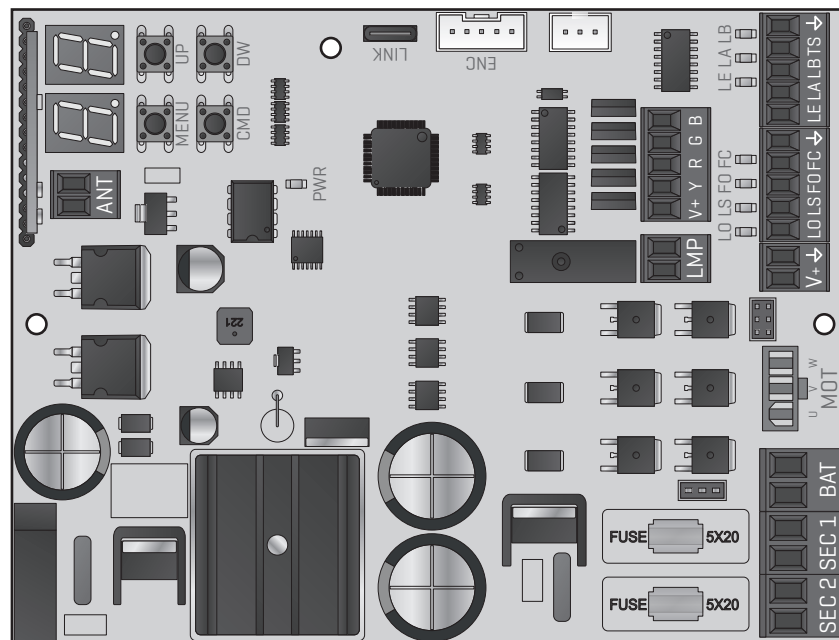




MC91BL-SC

USER/INSTALLER MANUAL



00. CONTENT

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Simplified EU Declaration of Conformity





The undersigned **MOTORLINE ELECTROCELOS, S.A., with registered office at Travessa do Sobreiro, n.º 29, 4755-474 Rio Côvo (Santa Eugénia), Barcelos,** declares that the present type of radio equipment - **MC91BL-SC Control board** - ecomplies with the Directive 2014/53/EU.

The full text of the declaration of conformity is available at the following internet address:

<https://motorline.pt/certification/mc91bl>



01. SAFETY INSTRUCTIONS

CE	This product is certified in accordance with European Community (EC) safety standards.
RoHS	This product complies with Directive 2011/65/EU of the European Parliament and of the Council, of 8 June 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment and with Delegated Directive (EU) 2015/863 from Commission.
	(Applicable in countries with recycling systems). This marking on the product or literature indicates that the product and electronic accessories (eg. Charger, USB cable, electronic material, controls, etc.) should not be disposed of as other household waste at the end of its useful life. To avoid possible harm to the environment or human health resulting from the uncontrolled disposal of waste, separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources. Home users should contact the dealer where they purchased this product or the National Environment Agency for details on where and how they can take these items for environmentally safe recycling. Business users should contact their vendor and check the terms and conditions of the purchase agreement. This product and its electronic accessories should not be mixed with other commercial waste.
	This marking indicates that batteries should not be discarded like other household waste at the end of their useful life. Batteries must be delivered to selective collection points for recycling.
	The different types of packaging (cardboard, plastic, etc.) must be subject to selective collection for recycling. Separate packaging and recycle it responsibly.
	This marking indicates that the product and electronic accessories (eg. charger, USB cable, electronic material, controls, etc.) are susceptible to electric shock by direct or indirect contact with electricity. Be cautious when handling the product and observe all safety procedures in this manual.

01. SAFETY INSTRUCTIONS

GENERAL WARNINGS

- This manual contains very important safety and usage information. Read all instructions carefully before beginning the installation/usage procedures and keep this manual in a safe place that it can be consulted whenever necessary.
- This product is intended for use only as described in this manual. Any other enforcement or operation that is not mentioned is expressly prohibited, as it may damage the product and put people at risk causing serious injuries.
- This manual is intended firstly for specialized technicians, and does not invalidate the user's responsibility to read the "User Norms" section in order to ensure the correct functioning of the product.
- The installation and repair of this product may be done by qualified and specialized technicians, to assure every procedure are carried out in accordance with applicable rules and norms. Nonprofessional and inexperienced users are expressly prohibited of taking any action, unless explicitly requested by specialized technicians to do so.
- Installations must be frequently inspected for unbalance and the wear signals of the cables, springs, hinges, wheels, supports and other mechanical assembly parts.
- Do not use the product if it is necessary repair or adjustment is required.
- When performing maintenance, cleaning and replacement of parts, the product must be disconnected from power supply. Also including any operation that requires opening the product cover.
- The use, cleaning and maintenance of this product may be carried out by any persons aged eight years old and over and persons whose physical, sensorial or mental capacities are lower, or by persons without any knowledge of the product, provided that these are supervision and instructions given by persons with experienced in terms of usage of the product in a safe manner and who understands the risks and dangers involved.

- Children shouldn't play with the product or opening devices to avoid the motorized door or gate from being triggered involuntarily.
- If the power cable is damaged, it must be replaced by the manufacturer, after-sales service or similarly qualified personnel to avoid danger.
- The device must be disconnected from the electrical network when removing the battery.
- Ensure that blocking is avoided between the actuated part and its fixed parts due to the opening movement of the actuated part.

WARNINGS FOR TECHNICIANS

- Before beginning the installation procedures, make sure that you have all the devices and materials necessary to complete the installation of the product.
- You should note your Protection Index (IP) and operating temperature to ensure that is suitable for the installation site.
- Provide the manual of the product to the user and let them know how to handle it in an emergency.
- If the automatism is installed on a gate with a pedestrian door, a door locking mechanism must be installed while the gate is in motion.
- Do not install the product "upside down" or supported by elements do not support its weight. If necessary, add brackets at strategic points to ensure the safety of the automatism.
- Do not install the product in explosive site.
- Safety devices must protect the possible crushing, cutting, transport and danger areas of the motorized door or gate.
- Verify that the elements to be automated (gates, door, windows, blinds, etc.) are in perfect function, aligned and level. Also verify if the necessary mechanical stops are in the appropriate places.
- The control board must be installed on a safe place of any fluid (rain, moisture, etc.), dust and pests.
- You must route the various electrical cables through protective tubes, to protect them against mechanical exertions, essentially on

01. SAFETY INSTRUCTIONS

the power supply cable. Please note that all the cables must enter the control board from the bottom.

- If the automatism is to be installed at a height of more than 2,5m from the ground or other level of access, the minimum safety and health requirements for the use of work equipment workers at the work of Directive 2009/104/CE of European Parliament and of the Council of 16 September 2009.
- Attach the permanent label for the manual release as close as possible to the release mechanism.
- Disconnect means, such as a switch or circuit breaker on the electrical panel, must be provided on the product's fixed power supply leads in accordance with the installation rules.
- If the product to be installed requires power supply of 230Vac or 110Vac, ensure that connection is to an electrical panel with ground connection.
- The product is only powered by low voltage safety with control board (only at 24V motors).
- Parts/products weighing more than 20 kg must be handled with special care due to the risk of injury. It is recommended to use suitable auxiliary systems for moving or lifting heavy objects.
- Pay special attention to the danger of falling objects or uncontrolled movement of doors/gates during the installation or operation of this product.

WARNINGS FOR USERS

- Keep this manual in a safe place to be consulted whenever necessary.
- If the product has contact with fluids without being prepared, it must immediately disconnect from the power supply to avoid short circuits, and consult a specialized technician.
- Ensure that technician has provided you the product manual and informed you how to handle the product in an emergency.
- If the system requires any repair or modification, unlock the automatism, turn off the power and do not use it until all safety

conditions have been met.

- In the event of tripping of circuits breakers or fuse failure, locate the malfunction and solve it before resetting the circuit breaker or replacing the fuse. If the malfunction is not repairable by consult this manual, contact a technician.
- Keep the operation area of the motorized gate free while the gate in in motion, and do not create strength to the gate movement.
- Do not perform any operation on mechanical elements or hinges if the product is in motion.

RESPONSABILITY

- Supplier disclaims any liability if:
 - Product failure or deformation result from improper installation use or maintenance!
 - Safety norms are not followed in the installation, use and maintenance of the product.
 - Instructions in this manual are not followed.
 - Damaged is caused by unauthorized modifications
 - In these cases, the warranty is voided.

MOTORLINE ELECTROCELOS SA.

Travessa do Sobreiro, nº29
4755-474 Rio Côvo (Santa Eugénia)
Barcelos, Portugal

SYMBOLS LEGEND:



• Important safety notices



• Useful information



• Programming information



• Potentiometer information



• Connectors information



• Buttons information

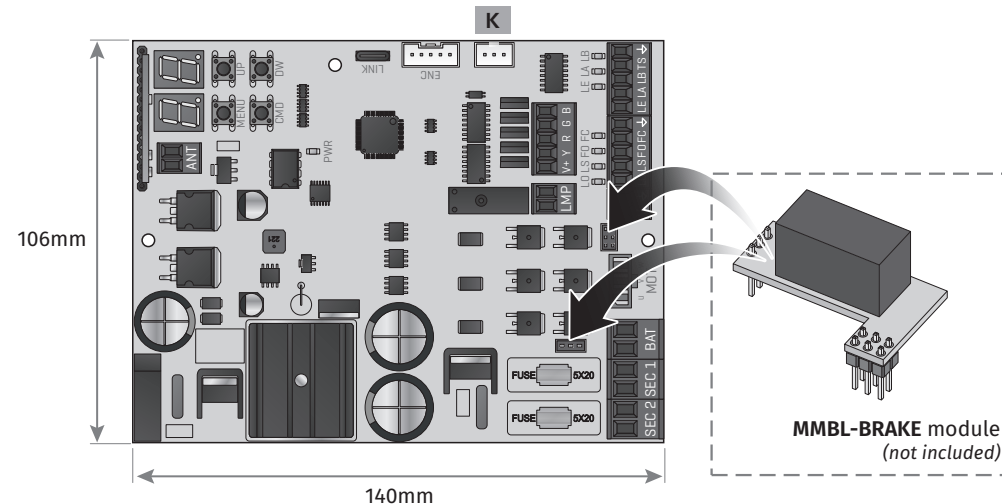
02. CONTROL BOARD

TECHNICAL SPECIFICATIONS

The MC91BL-SC is an electronic control board for controlling brushless motors with a built-in radio control system, developed for automating sliding gates.

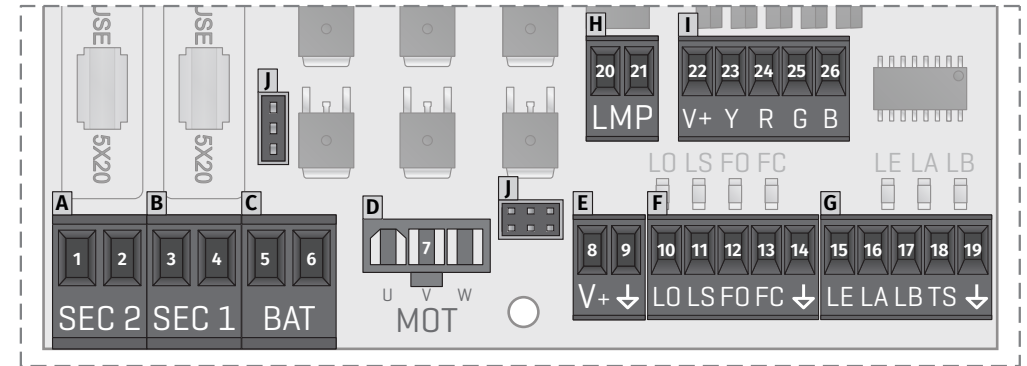
• Motor power supply	26Vac
• Control board power supply	21Vac // 26Vac
• Flashing light's output	36Vdc 4W Max.
• RGB Flashing light's output	24Vdc 100mA Max.
• Motor's output	36Vdc 400W Max.
• Auxiliary accessories output	24Vdc 8 W Max.
• Security device output and push button	24Vdc
• Standby Power	< 0.5W (in accordance with 2023/826)
• Working temperature	-25°C to + 55°C
• Incorporated Radio Receiver	433,92 Mhz
• Compatible remote controls	Rolling Code
• Maximum Memory Capacity	100 (full opening) - 100 (pedestrian opening)
• Control Board Dimensions	106x140 mm
• Fuse F1 Fuse F2	10AL 250V 1.6AL 250V
• Battery	MBAT26V2000 (recommended)
• Battery charging characteristics	29Vdc 0.35A Max.

SMPS Module	• Power supply	85-305 Vac 50/60 Hz
	• Power relay	250V AC / 5A
	• Maximum power	460W
	• Power output	5V / 600mA



02. CONTROL BOARD

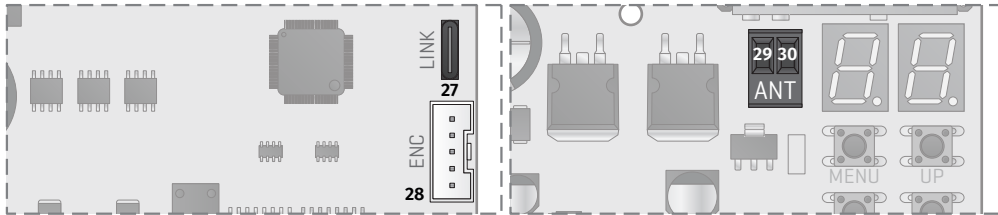
CONNECTORS



A	SEC2	01 • 21Vac control board power input 02 • 21Vac control board power input
B	SEC1	03 • 26Vac motor power input 04 • 26Vac motor power input
C	BAT	05 • 24Vdc Input for Emergency Battery 24V + max 7Ah 06 • 24Vdc Input for Emergency Battery 24V - max 7Ah
D	MOT	07 • 36Vdc Motor Output (max 400W)
E	V+ ↓	08 • 24Vdc output for accessories (max 8W) 09 • 0V output for accessories power supply
F	LO LS FO FC ↓	10 • NO input for Total Opening Input 11 • NO input for Partial maneuver button 12 • Opening limit-switch input 13 • Closing limit-switch input 14 • Common
G	LE LA LB TS ↓	15 • NC input for Photocells 1 16 • NC input for Photocells 2 17 • NC input for Stop device 18 • Photocell test output 19 • Common
H	LMP	20 • 36Vdc Flashing light's Output (max 4W) 21 • 0V Flashing light's Output
I	V+ Y R G B	22 • Common Output +24vdc (max 4W) 23 • Output for gate closed signal 24 • Output for gate closing signal 25 • Output for gate opening signal 26 • Output for gate open signal
J		Connector for MMBL-BRAKE module
K		Connector for Low Power (SMPS) plug

02. CONTROL BOARD

CONNECTORS



LINK	27 • Type-C input for MCONNECT LINK connection
ENC	28 • Conector para Encoder do motor
ANT	29 • Antenna connector (hot pole) 30 • Antenna connector (GND)

BUTTONS AND LEDs



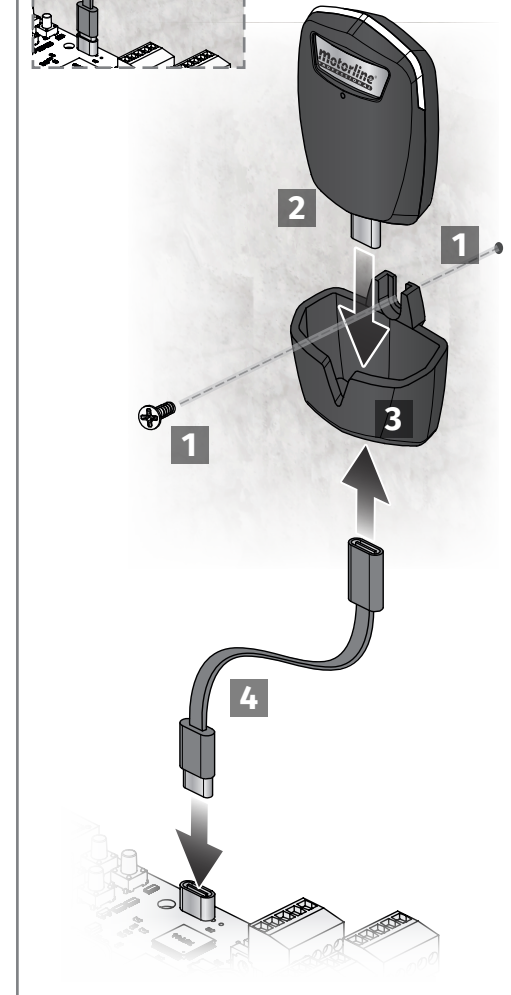
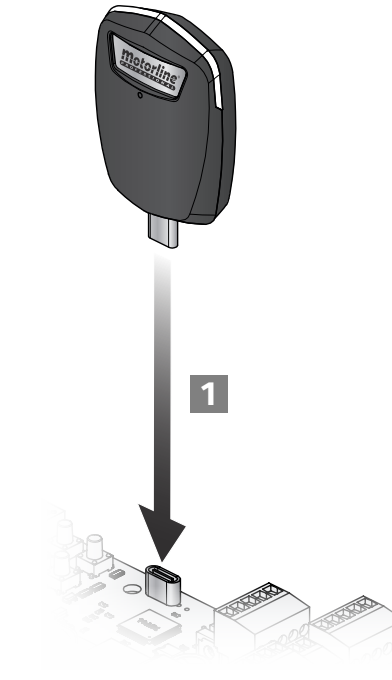
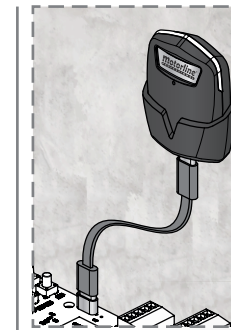
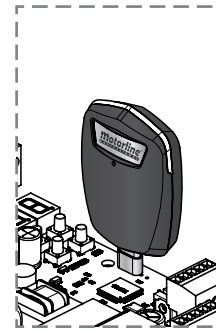
MENU	Access the Menu
CMD	Remote controls programming
UP	Navigate through menus/values
DW	Navigate through menus/values



LO	LED ON when the full opening button is active
LS	LED ON when the pedestrian opening button is active
FO	LED OFF when the opening limit switch is active
FC	LED OFF when closing limit switch is active
LE	LED OFF when the signal from the photocells 1 is interrupted
LA	LED OFF when the signal from the photocells 2 is interrupted
LB	LED OFF when the Stop button is active
PWR	LED ON when power is supplied to the microcontroller

03. INSTALLATION


INSTALACIÓN DEL MCONNECT LINK (OPCIONAL)



03. INSTALLATION

ESSENTIAL STEPS FOR INSTALLATION

- 01 • Make the connections of all the accessories according to the connection scheme (page 15 and 16).
- 02 • Connect the transformer to a power supply.
- 03 • Make sure that the gate movement is the same as the one shown on the display:

CL	OP	 If the display does not coincide with the movement of the gate, change the opening direction parameter in P0->d1 to 1.
CLOSING	OPENING	

- 04 • Automatically program the course - **P0** menu (page 8A).
- 05 • If necessary, adjust the gate slowdown time during opening and closing - **P1** menu (page 8B).
- 06 • Adjust the speed and sensitivity of the motor - **P2** menu (page 9A).
- 07 • Enable or disable the use of photocells in the **P5** menu (page 10A).
- 08 • Program a remote control (page 6B).

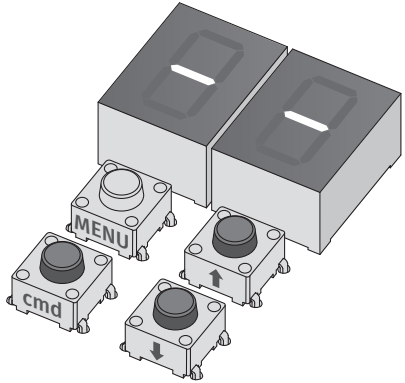
The control board is now fully configured!

Check the menus from the programming pages in case you wish to configure other features of the control board.

04. PROGRAMMING

REMOTE CONTROLS

SU	Programming a remote control for full opening	88
SP	Programming a remote control for pedestrian opening	88
Function of programmed remote controls in SP		
SU	Allows to configurate the pedestrian opening remote control for total opening.	00
		(Default value)
	00 Remote control for pedestrian opening.	
	01 Remote control for total opening.	



REMOTE CONTROL PROGRAMMING

01 • Press the **cmd** button for 1 sec.
 02 • Select the function where you want to program the remote controls (SU and SP) using ↓↑.
 03 • Press **cmd** once to confirm the function (SU or SP).
 04 • The first free position appears.
 05 • Press the remote control button you want to program.
 The display will blink and move to the next free location.

PROGRAM SL FUNCTION

01 • Press the **cmd** button for 1 sec.
 02 • Select the SL function using ↓↑.
 03 • Press **cmd** to enter the function.
 04 • Use ↓↑ to change the value.
 05 • Press **MENU** to save the new value.

DELETE REMOTE CONTROLS

01 • Press the **cmd** button for 1 sec.
 02 • Select the function (SU or SP) using ↓↑.
 03 • Press **cmd** once to confirm the function (SU or SP).
 04 • Use ↓↑ to select the remote control location you want to delete.
 05 • Press **cmd** for 3sec. and the position is empty.
 The display will flash and the position will be available.

DELETE ALL THE REMOTE CONTROLS

01 • Press the **cmd** button for 5 sec.
 02 • The display will show **dL**, confirming that all remote controls have been deleted.



- Whenever you store or delete a remote control, the display will flash and show the next position. You can add or delete remote controls without go back to point 01.
- If you do not press any button for 20 seconds the control board will return to standby.

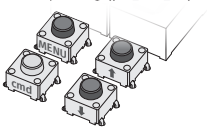
04. PROGRAMMING

"P" MENU FUNCTIONS

MENU	FUNCTION	MIN.	MÁX.	STATE	FACTORY VALUE	PAGE	
P0	COURSE PROGRAMMING	-	-	RU Automatic Programming	-	8A	
				RU Manual Programming	-		
				d0 Left opening d1 Right opening	00		
		0	1	S0 Solar mode	00	8B	
		-	-	n0 Motor Type	00 GALO motor 01 GALO SPPED motor	00	8B
		0	2	n5 Master/Slave	00	8B	
		0	99	Ec Standby mode (Ecodesign)	01	8B	
P1	RAMP ADJUSTMENT	0%	99%	dR Opening slowdown dF Closing slowdown	15%	8B	
		0	9	P0 Ramp time at start Pc Ramp time in slowdown	5		
P2	SPEED AND SENSITIVITY ADJUSTMENT	0	9	S0 Speed Adjustment in Openig	7	9A	
				S2 Speed Adjustment in Closing	7		
				F5 Sensitivity adjustment	5		
-	-	En	00 Encoder fault detection disables 01 Encoder fault detection active	01			
P3	PEDESTRIAN COURSE ADJUSTMENT	1%	99%	Opening setting in pedestrian mode	50%	9A	
P4	PAUSE TIME	0s	99s	RF Total pause time adjustment	0s	9B	
				RP Pedestrian pause time adjustment	0s		
P5	PHOTOCELLS 1 PROGRAMMING	-	-	LE	00 Disables photocells 01 Active photocells	00	
				HC	00 Photocells in opening 01 Photocells in closing	01	
				HE	00 Invert 01 Stop 02 Invert 2 sec. and Stop	00	
				SE	00 Disable photocell test 01 Activates photocell test	00	

04. PROGRAMMING

"P" MENU FUNCTIONS

P6	PHOTOCELLS 2 PROGRAMMING	-	-	ER	00 Disables photocells 01 Active photocells	00	10B
				HC	00 Photocells in opening 01 Photocells in closing	00	
				HE	00 Invert 01 Stop 02 Invert 2 sec. and Stop	01	
				HR	00 Disables safety edge input 01 Activates safety edge input	00	
				SE	00 Disable photocell test 01 Activates photocell test	00	
P7	OPERATING LOGIC	-	-	00 Automatic mode 01 Step by step mode 02 Condominium mode	01	11A	
P8	FLASHING LIGHT	-	-	00 Flashing (opening and closing) 01 During movement 02 Courtesy light	00	11A	
P9	REMOTE PROGRAMMING	-	-	00 Distance PGM OFF 01 Distance PGM ON	00	11B	
				<ul style="list-style-type: none"> • To access the P menu press the MENU button for 2 seconds. • Use ↓ ↑ to navigate through the menus. • Press MENU when you want to confirm access to a menu. • Press ↓ ↑ simultaneously to exit programming. 			

04. PROGRAMMING

PROGRAMMING "P"

PD COURSE PROGRAMMING


AU Automatic course programming
This menu allows you to automatic motor programming and slowdown.

Automatic programming:

- 01 • Press MENU for 2 sec. until it appears PD.
- 02 • Press MENU once until it appears AU.
- 03 • Press MENU to start automatic programming.

The following maneuvers will be carried out:


- a • Closes in slowdown (if it's open).
- b • Opens in slowdown.
- c • Closes in slowdown.
- d • Opens at normal speed.
- e • Closes at normal speed.

 **To cancel the programming press the UP and DOWN buttons simultaneously. You can use the remote control instead of the MENU button.**

MA Manual course programming:
This menu allows manually program the motor and slow down.

Manual programming:

- 01 • Press MENU for 2 sec. until it appears PD.
- 02 • Press MENU once until it appears AU.
- 03 • Press UP until it appears MA.
- 04 • Press MENU to start programming the opening time.
- 05 • Press MENU to start programming the slowdown time at the opening.
- 06 • Press MENU to start programming the closing time.
- 07 • Press MENU to start programming the slowdown time at closing.
- 08 • Press MENU to finish programming the slowdown time on closing.
- 09 • The gate will perform an automatic opening and closing manoeuvre.

<p>00  When defining opening to the right, the limit switch logic is automatically inverted, meaning there is no need to change the limit switch connections.</p>	<p>00 Left opening</p>	<p>00 (Default value)</p>
	<p>01 Right opening</p>	

- 01 • Press MENU for 2 sec. until it appears PD.
- 02 • Press MENU once until it appears AU. Use UP or DW to navigate the parameters.
- 03 • Press MENU to select the chosen parameter.
- 04 • The factory set value appears. Use UP and DW to change the value.
- 05 • Press MENU to save the new value.


04. PROGRAMMING

PROGRAMMING "P"

50 Solar mode
This menu allows you to shorten the start-up time of the control board.


Automatic programming:

- 01 • Press MENU for 2 seconds until you see PD.
- 02 • Press MENU once until you see 50. Use UP or DW to navigate the parameters.
- 03 • Press MENU to select the chosen parameter.
- 04 • The factory-set value appears. Use UP and DW to change the value.
- 05 • Press MENU to save the new value.

 **For installations with the APOLO system**



<p>00 Motor Type This menu allows you to select the motor type.</p>	<p>00 GALO motor</p>	<p>00 (Default value)</p>
	<p>01 GALO SPEED motor</p>	


- 01 • Press MENU for 2 sec. until it appears PD.
- 02 • Press MENU once until it appears AU. Use UP or DW to navigate the parameters.
- 03 • Press MENU to select the chosen parameter.
- 04 • The factory set value appears. Use UP and DW to change the value.
- 05 • Press MENU to save the new value.

 **You must confirm the motor version. If you have a GALO or GALO SPEED Motor, and the parameter does not correspond to this version, the Motor will not obtain its nominal speed.**

<p>05 Master/Slave Communication model for hardware devices where one device has unidirectional control over another device.</p>	<p>00 Disabled</p>	<p>00 (Default value)</p>
	<p>01 Master Controls the main functions of the Slave.</p>	
	<p>02 Slave It is controlled by the Master.</p>	

- 01 • Press MENU for 2 sec. until it appears PD.
- 02 • Press MENU once until it appears AU. Use UP or DW to navigate the parameters.
- 03 • Press MENU to select the chosen parameter.
- 04 • The factory set value appears. Use UP and DW to change the value.
- 05 • Press MENU to save the new value.

<p>EE Standby Mode (Ecodesign) Allows you to set the time it takes for the unit to enter low power mode. Each value is equivalent to 30 seconds. A value of 0 (zero) turns off low power mode.</p>	<p>00 (Default value)</p> <p> </p>
--	---

 **If external accessories are used, this mode must be turned off.**

04. PROGRAMMING

PROGRAMMING "P"

P1 RAMP ADJUSTMENT

This menu allows to set the slowdown time at opening and closing.

88

Opening slowdown

Allows to set the time that the gate will act with slowdown in the opening (100% corresponds to full opening).

85%
(Default value)

88

Closing slowdown

Allows to set the time that the gate will act with slowdown in the closing (100% corresponds to total closing).

0 99
0=OFF

P0

Ramp time at start

Allows you to define the acceleration ramp time when opening and closing.

05
(Default value)

P2

Ramp time in slowdown

Allows you to define the deceleration ramp time when opening and closing.

0 9
0=OFF | 5=1, | 9=2

01 • Press MENU for 2 sec. until appears P0.

02 • Use UP to change to P1.

03 • Press MENU until appears 88. Use UP or DW to navigate the parameters.

04 • Press MENU to edit the chosen parameter value.

05 • The factory set time appears. Use UP and DW to change the value.

06 • Press MENU to save the new value.

P2 SPEED AND SENSITIVITY ADJUSTMENT

S0

Opening speed adjustment

07

S2

Closing speed adjustment

07

F5

Sensitivity adjustment

Allows to adjust the sensitivity of the motor when detecting obstacles. The higher the sensitivity, the less effort it will take to detect any obstacle and reverse direction.

05
(Default value)

ER

Encoder fault detection

00 Encoder fault detection disables

01 Encoder fault detection active

01
(Default value)

01 • Press MENU for 2 sec. until appears P0.

02 • Use UP until appears P2.

03 • Press MENU will appear S0. Use UP or DW to navigate the parameters.

04 • Press MENU to edit the value.

05 • The factory set time appears. Use UP and DW to change the value.

06 • Press MENU to save the new value.



A very low value in the S0 or S2, parameters, or a very high value in the F5, parameter, may result in the motor not having enough torque to move the gate.

04. PROGRAMMING

PROGRAMMING "P"

P3 PARTIAL COURSE ADJUSTMENT

Partial mode allows the gate to be opened to allow people to pass through. In this function you can define the percentage of course that you want the gate to open in partial mode, in relation to the total course (100%).

P3

50% (Default value)

1 99

01 • Press MENU for 2 sec. until appears P0.

02 • Use UP until appears P3.

03 • Press MENU. The factory set time appears.

04 • Use UP and DW to change the value.

05 • Press MENU to save the new value.

P4 PAUSE TIME

8E

Pause time adjustment for automatic closing

Allows you to set the waiting time for the barrier from when it finishes fully opening until it starts to close.

00s
(Default value)

0 99

8P

Adjustment of pause time for automatic closing in partial closing

Allows you to define the waiting time from when partial opening ends until closing begins.

00s
(Default value)

0 99

01 • Press MENU for 2 sec. until appears P0.

02 • Use UP to change to P4.

03 • Press MENU until appears 8E. Use UP or DW to navigate the parameters.

04 • Press MENU to edit the chosen parameter value.

05 • The factory set time appears. Use UP and DW to change the value.

06 • Press MENU to save the new value.



• When the values are at zero, there is no automatic closing.

• Each value (1s) selected above 90s is equivalent to 20 seconds.

Example: Selecting the value 92s is equivalent to 130 seconds (90 + (2 x 20) seconds)

04. PROGRAMMING

PROGRAMMING "P"

PS PHOTOCELLS PROGRAMMING 1 Allows to program the security behavior LE (photocell 1).		
LE Enable or disable security entry.	00 Disable photocells	00 (Default value)
	01 Activate photocells	
HE Allows you to define whether this security will act on the opening or closing of the gate. <i>This menu can only be changed when the LE menu is active.</i>	00 Photocells in opening	00 (Default value)
	01 Photocells in closing	
HE It allows to define the behavior that the gate will have when this security is activated.	00 The gate movement is reversed	00 (Default value)
	01 The gate stops and resumes 5 sec after security is disabled	
	02 The gate reverses for 2 sec. and stop	
SE Photocell Test Before each gate movement, the control board tests whether the photocells are working correctly, reducing the risk of accidents if they fail.	00 Disable photocell test	00 (Default value)
	01 Activates photocell test	
<p>01 • Press MENU for 2 sec. until appears PO. 02 • Use UP until appears PS. 03 • Press MENU will appear LE. Use UP or DW to navigate the parameters. 04 • Press MENU to edit the chosen parameter value. 05 • The factory set time appears. Use UP and DW to change the value. 06 • Press MENU to save the new value.</p>		

04. PROGRAMMING

PROGRAMMING "P"

PE PHOTOCELLS PROGRAMMING 2 Allows to program the security behavior LA (photocell 2).		
LA Enable or disable security entry.	00 Disable photocells	00 (Default value)
	01 Activate photocells	
HE Allows you to define whether this security will act on the opening or closing of the gate. <i>This menu can only be changed when the LA menu is active.</i>	00 Photocells in opening	00 (Default value)
	01 Photocells in closing	
HE It allows to define the behavior that the gate will have when this security is activated.	00 The gate movement is reversed	01 (Default value)
	01 The gate stops and resumes 5 sec after security is disabled	
	02 The gate reverses for 2 sec. and stop	
HA Allows you to activate or deactivate the safety edge.	00 Disables 8k2 safety edge	00 (Default value)
	01 Activates 8k2 safety edge	
SE Photocell Test Before each gate movement, the control board tests whether the photocells are working correctly, reducing the risk of accidents if they fail.	00 Disable photocell test	00 (Default value)
	01 Activates photocell test	
<p>01 • Press MENU for 2 sec. until appears PO. 02 • Use UP to change to PE. 03 • Press MENU until appears LA. Use UP or DW to navigate the parameters. 04 • Press MENU to edit the chosen parameter value. 05 • The factory set time appears. Use UP and DW to change the value. 06 • Press MENU to save the new value.</p>		

04. PROGRAMMING


PROGRAMMING "P"

P7 OPERATING LOGIC This menu allows to set the operating logic of the automation.	
00 Automatic Mode Whenever there is an order the movement is reversed.	01 (Default value)
Step by step mode 1st impulse: OPEN 2nd impulse: STOP 3rd impulse: CLOSE 4th impulse: STOP If it is fully open and timed, it closes.	
02 Condominium Mode Does not respond to orders during opening and pause time.	
01 • Press MENU for 2 sec. until appears P0 . 02 • Use UP until appears P7 . 03 • Press MENU will appear 00 . 04 • Press MENU to edit the value. 05 • Use UP and DW to change the value. 06 • Press MENU to save the new value.	

P8 FLASHING LIGHT This menu allows to set the operation mode of the flashing light (LAMP).	
00 Flashing (opening and closing) During the opening/closing movement, the flashing light will operate intermittently. Opening: flashing 0,5sec. Closing: flashing 0,25sec.	00 (Default value)
01 During movement During the opening/closing movement, the flashing light is permanently ON. When stopped: it remains off.	
02 Courtesy light During the opening/closing movement, the flashing light is permanently ON. When in pause time: it remains ON. When stopped or closed: it remains on for the time set in E2 .	
01 • Press MENU for 2 sec. until appears P0 . 02 • Use UP until appears P8 . 03 • Press MENU will appear 00 . 04 • Press MENU to edit the value. 05 • Use UP and DW to change the value. 06 • Press MENU to save the new value.	

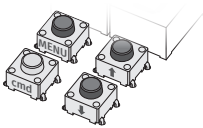
04. PROGRAMMING

PROGRAMMING "P"

P9 REMOTE PROGRAMMING This menu allows to enable or disable the programming of new remote control without directly accessing the control board, using a previously stored remote control (memorize remote controls page 6A).	
00 Distance PGM OFF	00 (Default value)
01 Distance PGM ON	
01 • Press MENU for 2 sec. until appears P0 . 02 • Use UP until appears P9 . 03 • Press MENU will appear 00 . 04 • Press MENU to edit the value. 05 • Use UP and DW to change the value. 06 • Press MENU to save the new value.	
REMOTE PROGRAMMING OPERATION (PGM ON): Press the buttons indicated in the image simultaneously for 10 seconds and the flashing light will flash (the 1st free position appears in the display). Each time you store 1 remote control, the control board will exit remote programming. If you want to memorize more remote control, you will always have to repeat the process of pressing the remote controls buttons simultaneously for 10 seconds for each new remote control.	

04. PROGRAMMING

"E" MENU FUNCTIONS

MENU	FUNCTION	MIN.	MÁX.	STATE	FACTORY VALUE	PAGE
E0	HUMAN PRESENCE	-	-	HP 00 Disables Human presence 01 Active at closing 02 Active during opening and closing	00	12B
				PE 00 Disables push buttons mode 01 Activates push buttons mode	00	
				LB 00 Disables LB input (STOP) 01 Activates LB input (STOP)	00	
E1	UNUSED	-	-	-	-	-
E2	COURTESY LIGHT TIME	0	99	LE Courtesy light time adjustment PE Adjusting the pre-flashin light time	00	13A
E3	FOLLOW ME	-	-	FE 00 Deactivates follow me 01 Activates follow me (fully open) 02 Activates follow me (in open or fully open position)	00	13B
		1s	9s	Eñ Set closing time (sec)	03	
E4	OPERATION MODE WITH BATTERIES	-	-	00 Normal operation 01 Barrier opens and stays open 02 Barrier closes and remains closed	00	13B
E5	ELECTRIC BRAKE	-	-	00 Disabled 01 Low intensity 02 High intensity	00	14A
E6	SLOWDOWN SPEED	1	9	Sc Adjusting the slowing down at the opening	3	14A
		1	9	Sc Adjusting the slowing down at the closing	3	
E7	MANUEVERS COUNTER	-	-	Shows the number of maneuvers performed	-	14B
E8	RESET - RESTORE FACTORY SETTINGS	-	-	00 Deactivated 01 Reset activated	00	14B
E9	OUTPUTS GATE STATUS (Conector I)	-	-	00 Continuous light 01 Flashing light	00	14B
		<ul style="list-style-type: none"> To access the E menu press the MENU button for 8sec. Use ↓ ↑ to navigate through the menus. Press MENU when you want to confirm access to a menu. Press ↓ ↑ simultaneously to exit programming. 				

04. PROGRAMMING

PROGRAMMING "E"

E0 HUMAN PRESENCE/PUSHBUTTON		
Human presence ⚠ <i>When human presence active, the RF remote controls do not work.</i> For this menu to work, you must make the following configuration: E0 → PL → 01	Disables human presence 00 Whenever a order to is sent to the LO input and the motor performs a complete maneuver	00 (Default value)
	Active at closing 01 The motor only works if you keep the LS button pressed	
	Active during opening and closing 02 The motor only works if you keep the LO or LS button pressed depending on the desired action	
Pushbutton	00 Disables pushbutton mode	00 (Default value)
	01 Active pushbutton mode	
LB Allows you to define the way Operation of the LB input.	00 Disables input to emergency stop device	00 (Default value)
	01 Input for emergency stop)	
01 • Press MENU for 8 sec. until it appears E0. 02 • Press MENU until appears HP. Use UP or DW to navigate the parameters. 03 • Press MENU to edit the chosen parameter value. 04 • The factory set time appears. Use UP and DW to change the value. 05 • Press MENU to save the new value.		

04. PROGRAMMING

PROGRAMMING "E"

E1 UNUSED
This parameter has no assigned function.

E2 COURTESY LIGHT TIME

LE **Courtesy light time**
Allows to adjust the courtesy light time. The courtesy light is activated the set time when the gate is in the closed, opened and stopped position.

00min
(Default value)



PP **Pre-flashing light time**
Allows you to adjust the pre-flashing light time.
If the value is 00 this function is deactivated.
The pre-flashing light is activated before an opening and closing maneuver.

00s
(Default value)



- 01 • Press MENU for 8 sec. until appears E0.
- 02 • Use UP to change to E2.
- 03 • Press MENU until appears LE. Use UP or DW to navigate the parameters.
- 04 • Press MENU to edit the chosen parameter value.
- 05 • The factory set time appears. Use UP and DW to change the value.
- 06 • Press MENU to save the new value.

04. PROGRAMMING

PROGRAMMING "E"

E3 FOLLOW ME

FE This menu allows activating the Follow me option. With this function activated, whenever the safety device detects the passage of a user/object, the control board activates the closing maneuver based on the time selected in this parameter.

00 **Function disabled**

01 **Function activated after opening**
The control board activates the closing only after completing the opening, based on the time defined in the E7 function

02 **Function activated during opening**
The control board activates the closing after completing the opening, when, during opening, the user/object passes through the photocells, based on the time defined in the E7 function

00
(Default value)

EE **Closing time function**
Allows you to define the waiting time between detection and the start of the closing maneuver after the safety device detects the passage of an object/user.

03s
(Default value)



- 01 • Press MENU for 8 sec. until E0 appears.
- 02 • Use UP until appears E3.
- 03 • Press MENU will appear FE.
- 04 • Press MENU to edit the value.
- 05 • Use UP and DW to change the value.
- 06 • Press MENU to save the new value.

E4 OPERATION MODE WITH BATTERIES

E4 This menu allows you to define how the control unit will operate on batteries in the event of a power failure.

00 **Normal operation**

01 The gate opens and remains open until power to the control board is restored.

02 The gate closes and remains closed until power to the control board is restored.

00
(Default value)

- 01 • Press MENU for 8 sec. until E0 appears.
- 02 • Use UP until appears E4.
- 03 • Press MENU will appear 00.
- 04 • Press MENU to edit the value.
- 05 • Use UP and DW to change the value.
- 06 • Press MENU to save the new value.

04. PROGRAMMING

PROGRAMMING "E"

E5 ELECTRIC BRAKE
Allows you to set the intensity of the electric brake.

00 Disabled

01 Low intensity

02 High intensity

00
(Default value)

- 01 • Press MENU for 8 seconds until appears *E0*.
- 02 • Use UP until appears *E5*.
- 03 • Press MENU and will appear *00*.
- 04 • Press MENU to edit the value.
- 05 • Use UP and DW to change the value.
- 06 • Press MENU to save the new value.



The electric brake should be used on gates with a steep incline.

E6 SLOWDOWN SPEED
This menu allows you to adjust the slowdown speed.
The higher the level, the faster the slowdown.

S8 Setting of the slowdown speed at the opening
Allows you to adjust the slowdown speed in the motor opening.

03
(Default value)



S8 Setting of the slowdown speed at the closing
Allows you to adjust the slowdown speed in the motor closing.

03
(Default value)

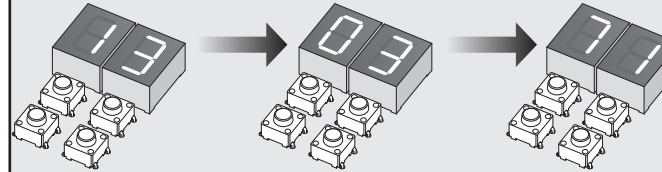


- 01 • Press MENU for 8 sec. until it appears *E0*.
- 02 • Use UP until appears *E6*.
- 03 • Press MENU will appear *S8*.
- 04 • Press MENU to edit the value.
- 05 • Use UP and DW to change the value.
- 06 • Press MENU to save the new value.

04. PROGRAMMING

PROGRAMMING "E"

E7 MANUEVERS COUNTER
This menu allows checking how many complete maneuvers were performed by the control board (complete maneuver means opening and closing).



Example:
130 371 maneuvers
1st Hundred thousand: **13**
2nd Thousands: **03**
3rd Dozens: **71**

- 01 • Press MENU for 8 seconds.
- 02 • *E0* appears. Press UP until appears *E7*.
- 03 • Press MENU.
- 04 • The maneuver count appears in the order shown above (example 130 371).
- 05 • *EB* appears.

E8 RESET - RESET FACTORY VALUES

00 Disabled

01 Reset enabled

00
(Default value)

- 01 • Press MENU for 8 sec. until it appears *E0*.
- 02 • Use UP until appears *E8*.
- 03 • Press MENU will appear *00*.
- 04 • Press MENU to edit the value.
- 05 • Use UP and DW to change the value.
- 06 • Press MENU to save the new value.



Resetting the control board does not erase the maneuver count.

E9 OUTPUTS GATE STATUS

88 Door status output
Allows you to change the way these outputs will act.
(I connector outputs)

00 Continuous light

01 Flashing light

00
(Default value)

- 01 • Press MENU for 8 sec. until it appears *E0*.
- 02 • Use UP until appears *E9*.
- 03 • Press MENU to select the parameter.
- 04 • Use UP and DW to change the value.
- 05 • Press MENU to save the new value.

05. DISPLAY

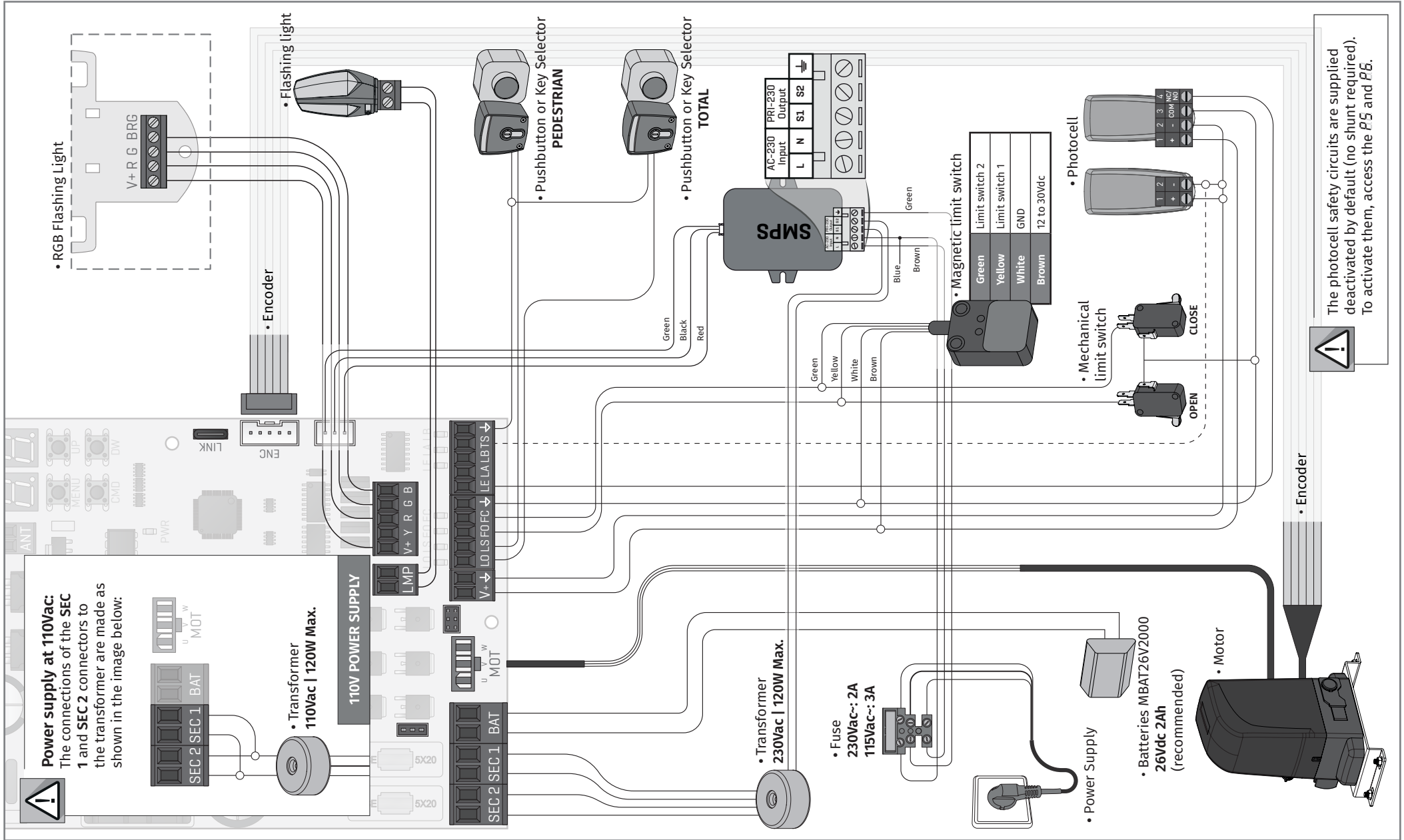
DISPLAY INDICATIONS

MENU	DESCRIPTION
00	In stop position, fully open
01	In stop position, intermediate position
02	In stop position, fully closed
03	Full opening button pressed
04	Pedestrian opening button pressed
05	Control board performs the opening course
06	Control board performs the closing course
07	End of opening course time
08	End of closing course time
09	Full memory
10	All remote controls erased
00 01 02	Remote control triggered from the indicated position
11	Obstructed photocell
12	Obstructed photocell
13	In pause time
14	In pedestrian pause time
15	Obstacle detection
16	Emergency device activated
17	Safety edge pressed

MENU	DESCRIPTION
18	Processing error
19	Overvoltage error
20	Under voltage error
21	Startup error
22	Encoder error
23	EEPROM memory error
24	Reverse motor direction error
25	Photocell test failed
26	Control in Pre-Flashing lamp
27	Motor overcurrent detection
28	Communication failure between master and slave

06. CONNECTION DIAGRAM

SLIDING GATES

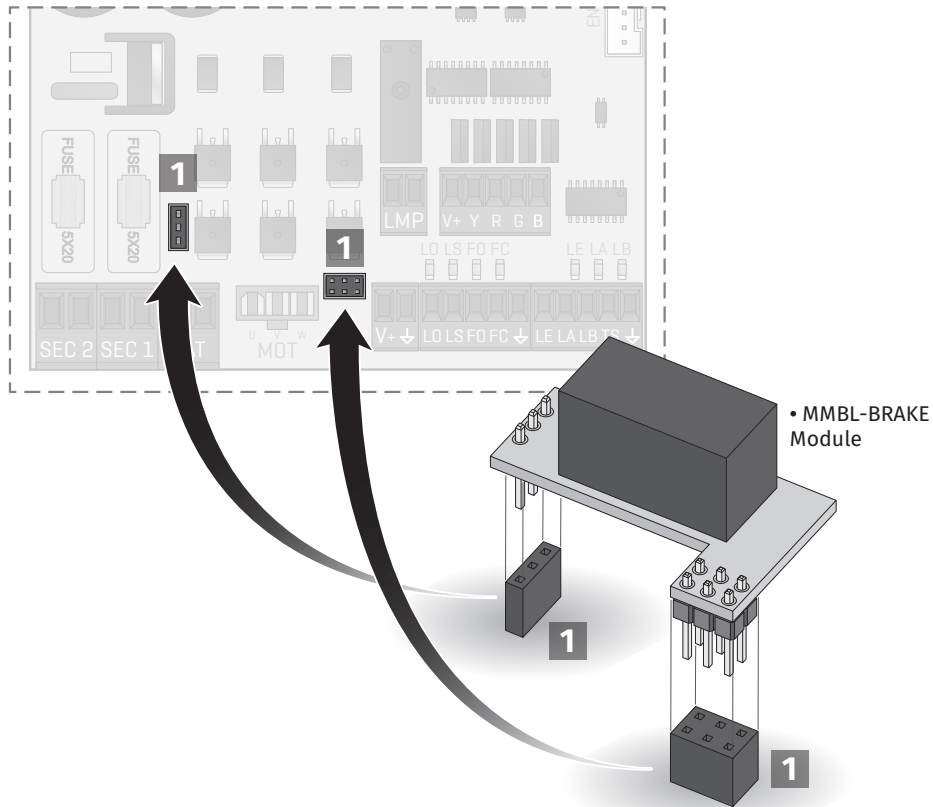


06. CONNECTION DIAGRAM

MMBL-BRAKE MODULE (OPTIONAL)



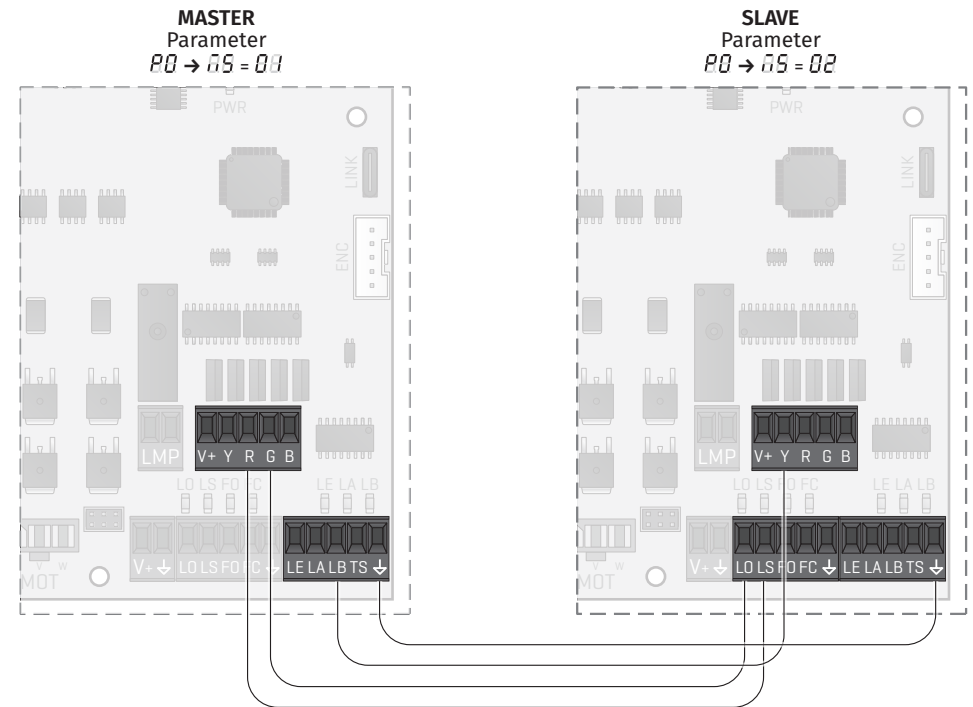
In installations where the gate has a steep slope, it is recommended to use the **MMBL-BRAKE** brake module to reduce the reversibility of the motor.



1 Install the **MMBL-BRAKE** module in the existing slots on the control board.

06. CONNECTION DIAGRAM

MASTER/SLAVE



To control the master/slave system correctly, all control signals from the gate and safety devices must be connected to the control board defined as Master.

07. TROUBLESHOOTING

INSTRUCTIONS FOR FINAL CONSUMERS/TECHNICIANS

Anomaly	Procedure	Behavior	Procedure II	Discovering the origin of the problem
• Motor doesn't work.	• Make sure you have power supply connected to the automatism and if it is working.	• Still not working.	• Consult a MOTORLINE technician.	<ol style="list-style-type: none"> 1 • Open control board and check if it has power supply. 2 • Check input fuses of the control board. 3 • If the motor works, the problem is on the control board. Pull it out and send it to our MOTORLINE technical services for diagnosis. 4 • If the motor doesn't work, remove from installation site and send it to our MOTORLINE technical services for diagnosis.
• Motor doesn't move but makes noise.	• Unlock the motor and move the gate/barrier/automatic bollard by hand to check for mechanical problems.	• Encountered problems?	• Consult a qualified technician in gate/barrier/automatic bollard.	Check all motion axis and associated motion systems related with the gate/barrier/automatic bollard (wheels, racks, etc) to find out what is the problem.
		• The gate/barrier/automatic bollard moves easily?	• Consult a MOTORLINE technician.	<ol style="list-style-type: none"> 1 • If the motor works, the problem is with control board. Pull it out and send it to our MOTORLINE technical services for diagnosis. 2 • If the motor doesn't work, remove it from installation site and send it to our MOTORLINE technical services for diagnosis.
• Motor opens but doesn't close.	• Unlock the motor and move the gate/barrier/automatic bollard by hand to closed position. Block the motor again. Turn off power supply for 5 seconds, and reconnect. Send order to open using remote control.	• The gate/barrier/automatic bollard opened but didn't close again.	<ol style="list-style-type: none"> 1 • Check if there is any obstacle in front of the photocells. 2 • Check if any of the control devices (Key Selector, Pushbutton, Video Intercom, etc.) are stucked and sending permanent signal to control board. 3 • Consult a MOTORLINE technician. 	<p>All control boards MOTORLINE have LEDs that easily allow to conclude which devices are with anomalies. All safety device (DS) LEDs in normal situations remain ON. All "START" circuits LEDs in normal situations remain Off. If LEDs devices are not all On, there is some security systems malfunction (photocells, safety edges). If "START" LEDs are on, there is some remote control issuing device emitting a permanent signal.</p> <p>A) SECURITY SYSTEMS:</p> <ol style="list-style-type: none"> 1 • Close with a shunt all safety systems on the control board. If the automated system starts working normally check for the problematic device. 2 • Remove one shunt at a time until you find the malfunction device. 3 • Replace it for a functional device and check if the motor works correctly with all the other devices. If you find another one defective, follow the same steps until you find all the problems. <p>B) START SYSTEMS:</p> <ol style="list-style-type: none"> 1 • Disconnect all wires connected to the START connector (LO and LS). 2 • If the LED turned OFF, try reconnecting one device at a time until you find the defective device. <p>NOTE: In case procedures described in sections A) and B) don't result, remove control board and send it to our MOTORLINE technical services for diagnosis.</p>
• Motor doesn't make complete course.	• Unlock the motor and move the gate/barrier/automatic bollard by hand to check for mechanical problems.	• Encountered problems?	• Consult a qualified technician in gate/barrier/automatic bollard.	Check all motion axis and associated motion systems related with the gate/barrier/automatic bollard (wheels, racks, etc) to find out what is the problem.
		• The gate/barrier/automatic bollard moves easily?	• Consult a MOTORLINE technician.	<ol style="list-style-type: none"> 1 • If the motor doesn't work, remove it from installation site and send it to our MOTORLINE technical services for diagnosis. 2 • If the motor works well and move gate at full force during the entire course, the problem is with control board. Set force using trimmer on the board. Make a new working time programming, giving sufficient time for opening and closing with appropriate force. 3 • If this doesn't work, remove control board and send it to MOTORLINE technical services. <p>NOTE: Setting force of the control board should be sufficient to make the gate open and close without stopping, but should stop and invert with a little effort from a person. In case of safety systems failure, the gate shall never cause physical damaged to obstacles (vehicles, people, etc.).</p>