

GATE 2 DG R1B

CONTROL UNIT FOR ONE OR TWO OPERATORS 230V/115V MANAGEMENT



SEA S.p.A.

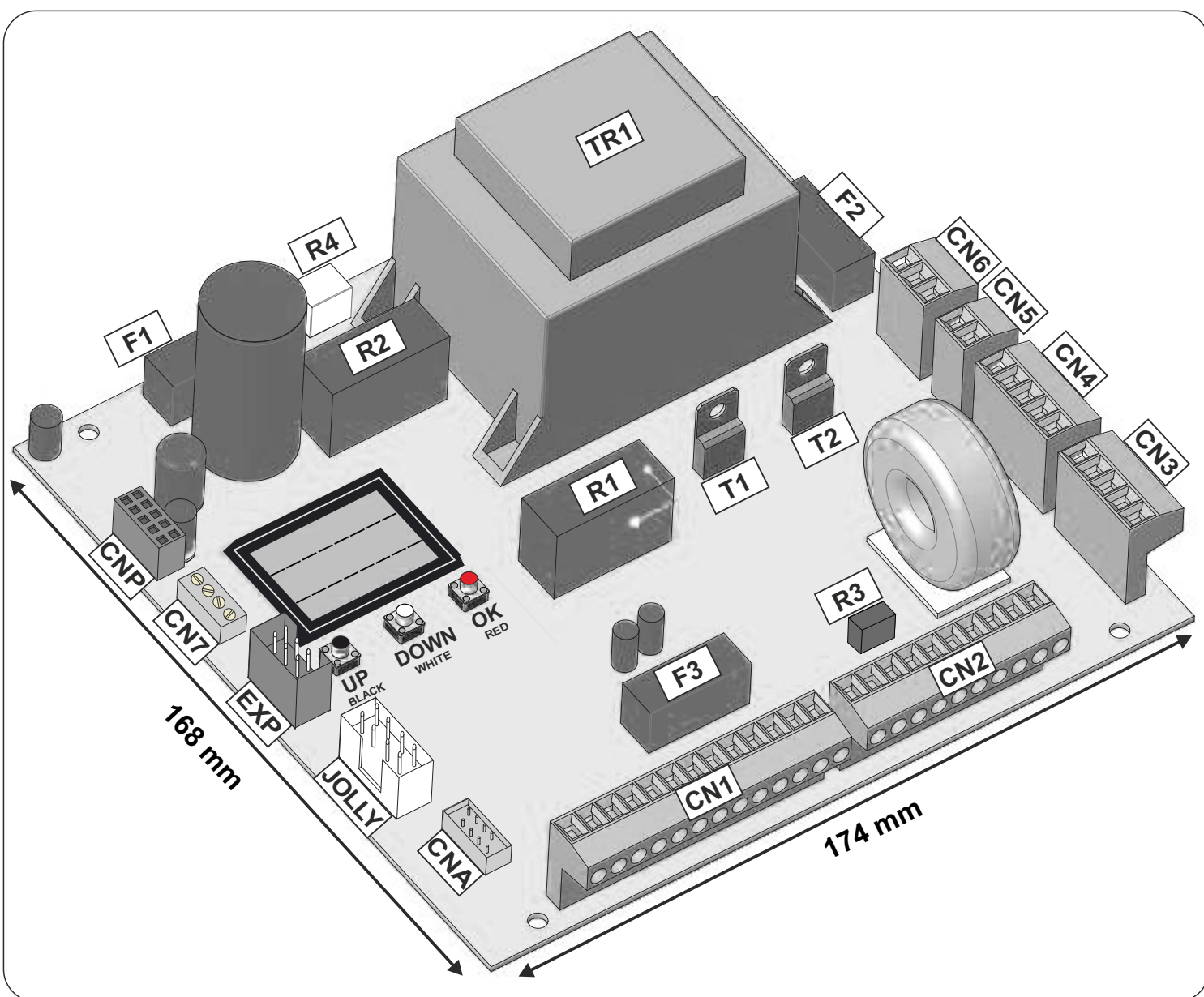
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COMPONENTI - COMPONENTS - COMPOSANTS - COMPONENTES



DATI TECNICI - TECHNICAL DATA DONNEES TECHNIQUES - DATOS TECNICOS

ALIMENTAZIONE	230 Vac 50/60 Hz 115Vac 50/60 Hz
POWER SUPPLY	
ALIMENTATION	
ALIMENTACIÓN	

TEMPERATURA DI ESERCIZIO	-20°C ↗ +50°C ↘
WORKING TEMPERATURE	
TEMPERATURE DE TRAVAIL	
TEMPERATURA DE TRABAJO	

ASSORBIMENTO IN STAND-BY	30 mA
STAND-BY ABSORPTION	
ABSORPTION EN STAND-BY	
ABSORCIÓN EN STAND-BY	

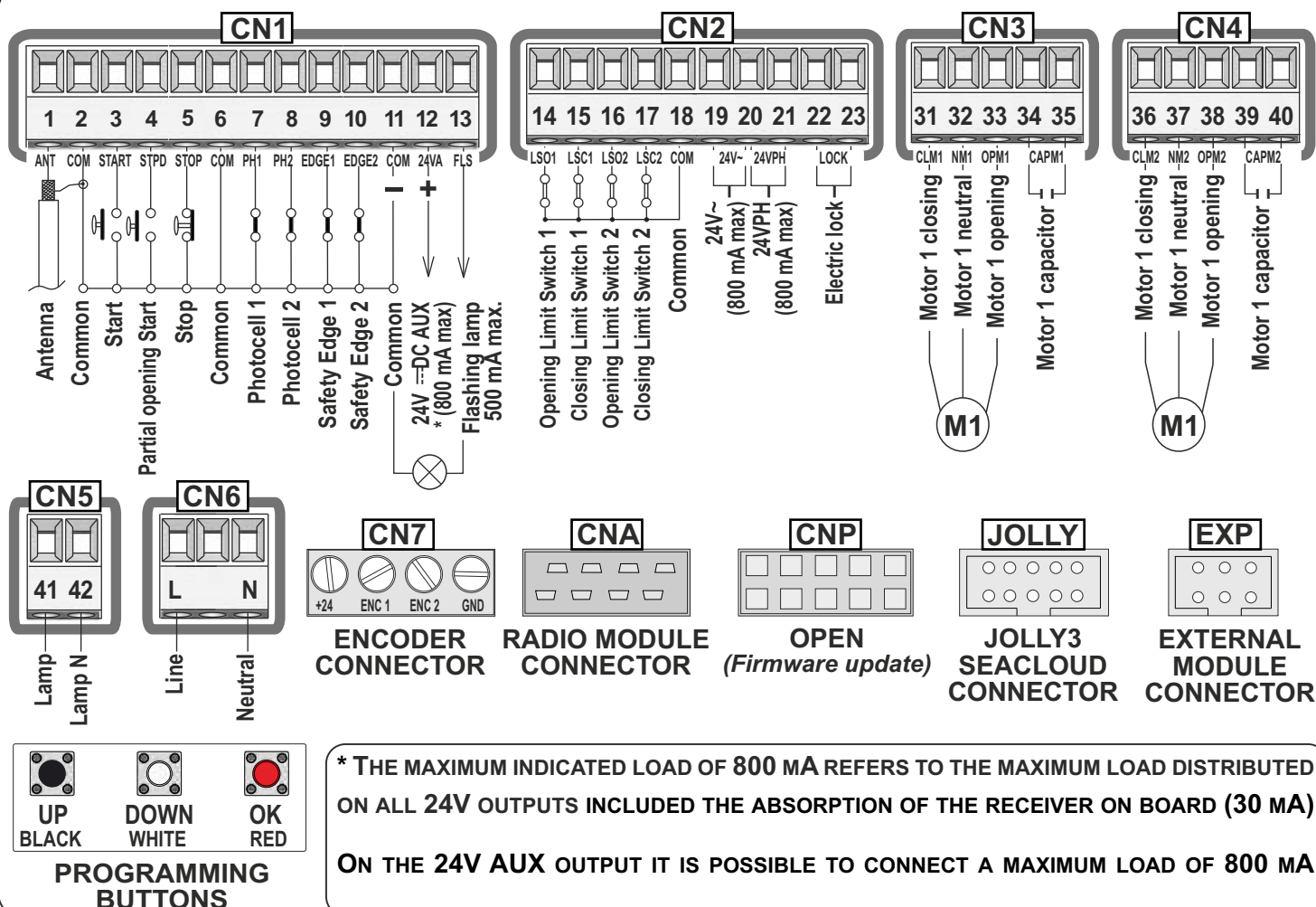
SCATOLA PER ESTERNO	325,7 x 246 x 140 mm IP55
EXTERNAL BOX	
BOITIER EXTERIEURE	
CONTENEDOR EXTERIOR	

COMPONENTI - COMPONENTS - COMPOSANTS - COMPONENTES

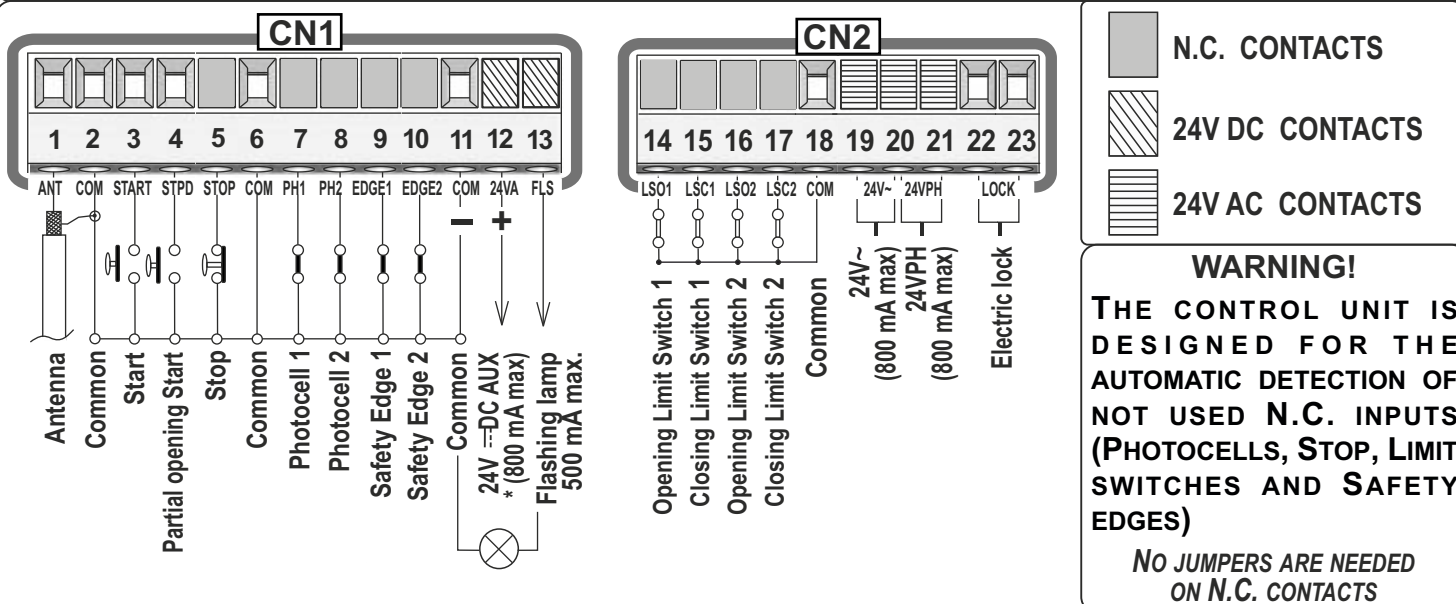
	ITALIANO	ENGLISH	FRANÇAIS	ESPAÑOL
CN1	ingresso / uscita	input / output	entrée / sortie	entrada / salida
CN2	finecorsa 24V elettroserratura	limit switch 24V electric lock	fin de course 24V serrure électrique	final de carrera 24V cerradura eléctrica
CN3	motore 1 condensatore M1	motor 1 capacitor M1	moteur 1 condensateur M1	motor 1 condensador M1
CN4	motore 2 condensatore M2	motor 2 capacitor M2	moteur 2 condensateur M2	motor 2 condensador M2
CN5	luce di cortesia	courtesy light	lumière de courtoisie	luz de cortesía
CN6	alimentazione	power supply	alimentation	alimentación
CN7	encoder	encoder	encodeur	encoder
CNA	ricevente RX	RX receiver	récepteur RX	receptor RX
CNP	programmazione	programming	programmation	programación
EXP	modulo esterno	external module	module externe	módulo externo
JOLLY	JOLLY 3 SEACLOUD	JOLLY 3 SEACLOUD	JOLLY 3 SEACLOUD	JOLLY 3 SEACLOUD
T1	triac pilotaggio motori	motor control triac	triac pilotage moteurs	triac pilotaje motores
T2	triac pilotaggio motori	motor control triac	triac pilotage moteurs	triac pilotaje motores
R1	relay motori	motors relay	relay moteurs	relay motores
R2	relay luce cortesia	courtesy light relay	relay lumière de courtoisie	relay luz de cortesía
R3	relay autotest fotocellula	photocell self-test relay	relay autotest photocellule	relay autotest fotocélula
R4	relay elettroserratura	electric lock relay	relay elettroserratura	relay cerradura eléctrica
F1	fusibile accessori 1 A	1 A accessories fuse	fusible accessoires 1A	fusible accesorios 1A
F2	fusibile 6.3AT (230V) fusibile 10AT (115V)	6.3AT fuse (230V) 10AT fuse (115V)	fusible 6.3AT (230V) fusible 10AT (115V)	fusible 6.3AT (230V) fusible 10AT (115V)
F3	fusibile 6.3 A elettroserratura	electric lock 6.3 A fuse	fusible 6.3 A serrure électrique	fusible 6.3 A cerradura eléctrica
TR1	trasformatore alimentazione	power transformer	transformateur alimentation	transformador alimentación

1 - CONNECTIONS

WARNING: CONNECT ALL DEVICES WITH SWITCHED-OFF CONTROL UNIT



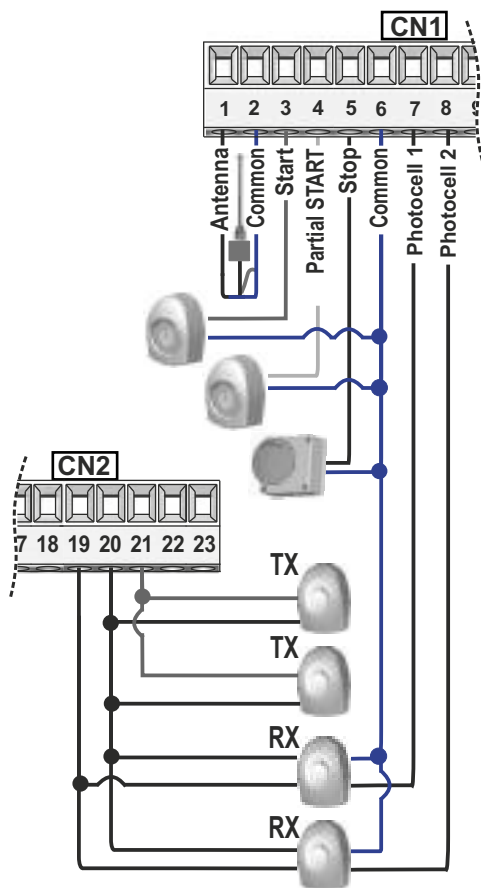
2 - CONTACTS



The inputs excluded in self-learning can be restored in the «INPUTS STATUS CHECK» menu (chapter 13) without need to repeat the control unit self-learning

THE HEREIN REPORTED FUNCTIONS ARE AVAILABLE STARTING FROM SOFTWARE REVISION 03.02 OF THIS CONTROL UNIT AND IT IS COMPATIBLE WITH JOLLY 3 PROGRAMMER

3 - CONNECTIONS ON CN1



3.1 - START (N.O.)

On clamps 3 and 6

The automation can be opened or closed through an impulse transmitted to this input (via key button, keyboard, etc.). To connect other START devices (for ex. the magnetic loop) refer to the respective instructions

Note 1: For details on the logics that can be associated to the START button, see **chapter 15 (LOGICS)**

Note 2: If this contact is engaged during the pause (ie. Timer), the gate will not close until releasing

3.2 - PARTIAL OPENING START (N.O.)

On clamps 4 and 6

The input allows to obtain the partial opening. It is possible to manage the opening space through the **menu-90** or through the JOLLY 3. It is also possible to manage the partial opening pause time through the **menu-91**

Note 1: For details on the logics that can be associated to the PARTIAL OPENING START button, see **chapter 15 (LOGICS)**

Note 2: If this contact is engaged during the pause (ie. Timer), the gate will not close until releasing

IMPORTANT: on **menu 89-TRAFFIC LIGHTS RESERVATION** it is possible to activate the priority in opening or closing to be associated to the START and the PARTIAL OPENING START buttons (only with SEM management unit)

3.3 - STOP (N.C.) On clamps 5 and 6

If this button is pressed the engine stops immediately in whatever condition or position it is. A new Start command will be required to restore the movement.

Note: After the Stop command, the engine will always re-start in closing

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

24V~ max 800mA - COM = 0V (clamps 19 e 20) 24VPH max 800mA - COM = 0V (clamps 20 e 21)

PH1 = Photocell 1 (clamp 7) PH2 = Photocell 2 (clamp 8)

Note 1: To perform the photocells self-test, connect the positive of the TX photocell to the clamp 20 and 21; From the **95-PHOTOTEST** menu options it is possible to choose where to enable the self-test

Note 2: The default settings are: **97-PHOTOCELL 1** = «closing»; **98-PHOTOCELL 2** = «opening and closing»; for further functions and management, see menu-97 and menu-98

3.5 - 24V $\overline{\text{DC}}$ AUX OPTIONS max 800mA

From **menu 94-24VAUX** or through the JOLLY 3 it is possible to choose when to have voltage on the AUX output. On the AUX output it is also possible to connect a relay (*i.e. in paragraph 3.12*) for the connection and the management of additional accessories (electric brake, additional warning lights, etc.)

3.6 - TIMER (N.O.)

On clamp 4 (Partial Opening Start) or on clamp 8 (Photocell 2)

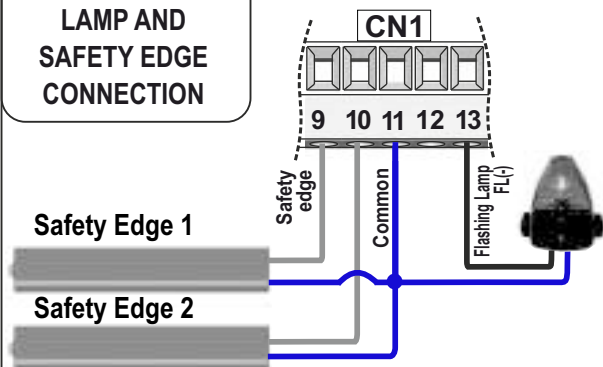
It can be enabled through **menu 92-TIMER** or via JOLLY 3. It opens and keeps the automation open until the contact is released. When released, the operator will wait for the pause time set then will close again

Note 1: If connected to the Partial Opening Start, this command will also be disabled on the remote control

Note 2: If the timer is enabled, in the event of a safety device intervention, the timer automatically reset after 6 seconds

Note 3: In case of a power failure when the gate is open, if the TIMER is still active, the gate automatically closes when the power is restored; if no longer active, a new START impulse will be required

**EXAMPLE OF
LAMP AND
SAFETY EDGE
CONNECTION**



3.7 - 24V \equiv FLASHING LIGHT - MAX 3W

On clamps 11 and 13

It warns of the gate movement by performing 1 blink per second on opening, 2 blinks per second on closing and remaining on steady during pause. Through the flashing light it is also possible to read the alarm signals linked to the Stop, Photocell1, Photocell2 and Edge devices.

From menu **86-FLASHING LIGHT** or JOLLY3 it is possible to modify its functions.

Furthermore it is possible to manage the pre-flashing function from menu **85- PRE-FLASHING**

3.8 - SAFETY EDGE (N.C.)

Safety edge 1 on clamps 9 and 11

Safety edge 2 on clamps 10 and 11

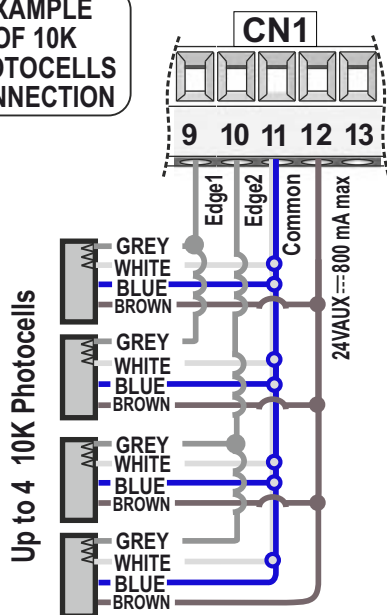
If enabled, the safety edge opens the contact causing a partial inversion of the motion both in opening and closing. The functions can be managed from menus **100-SAFETY EDGE 1** and **101-SAFETY EDGE 2**;

The direction can be managed from menus **102-EDGE 1 DIRECTION** and **103-EDGE 2 DIRECTION**

Note 1: among the options of the menu-100 and menu-101, there is the **8K2 balanced edge** (single or double): the safety edge contact will be controlled by a specific resistance value which detects any possible short-circuit of the device. If the device is unbalanced, a specific alarm will appear on the display

Note 2: it is possible to manage the functions of the safety edges also from the JOLLY 3 programmer

**EXAMPLE
OF 10K
PHOTOCELLS
CONNECTION**



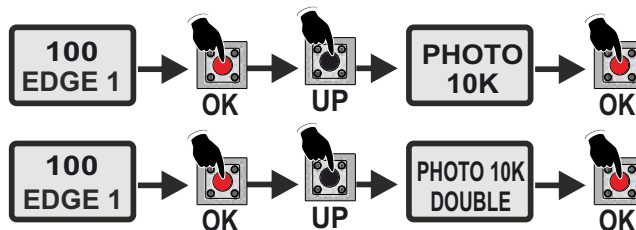
3.9 - 10K SINGLE OR DOUBLE PHOTOCELL

On clamps 9 - 11 - 12 and 10 - 11 - 12

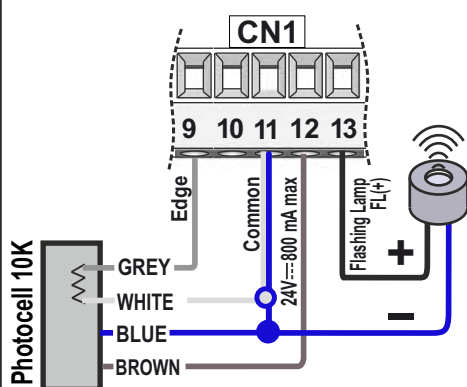
It is possible to connect up to four 10K photocells by setting menus **100-SAFETY EDGE 1** and/or **101-SAFETY EDGE 2** on the respective options (each contact allows you to connect up to 2 10K photocells). The 10K photocells will work according to the settings of menu **97-PHOTOCELL 1** and menu **98-PHOTOCELL 2**

Note1: The 10K photocell gives additional protection even in the event of a short circuit on the cables

SINGLE OR DOUBLE PHOTOCELL SETTINGS



**EXAMPLE OF 10K PHOTOCELL
AND BUZZER CONNECTION**



3.10 - BUZZER 24V \equiv

On clamps 11 and 13

The Buzzer is a sound alarm that can be used as a safety device. Use a self-oscillating 24V \equiv and 100 dB Buzzer

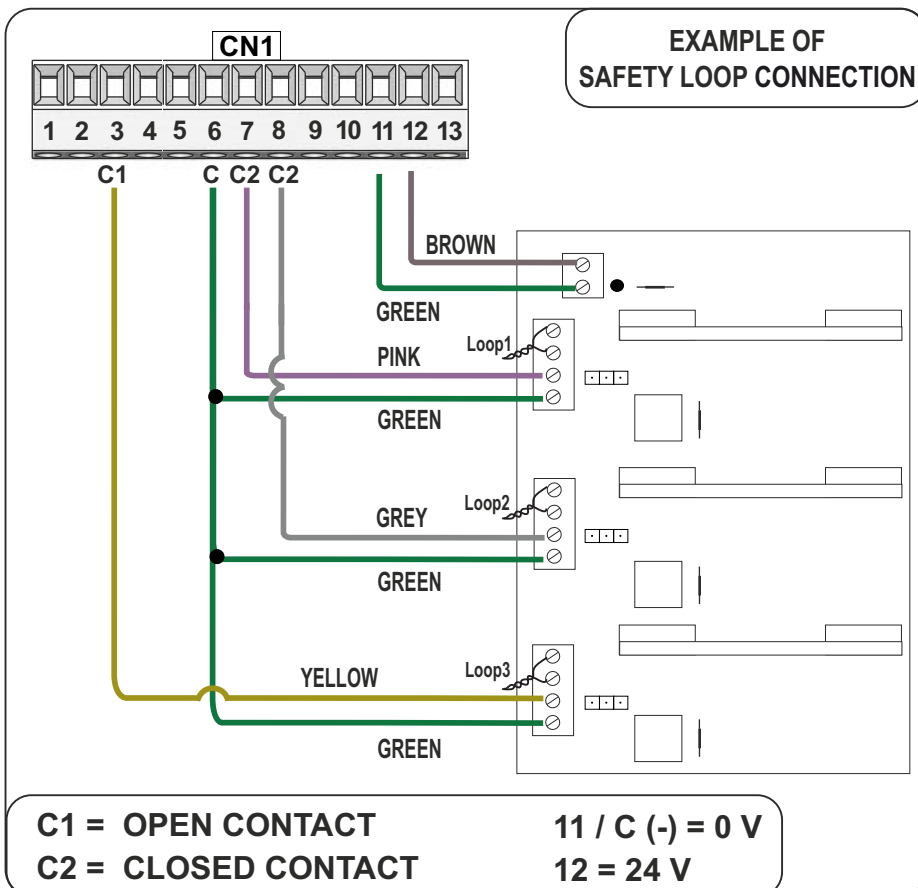
The Buzzer can be connected instead of the flashing light and it is necessary to set on **«BUZZER»** in the menu **86-FLASHING LIGHT**

The Buzzer will activate after 2 consecutive interventions of the anti-crushing protection; to reset it press the STOP button;

In any case, the sound of the Buzzer turns off automatically after 5 minutes and the automation will stand waiting for a new command



**IF BUZZER DOES NOT WORK, BE SURE THAT
MENU 86-FLASHING LIGHT IS SET ON «BUZZER»**



3.11 - SAFETY LOOP

Safety Exit Loop (Loop 1)

Connection scheme of the 1 reader loop detector

7 = Photocell 1 contact (N.C.)
6 = Common

Shadow Loop (Loop 2)

Connection scheme of the 2 readers loop detector

8 = Photocell 2 contact (N.C.)
6 = Common

NOTE: Menu 98-PHOTOCELL 2 must be set on «SHADOW LOOP»

Free Exit Loop (Loop 3)

Connection scheme of the 1 reader loop detector

3 = Start contact (N.O.)
6 = Common

3.12 - CONNECTIONS ON THE 24V AUX OUTPUT THROUGH RELAY

On clamps 11 and 12

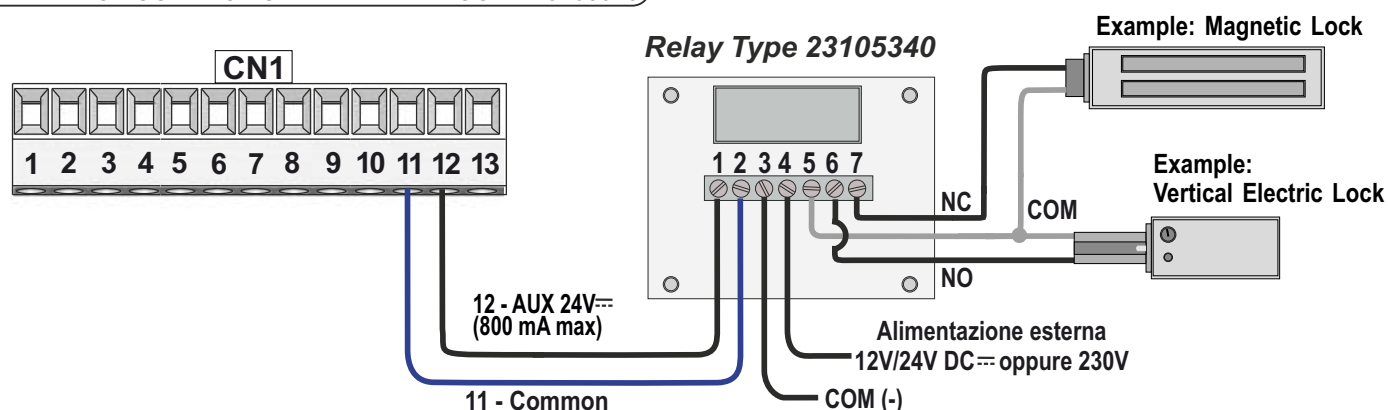
It is possible to connect additional accessories via relay connected to the 24V AUX output and manage them through the menu **94-24V AUX**. The menu options allow you to choose how to have voltage on the output and, consequently, to choose the option that best manages the accessory you want to connect.

WARNING! connect the accessory AFTER selecting the option

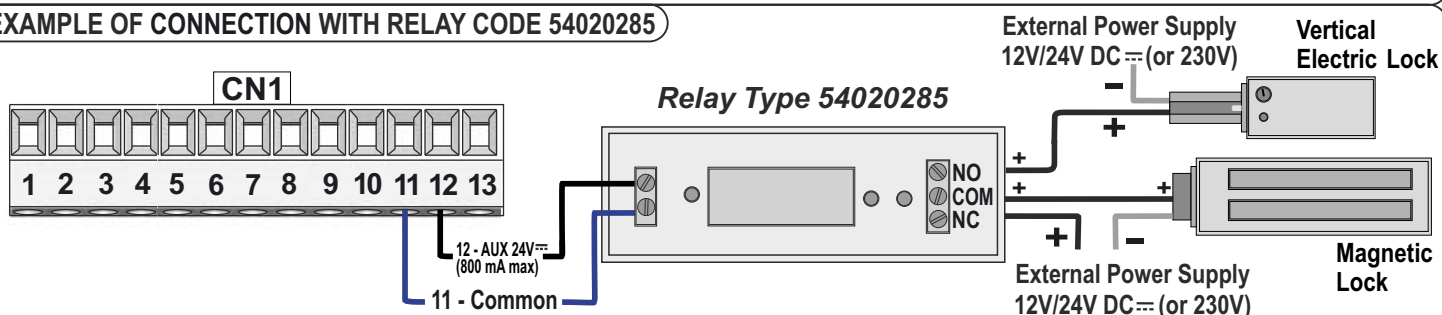
EXAMPLE: It is possible to connect a magnetic lock (**MagLock**) or a vertical lock through the Relay card code 23105340 (or old model code 54020285) to the control unit and to the external power supply (12 / 24V DC power supply in case of 12V / 24V lock or 230V power supply in case of 230V lock)

In this case, set 94-24V AUX to «NEGATIVE BRAKE» before connecting the lock!

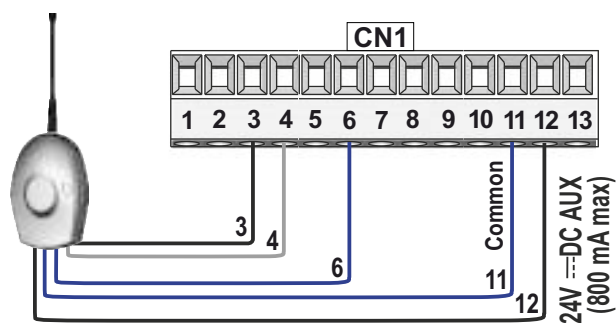
EXAMPLE OF CONNECTION WITH RELAY CODE 23105340



EXAMPLE OF CONNECTION WITH RELAY CODE 54020285



EXAMPLE OF EXTERNAL RECEIVER CONNECTION



3.13 - EXTERNAL RECEIVER

An external receiver can be connected to the control unit, according to the connection diagram on the side. In this case, **it is necessary to set the 94-24VAUX menu to the "ALWAYS" option** to ensure the continuous power supply of the output

It is also possible to connect the external receiver to the 24VAC outputs of CN2 - see paragraph 4.3

3.14 - LATCH OPENING OR LATCH CLOSING BUTTON

On clamps 4 and 6

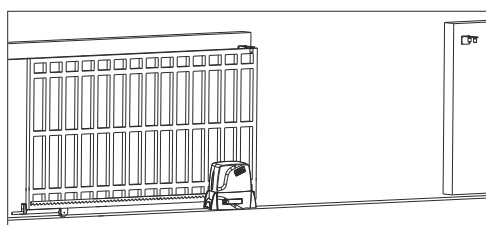
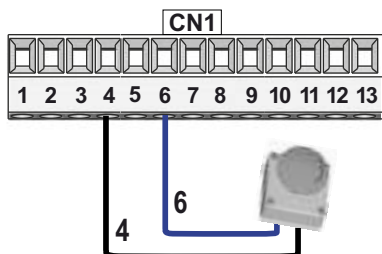
A button for the **Latch Opening** or **Closing** function can be connected to the control unit. To activate it, connect the N.O. contact on the Partial Opening Start (this function will be disabled). Through the **menu 118-LATCH** it is possible to choose between the various Latch options. To deactivate the Latch function, press again the button used for its activation

LATCH OPENING: opens and keeps the automation open. If active, no other type of Start command is accepted until the function is deactivated

LATCH CLOSING: closes and keeps the automation closed. If active, no other type of Start command is accepted until the function is deactivated

Note 1: The Latch function can also be enabled on the second channel of the remote control; see paragraph 17.2 for details

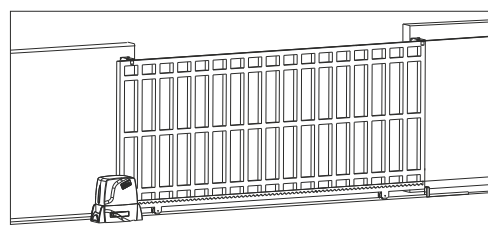
Note 2: The Latch function can also be enabled through the SEACLOUD. Please refer to the SEACLOUD instructions for more details



**LATCH OPENING
OPENS AND KEEPS OPEN**



NO OTHER COMMAND ACCEPTED



**LATCH CLOSING
CLOSES AND KEEPS CLOSED**

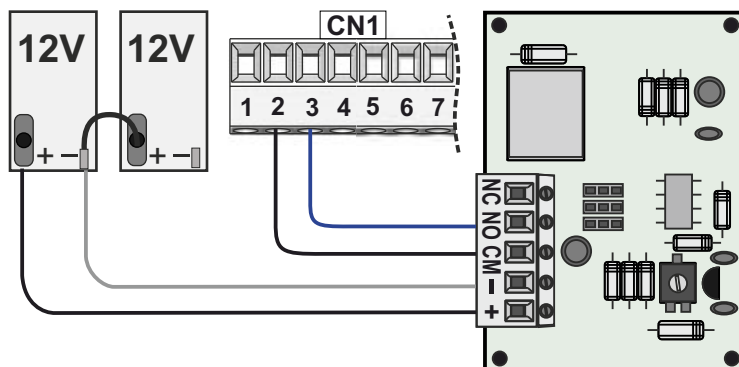


NO OTHER COMMAND ACCEPTED

3.15 - «LB» MANAGEMENT UNIT FOR «STAR 400/800»

On clamps 2 and 3

The «**STAR 400/800**» emergency UPS can be connected to the control unit via the «**LB**» management unit which controls the battery charge and allows the operator to carry out one last maneuver before the batteries are completely discharged. The «**LB**» unit and the batteries can be managed through the **113-EMERGENCY** menu



FOR FURTHER DETAILS ON THE «**LB**» MANAGEMENT UNIT, ON THE «**STAR 400/800**» EMERGENCY UPS AND ON ALL THE CONNECTIONS, SEE THEIR TECHNICAL INSTRUCTIONS

4 - CONNECTIONS ON CN2

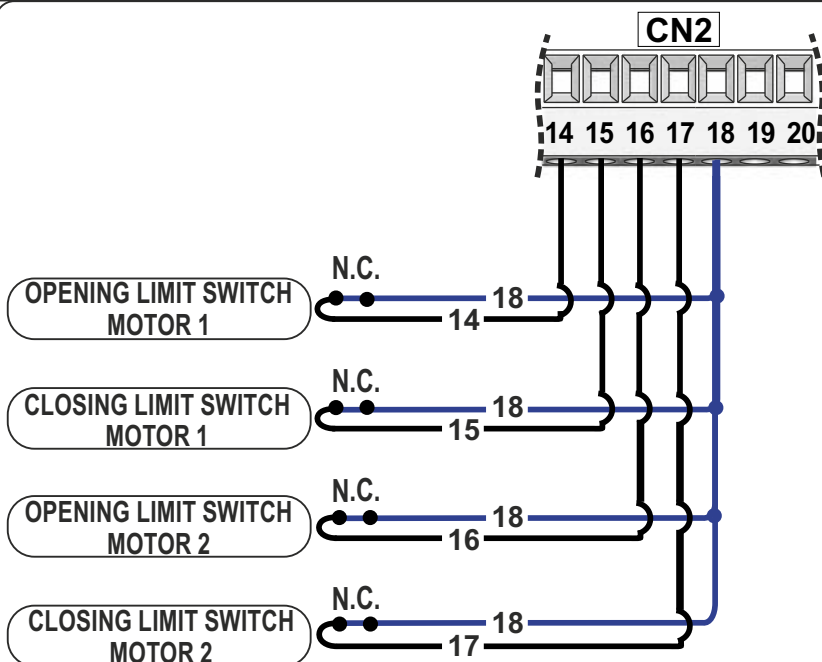
4.1 - LIMIT SWITCH

For the limit switch function, both the closing and opening limit switches must be connected. It is also possible to activate the **anti-intrusion function**, which is linked to the presence of one limit switch at least; If it is released, it forces the operator to reclose

⚠ For the correct operation of the limit switches the correspondence between the operators movement direction and the respective limit switch direction is required

NOTE:

In the menu **104-SELECT LIMIT SWITCH** it is possible to choose whether to work with the opening limit switch only or with the closing one only or with both



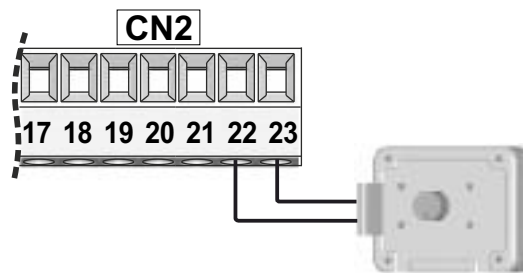
4.2 - 12V ELECTRIC LOCK

On clamps 22 and 23

An Electric Lock (12V - 15W max) can be connected Through **menu 77-LOCK TIME** it is possible to adjust the electric lock release time from 0 to 5 seconds

Through **menu 78-LOCK** it is possible to select when to activate the electric lock, if only in opening, only in closing or in both directions

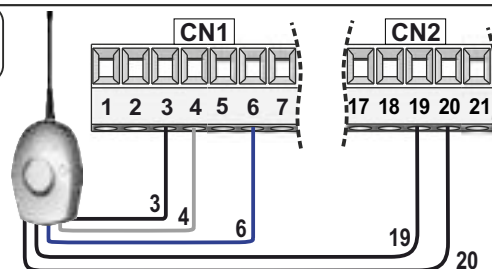
EXAMPLE OF ELECTRIC LOCK CONNECTION



4.3 - EXTERNAL RECEIVER

It is possible to connect an external receiver according to the connection diagram on the side. The clamps 19 and 20 of CN2 supply 24V~AC, therefore the receiver will always be powered

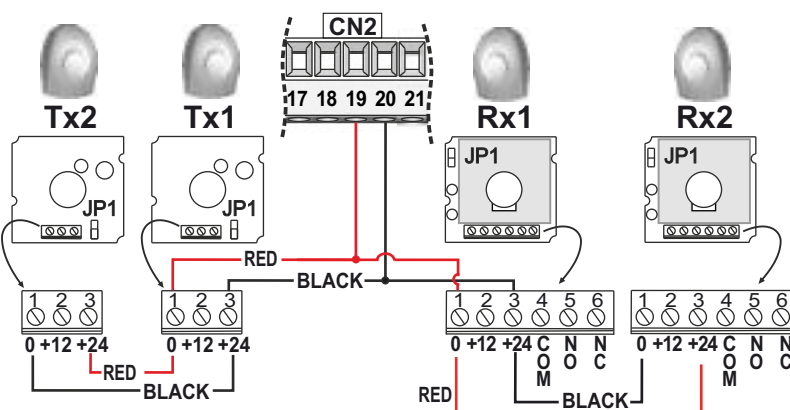
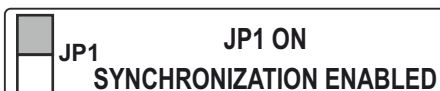
EXAMPLE OF EXTERNAL RECEIVER CONNECTION



4.4 - SYNCHRONIZED PHOTOCELLS CONNECTION

It is possible to connect one or two pairs of synchronized photocells on the clamps 19 and 20 of CN2 (24V~AC), according to the aside diagram (for further details refer to the photocell instructions).

It is also possible to change the photocell settings through the **97-PHOTOCELL1** and **98-PHOTOCELL 2** menus

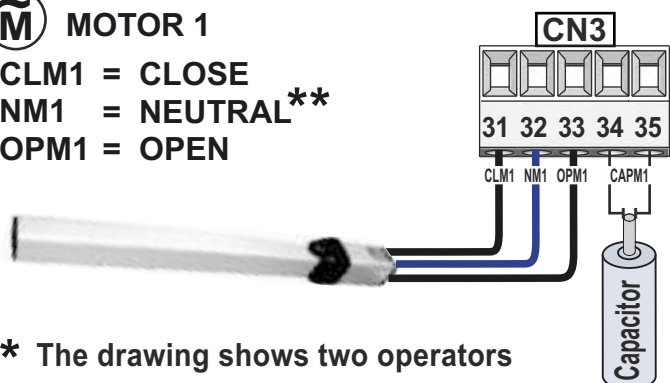


5 - CONNECTIONS ON CN3 AND CN4

5.1 - OPERATORS CONNECTION ON THE CONTROL UNIT

M MOTOR 1

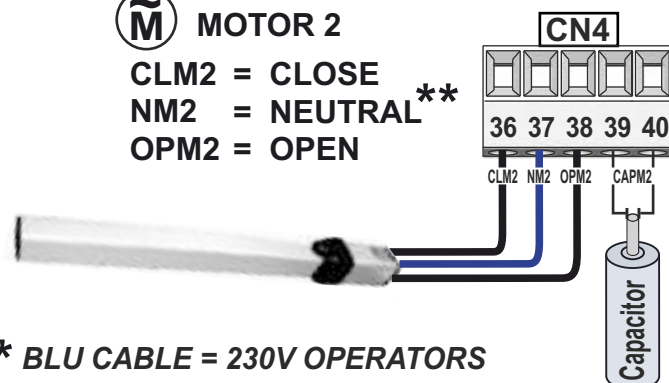
CLM1 = CLOSE
NM1 = NEUTRAL**
OPM1 = OPEN



* The drawing shows two operators for swing gate only as an example

M MOTOR 2

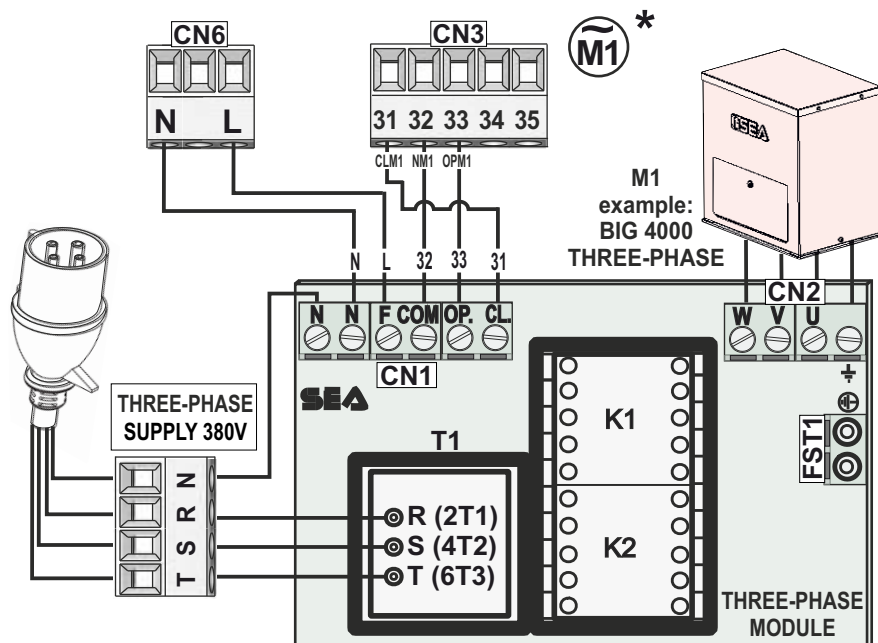
CLM2 = CLOSE
NM2 = NEUTRAL**
OPM2 = OPEN



** **BLU CABLE = 230V OPERATORS**
WHITE CABLE = 115V OPERATORS

IN CASE OF CONNECTION AND MANAGEMENT OF A SINGLE OPERATOR, USE THE CN3 TERMINAL FOR MOTOR 1

5.2 - THREE-PHASE MODULE CONNECTION



WARNING!
Set the menu
3-MOTOR on
«5-THREE-PHASE-BOLLARD»

THREE-PHASE MODULE CONNECTORS

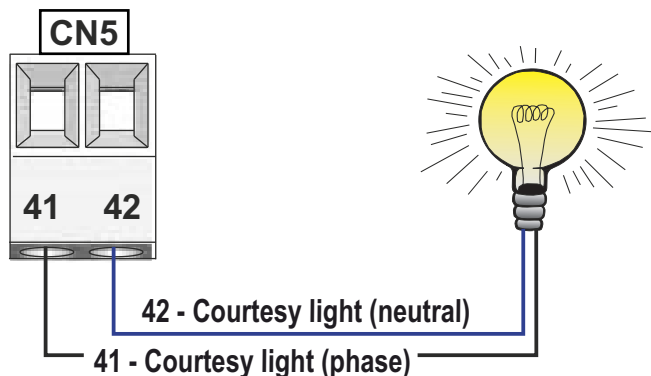
CN1 = On board power connector (220V)
CN2 = Motor connector (380V)
SFT1 = Ground connection Faston
K1 = 230V ~ 16A contactor
K2 = 230V ~ 16A contactor
T1 = Thermal switch *

* **T1 intervention threshold:**
3,7A → BIG 4000 THREE-PHASE
1,8A → LEPUS

* È POSSIBILE CONNETTERE FINO A 2 MODULI TRIFASE; IL SECONDO MODULO TRIFASE ASSOCIATO AL MOTORE 2 (M2) VA COLLEGATO ALLA MORSETTIERA CN4 (MORSETTIERA DI COLLEGAMENTO MOTORE 2) ALLO STESSO MODO DELLA CN3

6 - CONNECTIONS ON CN5

6.1 - COURTESY LIGHT CONNECTIONS (230V or 115V)



A timed courtesy light (from 0 to 240 seconds) can be connected to the CN5, according to the aside connection diagram

See the **menu 88-COURTESY LIGHT** for settings

Example:

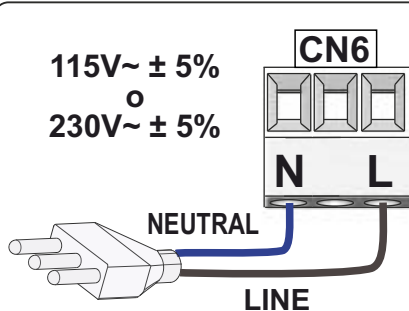
Timed Courtesy light from 0 up to 4 minutes

Max. 50W → 230V

Max. 100W → 115V

7 - CONNECTIONS ON CN6

7.1 -CONTROL UNIT CONNECTION



Fuse 3,6A delayed on 230V~ power supply

Fuse 6,3A delayed on 115V~ power supply

CAUTION!: for the connection to the power grid refer to the regulations in force

NOTE: It is recommended to use a 10A differential switch to protect the power supply system

NOTE: In case of unstable power supply, we recommend the use of an external UPS of minimum 800VA

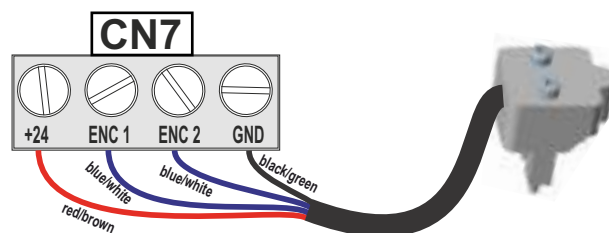
8 - CONNECTIONS ON CN7

8.1 - ENCODER CONNECTION

The **ENCODER** can be connected on CN7 by respecting the cable colors, as shown in the figure aside

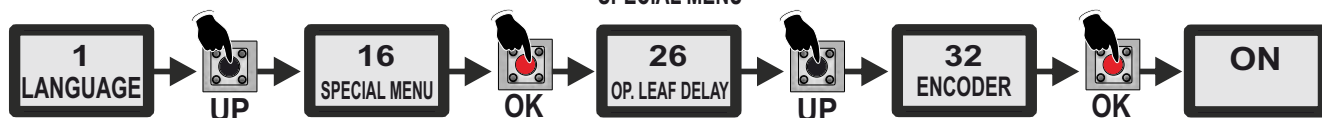
OLD TYPE ENCODER → BROWN - WHITE - GREEN

NEW TYPE ENCODER → RED - BLUE - BLACK



To enable the Encoder set the menu **32-ENCODER** in «ON» (if not ON by default)

SPECIAL MENU



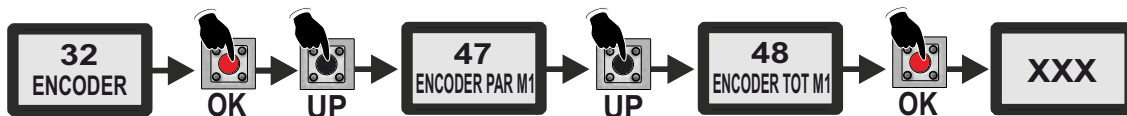
47-ENCODER PAR M1

shows the pulses read during operation



48-ENCODER TOT M1

shows the total pulses stored during programming



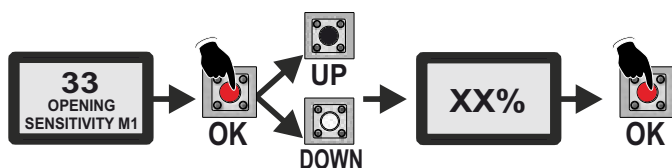
THE EXAMPLE REFERS ONLY TO MOTOR 1 (M1) BUT IT IS ALSO POSSIBLE TO DISPLAY THE PARAMETERS REFERRING TO MOTOR 2 (M2) ON MENUS 49 AND 50

8.2 - ENCODER SETTINGS

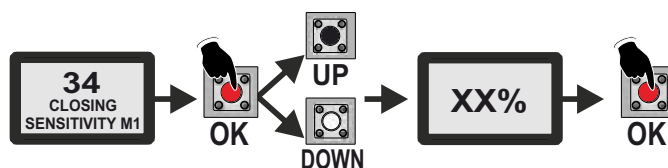
values can be set from a minimum of 10% (rapid intervention) to a maximum of 99% (slow intervention).

If parameters are OFF (intervention excluded) the Encoder will only work in position detection mode

SETTING OF OPENING INTERVENTION TIME



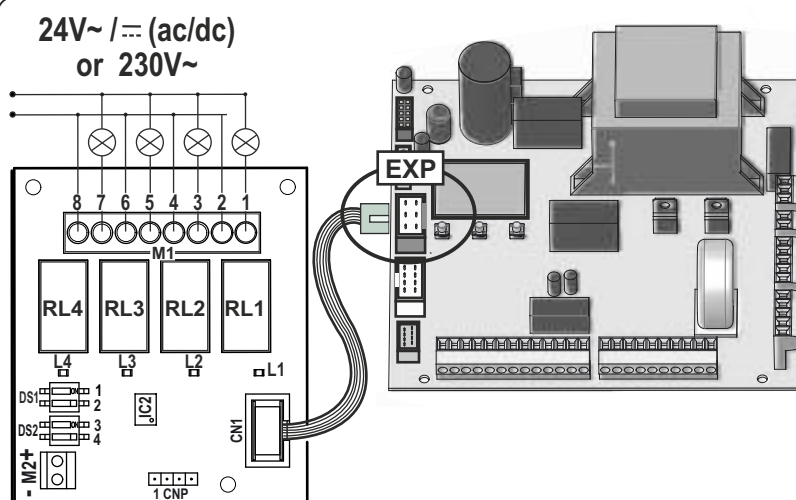
SETTING OF CLOSING INTERVENTION TIME



THE EXAMPLE REFERS ONLY TO MOTOR 1 (M1) BUT IT IS ALSO POSSIBLE TO DISPLAY THE PARAMETERS REFERRING TO MOTOR 2 (M2) ON MENUS 35 AND 36

9 - CONNECTIONS ON EXP

9.1 - «SEM 2» MANAGEMENT UNIT CONNECTION



The «SEM 2» management unit can be connected through the **EXP** connector

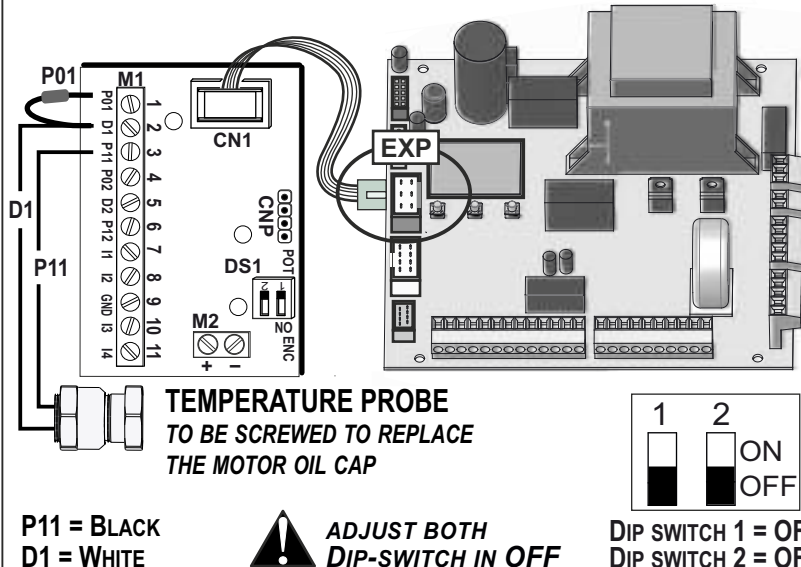
The **SEM 2** unit manages:

- The **TRAFFIC LIGHT** functions
- The **COURTESY LIGHT** functions
- The **VERTICAL ELECTRIC LOCK** functions
- The **POSITIVE AND/OR NEGATIVE ELECTRIC BRAKE** functions
- The **LIMIT SWITCH** status

*For further details on the «SEM 2» unit, refer to its **TECHNICAL INSTRUCTION***

9.2 - TEMPERATURE PROBE CONNECTION THROUGH «LSE» or «LE» UNITS

Example: «LSE» MANAGEMENT UNIT



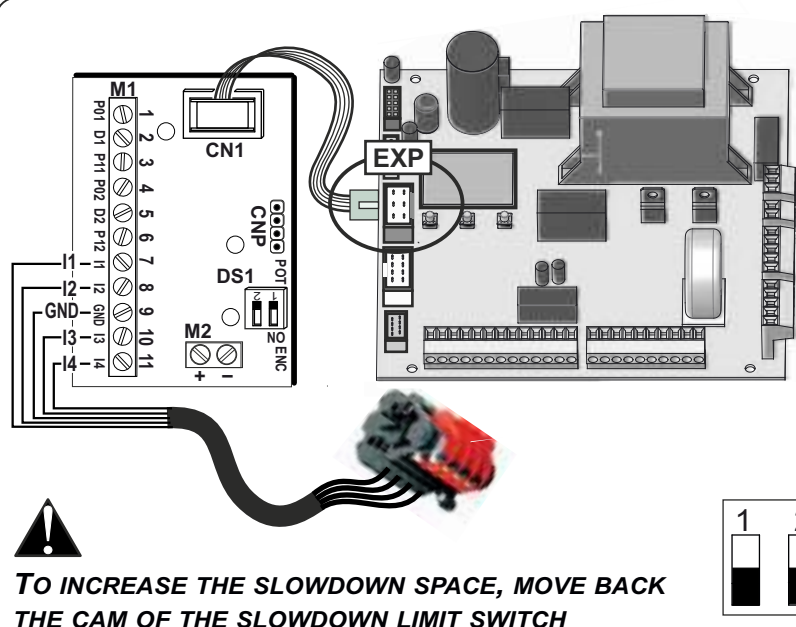
Through the **LSE** management unit (or the **LE** management unit) it is possible to wire up a **TEMPERATURE PROBE** to detect the engine oil temperature; If the oil temperature falls below the set value, the probe will activate heating up to the values defined in the set temperature range

TEMPERATURE PROBE can be enabled through the menu **109-THERMOMETER**;

TEMPERATURE RANGES can be set on:
110-LOW TEMPERATURE THRESHOLD
111-HIGH TEMPERATURE THRESHOLD

*For further details on the **LSE** or **LE** units, refer to the **TECHNICAL INSTRUCTIONS***

9.3 - LIMIT SWITCH WITH «LSE» MANAGEMENT UNIT CONNECTION



The «**LSE**» management unit can be connected through the **EXP** connector

THE «**LSE**» UNIT MANAGES **4 ADDITIONAL LIMIT SWITCHES** to set the slowdown starting points

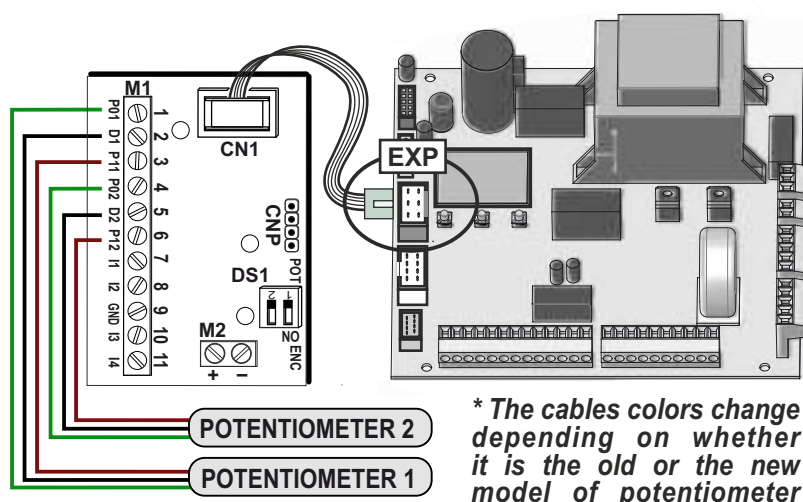
The opening and closing limit switches must be connected to the control unit

The additional limit switches can be managed from **104-SELECT LIMIT SWITCH**

*For further details on the «**LSE**» unit, refer to its **TECHNICAL INSTRUCTION***

9.4 - «POSITION GATE» CONNECTION THROUGH «LSE» or «LE» UNITS

Example: «LSE» MANAGEMENT UNIT

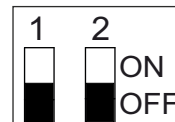


P11 = BROWN D1 = WHITE OR BLACK* P01 = GREEN OR BLUE*
P12 = BROWN D2 = WHITE OR BLACK* P02 = GREEN OR BLUE*

Through the **LSE** management unit (or **LE** management unit) it is possible to connect the «**POSITION GATE**», a potentiometer able to manage the correct position of the gate and the reversing on obstacle

POSITION GATE can be enabled on menu
32-ENCODER → POTENZIOMETER → ON

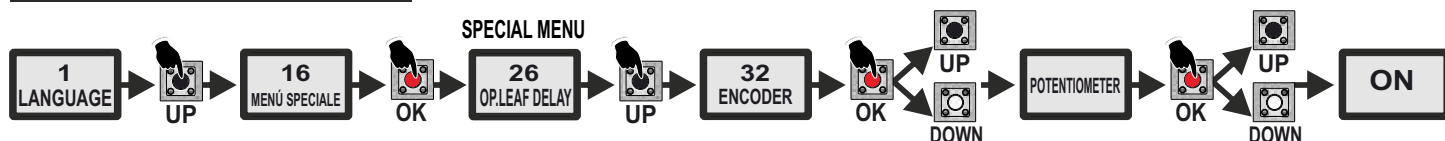
**! TO USE THE POTENTIOMETER
IT IS NECESSARY TO ADJUST
BOTH DIP-SWITCHES IN OFF**



*For further details on the **LSE** (or **LE**) management units refer to their **TECHNICAL INSTRUCTIONS***

9.5 - «POSITION GATE» POTENTIOMETER SETTING

TO ENABLE POTENTIOMETER



MENÙ 32 - POTENZIOMETER - MANAGEMENT SUB-MENUS:

51-I.PAR.M1 (PARTIAL PULSES MOTOR 1) displays the current position of the operator

52-I.AP.M1 (OPENING PULSES MOTOR 1) displays the impulses with the leaf completely open and it is possible, accessing through OK, to increase or decrease the total pulses using the UP and DOWN buttons

53-I.CH.M1 (CLOSING PULSES MOTOR 1) displays the impulses with the leaf completely closed and it is possible, accessing through OK, to increase or decrease the total pulses using the UP and DOWN buttons

54-I.PAR.M2 (PARTIAL PULSES MOTOR 2) displays the current position of the operator

55-I.AP.M2 (OPENING PULSES MOTOR 2) displays the impulses with the leaf completely open and it is possible, accessing through OK, to increase or decrease the total pulses using the UP and DOWN buttons

56-I.CH.M2 (CLOSING PULSES MOTOR 2) displays the impulses with the leaf completely closed and it is possible, accessing through OK, to increase or decrease the total pulses using the UP and DOWN buttons

Example:



NOTE 1: If the potentiometer reading is reversed in respect to the operator movement, the display will show the alarm "**POTENTIOMETER DIRECTION**" (see the last chapter "**Alarms**"); it is therefore necessary to invert the brown cable with the green cable (or Blue) and repeat the programming

9.6 - «POSITION GATE» POTENTIOMETER PARAMETERS SETTING

menu **33-OPENING SENSITIVITY MOTOR 1** adjusts the intervention time in opening
 menu **34-CLOSING SENSITIVITY MOTOR 1** adjusts the intervention time in closing
 menu **35-OPENING SENSITIVITY MOTOR 2** adjusts the intervention time in opening
 menu **36-CLOSING SENSITIVITY MOTOR 2** adjusts the intervention time in closing
 menu **37-SLOW-DOWN SENSITIVITY** adjusts the inversion time during the slow-down
 menu **38-OPENING POTENTIOMETER THRESHOLD M1** adjusts the intervention threshold in opening
 menu **39-CLOSING POTENTIOMETER THRESHOLD M1** adjusts the intervention threshold in closing
 menu **40-OPENING POTENTIOMETER THRESHOLD M2** adjusts the intervention threshold in opening
 menu **41-CLOSING POTENTIOMETER THRESHOLD M2** adjusts the intervention threshold in closing
 menu **42-POTENTIOMETER DECELERATION THRESHOLD IN OPENING M1**
 menu **43-POTENTIOMETER DECELERATION THRESHOLD IN CLOSING M1**
 menu **44-POTENTIOMETER DECELERATION THRESHOLD IN OPENING M2**
 menu **45-POTENTIOMETER DECELERATION THRESHOLD IN CLOSING M2**

NOTE 1: For a quick reverse on obstacle it is necessary to decrease the sensitivity parameters

NOTE 2: The sensitivity parameters can also be set in OFF (intervention excluded); in this case the potentiometer will only work in pulse detection mode (it does not reverse on obstacle)

9.7 - ACCESS TO THE HIDDEN «DEBUG» MENU FOR POTENTIOMETER

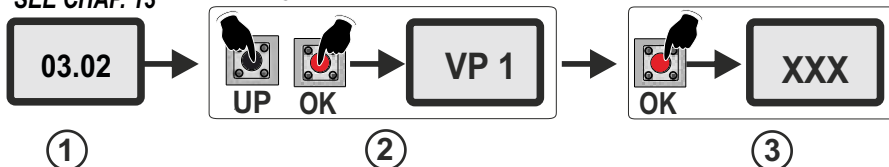
To view the instantaneous speed values «VP1» and «VP2» (referred to motor 1 and motor 2) **ACCESS THE HIDDEN «DEBUG» MENU:**

The view of these values allows to adjust a maximum threshold below

which the potentiometer (or the encoder) intervenes. The maximum threshold can be adjusted through menus 38 - 39 - 40 - 41 (while the maximum slowdown threshold can be adjusted through menus 42 - 43 - 44 - 45) and must always be higher than the instantaneous speed value shown in VP1 or VP2

SEE CHAP. 13

AT THE SAME TIME



10 - ADDITIONAL FUNCTIONS

10.1 - AMPEROMETRIC MANAGEMENT

The control unit is equipped with an obstacle detection system, (**working ONLY on ELECTRO-MECHANICAL OPERATORS**) which allows reversing in opening and closing; On electromechanical operators, the amperometric function is set to OFF by default, but it automatically activates if values different from OFF are set on menu **37-SLOWDOWN SENSITIVITY**.

If the obstacle detection system intervenes in opening, it causes a reverse of the motion for about 2 seconds; If the obstacle detection system intervenes in closing, it causes the partial or total reopening of the gate depending on the settings on menu **46-CLOSING INVERSION**

NOTE: If the **7-PAUSE TIME** menu is **NOT** set to **OFF**, the «automatic reclosing» function is active: in case of obstacle, allows the operator to attempt the reclosing for 5 times, then a new **START** input will be required to restore the motion

It is possible to adjust the torque value, i.e. the inversion force on obstacle, through the menus:

28/30-MOTOR 1/MOTOR 2 OPENING TORQUE adjustable from 10% to 100%

29/31-MOTOR 1/MOTOR 2 CLOSING TORQUE adjustable from 10% to 100%

NOTE: with high torque values (max. 100%), the force required to reverse on obstacle will be greater

It is possible to adjust the sensitivity for each direction (opening or closing) through the menus:

33/35-MOTOR 1/MOTOR 2 OPENING SENSITIVITY

34/36-MOTOR 1/MOTOR 2 CLOSING SENSITIVITY

NOTE 1: with high sensitivity values (max. 100%), the inversion on obstacle will occur after 5 seconds

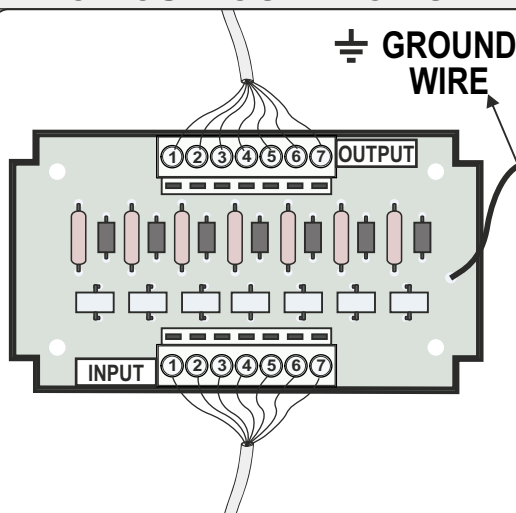
NOTE 2: The sensitivity parameters can also be set in OFF (intervention excluded); in this case the amperometric management will only work according to the settings of the menu-37

ATTENTION: In case of power failure, when the power is restored the first maneuver will be at high speed in order to allow the automatic recognition of the mechanical stop

10.2 - «I/O SURGE PROTECTOR» CIRCUIT CONNECTION

It is possible to connect the «**SURGE PROTECTOR**» device, to protect up to 6 inputs + 24V power supply from overvoltages due, for example, to the lightning strikes. Simply connect the cable of the accessory to be protected to the **INPUT** of the SURGE PROTECTOR circuit and then, from the corresponding number on the **OUTPUT** terminal block, connect the cable to the control unit

NOTE: connect the common and the power supply negative directly on the control unit



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

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

11 - DISPLAY AND PROGRAMMING



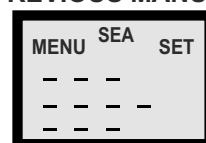
WARNING! MAKE ALL DEVICES CONNECTIONS ON SWITCHED-OFF CONTROL UNIT BEFORE THE PARAMETERS CONFIGURATION THROUGH DISPLAY

Starting from the software revision **03.02**, the electronic control unit is equipped with *the new BINGO display* with different **DIAGNOSTICS symbols**. For the **old version display** functions, consult the manual of the previous revision

NEW BINGO DISPLAY
FROM SOFTWARE REV 03.02



OLD DISPLAY
PREVIOUS MANUAL

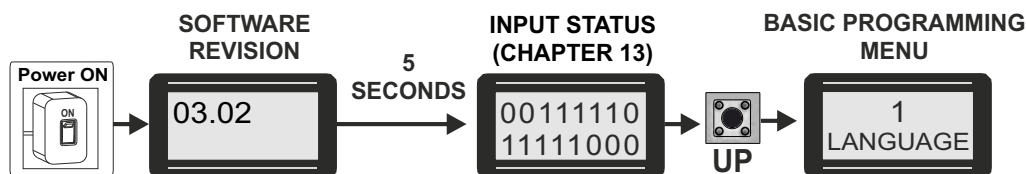


11.1 - SWITCHING ON THE CONTROL UNIT

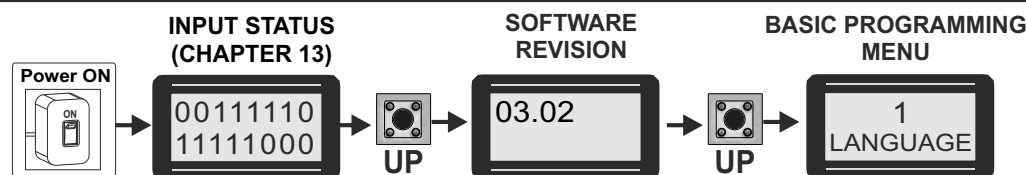
When a new control unit is powered on, the display shows the software revision first and the **INPUT STATUS** after 5 seconds.

If a control unit is already programmed, the display immediately shows the **INPUT STATUS** view

NEW CONTROL UNIT OR AFTER RESET



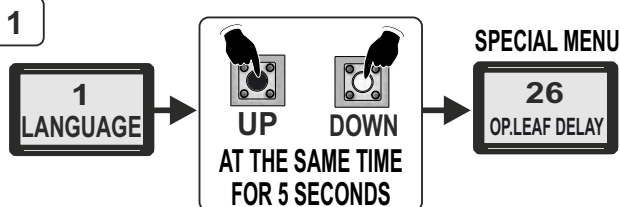
ALREADY PROGRAMMED CONTROL UNIT



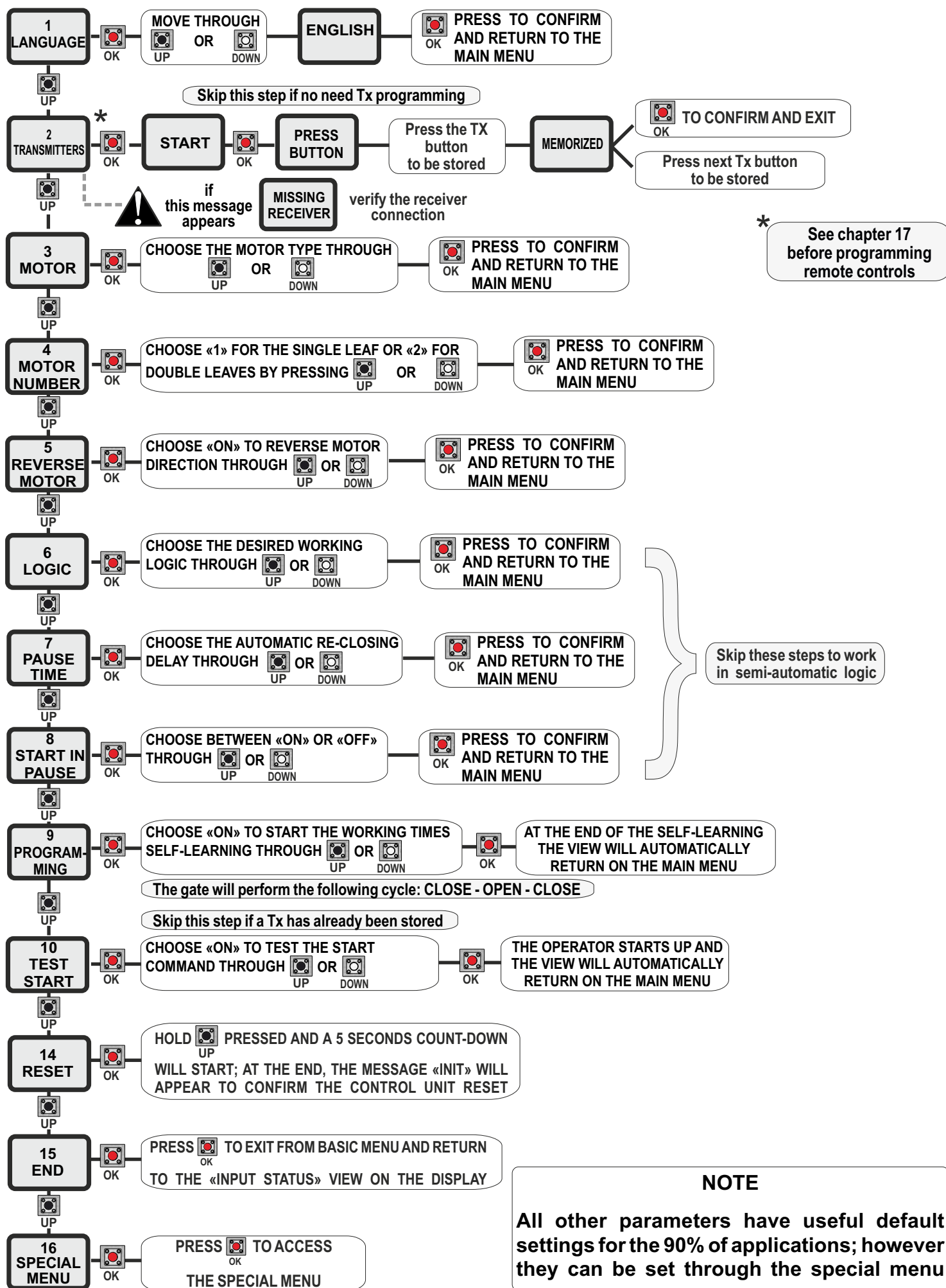
11.2 - BASIC PROGRAMMING MENU AND SPECIAL MENU

The control unit is equipped with a **basic programming menu** which can be accessed through the procedure above indicated when a control unit is switched on. The control unit is also equipped with a **special menu** that allows the setting of various parameters and the configuration of the accessories.

To access **THE SPECIAL MENU** choose one of the following 2 procedures:



12 - BASIC MENU FUNCTIONS

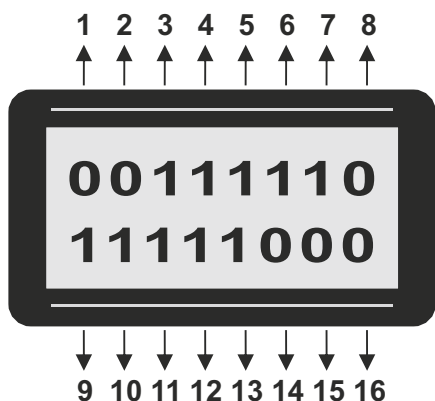


13 - INPUT STATUS CHECK AND MANAGEMENT

The input status check menu is displayed at the start of the control unit (for more details see chapter 11). Each input corresponds to a fixed position on the display, according to the diagram below and can be **NORMALLY OPEN (N.O.)** or **NORMALLY CLOSED (N.C.)**

0 = NORMALLY OPEN (N.O.)

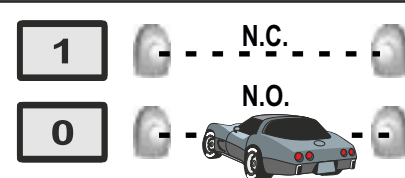
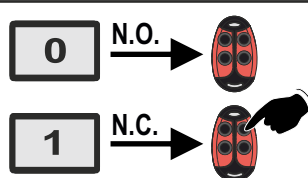
1 = NORMALLY CLOSED (N.C.)



1	START	9	OPENING LIMIT SWITCH MOTOR 1
2	PARTIAL OPENING START	10	CLOSING LIMIT SWITCH MOTOR 1
3	STOP	11	OPENING LIMIT SWITCH MOTOR 2
4	PHOTOCELL 1	12	CLOSING LIMIT SWITCH MOTOR 2
5	PHOTOCELL 2	13	MOTOR FAULT CHECKING
6	SAFETY EDGE 1	14	NOT IN USE
7	SAFETY EDGE 2	15	NOT IN USE
8	NOT IN USE	16	NOT IN USE

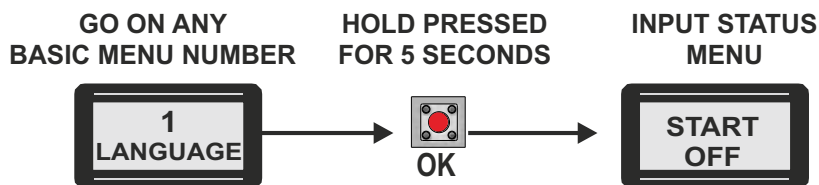
THE SYMBOL «1» LIT INDICATES THAT, DURING SELF-LEARNING, THE INPUT STATUS IS CLOSED OR DISABLED

WHEN THE CONTROL UNIT STARTS, THE DISPLAY SHOWS THE NORMAL STATUS OF THE INPUTS (SEE CHAPTER 11); EXAMPLE: IF A START COMMAND IS GIVEN, THE DISPLAY SHOWS THE CHANGE OF THE «START» INPUT (INPUT NUMBER 1) FROM NORMALLY OPEN TO NORMALLY CLOSED.



ON THE CONTRARY, IF THE PHOTOCELL IS ACTIVATED, THE DISPLAY SHOWS THE CHANGE OF THE «PHOTOCELL» INPUT (INPUT NUMBER 4 OR 5) FROM NORMALLY CLOSED TO NORMALLY OPEN

13.1 - ACCESS TO THE INPUTS STATUS MENU AND MANAGEMENT



Access the input status menu and scroll forward or backward through and ; by scrolling through the inputs, these are shown in their current state: in ON or OFF

example: or

Within this management menu it is possible to enable or disable the inputs; for the procedure see the table in the next paragraph (13.2);

The LIMIT SWITCHES inputs cannot be managed, but only their current status (ON or OFF) is displayed

! ATTENTION: INSIDE THE INPUT STATUS MANAGEMENT MENU YOU CAN SEE THAT:

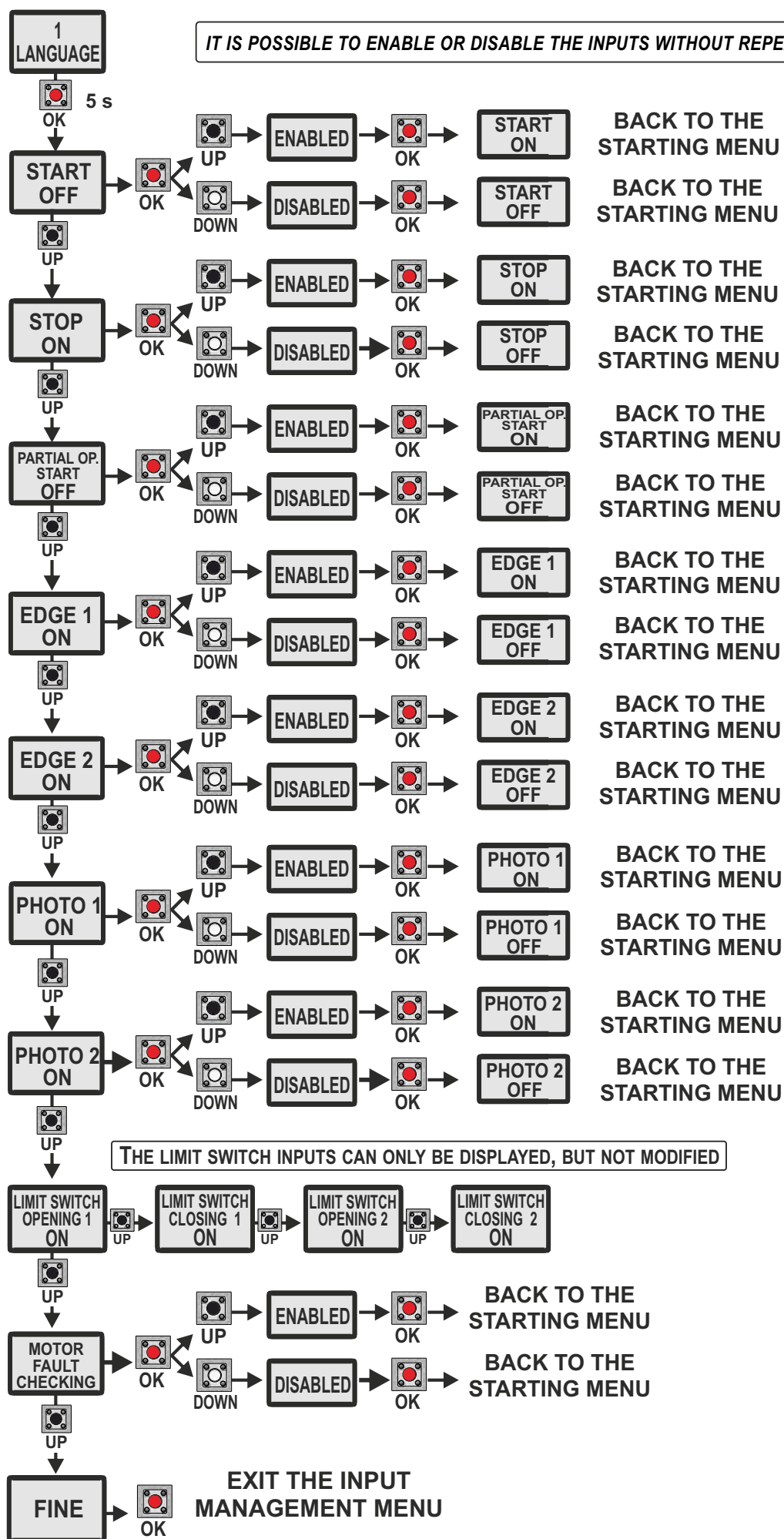
START and **PARTIAL OPENING START** are **NORMALLY OPEN (N.O.)** contacts:

If «ON» appears on the display when one of the two command is activated, the input is working
If «OFF» is displayed even after the command activation, then it is advisable to check the wirings

ALL OTHER CONTACTS ARE NORMALLY CLOSED (N.C.):

If «OFF» appears on the display when a command is activated, the input is working
If «ON» is displayed even after the command activation, then it is advisable to check the wirings

13.2 - GATE 2 DG R1B INPUT MANAGEMENT MENU



14 - WORKING TIMES SELF-LEARNING

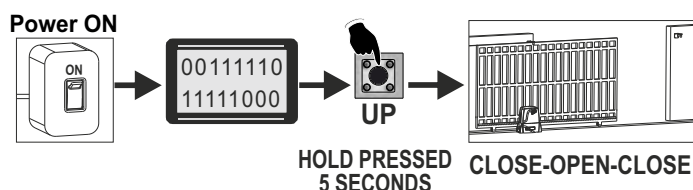
! POTENTIALLY DANGEROUS PROCEDURE. TO BE PERFORMED EXCLUSIVELY BY SPECIALIZED INSTALLERS AND IN SAFETY CONDITIONS

NOTE PRELIMINARI:

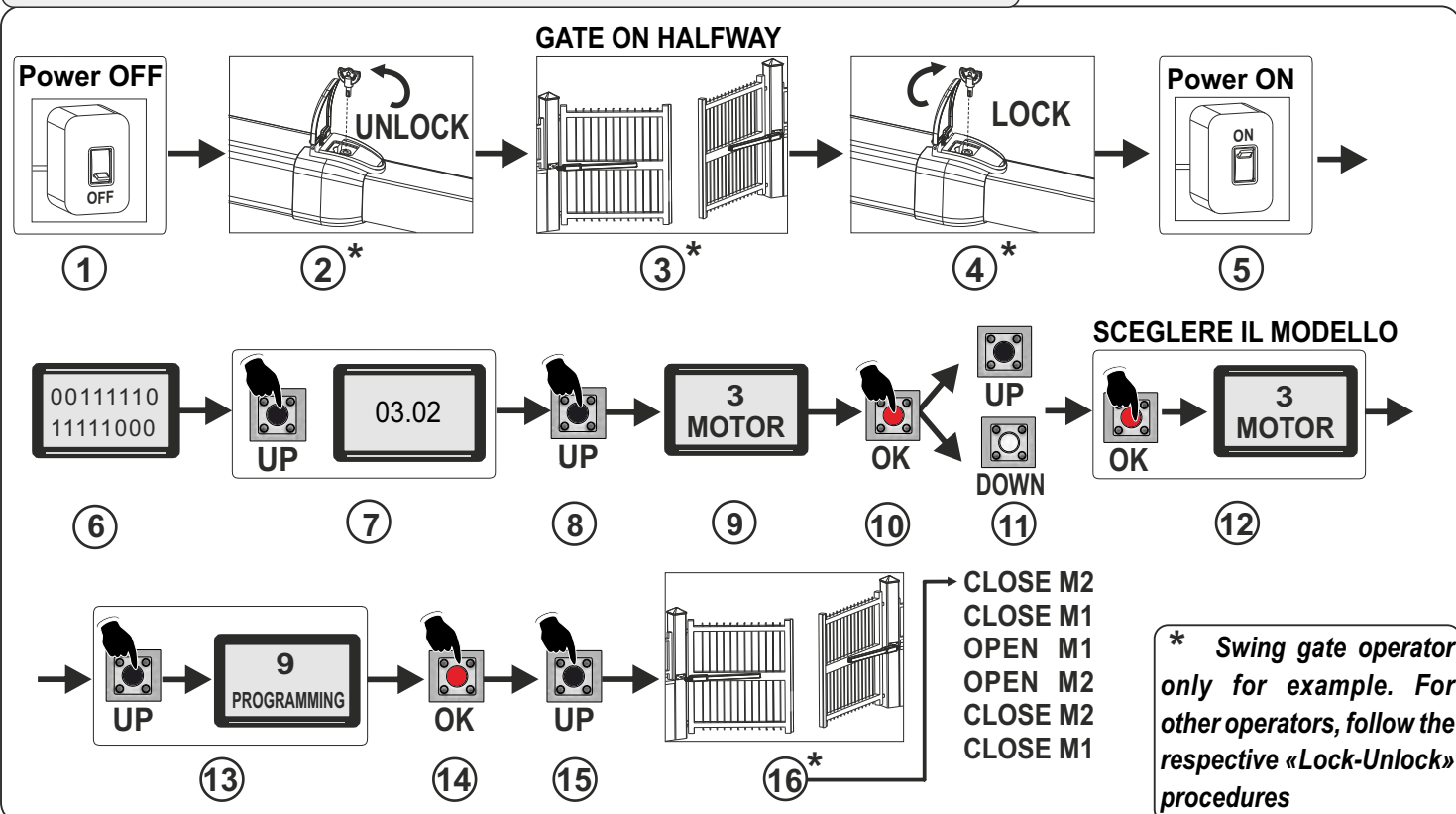
- It is not necessary to jumper Limit switches, Photocells, Stop or Safety Edges inputs if not used
- Check the correct operation of all accessories (Photocells, Push buttons etc.)

14.1 - QUICK START

The electronic unit on board the **SLIDING OPERATORS** is already set by default on the respective operator model and already has default settings for main parameters therefore it is possible to proceed with the **quick self-learning of the working times**, starting with the gate on its halfway



14.2 - WORKING TIMES SELF-LEARNING PROCEDURE



NOTE 1: If a motor performs the first learning cycle starting in opening, remove the power supply and reverse the motor cables (or set to **ON** the menu **5-REVERSE MOTOR**), then repeat the procedure

14.3 - SELF-LEARNING WITH LIMIT-SWITCHES

Working times self-learning through automatic detection of the end-of-stroke points by the limit switches (with or without ENCODER)

PRELIMINARY NOTES:

- From **menu 104-SELECT LIMIT SWITCH**, check or modify the type of limit switch installed if necessary; by default the menu is set on «**AUTOMATIC**» (automatic detection of the limit switches connected on CN2). However, it is possible to choose whether to use only the opening limit switches or only the closing ones
- Check on the **INPUT STATUS** menu (see chapter 13) that the correct limit switches are engaged for each direction of movement

WORKING TIMES SELF-LEARNING: FOLLOW THE PROCEDURE IN THE PARAGRAPH 14.2

NOTE : If a motor starts in closing, arrives up to the limit switch lever then it stops, it will be necessary to invert the limit switch cables and repeat the learning procedure

14.4 - SELF-LEARNING WITH ENCODER OR POTENTIOMETER

Working times self-learning through detection of the pulses by Encoder or Potentiometer

PRELIMINARY NOTES:

- Check that the **32-ENCODER menu** is «ON»; access submenus 47 - 48 - 49 - 50 and check the correct reading of the pulses; if necessary, adjust the sensitivity parameters (see chapter 8) *
- Check that the **32-ENCODER menu** is on «POTENTIOMETER»; access the submenus 51 - 52 - 53 - 54 - 55 - 56 and check the correct reading of the pulses; if necessary, adjust the sensitivity parameters (see paragraphs 9.4 to 9.7) *

WORKING TIMES SELF-LEARNING: FOLLOW THE PROCEDURE IN THE PARAGRAPH 14.2



In self-learning with POTENTIOMETER, the gate performs the following cycle:

CLOSE M2 - CLOSE M1 - OPEN M1 - OPEN M2 - CLOSE M2 - CLOSE M1 - OPEN M1 with SLOW-DOWN
OPEN M2 with SLOW-DOWN - CLOSES M2 with SLOW-DOWN - CLOSES M1 with SLOW-DOWN

* ALL PARAMETERS CAN BE CHANGED EVEN AFTER THE WORKING TIMES SELF-LEARNING PROCEDURE

14.5 - SELF-LEARNING WITH AMPEROMETRIC SENSOR

ONLY for ELECTROMECHANICAL OPERATORS

Working times self-learning through the automatic detection of the end-of-stroke points when the limit switches and the Encoder are not connected (**32-ENCODER menu** is «OFF»)

PRELIMINARY NOTE:

- If necessary, adjust the thresholds and sensitivity parameters (see chapter 10); *however, all parameters can be changed even after the working times self-learning procedure*

WORKING TIMES SELF-LEARNING: FOLLOW THE PROCEDURE IN THE PARAGRAPH 14.2

14.6 - SELF-LEARNING THROUGH PULSES without potentiometer

Working times self-learning through manual impulse on the stop points

PRELIMINARY NOTE:

- **BEFORE PROCEEDING WITH THE WORKING TIMES SELF-LEARNING** it is necessary to set the operating logics, to adjust the desired parameters and, if necessary, to program the radio transmitters

WORKING TIMES SELF-LEARNING: AFTER THE ABOVE-MENTIONED CHECKS, FOLLOW THE PROCEDURE ILLUSTRATED IN THE PARAGRAPH 14.2 UP TO POINT N° 15, THEN DURING THE LEARNING CYCLE «CLOSE - OPEN - CLOSE», IT WILL BE POSSIBLE TO GIVE A MANUAL PULSE (BY PRESSING the UP or DOWN buttons or by sending a START command) ON EVERY LEAF POINT OF STOP

Example:



14.7 - SELF-LEARNING THROUGH PULSES WITH POTENTIOMETER

Working times self-learning through detection of the pulses by Potentiometer which allows the choice of the desired stop points.

- Check that the **32-ENCODER menu** is on «POTENTIOMETER»; access the submenus 51 - 52 - 53 - 54 - 55 - 56 and check the correct reading of the pulses; if necessary, adjust the sensitivity parameters (see paragraphs 9.4 to 9.7)

WORKING TIMES SELF-LEARNING: AFTER THE ABOVE-MENTIONED CHECKS, FOLLOW THE PROCEDURE ILLUSTRATED IN THE PARAGRAPH 14.2 UP TO POINT N° 15, THEN DURING THE LEARNING CYCLE «CLOSE - OPEN - CLOSE», IT WILL BE POSSIBLE TO GIVE A MANUAL PULSE (BY PRESSING the UP or DOWN buttons or by sending a START command) ON EVERY DESIRED LEAF POINT OF STOP

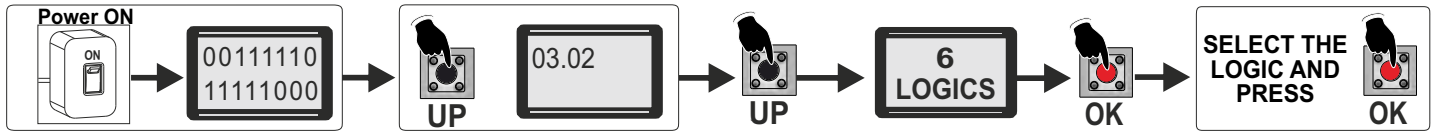
Example:



15 - OPERATING LOGICS

PRELIMINARY NOTES

- 1) For the automatic closing it is necessary to set a pause time; through the menu **7-PAUSE TIME** set a time between 1 second and 240 seconds; by default this parameter is OFF (SEMI-AUTOMATIC logic: after the opening, a START impulse will be required to close the gate)
- 2) It is possible to choose whether or not to accept the Start in pause; on menu **8-START PAUSE** select ON
By default this parameter is OFF



AUTOMATIC LOGIC

A **START** impulse opens the gate. A second **START** impulse during the opening will not be accepted.
A **START** impulse during closing reverses the movement

SAFETY LOGIC

A **START** impulse opens the gate. A second **START** impulse during opening reverses the movement.
A **START** impulse during closing reverses the movement

STEP BY STEP TYPE 1 LOGIC

The **START** impulse follows the **OPEN-STOP-CLOSE-STOP-OPEN** logic

STEP BY STEP TYPE 2 LOGIC

The **START** impulse follows the **OPEN-STOP-CLOSE-OPEN** logic

DEAD MAN LOGIC

The gate opens as long as the **START** opening button is held pressed; when released the gate stops
The gate closes as long as the **PARTIAL OPENING START** is held pressed; when released the gate stops
To carry out the complete opening and/or closing cycles it is necessary to hold the respective buttons constantly pressed

2 PUSH-BUTTONS LOGIC

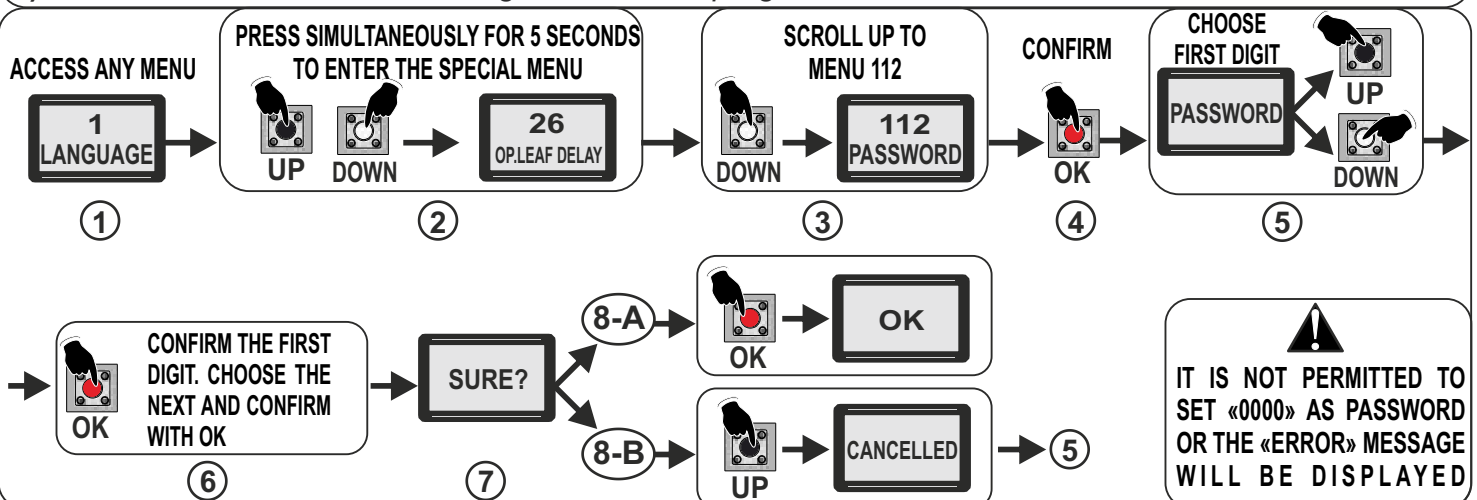
One **START** opens, one **PARTIAL OPENING START** closes.

A closing input will not be accepted during opening. A **START** command reopens during closing movement while the **PARTIAL OPENING START** (to close) will be ignored

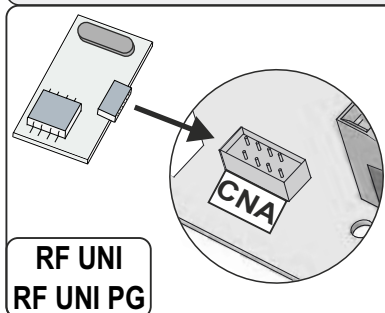
16 - PASSWORD MANAGEMENT

PRELIMINARY NOTES:

- 1) Once the password is enabled, **the menu cannot be adjusted**;
- 2) If You forgot the password, contact the SEA technical assistance; SEA will evaluate whether or not to provide the procedure for the control unit unlocking
- 3) *Password CANNOT be set through the JOLLY 3 programmer*



17 - RECEIVERS AND REMOTE CONTROLS

	SEA PLUG-IN RECEIVERS	MAX NUMBER OF USERS
	RF UNI	16 USERS Without additional memory 800 USERS With MEMO RF additional memory
	RF UNI PG (Old Model) <i>non-extractable memory</i>	100 USERS Fix Code 800 USERS Roll Plus
	RF UNI PG (New Model) <i>extractable memory</i>	800 USERS Fix Code 800 USERS Roll Plus

PRELIMINARY NOTES:

- **With the control unit OFF**, check if the RECEIVER module is correctly connected to the connector
- Power up the control unit and program the radio transmitters before connecting the antenna
- **RF UNI** and **RF UNI PG** modules allow the use of both **ROLL PLUS/UNI** and **FIX CODE** radio transmitters
- Perform the radio transmitters learning **only with closed gate and stopped motor**
- It is possible to store up to 2 of the available functions
- The START function must ALWAYS be assigned
- If the second function assigned will be modified later, then all the radio transmitters will acquire this last function on the second channel
- **The RF FIX module only allows the use of FIX CODE radio transmitters**

⚠ WARNING: The first stored radio transmitter will determine the coding of the following ones: if the first radio transmitter is stored as ROLLING CODE, then all the following radio transmitters must be stored as ROLLING CODE (FIX CODE storing will not be accepted). Vice versa, if the first radio transmitter is stored as a FIX CODE, then all the following radio transmitters must be stored as FIX CODE (ROLLING CODE storing will not be accepted)

STORING OF A ROLLING CODE RADIO TRANSMITTER:

Follow the procedures on the paragraph 17.2 for programming the remote control different buttons. When choosing the remote control button to be programmed, it is required to «*Press the Button*»; **to store THE FIRST REMOTE CONTROL in ROLLING CODE the button must be pressed TWICE IN SUCCESSION; for the subsequent remote controls it is sufficient to press it ONLY ONCE as required by the procedure**

STORING OF A FIX CODE OR ROLLING CODE PLUS/UNI RADIO TRANSMITTER:

Follow the procedures on the paragraph 17.2 for programming the remote control different buttons; **to store REMOTE CONTROLS in FIX CODE or ROLLING CODE PLUS/UNI the button must be pressed ONCE as required by the procedure (for both the first remote control and the following ones)**

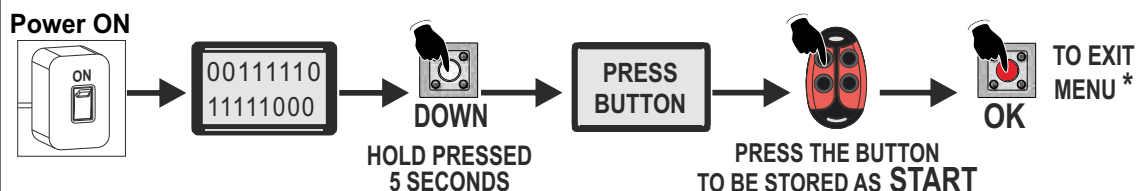
FOR THE INSTALLER: 2-TRANSMITTERS menu shows the stored radio transmitters serial number; It is advisable to create a table* as reminder of the serial numbers for each remote assigned to every customer, for an easy transmitter/customer management

Memory Location	TX Button	1	2	3	Serial Number	Customer
0						
1						
2						
3						

*example of table

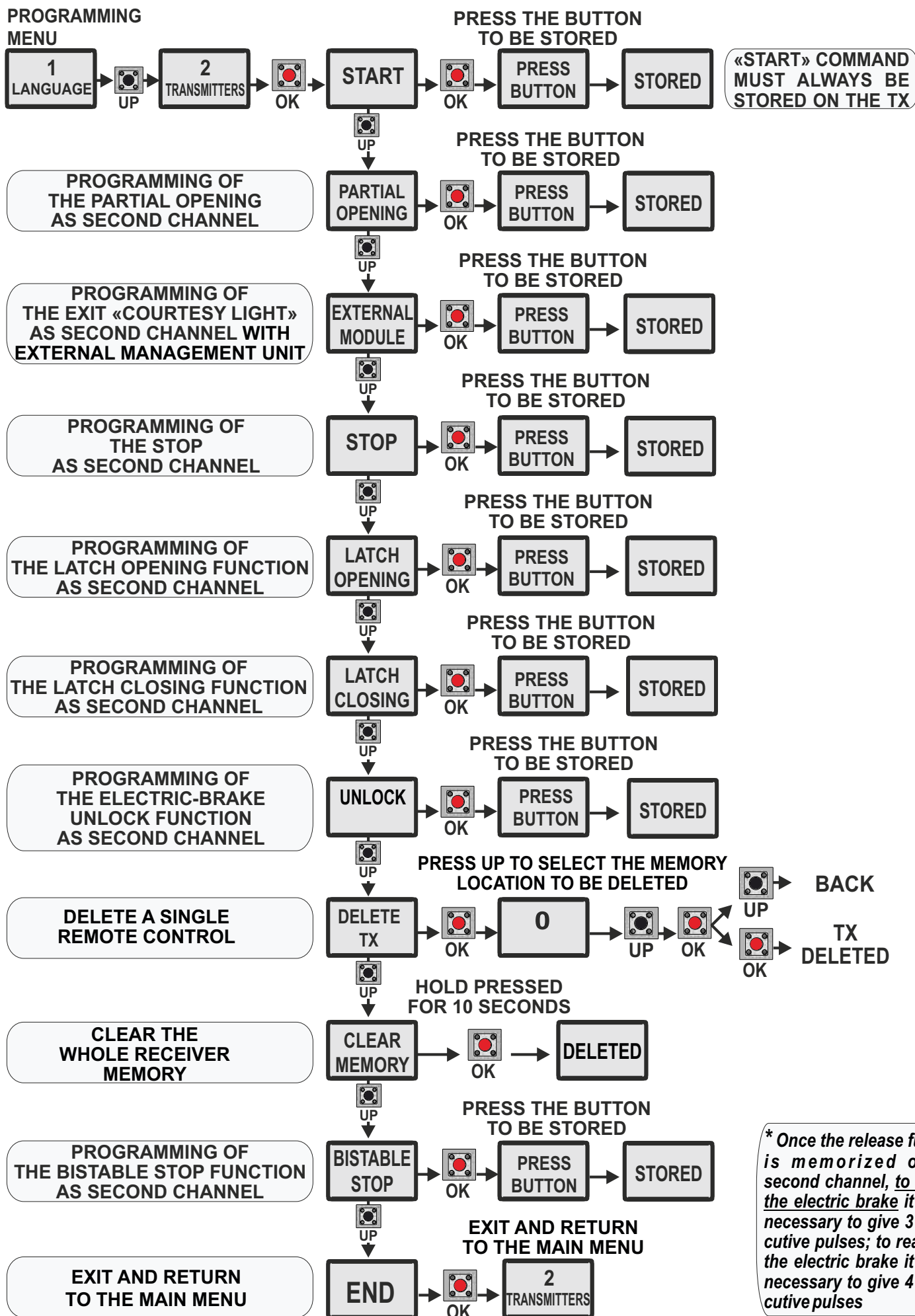
17.1 - START COMMAND QUICK SELF-LEARNING

It is possible to use the following quick procedure to store the START command on the remote control



* OR EXIT AUTOMATICALLY
AFTER 5 SECONDS
OF INACTIVITY

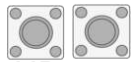
17.2 - REMOTE CONTROLS PROGRAMMING TABLE



** Once the release function is memorized on the second channel, to release the electric brake it will be necessary to give 3 consecutive pulses; to reactivate the electric brake it will be necessary to give 4 consecutive pulses*

MENU FUNCTIONS TABLE - GATE 2 DG R1B

MENU		SET	DESCRIPTION	DEFAULT	NOTE
1	LANGUAGE	<i>Italiano</i>	Italian	<i>English</i>	
		<i>English</i>	English		
		<i>Français</i>	French		
		<i>Español</i>	Spanish		
		<i>Dutch</i>	Dutch		
		<i>Polish</i>	Polish		
2	TRANSMITTERS	<i>Start</i>	Start	<i>Start</i> <i>Partial opening</i>	
		<i>Partial opening</i>	Partial opening		
		<i>External module</i>	External module		
		<i>Stop</i>	Stop		
		<i>Bistable Stop</i>	Pressed once, it stops the gate. Pressed twice, it reactivates the START input		
		<i>Latch opening</i>	One impulse opens and keep open. A second impulse restore the movement		
		<i>Latch closing</i>	One impulse closes and keep closed. A second impulse restore the movement		
		<i>Unlock</i>	To store a command for unlocking the electric brake		
		<i>Delete a transmitter</i>	To delete a single transmitter (TX)		
		<i>Clear memory</i>	To delete the full TX memory on the receiver		
		<i>End</i>	To exit the menu "transmitters"		
3	MOTOR	<i>1- Hydraulic</i>	Hydraulic operators	<i>Hydraulic</i>	
		<i>2- Sliding</i>	Sliding operators		
		<i>3- Reversible Sliding</i>	Reversible sliding operators		
		<i>4- Electromechanic swing</i>	Electromechanic swing operators		
		<i>5- Three-phase - Bollards</i>	Three-phase operators and Bollards		
4	GATES NUMBER	<i>From 1 to 2</i>	To set the number of motors to be managed	<i>1</i>	
5	REVERSE MOTOR	<i>On</i>	To reverse the opening with the closing or vice-versa (both motors and limit-switches are reversed)	<i>Off</i>	
		<i>Off</i>	Off		
6	LOGIC	<i>Automatic</i>	Automatic	<i>Auto- matic</i>	
		<i>Open-stop-close-stop-open</i>	Step by step type 1		
		<i>Open-stop-close-open</i>	Step by step type 2		
		<i>2 button</i>	Two buttons		
		<i>Safety</i>	Safety		
		<i>Dead man</i>	Dead man		
7	PAUSE TIME	<i>Off</i>	OFF (semi-automatic logics)	<i>Off</i>	
		<i>1 240</i>	Setting from 1 second to 4 minutes		
8	START IN PAUSE	<i>Off</i>	The Start command is not accepted during pause	<i>Off</i>	
		<i>On</i>	The Start command is accepted during pause		
9	PROGRAMMING	<i>Off On</i>	To start the working times self-learning	<i>Off</i>	
10	TEST START	<i>Off On</i>	To give a Start command for testing the automation	<i>Off</i>	
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 UP AND DOWN FOR 5 SECONDS AT THE SAME TIME TO ENTER OR TO EXIT THE SPECIAL MENU

SPECIAL MENU		SET	DESCRIPTION	DEFAULT	NOTE
26	LEAF DELAY IN OPENING	Off 6	Adjustable from OFF to 6 seconds	1,5	
27	LEAF DELAY IN CLOSING	Off 20	Adjustable from OFF to 20 seconds	2,5	
28	OPENING TORQUE MOTOR 1	10% 100 %	By increasing the torque, more strength will be required to execute the inversion in case of obstacle. Note: with hydraulic motors the torque will be on 100%	75%	
29	CLOSING TORQUE MOTOR 1	10% 100 %	By increasing the torque, more strength will be required to execute the inversion in case of obstacle. Note: with hydraulic motors the torque will be on 100%	75%	
30	OPENING TORQUE MOTOR 2	10% 100 %	By increasing the torque, more strength will be required to execute the inversion in case of obstacle. Note: with hydraulic motors the torque will be on 100%	75%	
31	CLOSING TORQUE MOTOR 2	10% 100 %	By increasing the torque, more strength will be required to execute the inversion in case of obstacle. Note: with hydraulic motors the torque will be on 100%	75%	
32	ENCODER	On	ON = Encoder enabled OFF = Encoder disabled (when OFF, only the working times learnt are shown)	Off	
47	ENCODER PAR.1	xxx.	Impulses read by Encoder during operation (Motor1)		
48	ENCODER TOT. 1	xxx.	Impulses stored during programming (Motor 1)		
49	ENCODER PAR.1	xxx.	Impulses read by Encoder during operation (Motor2)		
50	ENCODER TOT. 2	xxx.	Impulses stored during programming (Motor 2)		
32	ENCODER	Potentiometer	To enable the reading of the potentiometer (only with LE or LSE management unit)	Off	
51	I.PAR.M1	-----	To show the current position of the potentiometer on the leaf moved by Motor 1 . This parameter is useful to see if the potentiometer is correctly read		
52	I.AP.M1	From the value learnt to ± 100 pulses	To show the impulses stored by the control unit when the leaf moved by Motor 1 is fully open		
53	I.CH.M1	From the value learnt to ± 100 pulses	To show the impulses stored by the control unit when the leaf moved by Motor 1 is fully close		
54	I.PAR.M2	-----	To show the current position of the potentiometer on the leaf moved by Motor 2 . This parameter is useful to see if the potentiometer is correctly read		
55	I.AP.M2	From the value learnt to ± 100 pulses	To show the impulses stored by the control unit when the leaf moved by Motor 2 is fully open		
56	I.CH.M2	From the value learnt to ± 100 pulses	To show the impulses stored by the control unit when the leaf moved by Motor 2 is fully close		
32	ENCODER	Off	ON = Encoder enabled OFF = Encoder disabled (when OFF, only the working times learnt 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			
67	OPENING TIME M2	xxx.s	To display the learnt value during the working times self learning, in opening and closing (Motor 2). With UP or DOWN it is possible to increase or reduce the working times		
68	CLOSING TIME M2	xxx.s			

SPECIAL MENU		SET	DESCRIPTION	DEFAULT	NOTE
33	OPENING SENSITIVITY MOTOR 1	10% (Fast intervention) 99% (Slow intervention)	To adjust the Encoder or Potentiometer intervention time on Motor 1 in opening	Off	
		Off (Intervention excluded)	Disabled		
34	CLOSING SENSITIVITY MOTOR 1	10% (Fast intervention) 99% (Slow intervention)	To adjust the Encoder or Potentiometer intervention time on Motor 1 in closing	Off	
		Off (Intervention excluded)	Disabled		
35	OPENING SENSITIVITY MOTOR 2	10% (Fast intervention) 99% (Slow intervention)	To adjust the Encoder or Potentiometer intervention time on Motor 2 in opening	Off	
		Off (Intervention excluded)	Disabled		
36	CLOSING SENSITIVITY MOTOR 2	10% (Fast intervention) 99% (Slow intervention)	To adjust the Encoder or Potentiometer intervention time on Motor 2 in closing	Off	
		Off (Intervention excluded)	Disabled		
37	SLOWDOWN SENSITIVITY MOTOR	10% (Fast intervention) 99% (Slow intervention)	To adjust the amperometric sensitivity in slowdown Function available only on electro-mechanic operators	30% (= 1,5s)	
		With potentiometer	To set the inversion time in slow-down from 0 to 5 seconds (= 99%) - Only with potentiometer enabled		
38	POTENTIOMETER THRESHOLD OP. 1	1 1000	To adjust the threshold of the potentiometer intervention. This parameter self-determines during the working times learning but can also be adjusted later, on the condition that the set value is higher than the value shown in VP1 or VP2 (instantaneous speed values which can be shown by accessing the DEBUG menu). NOTE: The lower the threshold value, the slower will be the response of the potentiometer.	- - - -	
39	POTENTIOMETER THRESHOLD CL. 1				
40	POTENTIOMETER THRESHOLD OP. 2				
41	POTENTIOMETER THRESHOLD CL. 2				
42	POTENTIOMETER SLOWDOWN THRESHOLD OP. 1	1 100	To adjust the threshold of the potentiometer intervention in slowdown. By default this value is set on 10. but can be manually increased on the condition that the set value is higher than the value shown in VP1 or VP2 (instantaneous speed values which can be shown by accessing the DEBUG menu)	10	
43	POTENTIOMETER SLOWDOWN THRESHOLD CL. 1				
44	POTENTIOMETER SLOWDOWN THRESHOLD OP. 2				
45	POTENTIOMETER SLOWDOWN THRESHOLD CL. 2				
46	CLOSING INVERSION	Total	In case of obstacle or safety edge it totally reverses the movement during closing. If active, the automatic reclosing will be attempted for 5 times	Total	
		Partial	In case of obstacle, safety edge or potentiometer, it partially reverses direction (of about 30 cm) then stops		
For menu 47 and 50 see menu 32-Encoder = On					
For menu from 51 to 56 see menu 32-Encoder = Potentiometer					
59	OPENING SLOWDOWN 1	Off (*) 50% Hydraulic	Adjustable from Off to the 50% of the stroke. On hydraulic operators, the slowdown is automatically set to "Hydraulic" if value exceeds the 50%	It depends on model	
60	CLOSING SLOWDOWN 1	Off (*) 50% Hydraulic	Adjustable from Off to the 50% of the stroke. On hydraulic operators, the slowdown is automatically set to "Hydraulic" if value exceeds the 50%	It depends on model	
61	OPENING SLOWDOWN 2	Off (*) 50% Hydraulic	Adjustable from Off to the 50% of the stroke. On hydraulic operators, the slowdown is automatically set to "Hydraulic" if value exceeds the 50%	It depends on model	
62	CLOSING SLOWDOWN 2	Off (*) 50% Hydraulic	Adjustable from Off to the 50% of the stroke. On hydraulic operators, the slowdown is automatically set to "Hydraulic" if value exceeds the 50%	It depends on model	
* For operators with hydraulic brake (CF) or double hydraulic brake (2CF) this parameter must be on "Hydraulic"					

SPECIAL MENU		SET		DESCRIPTION	DEFAULT	NOTE
63	DECELERATION	0 % 100%		To adjust the change from normal speed to slowdown speed	100%	
64	ACCELERATION	0 % 100%		Acceleration ramp. To adjust the motor start	100%	
For menu from 65 to 68 see menu 32-Encoder = Off (They are visible even with 32-Encoder set ON)						
69	ANTI OVERLAP	Off		To disable the anti-overlapping control of the leaves allowing their separate control	Off	
		On		To enable the anti-overlapping control of the leaves		
70	OPENING POSITION RECOVERY	0	20 seconds	To retrieve the inertia of the motor in opening after the Stop or the reversing	1 s	
71	CLOSING POSITION RECOVERY	0	20 seconds	To retrieve the inertia of the motor in closing after the Stop or the reversing	1 s	
72	OPENING TOLERANCE MOTOR 1	0	100	To adjust the Motor 1 tolerance between the stop and the obstacle, in opening	0	
73	CLOSING TOLERANCE MOTOR 1	0	100	To adjust the Motor 1 tolerance between the stop and the obstacle, in closing	0	
74	OPENING TOLERANCE MOTOR 2	0	100	To adjust the Motor 2 tolerance between the stop and the obstacle, in opening	0	
75	CLOSING TOLERANCE MOTOR 2	0	100	To adjust the Motor 2 tolerance between the stop and the obstacle, in closing	0	
76	PUSHING STROKE	Time Pushing Stroke Off - 3 sec		Before opening, the motor starts in closing for the time set, in order to simplify the lock release	Off	
		Repeat Lock Release Off - On		If ON , the lock will be released both before and after the pushing stroke		
		End		To exit the menu		
77	LOCK TIME	Off	5sec	To adjust the lock release time from 0 to 5 seconds	3	
78	LOCK	Only opening		Lock enabled only before opening	Only opening	
		Only closing		Lock enabled only before closing		
		Opening and closing		Lock enabled before opening and closing		
79	ANTI INTRUSION	Only opening		If the gate is forced manually, the control unit starts the motor and restores the state of the gate before forcing (function only available if limit switches are installed)	Off	
		Only closing				
		Opening and closing				
		Off				
80	PUSHOVER	Off		The gate leaf makes an extra movement at the maximum torque to ensure the tightening of the gate	Off	
		Opening and closing				
		Only closing				
		Only opening				
81	PERIODICAL PUSHOVER	Off	8h (only if 80-Pushover is ON)	To activate the repetition of the pushover at a distance of time adjustable from 0 to 8 hours, at hourly intervals	Off	
82	MOTOR RELEASE	Opening 1 Off - 3 s		If different from OFF, the operator slightly reverses its direction at the end of the cycle	Off (hydraulic) 0.1 (mechanic)	
		Closing 1 Off - 3 s				
		Opening 2 Off - 3 s				
		Closing 2 Off - 3 s				
		End				
83	EXTRA TIME	0.0 s	10 s	With limit switches it is possible to add an extra time to the operators movement after the limit switches reading. Note: with Encoder, the space can be set by impulses (from 0 to 100)	0.0 s	
* If one or more of the slowdown menus (from 59 to 62) are set to "HYDRAULIC", the extra time will only be active on the operator thus set						

SPECIAL MENU		SET	DESCRIPTION	DEFAULT	NOTE
84	BRAKE	Off 100%	To adjust the braking on the limit switches	Off	
85	PRE-FLASHING	Only closing	To enable the pre-flashing only before closing	0.0 s	
		0.0 5.0 s	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	Flashing light will be OFF with enabled timer and open gate	Off	
		On	Flashing light will be ON with enabled timer and open gate		
88	COURTESY LIGHT	Off	Disabled	20	
		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 or exit. Available by the use of the partial opening contact	Off	
90	PARTIAL OPENING	20% 100%	Adjustable from 20% to 100%	100%	
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		
92	TIMER	Off	To turn the selected input into an input to which connect an external clock	Off	
		On photocell 2			
		On partial input			
94	24V AUX (Max. 800 mA) The AUX output allows the connection of a relay for the additional accessories management	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		
		Positive brake management (through relay)	Positive Electric-brake - connected through relay (AUX output powered only with stationary gate)		
		Negative brake management (through relay)	Negative Electric-brake - connected through relay (AUX powered during cycle and 1 s before starting the movement)		
		Negative brake (connected through relay) Photocell management	Negative Electric-brake (AUX output powered during cycle and 1 second before starting the movement; The AUX output is disabled when the photocell is activated)		
		Open gate warning light (connected through relay)	1 flash per second during opening 2 flashes per second during closing Steady lit in "Stop" or "Open" status		
		Start 3 s (connected through relay)	AUX powered at every Start input or at every photocells or safety edge intervention, for 3 seconds		
95	PHOTO-TEST	Barrier Led lights	Closed barrier - the light is switched-on Open barrier - the light is switched-off Moving barrier - the light blinks	Off	
		Photocell 1	Self-test enabled only on photocell 1		
		Photocell 2	Self-test enabled only on photocell 2		
		Photocells 1 and 2	Self-test enabled on photocells 1 and 2		
		Off	Disabled		

SPECIAL MENU		SET	DESCRIPTION	DEFAULT	NOTE
96	SAFETY EDGE SELF-TEST	<i>Safety Edge 1</i>	Self-test enabled only on safety edge 1	<i>Safety Edges 1 and 2</i>	
		<i>Safety Edge 2</i>	Self-test enabled only on safety edge 2		
		<i>Safety Edges 1 and 2</i>	Self-test enabled on safety edges 1 and 2		
		<i>Off</i>	Disabled		
97	PHOTOCELL 1	<i>Closing</i>	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	<i>Closing</i>	
		<i>Opening and closing</i>	If the photocell is occupied during opening or closing, it stops the gate movement; when released, the movement continues		
		<i>Stop</i>	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		
		<i>Stop and close</i>	If the photocell is occupied during closing, it stops the gate movement; when released, the closing movement continues		
		<i>Close</i>	The photocell stops the gate until it is occupied in both opening and closing; when released, the photocell gives a closing command (the gate closes 1 sec. after the photocell release)		
		<i>Pause reload</i>	If the photocell is occupied during opening or closing, it stops the gate movement; when released, the movement continues. If it is occupied during the pause, it recharges the pause time set		
		<i>Shadow loop</i>	When the gate is open, the shadow loop prevents the reclosing until it is occupied. Shadow loop is switched off during closing		
		<i>Delete pause time</i>	If the photocell is occupied during opening, pause or closing, the gate reopens completely and closes without observing the pause time set		
98	PHOTOCELL 2	<i>Shadow loop RP (pause reloading)</i>	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. Shadow loop is switched off in closing	<i>Opening and closing</i>	
		<i>Closing</i>	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		
		<i>Opening and closing</i>	If the photocell is occupied during opening or closing, it stops the gate movement; released, the movement continues		
		<i>Stop</i>	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		
		<i>Stop and close</i>	If the photocell is occupied during closing, it stops the gate movement; when released, the closing movement continues		
		<i>Close</i>	The photocell stops the gate until it is occupied in both opening and closing; when released, the photocell gives a closing command (the gate closes 1 sec. after the photocell release)		
		<i>Pause reload</i>	If the photocell is occupied during opening or closing, it stops the gate movement; when released, the movement continues. If it is occupied during the pause, it recharges the pause time set		
		<i>Shadow loop</i>	When the gate is open, the shadow loop prevents the reclosing until it is occupied. Shadow loop is switched off during closing		
		<i>Delete pause time</i>	If the photocell is occupied during opening, pause or closing, the gate reopens completely and closes without observing the pause time set		
		<i>Shadow loop PR (pause reloading)</i>	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. Shadow loop is switched off in closing		
		<i>Stop and open</i>	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		

SPECIAL MENU		SET	DESCRIPTION	DEFAULT	NOTE
100	SAFETY EDGE 1	<i>Normal</i>	Normal N.C. contact	<i>Normal</i>	
		<i>8K2</i>	To enable the safety edge protected by a 8K2 resistor		
		<i>8K2 Double</i>	To enable two safety edges protected by a 8K2 resistor		
		<i>Photo 1 10K</i>	To enable the photocell protected by a 10K resistor		
		<i>Photo 1 10K Double</i>	To enable two photocells protected by a 10K resistor		
101	SAFETY EDGE 2	<i>Normal</i>	Normal N.C. contact	<i>Normal</i>	
		<i>8K2</i>	To enable the safety edge protected by a 8K2 resistor		
		<i>8K2 Double</i>	To enable two safety edges protected by a 8K2 resistor		
		<i>Photo 2 10K</i>	To enable the photocell protected by a 10K resistor		
		<i>Photo 2 10K Double</i>	To enable two photocells protected by a 10K resistor		
102	SAFETY EDGE 1 DIRECTION	<i>Opening and closing</i>	Safety edge enabled in opening and closing	<i>Opening and Closing</i>	
		<i>Only opening</i>	Safety edge enabled only in opening		
		<i>Only closing</i>	Safety edge enabled only in closing		
103	SAFETY EDGE 2 DIRECTION	<i>Opening and closing</i>	Safety edge enabled in opening and closing	<i>Opening and Closing</i>	
		<i>Only opening</i>	Safety edge enabled only in opening		
		<i>Only closing</i>	Safety edge enabled only in closing		
104	SELECT LIMIT SWITCH	<i>Automatic</i>	Automatic detection of the limit switch	<i>Automatic</i>	
		<i>Opening only</i>	Limit switch enabled only in opening		
		<i>Closing only</i>	Limit switch enabled only in closing		
		<i>Ext</i>	Limit switch connected on the external interface for 4 cams limit switches		
		<i>Motor internal</i>	To be enabled if the operator is equipped with an inner limit switch that stops the motor phase		
106	DIAGNOSTICS	1 10	To display the last event (See alarms table)	----	
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	
109	THERMOMETER	On Off	To enable the probe for the oil temperature detection and heating; the probe must be connected through the LE (or LSE) management unit	Off	
110	LOWER THRESHOLD TEMPERATURE	From -20° to +50°	To adjust the temperature threshold of the oil heater probe activation (This menu is shown only if the menu 109-Thermometer is set to ON)	-10°	
111	UPPER THRESHOLD TEMPERATURE	From -20° to +50°	To adjust the temperature threshold of the oil heater probe deactivation (This menu is shown only if the menu 109-Thermometer is set to ON)	0°	
112	PASSWORD	Note: "0000" setting is not allowed	To enter a password for blocking the control unit parameters modification	----	
113	EMERGENCY	<i>Off</i>	Disabled	<i>Off</i>	
		<i>Last opening</i>	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		
		<i>Last closing</i>	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		

SPECIAL MENU		SET		DESCRIPTION	DEFAULT	NOTE
116	REPEAT LEAF DELAY	On	Off	In case of a STOP command when the gate is on its halfway, the leaves will repeat the "leaf delay" set on menus 26-27	On	
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 seconds) as soon as the power is restored	Off	
118	LATCH	Off		Disabled	Off	
		Opening		The gate opens and stay open till a new Start input. The latch function uses the "Partial Opening" N.O. input (the "Partial Opening" function is so disabled)		
		Closing		The gate closes and stay closed till a new Start input. The latch function uses the "Partial Opening" N.O. input (the "Partial Opening" function is so disabled)		
119	DISPLAY WRITING SPEED	From 30% to 100%		See Note 2 at the end of the table	80%	
120	BASIC MENU	Press OK to exit the special menu. The special menu switches off automatically after 20 minutes				

Note 1: after initialization, the parameters set on menu **3 - MOTOR** and **104 - SELECT LIMIT SWITCH** always remain set to the value chosen during the programming operation

Note 2: if the menu **119 - DISPLAY WRITING SPEED** is set to the minimum value of 30%, the display writing speed will be low. On the contrary, if it is set to the maximum value of 100%, the writing speed will be very high

Please note: the writing speed will not change on the JOLLY 3 programmer

ALARMS

The control unit advises about faults by a message on the display. The table below shows which faults are advised and what to do in the event of a malfunction. However, it is possible to read the last 10 fault warnings by accessing the **106-DIAGNOSTIC** menu

Note 1: To exit the alarms display press **OK**


If the warning signal does not disappear, carry out all the checks required for that error or disconnect the device generating error to check whether the signal disappears

It is also possible to visualize the warning signals through the flashing light or the pilot light, simply by observing the number of flashes emitted and checking the correspondence in the flashing table below. When an event occurs, the warning flashes are issued at each Start command;

Note 3: When there are no events, the normal operation (with **86-FLASHING LIGHT** set on "**NORMAL**") is:
1 flash per second in opening - 2 flashes per second in closing - steady during pause

WARNING	DESCRIPTION	SOLUTION
FAULT MOTOR	Motor power supply failure	Be sure there are no short circuits on the motor or on the control unit; Check the gate is not locked or stuck on stop point; Check the encoder (if active) is connected to the control unit; By unlocking the operator, try giving a Start command and hear if the motor runs dry; If the motor does not run at all, then it is burned, therefore call the technician ; If the motor runs, disconnect the power supply, lock the operator again and restore the power
FAULT 24	24V power supply failure	Check that there are no short circuits on wirings or on the control unit or that there is no overload
FAULT NET	Power supply failure	Check the power supply or check the F2 fuse
FAULT SELF-TEST	Photocells self-test failure	Check the photocells operation and/or wirings on control unit
FAULT LIMIT SWITCH	Limit switch activation failure	Check the operation of both limit switches and/or the correspondence between the motor movement direction and the engaged limit switch
FAULT POTENTIOMETER 1	Potentiometer 1 failure	The message appears only if the potentiometer is ON and the management unit (LE / LSE) is broken or not connected
FAULT POTENTIOMETER 2	Potentiometer 2 failure	The message appears only if the potentiometer is ON and the management unit (LE / LSE) is broken or not connected
FAULT POTENTIOMETER DIRECTION	Potentiometer direction failure	Reverse potentiometer connection cables (reverse the green - or blue - with the brown)
FAULT FLASHING LIGHT	Flashing light failure	Check connections and / or conditions of the lamp
FAULT THERMOMETER	Thermometer failure	The message only appears if the thermometer is ON and the management unit (LSE / LE) is broken, not connected or incorrectly set
FAULT EDGE 1	Safety edge 1 failure	Check edge metal thread and edge connection cables; make sure the edge contact is closed by checking on display the «input status»
FAULT EDGE 2	Safety edge 2 failure	Check edge metal thread and edge connection cables; make sure the edge contact is closed by checking on display the «input status»
FAULT PHOTO 1 10K	10K photocell 1 failure	Check photocell connection or possible short circuits; check if photocell is well powered Make sure that a 10K protection photocell has been connected
FAULT PHOTO 2 10K	10K photocell 2 failure	Check photocell connection or possible short circuits; check if photocell is well powered Make sure that a 10K protection photocell has been connected

NUMBER OF FLASHES	ALARM TYPE
1	Photocell in closing
2	Photocell in opening
3	Safety edge
4 fast	Limit switch error
5	Stop
6	Closing collision
7	Opening collision
7 fast 9 times	Self-test failure
8	Maximum cycles reached
10	Motor failure
11	Motor failure

 Periodically, **it would be advisable to reprogram the learning times on the control unit**, according to the number of performed cycles, on the type of operator or in case of malfunctionings.

The warning signal "**MAXIMUM CYCLES REACHED**" and the 7 flashes shown in the table aside refer to the achievement of the maximum cycles established before maintenance; therefore it is advisable to carry out maintenance and reset the number of cycles on the control unit

TROUBLESHOOTING

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

...continued

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

TO THE ATTENTION OF BOTH INSTALLER AND END USER

MAINTENANCE: Periodically, based on the number of maneuvers performed over time and based on the type of operator, if a change in friction, malfunctioning or non-compliance with the previously set times are noticed, ***it would be advisable to reprogram the learning times on the control unit***

Periodically clean the optical systems of the photocells

REPLACEMENTS: Send request for spare parts to: **SEA S.p.A. - Teramo - ITALY** - www.seateam.com

SAFETY AND ENVIRONMENTAL COMPATIBILITY: Disposal of packaging materials and/or circuits should take place in an approved disposal facility





REGULAR PRODUCT DISPOSAL (electric and electronic waste)

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

This brand on the product or on documentation indicates that the product must not be disposed off together 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

STORING

WAREHOUSING TEMPERATURES

T_{min}	T_{Max}	Dampness_{min}	Dampness_{Max}
- 20°C 	+ 65°C 	5% <i>not condensing</i>	90% <i>not condensing</i>

Materials handling must be made with appropriate vehicles

WARRANTY LIMITS - see the sales conditions

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 FOR THE INSTALLER AND THE USER

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

TERMS OF SALES

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

GENERAL NOTICE The systems must be assembled exclusively with SEA components, unless specific agreements apply. Non-compliance with the applicable safety standards (European Standards EM12453 – EM 12445) and with good installation practice releases SEA from any responsibilities. SEA shall not be held responsible for any failure to execute a correct and safe installation under the above mentioned standards.

1) PROPOSED ORDER The proposed order shall be accepted only prior SEA approval of it. By signing the proposed order, the Buyer shall be bound to enter a purchase agreement, according to the specifications stated in the proposed order.

On the other hand, failure to notify the Buyer of said approval must not be construed as automatic acceptance on the part of SEA.

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

3) PRICING The prices in the proposed order are quoted from the Price List which is valid on the date the order was issued. The discounts granted by the branch sales department of SEA shall apply only prior to acceptance on the part of SEA. The prices are for merchandise delivered ex-works from the SEA establishment in Teramo, not including VAT and special packaging. SEA reserves the right to change at any time this price list, providing timely notice to the sales network. The special sales conditions with extra discount on quantity basis (Qx, Qx1, Qx2, Qx3 formula) is reserved to official distributors under SEA management written agreement.

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

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

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

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

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

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

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

PLATINUM: The mechanical components of the operators belonging to this line are guaranteed for 36 months from the date of manufacturing written on the operator. The base warranty (36 months) will be extended for further 24 months (up to a total of 60 months) when it is acquired the certificate of warranty which will be filled in and sent to SEA S.p.A. The electronic devices and the systems of command are guaranteed for 24 months from the date of manufacturing. In case of defective product, SEA undertakes to replace free of charge or to repair the goods provided that they are returned to SEA repair centre. The definition of warranty status is by unquestionable assessment of SEA. The replaced parts shall remain propriety of SEA. Binding upon the parties, the material held in warranty by the Buyer, must be sent back to SEA repair centre with fees prepaid, and shall be dispatched by SEA with carriage forward. The warranty shall not cover any required labour activities.

The recognized defects, whatever their nature, shall not produce any responsibility and/or damage claim on the part of the Buyer against SEA. The guarantee is in no case recognized if changes are made to the goods, or in the case of improper use, or in the case of tampering or improper assembly, or if the label affixed by the manufacturer has been removed including the SEA registered trademark No. 804888. Furthermore, the warranty shall not apply if SEA products are partly or completely coupled with non-original mechanical and/or electronic components, and in particular, without a specific relevant authorization, and if the Buyer is not making regular payments. The warranty shall not cover damage caused by transport, expendable material, faults due to non-conformity with performance specifications of the products shown in the price list. No indemnification is granted during repairing and/or replacing of the goods in warranty. SEA disclaims any responsibility for damage to objects and persons deriving from non-compliance with safety standards, installation instructions or use of sold goods. The repair of products under warranty and out of warranty is subject to compliance with the procedures notified by SEA.

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

10) COMPETENT COURT OF LAW In case of disputes arising from the application of the agreement, the competent court of law is the tribunal of Teramo. SEA reserves the faculty to make technical changes to improve its own products, which are not in this price list at any moment and without notice. SEA declines any responsibility due to possible mistakes contained inside the present price list caused by printing and/or copying. The present price list cancels and substitutes the previous ones. The Buyer, according to the law No. 196/2003 (privacy code) consents to put his personal data, deriving from the present contract, in SEA archives and electronic files, and he also gives his consent to their treatment for commercial and administrative purposes.

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

In accomplishment with art. 1341 of the Italian Civil Law it will be approved expressly clauses under numbers:

4) PAYMENTS - 8) GUARANTEE - 10) COMPETENT COURT OF LAW

Dichiarazione di conformità
Declaration of Conformity

La SEA S.p.A. dichiara sotto la propria responsabilità e, se applicabile, del suo rappresentante autorizzato che il prodotto:

SEA S.p.A. declares under its proper responsibility and, if applicable, under the responsibility of its authorised representative that the product:

Descrizione / Description

Modello / Model

Marca / Trademark

GATE 2 DG R1B

23023025

SEA

(e tutti i suoi derivati / *and all its by-products*)

è costruito per essere incorporato in una macchina o per essere assemblato con altri macchinari per costruire una macchina ai sensi della Direttiva 2006/42/CE

is 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

è conforme ai requisiti essenziali di sicurezza relativi al prodotto entro il campo di applicabilità delle Direttive Comunitarie 2014/35/UE e 2014/30/UE

is conforming to the essential safety requirements related to the product within the field of applicability of the Community Directives 2014/35/UE and 2014/30/UE

COSTRUTTORE o RAPPRESENTANTE AUTORIZZATO:
MANUFACTURER or AUTHORISED REPRESENTATIVE:

SEA S.p.A.

DIREZIONE E STABILIMENTO:

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[Http://www.seateam.com](http://www.seateam.com)

Luogo, data di emissione

Place, date of issue

Teramo, 22/10/2018

L'Amministratore
The Administrator
Ennio Di Saverio




Automatic Gate Openers

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