Outdoor acoustic-optical siren MR100BL, MR100RL

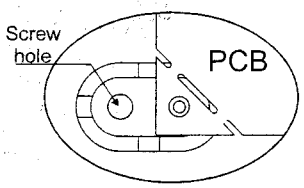
1. Basic features

MR100BL\MR100RL is an outdoor siren, designed for burglary, assault and fire protection alarm systems. Source of acoustic signal is **high effectiveness of special "quasi dynamic" piezoelectric transducer**. Source of optical signal are two high brightness LEDs. The casing has anti-tampering protection from cover opening and from detachment off the base. One of its advantages is very high mechanical shock resistance thanks to using the mixture of 70% polycarbonate and 30% ABS. Circuit impregnation assures high reliability even in severe weather conditions.

2. Assembly

It's supposed to be attached on vertical surface in a place preventing from any damage. Electric light should be pointed down.

Attention: Anti-tampering protection from detachment off the base will operate properly if you screw the back cover element to the wall. See the picture bellow.



3. The way of operation

- Siren MR100BL\MR100RL is equipped with separate control inputs for optical and acoustic parts.

  To turn on an acoustic alarm, change state on input **S**. Different ways of turning an acoustic alarm on is chosen by jumpers:
  - apply power supply - put jumpers **PS-** and **S+** on
  - remove power supply - put jumpers **PS-** and **S-** on
  - apply ground - put jumpers **PS+** and **S-** on
  - remove ground - put jumpers **PS+** and **S+** on
- MR100BL\MR100RL offers 2 alarm tones chosen by 2 jumpers (**S1**, **S2**).
- To turn on an optical alarm change state on input **L**. Different ways of turning an optical alarm on is chosen by jumpers:
  - apply power supply - put jumpers **PL-** and **L+** on
  - remove power supply - put jumpers **PL-** and **L-** on
  - apply ground - put jumpers **PL+** and **L-** on
  - remove ground - put jumpers **PL+** and **L+** on
- MR100BL\MR100RL has 2 anti-tampering protections (cover opening and detachment off the base). Anti-tampering circuit output is connected to pins **SAB**. In normal mode this output is short (NC). Taking jumper **JPS** away causes changing resistance of anti-tampering circuit from short into 2,2kΩ.
- The siren can be activated when releasing input signals duration is longer that 250ms and works as long as the signal release is active. Limit 250ms protects from false alarms.
- External power supply 13,8VDC should be connected to **Vdd** and **GND** pins.
- The duration of the alarm (generated when the power supply is cut off):

Jumper	Acoustic alarm	Optical alarm
1	*1min*	*1min*
4	*4min*	*4min*
16	*16min*	*No limit*

- During installation process do not forget to connect internal battery.

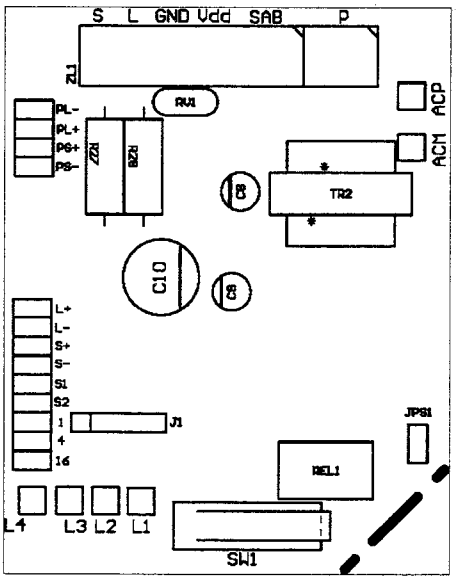
4. LED Status

LED mode	*Siren status*
Flash alternately	*System is not in alarm*
Flash together two times every 5 sec	*Tamper activation*
Flash together three times every 5 sec	*Bell trigger activation*

5. Technical data

- Nominal power supply – 13,8 VDC
- Max. current consumption in alarm mode – 0,5A
- Sound pressure level – 115dB/m
- Rechargeable battery 12V-1,2Ah
- Dimension – 250 x 155 x 67 mm

6. PCB



S	-	Acoustic releasing input
L	-	Optical releasing input
GND	-	Ground
Vdd	-	+13,8V
SAB	-	Anti-tamper circuit (normally close)
ACP	-	Battery plus
ACM	-	Battery minus
P	-	Acoustic output
L1, L2	-	Optical output
L3, L4	-	Status LED steering output
JPS	-	The choice of anti-tamper circuit resistance
PS-, PS+	-	The choice of acoustic input polarization
PL-, PL+	-	The choice of optical input polarization
S1, S2	-	The choice of acoustic alarm tones
S-, S+	-	The choice of acoustic release between power or GND
L-, L+	-	The choice of optical release between power or GND
1, 4, 16	-	Alarm timer (minutes)