



ELECTRONIC CONTROL UNIT (cod. 2302B Series) for swing gates automation (Mini Tank Series)

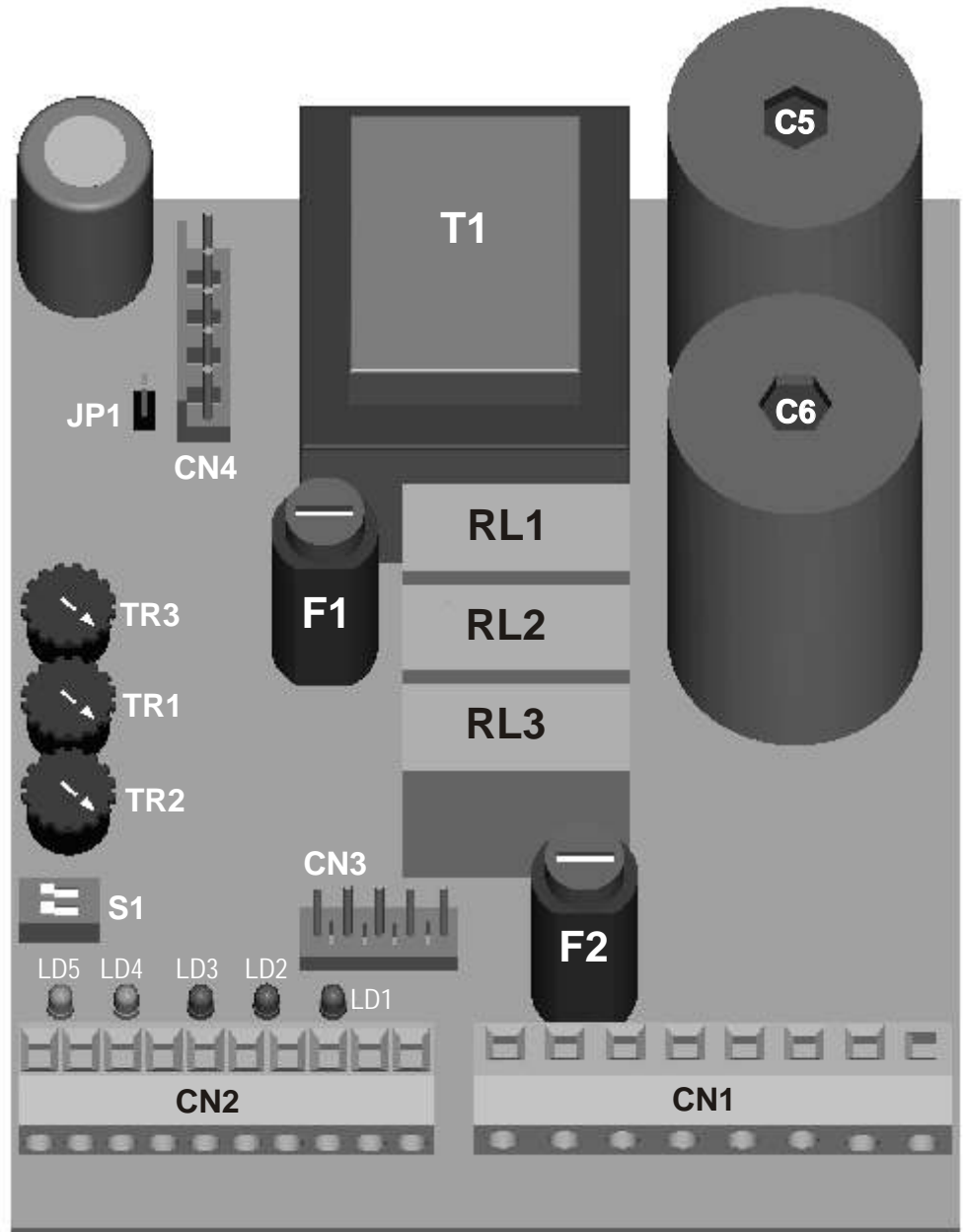
Accessories power supply:
24V dc Max 200 mA

Trimmer regulation:
Operating times
Open pause time
Leaf delay in closing

Logics selection:
Automatic
Semiautomatic

Pin header connector:
Radio receiver
Auto-test cards
for photocell

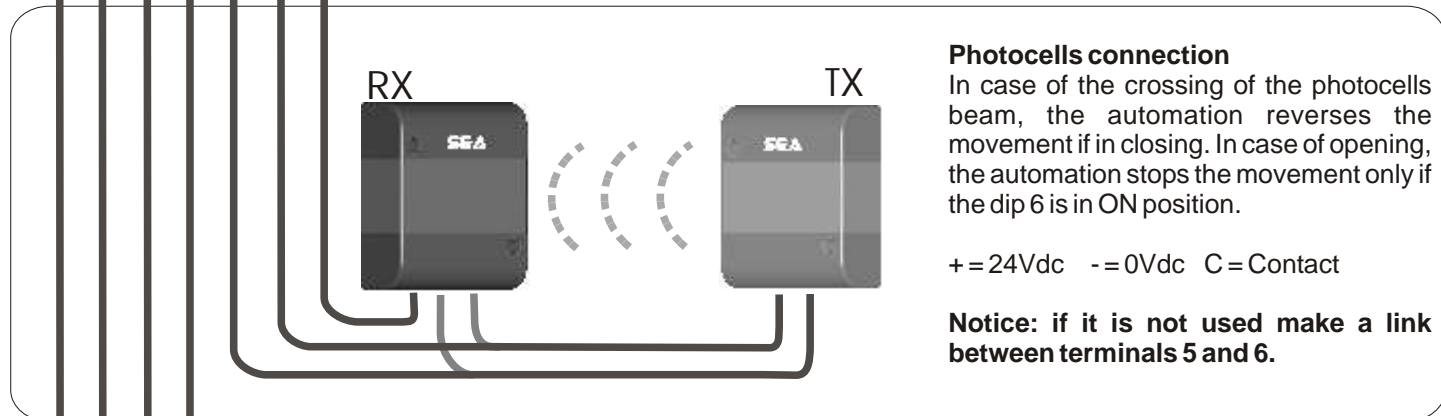
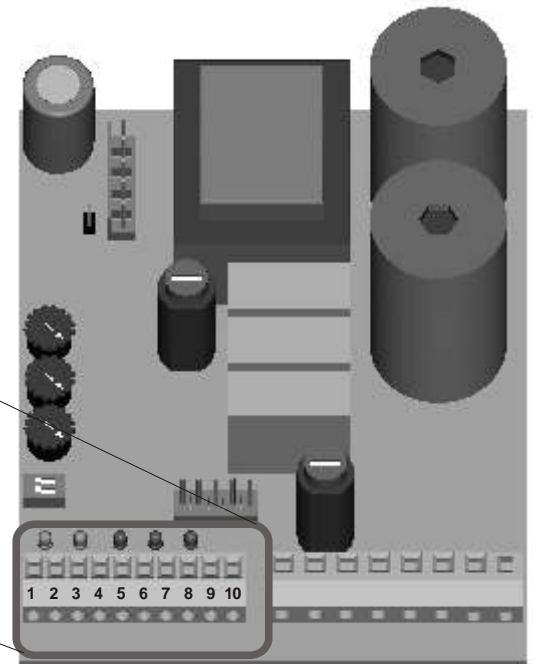
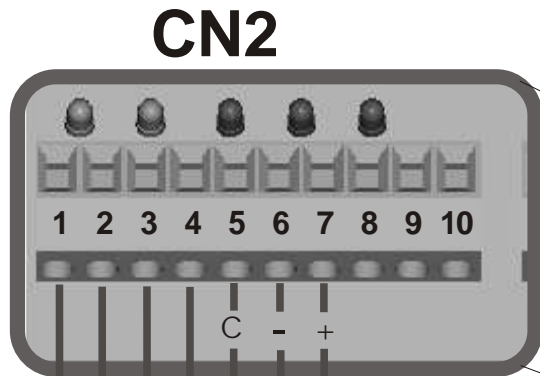
Main features:
Pedestrian opening
Flashing lamp 115V
Safety input



LD1: Status Indicator Lamp Led
LD2: Photocell Led
LD3: Stop Led
LD4: Pedestrian Start Led
LD5: Start Led
TR1: Open Pause Time Trimmer
TR2: Leaf Delay in Closing Trimmer
TR3: Motor Run Time Trimmer
S1: Logic Programming Dip Switches
F1: 500 mA Logic Fuse
F2: 5A Motor Fuse

T1: 6 VA Transformer
CN1: Power supply Terminal Connector
CN2: Main Terminal Connector
CN3: Modular Radio Connector
CN4: Photocell Card Connector
C5: Motor 1 Capacitor
C6: Motor 2 Capacitor
JP1: Photocell Card Jumper Link
RL1: Motor Direction Relay
RL2: Motor 1 Relay
RL3: Motor 2 Relay

CN2: Main Terminal

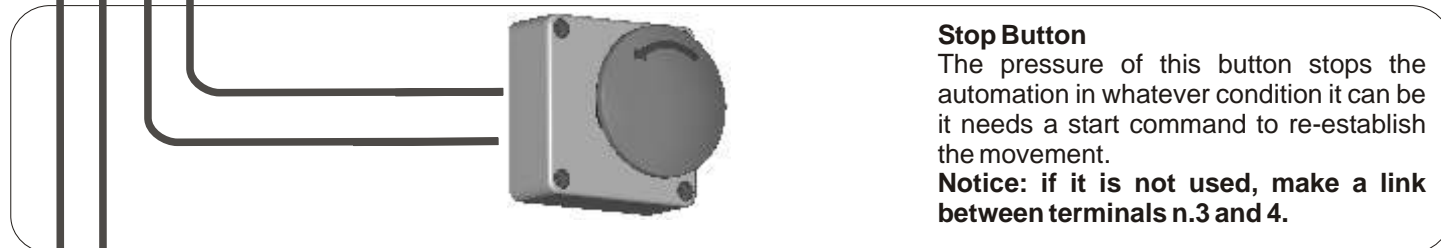


Photocells connection

In case of the crossing of the photocells beam, the automation reverses the movement if in closing. In case of opening, the automation stops the movement only if the dip 6 is in ON position.

+ = 24Vdc - = 0Vdc C = Contact

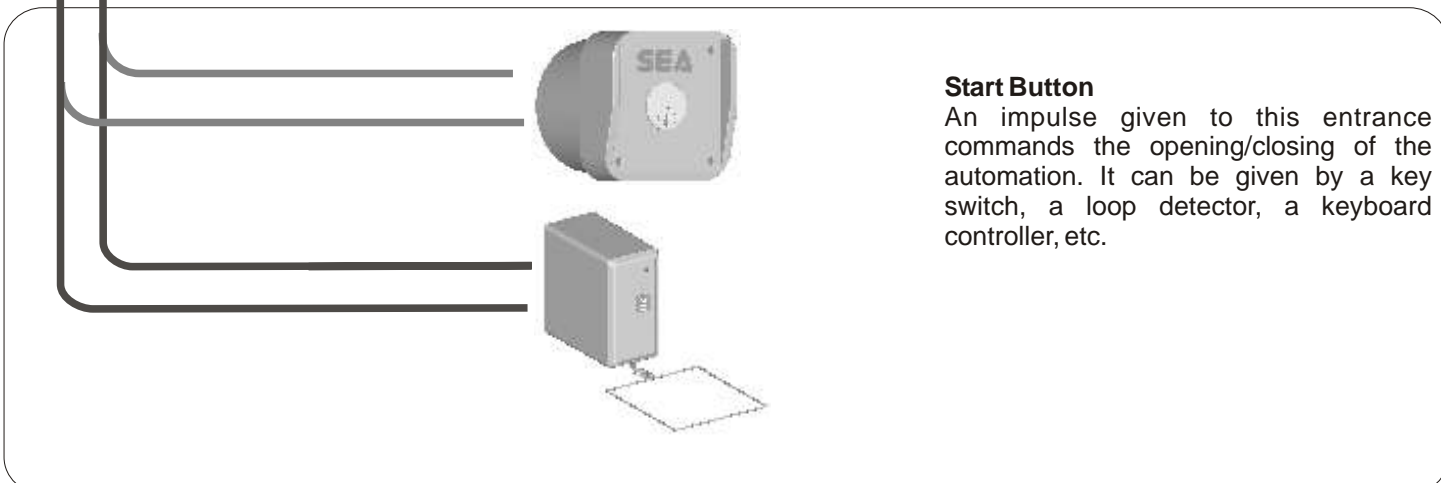
Notice: if it is not used make a link between terminals 5 and 6.



Stop Button

The pressure of this button stops the automation in whatever condition it can be it needs a start command to re-establish the movement.

Notice: if it is not used, make a link between terminals n.3 and 4.

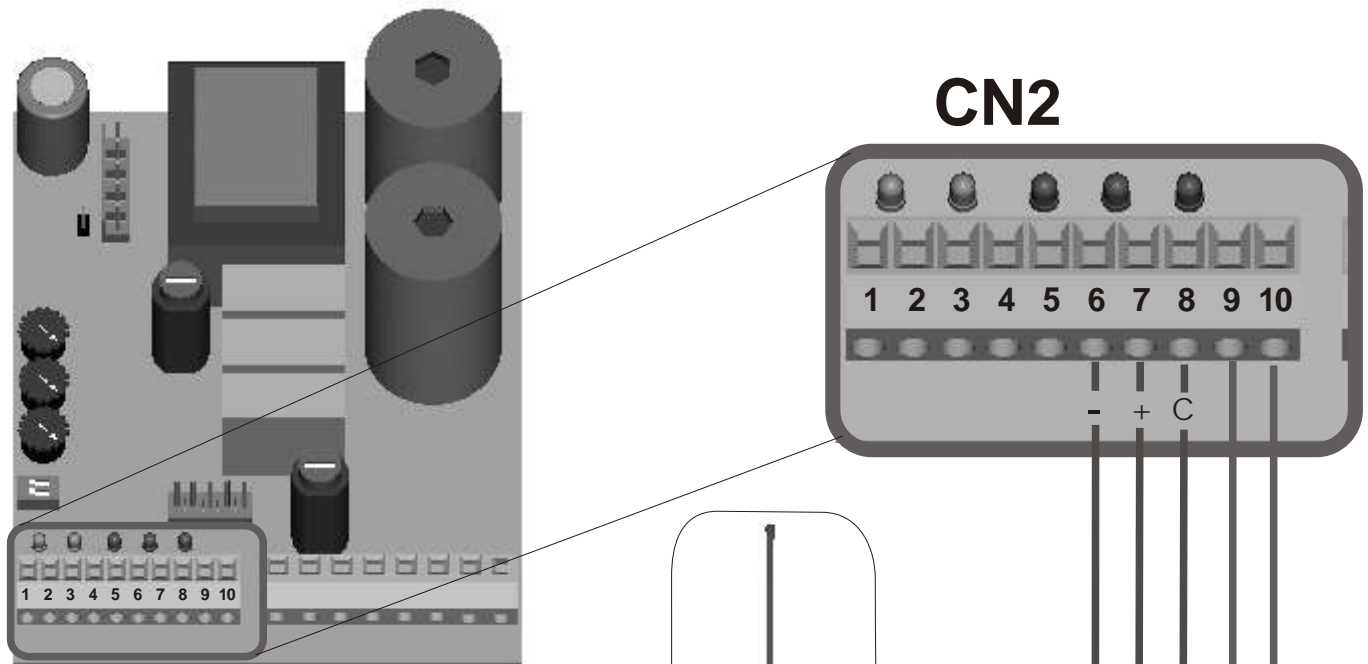


Start Button

An impulse given to this entrance commands the opening/closing of the automation. It can be given by a key switch, a loop detector, a keyboard controller, etc.



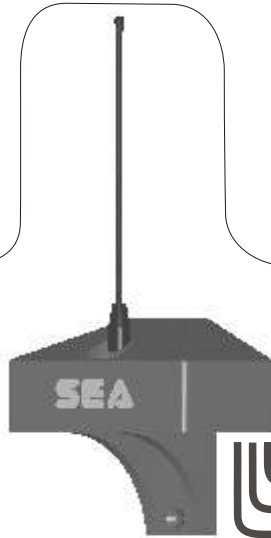
CN2: Main Terminal



Connection of a radio receiver

This connection allows to command the total opening/closing of the automation. For the receiver connection make reference to the related instruction manual.

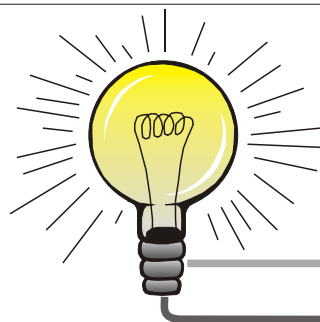
+ = 24Vdc, - = 0Vdc, C = Contact



Indicator lamp

24Vdc max 1W indicator lamp exit

When the automation is in the opening or in the pause phase, the indicator stays switched on. When it is in the closing phase, it flashes.



Pedestrian Start

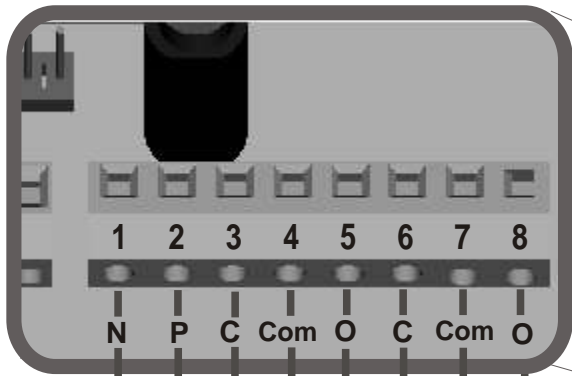
To obtain a pedestrian opening (single-leaf opening) connect the key-button wires (code 23103015) as in the picture. It is possible to connect other command devices (push button board, radio receiver, decoder with keyboard).

Note1: the contact for the pedestrian opening is a N.A. contact

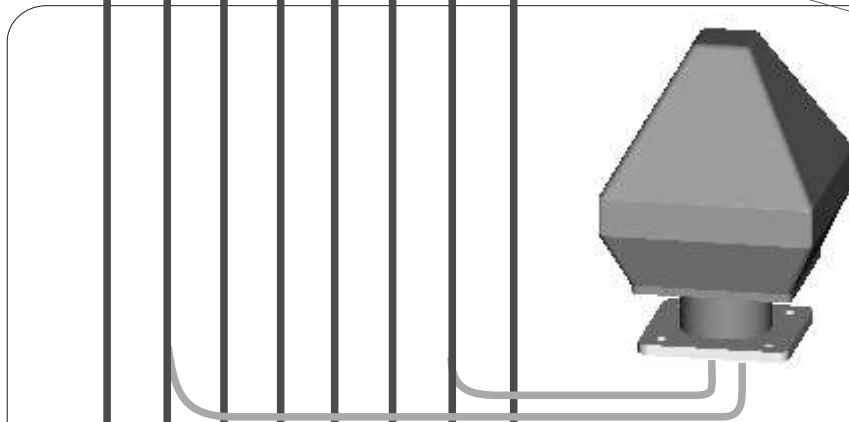
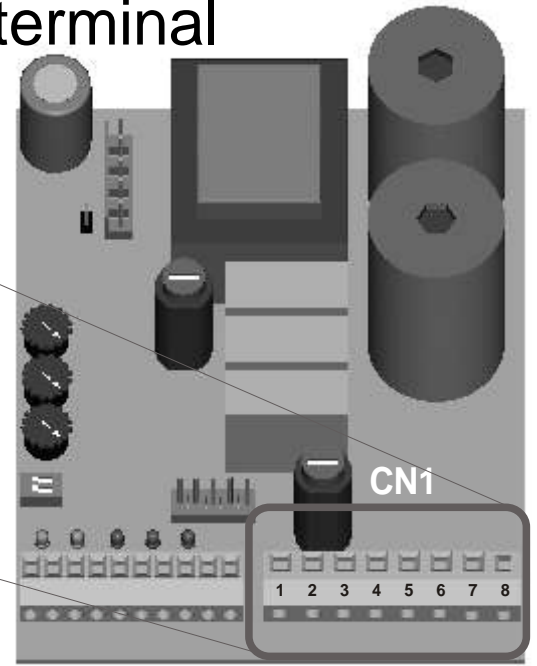
Note2: the pedestrian opening will be always executed on the **M2** engine.



CN1: Power supply and motors terminal



CN1



Warning Lamp

The warning lamp, which must be placed, must have a flashing card (code 23104015). To have it linked connect the flashing lamp wires as in the picture.

P = Phase
Com = Common 1 Motor



ENGINE 2

Exit for the connection of the engine 2

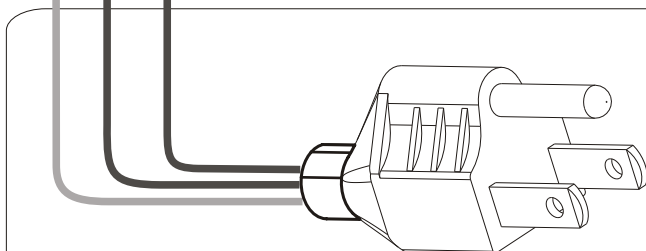
O = OPEN
C = CLOSED
Com = COMMON (engine white cable)
G = GROUND (engine green cable)



ENGINE 1

Exit for the connection of the engine 1

O = OPEN
C = CLOSED
Com = COMMON (engine white cable)
G = GROUND (engine green cable)



Net power supply entrance

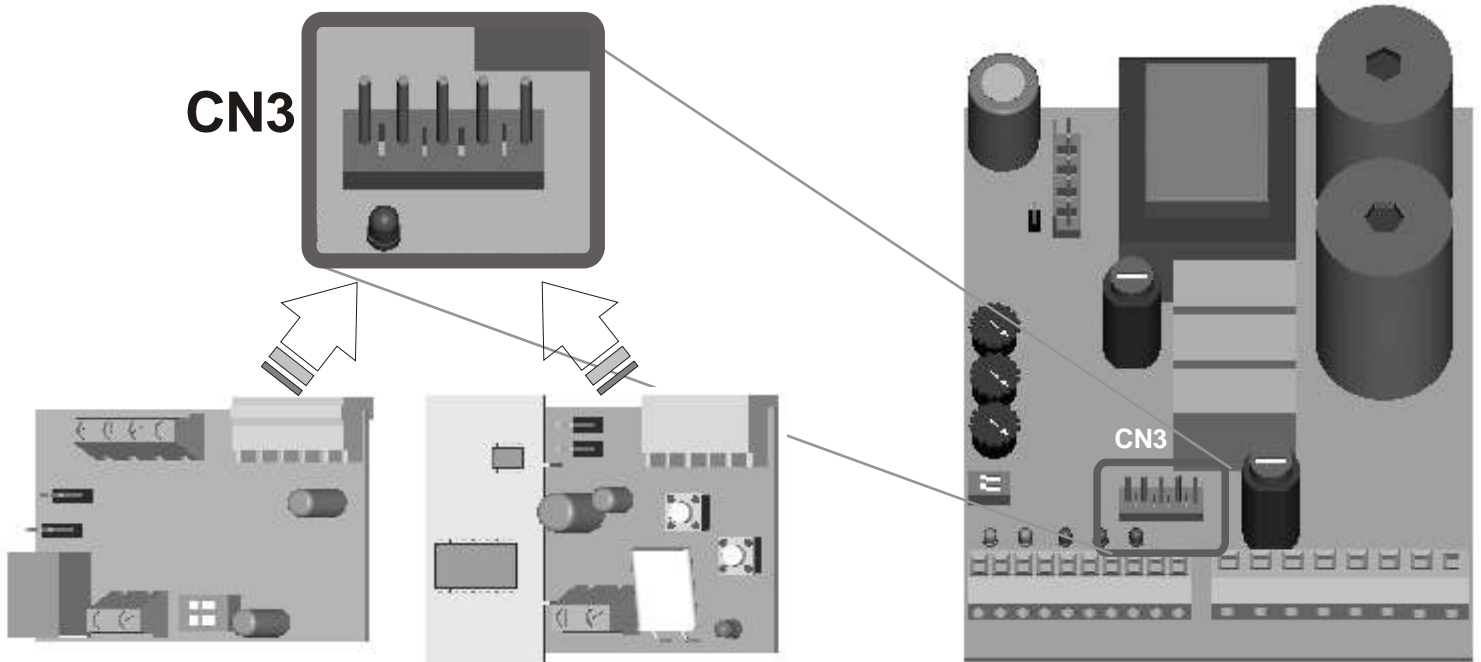
Entrance for the electric net connection

P = PHASE
N = NEUTRAL
G = GROUND

NOTICE: for the connection of the electric net make reference to the current laws.

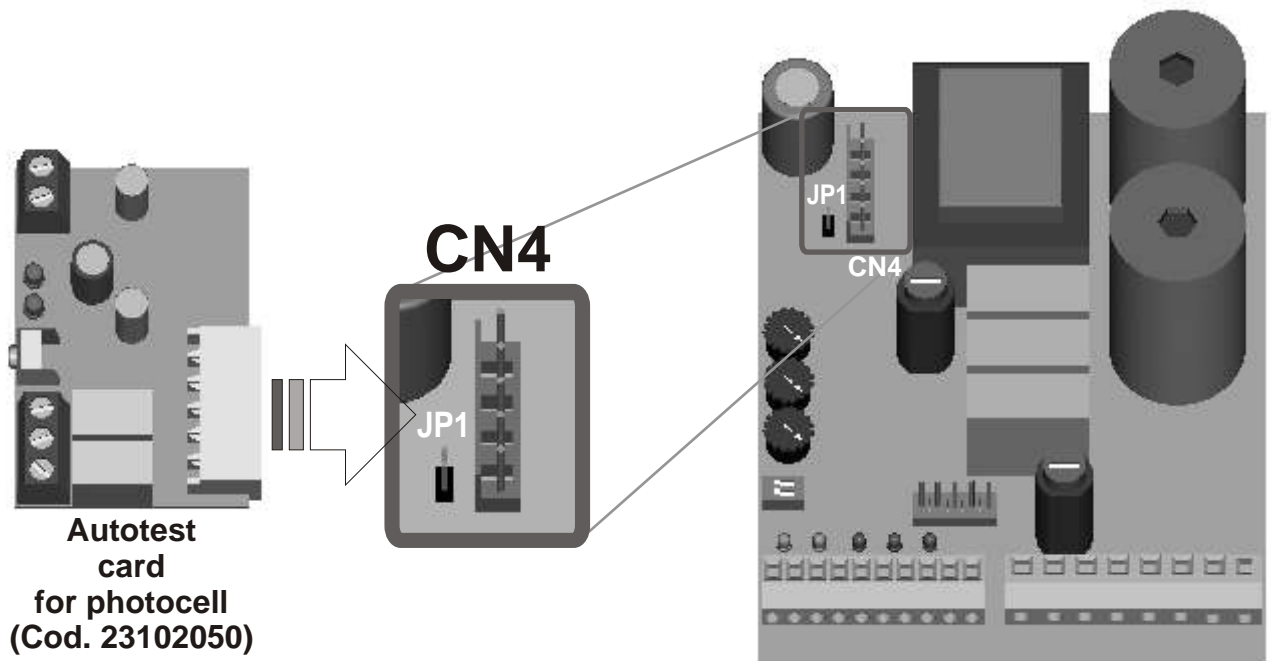


CN3: Radio Receiver Connector or decoder module



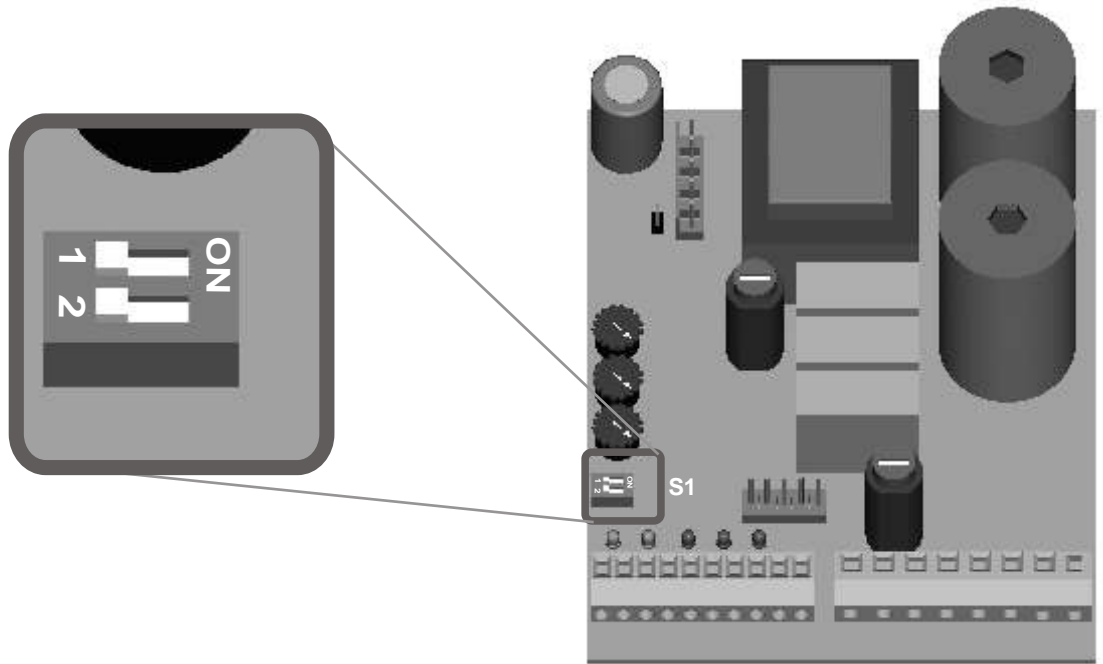
Notice: This connector is used only for the rapid connection of SEA designed products. Connector used for the rapid connection of inserting receivers or of the Decoder Module with keyboard.

CN4: Connector for autotest card for photocell



The **CN4** connector can be used only to insert the **autotest card for photocell (code 23102050)**; for the setting up make reference to the assembling instructions of the product itself. The autotest card mentioned above checks the good working of max two couples of photocells before every opening and closing. In case one of the two couples of photocells does not work correctly this card stops the equipment not allowing the opening or the closing.
NOTICE: in case the autotest card is used the **JP1 jumper** must be disconnected; this will make the terminal N.5 of the CN2 connector unusable.

S1: Programming Dip-switch



FUNCTION DESCRIPTION

The equipment in the picture has a two-microswitches group (s1) with which the two open-gate working options can be programmed (S2 is not used).

OPERATING LOGIC

The open-gate working can be programmed in the following way acting on dip switch (S1) and following the programming table:

* Automatic logic

sending the opening impulse (start) the automation opens, it stays opened during all the programmed pause time (TR1), then it closes automatically.

Sending a second start impulse:

- during the opening it is not accepted;
- with the gate opened the immediate closing is commanded;
- during the closing the automation opens again.

* Semi-automatic logic

A start command opens the automation, a second command stops it, a third impulse closes it.

Sending a second start impulse:

- during the opening the gate stops;
- with the gate opened the closing is commanded;
- during the closing the automation opens again.

DIP	SWITCHED ON / SWITCHED OFF	DIP 1 PROGRAMMING FOR THE CHOICE OF THE OPERATING LOGIC
1	ON	If Dip 1 is set out in this way, this equipment will operate following the automatic logic (A)
1	OFF	If Dip 1 is set out in this way, this equipment will operate following the semi-automatic logic (E)

2	SWITCHED ON / SWITCHED OFF	NOT USED
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TR3 working time regulation

The trimmer TR3 regulates the working time for both the leaves. This time can be modified from 0 to 120 sec.

Time increases turning the trimmer clockwise.

TR1 pause time regulation

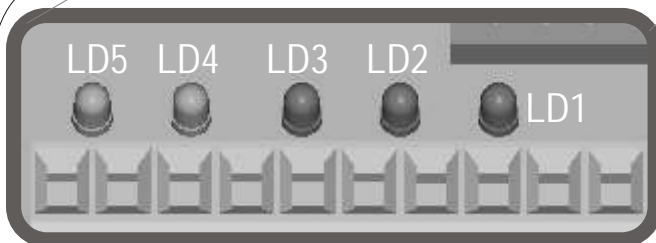
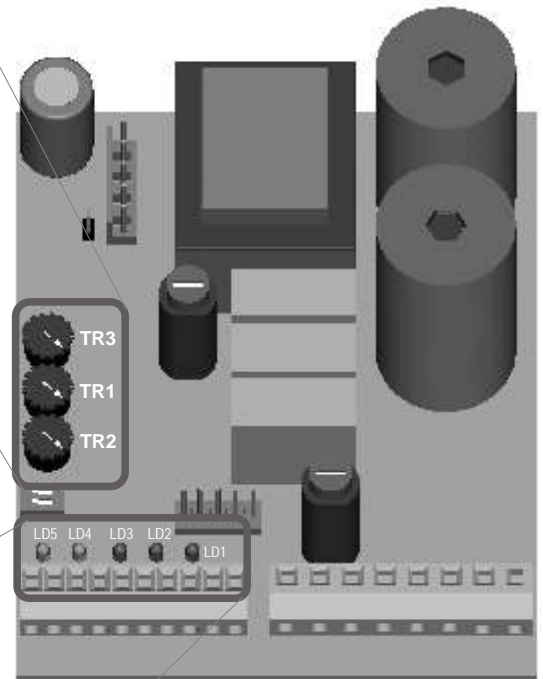
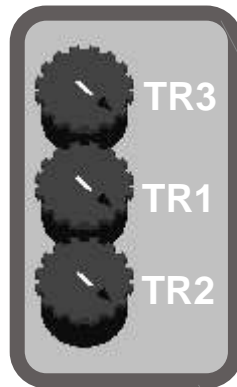
The trimmer TR1 regulates the pause time (time for which the leaves stay opened before closing automatically).

This time can be changed from 0 to 120 sec. Time increases turning the trimmer clockwise.

TR2 time regulation for the leaf delay in closing

The trimmer TR2 regulates the time of leaf delay in closing (M2). This time can be changed from 0 to 16 sec. Time increases turning the trimmer clockwise.

NOTICE: To allow a correct reading of the trimmers do the adjustments with the gate closed.



Diagnostic leds entrances and exits

LD5(PEDESTRIAN START)

It must be normally switched on and it must switch off when an pedestrian opening order is given to open a single leaf (for ex. key switch, keyboard etc)

LD4(START)

It must be normally switched on and it must switch off when an opening command is given (for ex. Radio receiver, key switch, loop detector reader, etc)

LD3(STOP)

It must be normally switched on and it must switch off when a stop command is given

LD2 (PHOTO)

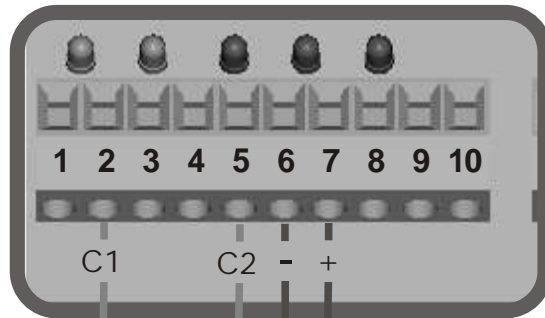
It must be normally switched on and it must switch off when the photocell is obscured

LD1 (INDICATOR LAMP)

It must be normally switched off and it must switch on when the automation is in the opening or in the closing phase and it must flash when it closes.

**CONNECTING SCHEME OF THREE READERS OF MAGNETIC LOOP DETECTORS:
TWO OF THEM USED AS SECURITY DEVICE AND ONE AS FREE EXIT.**

CN2: Main terminals

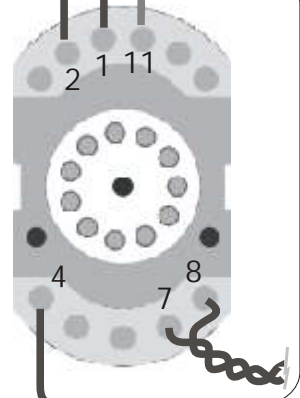


C1 = Opening contact
C2 = Safety contact
+ = 24 Vdc
- = 0 Vdc

SAFETY LOOP 1

Connecting scheme of loop detector 1 reader.

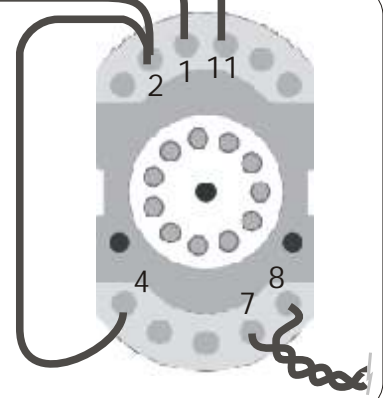
- 2 = 0V
- 1 = 24V
- 11 = Contact exit n.c.
- 4 = Common contact n.c.
- 7 = Wire loop
- 8 = Wire loop



SAFETY LOOP 2

Connecting scheme of loop detector 2 reader.

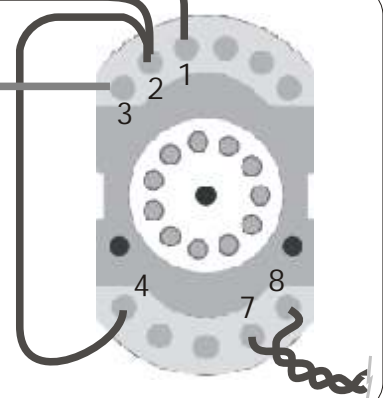
- 2 = 0V
- 1 = 24V
- 11 = Contact exit n.c.
- 4 = Common contact n.c.
- 7 = Wire loop
- 8 = Wire loop



FREE EXIT LOOP

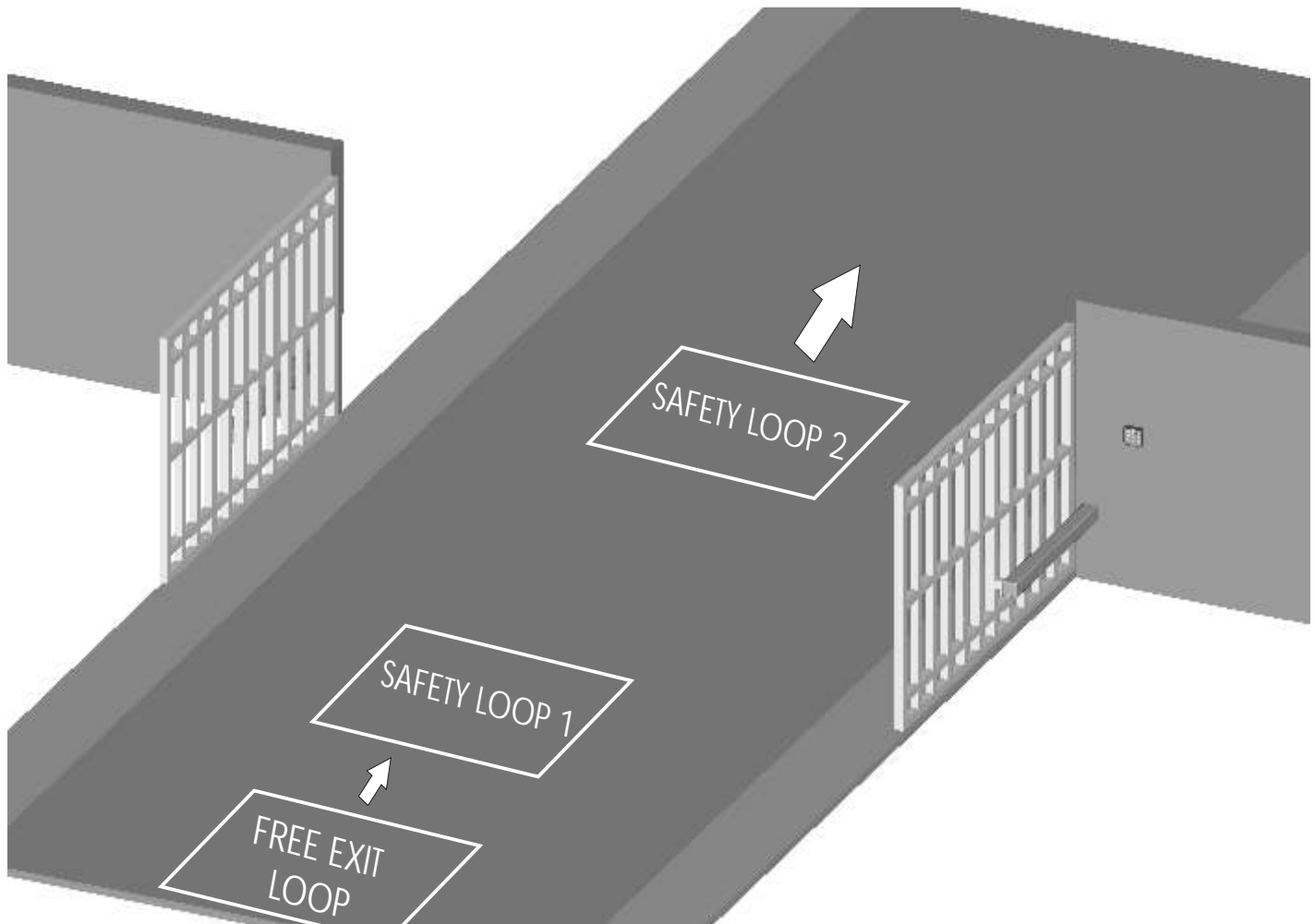
Connecting scheme of loop detector reader.

- 2 = 0V
- 1 = 24V
- 3 = Contact exit n.o.
- 4 = Common contact n.o.
- 7 = Wire loop
- 8 = Wire loop





INSTALLATION SCHEME OF THREE READERS OF MAGNETIC LOOP DETECTORS: TWO OF THEM USED AS SECURITY DEVICE AND ONE AS FREE EXIT.



Notice: This kind of installation does not guarantee security to pedestrians.

SAFETY PRECAUTIONS

All electrical installation work should conform to the current edition of the LEE Regulations and all electrical work should only be carried out by a competent electrician. A 16A - 0,03A differential switch must be incorporated into the mains electrical supply of the gates. Earth bonding of the entire gate system must be correctly carried out. To prevent mains interference all low voltage cabling (Push button, Photocell, Radio etc.) should be run in separate cable ducts from main carrying cables.

Note: Use "cable clips" and/or "duct/box pipes" fitting close to the control panel box so to protect the interconnection cables against pulling efforts.

SPARE PARTS

To obtain spare parts contact:

SEA USA Inc. 2806 N.W. 79th AVENUE MIAMI, FL 33122

INTENDED USE

The 2302B (Series) electronic control unit has been designed to be solely used as control unit for the automation of doors, gates and leaves being moved by one or two operators MiniTank SC (without electric lock).

LIMIT OF GUARANTEE

The 2302B (Series) electronic control unit is guaranteed for a period of 24 months. The guarantee period starts from the date stamp printed on the unit. The 2302B (Series) guarantee will be void if the unit has been incorrectly installed, not used for the intended purpose, tampered with or modified in any way.

The validity of this guarantee only extends to the original purchaser of the unit.

NOTE: THE MANUFACTURER CAN NOT BE DEEMED RESPONSIBLE FOR ANY DAMAGE OR INJURY CAUSED BY IMPROPER USE OF THIS PRODUCT.