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<b>SR 136</b> External optical and acoustic signaling device (DYNAMIC transducer 110dB; LED; metal enclosure; optional connection of the 12V/2,2Ah battery)	<b>CODE</b> <b>SR136</b>	In accordance with the <b>EN 50131-4 standard</b>	<b>MANUAL EN</b>
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Edition: 2 from 03.07.2014

Supersedes: 1 from 10.02.2014



## 1. Introduction

The external optical and acoustic signaling device SR136 is designed for Intrusion Detection Systems. It is available in one color: white enclosure, red optical indicator.

Acoustic indication is based on a dynamic transducer. The sound intensity generated by signaling device is 120 dB at 1 meter distance. Optical indication uses modern super-bright LED so that the light of the signaling device is clearly visible.

In addition to the basic function of the optical and acoustic signal generation at the time of alarm, the signaling device features a large number of additional functions such as alarm memory, Intrusion Detection System status indication (i.e. arming, disarming) or change of sound modulation. There are several modes of siren activation. All of these features are supported by the microcontroller of the device, while the programming is simple and intuitive.

## 2. Installation

The signaling device should be mounted by a qualified installer, holding relevant permits and licenses (applicable and required for a given country) for Intrusion Detection Systems.

The mounting location of the signaling device should be inaccessible in order to minimize the risk of tampering. The signaling device should be mounted on a flat surface using expansion bolts.

In order to open the enclosure of the SR136, unscrew the screw in the bottom of the housing and bend the upper part of the enclosure (lid) upwards.

Caution! When mounting, keep an appropriate distance (minimum 5 cm) between the top edge of the enclosure of the signaling device and the ceiling or other structures located above, so that re-mounting of the enclosure after installation and configuration of the device will be possible.

The view of the signaling device is shown in the pictures below.

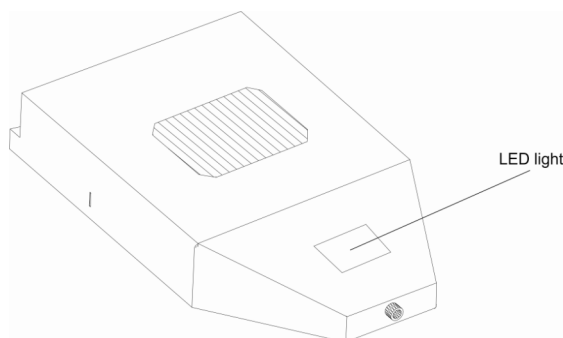


Fig. 1a

The signaling device after removing the plastic housing

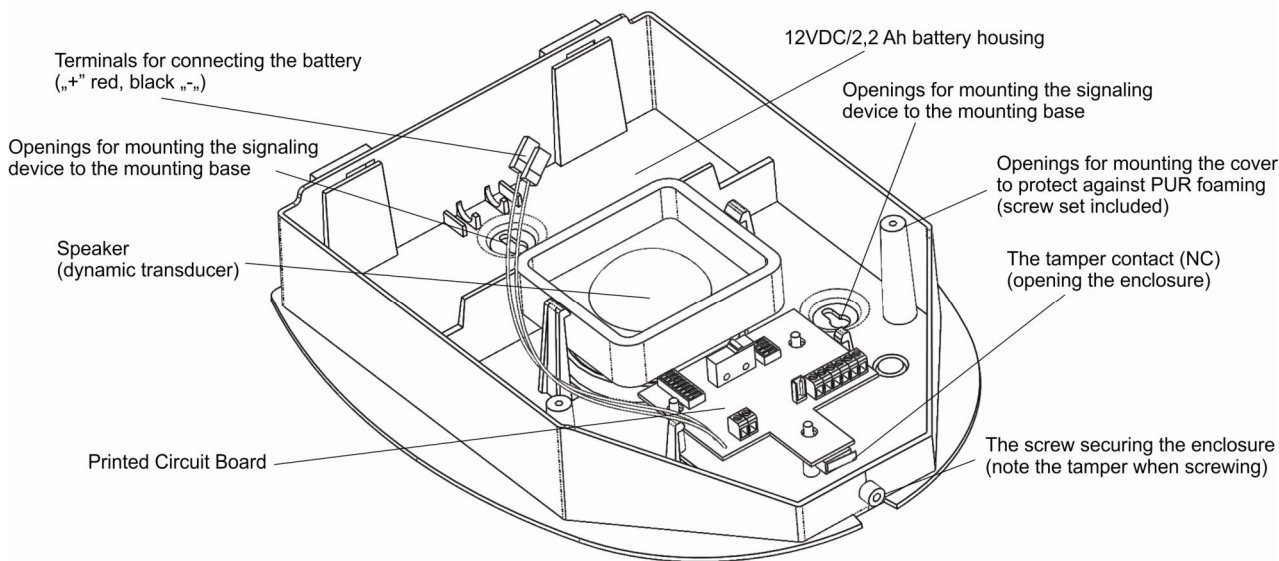


Fig. 1b

The signaling device after removing the plastic housing and metal enclosure

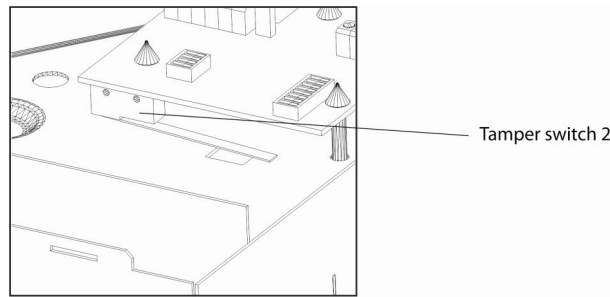


Fig. 1c

Tamper indicating detachment from the wall

Caution! The proper indication of detachment from the wall requires screwing the additional screw to the mounting base, which will result in closing the tamper switch once the signaling device is mounted on the wall.

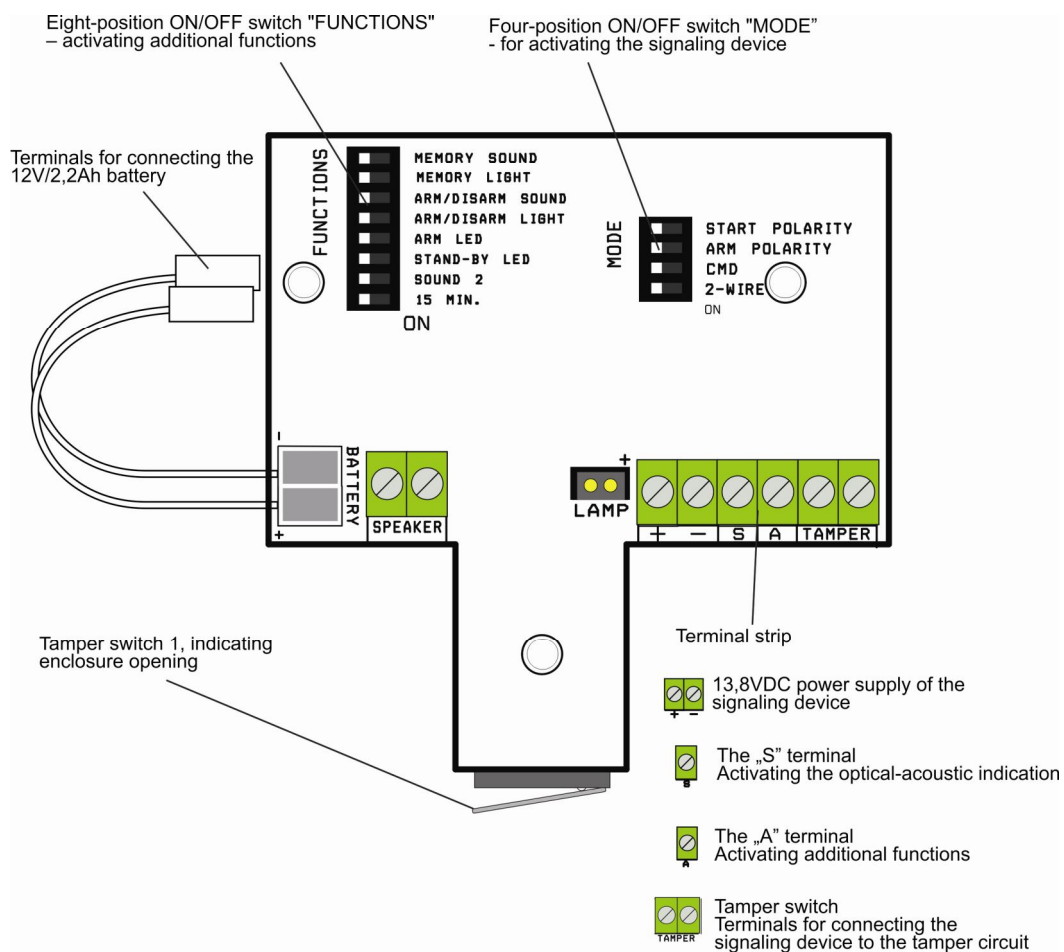


Fig. 2 The printed circuit board of the signaling device

Power supply of the signaling device is supplied to the „+” and „-” terminals.

The signaling device can operate with or without the 12V/2,2Ah battery. The battery should be connected to the „-BAT+” socket

Caution! During battery operation, the power supply voltage should be between 13V and 13.8V to ensure proper charging process.

The TAMPER switches are used to connect the device to the tamper circuit of the alarm system. The tamper circuit indicates outer enclosure opening (tamper 1) and detachment from the wall (tamper 2).

### 3. Configuration of the signaling device

The configuration of the signaling device is using two groups of switches: „MODE” and „FUNCTIONS”, which are placed on the Printed Circuit Board (see Fig. 2). Any change in configuration of the signaling device (change in the switch position) is confirmed with a short beep.

#### The "MODE" switch

Four-position ON/OFF switch "MODE" is used to select a method for activating the signaling device. See Table 1.

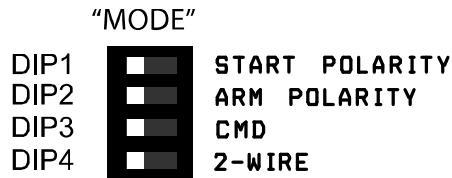


Table 1. The „MODE” switch

The DIP switch number	Function
DIP1 <b>START POLARITY</b> Triggering indication of the signaling device <b>CAUTION!</b> DIP4 should be in OFF position	OFF - The activation of the signaling device by removing the plus from the „S” terminal
	ON - The activation of the signaling device by removing the minus from the „S” terminal
DIP2 <b>ARM POLARITY</b> Triggering additional functions using the "A" control input (input polarization)	OFF – Activating the function by giving a „minus” to the „A” terminal
	ON – Activating the function by giving a „plus” to the „A” terminal
DIP3 <b>CMD</b> Separation of optical and acoustic signals.	„OFF” - Simultaneous launching of the speaker and lamp – the „S” terminal
	„ON” – Optical indication activated using the „S” control input, acoustic indication – activated using the „A” control input. See example in Figure 4b.
DIP4 <b>2-WIRE</b> Selecting the connection method of the device (2 and 3-wire installation)	OFF – Connect the signaling device traditionally, using the three wires: Supply the 13,8VDC at the „+” and „-” terminals (two wires) and activate the signaling device with additional control signal (1 wire) at the „S” or „A” terminal. The method of triggering the signaling device and activation of functions must be selected via the DIP 1 and DIP2 "MODE" switches.
	ON – Connect the signaling device with two wires: The activation of the signaling device requires supplying the 13,8VDC at the „+” and „-” terminals <b>CAUTION!</b> The first activation requires to repeat the powering up procedure. Each subsequent activation of the signaling device requires single powering.

### The "FUNCTIONS" switch

Eight-position ON/OFF switch "FUNCTIONS" activates additional function that can be performed by the signaling device.

#### "FUNCTIONS"

DIP1	<input type="checkbox"/>	MEMORY SOUND
DIP2	<input type="checkbox"/>	MEMORY LIGHT
DIP3	<input type="checkbox"/>	ARM/DISARM SOUND
DIP4	<input type="checkbox"/>	ARM/DISARM LIGHT
DIP5	<input type="checkbox"/>	ARM LED
DIP6	<input type="checkbox"/>	STAND-BY LED
DIP7	<input type="checkbox"/>	SOUND 2
DIP8	<input type="checkbox"/>	15 MIN.

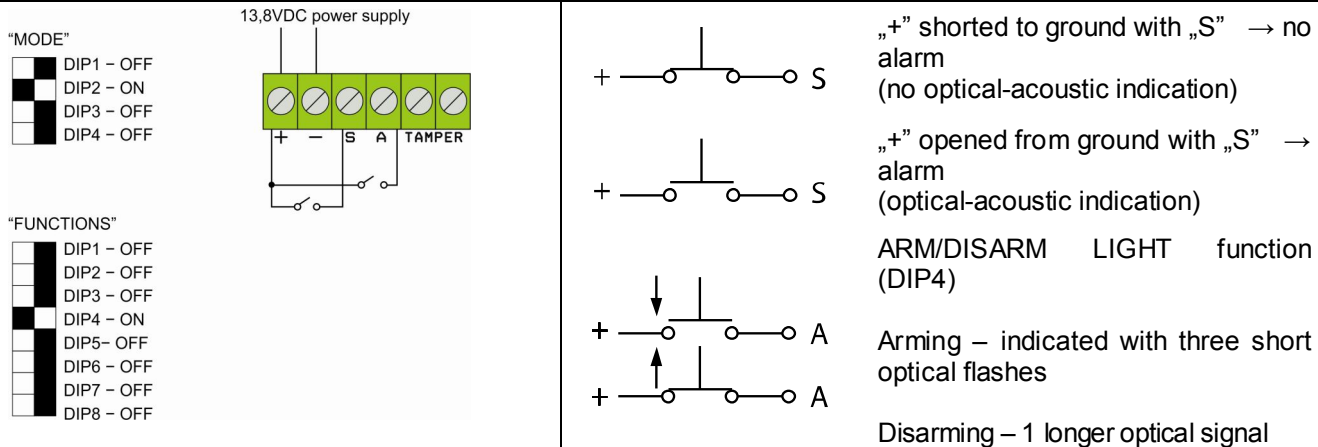
Table 2.The "FUNCTIONS" switch

The DIP switch number	Function	
DIP1 <b>MEMORY SOUND</b> Acoustic alarm memory	ON	The signaling device implements the following function: if an alarm has occurred (is saved) the device will generate several beeps at the moment of disarmament.
	OFF	Disabling the function.
DIP2 <b>MEMORY LIGHT</b> Optical alarm memory	ON	The signaling device implements the following function: if an alarm has occurred (is saved) the device will generate several optical signals at the moment of disarmament.
	OFF	Disabling the function.
DIP3 <b>ARM/DISARM SOUND</b> Acoustic indication of arming and disarming the system	ON	Arming - indicated by the signaling device with 3 short acoustic signals Disarming - indicated by the signaling device with 1 long acoustic signal
	OFF	Disabling the function.
DIP4 <b>ARM/DISARM LIGHT</b> Optical indication of arming and disarming the system	ON	Arming - indicated by the signaling device with 3 short optical signals Disarming - indicated by the signaling device with 1 long optical signal
	OFF	Disabling the function.
DIP5 <b>ARM LED</b> Indication of arming	ON	When armed, the device emits two short flashes at regular intervals
	OFF	Disabling the function.
DIP6 <b>STAND-BY LED</b> „Stand-by" mode indication	ON	In „stand-by" mode, the device emits one short flash at approximately 10 seconds intervals indicating that the siren is activated.
	OFF	Disabling the function.
DIP7 <b>SOUND 2</b> Selecting the frequency of the emitted sound	ON	Pos 1 – 1400Hz/1700Hz
	OFF	Pos 2 – 1600Hz/3500Hz
DIP8 <b>15 MIN.</b> increasing the siren duration during the alarm from 3 min to 15min	ON	Acoustic indication time– 15min
	OFF	Acoustic indication time – 3min

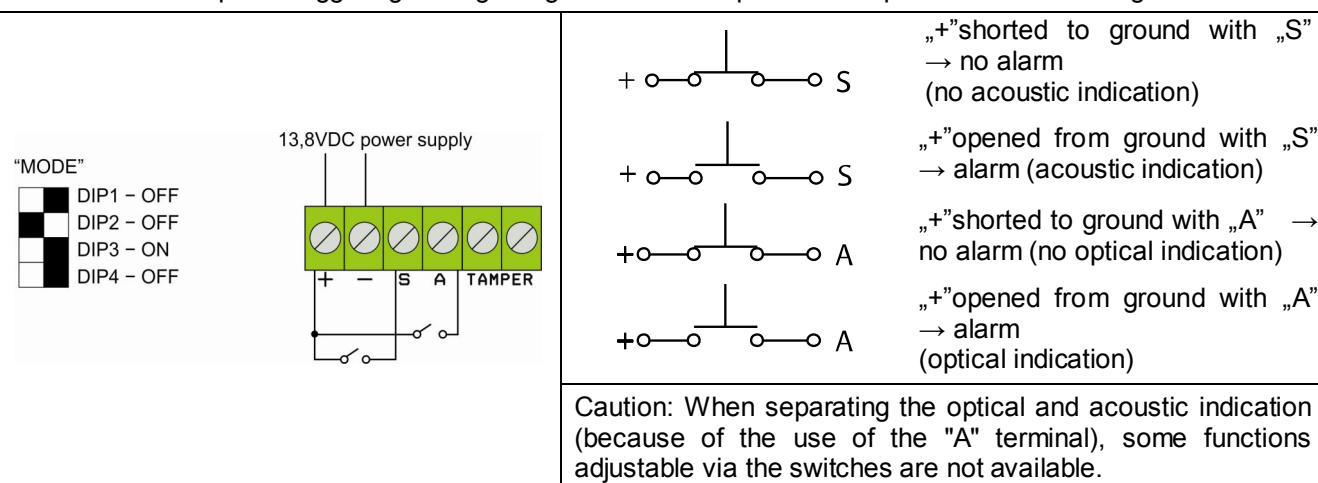
Caution! Activating the MEMORY SOUND (DIP1), MEMORY LIGHT (DIP # 2), ARM / DISARM SOUND (DIP3), ARM / DISARM LIGHT (DIP 4) and the ARM LED (DIP5) requires an additional triggering by the control signal supplied to the "A" terminal. Connect the "S" terminal with one of the suitably programmed control panel outputs.

Several wiring diagrams along with sample settings for "MODE" and "FUNCTIONS" switches - triggering the signaling device and enabling additional features - are presented below.

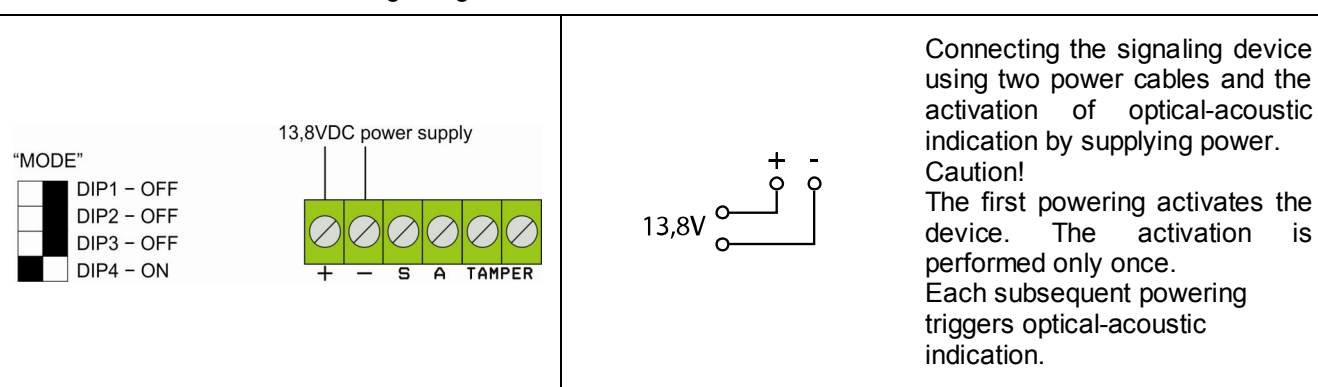
**Scheme 4a** The example of triggering the signaling device and optical indication when the system is armed/disarmed.



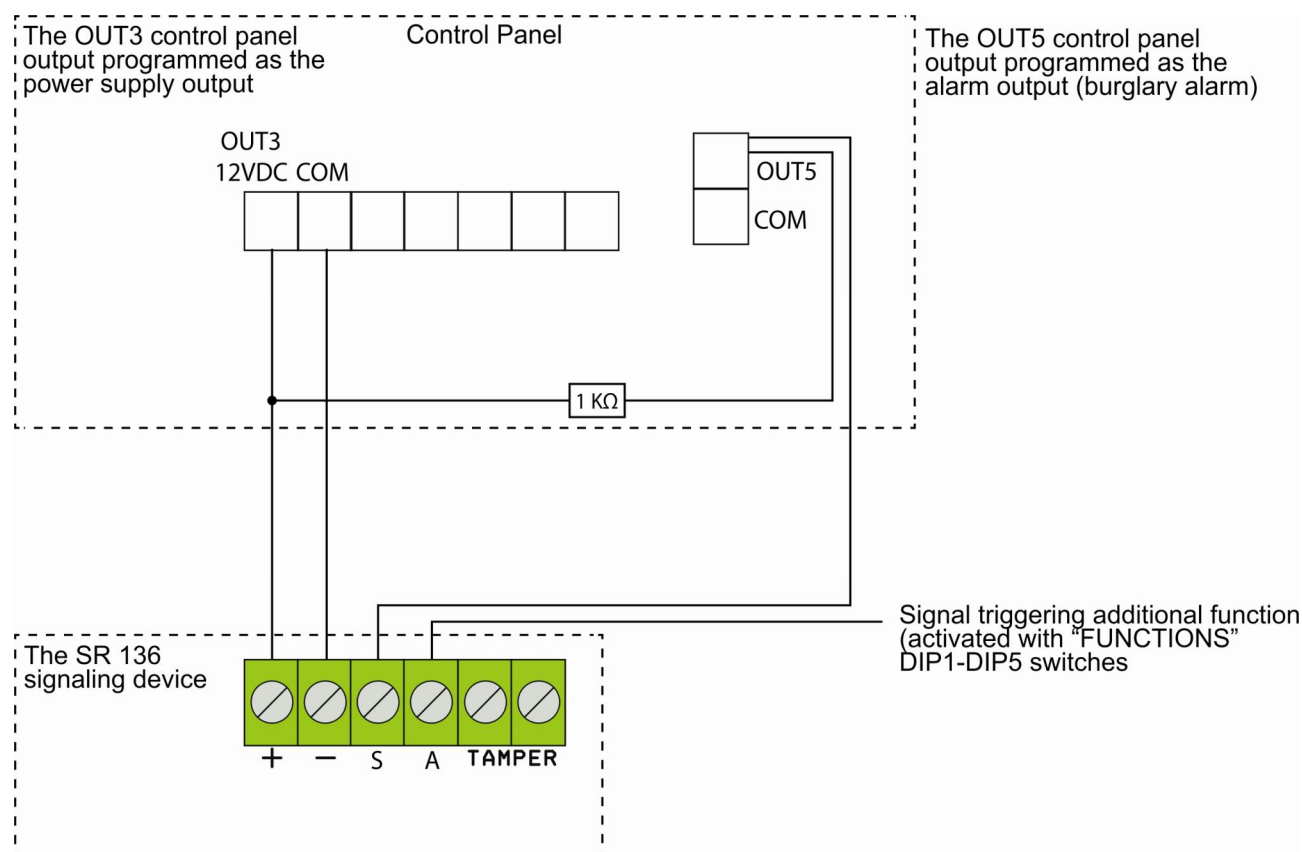
**Scheme 4b** Example of triggering the signaling device with separation of optical and acoustic signals



**Scheme 4c** Connection of the signaling device with two wires



The connection of the signaling device to the control panel.



The OUT3 and OUT5 control panel outputs enable the +12V power supply of the signaling device. The OUT3 output is programmed as the power supply output.

The "S" control input, which is shorted to ground, is used to control the signaling device. By default, when the alarm is inactive (no alarm), the +12 V is supplied at the "S" input via the 1kΩ bias resistor from the OUT3 output. By controlling the OUT5 output (shorting the output to ground), which is connected via the 1kΩ resistor, it is possible to force the "S" input to a low state, which results in activation of the signaling device.

## 4. Technical data

Signaling device model	SR136
Nominal supply voltage	13,8VDC
Permissible supply voltage range	11VDC÷15VDC
Maximum current consumption	1,3A
Power consumption in standby mode	8mA
Sound intensity	120dB at 1m distance (Un=13,8VDC),
Optional battery connection	YES (12VDC/ 2,2 Ah battery) not included
In accordance with the standard	EN 50131-4 Grade 2
Dimensions (H × W × D)	280 × 235 × 100mm
Weight	2kg
Operating temperature	- 40°C÷55 °C

***In accordance with the standards:***

**CEI EN 50131-4:2010-08**

**Grade 2**

**Class 4**



**RoHS**



**Additional information**

The manufacturer takes no responsibility for the defects that result from the damaging, malfunctioning or inability to operate the equipment especially when resulting from failure to comply with the recommendations and requirements contained in the manual.

It is necessary to periodically test the signaling device. The majority of Intrusion Detection Systems indicates malfunctioning of the signaling devices and informs the user with an appropriate message on the LCD keypad or LED light on the LED display. In case of such situation, the system installer shall be immediately notified. Testing and control methods of Intrusion Detection Systems are specifically determined by the installer.

The SR136 detector was made in accordance with the requirements of the EEC and 99/5/CE directives. The Declaration of Conformity is available at [www.pulsar.pl](http://www.pulsar.pl)





## WEEE LABEL

**Waste electrical and electronic equipment must not be disposed of with normal household waste. According to the European Union WEEE Directive, waste electrical and electronic equipment should be disposed of separately from normal household waste.**

### GENERAL WARRANTY CONDITIONS

1. Pulsar K. Bogusz Sp.j. (manufacturer) grants a two-year quality warranty for the equipment, starting from the production date.
2. The warranty includes free-of-charge repair or replacement with an appropriate equivalent (selected by the manufacturer) if the malfunction is due to the manufacturer. It includes manufacturing or material defects, provided that such defects have been reported within the warranty period (point.1).
3. The equipment subjected to warranty should be brought to the place of purchase or directly to the main office of the manufacturer.
4. The warranty applies to complete equipment, accompanied by a properly filled warranty claim with a description of the defect.
5. Should the claim be accepted, the manufacturer is obliged to provide warranty repairs, at the earliest convenience, however not later than within 14 days from the delivery to the service centre of the manufacturer.
6. The repair period mentioned in point 5 may be prolonged, if there are no technical possibilities to carry out the repairs, or if the equipment has been conditionally accepted, due to the breaking warranty terms by the claimant.
7. All the services are carried out at the service centre of the manufacturer, exclusively.
8. The warranty does not cover the defects of the equipment, resulting from:
  - reasons beyond the manufacturer's control,
  - mechanical damage,
  - improper storage and transport,
  - use that violates the operation manual or equipment's intended use,
  - fortuitous events, including lightning discharges, power failures, fire, flood, high temperatures and chemical agents,
  - improper installation and configuration (failure to follow instruction).
9. The warranty is void in case of construction changes and repairs carried out by any unauthorized service center or in case of damage or modifications to warranty stickers and serial numbers.
10. The liability of the manufacturer towards the buyer is limited to the value of the equipment determined according to the wholesale prices suggested by the manufacturer on the day of purchase.
11. The manufacturer takes no responsibility for the defects that result from the damaging, malfunctioning or inability to operate the equipment especially when resulting from failure to comply with the recommendations and requirements contained in the manual.

**The exclusive distributor of AMC products:**

**Pulsar K. Bogusz Sp.j.**

**Siedlec 150, 32-744 Łapczyca, Poland**

**Phone (+48) 14-610-19-40, Fax (+48) 14-610-19-50**

**E-mail: [biuro@pulsar.pl](mailto:biuro@pulsar.pl), [sales@pulsar.pl](mailto:sales@pulsar.pl)**

**[www.pulsar.pl](http://www.pulsar.pl), [www.zasilacze.pl](http://www.zasilacze.pl)**