



Security Escort Point Tracking Transmitter

SEC-3402 Series



BOSCH

en Installation Manual

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1 Copyright, Safety and Warranty

1.1 Copyright information

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All software is provided "AS IS." The sole obligation of BOSCH SECURITY SYSTEMS shall be to make available all published modifications that correct program problems are published within one (1) year from the date of shipment.

The software is intended for use only with the hardware specified in this manual and in the absence of other software. Concurrent use with other software or with hardware not specified may cause the program to function improperly or not at all. BOSCH SECURITY SYSTEMS may not provide support for systems operating under such conditions.

All efforts have been made to ensure the accuracy of the contents of this manual. The above notwithstanding, BOSCH SECURITY SYSTEMS assume no responsibility for any errors in this manual or their consequences.

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Other product and company names mentioned herein may be the trademarks of their respective owners.

1.2 Important safety notes

1. **Read, Follow, and Retain Instructions** – All safety and operating instructions must be read and followed properly before putting the unit into operation. Retain instructions for future reference.
2. **Consider all Warnings** – Adhere to all warnings on the unit and in the operating instructions.
3. **Accessories** – Use only accessories recommended by the manufacturer or those sold with the product. Accessories not recommended by the manufacturer shall not be used, as they may cause hazards.
4. **Installation Precautions** – Do not place this unit on an unstable stand, tripod, bracket, or mount. The unit may fall, causing serious injury to persons and damage to the unit. Mount the unit according to the manufacturer's instructions.
5. **Service** – Do not attempt to service this unit by yourself. Opening or removing covers may expose you to dangerous voltages or other hazards. Refer all servicing to qualified service personnel.
6. **Damage Requiring Service** – Disconnect the unit from the main AC or DC power source and refer servicing to qualified service personnel under the following conditions:
 - When the power supply cord or plug is damaged.
 - If liquid has been spilled or an object has fallen into the unit.
 - If the unit has been exposed to water and/or inclement weather (rain, snow, etc.).
 - If the unit does not operate normally, when following the operating instructions. Adjust only those controls specified in the operating instructions. Improper adjustment of other controls may result in damage, and require extensive work by a qualified technician to restore the unit to normal operation.
 - If the unit has been dropped or the cabinet damaged.
 - If the unit exhibits a distinct change in performance, this indicates that service is needed.
7. **Replacement Parts** – When replacement parts are required, the service technician shall use replacement parts that are specified by the manufacturer. Unauthorized substitutions may result in fire, electrical shock or other hazards.
8. **Safety Check** – Upon completion of service or repair work on the unit, ask the service technician to perform safety checks to ensure that the unit operates properly.
9. **Power Sources** – Operate the unit only from the type of power source indicated on the label. If unsure of the type of power supply to use, contact your dealer.
 - For units intended to operate from battery power, refer to the operating instructions.
 - For units intended to operate with External Power Supplies, use only the recommended approved power supplies.
10. **Lightning** – For added protection during a lightning storm, or when this unit is left unused for long periods of time, disconnect the unit from power. This will prevent damage to the unit due to lightning and excessive power line surges.
11. **Restricted Access Locations** are required for the installation.

1.3 Safety precautions

	<p>Disposal</p> <p>Your Bosch product has been developed and manufactured using high-quality materials and components that can be reused.</p> <p>This symbol means that electronic and electrical devices that have reached the end of their working life must be disposed of separately from household waste.</p> <p>In the EU, separate collecting systems are already in place for used electrical and electronic products. Please dispose of these devices at your local communal waste collection point or at a recycling center.</p>
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1.4 FCC/IC information

This device complies with Part 15 FCC Rules and Industry Canada's license-exempt RSSs. 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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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:

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



Notice!

The FCC label can be found under the enclosure cover once you open up the SEC-3402 series transmitter enclosure.

2 System Overview

The SEC-3402 series point transmitter is a magnetic and dry contact wireless transmitter used for monitoring assets.

The unit is equipped with an internal reed contact for use with an external magnet assembly (included), a cover tamper switch, a displacement detector, a buzzer and RF supervision. The SEC-3402 series can accept a supervised dry contact input from an external device.

The transmitter is available in the following models:

Transmitter Model	Description
SEC-3402-304	Point tracking transmitter, 303/304MHz
SEC-3402-433	Point tracking transmitter, 433MHz

2.1 Supervision

Supervision is provided by transmitting a low power level signal to the receiver every 60 min if there is no other activity. SEC-3402 series send battery status information to the system.

2.2 Auto-tracking

Once an alarm is initiated, such as the transmitter moved away from the magnet, the auto tracking feature begins. The transmitter sends a signal back to the central console every 7 seconds, updating its location for 15 minutes. To reset the transmitter after an alarm has been initiated, all device conditions (such as tamper, loop, or magnet) must be reset to normal.

3 Installation and Setup

This section provides information for system planners and configurators.

3.1 Mounting the point transmitter



Notice!

Avoid mounting the point transmitter on metal surfaces as it can reduce the range of the unit. Placing the point transmitter on ferrous metal (iron or steel) surfaces can affect operation of the magnetic contact.

3.1.1

Recommended mounting

1. Position the mounting plate over the desired location and attach it with the supplied screws.

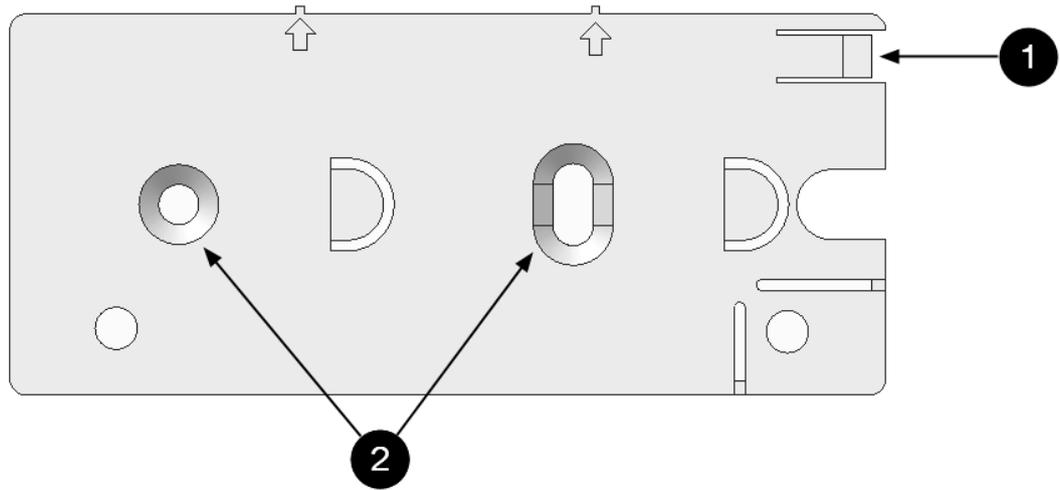


Figure 3.1: Attach mounting plate

1	Release tab	2	Mounting holes
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2. Open the cover using a screwdriver.

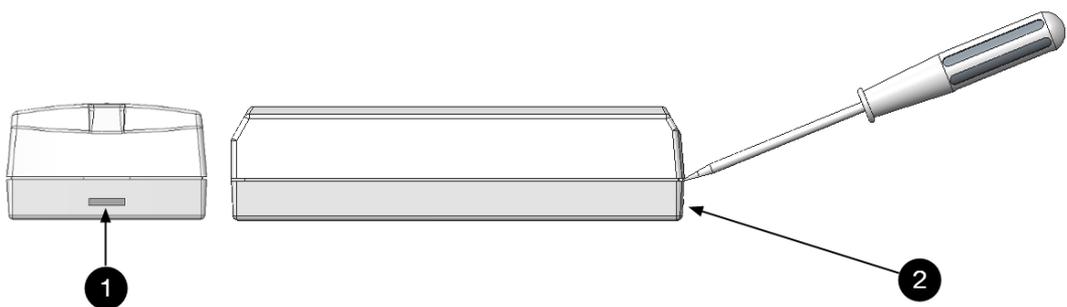


Figure 3.2: Open cover

1	Insert screwdriver and press here	2	Push in
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3. Be sure to note the location of the magnet when mounting the base.
4. Slide the point transmitter over the base to lock it into place.



Figure 3.3: Slide point transmitter over base

- 5. The point transmitter can be released from the base by pressing the release tab with a small screwdriver or a paper clip.
- 6. For higher security installations, mount the transmitter using the tamper screw provided.

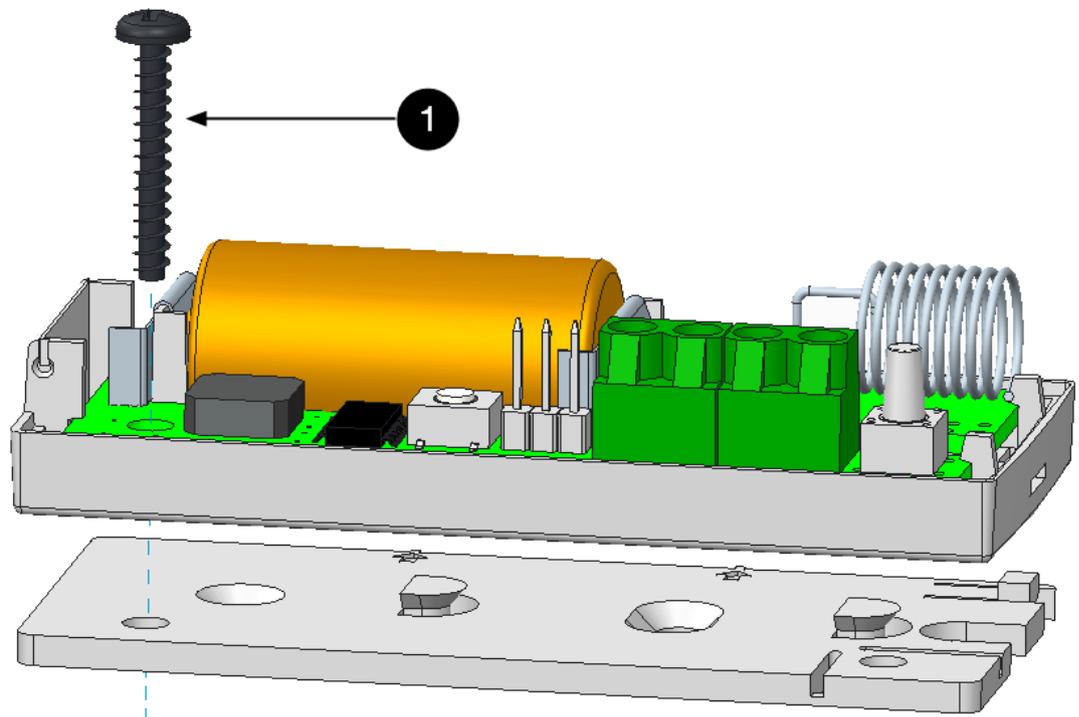


Figure 3.4: Mount transmitter using tamper screw

1	Tamper screw
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3.1.2 Mounting without the mounting plate

1. If the battery was installed in the point transmitter, remove it at this time.
2. Using a small screwdriver, gently lift the printed circuit board away from the case mounting clips. You do not need to remove the cover to remove the board.

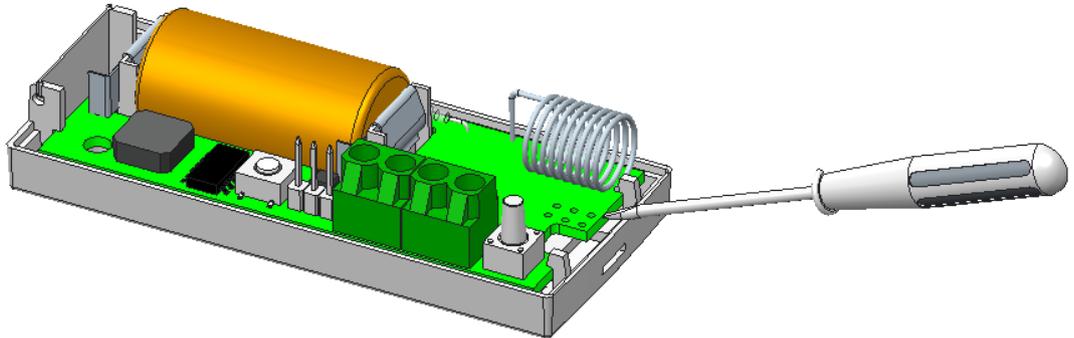


Figure 3.5: Lift printed circuit board

3. Rock the board gently to loosen the battery clips from the case and slide the board away from the mounting clips near the area where the cover connects to the base.
4. Mount the point transmitter in the desired location, taking note the magnet needs to be on the same side of the case as the reed switch.

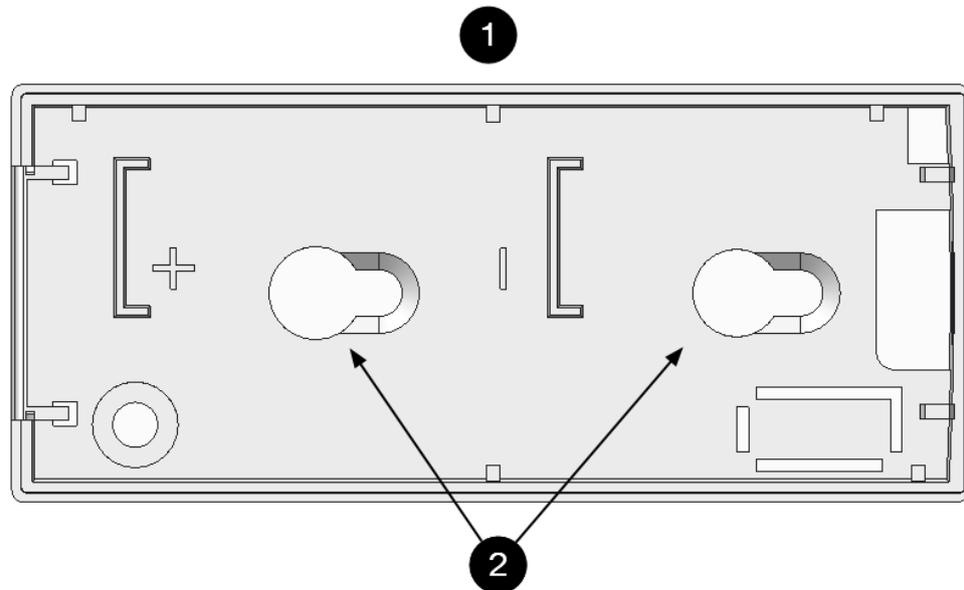


Figure 3.6: Mount point transmitter in desired position

1	Magnet side	2	Mounting holes
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3.1.3 Mounting the magnet

Mount the magnet as shown in the following figure. The magnet must mount within 19 mm (0.75 in.) of the base of the unit.

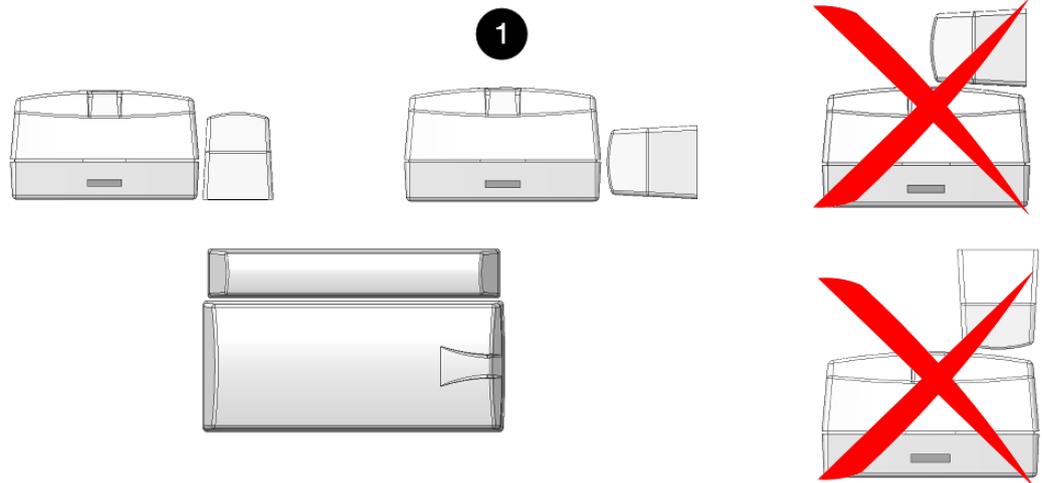


Figure 3.7: Mount the magnet

1	End view from the opening end
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3.2 Powering up the point transmitter

The SEC-3402 series can be powered up either by 3V battery or 12 VDC input, depending on the setting of the jumper.

3.2.1 3V battery

1. Check that the jumper is set over the jumper pins marked by the  symbol. This is the default factory setting on the point transmitter.
2. Install the recommended type of battery: Duracell® DL123A, Energizer® EL123AP or Panasonic® CR123A. Be sure to observe the polarity.

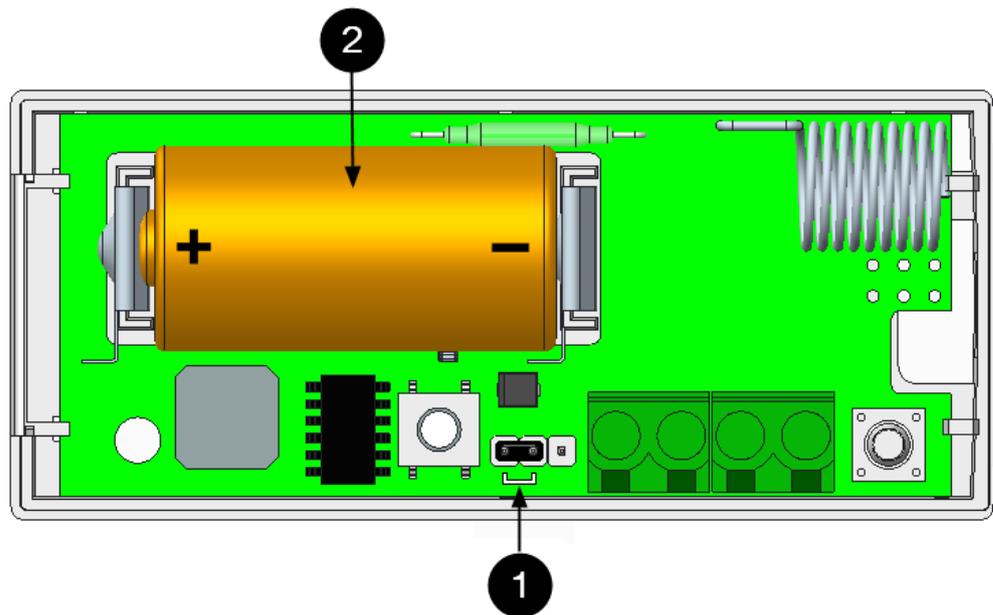


Figure 3.8: Install battery

1	Jumper setting	2	Battery
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3.2.2

12 VDC input

1. Set the jumper over the jumper pins as illustrated in the diagram below.
2. Connect the 12 VDC source to the connector of the transmitter.

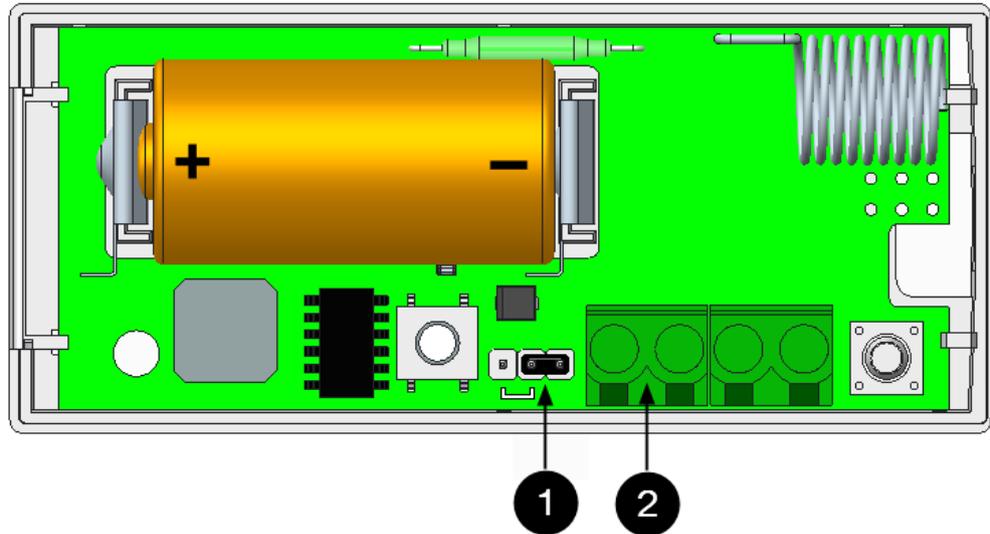


Figure 3.9: 12 VDC input

1	Jumper setting	2	12 VDC in
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3.3

Setting up magnetic or external contacts

The SEC-3402 series has the capacity to monitor magnetic and/or dry external contacts. External Normally Closed (NC) or external Normally Open (NO) contacts can be monitored. Recommended cable: 18 AWG < 20 ft (6 m)
EOL resistor: 1 Mega ohms



Notice!

If not using external contacts, you must install the EOL resistor.

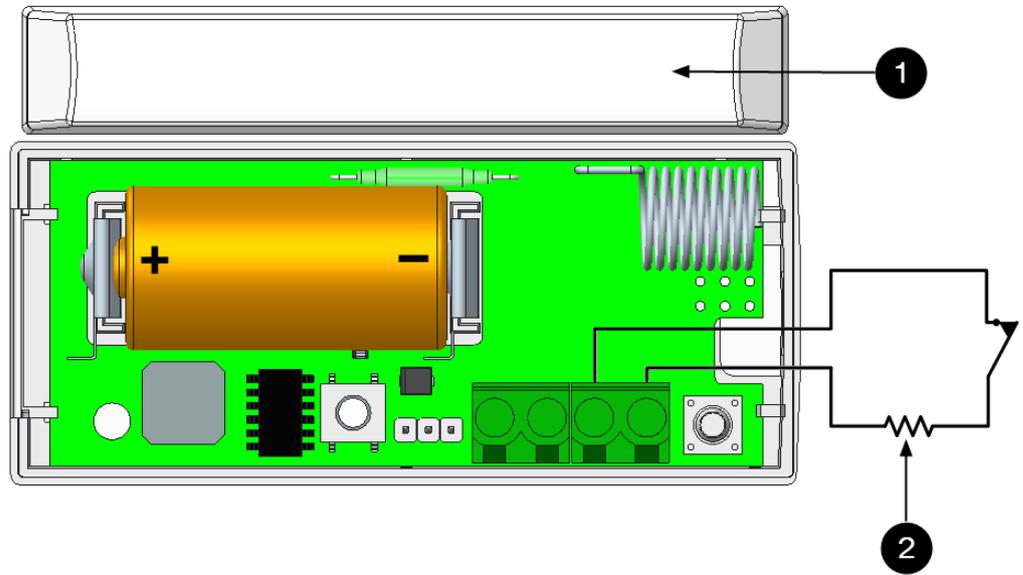


Figure 3.10: Magnet (optional) typical NC wiring

1	Magnet bar	2	EOL resistor
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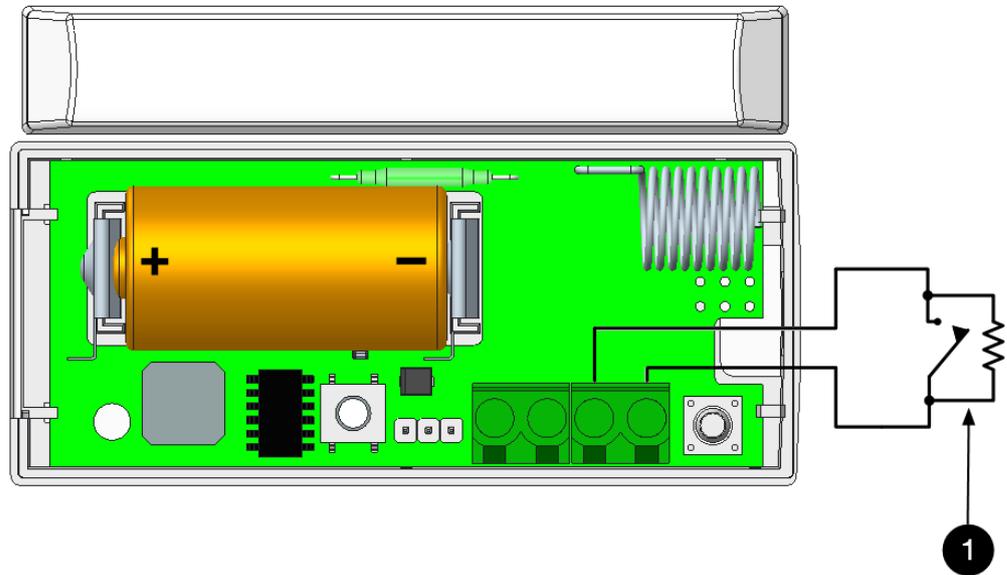


Figure 3.11: Magnet (optional) typical NO wiring

1	EOL resistor
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4 Enabling and Disabling Features

The features of SEC-3402 series can be set, enabled or disabled accordingly using its dip switch. There are 6 switches on the dip switch. Usage of the dip switch is explained as of below:

Switch Number	Usage
1	Frequency Selection: OFF - 304 MHz (default setting) ON - 303.825 MHz (Not applicable to SEC-3402-433)
2	Auto-track (every 7 seconds)
3	Displacement Detection
4	Reed Switch
5	Buzzer
6	Not Used



Notice!

Remove the battery before setting the dip switches. **Changes to the dip switches should be performed by administrators only.**

4.1 Default dip switch setting

The default setting of the SEC-3402 series dip switch is as follows:



Default Setting	Switch Number on Dip Switch					
	1	2	3	4	5	6 (not used)
Switch Position	OFF	OFF	OFF	OFF	OFF	OFF

4.2 Setting the radio frequency (RF)

Set switch number 1 on the dip switch to configure the RF of the device. This setting is not applicable for the SEC-3402-433 model as its RF is fixed as 433 MHz. The following settings are configurable for the SEC-3402-304 model.

Radio Frequency	Switch Number on Dip Switch
	1
304 MHz (default setting)	OFF
303.825 MHz	ON

Tab. 4.1: Radio frequency (RF) settings on dip switch

4.3 Enable/disable the auto-track

Enable or disable the auto-track feature by setting switch number 2 on the dip switch. Set switch number 2 to the OFF position to disable the auto-track feature. Set switch number 2 to the ON position to enable the auto-track feature. Once enabled, an alarm will trigger the transmitter to send a signal back to the Central Console every 7 seconds for a period of 15 minutes.

Auto-track Feature (7 seconds)	Switch Number on Dip Switch
	2
Disable (default setting)	OFF
Enable	ON

Tab. 4.2: Auto-track setting on dip switch

4.4 Enable/disable the displacement detection

Enable or disable the displacement detection feature by setting switch number 3 on the dip switch. Set switch number 3 to the OFF position to disable the displacement detection feature. Set switch number 3 on the dip switch to the ON position to enable the displacement detection feature. Once enabled, any movements of the transmitter will send a signal back to the Central Console.

Displacement Detection Feature	Switch Number on Dip Switch
	3
Disable (default setting)	OFF
Enable	ON

Tab. 4.3: Displacement detection setting on dip switch

4.5 Enable/disable the reed switch

Enable or disable the reed switch feature by setting switch number 4 on the dip switch. Set switch number 4 to the OFF position to disable the reed switch feature. Set switch number 4 to the ON position to enable the reed switch feature. Once enabled, the transmitter would be able to detect the state of the attached electromagnetic circuitry.

Reed Switch Feature	Switch Number on Dip Switch
	4
Disable (default setting)	OFF
Enable	ON

Tab. 4.4: Reed switch setting on dip switch

4.6 Enable/disable the buzzer

Enable or disable the buzzer feature by setting switch number 5 on the dip switch. Set switch number 5 to the OFF position to disable the buzzer feature. Set switch number 5 to the ON position to enable the buzzer feature. Once enabled, the buzzer would sound when an alarm is triggered and with every auto-track transmission.

Buzzer Feature	Switch Number on Dip Switch
	5
Disable (default setting)	OFF
Enable	ON

Tab. 4.5: Buzzer setting on dip switch

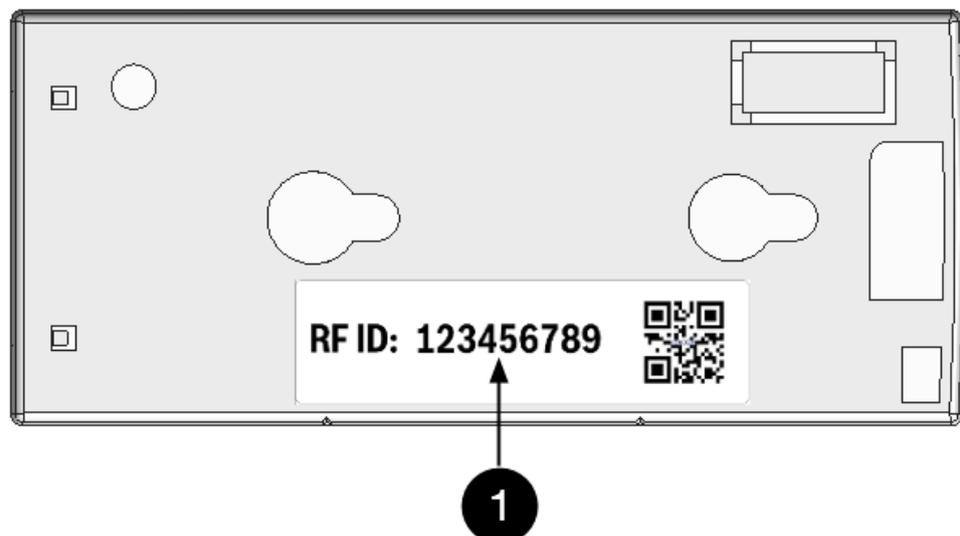
4.7 Factory reset

Factory reset should be performed by administrators only. Set all the dip switches to the OFF position. While pressing the Test button, the transmitter resets after inserting the battery. If reset is successful, there will be 3 slow consecutive beep tones every 1 second. If reset is unsuccessful, there will be 2 slow consecutive beep tones every 1 second. Refer to the following list of values that are being set for the respective features following the factory reset.

Default Setting	
Feature	Value
Supervision Tracking Interval	60 minutes

4.8 System programming

A two part ID sticker is located on the enclosure. You need the number on this sticker to program this device into the system. See the *Security Escort Technical Reference Manual* for programming information for wireless type devices.



1	ID number
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4.9 Configuring the transmitter



Notice!

Please note that this feature is only applicable to SEC-3402-433 transmitter model!

All factory reset features can be configured wirelessly on the transmitter via the coordinator/receiver using the Central Console software. Enroll transmitter to the Central Console software before configuration. Using the Central Console software, enable or disable the features accordingly and send the configuration to the transmitter. Please refer to the *Security Escort Technical Reference Manual* for further details.

4.10 Testing the transmitter

Test your transmitter by standing within sight of a receiver. Press the Test button for 3 seconds until the transmitter emits 3 short beep tones. A test transmission is sent to the Central Console, lighting the green LED on a receiver or the strobe on an outdoor siren-strobe. There might be a brief delay of 2 to 3 seconds before the flashing light appears. A successful test transmission will light up the green LED on a receiver; retest if otherwise.

5 Upgrading Transmitter Firmware

**Notice!**

Please note that this feature is only applicable to SEC-3402-433 transmitter model!

Transmitter firmware can be upgraded wirelessly via a dedicated coordinator using the Utility Tool of the Security Escort software. For more information on the usage of Utility Tool, please refer to the *Security Escort Technical Reference Manual*.

Bosch Sicherheitssysteme GmbH

Robert-Bosch-Ring 5

85630 Grasbrunn

Germany

www.boschsecurity.com

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Robert Bosch (SEA) Pte Ltd

11 Bishan Street 21

573943 Singapore

Singapore