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SI500 Indoor Siren NF & A2P EN Grade 2

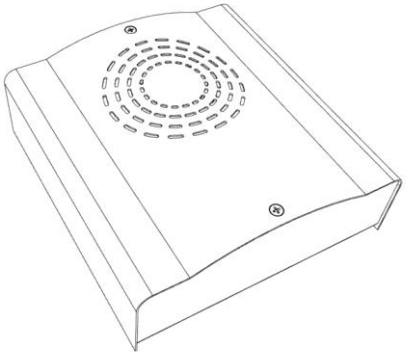
FEATURES

- High Efficiency Operation
- Silent Start-up
- Selectable sound cut off timer
- Front Tamper
- Max sound output **113** dBA at 1m
- Battery protected via resettable fuse
- Microprocessor controller
- Enclosed electronics module

Compliant with NF EN50131-4:2009, RTC50131-4:2011.

Note: For security reasons the tamper output of the siren is triggered when the siren detects:
- Removal of + ALIM (+ charging supply);
- Removal 0V supply;

Attention: Do not connect + ALIM (14.3V) to the positive output of a power supply which will be absent during (mains) power failure. ALIM+ must be connected to a permanent power supply.



OPERATION

The SI500 sounder is used for notification of an alarm condition as generated within an intruder, hold-up or other alarm system. In response to commands from the alarm system control panel, the SI500 will emit a high intensity sound.

The SI500 will detect any attempt to gain unauthorised access to the sounder by removal of the cover. This will generate a tamper signal* which is normally fed back to the alarm control panel.

The SI500 is classified as a self-powered sounder and has an on-board battery which is recharged via the external power source. This battery is used to operate the sounder if the external power is removed.

The SI500 is designed to sound when the BL+ (Blocage) input is removed or connected to 0V.

** The SI500 is a Security Grade 2 product – loss of ALIM/Hold-off (charging supply) will cause the sounder to self-activate, but a tamper signal is not generated. A tamper signal is only generated in the event that the cover is unscrewed/removed.*

FUNCTIONAL INFORMATION

Tamper Circuit

The SI500 sounder is provided with a tamper output to detect opening of the cover.
(See figure 2 for details of tamper connections.)

TIMER OPTIONS SELECTION

Table 1: Timer Duration Selection Links

			KEY Link FITTED Link NOT FITTED	
Sound Cut-Off Timer	5 sec.*	90 sec.	3 min.	15 min.**
T2	☐	☐	■	■
T1	☐	■	☐	■

* This cut-off time option intended for installation purposes only.
** Factory default setting.

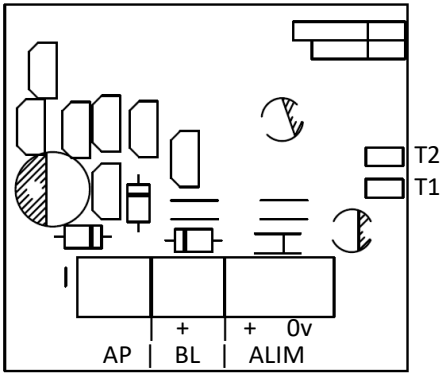
Response to a fault in the primary power supply (ALIM +/-)

If the primary power supply develops a fault or is deliberately disconnected, the siren is activated for a time depending on the setting of the ringing time

Sound Cut-off Timer

The SI500 sounder will automatically stop sounding after the time period selected by the Sound Cut-off Timer link, Table 1, irrespective of the status of the sound trigger (BL+) input. The 5s option is provided to reduce nuisance noise during testing

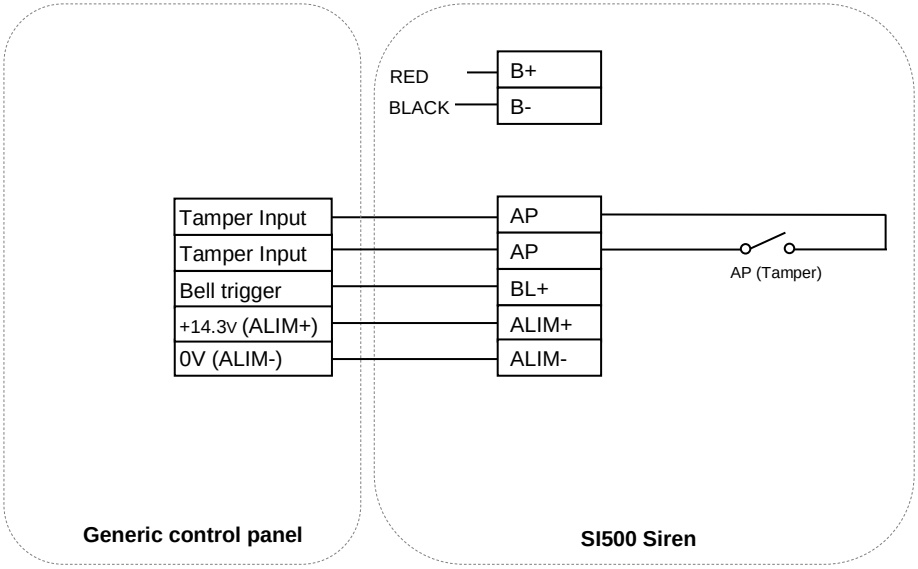
Fig. 1: SI500 Timer Setting Link Locations and General Connection Information



CONNECTIONS

B+	Positive connection to battery.
B-	Negative battery connection. Connect black battery lead after (ALIM) supply is applied.
HP	Speaker connections.
ALIM+	Permanent positive hold-off supply
ALIM-	Permanent negative hold-off supply.
AP	Tamper output - return connections to control panel. (See Figure 2)
BL+	Negative siren trigger, must be held to ALIM+ in standby mode.

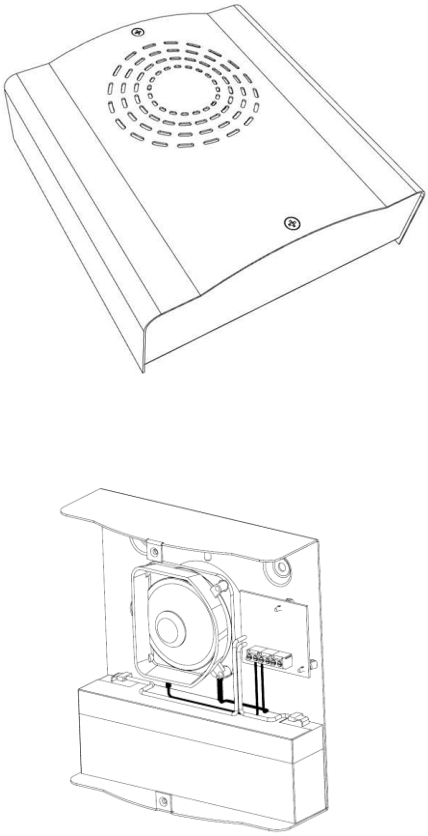
Fig. 2: SI500 Connections



INSTALLATION AND CONFIGURATION

1) Select a suitable mounting position for the SI500 sounder.
2) Drill holes as required for fixing the backplate to the wall and for cable entry to the rear of the unit.
3) Route cable from control panel through cable entry aperture.
4) Fit backplate to wall using 4 x M5 fixing screws suitable for material of mounting surface.

Fig. 3: Mounting Diagram



COMMISSIONING

1) Fit Timer Option Links - Sounder cut-off timer : T1 & T2 (see table 1).
2) Connect AP (Tamper outputs) as required (see Fig 2)
3) Connect ALIM+ & ALIM-.
4) Apply power to the sounder via ALIM + and ALIM - from control panel.
5) Connect the red and black battery leads to correct terminals of battery.
   *(NOTE 1: **The battery must be install**ed to permit activation of the siren.*
   There may be a delay of up to 10s before a valid battery is accepted.
   NOTE 2: The SI500 is specified to operate with a Powersonic PS-1221 battery, and it is recommended to use this battery for optimal performance.)
6) Fully test sounder functionality.
7) Close the sounder cover and check that the AP (tamper) outputs, if used, are closed.
8) Commissioning is complete.

MAINTENANCE

The SI500 sounder should be tested for correct operation on a periodic basis. A minimum of one check every 12 months is recommended. The following features should be verified on each maintenance visit:

1) Correct operation of sounder from control panel signal
2) Correct operation of cover and rear tampers.
3) Remove the ALIM+ supply from the control panel and check that the internal battery voltage as measured between B+ and B- is greater than 12V dc. If the battery voltage is less than this value replace the battery and re-connect observing CORRECT polarity.

BATTERY REMOVAL

The battery may be removed for disposal at end of product life or if it is detected faulty by the sounder self-test. To remove, disconnect red and black leads from the battery terminals, unclip rubber retaining band, and withdraw the battery from its holder. To fit a new battery, insert into holder, and reconnect positive (RED) and negative (BLACK) leads to ***correct*** positive and negative battery terminals.
Refit rubber retaining band.
IMPORTANT: Ensure correct polarity of connections. If either battery lead has become detached from the terminal block, ensure that exposed battery leads DO NOT accidentally cause a short circuit, then secure positive (RED) lead to BT+ and negative (BLACK) lead to BT-.

Dispose of used batteries in accordance with all national and local regulations

FAULT FINDING

Table 2: Summary of symptoms and possible faults

Symptom	Fault	Action
Sounder cannot be silenced	BL+ holdoff input is not > 7V	Verify that the control panel is biasing BL+ to >7V in standby mode.
	Holdoff supply (ALIM) is disconnected or very low	Check integrity of holdoff (ALIM) supply
Sounder stops after 5s	Incorrect timer link setting	Set correct timer jumper links.
Tamper condition indicated at control panel or cannot SET control panel (due to sounder tamper)	Tamper outputs (AP) not connected correctly to panel.	Refer to connection diagram Figure 2
	Tamper switch not closed	Check cover
No response to BL+ input	Battery not connected	Check battery connections to terminal block
	Battery faulty or voltage low	Replace battery
	Battery charger faulty	Return unit to manufacturer
Audible alarm stops before timeout.	Battery level very low	Recharge battery

DISPOSAL OF PRODUCT AT END OF LIFE

This product falls within the scope of EU Directives 2012/19/EU Waste Electrical and Electronic Equipment (WEEE) and 2013/56/EU (Battery). At the end of life, the product must be separated from the domestic waste stream and disposed via an appropriate approved WEEE disposal route in accordance with all national and local regulations.

Before disposal of the product, the battery must be removed, and disposed of separately via an appropriate approved battery disposal route in accordance with all national and local regulations. Package used batteries safely for onward transport to your supplier, collection point or disposal facility.

Caution: Risk of fire or explosion
if exposed battery wires are allowed to touch.

See Specification for battery type information. The battery is marked with the crossed out wheelie bin symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg).

The packaging supplied with this product may be recycled.
Please dispose of the packaging appropriately.

For more information see: www.recyclethis.info

SPECIFICATION

Sound Output	> **113** dBA @ 1m
Frequency range	~ 2430 - 3250 Hz
Power Supply	9.0 – 15.0Vdc, 14.3Vdc optimal charge
Current Consumption	10mA at 14.3Vdc (quiescent/battery charged)
Battery charging	~100mA when charging fully discharged batteries
Sounding	1.55A max from battery
Cut-off Timer	Selectable 5 seconds, 90 seconds, 3 minutes, 15 minutes. *(5 seconds only for installation – not a certified duration)*
Batterie	12V 2.1Ah SLA - Battery recharge in less than 24 hours (Following 10 x 3 minute soundings) *NOTE: The SI500 siren is specified for operation with a Powersonic PS-1221 battery and it is recommended to use this battery.*
Battery Low Voltage Detection	10.9V nominally
Battery Deep DIscharge Protection	9.5V nominal (resulting in de-activation of sounder)
Battery autonomy duration	36h
Tamper detection	Cover switch
Tamper Output	Max 2A / 30Vdc rated
Sound Trigger Input	BL+ < 2.9Vdc.
Dimension / Weight	193mm H x 184mm W x 70mm D / 1.4kg without battery
Fixings	M5 self-tapping screws (4-off)
Cover Material	Steel
Backplate Material	Steel
Protection level	IP31 & IK08
Operating Temperature	- 10ºC to +55ºC
Storage Temperature	- 10ºC to +55ºC

COMPLIANCE

This product meets the essential requirements of the following EU Directives:

EMC :	2014/30/EU
RoHS :	2011/65/EU
WEEE :	2012/19/EU
Batteries :	2013/56/EU
LVD :	2014/35/EU

EN50131-4:2009	Security Grade 2, Environmental Class II
RTC50131-4:2011	Security Grade 2, Environmental Class II

CERTIFICATION BODIES

AFNOR Certification
Tél. : + 33 (0) 1.41.62.80 00
www.marque-nf.com

CNPP Certification
Tél. :+33 (0) 2.32.53.63.63
www.cnpp.com

Certification reference: NF324-H58
Certificate No.: 3130000410