

1. General

The SD-3001 outdoor visual-acoustic siren is designed for use in burglary and assault signaling systems. The signaling function is performed in two ways: **visually** (by red color lamp blinking) and **acoustically** (by a modulated, high-volume sound signal). A xenon lamp (flash) is the source of light, while the sound signal is generated by means of a magnetodynamic transducer. The design of the siren housing, as well as the inner enclosure made from galvanized sheet, ensure a high degree of tampering protection (against opening, tearing off from the base, etc.). The electronics board is made in Surface Mount Technology (SMT) and protected by impregnation against unfavorable effects of weather conditions, thus ensuring high reliability of the equipment. The SD-3001 external housing is made of the highly impact resistant PC LEXAN polycarbonate, hence it features a high mechanical strength and guarantees aesthetic

The mechanical tamper switch can be replaced with a hermetic reed-relay switch. This enables the tamper protection to be customized. The reed-relay switch is not included in the standard outfit of the siren (i.e. it is sold separately).

2. Installation

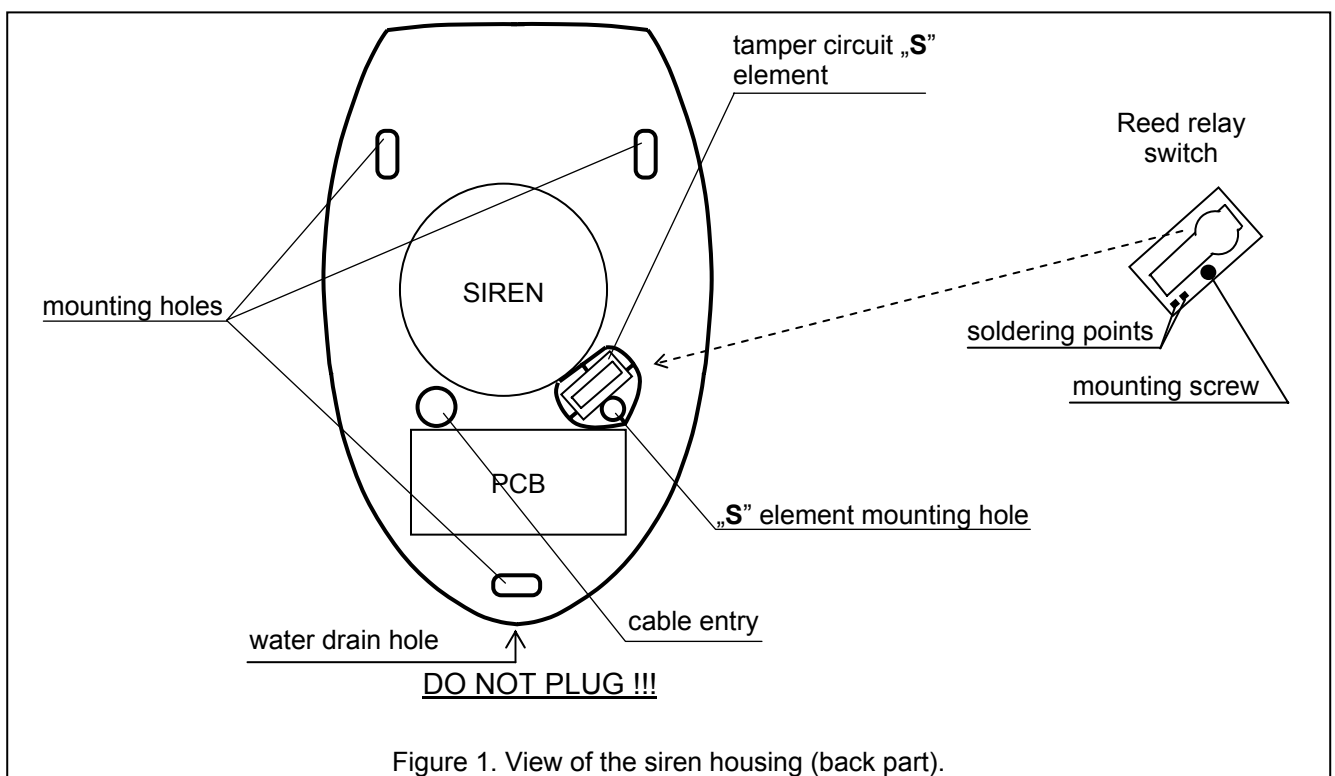


Figure 1. View of the siren housing (back part).

In order to use the reed relay switch, it is necessary to dismantle the mechanical switch installed by the manufacturer on the „S” element and replace it with the new switch. This operation requires resoldering of two wires which connect the switch with the siren electronics.

The SD-3001 siren should be mounted on a flat base in a location as inaccessible as possible to minimize the tampering risk. The siren is to be attached to the base by means of screws and expansion bolts.

Note: It is necessary to keep a clearance of approx. 0.5 cm between the upper edge of siren housing and the ceiling or other obstacle limiting the mounting position from above. The lack of such clearance can make the mounting of housing difficult.

The tamper circuit of the siren protects the device against removal of housing or tearing the device off the wall. Both these actions activate the alarm system. For the circuit to operate correctly **the „S” element must be screwed to the base**. Special precautions are to be taken while screwing this element, so as not to rupture.

After installing the siren, it is recommended to seal the mounting holes and the cable entries with silicone compound.

3. Description of siren



The way of activating the SD-3001 siren is different from that of the SD-3000 unit (read carefully the text below).

The SD-3001 siren can operate with any source of alarm signal. The circuits for acoustic and visual signaling have separate control inputs. The acoustic signaling is controlled by the **STA** input, while the visual signaling - by the **STO** input. Signaling is triggered after a change of voltage polarity from 0V to 12V or from 12V to 0V.

Note: Alarm will be triggered also in case of stable signal loss at control input, e.g. after cutting off the cable.

The way of changing the voltage polarity for the purpose of triggering the alarm is set by means of the jumpers **PLA** and **PLO**.

The siren has been designed so as to be **inactive right after power supply is connected to it**, irrespective of the status of inputs STA and STO. Only after elapse of **20 seconds in the stable, inactive state** (constant power supply from the control panel and input signals which does not generate alarm) it is possible to trigger the signaling. After each switching the power supply off and on, the time is counted over again. This function allows an accidental activation of the siren to be avoided during installation of the system.

The test mode makes it possible to activate signaling without the necessity of waiting 20 seconds. In order to do so, remove the jumper **O+A**, switch the supply voltage on and, within 5 seconds, put the jumper on again.

The TMP terminals are used for connecting the siren to the tamper circuit of the alarm system. When the siren is correctly mounted and the contacts of the switch placed on the „S” element are closed, the **TMP** terminals are also shorted.

The siren is adopted for operation either without or with a battery installed (back-up power supply). Where the battery is installed, the power supply voltage should be approx. **+13.8V** to provide correct battery charging.

Power supply voltage should be connected to the terminals **+12V** and **COM**. The loss of voltage on these terminals (with the battery connected) will trigger the tamper alarm, the duration of which depends on the settings of jumpers **TM0** and **TM1**. The kind of signaling is set with the jumper **O+A**. Restoration of the supply voltage will cancel the tamper alarm. Having mounted the siren, check the performance of this function by disconnecting and reconnecting the power supply voltage.

Note: The jumpers **TM0**, **TM1** determine the maximum active time of acoustic signaling. Afterwards, irrespective of the value set on the control panel, the siren will go silent. Signaling can only be triggered again after the **STA** input voltage returns to the state corresponding to the **PLA** jumper setting - that there is no alarm.

The LED placed on electronics board blinks when the +12V input power voltage is applied. The LED can be switched off by removing the JP8 jumper.

The bulb 12V/5W connected to the separate terminals on the electronics board is a part of the battery charging current limiter - the lamp is off during normal operation, but it glows when the battery is being charged and in siren with own battery, also after the power supply from the control panel is lost.

4. Connection

There are two types of alarm outputs which are used in alarm control systems: common ground outputs and common supply outputs. The siren can be activated by any type of output, provided that suitable connections are made. If the control panel alarm outputs have no resistors which induced polarization, then, in order to ensure proper operation of the siren, it is necessary to connect **2,2kΩ**

resistors as shown in Figure 2, 3 or 4 (depending on the output type). They can be connected in the control panel or in the siren. Such resistors must also be connected for outputs with load control.

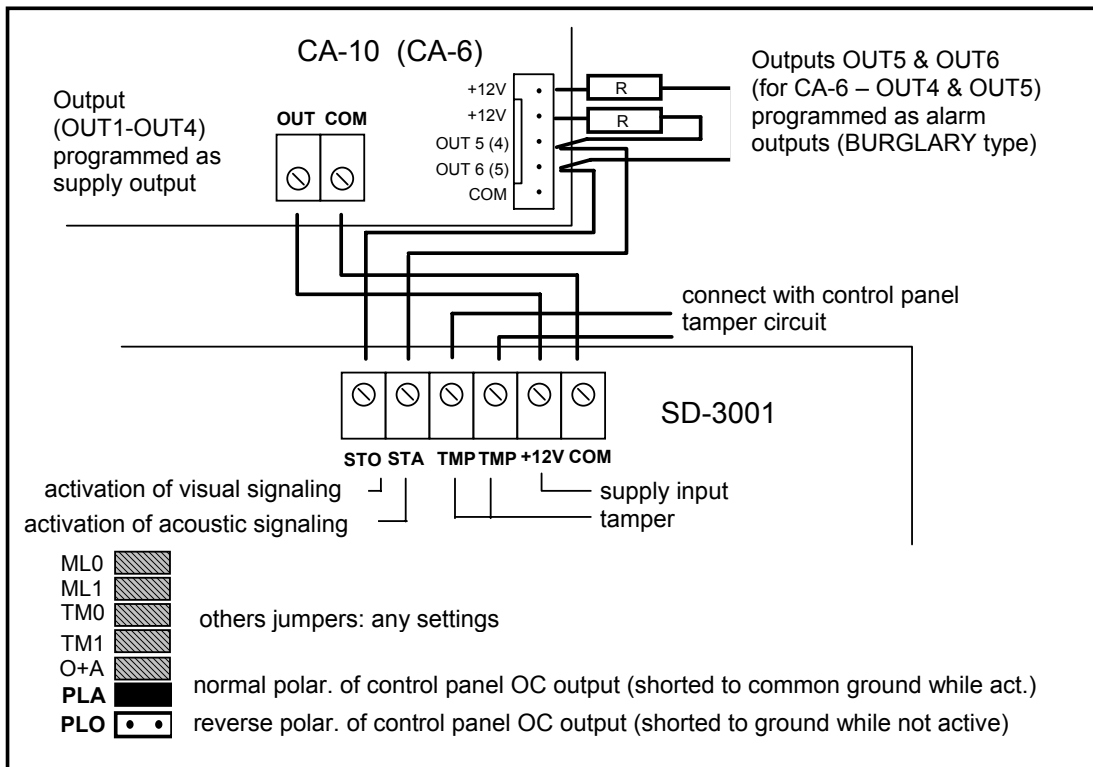
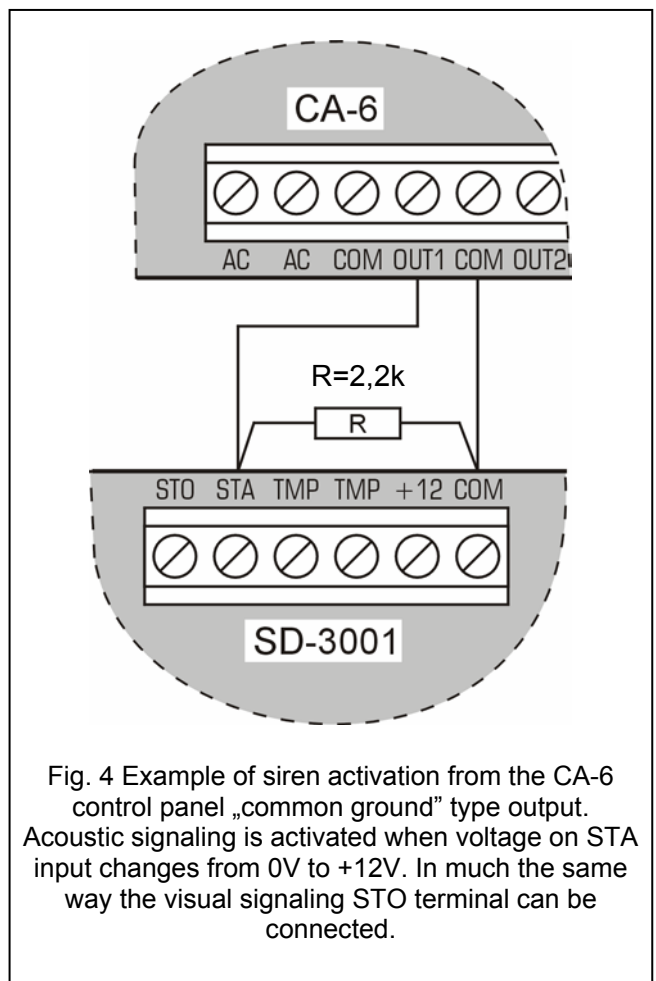
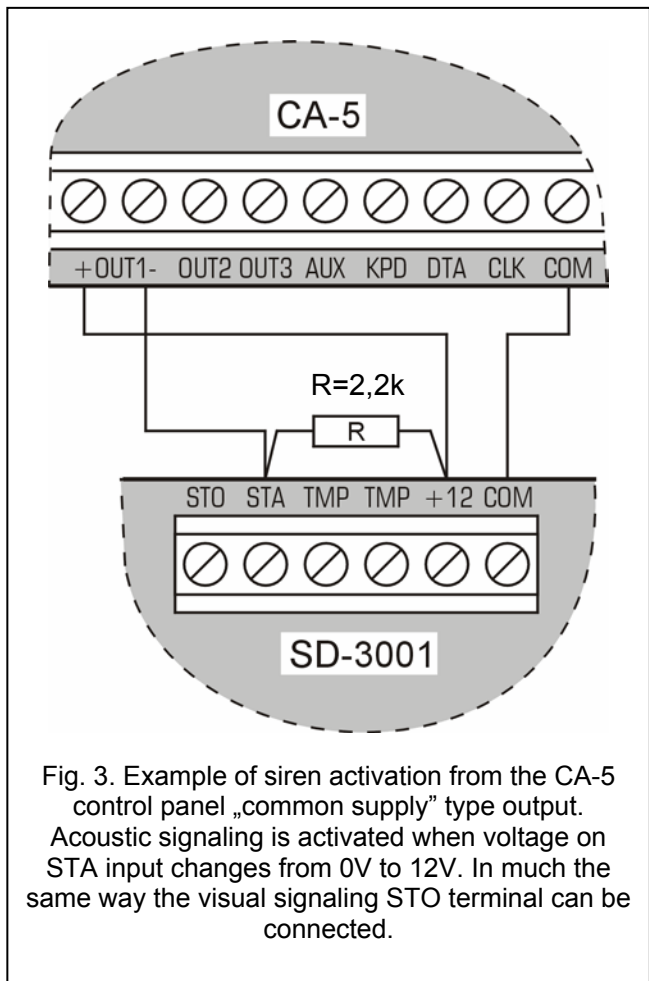



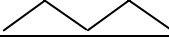

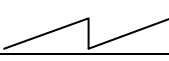

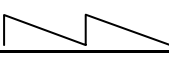












Figure 2. Connection of siren to CA-10 control panel manufacture by SATEL with the use of low voltage OUT5 and OUT6 outputs or to CA-5 with OUT4 and OUT5.



5. Jumper settings

ACOUSTIC SIGNAL TYPE SELECTION		
ML0 ML1		Two-tone signal, step modulated 
		Smooth modulated signal 
		Smooth modulated signal 
		Smooth modulated signal 
LIMITATION OF ACOUSTIC ALARM DURATION TO:		
TM0 TM1		Approx. 1 minute
		Approx. 5 minutes
		Approx. 10 minutes
		Approx. 15 minutes
SIGNALING MODE AFTER POWER SUPPLY LOSS		
O+A		Acoustic alarm only
		Acoustic and visual alarm
STA INPUT POLARITY (acoustic)		
PLA		Alarm if voltage has changed from 0V to 12V
		Alarm if voltage has changed from +12V to 0V
STO INPUT POLARITY (visual)		
PLO		Alarm if voltage has changed from 0V to 12V
		Alarm if voltage has changed from +12V to 0V



The converter powering the optical signaling circuit generates high voltage, which can result in electric shock. Therefore, all connections have to be made while the battery is disconnected, and the +12V wire is to be connected last.

6. Technical data

Power supply voltage (siren with battery)	13.8V DC
Power supply voltage (siren without battery)	10.8...13.8V DC
Average current consumption: acoustic signaling	1.2A
Average current consumption: visual signaling	200mA
Battery	12V/1.3Ah
Battery protection	fuse T 3.15A
Sound intensity level	approx. 120dB
Operating temperature	-35°C ÷ +60°C
Dimensions	300x195x97mm
Weight (without battery)	1.15kg

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