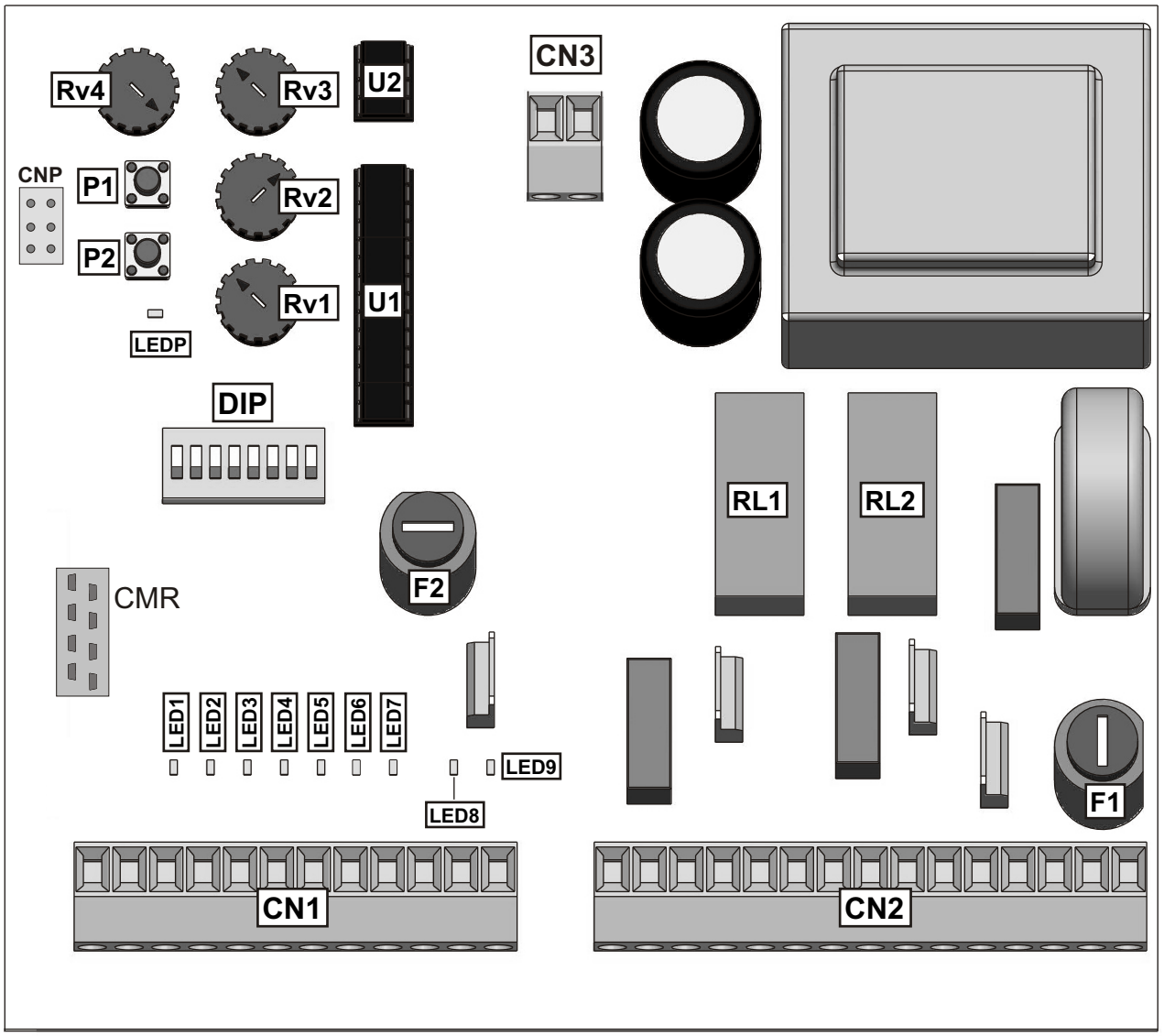
INDEX

COMPONENTS DESCRIPTION



LEDP = Programming

LED1 = Stop

LED2 = Pedestrian Start

LED3 = Start

LED4 = Photocell 2

LED5 = Photocell 1

LED6 = Encoder 2

LED7 = Encoder 1

LED8 = TXphotocell

LED9 = Electric lock

F1 = Power supply and motor 6.3AT fuse

F2 = Accessories Fuse 2A

CN1 = 24 V input/output connector

CN2 = Motors and power supply connector

CN3= Connector 24 V~ Photosync

Rv1 = Motor power adjustment

Rv2 = Time of slowdown adjustment and leaf delay management

Rv3 = Pause time adjustment

Rv4 = Encoder sensitivity and working times adjustment

P1 = Working times learning push-button

P2 = Radio transmitters learning push-button

DIP = Function Dip-switch setting

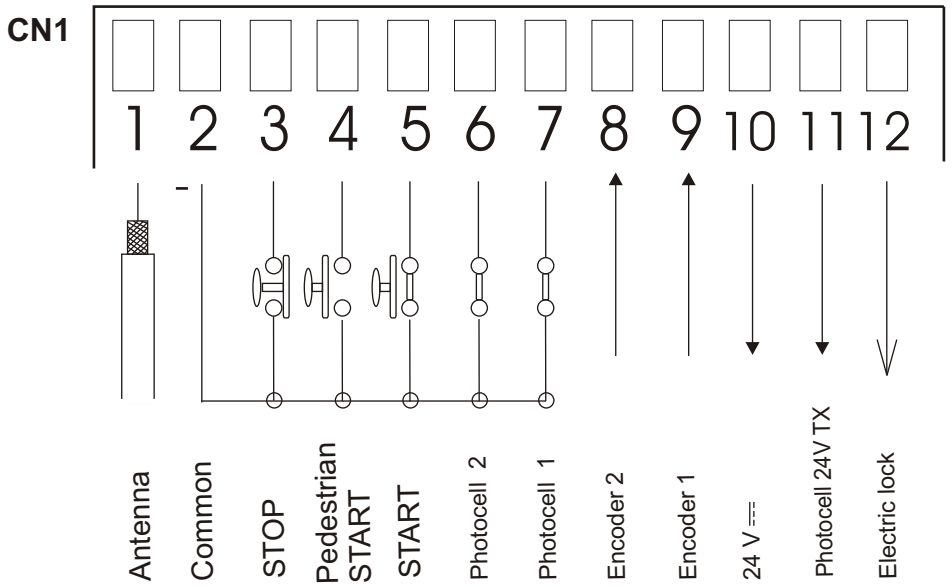
RL1 = Motor power supply relay

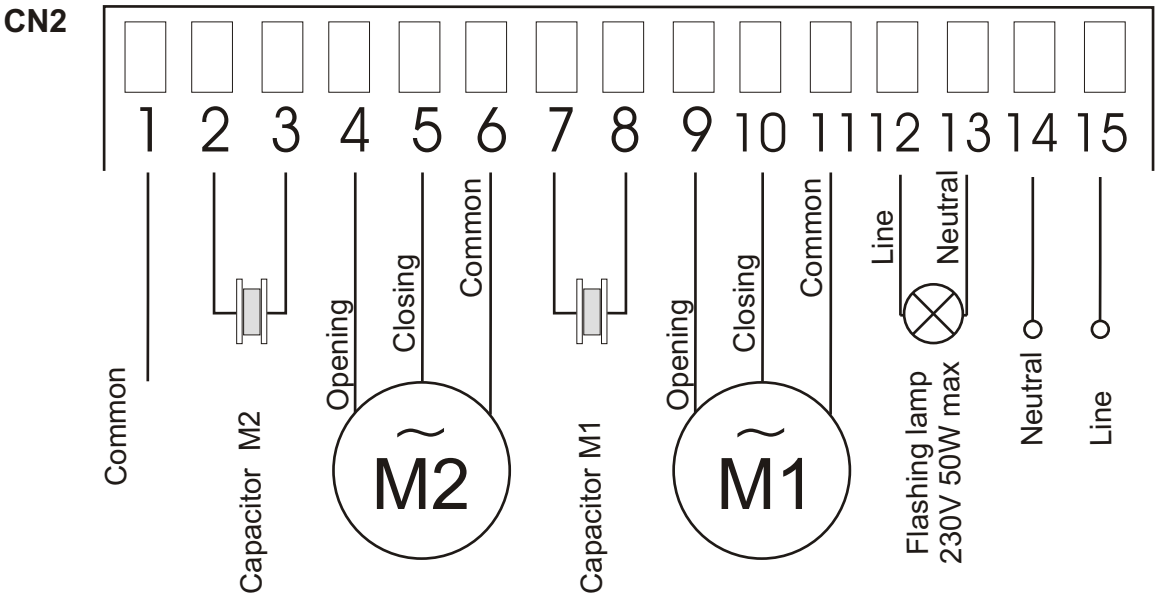
RL2 = Motor direction relay

CMR = Radio Receiver connector

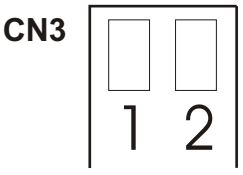
CNP= Connector PALM

CONNECTIONS

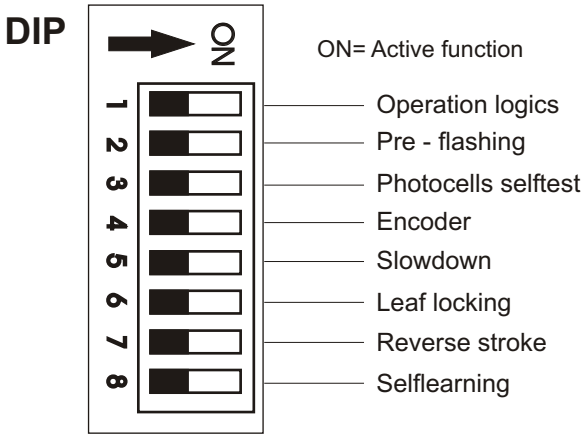




Note: Bridge all unused N.C. contacts.



Note: to power supply the syncronized photocells.



GENERAL INFORMATION

GENERAL FEATURES

SWING2 control unit has been deigned in order to manage one or two swing operators without limit switch. Its dimensions are very small, four different operation modes, possibility to adjust many parameters using the trimmer and dip switch, in addition the possibility to manage the use of the encoder through the safety gate device.

The absolute news of such electronic unit consists in two different learning modes of working times. Besides the standard and intuitive selflearning mode of working times (the same for GATE2), it gives the possibility to learn MANUALLY the working times, acting simply on TRIMMER Rv4 ADJUSTMENT.

TECHNICAL FEATURES

Control unit power supply	230V ~ (+6 -10%) - 50/60 Hz
Transformer	P1: Vn=230V~, Io=43.3 mA; S1: Vnom=17.5V~, Vo=20.2V~, I=0.69A
Absorbed power	7,5 W
Max. motor charge	500 W x 2
Max. accessories charge	24V⎓ 200mA
Max. flashing light charge	230V~ 50W max.
Environment temperature	-20°C +50°C
Protection fuses (24V accessories)	1 A
Programming modes	Selflearning page 31; instructions **manual including TRIMMER page 34**
Operating logics	Automatic / Semi-automatic / safety automatic / safety Semi-automatic
Opening / closing time	Adjustable with trimmer until 120 sec.
Pause time	Adjustable with trimmer from 0 to 120 sec.
Thrust force	Adjustable with trimmer
Slowdowns	Adjustable with trimmer
Leaf delay	Selflearning mode during programming phase. During working times mode adjustable with trimmer
Encoder sensitivity	Only during selflearning mode, Adjustable with trimmer
Connecting terminal entries	Antenna / Stop / Start / pedestrian Start / photocells 1 and 2 / Encoder 1 and 2
Connecting terminal exits	Power supply accessories 24V / Motors 230V 500W x 2 / Flashing light 230V 50W / Electric lock 12V⎓ 15VA max/ TX photocell power supply 24V / Capacitor
Board dimensions	150,7 x 141 x 47,5 mm
Outside box features	305 x 225 x 125 mm - Ip55

ACCESSORES TECHNICAL FEATURES

Kind of accessories	*I_{nom} absorbed (stand by)*	*Kind of accessories*	*I_{nom} absorbed (stand by)*
SIGNAL receivers	15 mA each	**KEY PLUS START-STOP**	10 mA
PHOTO 50	55 mA each couple	**CODE + MODULE DEC.**	12 mA
PHOTO 60	108 mA each couple	**CODE PLUS**	6 mA
GHOST 40	60 mA each couple	**THERMO**	15 mA
GHOST 50	60 mA each couple	**LOOP**	16 mA
SLIM	95 mA each couple	**RADIODEC PROX**	150 mA

NOTE: the sum of the nominal power absorbed by the each accessory on 24V exit must not exceed 200 mA.

SETTING

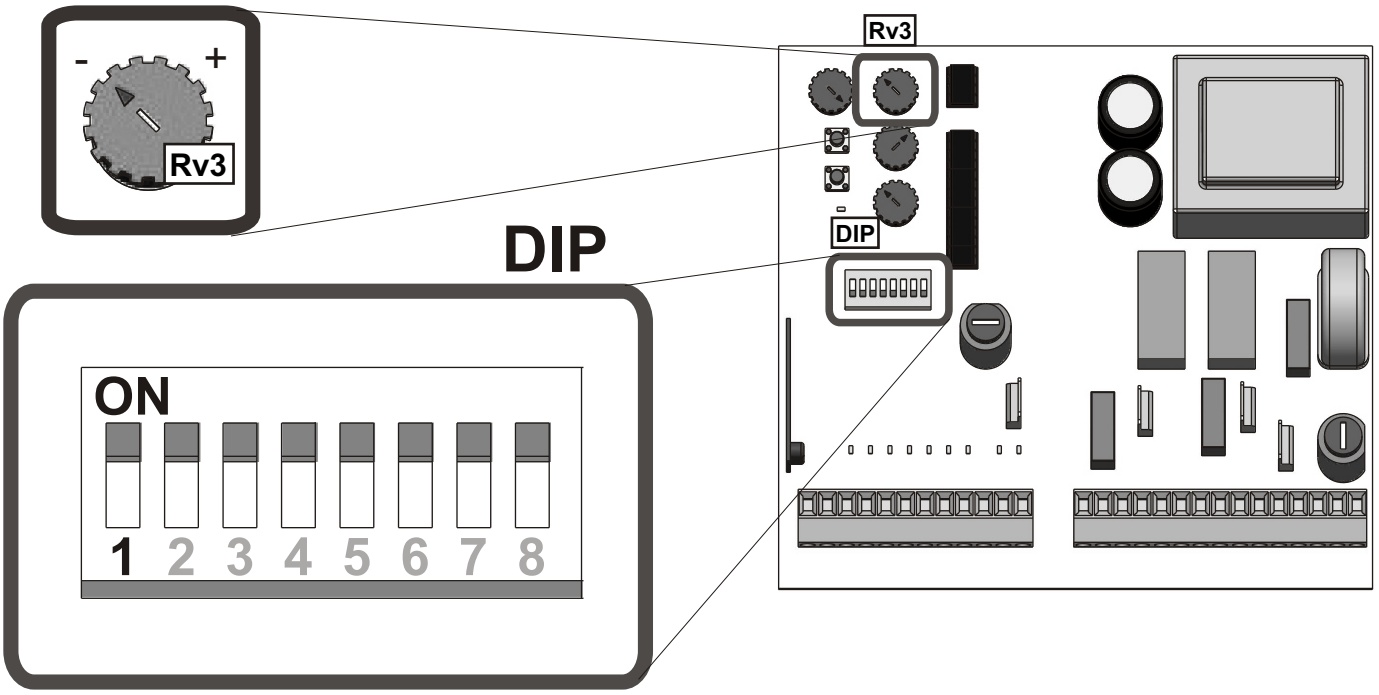
For the security of persons it is important to follow with attention all the advises and instructions in this manual. A wrong installation or a wrong use of the product can cause sever dammages to persons.

Make sure that the installation has an adeguate differential switch as prescribed by the law in force and provide on the power supply net a magnetothermic omnipolar switch. For the installation of the electric cables use adeguate rigid and/or flexible tubes.

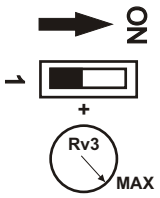
Keep always separate the connection cables of low voltage accessoires from those of 115/230V~ power supply. To avoid any interference use separate casings.

Max. Length of the power supply cable between control unit and motors is 10m, using cables with 2,5 mm^2 section.

OPERATING LOGICS (DIP-SWITCH)



OPERATING LOGICS



- SEMI - AUTOMATIC LOGIC

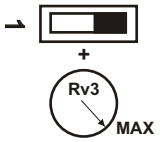
A start impulse opens the gate. A second impulse during the opening stops the movement, a successive impulse restarts the movement in closing. When the gate is in opening position a start impulse is required for closing it again.
A start impulse in closing phase reverses the movement.
Note: Rotate the trimmer Rv3 completely clockwise.

- AUTOMATIC LOGIC

A start impulse opens the gate. A second start impulse while the gate is opening is not accepted.
An impulse during the pause is not accepted. An impulse in closing phase reverses the movement.

- SAFETY AUTOMATIC LOGIC

A start impulse opens the gate. A second impulse in opening phase reverses the movement.
A start impulse during the closing phase reverses the movement.



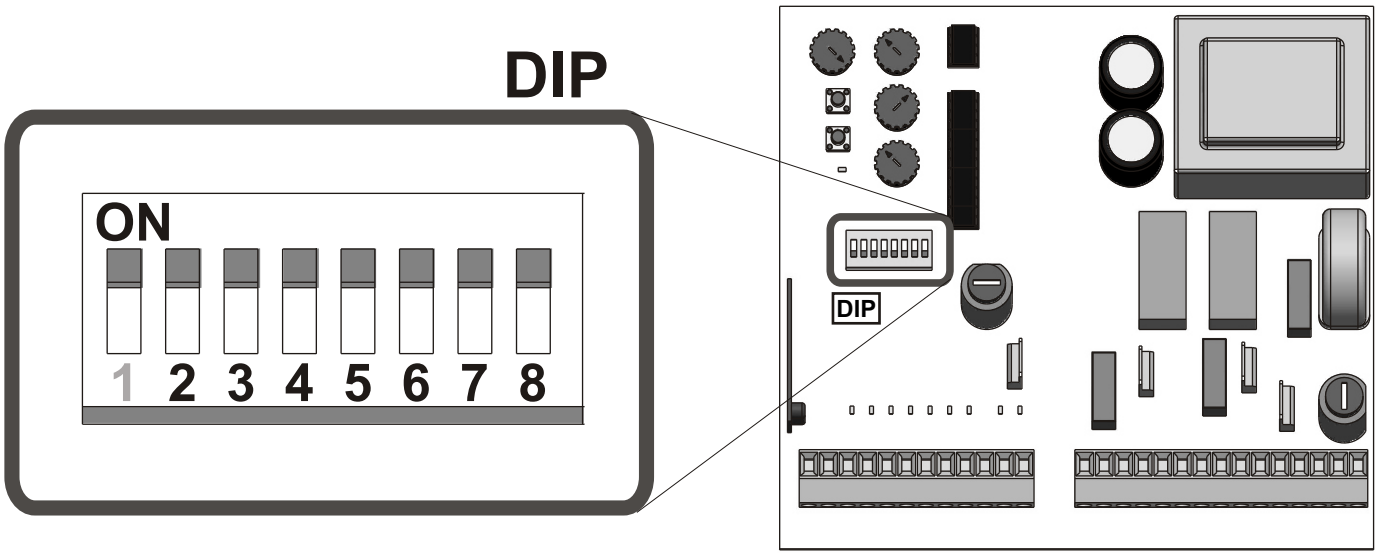
- SAFETY SEMI - AUTOMATIC LOGIC

A start impulse opens the gate. A second impulse in opening phase reverses the movement.
When the gate is in opening position another impulse is required in order to reclose the gate.
A start impulse during the closing phase reverses the movement.
NB: Ruotare il trimmer Rv3 tutto in senso orario

PROGRAMMING LOGICS: SUMMING UP TABLE

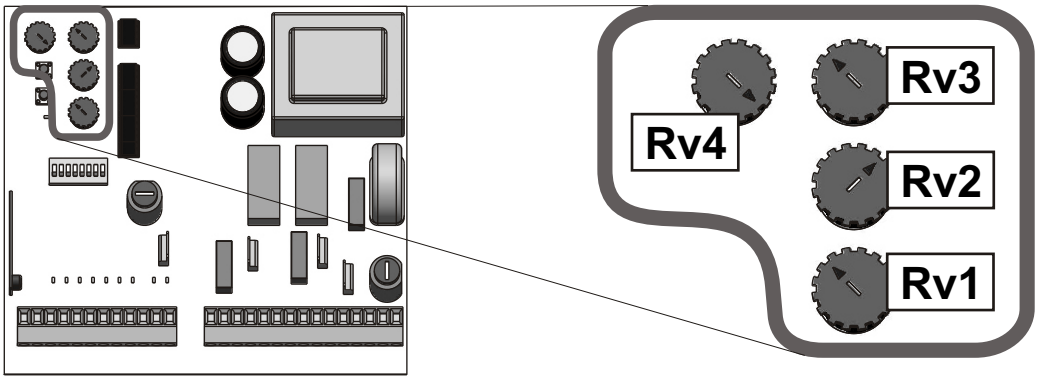
Rv3	DIP1	FUNCTIONING LOGICS SELECTION (DIP1 E Rv3)
MAX	OFF	DIP1 position + Trimmer Rv3 to select semi - automatic logic
	OFF	DIP1 position to select the automatic logic
	ON	DIP1 position to select the safety automatic logic
MAX	ON	DIP1 position + Trimmer Rv3 to select the safety semi - automatic logic

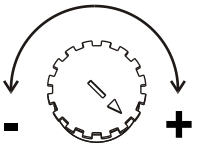
ADDITIONAL FUNCTIONS (DIP-SWITCH)



DIP	*POSITION*	SETTING OF THE OTHER FUNCTIONS THROUGH DIP-SWITCH
2	**ON**	***PRE - FLASHING*** When this function is activated the flashing lamp begins flashing about 3 seconds before the motor starts to work, both in closing and opening.
3	**ON**	***SELFTEST PHOTOCELL*** When this function is activated a test is executed on the photocells before the gate starts to move. In order to enable this function the photocells transmitters must be connected to terminals 11 (24V) and 2 (Negative) of connector CN1. The selftest can be exclusively used with the imput photocell 1.
4	**ON**	***ENCODER MANAGEMENT (only in working times selflearning mode)*** When this function is activated, the impulses coming from an encoder placed on the motor or on the gate are managed, so that any obstacle which interrupts the passage can be detected and the gate reverses its movement. If a malfunctioning occurs, the flashing lamp will execute a sequence of 3 flashings. After every single intervention the gate proceeds at reduced speed until it reaches the positive stop. **NOTE: if no encoder is installed, place DIP to OFF position.** **Note: The Encoder sensibility can be adjusted through the PALM or through the pushbuttons Ptime and Pcode on board of the control unit.**
5	**ON**	***SLOWDOWN AND LIMIT SWITCH*** When this function is activated motor speed reduces slowly before the gate reaches the limit switch stop or before the operating time ends.This function is designed in order to get the leaf gently closer to the mechanical stops, avoiding any noisy clash. The closing speed is fixed, while the slowdown time can be adjusted using the trimmer Rv2.
6	**ON**	***LEAF LOCKING*** When this function is activated, at the end of slowdown phase, and when the leaf has reached the mechanical stop, the motor is supplied at maximum power for 1 second approximately. This increases the oil pressure in the motor and makes the hydraulic lock more effective. **WARNING: this function must not be activated on a sliding gate since it could cause the over - running of the limit switches, with following block of the automation.** **(Through the PALM it is possible to exclude the PUSHOVER in opening).**
7	**ON**	***REVERSING STROKE*** This function (to be used exclusively on swing gates) is useful to facilitate the electric lock release. At the start impulse the leaves in closing phase are powered for 1 second approximately, before the opening cycle starts..
8	**ON**	***WORKING TIMES ADJUSTMENT USING TRIMMER*** This DIP when on ON position allows to activate the adjustment of the working times with trimmer, de-activating the selflearning.

TRIMMER ADJUSTMENTS





NOTE:
ROTATING THE TRIMMER CLOCKWISE THE TIMES / VALUES INCREASE

Rv1 ***MOTOR TORQUE ADJUSTMENT***
This trimmer allows to adjust the thrust force of the motor reducer. This kind of adjustment is required for operators without mechanical / hydraulic device for power limitation. The adjustment must be executed so that there is no crushing danger for people or objects and in any case in accordance with the law in force on the matter.

Rv2 ***SLOWDOWN TIME ADJUSTMENT / LEAF DELAY IN WORKING TIMES MODE WITH TRIMMER***
This trimmer has a double functionality depending on the selected working mode. In working times selflearning mode it allows to adjust the length of slowdown time. In working times manual adjusting mode (DIP 8 to ON position) this trimmer manages the leaf delay.

Rv3 ***PAUSE TIME ADJUSTMENT***
This trimmer allows the linear adjustment of pause time from 0 to 120 sec. (If you rotate it completely clockwise, you can adjust the working logics setting it in half-automatics).

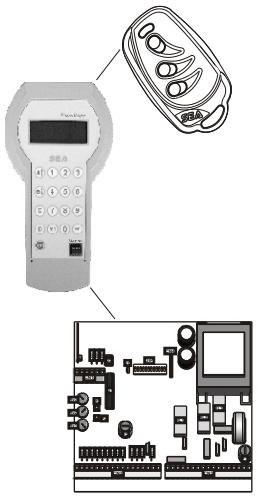
Rv4 ***ENCODER SENSITIVITY ADJUSTMENT / WORKING TIMES WITH TRIMMER***
This trimmer has a double functionality depending on the selected working mode. In working times selflearning mode it allows to adjust the encoder sensitivity, In working times manual adjusting mode (DIP 8 to ON position), this trimmer manages the opening and closing time of the automation.
Note: The Encoder must be set following the laws in force. The maximum sensitivity is obtained with the trimmer Rv4 completely in clockwise position.

ALARMS INDICATION TABLE

The flashes sequence,spaced with a pause, is showed on the flashing lamp (for about 20 seconds).

Flashes number	Kind of alarm
1	Photocell
3	Encoder

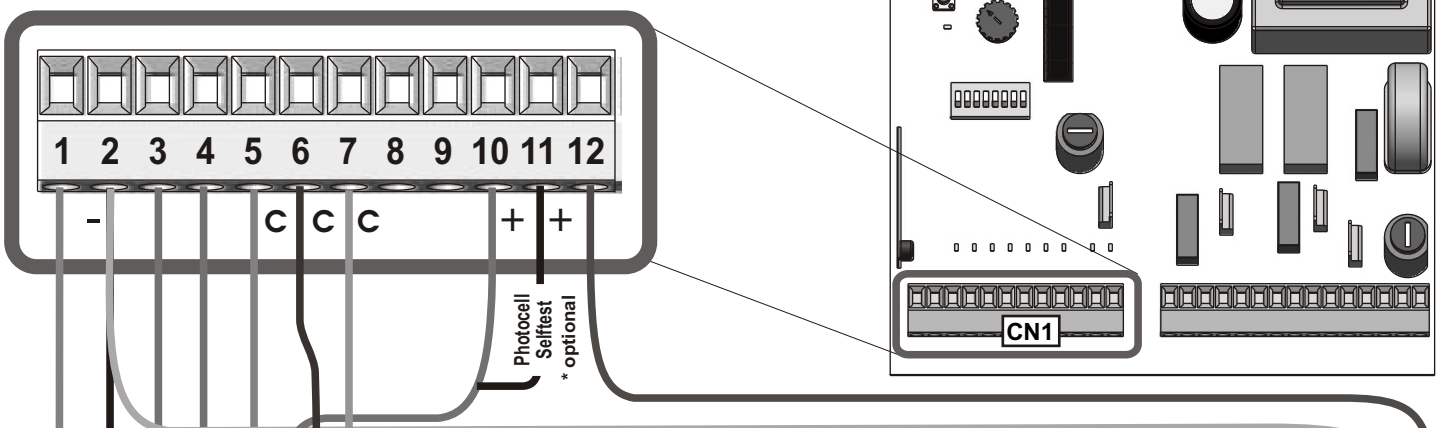
Flashes number	Kind of alarm
4	Stop
5	Photocell selftst



PALM FUNCTIONS

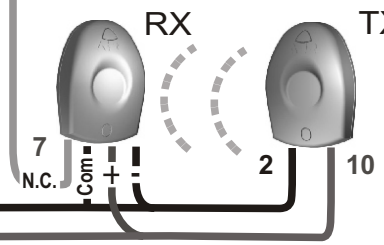
Control unit SWING 2 with PALM administration
- Visualisation and modification of the following parameters:
- Working times
- Leaf delay
- Partial opening time
- 2 n. maintenance cycles adjustment
- Antisqueezing sensibility SAFETY GATE
- PhotoStop
- PhotoClose
- PushOpen (excludes the pushover during opening phase)

START, PEDESTRIAN START, STOP, ANTENNA PHOTOCELLS 1 AND 2, ELECTRIC LOCK



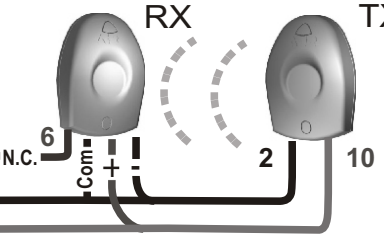
Photocells 1 Connection

When the photocells beam is crossed, the automation reverses its movement if in closing phase.
To use the photocells self- testing connect the (+) of the TX photocell 1 with contact 11 instead of 10.
Note: When not used make a jumper between contact 7 and 2 of Cn1.
Note: With the PALM device it is possible to set this photocell as PHOTOCLOSE, that means, that if occupied during the pause, the automation interrupts the same and recloses immediately.
+ = 24V ⎓ - = 0V⎓ C = Contact Com = Common



Photocells 2 Connection

When the photocells beam is crossed, the automation reverses its movement if in closing phase. In opening it causes the stop of the gate until it is occupied, when released the gate returns into open postion. **Note: When not used make a jumper between contact 6 and 2 of Cn1.**
Note: With the PALM device it is possible to set as PHOTOSTOP, that means that it does not allow to the gate to open, while it does not intervene during the remaining opening.
+ = 24V ⎓ - = 0V ⎓ C = Contact Com = Common



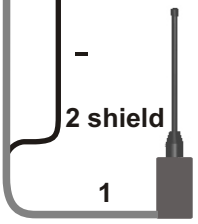
Start

This entry manages the opening/closing of the automation.

Pedestrian Start

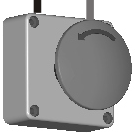
It executes complete opening/closing of one only leaf.

Note: The partial opening is executed on motor 1.



Antenna

Connect the antenna as in the picture.

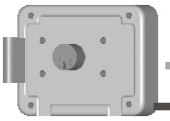


Stop

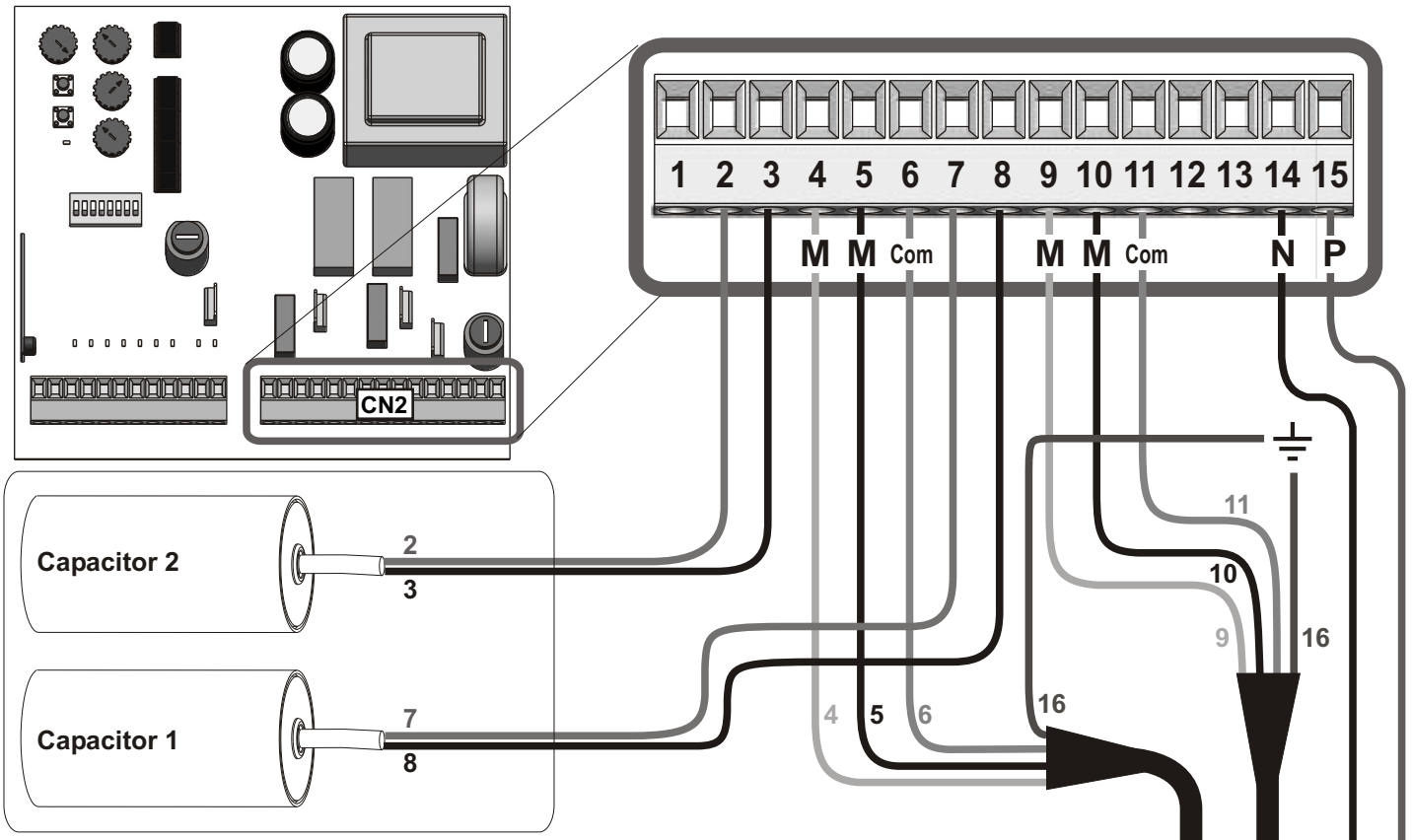
The pressure of this button stops the automation at any time. A START impulse is required in order to re-establish the movement.
If not used put a jumper between contact 3 and 2 of CN1.

Electric lock

Note: it's possible to connect **only one** electric lock.
12V ⎓
15VA max



MOTORS, CAPACITORS, POWER SUPPLY

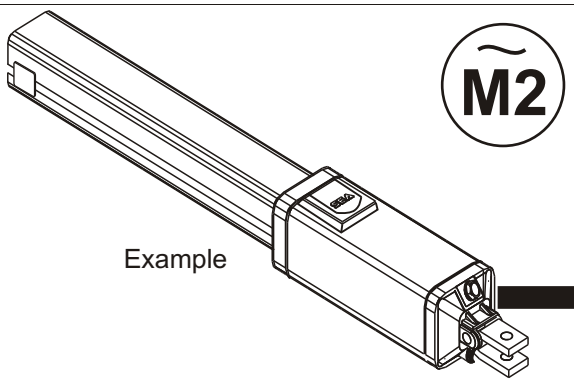


Motor 2

Motors 2 outputs

M = OPENING/CLOSING

Com = COMMON



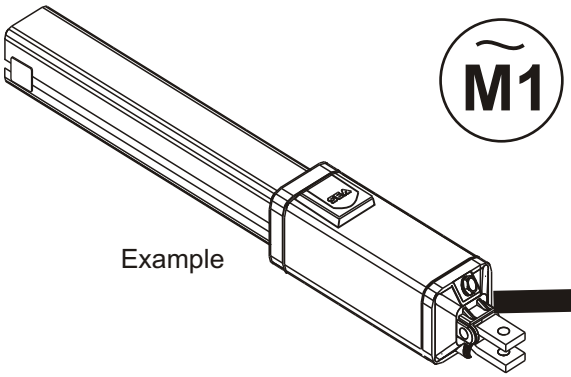
Example

Motor 1

Motor 1 outputs

M = OPENING/CLOSING

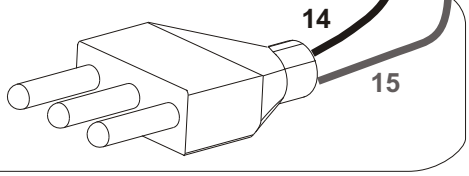
Com = COMMON



Example

Power supply
Power supply connection:

P = PHASE
N = NEUTRAL



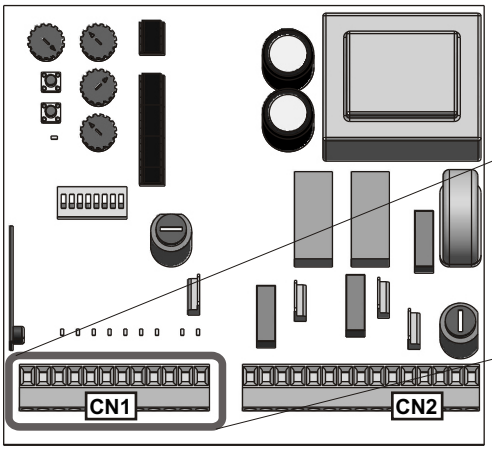
ENCODER (SAFETY GATE) MANAGEMENT ACTIVATION

After executing the four programming steps of the card, after connecting the encoder of both the motors and executing themotor torque adjustments using trimmer RV1 and/or mechanical adjustment devices (by-pass valves), place DIP 4 to ON position and repeat the programming procedure.

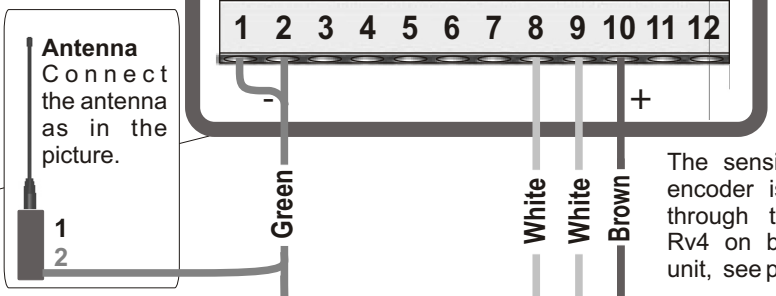
If necessary it' s possible to disable the SAFETY GATE management placing DIP 4 to OFF position, without repeating the self-learning times procedure.

SAFETY GATE (ENCODER), FLASHING LAMP

Working with DIP 4 placed to ON position and exclusively in working times self-learning mode.

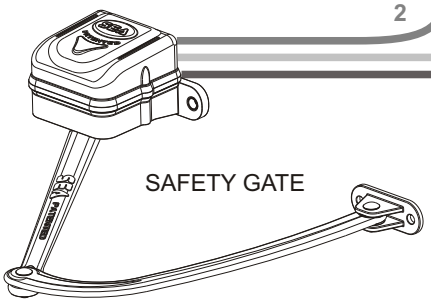


Antenna
Connect the antenna as in the picture.



The sensibility of the encoder is adjustable through the Trimmer Rv4 on board of the unit, see pag.27.

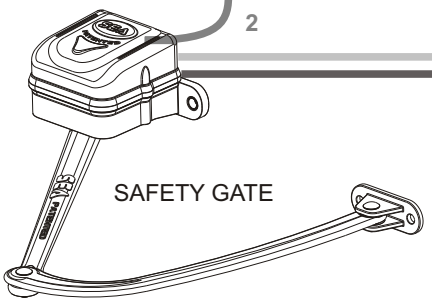
Encoder 2
The encoder (Safety Gate) is a system for obstacles detection. It is set in the factory on a middle level but can be modified. Low sensibility levels do not allow a fast inversion as required by the En12453 rules.
Connect the encoder 2 as in the picture.



NOTE: Only in working times selflearning mode (DIP8 OFF and DIP4 ON)

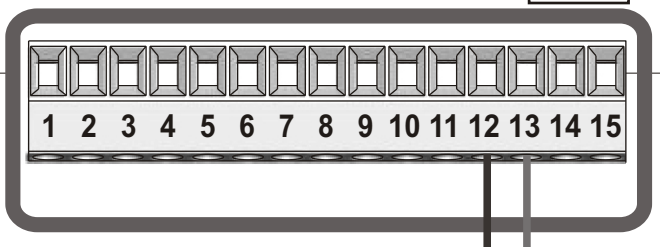
After an Encoder intervention and in case of power supply failure, the leaves will proceed at reduced speed until they reached their referring stops.

Encoder 1
The encoder (Safety Gate) is a system for obstacles detection.
Connect the encoder 1 as in the picture.
The Encoder function can be used in single leaf modality.
Note: With the PALM device or through the Trimer Rv4 on board of the control unit. it is possible to adjust the sensibility of the encoder on a scale from 0 to 15, where 0 indicates the max. sensibility during the inversion.
Note: Every time when there is no current supply and after every osbstacle the automation, when no limit switches are installed, will proceed slowly until it reaches the stop.

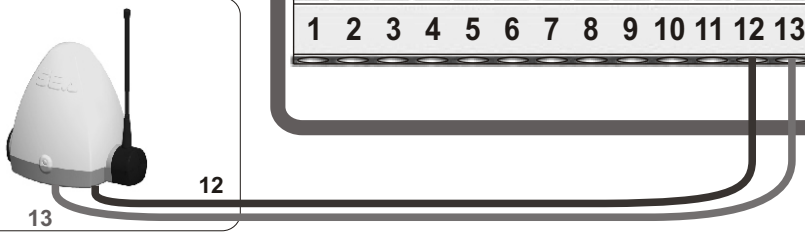


Note: Only in working times selflearning mode (DIP8 OFF and DIP4 ON)

CN2



Flashing lamp (230V~ 50W MAX)
Connect the flashing lamp as in the picture.
It's possible to ebable a pre-flashing of 3 seconds putting DIP2 to ON position.



WORKING TIMES SELFLEARNING ON SWING GATE

1 ***PHASE 1***

Make all the electrical connections and take care to bridge all the unused N.C. contacts.

If you are installing a motor reducer equipped with mechanical / hydraulic anticrushing device, set the motor torque (trimmer Rv1) at maximum value and make the motor torque adjustment using the appropriate by-pass valves or clutch adjustment screws located on the operators.

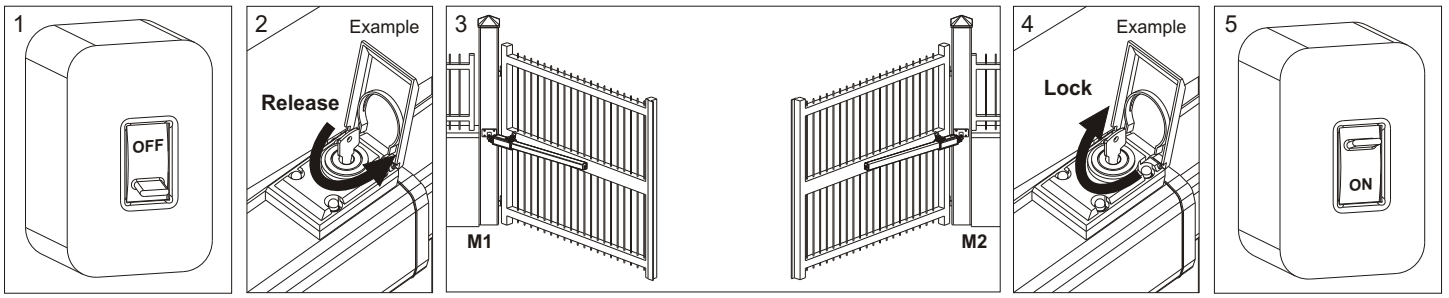
If you are installing a motor reducer not equipped with mechanical / hydraulic power limitaiton device,set the motor torque at maximum value ONLY during the selflearning phase. Immediately afterwards set a motor torque value which can assure the anticrushing safety, in accordance with the law in forcei.

WARNING !

THIS PROCEDURE IS POTENTIALLY DANGEROUS AND MUST BE EXECUTED EXCLUSIVELY BY SPECIALIZED STAFF UNDER SAFETY CONDITIONS.

2 ***PHASE 2***

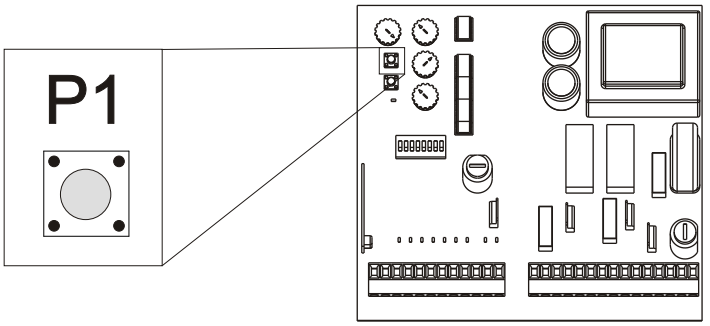
Disconnect the power supply (Fig. 1), release the gate (Fig. 2) and place the leaves at half-open position (Fig. 3). Re-lock the motor (Fig. 4) and connect again the power supply (Fig. 5).

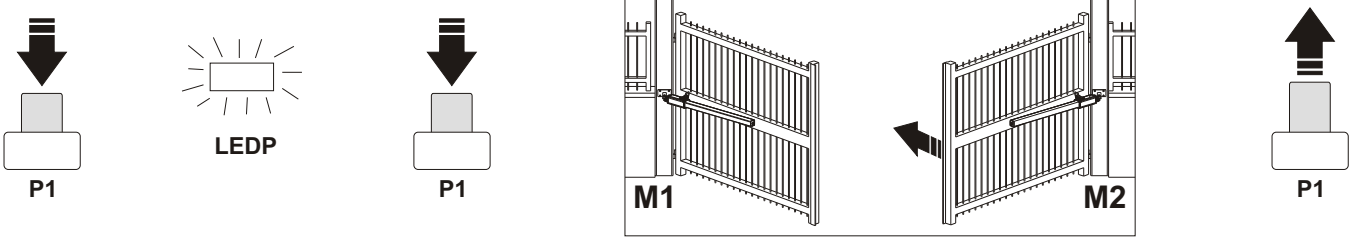


- Keep pressed P1 button, LEDP will switch on.

  Keep pressed P1 until the motor M2 starts to close*.

  Release P1.





WORKING TIMES SELFLEARNING ON SWING GATE

* If the motos starts to open the gate, disconnect the power supply again, and reverse the motor phases.
Execute the same kind of connection on motor M1.
Repeat the programming procedurerogrammazione (fase 2).

3 ***FASE 3***
Motor M2 closes (from step 2), when the leaf reaches the closing mechanical stop press the button P1 (Fig. 6). Motor M1 will also start a closing cycle. When the leaf reaches the closing mechanical stop press again the button P1 (Fig. 7).

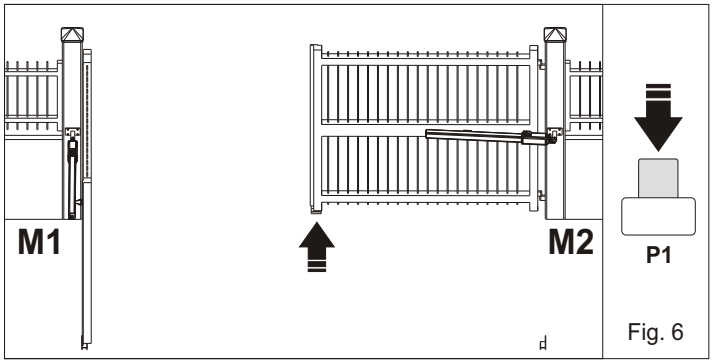


Fig. 6

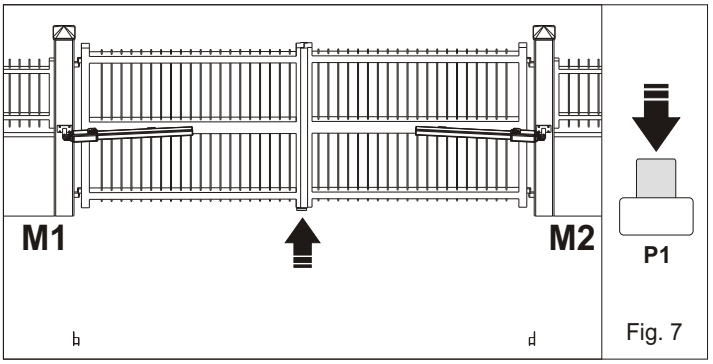


Fig. 7

The gate stops and motor M1 starts an opening cycle. Press agin P1 in the point where you desire to set the leaf delay in opening.
When the leaf reaches the mechanical stop in opening press once again P1 (Fig. 8).
At this point motor M2 also will start an opening cycle.
When the leaf will reach the mechanical stop in opening push once again P1 (Fig. 9).

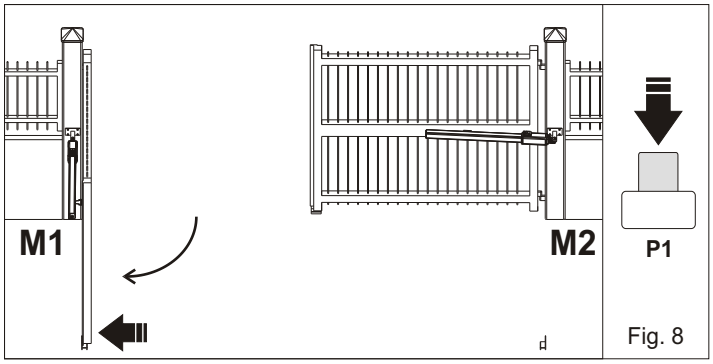


Fig. 8

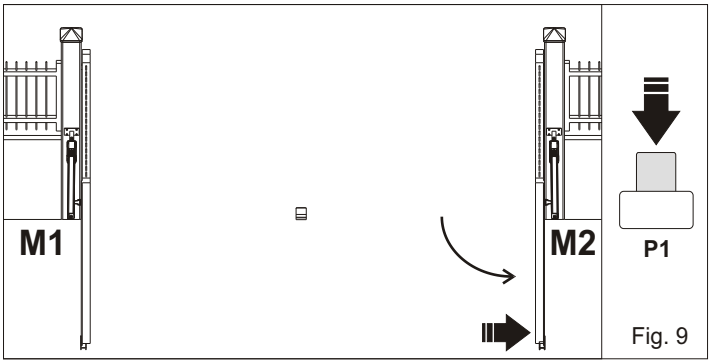


Fig. 9

WORKING TIMES SELFLEARNING ON SWING GATE

Motor M2 will start automatically a closing cycle.Press again P1 in the point where you desire to set the leaf delay in closing.
When the leaf reaches the mechanical stop in closing press once again P1 (Fig. 10).
At this point motor M1 will also start a closing cycle.
When the leaf reaches the mechanical stop in closing press once again P1 (Fig. 11).

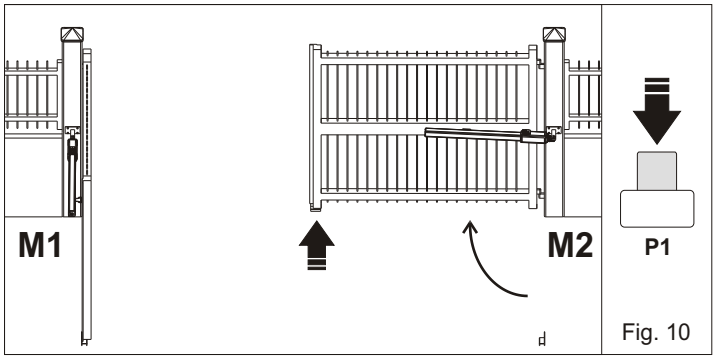


Fig. 10

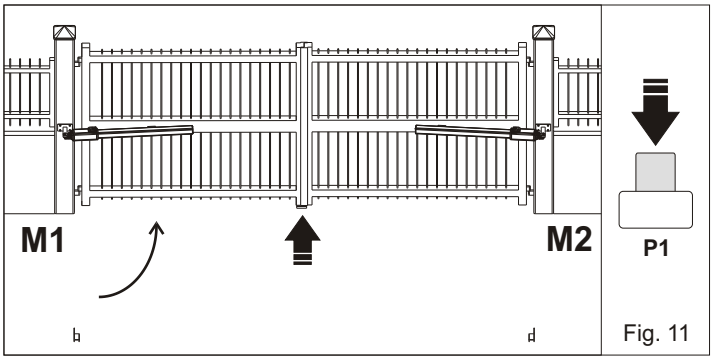


Fig. 11

Programming is finished.
Check the correct times memorizing giving a start impulse or pressing the button P1. If necessary repeat the same learning procedure from step 2.

4 ***PHASE 4***

In case of use use with motor reducer without mechanical / hydraulic device for motor torque limitation, adjust trimmer Rv1 on values which can assure the anti-crushing safety in accordance with the law in force.
If after adjusting the motor torque the working time is not enough (the leaf doesn't open / close completely), repeat STEP 2 setting the motor torque value as for the usual use of the automation.
Adjust the slowdown time (if enabled), using trimmer Rv2.

NOTE: assure that, in SAFETY GATE assistance (Encoder), DIP 4 is placed to OFF position.

ONE LEAF MODE

(ONLY IN WORKING TIMES ADJUSTMENT MODE USING TRIMMER)

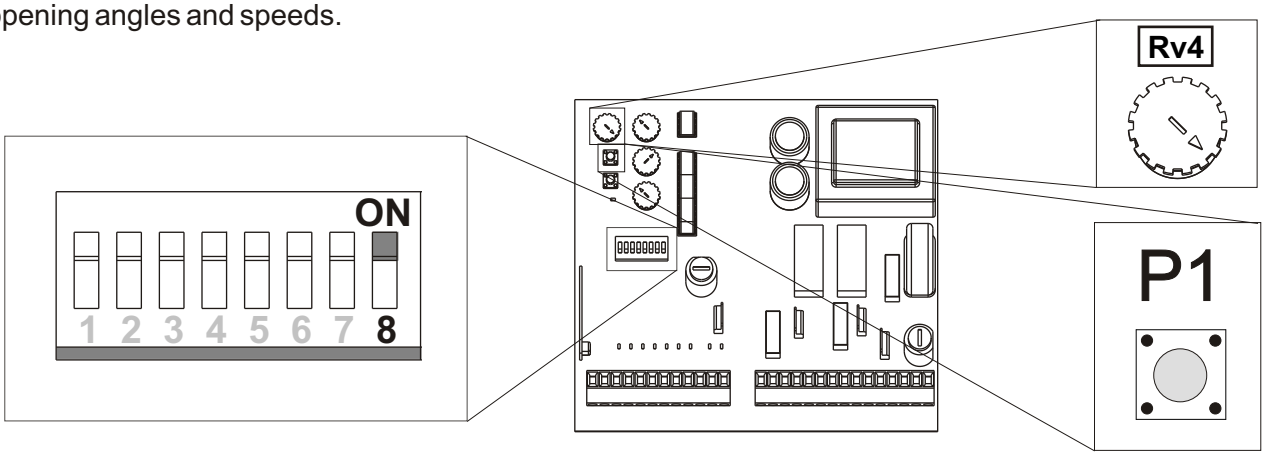
1) Connect motors cables to terminals No. 9,10,11 of Cn2 terminal board
2) Move to zero TRIMMER Rv2 of leaf delay
3) Place to ON position dip8 (working times adjustment mode using trimmer)
4) Execute working times adjustment as explained in the related paragraph at page 34 of the instructions manual.

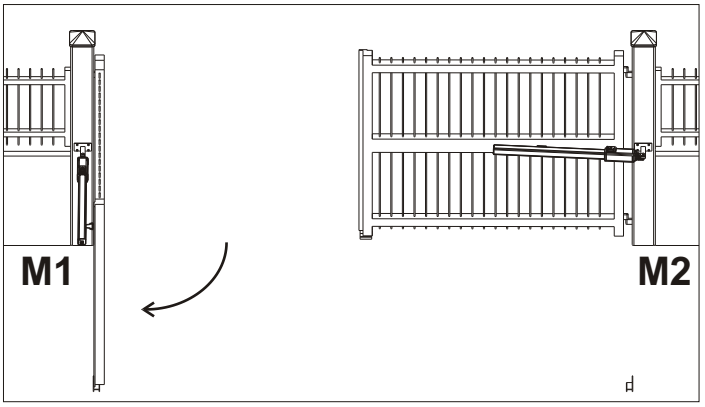
WORKING TIMES ADJUSTMENT
USING TRIMMER ON SWING GATE

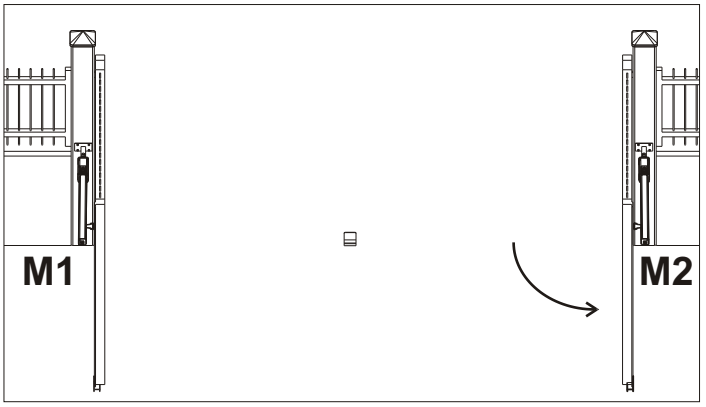
1 ***PHASE 1***

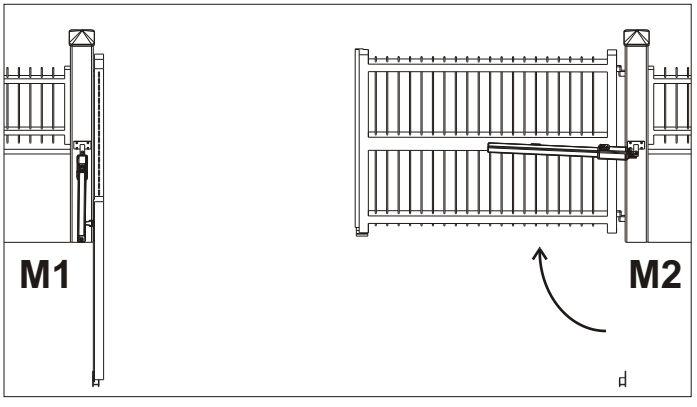
Place DIP8 to ON position and press button P1 or START, the gate will execute a complete opening / closing cycle.

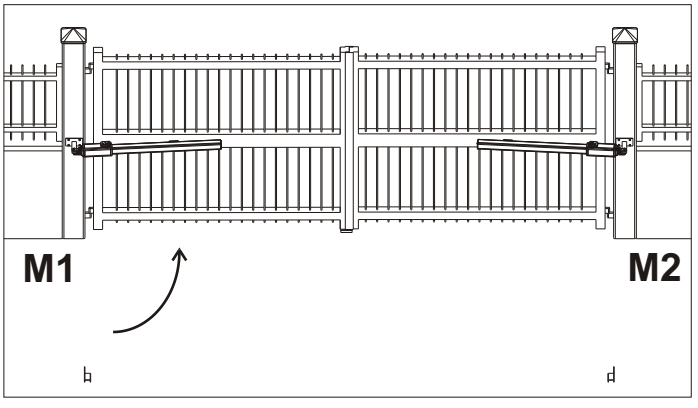
Note: It is strongly advised against to use this modality in case of swing gates with leaves with different opening angles and speeds.











At this point if the gate doesn't reach the mechanical stop in opening, increase trimmer Rv4 (rotate clockwise) and give again a START impulse.

On the contrary, if the gate executes a too long complete opening / closing cycle, decrease trimmer Rv4 (rotate counter clockwise).

Repeat the procedure until the gate will reach the complete and requested opening and closing cycle.

When this mode is on it's possible to adjust the leaf delays using trimmer Rv2.

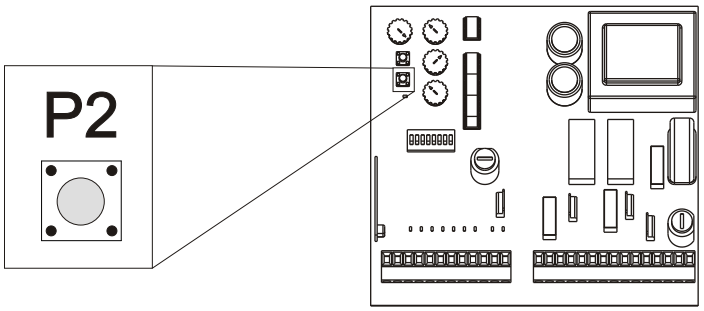
NOTE: WHEN THIS MODE IS ON THE USE OF ENCODERS IS DISABLED.

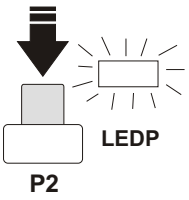
RADIO TRANSMITTERS MEMORIZING

Make sure that on CMR connector is installed the receiver with the same frequency of the radio transmitter that you want to use.
With this control unit all radio transmitters of the **SMART and HEAD series** and the radio transmitters **COCCIENELLA DIP and COPY** can be used.

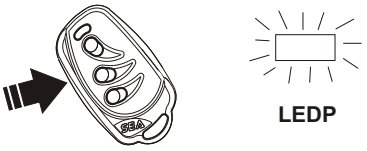
RADIO TRANSMITTER MEMORIZING TO START

Press the button P2 (PCode). LEDP will switch on.





Give an impulse with the radio transmitter, using the button which will be linked to the START impulse.
The led will execute two flashes Tx code and afterwards it will keep switching on waiting for new transmitters.

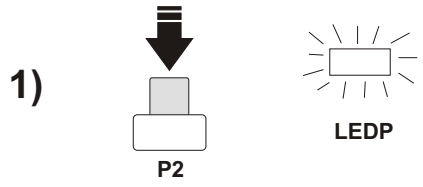


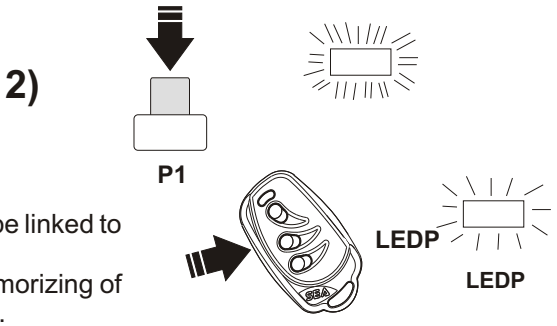
If no further code is memorized within 10 sec. The led will switch off automatically, getting out of the memorizing procedure.

WARNING: if you enter a code which is already memorized, it will be deleted (4 flashes).

RADIO TRANSMITTER MEMORIZING TO PEDESTRIAN START

1) Press the button P2 (PCode). LEDP will switch on.
2) Press the button P1 (PTime). LEDP will start to flash quickly.





Give an impulse with the radio transmitter, using the button which will be linked to the pedestrian start impulse.
The Led will execute 2 long flashes in order to confirm the correct memorizing of Tx and afterwards it will keep switching on waiting for new transmitters.

If no further code is memorized within 10 sec. The led will switch off automatically, getting out of the memorizing procedure.

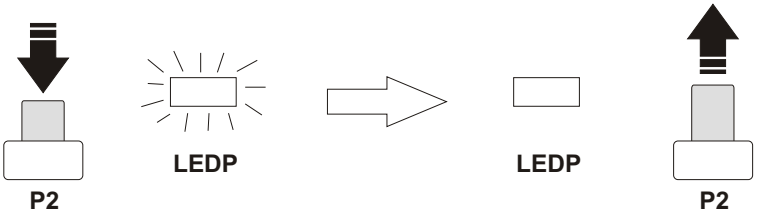
WARNING: if you enter a code which is already memorized, it will be deleted (4 flashes).

ALL RADIO TRANSMITTERS DELETING

Press and kepp pressing the button P2 (PCode).

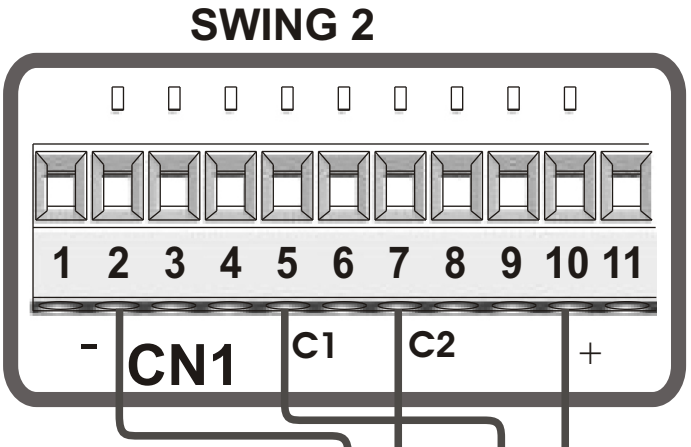
LEDP will start a sequence of flashes.

Wait that the led stops to flash and release the button P2 (PCode).



LEDP will flash 6 times in order to confirm the correct deleting.

SAFETY LOOP CONNECTION



THIS SCHEME IS AN EXPAMPLE FOR HOW TO CONNECT EVENTUAL MAGNETIC LOOPS.

C1 = CONTACT OPEN
C2 = CONTACT CLOSED
10 = 24 V⎓
2 = 0 V⎓

Loop exit 1

Connecting scheme of loop 1

5 = Contact start (n.o.)
2 = Common

Loop exit 2

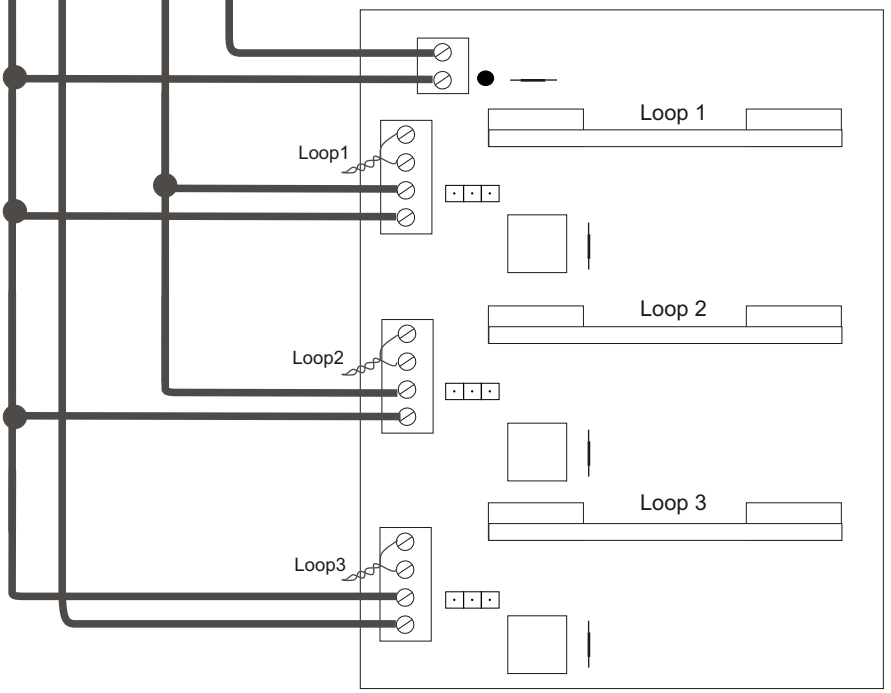
Connecting scheme of loop 2

5 = Contact start (n.o.)
2 = Common

Safety loop

Connecting scheme of loop 3

7 = Contact photocell (n.c.)
2 = Common



Note: In reality all contacts can be set as N.O. or N.C.

TROUBLE SHOOTING

Advises

Make sure all Safety LED are turned ON

All not-used N.C. Contacts must be bridged

Problem Found	Possible Cause	Solutions
The motor doesn't respond to any START impulse	**a.)** Bridge missing on one of the N.C. contacts **b.)** Burnt fuse	**a.)** Check connections or bridges on contacts 2/6 on the Cn1, 2/7 on the Cn1 **b.)** Replace burnt fuse on the board
Gate doesn't move while the motor is running	**a.)** The motor is in the released position **b.)** Trimmer Rv1 is at minimum **c.)** There is an obstacle or an obstacle is detected but it is not really present	**a.)** Re/lock the motor **b.)** rotate Trimmer Rv1 at maximum (rotate clockwise) **c.)** Look and remove the obstacle If encoder function is on, decrease its sensitivity
Gate doesn't reach the complete open/close position	**a.)** Programming error **b.)** Gate is stopped by an obstacle **c.)** The fiting geometry is inadequate **d.)** In manual adjusting mode with trimmer Rv4	**a.)** Repeat the programming **b.)** Remove the obstacle **c.)** Check fitting geometry following the operator installation manual. **d.)** Rotate Trimmer Rv4 clockwise
Gate opens bur doesn't close	**a.)** Photocells connections 2/6 and 2/7 are not closedi	**a.)** Check LED or bridges
Gate doesn't close automatically	**a.)** Pause time is too long **b.)** The setted operating logic doesn't include it	**a.)** Adjust the pause time using Trimmer Rv3 **b.)** Check dip1 and Trimmer Rv3 in order to verify the setted logic

WARNINGS AND WARRANTY

WARNINGS
The electric installation and the functioning logic choice must agree with the laws in force. In any case you must foresee a 16A and threshold 0.030A differential switch. Keep the power cables (motors, power supply) separate from the command cables (push buttons, photocells and so on). In order to avoid any interference it's preferable to foresee and use two separate sheaths.

REPLACEMENTS
Any request for spare parts must be sent to:
SEA s.r.l. - Zona Ind.le, 64020 S.ATTO - Teramo - Italia

USE DESTINATION
The electronic equipment 23001135 has been designed to be used exclusively as management equipment for sliding gates automation, swing gates, sectional doors, overhead doors, barriers.

SAFETY AND ENVIRONMENTAL COMPATIBILITY
It's recommended not to dispel in the environment the packaging materials of products and/or circuits.

REGULAR PRODUCT DISPOSAL (electric and electronic waste)

(It's applicable in UE countries and in those ones provided with a differential rubbish collection)

The brand that you find on the product or on documentation signals that the product must not be disposed off together with other domestic rubbish at the end of life cycle. In order to avoid any possible environmental or health damage because of the irregular waste disposal, we kindly invite you to separate this product from other kind of rubbish and to recycle it in a responsible way in order to favor the sustainable reuse of material resorces. Domestic users are invited to contact the retailer where the product has been purchased or the local office in charge for all the information related to defferential collection and recycling of this kind of product.

STORING

WAREHOUSING TEMEPERATURES			
T_{min}	T_{Max}	Dampness $_{min}$	Dampness $_{Max}$
- 40°C	+ 85°C	5% *not condensing*	90% *not condensing*

Materials handling must be made with appropriate vehicles..

DISINSTALLATION AND MAINTENANCE
The disinstallation and/or putting out of service and/or maintenance of the electronic equipment 23001135 must be made only and exclusively by authorized and qualified staff.

WARRANTY LIMITS
The warranty form of the electronic equipment 23001135 is valid for 24 months starting from the printed date on the product. The mentioned product will be considered under warranty if it doesn't show any damage caused by an irregular use or by any modification or breaking. The warranty is valid only for the original buyer.

NOTE:THE MANUFACTURER IS NOT CONSIDERED RESPONSIBLE FOR EVENTUAL DAMAGES CAUSED BY IRREGULAR, WRONG OR UNREASONABLE USE.

SEA reserves the right to make any required modification or change to the products and/or to this manual without any advanced notice obligation.

TERMS OF SALE

EFFICACY OF THE FOLLOWING TERMS OF SALE: The following general terms of sale shall be applied to all orders sent to SEA srl. All sales made by SEA to all customers are made under the prescription of this terms of sales which are integral part of the sale contract and cancel and substitute all opposed clauses or specific negotiations present in the order or in other documents received from the buyer.

GENERAL NOTICE The gate automation systems must be assembled exclusively with SEA components, unless specific agreements apply. Non-compliance with the applicable safety standards (European Standards EN 12453 EN12445 and others) and with good installation practice releases SEA from any responsibilities. SEA shall not be held responsible for any failure to execute a correct and safe installation under the above mentioned standards.

1) PROPOSED ORDER The proposed order shall be accepted only prior SEA approval of it. By signing the proposed order, the Buyer shall be bound to enter a purchase agreement, according to the specifications stated in the proposed order and always under those Terms of sale. On the other hand, failure to notify the Buyer of said approval must not be construed as automatic acceptance on the part of SEA.

2) PERIOD OF THE OFFER The offer proposed by SEA or by its branch sales department shall be valid for 30 solar days, unless otherwise notified.

3) PRICING The prices in the proposed order are quoted from the Price List which is valid on the date the order was issued. The discounts granted by the branch sales department of SEA shall apply only prior to acceptance on the part of SEA. The prices are for merchandise delivered ex-works from the SEA establishment in Teramo, not including VAT and special packaging. SEA reserves the right to change at any time this price list, providing timely notice to the sales network.

4) PAYMENTS The accepted forms of payment are each time notified or approved by SEA. The interest rate on delay in payment shall be 1.5% every month but anyway shall not be higher than the max. interest rate legally permitted.

5) DELIVERY Delivery shall take place, approximately and not peremptorily, within 30 working days from the date of receipt of the order, unless otherwise notified. Transport of the goods sold shall be at Buyer's cost and risk. SEA shall not bear the costs of delivery giving the goods to the carrier, as chosen either by SEA or by the Buyer. Any loss and/or damage of the goods during transport, are at Buyer's cost.

6) COMPLAINTS Any complaints and/or claims shall be sent to SEA within 8 solar days from receipt of the goods, proved by adequate supporting documents as to their truthfulness.

7) SUPPLY The concerning order will be accepted by SEA without any engagement and subordinately to the possibility to get it's supplies of raw material which is necessary for the production;.Eventual completely or partially unsuccessful executions cannot be reason for complains or reservations for damage. SEA supply is strictly limited to the goods of its manufacturing, not including assembly, installation and testing. SEA, therefore, disclaims any responsibility for damage deriving, also to third parties, from noncompliance of safety standards and good practice during installation and use of the purchased products.

8) WARRANTY.

SILVER: The mechanical components of the operators belonging to this line are guaranteed for 24 months from the date of manufacturing written on the operator.

GOLD: The mechanical components of the operators belonging to this line are guaranteed for 36 months from the date of manufacturing written on the operator.

PLATINUM: The mechanical components of the operators belonging to this line are guaranteed for 36 months from the date of manufacturing written on the operator. The base warranty (36 months) will be extended for further 24 months (up to a total of 60 months) when it is acquired the certificate of warranty which will be filled in and sent to SEA s.r.l. within 30 days from the purchase date. The electronic devices and the systems of command are guaranteed for 24 months from the date of manufacturing. In case of defective product, SEA undertakes to replace free of charge or to repair the goods provided that they are returned to SEA repair centre.

The definition of warranty status is by unquestionable assessment of SEA. The replaced parts shall remain propriety of SEA. Binding upon the parties, the material held in warranty by the Buyer, must be sent back to SEA repair centre with fees prepaid, and shall be dispatched by SEA with carriage forward. The warranty shall not cover any required labour activities. The recognized defects, whatever their nature, shall not produce any responsibility and/or damage claim on the part of the Buyer against SEA. The guarantee is in no case recognized if changes are made to the goods, or in the case of improper use, or in the case of tampering or improper installation, or if the product label of the manufacturer with the registered SEA trademark n° 804888 has been removed . Furthermore, the warranty shall not apply if SEA products are partly or completely coupled with non-original mechanical and/or electronic components, and in particular, without a specific relevant authorization, and if the Buyer is not making regular payments.The warranty shall not cover damage caused by transport, expendable material, faults due to non-conformity with performance specifications of the products shown in the price list. No indemnification is granted during repairing and/or replacing of the goods in warranty. SEA disclaims any responsibility for damage to objects and persons deriving from non-compliance with safety standards, installation instructions or use of sold goods. The repairs of products in warranty and out of warranty is accepted only if the procedure of SEA are fully respected by the customer.

9) RESERVED DOMAIN A clause of reserved domain applies to the sold goods; SEA shall decide autonomously whether to make use of it or not, whereby the Buyer acquires the property of the goods only after full payment of the invoice.

10) COMPETENT COURT OF LAW In case of disputes arising from the application of the agreement, the competent court of law is the tribunal of Teramo. The official language for the interpretation of the catalogue, the manuals, the terms of sale and any other is the italian language. SEA reserves the faculty to make technical changes to improve its own products, which are and are not included in this price list at any moment and without notice.

SEA declines any responsibility due to possible mistakes contained inside the present price list caused by printing and/or copying. The present price list cancels and substitutes the previous ones. The Buyer, according to the law No. 196/2003 (privacy code) consents to put his personal data, deriving from the present contract, in SEA archives and electronic files, and he also gives his consent to their treatment for commercial and administrative purposes.

Industrial ownership rights: with the purchase, the buyer accepts in full the present Terms of Sale and recognizes that SEA has the exclusive legal ownership of the registered SEA International trademark n° 804888 which is attached on each products label, and/or on manuals, packaging and/or in any other documentation, and he will commit himself to use it in its marketing and/or installation activity in a way which does not reduce the value of these rights; he won't also remove, replace or modify the trademark or any other particularity from the products. Any kind of replication or use of SEA brand is forbidden as well as of any change of sings-brands on the products,unless preventive and expressed authorization by SEA.