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

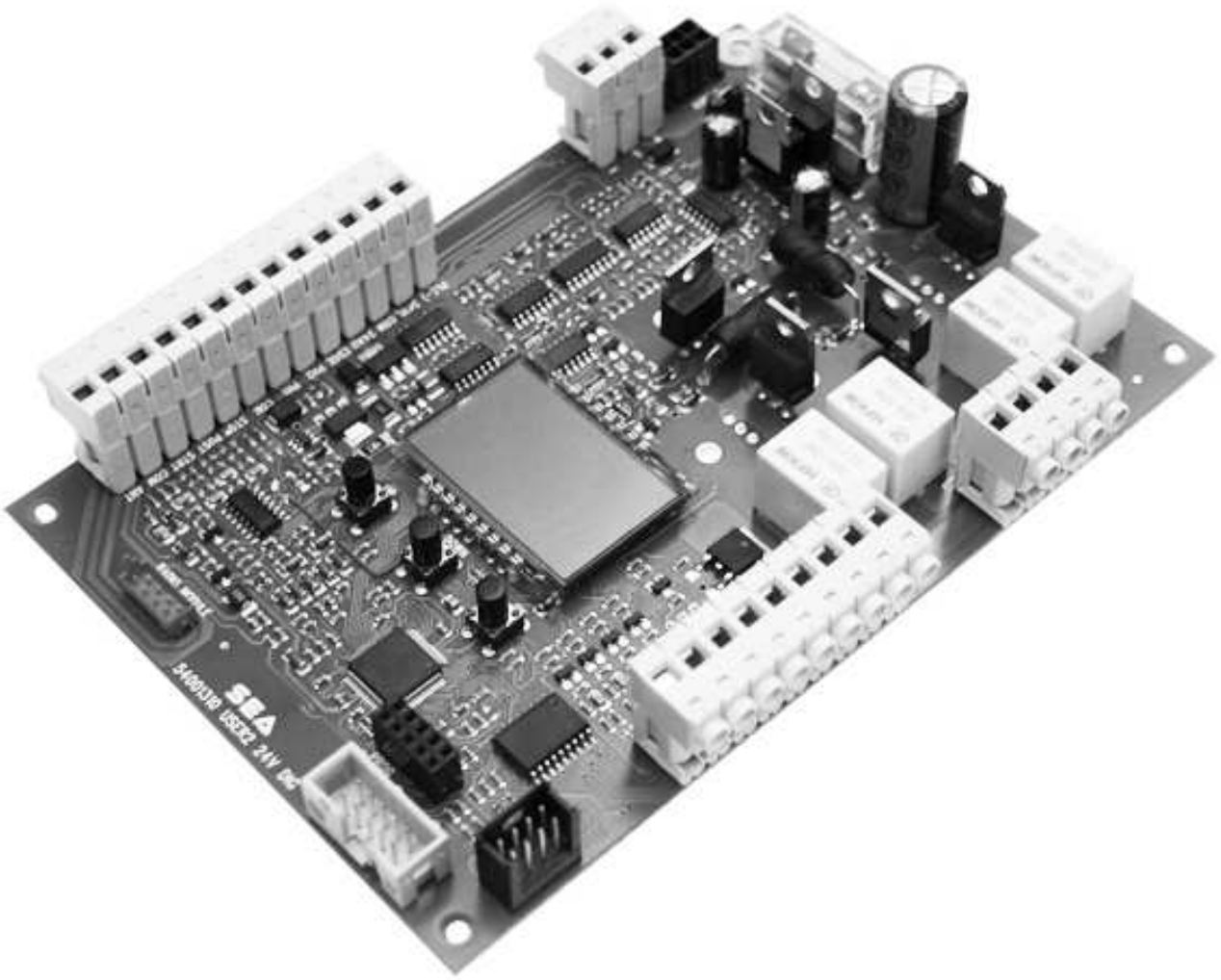
CE

English

USER 2 - 24V DG

23024080/25/30

ELECTRONIC CONTROL UNIT 24V⎓ FOR SWING GATES



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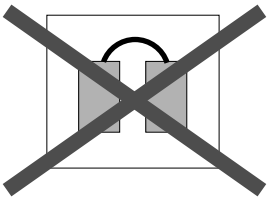
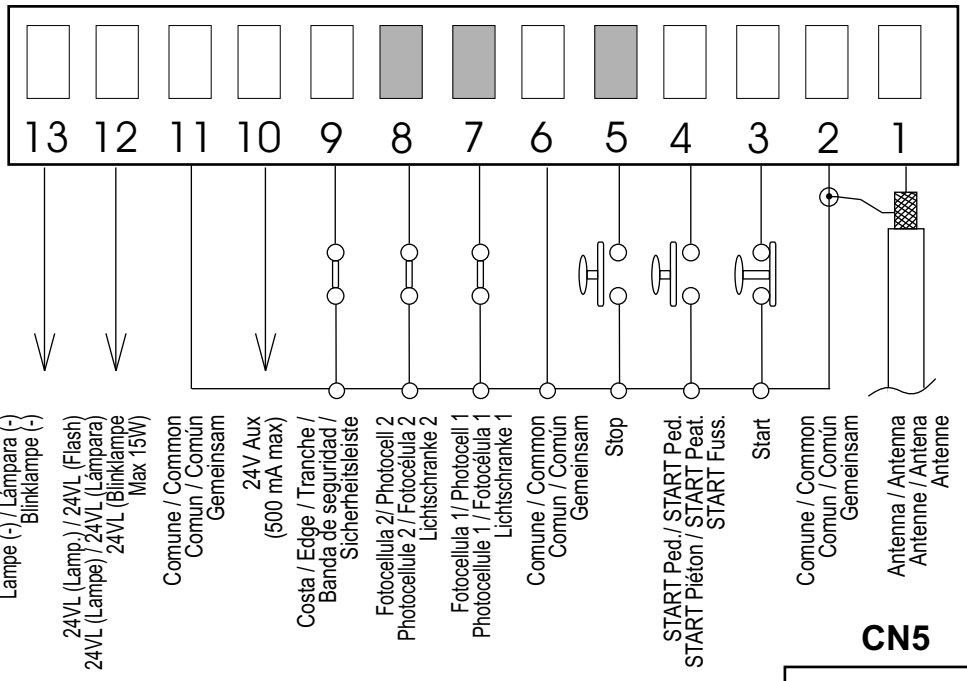
67410756 **REV 01 - 07/2012**

CONNESSIONI / CONNECTIONS / CONNEXIONS
CONEXIONES / VERBINDUNGEN

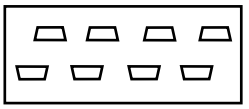
ATTENZIONE: la scheda è predisposta con il riconoscimento automatico degli ingressi N.C. non utilizzati (fotocellule, Stop e finecorsa) ad eccezione dell'ingresso COSTA DI SICUREZZA.
WARNING: The control unit is designed with the automatic detection of not used N.C. inputs (photocells, Stop and Limit switch) except the SAFETY EDGE input.
AVERTISSEMENT: L'armoire est conçue avec la détection automatique des accès N.C. pas utilisés (photocellules, Stop et fins de course), à l'exception de l'accès BARRE PALPEUSE DE SECURITE.
ATENCIÓN: la tarjeta está predispuesta con el reconocimiento automático de las entradas N.C. no utilizados, fotocélulas, stop y fin de carrera, con excepción de la entrada COSTA DE SEGURIDAD.
ACHTUNG: Die Steuerung ist mit der automatischen Erkennung der nicht verwendeten N.C. Eingänge, ausgestattet (Lichtschranken, Stop-und Endschalter) ausgenommen des Sicherheitsleiten Eingangs.



CN1

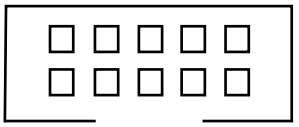


RADIO MODULE (CNA)



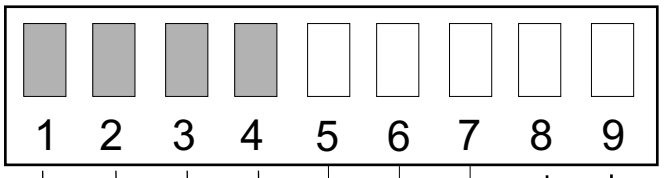
Connettore modulo ricevente
Receiver module connector
Connecteur module récepteur
Conector modulo receptor
Verbindungsmodul Empfänger

JOLLY

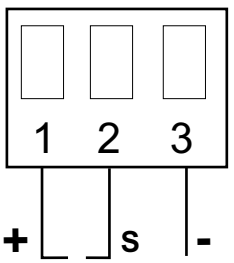


Connettore Programmatore Jolly
Connector Programmer Jolly
Connecteur Programmateur Jolly
Conector Programador Jolly
Anschluss Programmierer Jolly

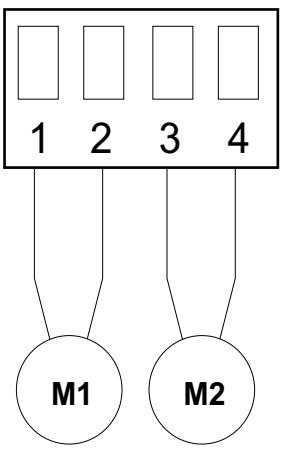
CN2



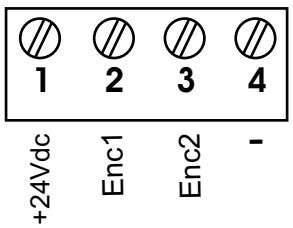
CN5



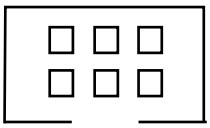
CN3



CN4

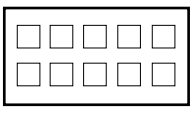


EXP



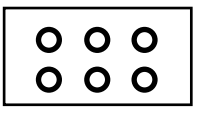
Connettore Modulo Esterno /
Connector External Module /
Connecteur / Conector /Anschluss

PROG



Connettore programmazione
Programming connector
Connecteur programmation
Conector programación

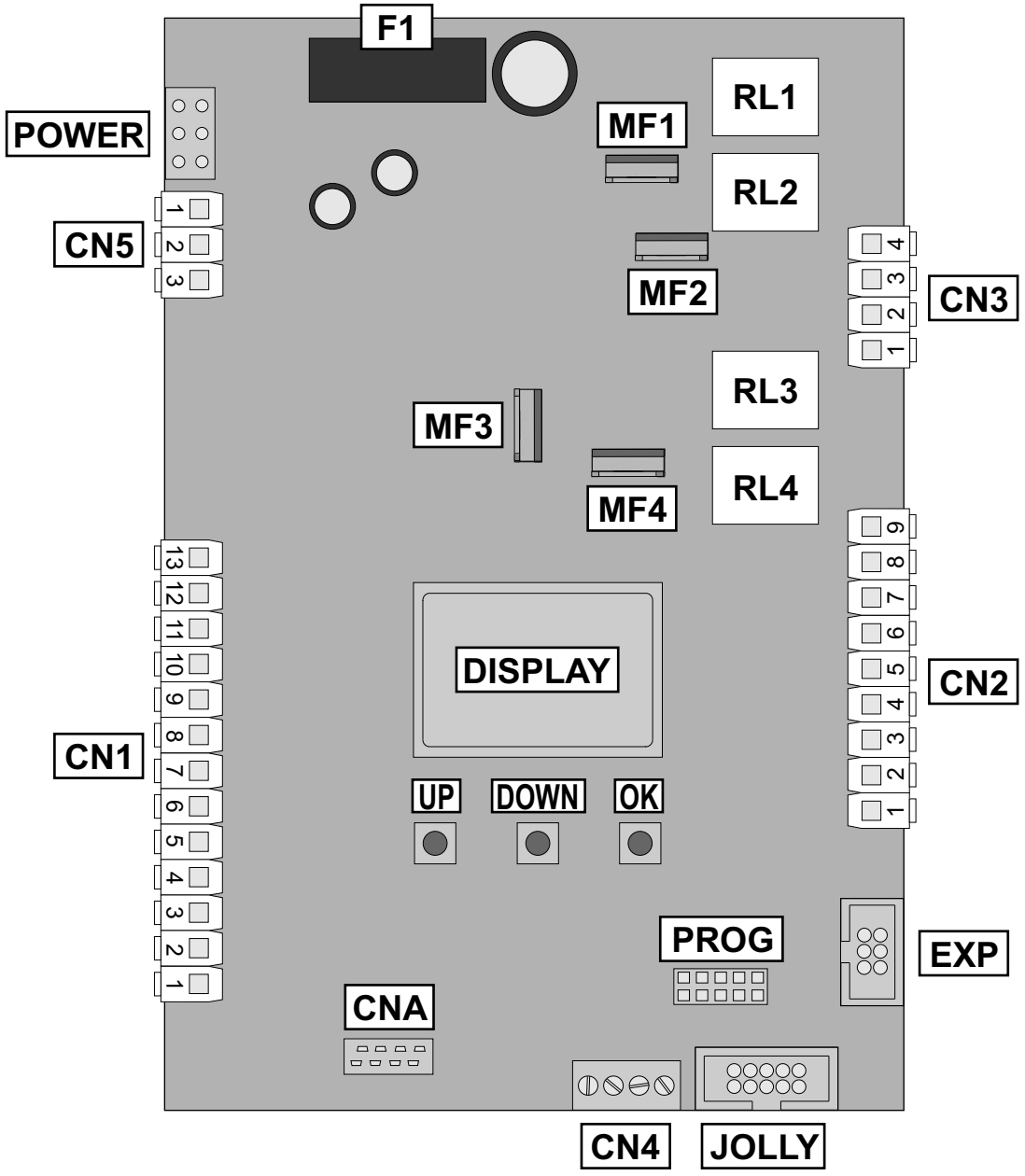
POWER



Connettore alimentazione 24V ⎓ /
24V ⎓ Power connector /
Connecteur alimentation 24V ⎓ /
Conector alimentación 24V ⎓

INDEX

DESCRIPTION OF THE COMPONENTS



CN1 = Input/Output connector
CN2 = limit switch, 24VL, light, electro-lock connector
CN3 = Motors connector
CN4 = Encoder connector
CN5 = Battery charger connector
CNA = Receiver module connection
EXP = External module connector
JOLLY = Jolly programmer connector
MF1 - MF2 = Mosfet motor 2
MF3 - MF4 = Mosfet motor 1
POWER = 24V ⎓ power supply connection
PROG = Programming connector
RL1 - RL2 = Relay motor 2
RL3 - RL4 = Relay motor 1
F1 = Fuse 6.3 AT

GENERAL INFORMATION

The information in this section of the manual are only for technicians or for qualified or authorized installers.

GENERAL CHARACTERISTICS

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

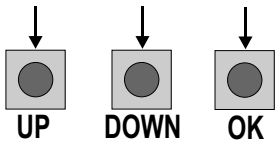
It is of very small dimensions and besides the possibility to adjust motor speed, amperemetric anti squeezing sensitivity, leaf delay in closing, pausing time, it is also possible to manage a display, through which it is possible to control a lot of management functions and the maintenance of the control unit.

TECHNICAL SPECIFICATIONS

Control unit power supply	24 V ⎓
Absorption in stand by	30mA
Max. motor charge	90 W x 2
Max. accessories charge	24V ⎓ 250mA
Max. Flash light charge	24V ⎓ 15W max.
Environment temperature	-20°C 🌡 +50°C 🌡
Protection fuse (24V accessories)	1 (1,6mA)
Function logic	Automatic / Step by step type 1 / Step by step type 2 / Safety / Dead man / 2 Buttons.
Opening/closing time	In selflearning in programming phase
Time of pause	Adjustable
Thrust	Adjustable for single leaf and direction
Slow down	Adjustable for single leaf and direction
Input on connecting terminal **Output on connecting terminal**	Battery power supply / Total opening / Pedestrian opening adjustable / Edge (opt.8K2)/ Stop / Limit switch opening and closing / Encoder / Photcell in opening and closing
Board dimensions	Power supply accessories 24V⎓ / Motors 24V⎓ / Flashing lamp 24V⎓ / Electro-lock 12V⎓
Specifications of optional batteries	156 x 100 mm
Specifications of external enclosure	24V Pb 2Ah min.
	305 x 225 x 125 mm - Ip55
Special accessories	Battery charger card (code 23101105), Relay card for traffic light management (SEM Cod. 23021100), Programmer JOLLY (code 23105276), Programmer OPEN (code 23105290)

NOTE: The Jolly programmer will be functioning starting from Rev. 35 onwards. You can upgrade the software of the Jolly and the control units with the OPEN device and the update firmware software.

QUICK START



PROGRAMMING BUTTONS

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

1 — MENU SEA SET `trSn` → OK → MENU SEA SET `Strt` → OK → MENU SEA SET `PUSh` → Press the button of the TX to be stored → MENU SEA SET `nEn`

OK to exit Menu or press the button of the next TX to be stored

UP

2 — MENU SEA SET `Mot` → OK → Choose the type of motor with UP or DOWN → OK → To confirm and return to main menu

UP

Skip this step if you are working in double leaf mode

3 — MENU SEA SET `Mono` → OK → With UP or DOWN choose ON only if in single leaf mode → OK → To confirm and return to the main menu

UP

4 — MENU SEA SET `LoGc` → OK → With UP or DOWN choose the desired logic → OK → To confirm and return to main menu

UP

5 — MENU SEA SET `t.PAU` → OK → With UP or DOWN choose a delay for automatic closing → OK → To confirm and return to main menu

UP

6 — MENU SEA SET `St.PS.` → OK → With UP or DOWN Choose ON → OK → To confirm and return to main menu

Skip this step if you wna tto work in half-automatic logic

UP

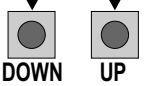
7 — MENU SEA SET `PrGM` → OK → With UP or DOWN choose ON to start times learning → OK → At the end of the selflearning the control unit returns automatically to the main menu

UP

Skip this step if a TX has already been stored

8 — MENU SEA SET `St.Pr.` → OK → With UP or DOWN Choose ON to start test → OK → To confirm and return to main menu

ALL OTHER PARAMETERS HAVE DEFAULT SETTINGS WHICH ARE USEFUL FOR THE 90% OF THE APPLICATIONS BUT CAN BE HOWEVER SET THROUGH THE SPECIAL MENU. FOR ENTERING INTO THE SPECIAL MENU PRESS THE UP AND DOWN BUTTONS AT THE SAME TIME FOR 5 S.



SELFLEARNING AND DEFAULT PARAMETERS

The control unit is pre-set with the default settings, to start the control unit with the DEFAULT settings just keep pressed the UP and DOWN buttons at the same time power supplying the control unit the display shows the message In it.
The DEFAULT settings are shown in the Menues table.

WORKING TIMES SELF LEARNING

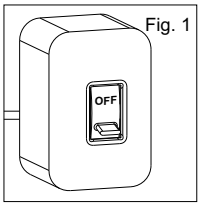


Fig. 1

Note1: Put a jumper on SAFETY EDGE contact if not used.
Note2: It is not necessary to put a jumper on the limit switches, photocells and Stop if they are not used.
1) Check the right operation of the accessories (photocells, buttons etc.).
If necessary set the leaf delay.
2) If necessary adjust the selflearning speed.
3) Switch off power supply (Fig. 1), release the motors (Fig. 2-3) and manually place the leaf on the middle of the stroke (Fig. 4).
Restore the mechanical lock (Fig. 5-6)
4) Power the control unit (Fig.7)
5) Choose the desired motor type; use (default Flipper).
6) Select Prog on the display, press OK and then UP and DOWN to start the programming.
Note3: If on single leaf mode set MONO on ON.
Note4: If one or both motors start in opening, switch off power and invert the motor(s) cable starting in opening. Afterwards repeat the procedure starting from point 4, or activate In.mt.
7) Both leaves will start a CLOSE - OPEN - CLOSE cycle automatically (CLOSE M2 - CLOSE M1 - OPEN M1 - OPEN M2 - CLOSE M2 - CLOSE M1).
End of selflearning.

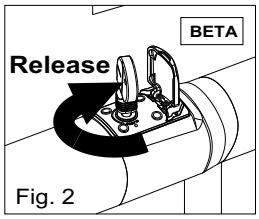


Fig. 2

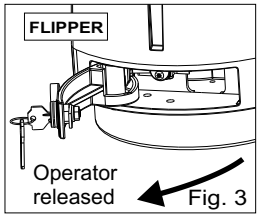


Fig. 3

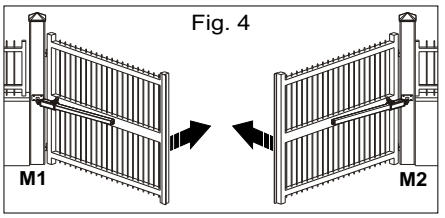


Fig. 4

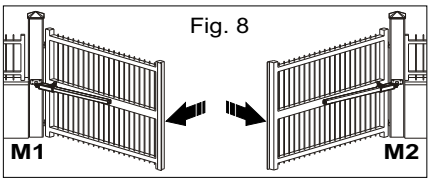


Fig. 8

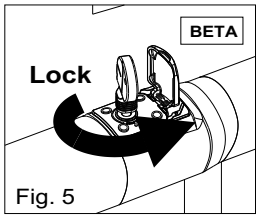


Fig. 5

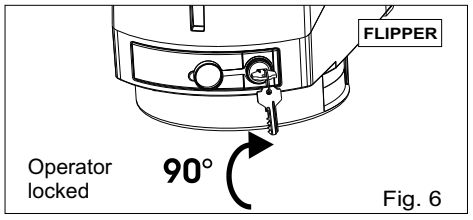


Fig. 6

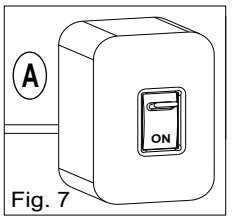


Fig. 7

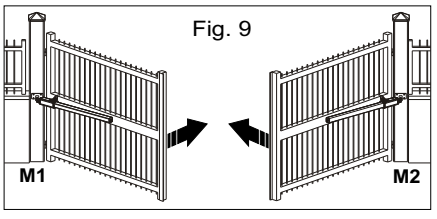


Fig. 9

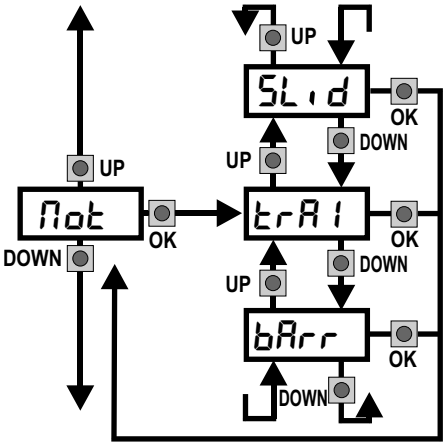
SELECTION OF THE SETTINGS

The settings of the control unit are made through the UP, DOWN and OK buttons. The UP and DOWN buttons to scroll through the MENUS and SUBMENUS. By pressing OK you enter from MENU into SUBMENU and confirm the choice.
Pressing the UP and DOWN buttons at the same time you access the SP MENU for special settings. Pressing the OK button for 5 seconds, you enter the TEST MENU, where you can check the operating status of all inputs.

Initial system

Software Version

Programming example



DISPLAY

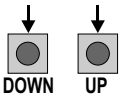
MENU FUNCTION board USER 2 24V DG INPUT TESTS (To access the Menu for input TESTS keep pressed OK for about 5 seconds)		
MENU	**Description**	**Description**
Strt	Start test	The contact must be a N.O. Contact . When activating the related command on the display SET lights up, the input works. If SET is always on, check the wirings.
StoP	Stop test	The contact must be a N.C. Contact. If activating the related command on the display SET lights up, the input works. If SET is always on, make sure that the contact is a N.C. Contact
PEdo	Pedestrian start test	The contact must be a N.O. Contact . When activating the related command on the display SET lights up, the input works. If SET is always on, check the wirings.
EdGE	Safety edge test	The contact must be a N.C. Contact. If activating the related command on the display SET lights up, the input works. If SET is always on, make sure that the contact is a N.C. Contact
PHo.1	Photocell 1 test	The contact must be a N.C. Contact. If activating the related command on the display SET lights up, the input works. If SET is always on, make sure that the contact is a N.C. Contact
PHo.2	Photocell 2 test	The contact must be a N.C. Contact. If activating the related command on the display SET lights up, the input works. If SET is always on, make sure that the contact is a N.C. Contact
FCo.1	M1 opening limit switch test	The contact must be a N.C. Contact. If activating the related command on the display SET lights up, the input works. If SET is always on, make sure that the contact is a N.C. contact or that the related limit switch is not occupied.
FCC.1	M1 closing limit switch test	The contact must be a N.C. Contact. If activating the related command on the display SET lights up, the input works. If SET is always on, make sure that the contact is a N.C. contact or that the related limit switch is not occupied.
FCo.2	M2 opening limit switch test	The contact must be a N.C. Contact. If activating the related command on the display SET lights up, the input works. If SET is always on, make sure that the contact is a N.C. contact or that the related limit switch is not occupied.
FCC.2	M2 closing limit switch test	The contact must be a N.C. Contact. If activating the related command on the display SET lights up, the input works. If SET is always on, make sure that the contact is a N.C. contact or that the related limit switch is not occupied.
0.0	Batteries' voltage level	Batteries charge level indicator

SELECTION OF THE SETTINGS

MENU FUNCTIONS TABLE USER 2 24V DG					
MENU	**Description**	**SET**	**Description**	**Default**	**Set value**
trSM	Transmitter	Strt	Start	Strt	
		StPd	Pedestrian Start	StPd	
		M.ESt	Exp. output		
		StoP	Stop		
		dEL.	Delete TX		
		dEL.S	Delete single transmitter		
Mot	Motor type	SU.AL	Surf - Alpha motors	FLiP	
		bEtA	Beta motors		
		FLiP	Flipper motors		
		FiELd	Field motors		
Mono	Leaf setting	on oFF	**In ON activates single leaf mode**	oFF	
LoGC	Working logics	Auto	Automatic	AUto	
		P.P.1	Step by step type 1		
		P.P.2	Step by step type 2		
		2PuL	Two buttons		
		SiCU	Safety		
		uoPr	Dead man		
tPAu	Time of pause	diSb	OFF (semi-automatic logics)	diSb	
		1.2.3	Setting from 1s to 4min.		
StPS	Start in pause	oFF	Start is not acceped during pause		
		on	Start is accepted during pause		
PrGM	Selflearning times	oFF on	Times learning start		
St.Pr	Test start	oFF on	Start command	oFF	
End	Exit menu	Select END and press OK to exit the menu.The menu switches off automatically after 2 minutes			

Note: On the USER 2 24GV DG Hydro (cod. 23024080) will change only the viusalizations of the "Type of motor" menu.

SELECTION OF THE SETTINGS

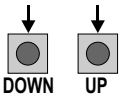


PRESS AT THE SAME TIME FOR 5 SECONDS TO ENTER OR TO EXIT THE SPECIAL MENU

SPECIAL MENU FUNCTIONS TABLE USER 2 24V DG
(To enter the Special Menu keep pressed UP and DOWN at the same time for 5 seconds.
To exit the Special Menu pressed END or keep pressed UP and DOWN at the same time for 5 seconds)

MENU SP	Description	SET	Description	Default	Set value
SP.M1	Motor M1 speed	30 100	Motor M1 speed	75	
SP.M2	Motor M2 speed	30 100	Motor M2 speed	75	
SL.dn	Slowdown speed			30	
SP.Lr	Learning speed	30 100	Learning speed	50	
tr.oP	Leaf delay setting in opening	d.Sb 6	Setting from OFF to 6 seconds	3	
tr.cL	Leaf delay setting in closing	d.Sb 20	From OFF to 20 seconds setting	3	
C.oP 1	M1 opening torque	0 100	Opening torque M1 and amperometric sensitivity Note: By increasing the torque the sensitivity decreases	70	
CCL 1	M1 closing torque	0 100	Closing torque M1 and amperometric sensitivity Note: By increasing the torque the sensitivity decreases	70	
C.oP2	M2 opening torque	0 100	Opening torque M2 and amperometric sensitivity Note: By increasing the torque the sensitivity decreases	70	
CCL2	M2 closing torque	0 100	Closing torque M2 and amperometric sensitivity Note: By increasing the torque the sensitivity decreases	70	
PU.oU	PushOver	d ISb	OFF	d.Sb	
		oP.cL	Opening an closing		
		o.oPE	Opening only		
		o.cLo	Closing only		
r.Str	Reversing Stroke	d.Sb 3	From OFF to 3 seconds	d.Sb	
Sd.o 1	**M1 opening slowdown**	d.Sb 50	From OFF to 50% of the stroke	30	
Sd.c 1	**M1 closing slowdown**	d.Sb 50	From OFF to 50% of the stroke	30	
Sd.o2	**M2 opening slowdown**	d.Sb 50	From OFF to 50% of the stroke	30	
Sd.c2	**M2 closing slowdown**	d.Sb 50	From OFF to 50% of the stroke	30	
Pr.bL.	Pre-flashing	d.Sb	OFF	d.Sb	
		1.2.3	Adjustable from 1s to 5s		
		CL.on	Only before closing		
LG.bU	Flashing lamp or Buzzer output	ALYS	Flashing lamp always on	LAMP	
		LAMP	Classic flashing light		
		SPY	Control lamp		
		bEEP	Buzzer		
in.Mt	Motors and limit-switch inversion	oFF	Synchronized right motor	oFF	
		on	Synchronized left motor		
Enc	Encoder activation	on oFF	In On enables the Encoder reading	oFF	
L.Cou	Courtesy light	CYCL	Only during cycle active.	CYCL	
		1.2.3	Courtesy light setting from 1s to 4min.		
PEdo	Pedestrian opening	20 100	Pedestrian opening space adjustment	100	

SELECTION OF THE SETTINGS

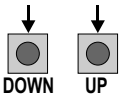


PRESS AT THE SAME TIME FOR 5 SECONDS TO ENTER OR TO EXIT THE SPECIAL MENU

SPECIAL MENU FUNCTIONS TABLE USER 2 24V DG
(To enter the Special Menu keep pressed UP and DOWN at the same time for 5 seconds.
To exit the Special Menu pressed END or keep pressed UP and DOWN at the same time for 5 seconds)

MENU SP	Description	SET	Description	Default	Set value
P.PEd	Pedestrian Pause	Strt	Pedestrian opening pause same as for total opening	Strt	
		d.Sb	OFF		
		1.2.3	Setting from 1s to 4 min.		
S.Str	Soft Start	0 99	Acceleration rampe	75	
		d.Sb	OFF		
CYCL	Number of cycl. for maintenance	100 10E4	Setting from 100 to 100000	10E4	
n.CYC	Number of executed cycles	0 10E9	Note: To reset keep pressed OK for 5 s.		
t.Mr	Timer management	d.Sb	OFF	d.Sb	
		PH2	Timer function ON on photo2 input		
		PEd	Timer function ON on pedestrian input		
S.EdG	Safety edge	d.Sb	Edge is ON but not protected	d.Sb	
		8.2	Edge is ON and protected by a 8k2 resistor		
PH.1C	Photocell 1 management	CLoS	Photocell ON in closing	CLoS	
		oPEn	Photocell ON in opening and closing		
		StoP	Photocell ON also before opening		
		PArC	Photocell stops in closing and closes when free		
		CL.1n	Photocell gives a command for immediate closing during pause and opening		
		rP.PA	Photocell pausing time loading		
PH.2C	Photocell 2 management	CLoS	Photocell ON in closing	oPEn	
		oPEn	Photocell ON in opening and closing		
		StoP	Photocell ON also before opening		
		PArC	Photocell stops in closing and closes when free		
		CL.1n	Photocell gives a closing command during opening, pause and closing		
		rP.PA	Photocell pausing time loading		
24UA	24Vaux output management	ALYS	24Vaux output always power supplied		
		oP.CL	24Vaux output power supplied only during opening and closing		
		oPEn	24Vaux output power supplied only during opening		
		CLoS	24Vaux output power supplied only during closing		
		PAuS	24Vaux output power supplied only during pause		
		PHtE	24Vaux output for connection of photocell TX to autotest		

SELECTION OF THE SETTINGS



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

SPECIAL MENU FUNCTIONS TABLE USER 2 24V DG
(To enter the Special Menu keep pressed UP and DOWN at the same time for 5 seconds.
To exit the Special Menu pressed END or keep pressed UP and DOWN at the same time for 5 seconds)

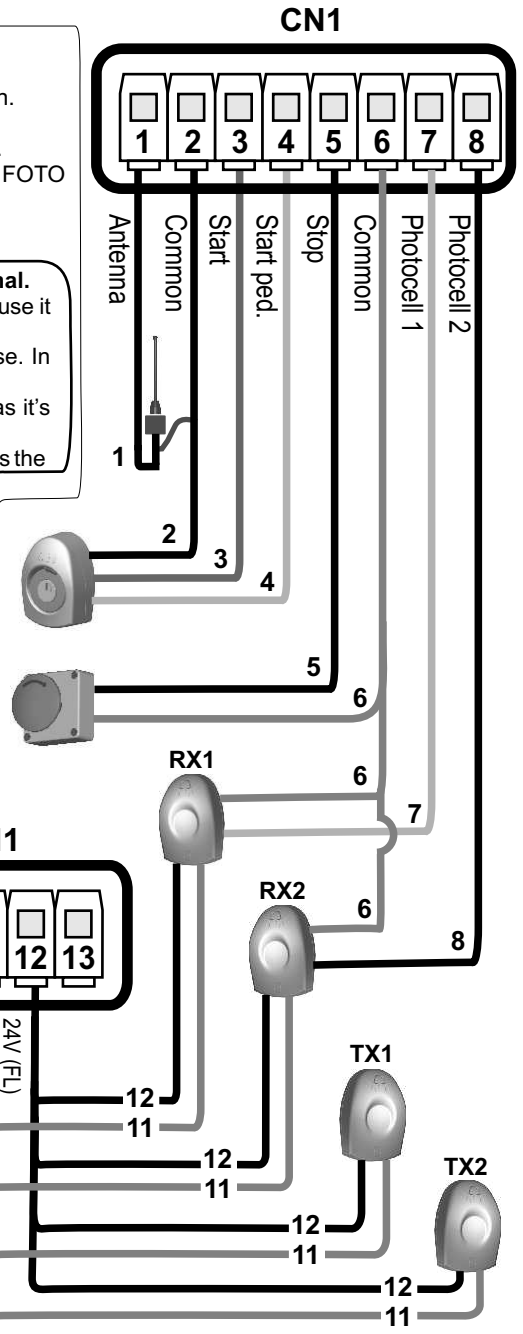
MENU SP	Description	SET	Description	Default	Set value
		PHEC	Phototest economy Output for Self-test ON only during the operation of the motors.		
rESP	Space retrieve	0 15	Retrieves the inertia of the motor after Stop or reversing from 0% to 15 %	6	
r.Mot	Reversing on limit switch	d.Sb 3	After reading the limit switch in closing the motor inverts for the set time, adjustable from 0 to 3sec.	d.Sb	
PoPr	Periodic Push Over	d.Sb 8	Allows the repetition of the Pushover function at a distance of time adjustable from 0 to 8 hours at hourly intervals	d.Sb	
ALLr	Antiintrusion alarm	d.Sb	**If the limit switch is freed manually it forces the reclosing of the gate**	d.Sb	
		o.CLo	Only on closing limit switch		
		o.oPE	Only on opening limit switch		
		oP.CL	On limit switch in closing and in opening		
t.SEr	Electrolock release time	d.Sb 5	**Sets the lock release time from 0 to 5 s**	1	
Lt IM	Courtesy light management with timer	oFF	When timer is ON the courtesy light can be kept switched OFF	oFF	
		on	With timer ON courtesy light can be kept ON		
d.AG	Events diagnostic	0 10	Shows last event (See alarms table)		
PhtE	Auto-test photocells	Ph.12	Auto-test active on Photo1 and Photo2	Ph.12	
		Ph.1	Auto-test active only on Photo1		
		Ph.2	Auto-test active only on Photo2		
tLo1	Tolerance between stop and obstacle motor 1 opening	0 100	Adjusts the tolerance between stop and obstacle	0	
tL.C1	Tolerance between stop and obstacle motor 1 closing	0 100	Adjusts the tolerance between stop and obstacle	0	
tLo2	Tolerance between stop and obstacle motor 2 opening	0 100	Adjusts the tolerance between stop and obstacle	0	
tL.C2	Tolerance between stop and obstacle motor 2 closing	0 100	Adjusts the tolerance between stop and obstacle	0	
SoP1	Sensitivity on obstacle	0 99	Adjusts the revesing sensitivity on motor 1 in opening. Note: Only with Encoder On active.	d.Sb	
S.CL1	Sensitivity on obstacle	0 99	Adjusts the revesing sensitivity on motor 1 in closing. Note: Only with Encoder On active.	d.Sb	
SoP2	Sensitivity on obstacle	0 99	Adjusts the revesing sensitivity on motor 2 in opening. Note: Only with Encoder On active.	d.Sb	
S.CL2	Sensitivity on obstacle	0 99	Adjusts the revesing sensitivity on motor 2 in closing. Note: Only with Encoder On active.	d.Sb	
PSrd	Enter password	----	Allows the entering of a password blocking the control unit parameters modification (see page 18)		
End	Exit special menu	Select END and press OK to exit the special menu. The special menu switches off automatically after 20 minutes.			

START - STOP - PEDESTRIAN START - ANTENNA - PHOTOCELL - EDGE

Photocell 1 and Photocell 2 Connections
+ = 24V(FL)⎓ COM = 0V PH1 = Photocell contact 1 PH2 = Photocell contact 2
Note1: For the autotest connect the TX to the 24Vaux clamp and activate the Autotest function.
Note2: The PhEt will keep the photocells OFF while the gate is closed, thus saving energy.
Note3: On the PhtE menu you can also activate the self-test even on the single photocell.
The standard setting of the photocell 1 is FOTO CLOSE and the one of the photocell 2 is FOTO OPEN. The photocell 2 can be set also as TIMER (see TIMER function).
The selftest can be applied also on single photocell.

OPTIONS ON FOTO1 and FOTO2 adjustable on on- board display or with JOLLY terminal.
FOTO CLOSE activation (CLOS): if occupied, reverses the movement in closing, during pause it prevent the closing.
Activation repeat pause (rPPA): If occupied, during pause it recharges the timer of pause. In closing it reverses the movement.
FOTO OPEN activation (oPEn): If activated the photocell blocks the movement as long as it's busy, when released the opening continues.
FOTO PARK activation (PArC): in opening it is not active; in pause are activated it commands the closing when released, otherwise it's not active; in closing it stops the movement as long as it is busy, when released the closing continues.
FOTO STOP activation (StoP): When activated before the opening the photocell blocks the automation as long as it is busy, during the opening it will be ignored. In closing the intervention of the photocell causes the reopening.
Activation PHOTO CLOSE IMMEDIATELY: The photocell stops the gate as long as it is occupied in both opening and closing, when released it gives a closing command (Closing one second after release of the photocell).

Options 24Vaux⎓ can be set with on-board Display or with Jolly device.
It is possible to chose when having tension on the 24Vaux output. The options are: always, only during opening, only during cycle, only before opening or only during pause.



SAFETY EDGE
It is possible to connect an active safety edge on the terminal CN1. If this device is pressed it opens the contact causing a partial inversion of the movement both in opening and in closing. If not used bridge the contacts 9 and 11 of CN1. Note: contact N.C.

PEDESTRIAN START (N.O.) The pedestrian start can be connected between the clamps 2 and 4 of the CN1 terminal .
This input allows a partial opening the opening space can be set through the on-board display or through the JOLLY device.
Note1: The contact for partial opening is a N.O. Contact (Normally open).
Note2:In 2 BUTTONS logic it is necessary to keep pressed the Start Ped. to re-close the automation.
Note3: In dead man logic this button executes the re-closing if you keep it pressed.
Note4: When closed during pause, the gate will reclose only after this input has been reopened.
TIMER activation: This input can be transformed into TIMER (See TIMER).

STOP (N.C.) The STOP is connected between the clamps 2 and 5 of the CN1 terminal .
The pressure on this button immediately stops the motor in any condition/position. A start command is needed to re-start the movement. After a stop the motor always re-starts in closing.

START (N.O.) The START is connected between the clamps 2 and 3 of the CN 1 terminal.
An impulse given to this contact opens and closes the automation depending onthe selected logic it can be given by a key switch, a keypad, etc. To connect the other devices refer to the related instructions leaflets. (ie. loop detectors and proximity switches).
Note1: In DEAD MAN logic it is necessary to keep pressed the Start for the opening of the automation.
Note2: In 2 BUTTONS logic this button performs the opening.

TIMER

Can be activated through on-board display or through the Jolly programmer. In both cases it's a N.O. contact which provoques the opening of the automation keeping it open until it is activated. When it's released, the gate attends the set pausing time and executes the reclosing. The TIMER command can be activated on the inputs FOTO2, START PEDESTRIAN.
Note1: When activated on the pedestrian entry, the pedestrian will be disabled also on the radio transmitter.
Note2: In case of intervention of a security device during the timer (Stop, Ammeter, Edge), to restore the movement it will be necessary to give a start impulse.
Note3: In case of no power supply with open gate and active Timer the control unit will restore its use, otherwise if during restore of the power supply the TIMER is not activated it will be necessary to give a start impulse for the reclosing.

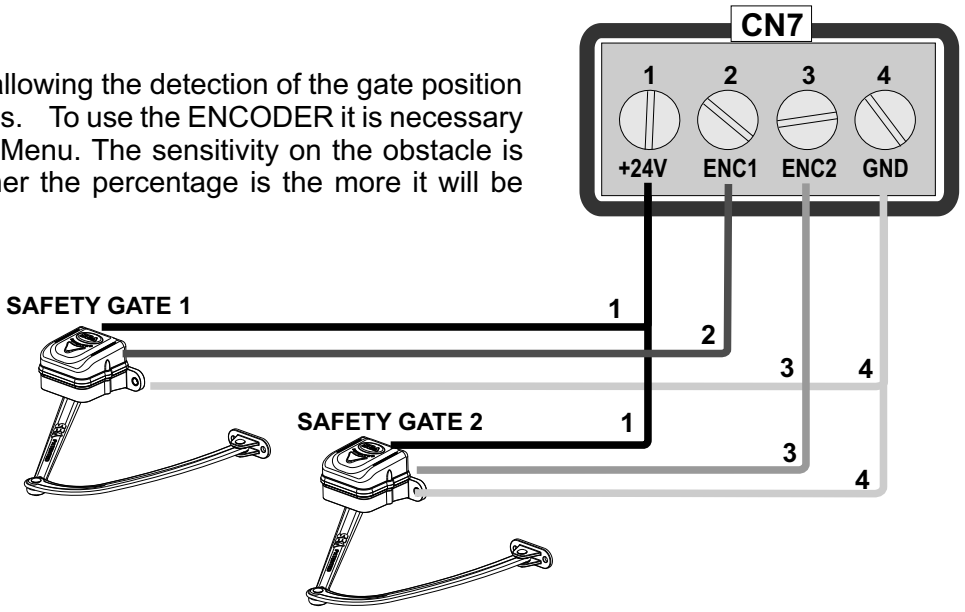
SAFETY GATE OR AMPEROMETRIC MANAGEMENT

AMPEROMETRIC DEVICE FOR ELECTROMECHANICAL OPERATORS

This control unit comes with an obstacle detection system working only on electromechanical operators allowing to have the reversing on obstacles and the automatic detection of the stops.
The sensitivity is adjustable for single leaf and single opening and closing direction through the torque parameter.

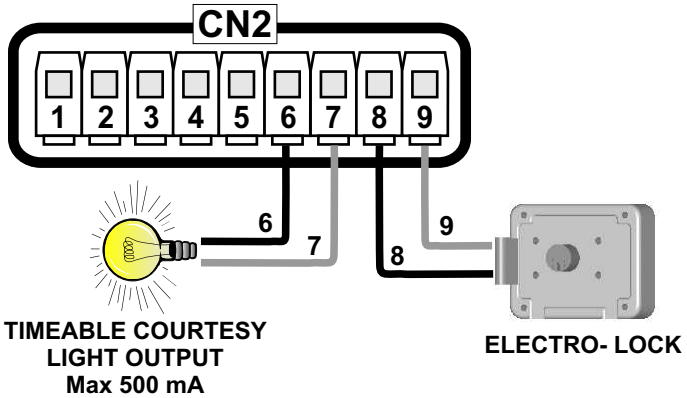
SAFETY GATE

The Safety Gate is an ENCODER allowing the detection of the gate position and its reversing in case of obstacles. To use the ENCODER it is necessary to enable it inside the special Enc Menu. The sensitivity on the obstacle is adjustable from 0 - 99%. The higher the percentage is the more it will be difficult to detect the obstacle.



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

ELECTRO- LOCK AND WARNING LAMP

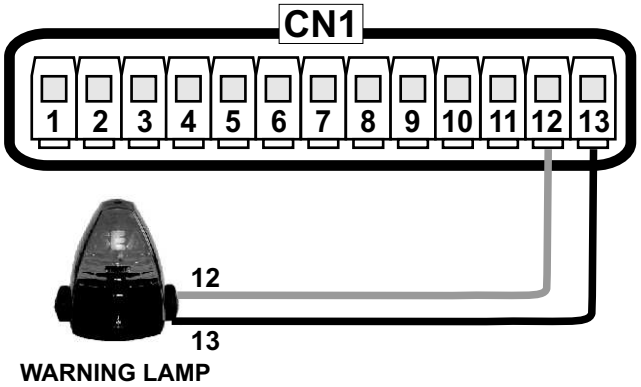


TIMEABLE COURTESY LIGHT OUTPUT Max 500 mA

ELECTRO- LOCK

Electro-lock exit

An electro-lock of 12V⎓ 15W max can be connected. It is possible to disactivate the electroc-lock if not used. This operation allows to save energy of the control unit. The release of the electro-lock can be timed' from 0 to 5 s.



WARNING LAMP

Flashing Lamp 24V⎓ 15W (Warning lamp) / 24V⎓ 4W Led

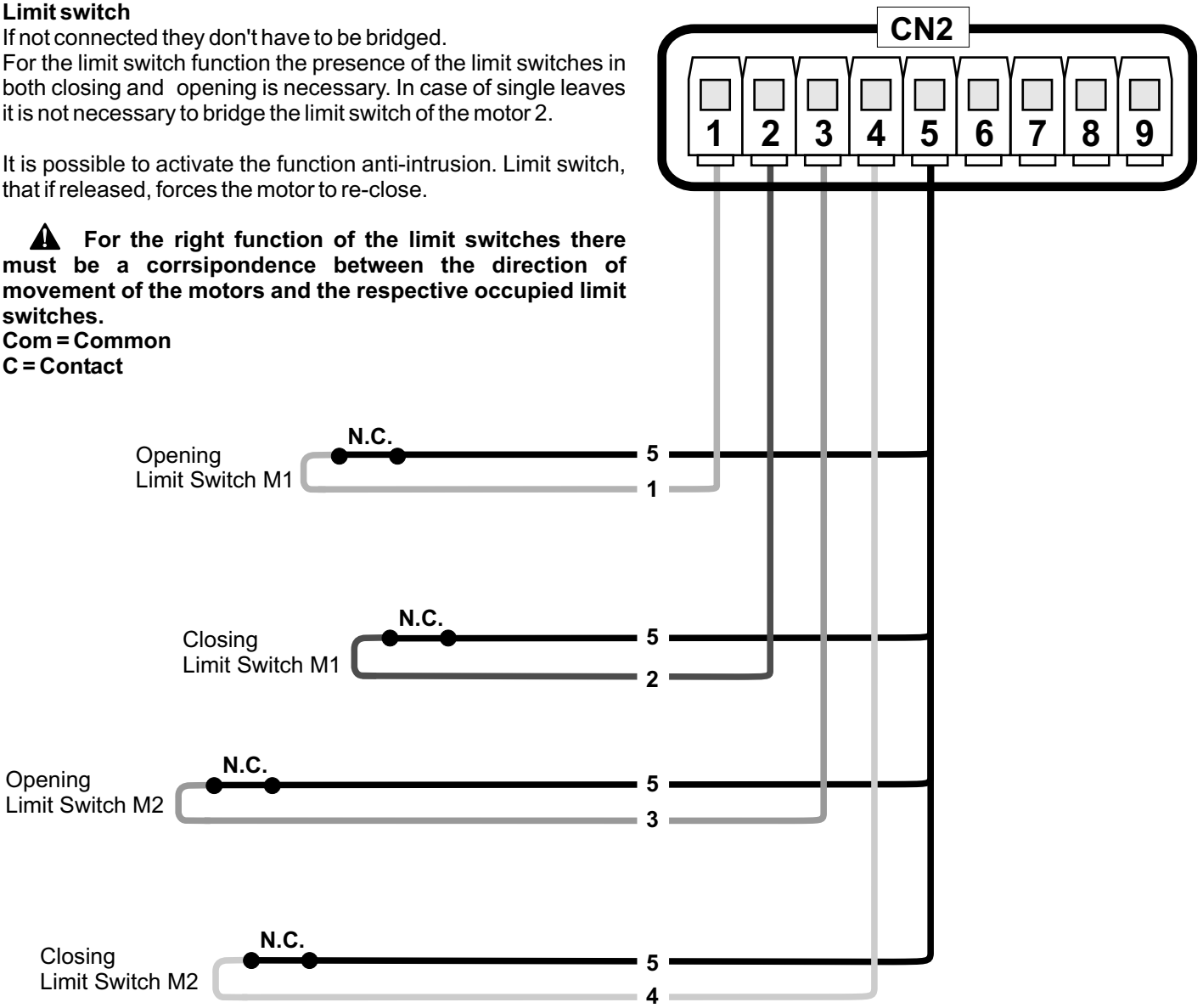
The warning lamp advises that the automatic gate is in movement performing 1 flash /second in opening and 2 flashes / second in closing. Instead it remains turned on fix during pause.
To connect it, connect the wires of the warning lamp as shown in the figure. **Note**: It is recommended to use the flash 24V Led.
Pre-flashing form 0 to 5 seconds can be activated before operator start or only before closing.
Furthermore from the flashing lamp it is possible to verify some alarm signals. See alarms indications.
It is possible to set this exit with fixed flashing also when the gate is not moving or it is possible to change this exit into control lamp. In such case all the indications of alarm remain on the warning lamp as long as they are active.

LIMIT SWITCH

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

It is possible to activate the function anti-intrusion. Limit switch, that if released, forces the motor to re-close.

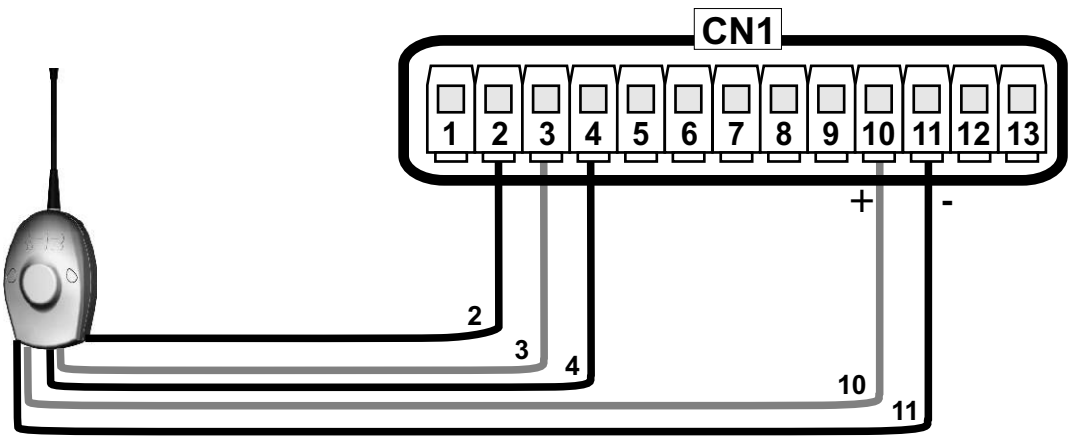
⚠ **For the right function of the limit switches there must be a corrsipondence between the direction of movement of the motors and the respective occupied limit switches.**
Com = Common
C = Contact



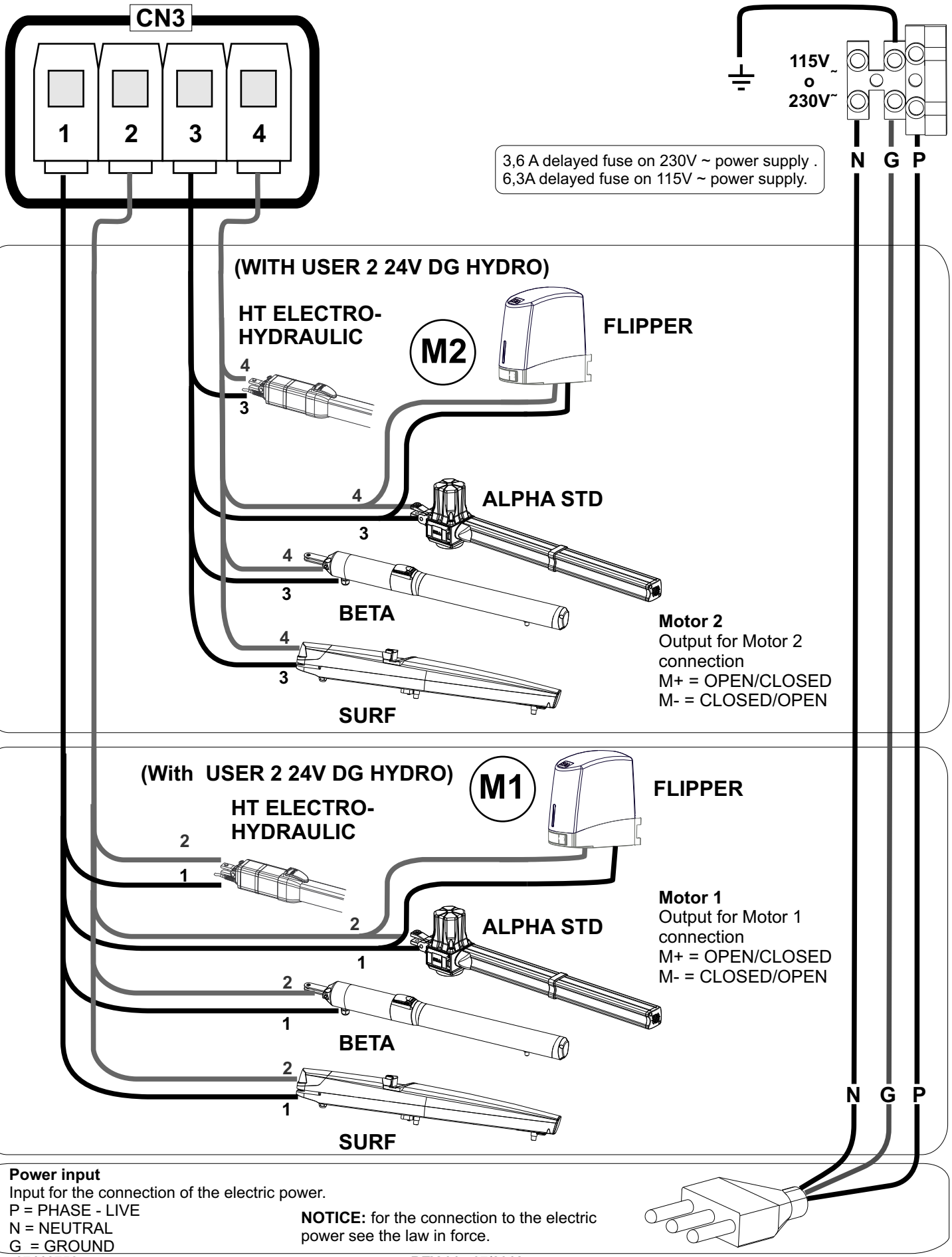
EXTERNAL RECEIVER

Example: Connection of a radio receiver

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



POWER SUPPLY - MOTORS



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

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

RADIO TRANSMITTER SELF LEARNING WITH RECEIVER ON BOARD OF CONTROL UNIT

⚠ **WARNING: Make the radio transmitters programming before you connect the antenna and insert the receiver into the special CMR connector (if available) with turned off control unit. (The control unit automatically recognizes if the receiver is a RF, RF Roll, RF Roll Plus or RF UNI module).**

With RF Roll or RF Roll Plus module it will be possible to use only Coccinella Roll or Coccinella Roll Plus radio transmitters. or Smart Dual Roll or Smart Dual Roll Plus.

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

Select through the display trSM and press OK, now select with the UP and DOWN buttons, the command to which you want to associate the button (it is possible to associate max. 2 commands) and press OK to confirm the choice, now press the button of the radio transmitter which you want to associate. If the storage is successful, the display will show MEM.
If the receiver is a Rolling Code, press twice the button of the radio transmitter that you want to program to memorize the first TX.
In the trSM MENU it is possible to select Strt (to associate a Start command), StPd (Pedestrian Start), M.ESt (For the activation of a contact on the EXP output), StoP (To associate the STOP command to the TX), dEL. (To delete all TX), dEL.S (To delet the single transmitter only if it is a Rolling Code Plus).

Notes:
- Enter radio transmitters learning only when the working cycle stops and the gate is closed.
- If the radio transmitters are Rolling Code it's possible to memorize up to 800 codes (buttons).
- If the radio transmitters are with fixed code it will be possible to memorize up to max. 30 codes (buttons).
- You can store max. 2 of the available 4 functions. If the control unit receives a code which was already associated to another function it will be updated with the new function.

DELETE TRANSMITTERS FROM THE RECEIVER

With modules different from RF UNI, it will be possible to delete only the entire memory of the receiver.
Proceed as follows: select from the menu trSM dEL and hold the OK button until the display shows the message donE.

With the RF UNI module, it will be possible to also delete the single button of the transmitter.
It can be done in two ways:
1) If you have the transmitter, or if you are using transmitters with fixed code, the cancellation can be executed by simply retransmitting the code. Ex. Button 1 of the transmitter memorized as START; access the menu trSM press OK, select Strt, press OK.
Send a Strt command from the transmitter and on the display will show dEL.
At this point the single button results deleted.

2) If you do not have a transmitter, or you are using a Roll Plus transmitter, you can delete the transmitter selecting the serial number of the transmitter to be deleted.
Procede as follows: Access the menu trSM, press OK, select dELS, press OK, choose the memory location to be deleted through the UP and DOWN buttons, press OK, check on the display if the serial number of the transmitter to be deleted is the right one, press OK, on the display shows SUrE, if the transmitter to be deleted is the right one press OK, otherwise press the DOWN button to return to the menu trSM.

Note: When using Roll Plus transmitters, it is recommended to record on a table similar to the below example, the serial number associateding it to the memory location where it was stored.

TABLE EXAMPLE

Memory location \ Transmitter button	1	2	3	4	Serial number	Customer
0						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

FUNCTION LOGIC

AUTOMATIC LOGIC
A start impulse opens the gate. A second impluse during the opening will not be accepted.
A start impulse during closing reverses the movement.
NOTE 1: To have the automatic closing it is necessary to set a pause time, otherwise all the logic will be semi-automatic.
NOTE2: It is possible to choose, whether to accept or not, the start in pause, selecting in the MENU the item ST.PS and choosing ON or OFF. By default, the parameter is OFF.

SECURITY LOGIC
A start impulse opens the gate. A second impulse during opening reverses the movement.
A start impulse during closing reverses the movement.
NOTE 1: To have the automatic closing it is necessary to set a pause time, otherwise all the logic will be semi-automatic.
NOTE2: It is possible to choose, whether to accept or not, the start in pause, selecting in the MENU the item ST.PS and choosing ON or OFF. By default, the parameter is OFF.

STEP BY STEP TYPE 1 LOGIC
The start impulse follows the OPEN-STOP-CLOSE-STOP-OPEN logic.
NOTE 1: To have the automatic closing it is necessary to set a pause time, otherwise all the logic will be semi-automatic.
NOTE2: It is possible to choose, whether to accept or not, the start in pause, selecting in the MENU the item ST.PS and choosing ON or OFF. By default, the parameter is OFF.

STEP BY STEP TYPE 2 LOGIC
The start impulse follows the OPEN-STOP-CLOSE -OPEN logic.
NOTE 1: To have the automatic closing it is necessary to set a pause time, otherwise all the logic will be semi-automatic.
NOTE2: It is possible to choose, whether to accept or not, the start in pause, selecting in the MENU the item ST.PS and choosing ON or OFF. By default, the parameter is OFF.

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

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

PASSWORD ENTERING MANAGEMENT

With a new control unit all menus can be displayed and set and the password will be disabled.
Selecting one of the Menus and keeping UP and DOWN pressed at the same time for 5 seconds, you will access the SP Menu containing the PSrd. Submenu.
Pressing OK in the PSrd. Menu, you will proceed with the entering of the numeric code of the 4-digit PASSWORD.
Use UP and DOWN to increase or decrease the number, press OK to confirm it and you will pass automatically to the entering of the next number. Pressing OK after the last entered number the word SUrE appears, confirm the activation of the PASSWORD and the message donE appears, pressing UP or DOWN instead you can cancel the operation and nULL will appear on the display.

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

If the password has been forgotten, the only way to unlock the control unit is to contact the SEA technical assistance, which will assess whether to provide the procedure to unlock the control unit or not.

Note: The password cannot be set through the Jolly terminal.

PROGRAMMER JOLLY PARAMETERS ADJUSTMENT

The JOLLY programmer allows to keep under control and to change all parameters of the control unit without need to use the buttons of the control unit. Compared to the on-board display, the programmer allows to view the programming instructions in the user's language and in a non-encrypted way. In addition to the JOLLY programmer, the user can work comfortably standing up without looking at the control unit.

Screen 1	
Language: IT	Available languages: IT,EN,FR,ES [Italian, English, Spanish, French] ⇦

Screen 2	
Motor	[Field, Alpha/Surf, Beta/FlipSp, Flipper] ⇦
Enc	Encoder [on/off] ⇦
Speed1	[30÷100] motor 1 speed adjustment ⇦
Speed2	[30÷100] motor 2 speed adjustment ⇦

Screen 3	
Slow Speed	[30÷100] slowdown speed adjustment ⇦
Learn speed	[30÷100] selflearning speed adjustment ⇦
Sp.Decel.O1	[Off÷100] motor 1 slowdown space in opening adjustment ⇦
Sp.Decel.C1	[Off÷100] motor 1 slowdown space in closing adjusmtent ⇦

Screen 4	
Sp.Decel.O2	[Off÷100] motor 2 slowdown space in opening adjustment ⇦
Sp.Decel.C2	[Off÷100] motor 2 slowdown space in closing adjustment ⇦
SoftStart	[0÷100] adjusts the acceleration ramp ⇦
Torque op.M1	[10÷100]% (max. motors current) ⇦

Screen 5	
Torque cl.M1	[10÷100]% (max. Motors current) ⇦
Torque op.M2	[10÷100]% (max. Motors current) ⇦
Torque.cl.M2	[10÷100]% (max. Motors current) ⇦
Cycle	[Secur./auto/deadman/step1/step2/two buttons] ⇦

Screen 6	
Double leaf / Single leaf	⇦
Pause time	[0÷240]s (pausing time in seconds, 0s halfautomatic logic) ⇦
Learning	Times learning [On-Off] ⇦
Cycles	[0÷...] (Number of executed cycles)

Screen 7	
Pedestrian	[30÷100]% (Pedestrian opening rate) ⇦
Open delay	[Off÷6s]% (Leaf delay in opening) ⇦
Close delay	[Off÷20s]% (Leaf delay in closing) ⇦
Anti Intrusion	[Off,Open,Close.,op.cl.] (Implies the presence of a N.C. contact on limit switch which if released forces the motors in closing) ⇦

Screen 8	
Preblink	[Close, Off, 0÷5s] (Only before closing, OFF from 0 to 5s) ⇦
Light Time	[Cycle, Off, 0÷240s] (Only during cycle, OFF from 0 to 240s) ⇦
Ph.test	[1,2-1-2] (Only on Foto1, only on Foto2, on both) ⇦
Max Cycles	[100÷100000] (Number of cycles for maintenance)

The arrow ⇦ indicates that the parameter can be changed with the + and - buttons.

PROGRAMMER JOLLY PARAMETERS ADJUSTMENT

Screen 9	
Flash	[Normal/Control/always/beep]
Photo1	[Close/Open/stop/park/close imm./rel.pause]
Photo2	[Close./Open/stop/park/close imm./rel.pause]
8k2 edge	[On-Off] (On ON it allows to connect a balaced edge with 8k2 resistance)

Screen 10	
Timer	[OFF-Ped-Foto2] (Allows the timer activation on the Foto2 or pedestrian input)
Pos. Recovery	[0÷100]% (Percentage of position recovery)
24V aux	[Cycle/in open /in clos./pause/ph.test/ph.T.ECO/always]
Start pause	[ON/OFF] (On ON and if the autom. clos. is on ON a start will cause the immediate closure of the gate)

Screen 11	
Mot.inv.	[ON/OFF] (Allows to changes at the same time the limit switch and the direction of motor rotation without disconnecting the cables)
Start	[ON/OFF] (Equivalent to giving a test start)
Rev. Mot.	[0÷100%] (Activates an inversion at the end of closing)
P.Ped	[start, Off, 0÷240 sec] (Differenciates the pedestrian pause from the total one)

Screen 12	
Tl.op.1	[0÷ 100%] (Tolerance between stop and obstacle)
Tl.cl.1	[0÷ 100%] (Tolerance between stop and obstacle)
Tl.op.2	[0÷ 100%] (Tolerance between stop and obstacle)
Tl.cl.2	[0÷ 100%] (Tolerance between stop and obstacle)

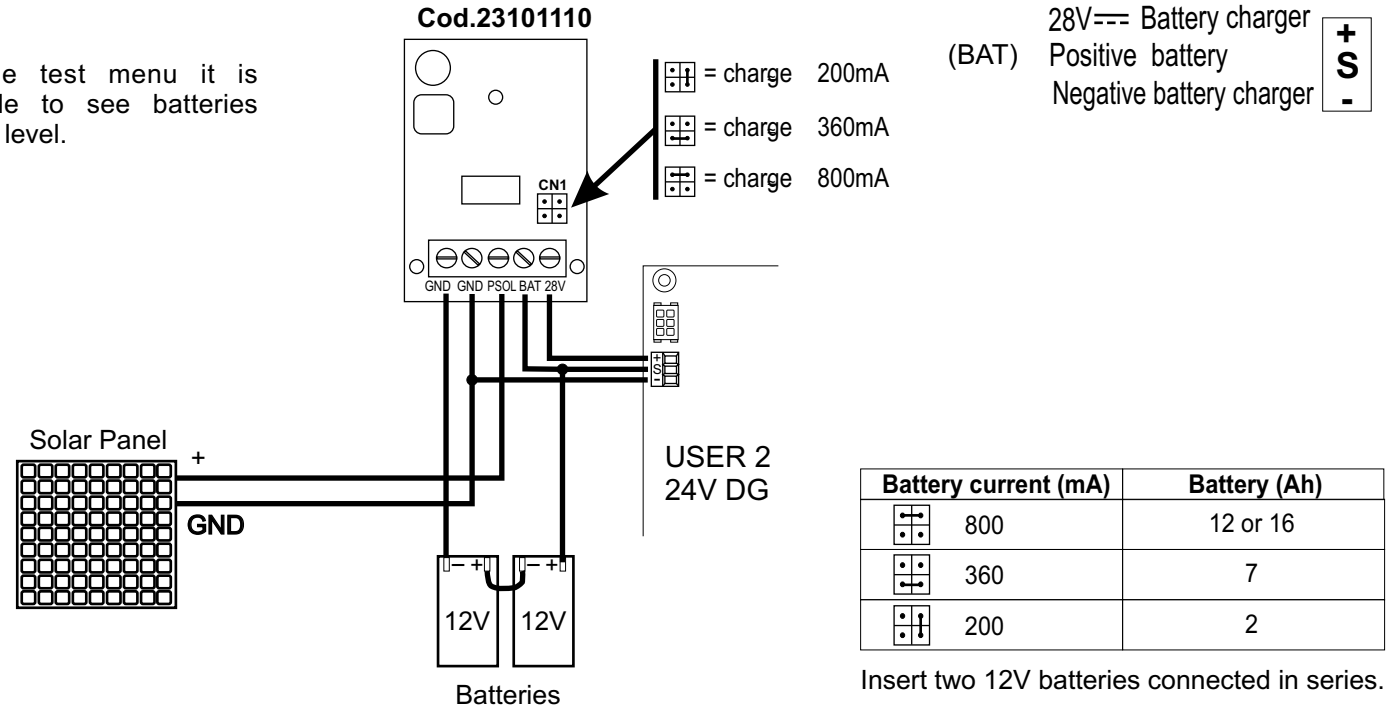
Screen 13	
Push ov.	[Off,open., close.,Open.cl.] (Activates the motors at max. torque at the end of closing or opening or in both cases)
Leaf Stroke	[0÷3 sec] (Facilitates the electrolock release)
P.O.PR.	[0÷8 ore] (Activates the periodic Push Over with stoped motors)
Lock	[0 a 5s] (Activates the click of the lock from 0 to 5 seconds)

Screen 14	
L.Timer	[Off-On] Allows to keep switched on or off the control light if a Timer is active

Screen 15	
Event	Summarizes the last 10 events that occurred on the unit

CONNECTION OF BATTERIES TO BATTERY CHARGER CARD

NOTE:
On the test menu it is possible to see batteries charge level.



Battery current (mA)	Battery (Ah)
800	12 or 16
360	7
200	2

Insert two 12V batteries connected in series.

ALARMS INDICATIONS

Signals	Kind of alarm	Solutions
FAUL	Motors current fault	Sure there are no short circuits on the motor or on the control unit.
Ft.24	24V Power supply fault	Make sure there are no short circuits on the wiring or on the control unit and no overloads.
Ft.AU	24Vaux output voltage	Make sure there are no short circuits on wiring or control unit and no overload.
Ft.L 1	Power supply fault	Check the network or the F1 fuse.
F.bAt	Battery voltage fault	If network is not present
F.Edg	Balanced edge input fault	Check for a 8.2 Ohms resistive value on the edge input, if not available enter it, or disable the reading of the 8k2 in the special menu.
F.Pho	Self-test photocells fault	Check the photocells operation and / or connections on the control unit.
Ft.FC	Limit switch activation fault	Check the operation of both limit switches and / or correspondence between movement direction of the motor and engaged limit switches.
Ft.FL	Flashing lamp fault	Check connections and / or conditions of the lamp.
CYCL	Max. cycles	Maintain and / or reset the number of performed cycles.

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

At each opening and closing of the automation the flashing light will blink. It blinks once per second during opening and twice per second during closing, while it remains lit during pause.
It is possible to view the alarms also on the flashing light or on the control lamp, simply by observing the number of flashes emitted and verifying the reference in the table below:

Flashings Number	Kind of alarm
9	Motors fault
2	Photocell in closing
3	Photocell in opening
6	Opening impact
4	Safety edge

Flashings Number	Kind of alarm
5	Stop
7	Max. Reached cycles
6	Closing impact
4 fast	Limit switch error

ALARM SIGNALS

Periodically, in relation to the number of manoeuvre and the type of gate, it is recommended to execute, if the gate has modified the attritions and it doesn't work, **the re-programming of the times of learning on the electronic board.**
The 7 flashes refer to the attainment of the established maximum cycles for the maintenance of the control unit, therefore it is recommended to perform the maintenance and to put on zero the number of cycles.

TROUBLE SHOOTING

Advises

Make sure all Safety LED are turned ON

All not-used N.C. contacts must have jumpers

Problem Found	Possibile Cause	Solutions
Motor doesn't respond to any START impulse	**a.)** Jumper missing on one of the N.C. Contacts **b.)** Burnt fuse	**a.)** Check the connections or the jumpers on the connections of the safety edge, of the stop and of the photocell **b.)** Replace the burned fuse on the control unit led 1 turned on.
Gate doesn't move while the motor is running	**a.)** The motor is in the released position **b.)** 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.)** The fitting geometry is inadequate **e.)** Torque or speed too low	**a.)** Set limit switches **b.)** Repeat programming **c.)** Remove obstacle **d.)** Check fitting geometry following the operator installation manual **e.)** Increase torque parameter
The gate opens but doesn't close	**a.)** The photocell contacts are not closed **b.)** Ammeter alarm	**a.)** Check the jumbers or the signals on the flashing lamp or on the dispaly **b.)** Check if the ammeter alarm has intervened and eventually increase the torque parameter.
The gate doesn't close automatically	**a.)** Pause time set to high **b.)** Control unit in semi-autom. logic	**a.)** Adjust pause time **b.)** Adjust the automatic or security logic

Page for both installer and user

MAINTENANCE

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

Periodically clean the optical systems of the photocells.

REPLACEMENTS

Any request for spare parts must be sent to:

SEA S.p.A. - Zona Ind.le, 64020 S.ATTO - Teramo - Italia

SAFETY AND ENVIRONMENTAL COMPATIBILITY

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

REGULAR PRODUCT DISPOSAL (electric and electronic waste)

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

The brand that you find on the product or on documentation signals that the product must not be disposed off together with other domestic waste at the end of life cycle. In order to avoid any possible environmental or health damage caused by irregular waste disposal, we recommand to separate this product from other forms of waste and to recycle it in a responsible way in order to provide the sustainable re-use of material resources. Domestic users are invited to contact the retailer where the product has been purchased or the local office in charge of all the information related to differential watse collection and recycling of this kind of product.

STORING

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

Materials handling must be made with appropriate vehicles..

WARRANTY LIMITS

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

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

SELF INSTALL - NEED TECHNICAL ASSISTANCE?

OPTION 1: DIRECT WITH THE SERVICE DESK – QUICKEST AND MOST EFFECTIVE METHOD

Submit your enquiry direct with the service desk at – service@automaticsolutions.com.au
The service desk has the most experienced staff in Australia to help with your problem but they need your help.

- **Describe your problem in detail and as clearly as possible. Don't forget to include a telephone number.**
- **Be certain to detail which model or models of you are working with.**
- **Send photos of the installation – they love photos. The people at the service desk are good but they are even better when they can see the installation. Send photos of the overall scene so they can see the entire installation. Also send photos of the wiring to the control board and any other part of the installation you think is relevant.**
- **Send video if appropriate. Smartphone's these days take remarkably good video in small file sizes which can be emailed in a moment. If your problem needs a video to show the issue please feel free to send it.**

NOTE: THIS IS BY FAR THE FASTEST AND MOST SUCCESFUL WAY TO SOLVE YOUR PROBLEM
PHOTOS AND VIDEOS ARE THE NEXT BEST THING TO BEING THERE

OPTION 2: LODGE YOUR ENQUIRY LOCALLY - SLOWER BUT CAN STILL BE EFFECTIVE

Make contact with the store of purchase. Branch staffs are typically not technicians and dependent on their length of service will have varying degrees of technical knowledge. If they cannot help however they will certainly either source help locally from their technicians or make contact with the service technicians on your behalf.

OPTION 3: SERVICE CALL WITH AUTOMATIC SOLUTIONS TECHNICIAN – SLOWEST METHOD

If you fall within the local branch service area it may be possible to book a local technician to look at your installation. Wait times will vary dependent on local workloads. The cost is a service fee which includes the first half hour and the hourly rate thereafter. If any Automatic Solutions provided parts are found to be defective and within warranty these will be provided free of charge.
(NOTE: If you suspect that any parts are defective and within warranty you may wish to consider option 4)

A note on this option: If you decide on this option you will be asked to sign an "authorisation to proceed" which will provide legal authority and payment security. This form has three options available of which only the first two are available to you. The third option is for warranty repairs only for full install customers. Self install customers requiring warranty only service need to refer to option four below.

IMPORTANT: IN SHORT THIS OPTION WILL INCUR CHARGES

OPTION 4: RETURN THE PRODUCT IF BELIEVED TO BE FAULTY

As a self install customer who has purchased product if you believe the product to be faulty rather than an installation or site problem you have the option of returning the product for evaluation and to exercise your right to a replacement, repair or refund as applicable. All returned product is forwarded immediately to the service technicians for evaluation and response. There are two main methods available to return product –

- **Direct to the service centre – this is the quickest method as it cuts out the branch delay**
- **Via the branch of purchase – slower because of the delay at the branch**

When choosing this option you need to complete a product return form. This form gives you all the information on procedure involved and where to send to. These are available at the branch of purchase, can be emailed to you (contact your branch), or available here - http://automaticsolutions.com.au/page/warranty.php