

SEA[®]

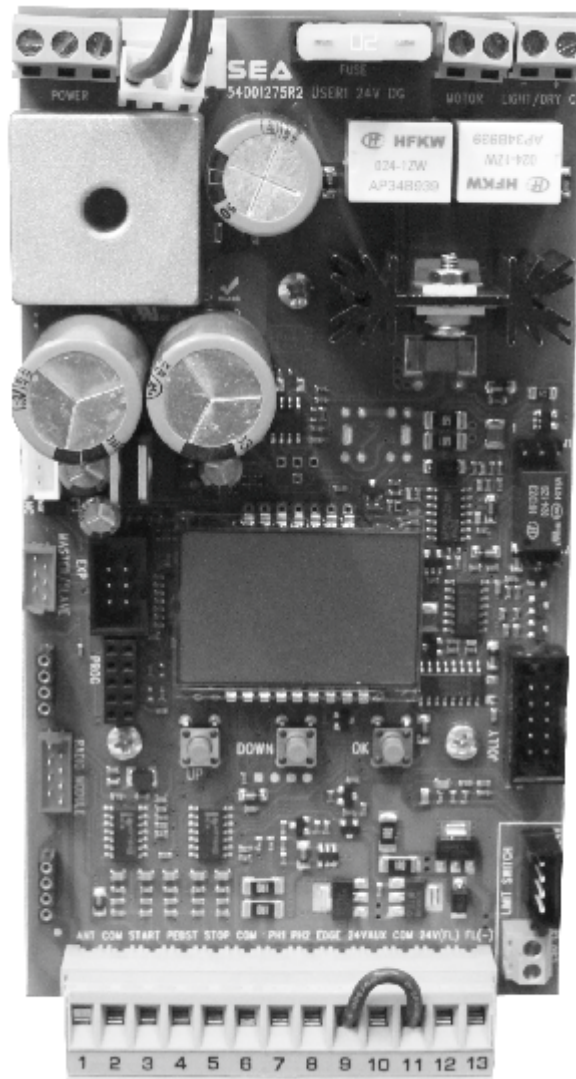
Sistemi Elettronici
di Apertura Porte e Cancelli
International registered trademark n. 804888

CE English

USER 1 - 24V DG MAXI

23024074

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



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DESCRIPTION OF THE COMPONENTS

TECHNICAL SPECIFICATIONS

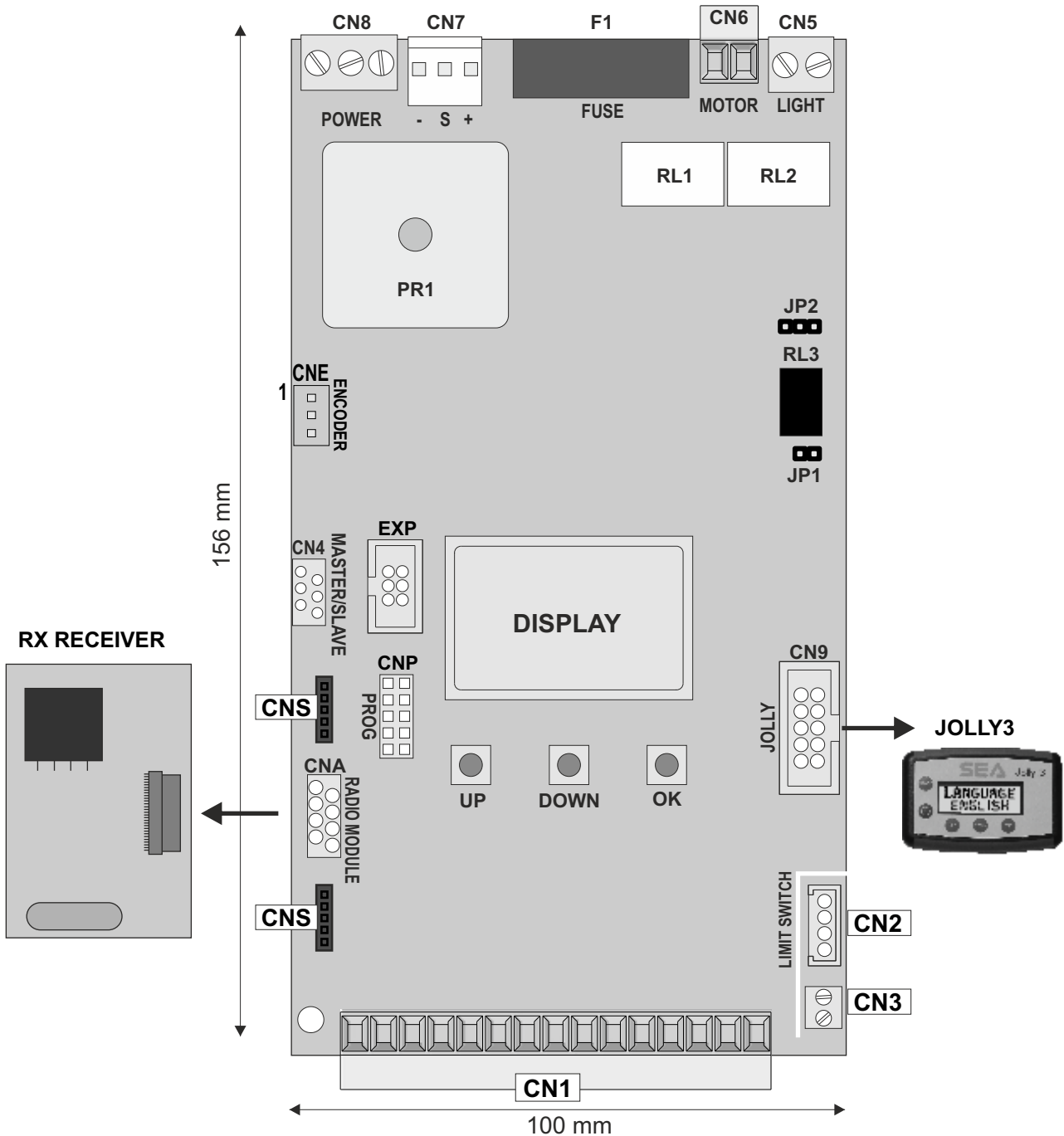
Control unit power supply: 24 V~

Absorption in stand by: 30 mA

Maximum motor current: 20A

Environment temperature: -20°C ∇ +50°C ∇

Specifications of external enclosure: 305 x 225 x 125 mm - Ip55



CN1 = Input/Output connector

CN2 = Pre-wired limit switch connector

CN3 = Not Pre-wired limit switch connector

CN4 = Master/slave connector

CN5 = Courtesy light output connector

CN6 = Motors connector

CN7 = Batteries connector - Quick connection

CN8 = Power connector

CN9 = Jolly 3 connector

CNA = RX Receiver connector

CNE = Encoder connector

CNP = Programming connector

CNS = RF FIX receiver connector

EXP = External module connector

OK = Programming button

DOWN = Programming button

UP = Programming button

RL1 = Motors control relay

RL2 = Motors control relay

RL3 = Light/dry output contact relay

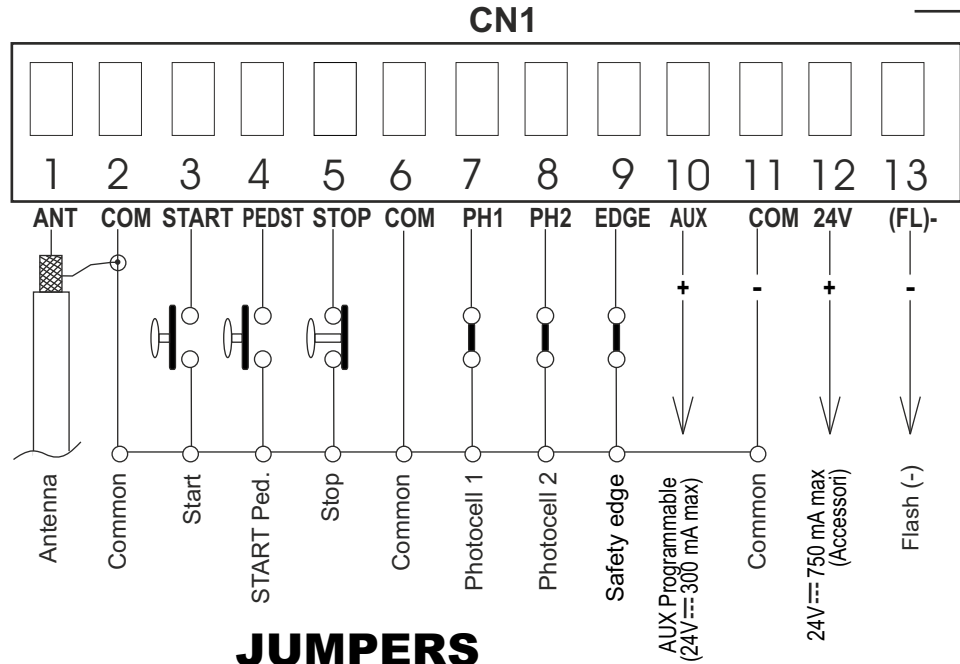
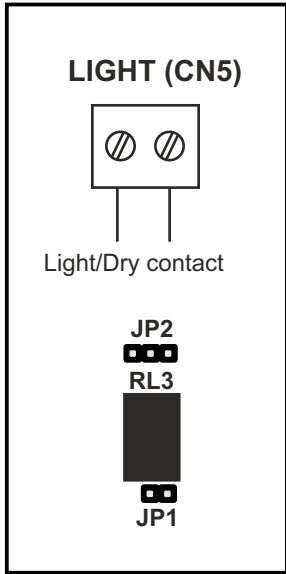
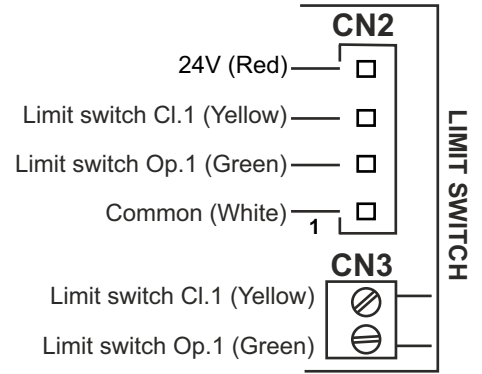
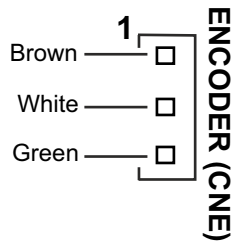
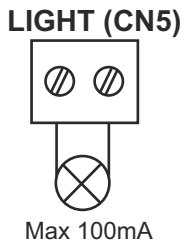
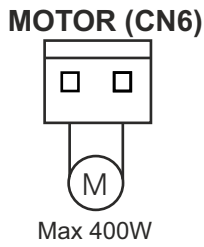
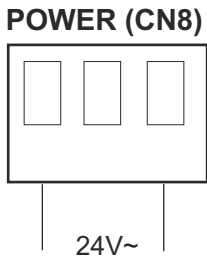
PR1 = Rectifier bridge

F1 = Fuse 20 AT

Jp1 = Relay 3 activation

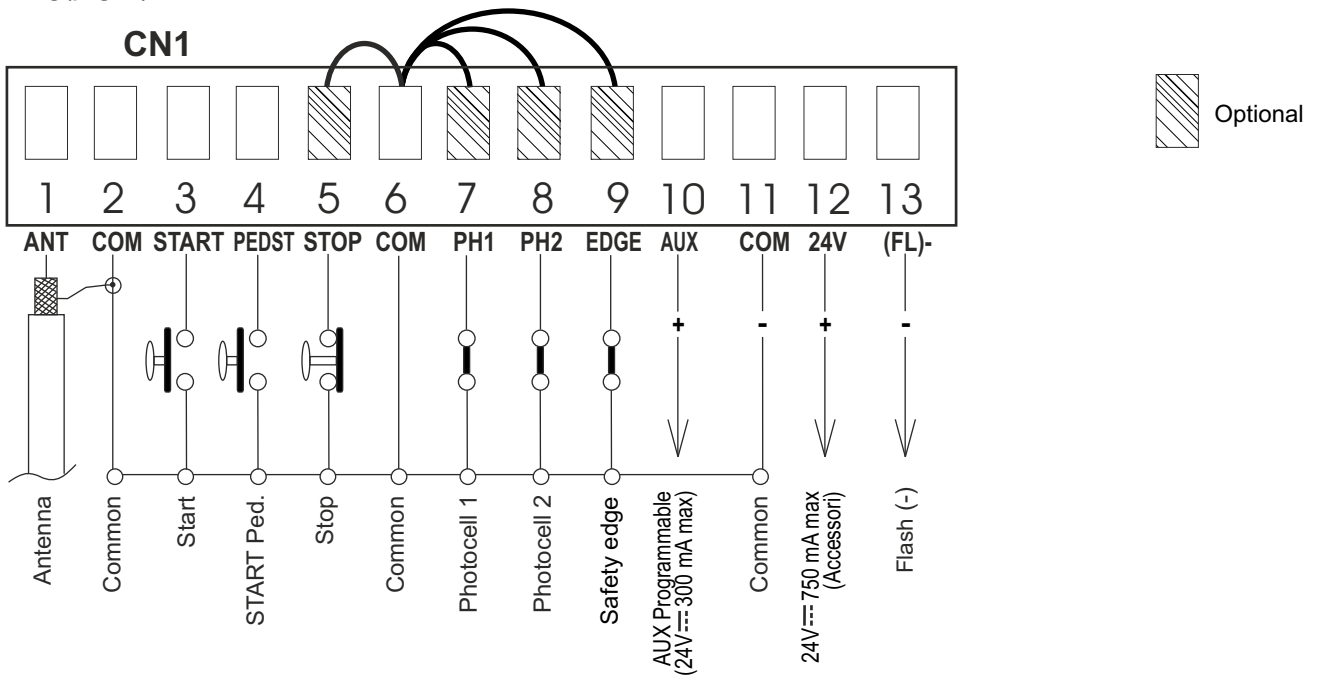
JP2 = Light/dry contact selection

CONNECTIONS



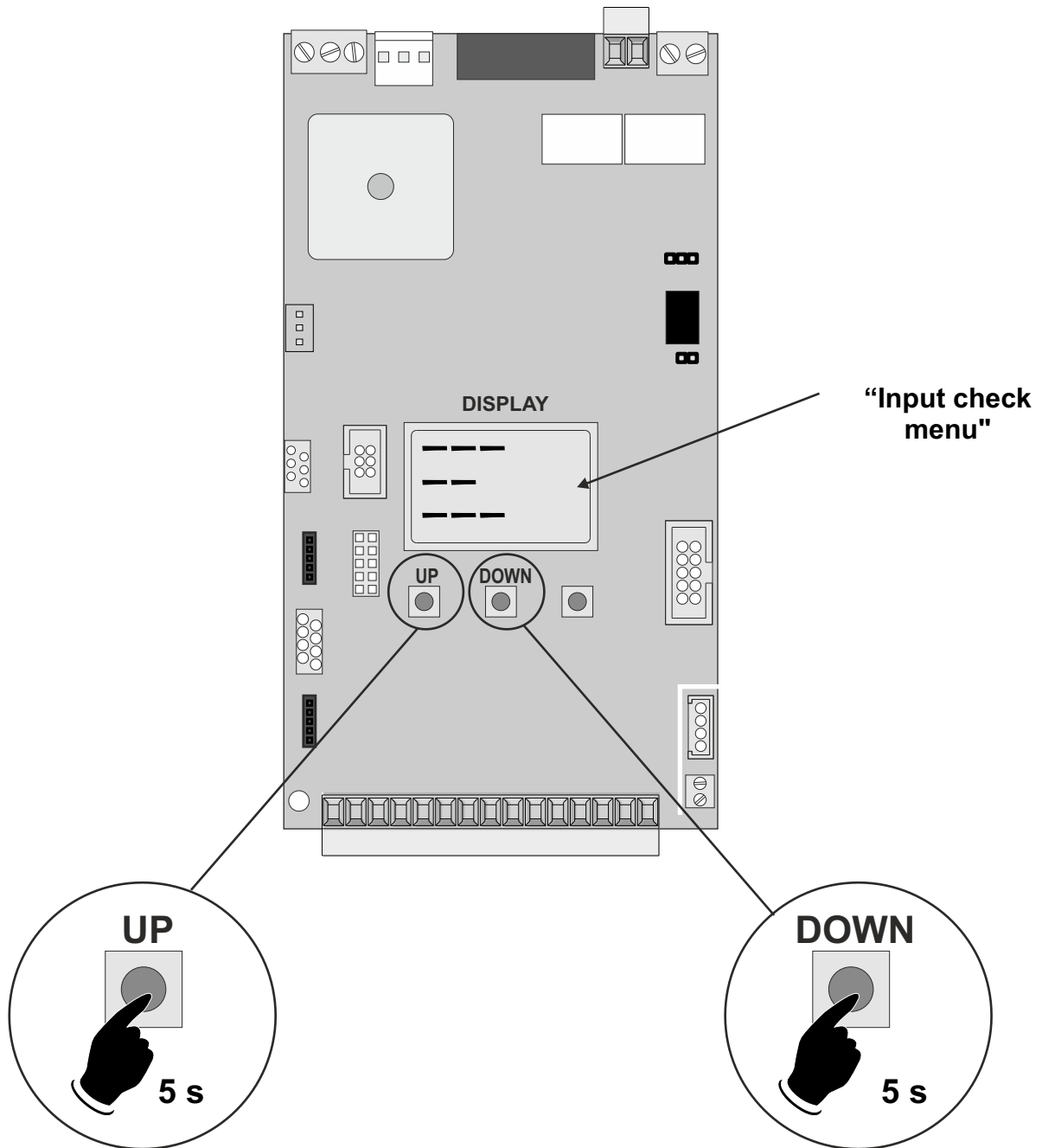
JUMPERS

WARNING: The control unit is designed with the automatic detection of not used N.C. inputs (photocells, Stop and Limit switch) except the SAFETY EDGE input. The exclude inputs in self-programming can be restored in the "Check inputs" menu without need to repeat the programming (pag.37).



The herein reported functions are available starting from revision 01.23 compatible only with Jolly 3.

QUICK SELF-EARNING PROGRAMMING



Start quick programming

You can start the quick programming by holding UP for 5 s in the "Input check menu", until the motor starts.

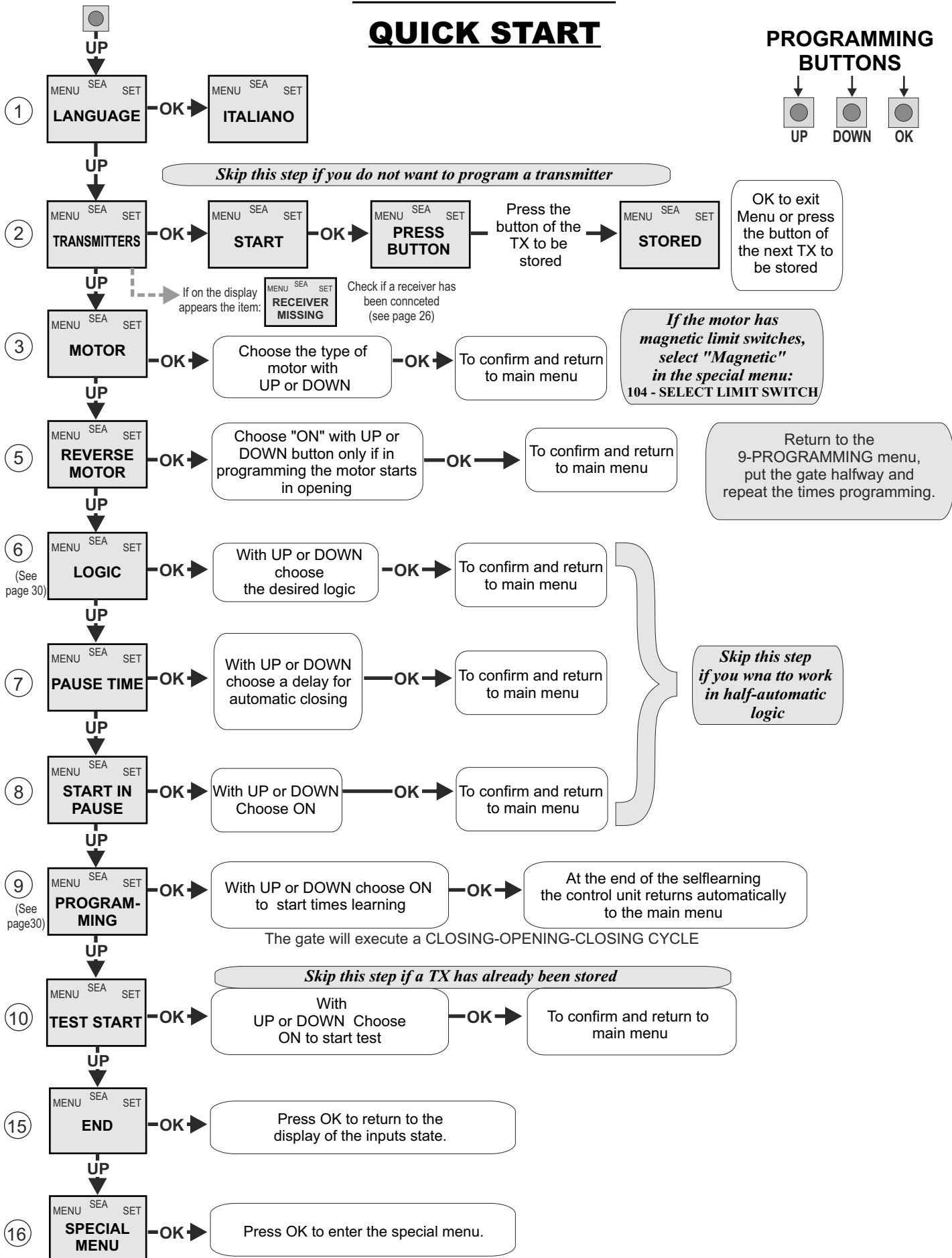
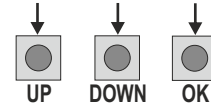
Fast self-learning START command by radio control

You can store the START button of the remote control while pressing DOWN for 5 s in the "Input check menu". Once the writing "Press button" appears, press the button of the transmitter, which you want to store for the START command. By pressing OK, you can exit the menu, otherwise it will be left automatically after 5 seconds.

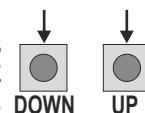
PROGRAMMING

QUICK START

PROGRAMMING BUTTONS



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 MOVE ON ONE OF THE MENU AND PRESS THE UP AND DOWN BUTTONS AT THE SAME TIME FOR 5 S.



MENU FUNCTIONS TABLE USER1 24V DG MAXI				
MENU	SET	Description	Default	Set value
1 - LANGUAGE	<i>Italiano</i>	Italian	<i>Italiano</i>	
	<i>English</i>	English		
	<i>Français</i>	French		
	<i>Español</i>	Spanish		
	<i>Dutch</i>	Olandese		
2 - TRANSMITTERS	<i>Start</i>	Start	<i>Start</i> <i>Pedestrian Start</i>	
	<i>Pedestrian Start</i>	Pedestrian Start		
	<i>External module</i>	External module		
	<i>Stop</i>	Stop		
	<i>Unloch</i>	Storing of a command for unlocking an electric brake		
	<i>Delete A TX</i>	Delete single transmitter		
	<i>Clear memory</i>	Delete transmitter memory		
	<i>End</i>	"Transmitters" menu output		
3 - MOTOR	<i>Saturn Fast - Saturn Super Fast</i>	Saturn Fast - Saturn Super Fast	<i>Saturn fast-</i> <i>Saturn</i> <i>super fast</i>	
	<i>Joint</i>	Joint		
	<i>Hydraulic unit</i>	Hydraulic unit		
	<i>Lepus box chain</i>	Lepus box chain		
	<i>Slim</i>	Without limitswitch, obligatory mechanical stop in opening and closing, obligatory Stop on engine release		
	<i>B-800</i>	Without limitswitch, obligatory mechanical stop in opening and closing, obligatory Stop on engine release		
	<i>Saturn 1500 - Lepus 2000</i>	Saturn 1500 - Lepus 2000		
5 - REVERSE MOTOR	<i>Off</i>	Synchronized right motor	<i>Off</i>	
	<i>On</i>	Synchronized left motor		
6 - LOGIC (See page 31)	<i>Automatic</i>	Automatic	<i>Open-stop-close-open</i>	
	<i>Open-stop-close-stop-open</i>	Step by step type 1		
	<i>Open-stop-close-open</i>	Step by step type 2		
	<i>2 buttons</i>	Two buttons		
	<i>Safety</i>	Safety		
	<i>Dead man</i>	Dead man		
7 - PAUSE TIME	<i>Off</i>	OFF (semi-automatic logics)	<i>Off</i>	
	<i>1 240</i>	Setting from 1s to 4min.		
8 - START IN PAUSE	<i>Off</i>	In pause start is not accepted	<i>Off</i>	
	<i>On</i>	In pause start is accepted		
9 - PROGRAMMING (See page 31)	<i>Off On</i>	Times learning start	<i>Off</i>	
10 - TEST START	<i>Off On</i>	Start command	<i>Off</i>	
15 - END	Press OK to return to the display of the firmware version and to the one of inputs state.			
16 - SPECIAL MENU	Press OK to enter the special menu.			

WORKING TIMES SELF LEARNING

NOTE: When using a magnetic limit switches in general; make sure that the control unit is set on magnetic limit switch before learning.

MENU 104 - SELECT LIMIT SWITCH - "Magnetic"

1) Disconnect the power supply, release the motor (Fig. 1) and manually position the leaves or the beam on halfway (Fig. 3-4).

2) Reset the mechanical lock (Fig. 2)

3) Select 9 - PROGRAMMING 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 cycle.

Note: If the motor starts in opening, remove and re-put power supply, select on the display 5 - REVERSE MOTOR. And through the UP and DOWN button put it on ON, or if you have the Jolly 3 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 the programming procedure.

4) 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 "Init".

The DEFAULT settings are shown in the Menues table.

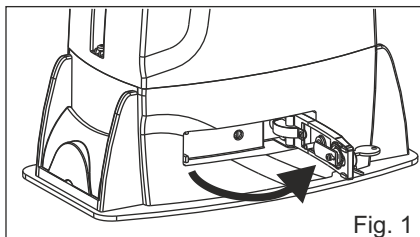


Fig. 1

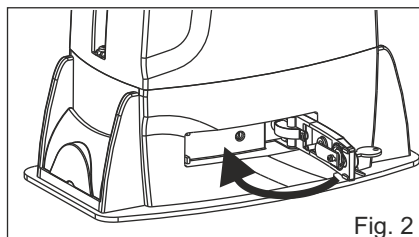


Fig. 2

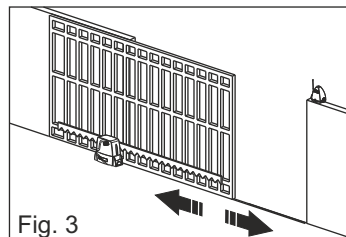


Fig. 3

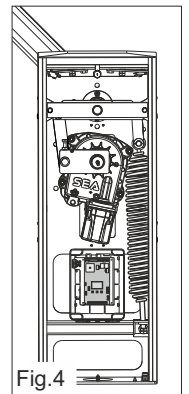


Fig. 4

PROGRAMMING SLIM MOTOR WITHOUT LIMIT SWITCH

The SLIM motor has no limit switches and works only with Encoder. For the stroke learning it is necessary that the motor reaches the mechanical stops. Learning provides a CLOSE-OPEN-CLOSE cycle with automatic detection of the mechanical stops. During normal cycle the motor will stop at about 1 cm from the mechanical stop. This space will be regulated through the motor release parameter (meu 82).

Attention:

In case of the STOP command, power failure or obstacle detection, the motor will perform a closing maneuver at low speed up to the mechanical stop in closing, to retrieve the position.

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.

SECURITY LOGIC

A start impulse opens the gate. A second impulse during opening reverses the movement.

A start impulse during closing reverses the movement.

STEP BY STEP TYPE 1 LOGIC

The start impulse follows the OPEN-STOP-CLOSE-STOP-OPEN logic.

STEP BY STEP TYPE 2 LOGIC

The start impulse follows the OPEN-STOP-CLOSE-OPEN logic.

NOTE1 : To have the automatic closing in this logic it is necessary to set a pause time , otherwise all the logics will be semi-automatic

NOTE2: It is possible to choose whether to accept or not the start in pause, by selecting in the MENU point 8-START IN PAUSE and choosing ON or OFF. The default parameter is OFF.

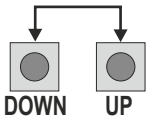
DEAD MAN LOGIC

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 PUSH BUTTONS 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.





SPECIAL MENU



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

SPECIAL MENU FUNCTIONS TABLE USER 1 24V DG MAXI				
For entering into the special menu move on one of the menu and press the UP and DOWN buttons at the same time for 5 s. For exiting the special menu press END or move on one of the menu and press the UP and DOWN buttons at the same time for 5 s.				
MENU SP	SET	Description	Default	Set Value
17 - OPENING SPEED 1 *	30 100	Setting from 30 to 100	* 70	
18 - CLOSING SPEED 1 *	30 100	Setting from 30 to 100	* 70	
21 - OPENING SLOWDOWN SPEED 1 *	30 100	Setting from 30 to 100	* 40	
22 - CLOSING SLOWDOWN SPEED 1 *	30 100	Setting from 30 to 100	* 40	
25 - LEARNING SPEED *	30 100	Setting from 30 to 100	* 75	
28 - OPENING TORQ 1 *	10 100	100% Maximum torque	* 70	
29 - CLOSING TORQ 1 *	10 100	10% Minimum torque	* 70	
32 - ENCODER *	On	In ON enables the Encoder	ON	
	47 - ENCODER PAR. *	xxx.	Encoder impulses during operation. This parameter is useful for seeing if the Encoder is working correctly.	
	48 - ENCODER TOT. *	xxx.	Encoder impulses stored in programming	
32 - ENCODER *	Off	In OFF disabled the Encoder	Off	
32 - ENCODER *	Potentiometer	Enables the reading of the potentiometer with LE card.	Off	
	51 - I.PAR.M1 *	-----	Reports the current position of the potentiometer on the leaf. This parameter is useful for seeing if the potentiometer is read correctly.	
	52 - I.AP.M1 *	-----	Reports the impulses stored by the control unit when the leaf is fully open.	
	53 - I.CH.M1 *	-----	Reports the impulses stored by the control unit when the leaf is fully close.	
33 - OPENING SENSITIVITY MOTOR1 *	10% (Fast intervention)	Adjusts the intervention time of the Encoder in opening	35	
	99% (Slow intervention)			
34 - CLOSING SENSITIVITY MOTOR1 *	10% (Fast intervention)	Adjusts the intervention time of the Encoder in closing	35	
	99% (Slow intervention)			
	Off (Intervention excluded)	Disabled		
	Off (Intervention excluded)	Disabled		
57 - WORKING CURRENT	-----	Shows the absorbed current by the motor during the movement. The letter H at the left of the current value indicates the exceeding of the set inversion threshold.		

Note: Menus 47 and 48 are only present if the encoder is ON.

MENU SP	SET	Description	Default	Set Value
59 - OPENING SLOWDOWN 1 *	Off	Disabled	* 30	
	5 100	Setting from 5 to 100		
60 - CLOSING SLOWDOWN 1 *	Off	Disabled	* 30	
	5 100	Setting from 5 to 100		
63 - DECELERATION	Off  100% 	Adjust the passage between normal speed and slowdown speed	10%	
64 - ACCELERATION *	0 %  100% 	Acceleration ramp. Adjusts the motor start.	* 70%	
70 - OPENING POSITION RECOVERY	0 15	Retrieves the inertia of the motor in opening after Stop or reversing	6 %	
71 - CLOSING POSITION RECOVERY	0 15	Retrieves the inertia of the motor in closing after Stop or reversing	6 %	
72 - OPENING TOLERANCE MOTOR1	0 100	Adjust the tolerance between stop and obstacle opening	0	
73 - CLOSING TOLERANCE MOTOR1	0 100	Adjust the tolerance between stop and obstacle closing	0	
79 - ANTI INTRUSION	Only opening	If you force the gate manually, the control unit starts the motor to restore the state of the gate before forcing.	Off	
	Only closing			
	Opening and closing			
	Off			
82 - MOTOR RELEASE	Off	Disabled	Off	
	1 100	Setting from 1 to 100		
85 - PREFLASHING	Only closing	Pre-flashing only active before closing	0.0	
	0.0 5.0	Pre-flashing time		
86 - FLASHING LIGHT	Normal	Normal	Normal	
	Light	Control lamp		
	Always	Always ON		
	Buzzer	Buzzer		
87 - 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		

MENU SP	SET	Description	Default	Set Value
88 - COURTESY LIGHT	1 240	With J1 between 2 and 3, and J2 inserted on CN5, you will have 24 volts only during the cycle plus for the set time.	In cycle	
	In cycle	With J1 between 2 and 3, and J2 inserted on CN5, you will have 24V only during the cycle.		
	Dry contact	With J1 between 1 and 2, and J2 not inserted, on CN5 you will have a dry contact with activation of "one second" at each start impulse.		
	Always	With J1 between 2 and 3, and J2 not inserted, on CN5 you will have 24 volts always.		
89 - TRAFFIC LIGHT RESERVATION	Off on	When setting this function the pedestrian input will be activated to work on the auxiliary board SEM (traffic light management).	Off	
90 - PEDESTRIAN OPENING	20 100	Setting from 20 to 100	30	
91 - PEDESTRIAN PAUSE	= Start	Pause in pedestrian opening same as in total opening	= Start	
	Off	Disabled		
	1 240	Setting from 1s to 4 min.		
92 - TIMER	Off	Transforms the selected input in an input on which to connect an external clock.	Off	
	On photo2			
	On pedestrian entry			
94 - 24V AUX (Max. 300 mA)	Always	AUX output always power supplied	Always	
	In cycle	AUX output active only during cycle		
	Opening	AUX output power supplied only during opening		
	Closing	AUX output power supplied only during closing		
	In pause	AUX output power supplied only during pause		
	Fototest	AUX output for connection of photocell TX to autotest		
	In cycle and fototest	AUX output only during cycle with fototest function active		
	Positive brake management	Positive Electrobrake (output only when the motor is stopped)		
	Negative brake management	Negative Electrobrake (output only during cycle)		
	Gate open warning light	1 flash per sec. in opening 2 flashes per sec. in closing Steady lit in Stop or Open.		

MENU SP	SET	Description	Default	Set Value
95 - FOTOTEST	<i>Photo1</i>	Auto-test active only on Photo1	<i>Photo1-2</i>	
	<i>Photo2</i>	Auto-test active only on Photo2		
	<i>Photo1-2</i>	Auto-test active on Photo1 and Photo2		
97 - PHOTO1	<i>Closing</i>	Photocell active in closing	<i>Closing</i>	
	<i>Opening and closing</i>	Active in opening and closing		
	<i>Stop</i>	Photocell active before opening		
	<i>Stop and close</i>	The photocell stops in closing and closes when released		
	<i>Close</i>	The photocell gives a command to close during opening, pause and closing		
	<i>Pause reload</i>	The photocell charging the pausing time		
	<i>Delay pause time</i>	If the photocell is occupied during opening, pause or closing, the gate reopens completely and closes without observing the pause time.		
98 - PHOTO2	<i>Closing</i>	Photocell active in closing	<i>Opening And closure</i>	
	<i>Opening and closing</i>	Active in opening and closing		
	<i>Stop</i>	Photocell active before opening		
	<i>Stop and close</i>	The photocell stops in closing and closes when released		
	<i>Close</i>	The photocell gives a command to close during opening, pause and closing		
	<i>Pause reload</i>	The photocell charging the pausing time		
	<i>Delay pause time</i>	If the photocell is occupied during opening, pause or closing, the gate reopens completely and closes without observing the pause time.		
99 - PHOTO OFF IN CLOSING	<i>0 50</i>	Setting from 0 to 50	0	
100 - EDGE	<i>Normal</i>	Normal N.C. contact	<i>Normal</i>	
	<i>8K2</i>	Edge is active and protected by a 8K2 resistor		
	<i>8K2 Double</i>	Allows to connect n. 2 8K2 protectec edges		
	<i>Photo1 10K</i>	Edge works as a photocell protected by a 10K resistor. See page 43.		
104 - SELECT LIMIT SWITCH *	<i>Mechanical</i>	Mechanical limit switch	<i>Mechanical</i>	
	<i>Magnetic</i>	Magnetic limit switch		

MENU SP	SET	Description	Default	Set Value
105 - MASTER-SLAVE	<i>Master</i>	For applications with two motors in master-slave, it allows to set the control unit as master	<i>Off</i>	
	<i>Slave</i>	For applications with two motors in master-slave, you can set the control unit as slave		
	<i>Off</i>	Disabled		
106 - DIAGNOSTICS	<i>1 10</i>	Shows last event		
107 - MAINTENANCE CYCLES	<i>100 10E4</i>	Setting from 100 to 100000	<i>10E3</i>	
108 - PERFORMED CYCLES	<i>0 10E9</i>	Reports the executed cycles. Keep pressed OK to reset the cycles	<i>0</i>	
112 - PASSWORD	<i>----</i>	Allows the entering of a password blocking the control unit parameters modification.	<i>----</i>	
113 - EMERGENCY	<i>Off On</i>	When ON, if no mains power and batteries connected, the gate will open fully and will remain open until the power returns. At this point it will perform an automatic reclosing.	<i>Off</i>	
119 - DISPLAY WRITING SPEED	<i>From 30% to 100%</i>	See note 3 below		<i>80%</i>
120 - BASIC MENU	Press OK to exit the special menu. The special menu switches off automatically after 20 minutes.			

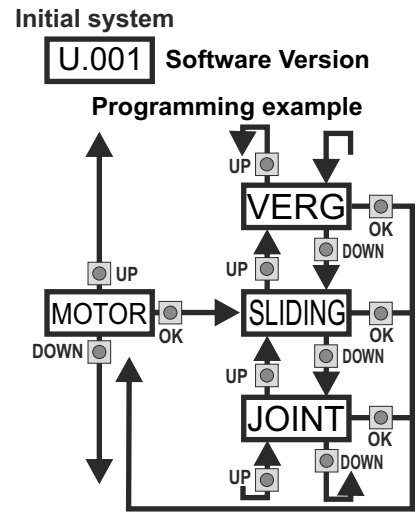
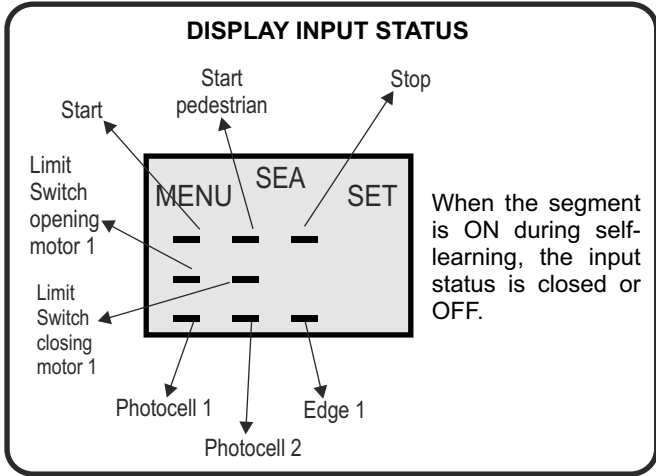
Note 1: The * indicates that the default value or the menu may change depending on the selected motor type.

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

Note 3: Display writing speed set on 30% keeps writing slow; Display writing speed set on 100% keeps writing fast. Please note that speed does not change on JOLLY 3 display.

INPUT CHECK MENU

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. Moving in the 1-LANGUAGE menu pressing the UP and DOWN buttons at the same time you access the SP MENU for special settings. Moving in the 1-LANGUAGE menu pressing the OK button for 5 seconds, you enter the CHECK MENU, where you can check the operating status of all inputs.



MENU FUNCTION TABLE CHECK USER1 24V DG MAXI INPUTS			
To access the Menu for input check 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	→OK↔	Enabled Blocked	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	→OK↔	Enabled Blocked	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	→OK↔	Enabled Blocked	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	→OK↔	Enabled Blocked	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 SWITCH 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 SWITCH 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.
0.0V	Batteries' voltage level		Batteries charge level indicator
END	Exit menu		

Note: If the **Stop**, **Photocell 1** and **Photocell 2** contacts are not bridged in self-learning, they will be deactivated and can be reactivated through this menu, without repeating times self-learning.

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.

With RF UNI and RF UNI PG 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.

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 case of **transmitters with fixed code** it is necessary to **press 1 time** the button of the transmitter you want to program to store the first remote control

- Notes:**
- Enter radio transmitters learning only when the working cycle stops and the gate is closed.
 - 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.


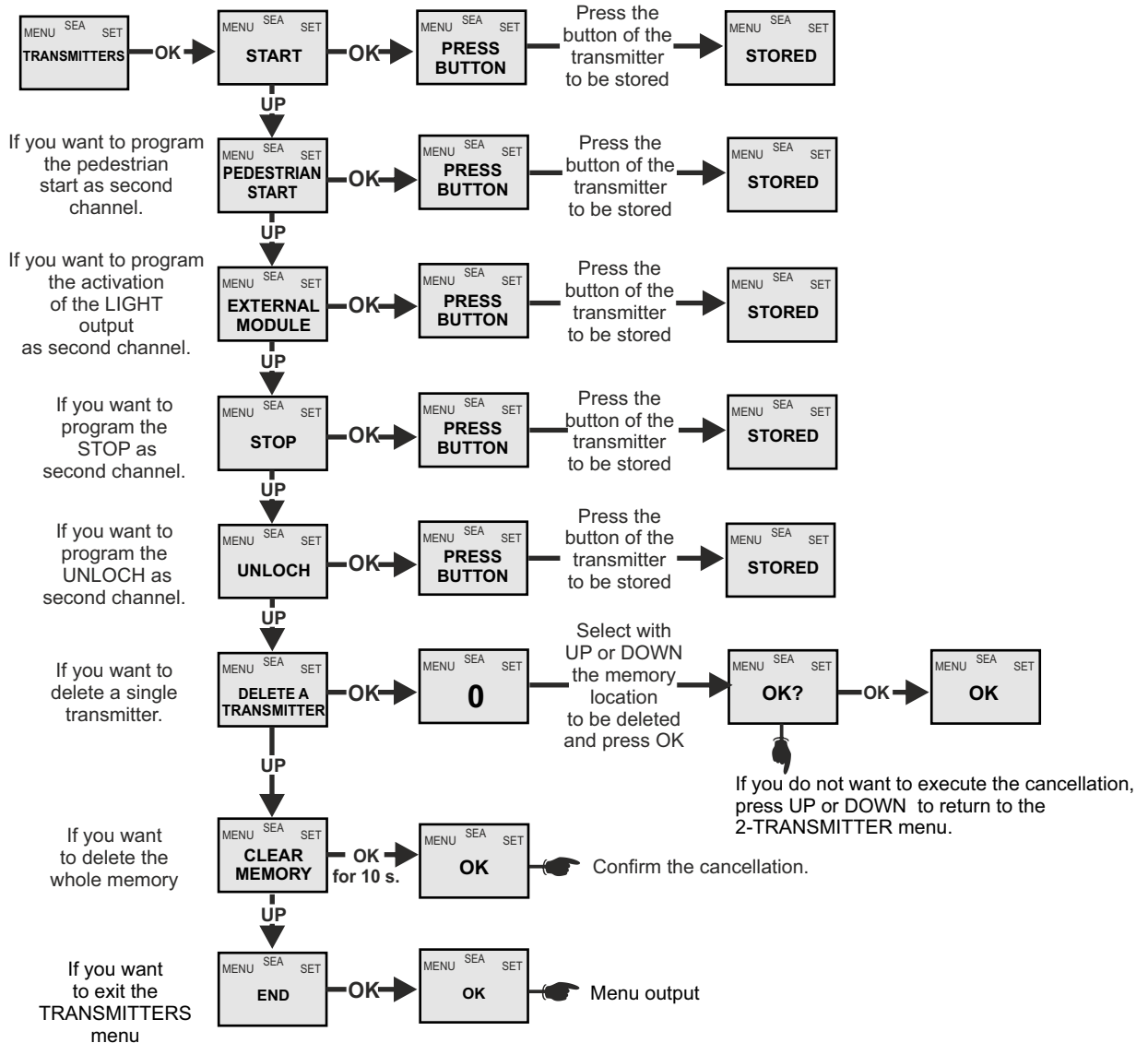
RF UNI	16 USERS Whitout memory 800 USERS With additional memory MEMO
RF UNI PG <i>Old model without additional memory</i>	100 USERS Fixed code 800 USERS Roll Plus
RF UNI PG <i>New model with MEMO additional memory</i>	800 UTENTI Fixed code 800 UTENTI Roll Plus 

TABLE EXAMPLE

Transmitter Memory location button	1	2	3	4	Serial number	Customer
0						
1						
2						
3						



RADIO TRANSMITTER SELF LEARNING

WITH RF FIX RECEIVER ON BOARD OF CONTROL UNIT

⚠ WARNING: Make the radio transmitters programming before you connect the antenna and insert the receiver into the special CNS connector (if available) with turned off control unit.

With the RF FIX module it will be possible to use only radio controls with fixed code.

Select through the display 2-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".

In the 2-TRANSMITTERS MENU it is possible to select "Start" (to associate a Start command), "Pedestrian start" (to associate a Pedestrian Start), "External Module" (For the activation of a contact on the EXP output), "Stop" (To associate the STOP command to the TX), "Unloch" (to associate the release of the electric brake to the transmitter), "Delete a transmitters" (To delete the single transmitter only if it is a Rolling Code Plus), "Clear memory" (To delete all TX), "End" (To exit menu 2-TRANSMITTERS). To release the electric brake it is necessary to give three consecutive pulses, the 4th will reactivate the lock of the electric brake.

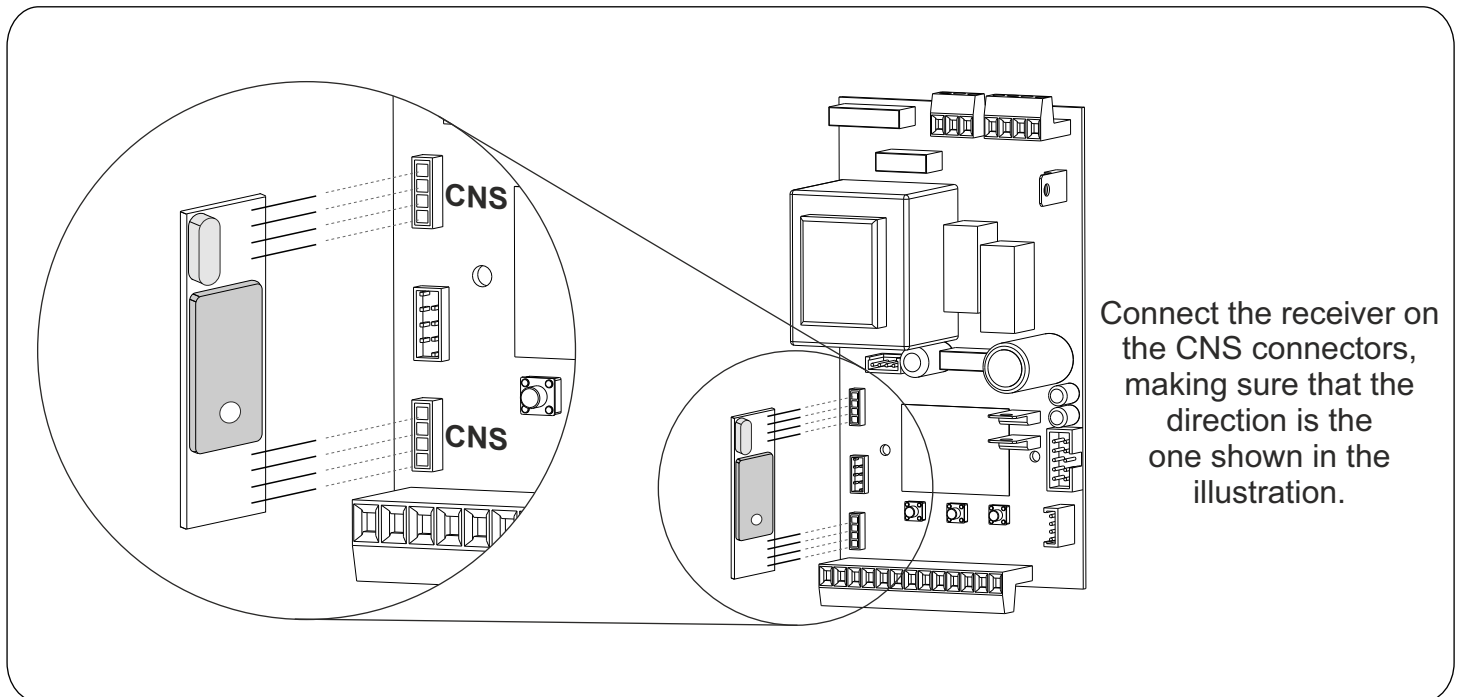
Notes:

- Enter radio transmitters learning only when the working cycle stops and the gate is closed.
- It will be possible to memorize up to max. 16 codes (buttons) adding the MEM memory it will be possible to store up to 496 different codes.
- 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 FIX, it will be possible to delete only the entire memory of the receiver.

Proceed as follows: select from the menu 2-TRANSMITTERS: "Clear memory" and hold the OK button until the display shows the message "OK".



START - STOP - PEDESTRIAN START - ANTENNA - PHOTOCELL

Photocell 1 and Photocell 2 Connections

+ = 24V --- (Accessories) max 750mA COM = 0V PH1 = Photocell contact 1
PH2 = Photocell contact 2

Note: For the autotest connect the TX to the AUX clamp and activate the Autotest function. The standard setting of the photocell 1 is in "Closing" and the one of the photocell 2 is in "Opening and losing". The photocell 2 can be set also as TIMER (see TIMER function).

Note3: On the 95-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 3 terminal.

"Closing": if occupied, reverses the movement in closing, during pause it prevent the closing.

"Opening and closing": If activated the photocell blocks the movement as long as it's busy, when released the opening continues.

"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.

"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.

"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).

"Pause reload": If occupied, during pause it recharges the timer of pause. In closing it reverses the movement.

"Delay pause time": If the photocell is occupied during opening, pause or closing, the gate reopens completely and closes without observing the pause time.

Options AUX 24V --- max 300mA can be set with on-board Display or with Jolly 3 device.

Through the Jolly 3 programmer it is possible to chose when having tension on the AUX output. The options are: *Always, In cycle, Opening, Closing, In pause, Fototest, In cycle and fototest, Positive brake management, Negative brake management, Gate open warning light*. 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 AUX 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.

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 press 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 CN1 terminal.

An impulse given to this contact opens and closes the automation depending on the 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

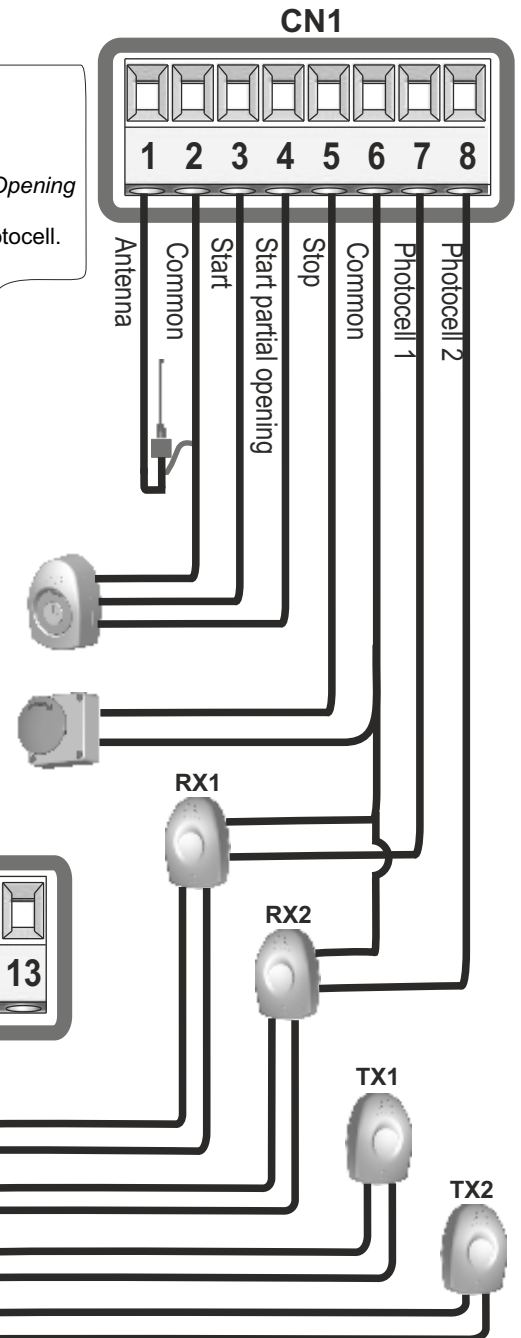


Can be activated through on-board display or through the Jolly 3 programmer. In both cases it's a N.O. contact which provokes the opening of the automation keeping it open until it is activated. When it's released, the gate attends the set pausing time and executes the reclosing. The TIMER command can 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.



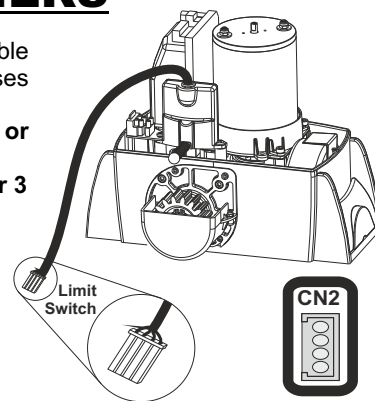
LIMIT SWITCH AND SENSOR BARRIERS

Sensor barriers

This control unit comes with a detection device of motor current absorption 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 sensitivity is adjustable both in opening and in closing through the on-board display or through the JOLLY 3 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 movement.



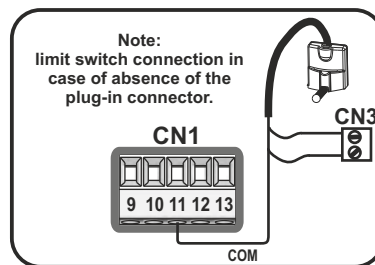
Limit switch

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 it 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 3 programmer it is possible to activate the anti-intrusion function. This function is tied 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.

ATTENTION: When using SEA magnetic limit switches, make sure that the motor is set on "Magnetic" present in the special menu 104-SELECT LIMIT SWITCH.



ALARMS INDICATIONS

Signals	Kind of alarm	Solutions
FAILURE BLOCKED MOTOR PRESS OK TO RESET	Motor current failure	-Be sure there are no short circuits on the motor or on the control unit -Check that the gate is not locked or stuck in stop -Check that the encoder (if active) is connected to the control unit -By unlocking the gate, try giving a start and hear if the motor runs dry If the motor does not run at all, then it is burned, therefore call our technical support; If the motor is running, it is recommended to unplug the power cord, lock the gate again and restore the power
FAILURE MOTOR	Motor current failure	Make 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.
FAILURE 24VAUX OVERLOAD EXIT 10 CONNECT ACCESSORIES EXIT 12	AUX output voltage failure	Make sure there are no short circuits on wiring or control unit and no overload. The 24Vaux exit is an output which can be set with a maximum load of 500mA; if you do not require an adjustable 24V, use the 24V present on terminal 12 (+) and use the negative on exit 11 (COM) and NOT on exit 13.
FAILURE AUTO-TEST	Autotest 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 POTENTIOMETER	Potentiometer failure	The message appears only if the potentiometer is ON and the potentiometer (LE) card is broken or not connected.
FAILURE POT.1 DIRECTION	Potentiometer's direction failure	Invert potentiometer's cables (invert green with brown)
FAILURE OVERCURRENT-COLLISION	Failure overcurrent-collision	Check for obstacles or points of friction on the gate. NOTE: the fault is reset by pressing OK
FAILURE SLAVE	Failure slave function	Check the Master/Slave circuit's connection and be sure the function Slave is set on Slave circuit (105-menu).
FAILURE EDGE	Edge's failure	Check edge's metal thread and edge's connection cables; make sure the contact is closed by looking on display.
FAILURE PHOTO1 10K	10K photocell failure	Check photocell connection or possible short circuits; check if photocell is well powered. Make sure that a 10K protection photocell has been connected
FAILURE PHOTO	Photocell failure	Check photocell connection or possible short circuits; check if photocell is well powered
FAILURE ENCODER	Encoder failure (on SLIM and B800 motors only)	Check Encoder connections; check on Menu-32 if Encoder is ON; check if motor is blocked.

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.

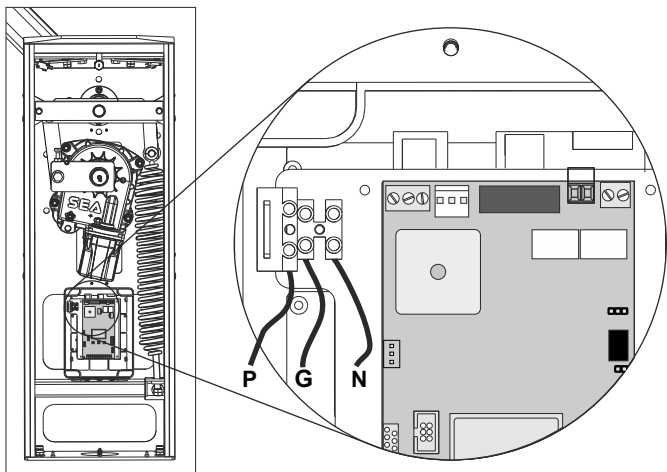
At each opening and closing of the automation the flashing light will blink. It blinks once per second during opening and twice per second during closing, while it remains lit during pause.

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:

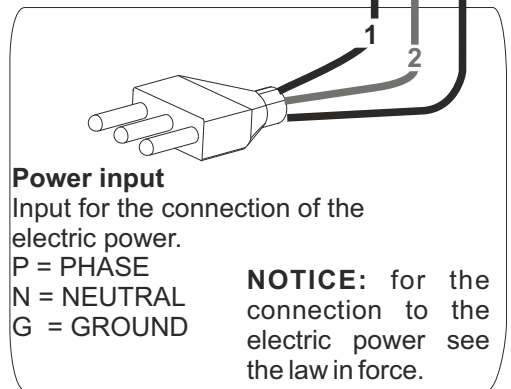
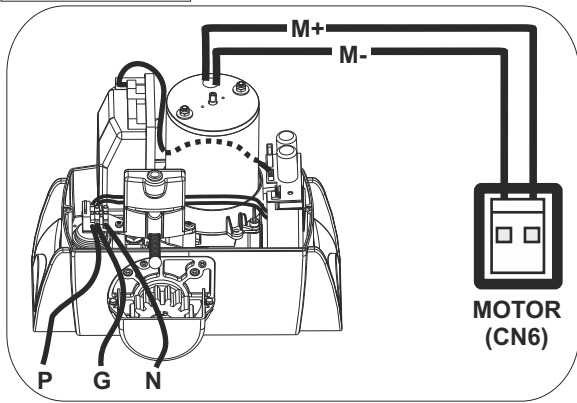
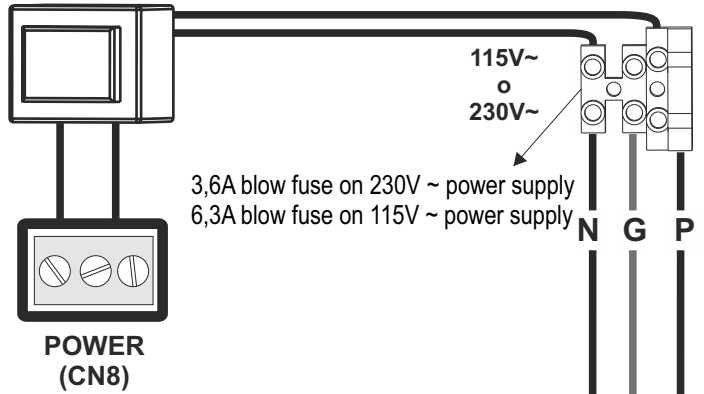
Flashings Number	Kind of alarm
9	Motors fault
2	Photocell in closing
3	Photocell in opening
6	Opening impact
4	Safety edge

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

MOTOR POWER SUPPLY



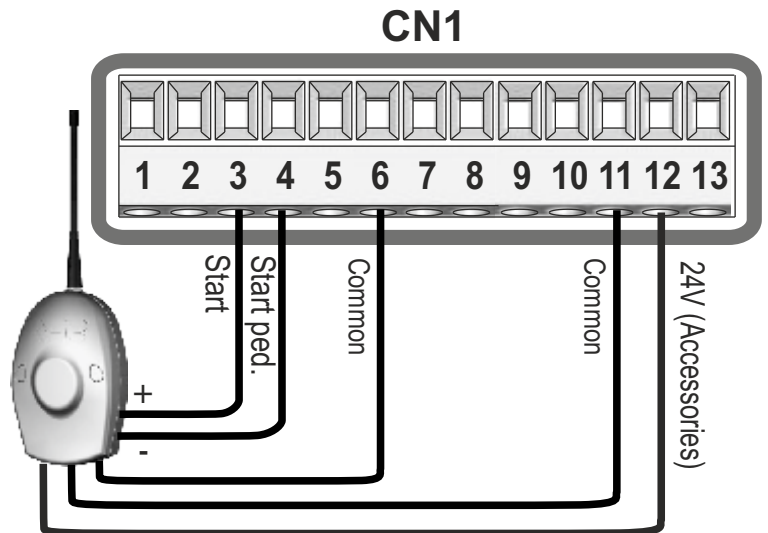
TRANSFORMER



EXTERNAL RECEIVER

Example: Connection of a radio receiver

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



WARNING LAMP - SAFETY EDGE - 10K PHOTOCELL - BUZZER

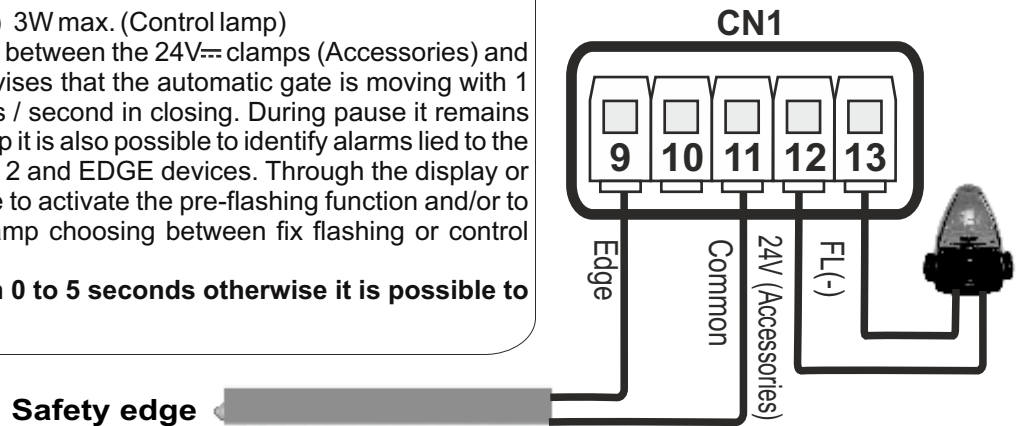
24V $\overline{\text{---}}$ FLASHING LAMP 3W MAX 12 and 13

Flashing Lamp 24V $\overline{\text{---}}$ (Accessories) 3W max. (Control lamp)

The Flashing Lamp can be connected between the 24V $\overline{\text{---}}$ clamps (Accessories) and FL (-) of CN 1. The Flashing 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 3 programmer it is possible to activate the pre-flashing function and/or to modify the function of the warning lamp choosing between fix flashing or control lamp.

The pre-flashing can be timed from 0 to 5 seconds otherwise it is possible to set it before closing only.

Example of a Flashing Lamp and an Edge connections



SAFETY EDGE 9 and 11

Between clamps 9 and 11 on the terminal CN1 it is possible to connect an active Safety Edge. When pressed, the Safety Edge opens the contact causing a partial inversion of the movement both in opening and in closing. The Safety Edge output can be set «only in closing», «only in opening» or both directions

Note1: Note1: Through the on-board display or the JOLLY 3 programmer it is possible to activate the balanced edge 8K2, in this case the edge contact is controlled 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 be shown on the on-board display or on the JOLLY programmer.

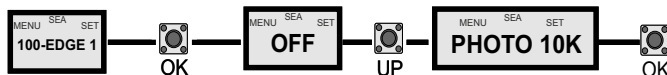
Note2: Self-test can be made also on a radio powered Edge (See Auto-test Menu)

10K PHOTOCELL 9 and 11

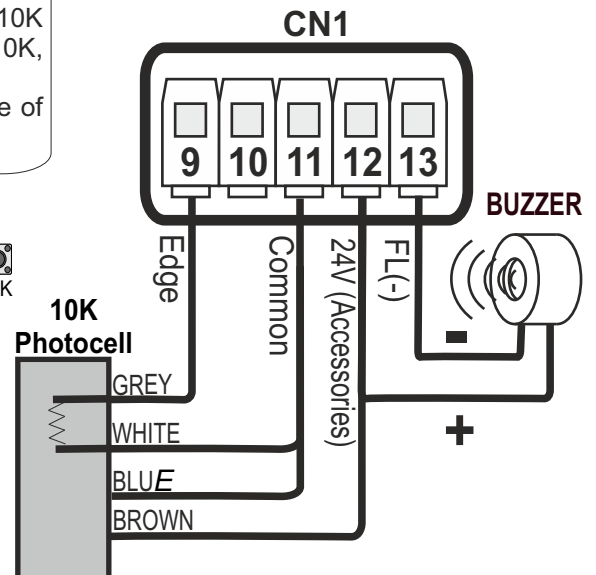
Between clamps 9 and 11 on the terminal CN1 it is also possible to connect a 10K Photocell. In this case it is necessary to set it on menu 100 - EDGE as Photo10K, then it will run following settings on menu 97 - PHOTO 1.

Nota1: The use of a 10K Photocell allows to get further protection in case of short-circuit on the cables.

Setting 10K Photocell



Example of a 10K Photocells and a Buzzer connections



IMPORTANT NOTE: INSTEAD OF THE FLASHING LAMP, IT IS POSSIBLE TO CONNECT A BUZZER; REMEMBER TO SET THE 86 - MENU ON « BUZZER »

24V $\overline{\text{---}}$ BUZZER 12 and 13

Buzzer (24V $\overline{\text{---}}$) Audible Alarm

Use an autoswinging buzzer 24V $\overline{\text{---}}$ of 100 dB.

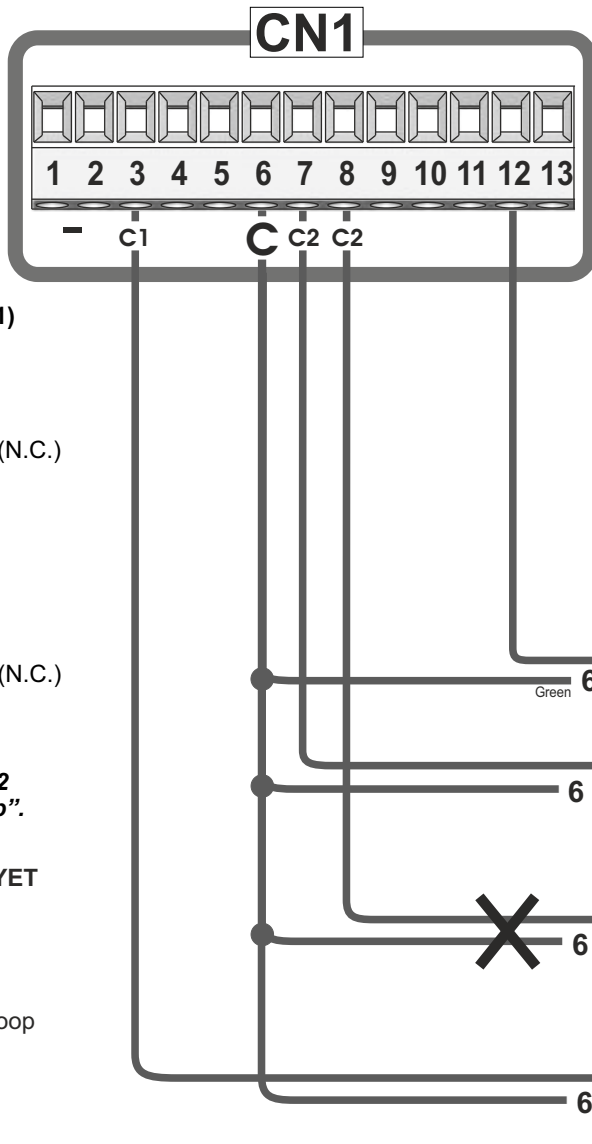
The buzzer will be switched on after two consecutive activations of the entrapment protection.

To reset the allarm it is necessary to push the button STOP.

Anyway after 5 minutes the buzzer will stop to sound and the automation stands still waiting for commands.

⚠ If Buzzer does not work, check the 86-FLASHING LIGHT menu is set on "Buzzer"

SAFETY LOOP CONNECTIONS



DRAWING SHOWS HOW TO EVENTUALLY CONNECT THE MAGNETIC LOOP

C1 = CONTACT OPEN
 C2 = CONTACT CLOSED
 12 = 24 V $\overline{\overline{\overline{\quad}}}$
 C = 0 V $\overline{\overline{\overline{\quad}}}$

Safety exit loop (loop 1)

Connecting scheme of loop detector 1 reader

7 = Contact photocell 1 (N.C.)
 6 = Common

Shadow loop (loop 2)

Connecting scheme of loop detector 2 reader

8 = Contact photocell 2 (N.C.)
 6 = Common

**Note: Please set 98-
 PHOTOCCELL2 - LOOP2
 menu to "Shadow loop".**

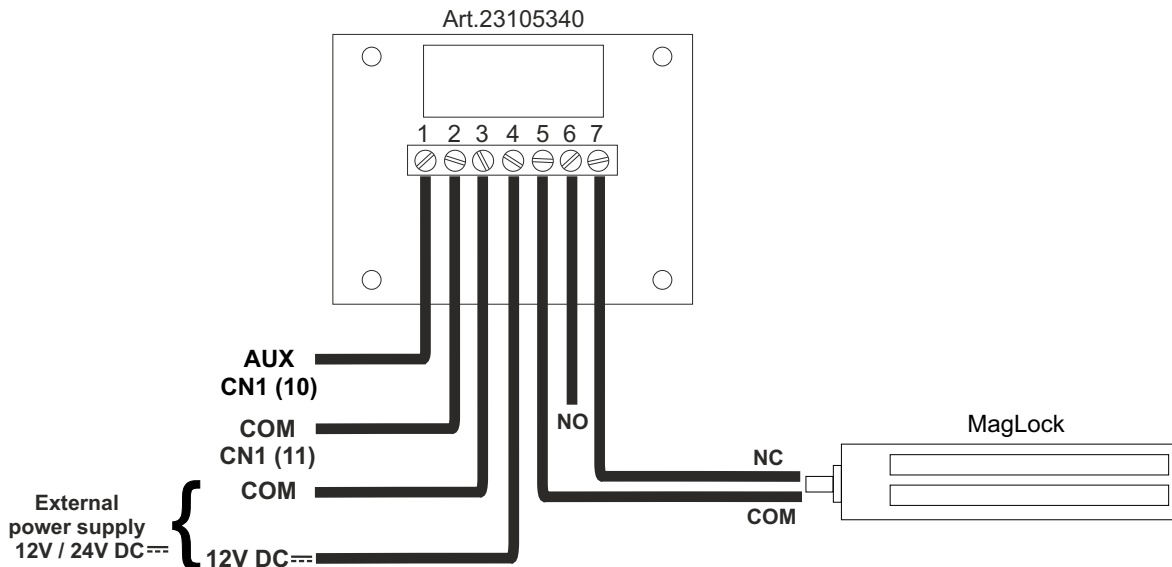
**NOTICE :
 SHADOW LOOP NOT YET
 AVAILABLE**

Free exit loop (loop 3)

Connecting scheme of loop detector reader

3 = Contact start (n.o.)
 6 = Common

MAGLOCK 12V CONNECTIONS



NOTE: Please set 94-24V AUX menu to "Negative brake management".

MASTER-SLAVE FUNCTION

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

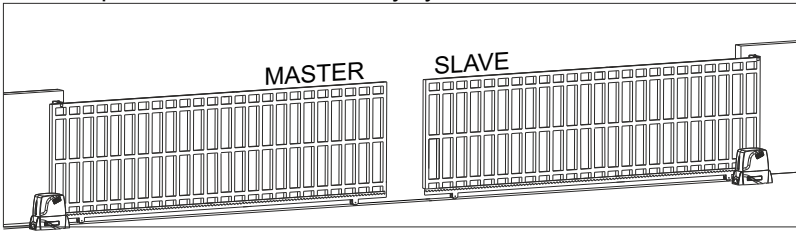
- 1) Set the two motors as if they were two independent installations, make sure that the individual motor works properly and that the limit switches (when present) are read properly.
- 2) Once sure of the correct functioning connect the control unit MASTER to the control unit SLAVE through the special clamp (Code SEA23001220).
- 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 105-MASTER-SLAVE.

Note 2: All these operations can also be managed through the JOLLY 3 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, AUX and motor inversion.

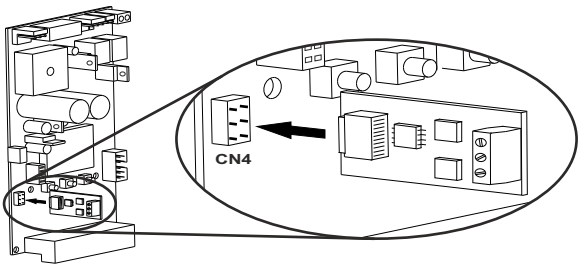
All other parameters will be set only by the MASTER control unit.



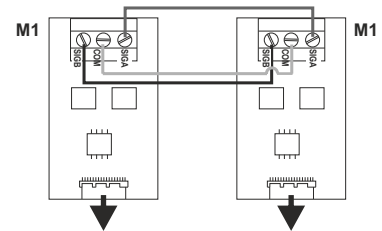
This configuration is usable in the case of two opposite sliding gates.

In this configuration, all devices (photocells, key switch, edges, etc.) must be connected on the MASTER unit which will also control the movement of the motor linked to the SLAVE 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.



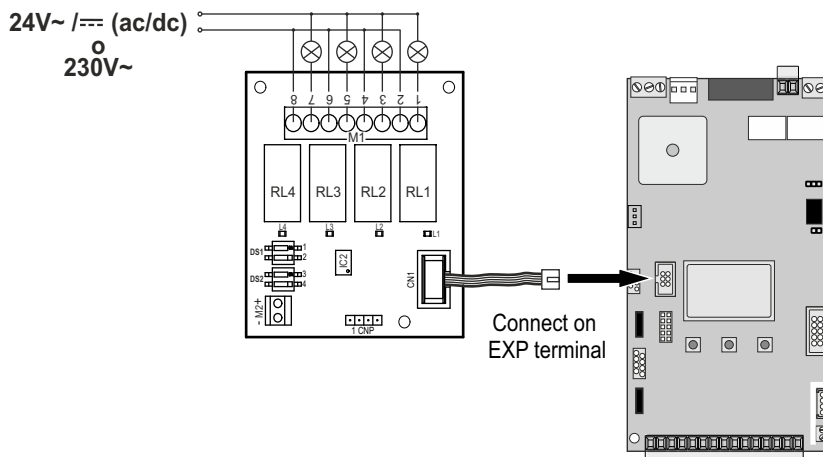
Insert on CN4 of the Master control unit Insert on CN4 of the Slave control unit

COURTESY LIGHT OUTPUT 24 VOLT / DRY CONTACT MANAGEMENT



JP1	JP2	8 - COURTESY LIGHT menu settings
		With JP1 off and JP2 inserted between 1 and 2 of CN5 you will have a clean contact that is activated based on the setting given by the menu 88 (one second from each start pulse, only during cycle or for the set time).
		With JP1 inserted and JP2 inserted between 2 and 3 of CN5 you will have tension according to the setting given by the menu 88 (one second from each pulse start, only during cycle, always or for the set time).

TRAFFIC LIGHT CARD CONNECTION



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 112-PASSWORD Submenu.

Pressing OK in the 112-PASSWORD 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 OK 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 112-PASSWORD menu, if the password is wrong the message "Error" will appear.

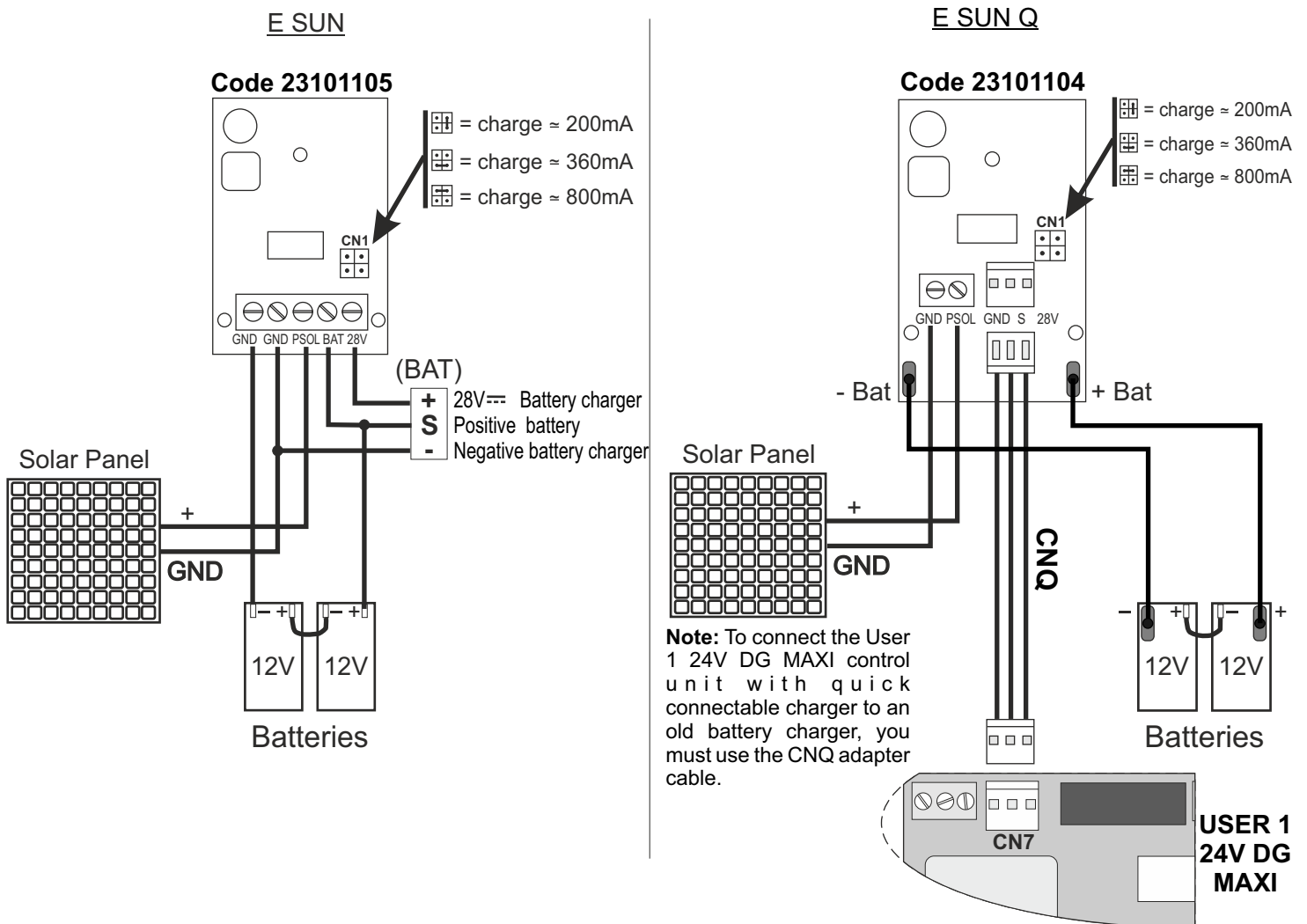
At this point, if the password has been entered correctly, the menus will be unlocked and it will be possible to change the parameters of the control unit again.

If the control unit has been unlocked through 112-PASSWORD 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 3.

CONNECTION OF BATTERIES TO BATTERY CHARGER CARD



IMPORTANT: To connect the batteries, always use the battery charger.

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

Insert two 12V batteries connected in series.

Specifications of optional batteries:
24V Pb

TROUBLESHOOTING

Advices		
Make sure all Safeties are turned ON		
Problem Found	Possible Cause	Solutions
Operator doesn't respond to any START impulse	a) Check the connected N.C. contacts b) Burnt fuse	a) Check the connections or the jumpers on the connections of the safety edge or of the stop and of the photocell if connected b) Replace the burnt fuse on the control unit
Operator does not run and diagnostic display not on.	a) No power to control board b) Open fuse c) Defective control board d) If on battery power only, low or dead batteries	a) Check AC power b) Check fuses c) Replace defective control board d) Charge batteries by AC or solar power or replace batteries
Operator does not respond to a wired control/command (example: Open, Close, etc.)	a) Check Open and Close command input b) Stop button is active c) Reset button is stuck d) Entrapment Protection Device active e) If on battery power only, low or dead batteries	a) Check all Open and Close inputs for a stuck on input b) Check Stop button is not stuck on c) Check Reset button d) Check all Entrapment Protection Device inputs for a stuck on sensor e) Charge batteries by AC or solar power or replace batteries
Operator does not respond to a transmitter	a) Stop button is active b) Reset button is stuck c) Poor radio reception	a) Check Stop button is not stuck on b) Check Reset button c) Check if similar wired control operates correctly. Check antenna wire
Motor turn only one way	a) Try to invert the motor phase and watch if the motor change or not the direction	a) If the motor is blocked change the cable if the motor go only in one direction the motor relay direction is damaged
Gate doesn't move while the motor is running	a) The motor is in the released position b) There is an obstacle	a) Re-lock the motor b) Remove obstacle
Gate doesn't reach the complete Open / Closed position	a) Wrong setting of the limit switches b) Error on programming c) Gate is stopped by an obstacle d) Torque too low e) Gate is too heavy for automatic slow-down	a) Set limit switches b) Repeat programming c) Remove obstacle d) Increase torque parameter e) Set the slow-down on OFF
Gate opens but doesn't close	a) The contacts of the photocells are connected and open b) The stop contact is connected and open c) The edge contact is open d) Ammeter alarm	a) b) c) Check the jumpers or the connected devices and the signals indicated on the warning lamp d) Check if the ammeter alarm has intervened and eventually increase the torque parameter
Gate doesn't close automatically	a) Pause time set too high b) Control unit in semi-automatic logic	a) Adjust pause time b) Set the pause parameter on a different value from the OFF
Gate moves, but cannot set correct limits	a) Gate does not move to a limit position b) Gate is too difficult to move	a) Use manual disconnect, manually move gate, and ensure gate moves easily limit to limit. Repair gate as needed b) Gate must move easily and freely through its entire range, limit to limit. Repair gate as needed
Gate does not fully open or fully close when setting limits	a) Gate does not move to a limit position b) Gate is too difficult to move	a) Use manual disconnect, manually move gate, and ensure gate moves easily limit to limit. Repair gate as needed b) Gate must move easily and freely through its entire range, limit to limit Repair gate as needed
Gate stops during travel and reverses immediately	a) Control Open/Close becoming active b) The obstacle sensitivity is too low c) Low battery voltage	a) Check all Open and Close inputs for an active input b) Check the obstacle sensitivity value and try to increase this parameter c) Battery voltage must be 23.0 Vdc or higher. Charge batteries by AC or solar power or replace batteries

...CONTINUE

Advices		
Make sure all Safeties are turned ON		
Problem Found	Possible Cause	Solutions
Gate opens, but will not close with transmitter or pause time different from OFF	<ul style="list-style-type: none"> a) Open control active b) Pause not set c) Close Entrapment Protecting Device active d) Photocells contact is open e) Fire-switch input active 	<ul style="list-style-type: none"> a) Check all Open inputs for an active input b) Check pause settings c) Check all Entrapment Protection Device inputs for an active sensor d) Check photocells contact e) Check fire-switch input
Gate doesn't respect slow down points	<ul style="list-style-type: none"> a) ENCODER is not working properly if It's activated b) Mechanical clutch loose c) Slow down space is too wide d) Potentiometer is not working properly if It's activated e) The recovery position parameters are too high or too low 	<ul style="list-style-type: none"> a) Check menu for encoder parameters "Encoder Par" shall be from a low value +/- 10 (gate completely closed) to "Encoder tot" (gate completely opened). If the movement of Ipar is not linear in the range (+/-10 - Encoder tot) probably the Encoder is defective b) Tight mechanical clutch c) Reduce slow down space d) Check menu for potentiometer parameters "IPar" shall be from "I. CH." (gate completely closed) to "I.AP." (gate completely opened). If the movement of Ipar is not linear in the range (I.AP. - I.CH.) probably the potentiometer is defective e) Reduce or increase the recovery position parameters
Gate opens suddenly without start command	<ul style="list-style-type: none"> a) Frequency or other noise from main line b) Short circuit on the start contact 	<ul style="list-style-type: none"> a) Wiring AC shall be separate from DC wire and pass through separate conduits. If there is a frequency noise it is possible to change frequency to another MHz like 868 for example or FM b) Check all start contacts
Gate doesn't close in automatic logic during pause even if a loop/photo is set as start	<ul style="list-style-type: none"> a) START IN PAUSE is not in ON b) The photo/loop input is not set as "Delay pause time" 	<ul style="list-style-type: none"> a) Put in ON the menu of START IN PAUSE b) Set in the photo/loop menu "Delay pause time"
Gate doesn't have power to close or reach limit switch	<ul style="list-style-type: none"> a) Slow down not possible for that site due to heavy gate or inclination or not new installation 	<ul style="list-style-type: none"> a) Put Slow Down in OFF
Obstruction in gates path does not cause gate to stop and reverse	<ul style="list-style-type: none"> a) Force adjustment needed 	<ul style="list-style-type: none"> a) Refer to the Adjustment section to conduct the obstruction test and perform the proper force adjustment that is needed (sensitivity - torque)
Photoelectric sensor does not stop or reverse gate	<ul style="list-style-type: none"> a) Incorrect photoelectric sensor wiring b) Defective photoelectric sensor c) Photoelectric sensors installed too far apart 	<ul style="list-style-type: none"> a) Check photoelectric sensor wiring. Retest that obstructing photoelectric sensor causes moving gate to stop, and may reverse direction b) Replace defective photoelectric sensor. Retest that obstructing photoelectric sensor causes moving gate to stop, and may reverse direction c) Move the photoelectric sensors closer together or use edge sensors instead
Edge Sensor does not stop or reverse gate	<ul style="list-style-type: none"> a) Incorrect edge sensor wiring b) Defective edge sensor 	<ul style="list-style-type: none"> a) Check edge sensor wiring. Retest that activating edge sensor causes moving gate to stop and reverse direction b) Replace defective edge sensor. Retest that activating edge sensor causes moving gate to stop and reverse direction
Alarm sounds for 5 minutes or alarm sounds with a command	<ul style="list-style-type: none"> a) Double entrapment occurred (two obstructions within a single activation) 	<ul style="list-style-type: none"> a) Check for cause of entrapment (obstruction) detection and correct. Press the reset button to shut off alarm and reset the operator.
Shadow loop does not keep gate at the open limit	<ul style="list-style-type: none"> a) Vehicle detector setup incorrectly b) Defective vehicle loop detector c) Wrong settings 	<ul style="list-style-type: none"> a) Review Shadow loop detector settings. Adjust settings as needed b) Replace defective Shadow loop detector c) Check the photo2 menu is set on shadow loop
Accessories connected to the accessory power not working correctly, turning off or resetting	<ul style="list-style-type: none"> a) Accessory power protector active b) Defective control board 	<ul style="list-style-type: none"> a) Disconnect all accessory powered devices and measure accessory power voltage (should be 23-30 Vdc). If voltage is correct, connect accessories one at a time, measuring accessory voltage after every new connection b) Replace defective control board

...CONTINUE

Advices		
Make sure all Safeties are turned ON		
Problem Found	Possible Cause	Solutions
FAILURE 24VAUX	a) Overload or short-circuit on the output N°10 b) Burnt fuse	a) Check a short circuit on the cable b) Change fuse
Control board powers up, but motor does not run	a) Stop button active or jumper not in place for stop circuit b) Open or Close Input active c) Entrapment Protection Device active d) Defective control board	a) Check Stop button is not "stuck on", or verify that the stop button is a normally closed circuit, or put a jumper on the stop circuit b) Check all Open and Close Inputs for a "stuck on" Input c) Check all Entrapment Protection Device inputs for a "stuck on" sensor d) Replace defective control board
Solar operator not getting enough cycles per day	a) Insufficient panel wattage b) Excessive accessory power draw c) Old batteries d) Solar panels are not getting enough sunlight	a) Add more solar panels b) Reduce the accessory power by using low power accessories or set the 24Vaux only in cycle c) Replace batteries d) Relocate the solar panels away from obstructions (trees, buildings, etc.)
Solar operator insufficient stand-by time	a) Insufficient panel wattage b) Excessive accessory power draw c) Battery capacity too low	a) Add more solar panels b) Reduce the accessory power draw by using low power accessories c) Use batteries with higher amp hour (Ah) rating

Page for both installer and user

MAINTENANCE

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

REPLACEMENTS

Any request for spare parts must be sent to:

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

SAFETY AND ENVIRONMENTAL COMPATIBILITY

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



REGULAR PRODUCT DISPOSAL (electric and electronic waste)

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

The brand that you find on the product or on documentation signals that the product must not be disposed off together with other domestic waste at the end of life cycle. In order to avoid any possible environmental or health damage caused by irregular waste disposal, we recommend 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 waste collection and recycling of this kind of product.

STORING

WAREHOUSING TEMPERATURES			
T _{min}	T _{Max}	Dampness _{min}	Dampness _{Max}
- 20°C	+ 65°C	5% 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.

English GENERAL NOTICE FOR THE INSTALLER AND THE USER

1. Read carefully these **Instructions** before beginning to install the product. Store these instructions for future reference
2. Don't waste product packaging materials and /or circuits.
3. This product was designed and built strictly for the use indicated in this documentation. Any other use, not expressly indicated here, could compromise the good condition/operation of the product and/or be a source of danger. SEA S.p.A. declines all liability caused by improper use or different use in respect to the intended one.
4. The mechanical parts must be comply with Directives: Machine Regulation 2006/42/CE and following adjustments), Low Tension (2006/95/CE), electromgnetic Consistency (2004/108/CE) Installation must be done respecting Directives: EN12453 and En12445.
5. Do not install the equipment in an explosive atmosphere.
6. SEA S.p.A. is not responsible for failure to observe Good Techniques in the construction of the locking elements to motorize, or for any deformation that may occur during use.
7. Before attempting any job on the system, cut out electrical power and disconnect the batteries. Be sure that the earthing system is perfectly constructed, and connect it metal parts of the lock.
8. Use of the indicator-light is recommended for every system, as well as a warning sign well-fixed to the frame structure.
9. SEA S.p.A. declines all liability as concerns the automated system's security and efficiency, if components used, are not produced by SEAS.p.A..
10. For maintenance, strictly use original parts by SEA.
11. Do not modify in any way the components of the automated system.
12. The installer shall supply all information concerning system's manual functioning in case of emergency, and shall hand over to the user the warnings handbook supplied with the product.
13. Do not allow children or adults to stay near the product while it is operating. The application cannot be used by children, by people with reduced physical, mental or sensorial capacity, or by people without experience or necessary training. Keep remote controls or other pulse generators away from children, to prevent involuntary activation of the system.
14. Transit through the leaves is allowed only when the gate is fully open.
15. The User must not attempt to repair or to take direct action on the system and must solely contact qualified SEA personnel or SEA service centers. User can apply only the manual function of emergency.
16. The power cables maximum length between the central engine and motors should not be greater than 10 m. Use cables with 2,5 mm² section. Use double insulation cable (cable sheath) to the immediate vicinity of the terminals, in particular for the 230V cable. Keep an adequate distance (at least 2.5 mm in air), between the conductors in low voltage (230V) and the conductors in low voltage safety (SELV) or use an appropriate sheath that provides extra insulation having a thickness of 1 mm.

TERMS OF SALES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



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Declaration of Conformity

La SEA S.p.A. dichiara sotto la propria responsabilità e, se applicabile, del suo rappresentante autorizzato che il prodotto:
SEA S.p.A. declares under its proper responsibility and, if applicable, under the responsibility of its authorised representative that the product:

Descrizione / Description	Modello / Model	Marca / Trademark
USER 1 24V DG MAXI	23024074	SEA

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

is built to be integrated into a machine or to be assembled with other machinery to create a machine under the provisions of Directive 2006/42/CE:

- Direttiva 2006/42/CE Direttiva macchine (allegato I)
Directive 2006/42/CE Machinery Directive (annex I)

- Direttiva 2004/108/CE Direttiva compatibilità elettromagnetica
Directive 2004/108/CE Electromagnetic compatibility

- CEI EN55014-1 Emissioni condotte e radiate
IEC EN55014-1 Conducted and radiated emissions
- CEI EN55014-2 Prove di immunità
IEC EN55014-2 Magnetic field immunity

- Direttiva 2006/95/CE - Direttiva Bassa Tensione
Directive 2006/95/CE - Low voltage Directive

- CEI EN60335-1:2008 Sicurezza degli apparecchi elettrici d'uso domestico e similare (Requisiti Generali).
IEC EN60335-1:2008 Household and similar electrical appliances - Safety - Part one: general requirements.

L'apparecchiatura usando gli specifici accessori di sicurezza certificati e rispettando tutti i vincoli normativi della macchina nel suo complesso (apparecchiatura, azionamento e struttura) può permettere un'installazione secondo le Norme:

The control unit, using the specific safety certified accessories and respecting all the regulatory constraints of the machine as a whole (control unit, operation and structure) may allow an installation according to the following Standards:

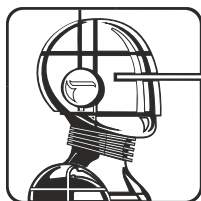
- EN 12453 2000
- EN 12445 2002
- EN 60335-1-103:2006+A1:2011

COSTRUTTORE o RAPPRESENTANTE AUTORIZZATO:
MANUFACTURER or AUTHORISED REPRESENTATIVE:

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(Luogo, data di emissione)
(Place, date of issue)
Teramo, 19/02/2015

L'Amministratore
The Administrator
Ennio Di Saverio



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