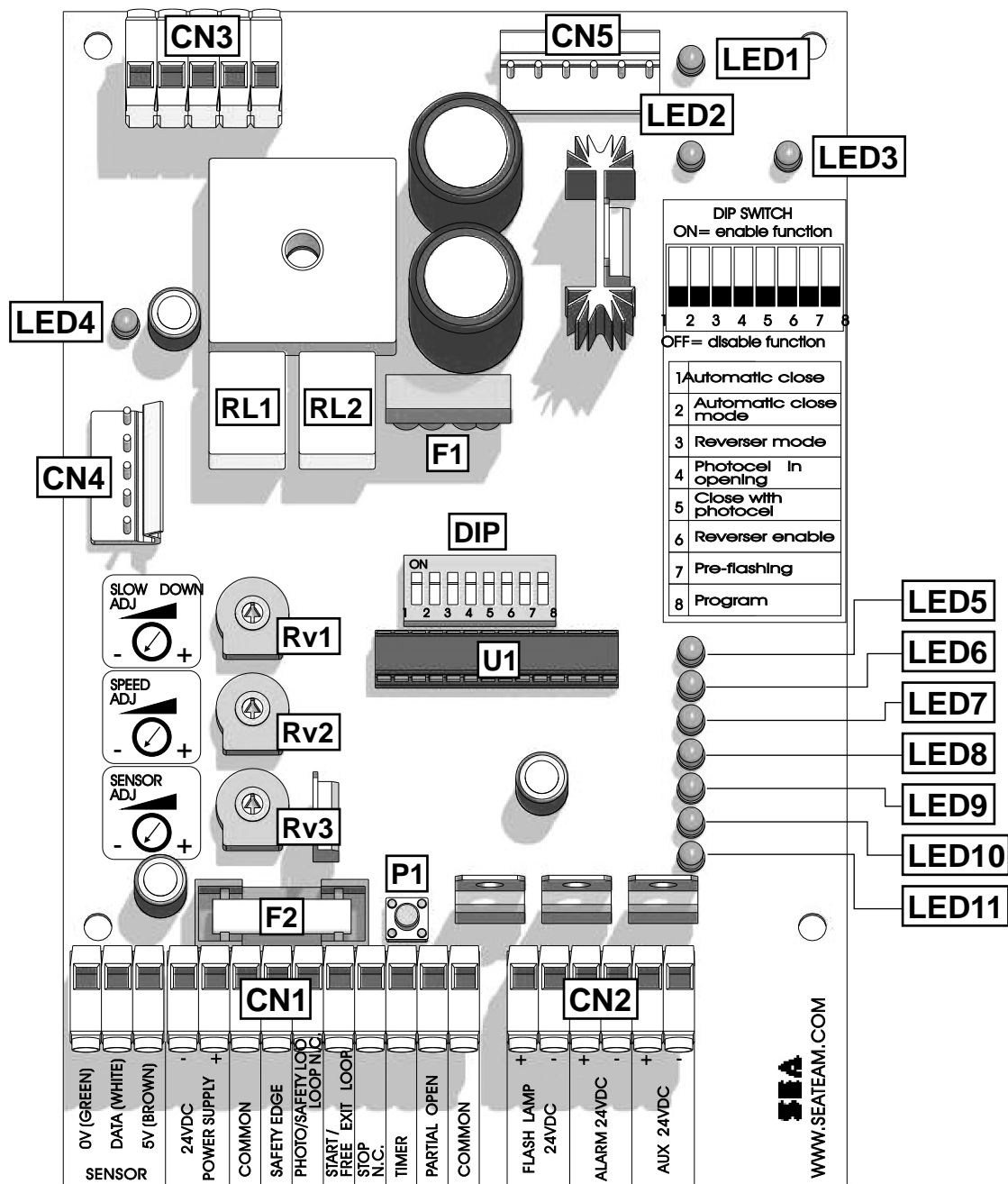


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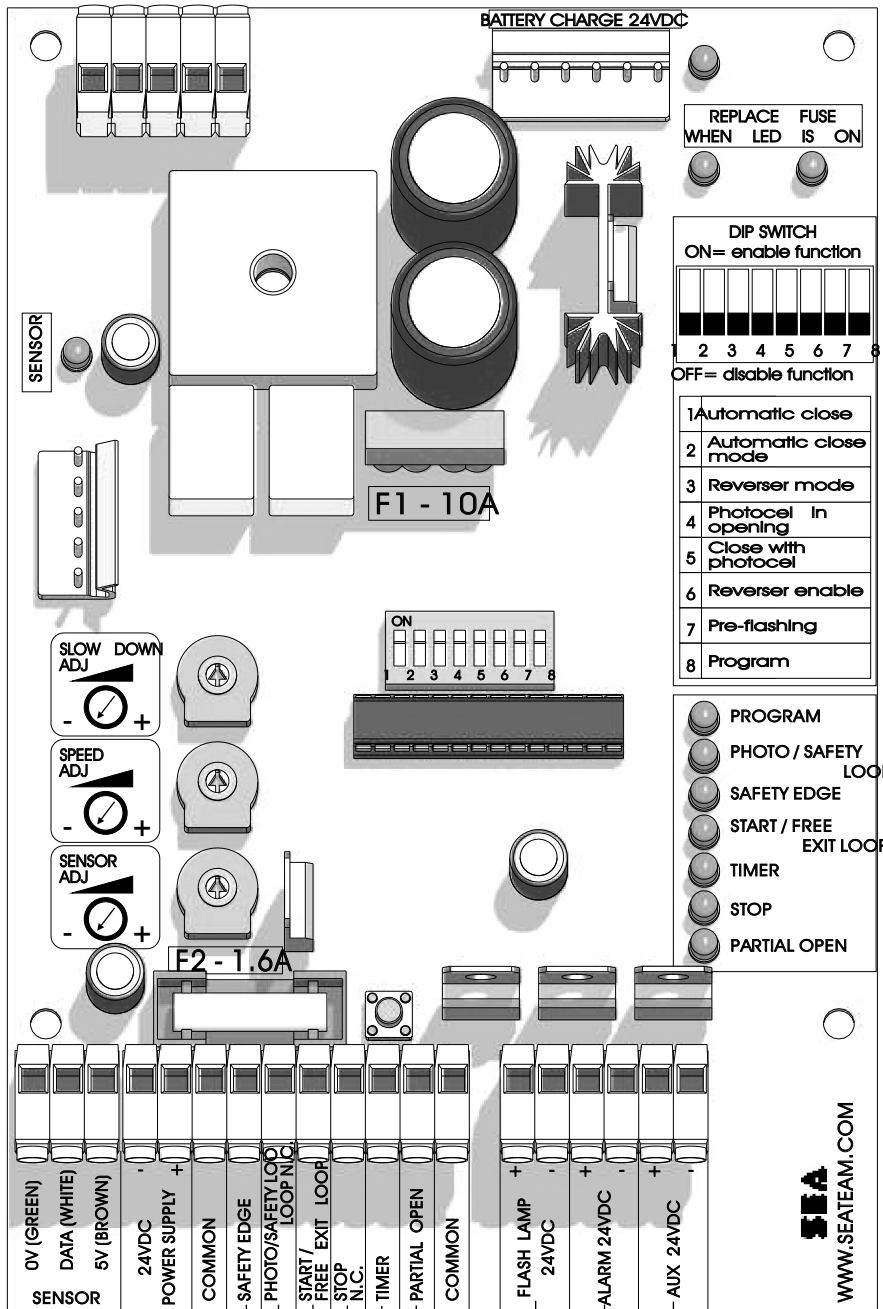
PARTS SPECIFICATION



LED1 = Power Supply	CN3 = Motor connector
LED2 = Led Motor fuse	CN4 = Radio receiver connector
LED3 = Led Accessories fuse	CN5 = Battery charger connector
LED4 = Sensor	Rv1 = Slow down speed regulation
LED5 = Programming	Rv2 = Motor speed regulation
LED6 = Photocell / Safety loop	Rv3 = Anti-crushing sensibility regulation
LED7 = Safety edge	P1 = Working time memorizing push button
LED8 = Start / Free exit loop	DIP = Dip switch for functions setting
LED9 = Timer	F1 = Power supply and motor (10A) fuse
LED10 = Stop	F2 = Accessories fuse (1.6A)
LED11 = Partial opening	RL1 = Relè motor direction
CN1 = Inputs/outputs 24V and Sensor connector	RL2 = Relè motor direction
CN2 = Flashing lamps 24V connector	U1 = Microcontroller



INPUTS / OUTPUTS CONNECTORS



AUX 24V:

The AUX output is activated for the whole functioning time of the automation (opening, closing, pause).

ALARM:

Acoustic alarm. Is activated after two consecutive interventions of impact force limitation without having completed an opening/closing. The alarm signal rests activated for 5 minutes except when the stop push button is pushed. All other inputs (start, partial open, etc) are ignored. After having pressed the stop push button or after the 5 minutes have passed it is ready to receive a start impulse to begin a new movement.

FLASHING LAMP:

During the opening phase, it flashes once a second; during the closing phase, it flashes twice a second. When the automation is opened and in automatic logic, the flashing lamp stays on for all the pause time. If DIP 7 is set on ON there will be a pre-flashing of 3 seconds before the door starts to move.

PARTIAL OPEN (N.O.)

Input, it opens for about one meter if in automatic (condominium) it closes again after the pause time, or acting as DIP 1 and 2 are set.

TIMER (N.O.) (to use as clock input)

Input of opening only. Keeping it in function with the Automatic and Condominium Logics it does not close until when it is not obstructed.

STOP (N.C.)

It stops the automation whenever it is pushed. A start order is necessary to reset the movement.

START (N.O.)

Input to command the automation depending on DIP1 and 2

SAFETY EDGE (N.C.)

If it is set up during the opening/closing phase, it stops the movement and reverses for about 1,5 sec. A start order is necessary to reset the movement.

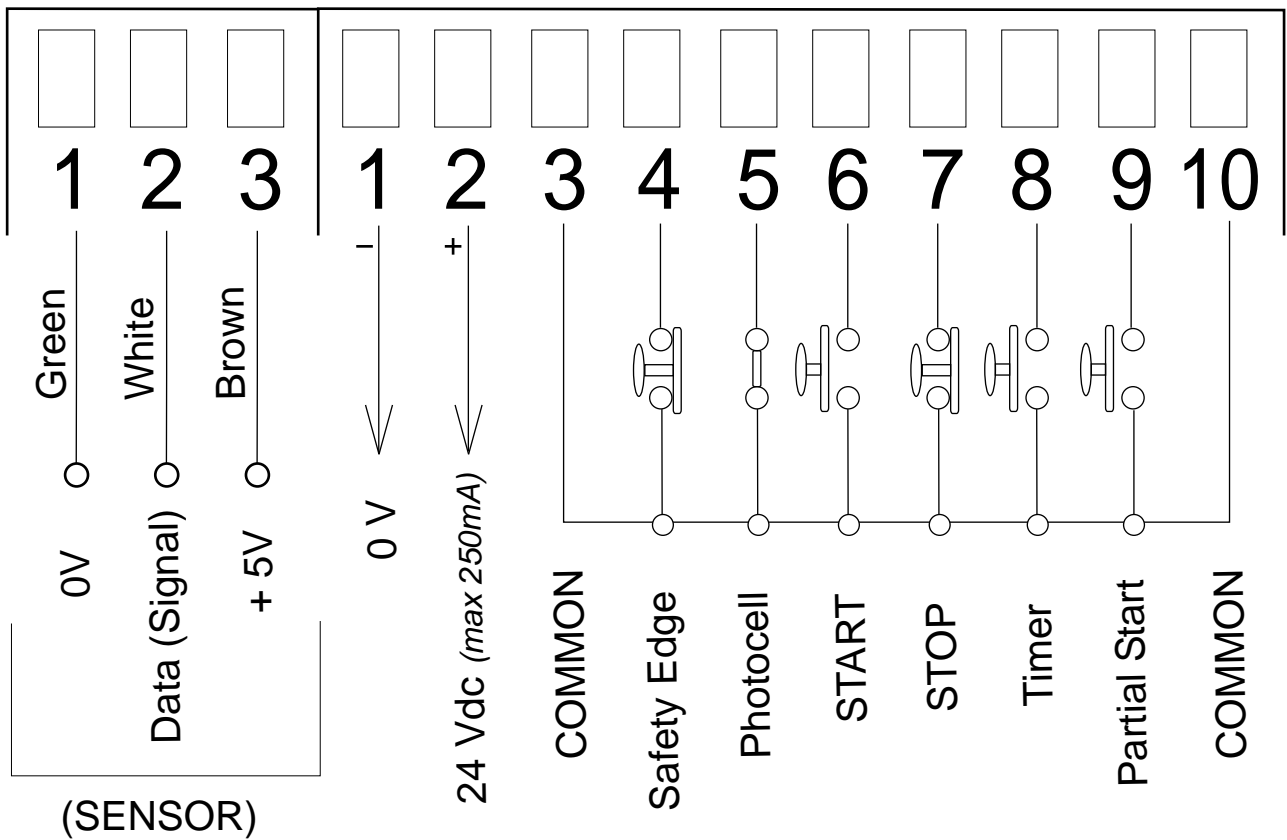
PHOTO/SAFETY LOOP (N.C.)

In closing when the signal is interrupted it immediately opens. With DIP 4 ON the intervention of the photocells causes the interruption of the movement also in opening, immediately opening again when they are not obstructed.

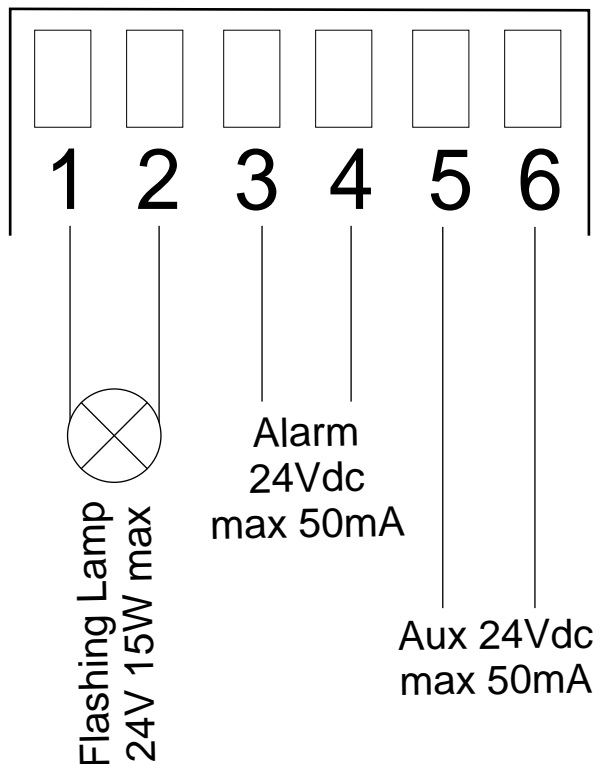
! IMPORTANT NOTICE: All the N.C. contacts which are not used must be linked with common.



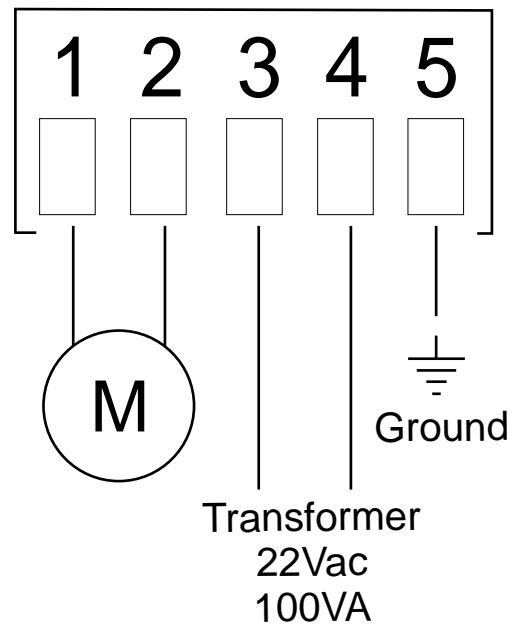
CONNECTIONS



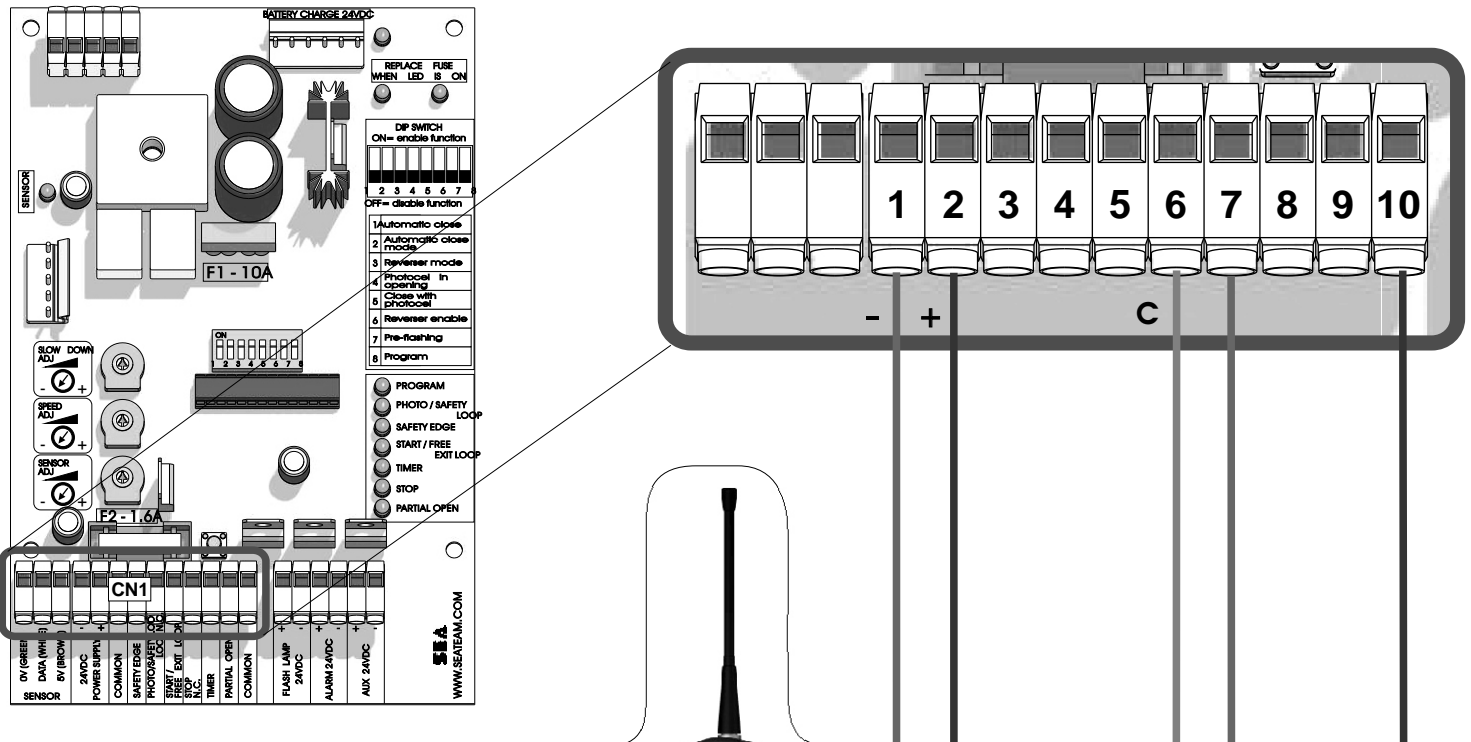
CN2



CN3



RADIO RECEIVER, STOP BUTTON, START BUTTON CONNECTIONS



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
 Com = Common

Stop Button

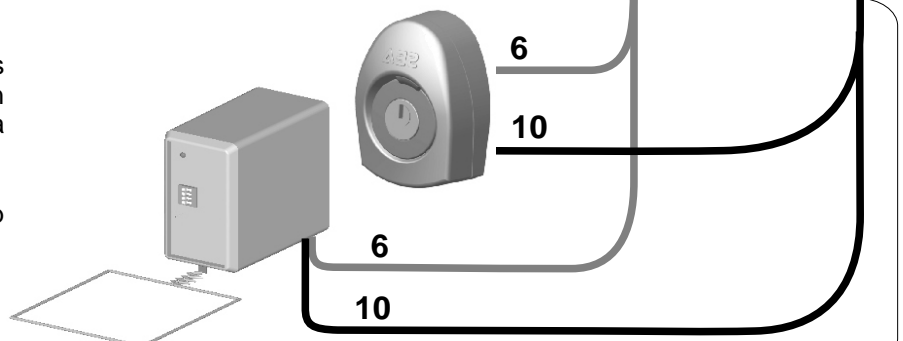
The pressure of this button stops the automation in whatever condition it can be it needs a start command to re-establish the movement

Notice: if it is not used, make a link between terminals n.10 and 7.

Start Button

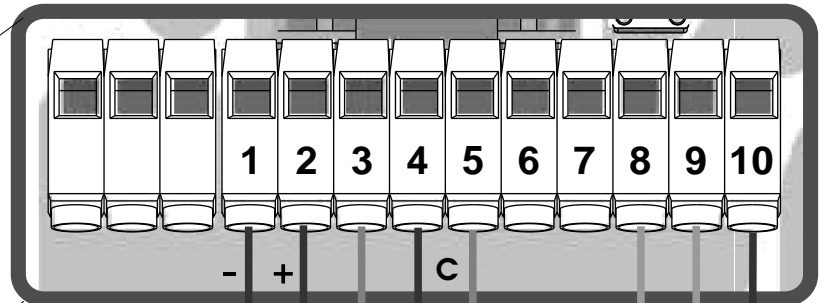
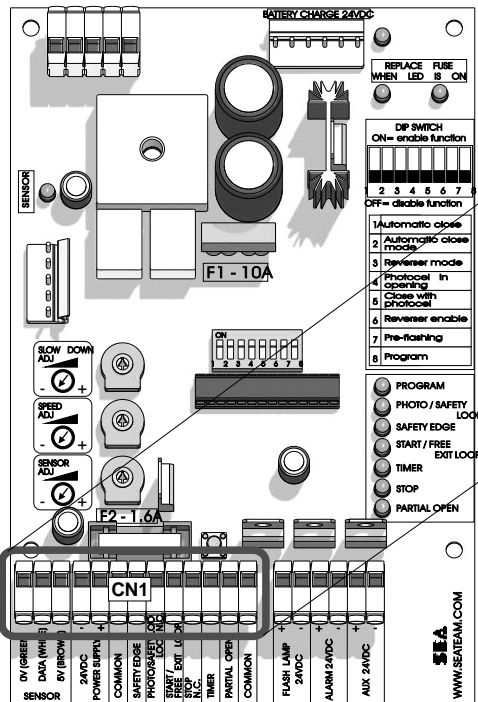
An impulse given to this entrance commands the opening/closing of the automation. It can be given by a key switch, a loop detector, a keyboard controller, etc.

To connect the supplied devices (for ex. Loop detector) see the related instructions.





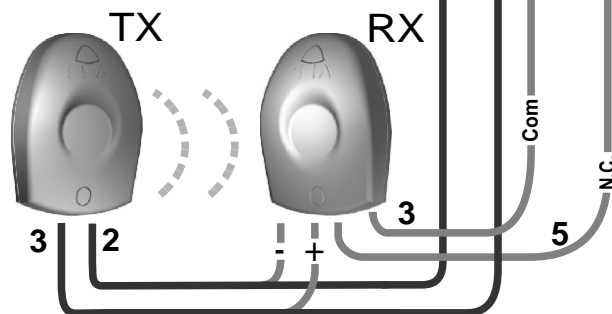
PHOTOCELLS, KEY SWITCH, SAFETY EDGE, TIMER CONNECTIONS



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 3 and 5
+ = 24Vdc - = 0Vdc C = Contact
Com = Common



Safety edge input

A further safety can be obtained making a connection with the safety edge mentioned on the side. If it is start up, the safety edge reverses the movement of the gate for two seconds and it stops.

! Notice: if the safety input is not used, connect terminals 4 and 10 with copper wire.



Timer

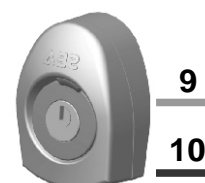


8
10

Partial Start

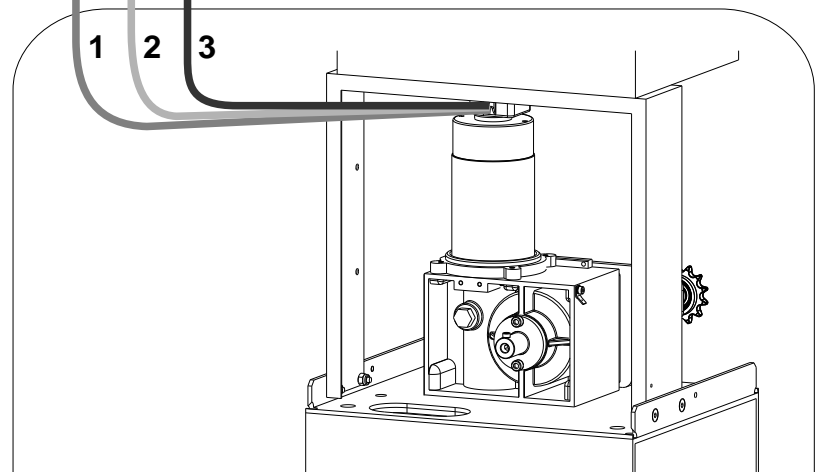
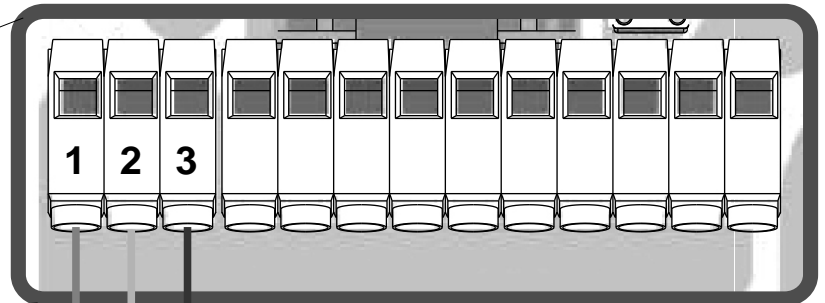
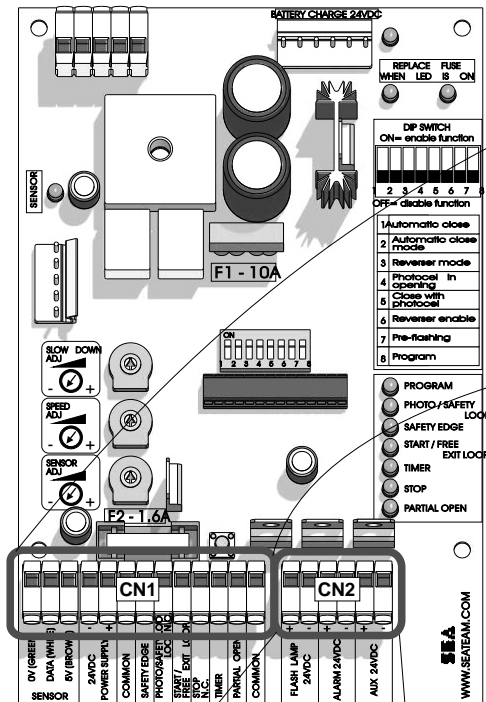
Connect the key switch wires to have a partial opening (opening of the gate for about 7 seconds) as in the picture. It is possible to connect other control devices (push button board, radio receiver, decoder with keyboard).

Notice: For the partial opening the contact is a N. O. contact (Usually Opened).





ENCODER (reversing sensor), BUZZER CONNECTIONS



Encoder (reversing sensor)

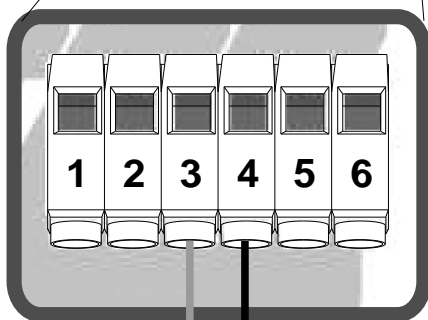
The encoder is a system which detects any obstacle during the running of the gate.

It's placed on top of the motor.

To use this system it is necessary to purchase a SEA motor provided with encoder

! Never disconnect the operating of this primary entrapment protection.

WARNING: SEA will never be responsible in case of damages if the reversing sensor has been disconnected.

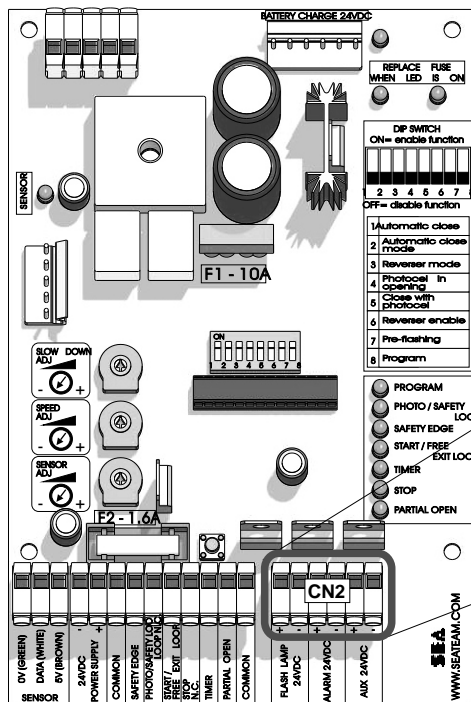


Buzzer (24Vdc 50mA max) Audible Alarm

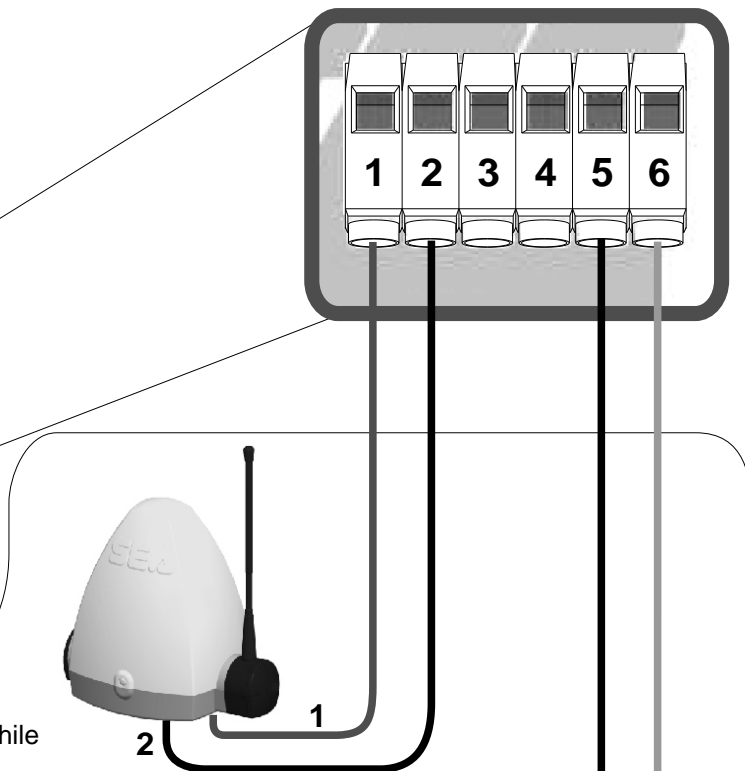
Use an autoswinging buzzer 24Vdc of 100 dB. The buzzer will be switched on after two consecutive activations of the anticrush sensor. To reset the allarm it is necessary to push the button STOP. Anyway after 5 minuts the buzzer will stop to sound and the automation stands still waiting for commands.

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

FLASHING LAMP, MAGNETIC/SOLENOID LOCK CONNECTIONS



CONNECTIONS



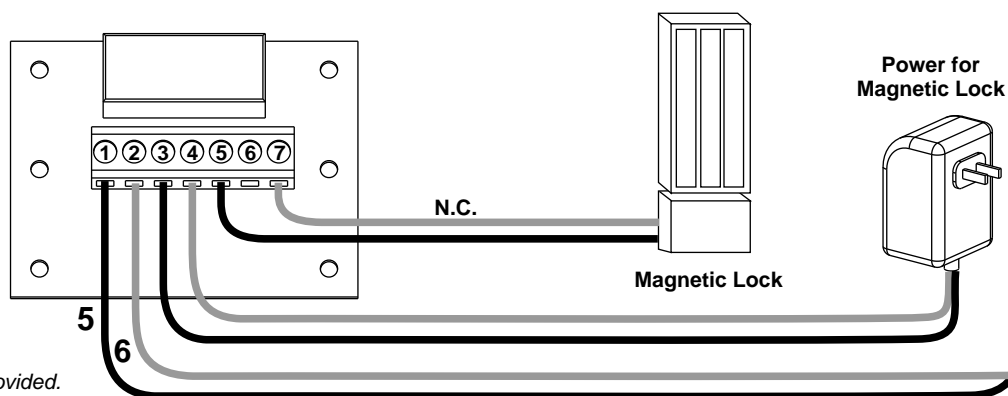
Flashing Lamp 24Vdc 15W max

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.

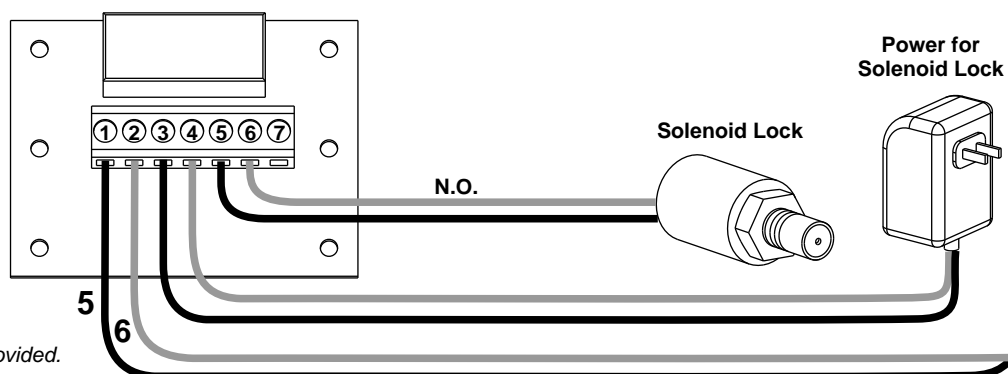
It is possible to activate a pre-flashing of 3 seconds before activating the automation placing Dip 7 on ON.

Magnetic Lock wiring



The Power Supply is not provided.

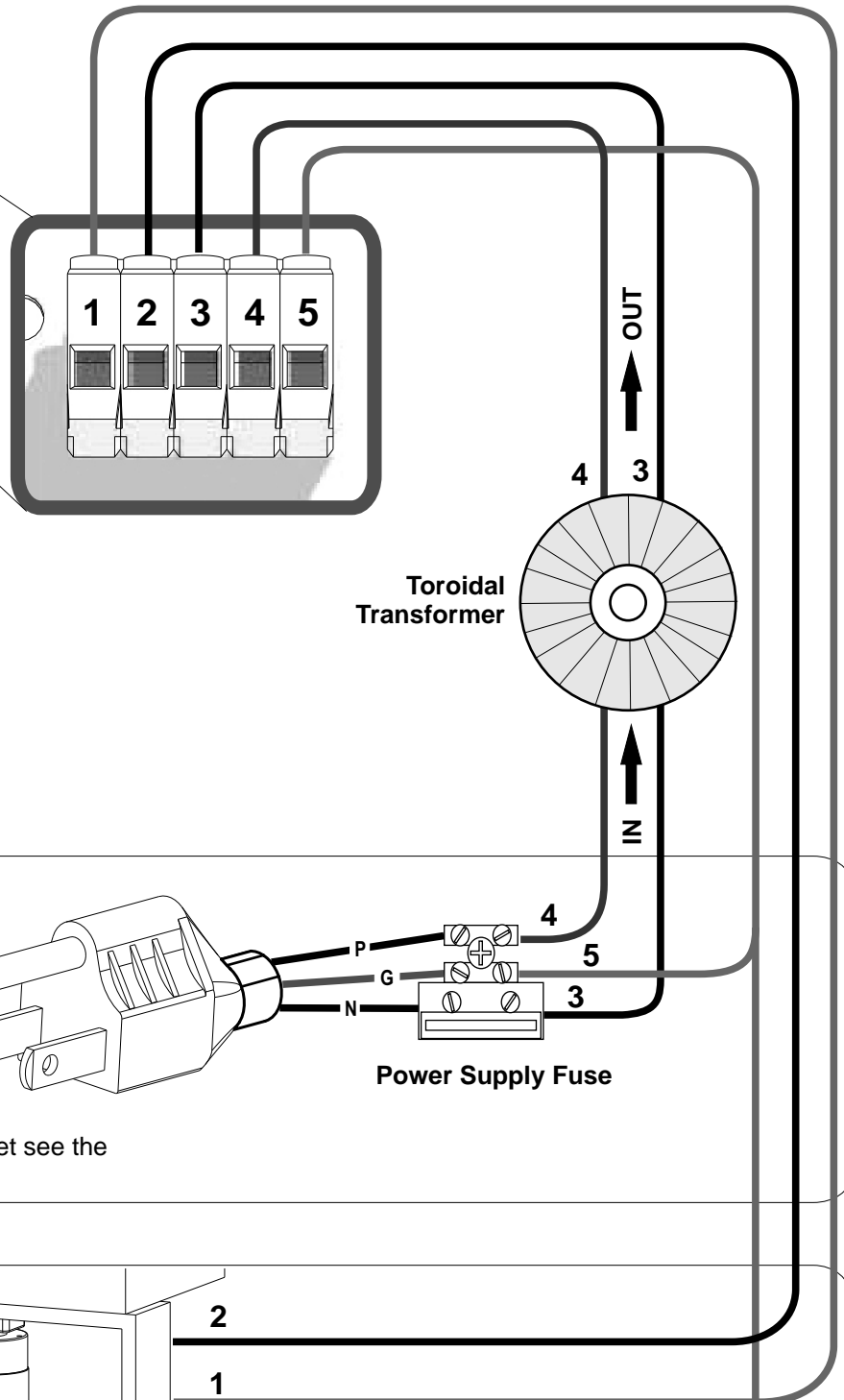
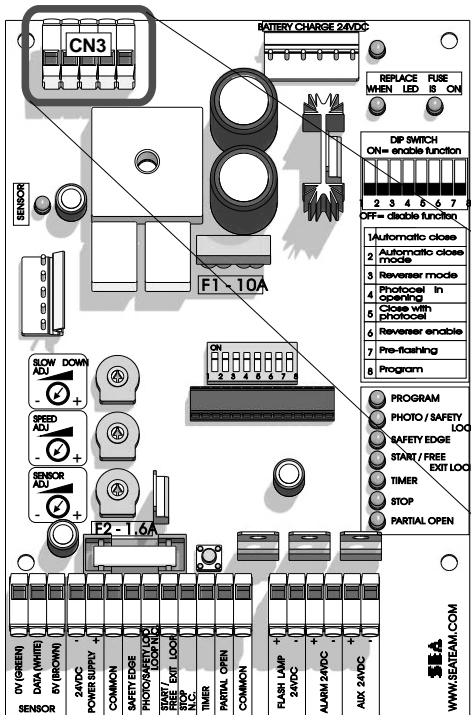
Solenoid Lock wiring



The Power Supply is not provided.



POWER SUPPLY, GROUND, MOTOR CONNECTIONS



Net supply input

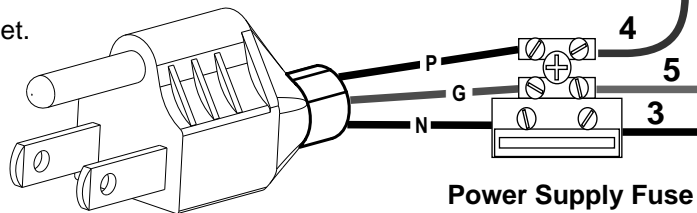
Input for the connection of the electric net.

P = PHASE

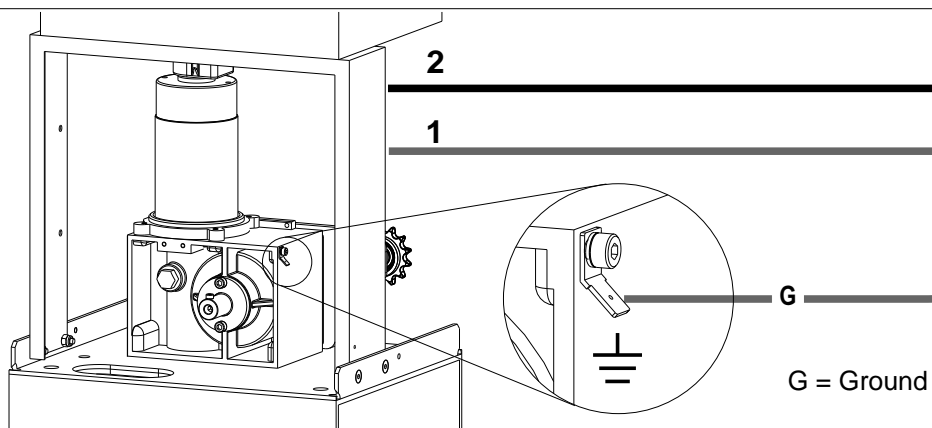
N = NEUTRAL

G = GROUND

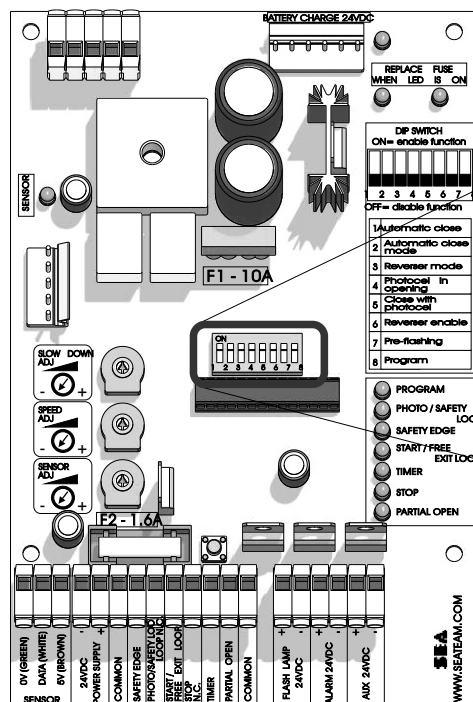
NOTICE: for the connection to the electric net see the norms in force.



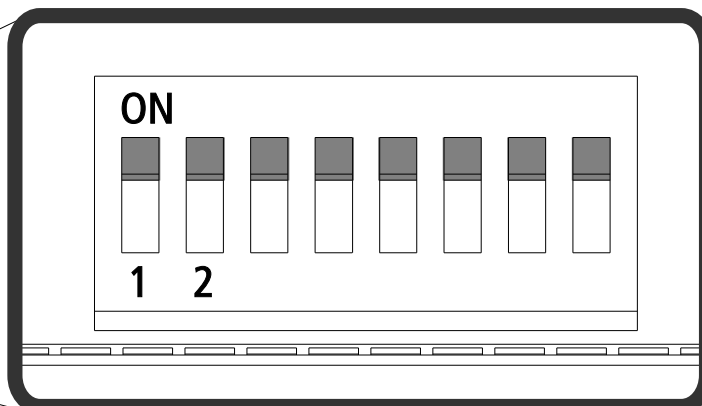
Motor and Ground connection



DIP SWITCHES, LOGIC PROGRAM



DIP SWITCHES



WORKING LOGICS

Four different working logics can be selected.
The programming takes place using DIP1 and DIP2.

- TYPE 1 LOGIC WITH STEP BY STEP COMMANDS

The repeated start realizes the following sequence:
open-stop-close-stop-open-stop-close

- TYPE 2 LOGIC WITH STEP BY STEP COMMANDS

The repeated start realizes the following sequence:
open-stop-close- open-stop-close-.....

- AUTOMATIC LOGIC (automatic closing)

The start only opens when the automation is closed, in opening it stops, in pause it immediately closes, in closing it opens again
It makes the automatic closing when the pause time has ended or with another start it immediately closes.

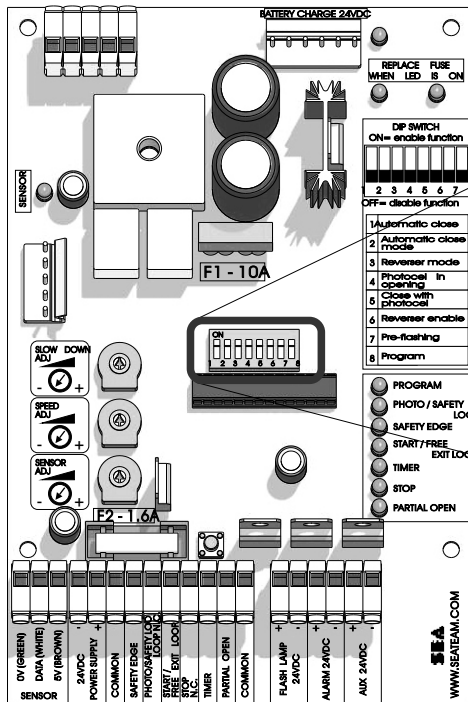
- CONDOMINIUM LOGIC (automatic closing)

The start only opens when the automation is closed, in opening it does not work, in pause it does not work (it continues the counting of the set time), in closing it opens again.

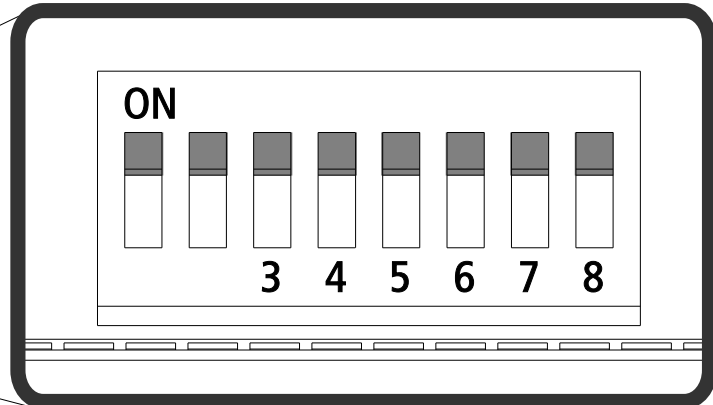
DIP	OPENED CLOSED	DIP1 AND DIP2 PROGRAMMING FOR THE SELECTION OF THE WORKING LOGIC
1 / 2	OFF / OFF	If Dip1 and Dip2 are programmed in this way, the control unit will work with Type 1 Logic
1 / 2	OFF / ON	If Dip1 and Dip2 are programmed in this way, the control unit will work with Type 2 Logic
1 / 2	ON / OFF	If Dip1 and Dip2 are programmed in this way, the control unit will work with Automatic Logic
1 / 2	ON / ON	If Dip1 and Dip2 are programmed in this way, the control unit will work with Condominium Logic



DIP SWITCHES, FUNCTIONS PROGRAM



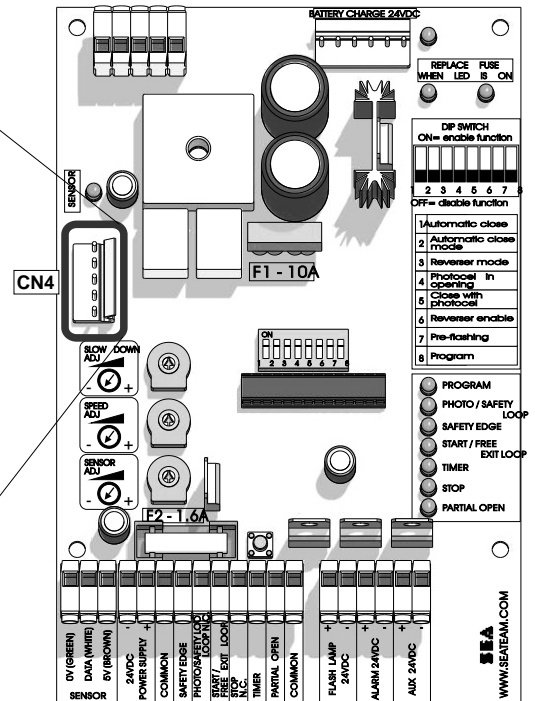
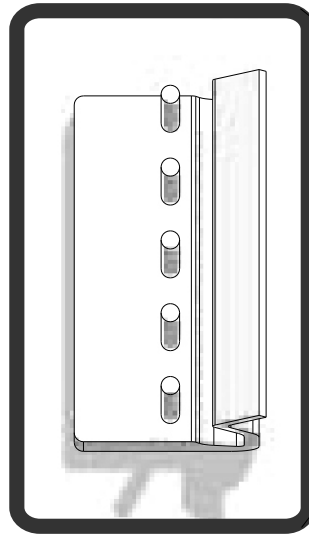
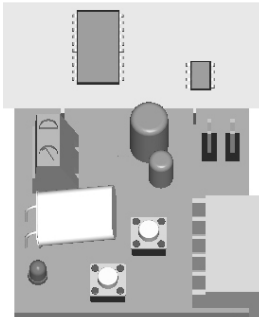
DIP SWITCHES



DIP	PROGRAMMING OF OTHER DIPS FOR OTHER FUNCTIONS
3	<i>INTERVENTION OF THE SAFETY REVERSER IN CLOSING</i> OFF: It opens again and if the automatic closing is programmed after the pause time it closes. If the closing has not been completed after two attempts, the sliding door stays opened and waits for commands. ON: It opens again and waits for commands.
4	<i>PHOTOCELL IN OPENING</i> OFF: Photocell only in closing, in case the signal is interrupted they reverse the movement. ON: Working photocell in opening and in closing, in case the signal is interrupted in opening the photocells stop the movement and they open again when the signal is restored, while in closing the movement is reversed only when the photocells are not obstructed.
5	<i>CLOSING FUNCTION AFTER THE INTERVENTION OF THE PHOTOCELL</i> ON: If a pause time is programmed it is reduced to 3 seconds when the photocells are interrupted in opening or in pause.
6	<i>REVERSER</i> OFF: Encoder sensor not enabled. The automation blocs only if the gate stands still for at least 1 sec. ON: Encoder sensor enabled. The intervention sensitivity is adjusted by RV3.
7	<i>PRE-FLASHING</i> OFF: The flashing lamp works together with the motor starting. ON: Pre-flashing which advances every movement of 3 sec. but the reversing, due to the intervention of the safeties.
8	<i>PROGRAMMING</i> OFF: Setting for Normal functioning. ON: It opens the time programming phase.

RADIO RECEIVER PLUG-IN CONNECTOR

RADIO RECEIVER PLUG-IN



TRIMMER REGULATIONS

Rv1: SLOW DOWN SPEED REGULATION

Trimmer completely turned anti-clockwise = low speed

Trimmer completely turned clockwise = high speed

NOTICE: Be careful to regulate the high speed of the slow down because it must be fit to the mechanical structure of the gate on which the automation is installed and with reference to the technical laws in force.

Rv2: MOTOR SPEED REGULATION

Trimmer completely turned anti-clockwise = low speed

Trimmer completely turned clockwise = high speed

NOTICE: Be careful to regulate the operating high speed as it must be fit to the mechanical structure of the gate on which the automation is installed and with reference to the current laws.

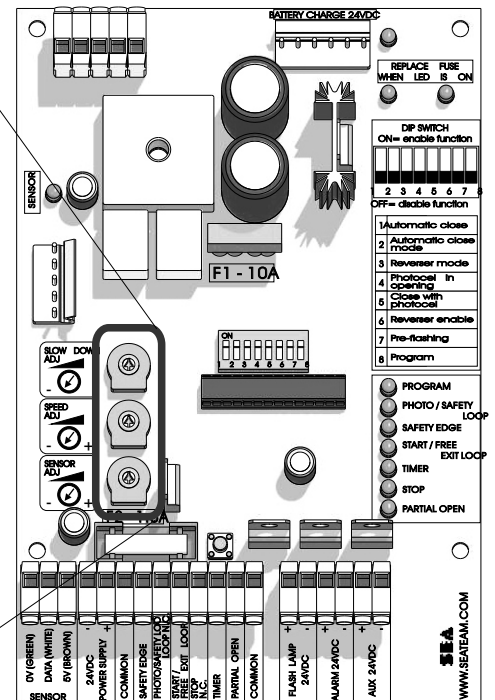
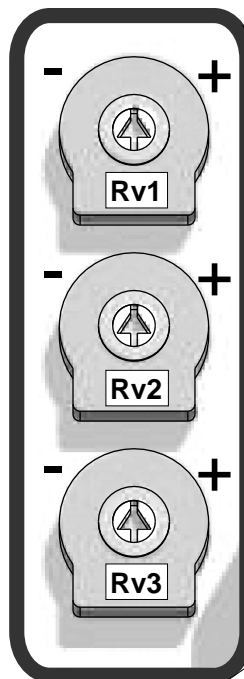
Rv3: INTERVENTION THRESHOLD OF THE ANTI-CRUSHING SENSOR REGULATION

Trimmer completely turned anti-clockwise = high sensibility (low push in case of obstacle).

Trimmer completely turned clockwise = low sensibility (high push in case of obstacle).

After two consecutive interventions of the anti-crushing sensor, even if in automatic logic, the automation stays opened waiting for orders.

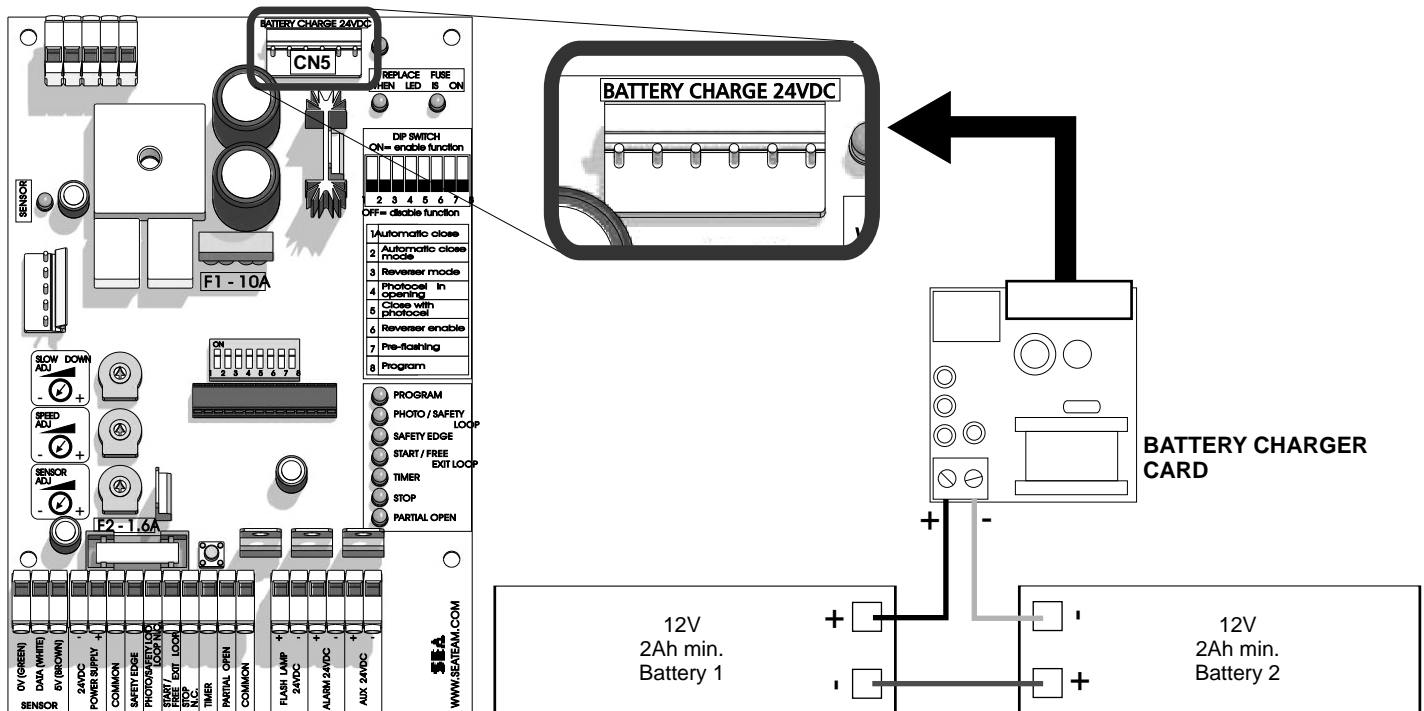
Regulate the sensibility in observance with the current laws.



NOTICE: The setting of Trimmers and Dip Switches are read when the automation has stopped.



CONNECTION OF BATTERIES AND BATTERYCHARGER CARD (OPTIONAL)



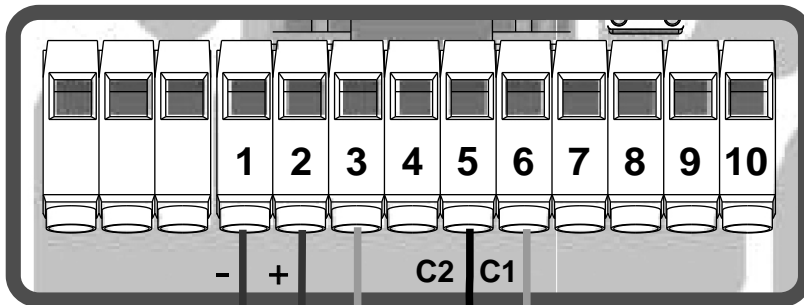
PROCESS OF CARD SELF-PROGRAMMING

After having tested the right sliding of the gate and the electric connections on the inputs/outputs, make the following:

1. Release the gate and place it by hand near the closing stop (about 19 ½ inches)
2. Restore the mechanical lock and move the gate by hand until the mechanical plug in of the lock
3. Give input to the Gate 1 24V card
4. Bring Dip Switch 8 on ON position
5. Make sure that during the learning process the stop, photocell, safety edge, etc. commands are not set up.
6. Push button P1 (Make sure the gate closes, on the contrary switch off the automation, reverse the motor cables (black and red) on CN1 and repeat the process from point 1)
7. Once reduced the speed, the gate will close until reaching the mechanical stop in closing
8. At this point and once reduced the speed, it will automatically open.
9. Once the opening phase has ended, the counting of the pause time will start.
Wait for the desired time (every flash of the warning lamp is equivalent to about 1 sec.) and push P1 button again
10. Wait for the complete closing of the gate
11. When the door will stop and will be completely closed, bring Dip Switch 8 on OFF position
12. The automation is ready to work



SAFETY LOOP CONNECTION



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

C1 = Opening contact

C2 = Safety contact

+ = 24 Vdc

- = 0 Vdc

SAFETY LOOP

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 EXIT LOOP

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

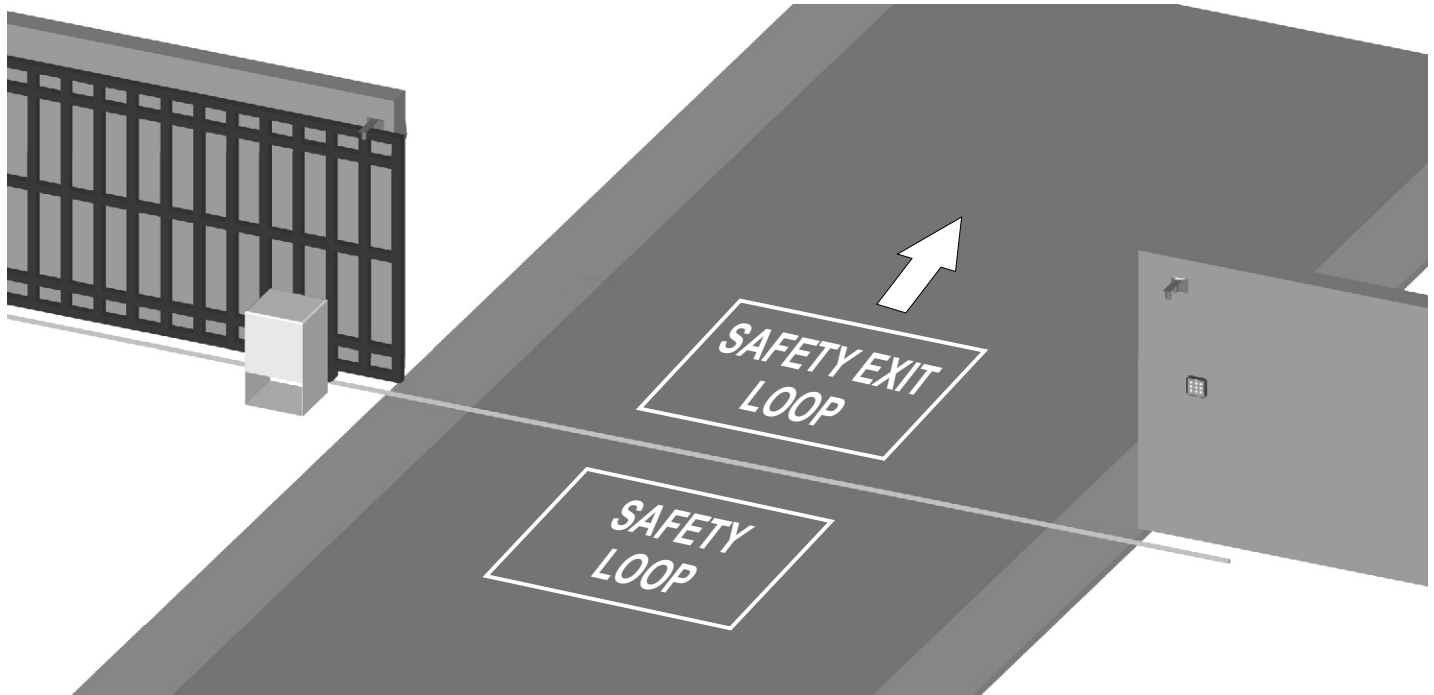
8 = Wire loop



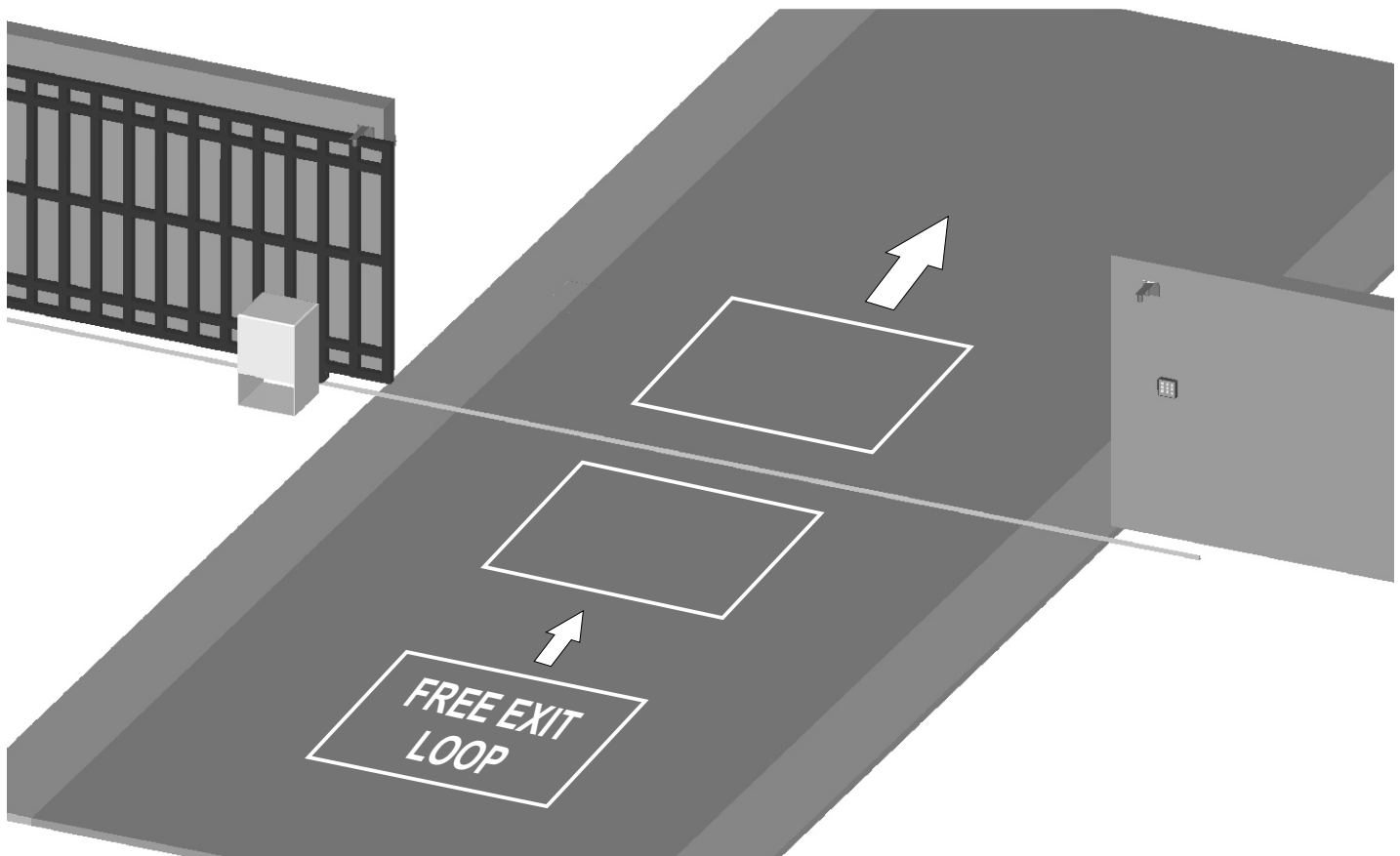
SAFETY LOOP CONNECTION

**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. 21st unit 160 DORAL MIAMI Florida (FL) 33172
Phone:++1-305.594.1151 - Fax: ++1-305.594.7325 - Toll Free: 800.689.4716
e-mail: sales@sea-usa.com

INTENDED USE

The GATE 1 24V electronic control unit has been designed to be solely used as control unit for the automation of sliding gates.

LIMIT OF GUARANTEE

The GATE 1 24V electronic control unit is guaranteed for a period of 24 months. The guarantee period starts from the date stamp printed on the unit. The GATE 1 24V 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: Complaints 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.



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web site: www.sea-usa.com

e-mail: sales@sea-usa.com