SADRIN
mini-barrier

Installation manual

POLITEC
Perimeter protection

1. FEATURES

Each individual beam is formed by two parallel beams 4 cm distant, this system allows to eliminate all the false alarms caused by insects (flies, butterflies etc...) That can be laid at the TX or RX LED, so to get the alarm condition is necessary to obscure both the rays that compose the beam.

The barrier is composed by a transmission unit (TX), which emits synchronized modulated infrared beams, and by a receiving unit (RX), which receives all beams emitted tuned with synchronized signals.
In event of interruption of one or more beams, depending on AND setting or time delay set on DIPSWITCH, receiver column will furnish alarm status by a LED indicator and relay opening.

Dovetail on aluminum profile, allows you to insert or remove polycarbonate front cover, without remove barriers from wall.

It is possible to adjust beams position at required height by loosening locking screw on each board and making them slide inside guide. After this lock screws re-tighten them.

SADRIN barrier is designed to be immune to any disturb given by cell phones used in proximity of it, not generating false alarms and maintaining its operating characteristics.

SADRIN is protected by blinding sunlight up to 300,000 lux, and at any case it is suggested to check solar rotation in horizon to avoid direct sunlight.

It is possible to add up to 8 expansions to motherboard, to realize a barriers composed by 10 different beams, in a profile length up to 4m.

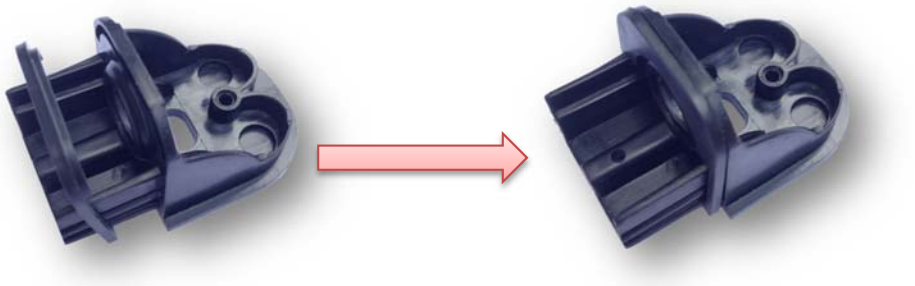
The new top cap design is studied to simplify the fixing of barrier to wall, without needs to drill aluminum profile.

2. MOUNTING

1. Remove devices from carton pipe by applying pressure to side of it to facilitate spillage;

2. Remove top caps and remove IR plastic profile for aluminum.
   If you need to shorten profile, cut it paying attention to avoid that any metal slag falls onto boards;

3. Insert square gasket in base cap;



4. Insert the cable gland gasket into groove;

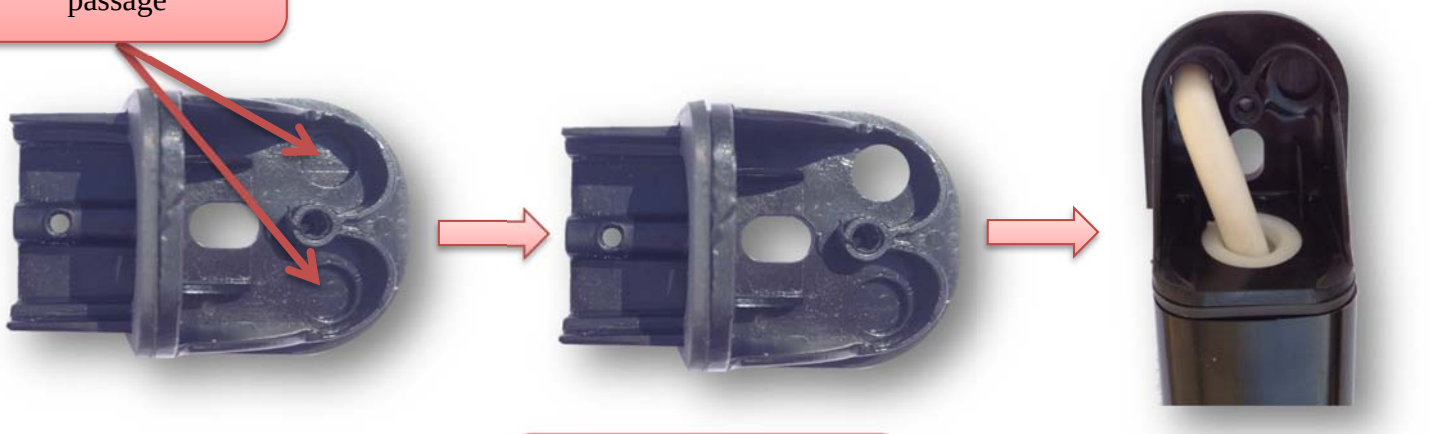
5. Cut cable gland gasket at desired diameter;

6. Insert base cap in aluminum profile, paying attention that gasket is attached to metal;

7. Open holes present on base cap and/or on cover, to allow cable insertion from outside barrier;

BUILT-IN CABLE PASSAGE

Round grooves on base cap for cable passage



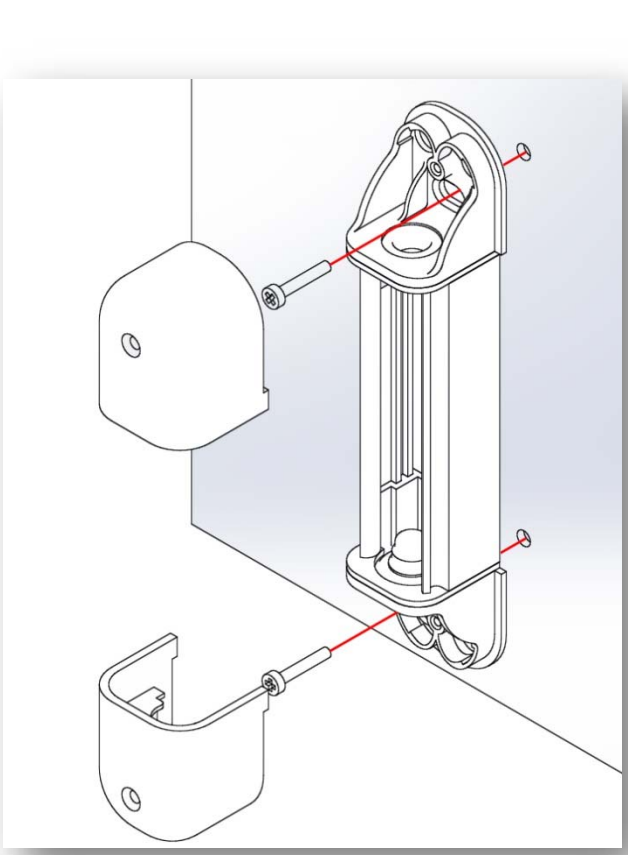
VISIBLE CABLE PASSAGE

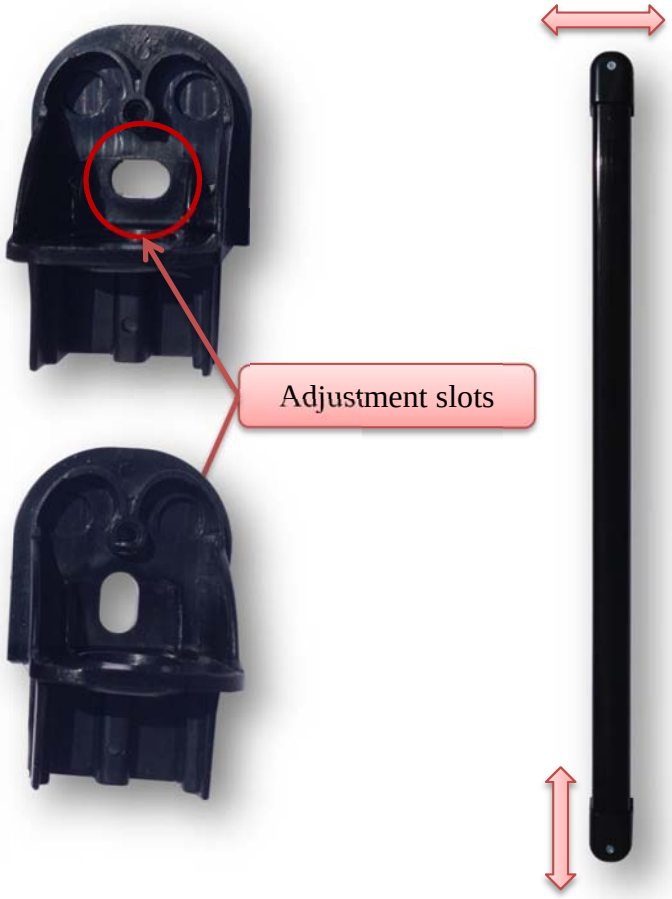
Grooves on base cap walls for cables passage

Grooves on cover cap walls for cables passage

8. On bottom cover cap of column there is a small drop to be incised to ensure drainage of rainwater that could accumulate inside closure;

9. Fix to wall all structure (it is possible to adjust position of column, horizontally and vertically, through slots on base caps)



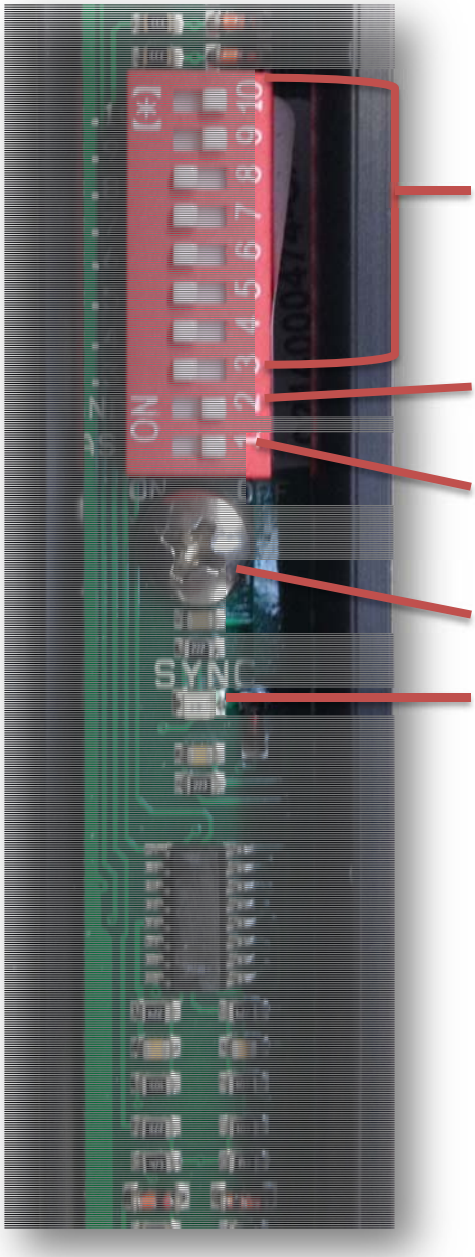


10. After installation and alignment, hang IR profile to aluminum and close top caps with the supplied screws.

3. INSTALLATION

Adjust beams height by loosening screws on the boards, and positioning at requested height, make connections to terminal blocks and seal cable passages to prevent entry of water and insects.
Make sure all boards screws are tightened so that there is a physical contact between boards and aluminum profile, to obtain an electric screening for prevent interferences.

Select and activate, through dip switches, the number of beams installed in barrier.



BEAM: move ON DIPSWITCH up to corresponding number of expansions present in barriers. The missed activation of DIPSWITCH exclude relative beam operation. (Example: 6 expansions added)

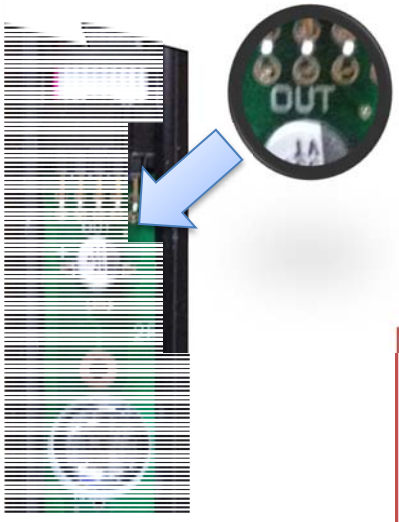
AND: in ON activates double-beam detection (time delay 500 msec)

FAST: single-beam detection (with faster time delay 100 msec)

Board fixing screw

LED SYNC: indicates the operation of the synchronism

- ***Make sure that expansions are properly connected (OUT>IN).***



Power on barriers and check SYNC LEDs are flashing on both Transmitter and Receiver mother boards. In case whereby only TX LED is on, check synchronism connection.

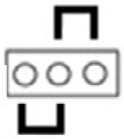
Test function of barrier interrupting a pair of beams at a time, this must report an ALARM event, signaled by RED LED and relay opening.

After test, complete installation choosing desired operation mode for the barrier, as shown in table below.

FUNCTION	DIP POSITION	DELAY
AND	AND - ON FAST - OFF	500ms
FAST	AND - OFF FAST - ON	100ms
NORMAL	AND - OFF FAST - OFF	250ms

After programming, if desired, is possible to turn off LED ALARM on mother boards by a jumper. Close barriers hanging plastic IR profile on aluminum and closing the top caps.

LED ALARM ON

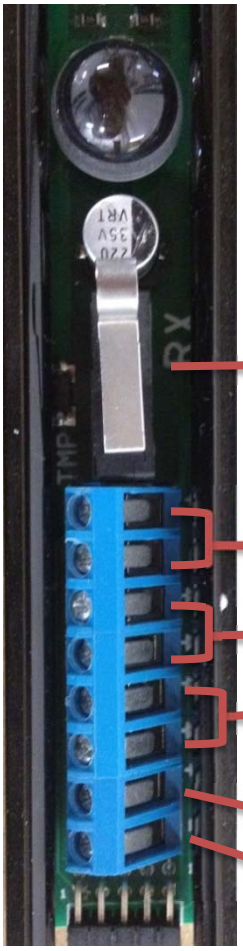


LED ALARM OFF

4. CONNECTIONS

Use screened cables for connection, linking screen to negative of supply -12VDC (GND) on terminal block. In addition to ordinary supply cables, tamper and alarm relay, you MUST connect transmitter side to receiver SADRIN TX - SADRIN RX with a two-wire for the synchronization (+sync TX to + SincRX) (-sync TX to, -sync RX).

RX



Tamper

+
Supply
-
12Vdc

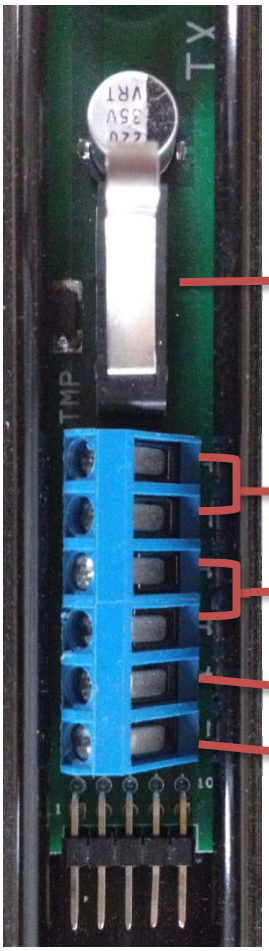
Tamper NC

Alarm NC
100- 500 mA

+ Sinc.

- Sinc.

TX



Tamper

+
Supply
-
12Vdc

Tamper NC

+ Sinc.

- Sinc.

- ***Only for expansions MUST be set in ON a DIPSWITCH (3-10) on relative bench. Beam 1 and 2 always selected, because built-in motherboard.***

5. CABLES & CABLING

Cablings must be done by two separate cables:

- **One (type screened 0.5 mm ^{2} minimum) supplies barrier and allows the transmission of the alarm signal and the tamper.**
- **One (type screened 0.22 mm ^{2} minimum) is synchronism cable to link TX and RX.**

➢ ***The screen of these cables must be connected to negative of 13.8 VDC in terminal blocks of each column.***

12Vdc screen alarm cable

6. TECHNICAL FEATURES

MODEL	SADRIN 205	SADRIN 410	SADRIN 615	SADRIN 820
Max range outdoor	Black 15m; White 5m			
Synchronism	wired			
Dual beam optical	Yes with 35mm lenses in AND			
Max configuration	2TX+2RX	4TX+4RX	6TX+6RX	8TX+8RX
Beam operating	Parallel			
Supply	13,8 Vdc			
Consumption (tx+rx)	60mA	90mA	120mA	150mA
Optional heaters	Up to -50°C, 12Vdc From 560mA to 3920mA tx + rx)			
Alarm output	Free contact relay (on RX side)			
Tamper output	On both columns			
Protection degree	IP54			
Dimensions	25mm x 22 mm from 500 to 4000mm			
Weight per column	250g	500g	750g	1000g

7. F.A.Q.

Barrier remains in alarm	• Mare sure on both columns synchronism has been wired in correct way and check presence of blinking LEDs on both RX and TX; • Make sure DIPSWITCHES configuration is correct; • Make sure all expansions are well connected by flat cable; • Make sure installation has been made within max range (especially in white colour).
Barrier gives false alarms	• Make sure no animals or obstacles are interesting beams range, in case not, if possible activate AND operation mode; • Make sure receiver column is not perpendicularly stricken by sunrays; • Make sure voltage on terminal block is higher than 12,6 Vdc; • Use a screened cable for power, contact and syncronism wiring, connecting screen to negative of supply to terminal block (GND); • Install columns in “stellar” configuration avoiding “cascade” one; • Use where possible a “linear” power supply, avoiding switching one; • For installation distance under 1,5m remove lenses to get a more accurate signal.