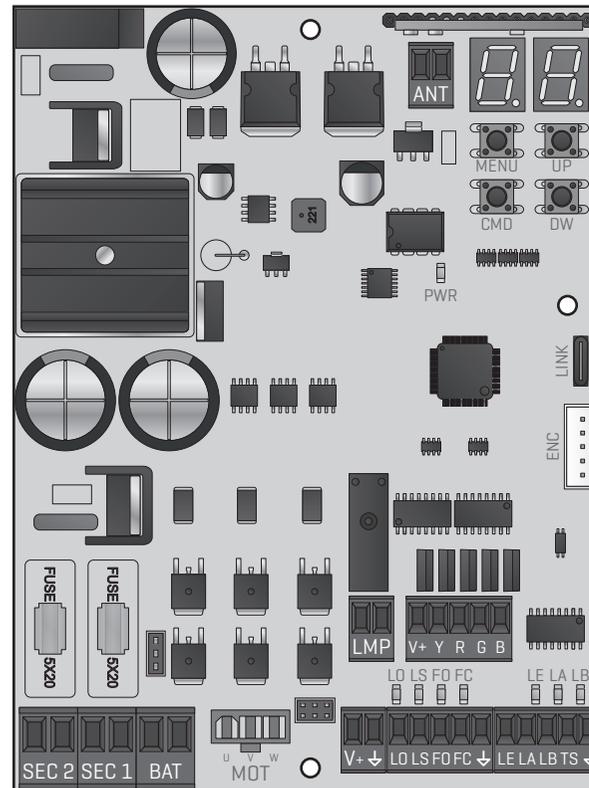




# MC91BL-SC

## 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

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



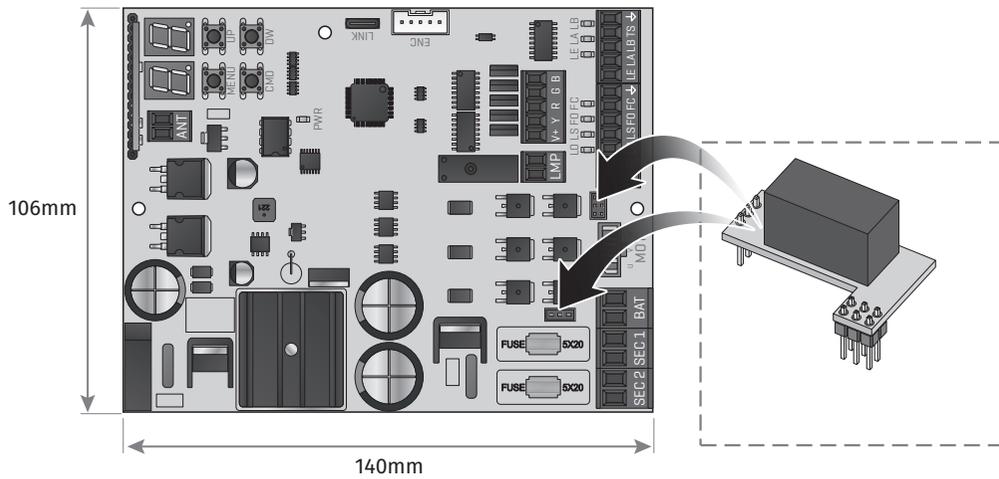
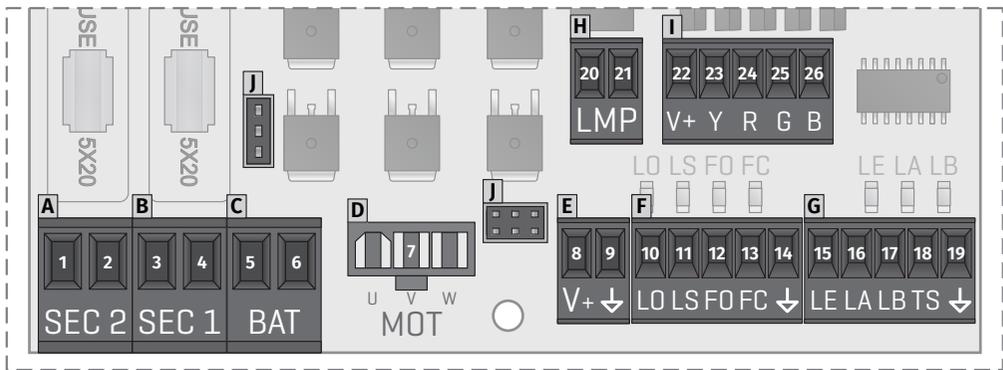
• Potentiometer information

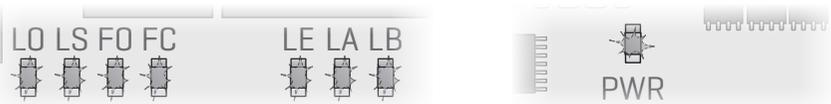
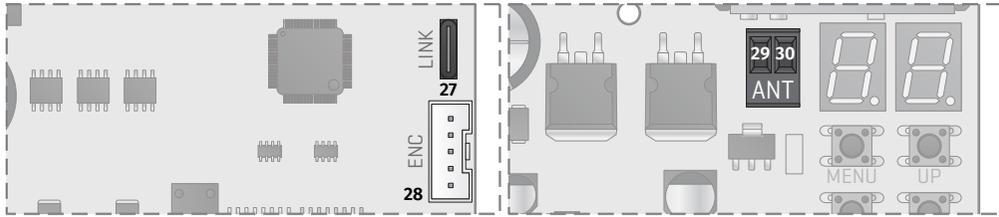


• Connectors information

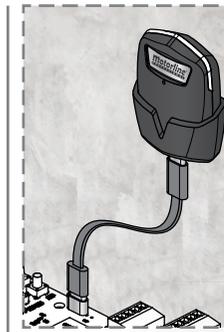


• Buttons information



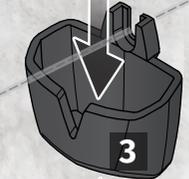


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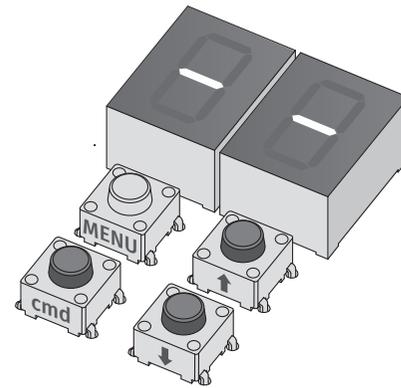
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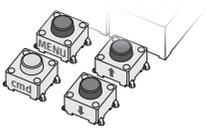
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3

4



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28	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	
29	OPERATING LOGIC	-	-		00 Automatic mode 01 Step by step mode 02 Condominium mode	01	11A
28	FLASHING LIGHT	-	-		00 Flashing (opening and closing) 01 During movement 02 Courtesy light	00	11A
29	REMOTE PROGRAMMING	-	-		00 Distance PGM OFF 01 Distance PGM ON	00	11B
				<ul style="list-style-type: none"> <li>• To access the <b>P menu</b> press the MENU button for 2 seconds.</li> <li>• Use ↓ ↑ to navigate through the menus.</li> <li>• Press MENU when you want to confirm access to a menu.</li> <li>• Press ↓ ↑ simultaneously to exit programming.</li> </ul>			

## 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.**

**IA 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 IA.
- 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><b>00</b>  <b>When defining opening to the right, the limit switch logic is automatically inverted, meaning there is no need to change the limit switch connections.</b></p>	<p><b>00</b> Left opening</p>	<p><b>00</b> (Default value)</p>
	<p><b>01</b> 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><b>70</b> <b>Motor Type</b> This menu allows you to select the motor type.</p>	<p><b>00</b> GALO motor</p>	<p><b>00</b> (Default value)</p>
	<p><b>01</b> 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><b>05</b> <b>Master/Slave</b> Communication model for hardware devices where one device has unidirectional control over another device.</p>	<p><b>00</b> Disabled</p>	<p><b>00</b> (Default value)</p>
	<p><b>01</b> Master Controls the main functions of the Slave.</p>	
	<p><b>02</b> 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.



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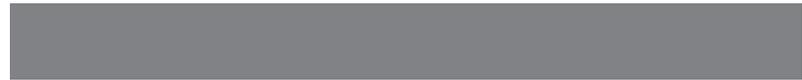
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## 05. DISPLAY

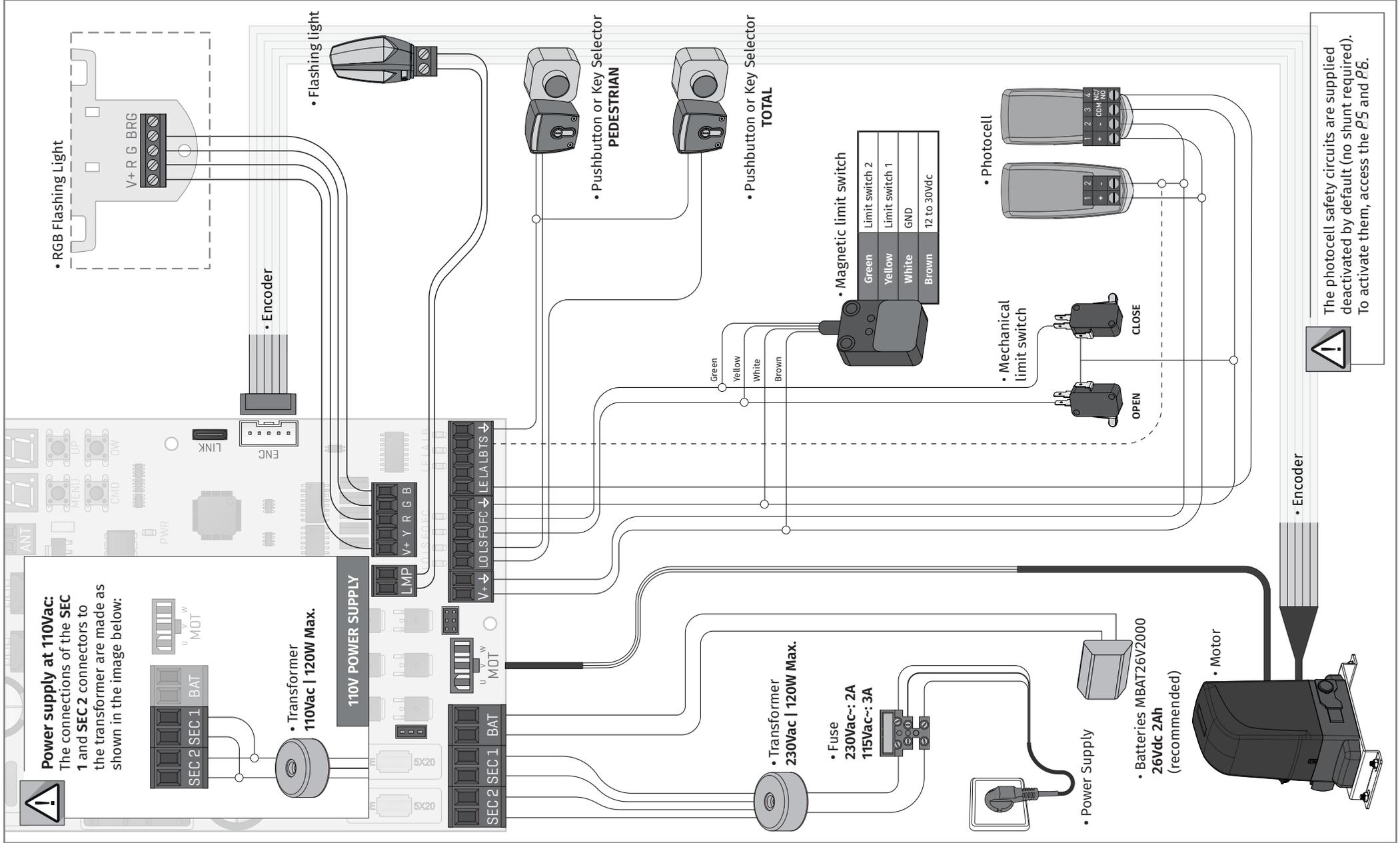
### DISPLAY INDICATIONS

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	Motor phase missing 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

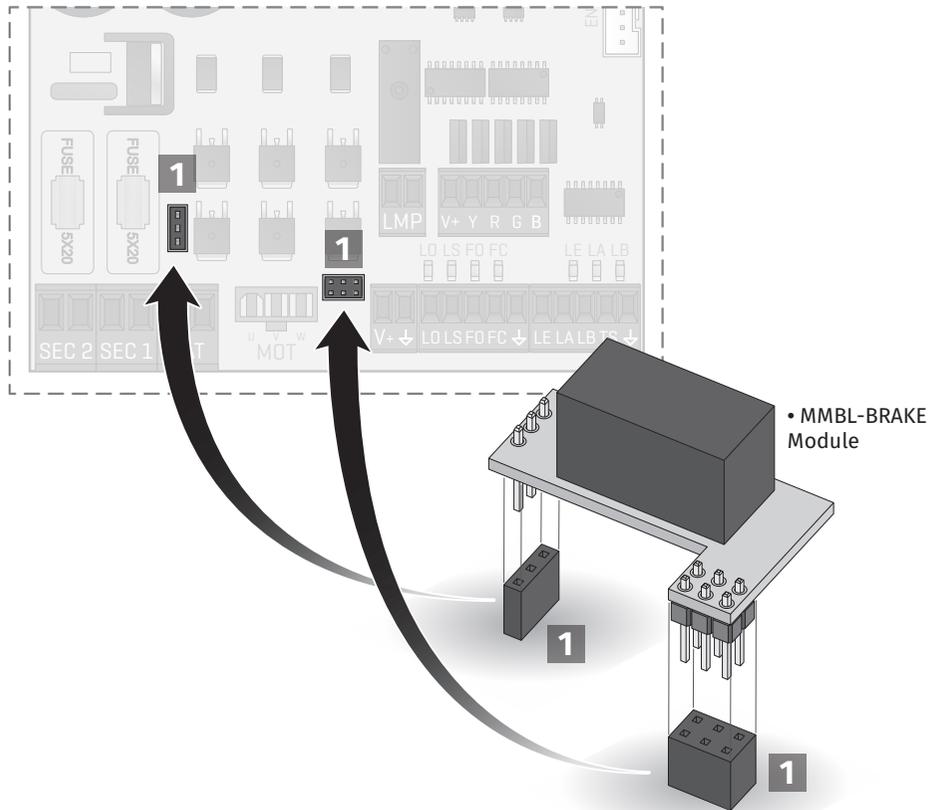
## SLIDING GATES



## 06. CONNECTION DIAGRAM

### MMBL-BRAKE MODULE (OPTIONAL)

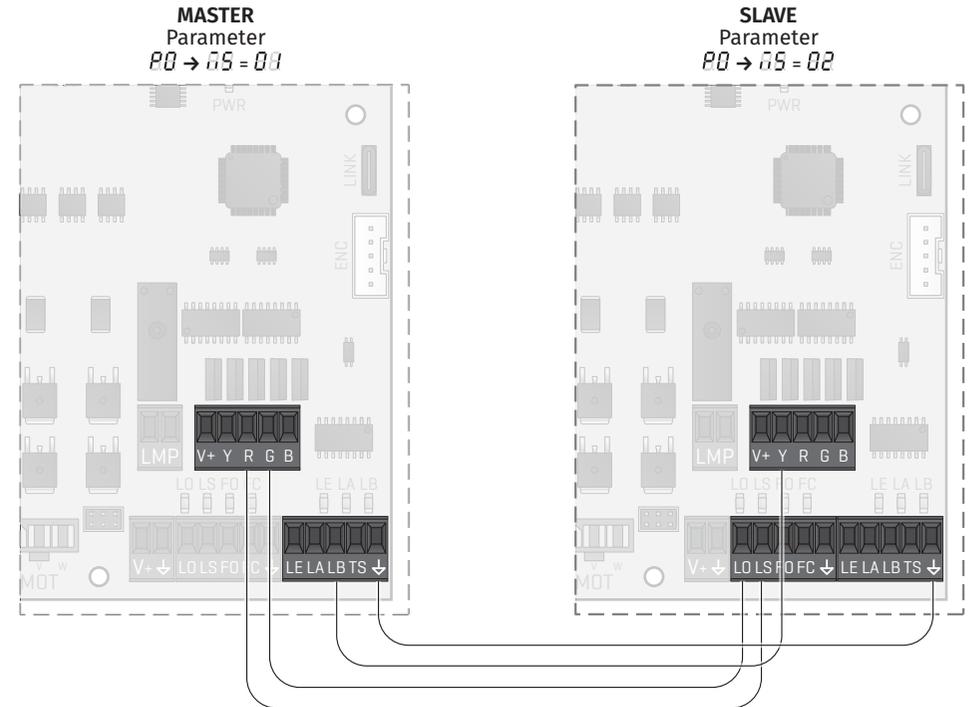
**i** In installations where the gate has a steep slope, it is recommended to use the **MMBL-BRAKE** brake module to reduce the reversibility of the motor.



**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.

