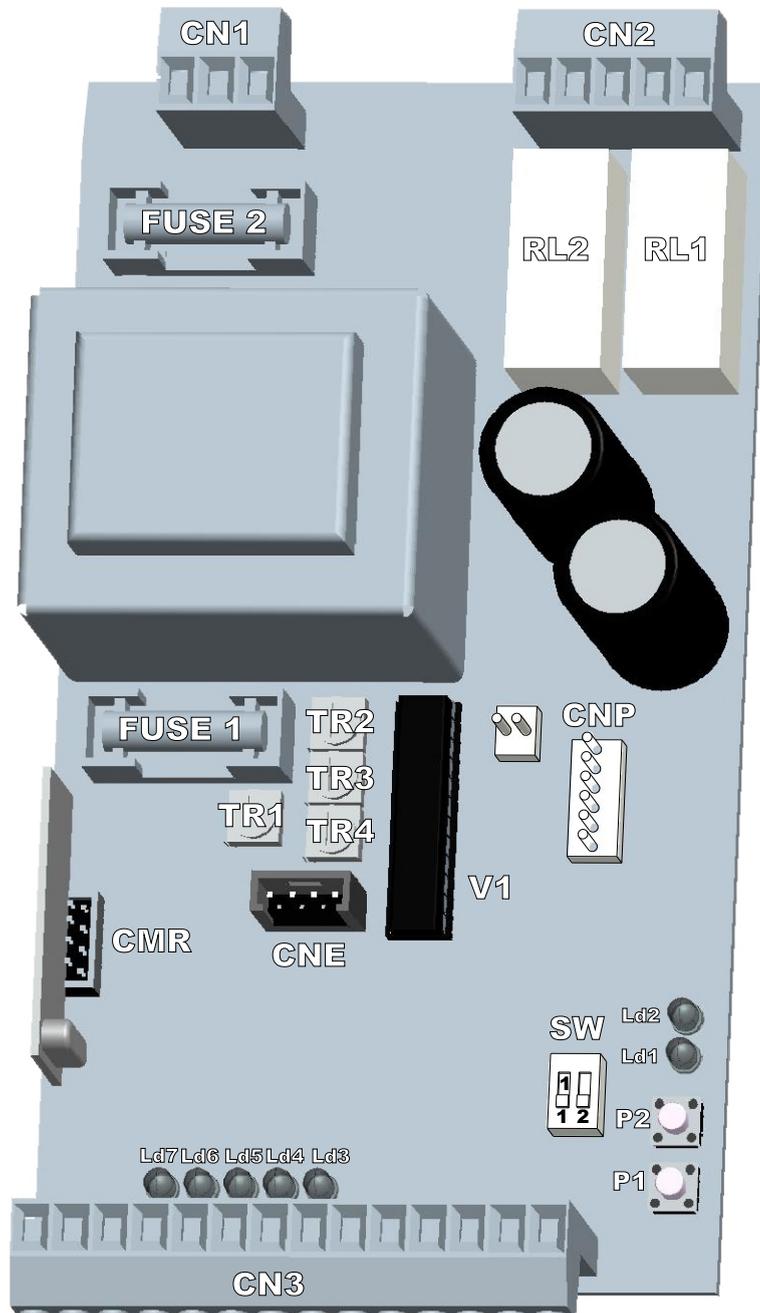


# SLIDE CONTROL UNIT



**SEA USA Inc.**  
**10850 N.W. 21th Street - MIAMI, FL 33172**  
**Tel. +1.305.594.1151 - +1.305.594.7325**  
**Toll free: +1.800.689.4716**

**web site: [www.sea-usa.com](http://www.sea-usa.com)**

**e-mail: [sales@sea-usa.com](mailto:sales@sea-usa.com)**

# SLIDE CONTROL UNIT

**Accessories power supply:**  
24V dc Max 200 mA

**Trimmer regulation:**  
Open pause time  
Brake regulation  
Motor torque regulation  
Encoder sensitivity adjustment /  
slowdown motor torque

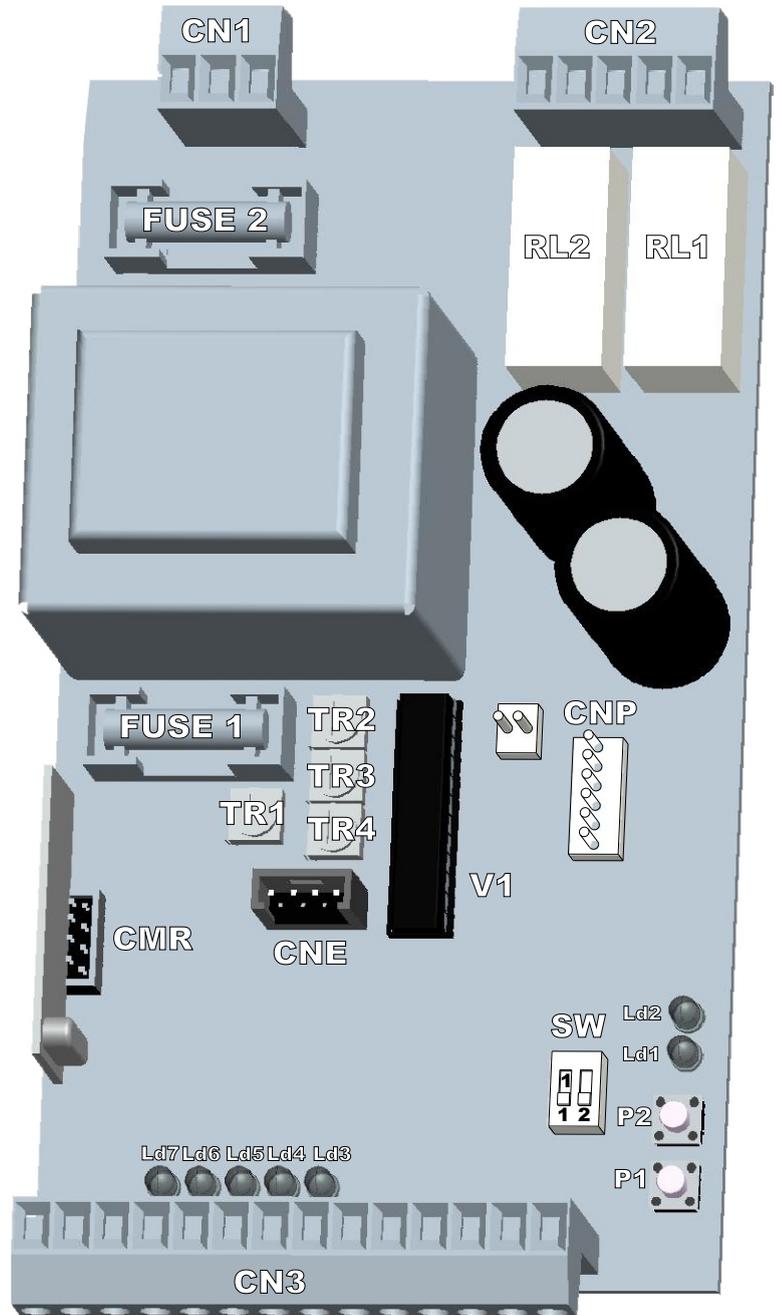
**Logics selection:**  
Automatic  
Semiautomatic  
Condominium

**Pin header connector:**  
Radio receiver

**Main features:**  
Regulable  
Device of anti-crushing reversal

Partial Start with Radio receiver or  
with Start Button

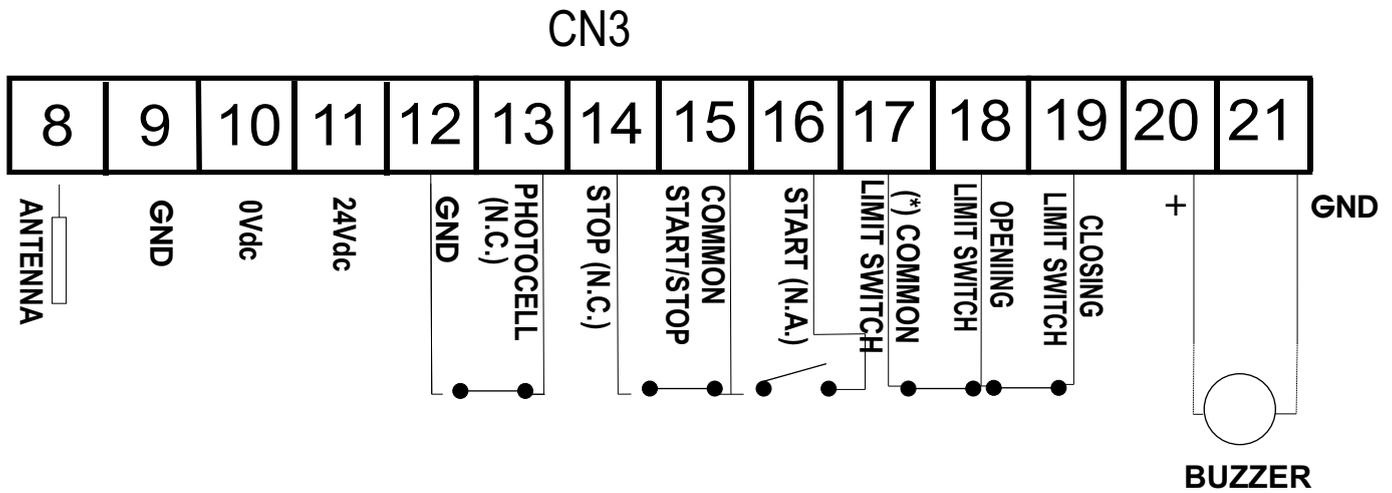
Stop from the remote control



FUSE 1	Fuse 24Vdc (2A)
FUSE 2	110Vac (10A)
TR1	Pause time adjustment (0 sec.-4 min.)
TR2	Motor torque adjustment
TR3	Encoder sensitivity adjustment / slowdown motor torque
TR4	Distance slowdown adjustment (disable)
SW.1	Automatic closing enabling
SW.2	Encoder enabling
RL 2	Motor direction relay
RL 2	Motor enabling relay
CN 1	Power supply 110Vac connector
CN 2	Motor connector - flashing light

CN 3	Low tension connector
CMR	Radio receiver connector
CN E	Encoder connector
LD1	Board and radio transmitter programming
LD2	Board and radio transmitter programming
LD3	Led limit switch 1
LD4	Led limit switch 2
LD5	Led Start
LD6	Led Stop
Ld7	Led photocell
CNP	Programming connector
U1	Microcontroller

# CONNECTIONS



**(\*)Notice1:**

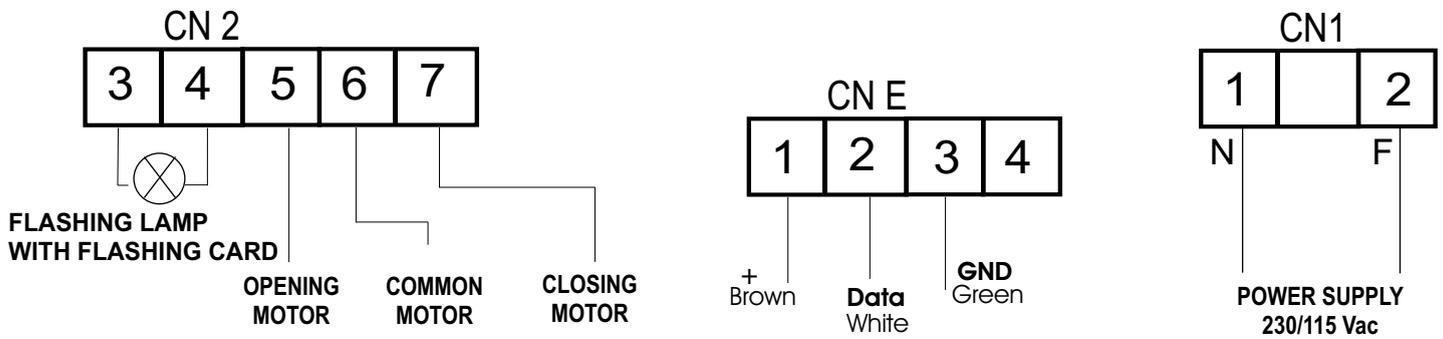
In case of inductive limit switch, connect the limit switch 0Vdc to the entry “common limit switch”.

**Notice2:**

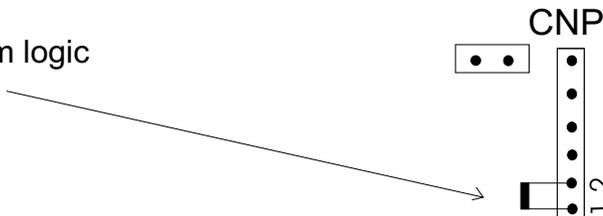
Bridge the normally closed contacts of the stop and/or photocell, if they are not enabled.

**Notice3:**

Output 24V, max 200mA.

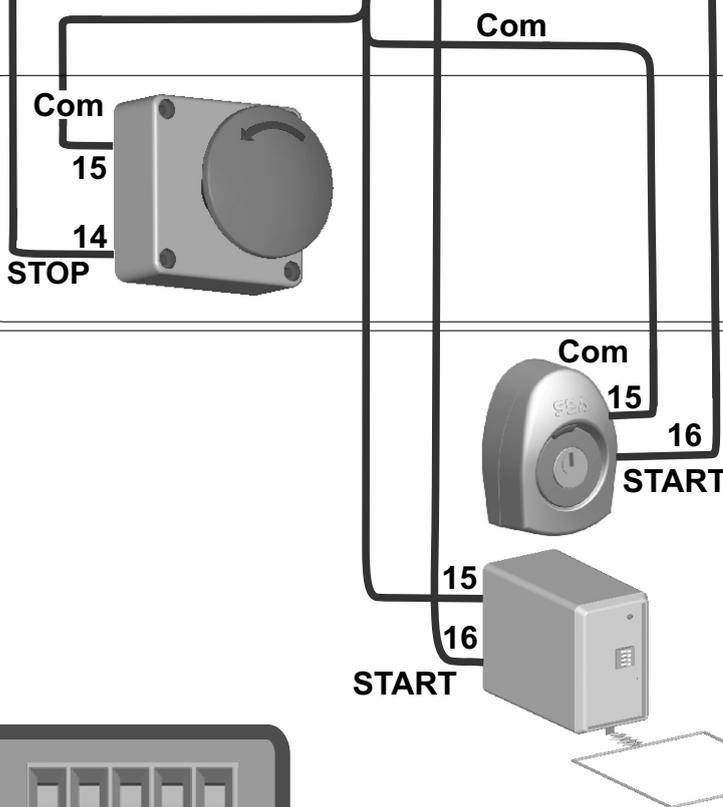
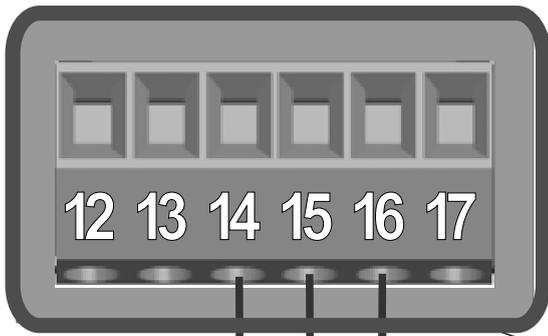
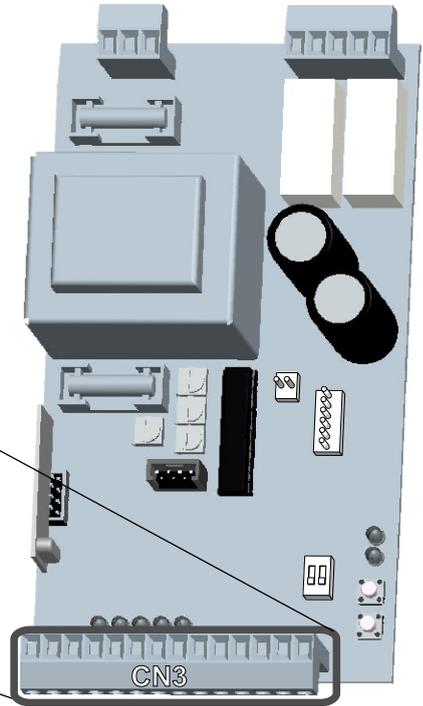


The Jumper enables the condominium logic



# STOP BUTTON, START BUTTON

## PHOTOCELLS CONNECTIONS



### Stop Button

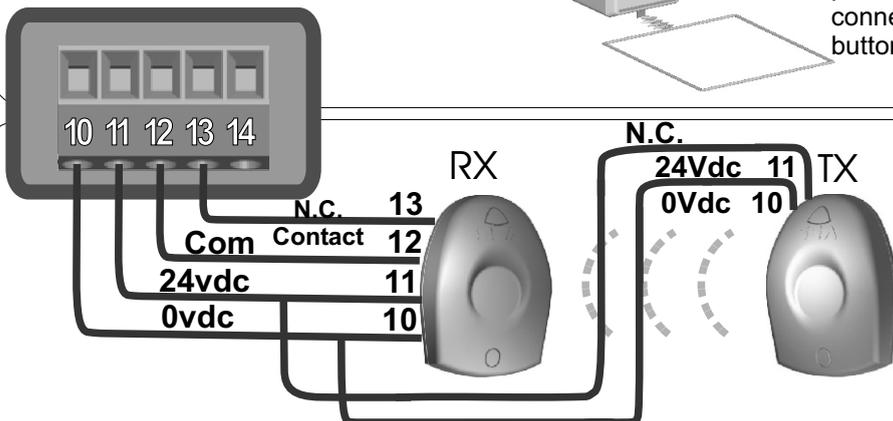
The pressure of this button stops the automation in whatever condition it can be it needs a start command to re-establish the movement. This function is activable also with remote control

**Notice:** if it is not used, make a link between terminals n.14 and 15.

### 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.

This function is activable also with remote control. To connect the supplied devices (for ex. Loop detector) see the related instructions. By pushing this button for more than 2sec. It is possible to activate the partial opening. On the remote control it is also possible to set a button for partial opening. On the start button it is possible to connect a Timer that to held open the gate until the button is not released.



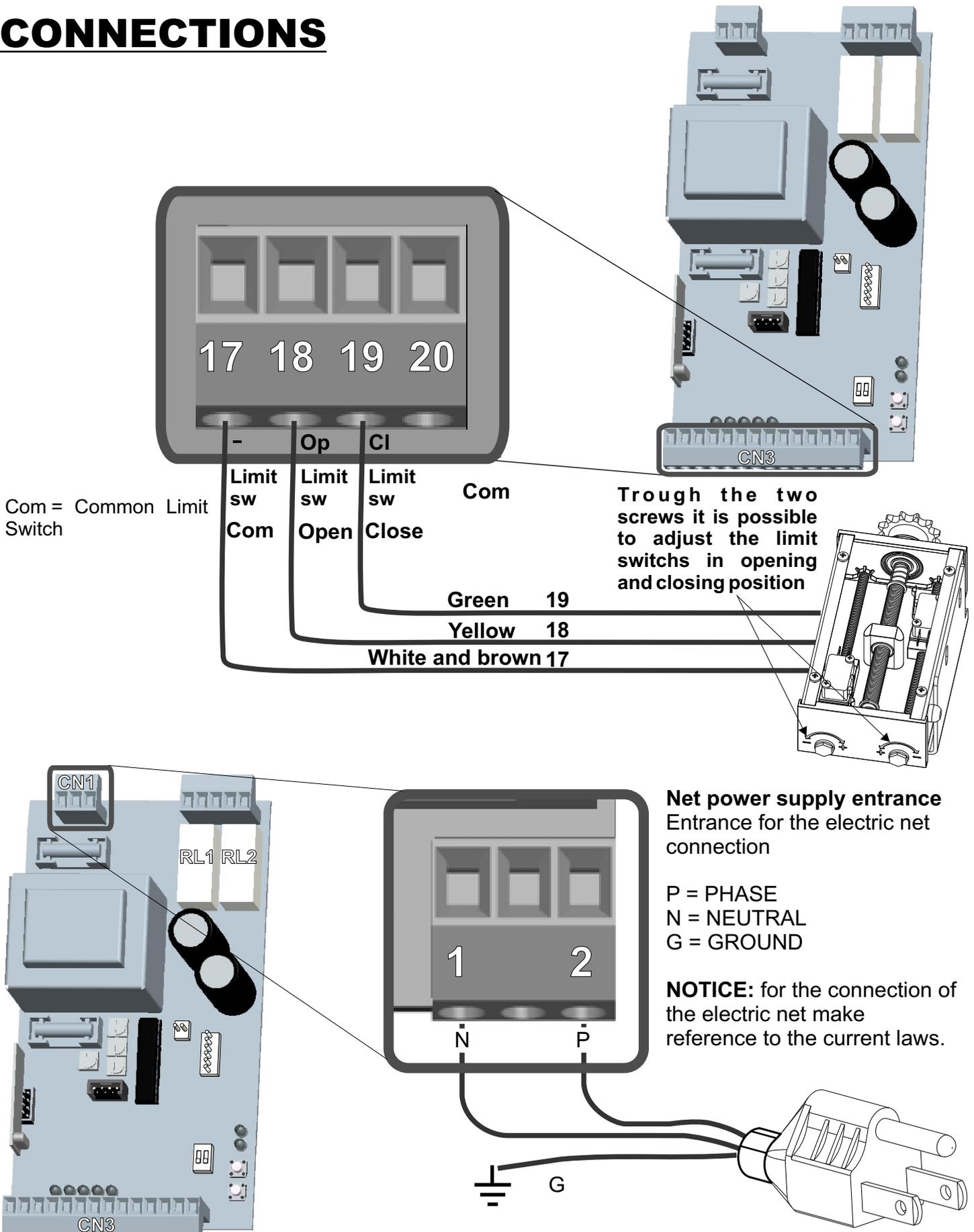
### Photocells Connection

When the photocells beam is crossed, the automation reverses its movement if in closing phase.

**Notice:** if it is not used, make a connection between terminals 12 and 13

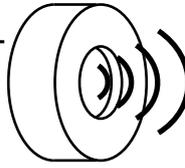
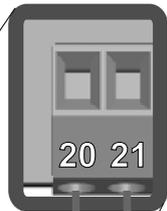
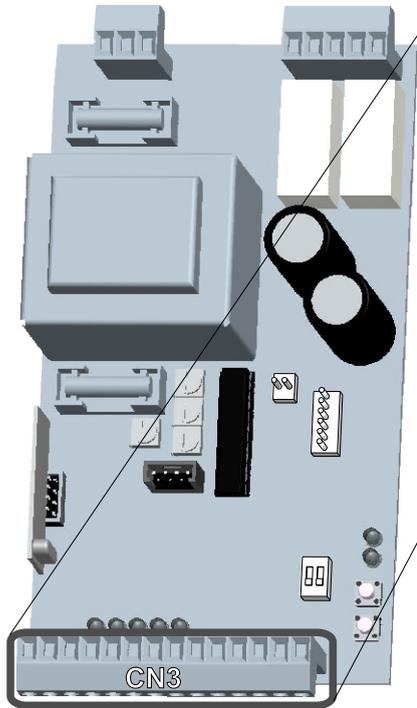
+ = 24Vdc    - = 0Vdc    C = Contact

# LIMIT SWITCH, POWER SUPPLY CONNECTIONS



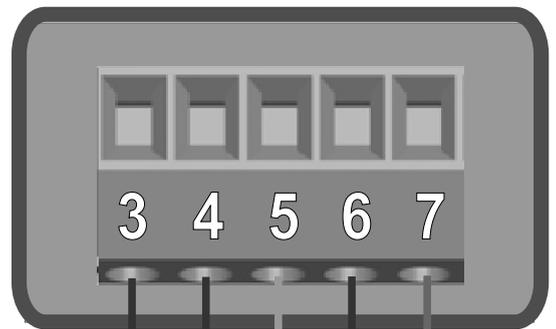
# FLASHING LAMP, MOTOR, BUZZER

## CONNECTIONS



**Buzzer (24Vdc) Audible Alarm**  
 Use a buzzer 24Vdc of 100 dB. The buzzer will be switched on after two consecutive activations of the anticrush sensor. To reset the alarm it is necessary to push the button STOP. Anyway after 5 minutes the buzzer will stop to sound and the automation stands still waiting for commands.

**! IMPORTANT:** UL325 standards requires an audible alarm to go OFF after 2 consecutive events detected by the primary entrapment protection of the gate operator (for ex. reversing sensor).



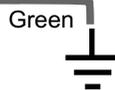
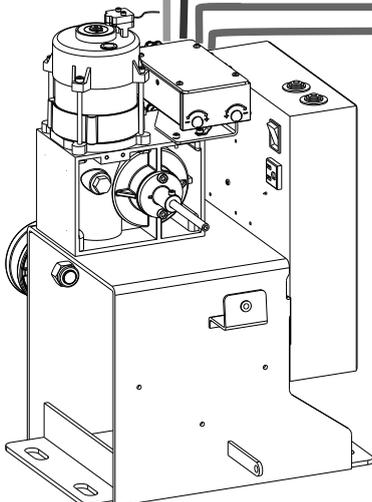
Op Com Cl

Pink White Black

### Flashing Lamp whit external flashing board.

The flashing lamp help the warning of an automatic gate while in movement. To connect it, connect the wires of the flashing lamp as in the picture.

**! IMPORTANT:** Only flashing lamp with flashing board.



**Motor**  
 Output for motor connection

O = OPEN

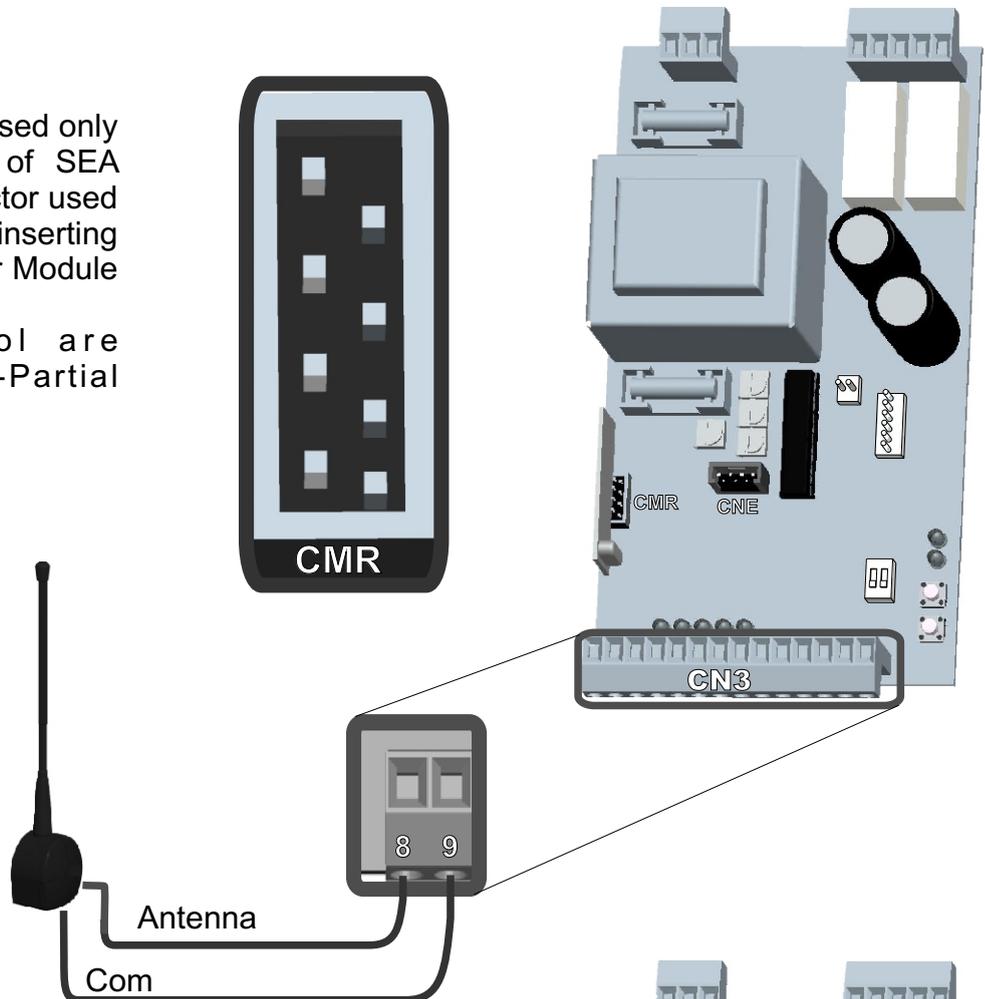
C = CLOSED

Com = COMMON (motor white cable)

To change the motor direction it is necessary to change the motor phases (op and cl) and the respective limit switches

# RADIO RECEIVER, DECODER MODULE, ENCODER CONNECTIONS

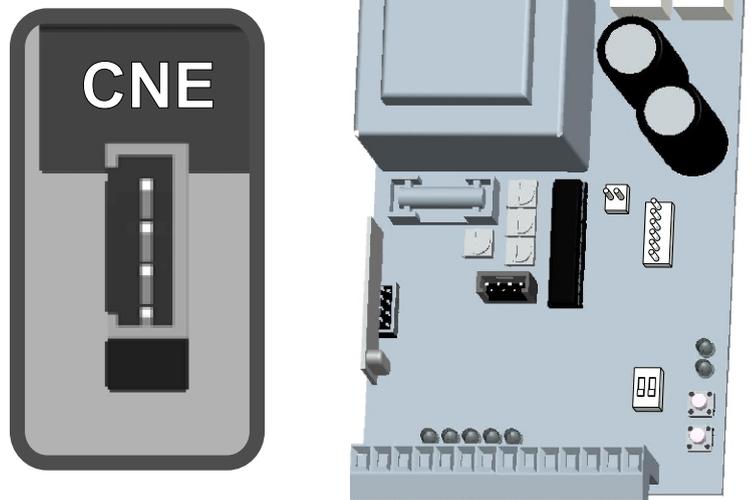
**Notice:** This connector is used only for the rapid connection of SEA designed products. Connector used for the rapid connection of inserting receivers or of the Decoder Module with keyboard. With remote control are programmable START-Partial START-STOP.



## **CN6: ENCODER CONNECTOR**

This connector is used to link the encoder (survey system of gate position) to the equipment.

If this electronic card is purchased inside the motor reducer, the encoder will be already inserted in the CN6 connector. If it is purchased separated by the motor reducer, it must purchase the specified encoder kit for Taurus to which an electronic card is applied. The encoder kit must belong to SEA.



# DIP SWITCHES, LOGIC PROGRAM, LEDS

## FUNCTIONING LOGICS DESCRIPTION

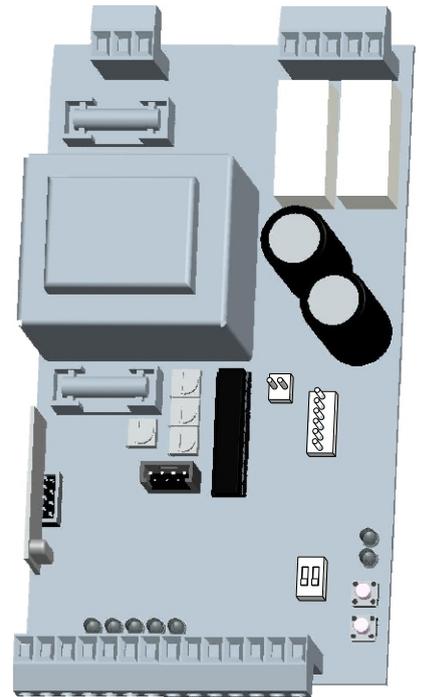
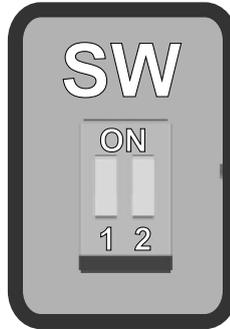
### Automatic logic (DIP1 to ON position):

A start pulse opens the gate, a start pulse in opening cannot be accepted, a start pulse during the pause time closes the gate immediately, a start pulse in closing reopens the gate. A stop pulse both in opening and in closing causes the interruption of the movement, the following start pulse causes the restart along the direction in which the gate has been stopped.

### (New) Condominium logic (DIP1 to ON position and inserted Jumper):

A start pulse opens the gate, a start during the opening is not accepted, a start in pause time is not accepted, a start in closing opens the gate again.

A stop both in opening and closing causes the interruption of the movement, the next start makes the gate restart in the opposite direction. If you push the stop button during the pause time, it is required to push again the stop button in order to start the automation again.



### Semiautomatic logic (DIP1 to OFF position):

A start pulse opens the gate, a start pulse in opening stops the movement, the next one closes. A start during the pause time recloses the gate, a start pulse in closing reopens.

A stop both in opening and closing causes the interruption of the movement, the next start makes the gate restart in the opposite direction.

### Automatic and condominium Partial opening logic:

A prolonged start pulse for more time than two seconds executes the partial opening, once the pause time is over you will get the reclosing of the partial opening.

A start pulse during the partial opening causes the total opening.

From the remote control you can program a button which executes the partial opening.

### Semiautomatic partial opening logic :

A prolonged start pulse for more time than 2 seconds will execute the partial opening, a prolonged start pulse for more time than 2 seconds will cause the partial opening reclosing. A start pulse during the partial opening status, will cause the total opening. You can programme a partial opening button from the remote control, which will be managed in semiautomatic logic.

### Timer management:

Connecting a clock to the start contact, it is possible to open and keep open the gate for all the time during which the contact keeps closed. With the opened Timer the operator will work as per the setted logic.

DIP	OPENED / CLOSED	DIP 1 PROGRAMMING FOR THE CHOICE OF THE WORKING LOGIC
1	ON	If DIP 1 is set out in this way, this equipment will operate following the <b>automatic logic</b>
1	OFF	If DIP 1 is set out in this way, this equipment will operate following the <b>semi-automatic logic</b>
1	ON + Jumper on the PIN 1 e 2 di CNP	If dip1 in on and there is a jumper between pins 1 and 2 of CNP the condominium logic is activated
DIP	OPENED / CLOSED	DIP 2 PROGRAMMING (Activation of different options)
2	ON	The DIP 2 function allows to activate the <b>anti-crushing security</b> . The anti-crushing security operates with DIP 2 ON (only with the encoder installed on the motor reducer).

## LEDS

### LD1

Board and radio transmitter programming and working times self learning

### LD2

Board and radio transmitter programming and working times self learning

### LD3

Led limit switch 1

### LD4

Led limit switch 2

### LD5

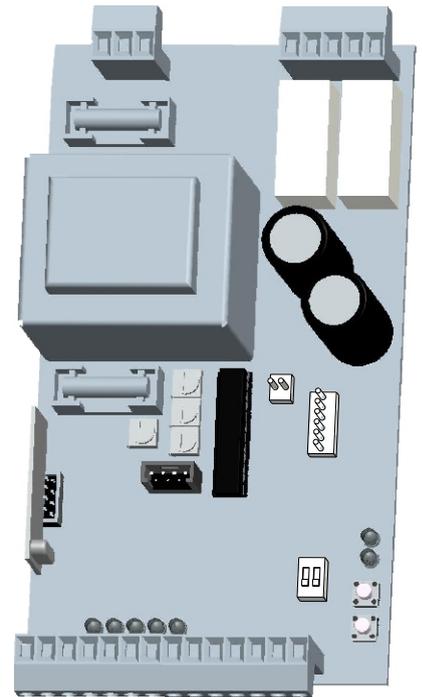
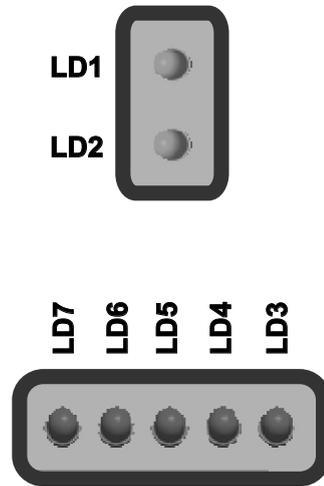
Led Start

### LD6

Led Stop

### LD7

Led photocell



## **SELF LEARNING TIME AND REMOTE CONTROL**

### **Self learning of the working times**

- 1) Release the gate and place it at half run
- 2) Push the buttons No. 1 and 2 at the same time until the gate will reclose. If the gate should open, reverse the polarity of the motor.  
(Note: before you execute such instructions we suggest to check that the limit switches works in the same direction of the motor).
- 3) At this point the gate executes one opening and closing cycle automatically and the flashing light will switch off.

**Note:** during the self learning if the gate closes and keeps firm on the closing limit switch, change the limit switches and check that the gate executes the correct self learning cycle (closing, opening and closing again).

### **Self learning of the start from the remote control**

- 1) Push the button P2 for three seconds, the leds 1 and 2 will flash alternatively.
- 2) Push P1, the led2 will keep switched fixed on, at this point push the button of the remote control to which you want to link the start. The led2 will switch off, the signal has been memorized.

### **Self learning of the partial start from the remote control**

- 1) Push P2 for three seconds, The led 1 and 2 will flash alternatively.
- 2) Push P1 for two times, the led1 will keep switched fixed on, at this point push the button of the remote control to which you want to link the pedestrian start. The signal has been memorized.

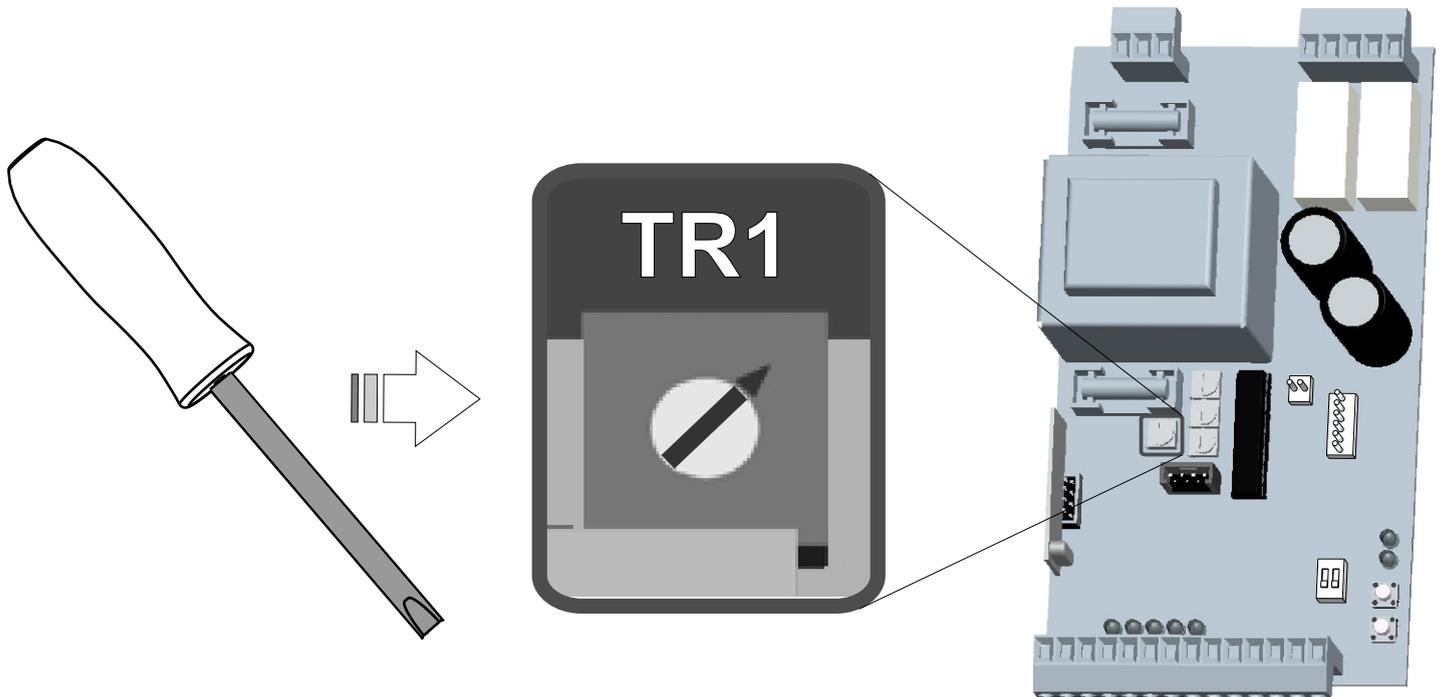
### **Self learning of the stop from the remote control**

- 1) Push P2 for three seconds, led 1 and 2 will flash alternatively.
- 2) Push P1 for three times, led 1 and 2 will keep switching on, at this point push the button of the remote control that you want to program as stop, leds will switch off, and the signal is memorized. This specific input allows to stop the gate in each point and in each situation, after you have pushed this button, if you want that the gate restart to move you must push again the stop and afterward the start.

### **Deleting of all the remote controls**

- 1) Push the button P2 for three seconds, the led 1 and 2 will flash alternatively.
- 2) While you keep pushed P1, push P2 for three times.

# TRIMMER REGULATION



## **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 5 to 120 sec. Time increases turning the trimmer anti-clockwise.

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

## **TR2: Regulation motor torque**

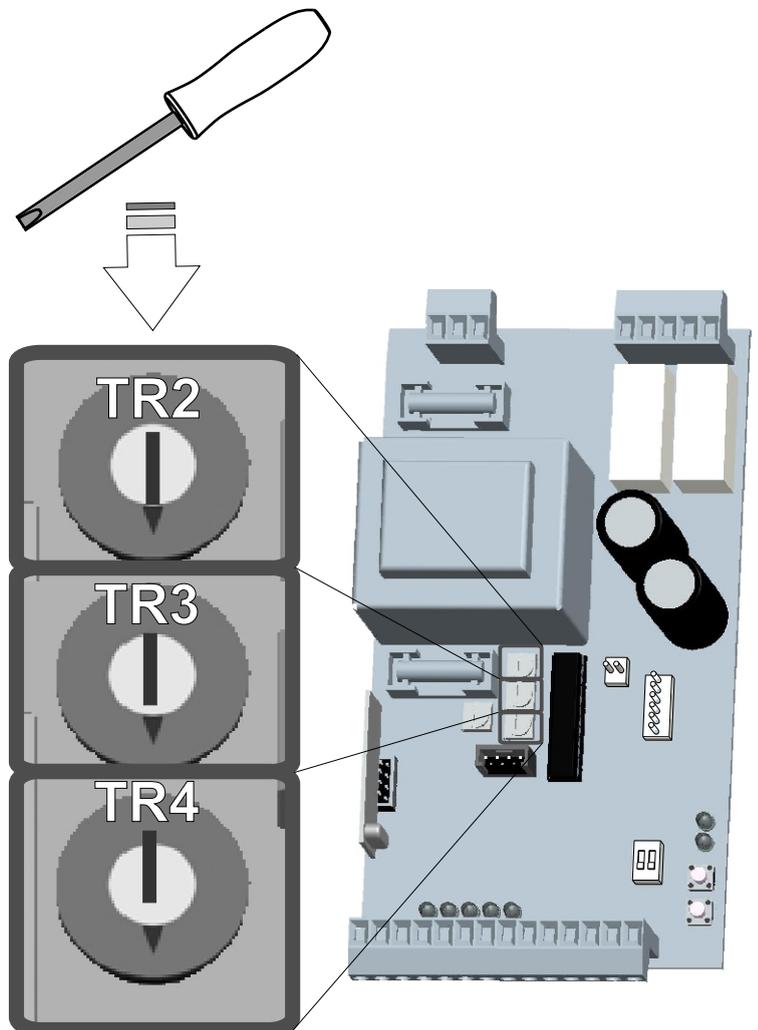
**Attention:** Adjust the force of traction of the gate with the screwdriver on Trimmer TR2: the more the gate weighs, the more it must be turned into an anti-clockwise direction. A wrong adjustment of the force in relation to the gate weight can cause crushing danger (because of excessive adjustment in anti-clockwise direction) or difficulties of gate movement (because of lower adjustment in clockwise direction).

## **TR3. Trimmer: Sensitivity of impact detection**

This trimmer allows to adjust the sensitivity to impact detection of the obstacles when the encoder is enabled, ***if the encoder is disabled such trimmer adjusts the motor torque in phase of slowdown***

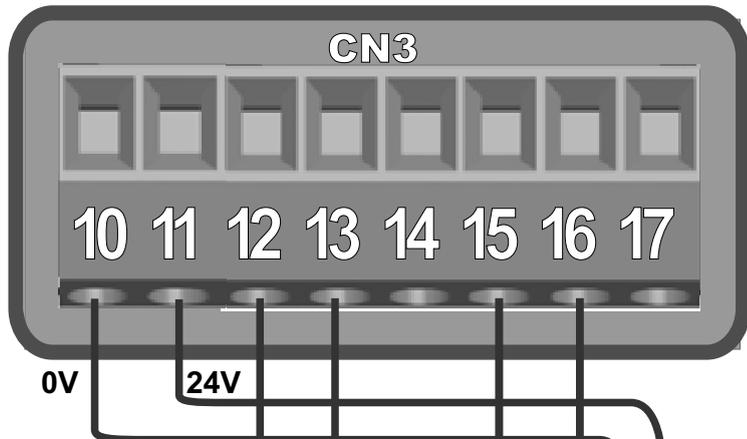
## **TR4. Trimmer for the adjustment of the slowdown distance (disable)**

This Trimmer allows to adjust the point where the slowdown must begin, such slowdown can take on whatever value from 0 to 2 meters. ***If the Encoder is not enabled, the trimmer can adjust the slowdown time from 0 to 5 seconds.***





# SAFETY LOOP CONNECTION



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

+ = 24 Vdc  
- = 0 Vdc

## SAFETY EXIT LOOP

Connecting scheme of loop detector 1 reader.

- 10 = 0V
- 11 = 24V
- 13 = Contact photocell (n.c.)
- 12 = Common photocell

## SAFETY LOOP

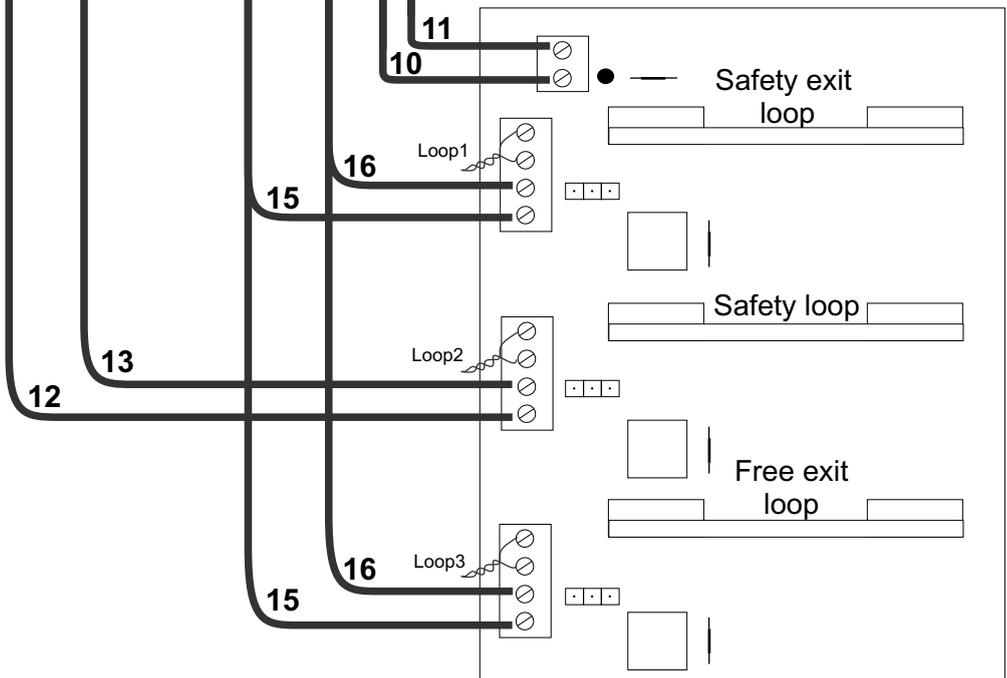
Connecting scheme of loop detector 2 reader.

- 10 = 0V
- 11 = 24V
- 16 = Contact start (n.o.)
- 15 = Common

## FREE EXIT LOOP

Connecting scheme of loop detector reader.

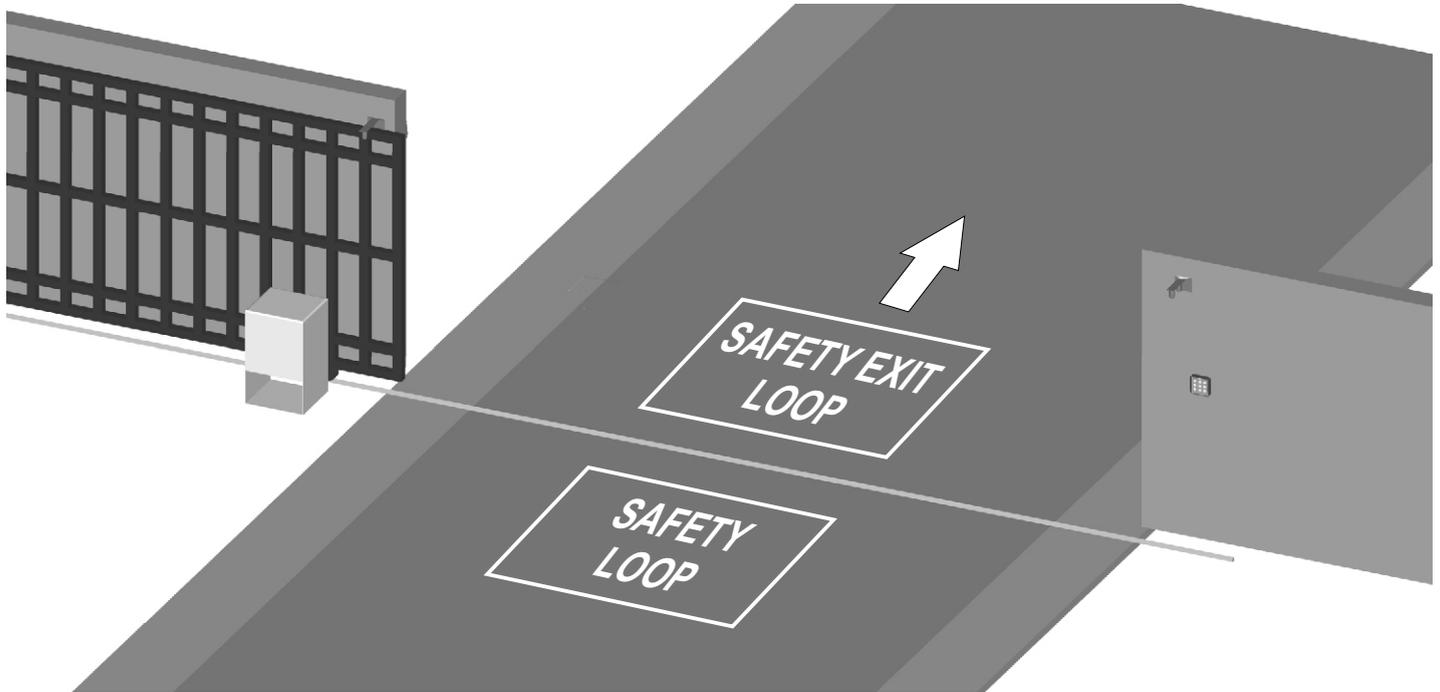
- 10 = 0V
- 11 = 24V
- 16 = Contact start (n.o.)
- 15 = Common



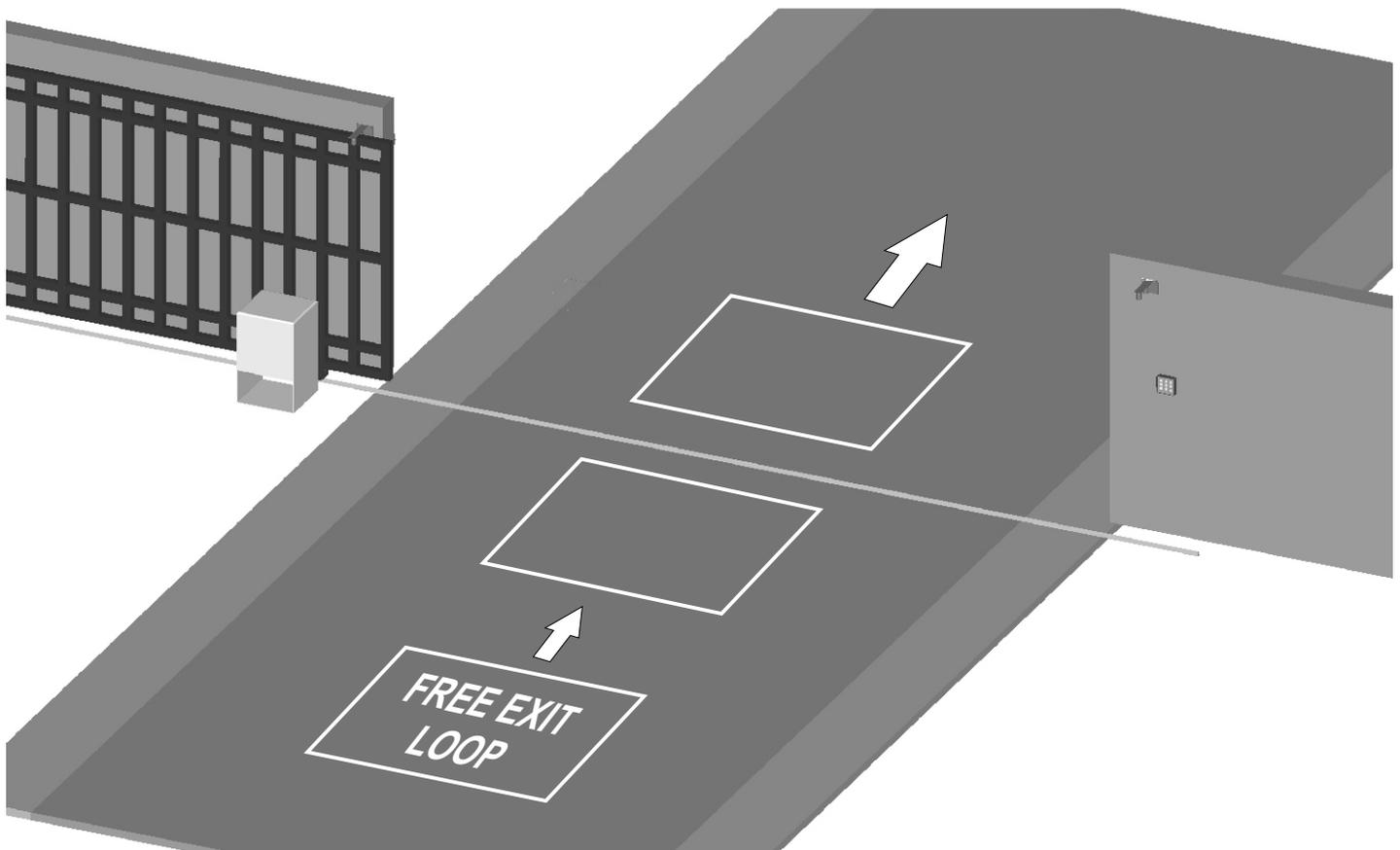
# SAFETY LOOP CONNECTION

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

## SAFETY LOOP SYSTEM



## EXIT LOOP SYSTEM



## **SAFETY PRECAUTIONS**

Every change on trimmers and on dip switch must be done with the gate closed, or without power supply.

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. 10850 N.W. 21<sup>th</sup> STREET - MIAMI, FL 33172**

**Tel.: 1.305.594.1151 - Fax: 1.305.594.7325 - Toll Free: 1.800.689.4716**

**e-mail: sales@sea-usa.com**

## **INTENDED USE**

The SLIDE electronic control unit has been designed to be solely used as control unit for the automation of sliding gates.

## **LIMIT OF GUARANTEE**

The SLIDE electronic control unit is guaranteed for a period of 24 months. The guarantee period starts from the date stamp printed on the unit. The SLIDE 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.**

# **SALES CONDITIONS**

**GENERAL WARNING:** Installation must be realized using parts and accessories approved by SEA. SEA is not responsible for incorrect installations and/or non-compliance with safety standards according to the law in-force. SEA is in no way liable for any damages and/or malfunctioning due to using parts and accessories non-compliant with the UL325 safety standards.

**ORDERS:** Orders are processed upon approval by SEA. Buyers must confirm orders by sending a written Purchase Orders to SEA. Purchase Orders are intended as confirmation of orders and binding for the buyer, which accepts SEA sales condition.

**QUOTATION:** Quotation and special offers with a non-specified duration expires automatically after 30 days.

**PRICES:** Prices are based on the Price List in force. Discounts and quotation from Sales Rep. and other selling branches must be approved by SEA. Prices are F.O.B SEA Warehouse in Miami and do not include shipments costs. SEA reserves the right to modify the price list at any time and provide notice to its sales network.

**PAYMENT:** Method of payments and terms are notified by SEA and displayed on the commercial invoice.

**DELIVERY:** The delivery time on the invoice is not binding and represents an estimated delivery. Shipments costs will be charged to the buyer and SEA is not responsible for delays and/or damages occurred to the products during shipment.

**COMPLAINS:** Complains and/or claims must be notified to SEA within 7 business days after receiving the products. Claims and complains must be supported by original documents. Customer must contact the factory for instructions and authorization. Merchandise returned for credit must be current, uninstalled and unused and returned in its original packaging. Freight must be pre-paid on all authorized returns.

**REPAIRS:** Repairs and parts are subject to the availability in stock. Shipment of products for repairs must be pre-paid by the customer. Products shipped without authorization, sender's details and description of the problems will be refused. Customers must contact SEA for instructions.

**WARRANTY:** for the original buyer only:

Hydraulic and oil-bath motors: 36 months warranty from the date of invoice on manufacturing, assembling and workmanship defects.

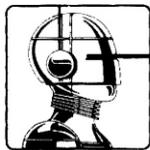
Electro-mechanic motors and electronic control systems: 24 months warranty from the date of invoice on manufacturing, assembling and workmanship defects.

Lepus and Full Tank Standard model: 60 months warranty from the date of invoice on manufacturing, assembling and workmanship defects.

No warranty will be recognized for damages due to incorrect installation and/or improper use for which the product was intended. SEA warranty obligations shall be limited to repair or replace the defective product/parts at SEA option, upon examination of the products by SEA technical Staff. All replaced parts must remain property of SEA. The warranty status of the product remains an unquestionable assessment of SEA. Buyer must ship pre-paid defective products. Products under warranty will be returned pre-paid by SEA. Recognized defects, whatever their nature, will not produce any responsibility and/or damage claims to SEA USA Inc and SEA s.r.l. Warranty shall not cover any required labor activities. Warranty will in no case be recognized if alterations and any other changes will be found on products. Warranty will not cover damages caused by carriers, expendable materials and faults due to improper use with the products specifications. No indemnities are recognized during repairing and/or replacing of the products under warranty. SEA USA Inc. and SEA s.r.l. decline any responsibility for damages to person and objects deriving from non-compliance with safety standards, installation instructions or use of the products sold. It is intended that warranty will be recognized only on products bought through the SEA authorized network. Products must be installed by professionals. No warranty will be recognized if products are installed directly by the final user. Warranty does not apply in case of unexpected events such as fire, flood, electrical power surge, lightning, vandalism and others.

**SEA USA Inc. is not responsible for errors in technical information printed in catalogs and installation manuals.**





**SEA**  
Gate Operators  
& Traffic Barriers



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