SEA®

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

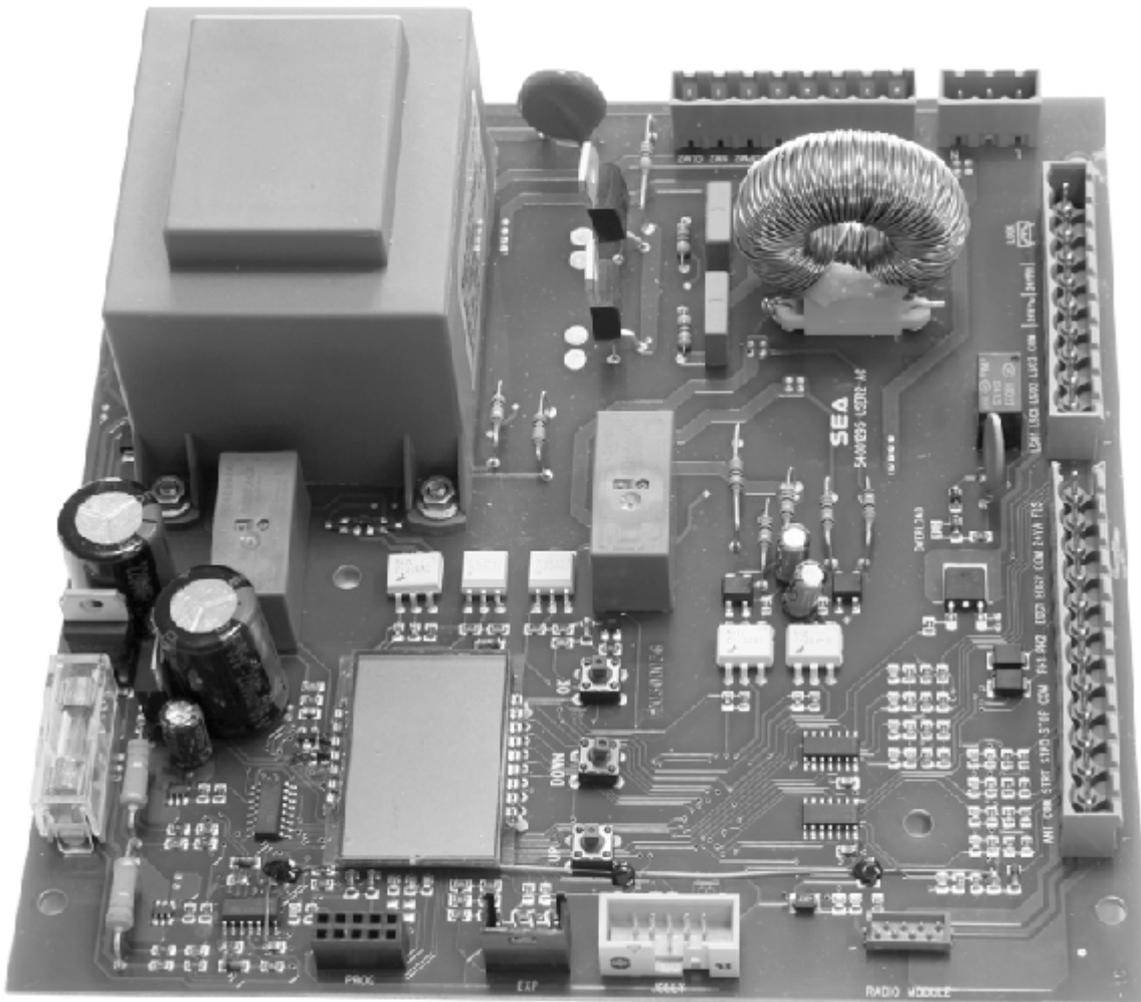# GATE 2 DG R1B

(Cod. 23023025)

ELECTRONIC CONTROL UNIT FOR 1 OR 2 230V/115V MOTORS
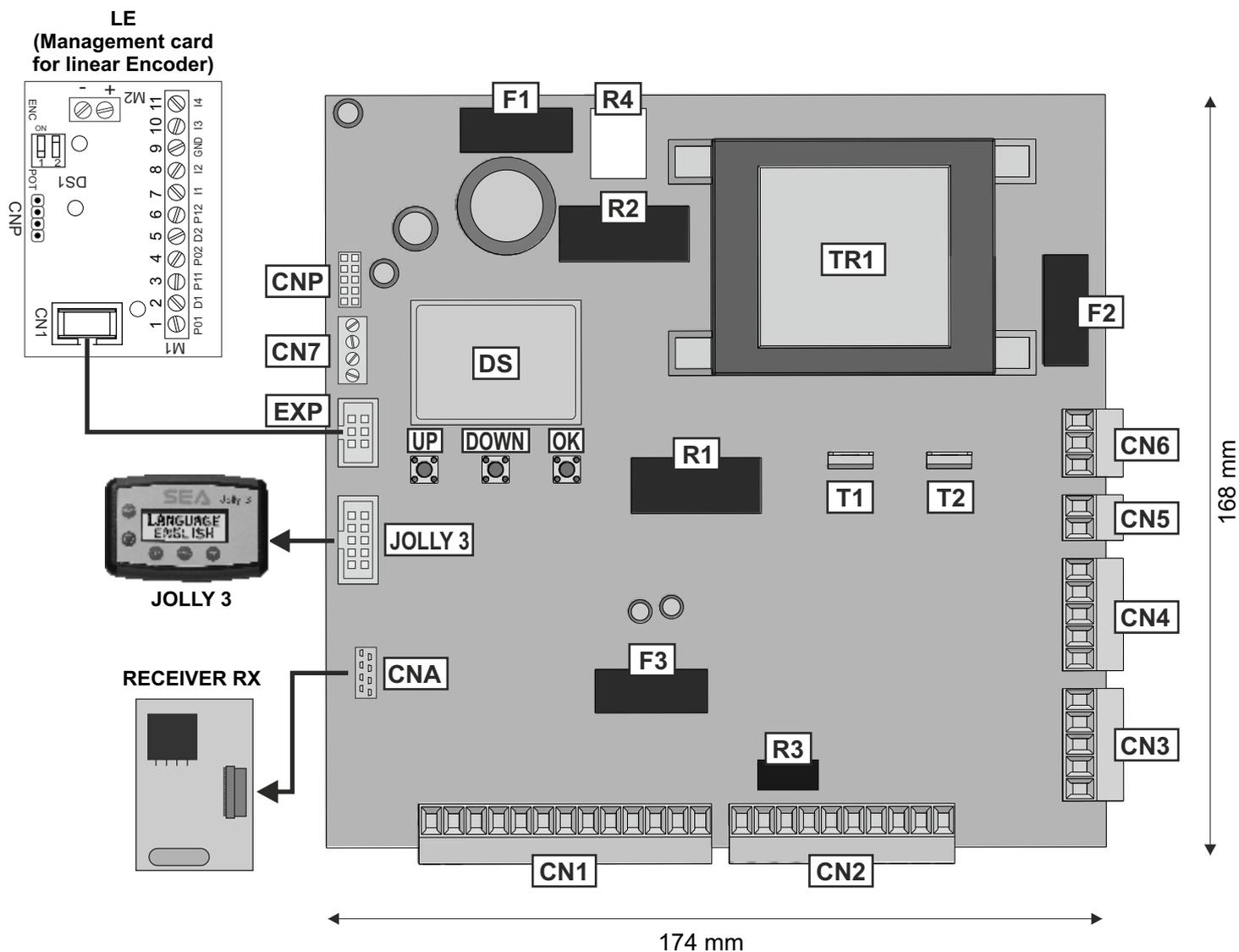
COMPONENTS

TECHNICAL SPECIFICATIONS

Control unit power supply: 230 Vac 50/60 Hz - 115Vac 50/60 Hz
Absorption in stand by: 30 mA
Environment temperature : -20°C +50°C
Specifications of external enclosure: 325,7 X 246 X 140

LE
(Management card for linear Encoder)

168 mm

174 mm

CN1 = Input/output connectors

CN2 = Limit switch, 24V~, Electrolock connector

CN3 = M1 Motors and capacitors connector

CN4 = M2 motors and capacitors connector

CN5 = Courtesy light output connector

CN6 = Power supply connector

CN7 = Encoder connector

CNA = RX Receiver connector

CNP = Porgramming connector

EXP = Expansion module connector / LE Card

JOLLY = Jolly 3

DS = Programming display

OK = Programming button

DOWN = Programming button

UP = Programming button

T1 = Motors piloting Triac

T2 = Motors piloting Triac

R1 = Motors comand relay

R2 = Courtesy light comand relay

R3 = Photocell autotest relay

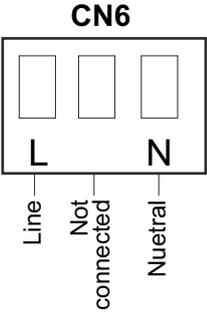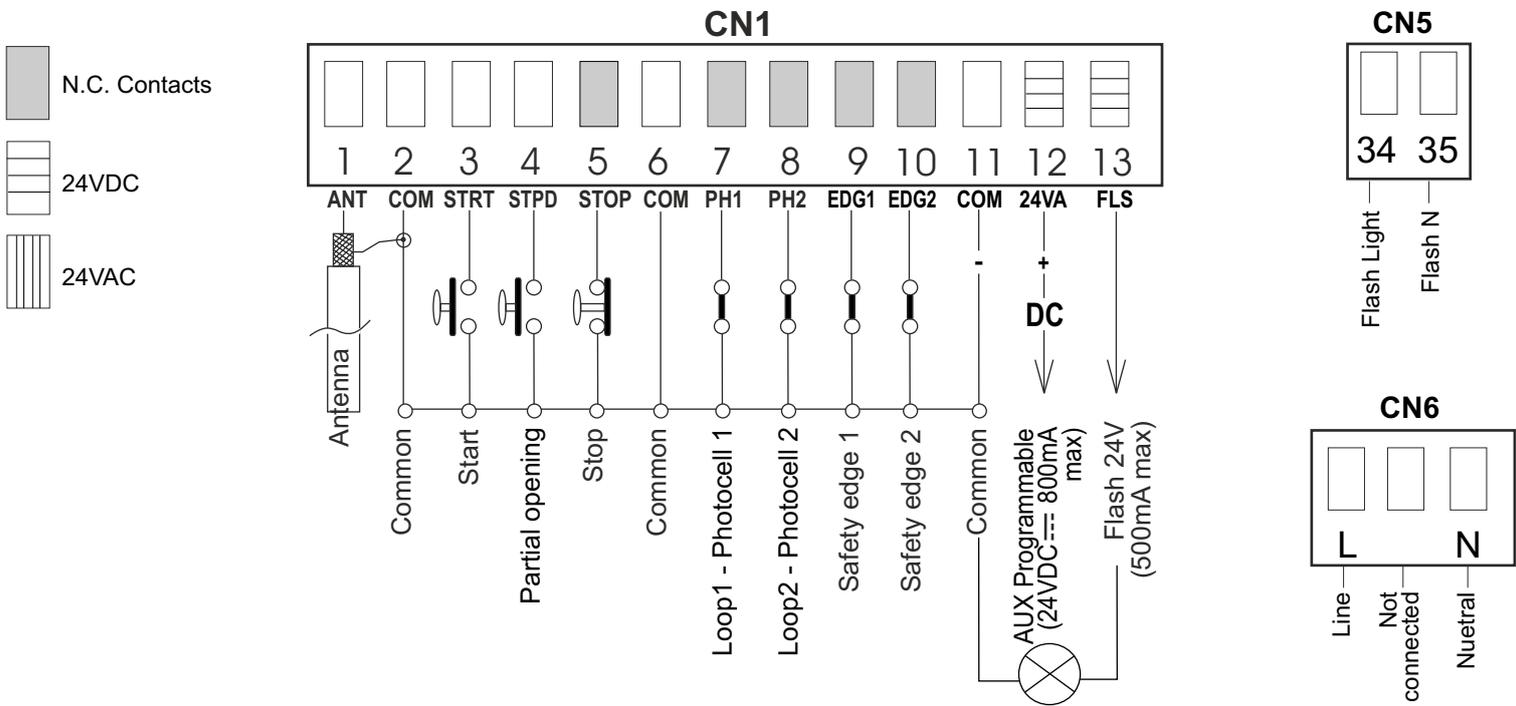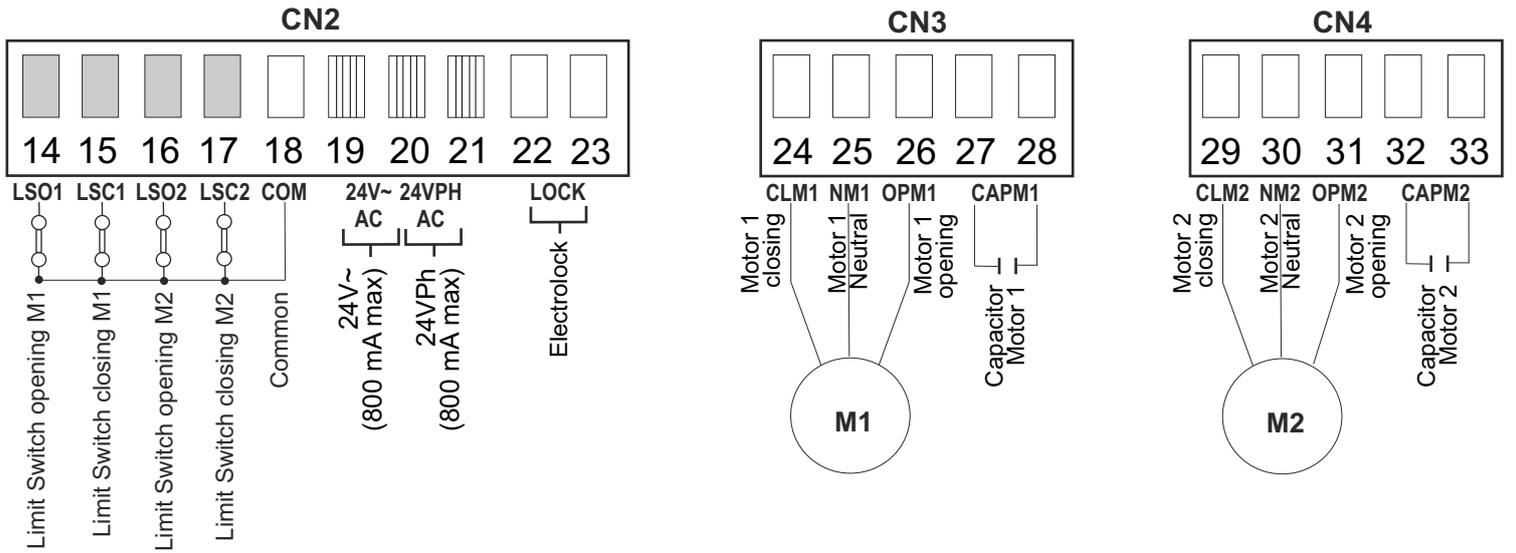**R4** = Electrolock relay

F1 = Accessories 1A fuse

F2 = Fuse 6.3AT on 230V - 10AT on 115V

F3 = 6.3A Electrolock fuse

TR1 = Power transformer

CONNECTIONS

CN2

14	15	16	17	18	19	20	21	22	23
LSO1	LSC1	LSO2	LSC2	COM	24V~ AC	24VPH AC		LOCK	

- LSO1 — Limit Switch opening M1
- LSC1 — Limit Switch closing M1
- LSO2 — Limit Switch opening M2
- LSC2 — Limit Switch closing M2
- COM — Common
- 24V~ AC — 24V~ (800 mA max)
- 24VPH AC — 24VPh (800 mA max)
- LOCK — Electrolock

CN3

24	25	26	27	28
CLM1	NM1	OPM1	CAPM1	

- CLM1 — Motor 1 closing
- NM1 — Motor 1 Neutral
- OPM1 — Motor 1 opening
- CAPM1 — Capacitor Motor 1

M1

CN4

29	30	31	32	33
CLM2	NM2	OPM2	CAPM2	

- CLM2 — Motor 2 closing
- NM2 — Motor 2 Neutral
- OPM2 — Motor 2 opening
- CAPM2 — Capacitor Motor 2

M2

CN1

1	2	3	4	5	6	7	8	9	10	11	12	13
ANT	COM	STRT	STPD	STOP	COM	PH1	PH2	EDG1	EDG2	COM	24VA	FLS
										-	+	
											DC	

- ANT — Antenna
- COM — Common
- STRT — Start
- STPD — Partial opening
- STOP — Stop
- COM — Common
- PH1 — Loop1 - Photocell 1
- PH2 — Loop2 - Photocell 2
- EDG1 — Safety edge 1
- EDG2 — Safety edge 2
- COM — Common
- 24VA — AUX Programmable (24VDC⎓ 800mA max)
- FLS — Flash 24V (500mA max)

Legend:
- N.C. Contacts
- 24VDC
- 24VAC

CN5

34	35
Flash Light	Flash N

CN6

L		N
Line	Not connected	Nuetral

NO JUMPERS NEEDED ON N.C. CONTACTS

WARNING: Automatic detection of not used N.C. inputs (Photocells, Stop, Limit switch and Edges)
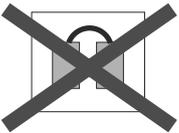
To reactivate an NC contact you follow this procedure:

Go to [MENU SEA SET 1-LANGUAGE] press the button [OK] for 5 seconds then you enter

the **INPUT CHECK MENU**, where you can check the operating status of all inputs (pg 43)

No need to repeat self programming after reactivation of N.C. contacts.

THE HEREIN REPORTED FUNCTIONS ARE AVAILABLE STARTING FROM REVISION 01.09 COMPATIBLE WITH JOLLY 3 ONLY.

CONNECTIONS SAFETY DEVICES

A) 24V AC 19 and 20

PHOTOCELL 1 AND PHOTOCELL 2
(LOOP1 - LOOP2)

19 and 20 24VAC~ (Accessories) 800 mA max COM = 0V
7 PH1 = Photocell contact 1   8 PH2 = Photocell contact 2
Default setting:
PHOTO 1 = *Closing* - PHOTO 2 = *Opening and closing*
The photocell 2 can also be set as TIMER (see TIMER function
below). For the options of the photocells (97 and 98 menus) see
page 55

TIMER: by holding PH2 the gate opens and then stay
opened. While you release it, the gate repeat the pause
selected time and start closing. In case a safety is activated the
timer will automatically reset after 6 sec.

AUTOTEST Function: is a safety mode to protect   against
malfunctioning of the PHOTO (the board doesn't allow any other
movements) and you can see report of detect on display.
To activate AUTOTEST:
1) Connect the TX photocell power on 24V AC~ input 20 and 21
2) Go on 95-PHOTOTEST menu and select on which accessory
Photo 1 or Photo 2 or both) activate this mode.

N.B: For the autotest connect the transmitters to the contacts **20** and **21**, if you do not want the autotest connect the transmitters to the contacts **19** and **20**
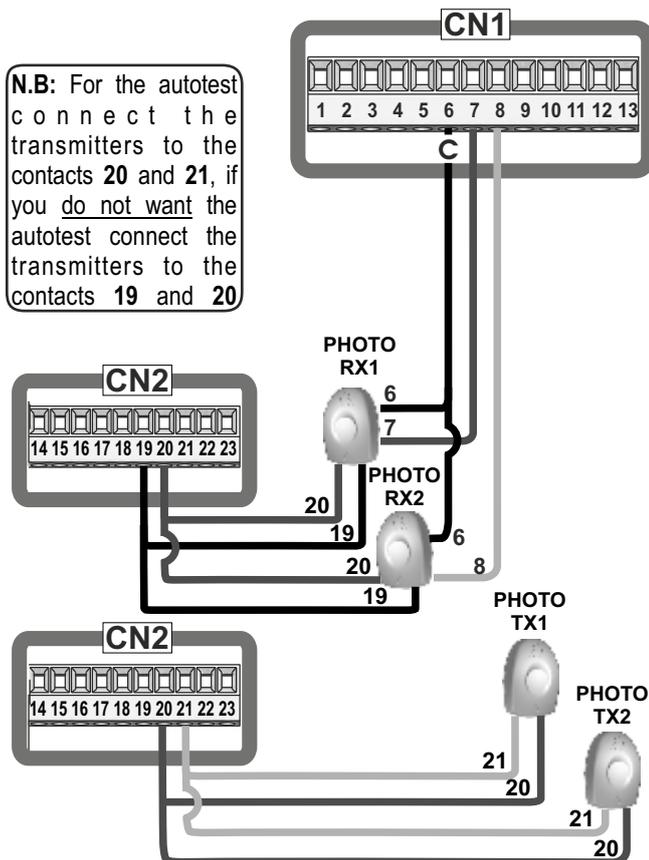
B) 24V DC AUX PROGRAMMABLE 12

It is possible to connect any accessory in case you
want to power in 24V DC and select operation mode
(see chart below). It is not possible to use AUTOTEST
if you connect on 24V DC AUX (only on 24V AC).
Max load 800 mA

The options of 94-24V AUX menu are*:*
• *Always*   • *Positive brake management*
• *In cycle*   • *Negative brake management*
• *Opening*   • *Negative brake management - photocellule*
• *Closing*   • *Gate open warning light*
• *In pause*

MENU SEA SET
94-24V AUX

(See special menu page 54)

CONNECTIONS PARTIAL OPENING, STOP, START

PARTIAL OPENING (N.O.)   4
• Function 1 (STANDARD): partial opening space adjustble from 20 to 100 (90-PARTIAL OPENING)
• Function 2 (TIMER): by holding STDP 4 the gate Opens and then stay opened.
While you release it the gate repeat the pause selected time and start closing.
In case a safety is activated the timer will automatically reset after 6 sec.
• Function 3 (2 BUTTONS): in 2 buttons logic press the STPD 4 to close the gate.
• Function 4 (DEADMAN): in deadman logic this button executes the re-closing if you keep it pressed.

STOP (N.C.)   5
When pressing this button the motor immediately stops in any condition/position.
To re-start the movement give a start command.
After a stop the motor always re-starts in closing.

START (N.O.)   3
• Function 1 (STANDARD): an impulse given to this contact opens and
closes the automation depending on the selected logic.
• Function 2 (TIMER): holding START starts the TIMER function,
releasing the start, the operator repeats the pause and then closes. To connect the other devices refer to the related
instructions leaflets (ie. loop detectors and proximity Switches). In case of activation of a safety device the timer will
automatically reset after 6 seconds.
• Function 3 (2 BUTTONS): in 2 buttons logic this button performs the opening.
• Function 4 (DEADMAN): in deadman logic keep pressed the Start for the opening of the automation.
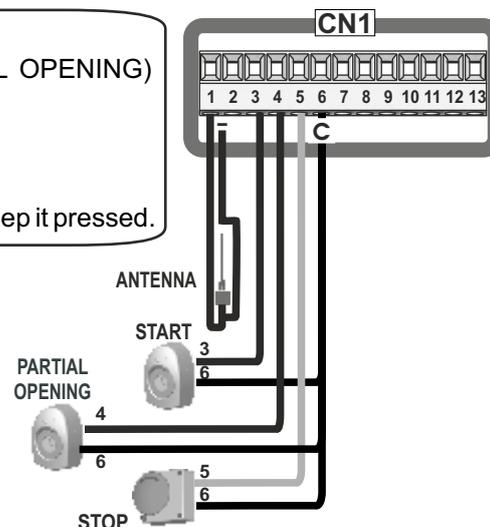
# WARNING LAMP - SAFETY EDGE - 10K PHOTOCELL - BUZZER

24V ⎓ FLASHING LAMP 3W MAX 11 and 13

Flashing Lamp 24V ⎓ (Accessories) 3W max. (Control lamp)
The Flashing Lamp can be connected between the 24V clamps (Accessories) and FL (-) of CN 1.
The Flashing lamp advises that the automatic gate is moving with 1 flash/second in opening and 2 flashes / second in closing. During pause it remains switched on. Through the warning lamp it is also possible to identify alarms lied to the STOP, PHOTOCELL 1, PHOTOCELL 2 and EDGE devices. Through the display or the JOLLY 3 programmer it is possible to activate the pre-flashing function and/or to modify the function of the warning lamp choosing between fix flashing or control lamp.
The pre-flashing can be timed from 0 to 5 seconds otherwise it is possible to set it before closing only.

Example of flashing lamp and edge connections

CN1
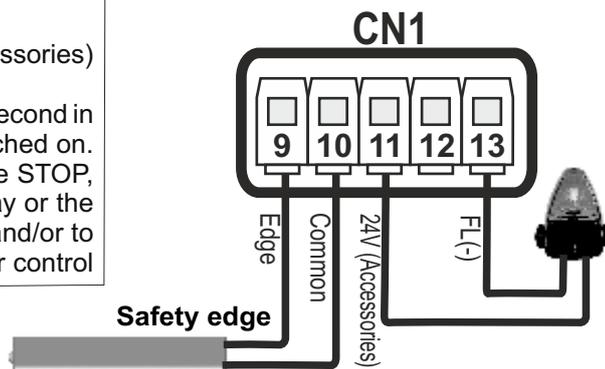
Safety edge

SAFETY EDGE 9 and 10

Between clamps 9 and 11 on the terminal CN1 it is possible to connect an active Safety Edge. When pressed, the Safety Edge opens the contact causing a partial inversion of the movement both in opening and in closing.
The Safety Edge output can be set «only in closing», «only in opening» or both directions
Note1: Note1: Through the on-board display or the JOLLY 3 programmer it is possible to activate the balanced edge 8K2, in this case the edge contact is controlled by a special resistance value revealing the eventual involuntary short- circuit of the device. In case of imbalance of the device a special alarm will be shown on the on-board dispaly or on the JOLLY programmer.
Note2: Self-test can be made also on a radio powered Edge (See Auto-test Menu)
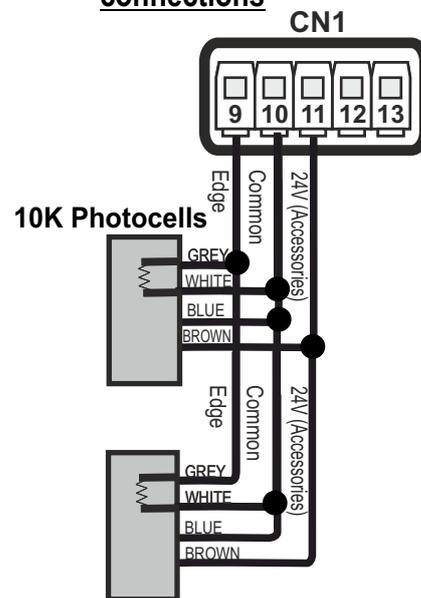
Example of two 10K Photocells connections

CN1

10K PHOTOCELL or DOUBLE 10K PHOTOCELL 9 and 10

Between clamps 9 and 11 on the terminal CN1 it is also possible to connect a 10K Photocell or two 10K Photocells .
In this case it is necessary to set it on menu 100 - EDGE as Photo10K (or Photo1 10K Double), then it will run following settings on menu 97 - PHOTO 1.
Nota1: The use of a 10K Photocell allows to get further protection in case of short-circuit on the cables.

10K Photocells

Setting 10 K Photocell

MENU SEA SET 100-EDGE 1 → OK → OFF → UP → PHOTO 10K → OK

Setting 10K Double Photocell

MENU SEA SET 100-EDGE 1 → OK → OFF → UP → PHOTO1 10K DOUBLE → OK

IMPORTANT NOTE: INSTEAD OF THE FLASHING LAMP, YOU CAN ALSO CONNECT A BUZZER REMEMBER TO SET THE 86-MENU ON «BUZZER»

24V BUZZER 11 and 13

Buzzer (24V ⎓) Audible Alarm
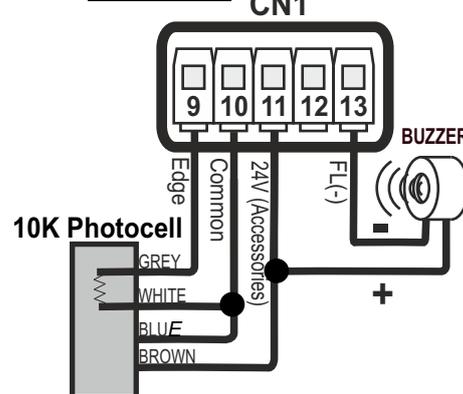Use an autoswinging buzzer 24V ⎓ of 100 dB.
The buzzer will be switched on after two consecutive activations of the entrapment protection.
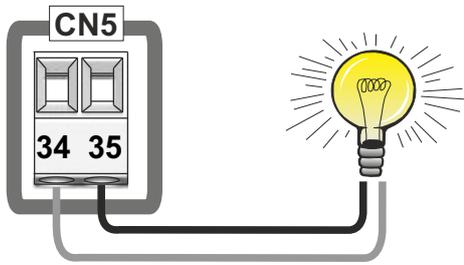To reset the allarm it is necessary to push the button STOP.
Anyway after 5 minutes the buzzer will stop to sound and the automation stands still waiting for commands.

⚠ *If Buzzer does not work, check the 86-FLASHING LIGHT menu is set on "Buzzer"*
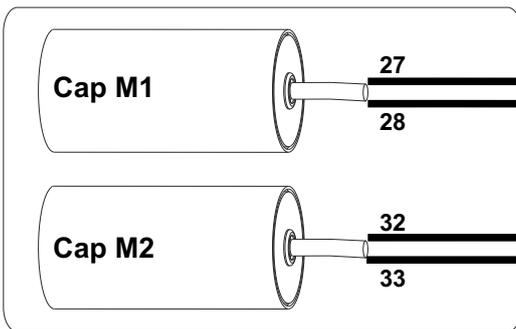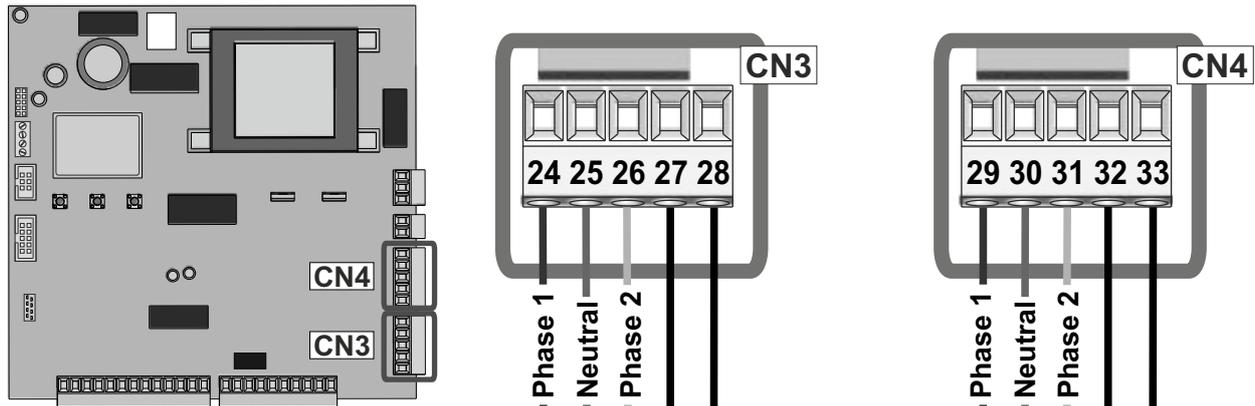
Example of 10K Photocell and Buzzer connections

CN1

BUZZER

10K Photocell

CONNECTIONS COURTESY LIGHT

CN5

34 35

**Timing from 0 to 4 minutes
(230V~ 50W Max   -   115V~ 50W Max)**

CONNECTIONS MOTORS - CAPACITY - POWER SUPPLY

CN4

CN3

CN3

24 25 26 27 28

CN4

29 30 31 32 33

Phase 1 Neutral Phase 2

Phase 1 Neutral Phase 2

Cap M1

27

28

Cap M2

32

33

Motor 1

Motor 1 connection

M = Opening /Closing

Com = COMMON

Motor to be connected in case of single-leaf.

Example

M1

24 **25**

26

CN6

L   N

Motor 2

Motor 2 connection

M = Opening/Closing

Com = COMMON

Example

M2

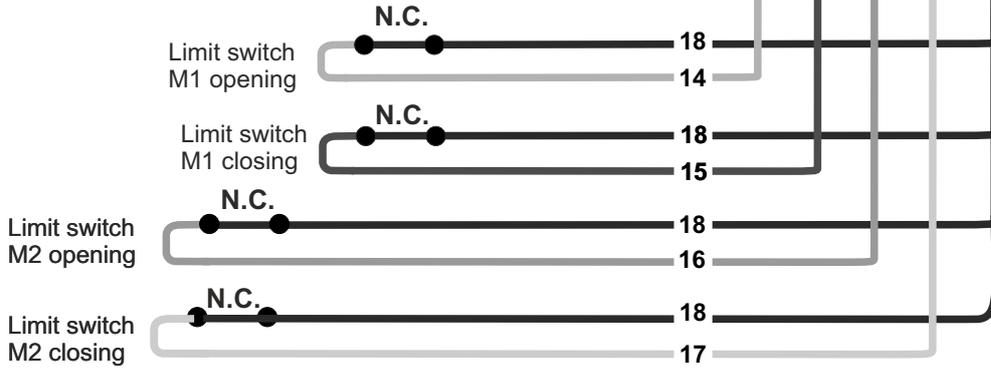**29**

30

31

Line

Neutral

POWER SUPPLY INPUT

**NOTE:** For power supply connection follow the rules in force

37

LIMIT SWITCH and ELECTRIC LOCK CONNECTIONS

LIMIT SWITCH 14 15 16 17

Does not need a jumper when not connected.
For the limit switch function, limit switches must be installed, both in opening and closing. In the case of single-leaf connect motor 1 (it is not necessary to bridge the limit switches of motor 2).
Anti-intrusion function can be activated. This function needs at least one limit switch, which pushes the motor in closing direction once it's released.

CN2

14 15 16 17 18 19 20 21 22 23

N.C.
Limit switch M1 opening — 18 / 14

N.C.
Limit switch M1 closing — 18 / 15

N.C.
Limit switch M2 opening — 18 / 16

N.C.
Limit switch M2 closing — 18 / 17

22 23

ELECTROLOCK

⚠ **The right operation of the limit switch is guaranteed when the motors turning direction correspond with the respective employed limit switches**
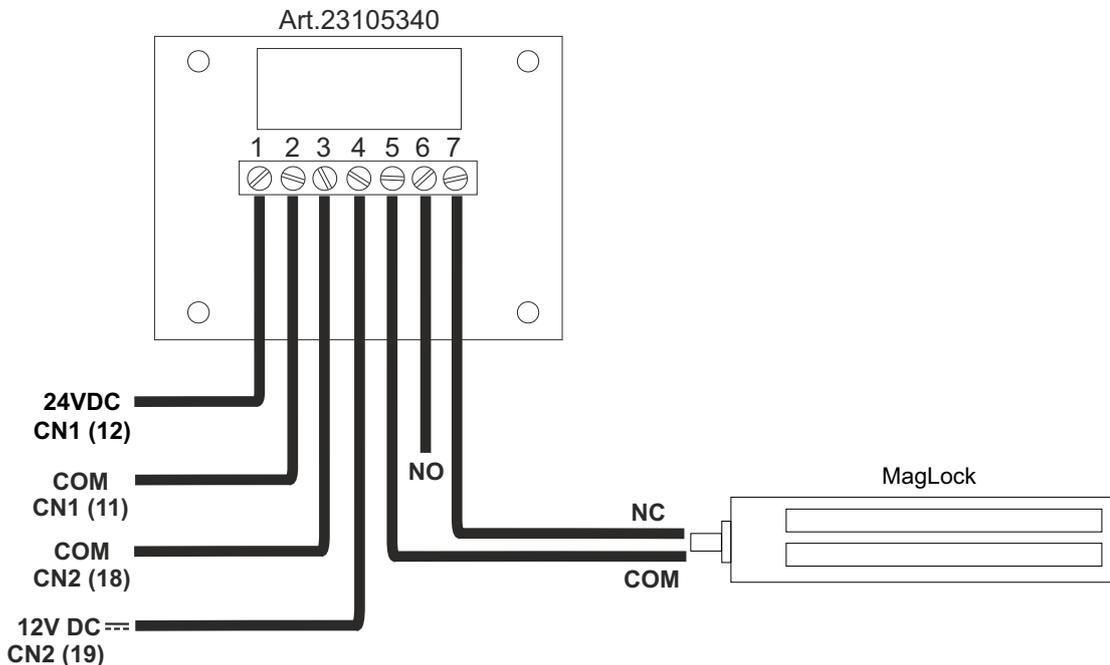**Com = Common**
C = Contact
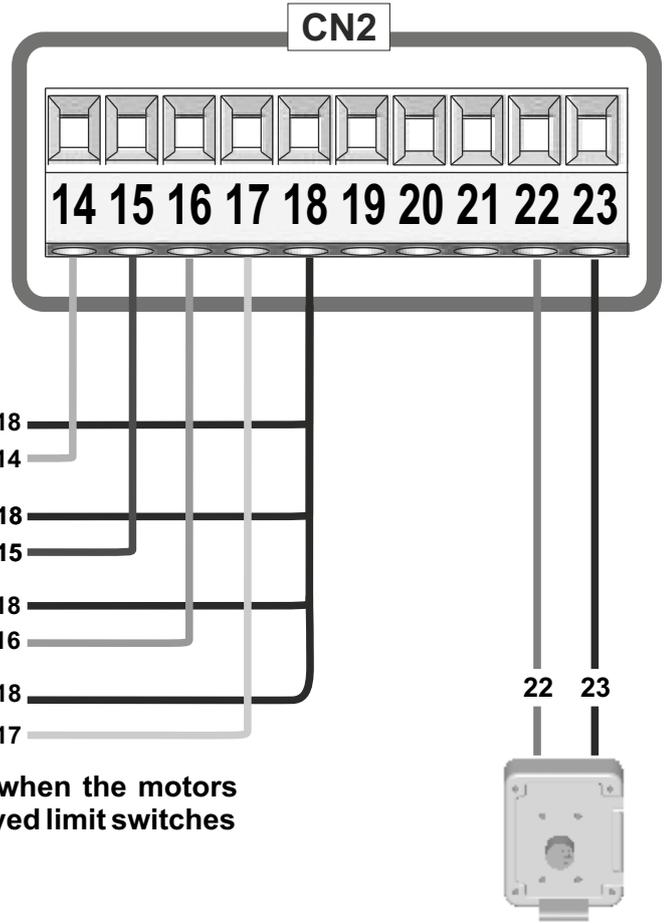
ELECTROLOCK OUTPUT 22 23

A 12V ⎓ 15W max electrolock can be connected
Electrolock can be deactivated when not used for energy saving on the control unit.
Electrolock release can be timed from 0 to 5 s.
The electrobrake can be set: only before opening, only before closing or in both directions.

MAGLOCK 12V CONNECTIONS

Art.23105340

1 2 3 4 5 6 7

24VDC
CN1 (12)

COM
CN1 (11)

COM
CN2 (18)

12V DC ⎓
CN2 (19)

NO

NC

COM

MagLock

NOTE: Please set 94-24V AUX menu to "Negative brake management"

CONNECTIONS SAFETY GATE, AMPEROMETRIC MANAGEMENT or POSITION GATE

⚠️ *With these options the entrapment protection is always monitored*

1) AMPEROMETRIC DEVICE FOR ELECTROMECHANICAL OPERATORS

This control unit comes with an obstacle detection system working only on electromechanical operators allowing to have the reversing on obstacles and the automatic detection of the stops.
Sensitivity adjustable from OFF to 99% inside the special menu. The more the percentage is high the more the obstacle detection will be difficult. On hydraulic unit this parameter will be always OFF.

2) SAFETY GATE

The Safety Gate, unlike the amperometric sensor, can be used both on electromechanical and hydraulic operators.
The Safety Gate is an ENCODER allowing the detection of the gate position and its reversing in case of obstacles. To use the ENCODER it is necessary to enable it inside the special 32-ENCODER Menu. The sensitivity on the obstacle is adjustable from 0 - 99%. The higher the percentage is the more it will be difficult to detect the obstacle.

ATTENTION: The first operation after power failure, will be executed with the set speed to search the mechanical stops limit.
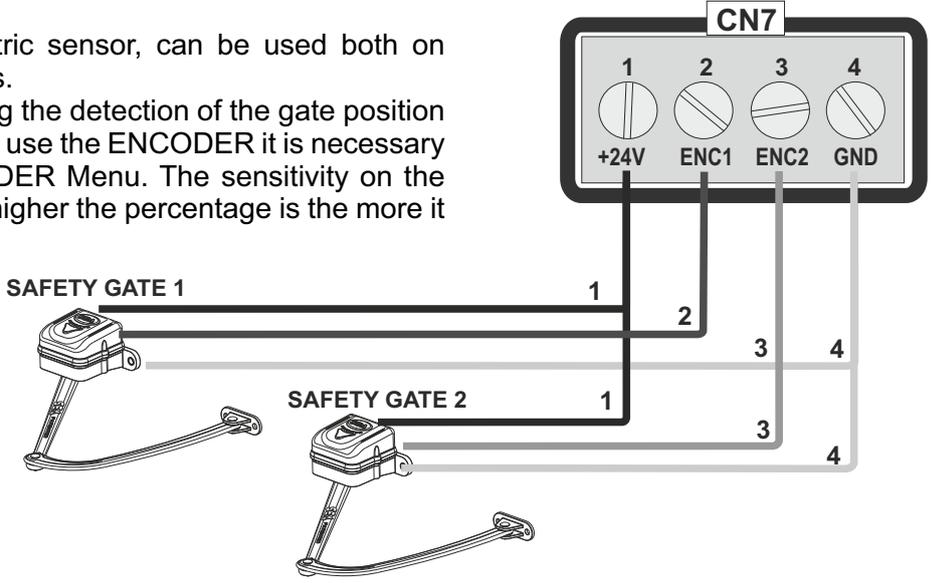

3) POSITION GATE WITH LE CARD

The position gate allows to know the exact position of the gate and to have the reverse on the obstacle.
The position gate is applicable on the hydraulic motors Half Tank and Mini Tank new series, **in combination with the LE card.**

To connect position gate (linear Encoder):
If the reading of the potentiometer is reversed relative to the movement of the motor, on the display will appear the alarm "Potentiometer direction" and you will have to reverse the brown wire with the green one and repeat programming.
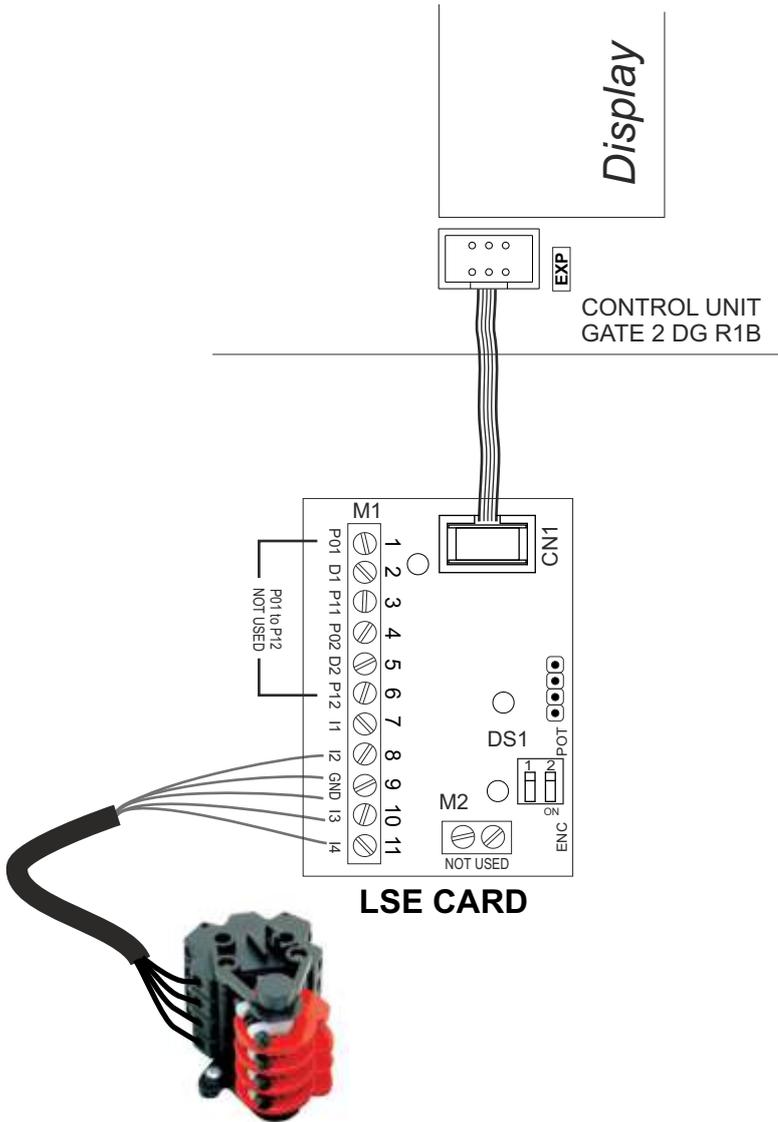
3.1)

3.2)

3.3)
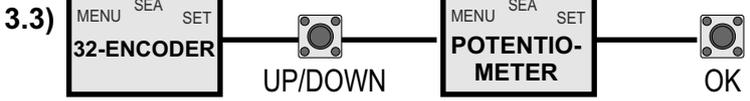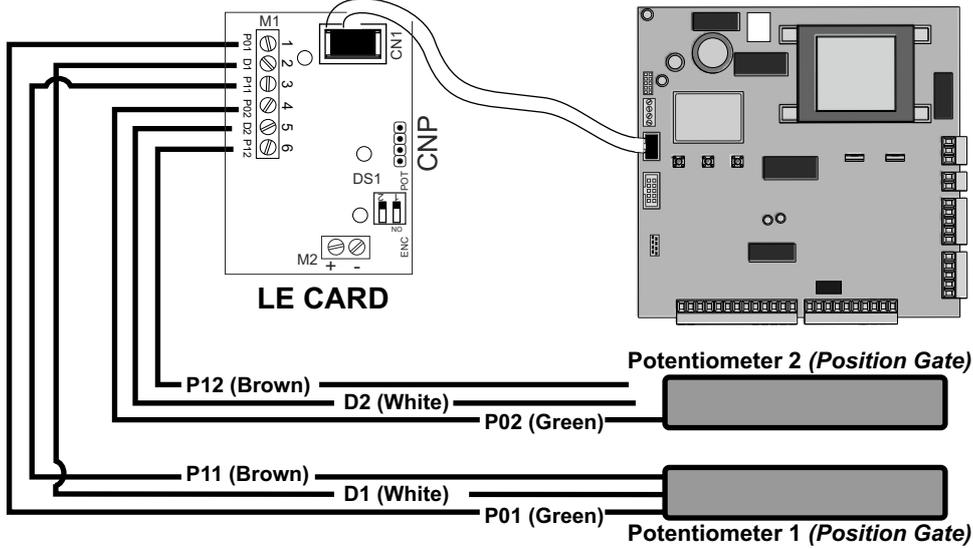
3.4) Sensitivity and threshold of intervention adjustment from menu 33 to 45

CONNECTIONS
4 LIMIT SWITCHES WITH LSE CARD

Display

EXP

CONTROL UNIT
GATE 2 DG R1B

ON Dip switch 1 = OFF **(if Inverter is not present)**
OFF Dip switch 2 = OFF

Set EXT on
104 - SELECT LIMIT SWITCH menu

I1 = Slowdown closing motor 1
I2 = Slowdown opening motor 1
GND = Common
I3 = Slowdown closing motor 2
I4 = Slowdown opening motor 2

Note 1: For two leaves gates, slowdown limit-switches only must be connected on LSE card. Opening and closing limit-switches must be connected on the control unit.

Note 2: If slowdown is not evident, move up slowdown limit-switches.

Note 3: for sliding motors with inverter, the Dip-switch 2 must be ON.

ON Dip switch 1 = OFF
OFF Dip switch 2 = ON

M1

P01 D1 P11 P02 D2 P12 I1

P01 to P12
NOT USED

CN1

I2 GND I3 I4

DS1

POT

M2

ENC

NOT USED

LSE CARD

CONNECTIONS TRAFFIC LIGHT CARD

24V~ /— (ac/dc)
or
230V~

M1

RL4 RL3 RL2 RL1

I4 L3 L2 L1

DS1
DS2

IC2

CN1

+2W
-

1 CNP

Connect on
EXP terminal

EXP

CONNECTIONS
SAFETY LOOP

CN1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |

− C1 C C2 C2
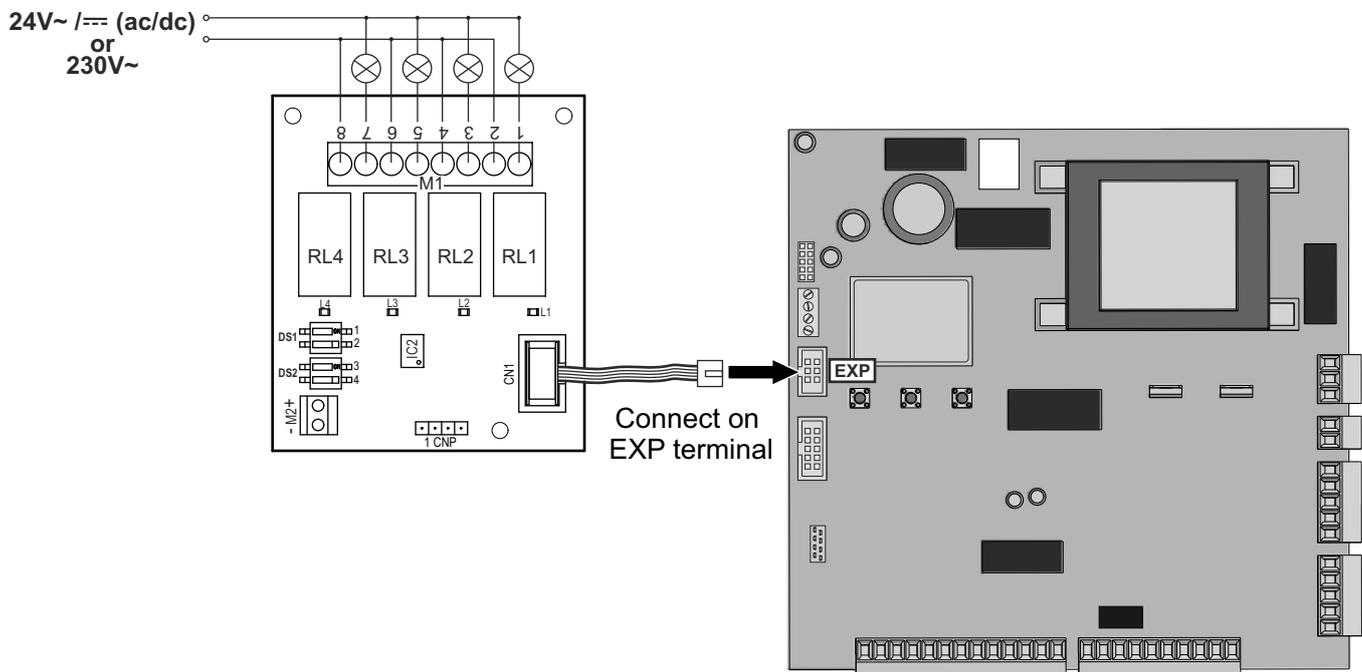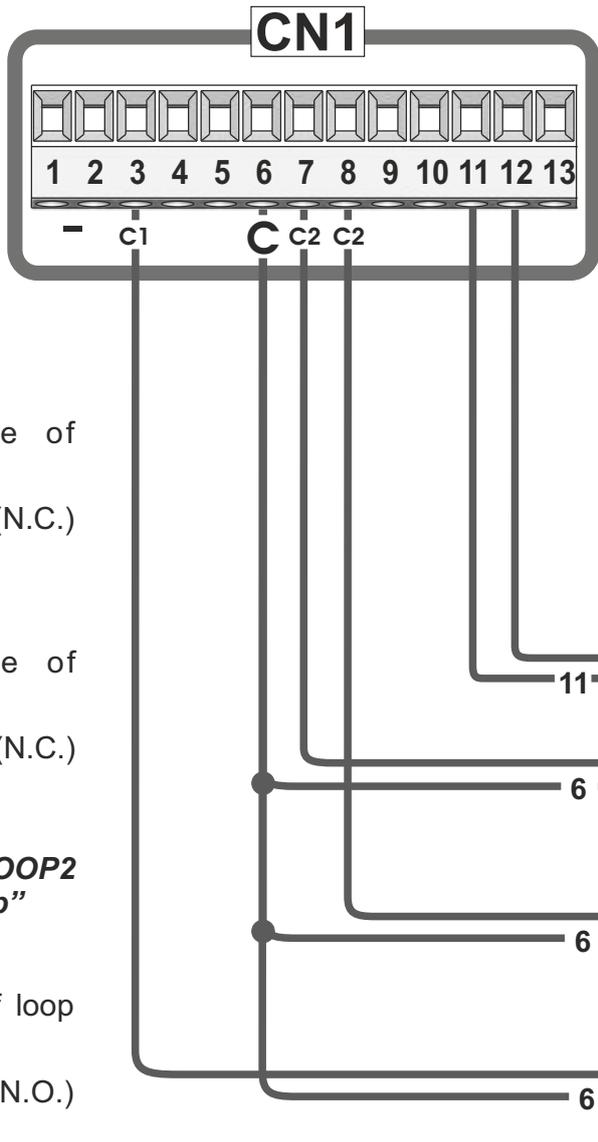
DRAWING SHOWS HOW TO EVENTUALLY CONNECT THE MAGNETIC LOOP

C1 = CONTACT OPEN
C2 = CONTACT CLOSED
12 = 24 V ===
11 = 0 V ===

Safety exit loop

Connecting scheme of loop detector 1 reader

7 = Contact photocell 1 (N.C.)
6 = Common

Shadow loop

Connecting scheme of loop detector 2 reader

8 = Contact photocell 2 (N.C.)
6 = Common

Note: Please set 98-PHOTOCELL2 - LOOP2 menu to "Shadow loop"

Free exit loop

Connecting scheme of loop detector reader

3 = Contact start (N.O.)
6 = Common

12
11 — Safety exit loop 1

Loop1
7
6 — Shadow loop

Loop2
8
6 — Free exit loop 3

Loop3
3
6
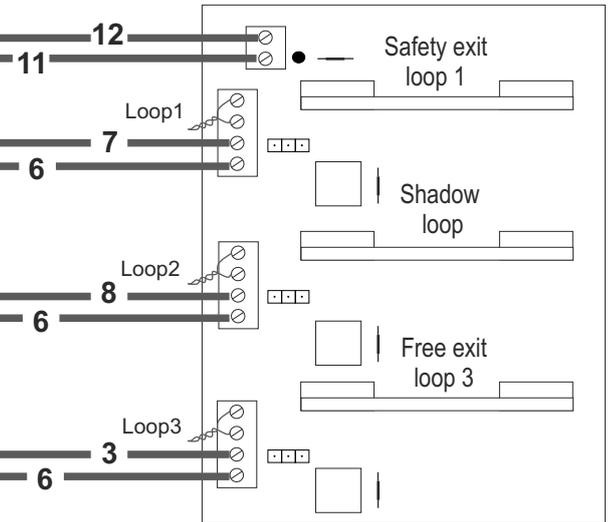
CONNECTING SCHEME OF THREE READERS OF MAGNETIC LOOP DETECTORS:
(TWO OF THEM USED AS SECURITY DEVICE AND ONE AS EXIT)

SAFETY LOOP SYSTEM
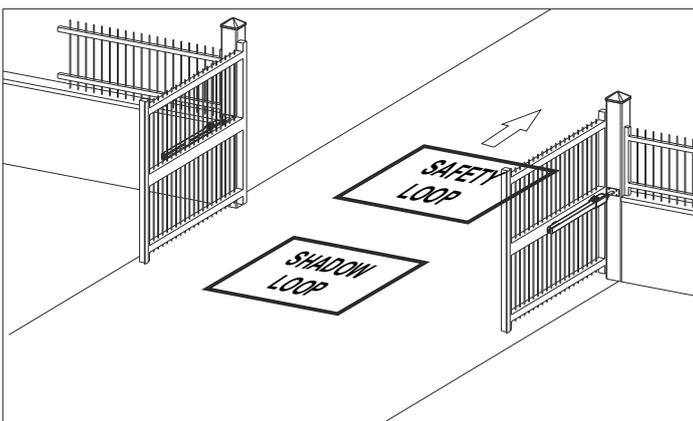
EXIT LOOP SYSTEM

PRE SET PARAMETERS AND NO/NC CONTACTS

①

DISPLAY INPUTS STATUS

Start
Pratial opening
Stop
Limit Switch opening motor 2

Limit Switch opening motor 1
Limit Switch closing motor 2

MENU SEA SET

Limit Switch closing motor 1

Photocell 1
Photocell 2
Edge 1
Edge 2

- When **N.C.** (Photo, Stop, Limit switch and Edge)

MENU SEA SET — When not engaged or not wired

N.C contacts

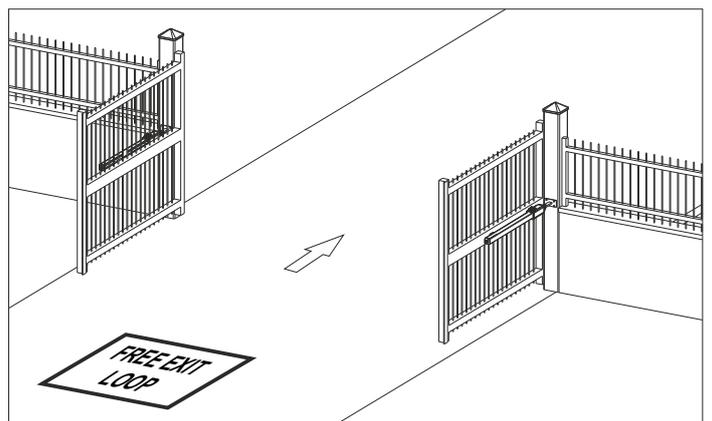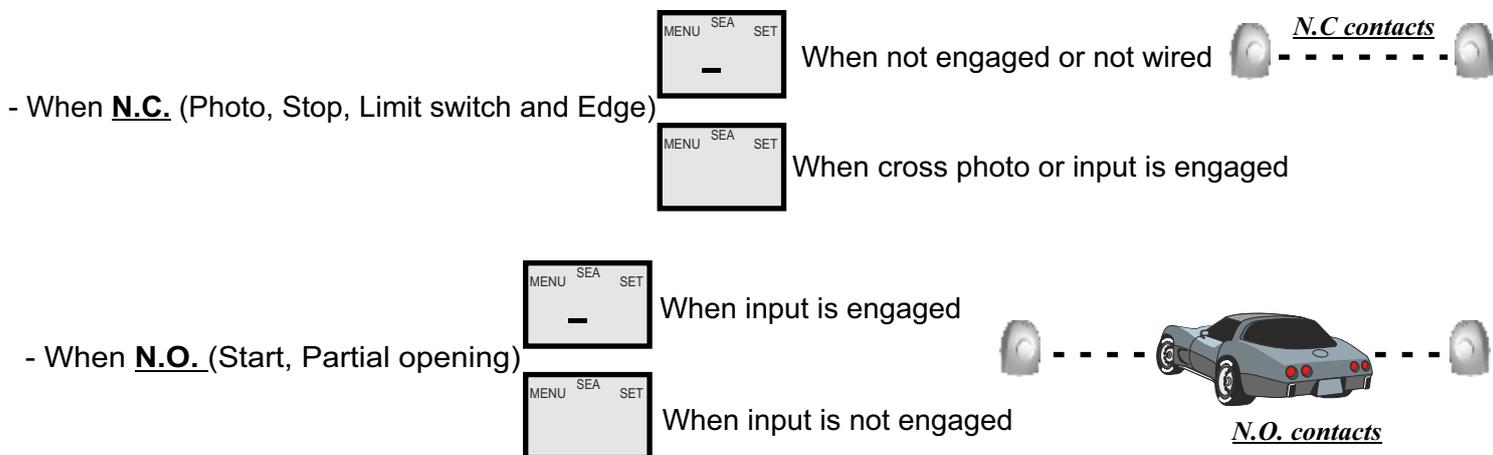MENU SEA SET — When cross photo or input is engaged

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- When **N.O.** (Start, Partial opening)

MENU SEA SET — When input is engaged

MENU SEA SET — When input is not engaged

N.O. contacts

---

② Power OFF

OFF

Power ON

③ Keep pressed the two buttons [◉] and [◉] At the same time put [ON] to start initialisation

UP DOWN

of the board until you see IN.IT on the display.

---

④ MENU SEA SET

IN.IT

All parameters get DEFAULT configuration, see following Menu (for example: Automatic logic, Pause time OFF) and put in **OFF** all NC contacts (like STOP, PHOTO, EDGE, LIMITS) not used.

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⑤ MENU SEA SET
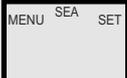
All NC contacts are automatically in **OFF** if not used (no segments on display). If wired segments are in ON on display

To reactivate NC contacts you must go on each Menu of display for NC contacts (like STOP, PHOTO, EDGE, LIMITS) and with SET put in **ON.**

INPUTS CHECK MENU

Moving in the ┌─────────────┐ `MENU  SEA  SET` `1-LANGUAGE` └─────────────┘ menu and then by pressing the `OK` button for 5 seconds, you can enter the **CHECK MENU**, where it is possible to check the operating status of all inputs.

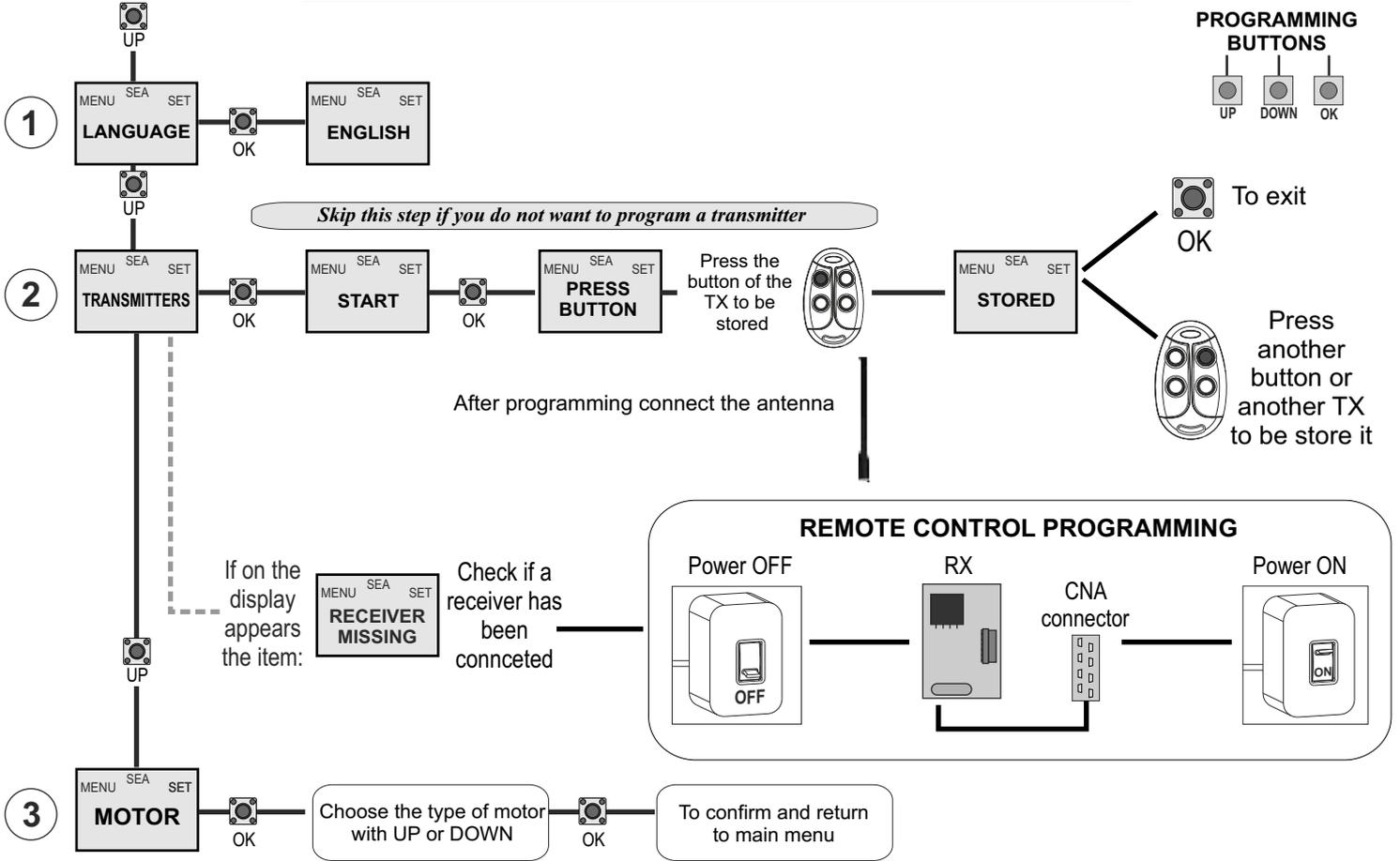| MENU FUNCTION TABLE CHECK GATE 2 DG R1B INPUTS			
To access the Menu for input check keep pressed OK for about 5 seconds.			
MENU		**Description**	**Description**
START		Start test	The contact must be a N.O. Contact . When activating the related command on the display SET lights up, the input works. If SET is always on, check the wirings.
STOP —OK<	Enabled / Blocked	Stop test	The contact must be a N.C. Contact. When activating the related command on the display SET lights up, the input works. If SET is always on, make sure that the contact is a N.C. Contact
PARTIAL OPENING START		Partial opening start test	The contact must be a N.O. Contact. When activating the related command on the display SET lights up, the input works. If SET is always on, check the wirings.
EDGE 1 —OK<	Enabled / Blocked	Safety edge1 test	The contact must be a N.C. Contact. When activating the related command on the display SET lights up, the input works. If SET is always on, make sure that the contact is a N.C. Contact
EDGE 2 —OK<	Enabled / Blocked	Safety edge2 test	The contact must be a N.C. Contact. When activating the related command on the display SET lights up, the input works. If SET is always on, make sure that the contact is a N.C. Contact
PHOTO 1 —OK<	Enabled / Blocked	Photocell 1 test	Ithe contact must be a N.C. Contact. When activating the related command on the display SET lights up, the input works. If SET is always on, make sure that the contact is a N.C. Contact
PHOTO 2 —OK<	Enabled / Blocked	Photocell 2 test	The contact must be a N.C. Contact. When activating the related command on the display SET lights up, the input works. If SET is always on, make sure that the contact is a N.C. Contact
LIMIT SWITCH OPENING 1		M1 Opening limit switch test	The contact must be a N.C. Contact. When activating the related command on the display SET lights up, the input works. If SET is always on, make sure that the contact is a N.C. contact or that the related limit switch is not occupied.
LIMIT SWITCH CLOSING 1		M1 Closing limit switch test	The contact must be a N.C. Contact. When activating the related command on the display SET lights up, the input works. If SET is always on, make sure that the contact is a N.C. Contact or that the related limit switch is not occupied.
LIMIT SWITCH OPENING 2		M2 Opening limit switch test	The contact must be a N.C. Contact. When activating the related command on the display SET lights up, the input works. If SET is always on, make sure that the contact is a N.C. contact or that the related limit switch is not occupied.
LIMIT SWITCH CLOSING 2		M2 Closing limit switch test	The contact must be a N.C. Contact. When activating the related command on the display SET lights up, the input works. If SET is always on, make sure that the contact is a N.C. Contact or that the related limit switch is not occupied.
END		Exit menu	

Note: If the **Stop**, **Photocell 1** and **Photocell 2**, **Edge 1** and **Enge 2** contacts are not bridged in self-learning, they will be deactivated and can be reactivated through this menu, without repeating times self-learning.
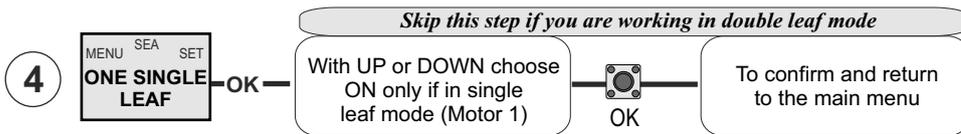
QUICK START AND PROGRAMMING

PROGRAMMING BUTTONS

UP   DOWN   OK

1 | MENU SEA SET **LANGUAGE** — OK — MENU SEA SET **ENGLISH**

UP

Skip this step if you do not want to program a transmitter

2 | MENU SEA SET **TRANSMITTERS** — OK — MENU SEA SET **START** — OK — MENU SEA SET **PRESS BUTTON** — Press the button of the TX to be stored — MENU SEA SET **STORED**

To exit — OK

Press another button or another TX to be store it

After programming connect the antenna

If on the display appears the item: — MENU SEA SET **RECEIVER MISSING** — Check if a receiver has been connceted

REMOTE CONTROL PROGRAMMING

Power OFF — OFF — RX — CNA connector — Power ON — ON

UP

3 | MENU SEA SET **MOTOR** — OK — Choose the type of motor with UP or DOWN — OK — To confirm and return to main menu

CHOOSE FROM SINGLE LEAF OR DOUBLE LEAF

SET IF ONE SINGLE LEAF (ON)

Default (OFF) = Double leaf

Skip this step if you are working in double leaf mode

4 | MENU SEA SET **ONE SINGLE LEAF** — OK — With UP or DOWN choose ON only if in single leaf mode (Motor 1) — OK — To confirm and return to the main menu

PRESET INSTALLATION

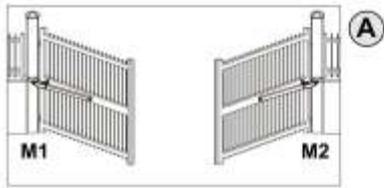**ATTENTION: This procedure is potentially dangerous and should only be performed by qualified people in safety conditions.**

A Turn OFF the power
OFF

B Release the operators
Example
Release

C Manually push the leaves in half position
M1 = motor1
M2 = motor2
M1   M2

D Reset the mechanical lock
Example
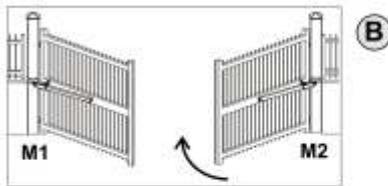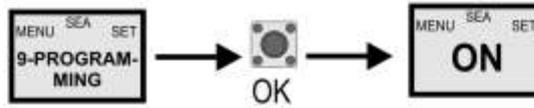**Lock**

E Put the power ON
ON
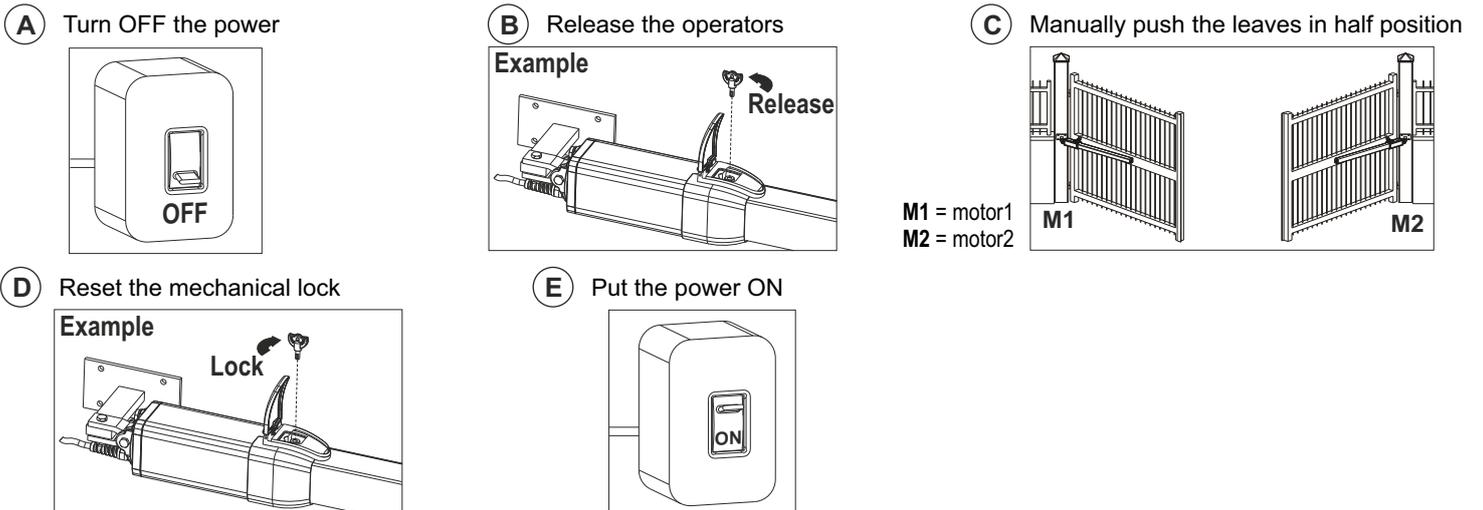
MANUAL SELF-LEARNING

A) IMPULSES *

The gate will start the following cycle: CLOSING M2 - CLOSING M1 - OPENING M1 - OPENING M2 - CLOSING M2 - CLOSING M1. During cycle, to store the respective stops, press UP or DOWN or START at every point of mechanical stop of the leaf. The self-learning is done.
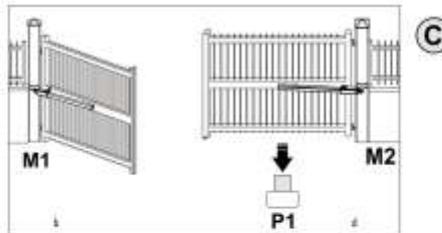
A — Both half way

MENU SEA SET 9-PROGRAMMING → OK → MENU SEA SET ON

B — M2 in closing

C — M2 closed
Press UP or TX if stored
when M2 is in closed position

D — M1 in closing

E — M1 closed
Press UP or TX if stored
when M1 is in closed position
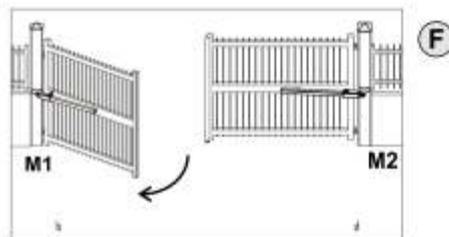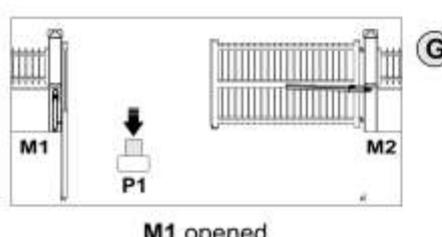
F — M1 in opening

G — M1 opened
Press UP or TX if stored
when M1 is in opened position

H — M2 in opening

I — M2 opened
Press UP or TX if stored
when M2 is in opened position
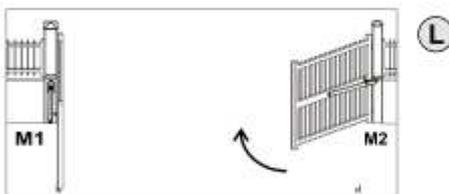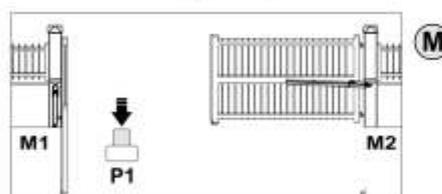
L — M2 in closing

M — M2 closed
Press UP or TX if stored
when M2 is in closed position
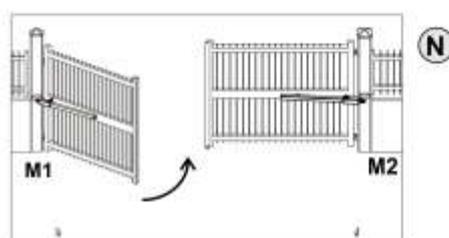
N — M1 in closing
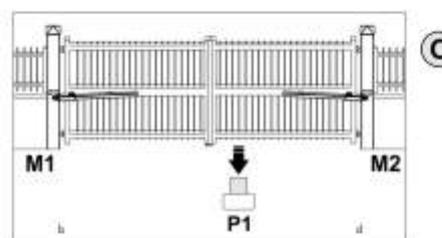
O — M1 closed
Press UP or TX if stored
when M1 is in closed position

AUTOMATIC SELF-LEARNING

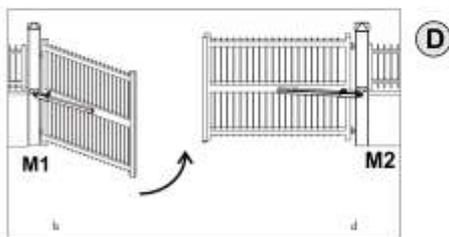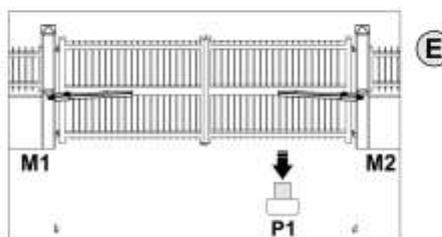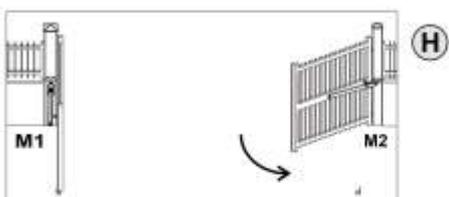Make sure, for all these types of selflearning, that the gate effects the following cycle: CLOSE M2 - CLOSE M1 - OPEN M1 - OPEN M2 - CLOSE M2 - CLOSE M1. Otherwise see REVERSE MOTOR function.

B) ENCODER *

- When an Encoder is installed, it is necessary to select **ON** in the 32-ENCODER menu

MENU ^SEA SET
32-ENCODER

→

MENU ^SEA SET
ON

Note: to adjust sensitivity on obstacle refer to the special menu

MENU ^SEA SET
33-OPENING SENSITIVITY MOTOR1

to

MENU ^SEA SET
37-SLOW DOWN SENSITIVITY

MENU ^SEA SET
9-PROGRAM-MING

| [OK] |

OK

MENU ^SEA SET
ON

⚠ **SELF-LEARNING starts AUTOMATICALLY**

C) POTENTIOMETER *

- When the potentiometer is installed, it is necessary to select

MENU ^SEA SET
32-ENCODER

→

MENU ^SEA SET
POTENTIO-METER

MENU ^SEA SET
9-PROGRAM-MING

| [OK] |

OK

MENU ^SEA SET
ON

⚠ **SELF-LEARNING starts AUTOMATICALLY**

Note: to adjust sensitivity on obstacle refer to the special menu

MENU ^SEA SET
33-OPENING SENSITIVITY MOTOR1

to

MENU ^SEA SET
37-SLOW DOWN SENSITIVITY
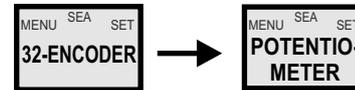
Potentiometer treshold intervention is automatically set during self learning,

NO NEED to set

MENU ^SEA SET
38-POT. THRESHOLD OPENING1

to

MENU ^SEA SET
45-POT.SLOWDOWN THRESHOLD CLOSING2

MIXED PROCEDURE
SELF-LEARNING OPERATION TIME WITH 9B7 C8 9F#POTENTIOMETER

When the potentiometer is installed, it is necessary to select "Potentiometer" in the 32-ENCODER menu. Start programming and make sure that leaf starts as first in closing. With potentiometer, the gate will automatically execute the following cycle: CLOSE - OPENING -CLOSE - OPENING and CLOSING with SLOW-DOWN
Note 1: For the stop detection sensitivity settings refer to the special menu.
Note 2: With the potentiometer you can also make the self-learning giving impulses on favourite opening or closing points; In this case it is alson possible to modify the parameters I.AP.M1, I.CH.M1, I.AP.M2, I.CH.M2 of ± 100 impulses, if you need to optimize the initial and the final position

IMPORTANT NOTE: In case of MIXED PROCEDURE, (detection of AUTOMATIC STOP in closing and MANUAL impulsion in opening) it will be necessary to give a new opening command during the second learning cycle

* REVERSE MOTOR

If the motor starts in opening, switch off the power and then switch it ON again, select

MENU ^SEA SET
5-REVERSE MOTOR

on the display and through the [ ] (UP) and [ ] (DOWN) put it on ON or, if you have the JOLLY 3 programmer, activate the motor exchange function
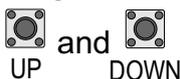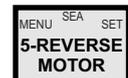
D) AMPEROMETRIC* (For electromechanical motors only)

This type of selflearning is possible ONLY with electromechanical operators and physical stops.

MENU SEA SET
3-MOTOR — MENU SEA SET **MECHANIC**

MENU SEA SET
9-PROGRAM-MING — ⬜ OK — MENU SEA SET **ON** ⚠ **SELF-LEARNING starts AUTOMATICALLY**

Note: to adjust sensitivity on obstacle refer to the special menu MENU SEA SET **33-OPENING SENSITIVITY MOTOR1** to MENU SEA SET **37-SLOW DOWN SENSITIVITY**

E) WITH LIMIT-SWITCHES *

1 - **INPUT TEST LIMIT-SWITCHES**: test <u>each</u> limit-switch of both leaves by activation before self-learning. The segment on display shall disappear when each limit-switch is activated

Limit Switch opening motor 1 — MENU SEA SET — Limit Switch closing motor 2

Limit Switch closing motor 1 — Limit Switch opening motor 2

WHEN NOT ENGAGED (-) segment is ON

MENU SEA SET
WHEN SINGLE LIMIT SWITCH IS ENGAGED
the segment is in OFF

MENU SEA SET
WHEN ALL LIMIT SWITCHES ARE ENGAGED
the segment are in OFF

2 - MENU SEA SET **9-PROGRAM-MING** — ⬜ OK — MENU SEA SET **ON** ⚠ **SELF-LEARNING starts AUTOMATICALLY**

LOGIC FUNCTIONS

⑥ MENU SEA SET **LOGIC** — ⬜ OK — With UP or DOWN choose the desired logic — ⬜ OK — To confirm and return to main menu — *Skip this step if you want to work in semi-automatic logic*

⚠ **ONLY AFTER SELF LEARNING OF WORKING TIME WITH AUTOMATIC LOGIC, THEN YOU CAN CHANGE LOGICS TO:**

A) AUTOMATIC
A start impulse opens the gate. A second impulse during the opening will not be accepted.
A start impulse during closing reverses the movement.
NOTE 1: To have the automatic closing it is necessary to set a pause time, otherwise all the logic will be semi-automatic. MENU SEA SET **7-PAUSE TIME** — More than 0 sec

NOTE2: It is possible to choose, whether to accept or not, the start in pause, selecting in the MENU the item
8-STARTIN PAUSE and choosing ON or OFF. By default, the parameter is OFF.

MENU SEA SET **8 - START IN PAUSE** — ON (accept start in pause)
— OFF (not accept start in pause)
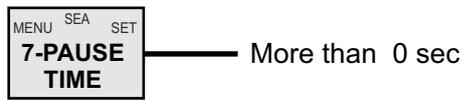
B) SECURITY

A start impulse opens the gate. A second impulse during opening reverses the movement.
A start impulse during closing reverses the movement.
NOTE 1: To have the automatic closing it is necessary to set a pause time, otherwise all the logic will be semi-automatic.

MENU   SEA   SET
7-PAUSE TIME	———— More than 0 sec

NOTE2: It is possible to choose, whether to accept or not, the start in pause, selecting in the MENU the item 8-STARTIN PAUSE and choosing ON or OFF. By default, the parameter is OFF.

MENU   SEA   SET
8 - START IN PAUSE	ON (accept start in pause) / OFF (not accept start in pause)
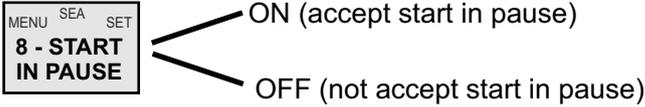
C) STEP BY STEP TYPE 1

The start impulse follows the OPEN-STOP-CLOSE-STOP-OPEN logic.
NOTE 1: To have the automatic closing it is necessary to set a pause time, otherwise all the logic will be semi-automatic.

MENU   SEA   SET
7-PAUSE TIME	———— More than 0 sec

NOTE2: It is possible to choose, whether to accept or not, the start in pause, selecting in the MENU the item 8-STARTIN PAUSE and choosing ON or OFF. By default, the parameter is OFF.

MENU   SEA   SET
8 - START IN PAUSE	ON (accept start in pause) / OFF (not accept start in pause)
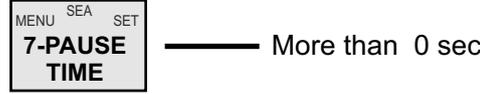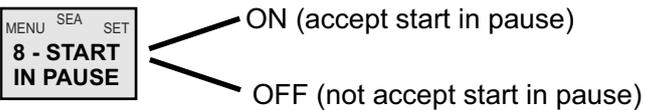
D) STEP BY STEP TYPE 2

The start impulse follows the OPEN-STOP-CLOSE -OPEN logic.
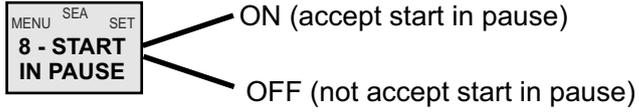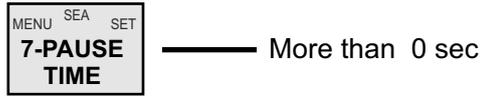**NOTE 1: To have the automatic closing it is necessary to set a pause time, otherwise all the logic will be semi-automatic.**

MENU   SEA   SET
7-PAUSE TIME	———— More than 0 sec

NOTE2: It is possible to choose, whether to accept or not, the start in pause, selecting in the MENU the item 8-STARTIN PAUSE and choosing ON or OFF. By default, the parameter is OFF.

MENU   SEA   SET
8 - START IN PAUSE	ON (accept start in pause) / OFF (not accept start in pause)
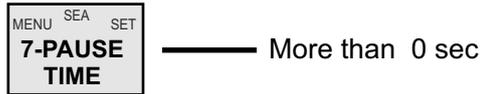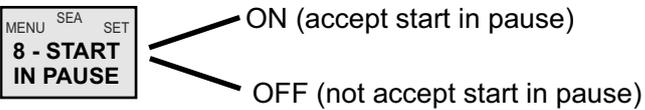
E) DEAD MAN

The gate opens as long as the **START** button of opening is pressed; releasing it the gate stops. The gate closes as long as the button connected to the PARTIAL OPENING is pressed; releasing it the gate stops. To execute complete opening and/or closing cycles the related pushbuttons must be constantly pressed.

F) 2 BUTTONS

One start opens, one partial opening closes. In opening the closing will not be accepted. In closing a start command reopens, a partial opening command (closes) will be ignored.

BASIC MENU

MENU FUNCTIONS TABLE GATE 2 DG R1B				
MENU	SET	Description	Default	Set value
1 - LANGUAGE	*Italiano*	Italian	*English*	
	English	English		
	Français	French		
	Español	Spanish		
	Dutch	Olandese		
2 - TRANSMITTERS	*Start*	Start	*Start* *Partial opening*	
	Partial opening	Partial opening		
	External module	External module		
	Stop	Stop		
	Unloch	Storing of a command for unlocking an electric brake		
	Delete a transmitter	Delete single transmitter		
	Clear memory	Delete transmitter memory		
	End	"Transmitters" menu output		
3 - MOTOR	*Hydraulic*	Hydraulic	*Mechanic*	
	Sliding	Sliding		
	Reversible sliding gate	Reversible sliding gate		
	Mechanic	Mechanic		
4 - ONE SINGLE LEAF *	*Off*	Disabled	*Off*	
	On	In ON activates single leaf mode (Motor 1)		
5 - REVERSE MOTOR	*Off*	In On reverses the opening with the closing and / or vice versa.	*Off*	
	On			
6 - LOGIC	*Automatic*	Automatic	*Automatic*	
	Open-stop-close-stop-open	Step by step type 1		
	Open-stop-close-open	Step by step type 2		
	2 buttons * *	Two buttons		
	Safety	Safety		
	Dead man * *	Dead man		
7 - PAUSE TIME	*Off*	OFF (semi-automatic logics)	*Off*	
	1 240	Setting from 1s to 4min.		
8 - START IN PAUSE	*Off*	In pause start is not acceped	*Off*	
	On	In pause start is accepted		
9 - PROGRAMMING	*Off On*	Times learning start	*Off*	
10 - TEST START	*Off On*	Start command	*Off*	
15 - END	Press OK to return to the display of the firmware version and to the one of inputs state.			
16 - SPECIAL MENU	Press OK to enter the special menu.			

* May automatically change depending of motor type.

** You can select those only after having done selflearning with automatic logic.

SPECIAL MENU
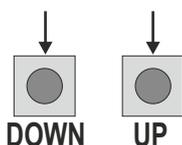
SPECIAL MENU FUNCTIONS TABLE GATE 2 DG R1B				
For entering into the special menu move on one of the menu and press the UP and DOWN buttons at the same time for 5 s or access through the menu 16 and press OK. For exiting the special menu move on one of the menu and press the UP and DOWN buttons at the same time for 5 s or move on the menu 120 and press OK.				
MENU SP	SET	Description	Default	Set value
26 - LEAF DELAY IN OPENING *	*Off 6*	Setting from OFF to 6 seconds	*1,5*	
27 - LEAF DELAY IN CLOSING *	*Off 20*	Setting from OFF to 20 seconds	*2,5*	
28 - OPENING TORQ 1 *	*10 100*	M1 opening torque Note: with hydraulic motors the torque will be on 100%	*75*	
29 - CLOSING TORQ 1 *	*10 100*	M1 closing torque Note: with hydraulic motors the torque will be on 100%	*75*	
30 - OPENING TORQ 2 *	*10 100*	M2 opening torque Note: with hydraulic motors the torque will be on 100%	*75*	
31 - CLOSING TORQ 2 *	*10 100*	M2 closing torque Note: with hydraulic motors the torque will be on 100%	*75*	
32 - ENCODER *	*On*	In ON enables the Encoder, in OFF it's disabled	*Off*	
47 - ENCODER PAR.1 *	*xxx.*	Encoder impulses during operation (Motor 1).		
48 - ENCODER TOT.1 *	*xxx.*	Encoder impulses stored in programming (Motor 1).		
49 - ENCODER PAR.2 *	*xxx.*	Encoder impulses during operation (Motor 2).		
50 - ENCODER TOT.2 *	*xxx.*	Encoder impulses stored in programming (Motor 2).		
32 - ENCODER *	*Potentiometer*	Enables the reading of the potentiometer with LE card.	*Off*	
51 - I.PAR.M1 *	- - - - - - -	Reports the current position of the potentiometer on the leaf of motor. This parameter is useful for seeing if the potentiometer is read correctly.		
52 - I.AP.M1 *	- - - - - - -	Reports the impulses stored by the control unit when the leaf of motor 1 is fully open.		
53 - I.CH.M1 *	- - - - - - -	Reports the impulses stored by the control unit when the leaf of motor 1is fully close.		

MENU SP	SET	Description	Default	Set value
54 - I.PAR.M2 *	- - - - - - - -	Reports the current position of the potentiometer on the leaf of motor 2.This parameter is useful for seeing if the potentiometer is read correctly.		
55 - I.AP.M2 *	- - - - - - - -	Reports the impulses stored by the control unit when the leaf of motor 2 is fully open.		
56 - I.CH.M2 *	- - - - - - - -	Reports the impulses stored by the control unit when the leaf of motor 2 is fully close.		
32 - ENCODER *	*Off*	In ON enables the Encoder, in OFF it's disabled	*Off*	
65 - OPENING TIME MOTOR1	*xxx.s*	Indicates the working times selflearning in opening and closing (Motor 1). With UP or DOWN it is possible to increase or reduce the working times.		
66 - CLOSING TIME MOTOR1	*xxx.s*			
67 - OPENING TIME MOTOR2	*xxx.s*	Indicates the working times selflearning in opening and closing (Motor 2). With UP or DOWN it is possible to increase or reduce the working times.		
68 - CLOSING TIME MOTOR2	*xxx.s*			
33 - OPENING SENSITIVITY MOTOR1	10% (Fast intervention) 99% (Slow intervention)	Adjusts the intervention time of the Encoder / Potentiometer on Motor 1 in opening	*Off*	
	Off (Intervention excluded)	Disabled		
34 - CLOSING SENSITIVITY MOTOR1	10% (Fast intervention) 99% (Slow intervention)	Adjusts the intervention time of the Encoder / Potentiometer on Motor 1 in closing	*Off*	
	Off (Intervention excluded)	Disabled		
35 - OPENING SENSITIVITY MOTOR2 *	10% (Fast intervention) 99% (Slow intervention)	Adjusts the intervention time of the Encoder / Potentiometer on Motor 2 in opening	*Off*	
	Off (Intervention excluded)	Disabled		
36 - CLOSING SENSITIVITY MOTOR2 *	10% (Fast intervention) 99% (Slow intervention)	Adjusts the intervention time of the Encoder / Potentiometer on Motor 2 in closing	*Off*	
	Off (Intervention excluded)	Disabled		
37 - SLOW DOWN SENSITIVITY *	10% (Fast intervention) 99% (Slow intervention)	Adjusts the amperometric sensitivity in slowdown. Active only if the motors are electromechanical.	*Off*	
	With potentiometer	In case of linear potentiometer, this parameter allows to set the inversion time in slow-down from 0 to 5 seconds (= 99%)	*30%*	
	Off (Intervention excluded)	Disabled		

MENU SP	SET	Description	Default	Set value
38 - POT. THRESHOLD OPENING 1 *	*1 100*	Adjusts the threshold of the potentiometer intervention. The parameter self-determines in learning but can also be adjusted later. The lower the value, the slower will be the response of the potentiometer. The parameter can be set as maximum threshold at the value read on the DEBUG VPI, VP2 menu.		
39 - POT. THRESHOLD CLOSING 1 *				
40 - POT. THRESHOLD OPENING 2 *				
41 - POT. THRESHOLD CLOSING 2 *				
42 - POT. SLOWDOWN THRESHOLD OPENING1 *	*1 100*	Adjust the threshold of the potentiometer in slowdown. By default this value is set on 1 and can be increased manually up to the maximum value read on the DEBUG VPI, VP2 menu.		
43 - POT. SLOWDOWN THRESHOLD CLOSING1 *				
44 - POT. SLOWDOWN THRESHOLD OPENING 2 *				
45 - POT. SLOWDOWN THRESHOLD CLOSING 2 *				
46 - INVERSION	*0 2000*	Allows you to adjust the inversion space calculated in pulses.	*500*	
	Normal	In case of inversion on obstacle in opening the gate partially reverses, in closing it reopens completely and if a pause time has been set it attempts to reclose for three times.		
59 - OPENING SLOWDOWN 1	*Off (= with hydraulic brake CF or 2CF) 50*	From OFF to 50% of the stroke	*20*	
60 - CLOSING SLOWDOWN 1	*Off (= with hydraulic brake CF or 2CF) 50*	From OFF to 50% of the stroke	*20*	
61 - OPENING SLOWDOWN 2 *	*Off (= with hydraulic brake CF or 2CF) 50*	From OFF to 50% of the stroke	*20*	
62 - CLOSING SLOWDOWN 2 *	*Off (= with hydraulic brake CF or 2CF) 50*	From OFF to 50% of the stroke	*20*	
63 - DECELERATION	*0 %* ⌐_ *100%* ╲_	Adjust the passage between normal speed and slowdown speed	*100%*	
64 - ACCELERATION	*0 %* _⌐ *100%* _╱	Acceleration ramp. Adjusts the motor start.	*100%*	
69 - ANTI OVERLAP *	*Off*	Desactivate the leaves anti-overlapping control, allowing separate control of the two leaves.	*Off*	
	On	Activate the leaves anti-overlapping control		
70 - OPENING POSITION RECOVERY	*0 20*	Retrieves the inertia of the motor in opening after Stop or reversing	*1*	

MENU SP	SET	Description	Default	Set value
71 - CLOSING POSITION RECOVERY	*0 20*	Retrieves the inertia of the motor in closing after Stop or reversing	*1*	
72 - OPENING TOLERANCE MOTOR1	*0 100*	Adjust the tolerance between stop and obstacle M1 opening	*0*	
73 - CLOSING TOLERANCE MOTOR1	*0 100*	Adjust the tolerance between stop and obstacle M1 closing	*0*	
74 - OPENING TOLERANCE MOTOR2 *	*0 100*	Adjust the tolerance between stop and obstacle M2 opening	*0*	
75 - CLOSING TOLERANCE MOTOR2 *	*0 100*	Adjust the tolerance between stop and obstacle M2 closing	*0*	
76 - PUSHING STROKE	*Off 3*	Facilitates the unlocking of the electrolock	*Off*	
77 - LOCK TIME	*Off 5*	Sets the lock release time from 0 to 5 s	*1*	
78 - LOCK	*Only opening*	Active only before opening	*Only opening*	
	Only closing	Active only before cloning		
	Opening and closing	Active before opening and closing		
79 - ANTI INTRUSION	*Only opening*	If you force the gate manually, the control unit starts the motor to restore the state of the gate before forcing only if limit switch is present	*Off*	
	Only closing			
	Opening and closing			
	Off			
80 - PUSHOVER *	*Off*	Allows the leaf to make an extra move at maximum torque to ensure the tightening.	*Off*	
	Opening and closing			
	Only opening			
	Only closing			
81 - PERIODICAL PUSHOVER *	*Off 8*	Allows the repetition of the Pushover function at a distance of time adjustable from 0 to 8 hours at hourly intervals	*Off*	
82 - MOTOR RELEASE *	*Off*	Disabled	*0.1*	
	0.1 3.0 s	Setting from 1 to 3 s. At the end of closing the motor re-opens for the set time.		
83 - EXTRA TIME	*0.0 s 10 s*	If limit switches are present it adds an extra time to the movement of the motors after the reading of the limit switches.	*0.0 s*	
84 - BRAKE *	*- - - -*	Adjusts the braking on the limit switches	*0*	
85 - PREFLASHING	*Only closing*	Pre-flashing only active before closing	*Off*	
	0.0 5.0 s	Pre-flashing time		
86 - FLASHING LIGHT	*Normal*	Normal	*Normal*	
	Light	Control lamp		
	Always	Always ON		
	Buzzer	Buzzer		

MENU SP	SET	Description	Default	Set value
87 - FLASHING LIGHT AND TIMER	*Off*	The flashing light remains OFF with the active timer and open gate	*Off*	
	On	The flashing light remains ON with active timer and o p e n g a t e		
88 - COURTESY LIGHT	*1 240*	Courtesy light setting from 1s to 4min.	*20*	
	In cycle	Courtesy light in cycle		
89 - TRAFFIC LIGHT RESERVATION	*Off on*	When setting this function the partial input will be activated to work on the auxiliary board SEM (traffic light management).	*Off*	
90 - PARTIAL OPENING	*20 100*	Setting from 20 to 100	*100*	
91 - PARTIAL PAUSE	*= Start*	Pause in partial opening same as in total opening	*= Start*	
	Off	Disabled		
	1 240	Setting from 1s to 4 min.		
92 - TIMER	*Off*	Transforms the selected input in an input on which to connect an external clock.	*Off*	
	On photo2			
	On partial entry			
94 - 24V AUX 800 mA max.	*Always*	AUX output always power supplied	*Always*	
	In cycle	AUX output active only during cycle		
	Opening	A U X o u t p u t p o w e r supplied only during opening		
	Closing	A U X o u t p u t p o w e r supplied only during closing		
	In pause	A U X o u t p u t p o w e r supplied only during pause		
	Positive brake management	Positive Electrobrake		
	Negative brake management	Negative Electrobrake		
	Negative brake management Photocellule	Negative electrobrake not active on intervention of the photocell.		
	Gate open warning light	1 flash per sec. in opening 2 flashes per sec. in closing Steady lit in Stop or Open.		
95 - FOTOTEST	*Photo1*	Auto-test active only on Photo1	*Off*	
	Photo2	Auto-test active only on Photo2		
	Photo1-2	Auto-test active on Photo1 and Photo2		
	Off	Disabilitato		
96 - EDGE AUTOTEST	*Edge1*	Test enabled on edge 1	*Off*	
	Edge2	Test enabled on edge 2		
	Edge1-2	Test enabled on edge 1 and 2		
	Off	Disabled		

MENU SP	SET	Description	Default	Set value
97 - PHOTO1 - LOOP1	*Closing*	If the photocell is occupied, it reverses the movement in closing; during pause, it prevents the closing	*Closing*	
	Opening and closing	If activated the photocell blocks the movement as long as it is busy; when released, the opening continues		
	Stop	When activated, before opening, the photocell blocks the automation as long as it is busy, during the opening it will be ignored. In closing the intervention of the photocell causes the reopening.		
	Stop and close	In closing, the photocell stops the movement until it is occupiedwhen released the closing continues		
	Close	The photocell stops the gate until it is occupied in both opening and closing; when released, it gives a closing command (Closing one second after the release of the photocell)		
	Pause reload	If occupied, during pause the photocell recharges the time of pause. In closing it reverses the movement		
	Shadow loop	Until occupied, with open gate,it prevents reclosing. It is switched off during closing		
	Delay pause time	If occupied during opening, pause or closing, the gate reopens completely and closes without observing the pause time.		
98 - PHOTO2 - LOOP2	*Closing*	If the photocell is occupied, it reverses the movement in closing; during pause, it prevents the closing	*Opening and Closing*	
	Opening and closing	If activated the photocell blocks the movement as long as it is busy; when released, the opening continues		
	Stop	When activated, before opening, the photocell blocks the automation as long as it is busy, during the opening it will be ignored. In closing the intervention of the photocell causes the reopening.		
	Stop and close	In closing, the photocell stops the movement until it is occupiedwhen released the closing continues		
	Close	The photocell stops the gate until it is occupied in both opening and closing; when released, it gives a closing command (Closing one second after the release of the photocell)		
	Pause reload	If occupied, during pause the photocell recharges the time of pause. In closing it reverses the movement		
	Shadow loop	Until occupied, with open gate,it prevents reclosing. It is switched off during closing		
	Delay pause time	If occupied during opening, pause or closing, the gate reopens completely and closes without observing the pause time.		

Note: LOOP3 (FREE EXIT) connected to START.

MENU SP	SET	Description	Default	Set value
100 - EDGE1	*Normal*	Normal N.C. contact	*Normal*	
	8K2	Edge is active and protected by a 8K2 resistor		
	8K2 Double	Allows to connect two 8K2 protected edges		
	Photo 1 10K	Edge works as a photocell protected by a 10K resistor		
	Photo 1 10K Double	It is possible to connect two photocells protected by a 10K resistor		
101 - EDGE2	*Normal*	Normal N.C. contact	*Normal*	
	8K2	Edge is active and protected by a 8K2 resistor		
	8K2 Double	Allows to connect two 8K2 protected edges		
	Photo 1 10K	Edge works as a photocell protected by a 10K resistor		
	Photo 1 10K Double	It is possible to connect two photocells protected by a 10K resistor		
102 - EDGE1 DIRECTION	*Opening and closing*	Active in opening and closing	*Opening and closing*	
	Only opening	Active only in opening		
	Only closing	Active only in closing		
103 - EDGE2 DIRECTION	*Opening and closing*	Active in opening and closing	*Opening and closing*	
	Only opening	Active only in opening		
	Only closing	Active only in closing		
104 - SELECT LIMIT SWITCH	*Automatic*	Limit switch in automatic recognition	*Automatic*	
	Only opening	Only limit switch in opening present		
	Only closing	Only limit switch in closing present		
	Motor internal	To be activated if there is a limit switch that stops the motor phase		
	Ext	Limit switch connected on Four limit switch interface card		
106 - DIAGNOSTICS	*1 10*	Shows last event (See alarms table)		
107 - MAINTENANCE CYCLES	*100 10E4*	Setting from 100 to 100000	*10E4*	
108 - PERFORMED CYCLES	*0 10E9*	Reports the executed cycles. Keep pressed OK to reset the cycles	*0*	

MENU SP	SET	Description	Default	Set value
109 - THERMOMETER	*On Off*	In ON you can insert the piston oil temperature probe combined with the LE card.	*Off*	
110 - LOWER TRESH. TEMPERATURE *	*-20° 50°*	Regulates the activation threshold of the motor oil heater.	*-10°*	
111 - UPPER TRESH. TEMPERATURE *	*-20° 50°*	Regulates the deactivation threshold of the motor oil heater.	*0°*	
112 - PASSWORD	*- - - -*	Allows the entering of a password blocking the control unit parameters modification.	*- - - -*	
119 - DISPLAY WRITING SPEED	*From 30% to 100%*	*See Note 3 below*		*80%*
120 - BASIC MENU	Press OK to exit the special menu. The special menu switches off automatically after 20 minutes.			

Note 1: The * indicates that the default value or the menu may change depending on the selected motor type.
Note 2: After initialization the parameters "motor type" and "limit switch type" remain son the value chosen in the setup program.
Note 3: Display writing speed set on 30% keeps writing slow; Display writing speed set on 100% keeps writing fast.
Please note that speed does not change on JOLLY 3 display.

PASSWORD MANAGEMENT

With a new control unit all menus can be displayed and set and the password will be disabled.
Selecting one of the Menus and keeping UP and DOWN pressed at the same time for 5 seconds, you will access the SP Menu containing the 112-PASSWORD Submenu.
Pressing OK in the 112-PASSWORD Menu, you will proceed with the entering of the numeric code of the 4-digit password.
Use UP and DOWN to increase or decrease the number, press OK to confirm it and you will pass automatically to the entering of the next number. Pressing OK after the last entered number the word *"Sure?"* appears, confirm the activation of the password and the message OK appears, pressing UP or DOWN instead you can cancel the operation and *"No operation"* will appear on the display.

Once entered the password, it will be definitively activated, once the display switch off timeout has expired, or by turning off and on again the control unit. Once the password has been activated, the menus of the display can be only displayed but not set. To unlock them you must enter the correct password in the112-PASSWORD menu, if the password is wrong the message *"Error"* will appear.
At this point, if the password has been entered correctly, the menus will be unlocked and it will be possible to change the parameters of the control unit again.
If the control unit has been unlocked through 112-PASSWORD Menu, it is possible to enter a new and different password, using the same entering process as for the first one; at this point, the old password will no longer be valid.

If the password has been forgotten, the only way to unlock the control unit is to contact the SEA technical assistance, which will assess whether to provide the procedure to unlock the control unit or not.
Note: The password cannot be set through the Jolly 3 terminal.

RADIO TRANSMITTER SELF LEARNING
WITH RECEIVER ON BOARD OF CONTROL UNIT

With RF UNI and RF UNI PG module it will be possible to use both Coccinella Roll Plus transmitters and radio transmitters with fixed code. The first memorized radio transmitter will determine the type of the remaining radio transmitters.

If the receiver is a **Rolling Code**, **press twice** the button of the radio transmitter that you want to program to memorize the first TX. In the case of **transmitters with fixed code** it is necessary **to press 1 time** the button of the transmitter you want to program to store the first remote control

Notes:
- Enter radio transmitters learning only when the working cycle stops and the gate is closed.
- You can store max. 2 of the available 4 functions. If the control unit receives a code which was already associated to another function it will be updated with the new function.

RF UNI	**16 USERS** Whitout memory **800 USERS** With additional memory MEM
RF UNI PG *Old Model*	**100 USERS** Fixed code **800 USERS** Roll Plus
RF UNI PG *New model*	**800 UTENTI** Fixed code **800 UTENTI** Roll Plus

TABLE EXAMPLE

Memory location / Transmitter button	1	2	3	4	Serial number	Customer
0						
1						
2						
3						
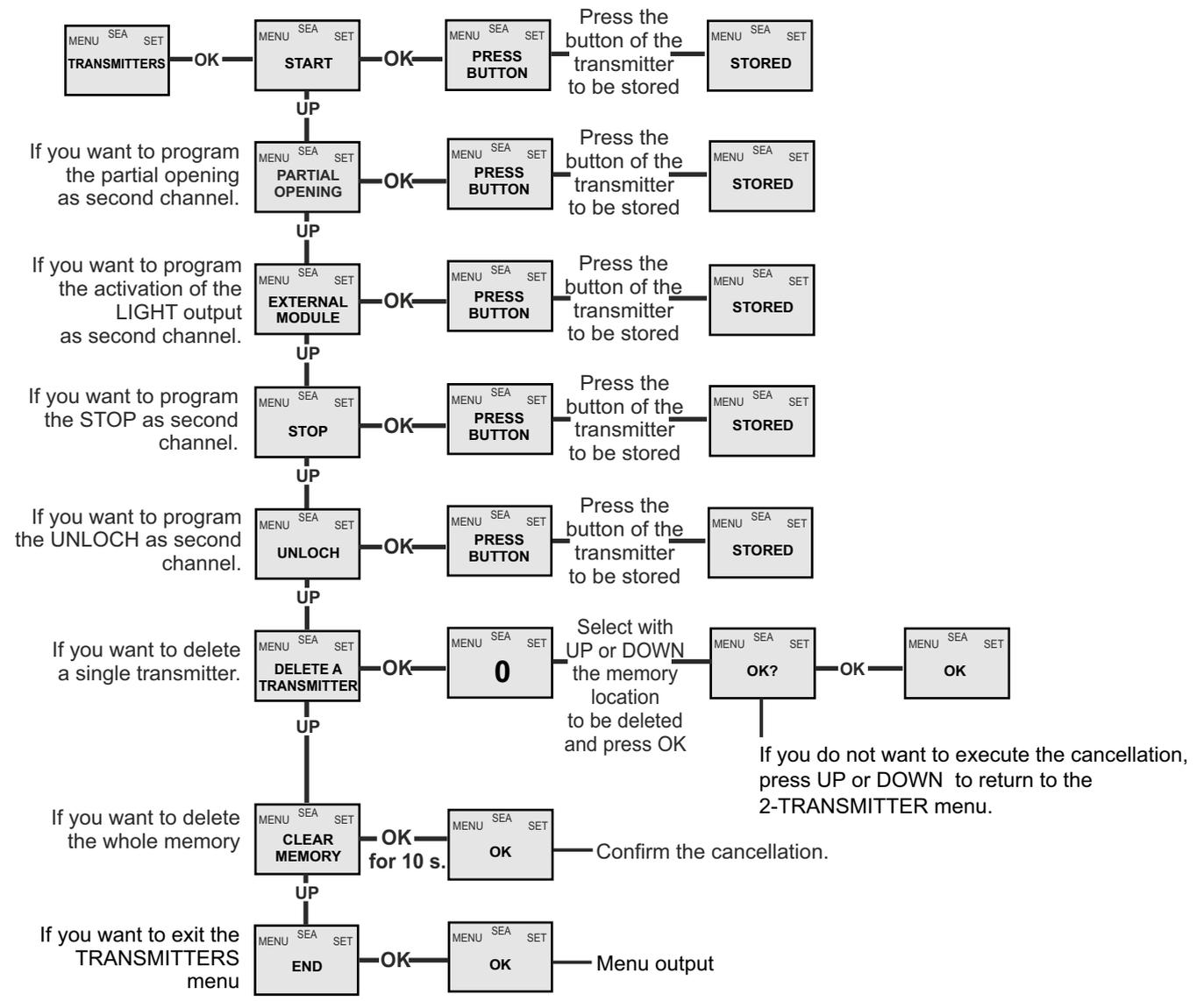
ALARM DESCRIPTION

Signals	Kind of alarm	Solutions
FAILURE MOTOR	Motor current failure	Make sure there are no short circuits on the motor or on the control unit
FAILURE24	AUX output voltage failure	Make sure there are no short circuits on the wiring or on the control unit and no overloads
FAILURE NET	Power supply failure	Check the network or the F2 fuse
FAILURE AUTO-TEST	Photocells auto-test failure	Check the photocells operation and / or connections on the control unit
FAILURE LIMIT-SWITCH	Limit-switch activation failure	Check the operation of both limit-switches and/or correspondence between movement direction of the motor and the engaged limit-switches
FAILURE FLASHING LIGHT	Flashing lamp failure	Check connections and/or conditions of the lamp
FAILURE POTENTIOMETER	Potentiometer failure	The message appears only if the potentiometer is ON and the potentiometer (LE) card is broken or not connected
FAILURE POT.1 DIRECTION	Potentiometer 1 direction failure	Invert potentiometer's cables (invert green with brown)
FAILURE POT.2 DIRECTION	Potentiometer 2 direction failure	Invert potentiometer's cables (invert green with brown)
FAILURE THERMOMETER	Failure thermometer	The message appears only if the thermometer is ON and the potentiometer card (LE) is broken, not connected or incorrectly set
FAILURE EDGE 1	Edge 1 failure	Check edge's metal thread and edge's connection cables; make sure the contact is closed by looking on display
FAILURE EDGE 2	Edge 2 failure	Check edge's metal thread and edge's connection cables; make sure the contact is closed by looking on display
FAILURE PHOTO1 10K	10K photocell1 failure	Check photocells 1 connections or possible short circuits; check if photocell is well powered. Make sure that a 10K protection photocell has been connected
FAILURE PHOTO2 10K	10K photocell2 failure	Check photocells 2 connections or possible short circuits; check if photocell is well powered. Make sure that a 10K protection photocell has been connected

Note 1: If in the diagnostics shows "Max. cycles reached", do the maintenance and / or reset the number of cycles performed.

Note2: To exit from the error messages, press OK. If the error persists, make all required checks for the specific error and / or disconnect the device that generates the error to see if the error disappears.

At each opening and closing of the automation the flashing light will blink. It blinks once per second during opening and twice per second during closing, while it remains lit during pause.

It is possible to view the alarms also on the flashing light or on the control lamp, simply by observing the number of flashes emitted and verifying the reference in the table below:

Blinks	Cause of alarm	Blinks	Cause of alarm
9	Motors failure	5	Stop
2	Photocell in closing	7	Max. Cycles reached
3	Photocell in opening	6	Collision in closing
6	Collision in opening	4 fast	Limit switch fault
4	Safety edge		

TROUBLE SHOOTING

Advices		
Make sure all Safeties are turned ON		
Problem Found	**Possible Cause**	**Solutions**
Operator doesn't respond to any START impulse	a) Check the connected N.C. contacts b) Burnt fuse	a) Check the connections or the jumpers on the connections of the safety edge or of the stop and of the photocell if connected b) Replace the burnt fuse on the control unit
Operator does not run and diagnostic display not on.	a) No power to control board b) Open fuse c) Defective control board	a) Check AC power b) Check fuses c) Replace defective control board
Operator does not respond to a wired control/command (example: Open, Close, etc.)	a) Check Open and Close command input b) Stop button is active c) Reset button is stuck d) Entrapment Protection Device active	a) Check all Open and Close inputs for a stuck on input b) Check Stop button is not stuck on c) Check Reset button d) Check all Entrapment Protection Device inputs for a stuck on sensor
Operator does not respond to a transmitter	a) Stop button is active b) Reset button is stuck c) Poor radio reception	a) Check Stop button is not stuck on b) Check Reset button c) Check if similar wired control operates correctly. Check antenna wire
Motor turn only one way	a) Check resistance between motor phase and neutral, if the resistance is MOhm b) Try to invert the motor phase and watch if the motor change or not the direction	a) Change cable b) If the motor is blocked change the cable if the motor go only in one direction the motor relay direction is damaged
Gate doesn't move while the motor is running	a) The motor is in the released position b) There is an obstacle	a) Re-lock the motor b) 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) Torque too low e) Gate is too heavy for automatic slow-down	a) Set limit switches b) Repeat programming c) Remove obstacle d) Increase torque parameter e) Set the slow-down on OFF
Gate opens but doesn't close	a) The contacts of the photocells are connected and open b) The stop contact is connected and open c) The edge contact is open d) Ammeter alarm	a) b) c) Check the jumpers or the connected devices and the signals indicated on the warning lamp d) Check if the ammeter alarm has intervened and eventually increase the torque parameter
Gate doesn't close automatically	a) Pause time set too high b) Control unit in semi-automatic logic	a) Adjust pause time b) Set the pause parameter on a different value from the OFF
Gate moves, but cannot set correct limits	a) Gate does not move to a limit position b) Gate is too difficult to move	a) Use manual disconnect, manually move gate, and ensure gate moves easily limit to limit. Repair gate as needed b) Gate must move easily and freely through its entire range, limit to limit. Repair gate as needed
Gate does not fully open or fully close when setting limits	a) Gate does not move to a limit position b) Gate is too difficult to move	a) Use manual disconnect, manually move gate, and ensure gate moves easily limit to limit. Repair gate as needed b) Gate must move easily and freely through its entire range, limit to limit Repair gate as needed
Gate stops during travel and reverses immediately	a) Control Open/Close becoming active b) The obstacle sensitivity is too low	a) Check all Open and Close inputs for an active input b) Check the obstacle sensitivity value and try to increase this parameter

Advices		
Make sure all Safeties are turned ON		
Problem Found	**Possible Cause**	**Solutions**
Gate doesn't respect slow down points	a) ENCODER is not working properly if It's activated b) Mechanical clutch loose c) Slow down space is too wide d) Potentiometer is not working properly if It's activated e) The recovery position parameters are too high or too low	a) Check menu for encoder parameters "Encoder Par" shall be from a low value +/- 10 (gate completely closed) to "Encoder tot" (gate completely opened). If the movement of Ipar is not linear in the range (+/-10 - Encoder tot) probably the Encoder is defective b) Tight mechanical clutch c) Reduce slow down space d) Check menu for potentiometer parameters "IPar" shall be from "I. CH."(gate completely closed) to "I.AP." (gate completely opened). If the movement of Ipar is not linear in the range (I.AP. - I.CH.) probably the potentiometer is defective e) Reduce or increase the recovery position parameters
Gate opens suddenly without start command	a) Frequency or other noise from main line b) Short circuit on the start contact	a) Wiring AC shall be separate from DC wire and pass through separate conduits. If there is a frequency noise it is possible to change frequency to another MHz like 868 for example or FM b) Check all start contacts
Gate doesn't close in automatic logic during pause even if a loop/photo is set as start	a) START IN PAUSE is not in ON b) The photo/loop input is not set as delay pause time	a) Put in ON the menu of START IN PAUSE b) Set in the photo/loop menu (delay pause time)
Gate doesn't have power to close or reach limit switch	a) Slow down not possible for that site due to heavy gate or inclination or not new installation	a) Put Slow Down in OFF
Obstruction in gates path does not cause gate to stop and reverse	a) Force adjustment needed	a) Refer to the Adjustment section to conduct the obstruction test and perform the proper force adjustment that is needed (sensitivity - torque)
Photoelectric sensor does not stop or reverse gate	a) Incorrect photoelectric sensor wiring b) Defective photoelectric sensor c) Photoelectric sensors installed too far apart	a) Check photoelectric sensor wiring. Retest that obstructing photoelectric sensor causes moving gate to stop, and may reverse direction b) Replace defective photoelectric sensor. Retest that obstructing photoelectric sensor causes moving gate to stop, and may reverse direction c) Move the photoelectric sensors closer together or use edge sensors instead
Edge Sensor does not stop or reverse gate	a) Incorrect edge sensor wiring b) Defective edge sensor	a) Check edge sensor wiring. Retest that activating edge sensor causes moving gate to stop and reverse direction b) Replace defective edge sensor. Retest that activating edge sensor causes moving gate to stop and reverse direction
Alarm sounds for 5 minutes or alarm sounds with a command	a) Double entrapment occurred (two obstructions within a single activation)	a) Check for cause of entrapment (obstruction) detection and correct. Press the reset button to shut off alarm and reset the operator.
Shadow loop does not keep gate at the open limit	a) Vehicle detector setup incorrectly b) Defective vehicle loop detector c) Wrong settings	a) Review Shadow loop detector settings. Adjust settings as needed b) Replace defective Shadow loop detector c) Check the photo2 menu is set on shadow loop
Accessories connected to the accessory power not working correctly, turning off or resetting	a) Accessory power protector active b) Defective control board	a) Disconnect all accessory powered devices and measure accessory power voltage (should be 23-30 Vdc). If voltage is correct, connect accessories one at a time, measuring accessory voltage after every new connection b) Replace defective control board
FAILURE 24VAUX	a) Overload or short-circuit on the output N°10 b) Burnt fuse	a) Check a short circuit on the cable b) Change fuse

Page for both instaler and user

MAINTENANCE
Considering the number of working cycles and the kind of gate, if the gate has changed the clutches and doesn't work it's necessary to periodically proceed, with **the learning times reprogramming on the electronic control unit.**
Periodically clean the optical systems of the photocells.

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

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 waste 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 waste at the end of life cycle. In order to avoid any possible environmental or health damage caused by irregular waste disposal, we recommand to separate this product from other forms of waste 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 watse collection and recycling of this kind of product.

STORING

WAREHOUSING TEMPERATURES			
T_{min}	T_{Max}	Dampness $_{min}$	Dampness$_{Max}$
- 20°C	+ 65°C	5% *Not condensing*	90% *Not condensing*

Materials handling must be made with appropriate vehicles..

WARRANTY LIMITS
For the guarantee see the sales conditions on the official SEA price list.

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

1. Read carefully these **Instructions** before beginning to install the product. Store these instructions for future reference
2. Don't waste product packaging materials and /or circuits.
3. This product was designed and built strictly for the use indicated in this documentation. Any other use, not expressly indicated here, could compromise the good condition/operation of the product and/or be a source of danger. SEA S.p.A. declines all liability caused by improper use or different use in respect to the intended one.
4. The mechanical parts must be comply with Directives: Machine Regulation 2006/42/CE and following adjustments), Low Tension (2006/95/CE), electromgnetic Consistency (2004/108/CE) Installation must be done respecting Directives: EN12453 and En12445.
5. Do not install the equipment in an explosive atmosphere.
6. SEA S.p.A. is not responsible for failure to observe Good Techniques in the construction of the locking elements to motorize, or for any deformation that may occur during use.
7. Before attempting any job on the system, cut out electrical power and disconnect the batteries. Be sure that the earthing system is perfectly constructed, and connect it metal parts of the lock.
8. Use of the indicator-light is recommended for every system, as well as a warning sign well-fixed to the frame structure.
9. SEA S.p.A. declines all liability as concerns the automated system's security and efficiency, if components used, are not produced by SEA S.p.A..
10. For maintenance, strictly use original parts by SEA.
11. Do not modify in any way the components of the automated system.
12. The installer shall supply all information concerning system's manual functioning in case of emergency, and shall hand over to the user the warnings handbook supplied with the product.
13. Do not allow children or adults to stay near the product while it is operating. The application cannot be used by children, by people with reduced physical, mental or sensorial capacity, or by people without experience or necessary training. Keep remote controls or other pulse generators away from children, to prevent involuntary activation of the system.
14. Transit through the leaves is allowed only when the gate is fully open.
15. The User must not attempt to repair or to take direct action on the system and must solely contact qualified SEA personnel or SEA service centers. User can apply only the manual function of emergency.
16. The power cables maximum length between the central engine and motors should not be greater than 10 m. Use cables with 2,5 mm^2 section. Use double insulation cable (cable sheath) to the immediate vicinity of the terminals, in particular for the 230V cable. Keep an adequate distance (at least 2.5 mm in air), between the conductors in low voltage (230V) and the conductors in low voltage safety (SELV) or use an appropriate sheath that provides extra insulation having a thickness of 1 mm.

TERMS OF SALES

EFFICACY OF THE FOLLOWING TERMS OF SALE: the following general terms of sale shall be applied to all orders sent to SEA S.p.A. All sales made by SEA to all costumers are made under the prescription of this terms of sales which are integral part of sale contract and cancel and substitute all apposed clauses or specific negotiations present in order document received from the buyer.

GENERAL NOTICE The systems must be assembled exclusively with SEA components, unless specific agreements apply. Non-compliance with the applicable safety standards (European Standards EM12453 – EM 12445) 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.
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. The special sales conditions with extra discount on quantity basis (Qx, Qx1, Qx2, Qx3 formula) is reserved to official distributors under SEA management written agreement.

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 non-compliance of safety standards and good practice during installation and use of the purchased products.

8) WARRANTY The standard warranty period is 12 months. This warranty time can be extended by means of expedition of the warranty coupon as follows:

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.p.A. 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 assembly, or if the label affixed by the manufacturer has been removed including the SEA registered trademark No. 804888. 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 repair of products under warranty and out of warranty is subject to compliance with the procedures notified by SEA.

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 purchases propriety of the goods only after full payment of the latter.

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. SEA reserves the faculty to make technical changes to improve its own products, which are not 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: once the Buyer has recognized that SEA has the exclusive legal ownership of the registered SEA brand num.804888 affixed on product labels and / or on manuals and / or on any other documentation, he will commit himself to use it in a way which does not reduce the value of these rights, he won't also remove, replace or modify brands or any other particularity from the products. Any kind of replication or use of SEA brand is forbidden as well as of any particularity on the products, unless preventive and expressed authorization by SEA.

In accomplishment with art. 1341 of the Italian Civil Law it will be approved expressively clauses under numbers:
4) PAYMENTS - 8) GUARANTEE - 10) COMPETENT COURT OF LOW

electronic opening system

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è costruito per essere incorporato in una macchina o per essere assemblato con altri macchinari per costruire una macchina ai sensi della Direttiva 2006/42/CE:
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è conforme ai requisiti essenziali di sicurezza relativi al prodotto entro il campo di applicabilità delle Direttive Comunitarie 2006/95/CE e 2004/108/CE.
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COSTRUTTORE o RAPPRESENTANTE AUTORIZZATO:
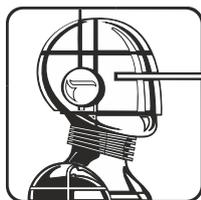*MANUFACTURER or AUTHORISED REPRESENTATIVE:*

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I test sul prodotto sono stati effettuati in configurazione standard e in riferimento alle norme specifiche per la sua classe d'utilizzo.
The products have been tested in standard configuration and with reference to the special norms concerning the classe of use.

(Luogo, data di emissione)
(Place, date of issue)
Teramo, 10/06/2015

L'Amministratore
The Administrator
Ennio Di Saverio

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