

## **TECHNICAL DESCRIPTION**

<b>+ / - 12V</b>	Power positive - negative terminals. A tension of 13,8V DC is applied to those terminals which keeps the battery under charge.
<b>+ / - SSP</b>	Positive or negative commands which keep the siren in stand by condition. If for any reason (alarm or wire cutting) this tension fails, the siren automatically activated.
<b>TAMP</b>	Tamper microswitch terminals.

## **TAMPER SWITCH SENSITIVITY**

To have an EN50131-4 Grade 3 compliant installation the wall removal detection must be trimmed as below:

1. Turn the screw fully clockwise
2. Slowly turn the screw anticlockwise until the Tamper switch gets activated.
3. Turn the screw one and a half (1.5) turns clockwise. Verify that the Tamper switch is now deactivated.

## **BATTERY INSTALLATION**

The SIR/PLL & SIR/PLSL sirens accepts two types of batteries, 2.7 Ah and 7 Ah. The 7Ah battery is held in place by the plastics and the internal metal casing. The 2.7 Ah battery is smaller in size and requires the use of a tie wrap (included in original packaging) to keep it in place (See Figure 4).



Figure 4. 2.7Ah battery installation



SIR/PLL certificate:  
**EVPU (Notified Body: No. 1293)**  
00051/101/1/2016  
EN50131-4:2009  
Security Grade 3, Environmental Class IV

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**Directive 2002/96/EC**  
Waste of electrical and electronic equipment (WEEE)

# **PARADOX HELLAS S.A.** fire alarm & security systems

## **SIR/PLL & SIR/PLSL**

Outdoor, Tampering Protected & Battery Back-up Sirens



## SELF POWERED SIREN FOR OUTDOOR USE

PARADOX HELLAS S.A. anticipating the needs of the Greek and European markets for outdoor sirens, developed its new product's SIR/PLL & SIR/PLSL sirens.

SIR/PLL & SIR/PLSL are sirens that emit a continuous high intensity, frequency modulated sound and contains a flash indicator. Its visual signal indicates the location of the alarm easy and quickly.

The siren's case is made from polycarbonate material in white color with room large enough for every company's logo. Inside it is protected with a metal cover made from galvanized metal sheet.

The sirens are protected from opening or removing from the wall by a tamper microswitch.

## INSTALLATION REQUIREMENTS

To properly install the sirens the following requirements must be met and guidelines must followed:

- A power source of 11 to 14VDC 1 Amp Peak current.
- A proper connection as described in "Methods of installation" section.
- A flat surface of approximately 35cm vertical by 30cm horizontal.
- The sensitivity of the tamper switch must be trimmed as described on the "Tamper switch sensitivity" section.

## GENERAL CHARACTERISTICS

- Complete initial connection can be made before panel power up. It's put in STANDBY mode only when the + or -SSP command is given.
- The siren is activated when the alarm panel's voltage drops below 9.5 VDC.
- High Bright LED Flash.
- Protection of the siren from short circuit in the Flash.
- Protection switch TAMPER from opening the cover or removing the siren from the wall.
- Maximum alarm duration when the SSP is off.
- UV protected, self extinguishing Polycarbonate plastic box.
- Available in white and silver color.
- Flash in red and orange color.
- Easy installation.

## TECHNICAL CHARACTERISTICS

Operating Voltage	11-14VDC
Standby Current Drain	12mA ±5%
Alarm Current Drain	1.6A ±5%
Supported Batteries	12V 2.3Ah / 12V 7Ah
Acoustic Pressure	110dB ±5%@1m
Type of acoustic output	Acoustic output is modulated tone
Operating Frequency (Audio)	1600 - 2400 Hz
Alarm Duration (Factory setting)	1. From 4 to 5 min 2. From 5 to 6 min 3. From 8 to 10 min
Max. Tamper Switch Ratings	1A / 30V
Visual Alarm Indicator	High Bright LED
SSP Voltage	± 12V
Dimensions [HxWxD] (mm)	275x250x90
Weight	SIR/PLL: 2.7Kgr SIR/PLSL: 2.4Kgr
Certificates	SIR/PLL
	SIR/PLSL

Table 1. Technical characteristics

## SIR/PLL & SIR/PLSL FUNCTION

SIR/PLL & SIR/PLSL have been constructed in a such way that the technician can install them very easy.

- After placing the siren on the wall, connect all the wires according to one of the 3 installation methods.
- Connect the internal battery of the siren. The siren will be activated.
- Put the internal metal cover on and finally close the plastic case and screw the screw witch is also closing the tamper microswitch. You can leave the siren in this status as long as you need to finish the whole installation which maybe even up to one month period.

On powering up the installation the command + or - SSP will be given from the panel. The siren is going in stand by mode.

When the command SSP will be interrupted, the siren sounds.

It stops when the SSP appears again be resetting the system. The period that the siren is sounding depends on the panel's alarm time.

In case of total SSP interruption (wire cutting-power off

etc.) the siren will sound for a preprogrammed period of time, powered by the internal battery.



**In the case of loss of power, the siren will remain inactive as long as the tamper and triggering conditions do not change.**

**In the event of loss of the interconnection with the controlling apparatus (e.g. security alarm system) the Siren will detect the open circuit condition and will activate the sounding sequence. Such a loss is considered a tampering attempt.**

## METHODS OF INSTALLATION

### 1st method

Connect +/- 12V terminals on the panel's battery via an 5A fuse.

The SSP command + or - has to be connected to the NC terminal of the optional panel's relay. The COM relay's terminal has to be connected to the + or - AUX terminal. The tamper terminals to a 24 hours zone.

When the panel interrupts the SSP command (panel in alarm) the siren is sounding. It stops by resetting the panel. This method ensures the function of the siren, even when the internal battery of the siren is destroyed.

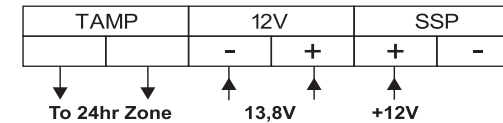


Figure 1. Connection with five wires

### 2nd method

The +SSP or -SSP command has to be connected with the + or -12V DC terminals (schematics). The terminals +/- 12V have to be connected to panel's battery via fuse and the NC/COM contacts of an external relay. The coil of the relay is connected to the bell output terminals. When the panel is not in alarm, voltage +/- 12V DC is connected to the siren and of course on the SSP. In this period the panel is charging the siren's battery and the siren is not sounding. When the panel is activated (in alarm), the +/-12V is disconnected, the SSP is interrupted and the siren is sounding using the internal battery. The disadvantage of this method is that the siren will not sound when the battery is not charged or destroyed. Is the only way to connect the siren in the installation.

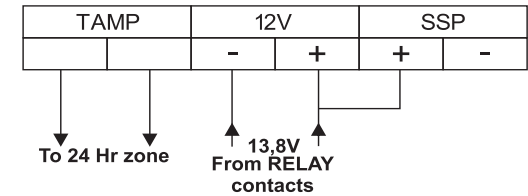


Figure 2. Connection with four wires

### 3rd Method

This method is used to connect the siren with the Paradox panels MG/SP and EVO. The terminals +/- 12V have to be connected in parallel with the panel's battery. Of course we must connect a fuse in serial between the panel's battery and the siren. The -SSP has to be connected to panel's PGM and the terminals of the tamper to a 24 hours zone.

In that case the following addresses must be programmed as below:

a) For MG/SP panels (PGM1)  
**[ENTER] + [INSTALLER CODE] + [220]: 03 01 99**  
**[221]: 03 00 99**  
**[261]: 2 (ON)**  
**[281]: 000**

b) For EVO panels (PGM1)  
**[0] for 3" + [INSTALLER CODE] + [0910]: 064**  
**[0911]: 255**  
**[0912]: 006**  
**[0913]: 007**

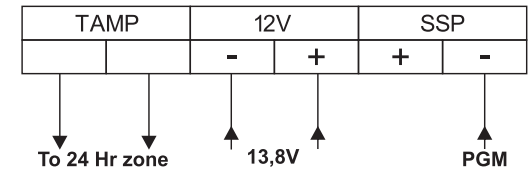


Figure 3. Connection with five wires with panels using the PGM