CE
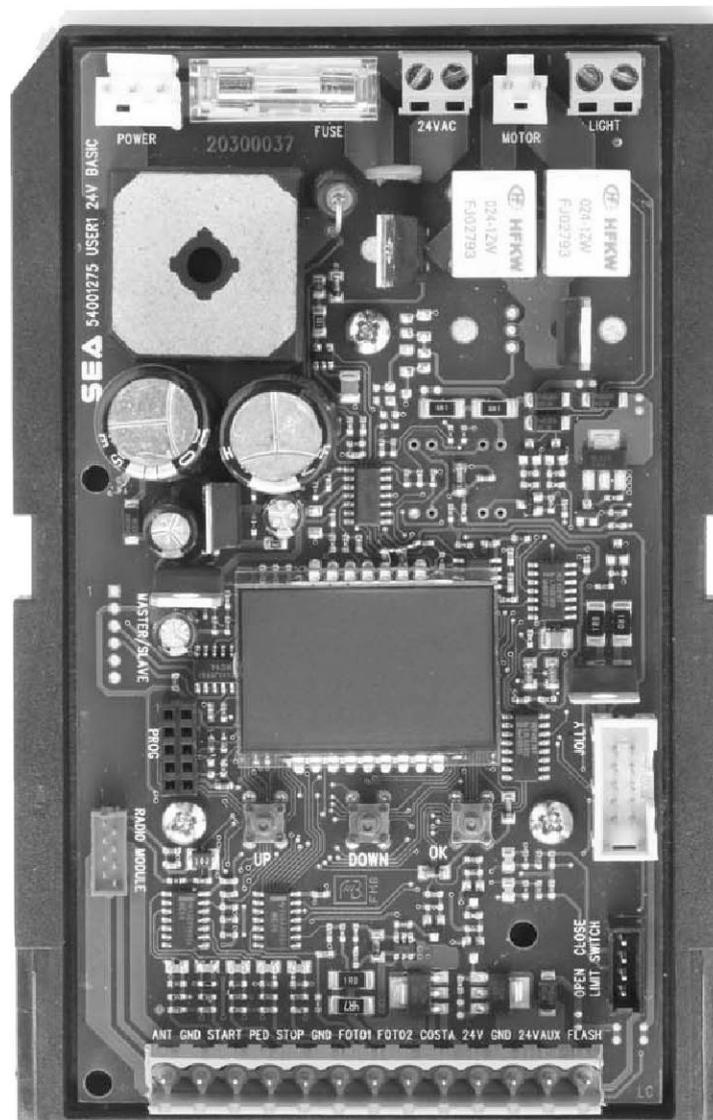
USER 1 - 24V DG R1

23024055

APPAR. ELETTRONICA 24V === PER CANCELLI SCORREVOLI E BARRIERA

24V === ELECTRONIC CONTROL UNIT FOR SLIDING GATES AND BARRIERS

ARMOIRE ELECTRONIQUE 24V === POUR PORTAILS COULISSANTS ET BARRIERES

DISPOSITIVO ELECTRÓNICO 24V === PARA CANCELAS CORREDIZOS Y BARRERAS

INDEX

DESCRIPTION OF THE COMPONENTS
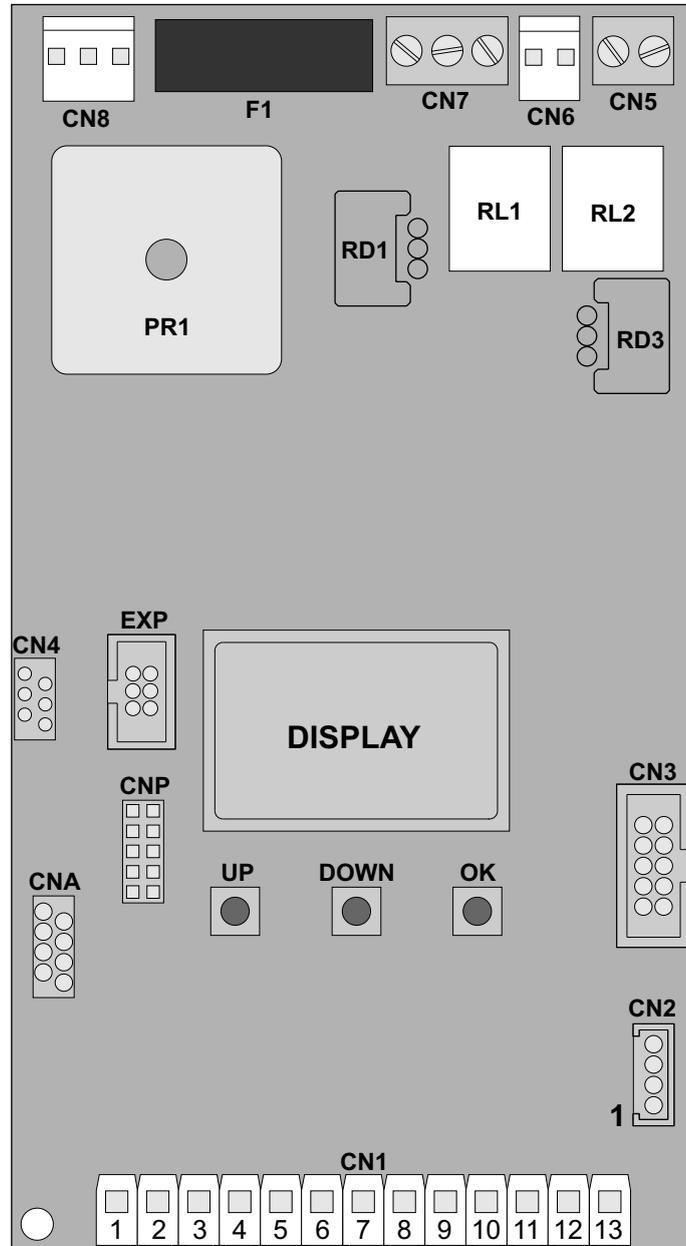
CN1 = Input/Output connector

CN2 = Limit switch connector

CN3 = Jolly connector

CN4 = Master/slave connector

CN5 = Courtesy light output plug

CN6 = Motors connector

CN7 = Batteries connector

CN8 = Power connector

CNA = Receiver connector

CNP = Programming connector

EXP = External module connector

OK = Programming button

DOWN = Programming button

UP = Programming button

RD1 =Motors piloting Mosfet

RD3 = Motors piloting Mosfet

R1 = Motors command relay

R2 = Motors command relay

PR1 = Rectifier jumper

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 1 24V DG R1 control unit has been designed to manage one low voltage motor with or without electronic limit switches.

It is of very small size and the big news is the LCD display on board that let you view and set in a simple and complete way all functions of the control unit.

TECHNICAL SPECIFICATIONS

Control unit power supply	24 V~
Absorption in stand by	30 mA
Max. motor charge	200W
Max. accessories charge 24V	24V=== 250mA
Max. Flash light charge	24V (FL) 15W max.
Environment temperature	-20°C ↯ +50°C ↯
Protection 24V~	F1 (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 *oFF* to 4 min)
Thrust	Adjustable Opening and Closing
Slow down	Adjustable Opening and Closing
Input on connecting terminal	Battery power supply / Total opening / Pedestrian opening adjustable / Balanceable edge / Stop / Limit switch opening and closing / Photocell 1 and Photocell 2
Output on connecting terminal	24V(FL)=== / Light === (Max 100 mA) / Motor 24V === / 24Vaux ===
Board dimensions	156 x 100 mm
Specifications of optional batteries	24V Pb 1.2Ah min.
Specifications of external enclosure	305 x 225 x 125 mm - Ip55
Special accessories	Battery charger card (cod.23101105) Programmer JOLLY (cod.23105276) Programmer JOLLY2 (cod.23105277) Programmer OPEN (cod.23105290) Traffic light card (cod.23021100)

The herein reported functions are available starting from revision 30.

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QUICK START

PROGRAMMING BUTTONS

UP | DOWN | OK

UP

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

1 MENU SEA SET **LANGUAGE** —OK→ MENU SEA SET **ITALIANO**

UP

2 MENU SEA SET **TRANSMITTERS** —OK→ MENU SEA SET **START** —OK→ MENU SEA SET **PRESS BUTTON** → Press the button of the TX to be stored → MENU SEA SET **STORED** → OK to exit Menu or press the button of the next TX to be stored

UP

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

UP

4 MENU SEA SET **REVERSE MOTOR** —OK→ Choose "ON" with UP or DOWN button only if in programming the motor starts in opening —OK→ Return to menu 7, place the gate halfway and repeat the times programming

UP

5 MENU SEA SET **LOGIC** —OK→ With UP or DOWN choose the desired logic —OK→ To confirm and return to main menu

UP

6 MENU SEA SET **PAUSE TIME** —OK→ With UP or DOWN choose a delay for automatic closing —OK→ To confirm and return to main menu

UP

7 MENU SEA SET **START IN PAUSE** —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

8 MENU SEA SET **PROGRAM-MING** —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

9 MENU SEA SET **TEST START** —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.

DOWN | UP
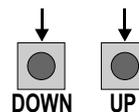
WORKING TIMES SELF LEARNING

NOTE: When using a B200 motor or magnetic limit switches in general; make sure that the control unit is set on magnetic limit switch before learning;
MENU ƎЧ - ᴇYPE oF Liᴺiᴛᴇᴺ Sᴜiᴛᴄᴥᴐᴇᴐ - ᴺAᴳᴺᴇᴛ iᴄ

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) Disconnect the power supply (Fig. 1), release the motor (Fig. 2) and put the leaves manually next to the stop in closing (Fig. 3-4).
Reset the mechanical lock (Fig. 5)
2) Connect the control board to the power supply (Fig.6).
3) Select on the on-board display or JOLLY programmer, the type of motor that you are using as indicated in the dispaly administration.
4) Set the motor torque, the working speed, the deceleration and acceleration space and the slowdown speed. If necessary also set the working logic and the other parameters.
5) Select *Proᴳrᴀᴺᴺinᴳ* on the display, press OK and than one of the UP or DOWN buttons. Now the gate will automatically execute a closing, opening and reclosing cylce.
Note: If the motor starts in opening, remove and re-put power supply, select on the display *rᴇUᴇrSᴇ ᴺoᴛor*. And through the UP and DOWN button put it on ON, or if you have the Jolly programmer, activate the motor and limit switch exchange function. If the motor starts in closing and stops, remove the power supply and reverse the motor cables, then repeat starting from point 5.
6)The self-learning is done.

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

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

Fig.1

Fig. 2

Fig. 5

Fig.6

Fig.4

Fig. 3

Fig. 7

Fig. 8
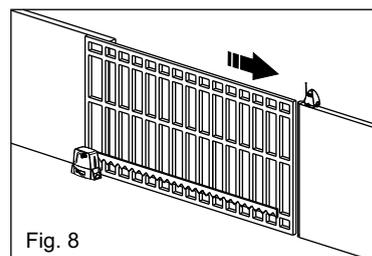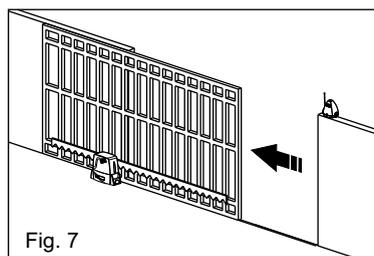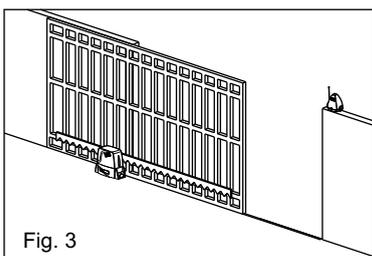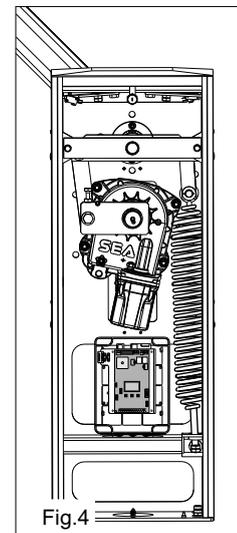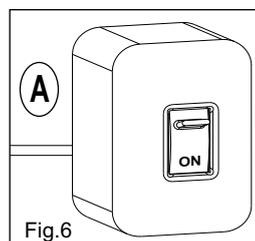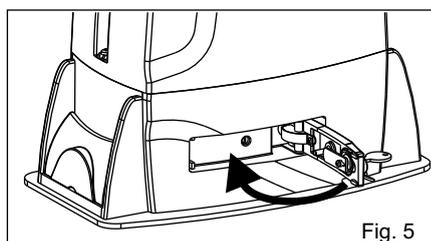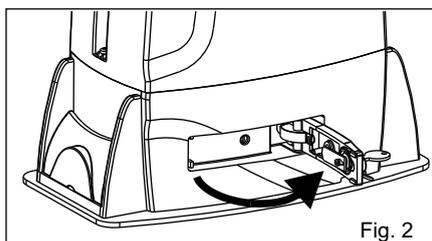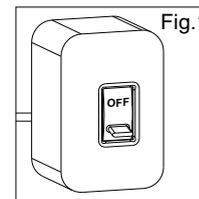
SELECTION OF THE SETTINGS

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.
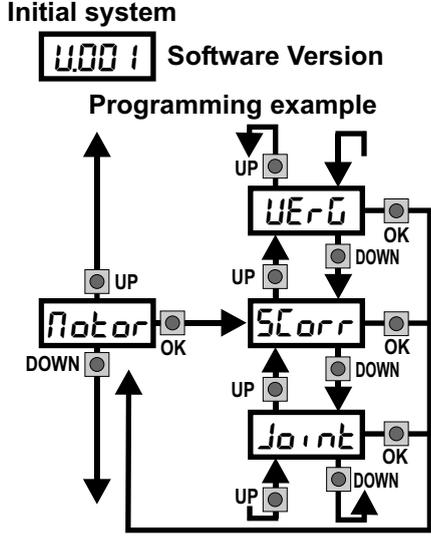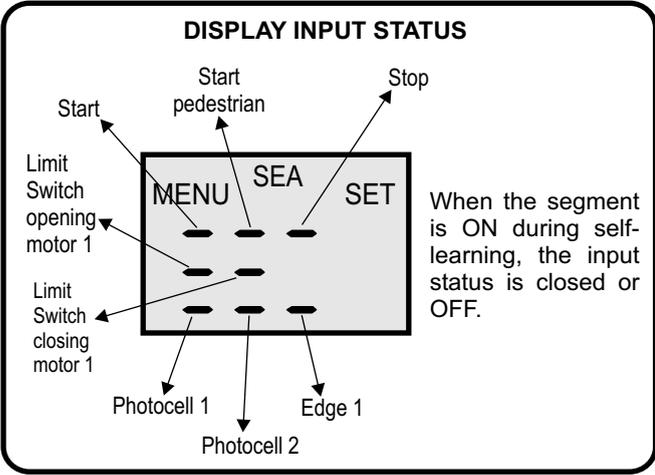Pressing the UP and DOWN buttons at the same time you access the SP MENU for special settings. Pressing the OK button for 5 seconds, you enter the TEST MENU, where you can check the operating status of all inputs.

DISPLAY INPUT STATUS

Start

Start pedestrian

Stop

Limit Switch opening motor 1

MENU   SEA   SET

Limit Switch closing motor 1

When the segment is ON during self-learning, the input status is closed or OFF.

Photocell 1

Edge 1

Photocell 2

Initial system

`U.001` **Software Version**

Programming example

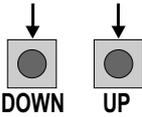| **MENU FUNCTION board USER1 24V DG INPUT TESTS**		
To access the Menu for input TESTS keep pressed OK for about 5 seconds.		
MENU	**Description**	**Description**
StArt	Start test	The contact must be N.O. If activating the related command on the display the item SET lights up, the input will be working. If SET is always on, check the wirings.
StoP	Stop test	The contact must be N.C. If activating the related command on the display the item SET lights up, the input will be working. If SET is always on, make sure that the contact is a N.C. one
PEdEStriAn StArt	Pedestrian start test	The contact must be N.O. If activating the related command on the display the item SET lights up, the input will be working. If SET is always on, check the wirings
EdGE	Safety edge test	The contact must be N.C. If activating the related command on the display the item SET lights up, the input will be working. If SET is always on, make sure that the contact is a N.C. one
Photo1	Photocell 1 test	The contact must be N.C. If activating the related command on the display the item SET lights up, the input will be working. If SET is always on, make sure that the contact is a N.C. One
Photo2	Photocell 2 test	The contact must be N.C. If activating the related command on the display the item SET lights up, the input will be working. If SET is always on, make sure that the contact is a N.C. one.
Limit SUitCh oPEninG	Opening limit switch test	The contact must be N.C. If activating the related command on the display the item SET lights up, the input will be working. If SET is always on, make sure that the contact is a N.C. one or that the related limit switch is not occupied.
Limit SUitCh CLoSinG	Closing limit switch test	The contact must be N.C. If activating the related command on the display the item SET will light up, the input will be working. If SET is always on, make sur that the contact is a N.C. one or that the related limit swith is not occupied.
0.0U	Batteries' voltage level	Batteries charge level indicator
End		Exit menu

English **USER 1 - 24V DG R1**

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MENU FUNCTIONS TABLE USER1 24V DGG				
MENU	SET	Description	Default	Set value
1 - LAnGuAGE	، tRL، Rno	Italian	، tRL، Rno	
	EnGL، SH	English		
	FrRnCR، S	French		
	ESPRnoL	Spanish		
2 - trRnSM، ttErS	StRrt	Start	StRrt PEd StRrt.	
	PEdEStr، Rn StRrt	Pedestrian Start		
	EHtErnRL ModuLE	External module		
	StoP	Stop		
	dELEtE R trRnSM، ttEr	Delete single transmitter		
	CLERr MEMorY	Delete transmitter memory		
3 - Motor	SL، d، nG	Sliding	SL، d، nG	
	Jo، nt	Joint		
	SPr، nt 3 MEtErS	Sprint 3 meters		
	SPr، nt 4 MEtErS	Sprint 4 meters		
	SPr، nt 5 MEtErS	Sprint 5 meters		
	StorM 5 MEtErS	Storm 5 meters		
	StorM 6 MEtErS	Storm 6 meters		
	StorM 7.5 MEtErS	Storm 7 and 7.5 meters		
	SRturn	Saturn		
	MErCurY 800	Mercury 800		
	UErGL.5 MEtErS	VergL.5 meters		
	UErGL.4 MEtErS	VergL.4 meters		
	UErGL.3 MEtErS	VergL.3 meters		
	ErG MRH،	Erg Maxi		
	ErG	Erg		
	UErG	Verg		
4 - rEUErSE Motor	oFF	Synchronized right motor	oFF	
	on	Synchronized left motor		
5 - LoG، C	RutoMRt، C	Automatic	RutoMRt، C	
	oPEn-StoP-CLoSE-StoP-oPEn	Step by step type 1		
	oPEn-StoP-CLoSE-oPEn	Step by step type 2		
	2 buttonS	Two buttons		
	SRFEtY	Safety		
	dERdMRn	Dead man		
6 - PRuSE t، ME	oFF	Disabled	oFF	
	1,2,3	Setting from 1s to 4min.		

MENU	SET	Description	Default	Set value
7 - StArt in PAuSE	oFF	In pause start is not acceped	oFF	
	on	In pause start is accepted		
8 - ProGrAMMinG	oFF on	Times learning start	oFF	
9 - tESt StArt	oFF on	Start command	oFF	
End	Select END and press OK to exit the menu.The menu deactivates automatically after 2 minutes			

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

SPECIAL MENU FUNCTIONS TABLE USER 1 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	SET	Description	Default	Set Value
1 - SPEEd	30 100	Setting from 30 to 100	* 80	
2 - SLoUdoUn SPEEd	30 100	Setting from 30 to 100	* 40	
3 - LERrninG SPEEd	30 100	Setting from 30 to 100	* 80	
4 - oPEninG tor9	10 100	Setting from 10 to 100	* 70	
5 - CLoSinG tor9	10 100	Setting from 10 to 100	* 70	
6 - oPEninG SLoUdoUn	oFF	Disabled	* 30	
	5 100	Setting from 5 to 100		
7 - CLoSinG SLoUdoUn	oFF	Disabled	* 30	
	5 100	Setting from 5 to 100		
8 - PrEFLASHinG	onLY CLoSinG	Pre-flashing active only before closing	oFF	
	0.0 5.0	Pre-flashing time		
9 - FLASHinG LiGHt	norNAL	Normal	norNAL	
	LiGHt	Control lamp		
	ALUAYS	Always ON		
	buZZEr	Buzzer		
10 - CoUrtESY LiGHt	in CYCLE	Courtesy light in cycle	in CYCLE	
	oFF	Disabled		
	1 240	Courtesy light setting from 1s to 4min.		
11 - trAFFiC LiGHt rESErUAtion	oFF on	When setting this function the pedestrian input will be activated to work on the auxiliary board SEM (traffic light management).	oFF	
12 - PEdEStriAn oPEninG	20 100	Setting from 20 to 100	30	
13 - PEdEStriAn PAUSE	= StArt	Pause in pedestrian opening same as in total opening	= StArt	
	oFF	Disabled		
	1 240	Setting from 1s to 4 min.		
14 - ACCELErAtion	0 100	Acceleration ramp	* 70	
15 - NAintEnAnCE CYCLES	100 10E4	Setting from 100 to 100000	10E4	
16 - PErForNEd CYCLES	0 10E4	Reports the executed cycles. Keep pressed OK to reset the cycles	0	

MENU SP	SET	Description	Default	Set Value
17 - t.nEr	oFF	Disabled	oFF	
	on PHoto2	Timer function active on photocell 2		
	on PEdEStriAn EntrY	Timer function active on pedestrian input		
18 - EdGE	norNAL	Normal N.C. contact	norNAL	
	8H2	Edge is active and protected by a 8k2 resistor		
19 - PHoto1	CLoSinG	Photocell active in closing	CLoSinG	
	oPEninG And CLoSinG	Photocell active in opening and closing		
	StoP	Photocell active before opening		
	StoP And CLoSE	The photocell stops in closing and closes when released		
	CLoSE	The photocell gives a command to close during opening, pause and closing		
	PAUSE rELoAd	The photocell charging the pausing time		
20 - PHoto2	CLoSinG	Photocell active in closing	oPEninG	
	oPEninG And CLoSinG	Photocell active in opening and closing		
	StoP	Photocell active before opening		
	StoP And CLoSE	The photocell stops in closing and closes when released		
	CLoSE	The photocell gives a command to close during opening, pause and closing		
	PAUSE rELoAd	The photocell charging the pausing time		
21 - 24U AuH	ALUAYS	24Vaux output always power supplied	ALUAYS	
	in CYCLE	24V output active only during cycle		
	oPEninG	24Vaux output power supplied only during opening		
	CLoSinG	24Vaux output power supplied only during closing		
	in PAUSE	24Vaux output power supplied only during pause		
	FototESt	24Vaux output for connection of photocell TX to autotest		
	in CYCLE And FototESt	24V output only during cycle with fototest function active		

MENU SP	SET	Description	Default	Set Value
22 - Position rECoUErY	0 15	Regulates the recovery of the motor inertia	6	
23 - Motor rELEASE	oFF	Disabled	oFF	
	1 100	Setting from 1 to 100		
24 - Anti intruSion	onLY oPEninG	Only on limit switch in opening	oFF	
	onLY CLoSinG	Only on limit switch in closing		
	oPEninG And CLoSinG	On limit switches in closing and in opening		
	oFF	Disabled		
25 - FLASHinG LiGHt And tiMEr	oFF	The flashing light remains OFF with the active timer and open gate	oFF	
	on	The flashing light remains ON with active timer and open gate		
26 - diAGnoStiCS	1 10	Shows last event (See alarms table)		
27 - FototESt	PHoto1	Auto-test active only on Photo1	PHoto 1-2	
	PHoto2	Auto-test active only on Photo2		
	PHoto 1-2	Auto-test active on Photo1 and Photo2		
28 - oPEninG toLErAnCE	0 100	Adjust the amperometric tolerance in relation to the detected stop in opening	0	
29 - CLoSinG toLErAnCE	0 100	Adjusts the amperometric tolerance in relation to the detected stop in closing	0	
30 - oPEninG SEnSitiUitY	10 99	Adjustable from 10 to 99. Increasing the value the reversing on obstacles will be delayed.	* 10	
	oFF	Disabled		
31 - CLoSinG SEnSitiUitY	10 99	Setting from 10 to 99	* 10	
	oFF	Disabled		
32 - PHoto oFF in CLoSinG	0 50	Setting from 0 to 50	0	
33 - MAStEr-SLAUE	MAStEr	For applications with two motors in master-slave, it allows to set the control unit as master	oFF	
	SLAUE	For applications with two motors in master-slave, you can set the control unit as slave		
	oFF	Disabled		

English   **USER 1 - 24V DG R1**

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MENU SP	SET	Description	Default	Set Value
34 - ŁYPE oF LiMiŁ SUiŁCH	NECHAniCAL	Mechanical limit switch	NECHAniCAL	
	NAGnEŁiC	Magnetic limit switch		
35 - PASSUord	- - - -	Allows the entering of a password which blocs the modification of the control unit parameters (see page 36)	- - - -	
End		Select END and press OK to exit the special menu. The special menu deactivates automatically after 20 minutes.		

Note 1: The * indicates that the default value may change depending on the selected motor type.

Note 2: After initialization the parameters "motor type" and "limit switch type" remain son the value chosen in the setup program.

FUNCTION LOGIC

AUTOMATIC LOGIC
A start impulse opens the gate. A second impulse during the opening will not be accepted.
A start impulse during closing reverses the movement.
NOTE 1: To have the automatic closing it is necessary to set a pause time, otherwise all the logic will be semi-automatic.
NOTE2: It is possible to choose, whether to accept or not, the start in pause, selecting in the MENU the item 5ŁArŁ ln PAuSE **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 5ŁArŁ ln PAuSE **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 5ŁArŁ ln PAuSE **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 5ŁArŁ ln PAuSE **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.

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

Select through the display *trAnSmittErS* 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 *StorEd*.

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 *trAnSmittErS* MENU it is possible to select *StArt* (to associate a Start command), *PEdEStrIAn StArt* (Pedestrian Start), *EHtErnAl ModulE* (To activate the LIGHT contact), *StoP* (To associate the STOP command to the TX), *dELEtE A trAnSmittEr* (to delete single transmitter), *CLEAr MEMorY* (To delete all TX).

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 *trAnSmittErS: CLEAr MEMorY* and hold the OK button until the display shows the message *oH*.

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 *trAnSmittEr* press OK, select *StArt*, press OK.
Send a *StArt* command from the transmitter and on the display will show *dELEtEd*.
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 *trAnSmittErS*, press OK, select *dELEtE A trAnSmittEr*, 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 and OK will appear to confirm the cancellation, otherwise press the DOWN button to return to the menu *trAnSMittErS*.

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						

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 *PASSUord* Submenu.
Pressing OK in the *PASSUord* 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 *oH* appears, pressing UP or DOWN instead you can cancel the operation and *no oPErAtIon* will appear on the display.

Once entered the PASSWORD, it will be definitively activated, once the display switch off timeout has expired, or by turning off and on again the control unit. Once the PASSWORD has been activated, the menus of the display can be only displayed but not set. To unlock them you must enter the correct PASSWORD in the *PASSUord* menu, if the password is wrong the message *Error* will appear.
At this point, if the password has been entered correctly, the menus will be unlocked and it will be possible to change the parameters of the control unit again.
If the control unit has been unlocked through *PASSUord* 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 or Jolly 2 terminal.

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English   **USER 1 - 24V DG R1**

# START - STOP - PEDESTRIAN START - ANTENNA - PHOTOCELL

CN1

Photocell 1 and Photocell 2 Connections
Note: If the photocells are not connected, put a jumper between the clamps (6,7,8).
+ = 24V(FL) $=$ COM = 0V   PH1 = Photocell contact 1   PH2 = Photocell contact 2
Note: For the autotest connect the TX to the 24Vaux clamp and activate the Autotest function.
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).
Note3: On the FototESt menu you can also activate the self-test even on the single photocell.
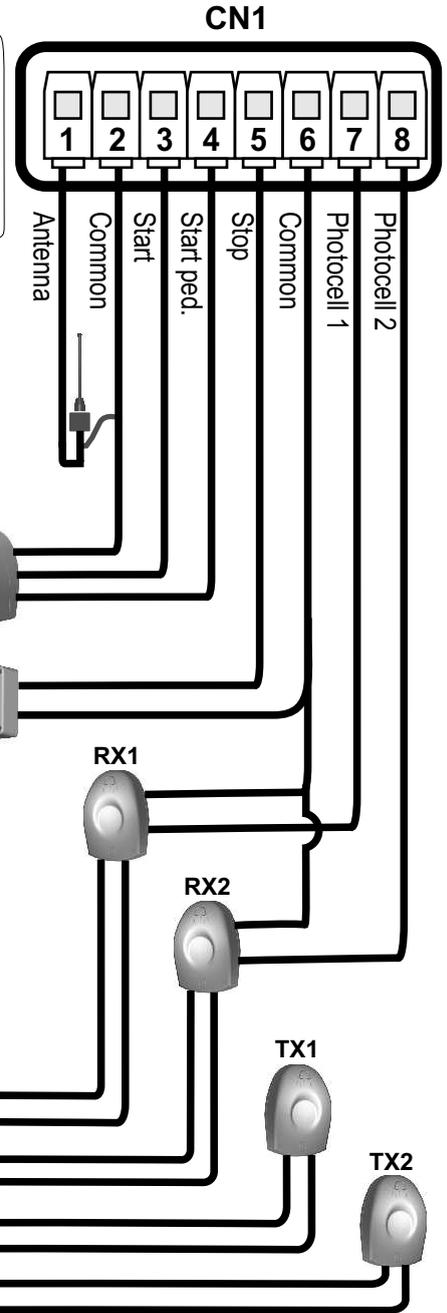
OPTIONS ON FOTO1 and FOTO2 adjustable on on-board display or with JOLLY terminal.
FOTO CLOSE activation (CLoS InG**):** if occupied, reverses the movement in closing, during pause it prevent the closing.
Activation repeat pause (PAuSE rELoAd**):** If occupied, during pause it recharges the timer of pause. In closing it reverses the movement.
FOTO OPEN activation (oPEn InG**):** If activated the photocell blocks the movement as long as it's busy, when released the opening continues.
FOTO PARK activation (StoP And CLoSE**) :** 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 (CLoSE**):** 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).

Antenna | Common | Start | Start ped. | Stop | Common | Photocell 1 | Photocell 2

Options 24Vaux $=$ **can be set with on-board Display or with Jolly device.**
Through the Jolly programmer 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, FototESt and in CYCLE And FototESt.
When using control units with batteries and / or solar panels, we recommend connecting the accessories which are not used when operator stands still (e.g. photocells) to a 24VAux output, setting the option " in CYCLE". With this setting you can save energy by lowering power consumption in stand-by, increasing the autonomy of the system.

RX1

RX2

CN1

9 | 10 | 11 | 12 | 13

Common | 24V (FL)

TX1

TX2

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.

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English   USER 1 - 24V DG R1

LIMIT SWITCH AND SENSOR BARRIERS

Sensor barriers
This control unit comes with a detection device of motor current absorbtion which allows to reveal possible obstacles during the opening and the closing of the gate. When this device intervenes in opening it causes the inversion of the movement for around a second, if it intervenes in closing it causes the total reopening.

Note1: The ammeter sensitivity is adjustable both in opening and in closing through the on-board display or through the JOLLY terminal. With high torque the gate reverses after 5 seconds.

Attention: In case of obstacle, if the automatic reclosing is on, the gate will attempt to close for 3 times, whereupon a start signal will be necessary to re-establish the movment.

Limit switch
The limit switch can be connected through the special LIMIT SWITCH connector on the control unit. The control unit can administrate mechanical, inductive and magnetic limit switches. Only on some special applications il will not be necessary to connect the limit switches. The control unit will automatically realize if limit switches are present or not.

1) Through the on-board display or through the JOLLY programmer it is possible to activate the ani-intrusion function. This function is lied to the presence of at least one limit switch which, when free, forces the motor to re-close.

Note: if during programming phase the motor and limit switch times should not be in phase between them, the gate will start in closing, it stops and will not complete the selflearning of the times, at this point it will be necessary to switch off the tension and to invert the cables of the motor. The first movement in selflearning must always be executed in closing.

Limit Switch

CN2

ATTENTION: When using SEA magnetic limit switches, make sure that the motor is set on MAGNETIC LIMIT SWITCH **present in the special menu.**
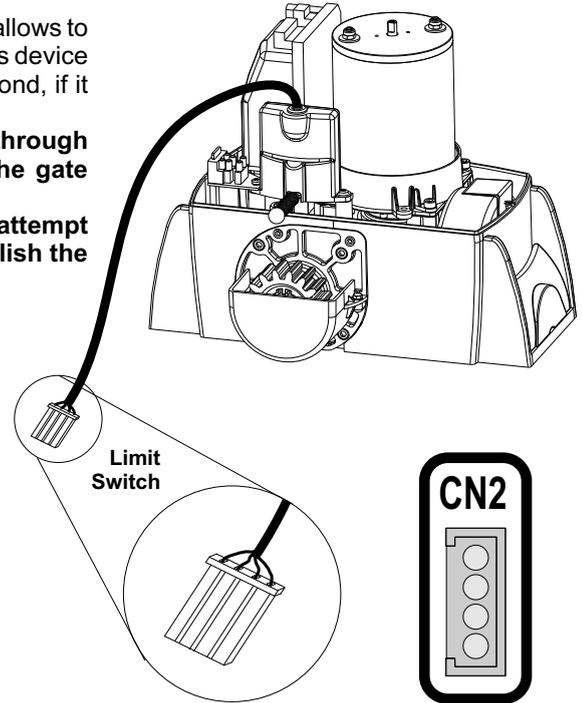
ALARMS INDICATIONS

Signals	Kind of alarm	Solutions
FAILURE Motor	Motors current failure	Sure there are no short circuits on the motor or on the control unit.
FAILURE24	24V Power supply failure	Make sure there are no short circuits on the wiring or on the control unit and no overloads.
FAILURE24VAUX	24Vaux output voltage failure	Make sure there are no short circuits on wiring or control unit and no overload.
FAILURE SELF TEST	Self-test photocells failure	Check the photocells operation and / or connections on the control unit.
FAILURE LIMIT SWITCH	Limit switch activation failure	Check the operation of both limit switches and / or correspondence between movement direction of the motor and engaged limit switches.
FAILURE SLAVE	Slave failure	Check the connection between MASTER and SLAVE or if the SLAVE board is actually set as such.
FAILURE FLASHING LIGHT	Flashing lamp failure	Check connections and / or conditions of the lamp.

Note 1: If in the diagnostics shows "max. cycles reached ", do the maintenance and / or reset the number of cycles performed.
Note2: To exit from the error messages, press OK. If the error persists, make all required checks for the specific error and / or disconnect the device that generates the error to see if the error disappears.

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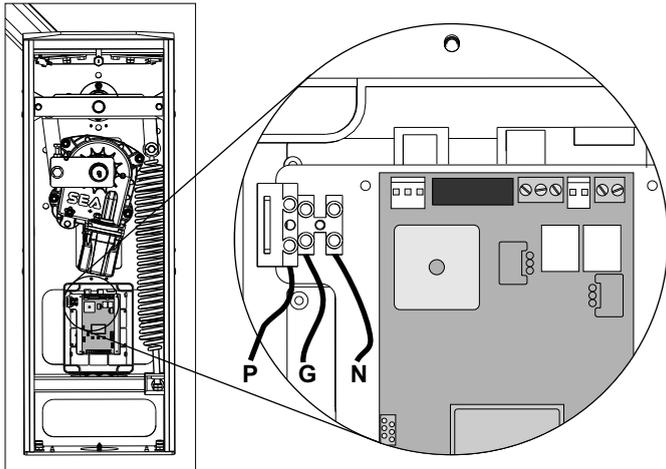It is possible to view the alarms also on the flashing light or on the control lamp, simply by observing the number of flashes emitted and verifying the reference in the table below:

Flashings Number	Kind of alarm	Flashings Number	Kind of alarm
9	Motors fault	5	Stop
2	Photocell in closing	7	Max. Reached cycles
3	Photocell in opening	6	Closing impact
6	Opening impact	4 fast	Limit switch error
4	Safety edge		

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MOTOR POWER SUPPLY

TRANSFORMER

115V~
o
230V~

3,6 A blow fuse on 230V ~ power supply
6,3A blow fuse on 115V ~ power supply

N   G   P

POWER
(CN8)

M+
M-

MOTOR
(CN6)

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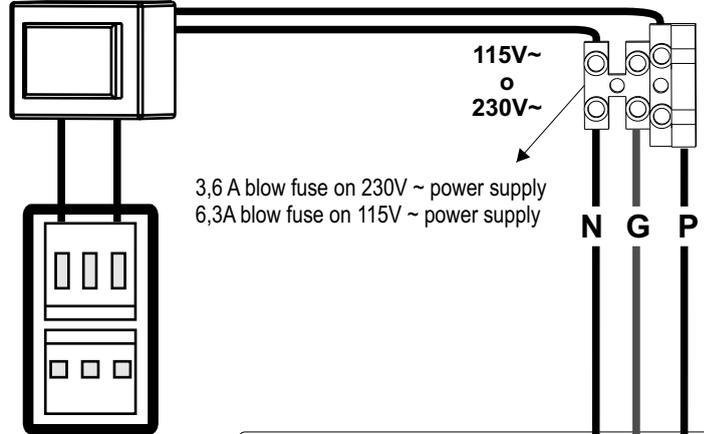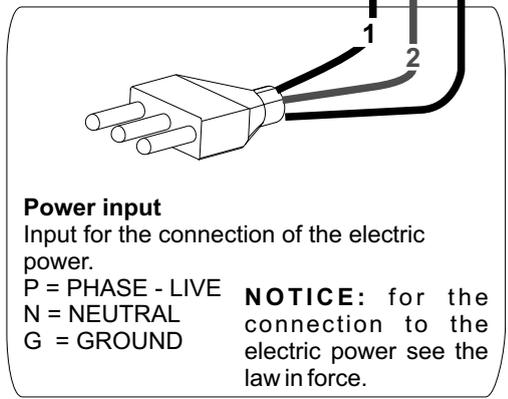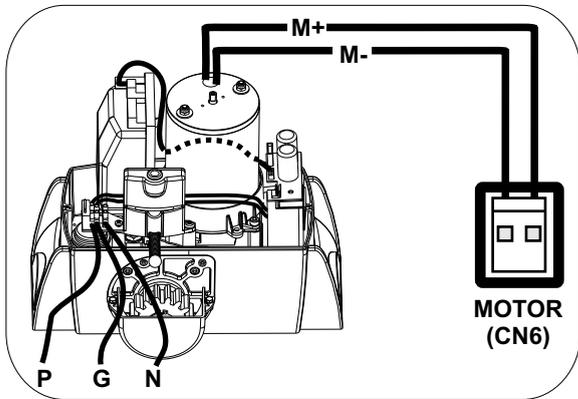
Power input
Input for the connection of the electric power.
P = PHASE - LIVE
N = NEUTRAL
G = GROUND

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

SECURITY EDGE AND WARNING LAMP

SECURITY EDGE

Between clamps 9 and 11 of CN 1 it is possible to connect an active safety edge on the terminal M8. 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 you must put a jumper between the contacts GND and 9 of CN1.

Note1: contact N.C.

Note2: Through the on-board display or the Jolly programmer it is possible to activate the balanced edge 8K2, in this case the edge contact is controled by a special resistance value revealing the eventual involuntary short- circuit of the device. In case of imbalance of the device a special alarm will show on the on-board dispaly or on the JOLLY programmer.

CN1

| 9 | 10 | 11 | 12 | 13 |

Edge | 24VAux | Common | 24V (FL) | FL(-)

Security edge
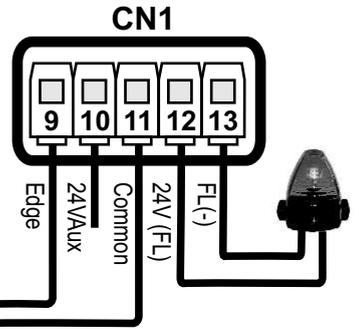
**Flashing Lamp 24V ⎓ 15W (Warning lamp)**
The flashing lamp can be connected between the clamps 24V (FL) and FL (-) of CN 1.
The warning lamp advises that the automatic gate is moving with 1 flash/second in opening and 2 flashes / second in closing. During pause it remains switched on. Through the warning lamp it is also possible to identify alarms lied to the STOP, PHOTOCELL 1, PHOTOCELL 2 and EDGE devices. Through the display or the JOLLY programmer it is possible to activate the pre-flashing function and/or to modify the function of the warning lamp choosing between fix flashing, control lamp or Buzzer.

EXTERNAL RECEIVER

Example: Connection of a radio receiver

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

CN1

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

Start | Start ped. | Common | Common | 24V (FL)

+
-
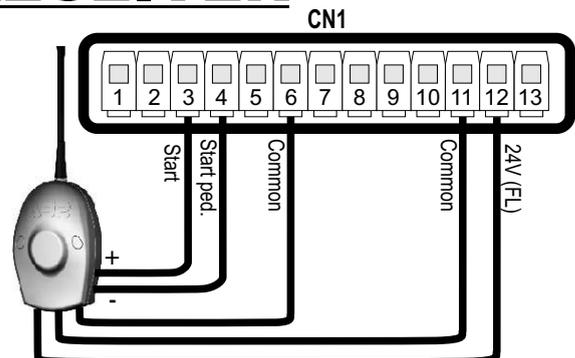
MASTER-SLAVE FUNCTION

To set an installation with two motors in **MASTER-SLAVE** function it is recommended to do as follows:

1) Set the two motors as if they were two independent installations, make sure that the individual motor works properly and that the limit switches (when present) are read properly.

2) Once sure of the correct functioning connect the control unit MASTER to the control unit SLAVE through the special clamp (Code SEA 23001220).

3) Now set the control unit, which has to manage the commands and motor 1 (photocell, keyswitch, STOP, safety edge etc.) as MASTER and the other one which will move motor 2 as SLAVE.

4) Follow up the selflearning of the times of the MASTER control unit.

Note 1: The master and slave settings on the control unit are present in the special menu selecting ΠRStEr-SLRUE.
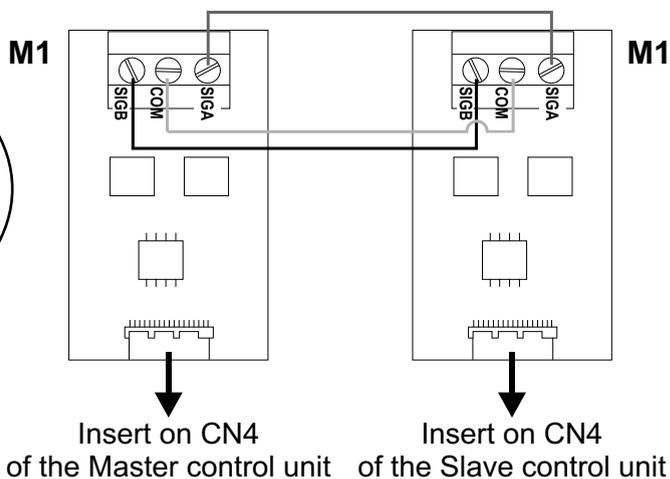
Note 2: All these operations can also be managed through the JOLLY programmer).

Note 3: On the SLAVE it is possible to set the following functions only: torque, speed, motor type, slowdown speed, acceleration, deceleration, position recovery, 24V aux and motor inversion. All other parameters will be set only by the MASTER control unit.
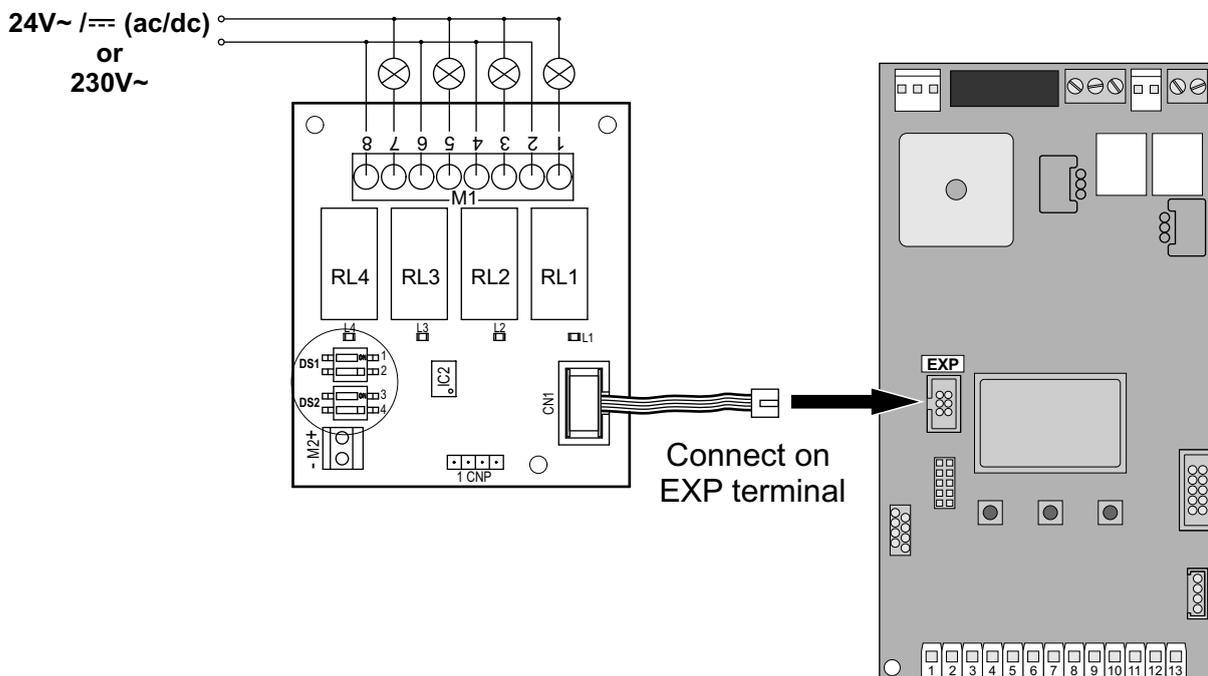
Note: respect the polarity of the cables.
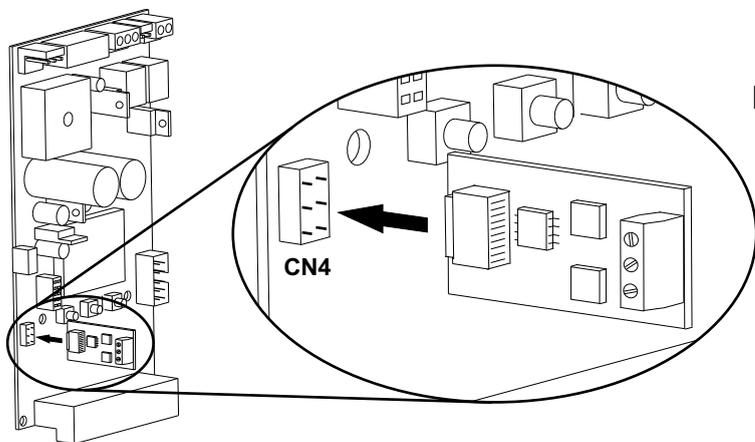
It is recommended to use a two twisted pairs shielded cable with less than 0.5 mm² section.

Insert on CN4 of the Master control unit

Insert on CN4 of the Slave control unit

TRAFFIC LIGHT CARD CONNECTION

24V~ /⎓ (ac/dc) or 230V~

Connect on EXP terminal

CONNECTION OF BATTERIES
TO BATTERY CHARGER CARD

Cod.23101105

= charge ≈ 200mA

= charge ≈ 360mA

= charge ≈ 800mA

CN1

GND GND PSOL BAT 28V

28V === Battery charger
Positive battery
Negative battery charger

(BAT)

+
S
-

Solar Panel

+

GND

12V   12V

Batteries

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

Insert two 12V batteries connected in series.
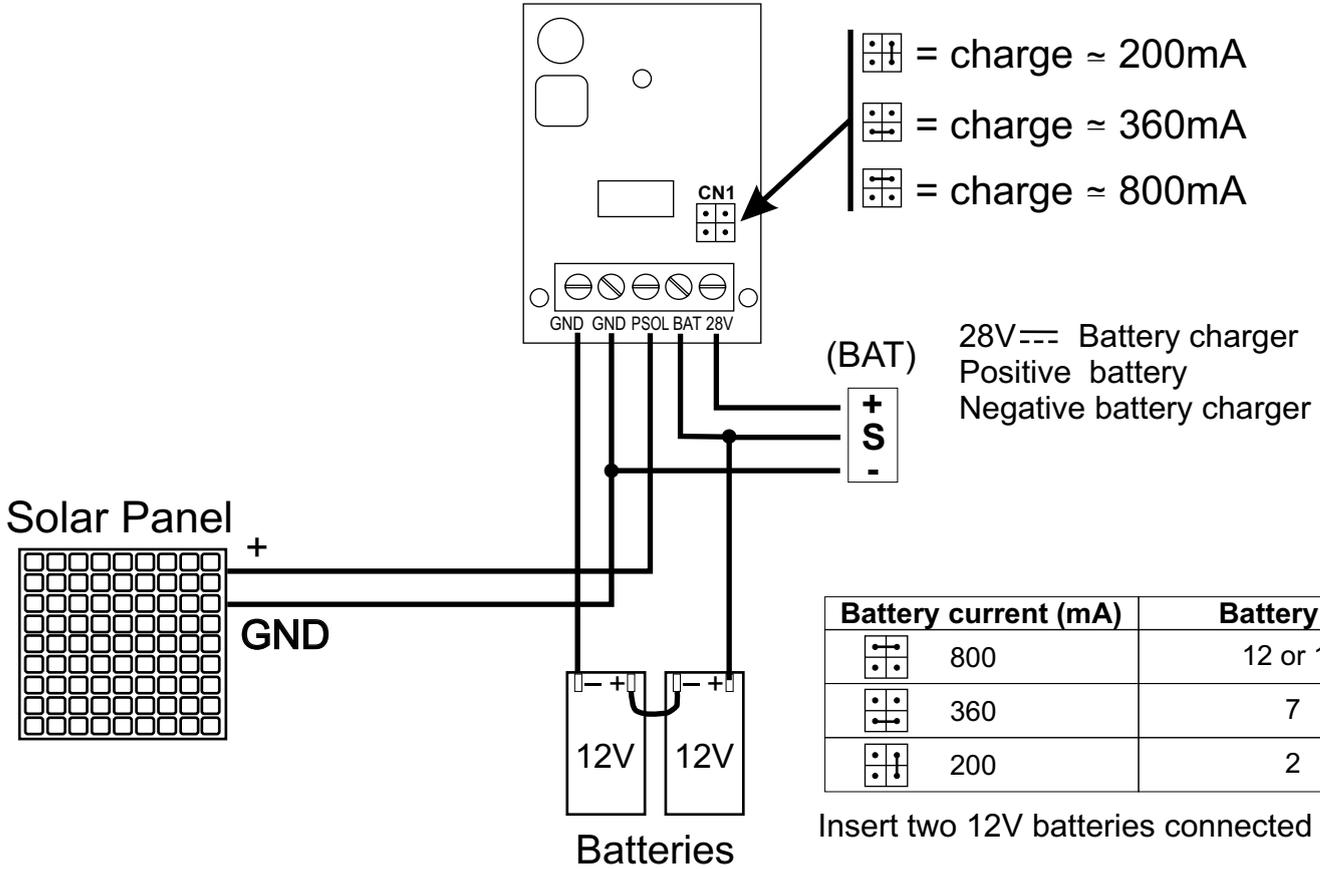
TROUBLE SHOOTING

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 or speed 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 oFF

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.

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