slide the board back into the housing and replace the end plug.
- 4. Hold sensor close to the intended location and verify it operates properly prior to drilling any holes. Do not proceed with drilling or mounting until proper operation is confirmed.
- 5. At the intended location draw a horizontal pencil line across the jamb from the door stop to the edge. Measure back from the stop a distance 1/2 the thickness of the door. Mark this as the centerline drill point for the sensor. If the door jamb has weatherstripping be sure to allow for its thickness when the door is in the closed position.
- 6. For the sensor drill a 3/4" wide by 3" deep hole at the centerline mark. A brad point bit is suggested as it reduces chipping and tearing. Remove all sawdust and debris.
- 7. Carefully slide the sensor into the hole until only the flange is exposed. Do Not Force. Secure with #4 flat head screws.
- 8. The magnet and sensor must be properly aligned for reliable operation. The vertical alignment is best achieved by swinging the door closed so that the horizontal line on the iamb can be transposed over to the door edge. For horizontal alignment it's generally best to make test marks and then close the door to visually verify which mark best aligns with the sensor.
- 9. For the magnet drill a 3/4" wide by 1" deep hole at the centerline mark using a brad point bit. Remove all sawdust and debris and press fit magnet into hole



### APPLICATION

The ELK-6023 Wireless Recessed Door Sensor is the ultimate wireless security device for discriminating customers. It mounts into a 3/4" drilled hole in a wooden door jamb and becomes nearly invisible once the door is closed. It features Elk's Industry Leading Two-Way Technology with positive signal acknowledgment, extended range, and long battery life. It works with Wireless Transceivers and Controls that accept Elk's two-way technology; such as, the ELK-M1XRFTW. Each time the 6023 transmits it sends a unique TXID identifier and a Loop number

The ELK-6023 is intended to be installed in accordance with: The National Electrical Code, ANSI/NFPA 70.

IMPORTANT: An ELK-M1XRFTW Receiver must be installed and enrolled with the M1 Control before any attempt to install or enroll wireless sensors.

# Enrolling from M1 Keypad Installer Programming

- 1. Enter M1 Keypad Installer Programming and navigate to Menu: 14-Wireless Setup
- Press right arrow, then scroll up to Sub-Menu: 3:Learn Sel WirelessTransmtr
- Press right arrow, then scroll or select a unused/available WZone (wireless zone).
- 4 Press right arrow to Lrn (Enroll) a new sensor.
- Insert the Battery into the sensor as soon as the keypad displays: Push Transmitter Button. The M1G voice will speak; "Press Transmitter button for zone xx". NOTE: If battery is already installed; remove it, wait
  - 20 seconds, then re-insert. Upon successful enrollment the Keypad will chime and
- briefly display the 6 digit TXID code of the sensor. If enrollment fails the TXID will not display. If that occurs; remove the battery, wait 5 seconds, then re-insert. In certain instances it may be necessary to repeat steps 3 -6
- 7. The Rapid-Enroll feature will auto advance to the next wireless zone in sequence and wait for the next sensor enrollment. Simply repeat step 5 for each additional sensor. 8. To end Rapid-Enroll after all wireless zones (sensors) have
- been enrolled press the ELK key one time. 9. Set the Loop Number. ELK wireless sensors use Loop 2
- for the built-in reed switch. Since the 6023 only has the single "reed switch" zone, the default M1 Loop # 0 will recognize the reed switch WITHOUT the need to change the Loop from 0 to 2. If you wish to view (or change) the Loop #, scroll up or down to the desired M1 wireless zone and press the left arrow. The screen will display a 9 digit number (TXID in decimal) followed by Loop=.
- 10. Supervision For wireless Burg sensors the supervision should be set to 1=Normal "Burg". This is the factory default setting for all wireless zones. To view or change the Supervision value, press the ELK key to locate Sub-Menu: 2:Xmit Transmitter Opt. Press the right arrow and scroll to the wireless zone, then press right arrow to select.

ZONE DEFINITION: After all wireless zones have been enrolled proceed to Menu: 5 - Zone Definitions to program the name, zone type, and any desirable options.

# Enrolling from ElkRP Software

1. Launch ElkRP and open the desired Customer Account file.

2. If no wireless zones currently exist in this M1 you will need to create a group of 16 wireless zones. In the folders column right click on Zones (Inputs) and then click New Wireless Zones. Place a check mark in the box beside the desired group, then click OK. Repeat if additional wireless groups are required. All expanded zones must be defined in groups of 16. The M1XRFTW wireless must always start at Zone 17 (Group 2) and the last wireless zone CANNOT be higher than Zone 160 (Group 10).

Note: M1 only allows Zones 17 to 160 to be used for wireless zones (max. of 144 wireless sensors). If a large number of wireless zones are expected, avoid conflict with any future Hardwired Zones in the range of zones 17 to 160 by NOT enrolling any Hardwired Zone Expanders (M1XIN) at data bus address 10 or lower.

- 3. Double click on Wireless Group (the group just added), then double click one zone at a time to define a name, type, and options. Repeat for each wireless zone. It is more time efficient to use ElkRP to program the Zone Definitions (name, type, and options) before moving to the Wireless Setup for entering the TXID and Loop number.
- 4. From the Folders column double click on Wireless Setup to setup and enroll the wireless sensors.
- 4a. Click the Transmitters tab, then double click a zone.
- 4b. Place a check mark in the Enabled box.
- 4c. Set Supervision type as: 1=Normal "Burg" Supervision You will notice there are 2 other supervision options displayed: 0=Non Supervised & 2=Fire Supervision
- 4d. Skip down to the TXID box and enter the Sensor TXID from the printed label located on the sensor.
- 4e. Skip to the LOOP box and enter a 2. Loop 2 defines the built-in reed switch.
- 4f. Click Save. Repeat the entire step 4 for each additional Wireless Zone and Sensor. Don't forget to Send changes to the M1.



# **Operational Testing**

A two color LED on the sensor circuit board displays feedback of transmission status. This is useful during installation and troubleshooting but is not viewable after sensor is installed.

#### GREEN blink = Good

Sensor has successfully transmitted a violation (alarm) transmission to the transceiver and that signal has been received and acknowledged by the transceiver. The green blink is not provided for a sensor restore transmission.

#### RED blink = CAUTION

Indicates that sensor was unable to communicate with the transceiver after multiple repeated attempts. The distance between the sensor and the transceiver may be too great. Another possibility is that the transceiver is disconnected or powered off. Try the following troubleshooting steps: A. Verify transceiver is on with its status LED blinking

- B. Trip another sensor to determine if it can successfully communicate with the transceiver.
- If steps A & B pass, try moving the sensor closer to the Transceiver and re-test. If sensor communicates at a closer range then one of two solutions may be needed:
- 1. Relocate the transceiver to a closer and/or more central location to this and all other sensors.
- 2. Purchase and install an additional "remote" transceiver to cover the area where this sensor was mounted.

Per UL a complete test of the security system and all zones should be performed once a week. The zones may be walk tested using the M1 Keypad Menu 3 - Walktest Area.

## Limited Warranty

The 6023 Wireless Recessed Door Sensor is warranted to be free from defects and workmanship for a period of 2 years from date of manufacture. Batteries used with wireless devices are not warranted. Elk makes no warranty, express or implied, including that of merchantability or fitness for any particular purpose with regard to batteries used with wireless devices. Refer to Elk's website for full warranty statement and details.

#### Battery Installation and Replacement

- Low Battery trouble will be transmitted when the sensor battery needs to be replaced. Approved 3.6V Lithium Batteries are: Xeno XL-050F
- 1. Remove the sensor cap (dime sized) by inserting the tip of a small flat screwdriver in the provided slot and gently prying. Carefully extract the circuit board from the housing.
- 2. Remove old battery and WAIT AT LEAST 20 SECONDS before installing new battery.
- 3. Observe correct polarity when installing new battery. Do not bend or damage the metal battery holder leafs.
- 4. Test sensor operation with panel. Trip sensor several times to send an "all good" and clear the low battery trouble.

BATTERY WARNING: Risk of fire, explosion and burns. Do not attempt to recharge or dissassemble. Do not incinerate or expose to heat above 212° F (100° C). Dispose of used batteries properly. Keep away from children.

#### FCC AND IC COMPLIANCE STATEMENT:

This device complies with Part 15 of the FCC Rules and Industry Canada License-Exempt RSS Standards. 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

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée quivalente (p.i.r.e.) ne dépassepas l'intensité nécessaire à l'établissement d'une communication satisfaisante

#### ELK-6023 Wireless Recessed Door Sensor FCC ID: TMAELK-6023 IC: 4353A-6023

NOTE: ELK PRODUCTS IS NOT RESPONSIBLE FOR ANY CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.



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