OPTICAL - ACOUSTICAL SIGNALLING DEVICE

SD-3000

sd3000_e 11/01

1. FEATURES

The SD-3000 visual / audible signaling device is designed for application in the burglary and assault signaling systems and/or in the fire alarm systems. The signaling function is performed in two ways: visually (by blinking of a red lamp) and acoustically (by a modulated high-volume sound signal). As the light source, a flash lamp is used, whereas the sound signal is generated by means of a magnetodynamic transducer. Design of the signaling device housing as well as internal shield made of galvanised plate ensure a high degree of anti-tampering protection (against opening and/or tearing off from the base). The electronic circuit of the signaling device is made by the use of SMD technique and impregnated against the adverse influence of weather conditions, which ensures a high reliability of the device. As the SD-3000 external housing is made of the PC LEXAN high-impact polycarbonate, it is characterized by a very high mechanical strength, and a nice appearance of the device is guaranteed even after many years of service.

2. INSTALLING

SD-3000 signalling unit should be mounted on a flat base and in a possibly inaccessible location to minimize tampering risk. The signalling unit is to be attached to the base by using screws and expansion studs (the mounting hardware is delivered together with the signalling unit).

CAUTION: *It is necessary to keep the clearance of approx. 4,5 cm between the upper edge of signalling unit chassis and the ceiling or other obstacle limiting the mounting position from above. The lack of such clearance can make the attachment of external housing difficult.*

Installation drawing:

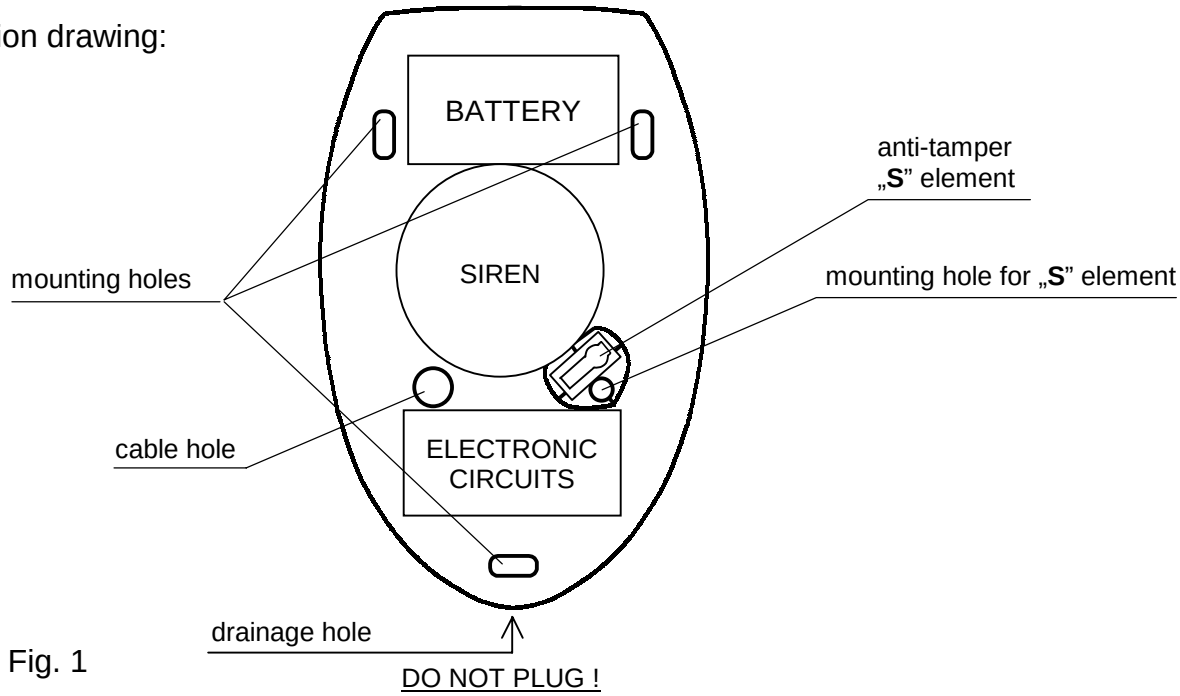

Fig. 1

The anti-tamper circuit of the signalling unit detects the removal of external housing or tearing the unit off the wall. Both these actions activate the alarm system. This circuit operates correctly only when **the „S" element is screwed to the base**. The „S" element has a special necking which is

ruptured at an attempt to tear the signalling unit off the wall. Special precautions are to be taken while screwing this element to the base, so as not to rupture this necking.
After installing the signalling unit, it is recommended to seal the mounting holes and the cable holes with silicone resin.

3. DESCRIPTION OF SIGNALLING UNIT

SD-3000 signalling unit can operate with any source of alarm signal. The circuits for acoustical and optical signalling have separate control inputs. Activation of acoustical signal takes place after changing the status at **STA** input. Optical signalling is activated after changing the condition at **STO** input. These inputs can respond to applying a voltage level of +12V, or by short-circuiting the input to ground level. The input polarity is set by the jumpers.
TMP terminals are used for connecting the signalling unit to the tamper circuit of the alarm system. When the signalling unit is correctly mounted and the contacts of the microswitch placed in „S" element are closed, **TMP** terminals are also shorted.

The signalling unit is adopted for operation without battery, as well as with battery installed (back-up power supply). In case of installing the battery, the power supply voltage should be + 13,8V to provide the correct battery charging.

Power supply voltage should be connected to **+12V** and **COM** terminals. The loss of the voltage on these terminals (at battery being connected) will activate the tamper alarm of the duration dependent on the jumper settings. When the power supply voltage is restored, tamper alarm is cancelled. After mounting the signalling unit, the performance of this function is to be checked by disconnecting and re-connecting the power supply voltage.
The LED, placed on electronic circuit board, blinks when the power voltage is applied. The LED can be switched off by removing JP8 jumper.

The lamp, 12V 5W, connected to the separate terminals on the board, is a part of the battery charging current limiter - the lamp does not light at normal operation, but glows during charging the battery.

4. CONNECTIONS

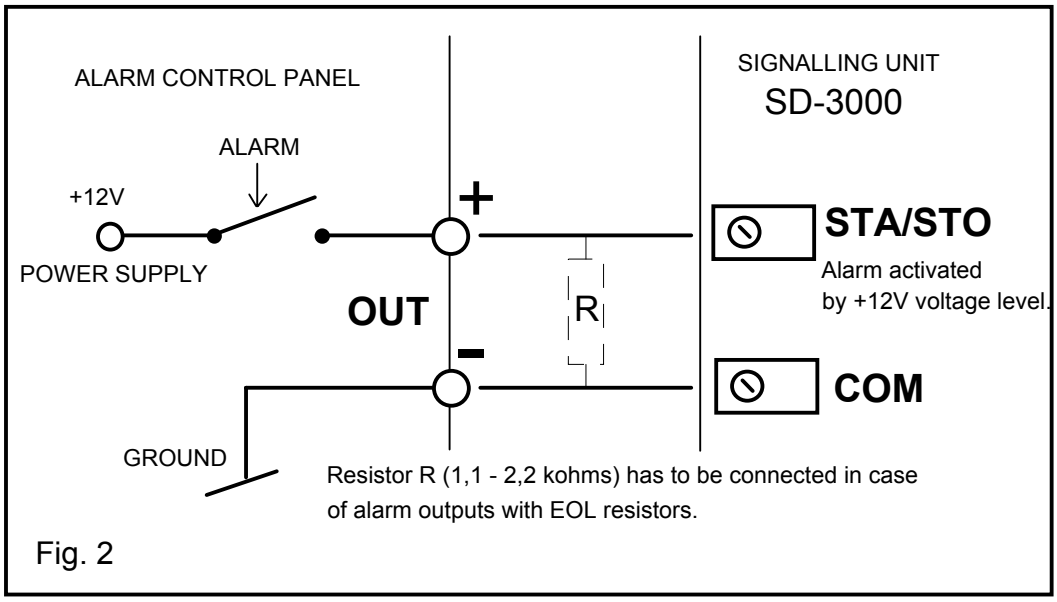

Figure 2. Connections with common ground output (e.g. the alarm control panel CA4M; CA6, CA6plus - OUT1 to OUT3 outputs; CA10, CA10plus - OUT1 to OUT4 outputs).

There are two types of alarm outputs which are used in alarm control systems: common ground outputs and common supply outputs. The signalling unit can be activated by any of those outputs, provided that the proper connections are made.

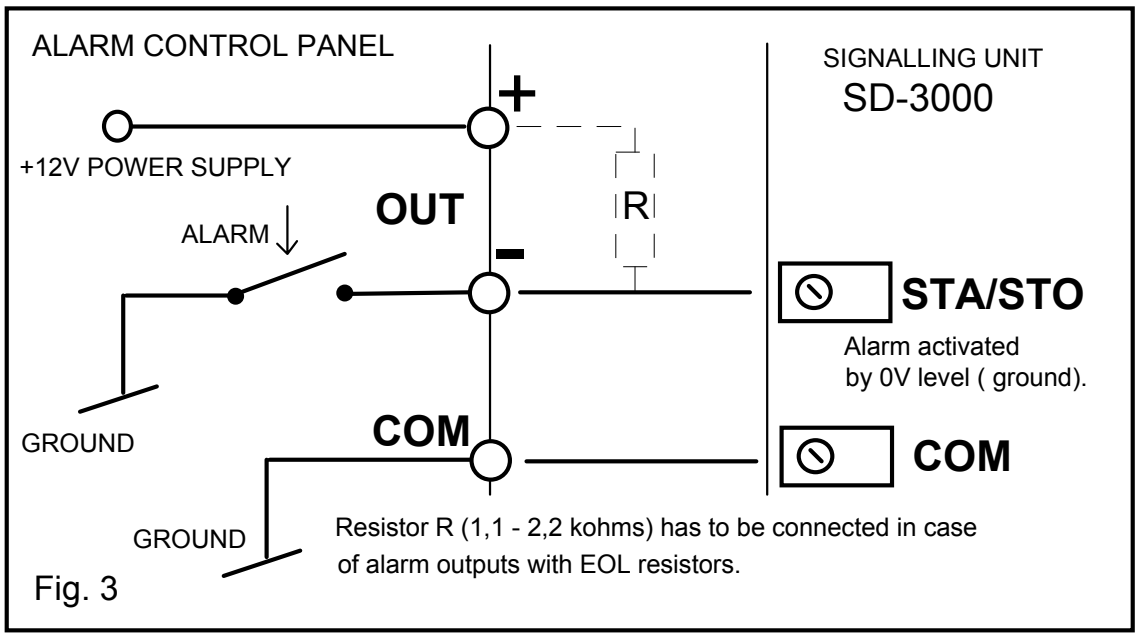

Figure 3. Connections with common supply output (e.g. alarm control panel CA4V1, CA8V2).

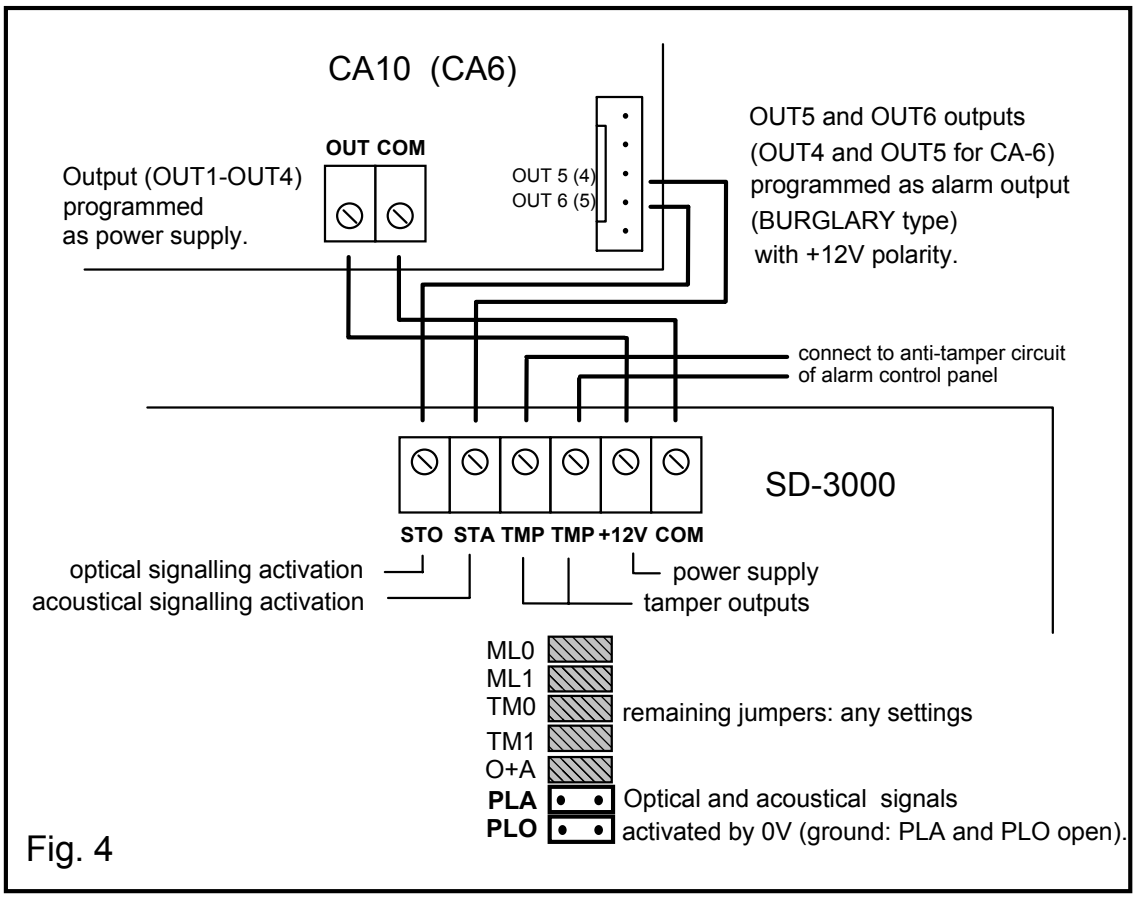

Figure 4. Connections of the signalling unit to the alarm control panels CA10 (CA10plus) and CA6 (CA6plus) by using low current outputs OUT5 and OUT6 (OUT4 and OUT5 in CA6). These outputs are of common supply type (see Fig.3) with internal polarity resistors (no additional resistors are required).

5. JUMPER SETTINGS

ML0 ML1	**Acoustic signal selection.**	
		Two-tone signal, step modulated 
		Smooth modulated signal 
		Smooth modulated signal 
		Smooth modulated signal 
TM0 TM1	**Duration of alarm after power supply loss.**	
		approx. 1 minute
		approx. 5 minutes
		approx. 10 minutes
		approx. 15 minutes
O+A	**Signalling mode after power supply loss.**	
		acoustical alarm only
		acoustical and optical alarm
PLA	**STA input polarity.**	
		acoustical alarm when STA input is at 0V
		acoustical alarm when STA input is at 12V
PLO	**STO input polarity.**	
		optical alarm when STO input is grounded (0V)
		optical alarm when +12V is applied to STO input

CAUTION !

The converter powering the optical signalling 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 connected in the end.

6. TECHNICAL SPECIFICATION:

Power supply voltage (signalling unit with back-up battery) ..... 13.8V DC

Power supply voltage (signalling unit without back-up battery): ..... 10.8…13.8V DC

Average current consumption:

- acoustical signalling 1.2A
- optical signalling 200mA

Back-up battery 12V/1.3Ah

Battery protection ..... WTAT 3.15A fuse

Sound intensity level..... approx. 120dB

Operating temperature .....
..... -35 degree C to +60 degree C

Dimensions 300x195x97mm

Weight (without battery)..... 1.15kg

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