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CE

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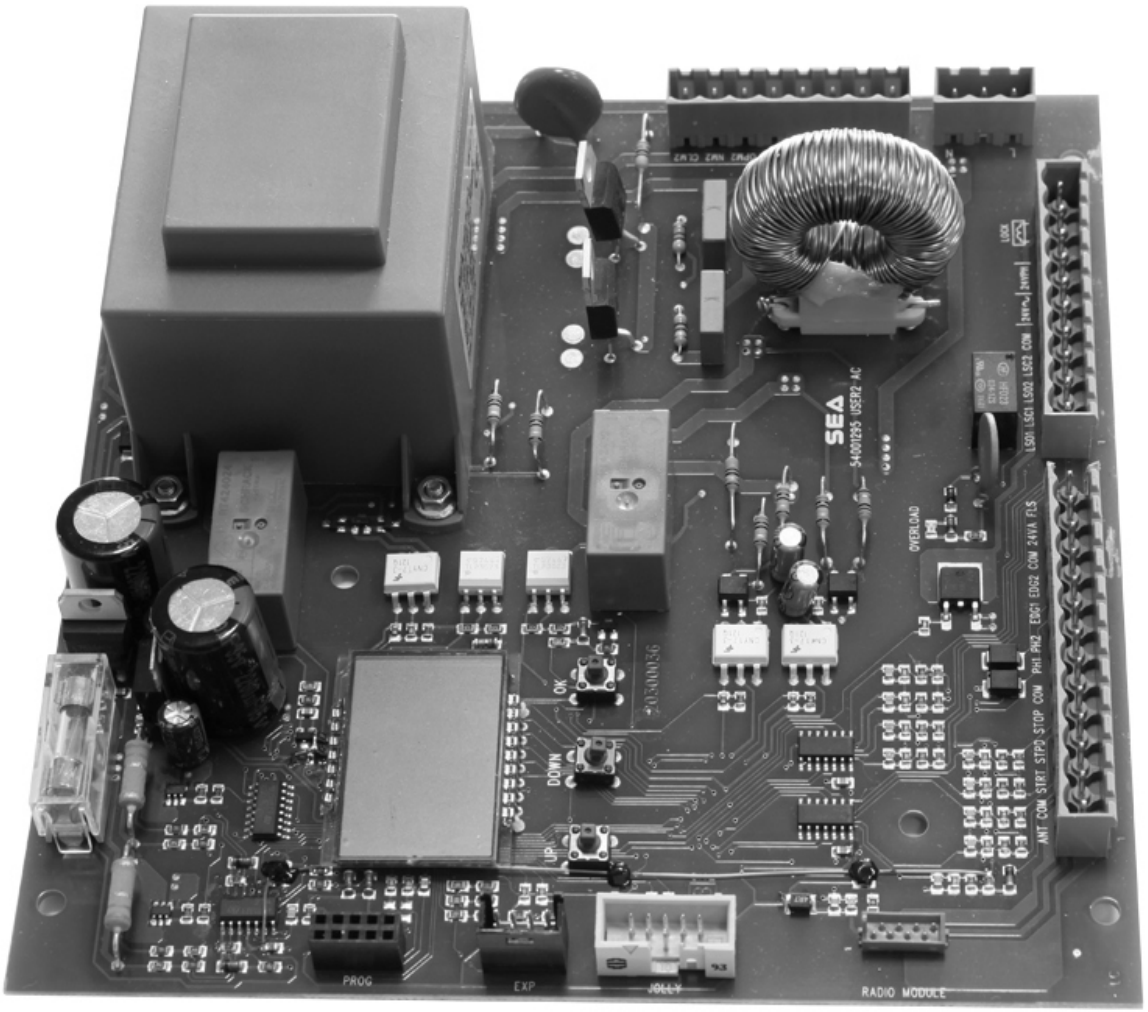
GATE 2 DG

(Cod. 23023025)



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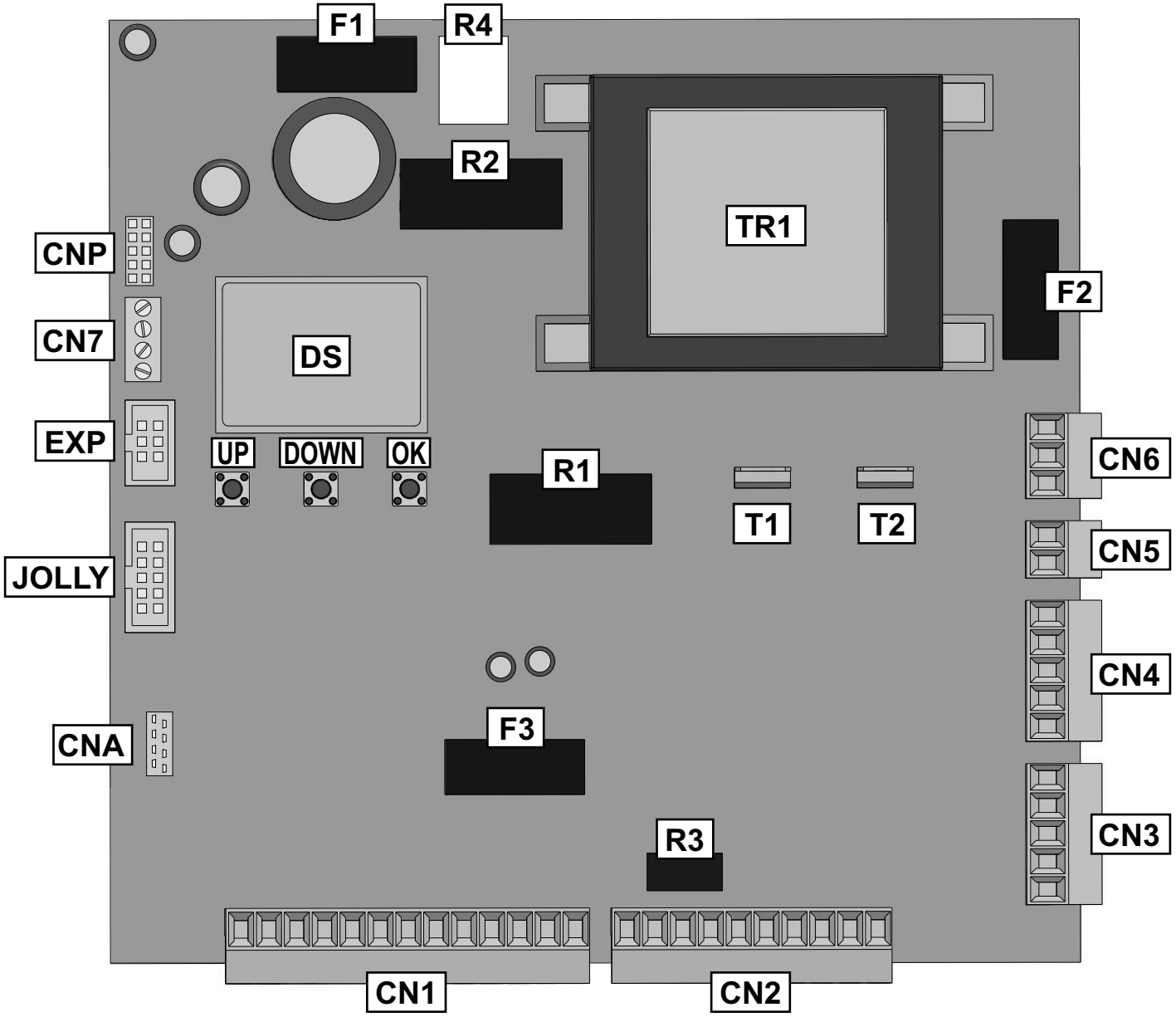
COMPONENTS



CN1 = Input/output connectors
CN2 = Limit switch, 24V~, Electrolock connector
CN3 = M1 Motors and capacitors connector
CN4 = M2 motors and capacitors connector
CN5 = Courtesy light output connector
CN6 = Power supply connector
CN7 = Encoder connector
CNA = Receiver connector
CNP = Porgramming connector
EXP = Expansion module connector
JOLLY = Jolly connector
DS = Programming display

OK = Programming button
DOWN = Programming button
UP = Programming button
T1 = Motors piloting Triac
T2 = Motors piloting Triac
R1 = Motors comand relay
R2 = Courtesy light comand relay
R3 = Photocell autotest relay
R4 = Electrolock relay
F1 = Accessories 1A fuse
F2 = 6.3AT fuse on 230V/10AT on 115V
F3 = 6.3A Electrolock fuse
TR1 = Power transformer

GENERAL INFORMATION

The information on this page are only for technicians or for qualified or authorized installers.

GENERAL DESCRIPTION

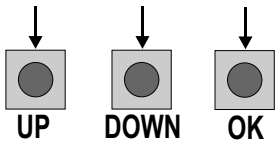
The GATE 2 DG control unit has been designed to control one or two 230V/115V 50/60 Hz motors with or without electronic limit switches.
The great news is the LCD display on board through which you can see and set in a simple and complete way all functions of the control unit.

TECHNICAL SPECIFICATIONS

Control unit power supply	230 Vac 50/60 Hz - 115Vac 50/60 Hz
Absorption in stand by	30 mA
Max. motor charge	800 W /motor
Max. accessories charge 24V (24VA)	24V⎓ 500mA
Max. Flash light charge	24V(FL) 15W max. We recommend to use 24V Flash (Led)
Environment temperature	-20°C +50°C
Accessories / Power/ Electrolock protection	F1 (1 AT) / F2 (6.3 AT) / F3 (6.3 AT)
Function logic	Automatic/S.by Step1/S.By Step2/Sec./Dead man/2Butt.
Opening/closing time	In selflearning in programming phase
Time of pause	Adjustable (from d.5b to 4 min)
Thrust	Adjustable Opening and Closing for single leaf
Slowdown space	Adjustable Opening and Closing for single leaf
Input on connecting terminal	Total opening / Pedestrian opening adjustable / Balanced edge in opening and closing / Stop / Limit switch opening and closing / Photocell 1 and Photocell 2/ Encoder
Output on connecting terminal	(FLS) Flash 24V⎓ / LAMP⎓ (Max 50W) / 24V~ / Motors / 24VA⎓ (Max 500 mA)
Board dimensions	168 X 174 X 65 mm
Specifications of external enclosure	325,7 X 246 X 140
Special accessories: **- Traffic light card on AUX connector** **- Programmer on Jolly connector** **- OPEN on Prog. Connector for software upgrating**	Relay card for traffic light management (SEM Cod. 23021100), Programmer JOLLY (cod.23105276), Programmer OPEN (cod.23105290)

The herein reported functions are available starting from revision 15.

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

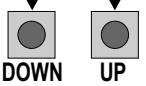
7 — MENU SEA SET **PrGM** —OK→ With UP or DOWN choose ON to start times learning —OK→ At the end of the selflearning the control unit returns automatically to the main menu

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.



WORKING TIMES SELF LEARNING

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 InIt.
The DEFAULT settings are shown in the Menues table.

WORKING TIMES SELFLEARNING THROUGH IMPULSES

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

NOTE: The card is preset with the standard working times, therefore the automation can be started even without the times programming, simply by adjusting the timing on the display (see default times).

1) Turn off electricity, release the motors and manually position the leaves on halfway.
Reset the mechanical lock.
2) Connect the control board to the power supply
3) Select on the on-board display or JOLLY programmer, the type of motor that you are using as indicated in the dispaly management (MECH-HYDRO).
4) If necessary also set the operation logic and the other parameters. If you want to program with a transmitter, store a transmitter before programming.
5) Select PrOG on the display, press OK and than one of the UP or DOWN buttons.
(If the motor starts in opening, remove and re-put power supply, select on the display InIt. And through the UP and DOWN button put it on ON, or if you have the Jolly programmer, activate the motor exchange function.)
6) At this point the gate will start the following cycle: CLOSING M2 - CLOSING M1 - OPENING M1 - OPENING M2 - CLOSING M2 - CLOSING M1. During cycle, to store the respective stops, press UP or DOWN or START at every point of stop of the leaf.
7) The self-learning is done.

SELFLERNING OPERATION TIME WITH ENCODER

When an encoder is installed, it is necessary to select On in the ENC menu, start programming and make sure that leaf 2 starts as first in closing. The gate will automatically execute the following cycle: CLOSING M2 - CLOSING M1 - OPENING M1 - OPENING M2 - CLOSING M2 - CLOSING M1.
Note: For stop detection sensitivity setting refer to the special menu.

SELFLEARNING OPERATION TIME WITH AMPEROMETRIC SENSOR

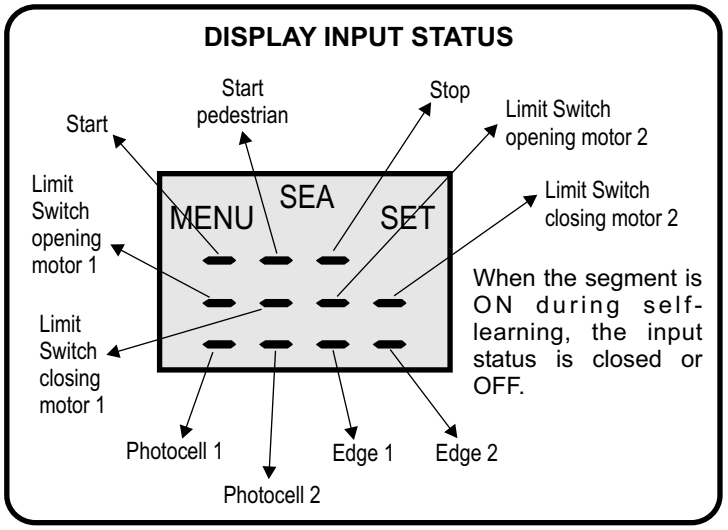
The times learning can be done only on electromechanical gates, taking advantage of the automatic detection of the stops.
Once the programming has been started just make sure that the gate executes the following cycle: CLOSING M2 - CLOSING M1 - OPENING M1 - OPENING M2 - CLOSING M2 - CLOSING M1.
Note: For stop detection sensitivity setting refer to the special menu.

LEARNING WITH LIMIT SWITCH

When limit switches are mounted, the gate executes automatically the follwing cycle: CLOSING M2 - CLOSING M1 - OPENING M1 - OPENING M2 - CLOSING M2 - CLOSING M1.
Before starting the learning, make sure(through the test menu), that the relative limit switches of every leaf and every opening are employed.
Exe: For the M2 motor closing the limit switch M2 in closing must be employed.

SELECTION OF THE SETTINGS

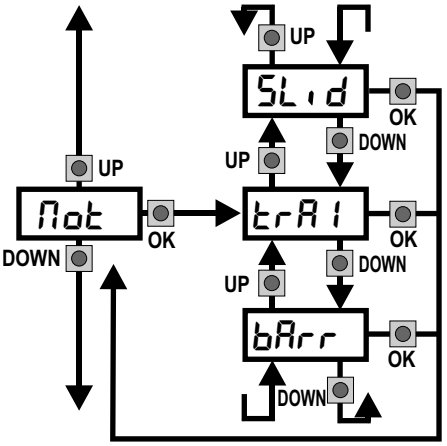
The settings of the control unit are made through the UP, DOWN and OK buttons. The UP and DOWN buttons to scroll through the MENUS and SUBMENUS. By pressing OK you enter from MENU into SUBMENU and confirm the choice.
Pressing the UP and DOWN buttons at the same time you access the SP MENU for special 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

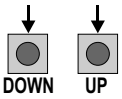


MENU FUNCTION board GATE 2 DG INPUT TESTS (To access the Menu for input TESTS keep pressed OK for about 5 seconds)		
MENU	**Description**	**Description**
Strt	Start test	The contact must be a N.O. Contact . When activating the related command on the display SET lights up, the input works. If SET is always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

SELECTION OF THE SETTINGS

MENU FUNCTIONS TABLE GATE 2 DG					
MENU	**Description**	**SET**	**Description**	**Default**	**Set value**
trSM	Transmitter	Strt	Start	Strt	
		StPd	Pedestrian Start	StPd	
		M.ESt	Exp. output		
		StoP	Stop		
		SbLC	Electrobrake release		
		dEL.	Delete TX		
		dEL.S	Delete single transmitter		
Mot	Motor type	idro	Hydraulic motors		
		MEcc	Electromechanical motors	MEcc	
		SL Id	Sliding gate		
		SL.rU	Reversible sliding gate		
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		
		S.C U	Safety		
		uo.Pr	Dead man		
t.PAu	Time of pause	d.Sb	OFF (semi-automatic logics)	d.Sb	
		1.2.3	Setting from 1s to 4min.		
St.PS	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			

SELECTION OF THE SETTINGS

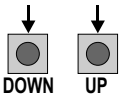


PRESS AT THE SAME TIME FOR 5 SECONDS TO ENTER OR TO EXIT THE SPECIAL MENU

SPECIAL MENU FUNCTIONS TABLE GATE 2 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
tr.oP	Leaf delay setting in opening	d.Sb 6	Setting from OFF to 6 seconds	1.5	
tr.cL	Leaf delay setting in closing	d.Sb 20	From OFF to 20 seconds setting	2.5	
C.oP 1	M1 opening torque	0 100	M1 opening torque Note: with hydraulic motors the torque will be on 100%	75	
CCL 1	M1 closing torque	0 100	M1 closing torque Note: with hydraulic motors the torque will be on 100%	75	
C.oP2	M2 opening torque	0 100	M2 opening torque Note: with hydraulic motors the torque will be on 100%	75	
CCL2	M2 closing torque	0 100	M2 closing torque Note: with hydraulic motors the torque will be on 100%	75	
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	20	
Sd.c 1	**M1 closing slowdown**	d.Sb 50	From OFF to 50% of the stroke	20	
Sd.o2	**M2 opening slowdown**	d.Sb 50	From OFF to 50% of the stroke	20	
Sd.c2	**M2 closing slowdown**	d.Sb 50	From OFF to 50% of the stroke	20	
Pr.bL.	Pre-flashing	d.Sb	OFF	d.Sb	
		1.2.3	Adjustable from 1s to 5s		
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	
tM.o 1	Motor 1 opening time	0 240	Learned operation time setting	28.6	
tM.c 1	Motor 1 closing time	0 240	Learned operation time setting	28.6	
tM.o2	Motor 2 opening time	0 240	Learned operation time setting	28.6	
tM.c2	Motor 2 closing time	0 240	Learned operation time setting	28.6	
L.Cou	Courtesy light	CYCL	Only during cycle	20	
		1.2.3	Courtesy light setting from 1s to 4min.		
PEd.o	Pedestrian opening	20 100	Pedestrian opening space adjustment	100	
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.		

SELECTION OF THE SETTINGS

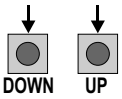


PRESS AT THE SAME TIME FOR 5 SECONDS TO ENTER OR TO EXIT THE SPECIAL MENU

SPECIAL MENU FUNCTIONS TABLE GATE 2 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
SStr	Soft Start	0 100	Acceleration rampe from 0 to 3 s.	100 %	
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	diSb	OFF	diSb	
		PH2	Timer function ON on photo2 input		
		PEd	Timer function ON on pedestrian input		
EdG1	Safety edge 1	oP.CL	Active in opening and closing	oP.CL	
		o.oPE	Active only in opening		
		o.CLo	Active only in closing		
EdG2	Safety edge 2	oP.CL	Active in opening and closing	oP.CL	
		o.oPE	Active only in opening		
		o.CLo	Active only in closing		
SEd1	Safety edge 1	diSb	Edge is ON but not protected	diSb	
		8.2	Edge is ON and protected by a 8k2 resistor		
SEd2	Safety edge 2	diSb	Edge is ON but not protected	diSb	
		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.1M	Photocell gives a command for immediate closing during pause and opening		
		rPPA	Photocell pausing time loading on Photo 1		
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.1M	Photocell gives a closing command during opening, pause and closing		
		rPPA	Photocell pausing time loading on Photo 2		
24VA	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		

SELECTION OF THE SETTINGS



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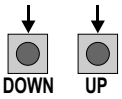
SPECIAL MENU FUNCTIONS TABLE GATE 2 DG
(To enter the Special Menu keep pressed UP and DOWN at the same time for 5 seconds.
To exit the Special Menu pressed END or keep pressed UP and DOWN at the same time for 5 seconds)

MENU SP	Description	SET	Description	Default	Set value
		CLoS	24Vaux output power supplied only during closing		
		PAuS	24Vaux output power supplied only during pause		
		EF.PS	Positive Electrobrake		
		EF.nE	Negative Electrobrake		
rE.SP	Space retrieve	0 20	Retrieves the inertia of the motor after Stop or reversing from 0 to 20 s	1	
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	
Fr.En	Braking adjustment on limit switch	0 100 %	Adjusts the braking on the limit switches in case of "SLIDE" and "REVERSIBLE SLIDE" setting		
Po.Pr	Periodic Push Over	d.Sb 8	Allows the repetition of the Pushover functionat 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**	3	
SErr		o.oPE	Active only before opening	o.oPE	
		o.CLo	Active only before cloning		
		oP.CL	Active before opening and closing		
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)		
C.rAL	Slowdown start torque	0 100	Adjusts the transition between max. torque and slowdown	100	
Ph.tE	Photo test	Ph 1	Autotest activation only on photocell 1	oFF	
		Ph2	Autotest activation only on photocell 2		
		Ph 1.2	Autotest activation on both		
		oFF	OFF		
tL.o 1	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	
tL.o2	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	

SELECTION OF THE SETTINGS



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

SPECIAL MENU FUNCTIONS TABLE GATE 2 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
S.oP 1	Sensitivity on obstacle	0 99	Motor 1 sensitivity adjustment in opening	d.Sb	
S.CL 1	Sensitivity on obstacle	0 99	Motor 1 sensitivity adjustment in closing	d.Sb	
S.oP2	Sensitivity on obstacle	0 99	Motor 2 sensitivity adjustment in opening	d.Sb	
S.CL2	Sensitivity on obstacle	0 99	Motor 2 sensitivity adjustment in closing	d.Sb	
S.rAL	Slowdown sensitivity	d.Sb 10	Reversing sensitivity adjustment during slowdown	d.Sb	
PS.rd	Enter password	----	Allows the entering of a password blocking the control unit parameters modification (see page 35)		
End	Exit special menu	Select END and press OK to exit the special menu. The special menu switches off automatically after 20 minutes.			

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), SbLC (to associate the release of the electric brake to the transmitter). To release the electric brake it is necessary to give three consecutive pulses, the 4th will reactivate the lock of the electric brake.

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.
Parameters displayed only with the software revision 37.

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

Screen 2	
Motor	[Mech/Hydra/Sliding gate/Reversible Sliding gate]
Enc	Encoder [on/off]
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 3	
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 4	
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 5	
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 6	
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 7	
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)

Screen 8	
Flash	[Normal/Control/always/beep]
Photo1	[Close/Open/stop/park/close imm./rel.pause]
Photo2	[Close./Open/stop/park/close imm./rel.pause]
Edge 1	In 8K2 mangages balanced edge with 8k2 resistance.

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

PROGRAMMER JOLLY PARAMETERS ADJUSTMENT

Screen 9	
Edge 2	In 8K2 mangages balanced edge with 8k2 resistance
Edge 1	Active in: opening and closing, only in opening, only in closing
Edge 2	Active in: opening and closing, only in opening, only in closing
Electrolock	Active in: closing and opening, only in closing, only in opening

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 (24VA)	[Cycle/open./clos./pause/always/Positive Electrobrake/Negative Electrobrake]
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	
Sense op.m1	[off÷ 100%] (Tolerance between stop and obstacle)
Sense cl.m1	[off÷ 100%] (Tolerance between stop and obstacle)
Sense op.m2	[off÷ 100%] (Tolerance between stop and obstacle)
Sense cl.m2	[off÷ 100%] (Tolerance between stop and obstacle)

Screen 15	
Sense dec.	[Off÷ 100%] (Tolerance between stop and obstacle)
C.dec.	[0÷ 100%] (Deceleration ramp)
TM.O.1	[0 ÷ ...sec] (View the opening time of leaf1)
TM.C.1	[0 ÷ ...sec] (View the closing time of leaf1)

Screen 16	
TM.O.2	[0 ÷ ...sec] (View the opening time of leaf2)
TM.C.2	[0 ÷ ...sec] (View the closing time of leaf2)
L.Timer	[Off-On] Allows to keep switched on or off the control light if a Timer is active

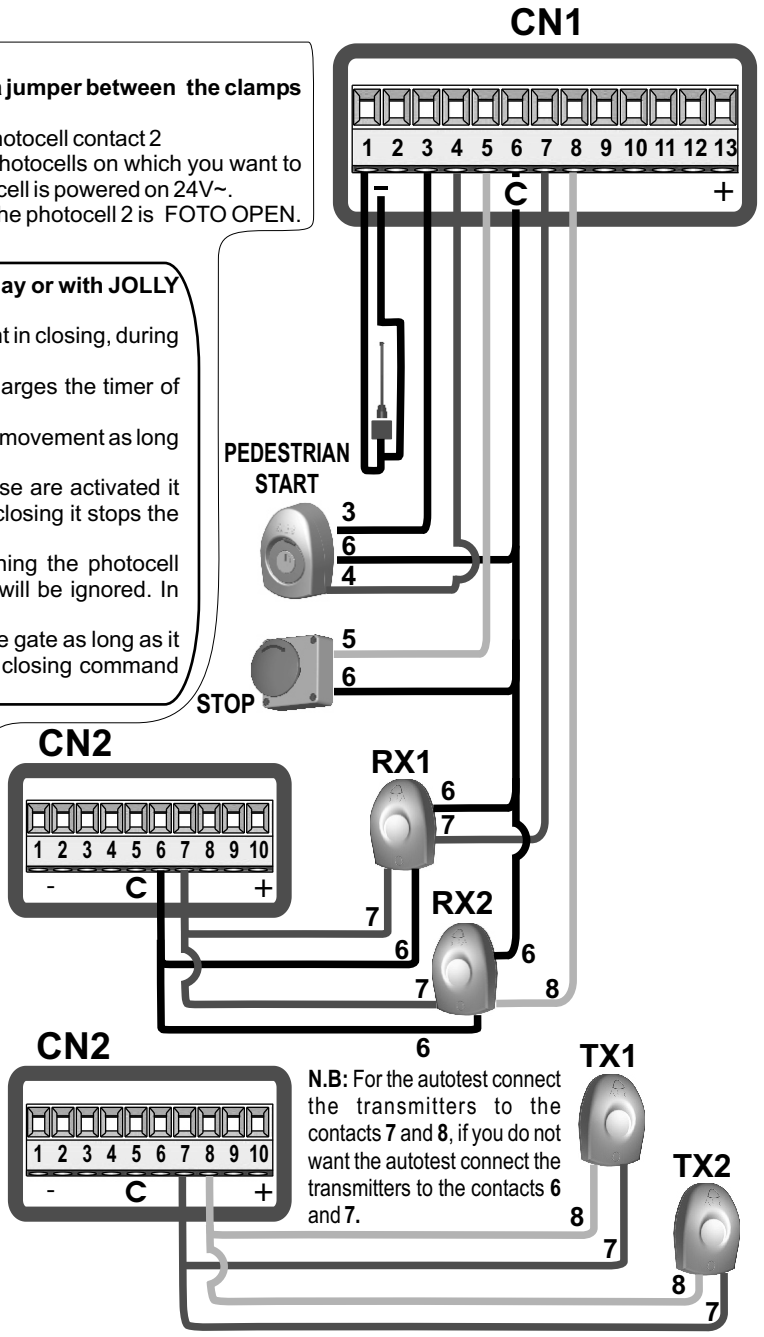
Screen 17	
Event	Summarizes the last 10 events that occurred on the unit

START - STOP - PEDESTRIAN START - ANTENNA - PHOTOCELL

Photocell 1 and Photocell 2 Connections
Note: If the photocells are not connected, it is not necessary put a jumper between the clamps (6 and 7 and/ou 6 and 8 of the CN1 terminal)
+ = 24VA ⎓ COM = 0V PH1 = Photocell contact 1 PH2 = Photocell contact 2
Note: For the autotest in the PHtE menu select the photocell or the photocells on which you want to perform it. Auto-test is possible only when the transmitter of the photocell is powered on 24V~.
The default setting of the photocell 1 is FOTO CLOSE and the one of the photocell 2 is FOTO OPEN.
The photocell 2 can also be set as TIMER (see TIMER function).

OPTIONS ON FOTO1 and FOTO2 adjustable on on- board display or with JOLLY terminal.
FOTO CLOSE activation (tLoS): 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 24VA⎓ can be set with on-board Display or with Jolly device.
It is possible to chose when having tension on the 24VA output. The options are: **always, only during opening, only during cycle, only before opening or only during pause or for the management of the positive or negative electrobrake.**



N.B: For the autotest connect the transmitters to the contacts **7** and **8**, if you do not want the autotest connect the transmitters to the contacts **6** and **7.**

PEDESTRIAN START (N.O.) The pedestrian start can be connected between the conectors 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 deadman 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 .
When pressing this button the motor immediately stops in any condition/position. To re-start the movement give a start command.
After a stop the motor always re-starts in closing.

START (N.O.) The START is connected between connector 2 and 3 of the CN 1 terminal.
An impulse given to this contact opens and closes the automation depending on the selected logic, it can be given by a keyswitch, a keypad, etc. Holding START starts the TIMER function, releasing the start, the operator repeats the pause and then performs the closing.
To connect the other devices refer to the related instructions leaflets. (ie. loop detectors and proximity switches).
Note1: In DEADMAN logic 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 the 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 as long as it is activated. When it's released, after having paused for the set pausing time the gate recloses. The TIMER can be activated on the inputs FOTO2, PEDESTRIAN START or keeping busy the START input.
Note1: When activated on the pedestrian entry, the pedestrian will be OFF also on the radio transmitter.
Note2: In the event of an intervention of a security device during the timer (Stop, amperometric, Edge), a start impulse restors the movement.
Note3: In case of no power supply with open gate and active Timer the control unit will restore its function, otherwise if during restoring 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.

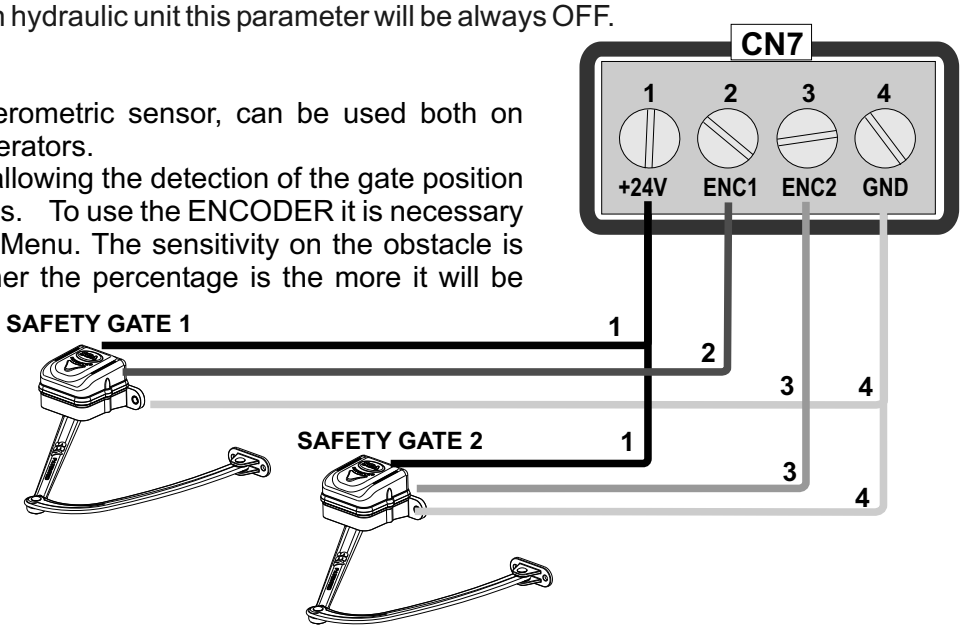
Sensitivity adjustable from d 15b to 99% inside the special menu. The more the percentage is high the more the obstacle detection will be difficult. On hydraulic unit this parameter will be always OFF.

SAFETY GATE

The Safety Gate, unlike the amperometric sensor, can be used both on electromechanical and hydraulic operators.

The Safety Gate is an ENCODER allowing the detection of the gate position and its reversing in case of obstacles. To use the ENCODER it is necessary to enable it inside the special 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.



SAFETY EDGE AND FLASHING LAMP

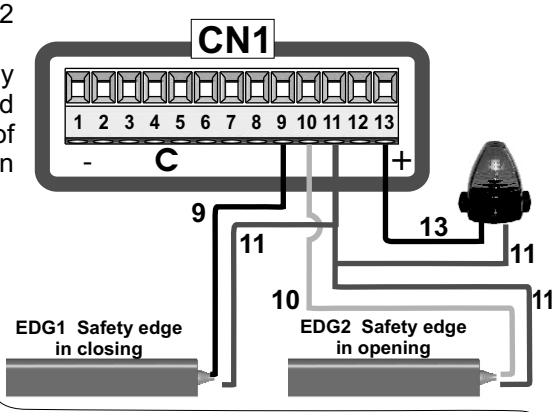
SAFETY EDGE

Two safety edges (EDG1 e EDG2) can be connected, respectively between the contacts 9, 11 and 10 and 11 of CN1.

Pressing EDG1 and EDG2, the contact opens, causing a partial reversing of the gate in closing and opening.

Note1: Put a jumper between the not used N.C. Contacts. The EDG1 and EDG2 inputs can be set: only in closing, only in opening or in both directions.

Note2: It is possible to activate a balanced edge 8K2 through the on board display or through the Jolly programmer, in such case the edge contact will be controled by a specific resistance value, detecting the possible involontary short circuit of the device. In case of an imbalanced device a special alarm will show on the on board display or on the JOLLY programmer.



24V Flashing light ⎓ 15W Max (Control lamp)

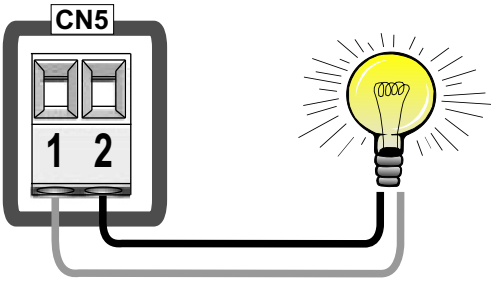
The flashing light can be connected between the FLS and COM connectors from Cn1 (It is recomended to use a 24V Flash Led flashing light).

It blinks once per second during opening and twice per second during closing, while it remains lit during pause.

Throught the warning light it is also possible to identify alarm signals comming from the STOP, PHOTOCELL 1, PHOTOCELL2 and EDGE devices. Through the on board display or the Jolly programmer it is possible to activate the pre - flashing function and/or to modify the flashing light function choosing between fixed flashing, control lamp or Buzzer.

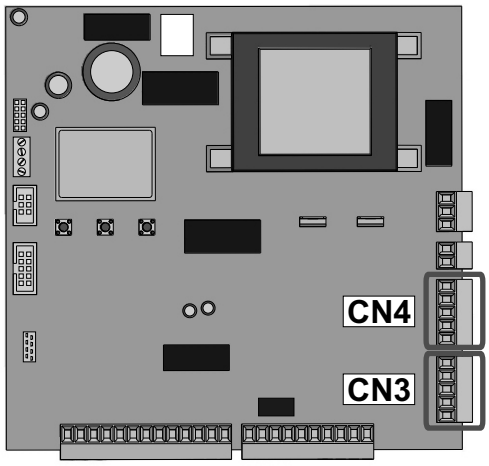
The pre-flashing can be set from 0 to 5 s. or it is possible to have it only before closing.

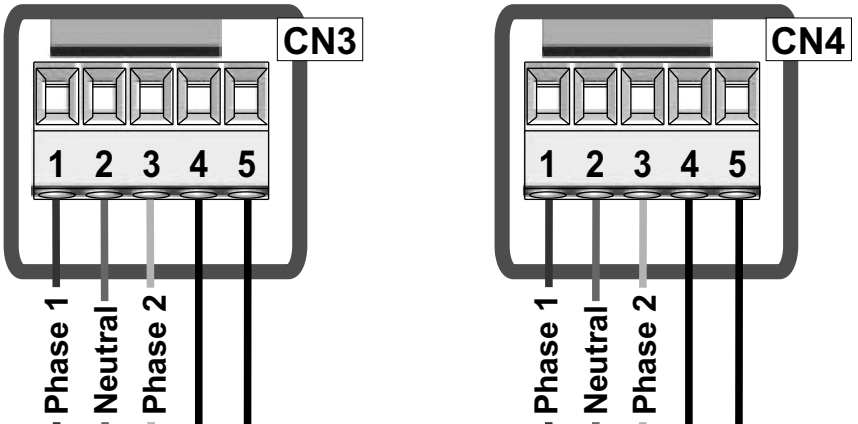
COURTESY LIGHT



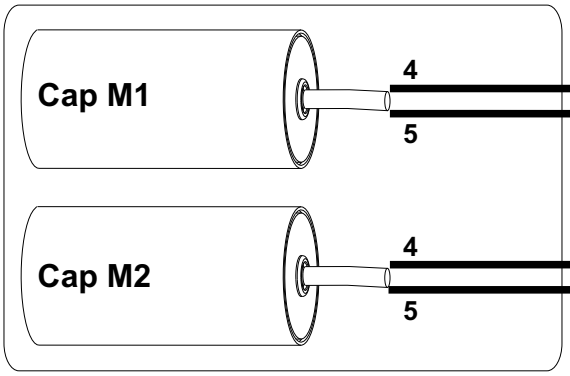
Timing
from 0 to 4 min
(230V~ 50W Max - 115V~ 50W Max)

MOTORS CONNECTION, CAPACITY AND POWER SUPPLY





Phase 1 Neutral Phase 2 Phase 1 Neutral Phase 2

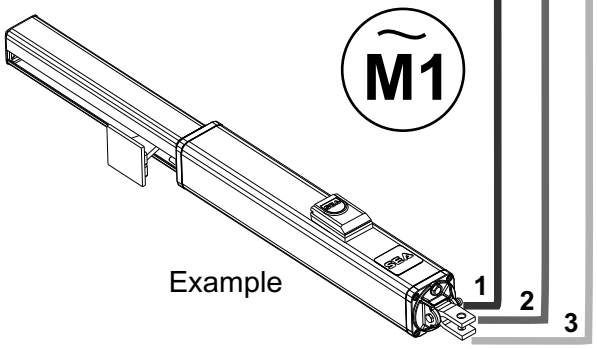


Motor 1

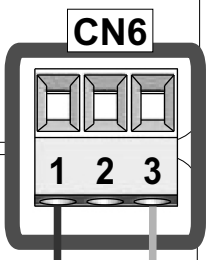
Motor 2 connection

M = Opening /Closing

Com = COMMON



Example

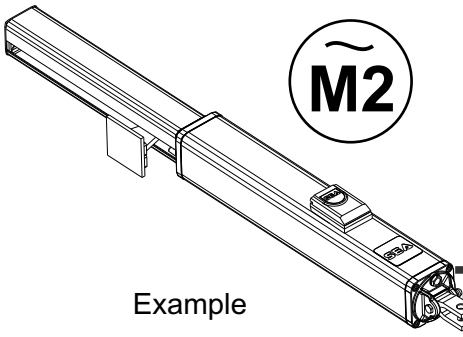


Motor 2

Motor 1 connection

M = Opening/Closing

Com = COMMON

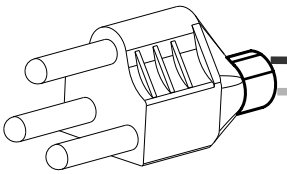


Example

Line Neutral

POWER SUPPLY INPUT

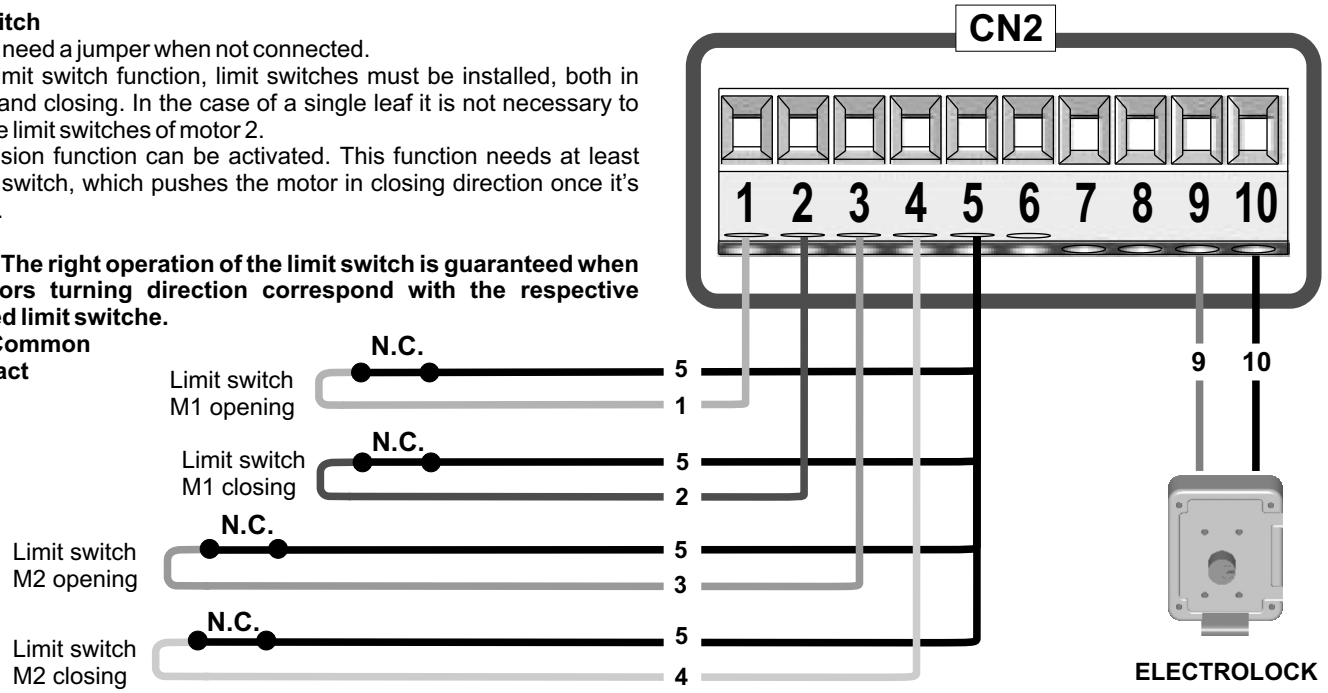
NOTE: For power supply connection follow the rules in force



LIMIT SWITCH, ELECTROLOCK CONNECTION

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

⚠ **The right operation of the limit switch is guaranteed when the motors turning direction correspond with the respective employed limit switche.**
Com = Common
C= Contact



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

ALARM DESCRIPTION

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	24VA output voltage	Make sure there are no short circuits on wiring or control unit and no overload.
Ft.L I	Power supply fault	Check the network or the F2 fuse
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:

Blinks	Cause of alarm
9	Motors fault
2	Photocell in closing
3	Photocell in opening
6	Collision in opening
4	Safety edge

Blinks	Cause of alarm
5	Stop
7	Max. Cycles reached
6	Collision in closing
4 fast	Limit switch fault

TROUBLE SHOOTING

Advises

Make sure all Safeties are turned ON
All 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
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	**a.)** Set limit switches **b.)** Repeat programming **c.)** Remove obstacle **d.)** Increase torque parameter
The gate opens but doesn't close	**a.)** The contacts of the photocells are open. **b.)** The stop contact is open **c.)** The edge contact is open **d.)** Ammeter alarm	**a.) b.) c.)** Check the jumpers or the signals indicated on the warning lamp **d.)** 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.)** Set the pause parameter on a different value from the d.5b

Page for both instaler and user

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

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

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

REGULAR PRODUCT DISPOSAL (electric and electronic waste)
(It's applicable in EU countries and in those ones provided with a differential waste collection)

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

STORING

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

Materials handling must be made with appropriate vehicles..

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

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

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