



# **Multi-Purpose Magnetic Switch**

## **User Guide**

**ES700MGLS-GN**

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For more information, please contact:

Essence Security

12 Sderot Abba Eban Street

Ackerstein Towers Bldg. D

Herzliya Pituach

46120 Israel

[www.essence-grp.com](http://www.essence-grp.com)

Tel: +972-73-2447777

Fax: +972-9-7729962

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications to this equipment not expressly approved by the party responsible for compliance (Essence Security Ltd.) could void the user's authority to operate the equipment.

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 interference, and  
(2) This device must accept any interference received, including interference that may cause undesired operation.

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# 1 Overview

The ES700MGLS Multi-Purpose Magnetic Switch is a bi-directional RF, battery operated magnet switch detector/shock detector/RF input terminal. It is composed of two parts: a smart magnet sensor and a permanent magnet. The smart magnet sensor is the brain of the device; it is responsible for detection and RF communication with the Control Panel. The smart magnet sensor is battery operated. When the magnet detector is operational, the permanent magnet mounts next to the smart magnet sensor. When the magnet's proximity to the smart magnet sensor changes, the smart magnet sensor triggers an action via the Control Panel.

The ES700MGLS device has a multipurpose design that supports the following modes:

- Detects intrusions at break-in points such as doors and windows through an integral magnet sensor.
- Detects intrusions by connecting to an external wired magnet sensor.
- Detects surface shocks/vibrations on the surface where the smart magnet sensor is mounted.
- As a pure RF input device, detects status changes in a wired external input device. Possible external devices that may be connected to the ES700MGLS device are as follows:
  - ◆ Gas Detector
  - ◆ Flood Detector
  - ◆ Fire Detector
  - ◆ Panic (SOS) Button
  - ◆ Gas Monitor

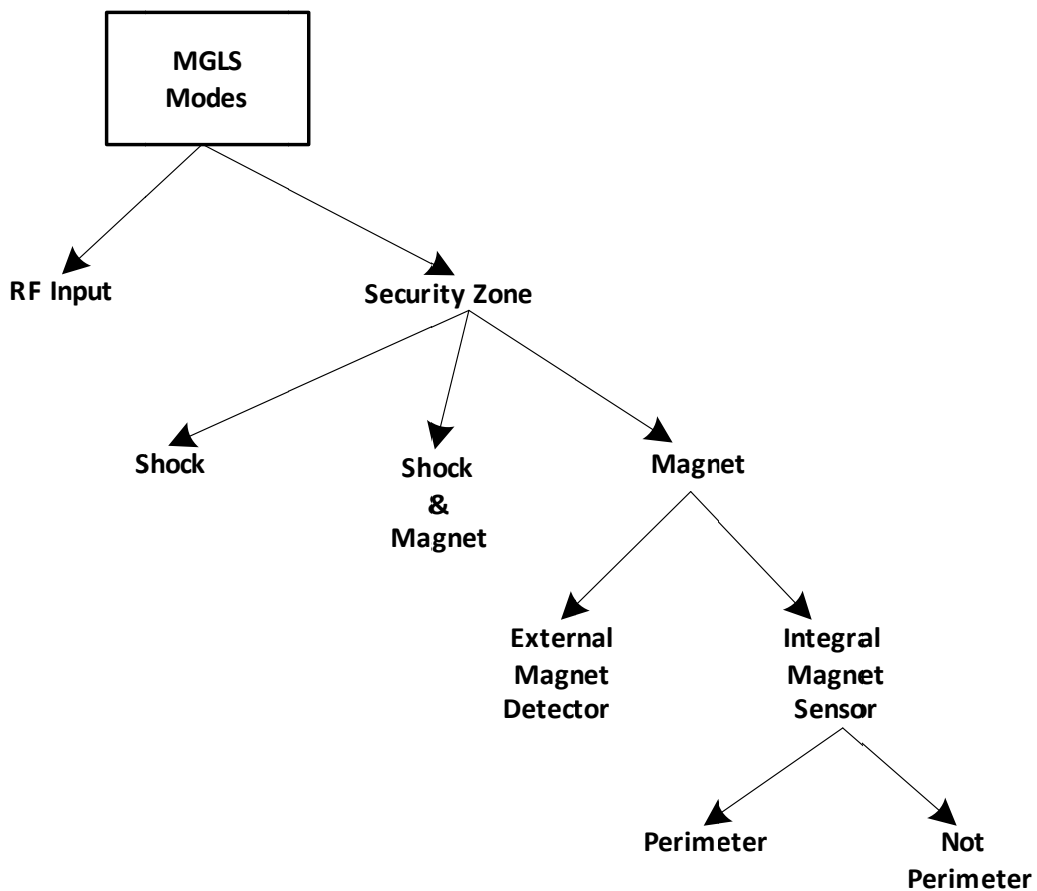


Figure 1: ES700MGLS Device Modes Diagram

Detections are indicated by a single bi-color LED on the front of the device and via a remote connection to the Control Panel. When a LED notification is not required, the LED can be disabled.



**Note:** The ES700MGLS device is integrated into the security system via the Essence Site Installer Smartphone application. For more information, see the *Essence Site Installer section 4.1.1 Essence Site Installer Application, on page 9.*

The ES700MGLS parameters can also be configured locally or from a remote location via the ESI-CMS application through the Control Panel (the computer, where the application is installed, must have a Windows® XP O/S or higher). For more information, refer to the ESI-CMS User Guide.

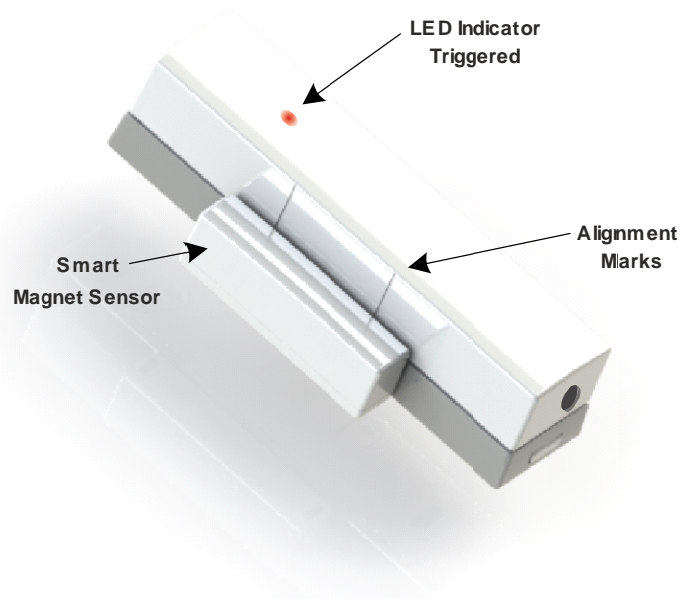


Figure 2: ES700MGLS-GN Multi-Purpose Magnetic Switch with Smart Magnet Sensor and Permanent Magnet

## 2 Operation

### 2.1 Indications

The ES700MGLS smart magnet sensor includes a bi-colored LED (green and red). This LED indicates to the homeowner a change to the normal status of the device. The LED can be disabled from the ESI-CMS (default is enabled).

Table 1 describes the LED indications for each state (when enabled):

Table 1: LED states

LED	Description
OFF	No intrusion, vibration or terminal triggered
Glow red for 1 second	Protected location opened, input terminal disconnected or, vibration detected
Glow red for 2 seconds	Device tampering has been detected
Glow green for 1 second	Protected location closed after having been opened, input terminal connected after being disconnected

Device trigger behavior is not limited to the LED on the device, but also includes signals to the Control Panel. The action taken from the Control Panel is configurable from the software part of the installation process and may depend on the status of the system (Arm, Disarm and Partial Arm).

For more information on configuring the ES700MGLS device, see 4.1 Settings and Defaults, on page 8.

Actions that trigger a response from the Control Panel are as follows:

- Magnet Detector: Open and close action where the permanent magnet is moved away or towards the smart magnet detector.
- Shock Sensor: Vibrations (in severity or quantity) is detected on the surface where the device is mounted.
- Input Terminal: Leads are disconnected or reconnected to the terminals in the ES700MGLS device. Triggers from the external device connected to the terminals may also trigger a Control Panel response.
- Device Maintenance: Low battery or ES700MGLS device tampering.

### 3 Installation Overview

The ES700MGLS device can be installed in multiple configurations, depending on the feature(s) that will be used on the premises.

The configurations pertain to the following functionalities:

- Shock Sensor and Intrusion Detector operating from the same device
- Shock Sensor (exclusively)
- Intrusion Detector –doors & windows (exclusively)
- Input Terminal device (exclusively)



**Note:** If the device will be used to detect surface shocks exclusively or as a go-between for the security system and an external device (input terminal), the permanent magnet is not required.

#### 3.1 Installation Work Flow

Perform the installation process in the following logical order.

1. Have the tools, battery and screws (optional) available.
2. Familiarize the owner with the available functional configurations.
3. Determine the functionality for the device (intruder, shock, input terminal, or a combination).
4. Decide where the device will be mounted.
5. Install and configure the device with the Essence Site Installer (BlackBerry). After the installation, perform a more comprehensive configuration in collaboration with the monitoring center via the ESI-CMS, refer to the ESI-CMS User Guide.

6. Mount the device as determined by the selected functionality. Where appropriate, use two 3 X 35 DIN 7982 C screws to add extra support to the mount and two provide tamper/tear off protection. For more information about the screws see, Figure 32, on page 22.
7. Test the device.

## 3.2 Power

The ES700MGLS smart magnet sensor requires one 3V CR-123A Lithium battery, giving a nominal battery life of 3 years. The permanent magnet does not require a battery.

## 3.3 Selecting a Mounting Location

The ES700MGLS device can be mounted on the fixed side of a protected opening (such as a doorpost or window frame). When selecting a mounting position, the following factors must be taken into consideration:

- The ES700MGLS device should be mounted as high as possible, out of reach of a possible intruder, but still accessible for occasional maintenance.
- Do not install the ES700MGLS device on metallic surfaces or on other surfaces known to interfere with radio transmissions.



**Note:** Do not mount the device on surfaces that can be magnetically charged, as this may limit the device's effectiveness.

If the ES700MGLS device will be used to detect intrusions or surface shocks, use the following addition criteria for selection a mounting location

- The ES700MGLS device smart magnet sensor should be placed on the frame side of the door or window opening. The permanent magnet should be placed on the surface of the door or window (where required). A smooth and clean surface is best to ensure optimal contact with the mounting tape.



**Note:** Though the installation instructions below specify using the mounting tape to affix the device to a surface, A screw (not provided) may also be used. The screw will provided a reinforced bond to the surface. A hole for the screw is provided in the mounting.

# 4 Configuring the Device

## 4.1 Settings and Defaults

Once the battery is inserted into the device, via Site Installer instructions (see section 4.1.1 Essence Site Installer Application, on page 9), the Control Panel is able to recognize/learn the new device. After the device is learned, it can be configured to fit the needs of the installation and the homeowner via the Essence Site Installer application, as described in this section. Additionally, parameters may also be configured via the ESI-CMS application through the Control Panel.





For more information about the ESI-CMS application, refer to the ESI-CMS User Guide.

### 4.1.1 Essence Site Installer Application

The ES700MGLS device detects changes in shock and magnetism, i.e., vibrations on the surface where the device is mounted, or changes in the vicinity of a magnet as in opening/closing a door or window. In addition, the ES700MGLS device can act as an input device for an external wired peripheral and incorporate it into the security system.


The installation process varies depending on the intended purpose of the ES700MGLS device being installed:

- As an RF Security device (Integral Magnetic Detector and or Shock Detector): Select the RF Security icon , and then choose Shock, Magnet, or both.
- As an RF Input device (Input Terminal functionality): Select the RF Input icon , and then select the type of device connected to the ES700MGLS device terminals.



**Note:** The RF Security functionality does allow you to use the device as a limited input terminal. This option is available when the ES700MGLS device is configured as RF Security Magnet Detector only; and the device connected to the input terminal of the ES700MGLS device is a wired magnet device.

#### ➔ To add ES700MGLS as an RF Security device (Magnet, Shock or, Magnet & Shock sensor):

1. If the screw securing the top cover to the mounting is present, remove the screw with a flathead screwdriver. Then gently insert the screwdriver between the side snap and the top cover and pry off the cover.
2. Connect the dongle to the system Control Panel.
3. From the BlackBerry, click the Essence Site Installer icon .

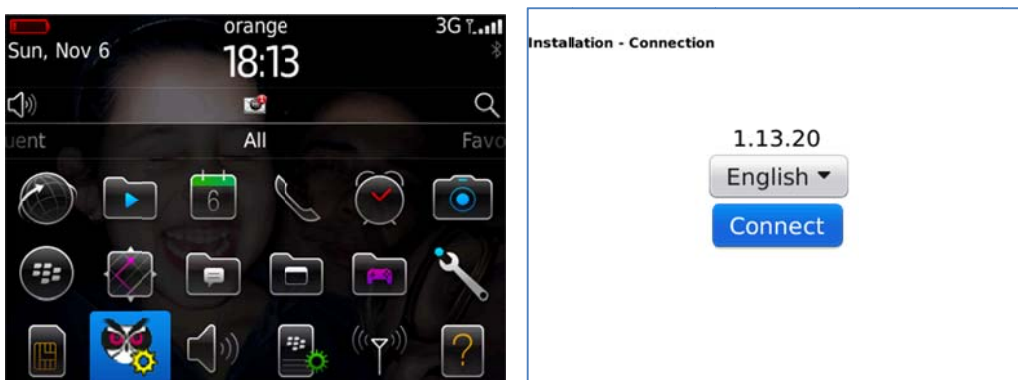


Figure 3: Main Menu and Language Screens

The Language screen is displayed.

- Select a Language and click Connect. The Dongle screen is displayed.

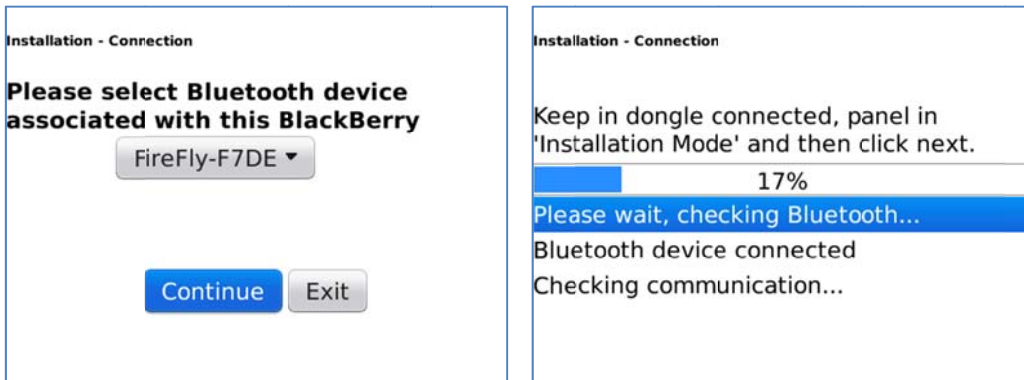


Figure 4: Dongle and Communication Screen

- Select the dongle ID from the drop-down list and click Continue. A Communication screen displays and proceeds to establish a connection between the dongle and the BlackBerry.

The dongle ID is the last four numbers on the barcode glued to the dongle.

- After communication between the dongle and the BlackBerry is synched, click Continue. The Server Permissions screen is displayed.

The server is located at the monitoring center. The IP address displayed is specific to the monitoring station.

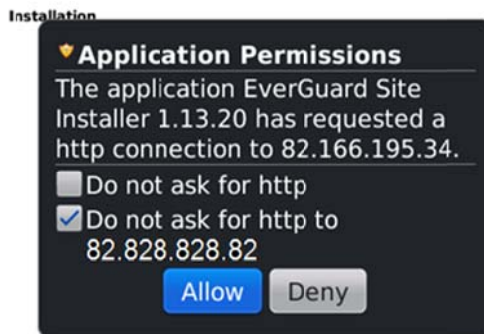


Figure 5: Server Permissions Screen

- Confirm the checkbox with the IP address of the server is selected and click Allow. The device Types screen is displayed.



Figure 6: Device Types Screen - RF Security Icon


- Select the RF Security icon . A screen listing RF security devices (MGI, MGS and MGL devices) already in the system is displayed. If an RF security device has already been installed, it will appear in the list as an MGI, MGS or, MGL depending on the device's configuration.



Figure 7: RF Security Device Listing Screen

At this point the following should be considered:

- When Adding or Editing an RF security device plan the functionality of the device as follows:
  - ◆ Shock & Magnet sensor  
Set the configuration for the magnet sensor and the shock sensor.
  - ◆ Shock sensor  
Set the configuration for the shock sensor.
  - ◆ Magnet sensor  
Set the configuration for the magnet sensor and determine if a wired external magnet will be connected to the magnet, configure the device accordingly.  
If there is no external wired magnet connected to the device, determine if the integral magnet sensor will function as a perimeter magnet or not, and then configure the device accordingly.

If there are no RF Security devices currently in the system, the list will be replaced by the word "EMPTY".

9. Click New, and then put a battery in the device as instructed. The device is learned by the system.

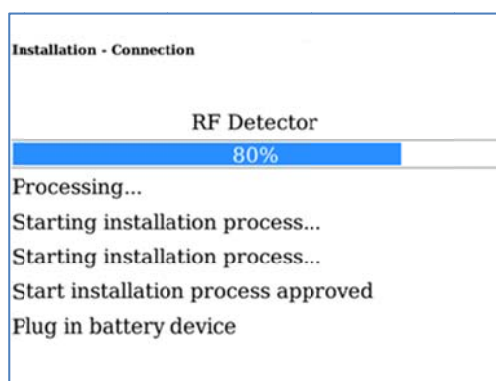


Figure 8: System Learning Screen

10. After the device is learned by the system, the RF Security Device Listing screen displays again, but with a new row for the learned device. The new device row text is "N/A – MGLS", because it has not been named yet.



Figure 9: Device Name and ID Screen with a New Device Row

The ID cannot be changed and represent the order in which the devices were put in the system. For example, in the screen above the device was the third RF Security device put in the system.

- Click the device you just added to the list and select Edit from the popup menu.



Figure 10: Device Name and ID Screen with Popup Menu

- Enter parameter values as required.

The location selected will replace the N/A value in the Device Name and ID screen. The Function selected will automatically change the Parameter screen to include the parameters relevant for the selected function.

## Configuring the Device

S/N: 001055D1  
ID: 2  
Radio Level: 89%

Location: CHOOSE NAME ▾

Floor: 0 ▾

Sensitivity: 0

Functionality: Shock ▾

First Camera DISABLE ▾

Second Camera DISABLE ▾

Repeater DISABLE ▾

Led

Shock Configuration:

Mode: N/A ▾

Full  Day  Night  Custom

Bypass  Chime

Placement: N/A ▾

Back Update Delete Set

S/N: 001055D1  
ID: 2  
Radio Level: 89%

Location: CHOOSE NAME ▾

Floor: 0 ▾

Functionality: Mag ▾

First Camera DISABLE ▾

Second Camera DISABLE ▾

Repeater DISABLE ▾

Led

MAG Configuration:

Mode: N/A ▾

Full  Day  Night  Custom

Bypass  Chime

External Magnet

Placement: N/A ▾

Back Update Delete

S/N: 001055D1  
ID: 2  
Radio Level: 89%

Location: CHOOSE NAME ▾

Floor: 0 ▾

Sensitivity: 0

Functionality: Shock+Mag ▾

First Camera DISABLE ▾

Second Camera DISABLE ▾

Repeater DISABLE ▾

Led

Shock Configuration:

Mode: N/A ▾

Full  Day  Night  Custom

Bypass  Chime

MAG Configuration:

Mode: N/A ▾

Full  Day  Night  Custom

Bypass  Chime

External Magnet

Placement: N/A ▾


Back Update Delete Set

Figure 11: RF Security Device Parameter Screens (Shock, Magnet and Shock & Magnet)

The S/N (serial number) and ID of the device are read-only parameters. These parameters are set when the device is learned by the system. The Radio level is also read-only, it shows the RSSI level per RF Security device in the system.

13. After completing the Parameters screen, click Update and Save. A message appears stating that the device data updated successfully. For information about the parameters, see the *ESI-CMS User Guide*.
14. Click OK. The Installation screen is displayed and the new device appears on the list.

➔ **To add ES700MGLS as an RF Input device:**

1. If the screw securing the top cover to the mounting is present, remove the screw with a flathead screwdriver. Then gently insert the screwdriver between the side snap and the top cover and pry off the cover.
2. Connect the dongle to the system Control Panel.
3. From the BlackBerry, click the Essence Site Installer icon .

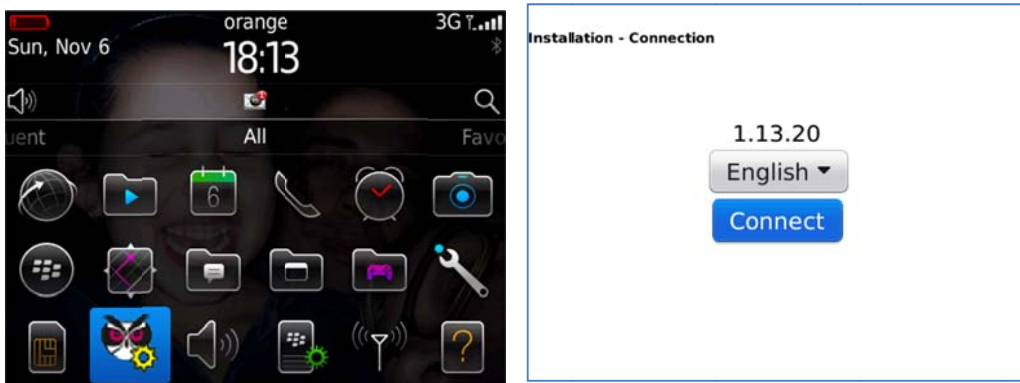


Figure 12: Main Menu and Language Screens

The Language screen is displayed.

4. Select a Language and click Connect. The Dongle screen is displayed.

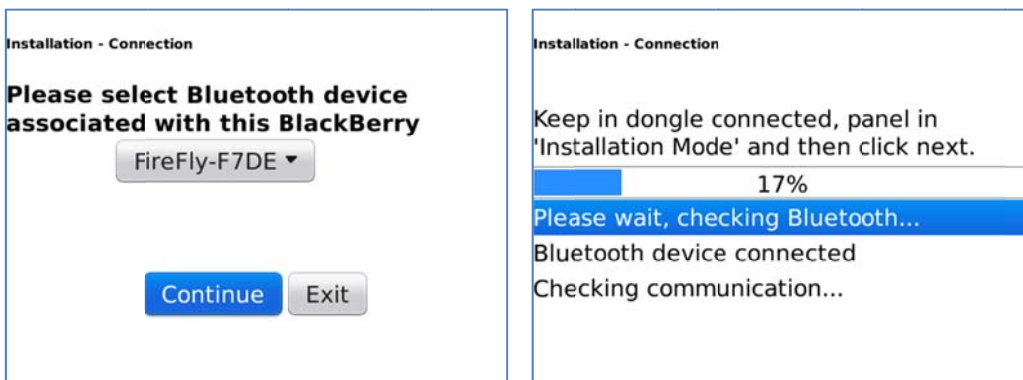


Figure 13: Dongle and Communication Screen

5. Select the dongle ID from the drop-down list and click Continue. A Communication screen displays and proceeds to establish a connection between the dongle and the BlackBerry.  
The dongle ID is the last four numbers on the barcode glued to the dongle.
6. After communication between the dongle and the BlackBerry is synched, click Continue. The Server Permissions screen is displayed.

The server is located at the monitoring center. The IP address displayed is specific to the monitoring station.

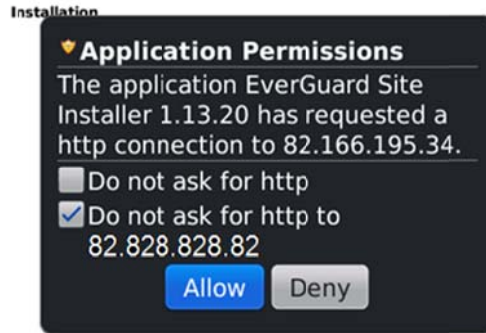


Figure 14: Server Permissions Screen

7. Confirm the checkbox with the IP address of the server is selected and click Allow. The device Types screen is displayed.

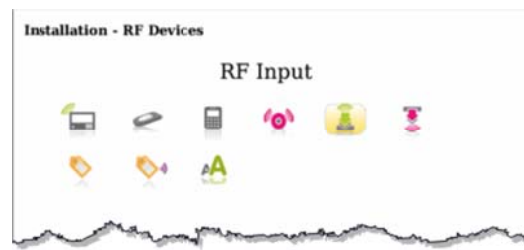



Figure 15: Device Types Screen - RF Security Icon

8. Select the RF Input icon . A screen listing RF Input devices already in the system is displayed.

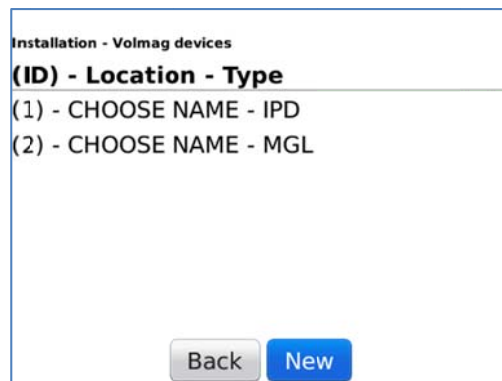


Figure 16: RF Input Device Listing Screen

If there are no RF Input devices currently in the system, the list will be replaced by the word "EMPTY".

9. Click New, and then put a battery in the device, as directed by the screen text. The device is learned by the system.

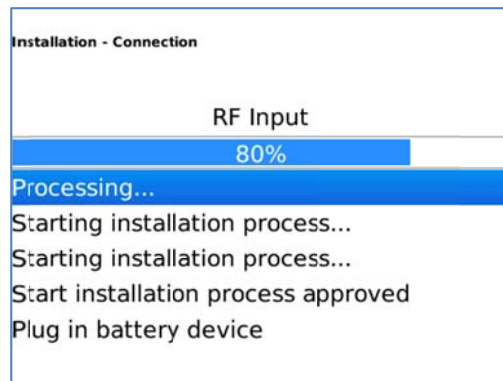


Figure 17: System Learning Screen

- After the device is learned by the system, a Device Name and ID screen is displayed.

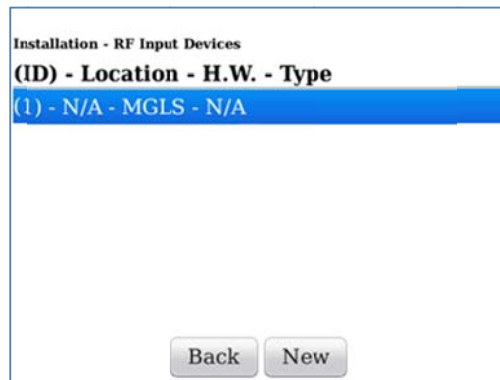


Figure 18: Device Name and ID Screen

The ID cannot be changed and represent the order in which the devices were learned by the system. For example, in the screen above the device was the third RF security device learned by the system.

- Choose a name/location for the device.

When selecting a name for the device, base the decision on the location where the device will be mounted.

And then click:

- Back to return to the screen listing RF Input devices. Double click the device you just added to the list and select Edit from the popup menu.

Enter parameter values as required, and then click Update and Save. A message appears stating that the device data updated successfully. For information about the parameters, see the *ESI-CMS User Guide*.





Editing RF Input  
 S/N: 001055D1  
 ID: 1  
 Radio Level: 93%

Location: CHOOSE NAME ▾  
 Floor: 0 ▾  
 Hardware: MGLS  
 Type: N/A ▾

Enable Trigger

Type: None ▾ No. 1 ▾  
 Name:  
 First Camera DISABLE ▾  
 Second Camera DISABLE ▾  
 LED

Back Update Delete

Figure 19: RF Input Device Parameter Screen

The S/N (serial number) and ID of the device are read-only parameters. These parameters are set when the device is learned by the system. The Radio level is also read-only, it shows the RSSI level per RF Input device in the system.

Click OK. The Installation screen is displayed and the new device appears on the list.

- New to add an additional device.

➡ **To edit an ES700MGLS device (RF Security or RF Input):**

1. Connect the dongle to the system Control Panel.

2. Click the Essence Site Installer icon  on the BlackBerry.

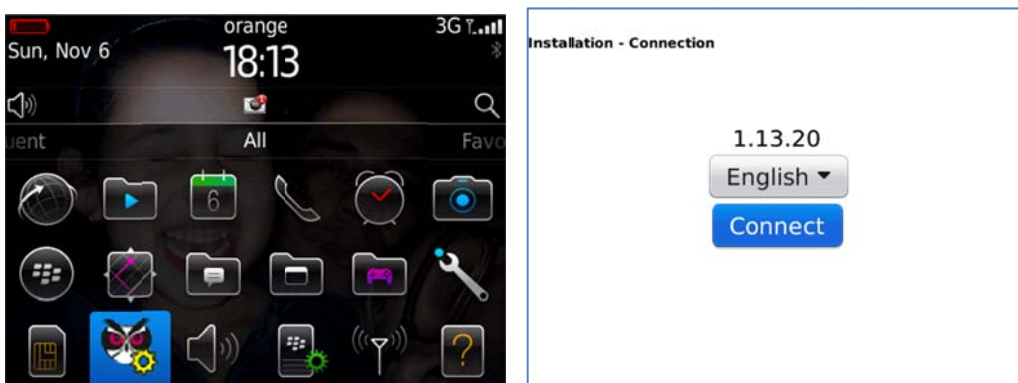


Figure 20: Main Menu and Language Screen

The Language screen is displayed.

3. Select a Language and click Connect. The Dongle screen is displayed.

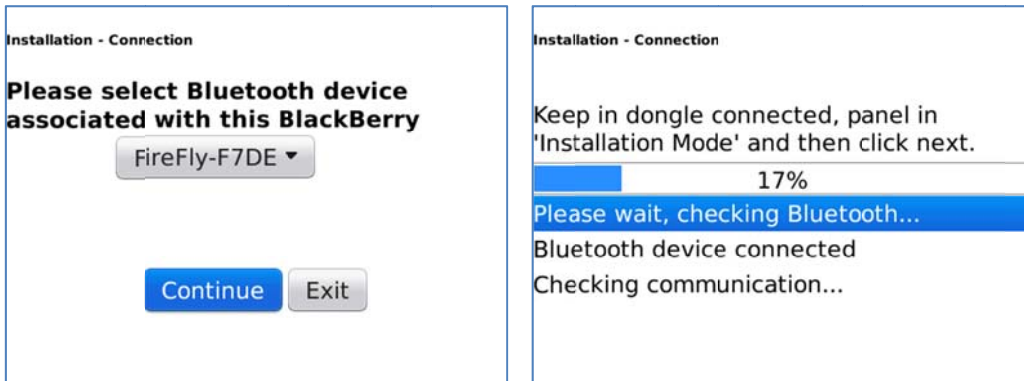


Figure 21: Dongle and Communication Screen

4. Select the dongle ID from the drop-down list and click Continue. A Communication screen displays and proceeds to establish a connection between the dongle and the BlackBerry.

The dongle ID is the last four numbers on the barcode glued to the dongle.

5. After communication between the dongle and the BlackBerry is synched, click Continue. The Server Permissions screen is displayed.

The server is located at the monitoring center. The IP address displayed is specific to the monitoring station.

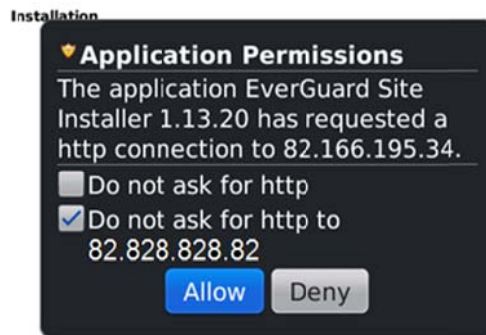


Figure 22: Server Permissions Screen



6. Confirm the checkbox with the IP address of the server is selected and click Allow. The device Types screen is displayed.
7. Select the RF input  or RF Security  icon, depending on how the device was previously defined. A screen listing devices of the specified type already in the system is displayed.



Figure 23: Device Types Screen

8. Click the item row of the device that will be edited. A popup menu appears.

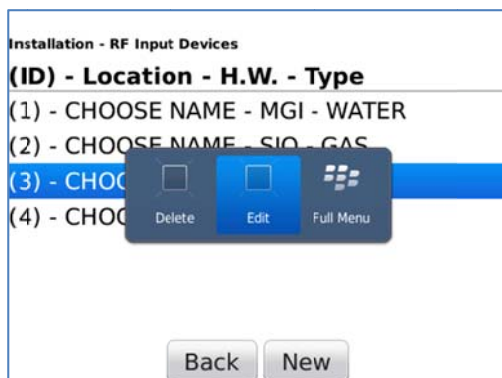


Figure 24: Device Listing with Popup Menu

9. Select Edit in the popup menu. The parameters of the selected device are displayed. For information about the parameters, see the *ESI-CMS User Guide*.

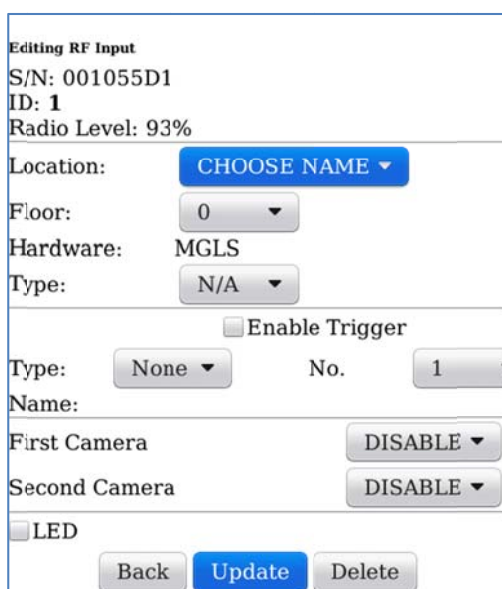



Figure 25: RF Input Device Parameter Screen

10. Change parameter values as required and click Update and Save. A message appears stating that the device data updated successfully.  
The S/N (serial number) and ID of the device are read-only parameters. These parameters are set when the device is learned by the system. The Radio level is also read-only, it shows the RSSI level per device type in the system.
11. Click OK. The Installation screen is displayed and the previously selected row is updated accordingly.

### ➔ To delete an ES700MGLS device (RF Security or RF Input):

1. Connect the dongle to the system Control Panel.
2. Click the Essence Site Installer icon  on the BlackBerry.

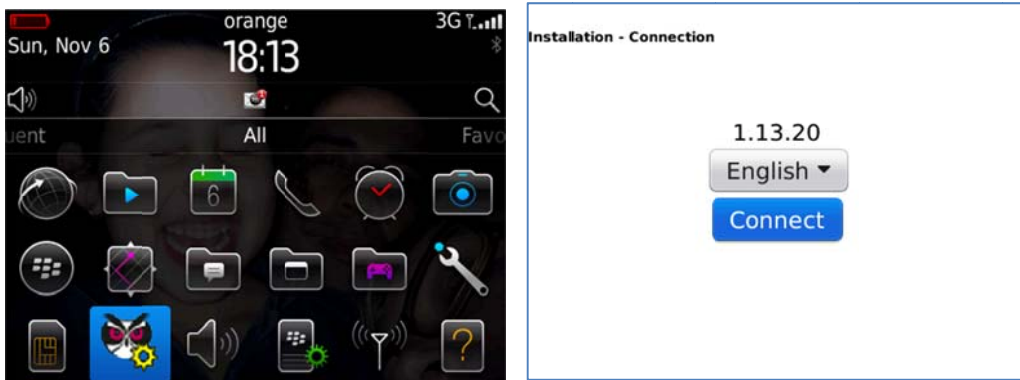


Figure 26: Main Menu and Language Screens

The Language screen is displayed.

3. Select a Language and click Connect. The Dongle screen is displayed.

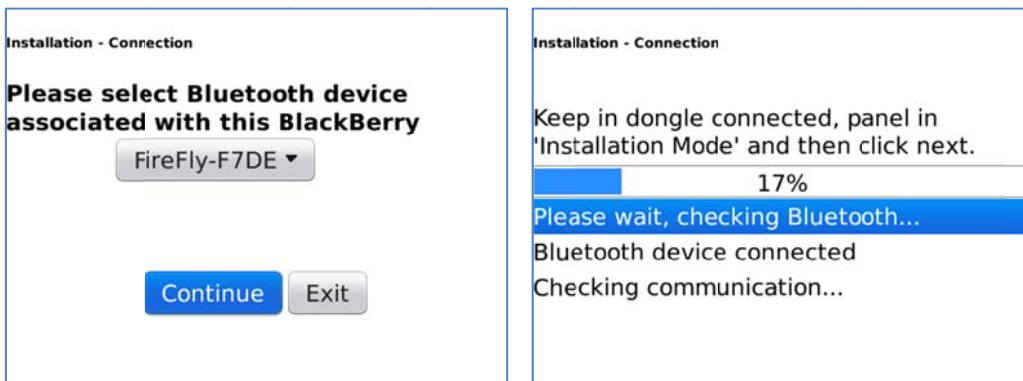


Figure 27: Dongle and Communication Screens

4. Select the dongle ID from the drop-down list and click Continue. A Communication screen displays and proceeds to establish a connection between the dongle and the BlackBerry.

The dongle ID is the last four numbers on the barcode glued to the dongle.

5. After communication between the dongle and the BlackBerry is synched, click Continue. The Server Permissions screen is displayed.

The server is located at the monitoring center. The IP address displayed is specific to the monitoring station.

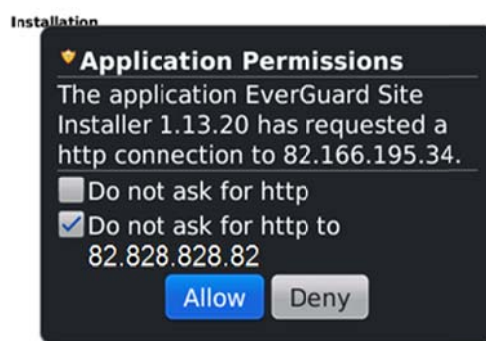




Figure 28: Server Permissions Screen

6. Confirm the checkbox with the IP address of the server is selected and click Allow. The device Types screen is displayed.



Figure 29: Device Types Screen

7. Select the RF input  or Security  icon, depending on how the device was previously defined. A screen listing devices of the specified type already in the system is displayed.
8. Click the item row of a device. A popup menu appears.

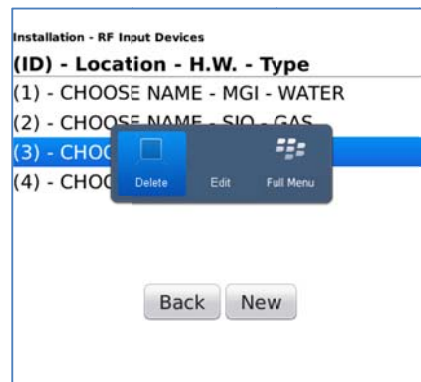


Figure 30: Device Listing with Popup Menu

9. Select one of the following menu items:
  - Delete
  - Edit and then click Delete in the Device Parameters screen.
10. Confirm the delete operation. The Installation screen is displayed and the previously selected row is removed.

## 5 Mounting

### 5.1 Installing the ES700MGLS Device (as Shock Sensor and/or Magnet Detector)

The ES700MGLS device is mounted using mounting tape found on the back of the smart magnet sensor and the corresponding permanent magnet.

A single screw may be added to the mounting part of the smart magnet sensor to activate the tear-off tamper protection for the device (and be compliant to the EN 50131 standard). A second optional screw may be added for the mechanical strength and symmetry of the installation See Figure 32 and step 5 below.

When installing the ES700MGLS device as an magnet detector, the configuration settings provides you with the option of using the device as an input terminal for an external legacy magnet device. The external magnet must be hardwired to the ES700MGLS device as if it was defined as an RF Input device (see Figure 37 and

Figure 38). This means placement of the ES700MGLS device must be near the external magnet device.

**➔ To install the ES700MGLS device (as Shock Sensor and/or Magnet Detector):**

1. Identify the location for mounting the ES700MGLS device according the criteria in section 3.3.
2. If the screw securing the top cover to the mounting is present, remove the screw with a screwdriver. Then gently insert the screwdriver between the side snap and the top cover and pry off the cover.



Figure 31: Screwdriver Insertion Point and Top Cover Separation

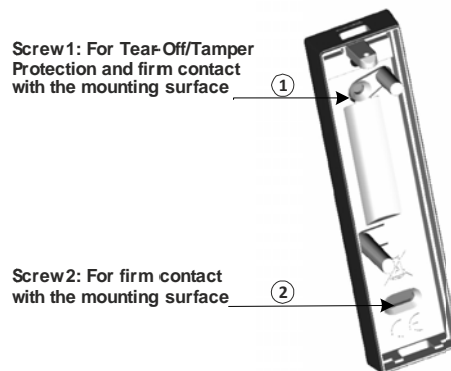


Figure 32: Tear-Off Tamper Screw Location in Mounting

3. If there is no battery in the device, put the battery in the device. The battery must be a 3V CR-123A Lithium battery. Check that the polarity indicators on the battery match the picture on the device circuit board.

If the battery is already in the device, remove it and trigger the tamper mechanism by pressing the tamper switch several times, and then replace the battery making sure the polarity is correct.

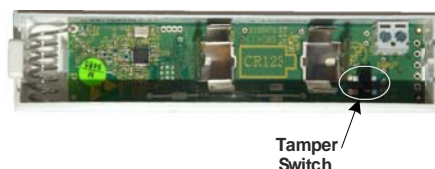


Figure 33: Location of the ES700MGLS Device Tamper Mechanism

After the battery is installed, the red LED glows for 3 seconds. This indicates that the device has been successfully powered up.



**WARNING!** A new battery can explode if it is incorrectly installed. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries responsibly.

4. Clean the surfaces of the mounting locations thoroughly. Make sure the locations are dry.
5. Mount the smart magnet sensor by peeling the cover off the mounting tape and press the sticky side against surface of the designated location (frame-side of the opening).

To ensure a strong bond and to enable the Tear-Off/Tamper feature, also screw the mounting in place, after using the mounting tape, with two 3 X 35 DIN 7982 C screws as depicted in Figure 32.

6. For standard compliant installations, a single screw must be added. This will add a tearing tamper protection to the unit.

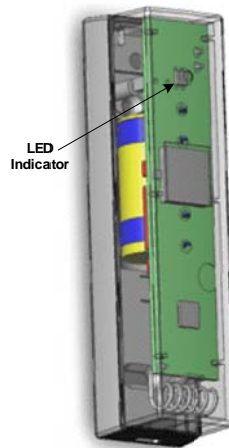


Figure 34: ES700MGLS Device Interior View 1

7. Replace the top cover of the device onto the bottom casing. For standard compliant installation, use a kb22X6 screw to supplement the clip.
8. Line up the permanent magnet next to the smart magnet sensor so that the indicator marks are aligned. Though trial and error, move the permanent magnet back and forth until you find the threshold point of the green LED. From this point, move the permanent magnet toward the smart sensor approximately 0.5 cm (0.2 inch). Then Mount the permanent magnet by peeling the cover off the mounting tape and pressing it into place.

The distance between the two parts of the device may vary from installation to installation, depending on the surfaces. For example, molding on a frame or a deviation between the planes of the surfaces may require the sensor to be closer to the permanent magnet than it would be in another installation. As a general rule, the two parts of the device will usually be around 3 cm from each other.

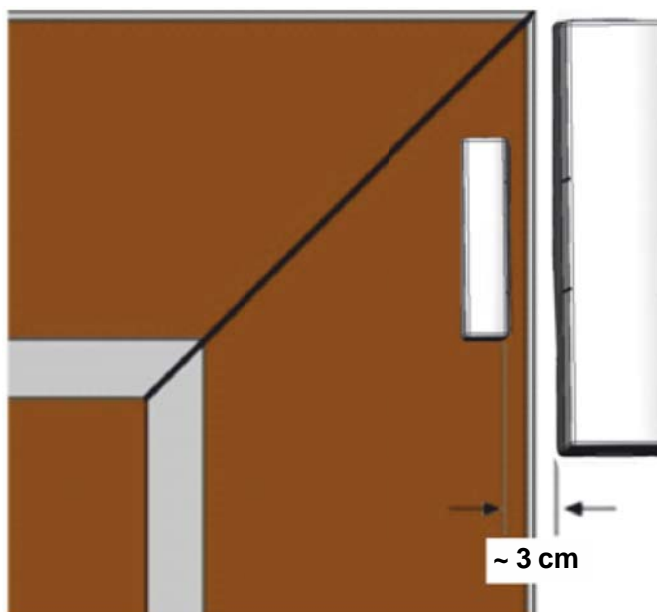


Figure 35: Correct ES700MGLS-GN Alignment and Gap for Intrusion Detection (Alignment Marks are Exaggerated for Better Understanding)



**Note:** If the device is being used exclusively as a Shock detector, the permanent magnet is not required.

➔ **To install the ES700MGLS device (as an Input Terminal Only):**

1. Identify the location for mounting the ES700MGLS device according to the criteria in section 3.3.
2. If the screw securing the top cover to the mounting is present, remove the screw with a screwdriver. Then gently insert the screwdriver between the side snap and the top cover and pry off the cover.



Figure 36: Screwdriver Insertion Point and Top Cover Separation

3. Thread the leads from the external device through the back of the mounting (see Figure 37).

Depending on the type of wire from the external device, carefully break off the tab cover of the tab that best suits the wire placement. To break off the tabs, use needle nose pliers



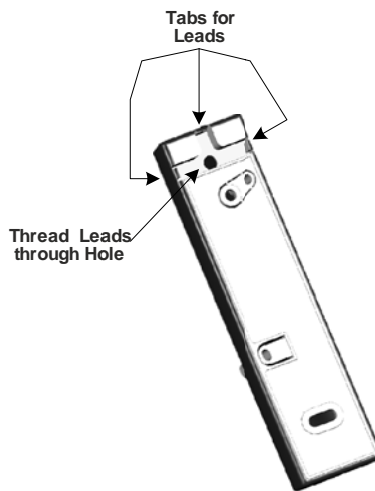


Figure 37: External Leads Placement in the ES700MGLS device

4. Connect the leads to the terminals in the ES700MGLS device with a screwdriver. Polarity is irrelevant.

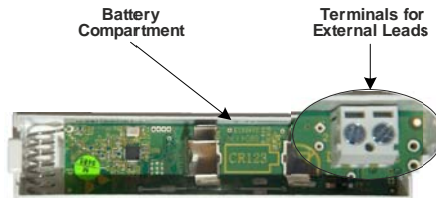


Figure 38: External Leads Placement in the ES700MGLS Device

5. If there is no battery in the device, put the battery in the device. The battery must be a 3V CR-123A Lithium battery. Check that the polarity indicators on the battery match the picture on the device circuit board.

If the battery is already in the device, remove it and trigger the tamper mechanism by pressing the tamper switch several times, and then replace the battery making sure the polarity is correct.

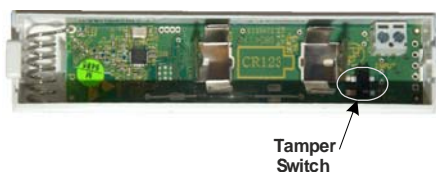


Figure 39: Location of the ES700MGLS Device Tamper Mechanism

After the battery is installed, the red LED glows for 3 seconds. This indicates that the device has been successfully powered up.



**WARNING!** A new battery can explode if it is incorrectly installed. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries responsibly.

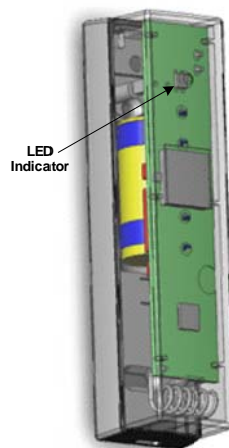


Figure 40: ES700MGLS Device Interior View 1

6. Clean the surface of the designated mounting locations thoroughly. Make sure the locations are dry.
7. Mount the smart magnet sensor by peeling the cover off the mounting tape and press the sticky side against surface of the designated location (frame-side of the opening).

To ensure a strong bond and to enable the Tear-Off/Tamper feature, also screw the mounting in place, after using the mounting tape, with two 3 X 35 DIN 7982 C screws as depicted in Figure 32.

8. For standard compliant installations, a single screw must be added. This will add a tearing tamper protection to the unit.
9. Replace the top cover of the device onto the bottom casing. For standard compliant installation, use a kb22X6 screw to supplement the clip.

### 5.1.1 “Walk Test” Mode

After the battery has been installed in the device, a Walk Test mode (like in PIRs) automatically runs for 10 minutes. In this mode, the professional installer may test the sensor for trigger actions. The LEDs will indicate a change to the environment as specified by the designated function of the device. In this mode, the LEDs will always indicate a trigger response, regardless of the LED’s enable/disable configuration.

### 5.1.2 Verify High-Quality RF Communication (Optional)

If ES700KPD is available: At the mounting location, using the ES700KPD key pad program 92 function, verify that there is sufficient reception from the Control Panel to the ES700MGLS device. (For more information, see the *ES700KPD User Manual*.)

Alternatively, use the RF Test Mode in the ES700DVK keypad (For more information, see the *ES700DVK User Guide*.)

## 6 Maintenance

### 6.1 Replacing the Battery

The ES700MGLS has a nominal battery life of 3 years. The battery status is displayed via the device LED and reported automatically to the monitoring center. When the battery status indicates that it is low, the battery should be replaced within a few days.

#### ➔ To replace a battery:

1. If the screw securing the top cover to the mounting is present, remove the screw with a flathead screwdriver.
2. Gently insert the screwdriver between the side snap and the top cover and pry off the cover.



Figure 41: Screwdriver Insertion Point and Top Cover Separation

3. Remove the old battery and trigger the tamper mechanism by pressing the tamper switch several times, and then replace the battery making sure the polarity is correct.

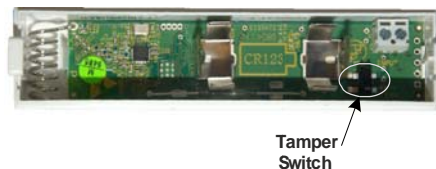


Figure 42: Location of the ES700MGLS Device Tamper Mechanism

The battery must be a 3V CR-123A Lithium battery.

After the battery is installed, the red LED glows for 3 seconds. This indicates that the device has been successfully powered up.



**WARNING!** A new battery can explode if it is incorrectly installed. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries responsibly.

4. Replace the top cover of the device onto the bottom casing.

## Appendix A ES700MGLS Specifications

<b>Electrical</b>	
Power Supply:	One 3V CR-123A Lithium battery
Battery Life:	Over 3 years (under nominal conditions)
Battery Power Test:	Upon power-up and periodically
<b>Wireless</b>	
Bi-directional:	End-to-End Bi-Directional ESI protocol Advanced radio supervision algorithm
Frequency:	BFSK, 868.3 MHz in Europe and FM 916.5MHz in US (factory configured)
RF Coverage:	700 meters (2296 feet) (Open Air Nominal)
Encoding:	32-bit ID, over 4 billion combinations
<b>Functional</b>	
Detection Threshold:	Closing distance: 35 mm (~1.38 inch) Opening distance: 45 mm (~1.78 inch)
Magnet Polarity:	Irrelevant
Visual Indications:	1 Green LED for closure 1 Red LED for opening
Tamper Mechanism:	Double Triggered Tamper – cover open & Wall tearing
Number of ES700MGLS devices supported is dependent on designated function:	In EverGuard and EverGuard Express-2 systems: Intrusion Detectors, Shock Sensors: 64 devices Input Terminals: 16 devices  In the EverGuard Express system: Intrusion Detectors + Shock Sensors: 32 devices Input Terminals: 8 devices
<b>Environmental</b>	
Operating Temperatures:	-10° ~50° Celsius (14° - 122° Fahrenheit)
Storage Temperatures:	-20° ~60° Celsius (-4° - 140° Fahrenheit)
Humidity	95% non-condensing

Physical	
Dimensions:	Smart magnet sensor– 98 x 25 x 25 mm (L x W x H) Permanent magnet – 46 x 14.5 x 10 mm (L x W x H)
Weight:	Smart magnet sensor – 45 grams (incl. battery) Permanent magnet – 25 grams
Color:	Cover: RAL 9003 (Glossy white) Base: RAL 7035 (Silver) Magnet: RAL 9003 (Glossy white)
Compliance with Standards	
CE:	ETSI EN 301 489-4 ETSI EN 301 489-1 EN 50130-4 EU Directive 1999/5/EC for R&TTE
Radio:	ETSI EN 300 220-3 ETSI EN 300 220-1 CEPT/ERC - Recommendation 70-3 EN 50131-5-3
Safety:	EN/IEC60950-1
Security and Alarm Systems:	EN 50131-1:2006 + A1:2009 Class-II Grade-2 EN 50131-2-6:2008 Class-II Grade-2 EN50131-6:2008 Type-C
Environmental Regulation:	Compliance to RoHS: 2002/95/EC
Reliability (Mechanical and Environmental conditions):	EN 50130-5:1998 IEC 60068
Manufacturing and Materials Standards:	ISO 9001:2008 ISO 14000
Markings:	