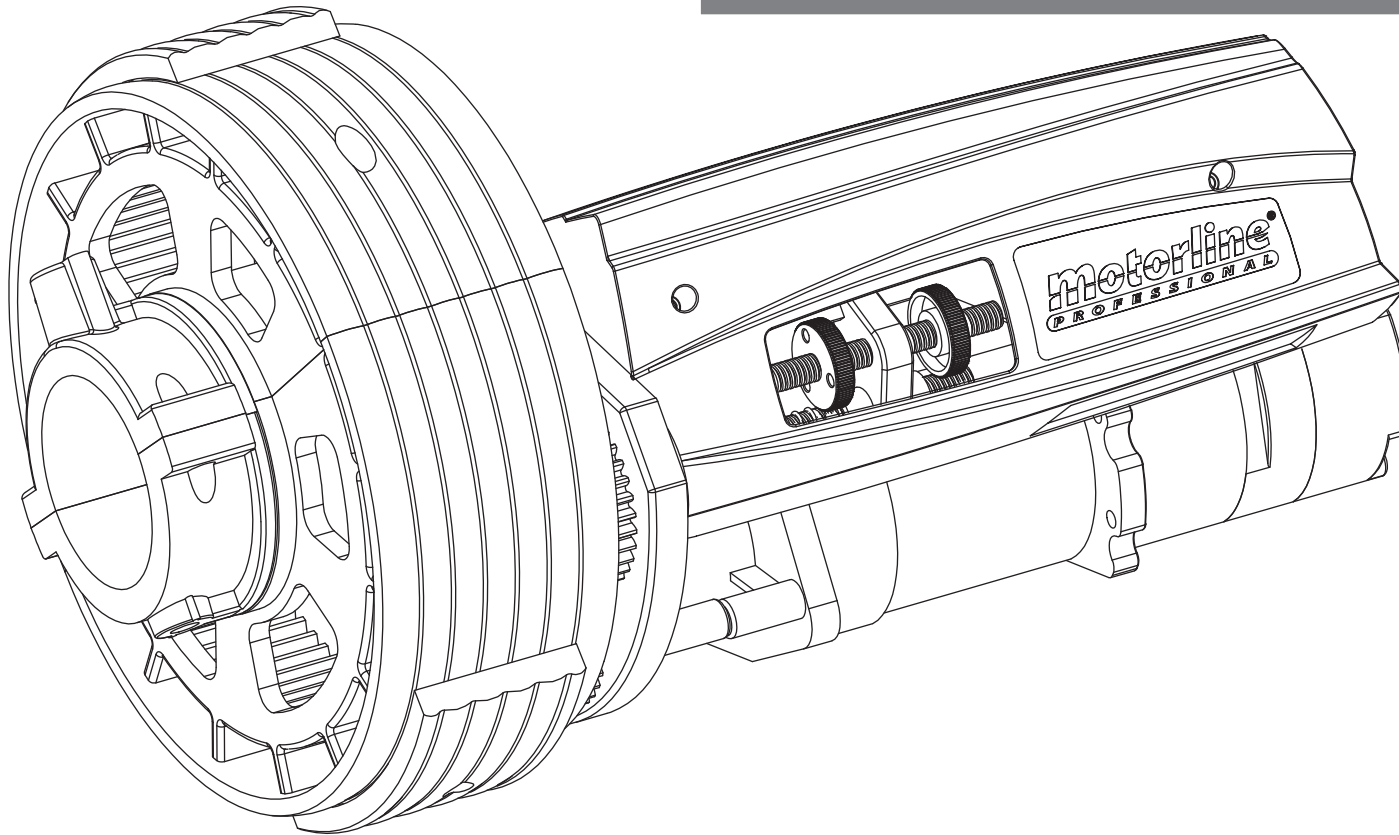




USER'S AND INSTALLER'S MANUAL



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01. SAFETY INSTRUCTIONS

	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 batteries should not be discarded like other household waste at the end of their useful life. Batteries must be delivered to selective collection points for recycling.
	The different types of packaging (cardboard, plastic, etc.) must be subject to selective collection for recycling. Separate packaging and recycle it responsibly.
	This marking indicates that the product and electronic accessories (eg. charger, USB cable, electronic material, controls, etc.) are susceptible to electric shock by direct or indirect contact with electricity. Be cautious when handling the product and observe all safety procedures in this manual.

01. SAFETY INSTRUCTIONS

GENERAL WARNINGS

- This manual contains very important safety and usage information. Read all instructions carefully before beginning the installation/usage procedures and keep this manual in a safe place that it can be consulted whenever necessary.
- This product is intended for use only as described in this manual. Any other enforcement or operation that is not mentioned is expressly prohibited, as it may damage the product and put people at risk causing serious injuries.
- This manual is intended firstly for specialized technicians, and does not invalidate the user's responsibility to read the "User Norms" section in order to ensure the correct functioning of the product.
- The installation and repair of this product may be done by qualified and specialized technicians, to assure every procedure are carried out in accordance with applicable rules and norms. Nonprofessional and inexperienced users are expressly prohibited of taking any action, unless explicitly requested by specialized technicians to do so.
- Installations must be frequently inspected for unbalance and the wear signals of the cables, springs, hinges, wheels, supports and other mechanical assembly parts.
- Do not use the product if it is necessary repair or adjustment is required.
- When performing maintenance, cleaning and replacement of parts, the product must be disconnected from power supply. Also including any operation that requires opening the product cover.
- The use, cleaning and maintenance of this product may be carried out by any persons aged eight years old and over and persons whose physical, sensorial or mental capacities are lower, or by persons without any knowledge of the product, provided that these are supervision and instructions given by persons with experienced in terms of usage of the product in a safe manner and who understands the risks and dangers involved.

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.

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Barcelos, Portugal

SYMBOLS LEGEND:



• Important safety notices



• Useful information



• Programming information



• Potentiometer information



• Connectors information

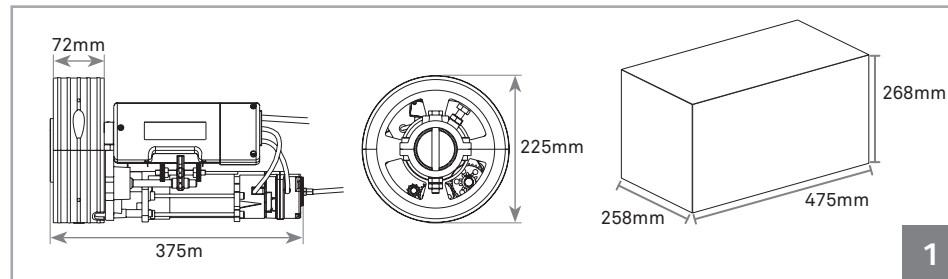


• Buttons information

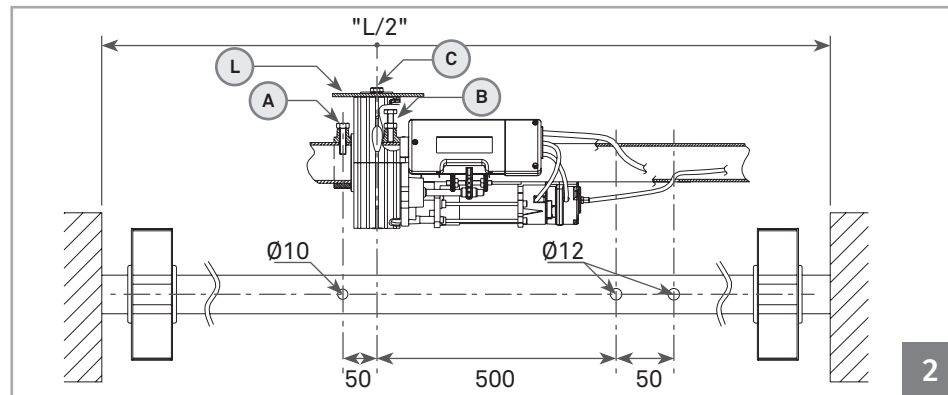
02. THE AUTOMATISM

TECHNICAL SPECIFICATIONS

	ROLLING 160SP	ROLLING 360SP		ROLLING 160SP	ROLLING 360SP
Power supply	230V 50/60Hz	230V 50/60Hz	Torque	150Nm	420Nm
Consumption	2,3A	4,5A	Lifts	160Kg	360Kg
Power	520W	1000W	Maximum height	6m	6m
Thermal protection	4min	4min	RPM	10	8
Weight	8 kg	16 kg	Capacitor	18 μ F	18 μ F (x2)
Noise level	LpA <= 70 dB (A)				



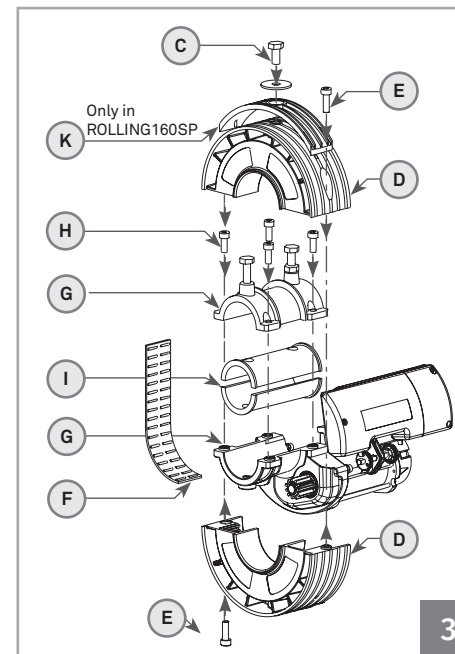
INSTALLATION INSTRUCTIONS



- 01 • Close the rolling shutter.
- 02 • Make 3 holes in the shutter's tube as shown in image 2.
- 03 • Remove the M10 screw (C) from the crown of the gearmotor (figure 3).

02. THE AUTOMATISM

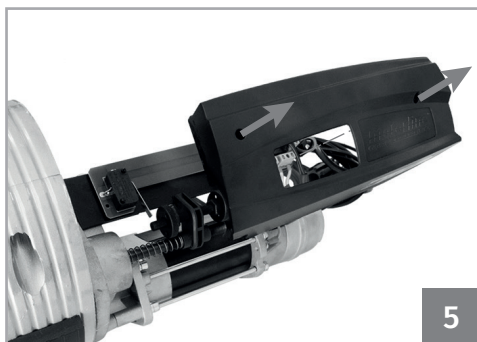
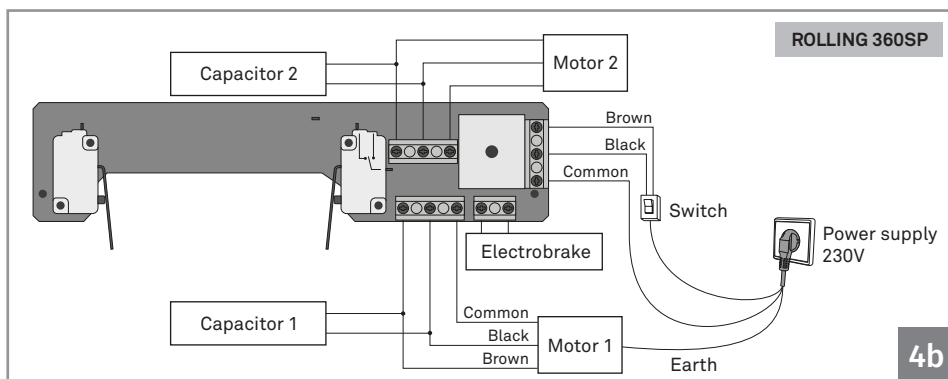
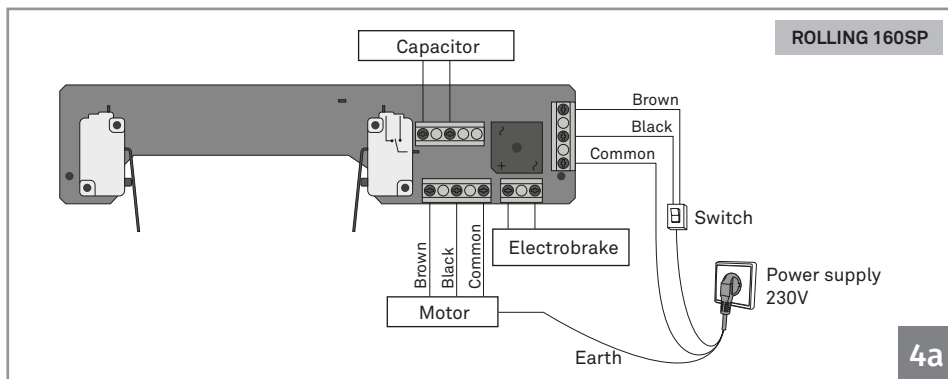
INSTALLATION INSTRUCTIONS



- 04 • Remove the two semi-crown (D) unscrewing the two M8 screws (E) as shown in figure 3.
- 05 • Carefully remove the plastic band with rolls (F) avoiding heavy folds that would cause the spillage of the rolls.
- 06 • Separate the two elements of the gearmotor (G) unscrewing the four M8 screws (H).
- 07 • In case the diameter of the tube is inferior to 60mm, use the reductions Ø33 / Ø42 / Ø48 (I) positioning them on the 10mm hole drilled previously (figure 2).
- 08 • Assemble on the tube of the shutter the two elements of the gearmotor (G) using the four M8 screws (H) removed before.
- 09 • Fasten the M10 screw (A) without hexagon nut, screwing it inside the hole 10mm (figure 2).
- 10 • Tighten the M10 screw with nut (B) in order to block the gearmotor on the shaft.
- 11 • Install the plastic band with rolls (F) in its appropriate place.
- 12 • Install the two semi-crown (D) fixing them with the two M8 screws (E). In presence of spring boxes diameter 220 mms use the adapter (K) (figure 3).
- 13 • Make 12 mm hole in the last element of the shutter (L), aligned with the M10 hole existing on the crown motor.
- 14 • Place the last element of the shutter on the motor and secure it through the screw M10 (C) with washer (figure 3).

02. THE AUTOMATISM

INSTALLATION INSTRUCTIONS

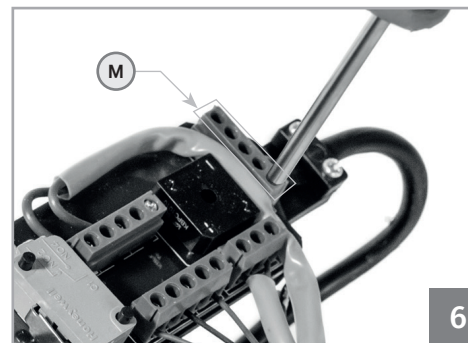


15 • Remove the limit-switch board's cover.

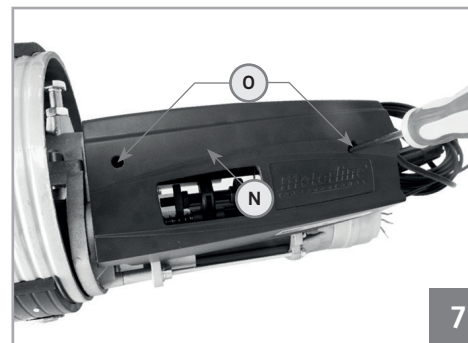
16 • Make the electrical connections as shown in figure 4 passing the 4x1 mm cable supplied, inside the shutter shaft avoiding any contact with the rotating parts (figure 2). In presence of motor with electrobrake, insert the sheath of the brake inside the other hole Ø12.

02. THE AUTOMATISM

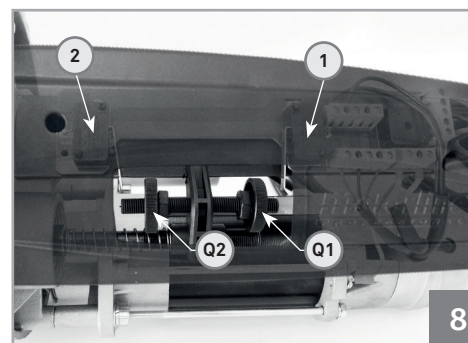
INSTALLATION INSTRUCTIONS



17 • Connect the terminal block (M) of the power wire to the limit switch respecting the right direction (figure 6). Fasten the terminal block through the four screws.



18 • Close the limit switch through the plastic cover (N) and then fasten with the two screws (O), checking the correct disposition of the cables (figure 7).



19 • After having installed the mechanical parts and electrical connections, proceed to the regulation of the limit-switches as shown in figure 8.

02. THE AUTOMATISM

INSTALLATION INSTRUCTIONS

20 • Rotate the plastic washer (Q1) by hand until you hear the click of the microswitch 1 (down regulation completed).

21 • Rotate the other plastic washer (Q2) towards the microswitch 2 (up). Give tension to the motor through an electric command and verify if the shutter, climbing, stops in desired point. Adjustments of the position can be effected acting always on the same plastic washer and operating through electric command.

22 • Should the shutter need to be installed contrary to the description in figure 2, the steps described above should be carried out to the contrary as microswitch 2 will stop the closing and microswitch 1 will stop the opening.

23 • Fasten the counternuts after adjusting the limit-switch washers.

INSTALLATION OF THE ELECTROBRAKE

01 • Insert the brake on the back of the electrical motor.

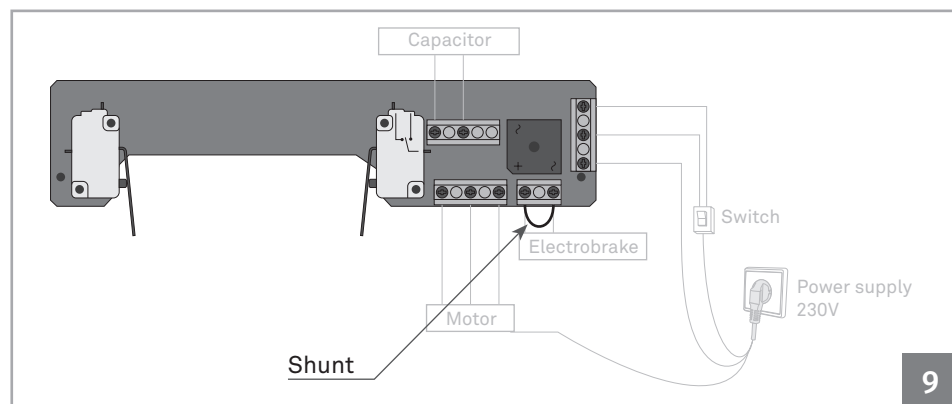
02 • Fixing the electrobrake to the motor using the screws M5x50.

03 • Remove the bridge from the limit switch (fig. 9).

Do not damage the bridge pulling on the wire and keep it for future use.

04 • Connect the electric cables of the brake to the terminal of the limit switch, figure 4.

05 • Close the limit switch using the plastic cover.

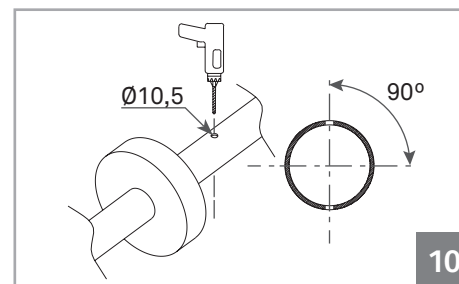


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02. THE AUTOMATISM

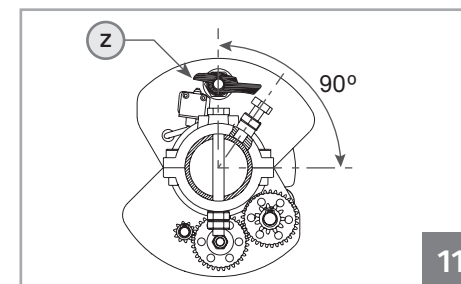
GEAR MOTOR WITH SAFETY DEVICE

Gear motor with safety device carried out to the stop the free fall of roller shutters and at the same time, in microswitch versions, to interrupt the motoreductor's feeding.



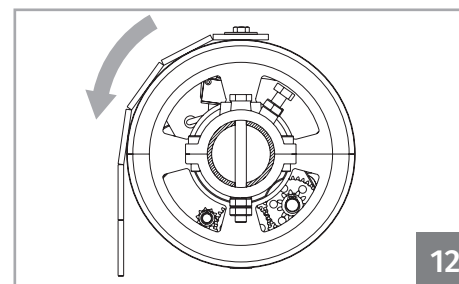
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01 • Effect on the tube of the shutter a passing perforation $\text{Ø}10$ perpendicular to the axis.



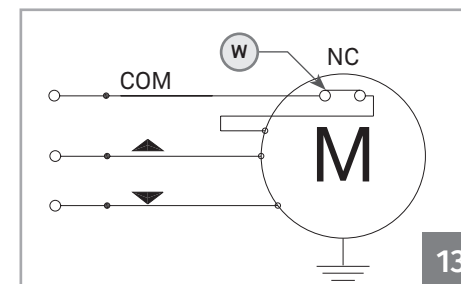
11

02 • After assembled the two elements of the gearmotor (G), check that the pawl (Z) is in the highest position perpendicular to the rolling shutter axis.



12

03 • The downward run of the roller shutter shall be consistent with the downward run of the safety brake. Place the gear motor as shown.

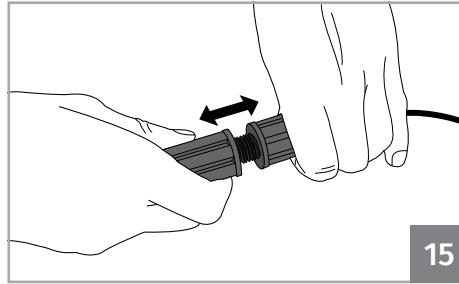
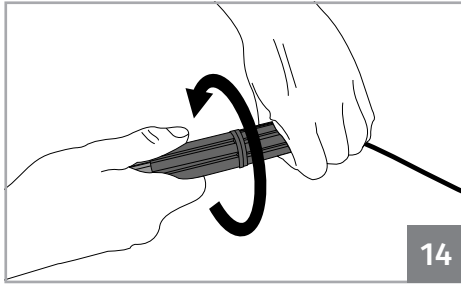


13

04 • For microswitch versions, connect the micro switch's cable (W) in series to the feeding cable (common) of the gearmotor.

02. THE AUTOMATISM

MOTOR UNLOCKING



To unlock the motor simply unscrew the unlocking piece at the end of the steel cable by turning it to the left. To lock the engine again, tighten the same piece.