SEA®
Sistemi Elettronici
di Apertura Porte e Cancelli
International registered trademark n. 804888

CE

Italiano
English
Français
Español
Deutsch

USER 2 - 24V

23024015/16

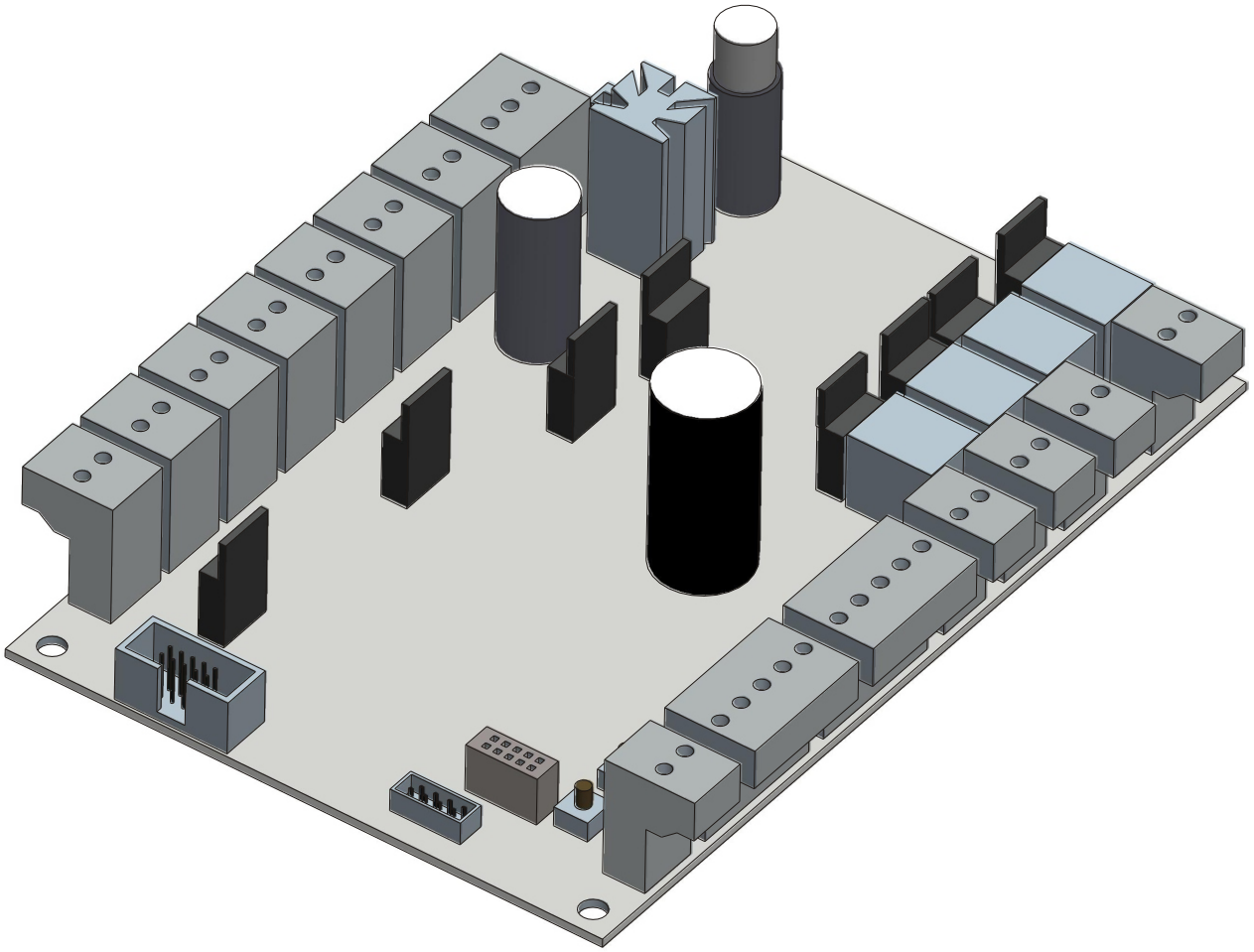
APPARECCHIATURA ELETTRONICA 24Vdc PER CANCELLI AD ANTE BATTENTI

ELECTRONIC CONTROL UNIT FOR SWING OPERATORS 24 V D.C.

ARMOIRE ELECTRONIQUE 24 V dc POUR PORTAILS A BATTANTS

TARJETA ELECTRONICA 24Vdc PARA CANCELA ABATIBLES

ELEKTRONISCHE 24Vdc STEUERUNG FÜR SCHWINGTORE



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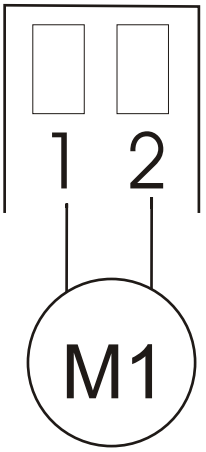
67410755 REV 05 - 01/2009

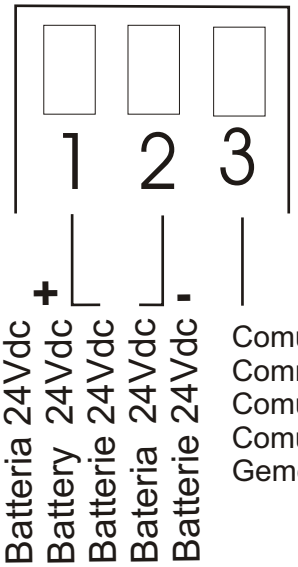
CONNESSIONI / CONNECTIONS / CONNEXIONS
CONEXIONES / VERBINDUNGEN

M1



(70W Max)

M3



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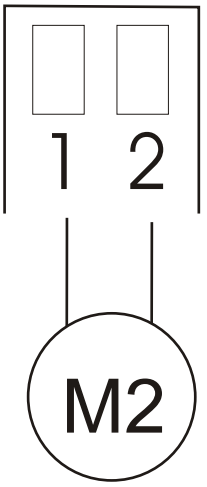
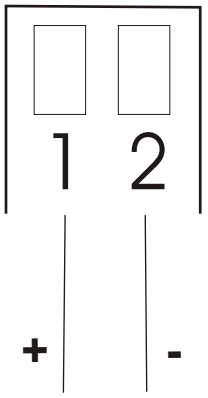


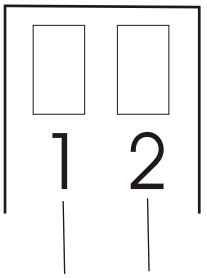
(70W Max)

M5



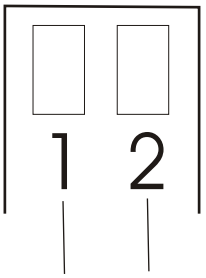
24Vdc Accessori Max 200 mA
24Vdc Accessories Max 200 mA
24Vdc Accessoires Max 200 mA
24Vdc Accesorios Max 200 mA
24Vdc Zubehör Max 200 mA

M6

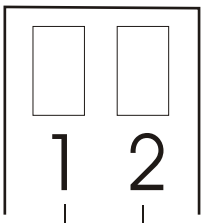


Lampeggiatore 24V 15W /
Flashing lamp 24V 15W
Lampe clignotante 24V 15W /
Lampara 24V 15W /
Blinklamp e 24V 15W

M7



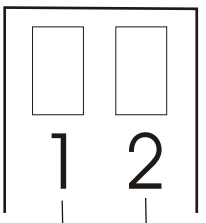
M8



+12V Elettroserratura /
+12V Electric lock
+12V Electro serrure /
+12V Electrocerradura /
+12V Elektroschloss

Comune / Common / Comun/ Comune / Gemeinsam

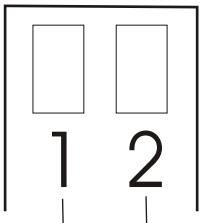
M9



Fotocellula / Photocell / Photocellule /Fotocelula / Lichtschranke

Comune / Common / Comun/ Comune / Gemeinsam

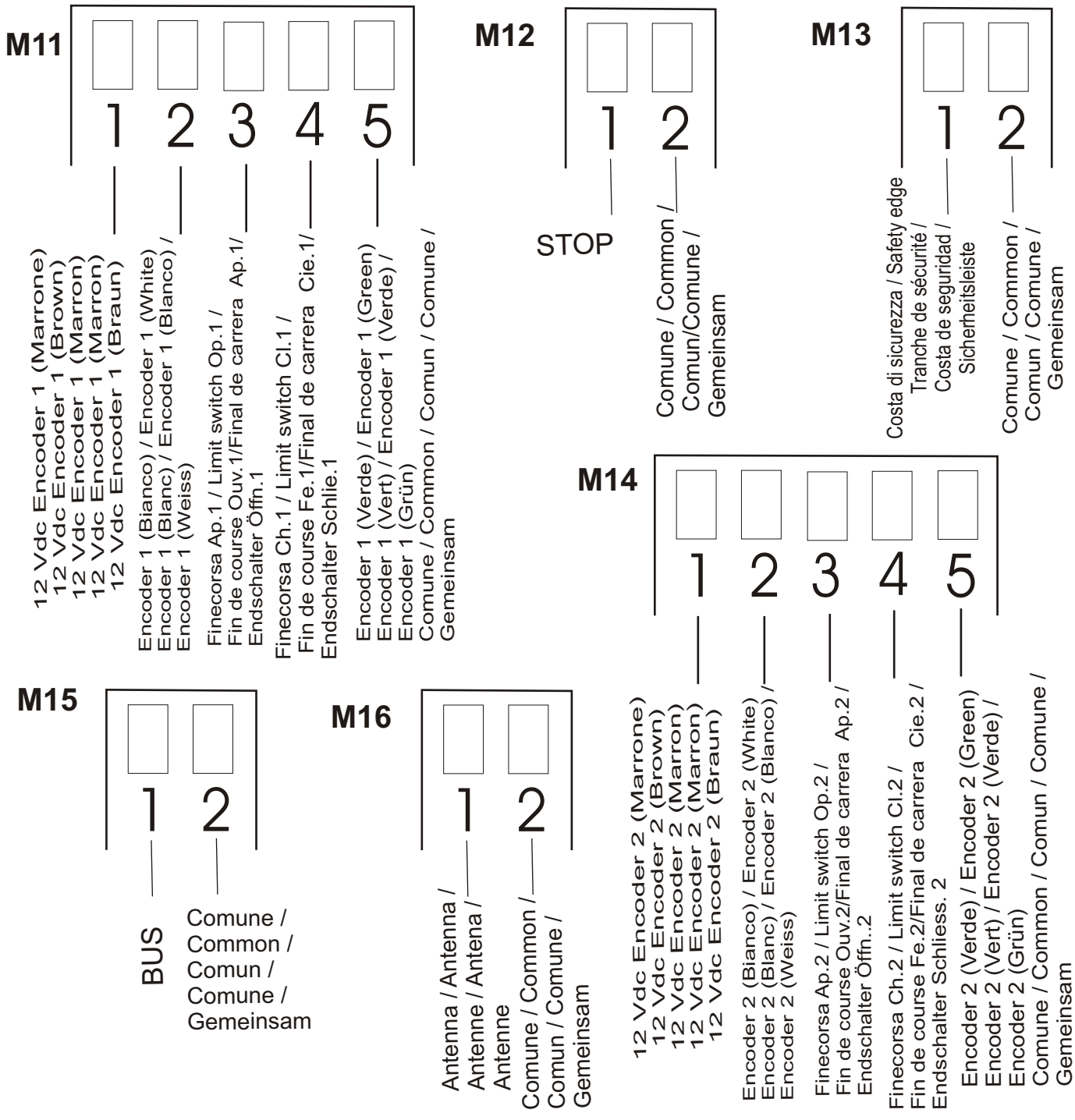
M10



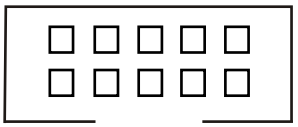
START Ped./ START Ped. /
START Ped/START Ped./
START Fuss.

Comune / Common / Comun/Comune/ Gemeinsam

CONNESSIONI / CONNECTIONS / CONNEXIONS
CONEXIONES / VERBINDUNGEN

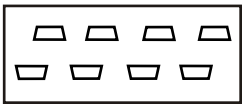


CMD



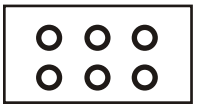
Connettore modulo display /
Display module connector /
Connecteur module display /
Conector modulo display /
Verbindungsmodul Bildschirm

CMR



Connettore modulo ricevente /
Receiver module connector /
Connecteur module récepteur /
Conector modulo receptor /
Verbindungsmodul Empfänger

CALM



Connettore alimentazione 24Vdc /
24V dc feed connector /
Connecteur alimentation 24Vdc /
Conector alimentaciùn 24Vdc /
Speisungsverbindung 24Vdc

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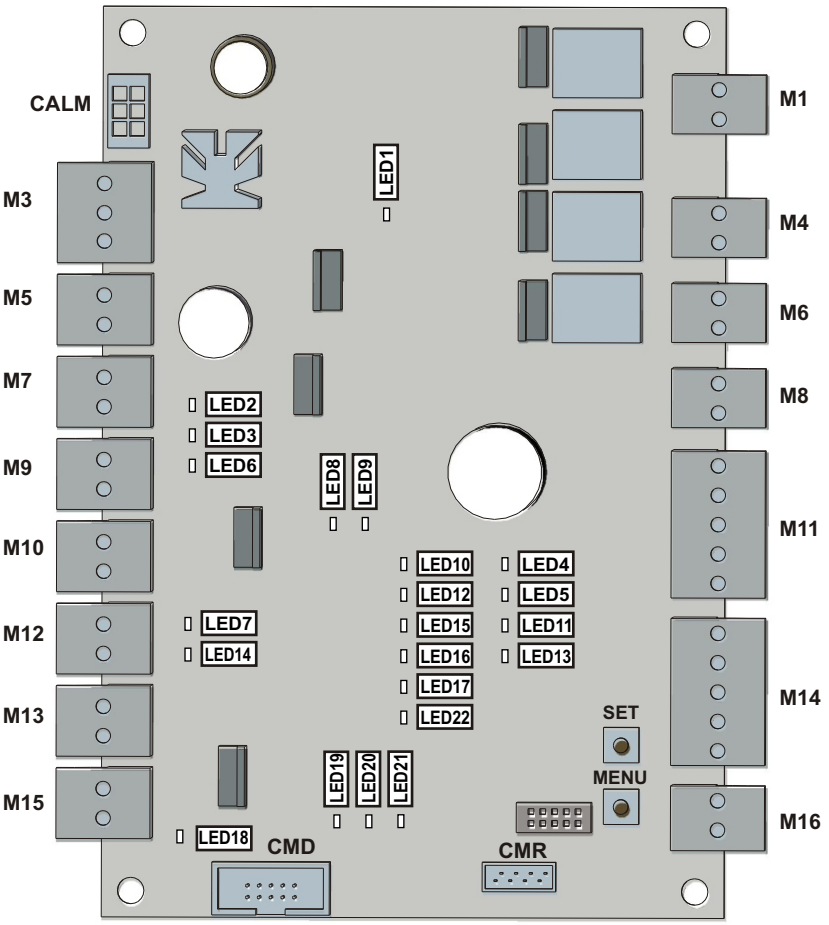
DESCRIPTION OF THE COMPONENTS



LED1 = Fuse breaking signal
LED2 = Start
LED3 = Photocell
LED4 = Limit switch opening M1
LED5 = Limit switch closing M1
LED6 = Pedestrian Start
LED7 = Stop
LED8 = Battery
LED9 = 24Vdc Power supply
LED10 = Using modality
LED11 = Limit switch opening M2
LED12 = Time of pause
LED13 = Limit switch closing M2
LED14 = Safety edge
LED15 = TX Programming
LED16 = Leaf delay adjustment
LED17 = Functioning logics
LED18 = BUS Indicator
LED19 = Function indicator
LED20 = Function indicator
LED21 = Function indicator
LED22 = Motors' speed adjustment
SET = Setting
MENU = Selection

M1 = Motor 1 power supply
M3 = Battery card connection
M4 = Motor 2 power supply
M5 = 24Vdc exit
M6 = 24V 15W Warning lamp
M7 = Start
M8 = Electric lock exit
M9 = Photocell connection
M10 = Pedestrian start
M11 = Encoder / Limit switch M1
M12 = Stop
M13 = Security edge
M14 = Encoder / Limit switch M2
M15 = BUS accessories connection
M16 = Antenna
CMD = Display module connection
CMR = Receiver module connection
CALM = 24Vdc power supply connection

GENERAL INFORMATION

GENERAL CHARACTERISTICS

The USER 2 24V control unit has been designed to manage one or two low voltage swing gate operators with or without electronic limit switches.

It is very small and besides the possibility to adjust the: motor speed, amperemetric sensitivity for the anti squeezing, leaf delay in closing, pausing time, it is also possible to manage a display, through which it is possible to control numberous functions of management and the maintenance of the control unit. The most important novelty however concerns the presence of a BUS connector with two threads, through which it is possible to connect the accessories as photocells, flashing lampe, key switch and so on,... bringing only two cables to the control unit. The self- learning of working time can be done automatically.

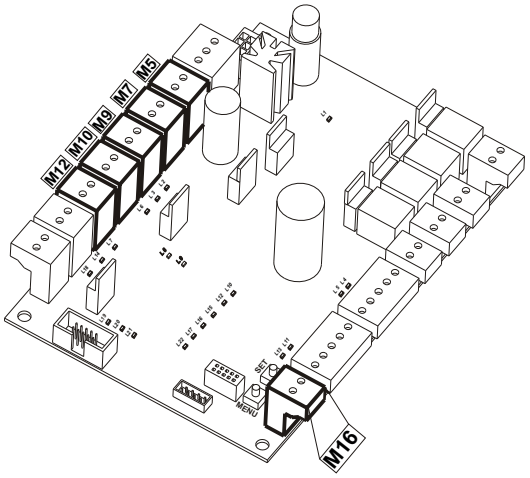
TECHNICAL CHARACTERISTICS

Control unit power supply	24 Vdc
Absorbt power	10 W
Max. motor charge	90 W x 2
Max. accessories charge	24Vdc 250mA
Max. Flash light charge	24Vdc 15W max.
Environment temperature	-20°C +50°C
Protection fuse (24V accessories)	1 (250mA)
Function logic	Automatic / Manual / Security / Semiautom.
Opening/closing time	In selflearning in programming phase
Time of pause	Adjustable with push button
Thrust	Adjustable with display
Slow down	Adjustable with display
Entries on connecting terminal	Battery power supply / Total opening /Pedestrian opening adjustable / Edge/ Stop / Limit switch opening and closing / Encoder/ BUS accessories
Exit on connecting terminal	Power supply accessories 24Vdc / Motors 24Vdc / Flashing lamp 24Vdc / Electric lock 12Vdc /
Board dimensions	156 x 100 mm
Characteristics optional batteries	24V Pb 2Ah min.
Characteristics of external enclosure	305 x 225 x 125 mm - Ip55

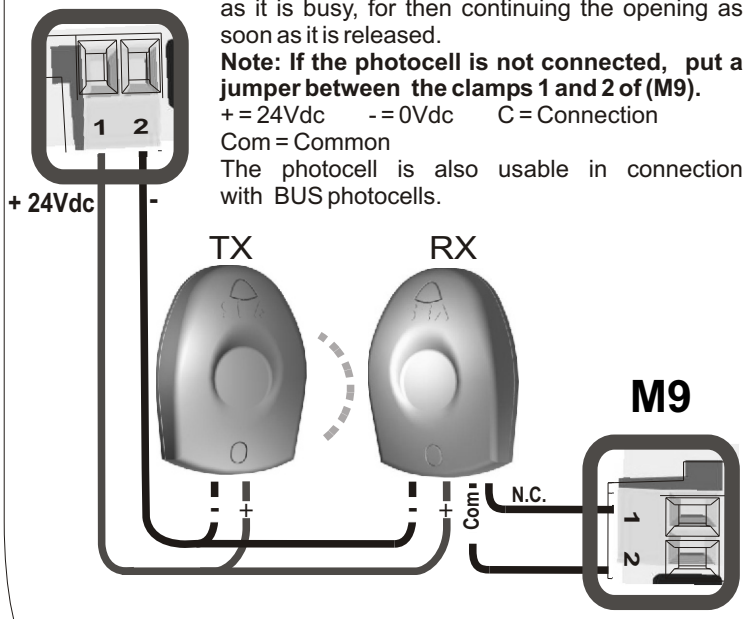
ARRANGEMENTS

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 local isolation at the control panel.
For the installation of the electric cables use adequate rigid and/or flexible ducts.
Always separate the connection cables of low voltage accessoires from those of 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.

START - STOP - PEDESTRIAN START - ANTENNA - PHOTOCELL

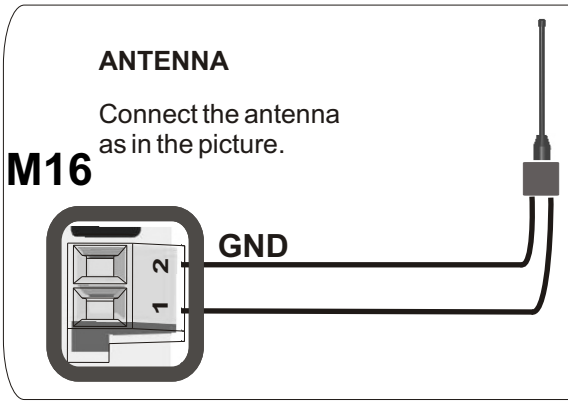


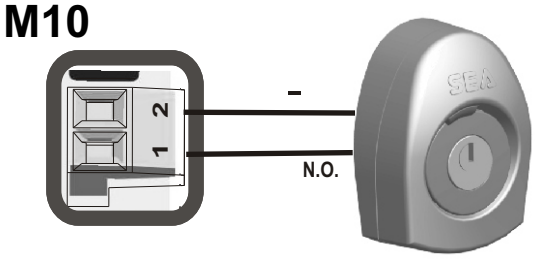
Photocell 1 Connection
When the ray of the photocell is crossed, and the automation is in phase of closing it reverses its movement. Through display it is possible to activate the photocell in opening, if activated it causes the interruption of the movement as long as it is busy, for then continuing the opening as soon as it is released.
Note: If the photocell is not connected, put a jumper between the clamps 1 and 2 of (M9).
+ = 24Vdc - = 0Vdc C = Connection
Com = Common
The photocell is also usable in connection with BUS photocells.



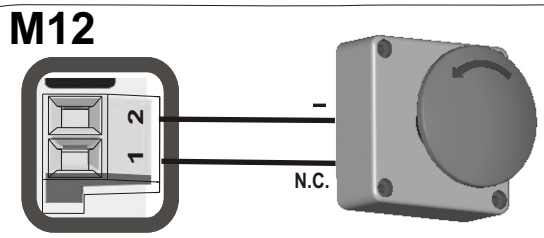
ANTENNA

Connect the antenna as in the picture.

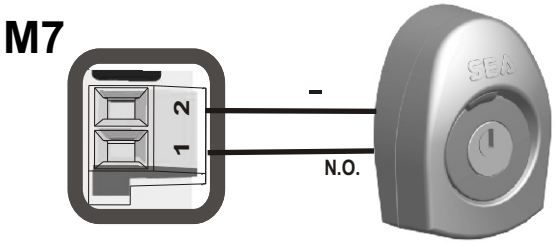




PEDESTRIAN START (N.O.)
To obtain a partial opening (only one leaf opening) connect the key-button wires as in the picture. It is possible to connect other command devices (push button board, radio receiver, keypad).
From the display it is possible to adjust the pedestrian opening space: 30%, 50%, 100%.
Note1: The contact for partial opening is a N.O. Contact (Normally open)
Note2: Partial opening will always operate the **M1** motor.
Nota3: In manual logic it is necessary to keep pressed the Start ped for the reclosing of the leaf.



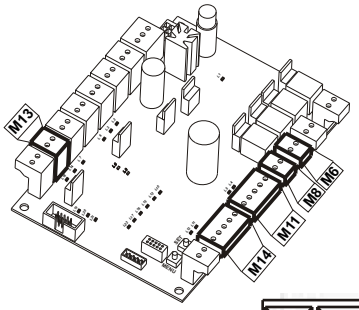
STOP (N.C.)
The pressure on this button immediately stops the motors in any condition /position. A start command is needed to re-start movement.
After a stop the motors always re-start in closing.
Notice: If stop button is not used make a jumper between terminals n° 1 and 2 of M12.



START (N.O.)
An impulse given to this contact opens and closes the automation depending on logic selected. It can be given by a key switch, a keypad, etc.
To connect the other devices refer to the related instructions leaflets. (ie. loop detectors and proximity switches)
Note1: In manual logic it is necessary to keep pressed the Start for the opening of the leaf.

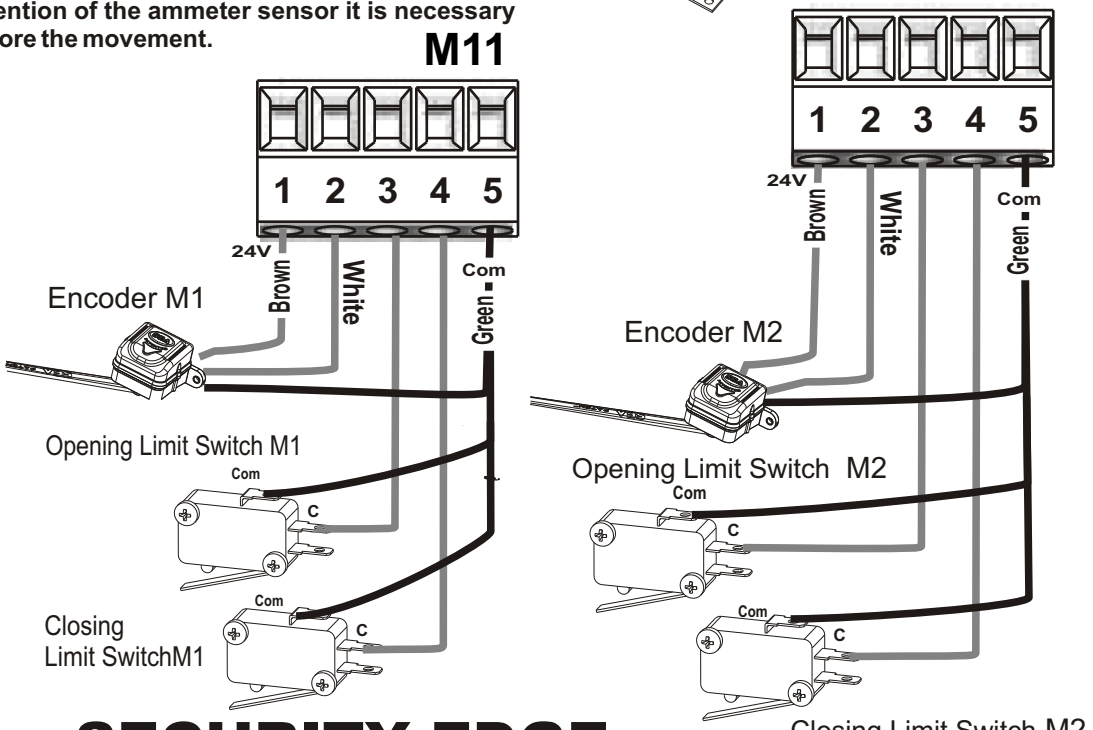
ENCODER - LIMIT SWITCH

Encoder (Function not activated)
The encoder is a device that allows to reveal possible obstacles during the opening and the closing of the gate.
When this device intervenes in opening it causes the inversion of the movement for around a second, if it intervenes in closing it causes the total reopening.
Note 1: Such function is active through an amperemetric sensor on the control board.
Nota2: The amperemetric sensitivity is adjustable through the Palmuser modifying the motor torque parameter for every single leaf. With torque 100% the gate reverses after 5 seconds.
Attention: after every intervention of the ammeter sensor it is necessary to give a start impulse to restore the movement.



PHOTOCELLS
If not connected they don't have to be bridged.
For the limit switch function the presence of the limit switches in both closing and opening is necessary. In case of single leaves it is not necessary to bridge the limit switch of the motor 2.
Com = Common
C = Contact

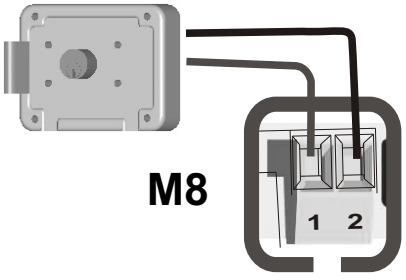
From display it is possible to activate the function anti-intrusion. Such function is tied up to the presence of at least one limit switch, that if freed, forces the motor to re-close.



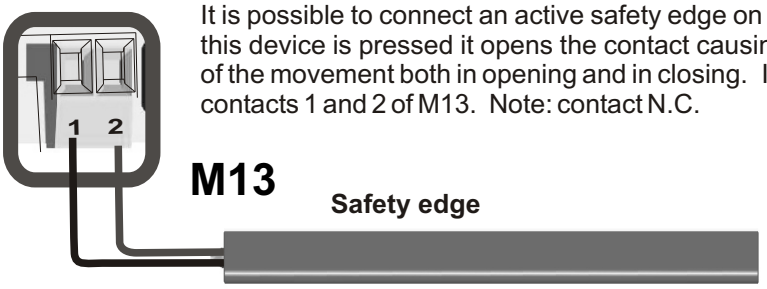
SECURITY EDGE

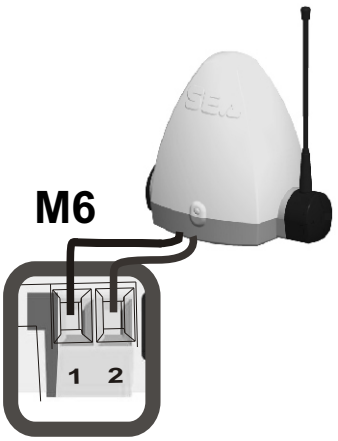
ELECTRIC LOCK AND WARNING LAMP

Electric lock exit
An electric lock of 12Vdc 15W max can be connected .
The electric lock activates at every opening cycle for about 1,5 sec.



It is possible to connect an active safety edge on the terminal M13. If this device is pressed it opens the contact causing a partial inversion of the movement both in opening and in closing. If not used bridge the contacts 1 and 2 of M13. Note: contact N.C.

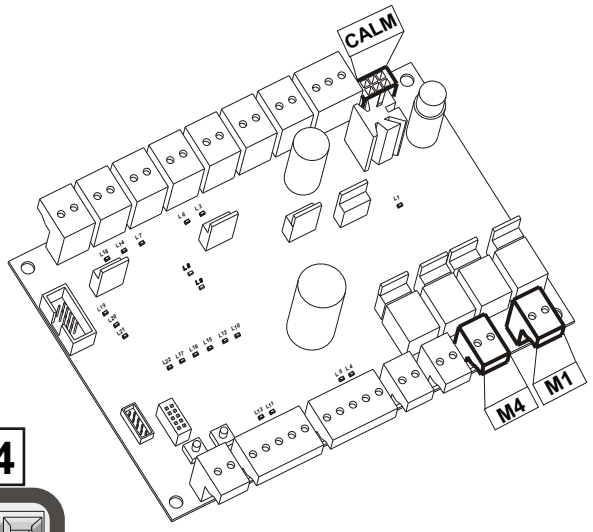


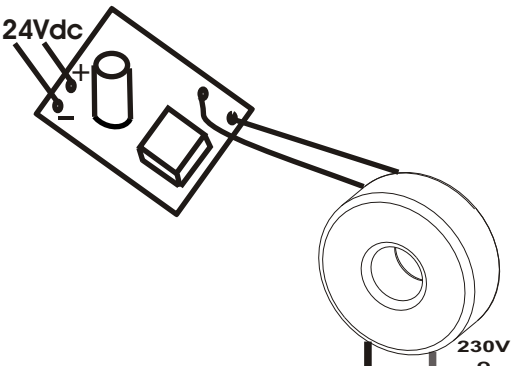


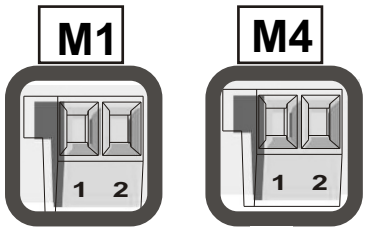
Flashing Lamp 24V 15W (Warning lamp)

The flashing lamp gives warning that the gate is moving.
To connect, wire the flashing lamp as in the picture
It is possible to activate a pre- flashing of 3 seconds before activating the automation, setting pre- flashing on ON, through the display module. Furthermore, it is possible to verify some alarm signals from the warning lamp. See pag.32.
Attention : Through the PALM USER it is possible to transform this exit into warning lamp. In such case all alarm signalisations rest on the flashing lamp as long as they are active.
With open gate in In half automatic logic it remains switched on with fixed light.

POWER SUPPLY - MOTORS ARM-ALPHA-BETA





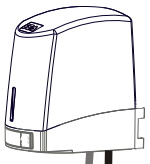


M+M-

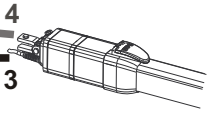
M+M-

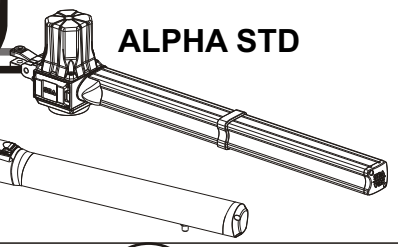
HT ELETTRO-IDRAULICO

M2

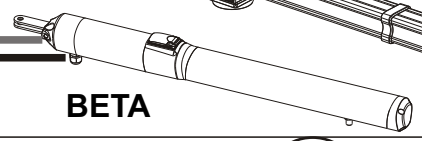


Flipper





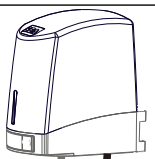
ALPHA STD



BETA

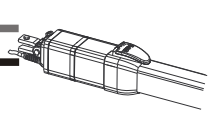
Motor 2
Output for Motor 2 connection
M+ = OPEN/CLOSED
M- = CLOSED/OPEN

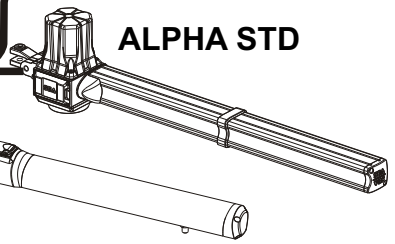
M1



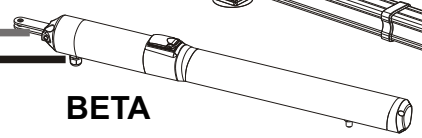
Flipper

HT ELETTRO-IDRAULICO





ALPHA STD

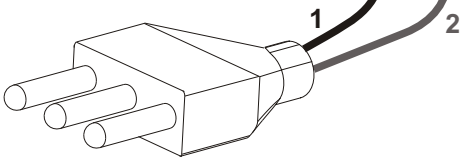


BETA

Motor 1
Output for Motor 1 connection
M+ = OPEN/CLOSED
M- = CLOSED/OPEN

Power input
Input for the connection of the electric power.
P = PHASE - LIVE
N = NEUTRAL

NOTICE: for the connection to the electric power see the law in force.



SELFLEARNING WITH DEFAULT PARAMETERS

To learn the times with the default settings, it is sufficient to press the Menu button once and to hold pressed the SET bouton until the departure of the motors in closing.
The settings of DEFAULT are: SEMIAUTOMATIC LOGIC, DOUBLE LEAF ENCODER OFF, SPEED 75%, LEAF DELAY 3 SEC., PAUSE 2 SEC., ANTI-SQUEEZING 75%, SLOWDOWN SPEED 30%, LEARNING SPEED 50%, ACCELERATION 70%, DECELARATION 30%, LEAF STROKE OFF, ANTI-INTRUSION OFF, SELFTEST OFF, PEDESTRIAN 100%, PHOTO OPENING OFF, MAX CYCLES 100000.

WORKING TIMES SELF LEARNING

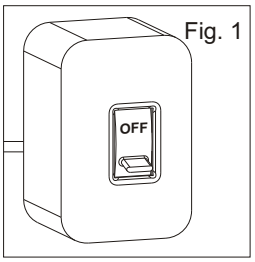


Fig. 1

1) Make sure that each accessory (photocells, push buttons, and so on) works properly and adjust the leaf delay if necessary.
2)If necessary adjust the self-learning speed through the palm user.
3)Disconnect the power supply (Fig. 1), release the motors (Fig. 2-3) and put the leaves manually near the stop in closing (Fig. 4).Reset the mechanical lock (Fig. 5-6)
4) Connect the control board to the power supply (Fig.**7**).
5) Press the selection button "MENU" so to switch on LED10
6) Press the button "SET" until the led of the color corresponding to the type of application (single leaf, double leaf, Encoder ON, Encoder OFF) switches on.
7) Hold pressed the button "SET" until the motors start in closing and then release the button.
8) Both leaves will start the closing with reduced speed (Fig.4).
9) At the attainment of the stops they will automatically execute an opening cycle with reduced speed (Fig.8). Át the attainment of the stop in opening they will automatically perform a closing cycle.
10) Wait for the closing end of the leaf (Fig.9).
The self-learning is done.

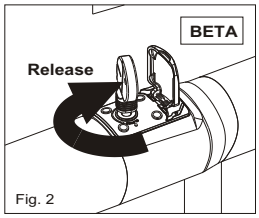


Fig. 2

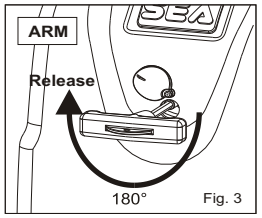


Fig. 3

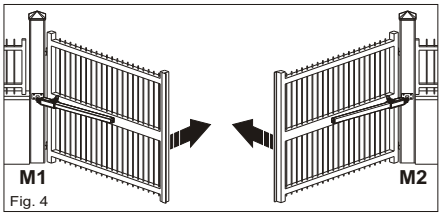


Fig. 4

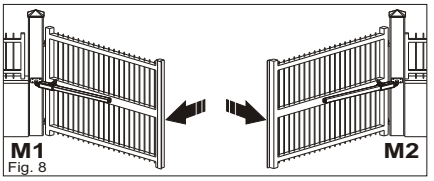


Fig. 8

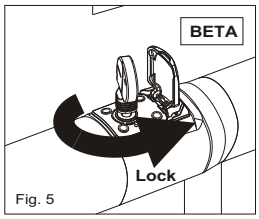
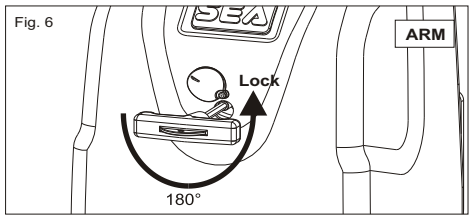
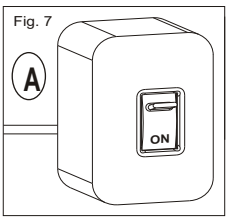


Fig. 5





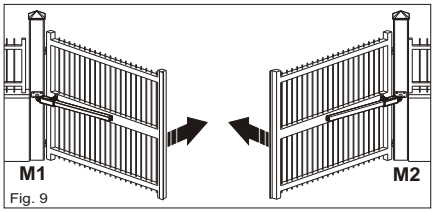
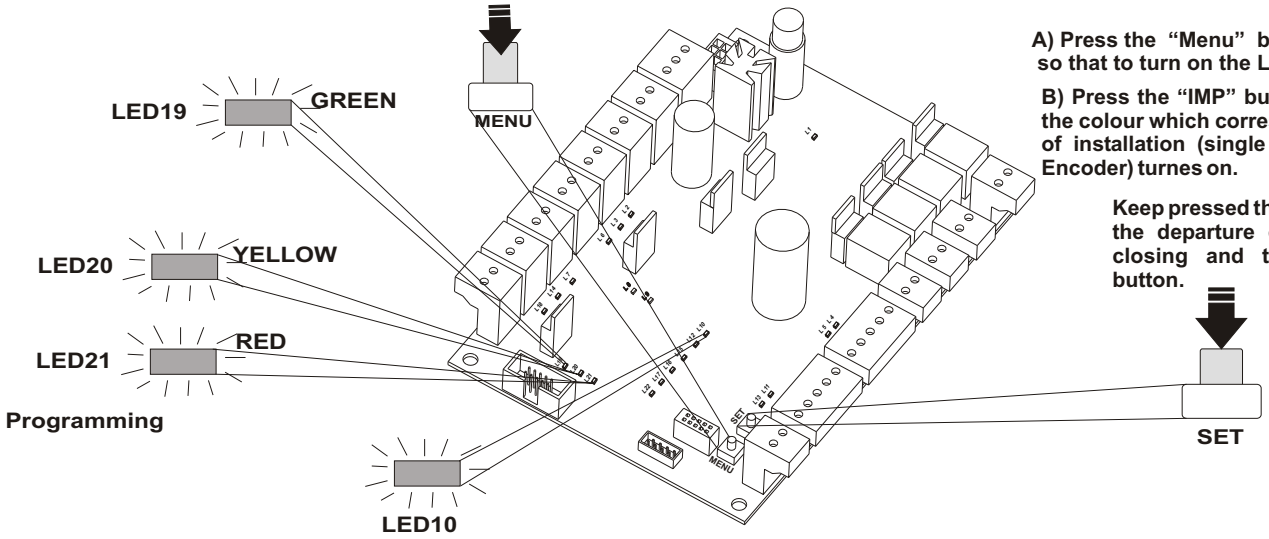


Fig. 9

A) Select LED 10 of the self-learning through the MENU button, with LED 10 turned on press button SET to choose the function modality:
- led L20 yellow = double leaf Encoder OFF
- led L21 red ON = single leaf Encoder OFF
- led L19 and 20 green and yellow = double leaf Encoder ON
- led L19 and 21 green and red = single leaf Encoder ON
B) Once the functioning modality has been chosen hold pressed SET up to the departure of the motors in closing and then release the button.



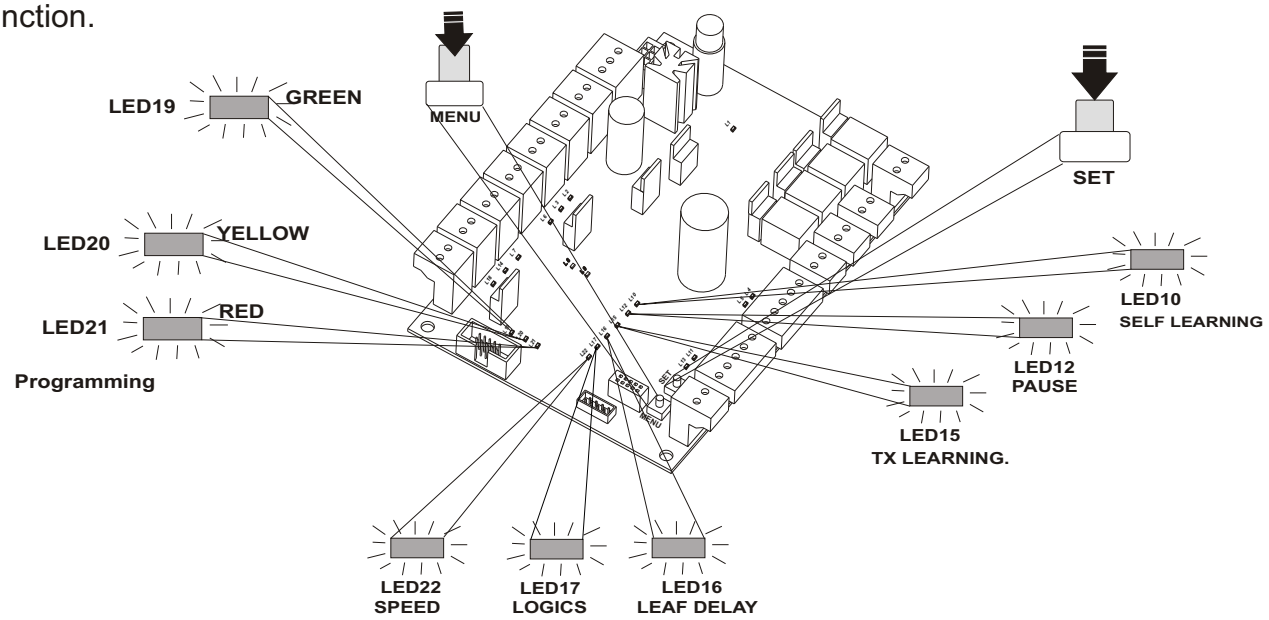
A) Press the "Menu" button so that to turn on the LED10

B) Press the "IMP" button till the Led of the colour which corresponds to the type of installation (single leaf, double leaf, Encoder) turnes on.

Keep pressed the button "SET" till the departure of the motors in closing and then release the button.

SELECTION OF THE SETTINGS

The adjustments of the control unit are executed through the buttons "MENU" and "SET" .
Pressing the "MENU" button you select the Leds corresponding to the various functions to be set, pressing the "SET" button you select the leds corresponding to the desired values inside every single function.



Selecting with the button "**MENU**" the **LED 12** turns on at the pausing time regulation, with **LED 12** turned on, hold pressed the selected button **"SET"** for the desired time of pause. In function of the colour that the leds 19, 20 and 21 will assume it will be possible to have an order of the length of the set time of pause. If the button is released and then pressed again the time of pause will be annulled.
Led L19 green turned on Time of pause <15 sec.
Led L20 yellow turned on Time of pause <45 sec.
Led L21 red turned on Time of break >45 sec. Up to 2 mins.

Selecting with the button **"MENU" LED 16** turns on at the adjustment of the opening of the leaf delay, with **LED 16** turned on press the button "SET" till to select the desired leaf delay, observing the colour of the leds 19, 20 and 21.
Led L19 green turned on leaf delay OFF
Led L20 yellow turned on leaf delay <4 sec.
Led L21 red turned on leaf delay >4 sec. Up to 7 sec

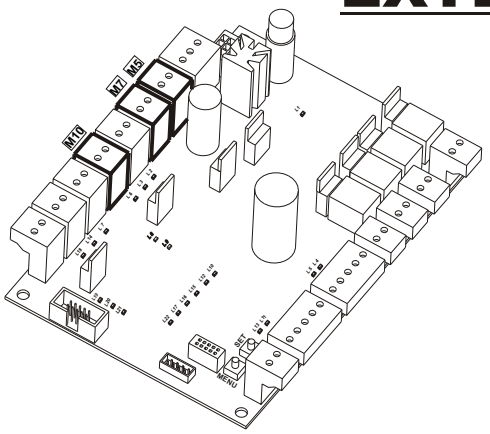
Selecting with the button **"MENU" LED 17** turns on at the choice of the functioning logic, with LED 17 turned on press the button **"SET"** till to select the desired logic, observing the colours of the Leds 19, 20 and 21.
Led L19 green turned on manual logioc
Led L20 yellow turned on automatic logic
Led L21 red turned on security logic
Led L19 and L20 green and yellow turned on semi-automatic logic.

Selecting with the button **"MENU" LED 22** turns on at the choice of the motors' speed, with LED 22 turned on press the button **"SET"** till to select the desired speed, observing the colours of the leds 19, 20 and 21.
Led L19 green turned on slow speed
Led L20 yellow turned on middle speed
Led L21 red turned on high speed
Hold pressed "SET" for more then 5 seconds to annul the executed number of cycles

Selecting with the button **"MENU"** the **LED 10** and **LED 12** with alternate flash you enter into the motor torque adjustment. With **LED 10** and **LED 12** flashing alternatively keep pressed the button **"SET"** while selecting the desired torque observing the color of the **LEDS 19**, **20**, **21.**
Led L19 green turned on, torque = 50%
Led L20 yellow turned on, torque = 75%
Led L21 red turned on, torque = 90%
Led L19, L20 and L21 turned on, troque = 100%

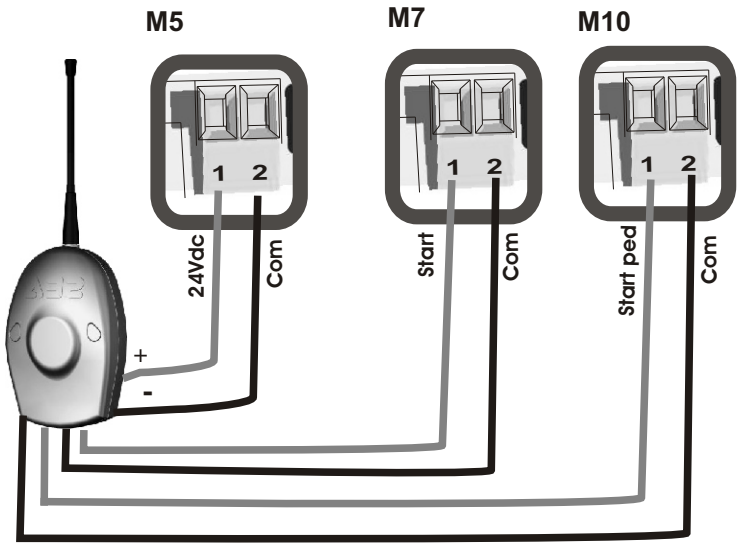
After 30 seconds without having pressed any button, the parameters' adjustment function will be automatically left.
If the control unit turnes on when holding pressed the buttons "MENU" and "SET" contemporarily, the control unit will be started with the parameter of DEFAULT (see preceding page).

EXTERNAL RECEIVER



Connection of a radio receiver

For the connection of the receiver refer to the relative instructions manual.

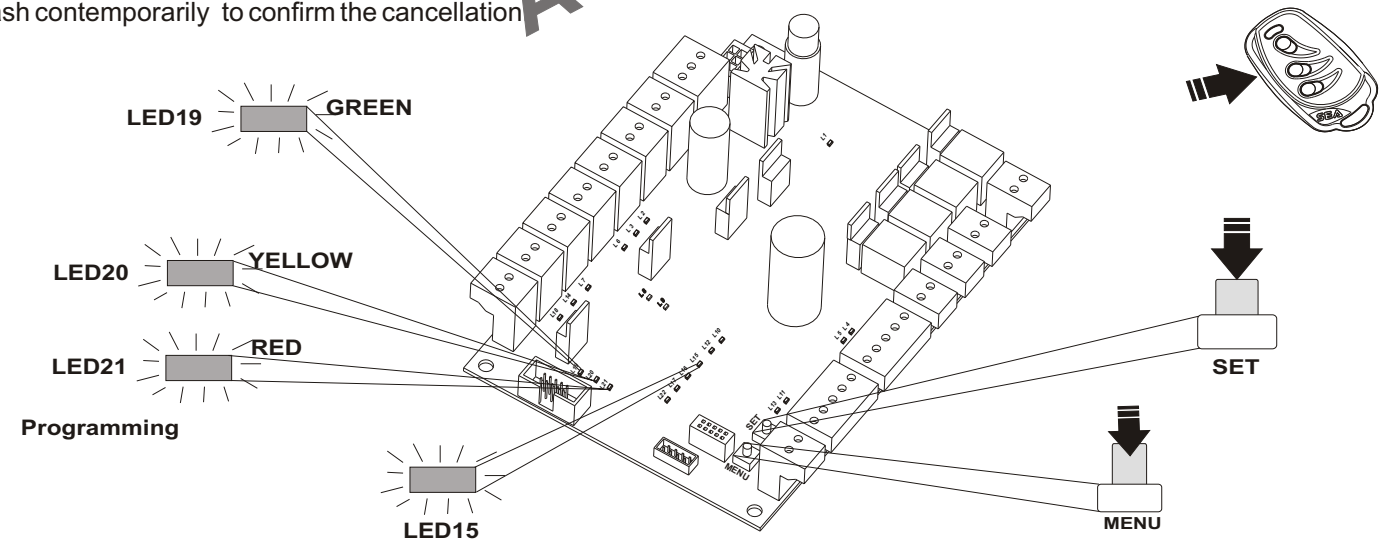


RADIO TRANSMITTER SELF LEARNING WITH RECEIVER ON BOARD OF CONTROL UNIT

WARNING: Make the radio transmitters programming before you connect the antenna and insert the receiver into the special CMR connector (if available) with turned off control unit.

1. Press repeatedly the button "MENU" till to select the led 15 (red), at this point press the button "SET" and the led15 will flash together with the led 19 (green) to signal that it waits for a code to be associated to the total opening;
2. Press the desired button of the radio transmitter, the led19 (green) will turn off to signal the memorisation of the data;
3. If it is desired to also associate a command to the pedestrian start, press **SET** again, the led 20 (yellow) will flash for signalling that it is waiting for a code to be associated to the **pedestrian opening;**
4. Press the desired button of the radio transmitter, LED 20 will turn off to signal the memorisation of the data.
5. At this point it is possible to press the desired button of the radio transmitter and the leds 19,20, 21 (green, yellow, red) will show the available memory, led19 (green) shows the occupied memory, less than 50%, led 20 (yellow) shows the occupied memory , more than 50%, led 21 (red) full memory.
6. To delet all memorized codes keep pressed for more than 5 seconds the adjusted button until the leds yellow, red and green will flash contemporarily to confirm the cancellation.

FUNCTION NOT AVAILABLE



Notes:
- Enter radio transmitters learning only when the working cycle stops and the gate is closed.
- It's possible to memorize up to 800 codes (buttons).
- If all available codes have alredy been memorized and you try to memorize a further code, the led 21 (red) will flash for signalling the error.
- If the board receives a code which was already associated to another function it will be updated with the new function.

FUNCTION LOGIC

SEMI AUTOMATIC LOGIC

A start impulse opens the gate. A second impulse during opening stops the mouvement.
With the gate opened a start impulse is necessary for its re-closing. A start commande during the closing reverses the movement.

SECURITY LOGIC

A start impulse opens the gate. A second impulse during opening reverses the movement. A start impulse during closing reverses the movement. A start commande during pause causes the immediate re-closing.

MANUAL LOGIC

The gate opens when the **Start** push button for opening is pressed and held; releasing it stops the gate. The gate re-closes as long as the button connencted to the **pedestrian START** will be pressed; releasing it stops the gate. To execute complete opening and/or closing cycles it is necessary to keep the relative push buttons constantly pressed.

AUTOMATIC LOGIC

A start impulse opens the gate. A second impluse during the opening will not be accepted. An impulse during the pause won't be accepted. An impulse during the closing reverses the movement.

DESCRIPTION OF THE BUS SYSTEM

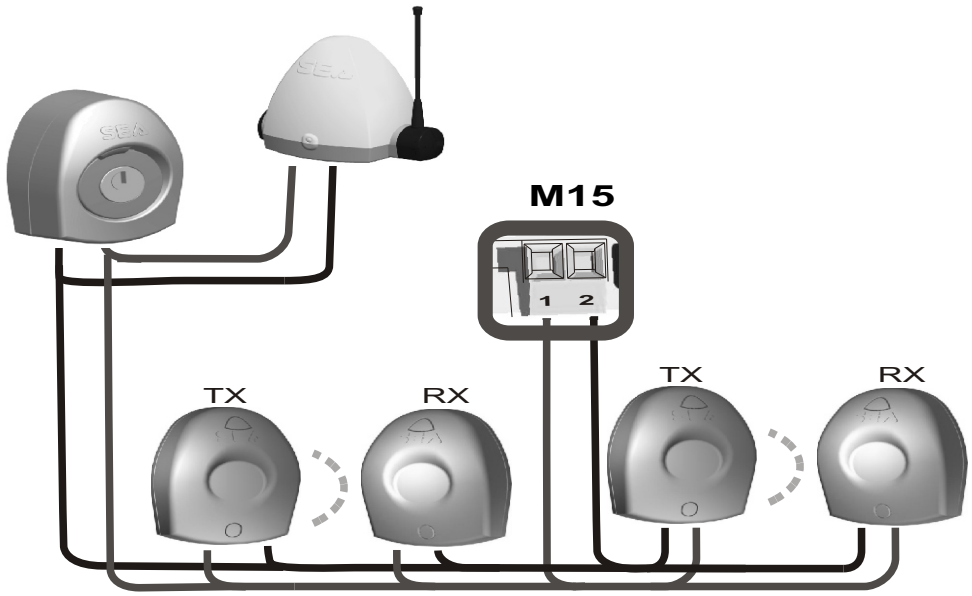
The BUS is a connecting system through which it is possible to connect different accessories among which: photocells, key switches, warning lamps, numerical keyboards and key selectors, all in parallel on the same entry and all through two only threads. This system therefore allows to eliminate the two threads of the power supply for the accessories, therefore every accessory will be equiped with only two threads. Every accessory is equiped with a rotating changer, which allows to join the various devices according to a numerical sequence which defines the particular function assigned to that accessory.

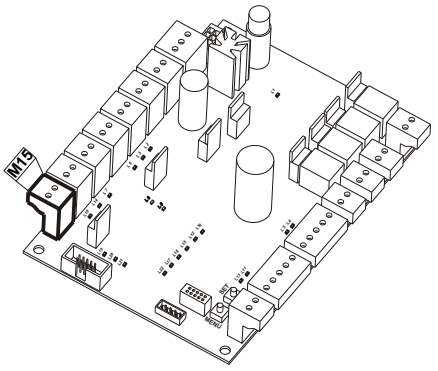
Photocells BUS addressing

Rotating Changer on TX and FX on 0 or 1 = photocell active only in opening Rotating Changer on TX and FX on 2 or 3 = photocell active only in closing Rotating changer on TX and FX on 4 = photocell both in opening and in closing.
The positions from 6 to 9 are interpreted as active photocells both in closing and in opening.
Note: Two couples of photocells with the same function have to have a different number. For ex. on two couples in closing TX and FX of the first one will have the number 2, TX and FX of the second couple will have the number 3.

Initialization BUS

Connect all the devices in parallel on the clamp M15 or in parallel between them.
At the lighting of the control unit make sure that the LED18 (red) performs some fast flashes, at this point, if the red led remains turned on this means that there is an error on the BUS, signalled from the display or by 8 flashes on the warning lamp, but if the red led will keep on flashing slowly the BUS is perfectly working.
NOTE: To repeat the search of the peripheral BUS in case of BUS error, press contemporarily the buttons + and - of the display.





DISPLAY PARAMETERS ADJUSTMENT

The accessory PALM USER allows to keep under control all the parameters of the control unit and it results essential for the initial setting of some parameters, which are: pre-flashing, photocell self-testing, photocell in opening, anti-intrusion, torque motore1 and 2, deceleration speed, learning speed, acceleration, deceleration, leaf stroke, number of cycles, pedestrian opening.

Screen 1	
Cycle	Semiaut./manual/automatic/security
Double/single leaf	Select double or single leaf
Encoder	on/off (function with encoder, not implemented)
Time of pause	[0÷120]s (time of pause in seconds)

→ Shows the working logic adjusted on board of the control unit.

Screen 2	
Cicli exec.	[0÷2^{32}] (number of executed cycles)
Mem. free	[0÷100]% (percentage of available memory for the learning of remote controls)
Learning	on/off (signalling of the execution of the learning)

Screen 3	
Speed	[30÷100] adjusts the motors' speed
Sl. speed	[30÷100] adjusts the slow down speed
Lear. Speed.	[30÷100] adjusts the learning speed

→ Adjustment with the buttons + and - of the PALM USER

Screen 4	
Photocell Tx1	[OK-NP] (peripheral reveal - not present)
Photocell TX2	[OK-NP] (peripheral reveal - not present)
Photocell TX3	[OK-NP] (peripheral reveal - not present)
Photocell TX4	[OK-NP] (peripheral reveal - not present)

The screens **4**, **5**, **6**, **7**, **8 and 9** show the type of accessory on the BUS.

Screen 5	
Photocell TX5	[OK-NP] (peripheral reveal - not present)
Photocell RX1	[OK-NP] (peripheral reveal - not present)
Photocell RX2	[OK-NP] (peripheral reveal - not present)
Photocell RX3	[OK-NP] (peripheral reveal - not present)

Screen 6	
Photocell RX4	[OK-NP] (peripheral reveal - not present)
Photocell RX5	[OK-NP] (peripheral reveal - not present)
Proximity n°1	[OK-NP] (peripheral reveal - not present) *
Proximity n°2	[OK-NP] (peripheral reveal - not present) *

DISPLAY PARAMETERS ADJUSTMENT

NOTE: For the respect of the valid European ruels on the safety of the electric gates, it is recommended to not adjust the parameters **torque Max 1** and **torque Max 2** on the value 100%.

Screen 7	
Prossimity n°3	[OK-NP] (peripheral reveal - not present) *
Pushbutton board	[OK-NP] (peripheral reveal - not present) *
Num. Push b. Board	[OK-NP] (peripheral reveal - not present) *

Screen 8	
Interf.Photo	[OK-NP] (peripheral reveal - not present) *
Interf. commands	[OK-NP] (peripheral reveal - not present) *

Screen 9	
Flashing lamp	[OK-NP] (peripheral reveal - not present)
Sel. Key	[OK-NP] (peripheral reveal - not present) *

Screen 10	
Accelerat.	[0÷100]% (inclination of the ramp of acceleration)
Decelerat.	[0÷100]% (inclination of the ramp of acceleration)
Leaf delay	[0÷7] sec (adjusted leaf delay)
Pedestrian op.	[30,50,100]% (percentage pedestrian opening)

It allows to regulate the duration of the acceleration of the motors on the start If on 100% the gate will immediately depart at the max. adjusted speed

It allows to regulate the duration of the deceleration of the motors at the end of opening and closing. If on 0% the gate won't effect the phase of deceleration.

It regulates the duration of the leaf delay. Adjustable with the buttons + and - of the PALM USER or on the control unit.

Regualtes the pedestrian opening space. Adjustable with the buttons + and - of PALM USER.

Screen 11	
Torque max1	[10÷100]% (max. current of the motors)
Torque max2	[10÷100]% (max. Current of the motors)
Photo in opening	on/off (attivazione fotocellula in apertura)
Leaf storke	on/off (leaf stroke to release/lock the lock)

Allows to regulate and to visualize the sensitivity of the anti-sqeezing. With value 100% the gate in presence of obstacle will reverse the movement after 5 seconds.

Activates a leaf stroke at the beginning of opening and at the end of closing

Screen 12	
Anti-intrusion	on/off (in ON it implicates the presence of a contact N.C. on the limit switch that, if freed, forces the motors in closing
Pre- flashing	on/off (activation of the pre-flashing)
Autotest photo.	On/off (activates autotest photocell)
Max cycle	0÷100000 (indicates the number of cycles after which it is necessary to follow up the maintenance)

Activates or disactivates the pre-flashing.

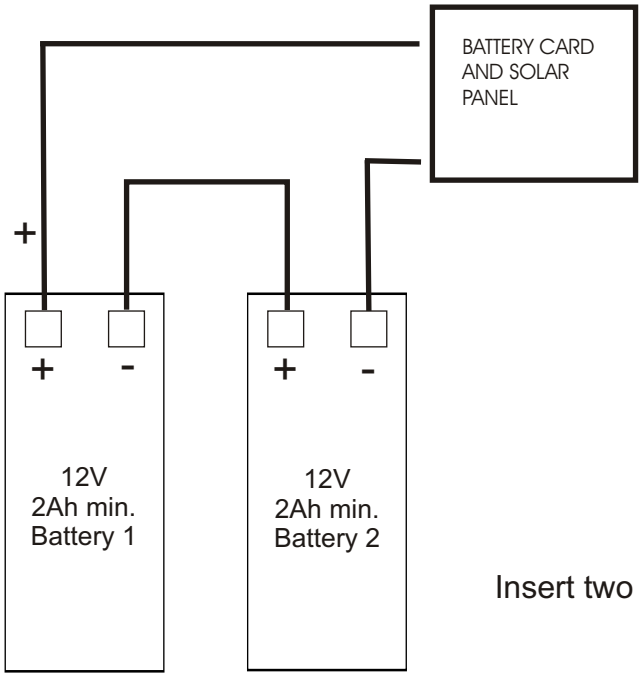
Activates or disactivates the leaf delay.

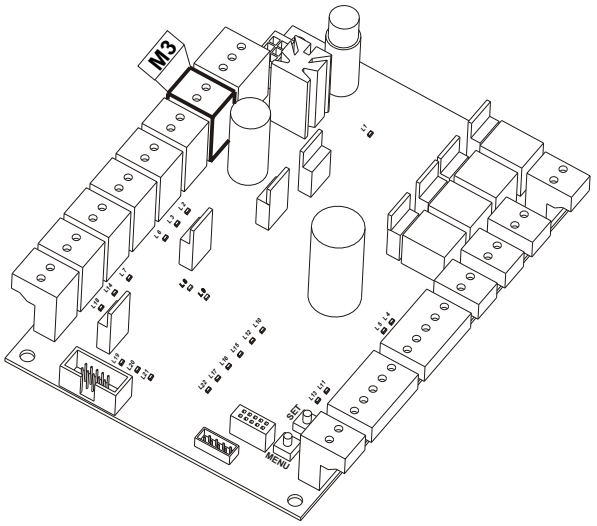
Screen 13	
Warning lamp	ON/OFF (while on ON the alarm signalisation will rest on the flashing light until they are eliminated)

Note:
The indications for the peripheral marked with * are not possible because not mplemented. The presence of “Interf. Commands” depends on the adjustment of the changer of the interface I/O.

CONNECTION OF BATTERIES

FUNCTION NOT YET AVAILABLE





Insert two 12V batteries connected in series.

ALARMS INDICATIONS

The flashing sequence is signalled at every opening and closing of the automation on the warning lamp. The warning lamp will send a flashing every second in opening and two flashings in closing, while it will remain turned on fixed in pause.

Flashings Number	Kind of alarm
2	Photocell
3	Photocell in opening
4	Safety edge
5	Stop

Flashings Number	Kind of alarm
6	Collision on obstacle
7	Reached maximum cycles
8	Alarm BUS
9	Motor failure

ALARM SIGNALS

The dammages with 2,3, 4 and 5 flashings, refer to normally closed contacts, therefore verify if such are the connections and/or the correct working of the photocells, of the Stop button and/or of the safety edge.

2. The failure with 6 flashes refers to a collision with an obstacle which has been revealed by the ammeter sensor, therefore it is necessary either to repalce the motor or to verify the conditions of the connections.

3. Periodically, in relation to the number of manoeuvre and the type of gate, it is recommended to execute, if the gate has modified the attritions and it doesn't work, **the re-programming of the times of learning on the electronic board.**

The dammage with 7 flashes refers to the attainment of the established maximum cycles for the maintenance of the control unit, therefore it is necessary to perform the maintenance and to put on zero the number of cycles, according to the following procedure: Through the button SEL select the led 22 of the motors' speed, keep pressed the chosen button for more than 5 seconds.

4. The dammage with 8 flashes indicates a generic error on the BUS, this means that there is a short circuit on one of the connected devices to the BUS, and it it necessary to verify the connections and the functionality of the connected devices or the connected devices are not correctly joined between them (see paragraph on the BUS management)

5. The failure with 9 flashes refers to a shortcut on the motor, therefore it is necessary either to replace the motor or to verify the conditions of the connections.

MAINTENANCE

Periodically, considering the number of working cycles and the kind of gate, it-s necessary to proceed, if the gate has changed the frictions and doesn-t work , with **learning times reprogramming on the electronic control unit.**

TROUBLE SHOOTING

Advises

Make sure all Safety LED are turned ON
All not-used N.C. contacts must have jumpers

Problem Found	Possibile Cause	Solution
Motor doesn't respond to any START impulse	**a.)** Jumper missing on one of the N.C. Contacts **b.)** Burnt fuse	**a.)** Check the connections or the jumpers on the connections of the safety edge, of the stop and of the photocell **b.)** Replace the burned fuse on the control unit led 1 turned on.
Gate doesn't move while the motor is running	**a.)** The motor is in the released position **b.)** The electronic clutch are not set **c.)** There is an obstacle	**a.)** Re-lock the motor **b.)** Electronic friction adjustment on display, through point anti-squeezing **c.)** Remove obstacle
Gate doesn't reach the complete Open / Closed position	**a.)** Wrong setting of the limit switches **b.)** Error on programming **c.)** Gate is stopped by an obstacle **d.)** The fitting geometry is inadequate	**a.)** Set limit switches **b.)** Repeat programming **c.)** Remove obstacle **d.)** Check fitting geometry following the operator installation manual
The gate opens but doesn't close	**a.)** The photocell contacts are not closed	**a.)** Check LED and jumpers or the signals indicated on the warning lamp
The gate doesn't close automatically	**a.)** Pause time set to high **b)** Control unit in semi-autom. logic	**a.)** Adjust pause time **b)** Adjust the automatic or security 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 use two separate cables and ducts

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 23024015/16 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
Disposal of the packaging materials of products and/or circuits should take place in an approved disposal facility.

REGULAR PRODUCT DISPOSAL (electric and electronic waste)

(It's applicable in EU 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 ask you to separate this product from other forms of rubbish and to recycle it in a responsible way in order to provide the sustainable re-use of material resources. Domestic users are invited to contact the retailer where the product has been purchased or the local office in charge of all the information related to differential collection and recycling of this kind of product.

STORING

WAREHOUSING TEMPERATURES			
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..

REPLACEMENT AND MAINTENANCE
The replacement and/or putting out of service and/or maintenance of the electronic equipment 23024015/16 must be made only and exclusively by authorised and qualified staff.

WARRANTY LIMITS
The warranty form of the electronic equipment 23024015/16 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 ANY DAMAGE 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.