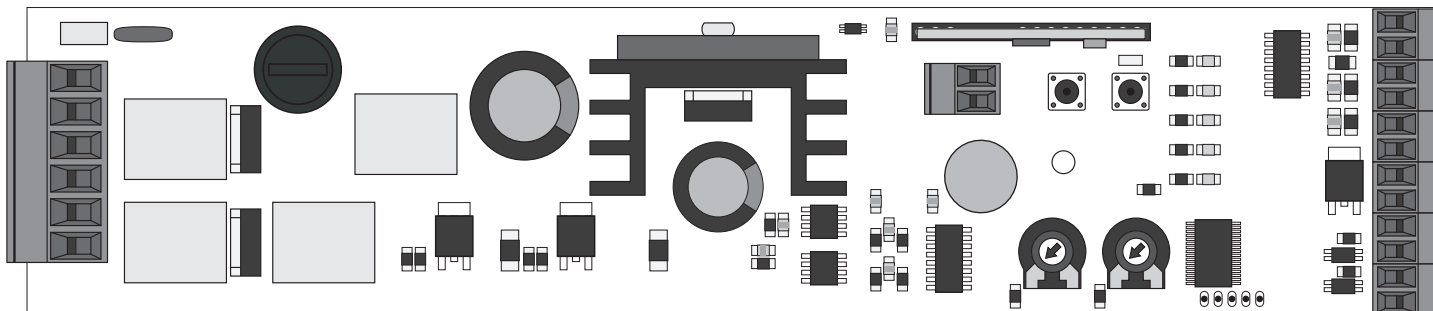




# MC18

## USER/INSTALLER MANUAL








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# 01. SAFETY INSTRUCTIONS

## WARNING:

	This product is certified in accordance with European Community (EC) safety standards.
	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 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.

## **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 central 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 central 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

# 01. SAFETY INSTRUCTIONS

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 central (only at 24V motors)

## 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



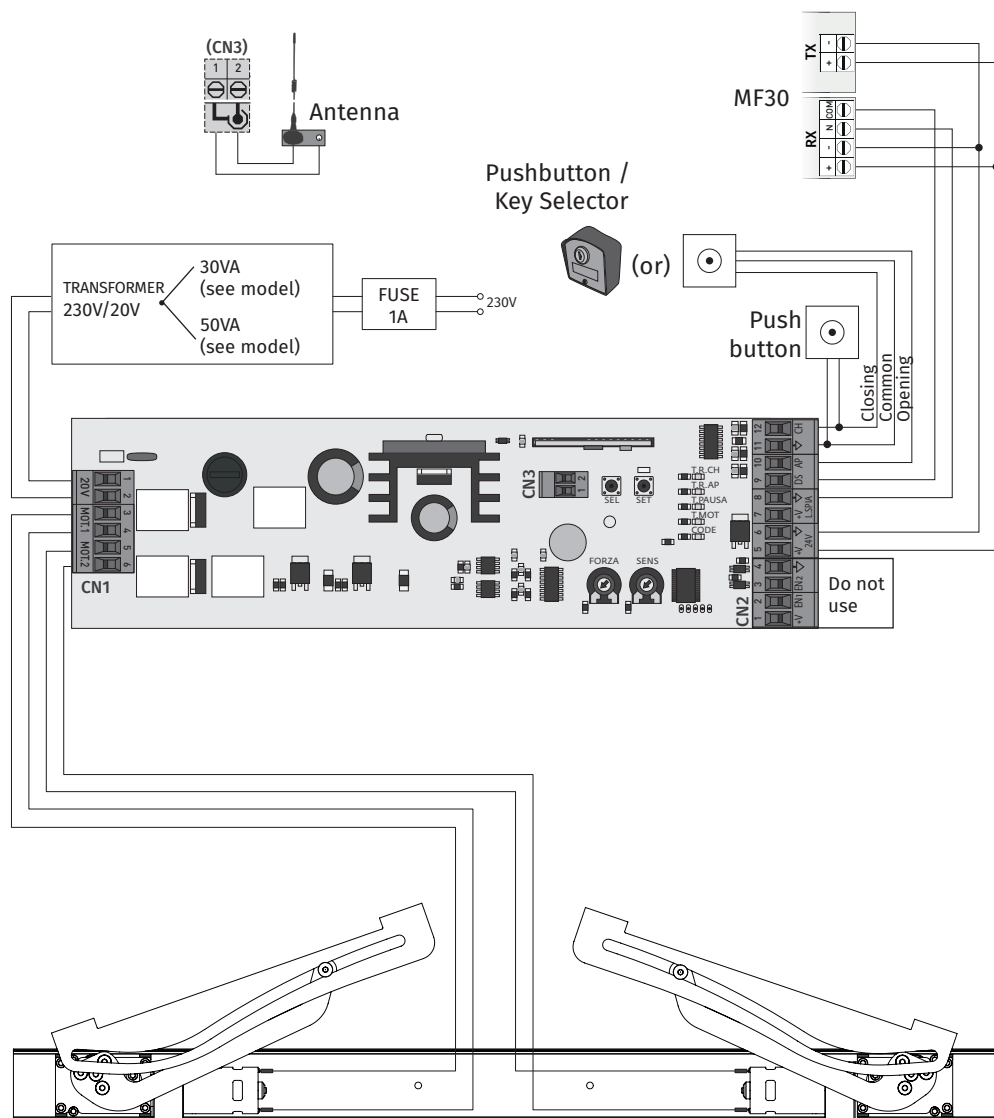
• Connectors information



• Buttons information

## 02. CONNECTION SCHEME

### CONNECTION OF COMPONENTS TO THE CONTROL BOARD



## 03. THE CONTROL BOARD

### TECHNICAL CHARACTERISTICS

The **MC18** is a 24V DC electronic control board, with a built-in radio control system, developed for the automation of shutters.

• Output for motors	24Vdc 2 x 50 W max.
• Signal light output	24Vdc 3 W max.
• Power supply for photocell	24Vdc 3 W max.
• Working temperature	-20 to +60 °C
• Built-in radio receiver	433,92 Mhz
• OP remote controls	12-18 Bit or Rolling Code
• Memory for remote controls	5
• Dimensions	110x121x47 mm.
• Transformer power supply	230V/20V 30VA (up to 1400mm) or 230V/50VA (over 1400mm)

CN1

- 01 • Input 20Vac 30/50 VA
- 02 • Input 20Vac 30/50 VA
- 03 • Output + 24V Motor 1
- 04 • Output - 24V Motor 1
- 05 • Output + 24V Motor 2
- 06 • Output - 24V Motor 2

CN2

- 01 • 12Vdc encoder power supply (do not use)
- 02 • Motor 1 encoder signal input (do not use)
- 03 • Motor 2 encoder signal input (do not use)
- 04 • GND encoder power supply (do not use)
- 05 • Photocell power supply + 24Vac 3W
- 06 • Photocell power supply (GND)
- 07 • Flashing light output + 24Vdc
- 08 • Common GND
- 09 • Safety device input (NC)
- 10 • Opening button Input (NA)
- 11 • Common GND input
- 12 • Closing button Input(NA)

## 03. THE CONTROL BOARD

### PRE-CONFIGURATION INDICATIONS

**CN3**  
01 • Antenna input (mass)  
02 • Antenna input (hot pole)

**LEDS**  
T. R. CH • Closing delay (page 6B)  
T. R. AP • Open delay (page 6A)  
T. PAUSA • Automatic closing time  
T. MOT • Motor working time programming (page 5B), slow-speed (page 7B)  
CODE • Remote control programming (page 5A), close button configuration (page 7A).

**CN2**  
**Photocells:**  
05 and 06 • This circuit allows powering photocells.  
OPENING: nothing happens; CLOSING: reverses the movement.  
  
**Flashing light:**  
07 and 08 • This output (24V DC 3W max) allows the connection of a flashing light to identify the automation status.  
CLOSED: OFF; OPEN: ON; IN MOVEMENT: ON.  
  
**Security devices:**  
09 and 11 • This circuit allows the connection of all types of safety devices, such as photocells, safety edges, etc.  
This device intervenes only when closing the shutter and, whenever activated, it reverses the direction of movement of the automatism.  
**Note:** If not used, you must have a Shunt (DS/↯)

#### • PROGRAM THE CONTROL BOARD - SEL/SET BUTTONS

**SEL button:** Selects the function to be changed. The selection is identified by the flashing of the LED corresponding to the currently selected function. By pressing the SEL button several times, you will cycle through the various functions to be programmed. The selection remains active for 10 seconds, after which the control board returns to its original state (no active selection).

**SET button:** Programs the selected function using the SEL button.



The SET button can be replaced by a remote control, as long as it is programmed.

## 03. THE CONTROL BOARD

### OPERATIONAL CHARACTERISTICS :

#### Operation with remote control buttons:

- The open button will open until the factory set time expires.
- When the shutter is opening, if you press the opening button, the window movement is automatically interrupted (the same happens when closing).  
If you press a button opposite to the movement of the shutter, the movement reverses.

#### Operation with remote control:

- The first pulse opens the shutter until the end of the motor time. The second impulse closes the shutter.  
When the shutter is opening, if you press the remote control before the motor time is up, the shutter movement is automatically stopped. If you press the remote control again, the shutter will move in the opposite direction.

### PHOTOCELLS

The control board allows the electrical supply and the connection of photocells. The intervention of photocells in the opening phase is not taken into account, in the closing phase it causes the inversion of the movement.

### MOTOR FORCE AND SPEED ADJUSTMENT

The control board is equipped with a VR1 regulation device to adjust the power and speed of the motors, which are fully managed by the microprocessor. Adjustment can be made within a range of 50% to 100% of maximum force. For each movement, there is an initial start-up, powering the motor for 2 seconds at maximum power, even if the motor force setting is changed.



**ATTENTION:** A variation of the VR1 regulation device requires the repetition of the T. MOT programming procedure, since the maneuver and slow-speed times may vary.

## 03. THE CONTROL BOARD

### OBSTACLES DETECTION

The control board is equipped with a VR2 adjustment device to adjust the sensitivity needed to detect the obstacle, which is fully managed by the microprocessor. Its adjustment can be made with a reaction time that varies between a minimum of 0.1 seconds and a maximum of 3 seconds.



**ATTENTION:** Obstacle detection works as follows: During opening - if it encounters an obstacle, it reverses for 2 seconds; During closing - if it encounters an obstacle, it reverses the maneuver completely until the point of total opening.

**NOTE:** In the last 5 sec. of maneuver the reaction to the obstacles is simply to stop.

### SLOW-SPEED

The motor slow-speed function is used to prevent the shutters from hitting at high speed at the end of the opening and closing phase. During motor time programming (see main menu), the control board also allows programming the slow-speed at the desired points (before total opening and closing). If the "Automatic programming" function is used, the "**slow-speed**" function must be activated (see extended menu 1).

### SIGNAL LIGHT

The control board allows the connection of a 24Vdc 3 W max. to show the state of automation. The light is off when the automation is closed, and remains on when moving or open.

## 04. PROGRAMMING MAIN MENU

### ESSENTIAL STEPS FOR INSTALLATION

- 01 • Connect all accessories according to the wiring diagram (page 4A).
- 02 • Connect the automation to a 230Vac power supply.
- 03 • In **EXTENDED MENU 1**, check that the slow-speed is ON/OFF and set it as you like.
- 04 • Make an automatic course programming - **EXTENDED MENU 2 (page 9B)**.
- 05 • Program a remote control (page 6B).

### MAIN MENU

This is the main menu of the MC18 control board, where you have access to the most important functions of its operation. The control board is supplied with the main menu active.

MAIN MENU		
LED	LED OFF	LED ON
• CODE	No code	Code inserted
• T. MOT	Motor time 30 sec.	Programmed time
• T. PAUSA	No automatic closing	With automatic closing
• T. R.AP	No opening delay	Programmed time
• T. R.CH	No closing delay	Programmed time

### CODE | REMOTE CONTROL PROGRAMMING

The control board only accepts Dip-Switch or Rolling Code MOTORLINE remote controls, and has a maximum capacity of 5 remote controls. When trying to program the 6th remote control, all programming LEDs will flash simultaneously, indicating full memory.

**There are 2 methods to program new remote controls:**

**Method A: 1 button to open and close**

- 01 • Press the **SEL** button as many times as necessary until the **CODE LED** starts flashing.
- 02 • Press the remote button you want to program for 1 second.
- 03 • The **LED** starts flashing fast, release the button and wait for the **LED** to stop flashing.

**Method B: 1 button to open + 1 button to close**

- 01 • Press the **SEL** button as many times as necessary until the **CODE LED** starts flashing.
- 02 • Press the button of the remote you want to program the opening for one second.
- 03 • The **LED** starts flashing fast, now press the close button or wait for it to stop flashing.

**To delete all configured remote controls:**

- 01 • Press the **SEL** button as many times as necessary until the **CODE LED** starts to flash.
- 02 • Press the **SET** button until the **CODE LED** turns OFF. All remote controls are erased.



## 04. PROGRAMMING MAIN MENU

### MAIN MENU

#### T. MOT | PROGRAMMING THE WORKING TIME OF THE MOTORS (4 MIN. MAXIMUM)

The control board is provided with a working time set to 30 seconds without slow-speed. If you want to change the working time of motors 1 and 2, the shutter must be closed.



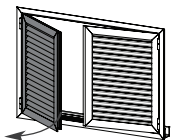
In case you want slow-speed, you must go to the Extended Menu 1 and activate the slow-speed (T.MOT., pg 8B).

Motor 1

#### 1º OPENING TIME PROGRAMMING

Motor 2

1 • Press the SEL button as many times as necessary until the T.MOT LED starts flashing.



2 • Press SET.

3 • Motor 1 starts opening.

4 • Press SET at the desired point for slow-speed.

5 • T. MOT. LED flashes slowly and the motor starts moving at slow-speed.

6 • Press SET to finish opening when it reaches the stopper.

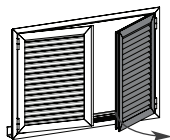
7 • LED T. MOT. flashes regularly again.

8 • Motor 2 starts opening.

9 • Press SET at the desired point for slow-speed.

10 • T. MOT. LED flashes slowly and the motor starts moving at slow-speed.

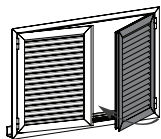
11 • Press SET to finish opening when it reaches the stopper.



Motor 2

#### 2º CLOSING TIME PROGRAMMING

Motor 1



12 • T. MOT. LED flashes regularly again.

13 • Motor 2 starts closing.

14 • Press SET at the desired point for slow-speed.

15 • T. MOT. LED. flashes slowly and the motor starts moving at slow-speed.

16 • Closing completes when reaching the stopper.

17 • Press SET to finish.

18 • T. MOT. LED flashes regularly again.

19 • Motor 1 starts closing.

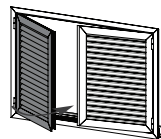
20 • Press SET at the desired point for slow-speed.

21 • T. MOT. LED flashes slowly and the motor starts moving at slow-speed.

22 • Closing completes when reaching the stopper.

23 • Press SET to finish.

24 • LED T. MOT. will stop flashing, wait for all LEDs to stop flashing.



## 04. PROGRAMMING MAIN MENU

### MAIN MENU

#### T. PAUSA | PROGRAMMING THE AUTOMATIC CLOSE TIME (4 MIN. MAXIMUM)

The control board allows automatic closing after a certain waiting time, up to a maximum of 4 minutes.

The control board is supplied by the manufacturer with this function disabled.

##### Programming:

01 • Press the SEL button as many times as necessary until the T.PAUSA LED starts flashing.

02 • Press the SET button, wait as long as you want and press SET again.

**NOTE • the time interval between pressing SET the 1st time and the 2nd time, represents the time that the motor will wait in opening until it starts automatic closing.**

03 • The T. PAUSA LED will be ON, signaling the success of the operation.

##### Delete:

01 • Press the SEL button as many times as necessary until the T.PAUSA LED starts flashing.

02 • Press SET twice in less than 2 seconds.

03 • The T. PAUSA LED. will turn OFF, signaling the success of the operation.

#### T. R. AP | OPENING DELAY PROGRAMMING (30 SEC. MAXIMUM)

With this function, you can delay the start of opening of motor 2 by up to 30 seconds in relation to motor 1.

The control board is delivered without opening delay.

##### Programming:

01 • Press the SEL button as many times as necessary until the T.R.AP LED starts flashing.

02 • Press the SET button, wait the amount of time you want and press SET again.

**NOTE • the time interval between pressing SET the 1st time and the 2nd time represents the time that motor 2 will delay in relation to motor 1.**

04 • The T.R.AP LED will be ON, signaling the success of the operation.

##### Delete:

01 • Press the SEL button until the T.R.AP LED starts flashing.

02 • Press the SET button twice within 2 seconds.

03 • The T.R.AP LED will turn OFF, signaling the success of the operation.



## 04. PROGRAMMING MAIN MENU

### MAIN MENU

#### T. R. CH | CLOSING DELAY PROGRAMMING (30 SEC. MAXIMUM)

With this function, you can delay the start of closing of motor 1 by up to 30 seconds in relation to motor 2.

The control board is delivered without closing delay.

#### Programming:

**01** • Press the **SEL** button as many times as necessary until the **T.R.CH LED** starts flashing.

**02** • Press the **SET** button, wait as long as you want and press **SET** again.

**NOTE** • the time interval between pressing **SET** the 1st time and the 2nd time represents the time that motor 1 will delay in relation to motor 2.

**03** • The **T. R. CH LED** will be ON permanently, signaling the memorization of the delay time between motor 1 and motor 2.

#### Delete:

**01** • Press the **SEL** button until the **T.R.CH LED** starts to flash.

**02** • Press the **SET** button twice within 2 seconds.

**03** • The **T.R.CH LED** will turn OFF, signaling the success of the operation.

### RESET FACTORY SETTING

If it is necessary to reset the factory settings, press the SEL and SET buttons simultaneously. All LEDs will turn red and then turn OFF. All red LEDs will light up and then turn off, with a complete reset to factory parameters.

## 05. PROGRAMMING EXTENDED MENU 1

### EXTENDED MENU 1

The control board is supplied by the manufacturer with an extended menu 1, which allows access to more functions of the control board.

To access the options of the extended menu 1, follow the instructions below:

**01** • Press and hold the **SET** button for 5 seconds and the **T.R.AP LED** and **T.R.CH LED** will flash alternately for 30 seconds.



If it is more than 30 seconds without selecting an option from the Extended Menu 1, it returns to the Main Menu.

#### EXTENDED MENU 1

LED	LED OFF	LED ON
• CODE	Separate open and close buttons	Closing button in step-by-step mode
• T. MOT	Slow-speed OFF	Slow-speed ON
• T. PAUSA	DS=inverts on opening	DS=stops on opening and closing
• T. R. AP	ON/OFF flash alternately	
• T. R. CH	ON/OFF flash alternately	

#### CODE | PUSH BUTTON CONFIGURATION

Inputs n°10 and n°12 of CN2 are configured as automation opening and closing buttons. It is possible to configure the button at input n°12 for a button with cyclic operation: **OPEN - STOP - CLOSE (step by step)**. Input button n°10 continues to control opening only.

**In order to change the operation of the buttons to:**

- opening button: continue to be opening only;

- closing button: to become a step-by-step button (cyclic) **OPEN - STOPS - CLOSE**.

**Follow the following steps:**

**01** • Access the extended menu 1 (page 8B).

**02** • Press the **SEL** button as many times as necessary until the **CODE LED** starts flashing.

**03** • Press **SET** to confirm.

**04** • The **CODE LED** will turn ON/OFF and the operation is complete.

**05** • If you want to go back to the two separate buttons, repeat the operation again and turn off the LED.

## 05. PROGRAMMING EXTENDED MENU 1

### EXTENDED MENU 1

#### T. MOT | SLOW-SPEED

With this function, you can activate/deactivate the slow-speed of the motors, both when opening and when closing.

##### Activate slow-speed - LED on / Deactivate slow-speed - LED off:

- 01 • Access the extended menu 1 (page 8B).
- 02 • Press the **SEL** button as many times as necessary until the **T.MOT LED** starts flashing.
- 03 • Press **SET** to confirm.
- 04 • The **T.MOT LED** will light up and the operation is completed.
- 05 • If you want to deactivate the slow-speed, repeat the operation again and turn off the LED.

#### T. PAUSA | PHOTOCCELL OPERATING LOGIC

The control board is factory configured to ignore the photocells when opening and invert the movement of the motors when closing.

In this function, you can change the action of the photocell, starting to stop when it is activated when opening and closing.

##### Photocells stop operating during opening and closing - LED on / Photocells cause inversion only during closing - LED off:

- 01 • Access the extended menu 1.
- 02 • Press the **SEL** button as many times as necessary until the **T.PAUSA LED** starts flashing.
- 03 • Press **SET** to confirm.
- 04 • The **T.PAUSA LED** will turn ON/OFF and the operation is complete.

## 06. PROGRAMMING EXTENDED MENU 2

### EXTENDED MENU 2

The control board is provided by the manufacturer with an extended menu 2, which allows access to more functions of the control board.

To access the options of the extended menu 2, follow the instructions below:

01 • Access the extended menu 1 (p. 8B).

02 • Press and hold the **SET** button for 5 seconds and the **T.R.AP LED** and **T.R.CH LED** will flash simultaneously.



If you are in Extended Menu 2 for more than 30 seconds without selecting an option, you will return to the Main Menu.

EXTENDED MENU 2		
LED	LED OFF	LED ON
• CODE (function not used)	Keep LED off	Keep LED off
• T. MOT	Automatic PGM OFF	Automatic PGM ON
• T. PAUSA	Automation of 2 motors	Automation of 1 motor
• T. R. AP	ON/OFF flashes simultaneously	
• T. R. CH	ON/OFF flashes simultaneously	

#### CODE | FUNCTION NOT USED

**This function has no use**, for that reason **keep the LED off**.

If you activate the function by accident, repeat the operation again and turn off the LED.

## 06. PROGRAMMING EXTENDED MENU 2

### EXTENDED MENU 2

#### T.MOT | AUTOMATIC PROGRAMMING

The control board makes it possible to automatically program the course without having to give slow-speed and stop orders.

##### For automatic programming (LED on) / Programming off (LED off):

- 01 • Unlock the motor, place the shutter halfway and lock the motor again.
- 02 • Access the Extended Menu 1 (p. 8B).
- 03 • Access the Extended Menu 2 (p.9B).
- 04 • Press the **SEL** button as many times as necessary until the **T.MOT LED** starts flashing.
- 05 • Press **SET** continuously (do not release the button until you finish the following maneuvers).
- 06 • Motor 2 will close to the limit switch or stopper.
- 07 • Motor 1 will close to the limit switch or stopper.
- 08 • Motor 1 will open to the limit switch or stopper.
- 09 • Motor 2 will open to the limit switch or stopper.
- 10 • Motor 2 will close to the limit switch or stopper.
- 11 • Motor 1 will close to the limit switch or stopper and automatic programming is complete.
- 12 • Release the **SET** button.



- If the motor moves in the opposite direction, turn OFF the power supply and change the motor wires.
- Keeping **SET** always pressed, until the end of programming, the control board will open and close completely.
- The control board will increase the slow-speed duration by 15% of the recognized course in the automatic programming.
- You can also use a remote control instead of the **SET** button (previously memorized in the control board).

#### T. PAUSA | AUTOMATION 1/2 MOTORS

To facilitate installation, the control board has two standard configurations for 1 or 2 motors. In the standard configuration, the control board has the typical management of a 2-motor automation. If you need to activate the standard management of a 1-motor automation, proceed as follows:

- 01 • Access the Extended Menu 2 (p. 9B).
- 02 • Press the **SEL** button as many times as necessary until the **T.PAUSA LED** starts flashing.
- 03 • Press **SET** once.
- 04 • The **T.PAUSA LED** will be permanently ON and the process is complete.
- 05 • Repeat the operation if you want to restore the previous configuration and turn off the LED.

## 07. PROGRAMMING EXTENDED MENU 3

### EXTENDED MENU 3

The control board is provided by the manufacturer with the Extended menu 3, which allows access to more functions of the control board.

If you want to change the speed of the slow-speed power executed by the control board, follow the instructions below:

- 01 • Access the extended menu 2 (p. 9B).
- 02 • Press and hold the **SET** button for 5 seconds and the **T.R.AP LED** and **T.R.CH LED** will flash alternately and then simultaneously.
- 03 • Use the **SEL** and **SET** buttons to select the desired option for 30 seconds.



If you are in Extended Menu 3 for more than 30 seconds without selecting an option, you will return to the Main Menu.

#### EXTENDED MENU 3

LEVEL	LED ON
• 1 Slower (slow-speed)	CODE
• 2 Medium (slow-speed)	CODE - T.MOT
• 3 Faster (slow-speed)	CODE - T.MOT - T. PAUSA
• T. R. AP	ON/OFF flash alternately/simultaneously
• T. R. CH	ON/OFF flash alternately/simultaneously

#### SLOW-SPEED PROGRAMMING

The control board allows you to program the slow-speed of the motors. It is possible to choose between 3 levels of speed, each combination of lit LEDs corresponds to a level.

In the factory setting the selected level is level 1.

- 01 • Access the extended menu 1 (p. 8B).
- 02 • Access the extended menu 2 (p. 9B).
- 03 • Access the extended menu 3 (p. 10B).
- 04 • Press the **SEL** button to select the desired speed level by lighting LEDs, while the others will flash.
- 05 • Press **SET** to confirm.

# 08. TROUBLESHOOTING

## INSTRUCTIONS FOR END CONSUMERS

## INSTRUCTIONS FOR SPECIALIZED TECHNICIANS

Anomaly	Procedure	Behavior	Procedure II	Find the source of the problem
• Motor does not work	• Check that the 230V power supply is connected to the automation and that the fuse is working correctly.	• Still not working	• Consult a qualified <b>MOTORLINE</b> technician.	<ol style="list-style-type: none"> <li>1 • Remove the mechanism cover;</li> <li>2 • Measure the 20V output of the transformer to detect the location of the fault;</li> </ol> <p><b>A) It has 20V:</b></p> <ol style="list-style-type: none"> <li>1 • Check that the control board is supplying the motor to detect whether the fault is in the motor or in the control board, measuring the output from the control board to the motors. Replace the damaged component or send it to service for diagnosis and repair.</li> </ol> <p><b>B) It does not have 20V:</b></p> <ol style="list-style-type: none"> <li>1 • Check the 230V input of the transformer. If you have 230V the problem is with the transformer. If not, the problem is with the fuse, electrical cables or the electrical current itself. Check all systems.</li> </ol>
• Motor does not move but makes noise	• Check if there are any mechanical problems with the shutter.	• Is the shutter stuck?	• Consult a qualified <b>MOTORLINE</b> technician.	<ol style="list-style-type: none"> <li>1 • Check all axes and movement systems associated with the shutter and automation to find out what the problem is.</li> </ol>
		• Does the shutter move easily?	• Consult a qualified <b>MOTORLINE</b> technician.	<ol style="list-style-type: none"> <li>1 • Turn OFF the motors of the control board and test them by connecting directly to a 24V battery to find out if it is faulty;</li> <li>2 • If the motors work, the problem is with the control board. Remove it and send it to technical services for diagnosis;</li> <li>3 • If the motors do not work, remove them and send them to the technical services for diagnosis.</li> </ol>
• Motor opens but does not close	<ol style="list-style-type: none"> <li>1 • Check if there is any obstacle in front of the photocells;</li> <li>2 • Check that the photocells are working. Pass your hand in front and check if the relay makes noise.</li> <li>3 • Check if any of the control devices (key selector, pushbutton, video intercom, etc.) on the shutter are stuck and sending a permanent signal;</li> </ol>	• The shutter opened but did not close.	• Consult a qualified <b>MOTORLINE</b> technician.	<ol style="list-style-type: none"> <li>1 • Check that the LEDs are ON to confirm the existence of power supply;</li> <li>2 • Check if the photocells are powered at the output of the control board;</li> <li>3 • Try closing.</li> </ol> <p><b>A) Closed:</b></p> <ol style="list-style-type: none"> <li>1 • Problem is in one of these two systems. Put a <b>SHUNT</b> between <b>DS</b> and <b>COM</b> and send the photocells to technical services.</li> </ol> <p><b>B) Did not close:</b></p> <ol style="list-style-type: none"> <li>1 • Problem is in the motor or in the control board. Give the order to close the shutter while measuring the power output from the control board to the motor. If it has 24V, the control board is working and the problem is with the motor.</li> <li>2 • If there is no power, the problem is with the control board.</li> </ol>
• Motor does not make complete route	• Release the motor and move the shutter manually to check the shutter for mechanical problems.	• Did you encounter problems?	• Consult a qualified <b>MOTORLINE</b> technician.	<ol style="list-style-type: none"> <li>1 • Check all axes and movement systems associated with the shutter and automation to find out what the problem is.</li> </ol>
		• Does the shutter move easily?	• Consult a qualified <b>MOTORLINE</b> technician.	<ol style="list-style-type: none"> <li>1 • Check that the shutter tests were well done;</li> <li>2 • Change the force on the Force and/or Sensitivity Potentiometer until the motor moves the shutter without inverting the direction;</li> <li>3 • This adjustment must be made in such a way that the shutter, when encountering an obstacle, reverses;</li> <li>4 • If even at the maximum power level the problem still persists, test the motor connected directly to a 24V battery to check if it has the power to open/close the shutter completely;</li> <li>5 • Change the force on the force and/or Sensitivity Potentiometer until the shutter reverses direction;</li> </ol>