

1. GENERAL

The SP-4002 outdoor siren is designed for application in burglary and panic alarm systems, as well as in fire alarm systems. The signaling function is performed in two ways: **optically** (by red lamp blinking) and **acoustically** (with a modulated high-volume sound signal). The source of light is a xenon flasher, while the sound signal is generated by means of a piezoelectric transducer. Design of the siren housing and the inner galvanized sheet cover ensure a high degree of tamper protection (against opening and/or pull-off from the mounting surface). Electronic circuit of the siren is made in SMD technology and impregnated against adverse effect of weather conditions, which ensures a high reliability of the equipment. As the outer shell of the SP-4002 is made of PC LEXAN high-impact polycarbonate, it features a very high mechanical strength and guarantees esthetic look of the equipment even after many years of service.

2. INSTALLATION

The SP-4002 siren should be mounted on flat surface, at a place as much inaccessible as possible so that the risk of tampering is minimized. The siren must be attached to the surface by means of screws and expansion plugs. In order to take off the cover, remove the two retaining screws and lift it by an angle of approx. 60°. Be particularly careful when dismantling and remounting the inner sheet metal cover.

NOTE: Make sure there is a suitable distance (minimum 2.5 cm) between the upper edge of the siren base and the ceiling or another element restricting the mounting position from the above. Otherwise, replacement of the cover may be impossible.

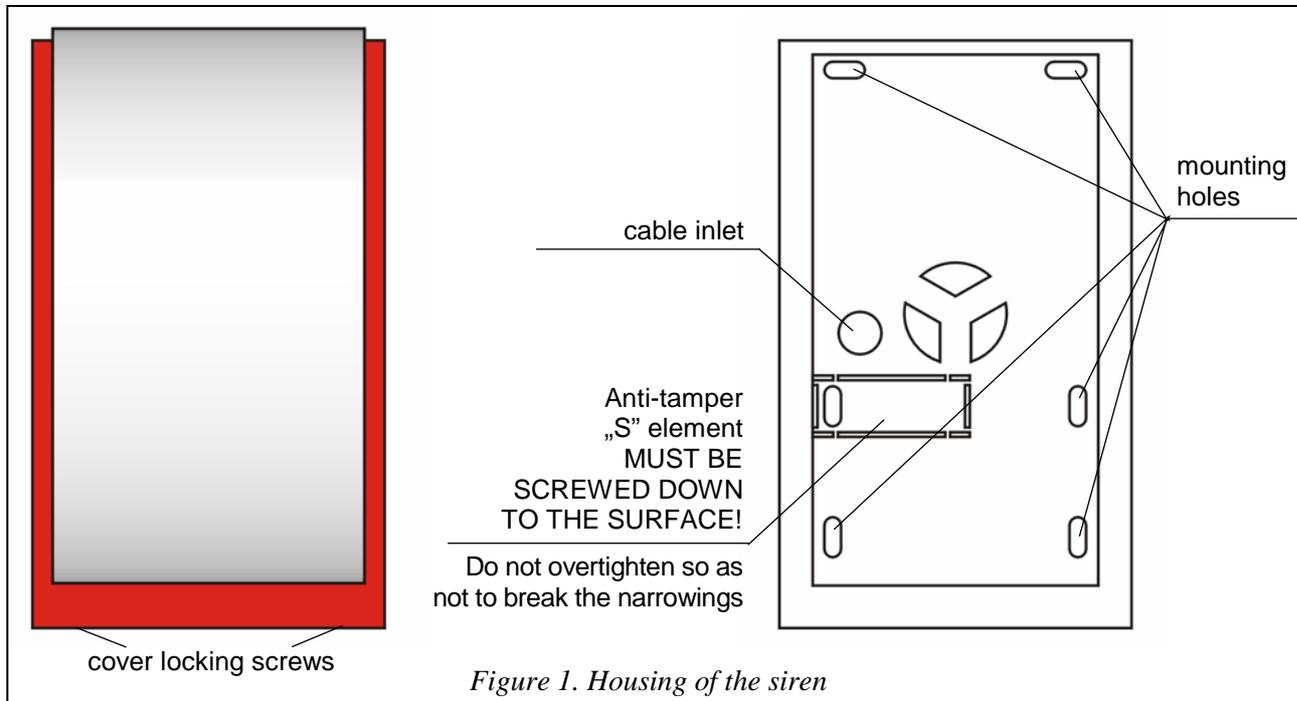


Figure 1. Housing of the siren

After installation of the siren, it is recommended that the mounting holes as well as the cable inlet be sealed by means of silicone compound.

3. OPERATION OF THE SIREN

The SP-4002 siren can work in conjunction with any alarm signal source. The acoustic and optical signaling circuits have separate control inputs. The signaling is triggered after a change of polarity

or signal loss (cable cut-of) on the control input. The **STA** input controls the acoustic signaling, while the **STO** input controls the optical signaling. The way in which the signaling is triggered should be set by means of the **PLA** and **PLO** jumpers.

The siren is designed so that it remains **inactive after the power supply is switched on**, irrespective of the setting of STA and STO inputs. Only after elapse of **20 seconds** in a stable, inactive state (with steady power supply from the alarm control and the input signals in accordance with the jumper settings) the signaling operation can be triggered. Always when the power supply is switched off / on, the time countdown starts over again. This function prevents accidental activating of the siren during installation of the system.

The test mode makes it possible to trigger the signaling without the necessary 20 seconds' wait. To do so, remove the **O+A** jumper prior to switching on power supply of the equipment, then switch on the power, and, within 5 seconds, replace the jumper.

The "**TMP**" terminals are used to connect the siren to the security system tamper circuit, while the **SENS.TMP** terminals are provided for connecting the inner sensor for tamper protection of the housing against opening and/or pull-off.

The siren is designed both for operation without a battery or with a **6V** battery (own power supply). The battery circuit includes a **T3,15A** fuse.

The external power supply of the siren must be connected to the **+12V** and **GND** terminals. Voltage loss across these terminals (with connected battery of the siren) will generate a tamper alarm, the duration of which depends on the setting of **TM0** and **TM1**. The type of signaling should be set with the **O+A** jumper. Supply voltage recovery will stop the tamper alarm signaling. Having installed the siren, check this function in operation by disconnecting and reconnecting the supply voltage.

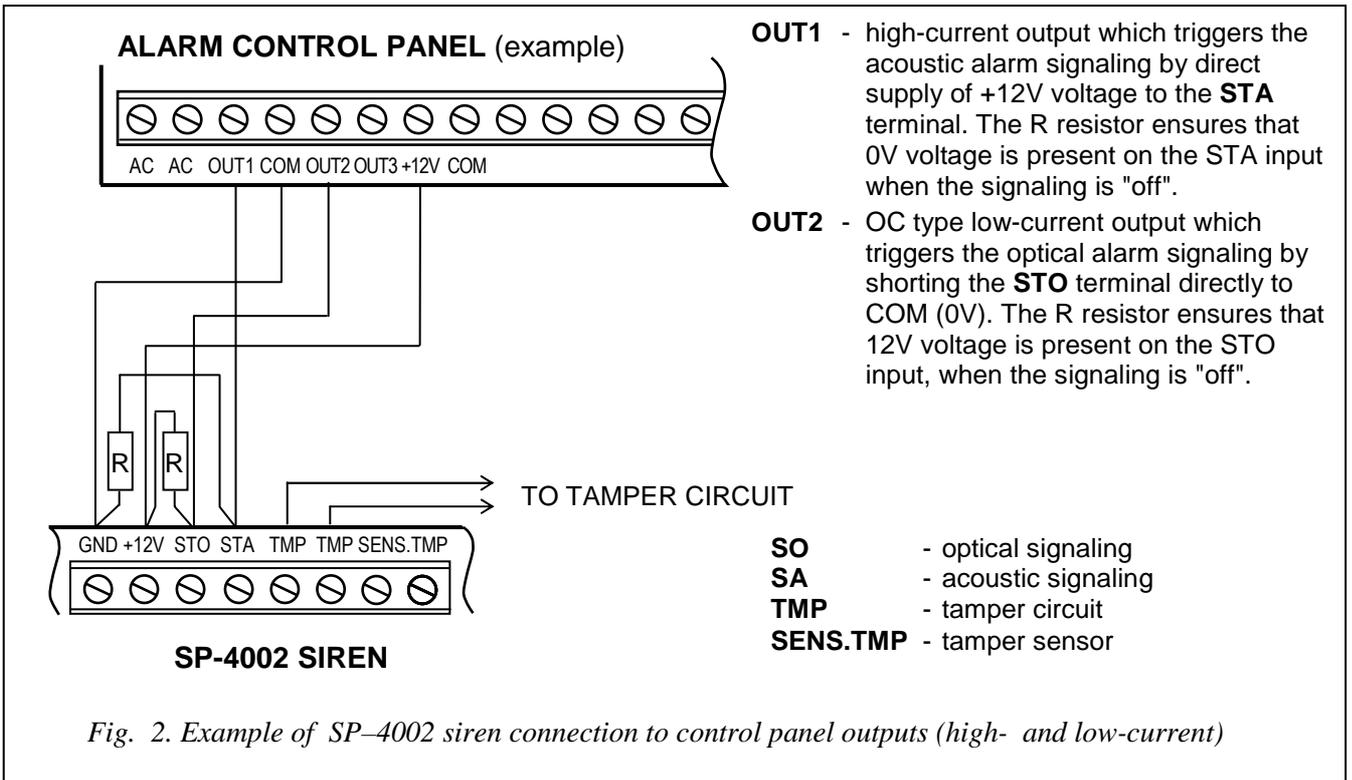
CAUTION! *The **TM0** and **TM1** jumpers set the maximum active time of acoustic signaling. When this time is up, the siren will stop, irrespective of what value is preset in the control panel. The signaling will be triggered again only when voltage on the **STA** input is restored to its standard level (in accordance with the **PLA** jumper setting, which specifies no signaling).*

The onboard LED is blinking when voltage is present on the +12V input. You may disable operation of this LED by removing its jumper.

4. CONNECTION

There are two kinds of alarm outputs in the alarm control panels: with common ground and with common power supply. The siren may be triggered from any kind of output as long as a suitable connection is provided. If the control panel alarm outputs have no polarizing resistors then, in order to ensure proper operation of the siren, the **2.2kΩ** resistors must be connected as shown in Figure 2 (depending on the output type of the control panel). Connection of such resistors is also necessary for outputs with load control.

CAUTION ! *The power supply converter of the optical signaling system generates high voltage which may cause electric shock when touched. For this reason any connections may only be made with the battery disconnected and the +12V wire should be connected last.*



5. JUMPER SETTING

Installed on the siren board are eight pairs of pins used to configure the equipment operation. Their settings are selected by shorting or opening the particular pair of pins. All possible settings are described on the table below.

SELECTION OF ACOUSTIC SIGNAL TYPE		
ML0 ML1		Two-tone signal, step modulation
		Stepless modulation signal
		Stepless modulation signal
		Stepless modulation signal
LIMITATION OF ACOUSTIC ALARM DURATION TO:		
TM0 TM1		Approx. 1 minute
		Approx. 5 minutes
		Approx. 10 minutes
		Approx. 15 minutes
ALARM SIGNALING ON POWER FAILURE		
O+A		Acoustic and optical signal
		Acoustic signal only

Designation of the pin state:
 - pins open
 - pins shorted

STA INPUT POLARIZATION (acoustic)		
PLA		Alarm if on STA input voltage has changed from 0V to 12V
		Alarm if on STA input voltage has changed from 12V to 0V
STO INPUT POLARIZATION (optical)		
PLO		Alarm if on STO input voltage has changed from 0V to 12V
		Alarm if on STO input voltage has changed from 12V to 0V
SIGNALING OF SUPPLY VOLTAGE PRESENCE		
LED		LED off
		LED blinking

6. TECHNICAL DATA:

Supply voltage.....	12V DC \pm 15%
Current consumption (average):	
- acoustic signaling.....	270 mA
- optical signaling	270 mA
- signaling + charging	up to 650 mA
Internal battery	6V/1.3 Ah
Internal battery protection	fuse T 3.5A
Sound intensity	min. 120 dB
Working temperature	-35°C...+55°C
Dimensions	148x254x64mm

Latest EC declaration of conformity and certificates can be downloaded from
website www.satel.pl



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