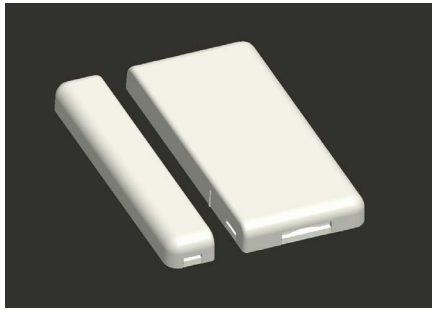
ELK-6021 Wireless Mini Window Sensor

APPLICATION

The ELK-6021 is an exceptionally thin Wireless Window Sensor. It is designed primarily for use on non-metal surfaces and is ideal for double hung or casement style wood/vinyl windows. It is nearly invisible when installed properly. The 6021 is compatible with Wireless Transceivers and Controls that accept Elk's two-way technology such as the ELK-M1XRFTWM. The 6021 contains a built-in reed switch and reports a unique TXID identifier to the transceiver.

The 6021 features Elk's Industry Leading Two-Way Technology with positive signal acknowledgment and very good battery life.



SPECIFICATIONS:

Frequency: 902 Mhz - 928 Mhz frequency hopping
Dimensions: 1.1"W x 2.3"L x .25"D Mag: .37"W x 2.3L x .25D
Max. Operating Gap of Reed: 3/8" Do not mount on metal surfaces
Operating Temperature: 14° to 104° F (-10° to 40°C)
Relative Humidity: 5-95% Non-Condensing
Battery: 3V CR2032 Lithium - See Battery Installation
Unique TXID Code: Over 1 million combinations

Enrolling from M1 Keypad Installer Programming

1. Enter **M1 Keypad Installer Programming** and navigate to Menu: **14-Wireless Setup**
2. Press right arrow, then scroll up to Sub-Menu: **3:Learn Sel WirelessTransmtr**
3. Press right arrow, then scroll or select a unused/available **WZone** (wireless zone).
4. Press right arrow to **Lrn** (Enroll) a new sensor.
5. Insert the Battery into the 6021 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 5 seconds, then re-insert.
6. 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 after all wireless zones (sensors) are 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 6021 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 happens to be 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 (sensors) 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 is 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 addresses below 10.

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 in 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: **0**=Non Supervised (Keyfobs), **1**=Normal "Burg" Supervision, or **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.

Locating and Mounting the Sensor

We recommend that the ELK-6021 Mini sensor be installed within 100 ft. of the wireless receiver. While the open-air range is much greater than 100 ft., obstacles and conditions in a building can significantly decrease effective operating range. (Note: For longer range requirements check out the ELK-6020 Slim-Line and ELK-6022 Universal sensors.) The ELK-6021 should never be mounted on metal surfaces since the extremely low profile of the device causes the signal to be adversely affected by the metal.

Always test sensors in their intended location PRIOR to permanent mounting. Bear in mind that a sensor's operating range can often be improved by slightly moving or re-orienting the sensor mounting.

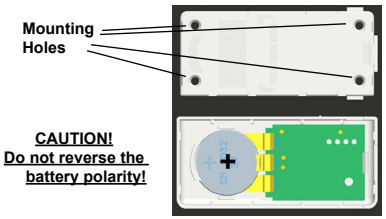


Figure 1. ELK-6021 Sensor & Backplate

Mounting surface should be clean, dry, and flat. Avoid metal surfaces! Observe temperature and humidity specs. Do not use in high moisture/humidity areas.

1. Separate the base from the sensor and magnet by inserting the tip of a small flat screwdriver in the end slot.
2. Install battery and enroll the sensor.
3. When ready to permanently mount, use the supplied adhesive pads or #2 flathead sheet metal screws. Be sure the align marks on both backplates face each other and the maximum gap DOES NOT EXCEED the gap specs.

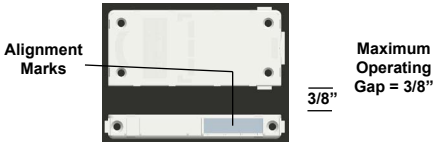


Figure 2. ELK-6021 Mounting Gap and Alignment

4. Attach the sensor and magnet to their baseplates.

Applying the self adhesive mounting tape:

1. Clean all surfaces of any grease, dirt, etc.
2. Peel the protective cover from one side of adhesive pad and apply to back of sensor/magnet.
3. Grasp the remaining protective backing and remove just prior to mounting.
4. Hold for several seconds to allow a strong bond. It may require up to 24 hrs for tape to reach full bond.

NOTE: Adhesive tape cannot be used for UL Listed Installations.

Operational Testing

A two color LED in the sensor front displays feedback of transmission status. This is useful during installation and troubleshooting but may be hard to see in bright light conditions.

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 6021 Wireless Mini Door & Window 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.

1. Remove sensor cover by grasping the sides and inserting the tip of a small flat screwdriver in the end slot.
2. Remove old battery and **WAIT AT LEAST 20 SECONDS** before installing new battery. Trip sensor several times to send an "all good" and clear the low battery trouble.
3. **Observe correct polarity** when installing new battery. Do not bend or damage the metal battery holder leafs.
4. Test sensor operation with panel.

Approved 3.0V Lithium Batteries are:
CR2032

Insert Battery with Positive Side Up

BATTERY WARNING: Risk of fire, explosion and burns. Do not attempt to recharge or disassemble. 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-6021 Wireless Mini Door and Window Transmitter FCC ID: TMAELK-6021 IC: 4353A-6021

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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