

## SA500

**Self-powered outdoor piezoelectric siren  
for intrusion detection systems**



Addressee for this information:  User |  Installer

### 1 DESCRIPTION

SA500 is an outdoor piezoelectric siren.

Operation takes place in **positive voltage reference fall** mode: while the siren is idle, a voltage is constantly applied to the reference terminal; in alarm condition, the voltage interruption causes sound activation.

SA500 features a single piezo horn.

Additional features:

- orange LED flasher on side
- RGB LED with customisable colour for system status signalling.

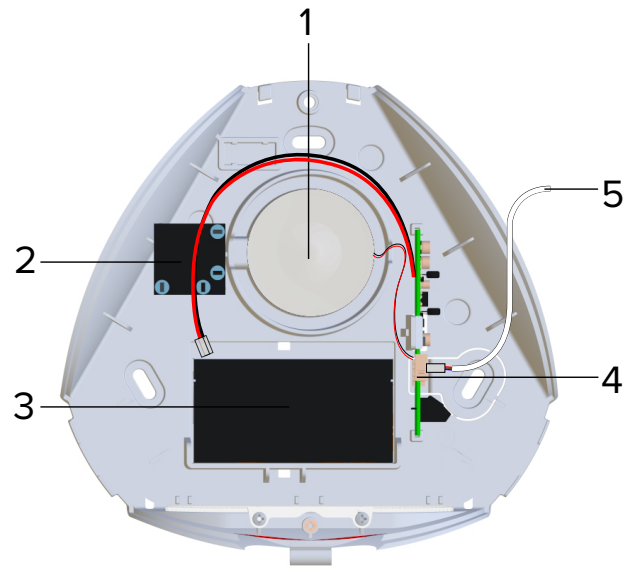
Additional visualisation functions can be enabled by cutting specific jumpers.

The siren is supplied in a plastic housing.

Microswitches are available for protection against cover opening and removal from the wall.

SA500 is certified IMQ - Security Systems.

### 2 STRUCTURE



- 1 Horn
- 2 Anti-foam module (not supplied)
- 3 Battery
- 4 PCB
- 5 Connection cable to the LED board

Model		SA500	
<b>Identification</b>			
Use		outdoor	
<b>General features</b>			
<b>Sound emission</b>	Sound type	dual tone	
	Number of horns	1	
	Fundamental frequency	2.860	kHz
	Peak sound pressure	107	dB
	Average sound pressure	103	dB
	Sound pressure at 1 m	99	dB
<b>Operating times</b>	Sound deactivation	5	min
	Activation delay	0.05	s
	Battery fault check interval	23	h
	Low/missing battery check interval	9	s
<b>Operating voltage</b>	Power supply	14,4	V
	Battery	B1.212G (12 V 1.2 Ah)	
	Minimum power supply	11.0	V
	Maximum operating voltage	15.0	V
	Minimum operating voltage for battery charge	12.7	V
	Discharged battery threshold	10.5	V
	Missing battery threshold	9.0	V
<b>Current consumption at 14.4 V</b>	Idle mode	13 (1)	mA
	Alarm mode	400.0 (1)	mA
<b>Certification</b>		IMQ-Alarm EN50131-4 grade 3, environmental class IV	
<b>Environmental class</b>		IV	
<b>Protection class</b>		IP44	
<b>Dimensions</b>		W 245 × H 245 × D 65	
<b>Weight</b>		1.30	
		kg	

(1) with fully charged battery

### Parts supplied

- Screws
- Dowels
- Technical manual

## 4 PRECAUTIONS BEFORE DEVICE MOUNTING



General warnings are at the end of this manual.

Check the mounting surface is perfectly flat.  
Make sure the microswitch pin does not fall into holes, gaps or cracks on wall surface.

## 5 DEVICE MOUNTING



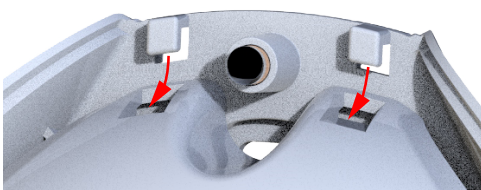
### • Opening the housing



- unscrew the fixing screw A
- rotate the external cover 180° downward

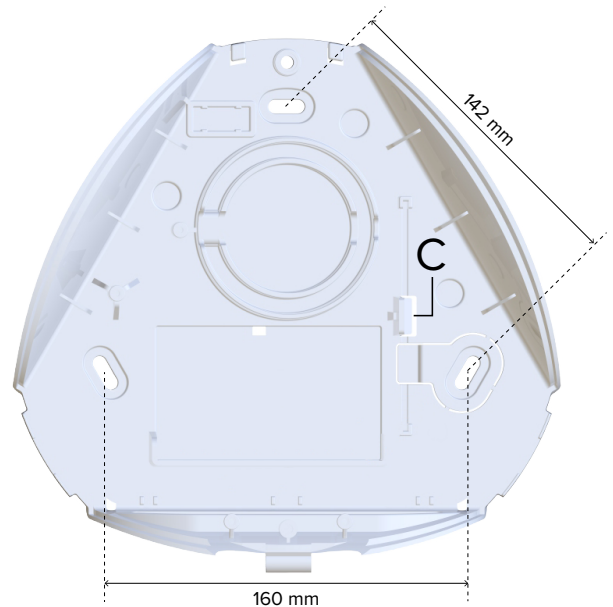


- unscrew internal cover fixing screw B



- extract the internal cover from the upper hooks

### • Base wall mount

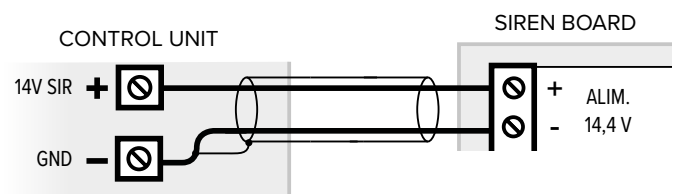


- feed unpowered cables through hole C
- fix the base to the surface using screws and dowels
- arrange the battery in the specific space
- wire the battery to the onboard connector

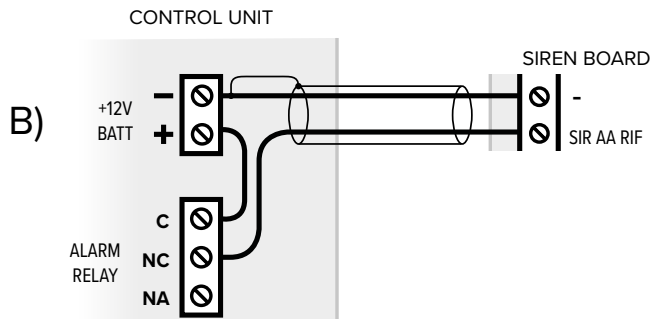
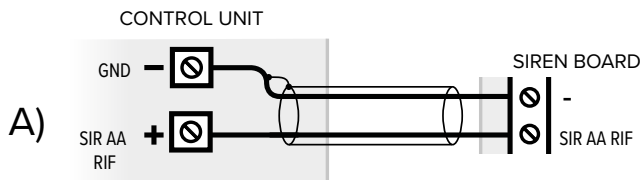
Do not reverse polarities.

### • Wirings

- wire **ALIM. 14,4V** terminals to the power source (on control unit, if equipped with 14V SIR terminals, or from external power supply unit) for battery charging

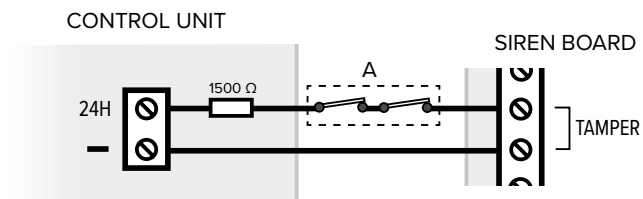


- wire **SIR AA RIF.** terminal to the reference voltage for siren control



- A** Reference for control units equipped with SIR AA RIF. terminals
- B** Reference for control units not equipped with SIR AA RIF. terminals

- wire **TAMPER** terminals (NC) to the control unit tamper circuit or to a control unit zone programmed as "tamper"



- A** Tamper switches of other devices

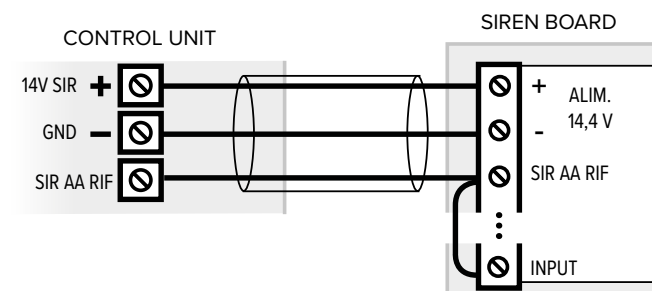
- wire **GUASTO** terminals (NC) to a control unit zone programmed as "fault" (optional)

### Status LED control

Use **INPUT** terminal to control the status LED.

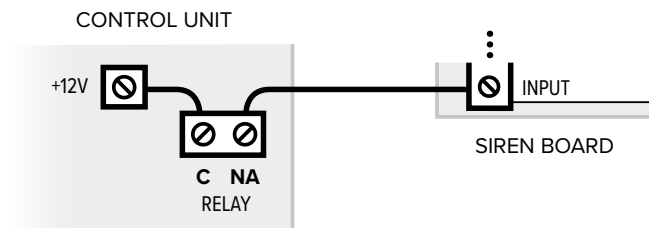
You can connect **INPUT** terminal:

- to terminal **SIR AA RIF.**: the status LED will blink continuously to indicate the siren is on (see next picture);



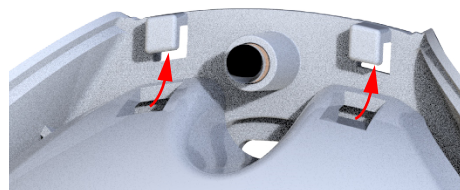
- to a control unit relay output properly programmed so

that the status LED flashes under precise conditions (e.g. when control unit is armed).



In case no indication is required, leave **INPUT** terminal free. It is possible to set the status LED colour by cutting dedicated jumpers: see paragraph 6.1 p. 4.

### • Closing the housing



- insert the internal cover in the upper hooks
- tighten the internal cover fixing screw
- lift the external cover
- tighten the external cover fixing screw

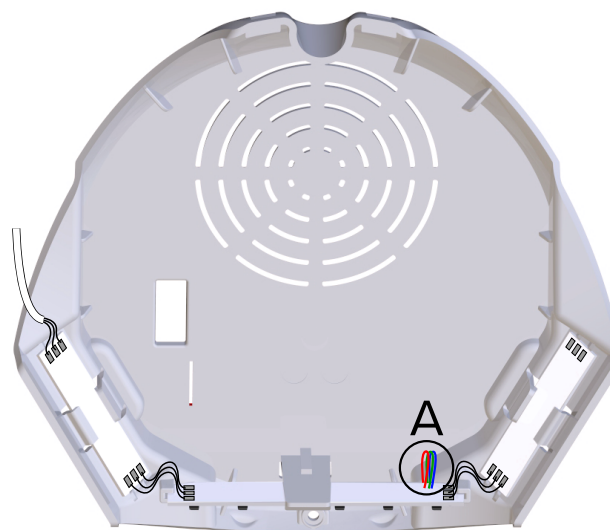
## 6 STARTING THE DEVICE



- trigger an alarm
- check the siren properly works

### 6.1 Setting system status LED colour

The siren features a RGB LED to signal system status.



- A** jumper position on RGB LED board

It is possible to set its colour by cutting dedicated jumpers on RGB board bottom.

The following table shows the jumper configurations (open or close) corresponding to the different colours:

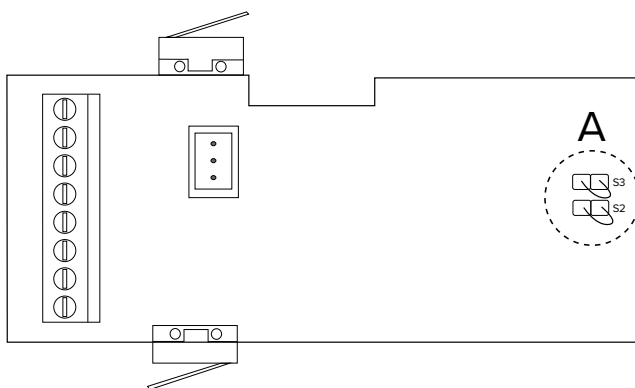
Colour	RED jumper	GREEN jumper	BLUE jumper
White			
Light blue			
Purple			
Blue			
Yellow			
Green			
Red			

In alarm mode, the siren keeps the sound signal on for 5 minutes maximum.

*Cutting all the jumpers will cause the loss of the system status signalling function.*

## 6.2 Additional functions

Additional visualisation functions can be enabled by cutting specific jumpers.



**A** position of the jumpers on the board

Jumper to cut	Function	Indication
<b>S2</b>	Sound activation memory indication	Continuous blinks: alarm memory. To delete memory, apply a 12 V voltage to INPUT terminal.
<b>S3</b>	Fault indication	1 flash every 3 s: power supply anomaly 2 flashes every 3 s: low battery 3 flashes every 3 s: battery anomaly

## 7 OPERATING MODE



The siren uses two indications at the same time to notify alarm status: audible (horn activation) and visual (beacon activation) indication.

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## EU DECLARATION OF CONFORMITY

The product complies with current European EMC and LVD directives.

The full text of the EU declaration of conformity is available at the following internet address: [www.elmospa.com](http://www.elmospa.com) – registration is quick and easy.



## GENERAL WARNINGS



This device has been designed, built and tested with the utmost care and attention, adopting test and inspection procedures in compliance with current legislation. Full compliance of the working specifications is only achieved in the event the device is used solely for its intended purpose, namely:

### **Self-powered outdoor piezoelectric siren for intrusion detection systems.**

The device is not intended for any use other than the above and hence its correct functioning in such cases cannot be assured. Consequently, any use of the manual in your possession for any purpose other than those for which it was compiled - namely for the purpose of explaining the product's technical features and operating procedures - is strictly prohibited.

Production processes are closely monitored in order to prevent faults and malfunctions. However, the components adopted are subject to an extremely modest percentage of faults, which is nonetheless the case with any electronic or mechanical product.

Given the intended use of this item (protection of property and people), we invite you to adapt the level of protection offered by the system to suit the actual situation of risk (allowing for the possibility of impaired system operation due to faults or other problems), while reminding you that there are specific standards for the design and production of systems intended for this kind of application.

**We hereby advise you (the system's operator) to see that the system receives regular routine maintenance, at least in accordance with the provisions of current legislation, and also check on as regular a basis as the risk involved requires that the system in question is operating properly, with particular reference to the control unit, sensors, sounders, dialler(s) and any other device connected. You must let the installer know how well the system seems to be operating, based on the results of periodic checks, without delay.**

Work involved in the design, installation and maintenance of systems incorporating this product should be performed only by personnel with suitable skills and knowledge required to work safely so as to prevent any accidents. It is vital that systems be installed in accordance with current legislation. The internal parts of certain equipment are connected to the mains and therefore there is a risk of electrocution when maintenance work is performed inside without first disconnecting the primary and emergency power supplies. Certain products include batteries, rechargeable or otherwise, as an emergency backup power supply.

If connected incorrectly, they may cause damage to the product or property, and may endanger the operator (explosion and fire).

## INSTALLER WARNINGS



Comply strictly with current standards governing the installation of electrical systems and security systems, and with the manufacturer's directions given in the manuals supplied with the products.

Provide the user with full information on using the system installed and

on its limitations, pointing out that there are different levels of security performance that will need to suit the user's requirements within the constraints of the specific applicable standards. See that the user looks through the warnings given herein.

Work involved in the design, installation and maintenance of systems incorporating this product should be performed only by personnel with suitable skills and knowledge required to work safely so as to prevent any accidents. It is vital that systems be installed in accordance with current legislation. The internal parts of certain equipment are connected to the mains and therefore there is a risk of electrocution when maintenance work is performed inside without first disconnecting the primary and emergency power supplies. Certain products include batteries, rechargeable or otherwise, as an emergency backup power supply. If connected incorrectly, they may cause damage to the product or property, and may endanger the operator (explosion and fire).

## USER WARNINGS



Check the system's operation thoroughly at regular intervals, making sure the equipment can be armed and disarmed properly.

Make sure the system receives proper routine maintenance, employing the services of specialist personnel who meet the requirements prescribed by current regulations.

Ask your installer to check that the system suits changing operating conditions (e.g. changes in the extent of the areas to be protected, change in access methods, etc...)

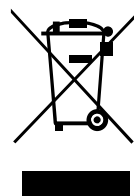
## MAIN SAFETY RULES

The use of the device is forbidden for children and unassisted disabled individuals.

Do not touch the device when bare footed, or with wet body parts. Do not directly spray or throw water on the device.

Do not pull, remove or twist the electric cables protruding from the device even if the same is disconnected from the power source.

## DISPOSAL WARNINGS



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In accordance with Directive 2012/19/EU on waste electrical and electronic equipment (WEEE), please be advised that the EEE was placed on the market after 13 August 2005 and must be disposed of separately from normal household waste.