SEA®

Automatic Gate Openers

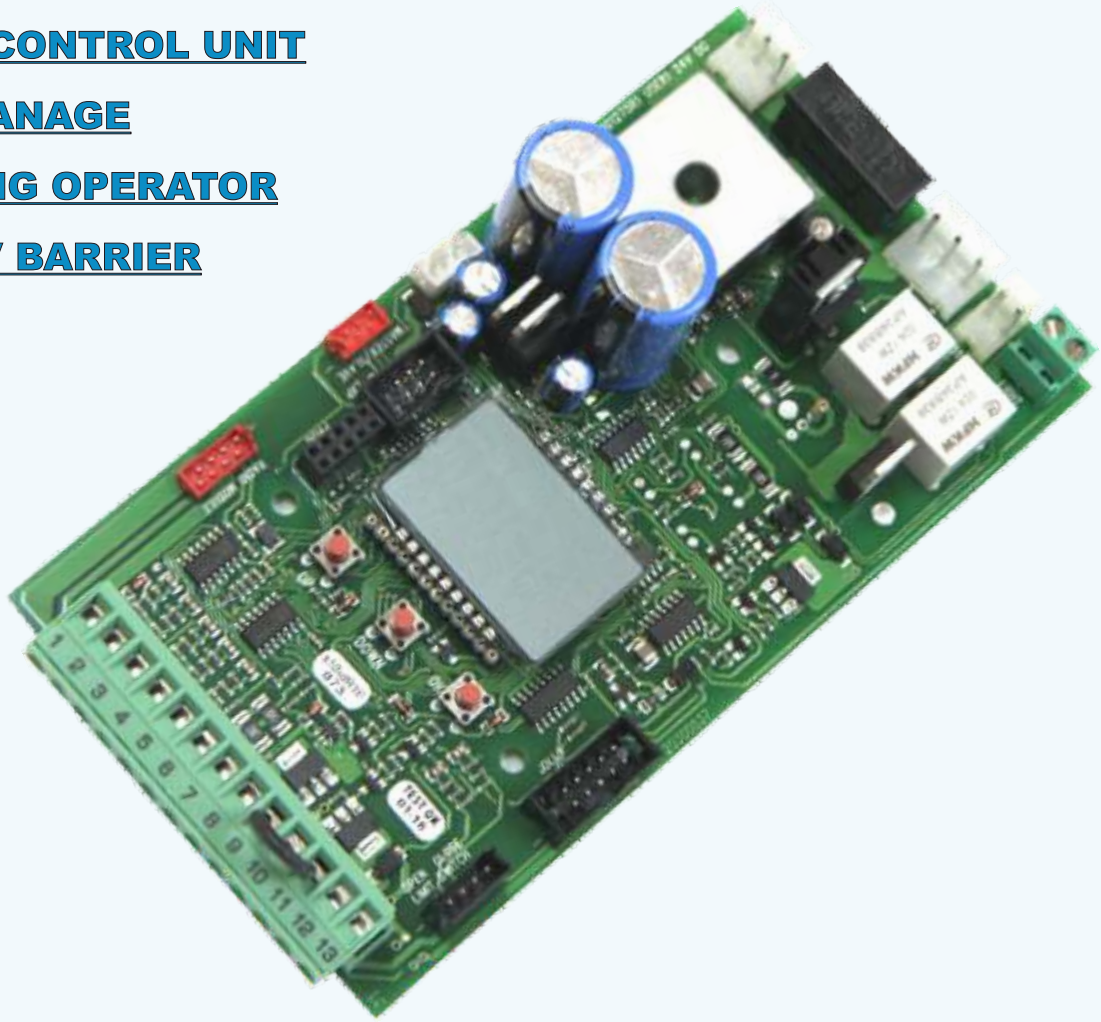
International registered trademark n. 804888

CE UKCA

ENGLISH

USER 1 DG R1B

ELECTRONIC CONTROL UNIT TO MANAGE A 24V SLIDING OPERATOR OR A 24V BARRIER



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PRELIMINARY

- **The USER 1 24V DG requires the programming of the working times** ***(chapter 16)***; it is not possible to start the operator correctly without first programming the control unit!

- The unit and the accessories programming and settings can be carried out by the display on board or by the **JOLLY 3** programmer or **SEACLOUD**


JOLLY 3


SEACLOUD

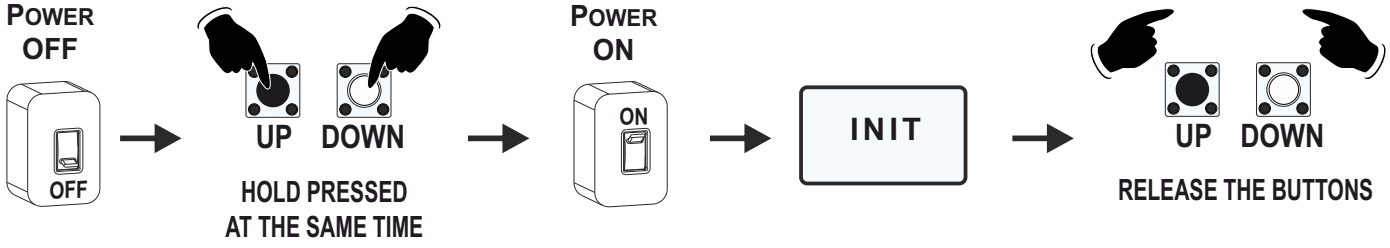
- Functions and menus here described are valid only for the software revision **03.04**; if some functions or menus do not correspond to your control unit, consult the previous manuals

All the wirings *(circuits and accessories) must be made when the* ***control unit is OFF and not powered****; only after completing all wirings the control unit can be switched on and programmed*

TECHNICAL INFORMATION

POWER SUPPLY	MAX. MOTOR CURRENT	ABSORPTION IN STAND-BY	OPERATING TEMPERATURE	PROTECTION CLASS OF THE PLASTIC BOX (IF INCLUDED)
24V~	20 A	30 mA	-20° C +50°C	IP 55

RESET PROCEDURE



QUICK START

- Make all connections ***(control unit OFF!)***: motors, accessories and power cables
- **DO NOT jumper the N.C. contacts! -** ***automatic detection of the*** **N.C.** ***contacts not in use!***
- Power on the control unit and check the correct status of the inputs ***(chapter 15)***
- Enter the basic menu and set the following menus:
  (if you do not set a time on menu 7, the logic will be ***«semi-automatic»*** *- automatic reclosing disabled)*

1 LANGUAGE	3 MOTOR	6 LOGIC	7 TIMER TO CLOSE

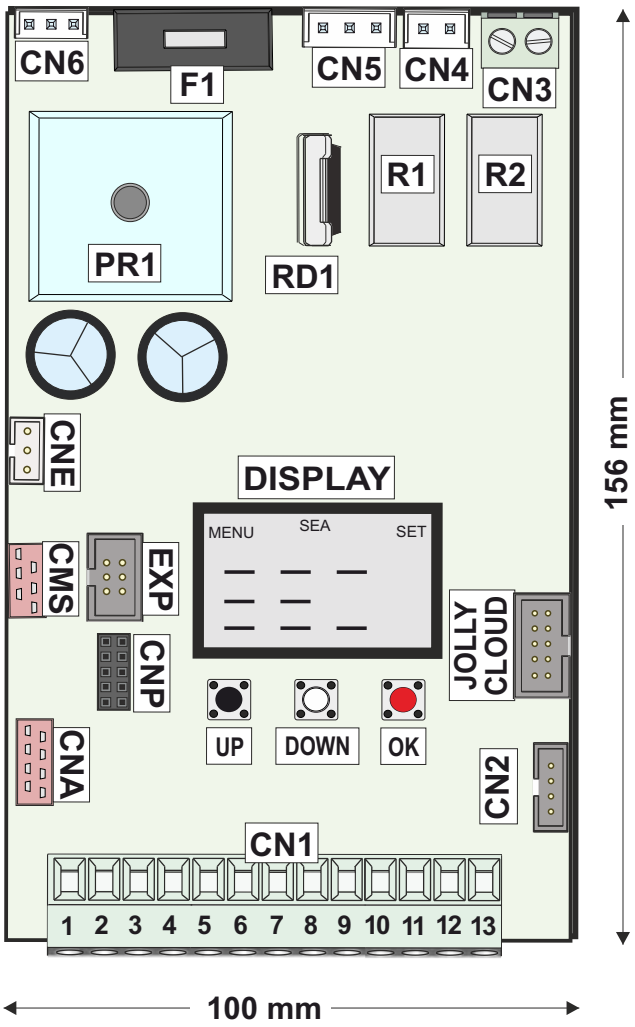
- If installed, enable the encoder on the special menu 32 - ***see paragraph 16.2***

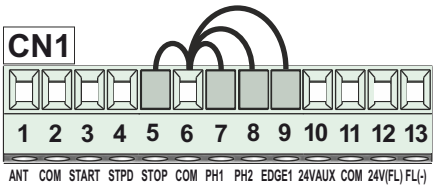
32 ENCODER

- Start the working times learning by following the procedure in ***chapter 16***

1 - CONNECTIONS

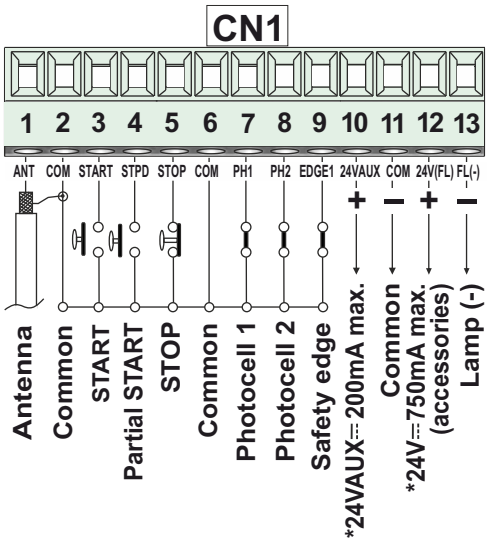
Make all the wirings when the control unit is not powered!
Keep the power cables separate from the command cables - always run cables in separate sheaths to prevent interferences!

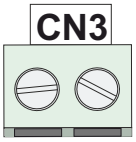




OPTIONAL JUMPERS

- AUTOMATIC RECOGNITION OF THE N.C. INPUTS NOT IN USE
  NO JUMPERS ARE REQUIRED ON THE N.C. CONTACTS!
- TO RESTORE THE EXCLUDED INPUTS, ENTER THE *«INPUTS MANAGEMENT»* MENU *(SEE CHAPTER 15)*
  NO NEED TO SET UP THE UNIT AGAIN!



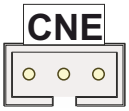


COURTESY LIGHT

MOTOR

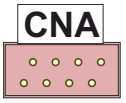
BATTERY

POWER SUPPLY



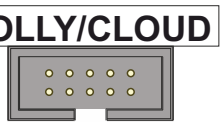
ENCODER

EXTERNAL MODULE

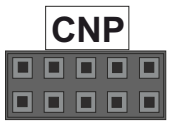


RECEIVER

PRIMARY SECONDARY *(MASTER/SLAVE)*



JOLLY/SEACLOUD PROGRAMMER



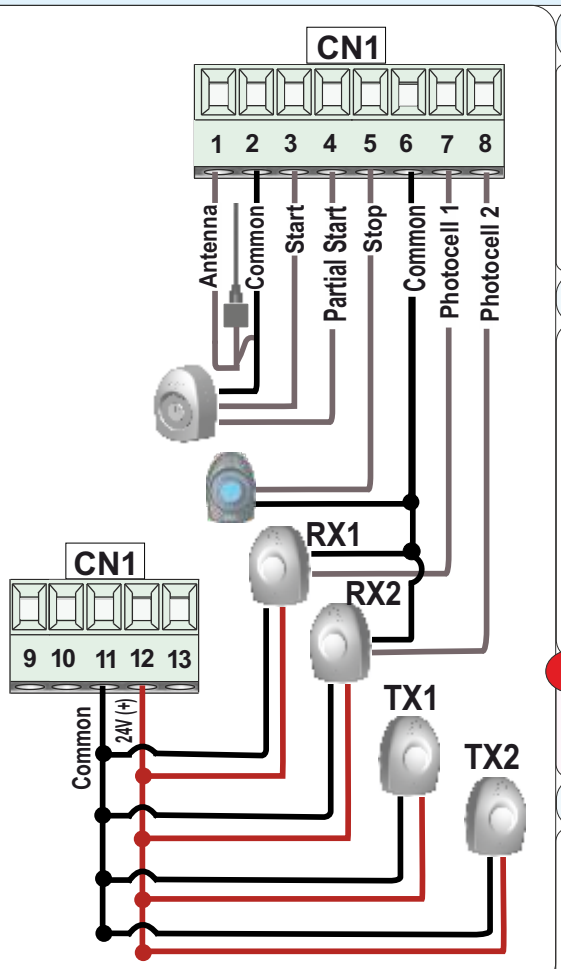
OPEN *(Firmware update)*

PROGRAMMING BUTTONS

RD1 = MOTOR CONTROL MOSFET
RD2 = MOTOR CONTROL MOSFET
R1 = MOTOR RELAY
R2 = MOTOR RELAY
F1 = FUSE 10 AT
PR1 = RECTIFIER BRIDGE

* *All the 24V outputs support a maximum load of 750mA, referred to the sum of the loads of all 24V accessories connected, including the absorption of the receiver on board (30 mA)*

2 - CONNECTIONS ON CN1



2.1 - START (N.O.)

- Connect the **«START»** command on clamps 2 *(or 6)* and 3
- Logics to be linked to the **«START»** command in ***chapter 17***

⇨ *If the input is engaged during the pause time, the gate does not close until the input is released*

2.2 - PARTIAL START (N.O.)

- Connect the **«PARTIAL START»** command on clamps 2 and 4
- Logics to be linked to the **«PARTIAL START»** in ***chapter 17***
- Partial opening space management: **90 PARTIAL OPENING**
- Partial opening pause time management: **91 PARTIAL PAUSE**

⇨ *If the input is engaged during the pause time, the gate does not close until the input is released*

*If a **traffic light** is wired via SEM unit, it is possible to enable the opening or closing priority linked to the **«START»** or **«PARTIAL START»** commands, via menu 89*

89 TRAFFIC LIGHT RESERVATION

2.3 - STOP (N.C.)

- Connect the **«STOP»** command on the clamps 5 and 6
- After stopping, press **«START»** to restore the movement

⇨ *The operator starts-up in closing after a **«STOP»** command!*

2.4 - PHOTOCELL 1 AND PHOTOCELL 2 (N.C.)

- Connections: **+ = 24V⎓ MAX 750mA (CLAMP 12)** **COM = 0V (CLAMPS 2 - 6 - 11)** **PH1 = PHOTOCELL 1 (CLAMP 7)** **PH2 = PHOTOCELL 2 (CLAMP 8)**
- Management **97 PHOTOCELL 1** **98 PHOTOCELL 2**
- **«PHOTOTEST» function**: connect the Tx-photocell positive cable on the clamp 10 and enable the **«PHOTOTEST»** function on menu 94; It is also possible to choose which photocell to test among the options of the menu 95

94 24V AUX **95 PHOTOTEST**

⇨ *Default settings: **menu 97** = «closing»; **menu 98** = «opening and closing»*

⇨ *THE USE OF **SHIELDED PHOTOCELLS IS MANDATORY !***

By wiring the photocells power cable to the clamp 10 (AUX) and by setting the menu 94 to «IN CYCLE AND PHOTOTEST», the photocells are tested at every start-up and the energy is saved in stand-by!

2.5 - TIMER (N.O.) - EXTERNAL CLOCK

92 TIMER

- Connect the timer to the clamp 4 **«PARTIAL START»** or to the clamp 8 **«PHOTOCELL 2»**
- If wired to the **«PARTIAL START»**, this command will be disabled *(on transmitters too)*
- The timer opens and keeps the gate open until engaged; when released, the gate closes only after the pre-set pause time has elapsed
- In the event of a safety accessory intervention, the timer automatically resets after 6 sec.

⇨ *In the event of a power failure when the gate is open:*
if the TIMER is still active when the power is restored, the gate remains open;
*if the TIMER is no longer active, a **«START»** input will be required to close the gate*

2.6 - 24V ⎓ FLASHING LIGHT - MAX 3W

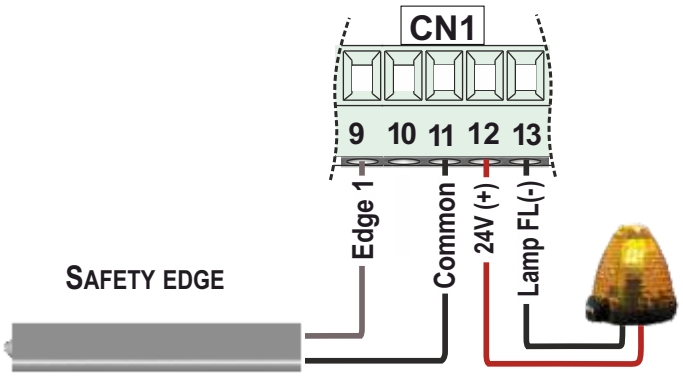
- Connect the flashing lamp on clamps 12 and 13
- Gate movement signals:
  1 BLINK/SECOND IN OPENING
  2 BLINKS/SECOND IN CLOSING
  STEADY LIT DURING PAUSE
- Management: menu 86
- Pre-flashing: menu 85

86 FLASHING LIGHT

85 PRE-FLASHING

⇨ *The control unit sends the warning signals also through the flashing lamp; see* ***chapter 20***

EXAMPLE OF FLASHING LAMP AND SAFETY EDGE CONNECTION



2.7 - SAFETY EDGE (N.C.)

- Connect the safety edge 1 on clamps 9 and 11
- Choice of the safety edges type - MENU 100
- Choice of the desired direction - MENU 102 *(MENU 103*)*

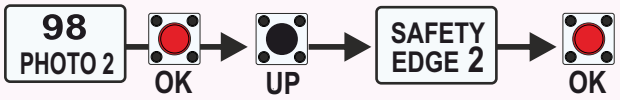
100 SAFETY EDGE 1

102 EDGE 1 DIRECTION

103* EDGE 2 DIRECTION

⇨ **8K2 BALANCED SAFETY EDGE** ***(SINGLE OR DOUBLE)***: the edge contact is checked through a resistance value to detect short-circuits *(an alarm will be displayed!)*

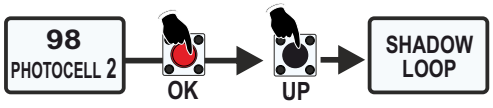
A second safety edge *(N.C. type only)* can be wired to the **«PHOTOCELL 2»** input and can be enabled by setting the menu 98 to **«SAFETY EDGE 2»**



* ***The direction of this second safety edge can be managed from menu 103***

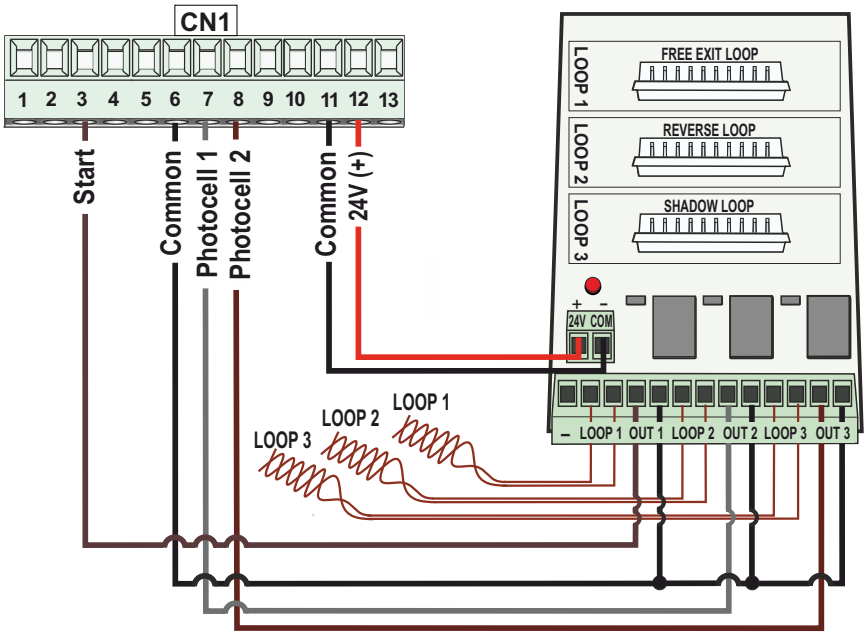
2.8 - SAFETY LOOP

- **FREE EXIT LOOP (LOOP 1)**
  3 = START **(N.O.)**
  6 = COMMON
- **REVERSE LOOP (LOOP 2)**
  7 = PHOTOCELL 1 **(N.C.)**
  6 = COMMON
- **SHADOW LOOP (LOOP 3)**
  8 = PHOTOCELL 2 **(N.C.)**
  6 = COMMON



⇨ ***USE THE SAFETY LOOP COMBINED WITH THE «ULTRA LOOP PLUG» (23105142)***

EXAMPLE OF SAFETY LOOP CONNECTION



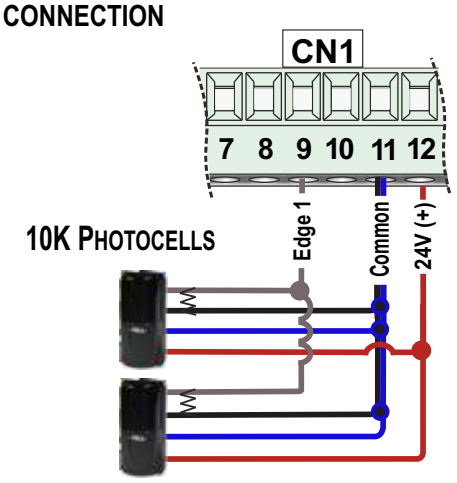
2.9 - 10K PHOTOCELL SINGLE OR DOUBLE

- Connect up to two 10K photocells on clamps 9 - 11 - 12
- Set the menu 100 on «SINGLE» or «DOUBLE» to enable the 10K photocells reading

- It is possible to set the desired operation mode via the **«PHOTOCELL»** menus 97 and 98

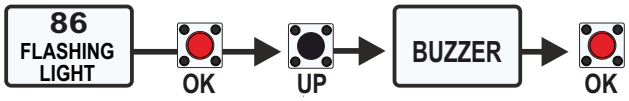
⇨ *BY THE USE OF THE 10K PHOTOCELLS, A FURTHER PROTECTION IS GIVEN, EVEN IN THE EVENT OF A SHORT-CIRCUIT ON THE CABLES*

EXAMPLES OF 10K PHOTOCELLS CONNECTION



2.10 - BUZZER 24V ⎓

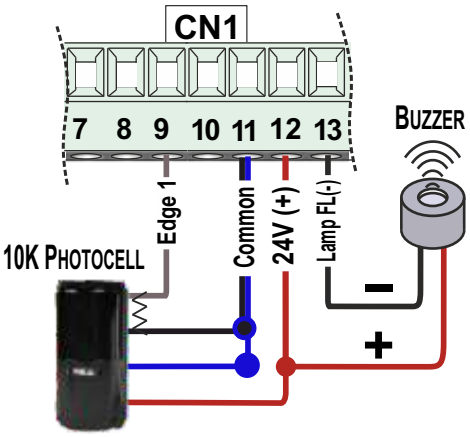
- Connect the buzzer on clamps 12 and 13
- Use a 24V ⎓ and 100 dB oscillating Buzzer
- The Buzzer can be connected instead of the flashing light; ***however, it is necessary to set the menu as «BUZZER»***



- The Buzzer activates after 2 consecutive interventions of the anti-crushing protection

⇨ Press the STOP button to turn off the buzzer; anyway, the sound switches off automatically after 5 minutes and the operator remains stopped waiting for a new command

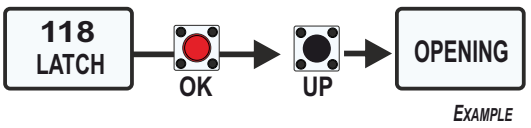
EXAMPLE OF 10K PHOTOCELL AND BUZZER CONNECTION



2.11 - LATCH OPENING OR LATCH CLOSING BUTTON

- Connect the button to be used as LATCH on clamps 4 and 6

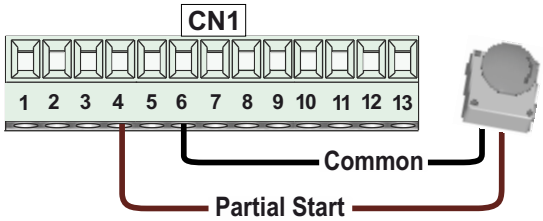
⚠ ***THE «PARTIAL START» FUNCTION WILL BE DISABLED***

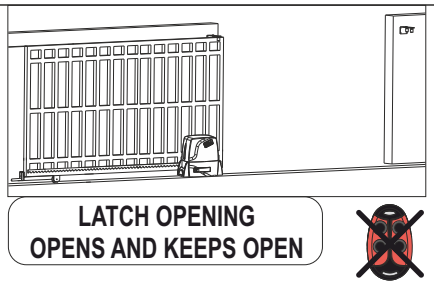


EXAMPLE

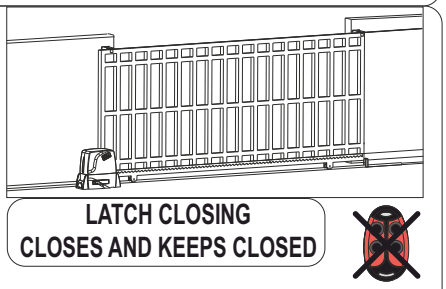
- Management: set the desired operation mode on menu 118
- To enable the LATCH, press the LATCH BUTTON; to disable the LATCH, press again the LATCH BUTTON

⇨ *The LATCH command can also be sent from SEACLOUD or enabled on the second channel of the transmitter **(paragraph 19.4)**, thus keeping the PARTIAL START input free;*





NO COMMAND ACCEPTED



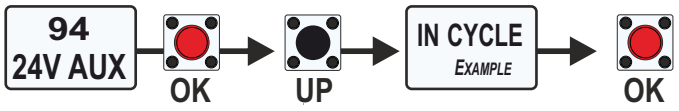
NO COMMAND ACCEPTED

2.12 - 24V⎓ DC AUX OUTPUT OPTIONS - *CLAMP 10 - MAX 200mA*

- A relay can be connected to the 24VAUX output; the relay allows the connection and the management of additional accessories *(courtesy light, locks etc.)*; some examples below, including the menu 94 settings

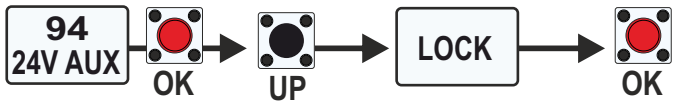
⚠ ***CONNECT THE ACCESSORY ONLY AFTER SETTING THE MENU 94 ON THE DESIRED OPTION!***

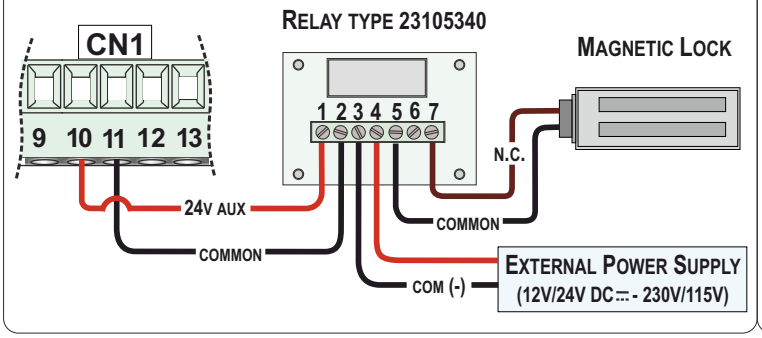
- Management: on menu 94 choose how to have voltage on the AUX output, according to the type of accessory you have wired

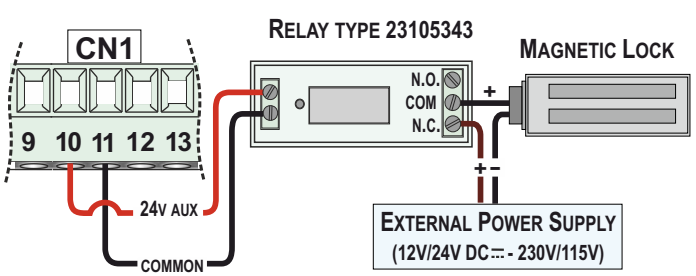


MAGNETIC LOCK CONNECTION - *BY THE USE OF TWO DIFFERENT RELAY MODELS*

- To use the magnetic lock set the menu 94 on **«LOCK»**

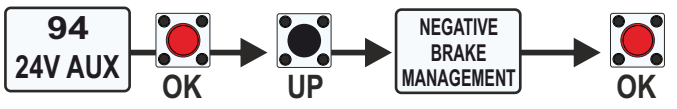


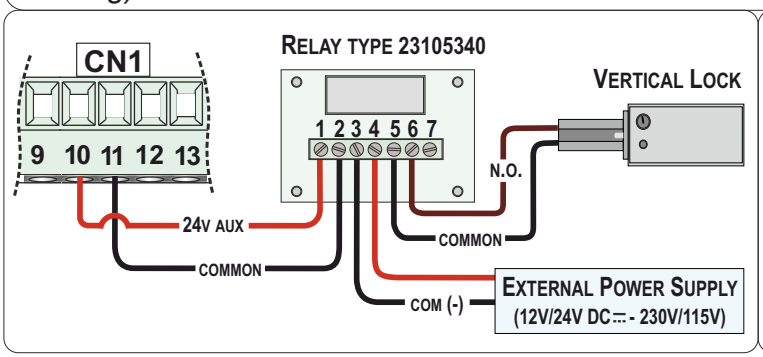


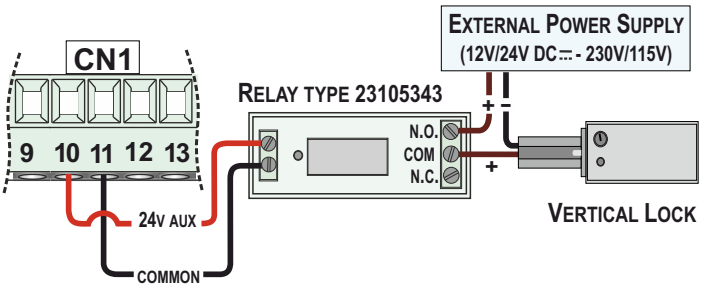


VERTICAL LOCK CONNECTION - *BY THE USE OF TWO DIFFERENT RELAY MODELS*

- To use the vertical lock set the menu 94 on «NEGATIVE BRAKE MANAGEMENT» *(24Vaux output powered during the cycle and 1 second before starting)*



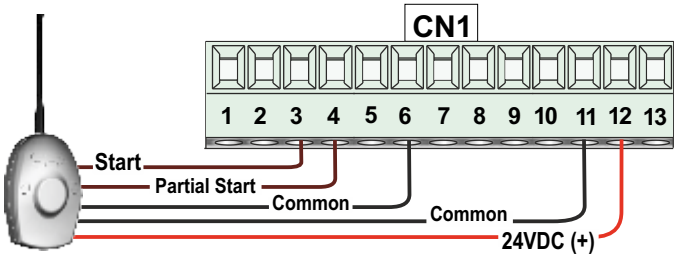




2.13 - EXTERNAL RECEIVER

- An external receiver can be connected according to the connection diagram on the side.

- For the operation of the receiver and for the transmitters programming, refer to its instruction manual



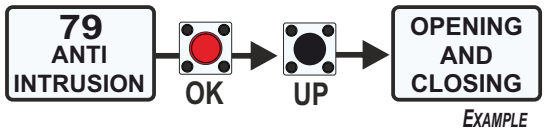
3 - CONNECTION ON CN2

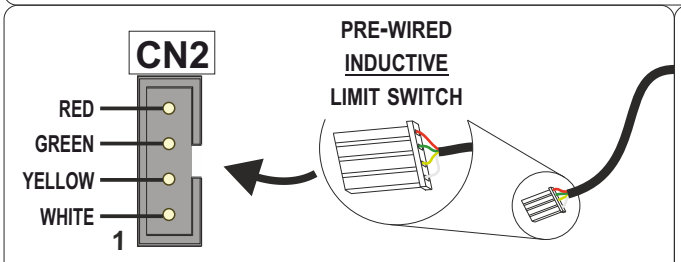
3.1 - LIMIT SWITCH

- It is possible to connect the pre-wired limit switch to the CN2 connector; Respect the cable colors

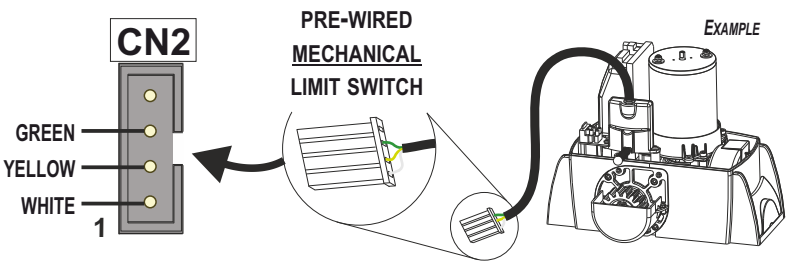
⇨ The type of limit switch is automatically detected during the working times learning

The ANTI-INTRUSION FUNCTION is also available; It is linked to the limit switch activation; If enabled through the menu 79, this function restores the original position of the gate after a manual forcing or a blast of wind





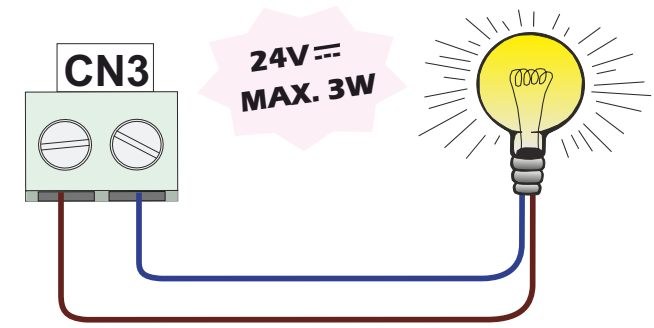
GREEN = OPENING LIMIT SWITCH *RED = 24V*
YELLOW = CLOSING LIMIT SWITCH *WHITE = COMMON*



GREEN = OPENING LIMIT SWITCH
YELLOW = CLOSING LIMIT SWITCH *WHITE = COMMON*

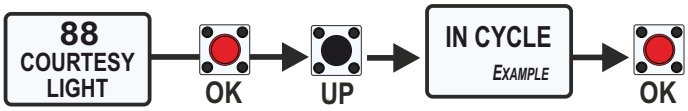
4 - CONNECTION ON CN3

4.1 - COURTESY LIGHT

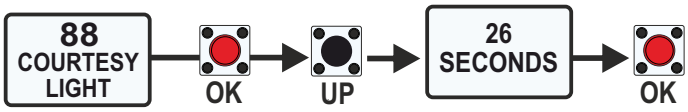


Max. 50W ⟶ 230V **Max. 100W ⟶ 115V**

- Wire the courtesy light as shown in the diagram
- Courtesy light operation can be managed by menu 88

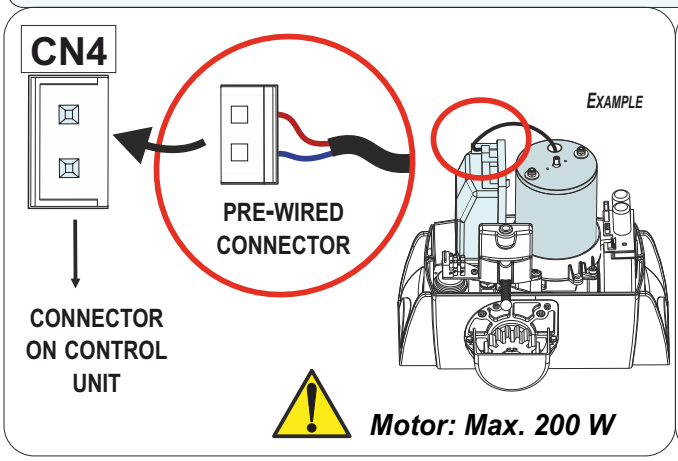


- The timing can be set from 0 to 240 seconds

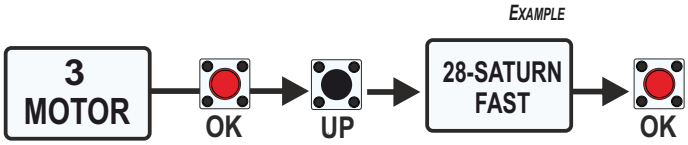


5 - CONNECTION ON CN4

5.1 - MOTOR CONNECTION ON THE CONTROL UNIT



- According to the type of operator in use, when configuring the menus, be careful to set the correct type of operator in menu 3

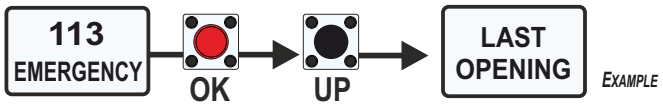


⇨ *All the parameters of the special menu are automatically set to the value/setting useful for the type of operator you chose!*

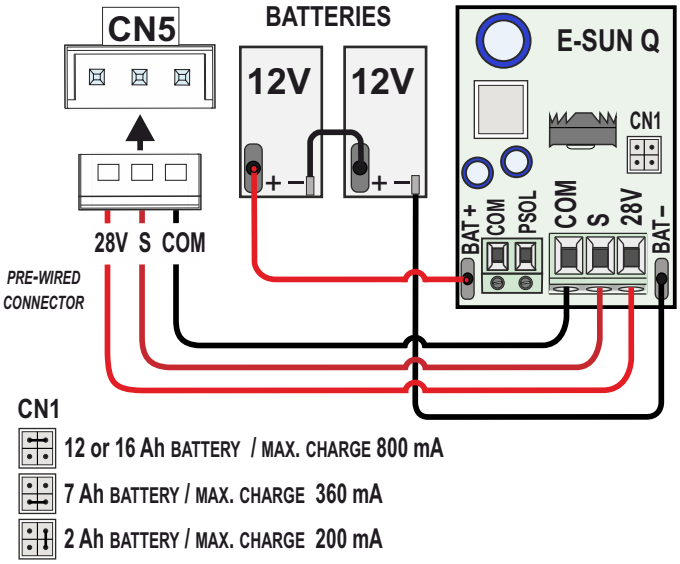
6 - CONNECTIONS ON CN5

6.1 - EMERGENCY BATTERIES

- It is possible to connect a group of two 12V batteries in series ***(24V Pb 1.2Ah min.)*** to the operator, via the **«E-SUN Q»** battery charger unit
- The **«E-SUN Q»** battery charger unit keeps a constant charge of the batteries and, in the event of a power failure, allows the operator to work until they run out.
- Furthermore, it is possible to enable one of the **«EMERGENCY»** functions from menu 113; the unit controls the charge of the batteries and allows one last operation before the batteries are completely discharged



EXAMPLE



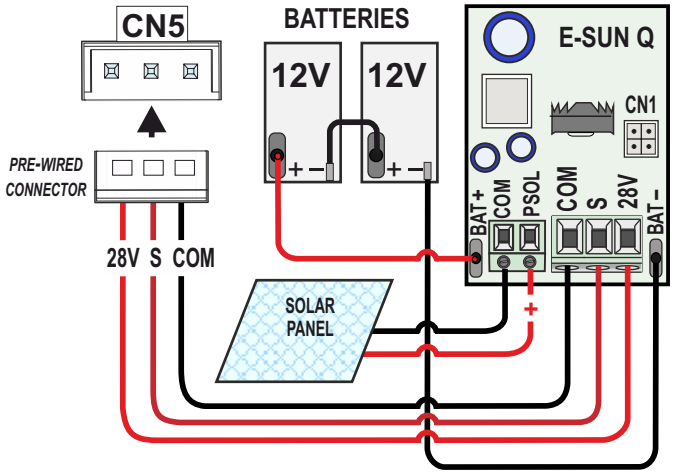
CN1

- 12 or 16 Ah BATTERY / MAX. CHARGE 800 mA
- 7 Ah BATTERY / MAX. CHARGE 360 mA
- 2 Ah BATTERY / MAX. CHARGE 200 mA

6.2 - POWER SUPPLY VIA SOLAR PANEL/BATTERIES

- It is possible to power the operator with a solar panel and the group of two 12V batteries in series ***(24V Pb 1.2Ah min.)***, all wired via the **«E-SUN Q»** battery charger unit

For further details on the use of the solar panel, please refer to its technical manual



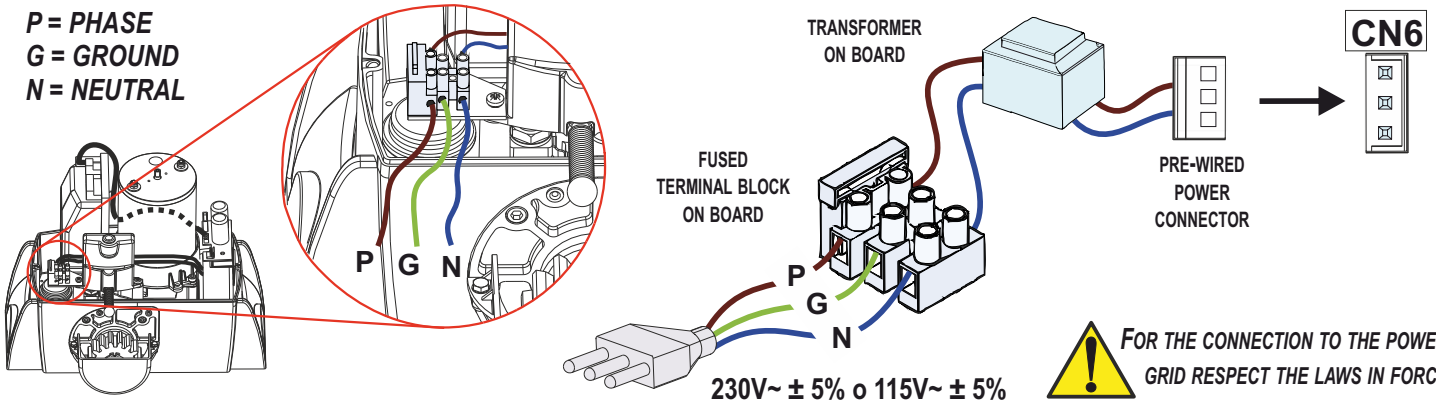
CN1

- 12 or 16 Ah BATTERY / MAX. CHARGE 800 mA
- 7 Ah BATTERY / MAX. CHARGE 360 mA
- 2 Ah BATTERY / MAX. CHARGE 200 mA

7 - POWER SUPPLY CONNECTION ON CN6

7.1 - CONTROL UNIT POWER SUPPLY

P = PHASE
G = GROUND
N = NEUTRAL



FOR THE CONNECTION TO THE POWER GRID RESPECT THE LAWS IN FORCE

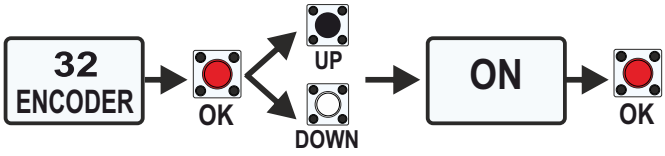
- Fuse 3,15AT delayed on 230V~ power supply and Fuse 6,3AT delayed on 115V~ power supply
- Use a 10A differential switch to protect the power supply system
- In case of unstable power supply, the use of an external UPS of min. 250VA - 24Vdc is recommended

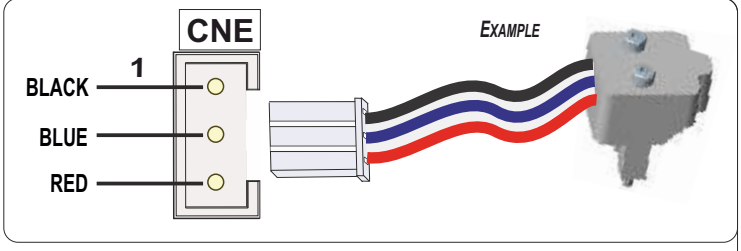
THE CONTROL UNIT MUST BE POWERED ONLY AFTER ALL THE WIRINGS HAVE BEEN COMPLETED!

8 - CONNECTIONS ON CNE

8.1 - STANDARD ENCODER CONNECTION

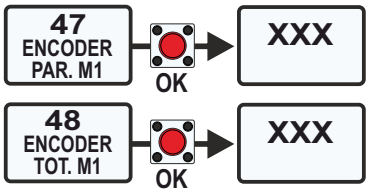
- Connect the **ENCODER** on CNE; respect the cable color
- Encoder can be enabled on menu 32





- The menu 47 shows the impulses read during the operation
- The menu 48 shows the total pulses stored during the learning

⇨ ***The menus 47 - 48 are visible only when the menu 32 is «ON»***

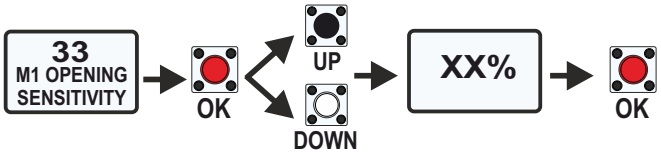


8.2 - ENCODER PARAMETERS ADJUSTMENT

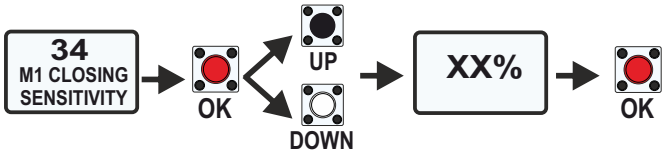
- Settable values: minimum 10% (rapid intervention) - maximum 99% (slow intervention)

⇨ ***If set to OFF (intervention excluded), the encoder only detects position***

- Opening intervention time adjustment

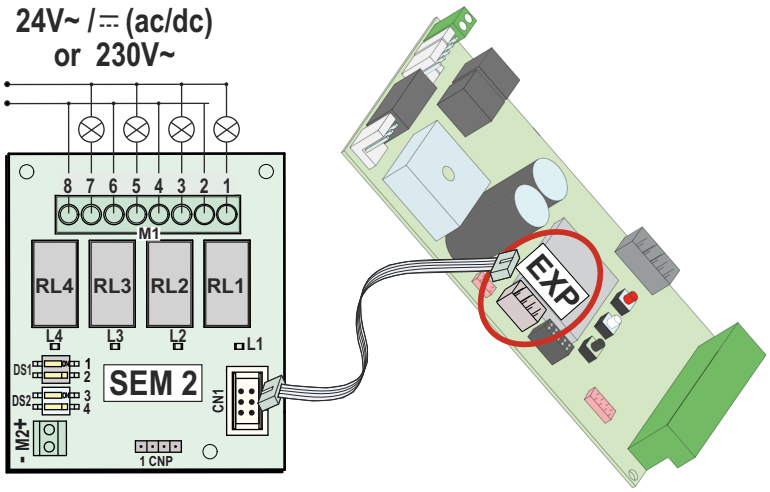


- Closing intervention time adjustment



9 - CONNECTION ON EXP

9.1 - «SEM 2» MANAGEMENT UNIT



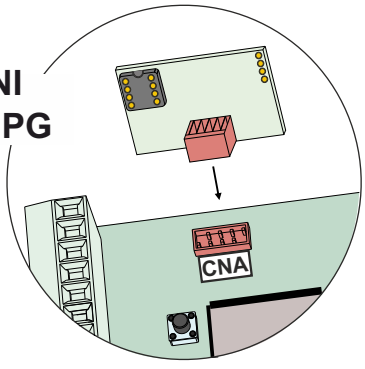
- The SEM 2 accessories management unit allows you to connect and manage the following additional accessories:
  - TRAFFIC LIGHT
  - COURTESY LIGHT
  - VERTICAL ELECTRIC LOCK
  - POSITIVE OR NEGATIVE ELECTRIC BRAKE

⇨ **SEM2 READS THE LIMIT SWITCHES STATUS**
(to connect those accessories whose activation depends on the limit switches status)

MORE DETAILS ON SEM 2 INSTRUCTIONS

10 - RECEIVER CONNECTION ON CNA

RF UNI
RF UNI PG

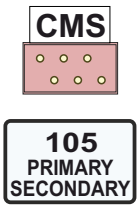


RECEIVER MODEL	MAX USERS NUMBER
RF UNI	**16 USERS** - Without additional memory **800 USERS** - With **MEMO** addistional memory
RF UNI PG *old model* *non-extractable memory*	**100 USERS** - If programmed in FIX CODE **800 USERS** - If programmed in ROLLING CODE PLUS
RF UNI PG *new model* *extractable memory*	**496 USERS** - If programmed in FIX CODE **800 USERS** - If programmed in ROLLING CODE PLUS

11 - CONNECTION ON CMS

11.1 - «PRIMARY/SECONDARY» (MASTER/SLAVE) CIRCUITS

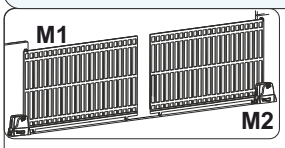
- PRIMARY/SECONDARY mode: to manage 2 operators (ex. opposite barriers or bollards) having each one its control unit
- Wire each **«PRIMARY/SECONDARY»** circuit to the **CMS** connector of each control unit
- Management via menu 105; set a unit as **«PRIMARY»** and the other as **«SECONDARY»**



⇨ Connect all accessories on the **«PRIMARY»** control unit. The **«SECONDARY»** control unit only allows the management of the following menus:

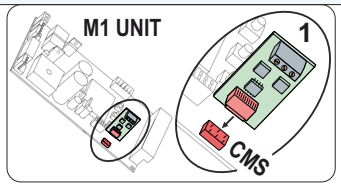
1-LANGUAGE	32-ENCODER	70-POSITION RECOVERY IN OPENING
3-MOTOR	33-MOTOR 1 OPENING SENSITIVITY	71-POSITION RECOVERY IN CLOSING
5-REVERSE MOTOR	34-MOTOR 1 CLOSING SENSITIVITY	72-MOTOR 1 TOLERANCE IN OPENING
14-RESET	37-SLOWDOWN SENSITIVITY	73-MOTOR 1 TOLERANCE IN CLOSING
17-MOTOR 1 OPENING SPEED	47-MOTOR 1 PARTIAL ENCODER	86-FLASHING LIGHT
18-MOTOR 1 CLOSING SPEED	48-MOTOR 1 TOTAL ENCODER	88-COURTESY LIGHT
21-M1 SLOWDOWN SPEED IN OPENING	59-MOTOR 1 SLOWDOWN IN OPENING	94-24V AUX (NO AUTOTEST FUNCTION)
22-M1 SLOWDOWN SPEED IN CLOSING	60-MOTOR 1 SLOWDOWN IN CLOSING	104-SELECT LIMIT SWITCH
28-MOTOR 1 OPENING TORQUE	63-DECELERATION	106-DIAGNOSTICS
29-MOTOR 1 CLOSING TORQUE	64-ACCELERATION	112-PASSWORD

11.2 - «PRIMARY/SECONDARY» CONFIGURATION



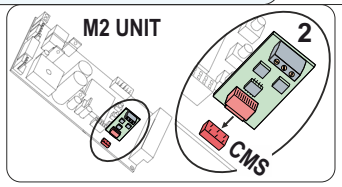
INSTALL and SET UP THE TWO OPERATORS *

1



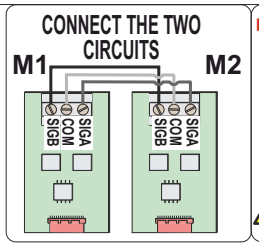
CONNECT THE FIRST CIRCUIT TO THE MOTOR 1 CONTROL UNIT

2



CONNECT THE SECOND CIRCUIT TO THE MOTOR 2 CONTROL UNIT

3



4

⇨ use a shielded and twisted pairs transmission cable type **RS485** with a section not exceeding 0.5 mm²

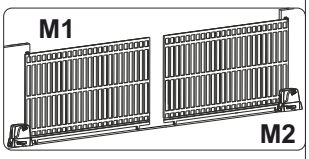
RESPECT THE CABLES POLARITY

5

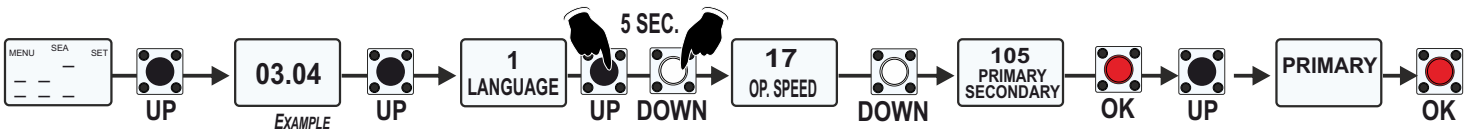
→ 9 PROGRAMMING → OK

Carry on the working times learning on every control unit *(see the chapter 16)*

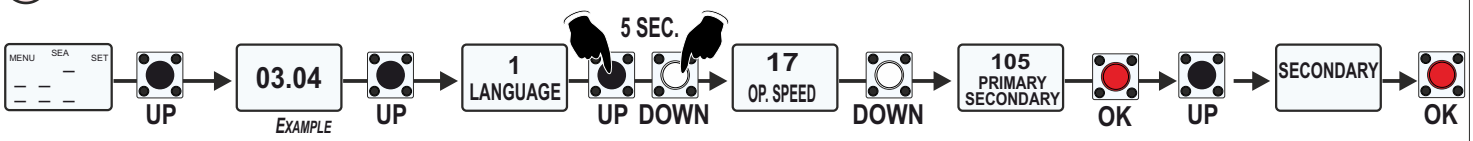
→



6 **MOTOR 1 CONTROL UNIT «PRIMARY» SET UP**



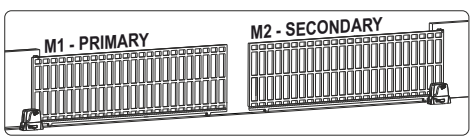
7 **MOTOR 2 CONTROL UNIT «SECONDARY» SET UP**



8

Once every control unit has been set up, power cycle the units, then send a «START» command to the «PRIMARY» control unit

→



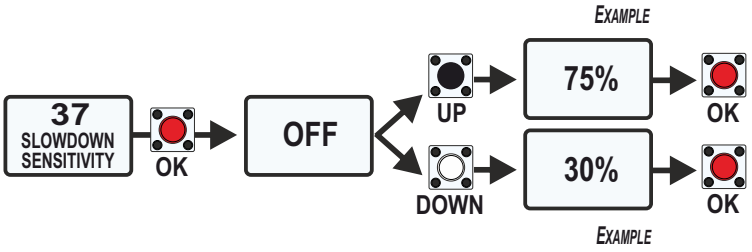
**** Install and set up the two operators as if they were two independent installations. check the correct functioning and the correct reading of the limit switches, if installed.***

12 - ADDITIONAL FUNCTIONS

12.1 - AMPEROMETRIC MANAGEMENT - *ONLY FOR ELECTROMECHANIC OPERATORS*

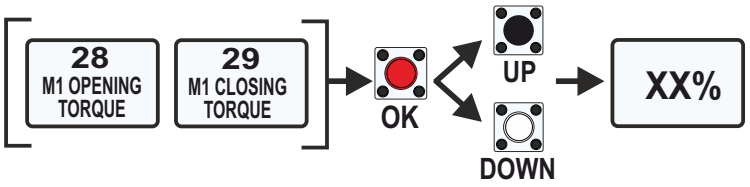
- Obstacle detection system with inversion both in OPENING and CLOSING
- Set the menu 37 on a value different from OFF *(which is set by default)* to enable the function

⇨ *the greater the value, the greater the amperometric intervention delay*



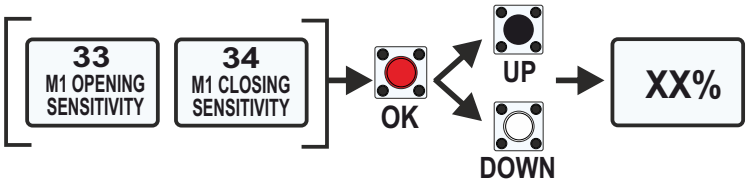
- Torque parameters setting in opening and closing for adjustment of the inversion force on obstacle

⇨ *the greater the torque, the greater the force required for the inversion*



- Sensitivity parameters in opening and closing for the amperometric intervention time adjustment

⇨ *for a quick reverse on obstacle decrease the sensitivity*



If set to OFF (intervention excluded) the amperometric management will only work according to the menu 37 settings

12.2 - AMPEROMETRIC INTERVENTION METHOD

- It is possible to choose between **TOTAL** or **PARTIAL** reopening after the amperometric intervention in closing (menu 46)

46 CLOSING INVERSION

⇨ *When the menu 46 is set to **«TOTAL»** and the menu 7 is different from OFF, the **«AUTOMATIC RECLOSING» function** automatically enables: in case of obstacle the operator tries to reclose up to 5 times, then a new START command will be required to restore the motion.*

7 TIMER TO CLOSE

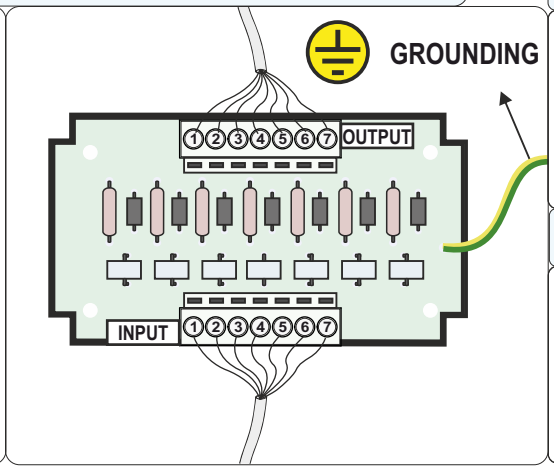
⇨ *In case of obstacle during the opening, the operator will always reverse partially!*

When the movement is restored after the partial inversion, the cycle will be performed at preset speed to detect the mechanical stops

12.3 - «I/O SURGE PROTECTOR» CIRCUIT CONNECTION

- To protect up to 6 inputs and the 24V power supply from temporary overloads *(ie. lightning strikes)*
- Connect the 24VDC cable and the accessories cables on **input**; connect the corresponding cables from **output** to the control unit

Connect the negative and the common cables from the main power supply to the control unit



OUTPUT CONNECTION ON CONTROL UNIT	
1	24V DC ACCESSORIES
2	CONTACT 1 (Es. PHOTOCELL)
3	CONTACT 2 (Es. SAFETY EDGE)
4	CONTACT 3 (Es. START)
5	CONTACT 4
6	CONTACT 5
7	CONTACT 6

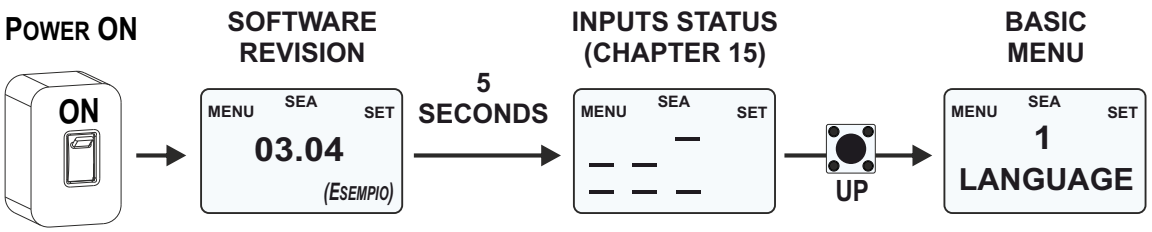
INPUT ACCESSORIES CONNECTION	
1	24V DC ACCESSORIES
2	CONTACT 1 (Es. PHOTOCELL)
3	CONTACT 2 (Es. SAFETY EDGE)
4	CONTACT 3 (Es. START)
5	CONTACT 4
6	CONTACT 5
7	CONTACT 6

13 - DISPLAY and PROGRAMMING

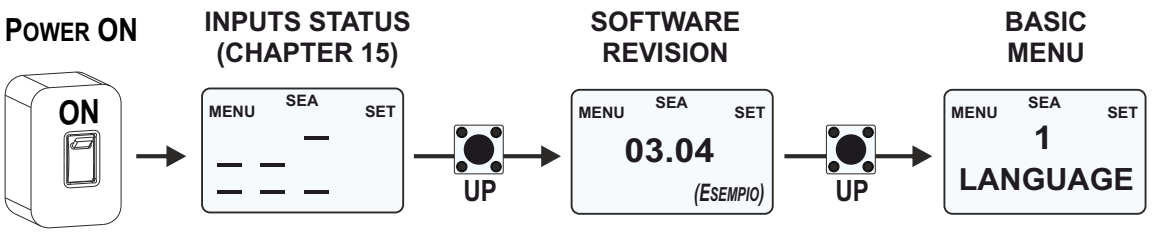
CONNECT ALL THE ACCESSORIES WHEN THE CONTROL UNIT IS SWITCHED OFF!
AFTER ALL CONNECTIONS HAVE BEEN MADE, POWER ON THE UNIT FOR SETTINGS

13.1 - POWER ON THE CONTROL UNIT

NEW CONTROL UNIT *(OR AFTER RESET)*

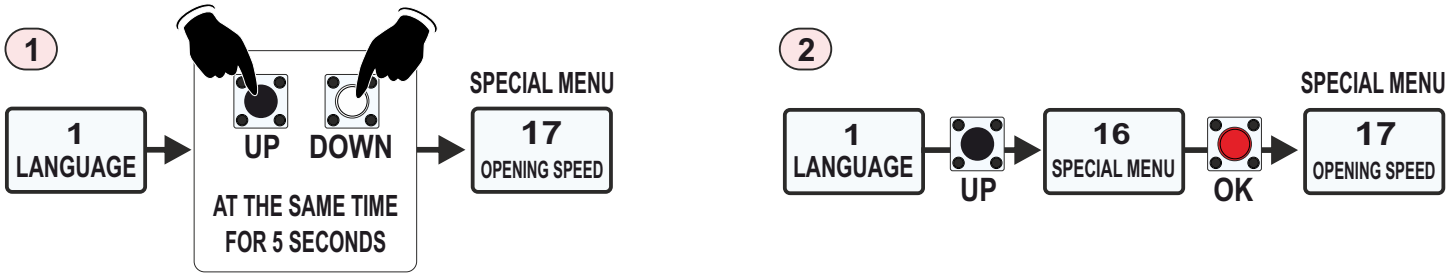


ALREADY PROGRAMMED CONTROL UNIT



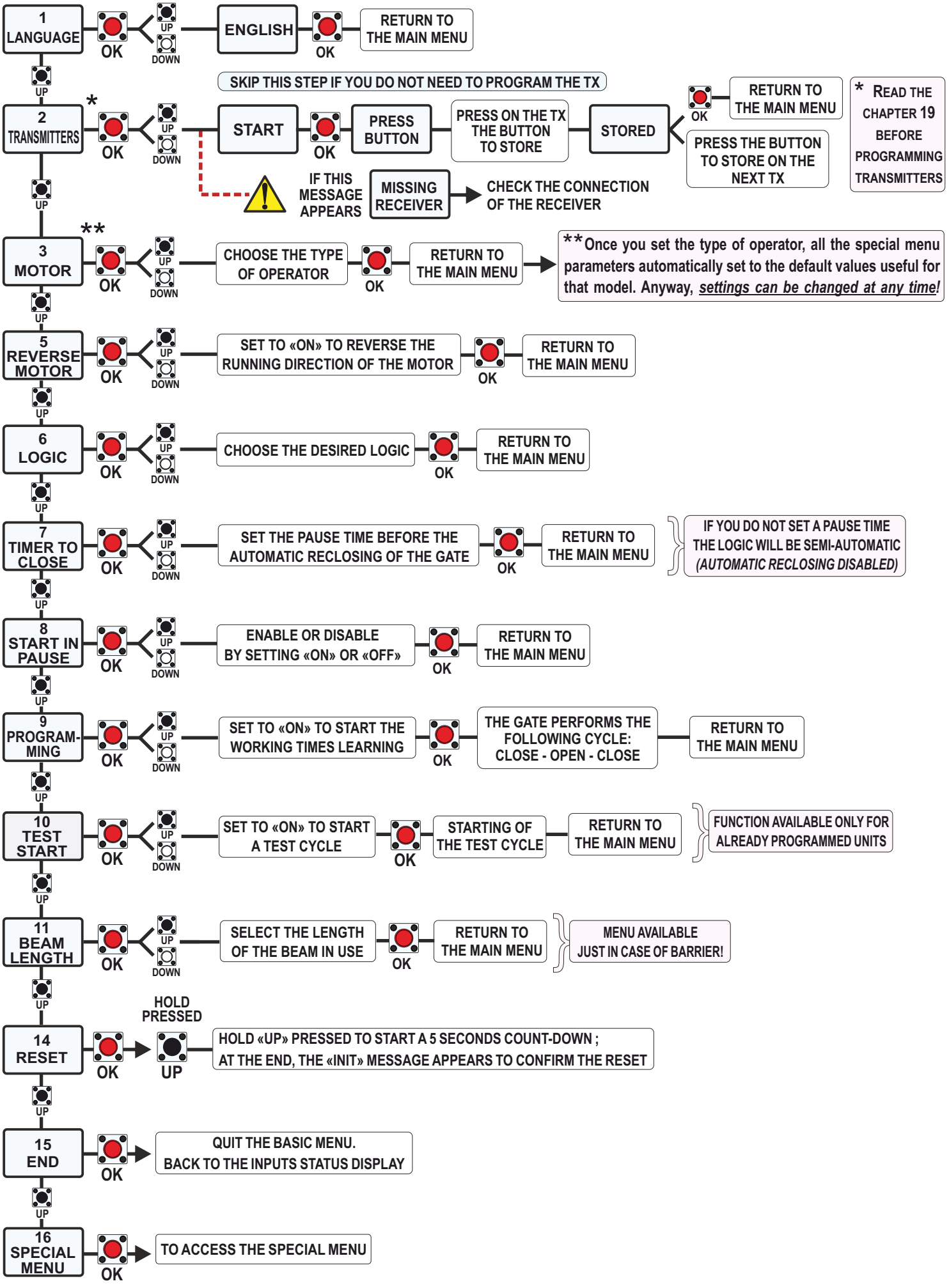
13.2 - BASIC MENU and SPECIAL MENU

- The control unit has a **BASIC MENU** ***(chapter 14)*** which allows the basic settings in order to start using the product quickly
- The **SPECIAL MENU** allows to change default settings, or to enable/disable the accessories or the control unit functions
- To access the **SPECIAL MENU** use one of the two following methods



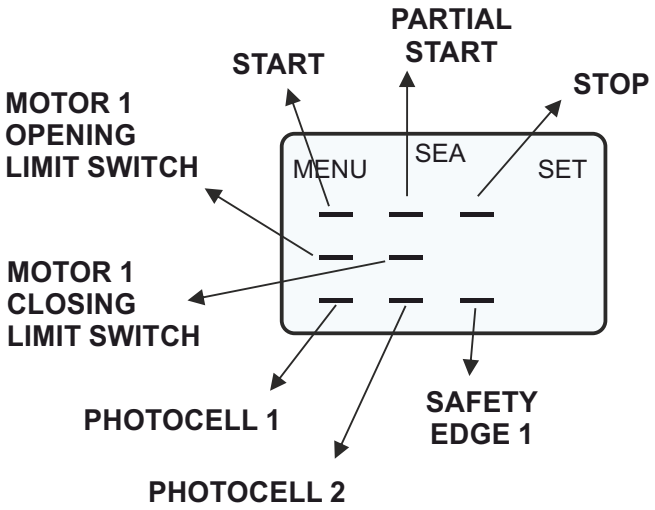
*IN THE **BASIC MENU** IT IS POSSIBLE TO **SELECT THE OPERATOR TYPE** IN USE AND OTHER NECESSARY OPTIONS. ONCE THE TYPE HAS BEEN CHOSEN, ALL THE SPECIAL MENUS ARE AUTOMATICALLY SET TO THE DEFAULT VALUES USEFUL FOR THAT OPERATOR, SO FURTHER SETTINGS MAY NOT BE NECESSARY*

14 - BASIC MENU

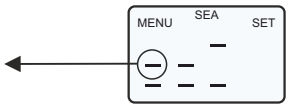


15 - INPUTS STATUS MANAGEMENT

15.1 - INPUTS STATUS DISPLAY

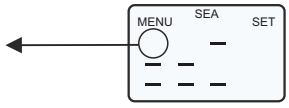


DASH ON:



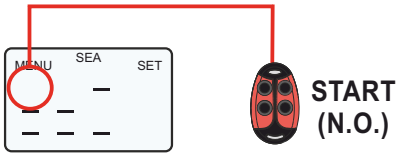
NORMALLY CLOSED INPUT (N.C.)

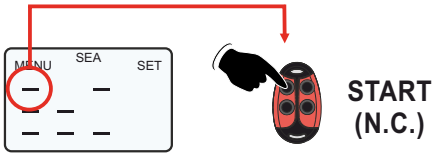
DASH OFF:



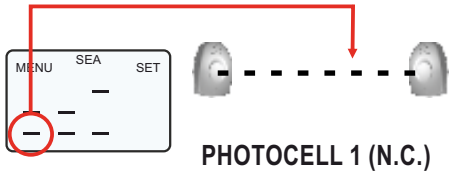
NORMALLY OPEN INPUT (N.O.)

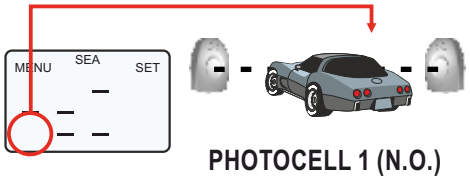
● *Example: if you give a **«START»** command, its input switches from normally open to normally closed*



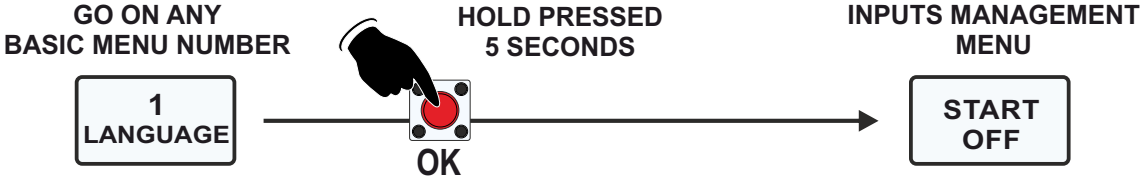


● *Example: if you pass by the photocell, its input switches from normally closed to normally open*





15.2 - ACCESS TO THE INPUTS MANAGEMENT MENU



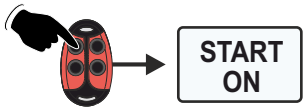
● The «inputs management menu» shows the inputs in their current status: ON or OFF

EXAMPLE

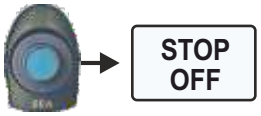
EXAMPLE

● Inside the **«INPUTS MANAGEMENT MENU»** it is possible to enable or disable the inputs; ***paragraph 15.3***

● **START** and **PARTIAL START** are **NORMALLY OPEN (N.O.)** contacts
If **«ON»** is displayed when the contact is activated, then the input works
If **«OFF»** is displayed when the contact is activated, then check the wirings



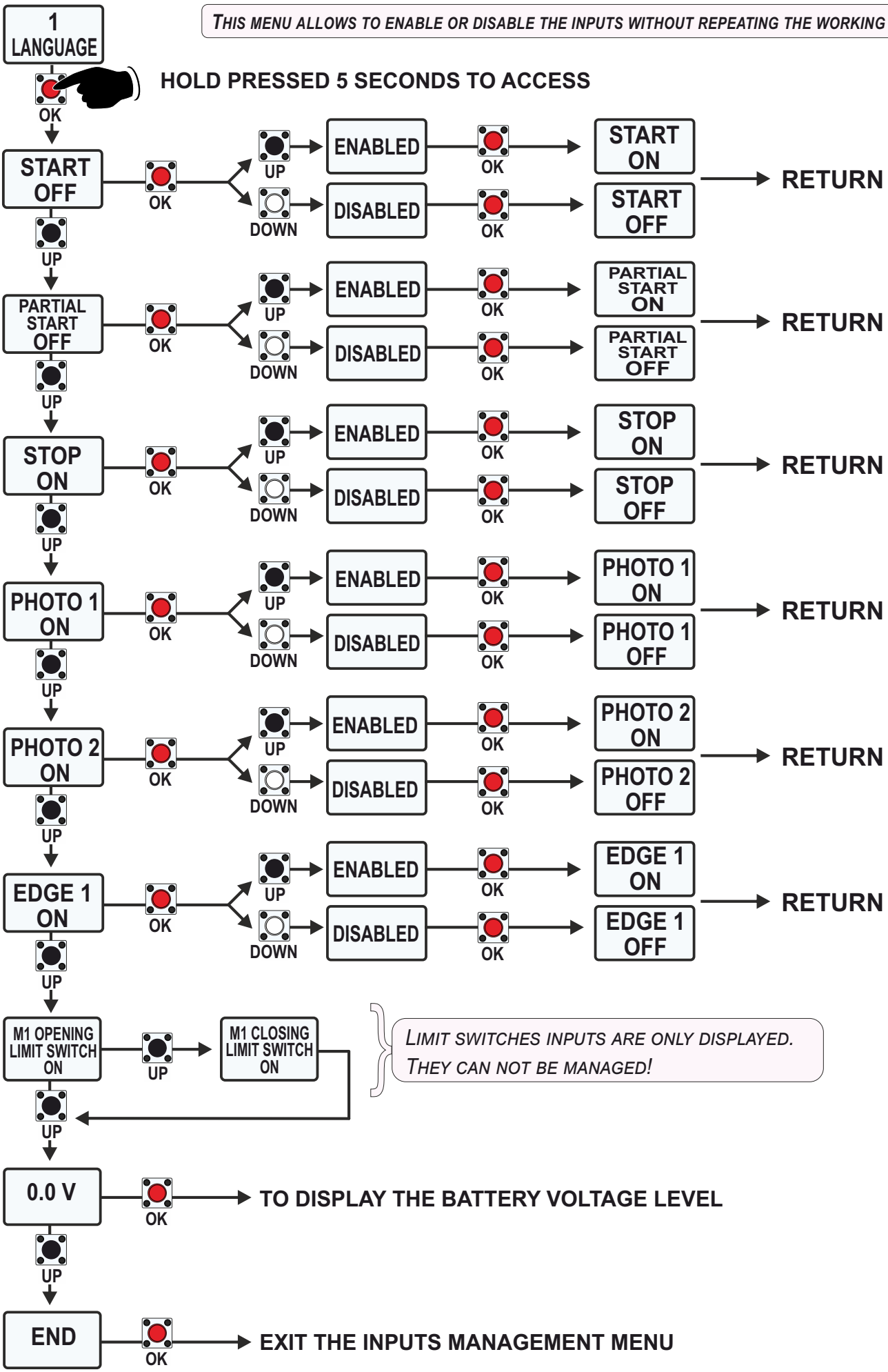
● **ALL OTHER CONTACTS** are **NORMALLY CLOSED (N.C.)** contacts
If **«OFF»** is displayed <u>when an accessory is wired</u>, then the input works
If **«ON»** is displayed <u>when an accessory is wired</u>, then check the wirings



⇨ *THE LIMIT SWITCHES INPUTS CANNOT BE MANAGED, BUT ONLY DISPLAYED IN THEIR CURRENT STATE (ON OR OFF)*

15.3 - INPUTS MANAGEMENT MENU

THIS MENU ALLOWS TO ENABLE OR DISABLE THE INPUTS WITHOUT REPEATING THE WORKING TIMES LEARNING



16 - WORKING TIMES LEARNING

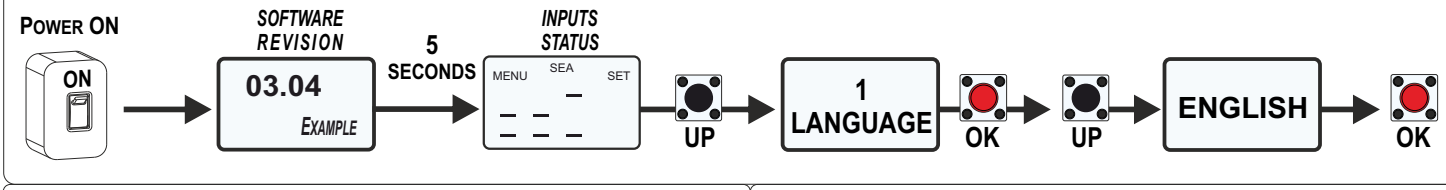
DANGER!

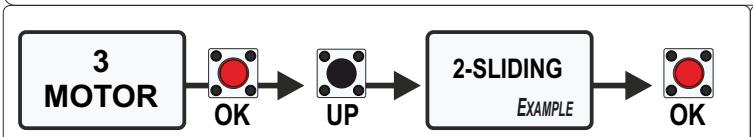
HAVE A QUALIFIED SERVICE PERSON TO CARRY OUT THE OPERATIONS IN SAFE CONDITIONS

- Check the correct operation of all accessories (photocells, buttons, etc.)
- Do not jumper the inputs not in use (limit switch, safety edge, etc.)

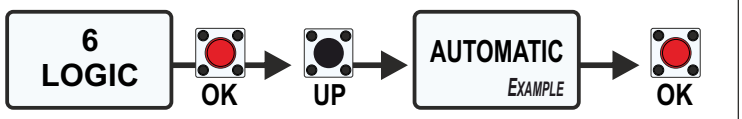
16.1 - PRELIMINARY SETTINGS

Before programming the working times, it is necessary to carry out the essential settings of the basic menu. It is not possible to correctly start-up the times learning without carrying-on the following settings!

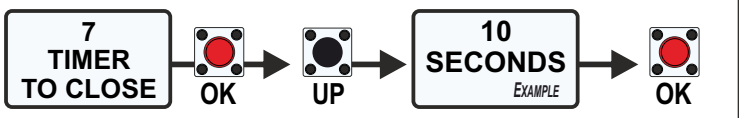




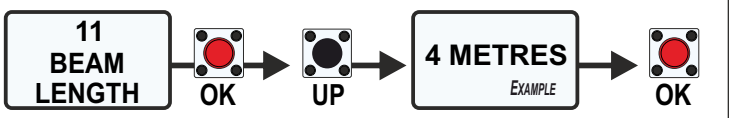
When a type is set, the parameters of the special menu automatically set to the useful values for that model!



*Select the desired operation logic **(see chapter 17)**. **Note:** If a pause time other than zero is set in the following menu, the automatic reclosing will always be active*



*Set a pause time other than zero to enable the automatic reclosing. If set to **«0»** the automatic reclosing will be disabled and you will have a «semi-automatic» logic*

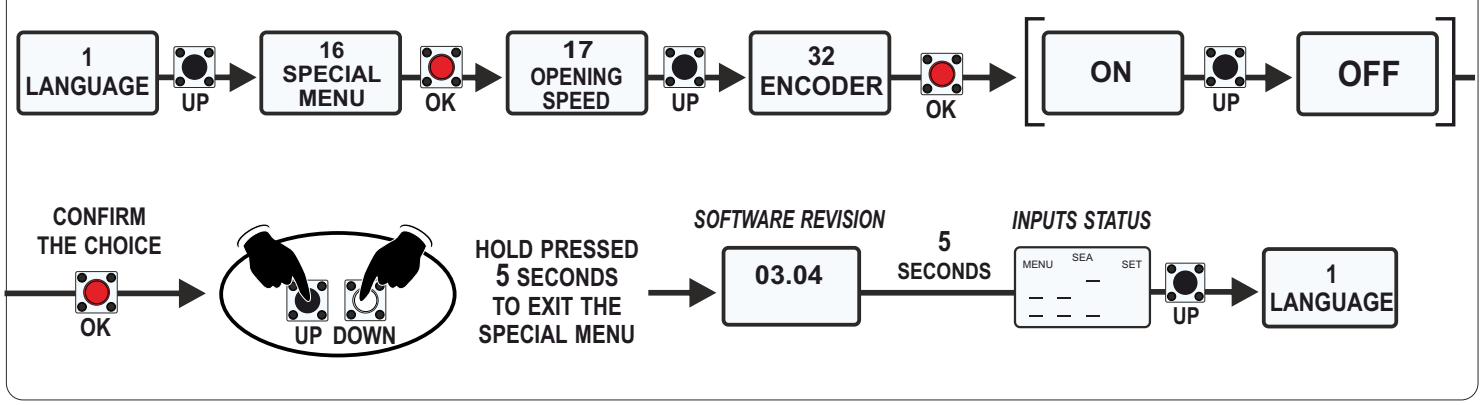


ONLY WITH BARRIER!

Set the length of the beam in use.
This menu is available only if the menu 3 is set to 16-SPRINT or 17-STORM or 19/20-VERG

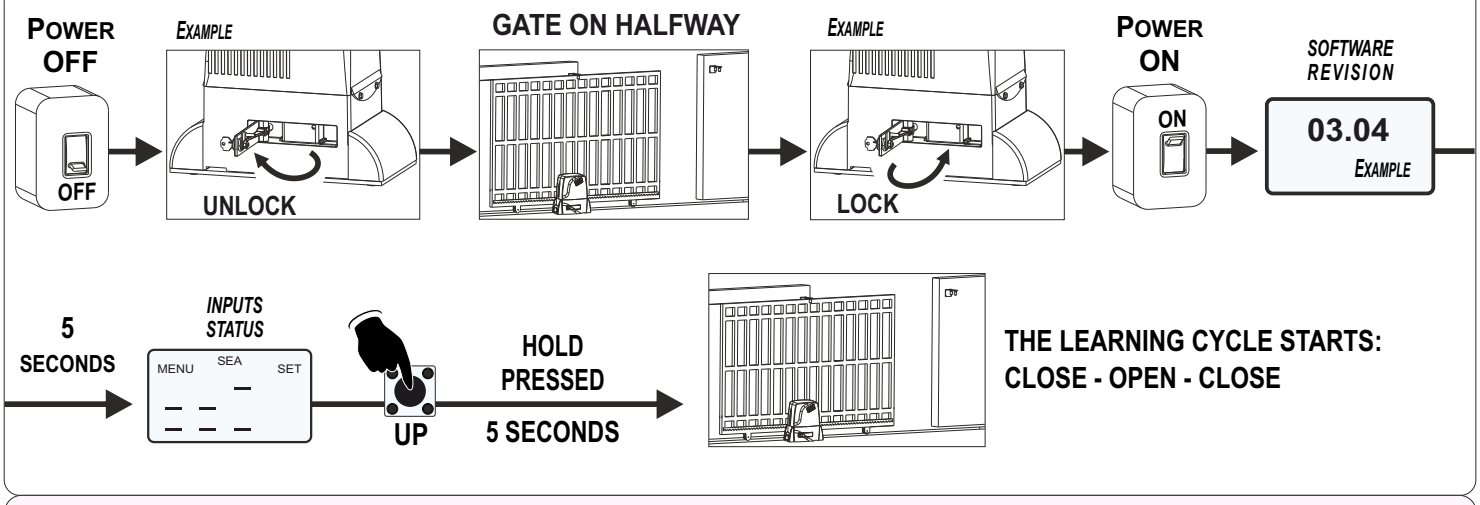
16.2 - ENCODER ACTIVATION *(IF INSTALLED)*

- If the operator is equipped with an encoder, it is necessary to check that it is correctly enabled in the special menu 32, ***before the working times learning!***

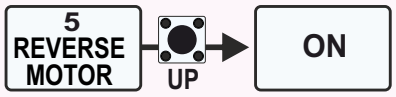


16.3 - QUICK LEARNING - *ONLY FOR SEA SLIDING OPERATORS*

- The control unit on board the SEA sliding operators is pre-set by default (model and parameters) to allow the quick learning of the working times

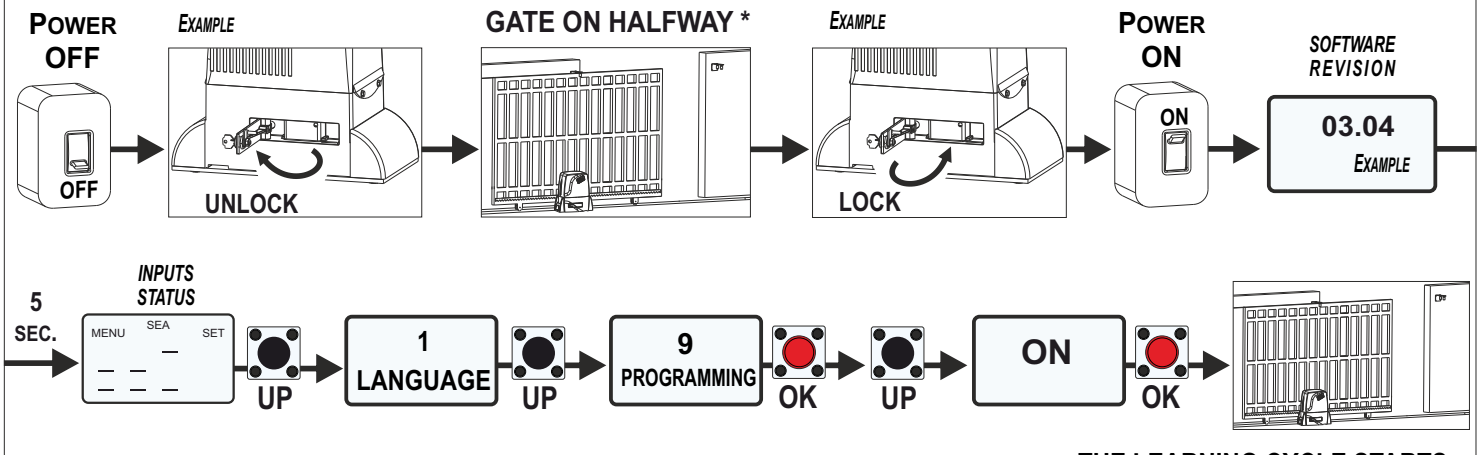


⇨ **If the operator performs the first learning cycle starting in opening, wait for the end of the cycle and reverse the motor rotation through the menu 5, then repeat the learning procedure**



16.4 - WORKING TIMES LEARNING BY LIMIT SWITCH

- Working times learning through automatic detection of the limit switches
- Check that the special menu 32 is **«OFF»** ***(see paragraph 16.2)***
- Check on the **INPUTS STATUS MENU** ***(chapter 15)*** that the correct limit switch is engaged for each movement direction
- Start-up the working times learning by following the procedure below:



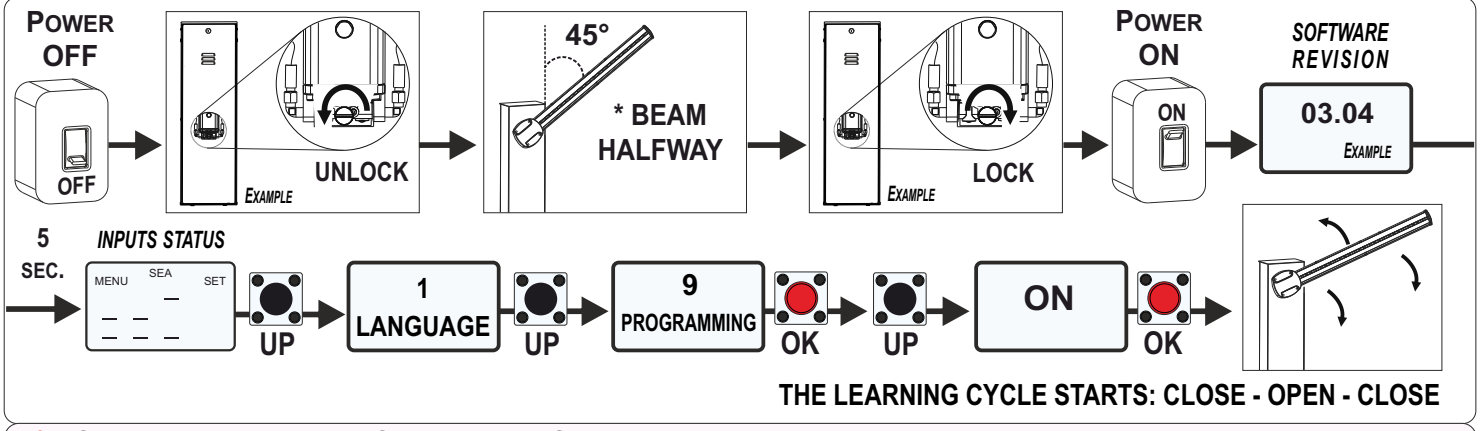
⇨ **If the motor <u>starts closing</u>, reaches the limit switch lever and stops, then swap the <u>limit switch cables</u> and repeat the procedure;**

⇨ **If the motor <u>starts opening</u>, reaches the limit switch lever and stops, then swap the <u>motor cables</u> and repeat the procedure;**

**** In case of a barrier, place the beam at approximately 45° (halfway), before starting learning***

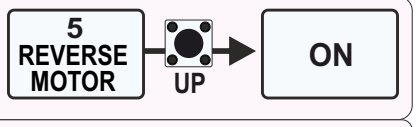
16.5 - WORKING TIMES LEARNING BY STANDARD ENCODER

- Working times learning through automatic detection of the end-of-stroke points
- Check that the correct encoder type is enabled in special menu 32 ***(see paragraph 16.2)***
- Start-up the working times learning by following the procedure below



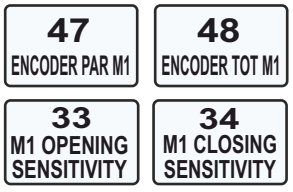
THE LEARNING CYCLE STARTS: CLOSE - OPEN - CLOSE

If the operator performs the first learning cycle starting in opening, wait for the end of the cycle and reverse the motor rotation through the menu 5, then repeat the learning procedure



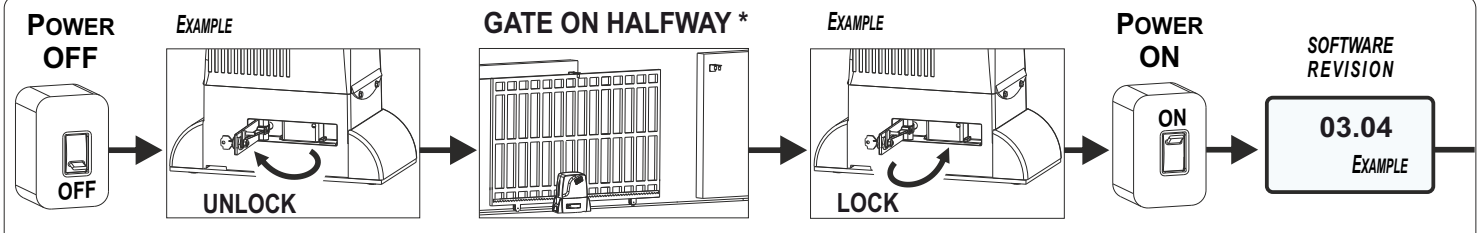
**** In case of a sliding operator, manually place the gate halfway before starting the learning procedure***

- After the learning, it is possible to verify the correct reading of the impulses by accessing the menus 47 and 48 ***(paragraph 8.1)***
- After the learning, it is possible to adjust the sensitivity parameters in opening and closing by the menus 33 and 34 ***(paragraph 8.2)***

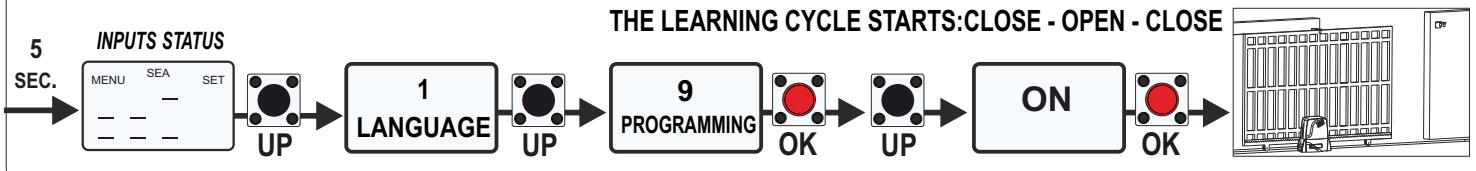


16.6 - WORKING TIMES LEARNING BY AMPEROMETRIC FUNCTION

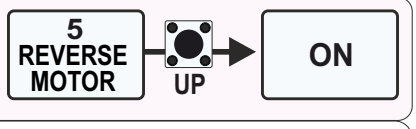
- Working times learning through automatic detection of the end-of-stroke points
- Enable the amperometric management by setting **a value other than OFF on menu 37** ***(chapter 12)***
- If installed, enable the encoder in the special menu 32, otherwise set to **OFF** ***(paragraph 16.2)***
- Start-up the working times learning by following the procedure below



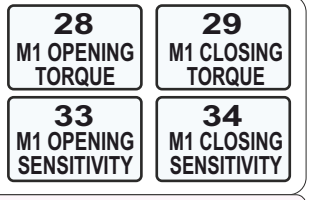
THE LEARNING CYCLE STARTS:CLOSE - OPEN - CLOSE



If the operator performs the first learning cycle starting in opening, wait for the end of the cycle and reverse the motor rotation through the menu 5, then repeat the learning procedure



- After the learning, it is possible to increase or decrease the torque percentage by accessing the menus 28 and 29 ***(paragraph 12.1)***
- After the learning, it is possible to adjust the sensitivity parameters in opening and closing by the menus 33 and 34 ***(paragraph 12.1)***



**** In case of a barrier, place the beam at approximately 45° (halfway), before starting learning***

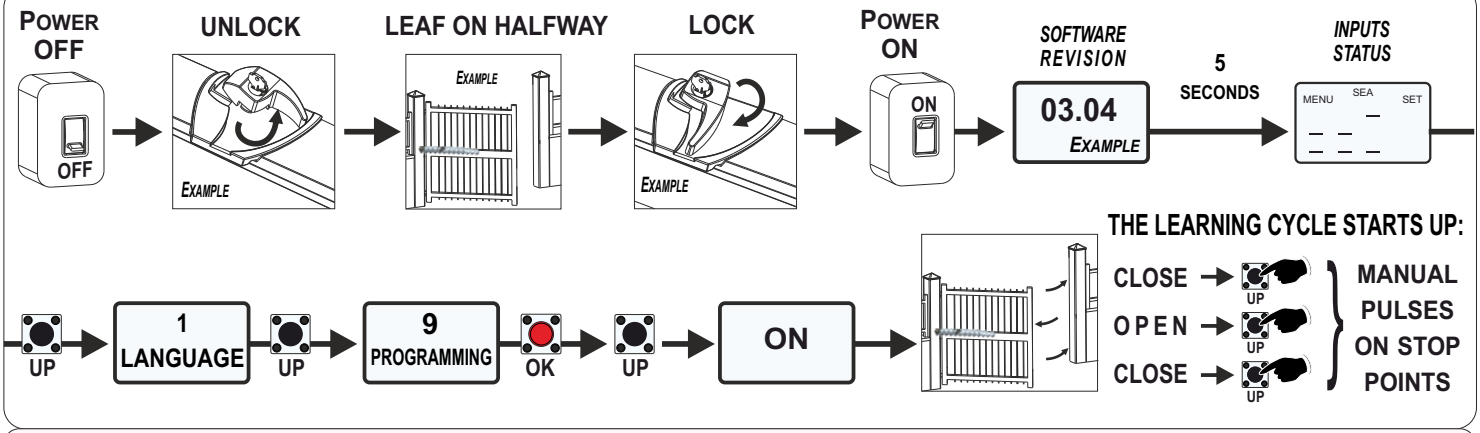
16.7 - WORKING TIMES LEARNING BY MANUAL PULSES

For operators without limit switches (example: 24V swing operator)

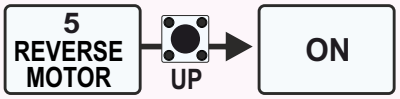
- Working times learning through manual pulses on the points of stop
- If installed, enable the encoder in the special menu 32, otherwise set to **OFF** ***(paragraph 16.2)***

⇨ When set to OFF, it is possible to adjust the working times manually by the menus 65 and 66 *(available only when the menu 32 is «OFF»)*

65	66
M1 OPENING TIME	M1 CLOSING TIME



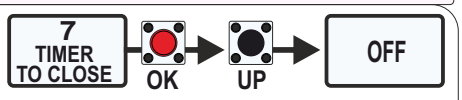
⇨ **If the operator performs the first learning cycle starting in opening, wait for the end of the cycle and reverse the motor rotation through the menu 5, then repeat the learning procedure**



17 - LOGICS

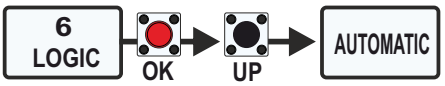
THE DEFAULT LOGIC IS «AUTOMATIC», ANYWAY IT CAN BE CHANGED AFTER THE WORKING TIMES LEARNING!

- **SEMI-AUTOMATIC LOGIC:** automatically set when the menu 7 is «OFF» ***(automatic reclosing disabled)***

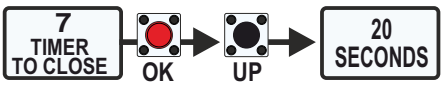


- **SEMI-AUTOMATIC** operation: a **START** command opens the gate; another **START** command closes; *In semi-automatic logic, the automatic reclosing is always disabled.*
- This logic matches with other logics *(except «AUTOMATIC»)*, keeping the automatic reclosing disabled

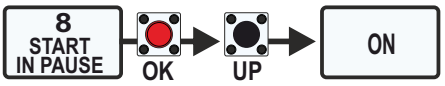
- **AUTOMATIC LOGIC:** pre-set by default. Anyway it can be manually enabled through the menu 6 or through the menu 7 by setting a pause time different than 0 and up to 240 seconds *(The menu 7 also enables the automatic reclosing when different than 0)*



EXAMPLE

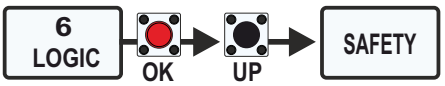


- Through the menu 8 it is possible to choose if the **START** command given during the pause time is accepted or not

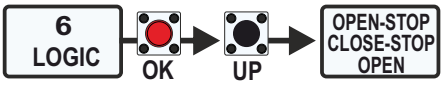


- **AUTOMATIC** operation: a **START** command opens the gate; another **START** command is not accepted if given during the opening; a **START** command reverses the movement if given during the closing

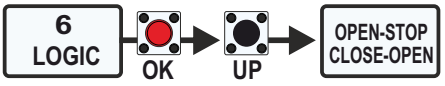
- **SAFETY LOGIC:** a **START** command opens the gate; another **START** command reverses the movement if given during the opening a **START** command reverses the movement if given during the closing



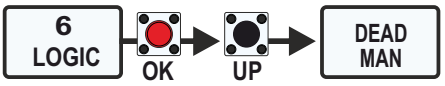
- **STEP BY STEP TYPE 1 LOGIC:** the **START** command follows the logic: **OPEN - STOP - CLOSE - STOP - OPEN**



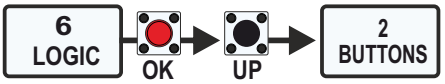
- **STEP BY STEP TYPE 2 LOGIC:** the **START** command follows the logic: **OPEN - STOP - CLOSE - OPEN**



- **DEAD MAN LOGIC:** the gate opens as long as the **START** command is held pressed; when released the gate stops. The gate closes as long as the **PARTIAL START** is held pressed; when released the gate stops.



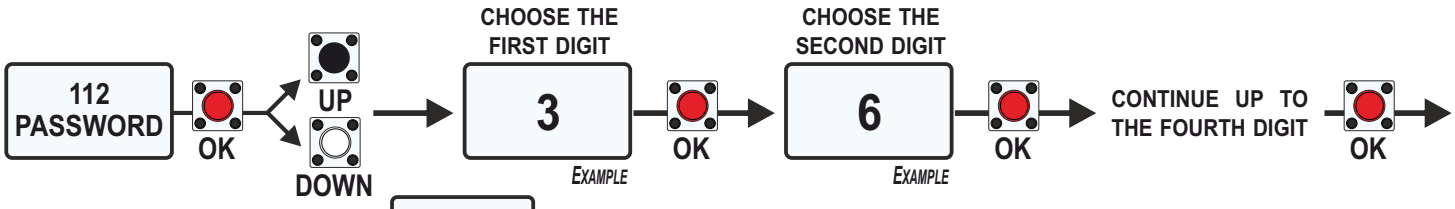
- **2 BUTTONS LOGIC:** a **START** command opens the gate; a **PARTIAL START** command closes the gate

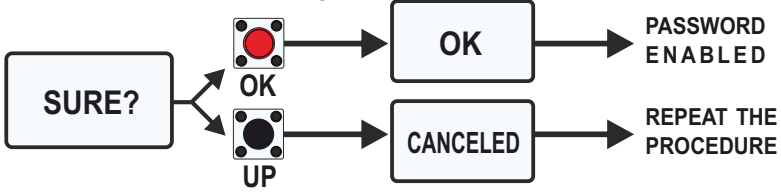


The **START** command reopens the gate if given during the closing. The **PARTIAL START** command is not accepted if given during the opening or during the closing

18 - PASSWORD

- Once the password is enabled, all the menus can not be adjusted, they are only displayed
- If you forget the password, contact the SEA technical assistance: ***SEA reserves the right to evaluate and decide whether to provide or not the unlocking procedure***





⇨ THE PASSWORD «0000» IS NOT ALLOWED *(THE DISPLAY WILL SHOW AN ERROR MESSAGE!)*

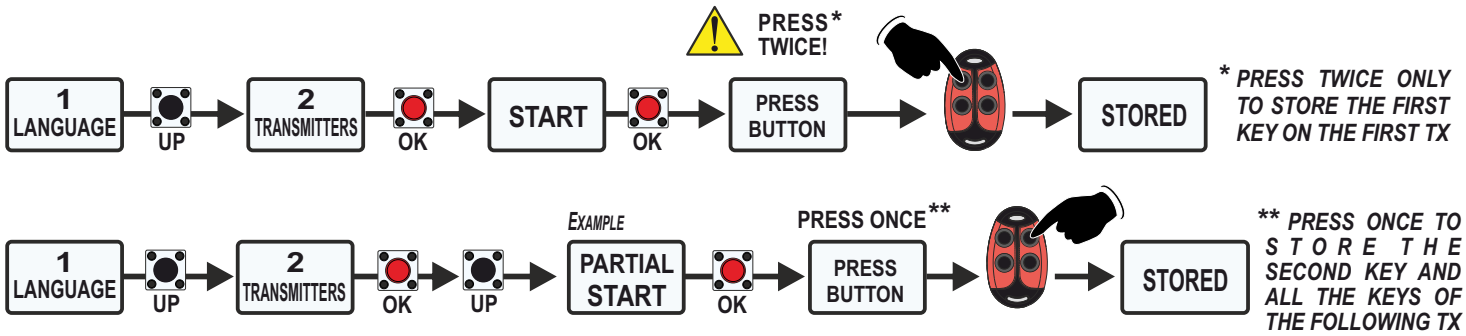
19 - RECEIVERS AND TRANSMITTERS

CONNECT THE RECEIVER CIRCUIT WHEN THE CONTROL UNIT IS NOT POWERED, AS INDICATED IN CHAPTER 10

- **When the control unit is switched-off**, check if the receiver is correctly plugged in
- Program the transmitters before connecting the antenna
- Program the transmitters only when the gate is closed and the motor is stopped
- **RF UNI** and **RF UNI PG** allow the use of both **ROLL PLUS/UNI** TX and **FIX CODE** TX
- It is possible to store up to 2 among the available functions
- The **START** command must **ALWAYS** be stored on the first channel of the TX
- If the second stored function is modified, then all the transmitters acquire this change on the second channel

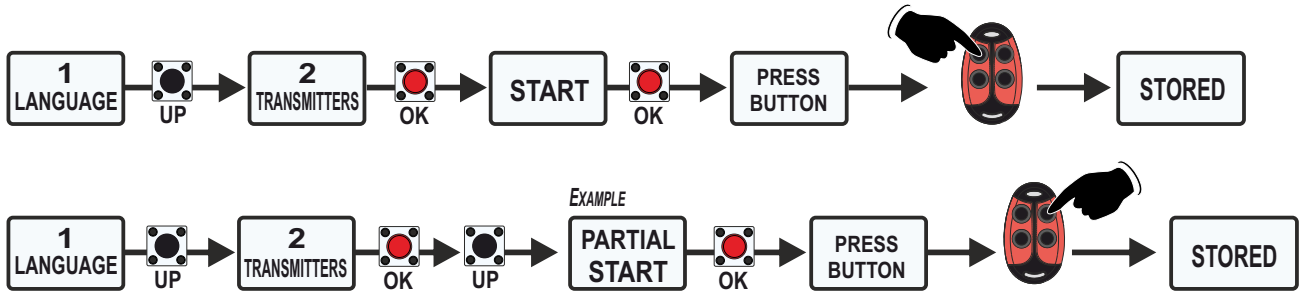
THE FIRST STORED TRANSMITTER DETERMINES THE CODING OF THE FOLLOWING ONES
if the first transmitter is stored as ROLLING CODE, then all the followings must be stored as ROLLING CODE; transmitters with different coding are not accepted - see the coding passage on Tx instruction!

19.1 - OLD «ROLLING CODE» CODING



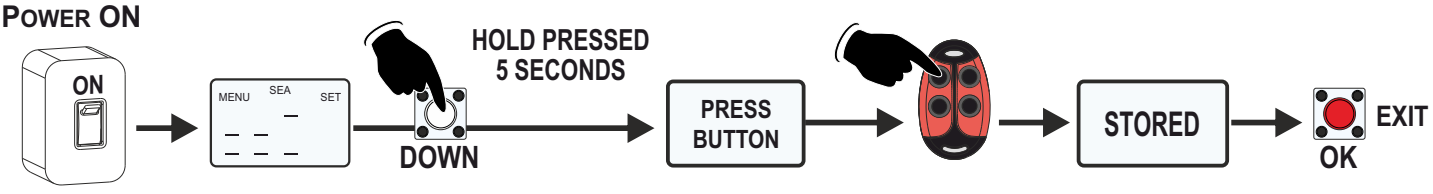
*More details on the functions available in **paragraph 19.4***

19.2 - «ROLLING CODE PLUS» - «UNI» - «FIX CODE» TRANSMITTERS

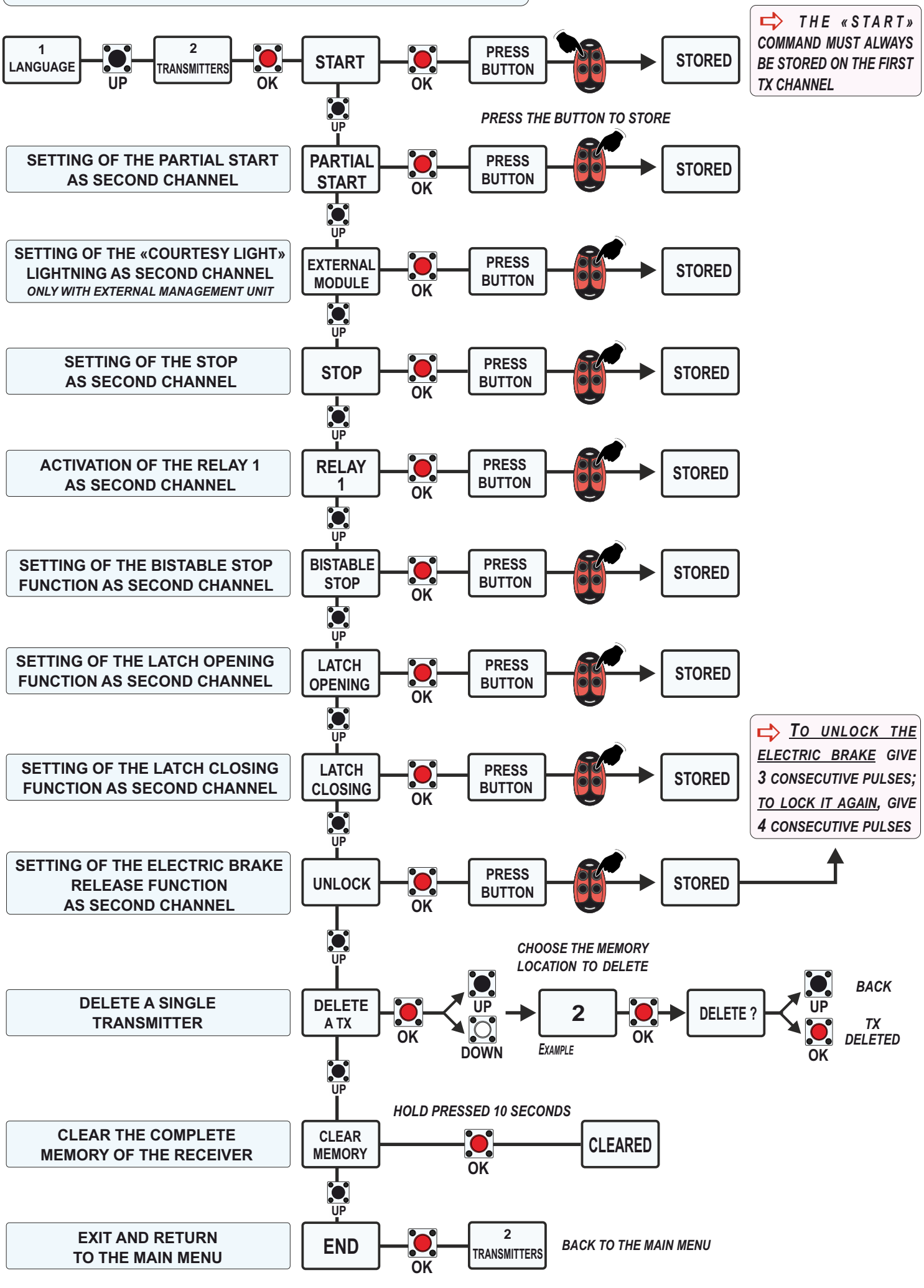


*More details on the functions available in **paragraph 19.4***

19.3 - «START» COMMAND QUICK LEARNING

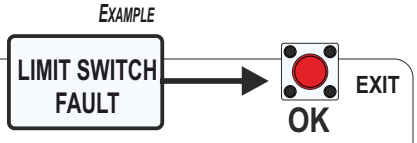


19.4 - TRANSMITTERS FUNCTIONS DIAGRAM



20 - ALARMS

20.1 - FAULTS SHOWN ON THE DISPLAY



- The control unit advises of the faults may happen through a message on the display *(Note: press ok to exit the message)*
- Below the list of the faults that are signaled on the display and the possible solutions to the problems *(if the fault message holds out, contact the technical support)*

WARNING MESSAGE	SOLUTION
FAULT MOTOR	Motor power supply fault - Check that there are no short circuits on the motor or on the control unit; check that the gate is not blocked or stuck on a stop point. Unlock the operator and give a START command to check that the motor runs: if the motor runs then disconnect the power supply, lock the operator again and restore the power supply; if the motor does not run, then it is burned
FAULT BLOCKED MOTOR	Operator blocked - Check that the gate is not blocked or stuck on the stop point Check that the Encoder is correctly wired. The normal operation can be restored by pressing OK
FAULT 24	24V power supply fault - Check that there are no short circuits on wirings or on the control unit; check that there is no overload
FAULT 24VAUX CHECK CHARGE ON OUTPUT 10 CONNECT ACCESSORIES OUTPUT12	24VAUX output fault - Check that there are no short circuits on wirings or on the control unit; check that there is no overload. The 24Vaux output is a programmable output and supports a maximum load of 200mA; if you do not need a programmable 24V power supply, use the 24V output on clamp 12(+) and wire the negative cable to the clamp 11 (COM) *(NOT to the clamp 13!)*
FAULT SELF-TEST	«PHOTOCELLS SELF-TEST» function fault - Check the operation of the photocells and/or their wirings on the control unit
FAULT LIMIT SWITCH	Limit switch activation fault - Check the operation of both limit switches and that there is a correspondence between the direction of movement of the motor and the limit switch engaged
FAULT FLASHING LIGHT	Flashing light fault - Check the wirings and / or the condition of the lamp
FAULT ENCODER	Encoder fault - Check that the menu 32 is set to «ON». Check that the encoder is correctly wired; check that the encoder is not damaged. Check that the operator is not blocked
FAULT SLAVE *(SECONDARY)*	«SECONDARY» *(slave)* function fault - Check that the PRIMARY and the SECONDARY circuits *(master/slave)* are correctly wired to each other ant to the control unit; make sure that the control unit linked to the «SECONDARY» *(slave)* circuit has been correctly set as «SECONDARY» on menu 105
FAULT SAFETY EDGE	Safety edge fault - Check the metal wire of the safety edge and the cables wirings. Check that the contact is closed by accessing the «INPUT STATUS» menu *(paragraph 15.3)*
FAULT OVERCURRENT COLLISION	Check for any obstacles or friction points on the gate NOTE: The normal operation can be restored by pressing OK
STOP ON	Operator blocked - Check that the gate is not blocked or stuck on the stop point or damaged. Check that the release micro-switch, if installed, is correctly wired.

20.2 - FAULTS SIGNALED ON THE FLASHING LIGHT

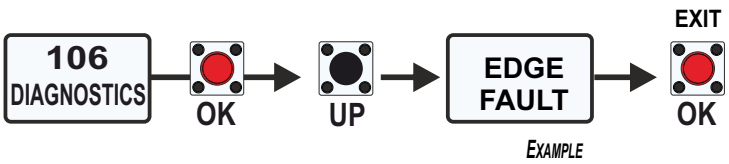
- It is also possible to visualize the warning signals through the flashing light simply by observing the number of flashes emitted *(see the table of correspondences below)*
- When an event occurs, the warning flashes will be issued at each **«START»** command

ALARM TYPE	NUMBER OF FLASHES
MOTOR FAILURE	9 SLOW (EVERY 0.5 SEC) FOR 10 TIMES
PHOTOCELL FAILURE DURING CLOSING	2 SLOW (EVERY 0.5 SEC) 5 TIMES
PHOTOCELL FAILURE DURING OPENING	3 SLOW (EVERY 0.5 SEC) FOR 1 TIME
COLLISION - OBSTACLE DETECTED DURING OPENING	6 SLOW (EVERY 0.5 SEC) 11 TIMES
COLLISION - OBSTACLE DETECTED DURING CLOSING	6 SLOW (EVERY 0.5 SEC) 11 TIMES
SAFETY EDGE FAILURE	4 SLOW (EVERY 0.5 SEC) 4 TIMES
ENCODER FAILURE	8 FAST (EVERY 0.2 SEC) 4 TIMES
FAULT ON STOP CONTACT	5 SLOW (EVERY 0.5 SEC) FOR 2 TIMES
LIMIT SWITCH FAILURE OR ERROR	4 FAST (EVERY 0.2 SEC) 11 TIMES
MAX. CYCLES ACHIEVED-MAINTENANCE REQUIRED	7 SLOW (EVERY 0.5 SEC) FOR 2 TIMES

⇨ *The **«CYCLES ALARM»** warning refers to the reaching of the maximum cycles number established after which the maintenance is necessary*

20.3 - «DIAGNOSTICS» MENU TO DISPLAY LATEST EVENTS

- The warnings and the alarms remain in the control unit memory, up to a max. of 10 events. To see the stored events, access the menu 106. Below is the table with the type of events saved in the diagnostics



EXAMPLE

⇨ If the fault message holds out, carry out the required checks or disconnect the device generating the fault

TYPE OF EVENT	WARNING MESSAGE STORED
EVENTS OR ALARMS REGARDING FAULTS ON MOTOR	MOTOR FAULT
EVENTS OR ALARMS REGARDING FAULTS ON PHOTOCELL 1 OR PHOTOCELL 2 IN OPENING	PHOTO OPENING
EVENTS OR ALARMS REGARDING FAULTS ON PHOTOCELL 1 OR PHOTOCELL 2 IN CLOSING	PHOTO CLOSING
EVENTS OR ALARMS REGARDING FAULTS ON 10K PHOTOCELLS	10K PHOTOCELL
EVENTS OR ALARMS REGARDING THE DETECTION OF OBSTACLES IN THE OPENING PHASE	OBSTACLE IN OPENING
EVENTS OR ALARMS CONCERNING THE DETECTION OF OBSTACLES IN THE CLOSING PHASE	OBSTACLE IN CLOSING
EVENTS OR ALARMS CONCERNING FAULTS ON THE SAFETY EDGE	SAFETY EDGE FAULT
EVENTS OR ALARMS CONCERNING FAULTS ON THE ENCODER	ENCODER FAULT
EVENTS OR ALARMS CONCERNING FAULTS ON THE «STOP» CONTACT	STOP
REACHING OF THE MAXIMUM CYCLES ESTABLISHED - MAINTENANCE REQUIRED	MAINTENANCE
EVENTS OR ALARMS CONCERNING FAULTS ON THE MAIN POWER SUPPLY	MISSING NETWORK
EVENTS OR ALARMS CONCERNING FAULTS ON THE OPENING OR CLOSING LIMIT SWITCHES	LIMIT SWITCH
EVENTS OR ALARMS CONCERNING THE EMERGENCY MANŒUVRES PERFORMED	CLOSE ALWAYS
EVENTS OR ALARMS CONCERNING THE EMERGENCY MANŒUVRES PERFORMED	EMERGENCY
EVENTS OR ALARMS CONCERNING THE BATTERY FUNCTIONALITY	BATTERY

IT IS ALWAYS RECOMMENDED TO CONSULT THE CHAPTER 21 DEDICATED TO TROUBLESHOOTING. MOST OF THE PROBLEMS CAN BE SOLVED BY FOLLOWING THE GIVEN INSTRUCTIONS!

21 - TROUBLESHOOTING

MAKE SURE THAT ALL THE SAFETY DEVICES ARE ENABLED

PROBLEM	POSSIBLE REASON	SOLUTION
The operator does not respond to any START command	a) Check that the N.C. are connected b) Blown fuse	a) Check the connections and the jumpers on the safety edge or stop or photocell inputs, if connected b) Replace the blown fuse on the control unit
The operator does not run and the diagnostic display is off	a) The control unit is not powered b) Fuse open c) Defective control unit d) If the operator is powered only by battery, then the charge may be too low or completely exhausted	a) Check the AC power supply b) Check the fuses c) Replace the defective control unit d) Recharge the battery in AC or with solar panel; If necessary, replace the battery
The operator does not respond to a wired command *(example: Opening, Closing, etc.)*	a) Check the inputs of the opening and closing commands b) The STOP button is activated c) The Reset button is blocked d) Anti-entrapment safety device active e) If the operator is powered only by battery, then the charge may be too low or completely exhausted	a) Check all the opening and closing inputs to make sure they are not blocked b) Check the STOP button is not blocked c) Check the Reset button d) Check among all the inputs of the anti-entrapment protection device, if there is a blocked sensor e) Recharge the battery in AC or with solar panel; If necessary, replace the battery
The operator does not respond to a remote control	a) The STOP button is activated b) The Reset button is blocked c) Poor radio reception	a) Check the STOP button is not blocked b) Check the Reset button c) Check if the other wired devices are working correctly; check the antenna cable
The motor runs in one direction only	a) Try to invert the motor phase and see if it changes direction or not	a) If the motor is blocked, replace the cable; if the motor moves in one direction only, the motor direction relay is damaged
The gate does not move but the motor runs	a) The engine is in the locked position b) Presence of an obstacle	a) Release the motor b) Remove the obstacle
The gate does not reach the complete open or closed position	a) Wrong limit switch setting b) Programming error c) Gate is stopped by an obstacle d) Torque too low e) The gate is too heavy to perform the automatic slowdown	a) Set the limit switches b) Repeat the working times programming c) Remove the obstacle d) Increase the torque parameter e) Set the slowdown to OFF
The gate opens but does not close	a) The photocells contacts are connected and open b) Stop contact connected and open c) The safety edge contact is open d) Amperometric alarm	a) b) c) Check the jumpers or the connected devices or the warning signals on the flashing lamp d) Check for a possible the amperometric alarm and, if necessary, increase the torque parameter
The gate does not close automatically	a) Pause time set too high b) Semi-automatic logic control unit	a) Adjust the pause time b) Set the PAUSE TIME menu to a value different than OFF
The gate moves, but the limit switches cannot be set correctly	a) The gate does not move towards a stop position b) It is too difficult to move the gate	a) Manually unlock and move the gate and make sure the gate moves easily from limit switch to limit switch. If necessary, repair the gate b) The gate must be able to move easily and freely throughout its travel, from limit switch to limit switch. If necessary, repair the gate
The gate does not fully open or close when the limit switches are set	a) The gate does not move towards a limit switch b) It is too difficult to move the gate	a) Manually unlock and move the gate and make sure the gate moves easily from limit switch to limit switch. If necessary, repair the gate b) The gate must be able to move easily and freely throughout its travel, from limit switch to limit switch. If necessary, repair the gate
The gate stops during travel and reverses direction	a) Open/Close control active b) The obstacle detection sensitivity is too low c) The battery voltage is too low	a) Check if there is an active input among all the opening and closing inputs b) Check the obstacle detection sensitivity value and try to increase it c) The minimum battery voltage must be 23.0Vdc. Recharge the battery in AC or with solar panel; If necessary, replace the battery
The gate does not respect the slowdown start points	a) The encoder does not work properly when activated b) Slow mechanical clutch c) Too large deceleration space d) The potentiometer does not work correctly when activated e) The parameters of the recovery position are too high or too low	a) Check in the Encoder menu that the "Encoder Par" parameter is set from a low value of +/- 10 (gate completely closed) to "Encoder tot" (gate completely open). If the IPAR movement is not in line with the range of values (from +/- 10 to "Encoder tot") probably the encoder is defective b) Tighten the mechanical clutch c) Reduce the slowdown space d) Check in the Potentiometer menu that the "IPAR" parameter is set from "I.CH." (gate completely closed) to "I.AP." (gate completely open). If the"IPAR" movement is not in line with the range of values (from I.AP. to I.CH.), the potentiometer is probably faulty e) Reduce or increase the values of the "recovery position"

PROBLEM	POSSIBLE REASON	SOLUTION
The gate opens but does not close with TX or closing timer	a) Opening control active b) Pause not set c) The closing anti-entrapment protection device is active d) The photocell contact is open e) The fire switch input is active	a) Check if there is an active input among the open inputs b) Check the pause settings c) Check if there is an active sensor among all the inputs of the anti-entrapment protection device d) Check the contact of the photocells e) Check the fire switch input
The gate opens suddenly but any START command have been given	a) Frequency or disturbances on the main line b) Short-circuit on the START contact	a) The AC wiring must be separated from the DC wires and run through separate conduits. If it is a frequency disturbance, you can change the frequency to another MHz value, such as 868 or FM b) Check all the START contacts
The gate does not accept the close command during the pause in automatic logic, even if the loop or photocell are set as Start	a) START IN PAUSE is not ON b) The photocell/loop input is not set as "pause reload"	a) Turn ON the START IN PAUSE menu b) Set "pause reload" in the photocell / loop menu
The gate does not have the necessary force to close or reach the limit switch	a) Slowing down is not possible either because the gate is too heavy or because of the inclination or because the installation is not new	a) Set the slowdown to OFF
The gate travel is obstructed and cannot stop or reverse	a) Force the necessary adjustment	a) Refer to the adjustment parameter to carry out the obstruction tests and make the correct adjustments of the force (sensitivity - torque)
The photocell does not stop or reverse the gate travel	a) The photocell wiring is incorrect b) The photocell is faulty c) The photocells have been installed too far apart	a) Check the photocell wiring. Check that the gate stops and reverses its direction when the photocell is engaged b) Replace the faulty photocell. Check that the gate stops and reverses its direction when the photocell is engaged c) Install the photocells closer or use safety edges with sensors
The safety edge does not stop or reverse the travel of the gate	a) Incorrect wiring of the edge sensor b) Defective edge sensor	a) Check the safety edge wiring. Check that the gate stops and reverses its direction when the edge is activated b) Replace the defective safety edge and check that the gate stops and reverses its direction when it is activated
The alarm sounds for 5 minutes or the alarm sounds after a command	a) A double entrapment has occurred (two obstructions within a single activation)	a) Check the cause of the entrapment detection (obstruction) and correct it. Press the reset button to silence the alarm and reset the operator
The shadow loop does not hold the gate on the opening limit switch	a) Shadow loop sensor incorrectly adjusted b) Defective shadow loop sensor c) Wrong setting	a) Check the shadow loop settings and reset as needed b) Replace the defective vehicle sensor c) Check that menu 98 is on SHADOW LOOP
The accessories connected to the 24V accessory power supply do not work properly, they turn off or restart	a) Accessory power supply protection active b) Defective electronic control unit	a) Disconnect all devices powered by the 24V output for the accessories power supply and measure their voltage (must be 23-30 Vdc). If the voltage is correct, reconnect the accessories one at a time, measuring each time the voltage b) Replace the defective control unit
Fault on the 24VAUX	a) Overload/short-circuit on AUX input b) Blown fuse	a) Check if the cable is shorted b) Replace the fuse
The control unit turns on but the motor does not run	a) STOP active or wrong jumpers b) Open or close the active input c) Active Entrapment Protection Device d) Defective electronic control unit	a) Check that the STOP button is not blocked, that it is a N.C. contact or put a jumper on the Stop input b) Check that none of the opening and closing inputs are blocked c) Check whether there is a blocked sensor among all the entrapment protection device inputs d) Replace the defective control unit
The operator does not support enough daily cycles when powered by solar panel	a) Insufficient power (Watt) of the panel b) Excessive absorption by accessories c) Battery exhausted d) The solar panels are not sufficiently irradiated	a) Add more solar panels b) Use low absorption accessories or set the 24VAux output to "In Cycle" (Aux active only during the cycle) c) Replace the battery d) Position the solar panels in more illuminated points (avoid the shade of trees, buildings, etc.)
The operator has insufficient stand-by time when powered by a solar panel	a) Insufficient power (Watt) of the panel b) Excessive absorption by accessories c) The battery voltage is too low	a) Add more solar panels b) Use low absorption accessories c) Use batteries with higher amperage (Ah)

USER 1 DG R1B MENU FUNCTIONS TABLE

MENU		SET	DESCRIPTION	DEFAULT	NOTES
1	LANGUAGE	*Italiano*	Italian	*English*	
		English	English		
		Français	French		
		Español	Spanish		
		Dutch	Dutch		
		Polski	Polish		
2	TRANSMITTERS	*Start*	Start	*Start* *Partial* *Opening*	
		Partial START	Partial START		
		External module	External module		
		Stop	Stop		
		Bistable Stop	Pressed once, it stops the gate. Pressed twice, it reactivates the START input		
		Latch opening	One impulse opens and keep open. A second impulse restore the movement		
		Latch closing	One impulse closes and keep closed. A second impulse restore the movement		
		Unlock	To store a command for unlocking the electric brake		
		Delete a transmitter	To delete a single transmitter (TX)		
		Clear memory	To delete the full transmitters memory on the receiver		
		End	To exit the menu «transmitters»		
3	MOTOR	***2-** SLIDING*	24V electro-mechanic operators for sliding gates	- - - -	
		***16-** SPRINT*	24V hydraulic barrier		
		***17-** STORM*	24V electro-mechanic barrier		
		***18-** MERCURY 800*	24V electro-mechanic operators for sliding gates		
		***19-** VERG L*	24V electro-mechanic barrier		
		***20-** VERG*	24V electro-mechanic barrier		
		***21-** ERG MAXI*	24V electro-mechanic operator for garage doors		
		***23-** ERG*	24V electro-mechanic operator for garage doors		
		***24-** MERCURY FAST* *MERCURY SUPER FAST*	24V electro-mechanic operators for sliding gates		
		***26-** TAURUS - MERCURY* *NO LIMIT SWITCH*	24V electro-mechanic operators for sliding gates ***Without Limit Switch***		
		***27-** B224 - B800* *NO LIMIT SWITCH*	24V electro-mechanic operators for sliding gates ***Without Limit Switch***		
		***28-** SATURN FAST* *SATURN SUPER FAST*	24V electro-mechanic operators for sliding gates		
		***41-** TAURUS/ORION CHAIN* *NO LIMIT SWITCH*	24V electro-mechanic chain operators for sliding gates ***Without Limit Switch***		
		***61-** CHAIN*	24V electro-mechanic chain operators		

MENU		SET	DESCRIPTION	DEFAULT	NOTES
4	GATES NUMBER	*From 1 to 2*	To set the number of operators to be managed ***This menu is available only if the 3-MOTOR menu is set to the options «21-ERG MAXI» or «23-ERG»***	*1*	
5	REVERSE MOTOR	*On*	To reverse the opening with the closing or vice-versa ***(both motors and limit-switches are reversed)***	*Off*	
		Off	Off		
6	LOGIC	*Automatic*	Automatic logic - ***automatic reclosing enabled***	*Auto-matic*	
		Open-stop-close-stop-open	Step by step type 1		
		Open-stop-close-open	Step by step type 2		
		2 button	Two buttons		
		Safety	Safety		
		Dead man	Dead man		
7	TIMER TO CLOSE	*Off*	Semi-automatic logic enabled ***a START command opens and another START closes the gate - automatic reclosing disabled***	*Off*	
		1 240	To set a pause time (from 1 second to 4 minutes) before the automatic reclosing		
8	START IN PAUSE	*Off*	The START command is not accepted during pause	*Off*	
		On	The START command is accepted during pause		
9	PROGRAMMING	*Off On*	To start up the working times learning	*Off*	
10	TEST START	*Off On*	To give a START command for testing the operator ***(This command can be used only if the unit has already been programmed!)***	*Off*	
11	BEAM LENGTH	*3m - 4m - 5m - 6m* *7m - 7,5m*	This menu will be shown only if the menu **3-MOTORS** is set to the options **«16-SPRINT»** or **«17-STORM»** or **«19-VERG L»** or **«20-VERG»**. It allows to set the beam length *(values in meters)*	*Off*	
14	RESET	A count-down of 5 seconds will start by holding the UP button; at its end «INIT» will appear on the display as confirmation of the control board reset			
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*			

SPECIAL MENU

UP DOWN

PRESS AT THE SAME TIME FOR 5 SECONDS TO ENTER OR TO EXIT THE SPECIAL MENU

SPECIAL MENU		SET	DESCRIPTION	DEFAULT	NOTES
17	OPENING SPEED 1	*30% 100%*	Motor 1 speed in opening	*80%*	
18	CLOSING SPEED 1	*30% 100%*	Motor 1 speed in closing	*80%*	
21	SLOWDOWN SPEED IN OPENING 1	*From 30% to 100% of the maximum speed*	Motor 1 slowdown speed in opening	*40%*	
22	SLOWDOWN SPEED IN CLOSING 1	*From 30% to 100% of the maximum speed*	Motor 1 slowdown speed in closing	*40%*	
25	LEARNING SPEED	*30% 100%*	To adjust the working times learning speed. ***This setting changes according to the motor set on Menu 3***	*It depends on model*	
NOTE: The range of values that can be set in all the SPEED menus may vary according to the operator model					
28	OPENING TORQ 1	*10% 100 %*	**Motor 1 torque in opening:** the higher the torque value, the more force is required to execute the inversion in case of obstacle.	*It depends on model*	
29	CLOSING TORQ 1	*10% 100 %*	**Motor 1 torque in closing:** the higher the torque value, the more force is required to execute the inversion in case of obstacle.	*It depends on model*	
32	ENCODER	*ON*	**ON** = Standard Encoder Enabled **OFF** = Standard Encoder Disabled ***(when OFF, only the learnt working times are shown)***	*Off*	
	47 ENCODER PAR. M1	*xxx.*	Impulses read by Encoder during operation **(Motor 1)**		
	48 ENCODER TOT. M1	*xxx.*	Impulses stored during programming **(Motor 1)**		
32	ENCODER	*OFF*	**ON** = Standard Encoder Enabled **OFF** = Standard Encoder Disabled ***(when OFF, only the learnt working times are shown)***	*Off*	
	65 OPENING TIME M1	*xxx.s*	To display the learnt value during the working times self learning, in opening and closing ***(Motor 1)*** . With UP or DOWN it is possible to increase or reduce the working times		
	66 CLOSING TIME M1	*xxx.s*			
33	OPENING SENSITIVITY MOTOR 1	*10% (Fast intervention)* *99% (Slow intervention)*	To adjust the Encoder or the amperometric intervention time on the Motor 1 in opening	*30%*	
		Off (Intervention excluded)	Disabled		
34	CLOSING SENSITIVITY MOTOR 1	*10% (Fast intervention)* *99% (Slow intervention)*	To adjust the Encoder or the amperometric intervention time on the Motor 1 in closing	*30%*	
		Off (Intervention excluded)	Disabled		
37	SLOWDOWN SENSITIVITY	*10% (Fast intervention)* *99% (Slow intervention)*	To adjust the Encoder or the amperometric intervention on the Motor during the slowdown	*30%*	
		Off (Intervention excluded)	Disabled		
46	CLOSING INVERSION	*Total*	In case of obstacle or safety edge intervention during the closing, the gate totally reverses the movement. If the automatic reclosing is enabled ***(automatic logic)***, it is attempted for 5 times	*It depends on model*	
		Partial	In case of obstacle or amperometric intervention or safety edge, the gate partially reverses direction ***(of about 30 cm)*** then stops		
The menus 47 - 48 are shown only if the menu 32- ENCODER = ON					
57	WORKING CURRENT	*..... Ampere*	To display the absorbed current during the Motor 1 operation	- - - -	

	SPECIAL MENU	SET	DESCRIPTION	DEFAULT	NOTES
59	OPENING SLOWDOWN 1	*Off* *100%(*)*	Adjustable from OFF *(disabled)* to the 100% of the stroke	*It depends on model*	
60	CLOSING SLOWDOWN 1	*Off* *100%(*)*	Adjustable from OFF *(disabled)* to the 100% of the stroke	*It depends on model*	
**** The slowdown starts once half of the total stroke is reached***					
63	DECELERATION	*0%* *100%* 	To adjust the change from normal speed to slowdown speed	*It depends on model*	
64	ACCELERATION	*0%* *100%* 	Acceleration ramp. To adjust the motor start up speed	*It depends on model*	
The menus 65 - 66 are shown only if the menu 32- ENCODER = OFF					
70	OPENING POSITION RECOVERY	*0* *15 seconds*	After a STOP or an inversion command given during the opening, the gate recovers the excess space traveled by inertia	*6s*	
71	CLOSING POSITION RECOVERY	*0* *15 seconds*	After a STOP or an inversion command given during the closing, the gate recovers the excess space traveled by inertia	*6s*	
72	OPENING TOLERANCE MOTOR 1	*0%* *100%*	To adjust the tolerance space between the recognition of the mechanical stop in opening and the recognition of the obstacle - In case of obstacle within the tolerance space, this will be considered as mechanical stop	*0%*	
73	CLOSING TOLERANCE MOTOR 1	*0%* *100%*	To adjust the tolerance space between the recognition of the mechanical stop in closing and the recognition of the obstacle - In case of obstacle within the tolerance space, this will be considered as mechanical stop	*0%*	
79	ANTI INTRUSION	*Only opening*	If the gate moves, whether due to wind or manual forcing, the function starts up the operator to restore the initial position. ***(function available only if limit switch are installed)***	*Off*	
		Only closing			
		Opening and closing			
		Off			
82	MOTOR RELEASE	*Off*	If different than OFF, the motor slightly reverses the rotation direction for the set percentage space at the end of the cycle	*Off*	
		0% *100%*			
85	PRE-FLASHING	*Only closing*	To enable the pre-flashing only before closing ***(To access this option: press DOWN when 0.0 is shown)***	*Off*	
		0.0 *5s*	To set the pre-flashing duration		
86	FLASHING LIGHT	*Normal*	Normal	*Normal*	
		Light	Warning lamp function		
		Always	Always ON		
		Buzzer	Buzzer		
87	FLASHING LIGHT AND TIMER	*Off*	The flashing light is OFF when the timer is enabled timer and the gate is open	*Off*	
		On	The flashing light is ON when the timer is enabled timer and the gate is open		
88	COURTESY LIGHT	*Off*	Disabled	*Off*	
		1 *240*	Adjustable from 1 second to 4 minutes		
		In cycle	Courtesy light only in cycle		
89	TRAFFIC LIGHT RESERVATION	*Off* *On*	To get the priority in entry *(via a **START** command)* or in exit *(via a **PARTIAL START** command)*. ***The function is available only if a traffic light is wired via SEM management unit***	*Off*	
90	PARTIAL OPENING	*20%* *100%*	Adjustable from 20% to 100%	*30%*	
91	PARTIAL PAUSE	*= Start*	The pause in partial opening is the same as in total opening	*= Start*	
		Off	Disabled		
		1 *240*	Adjustable from 1 second to 4 minutes		

SPECIAL MENU		SET	DESCRIPTION	DEFAULT	NOTES
92	TIMER	*Off*	The selected input will be turned into an input (on CN1) to which connect an external clock	*Off*	
		On Photocell 2			
		On Partial Start			
94	24V AUX ***(Max. 200 mA)*** ***The AUX output allows the wiring of additional accessories via relay; accessories will work according to the chosen option***	*Always*	AUX output always powered	*Always*	
		In cycle	AUX output powered only during cycle		
		Opening	AUX output powered only during opening		
		Closing	AUX output powered only during closing		
		In pause	AUX output powered only during pause		
		Phototest	AUX output powered for safety devices testing		
		In cycle and phototest	AUX powered only during cycle and for safety devices testing		
		Positive brake management	AUX output powered only when the gate is stationary ***Ex.: positive electric brake connected via relay***		
		Negative brake management MAGLOCK	AUX output powered during cycle and 1 second before starting the movement ***Ex.: negative electric brake connected via relay***		
		Open gate warning light	**1 flash per second -** during opening **2 flashes per second -** during closing **Steady lit -** gate in «STOP» or «OPEN» status		
		Start 3 s	AUX output powered at every START input or at every photocells or safety edge intervention, for 3 seconds ***ie.: a courtesy light connected via relay***		
		Barrier Led lights	**Closed barrier -** the light is switched-on **Open barrier -** the light is switched-off **Moving barrier -** the light blinks		
95	PHOTO-TEST	*Photocell 1*	Self-test enabled only on photocell 1	*Photo 1 and 2*	
		Photocell 2	Self-test enabled only on photocell 2		
		Photocells 1 and 2	Self-test enabled on photocells 1 and 2		
97	PHOTOCELL 1 SHADOW LOOP 1	*Closing*	If the photocell is occupied during closing, the gate reverses the movement; If the photocell is occupied during the pause, it prevents the gate reclosing	*Closing*	
		Opening and closing	If the photocell is occupied during opening or closing, it stops the gate movement; when released, the movement continues		
		Stop	If the photocell is occupied before the Start input, the Start will be ignored. If the photocell is occupied after the Start input, the photocell will be ignored. If the photocell is occupied during closing, the gate will reopen		
		Stop and close	If the photocell is occupied during closing, it stops the gate movement; when released, the closing movement continues		
		Close	The photocell stops the gate until it is occupied in both opening and closing; when released, it send a closing input ***(the gate closes 1s after the photocell release)***		
		Pause reload	If the photocell is occupied during opening or closing, it stops the gate movement; when released, the movement continues. If the photocell is occupied during the pause, it recharges the pause time set		
		Shadow loop	When the gate is open, the shadow loop prevents the reclosing until it is occupied. The Shadow loop is switched off during closing		
		Delete pause time	If the photocell is occupied during opening, pause or closing, the gate reopens completely and closes without observing the pause time set		
		Shadow loop RP ***(pause reloading)***	When the gate is open, the shadow loop prevents the reclosing until it is occupied. When released, the gate repeats the pause time set, then it closes. The Shadow loop is switched off during closing		

SPECIAL MENU		SET	DESCRIPTION	DEFAULT	NOTES
98	PHOTOCELL 2 SHADOW-LOOP2	*Closing*	If the photocell is occupied during closing, the gate reverses the movement; If the photocell is occupied during the pause, it prevents the gate reclosing	*Opening and Closing*	
		Opening and closing	If the photocell is occupied during opening or closing, it stops the gate movement; when the photocell is released, the movement continues		
		Stop	If the photocell is occupied before the Start input, the Start will be ignored. If the photocell is occupied after the Start input, the photocell will be ignored. If the photocell is occupied during closing, the gate will reopen		
		Stop N.O.	Stop connection on ERG push-button panel		
		Stop and open	If the photocell is occupied during opening, the gate will stop; when released, the gate continues the opening movement. The photocell is ignored during closing		
		Stop and close	If the photocell is occupied during closing, it stops the gate movement; when released, the closing movement continues		
		Close	The photocell stops the gate until it is occupied in both opening and closing; when released, it send a closing input ***(the gate closes 1s after the photocell release)***		
		Pause and close	The photocell stops the gate in opening for a time equal to the pause time set for automatic re-closing ***(menu 7)*** then the gate closes; Furthermore, if you give a START command when the gate is closed but the photocell busy, the gate does not open: it will be necessary to release the photocell and give another START command		
		Pause reload	If the photocell is occupied during opening or closing, it stops the gate movement; when released, the movement continues. If the photocell is occupied during the pause, it reloads the pause time set		
		Pause reload Photo closing	If the photocell is occupied during the pause, it reloads the pause time set. If the photocell is occupied during closing, the gate reverses the movement		
		Shadow loop	When the gate is open, the shadow loop prevents the reclosing until it is occupied. The Shadow loop is switched off during closing		
		Delete pause time	If the photocell is occupied during opening, pause or closing, the gate reopens completely and closes without observing the pause time set		
		Shadow loop RP ***(pause reloading)***	When the gate is open, the shadow loop prevents the reclosing until it is occupied. When released, the gate repeats the pause time set, then it closes. The Shadow loop is switched off during closing		
		Safety edge 2	To enable the second N.C Standard safety edge wired on the *«photocell 2»* input It is possible to choose the working direction of the second safety edge by the menu 103		
99	PHOTO OFF IN CLOSING	*0%* *50%*	In closing, this function excludes the photocell reading for the space percentage set	*0%*	
100	SAFETY EDGE 1	*Normal*	Standard safety edge - N.C. contact	*Normal*	
		8K2	Safety edge protected by a 8K2 resistor enabled		
		8K2 Double	Two safety edges protected by a 8K2 resistor enabled		
		Photo 1 10K	Photocell protected by a 10K resistor enabled		
		Photo 1 10K Double	Two photocells protected by a 10K resistor enabled		
102	SAFETY EDGE 1 DIRECTION	*Opening and closing*	Safety edge enabled in opening and closing	*Opening and Closing*	
		Only opening	Safety edge enabled only in opening		
		Only closing	Safety edge enabled only in closing		

SPECIAL MENU		SET	DESCRIPTION	DEFAULT	NOTES
103	SAFETY EDGE 2 DIRECTION ***Menu available only if the menu 98 is set on "SAFETY EDGE 2"***	*Opening and closing*	Safety edge enabled in opening and closing	*Opening and Closing*	
		Only opening	Safety edge enabled only in opening		
		Only closing	Safety edge enabled only in closing		
104	SELECT LIMIT SWITCH	*N.C.*	The mechanical limit switch is detected during the learning	*N.C.*	
		N.O.	The mechanical limit switch is detected during the learning		
105	PRIMARY/SECONDARY *(MASTER/SLAVE)*	*Primary*	To set the control unit as **PRIMARY** on applications with two operators in primary/secondary mode	*Off*	
		Secondary	To set the control unit as **SECONDARY** on applications with two operators in primary/secondary mode		
		Off	Disabled		
106	DIAGNOSTICS	*1* *10*	To display the last 10 events *(alarms)* ***(See Chapter «ALARMS»)***	- - - -	
107	MAINTENANCE CYCLES	*100* *240000*	Adjustable from 100 to 240000 cycles	*100000*	
108	PERFORMED CYCLES	*0* *240000*	To display the executed cycles. ***Hold pressed OK to reset the cycles***	*0*	
112	PASSWORD	***Note: «0000» setting is not allowed***	To enter a password for blocking the control unit parameters modification	- - - -	
113	EMERGENCY	*Off*	Disabled	*Off*	
		Emergency	In case of power failure and with batteries connected and charged, the gate opens completely and remains open until the power is restored		
		Last opening	In case of power failure, as soon as the battery charge drops below 22V, the gate opens one last time and remains open until the power is restored		
		Last closing	In case of power failure, as soon as the battery charge drops below 22V, the gate closes one last time and remains closed until the power is restored		
117	ALWAYS CLOSE	*Off* *240 seconds*	In case of power failure, if the gate has been manually open, it closes only after the set time has elapsed ***(from 0 to 240 sec.)*** as soon as the power is restored	*Off*	
118	LATCH	*Off*	Disabled	*Off*	
		Opening	To enable the LATCH button wired to the «Partial Start» N.O. input; ***(Partial Start function will be disabled)*** after a LATCH button command the gate opens and stay open till a new LATCH button command		
		Closing	To enable the LATCH button wired to the «Partial Start» N.O. input; ***(Partial Start function will be disabled)*** after a LATCH button command the gate closes and stay closed till a new LATCH button command		
To disable the LATCH, press one more time the same button used to enable ***The LATCH command can also be sent from Tx or SEACLOUD, thus keeping the PARTIAL START input free***					
119	DISPLAY WRITING SPEED	*From 30% to 100%*	The scrolling speed of the text can be adjusted from 30% to 100%	*80%*	
If the menu 119 is set to the minimum value of 30%, the scrolling speed will be low. ***On the contrary, if adjusted to the maximum value of 100%, the scrolling speed of the text will be very high.*** ***Note: the speed does not change on the display of the JOLLY 3 programmer!***					
120	BASIC MENU	Press OK to exit the special menu. The special menu switches off automatically after 20 minutes			

PART FOR BOTH INSTALLER AND END-USER

MAINTENANCE: periodically, it would be advisable to reprogram the working times on the control unit according to the number of cycles performed over time and according to the type of operator, especially if changes in friction, malfunctions or non-compliance with the previously set working times are noticed. Periodically clean the optical system of the photocells.

SAFETY PRECAUTIONS: all electrical works and the choice of the operating logic should comply with the current regulations. A 16A/0,030 differential switch must be used. Separate the source cables *(operators, power supply)* and command cables *(photocells, push-buttons, etc)*. Be sure the system is properly grounded. Always run cables in separate sheaths to prevent interferences

SPARE PARTS: send request for spare parts to: ***SEA S.p.A. - Teramo - ITALY - www.seateam.com***

SAFETY AND ENVIRONMENTAL COMPATIBILITY: do not waste product packaging materials and/or circuits; do not dispose of the product with other domestic waste at the end of its life cycle. In order to avoid any possible environmental or health damage caused by irregular waste disposal, we recommend to separate this product from other types 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 to get all the information related to differential waste collection and recycling of this kind of product.

STORAGE: T = -30°C/+60°C ; Humidity = min. 5% / max. 90% (without condensation); Materials must be properly packaged, handled with care and with appropriate vehicles

WARRANTY LIMITS: - see the sales conditions

MAINTENANCE AND DECOMMISSION: must be carried out only by specialized and authorized personnel

THE MANUFACTURER CAN NOT BE DEEMED RESPONSIBLE FOR ANY DAMAGE OR INJURY CAUSED BY IMPROPER USE OF THIS PRODUCT

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

GENERAL NOTICE

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 comply with Directives: Machine Regulation 2006/42/CE and following adjustments, Low Tension (2006/95/CE), Electromagnetic Consistency (2004/108/CE); Installation must respect 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 grounding system is perfectly constructed, and connect to it the metal parts of the gate

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 concerning the automated system safety and efficiency, if components used are not produced by SEA

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 the system 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. The 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 mm2 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 safety low voltage (SELV) or use an appropriate sheath that provides extra insulation having a thickness of 1 mm

TERMS OF SALE

EFFICACY OF THE FOLLOWING TERMS OF SALE: the following general terms of sale shall be applied to all orders sent to SEA S.p.A. All sales made by SEA to all customers 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 EN12453 – EN 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 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 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 or damage of the goods during transport, are at Buyer's cost

6) COMPLAINTS Any complaints 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 its supplies of raw material which is necessary for the production; Eventual completely or partially unsuccessful executions cannot be reason for complaints 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 property 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 LAW**

Automatic Gate Openers
International registered trademark n. 804888

DECLARATION OF CONFORMITY
DICHIARAZIONE DI CONFORMITÀ

SEA S.p.A. declares under its proper responsibility and, if applicable, under the responsibility of its authorised representative that, by installing the appropriate safety equipment and noise filtering, the products:

La SEA S.p.A. dichiara sotto la propria responsabilità e, se applicabile, del suo rappresentante autorizzato che, con l'installazione degli adeguati dispositivi di sicurezza e di filtraggio disturbi, i prodotti:

DESCRIPTION - *DESCRIZIONE*	**MODEL** - *MODELLO*	**TRADEMARK** - *MARCA*
USER 1 24V DG R1B *(AND ALL ITS BY-PRODUCTS - E TUTTI I SUOI DERIVATI)*	**23024055**	**SEA**

- are built to be integrated into a machine or to be assembled with other machinery to create a machine under the provisions of Directive 2006/42/CE;
- comply with the essential safety requirements related to the products within the field of applicability of the Community Directives 2014/35/UE and 2014/30/UE

- sono costruiti per essere incorporati in una macchina o per essere assemblati con altri macchinari per costruire una macchina ai sensi della Direttiva 2006/42/CE;
- sono conformi ai requisiti essenziali di sicurezza relativi ai prodotti entro il campo di applicabilità delle Direttive Comunitarie 2014/35/UE e 2014/30/UE

PLACE AND DATE OF ISSUE
LUOGO E DATA DI EMISSIONE

TERAMO, 06/09/2022

THE MANUFACTURER OR THE AUTHORIZED REPRESENTATIVE
IL COSTRUTTORE O IL RAPPRESENTATE AUTORIZZATO

SEA S.P.A.
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L'Amministratore
The Administrator
Ennio Di Saverio

CE UKCA

SEA®

Automatic Gate Openers

International registered trademark n. 804888

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