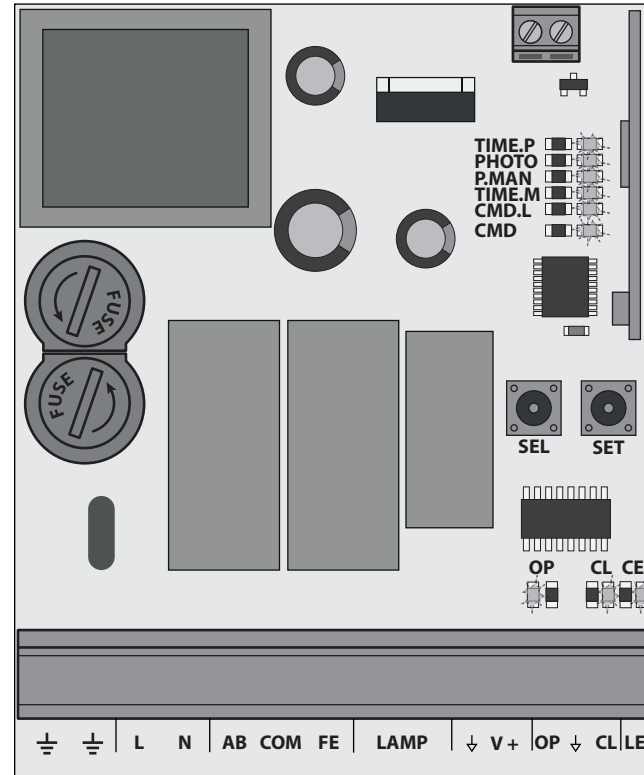




MC75

USER'S AND INSTALLER'S MANUAL



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01. SAFETY INSTRUCTIONS

	<p>This product is certified in accordance with European Community (EC) safety standards.</p>
	<p>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.</p>
	<p>(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.</p>
	<p>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.</p>
	<p>The different types of packaging (cardboard, plastic, etc.) must be subject to selective collection for recycling. Separate packaging and recycle it responsibly.</p>
	<p>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.</p>

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.

01. SAFETY INSTRUCTIONS

- 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

01. SAFETY INSTRUCTIONS

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



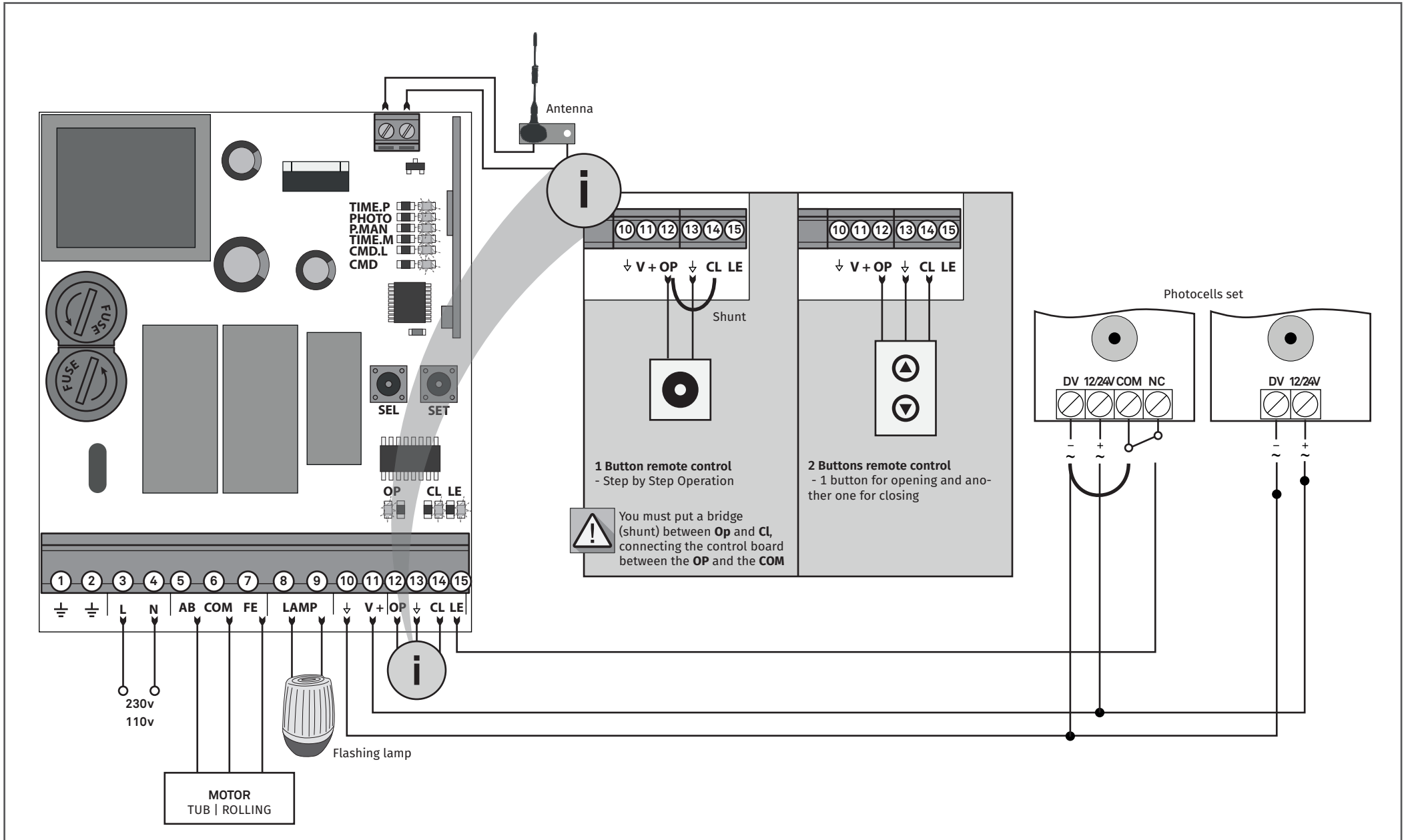
• Connectors information



• Buttons information

02. CONNECTIONS SCHEME

CONNECTING COMPONENTS TO THE CONTROL BOARD



03. THE CONTROL BOARD

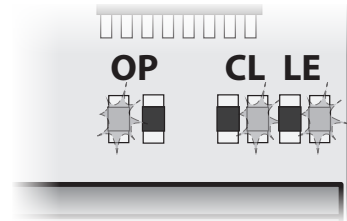
THECNICAL CHARACTERISTICS



The MC75 is a control board developed specifically for rolling motors (TUB and ROLLING range), which allows the programming of working time and pause time for automatic closing.

It has the ability to detect limit switch devices and when the motor is locked, and as such, the working time ends as soon as the curtain or rolling grilles reaches a limit switch and when it detects that the motor is locked (in effort).

	230V	110V
• Power Supply	230Vac 50/60Hz	110Vac 50/60Hz
• Motor output power	1500W max	1000W max
• Remote controls	12 Bits or Rolling Code	
• Maximum memory capacity	30 Codes	
• Working temperature	-20°C ~ 55°C	
• Built-in radio receiver	433,92 Mhz	
• Auxiliary accessory output	24Vdc/100mA	
• External lamp output	500W	300W
• Motor output fuse	Ø5x20mm 8Ah	Ø5x20mm 10Ah
Low voltage fuse for accessories output	Ø5x20mm 65mA	

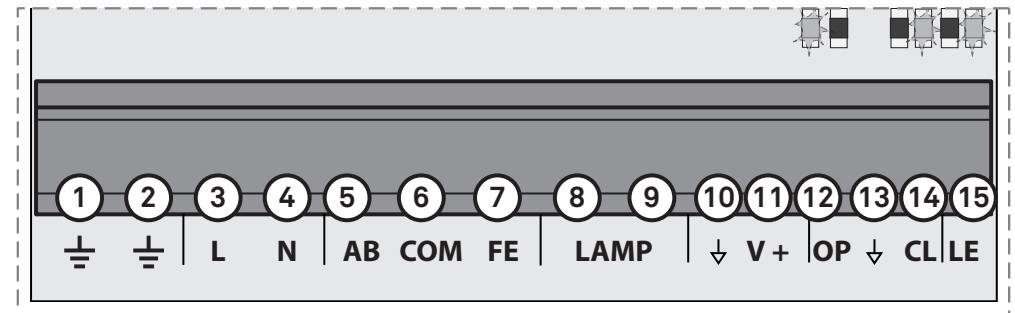
INFORMATION LEDS



LED	DESCRIPTION		
OP	Opening order	Receiving signal	No activity signal
CL	Closing order	Receiving signal	No activity signal
LE	Indication of the photocell Circuit Button	Detected photocells	Photocells not detected

03. THE CONTROL BOARD

CONNECTION CONNECTORS



1 • Ground connection	
2 • Ground connection	
3 • 230V/110V Power Supply - Phase (L)	Control board power supply connection
4 • 230V/110V Power Supply - Neutral (N)	
5 • Motor output - Opening (AB)	Connection of the opening and closing phases of the motor. If the direction of the motor is contrary to the intended direction, simply replace the two wires to reverse the direction.
6 • Motor output - Neutral (COM)	
7 • Motor output - Closing (FE)	
8 • External Lamp output - Phase	Connection for external lamp with maximum output duration of 4 min.
9 • External Lamp output - Neutral	
10 • Common (COM)	Device power output
11 • 24Vdc 100Ma Auxiliary output (V+)	
12 • NO input for push button - Opening (OP)	Circuit for connection of push button: Two button push button: Opening and closing control on each button. One button push button: Operates in Step-by-step mode (open-stop-close-stop ...) always with the same button. To do this, you must put a shunt between Op and CL, by connecting the push button between Op and COM.
13 • Common (COM)	
14 • NO input for push button - Closing (CL)	
15 • NC input for Photocells (LE)	This circuit allows the connection of all types of safety photocells. This device only intervenes in closing and pause operations, as follows: - In closing, stops and starts the complete opening of the automation - In pause time, it prevents the automation from starting the closing by holding it open.
[Complete circuit with COM (11 or 13)]	

04. MAIN MENU

LEDs



LEDs Main menu: The control board has a set of LEDs that allows to identify the status of the different functions.



LED	DESCRIPTION	ON	OFF
TIME P	Pause time	Programmed	Not Programmed
PHOTO	Enable Photocells	Active	Disabled
P. MAN	Human presence	Active	Disabled
TIME. M	Working time	Active	Disabled
CMD. L.	Lamp remote control	Programmed remote control (s)	No program. remote controls
CMD	Remote control	Programmed remote control (s)	No program. remote controls

2-BUTTON REMOTE CONTROL



Functionality - This function allows you to memorize a 2-button remote control via the control board.

Memorizing a 2-button remote control (normal operation):

- 01** • Press the **SEL** button as many times as necessary until the **CMD LED** starts blinking.
- 02** • Press the remote control button for closing for 1 second. The **CMD LED** flashes at twice the initial speed, signaling the button recording.
- 03** • Press a remote control button for opening for 1 second. The **CMD LED** stops blinking, signaling the button recording, and the **CMD.L LED** flashes. Wait for 30 seconds, the control board exits of programming mode and all LEDs stop blinking.



04. MAIN MENU

1-BUTTON REMOTE CONTROL



Functionality - This function allows you to memorize a 1-button remote control via the control board.

Memorizing a 1-button remote control (Step by Step operation):

- 01** • Press the **SEL** button as many times as necessary until the **CMD LED** starts blinking.
- 02** • Press the remote control closing button for 1 second. The **CMD LED** flashes at twice the initial speed, signaling the button recording.
- 03** • The remote control is memorized. Wait for 30 seconds, the control board exits the programming mode and all LEDs stop blinking.



REMOTE CONTROL FOR EXTERNAL LAMP CONTROL



Functionality - This function allows you to memorize a remote control to control the external lamp through the control board.

Memorize a remote control to control the external lamp:

- 01** • Press the **SEL** button as many times as necessary until the **CMD.L LED** starts blinking.
- 02** • Press the remote control button to control the lamp output for 1 second.
- 03** • The remote control is memorized. Wait for 30 seconds, the control board exits the programming mode and all LEDs stop blinking.



PROGRAMMING OF REMOTE CONTROLS



Functionality - This function allows you to program new remote controls via an already configured remote control.

Programming remote controls for opening/closing:

- 01** • With the rolling grilles fully open/closed, press the open/close button of a remote control already programmed for a time superior to 10 seconds. When the lamp blinks twice, the control board has entered on programming mode remotely.
- 02** • Push the closing button of the new remote control for 1 second. The lamp blinks once.
- 03** • Press the button of a new remote control for opening for 1 second. The lamp blinks twice and the remote control is programmed.



04. MAIN MENU

PROGRAMMING EXTERNAL LAMP REMOTE CONTROLS REMOTELY



Functionality - This function allows you to memorize the remote control to control the external lamp via an already configured remote control.

Remote Control programming for external lamp control:

- 01** • Press the lamp button of an already programmed remote control for more than 10 seconds. When the lamp blinks twice, it has entered on programming mode remotely.
- 02** • Press the button on the new remote control to control the lamp. The lamp blinks twice and the remote control is programmed.



Remote control(s) programmed



No programmed remote controls

DELETE ALL THE REMOTE CONTROLS



Functionality - This function allows you to delete all remote controls added to the control board.

- 01** • Press the **SEL** button as many times as necessary until the **CMD LED** blinks.
- 02** • Press the **SET** button once and the **CMD LED** goes off signaling the elimination of all the remote controls.



Remote control(s) programmed



No programmed remote controls

MOTORS WORKING TIME



Functionality - This function allows you to set the opening and closing time of the motor.

- 01** • Close the rolling grilles manually.
- 02** • Press the **SEL** button as many times as necessary until the **TIME.M LED** starts flashing.
- 03** • Press the **SET** button continuously for the time required for the opening operation. When you reach the end of the opening, release the **SET** button to end programming. If you have activated the "Detection of Limit Switch" option, this programming will end automatically when the control board detects the limit switch. Wait for 30 seconds, the control board exits the programming mode and all LEDs stop flashing.



Function on



Function off

04. MAIN MENU

HUMAN PRESENCE FUNCTION



Functionality - This function allows you to activate the Human presence function. When enabled, the automation only closes as long as the closing button is pressed.

- 01** • Press the **SEL** button as many times as necessary until the **P.MAN LED** blinks.
- 02** • Press the **SET** button to enable/disable the option. Wait for 30 seconds, the control board exits the programming mode and all LEDs stop blinking.



Function on



Function off

USE OF PHOTOCELLS



Functionality - This function allows you to activate/deactivate the use of the Photocells, to reverse and prevent the closing of the automation when the signal is interrupted.

- 01** • Press the **SEL** button as many times as necessary until the **LED PHOTO** blinks.
- 02** • Press the **SET** button to enable/disable the option. Wait for 30 seconds, the control board exits the programming mode and all LEDs stop blinking.



If you do not connect photocells to the control board, you must deactivate this function.



Function on



Function off

PAUSE TIME PROGRAMMING



Functionality - This function allows you to set the time the automation waits after opening until the automatic closing is started, for a maximum time of **10 minutes**.

- 01** • Press the **SEL** button as many times as necessary until the **TIME.P LED** starts blinking.
- 02** • Press the **SET** button to start counting time (the LED flashes at twice the initial speed), and press again the **SET** button to end the pause time count.



Function on



Function off

TOTAL RESET



Functionality - This function allows you to restore all the factory settings and all the memorized remote controls will be erased.

- 01** • Press the **SEL** and **SET** buttons at the same time for 5 seconds. The LEDs turn on and off, signaling that the operation has been done.

05. EXTENDED MENU

EXTENDED MENU 1 - LAMP/CORT - Output control for Lamp

Functionality - This menu allows you to set the type of external lamp operation. The control board is supplied by default with the lamp control via the remote control.

To access the **Extended Menu 1** options follow the steps:

01 • Press the **SET** button for more than 5 seconds. The **TIME.M** and **P.MAN** LEDs flash alternately.

02 • Press the **SEL** button to pass through the various operating modes.

03 • Press the **SET** button to save the selected option.

The control board will automatically exit programming mode.

EXTENDED MENU 1		
Operation	LED CMD	LED CMD.L
• Control by remote control	Deleted	Deleted
• Lamp lights up when opening and closing	On	Deleted
• Lamp lights up when opening, closing, and pause time (when active)	Deleted	On
• Lamp lights up when opening, closing, during pause time and stays on for three minutes after closing	On	On
• P.MAN	Flashing ON/OFF	
• TIME.M	Flashing OFF/ON	

EXTENDED MENU 2 - Programming of remote controls

Functionality - This menu allows you to activate or deactivate the possibility of programming new remote controls through an already configured remote control.

The control board is supplied with this PGN function enabled

01 • Access **Extended Menu 1** (consult instructions from the previous menu).

02 • Within the **Extended Menu 1**, press the **SET** button for more than 5 seconds. The **TIME.M** and **P.MAN** LEDs flash simultaneously.

03 • Press the **SEL** button to turn on/off the **CMD LED** by choosing the desired option!

04 • Press the **SET** button to save the selected option.

The control board will automatically exit programming mode.

EXTENDED MENU 2		
LED	LED OFF	LED ON
• CMD	Remote programming = ON	Remote programming = OFF
• P.MAN	Flashing ON/OFF	
• TIME.M	Flashing ON/OFF	

05. EXTENDED MENU

EXTENDED MENU 3 - Type of motor connected to the control board

Functionality - This menu allows you to choose the type of motor connected to the control board for effort inversion functions (motor locked).

The control board is supplied with **17RPM Motor** mode enabled.

To access the **Extended Menu 3** options follow the steps:

01 • Access **Extended Menu 2** (consult instructions from the previous menu).

02 • Within the **Extended Menu 2**, press the **SET** button for more than 5 seconds. The **TIME.M** and **P.MAN** LEDs flash alternately quickly.

03 • Press the **SEL** button to turn ON/OFF the **CMD LED** by choosing the desired option!

04 • Press the **SET** button to save the selected option.

The control board will automatically exit programming mode.

EXTENDED MENU 3		
LED	LED OFF	LED ON
• CMD	12RPM Motor	17RPM Motor
• P.MAN	Flashing ON/OFF	
• TIME.M	Flashing OFF/ON	

EXTENDED MENU 4 - Blocked motor detection











Functionality - This menu allows you to set the sensitivity levels for the locked motor detection. The control board is supplied at the factory with level 0 (detection disabled), and this value can be adjusted, ranging from 1 to 5 (1 less sensitive and 5 more sensitive).

To access the **Extended Menu 4** options, follow the instructions below:

01 • Access **Extension Menu 3** (see instructions in the previous menu).

02 • Within the **Extended Menu 3**, press the **SET** button for more than 5 seconds. The **LED TIME.P** and **PHOTO** will flash rapidly alternately.

03 • Press the **SEL** button as many times as necessary to change the values. The LEDs will light sequentially.

Level	LEDs				
1	CMD 				
2	CMD 	CMD.L 			
3	CMD 	CMD.L 	TIME.M 		
4	CMD 	CMD.L 	TIME.M 	P.MAN 	

EXTENDED MENU 4		
LED	LED off	LED on
• CMD	Disable detection	Enable detection
• PHOTO	Flashing ON/OFF	
• TIME.P	Flashing ON/OFF	

06. TROUBLESHOOTING

INSTRUCTIONS FOR FINAL CONSUMERS

INSTRUCTIONS FOR SPECIALIZED INSTALLERS

Anomaly	Procedure	Behavior	Procedure II	Discovering the origin of the problem
• Motor doesn't work	• Make sure you have 110/230V power supply connected to automation and if it is working properly.	• Still not working	• Consult a qualified MOTORLINE technician.	<ol style="list-style-type: none"> 1 • Open control board and check if it has 110/230V power supply; 2 • Check the control board input fuses; 3 • Disconnect the motor from control board and test it by connecting directly to 230Vdc power supply in order to find out if they have problems. 4 • If the motor works, the problem is on the control board. Pull it out and send it to the MOTORLINE technical services for diagnosis; 5 • If the motor doesn't work, remove it from installation site and send to the MOTORLINE technical services for diagnosis.
• Motor doesn't move but makes noise	• Unlock motor and move the rolling grilles by hand to check for mechanical problems on the movement.	• Encountered problems?	• Consult a qualified MOTORLINE technician.	1 • Check all motion axis and associated motion systems related with the rolling grilles and the automatism (bolts, hinges, etc.) to find out what is the problem.
		• The rolling grilles moves easily?	• Consult a qualified MOTORLINE technician.	<ol style="list-style-type: none"> 1 • If the motor works, the problem is on the control board. Pull it out and send it to the technical services for diagnosis; 2 • If the motor doesn't work, remove it from installation site and send to the technical services for diagnosis.
• Motor opens, but doesn't close	• Unlock motor and move the rolling grilles by hand to closed position. Lock motor again and turn off power supply for 5 seconds. Reconnect it and send order to open rolling grilles using remote control.	• Rolling grilles 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, push button, video intercom, etc.) of the rolling grilles are jammed and sending permanent signal to control unit; 3 • Consult a qualified MOTORLINE technician. 	<p>All control boards MOTORLINE have LEDs that easily allow to conclude which devices are with anomalies. All safety devices LEDs (DS) 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" circuits LEDs are turn On, there is a control device sending permanent signal.</p> <p>A) SECURITY SYSTEMS:</p> <ol style="list-style-type: none"> 1 • Close the photocell circuit with shunt or disable the PHOTO function. 2 • Check if the system is functional. 3 • Replace this device with a functional one, and verify if the automation functions correctly with all other devices. If you find any other faults, follow the same steps until you discover all the problems. <p>B) START SYSTEMS:</p> <ol style="list-style-type: none"> 1 • Disconnect all wires connected to the connector (PULL and PED). 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 to the technical services for diagnosis.</p>
• Motor doesn't make complete route	Unlock motor and move rolling grilles by hand to check for mechanical problems on the rolling grilles.	• Encountered problems?	• Consult an experienced rolling grilles expert.	1 • Check all motion axis and associated motion systems related with the rolling grilles and the automatism (bolts, hinges, etc.) to find out what is the problem.
		• The rolling grilles moves easily?	• Consult a qualified MOTORLINE technician.	<ol style="list-style-type: none"> 1 • Make sure that the limit switches are correctly tuned. 2 • They are properly tuned. 3 • Make a new programming starting with the rolling grilles completely closed. <ol style="list-style-type: none"> 3.1 • Deactivate the Extended Menu 4 (Blocked Motor Detection). 4 • If the motor doesn't work, remove it from installation site and send to the technical services for diagnosis. 5 • If motor work well and move rolling grilles at full force during the entire course, the problem is in the control board.