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SA-02

Supervised Wireless Magnetic Contact Sensor



CE 0678 !

INSTALLATION INSTRUCTIONS AND IMPORTANT INFORMATION

ROSSLARE SECURITY PRODUCTS

P/N: 9J-REL-001/0706-0670001-00

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INTRODUCTION (FAQ's)

Q: What is a Magnetic Contact Sensor ?
A: A Magnetic Contact Sensor is a sensor which detects the opening and closing of doors or windows protected by the sensor.

Q: What is WIRELESS and how can it benefit me ?
A: Wireless is the use of radio signals to transmit a signal from any sensor to a security panel, eliminating the need for setting wire ducts, extra cabling materials or drilling, saving time and money.

Q: What is SUPERVISOR or SUPERVISED sensor ?
A: A Supervised sensor continuously reports to the receiver or security panel to confirm status of the sensor and its presence. If the receiver fails to hear from a sensor within a pre-programmed time, it will presume a sensor is missing or malfunctioning and notify the user. This provides added security.

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INTRODUCTION (FAQ's) - continued:

Q: What is LOW BATT detection ?
A: For all supervised sensors, LOW BATT detection is when a sensor continuously measures its battery state and transmits a low battery signal to the security panel when the battery's voltage drops below a certain level. This alerts the user in advance to replace a weak battery.

Q: What is a CASE TAMPER detector?
A: A Case Tamper detector monitors any unauthorized opening of the unit housing. A signal will be transmitted to the security panel to notify the user of such tampering.

Q: What is a BACK TAMPER detector?
A: Once the sensor is mounted and activated, the Back Tamper detector ensures that the sensor is not removed or vandalized by detecting any removal of the unit from a wall or corner. The Back tamper detector will alert the security panel in such cases.

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FEATURES OF SA-02 - Performance Magnetic Contact Sensor

The SA-02 Supervised Wireless Magnetic Contact Sensor is a high-performance intrusion sensor developed with the highest level of technology to make it ideal for residential and commercial applications. Following features standard.

Supervisor
Case & Back Tamper Detectors
ASIC and Microprocessor Technology
Up to 3-yr. Battery Life with SPS
Ultra-low Current Consumption
Readily Replaceable 3.6V- 1/2 AA Lithium Battery
SMD Component technology
L.E.D. Test Function

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INSTALLATION - Performance Criteria

The SA-02 Magnetic Contact Sensor detects the opening and closing of doors and windows and transmits this information to the receiver panel.

- AVOID: Placing the Magnetic Contact Sensor near strong magnetic or electrical fields other than the magnet with which it is intended to be used. Otherwise, performance could be affected and false alarms could occur.

- AVOID: Mounting on or near large metal surfaces and multiple concrete/steel walls. This may interfere or block the wireless signals. Make sure to test the range from any location by using the RF Test Procedure to ensure reception.

- IMPORTANT NOTE: Install the Magnetic Contact Sensor on windows or doors that have firm hinges and firm locking action to prevent false alarms associated with wind or bumping.

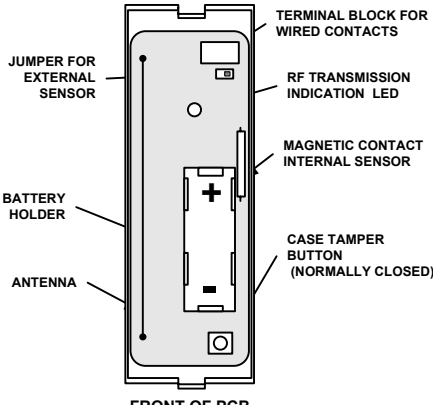
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STEP-1 INSTALLING THE BATTERY (Fig 1)

Use only the specified 3.6 V Lithium Battery. (See block 22)

- 1) Unscrew the case locking screw and remove the front cover. CAUTION Do not touch the magnetic element or the electronic components inside as this may cause damage.
- 2) For a new unit, simply remove the plastic strip contact breaker. For replacement, remove the battery by using a small screwdriver. CAUTION: Notice the polarity. Replace with a fresh battery.
- 3) Dispose of the old battery properly. Do not incinerate, heat, disassemble, recharge.
- 4) To test, press in both the back-tamper and the case-tamper buttons, or use a magnet to simulate a door opening and closing. The LED will light to indicate an RF transmission.
- 5) Close the front cover and replace the locking screw

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FRONT OF PCB

FIG 1: Front of PCB

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STEP-2 SELECTING THE LOCATION

The location and mounting of the SA-02 affects both the transmission range and wear and tear of the transmitter.

Preferably the transmitter should be installed as close as possible to the receiver and mounted in a high location so that the transmission will have less interference.

- 1) Select a DOOR OR WINDOW within a room or hallway that best matches the criteria in section 5. (Fig 2):
- 2) Make sure that the Magnetic Contact Sensor will be mounted on a sturdy, non-vibrating door or window frame. Note: Following this instruction will reduce bumping and vibration effects on the sensor, and will extend the life of the product.
- 3) Perform the RF Test from the proposed mounting location to ensure that the sensor can be received.
- 4) Select the appropriate height for the magnet assembly that will suit the location of the sensor.

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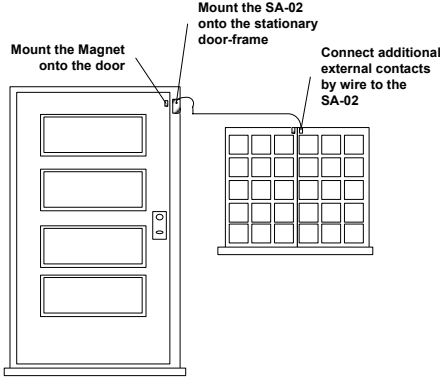


FIG 2: Selecting a Location

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STEP-3 SELECT MAGNET HEIGHT

The SA-02 comes equipped with a standard magnet with adjustable height, suitable for most applications. When there is a special need, select the appropriate height for the magnet assembly that will suit the location of the sensor. (FIG 3)

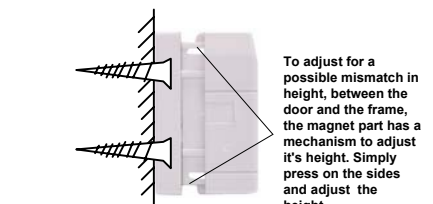


FIG 3: Magnet

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STEP- 4 WIRING THE EXTERNAL SENSOR

When the internal magnetic sensor in the SA-02 is not applicable, or an additional set of contacts are needed for the SA-01, the following procedure is required:

The maximum distance that an external contact can be away from the SA-02 is about 8.5 meters or 25 feet.

- 1) This step is not necessary unless installing a remote external magnetic contact sensor with a wire to the SA-02.
- 2) Remove the case locking screw and front cover.
- 3) Connect the external magnet(s) in series to the wired input terminal block of the magnetic contact sensor.
- 4) Move the jumper cover to the two right-most pins to activate the external magnetic contact input.
- 5) Replace the front cover and locking screw.

Please see FIG 4.

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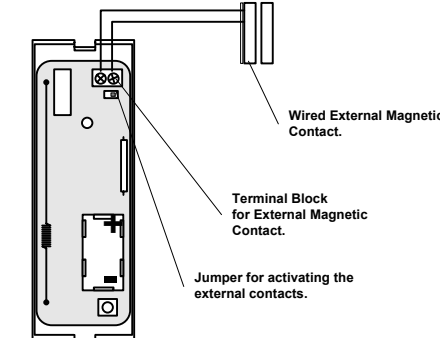


FIG 4: Wiring an External Sensor

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STEP-5 ACTIVATING THE BACK TAMPER

Each Magnetic Contact Sensor SA-02 is equipped with both a Back and Case Tamper detector. The case tamper detector is always active, however the wall tamper detector (normally inactive) is optionally activated by cutting a Jumper.

For additional protection against the theft or removal of the sensor from the mounting location, the back tamper can be activated to work in unison with case tamper by cutting the jumper R18 which is on the top side of the PCB.

- 1) Remove the case locking screw and front cover. Look at the front of the PCB with the antenna showing (FIG 5)
- 2) To activate the back tamper switch, locate and cut the jumper
- 3) Replace the front cover and locking screw. The Back tamper will be active.

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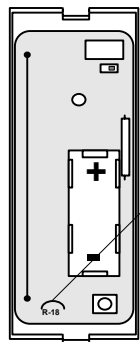


FIG 5: Activation of the Back Tamper

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STEP-6 RADIO TRANSMISSION TEST

This test is used to check the range and the reception of the sensor to the control panel receiver. If reception is poor, try to change the location of the Magnetic Contact Sensor.

- 1) Ensure that all the settings of the Magnetic Contact Sensor are adjusted as necessary for the location according to STEPS 1 to 5, and that the Magnetic Contact Sensor case is closed, with the locking screw firmly secured.
- 2) Hold the sensor close as possible to the mounting location, and transmit using the magnet.
- 3) During this mode, each time the LED flashes, the sensor transmits to the panel. If the panel is in test mode, this will cause an alarm. If the panel is in test mode, then the signal strength can be measured.
- 4) It is recommended to try several locations until the best reception is attained.

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STEP-7 MOUNTING THE Magnetic Contact Sensor (FIG 6)

The SA-02 Magnetic Contact Sensor is designed to be Mounted onto a flat wooden or stucco surface.

Flat Surface Mounting:

- 1) Remove the PCB from the back case.
- 1) Remove the knockouts from the back case labeled B by using a sharp tool or using a nail.
- 2) Affix the two screws onto the wall, so that the Back Tamper arm is pressed in.
- 3) Replace the PCB and tighten the PCB locking screw.
- 4) Replace the top cover of the Magnetic Contact Sensor.

Important: When mounting the SA-02 to the surface, it is important to see that the surface is flush with the back tamper device.

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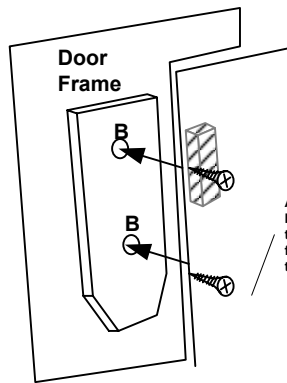


FIG 6: Mounting the SA-02

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STEP-8 Post-Installation Testing

After mounting the back of the sensor housing to the window or door frame, it is important to check the reliability of the RF transmission to the receiver or security panel.

Perform a range test as indicated in STEP 6.

If the sensor is used with a receiver, check to see that the receiver is receiving the sensor.

It is suggested that you arm the system and test that the SA-02 transmits to the desired control panel.

Important: If the back tamper has been activated in previous steps, check the security panel to ensure that there is no tamper signal, and that the sensor is properly installed.

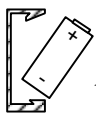
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STEP-9 Replacing the Battery in the SA-02.

Batteries in the SA-02 should be replaced following a Low Battery indication on the receiver or security panel.

PLEASE: Dispose of the old battery properly, do not re-charge, disassemble, heat or incinerate.

- 1) Open the SA-02 sensor, and observe the correct polarity labeled on the PCB and the holder.
- 2) Remove the old battery and dispose of it properly.
- 3) Insert the new battery (Model numbers shown in specifications below)



3.6 -volt Lithium 900 mAh
Lithium Primary cell.
3.6-volt Lithium 900 mAh
Tadiran / Varta / Tekcell (SB-AA-02)
1/2 AA Size.

Insert the NEGATIVE (-) side of battery first.

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CE Notice:

The model SA-02 Wireless Magnetic Contact Sensor generates and uses radio frequency energy. If not installed in accordance with the manufacturer's instructions it may cause interference.

If this equipment causes interference to radio or television reception-which can be determined by turning the equipment on and off - the installer is encouraged to correct the interference by one or more of the following measures: 1) Reorient the antenna of the radio/television, 2) Connect the AC transformer to a different outlet so the control panel or television are on different branch circuits, 3) Relocate the control panel with respect to the radio/television.

This device complies with the applicable ETSI/CE rules. 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.

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Important !:

Rosslare radio control panels provide a reliable communications link and fill an important need in portable wireless signalling. However, there are some limitations that must be observed.

For US installations only: The radios are required to comply with FCC rules and regulations as part 15 devices. As such they have a limited transmitter power and therefore limited range. A receiver cannot respond to more than one transmitted signal at a time and may be blocked by two simultaneous signals that occur near their operating frequencies, regardless of the individual sensor code.

Any changes to this circuit or device may void FCC compliance.

Infrequently used radio links should be tested regularly to protect against unintended interference or fault.

A general knowledge of radio and it's properties should be gained prior to acting as a wholesale distributor or dealer, and these facts should be communicated to the ultimate users.

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SPECIFICATIONS

Battery:
Lithium Primary cell.
3.6-volt Lithium 900 mAh
Tadiran / Varta / Tekcell (SB-AA-02)
1/2 AA Size. (Low Battery Signal when V-2.5V)
CAUTION! Dispose of Properly, do not re-charge, disassemble, heat or incinerate.

Pulse Count: Fixed at single pulse.
Detect Range: Sensitivity of up to 2 cm from magnet.
Operating Temp: -20°C to +50°C
-4°F to +122°F

Operating Humidity: Up to 95% Non-Condensing (max.)
Alarm Transmit: 1 second.
RF Frequency: Available in 433.92 or 868.35 MHz, with 1m Watt
Installation: Indoor
Magnet: Standard magnet with plastic housing and wall spacer, adjustable height.
Tamper Switch 1: Removal of Magnetic Contact Sensor Front Cover (Protected by case tamper switch)
Tamper Switch 2: Removal of Magnetic Contact Sensor from the wall or from corner mount (protected by rear tamper switch)
Supervisor: The supervisory signal is routinely transmitted to the panels every 20 minutes, advising the Tamper Status, Battery Status, Event Activation Status to the panel.
Current: Standby - 23uA
Transmit - 5 mA
Size: 87mm (h) x 35mm (w) x 25 mm (d)
(3.5" x 1 3/8" x 1")
Weight: 37 grams (1.30 oz) without battery.

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WARRANTY

The Manufacturer's warranty on this product is for a period of one year from the date of purchase against defects in materials and workmanship. Manufacturer's warranty hereunder is limited to repair or replacement, at the manufacturer's sole option, if the product is found to be defective in normal use during the warranty period. The warranty is given in favour of the original purchase only. Subject to the above warranty, manufacturer's liability and that of its distributors, re-sellers and agents and is wholly limited to the original purchase price and no payment will be made for related or consequential loss including but not limited to labour costs incurred in inspection, replacement or repair of defective products. This warranty is given expressly and in place of all other expressed or implied warranties of merchantability and fitness for a particular purpose and this warranty is the only warranty made by the manufacturer. No agent, representatives or employee of the manufacturer has the authority to waive, alter or add to the printed provisions of this warranty, to make representation of warranty not contained herein or to extend this warranty to anyone other than the original purchaser of the product. The SA-02 Magnetic Contact Sensor is guaranteed against defects in workmanship and material for a period of 12 (twelve) months from date of purchase. Return the faulty product with a dated proof of purchase to your dealer for replacement.

NOTICE

The SA-02 Magnetic Contact Sensor is designed to send an electronic signal to alarm control system, should intrusion occur, the warranty does not make the manufacturer or the distributor of the SA-02 Magnetic Contact Sensor held liable for consequential damages resulting from any breach of warranty, expressed or implied, applicable to their use.

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