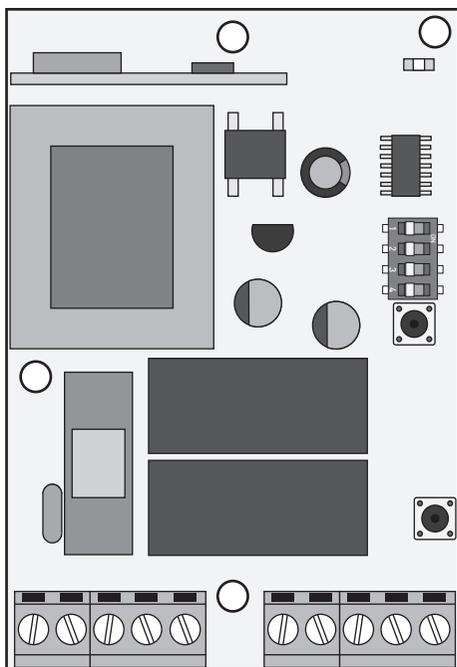


# CONTROL BOARD MC101

USER / INSTALLER MANUAL



**motorline**<sup>®</sup>  
PROFESSIONAL

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# 01. SAFETY INSTRUCTIONS

## ▷ STANDARDS TO FOLLOW

### ATTENTION:

▷ To ensure the safety of people, it is important that you read all the following instructions. Incorrect installation or incorrect use of the product can cause physical injury and material damage.

▷ Keep these instructions in a safe place for future reference.

▷ This product was designed and produced strictly for the use indicated in this manual. Any other use, not expressly indicated here, could compromise the good condition/operation of the product and/or be a source of danger.

▷ **ELECTROCELOS SA** is not responsible for the improper use of the product, or other use than that for which it was designed.

▷ **ELECTROCELOS SA** is not responsible if safety standards were not taken into account when installing the equipment, or for any deformation that may occur to it.

▷ **ELECTROCELOS SA** is not responsible for the safety and proper operation when using components not sold by them.

▷ Do not make any modifications to the operator components and / or their accessories.

▷ Before installation unplug the automatism from the source of power.

▷ The installer must inform the client how to handle the product in case of emergency and provide this manual to user.

▷ Keep remote controls away from children, to prevent the automated system from being activated involuntarily.

▷ The customer shall not, under any circumstances, attempt to repair or tune the automatism. Must call qualified technician only.

▷ Connect the automatism to a 230V plug with ground wire.

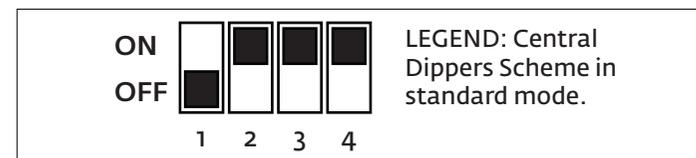
▷ Control board for indoor use.

# 02. THE CONTROL BOARD

## TECHNICAL SPECIFICATIONS ◀

▷ Power supply	AC 230V 50/60Hz
▷ Motor output	1500W máx.
▷ Auxiliary accessories output	12 VDC - 1W - 80mA máx.
▷ Working temperature	-20°C to 55°C
▷ Incorporated Radio Receptor	433,92 Mhz
▷ OP Transmitters	12 bits or Rolling Code
▷ Maximum memory capacity	46 Codes
▷ Input Fuse (standard)	Ø5x20mm F5AL250V 6AH

## DIPPERS FUNCTION ◀



	ON (up)	OFF (down)
Dip 1	Enables automatic closing after pause time.	Disables the automatic closing.
Dip 2	Enables the use/programming of 2 buttons either in transmitters as in push buttons. ▷1 button opens and the other closes.	Enables the use/programming of only 1 button in transmitters and push buttons with the function open-stop-close-stop (...).
Dip 3	Disables the PRESENT MAN function in closing maneuvers.	Enables the PRESENT MAN function in closing maneuvers. (it's necessary to keep the key pressed down to close).
Dip 4	Disables the photocells use (CN2-10).	Enables the photocells use (CN2-10).

## 02. CONTROL BOARD

### ▷ CONNECTORS

#### ▷ CONNECTOR'S DESCRIPTION

CN1

- 01 ▷ 230V Line Input (phase) - PH
- 02 ▷ 230V Line Input (neutral) - NEUT
- 03 ▷ Motor's Output - Common - COM MOT
- 04 ▷ Motor's Output - Closing - CLOS
- 05 ▷ Motor's Output - Opening - OPEN

CN2

- 06 ▷ Photocells power supply output - 12VDC
- 07 ▷ Common output - COM
- 08 ▷ Opening push-button input (NO) - UP
- 09 ▷ Closing push-button input (NO) - DOWN
- 10 ▷ Photocells input (NC) - PHOTO

Before proceeding to the control board configuration, please note the following points listed in the table below in order to better understand the control board function:

CN1

#### Motor:

**04 and 05** ▷ The motor phases must be connected in these two terminals. If the motor direction is the opposite to the desired simply switch the two wires to reverse direction.

CN2

#### Security circuit - Photocells:

**07 (COM) and 10** ▷ This circuit allows connection of all photocells types. This device intervenes only during the pause time and during closure. In pause time it keeps the automatism opened. When it is activated during closing maneuvers, it stops and starts a complete automatism opening.

#### Mecanic push-button:

**07 (COM), 08 e 09** ▷ This circuit allows the connection of mechanical push-buttons with two button for opening and closing.

**NOTA** ▷ You can, with a one button's push-button, control the opening and closing of the automation in step mode (open-stop-close-stop (...)) always with the same button. To enable this feature, you must put the DIP2 to OFF and connect the push-button only at terminal 08 - UP and terminal 07-COM.

## 03. CONFIGURATION

### TRANSMITTERS CONFIGURATION ◀

#### ▷ New transmitters configuration - 2 keys (DIP 2 ON)

- 1 ▷ Press the **P1** button once and the **LED CODE** will light during 6sec.
- 2 ▷ While the **CODE LED** is light up, press the opening desired transmitter key during 1sec and **CODE LED** will blink twice.
- 3 ▷ The **CODE LED** will be light up again and you must now press the transmitter key for closing during 1 sec and **CODE LED** will blink twice.
- 4 ▷ Let the **CODE LED** go off and the transmitter is now configured.

#### ▷ New transmitters configuration - 1 key (DIP 2 OFF)

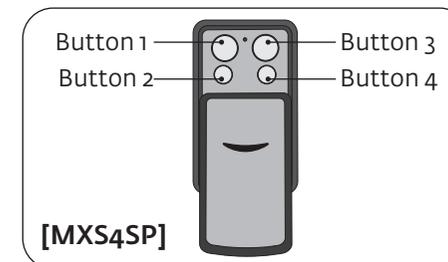
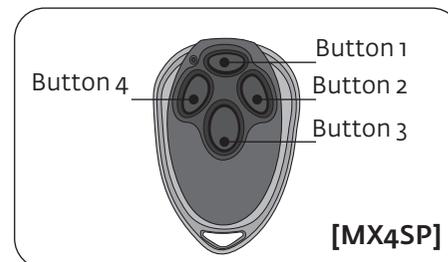
- 1 ▷ Press the **P1** button once and the **LED CODE** will light up during 6sec.
- 2 ▷ While the **CODE LED** is light up, press the desired transmitter key during 1sec and **CODE LED** will blink twice.
- 3 ▷ Let the **CODE LED** go off and the transmitter is now configured.

**NOTE:** After you program the first transmitter, the control board will only accept new transmitters of the same type. For example, if the first programmed transmitter is set for rolling code, the central will only accept more rolling code transmitters until a maximum of 46 transmitters.

#### ▷ Programming remote controls without access to the control board

##### • Using an already configured TRANSMITTER:

- 1 ▷ Press transmitter's 1 and 2 keys simultaneously for 3sec.
- 2 ▷ Press the new transmitter's desired opening key for 1sec.
- 3 ▷ Wait 3sec and press the desired closure key for 1sec.
- 4 ▷ Wait 6sec and can now use the new device.



## 03. CONFIGURATION

### ▷ TRANSMITTERS CONFIGURATION

#### • Using one PUSH-BUTTON connected to the control board:

- 1 ▶ Press for 2 seconds simultaneously the opening and closing buttons.
- 2 ▶ Press the new transmitter's desired opening key for 1sec.
- 3 ▶ Wait 3sec and press the desired closure key for 1sec.
- 4 ▶ Wait 6sec and can now use the new device.

#### ▶ Erase all configured transmitters

- 1 ▶ Press and hold the **P1 key** for 10sec. The **CODE LED** will remain light up the entire time and will start to blink at the end of 10sec.
- 2 ▶ Release the **P1 key** and **LED CODE** will stop flashing and remain lit for 3sec so that you configure a new transmitter (note the DIP2 position).
- 3 ▶ If you do not want to configure new transmitter, let the **CODE LED** go off without pressing any key.

### ▷ FEATURES

#### ▶ Adjusting the Working Time and the Pause Time

The **Working Time** can be set to 60sec, 90sec and 120sec.

To set any of these values, press the **P2** button as many times as needed until the desired option is defined **while the engine is running**.

The **Pause Time** can be set to 30sec, 60sec and 90sec.

To set any of these values, press the **P2** button repeatedly until the desired option is defined **while the engine is paused** (must enable auto-locking by putting DIP1-ON).

LED Blink	Working Time	LED Blink	Pause Time
1 blink	20 seconds	1 blink	20 seconds
2 blinks	25 seconds	2 blinks	25 seconds
3 blinks	30 seconds	3 blinks	30 seconds
4 blinks	35 seconds	4 blinks	35 seconds
5 blinks	40 seconds	5 blinks	40 seconds
6 blinks	50 seconds	6 blinks	50 seconds
7 blinks	60 seconds	7 blinks	60 seconds
8 blinks	80 seconds	8 blinks	80 seconds
repeated blinks	120 seconds	repeated blinks	120 seconds

## 03. CONFIGURATION

### FEATURES ◀

#### NOTE:

▶ The **Working Time** should be set to a value above the actual required working time. For example, if the automatism needs 40sec to go all the course, you must set the **Working Time** for 60sec.

#### ▶ Setting the motor working direction

To verify that the operating direction is correct, proceed as follows:

1 ▶ With a configured transmitter give order with the key that you have programmed in the first place and the automatism must begin to open. If it starts to close, swap the motor wires at terminals 4 and 5 from the CN1 connector.

#### ▶ Safety photocells (NC)

1 ▶ To enable the use of photocells, place the Dipper 4 to **OFF**.

Safety photocells act as follows:

▶ In opening maneuvers, has no action.

▶ When opened, the photocells cause the gate to remain open if there is an obstacle in front of them.

▶ In closing maneuvers, the gate stops and starts to open immediately, stopping at the end of the working time or at the opening limit-switch.

### INSTALLATION PROCESS ◀

1 ▶ Connect the control board to a 230V power supply (terminals 1 and 2 - CN1).

2 ▶ Configure the Dippers according to the used devices and the desired type of operation.

3 ▶ Configure transmitter.

**NOTE:** Be aware of any component connected to the control board as the motor or photocells.

This control board can operate all types of motor which doesn't exceed 1500W of power and photocells which doesn't exceed a consumption over 80mA.

## 04. DIAGNOSIS

### ▷ FAILURES DIAGNOSIS

#### ▷ DOOR OPENS BUT DOESN'T CLOSE

1 ▷ Put the **DIP4 ON** to disable the photocells. Try to close the automatism. If it closes, the problem is in photocells. If it doesn't close, the problem is in the control board or in the motor. Do the test below to diagnose.

#### ▷ MOTOR DOESN'T WORKING

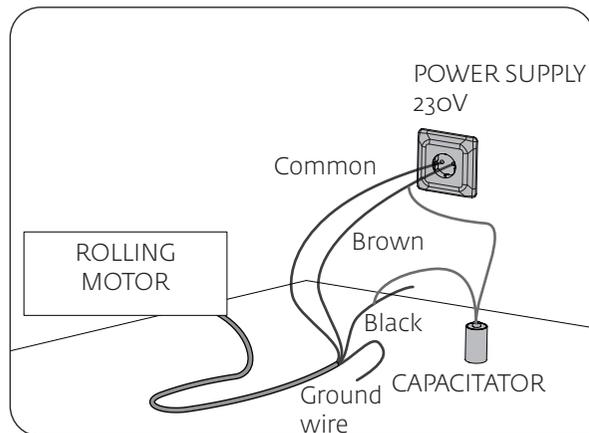
1 ▷ Do the test below to diagnose if the failure is in the engine or in another component. If the engine is running check the following:  
- Control board's power supply and control board's entrance fuse.



The control board comes from factory with a 5A250V fuse. This can be changed according to the motor consumption to a maximum of 8A250V!

### ▷ MOTOR DIAGNOSIS

The test below serves only to identify if the problem is in the motor or in the control board. If the engine is running connected to a power source, it means that the problem is in another component, such as control board or power supplies.



To detect which components have problems in an installation, it is sometimes necessary to perform a test with a direct connection to a 230V power supply.

#### NOTES:

▷ The order to connect the capacitor with the automatism wires is not important as long as you connect one with the Brown wire and the other with the Black wire;  
▷ The common should always be connected to the power supply.



All tests must be performed by professional technicians due to serious danger associated with the misuse of electrical systems!

## 05. CONNECTION SCHEME

### COMPONENT CONNECTION TO THE CONTROL BOARD ◀

