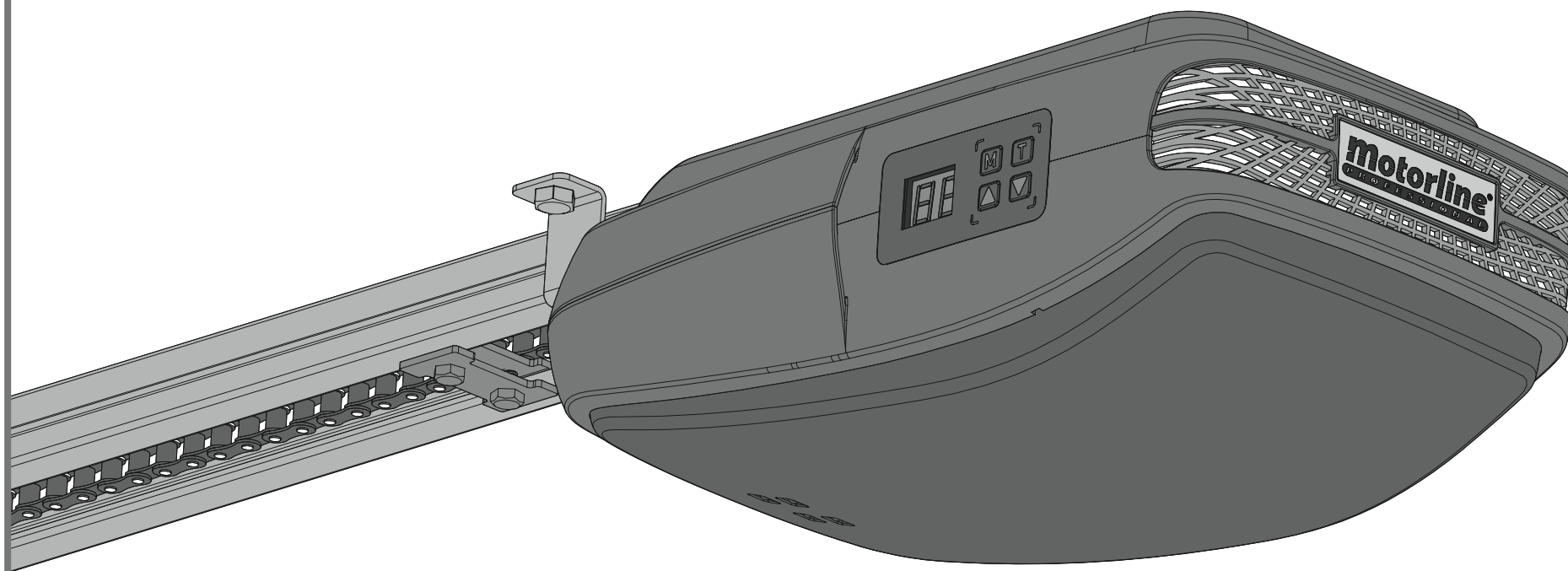




# ROSSO EVO

## USER'S AND INSTALLER'S MANUAL








# 00. CONTENT

## INDEX

<b>01. SAFETY INSTRUCTIONS</b>	2B
<b>02. PACKAGE</b>	
INSIDE THE PACKAGE	5A
<b>03. THE AUTOMATISM</b>	
TECHNICAL SPECIFICATIONS	5B
MANUAL BRAKE RELEASE	6A
REMOVE UPPER COVER	6B
REPLACE UPPER COVER	6B
CHANGING COURTESY LEDS	7A
CHANGING FUSE	7A
PRE-INSTALLATION INFORMATION	7B
<b>04. INSTALLATION</b>	
ENGINE'S FIXATION IN THE PIPELINE	8A
THE AUTOMATISM INSTALLATION	8B
INSTALLATION MAP	10
<b>05. PROGRAMMING</b>	
LEGEND	11A
MENU FUNCTIONS	11B
PROGRAMMING TRANSMITTERS	14B
<b>06. POST-INSTALLATION</b>	
STOPPER AT THE OPENING	15A
STRETCH RAIL CHAIN	15B
MAINTENANCE	15B
<b>07. DIAGNOSIS</b>	
CONNECTING ENGINE TO 24V BATTERY	16
<b>08. TROUBLESHOOTING</b>	
CONTROL BOARD ERROR MAP	17
INSTRUCTIONS FOR CONSUMERS   TECHNICAL PERSONNEL	18
<b>09. CENTRAL CONNECTIONS</b>	
ROSSO EVO CENTRAL	19

# 01. SAFETY INSTRUCTIONS

## ATTENTION:

	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.
	(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. very important. 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.

# 01. SAFETY INSTRUCTIONS

- 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 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 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.

## SYMBOLS LEGEND:



• Important safety notices



• Useful information



• Programming information



• Potentiometer information



• Connectors information



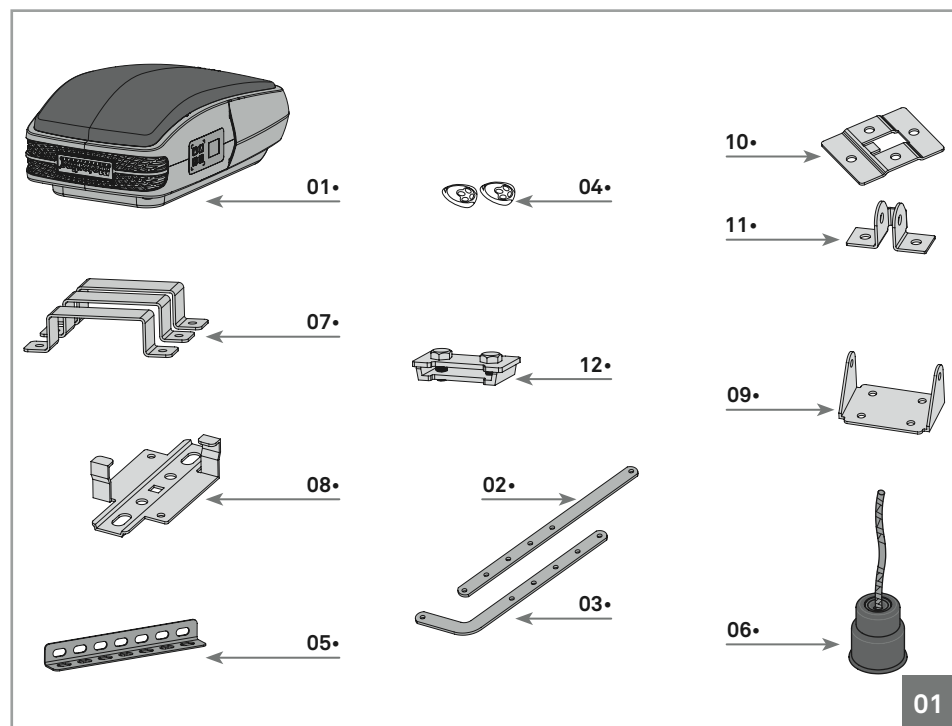
• Buttons information

## 02. PACKAGE

### INSIDE THE PACKAGE

Inside the package you will find the following components:

- 01 • 01 motor
- 02 • 01 main rod
- 03 • 01 secondary rod
- 04 • 02 transmitters
- 05 • 01 mounting bracket
- 06 • 01 unlock string
- 07 • 03 motor's fixing plate to the rail
- 08 • 01 rail's fixing plate to the ceiling
- 09 • 01 rail's fixing plate to the lintel
- 10 • 01 gate's fixing plate
- 11 • 01 reinforcement plate to gate's fixing plate
- 12 • 01 stopper



01

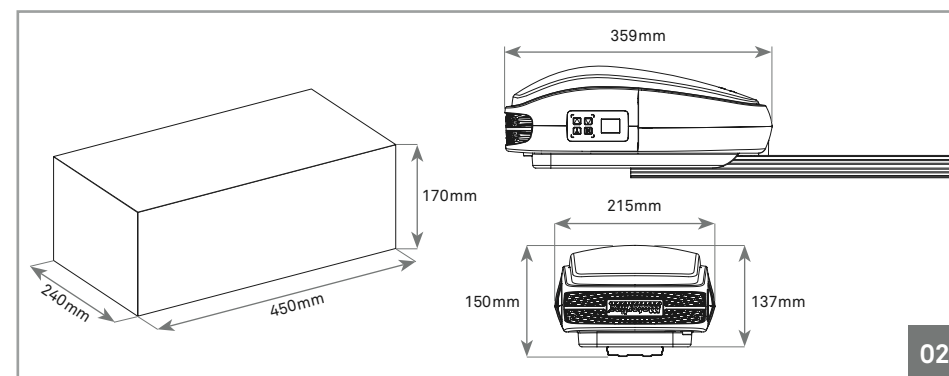
## 03. THE AUTOMATISM

### TECHNICAL SPECIFICATIONS

The **ROSSO EVO** specifications are as follow:

	ROSSO EVO 60	ROSSO EVO 100	ROSSO EVO 120
• Power Supply	AC 230V 50/60Hz	AC 230V 50/60Hz	AC 230V 50/60Hz
• Motor's Power	DC24V - 100W	DC24V - 120W	DC24V - 160W
• Velocity	140mm /sec	140mm /sec	140mm /sec
• Noise Level	LpA <= 56dB (A)	LpA <= 56dB (A)	LpA <= 56dB (A)
• Force	600N	1000N	1200N
• Operating temperature	-25°C a 55°C	-25°C a 55°C	-25°C a 55°C
• Thermal protection	120°C	120°C	120°C
• Protection grade	IP20	IP20	IP20
• Working frequency	80%	80%	80%
• Courtesy Light	3 minutes	3 minutes	3 minutes
• Maximum door area	10m <sup>2</sup>	15m <sup>2</sup>	18m <sup>2</sup>
• Memory	transmitters	transmitters	transmitters
• Code Type	Rolling Code	Rolling Code	Rolling Code
• Radio frequency	433,92 MHz	433,92 MHz	433,92 MHz

The automatism **ROSSO EVO** dimensions are as follows:



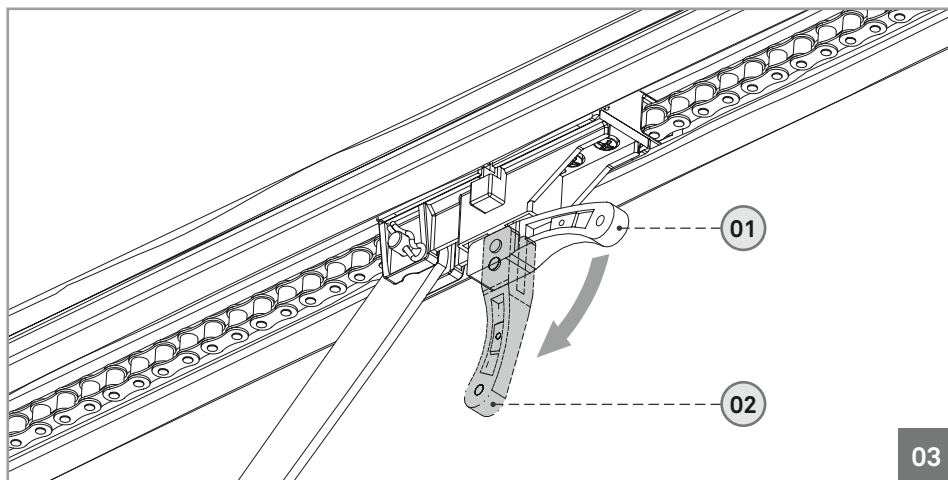
02

## 03. THE AUTOMATISM

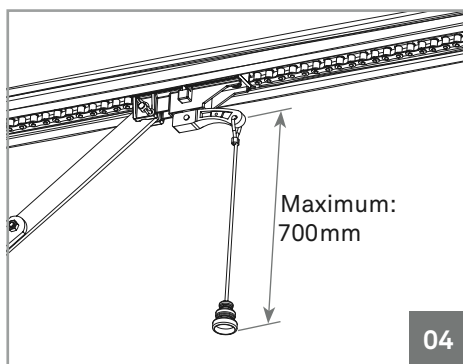
### MANUAL BRAKE RELEASE

The **ROSSO EVO** unlocking system is very simple and practical to use. To do so just pull the lever down (figure 03).

To block simply pull the lever to the original position.



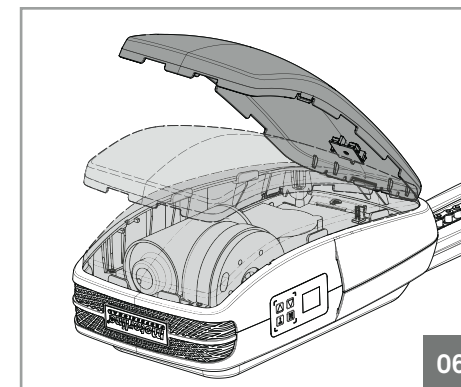
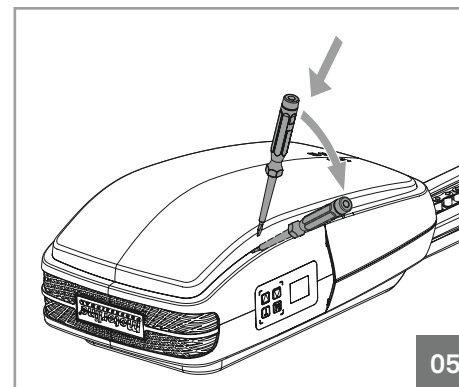
**Position 01** • Motor locked  
**Position 02** • Motor unlocked



← Together with the automatism it is also provided a string to apply on the unlock lever, which makes it even a more practical and comfortable process.

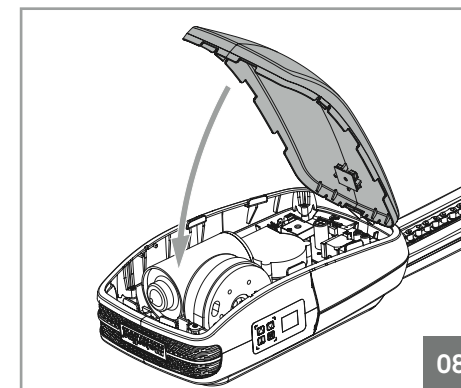
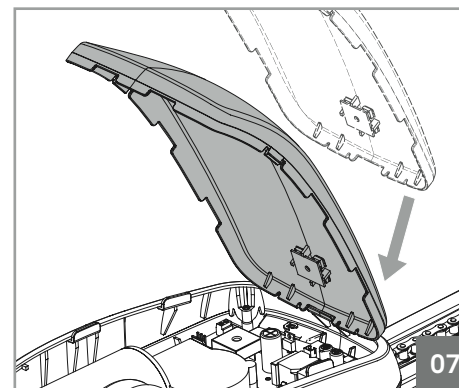
## 03. THE AUTOMATISM

### REMOVING TOP COVER



To remove the cover simply insert a small screwdriver into the side holes, and create a leverage effect to release the indents fittings between the top cover and the body. Then just remove the cover by lifting it.

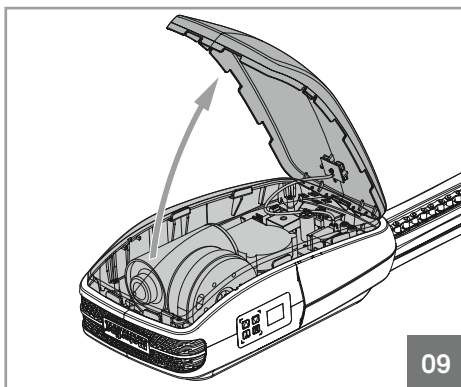
### REPLACE TOP COVER



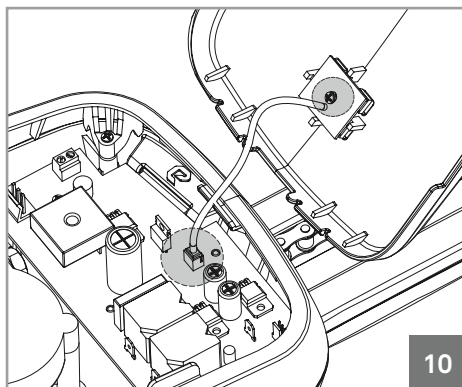
To replace the cover you must first fit the back as shown in the figure 07. Then simply turn down the cover and fit the front pressing down. The fittings will automatically secure the cover.

## 03. THE AUTOMATISM

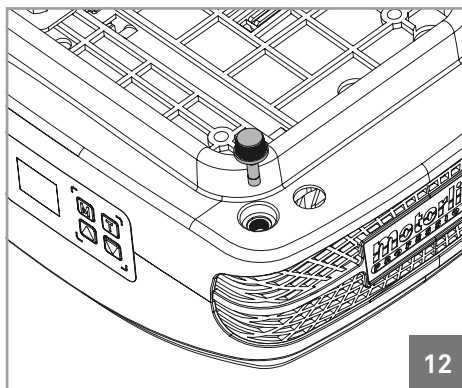
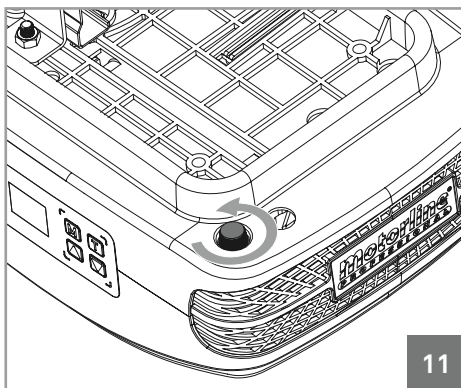
### CHANGING COURTESY LEDS



- To replace the LED board you must open the top cover and detach the wire of the LED from the control board. Loosen the screw which secures the LED board to the top cover and remove it. Now just put the new LED board, screw it, fit the wire in the control board and close back the cover on the motor.



### CHANGING FUSE



- To replace the fuse, first loosen it as visible in the image 11. Then just pull to remove it (image 12). Repeat the same steps in reverse order to put a new fuse. The operator uses a 250V 2,5A.

## 04. INSTALLATION

### INFORMATION PRE-INSTALLATION

For a correct operation of **ROSSO EVO**, you must take into account the following parameters before the installation:

- Read all steps on this manual at least once in order to get acquainted with the installation and configuration process.
  - Make sure the door's structure is solid and appropriate to be automated.
- Verify that the sectional door has no technical defects, such as friction points/ prison, that may jeopardize the automatism durability.
- Make sure the door is in good condition to install the motor. To do so, raise it manually to 800mm, 1600mm and 2000mm from the ground. *Check if the door remains suspended in these positions or descending. If the door starts to go up or down, it means that the springs are not well calibrated.*
- Check the surroundings. Carefully evaluate any hazards that may cause material damage, possible insects contact, infiltration, among others.
- Make sure that the automatism will be connected to a 230V, properly protected with Ground Wire.
- Make sure there is adequate protection against short-circuits / power surges and earthed in the Electrical Box.
- Be careful when handling directly the control board. Improper handling can damage some electrical components.
- Make sure you have all the necessary material prepared for installation.
- Evaluate the safety devices to be installed. This will ensure that unexpected accidents do not happen.



**It is very important that these precautions are respected!**

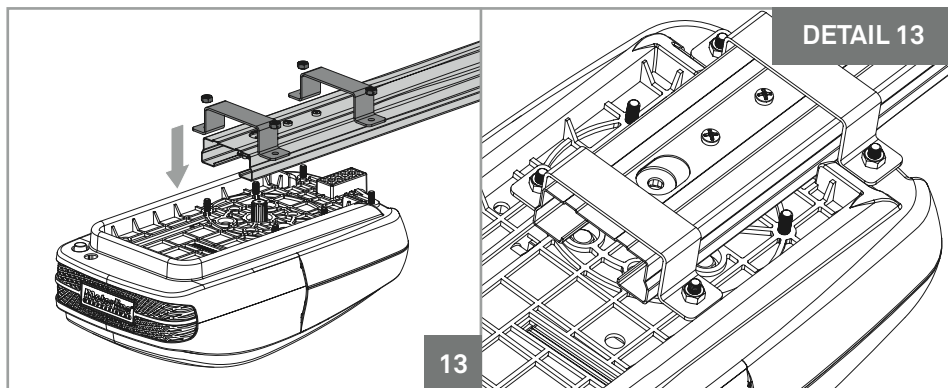
Only in this way the correct functioning and automatism durability can be achieved!

## 04. INSTALLATION

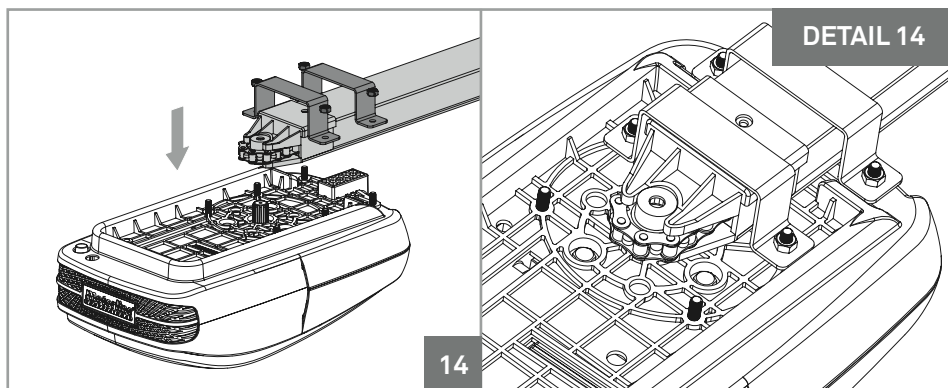
### FIXING THE MOTOR IN RAILS



With standard rails, you can only automate doors with maximum height of 2500mm.



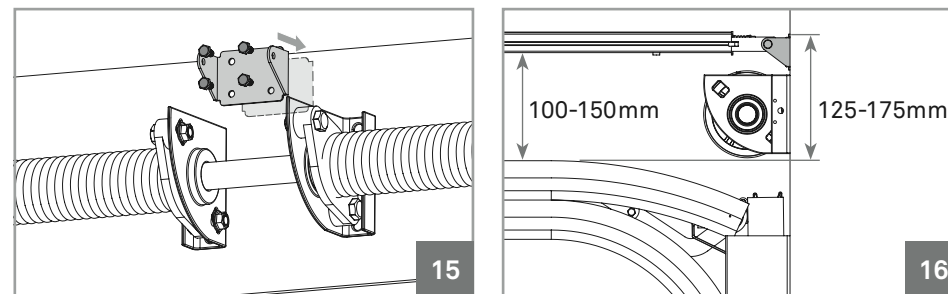
**01** • The steel rail and automatism attachment must be made using the plates and M6 nuts as shown above. Fasten 4 screws, leaving the two in the middle free.



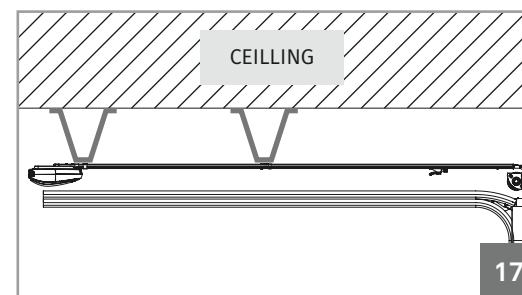
**02** • The aluminum rail and automatism attachment must be made using the plates and M6 nuts and as shown above. Tighten 4 screws, leaving the two in the front free.

## 04. INSTALLATION

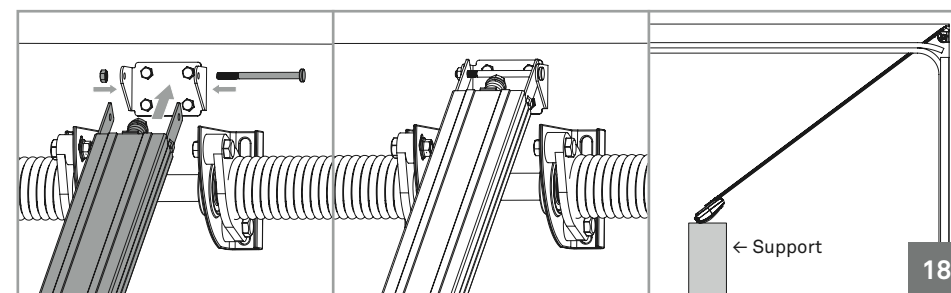
### AUTOMATISM INSTALLATION



**01** • Attach the rail's support plate to the lintel, as visible in the image 15. In the image 16 if can be seen the distance to keep between the gate rail and support plate's upper part (125-175mm).



← **Note** • If you are unable to fix the rail to the ceiling for not respecting the measures above, there should be created a solid structure to be able to fix the motor in correct measurements. This structure may be fixed to the ceiling as a visible on the image 17.

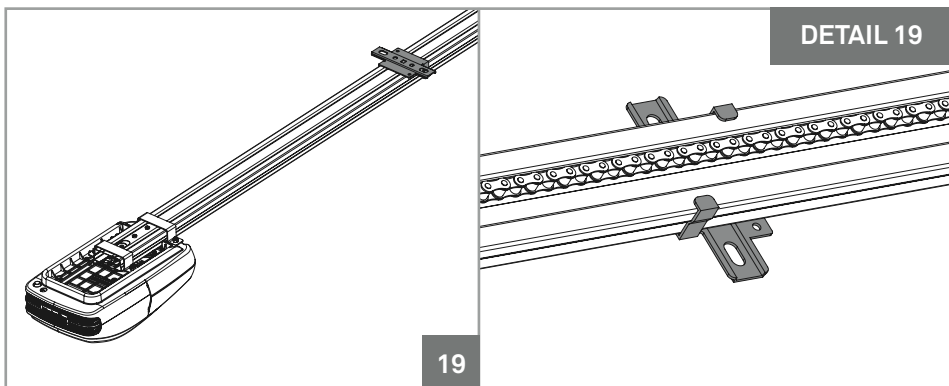


**02** • Fasten the rail in the fixation plate already attached. To facilitate the task, you can do it with the rail inclined (motor on the floor / support) which facilitates the installation since you only have to handle the area of rail to be fixed.

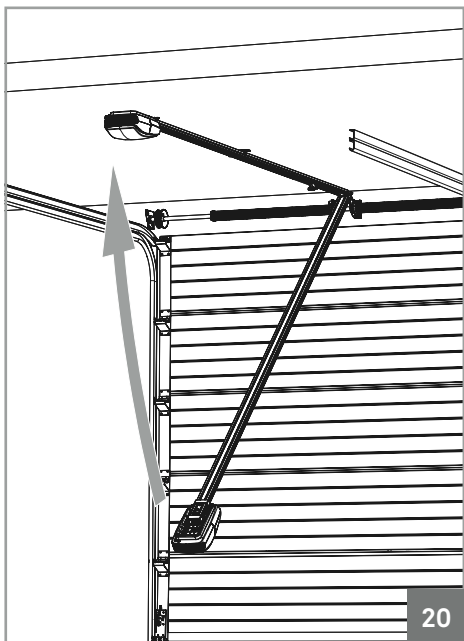


## 04. INSTALLATION

### AUTOMATISM INSTALLATION

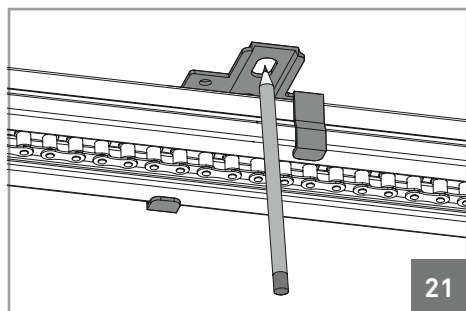


**03** • Place ceiling rail's fixation plate roughly halfway through the steel rail as visible in the pictures above.



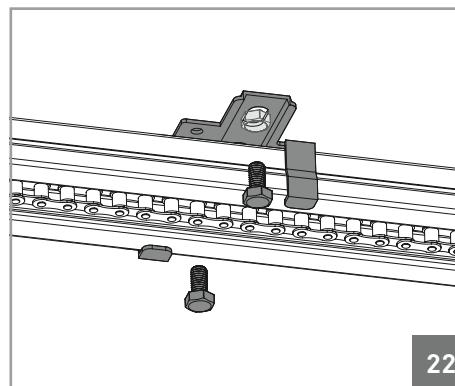
**04** • Raise up the motor until the rail is levelled horizontally. If necessary, you should create a support structure to a solid surface as shown on the previous page, so that the rail stays horizontally aligned (picture 17).

Mark the holes in the ceiling plate and/or structure and make the necessary holes to fix it.

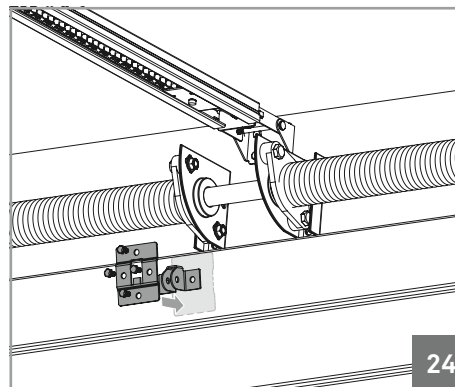
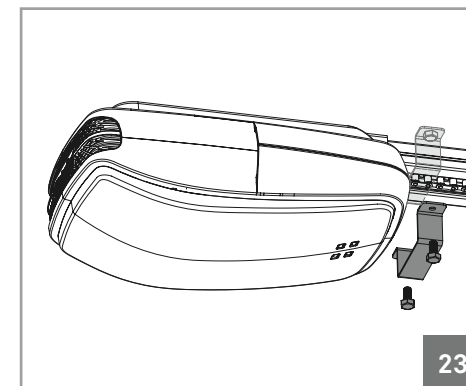


## 04. INSTALLATION

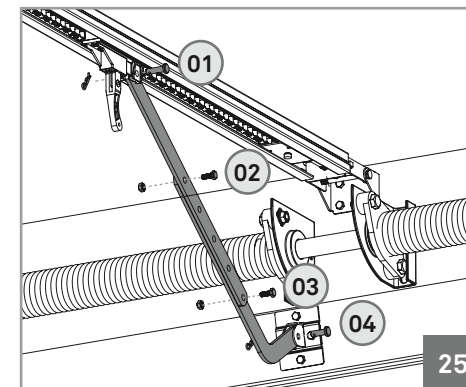
### AUTOMATISM INSTALLATION



**05** • After rising the rail and mark the holes, you should fix the plate with screws. After that, you should use bracket to reinforce the attachment, this time near the motor (image 23).



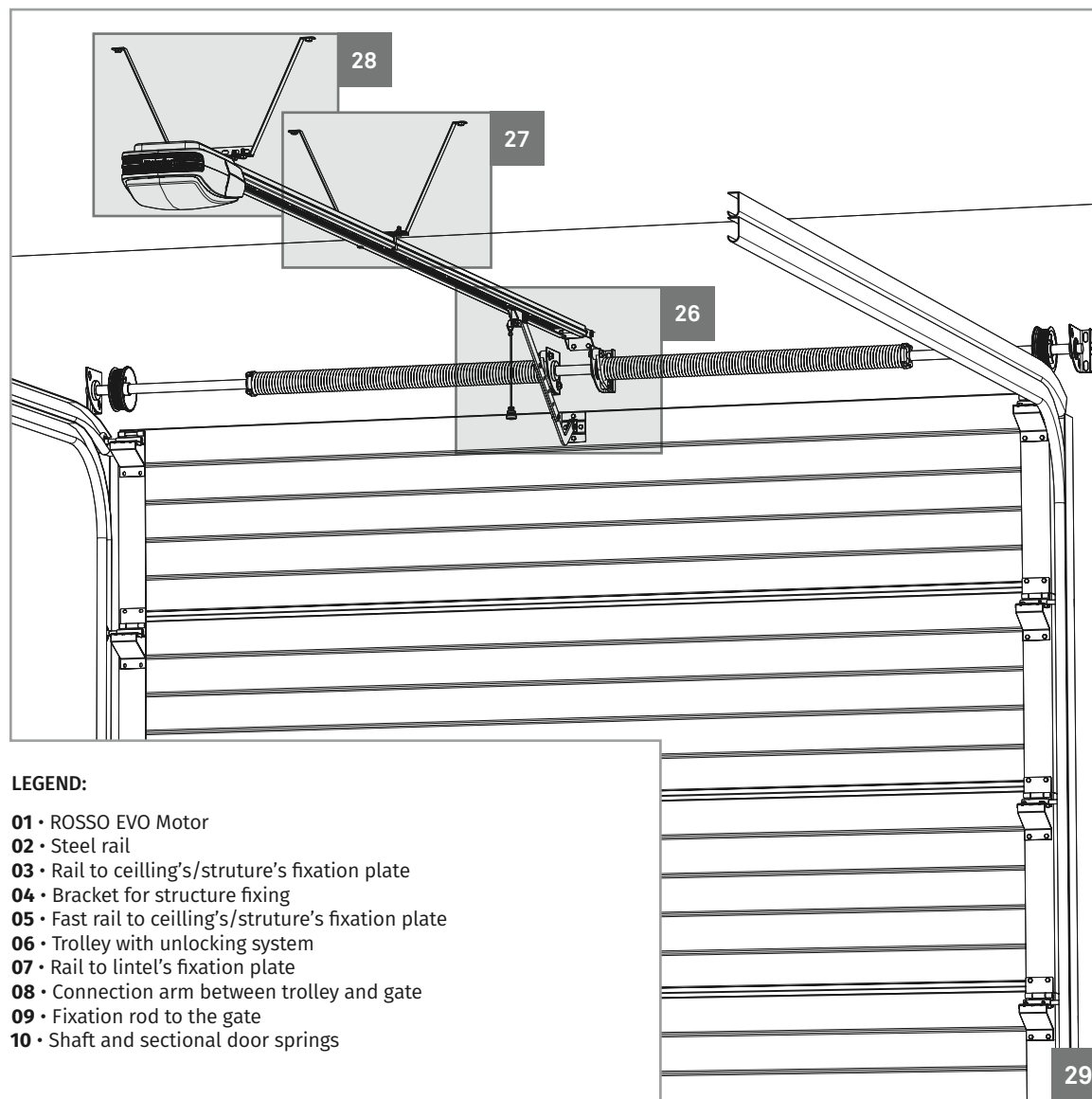
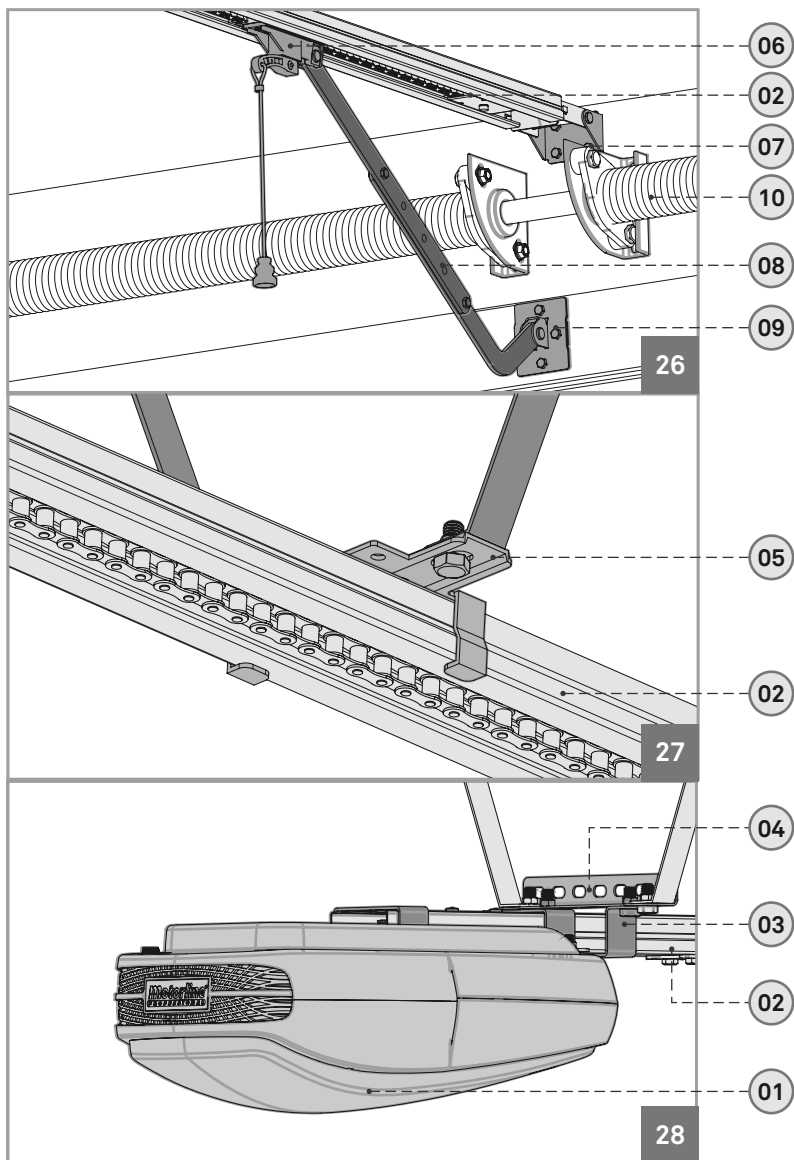
**06** • Attach the plates to the top of the door panel. The rods must be centered horizontally with the panel so that it stays aligned with the rail. It should also be fixed as higher as possible (picture 24).



**07** • Now attach the two connecting rods between the trolley and the panel's upper plate. Use the screws and M8 nuts to tighten 2 rods together (02 and 03), and 2 pins with pegs to fix them on the trolley and the gate (01 and 04).

# 04. INSTALLATION

## INSTALLATION MAP

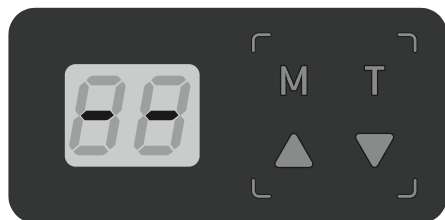


### LEGEND:

- 01 • ROSSO EVO Motor
- 02 • Steel rail
- 03 • Rail to ceiling's/struture's fixation plate
- 04 • Bracket for structure fixing
- 05 • Fast rail to ceiling's/struture's fixation plate
- 06 • Trolley with unlocking system
- 07 • Rail to lintel's fixation plate
- 08 • Connection arm between trolley and gate
- 09 • Fixation rod to the gate
- 10 • Shaft and sectional door springs

## 05. PROGRAMMING

### LEGEND

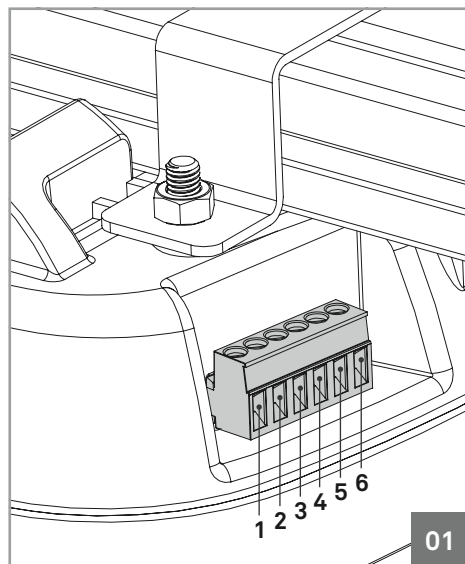


- Legend:**
- 88** • Display
  - M** • Main Menu
  - T** • Programming transmitters
  - ▲** • Up
  - ▼** • Down

When you turn the power on, the LCD displays a countdown from **99** to **11**, and the courtesy lamp stays on for 2 seconds. When the motor is in standby, the display shows the message **88**.

When the motor is opening, the display always shows the message **0P**.  
When the motor is closing, the display always shows the message **EE**.

**Note:** If you connect a signaling lamp, this will blink during any gate's movement cycle.



#### Conector Links:

- 1 • Pedestrian Gate (NC contact)
- 2 • PB (contact NO)
- 3 • PE (contact NC)
- 4 • GND (common)
- 5 • +24V
- 6 • Extern Lamp (max. 24V 5W)

## 05. PROGRAMMING

### MENU FUNCTIONS

The control board has a main menu which allows access to all the different settings of the automatism.

<b>P0</b>	Programming the "Follow Me" function	<b>P5</b>	Enable/disable condominium function
<b>P1</b>	Programming opening and closing courses	<b>P6</b>	Programming maintenance warnings
<b>P2</b>	Programming the automatism force level	<b>P7</b>	Programming transmitters using already configured transmitters
<b>P3</b>	Enable/disable safety photocells	<b>P8</b>	Counting of maneuvers
<b>P4</b>	Programming the self-closing feature	<b>P9</b>	Enable/disable the service door



#### Start all the programs from the stand-by mode (--)!

All the menu configuration instruction in this manual have been performed using as starting point the stand-by mode (--).

**Begin programming the P1 menu with the gate closed, since the first maneuver configuration will be the opening.**

### **88** • Programming the "Follow Me" function

- 01** • Press the **M** button for 4 seconds to enter the programming menu.
  - 02** • The display will show **P1**. Press **▲** key to access **P0**.
  - 03** • Press **M** key once to access the submenu.
  - 04** • The display will show the currently set value. You can now select another option using the **▲** or **▼** keys to select the desired value for the "Follow Me".
- Note:** Each value corresponds to the seconds that the automation waits to close.
- Example: **02** corresponds to **2 seconds**.
  - 05** • Press the **M** key during 2 seconds to confirm the selected option.

**Functionality** • The "Follow Me" function automatically closes the gate, after the photocells detect the passage of people or vehicles.

**The time space between the passage of cars/persons through the photocells and the start of the gate closing maneuver can be set from 0 to 10 seconds.**



This function works only if the **P3** and **P4** functions are **enabled**.

## 05. PROGRAMMING

### MENU FUNCTIONS

#### **00** • Programming opening and closing courses

- 01** • Press the **M** key for 4 seconds to enter the programming menu.
- 02** • The display will show **P1** and press the **M** key once to enter the submenu.
- 03** • The display will show **OP** and you can now set the opening limit using the **←** or **→** keys to adjust it.
- 04** • Press the **M** key for 2sec to confirm the opened position.
- 05** • The display will show **CL** and you can now configure the closing limit using the same **←** or **→** keys.
- 06** • Press the **M** button for 2sec to confirm the closed position. The control board saves the configuration and exits the programming mode. The LEDs light up for 2sec and the gate starts to open and close automatically to the programmed limits showing the message **OP** during the opening and **CL** during the closing. When it finishes closing, the control board will exit to the stand-by mode (--).



If it stays more than **20sec** without pressing any key, the control board will exit every programming and automatically go to stand-by mode (--) without saving any action.

#### **02** • Programming the automatism force level

- 01** • Press the **M** key for 4 seconds to enter the programming menu.
- 02** • The display will show **P1** and press **←** or **→** keys repeatedly until it shows **P2**.
- 03** • Press the **M** key once to access this submenu.
- 04** • The display will show a value between **F1** and **F9**, which identifies the strength level when the motor is configured. Use the **←** or **→** keys to select the desired option, being **F1** the minimum force and **F9** the maximum.
- 05** • Press the **M** key once to save this option.
- 06** • The control board will exit to standby mode (--) and the configuration is complete.

**Nota** • The control board comes with the **F4** level configured from the factory.

## 05. PROGRAMMING

### MENU FUNCTIONS

#### **03** • Enable/disable safety photocells

- 01** • Press the **M** button for 4 seconds to enter the programming menu.
- 02** • The display will show **P1** and press **←** or **→** keys repeatedly until it shows **P3**.
- 03** • Press the **M** key once to access this submenu.
- 04** • The display will show the value **H0** or **H1**, which identifies the option in which the central is configured. Use the **←** or **→** keys to select the desired option. **H0** disables the use of photocells and **H1** activates it.
- 05** • Press the **M** key once to save this option.
- 06** • The control board will exit to standby mode (--) and the configuration is complete.

**Functionality** • When the use of photocells is active and some obstacle cross them when the door is closing, the door will reverse direction beginning to open.

**Note** • The use of photocells comes disabled by the factory (**H0**).



**Start all programs from the stand-by mode (-)**

If it stays more than **20sec** without pressing any key, the controlboard will exit the state and will automatically go to stand-by mode without saving any action.

#### **04** • Programming the self-closing feature

- 01** • Press the **M** button for 4 seconds to enter the programming menu.
- 02** • The display will show **P1** and press **←** or **→** keys repeatedly until it shows **P4**.
- 03** • Press the **M** key once to access this submenu.
- 04** • The display will show a value between **00** and **90**, which identifies the time in seconds that the engine is on hold since the opening ends until start automatic closing. Use the **←** or **→** buttons to select the desired option.
- 05** • Press the **M** key once to save this option.
- 06** • The control board will exit to standby mode (--) and the configuration is complete.

**Note** • The option **00** disables the automatic closing, so the gate will only close if it receives an order from a configured device.

Any other option sets the automatic closing time, being the minimum 10 seconds (option 10) and the maximum 90 seconds (option **90**).

## 05. PROGRAMMING

### MENU FUNCTIONS

#### **89** • Enable/disable function condominium

- 01** • Press the **M** button for 4 seconds to enter the programming menu.
- 02** • The display will show **P1** and press or keys repeatedly until it shows **P5**.
- 03** • Press the **M** key once to access this submenu.
- 04** • The display will show the value **H0** or **H1**, which identifies the option in which the central is configured. Use the or buttons to select the desired option.
- 05** • Press the **M** key once to save this option.
- 06** • The control board will exit to standby mode (--) and the configuration is complete.

**Functionality** • This function causes the central to ignore all orders for the opening course sent by configured devices.

- If you press the transmitter during the opening, the order is rejected and it continues to open
  - If you press with the door completely open, it will begin to close.
  - If you press during closing, the gate reverses direction and starts to open.
- When disabled, you can control the opening or closing of the gate whenever you want, and their behavior is open-stop-close-stop-open (...) by each time you press the transmitter.



**Note** • The **P4** and **P5** functions, when activated, prevent the gate to stay open. This way the gate will always open completely, starting the closure after the pause time defined in **P4**.

#### **88** • Programming maintenance warnings

- 01** • Press the **M** key for 4 seconds to enter the programming menu.
- 02** • The display will show **P1** and press or keys repeatedly until it shows **P6**.
- 03** • Press the **M** key once to access this submenu.
- 04** • The display will show a value between 00 and 45, which identifies the thousands of maneuvers to which the motor will emit a warning maintenance light. Use the or keys to put on the desired option.
- 05** • Press the **M** key once to save this option.
- 06** • The control board will exit to standby mode (--) and the configuration is complete.

**Functionality** • This notice serves to schedule revisions to the automatism, gate or springs after a certain number of complete maneuvers (open-stop-close-stop). When the automatismo completes the number of maneuvers defined by this menu, the LEDs will blink during 2 minutes after every maneuver, to emit the maintenance warning.

**Note** • The option **00** disables the maintenance warning. Any other option defines thousands of operations, the lowest value is 5000 operations (option **05**) and the maximum is 45000 operations (option **45**).

## 05. PROGRAMMING

### MENU FUNCTIONS

Whenever you want to reconfigure this option, you must perform two configurations. First, set the option to **00** to make a RESET to the counting maneuvers. After that, make a new one setting the new desired option. The central will, from this moment on, start counting maneuvers to emit the maintenance warning.

#### **88** • Programming transmitters using already configured transmitters

- 01** • Press the **M** key for 4 seconds to enter the programming menu.
- 02** • The display will show P1 and press or keys repeatedly until it shows P7.
- 03** • Press the **M** key once to access this submenu.
- 04** • The display will show the value L0 or L1, which identifies the option in which the central is configured. Use the or keys to put on the desired option.
- 05** • Press the **M** key once to save this option.
- 06** • The control board will exit to standby mode (--) and the configuration is complete.

**Functionality** • This menu allows you to enable or disable the possibility to program a new transmitter through one already configured (see page 12.A). L0 means that this functionality is disabled, and L1 means that is enabled.

#### **88** • Counting maneuvers

- 01** • Press the **M** key for 4 seconds to enter the programming menu.
- 02** • The display will show **P1** and press or keys repeatedly until it shows **P8**.
- 03** • Press the **M** key once to access this submenu.
- 04** • The display will show three numbers, each one for 2 seconds separated by intervals of 1 second between them. After this the control board will automatically exit to standby mode (--).

**Functionality** • This function serves only to show all completed maneuvers performed by the automatism (open-stop-close-stop).

**Example:** If when entering the **P8** submenu the display first show n°15, then n°65 and finally n°22, means that a total of **156522** complete maneuvers have already been done.

**RESET** through the menu **P6**: To restart maneuver counting, go to **P6** submenu, and while the display shows any of the options in this submenu, press the or keys simultaneously for 10 seconds. The control board will automatically exit to standby mode and the **RESET** to the **P8** menu is complete.

## 05. PROGRAMMING

### MENU FUNCTIONS

#### **88** • Service door / Photocells for side door open

- 01** • Press the **M** key for 4 seconds to enter the programming menu.
- 02** • The display will show **P1** and press or keys repeatedly until it shows **P9**.
- 03** • Press the **M** key once to access this submenu.
- 04** • The display will show the value **E0** or **E1**, which identifies the option in which the central is configured. Use the or keys to put on the desired option.
- 05** • Press the **M** key once to save this option.
- 06** • The control board will exit to standby mode (--) and the configuration is complete.

**Functionality** • The option **E0** disables the use of this functionality while the **E1** option activates it. When the function is activated, the gate only opens/closes if the service door is closed or if the side sectional door's photocells are not interrupted.

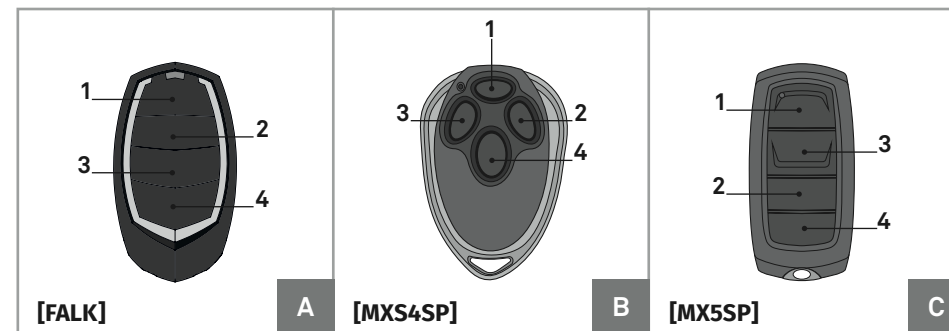
With the service door opened, the control board rejects any opening or closing order.

If the service door opens during any gate maneuver, the gate stops immediately.

If the photocells are interrupted during a closing maneuver, the automatism will stop immediately, but if it is during an opening maneuver it will stop and invert (close) for 1 second.

## 05. PROGRAMMING

### PROGRAMMING TRANSMITTERS



#### • Standard configuration using the T key on the display

- 01** • In stand-by mode (--) press the T key until the display shows SU.
  - 02** • Press two times the transmitter's desired key to configure until the engine starts moving.
- Note** • Repeat these steps whenever you want to configure new transmitters.

#### • Configuration through already configured transmitters

Since there is already configured transmitter, you can use it to open the control board's memory by distance in order to configure new transmitters. This allows easy configuration without requiring direct access to the engine.

- 01** • In Stand-By mode (--) press **3** and **4** keys from an already configured transmitter until the courtesy LEDs start to blink. Now release the pressed buttons.
- 02** • Press the new transmitter's desired key to configure until the automatism starts moving.

**Note .1** • Repeat these steps whenever you want to configure new transmitters.

**Note .2** • This feature can be enabled or disabled via the P7 menu (see pag 11.A).

#### • Delete all configured transmitters

- 01** • In stand-by mode (--) press the T key for 10sec until the display shows dl.

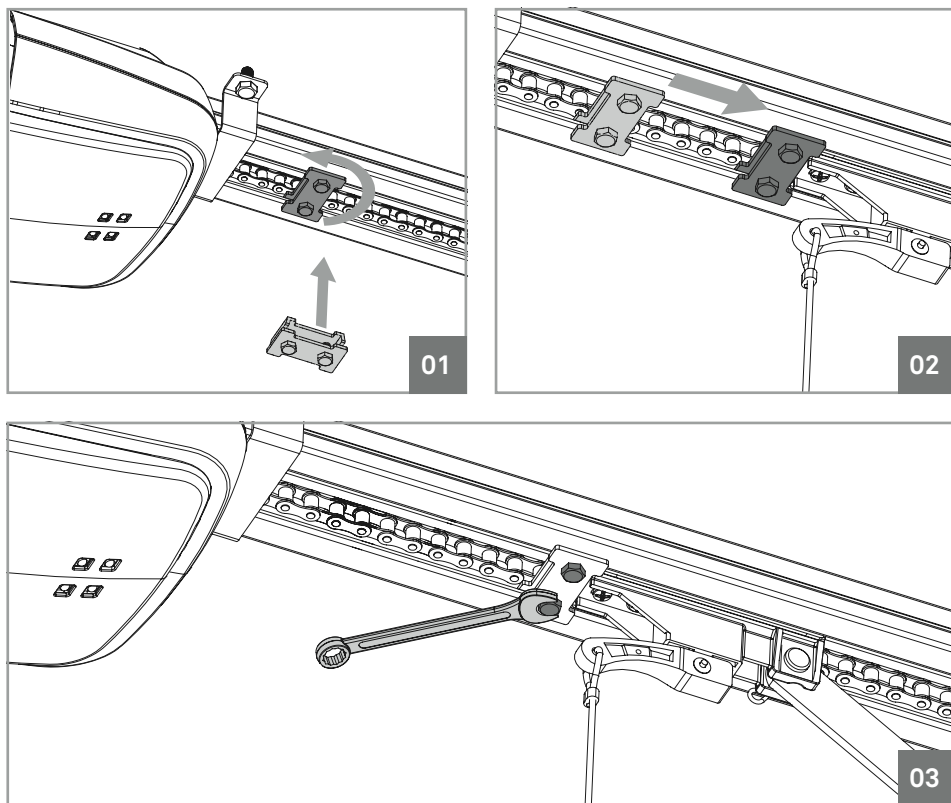


The control board has a maximum capacity of 100 transmitters and only accepts Motorline Rolling Code transmitters!

## 06. POST-INSTALLATION

### STOPPER AT THE OPENING

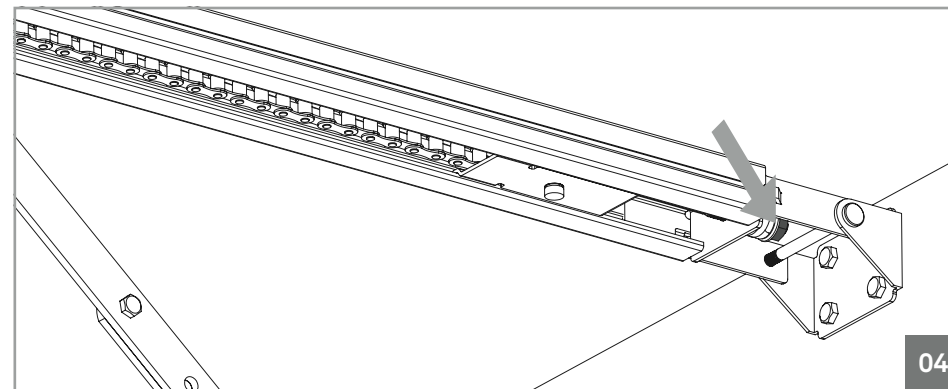
The automatism needs a stopper in the opening and closing to always control the courses. In closing maneuvers, the ground will be the stopper for the gate, but in the opening maneuvers it is necessary to create a stopper on the steel rail, to ensure that the trolley always stop in the correct place.



- To install the opening stopper just apply it on the rail, as seen in Figure 01. The stopper must have a metal plate out of the rail and other on the inside, so when you fasten it, this is secure in the pipeline.
- **With the door completely open**, push the stopper until it touches the trolley (02).
- Fasten the two screws to hold the stopper in that exact position (03).

## 06. POST-INSTALLATION

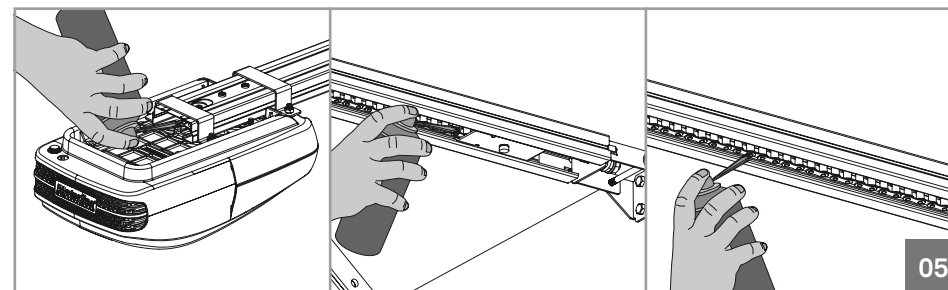
### STRETCH RAIL'S CHAIN



For a correct automatism function, the chain has to be very well adjusted. For that, you just need to tighten or loosen the shadowed nut in the above picture with a wrench key, which will stretch or relieve the chain. The chain can't be too much stretched, or it will get too stuck and damage the gear and the motor, nor too loose to the point of creating a sag in the middle and come out of the rail.

**Note** • The spring tensioner should never get fully compressed, because it means that it is on its maximum tension!

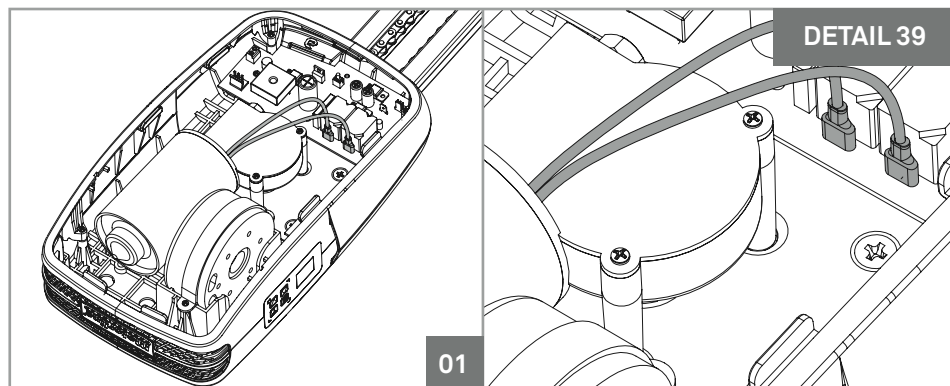
### MAINTENANCE



The only maintenance required is lubricating the automatism and rail motion axes. The pinions at both ends of the rails as well as their supporting bearings and chain should be lubricated at least once every year.

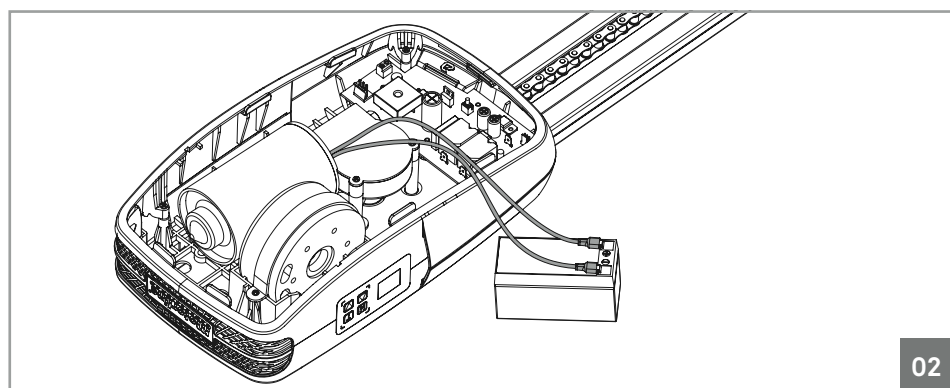
## 07. DIAGNOSIS

### CONNECT ENGINE TO 24V BATTERY



In case of automatism failure or malfunction, you must detect the fail component (motor or central). To do that, you should test the motor directly connected to a **24V DC** power source, in order to understand if this works.

Just disconnect the two motor cables (shaded in the image 01) which connect to the central and connect them directly to a **24V DC** battery as visible in the image 02.













Motor cables have no specific way of connection. The only difference is that if you connect the motor in one way, it will rotate in one direction, and if you connect the wires in the opposite it will rotate in the other direction.



# 08. TROUBLESHOOTING


## CONTROL BOARD ERROR MAP

Error	Error Description	Cause	Solving the problem
<b>ENCODER ERROR</b> 	<ul style="list-style-type: none"> <li>The control board does not receive information encoder installed on the motor.</li> </ul>	<ul style="list-style-type: none"> <li>Encoder's plug.</li> <li>Motor does not work and the encoder does not scan.</li> <li>Encoder does not work/is off.</li> <li>Digit control board does not send signal to the base control board.</li> <li>Base control board does not send power to motor.</li> </ul>	<ul style="list-style-type: none"> <li>Make sure the plug is fully inserted.</li> <li>Test battery to see if the motor is running.</li> <li>Test with another encoder.</li> <li>Test with another digits control board.</li> <li>Test with another base control board.</li> </ul>
<b>MEMORY FULL</b> 	<ul style="list-style-type: none"> <li>It is unable to program a new remote controls (# 31).</li> </ul>	<ul style="list-style-type: none"> <li>The memory is full (30 remote controls).</li> </ul>	<ul style="list-style-type: none"> <li>In case of not using the memorized remote controls, clear the existing memory.</li> <li>If you have 30 programmed commands and want to add more, install an external receiver (MR5SP).</li> </ul>
<b>DIRECTION OF THE MOTOR ROTATION</b> 	<ul style="list-style-type: none"> <li>Trying to program the closure before opening.</li> <li>Iron rails motor (CF) with aluminum rails (CA) installed or the opposite (CA motor with CF rail)</li> <li>Check if, by pressing the arrow , the door goes up and the display shows OP.</li> <li>Check if, by pressing the arrow  the door goes down and the display shows CL.</li> </ul>		<ul style="list-style-type: none"> <li>Swap the red wire with the motor's black wire.</li> </ul>
<b>COURSE ERROR</b> 	<ul style="list-style-type: none"> <li>The motor stops running. Programming does not record the course.</li> <li>The motor has no programmed course.</li> </ul>	<ul style="list-style-type: none"> <li>The motor has been in continuous operation for more than 1 minute.</li> <li>Error "C" occurred during programming.</li> </ul>	<ul style="list-style-type: none"> <li>The motor does not support a working time exceeding 1 minute. In the case of trying to make a program exceeding 1 minute it will not be stored. Reprogram the course without exceeding 1 minute or overcharge.</li> </ul>
<b>EXCESSIVE LOADING</b> 	<ul style="list-style-type: none"> <li>Excessive loading in the motor due to gate's excessive weight.</li> <li>Too much effort. When programming the motor (working time, P1 Menu), the gate was in too much effort against the opening stopper or against the floor.</li> </ul>		<ul style="list-style-type: none"> <li>Redo the course programming without putting too much effort against the stoppers.</li> </ul>
<b>PHOTOCELLS NOT CONNECTED WITH MOTOR</b> 	<ul style="list-style-type: none"> <li>The photocells are active but not connected to the motor.</li> </ul>		<ul style="list-style-type: none"> <li>Connect the photocells to the motor (page 19).</li> </ul>
<b>PCB ANOMALY</b> 	<ul style="list-style-type: none"> <li>PCB power module has detected an anomaly on power supply.</li> </ul>		<ul style="list-style-type: none"> <li>Check all connections and make sure all cables are well connected.</li> </ul>

 **Errors appear on the display for 5 seconds!**

# 08. TROUBLESHOOTING

## INSTRUCTIONS FOR FINAL CONSUMERS / INSTRUCTIONS FOR TECHNICAL PERSONNEL

Anomaly	Procedure	Actions	Procedure II	Discovering the origin of the problem			
• Motor does not work	• Verify that you have connected to 230V power to the automation and if the fuse is working properly.	• Still not working	• Consult a <b>MOTORLINE</b> qualified technician.	1 • Remove the top cover of the engine; 2 • Measure the 24V transformer's output to detect the location of the malfunction;	<b>A) Has 24V:</b> 1 • Make sure the central is supplying the motor to detect whether the fault is in the engine or in the central. Replace the damaged component or send to	Motorline facilities for diagnosis and repair.	on the input, the transformer is the problem. If not, the problem is the fuse, electrical cables or electrical current itself. Check all systems.
	• Make sure the pedestrian service door is securely closed.	• Still not working	• Consult a <b>MOTORLINE</b> qualified technician.	1 • Give a start on the transmitter to open and check the LEDs behavior.	2 • If it blinks twice, then the connection with the photocells	<b>B) Doesn't have 24V:</b> 1 • Check the 230V transformer input. If you can measure 230V	the service door connection is having problems. Check all the photocells circuit connection. 3 • If it flashes three times, then the door's connection circuit.
• Motor does not move but makes noise	• Unlock the engine and move the gate manually to check for mechanical problems on the gate.	• Encountered any problems?	• Consult an gate's technician.	1 • Check all the motion axes and the movement systems associated to the gate and the automatism (rails,pulleys, bolts, hinges, etc.) to find out he problem. Also make sure the springs are in good condition and are able to withstand the gate.			
		• The gate moves easily?	• Consult a <b>MOTORLINE</b> qualified technician.	1 • Turn off the central's motor and test it directly connected to a 24V battery to find the malfunction (see page 12.B)	2 • If the engine operate, the problem is in the central. Pull it out and send it to the MOTORLINE technical services for diagnosis;	3 • If the motor does not work, remove it and send it to the MOTORLINE technical services for diagnosis.	
• Motor opens but does not close	1 • Check if there is any obstacle in front of the photocells; 2 • Chech if the photocells are working. Put your hand in front of their infrared link, and check if the relay makes noise. 3 • Check if any of the gate's control devices (key selector, push button, video intercom, etc.) are locked and sending permanent sign;	• Gate has opened but did not close.	• Consult a <b>MOTORLINE</b> qualified technician.	1 • Make sure the display and the courtesy LEDs are connected and to see if it has power; 2 • Check if the photocells have power supply from the control board. If not, check the fuse n° <b>FUSE FT</b> (see page 7A); 3 • Go to the menu on the display and disable the photocells and the service door; 4 • Try to close;	<b>A) It closed:</b> 1 • Problem is in one of these two systems. Activate the photocells and make sure the gate closes. If it closes, the problem will be on the service door. Activate it from the menu and try to close the gate to be sure.	<b>B) Didn't close:</b> 1 • The problem is in the motor or in the central.Give the order to close the gate while measuring the output power from the central to the engine. If you have 24V, the center is working and the problem is in the engine. 2 • If it does not have power, the problem remains in the centralboard.	
	<b>NOTE</b> • With the gate open, if you give the order to close and you have some obstacle in front of the the photocells, LEDs blink twice. During closing, if it invert for stress detection, blink once.						
• Motor does not the full itinerary	• Unlock motor and move gate by hand to check for mechanical problems on the gate.	• Encountered any problems?	• Consult an gate's technician.	1 • Check all the motion axes and the movement systems associated to the gate and the automatism (rails,pulleys, bolts, hinges, etc.) to find out he problem. Also make sure the springs are in good condition and are able to withstand the gate.			
		• Is the gate moving easily?	• Consult a <b>MOTORLINE</b> qualified technician.	1 • Verify that the gate tests were well done; 2 • Change the force on P2 menu until the engine move the gate without changing direction; 3 • This adjustment must be made so that the gate when	meeting an obstacle inverts his direction (left illustration); 	4 • If even at his maximum strength (F9) the problem still remains, test the motor directly connected to a 24V battery to see if it has the strength to open/ close the door completely; 5 • Change the force on P2 menu	until the engine moves the gate without changing direction;

# 09. CENTRAL CONNECTIONS

## ROSSO EVO CONTROL BOARD

