

zero
HOME AUTOMATION

Z10 - ROLLING SHUTTER

SUPPLY 230V



IT | EN | FR

Z10I.REV01.2018

USER MANUAL AND CONFIGURATION



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01. SAFETY INSTRUCTIONS

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.
- ZERO SRLS. is not responsible for the improper use of the product, or other use than that for which it was designed.
- ZERO SRLS. is not responsible if safety standards were not taken into account when installing the equipment, or for any deformation that may occur to it.
- ZERO SRLS. 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 operator .Must call qualified technician only.
- Connect the automatism to a 230V plug with ground wire.
- Operator for outdoor and indoor use.

02. OPERATOR

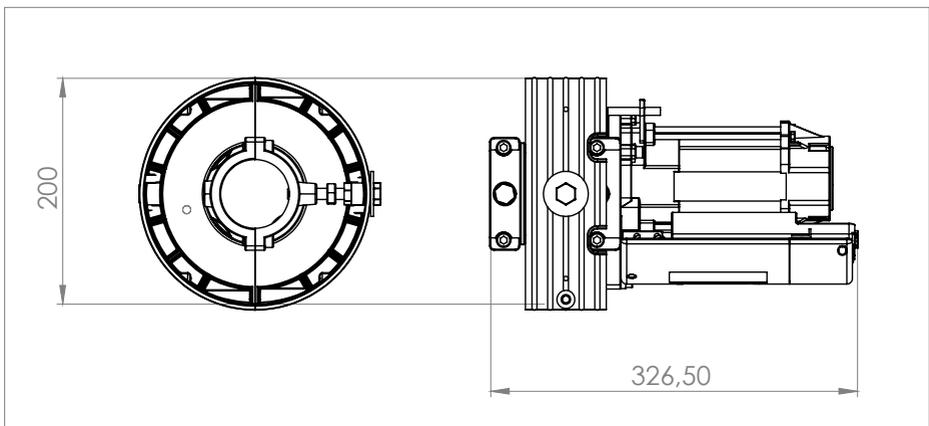
TECHNICAL SPECIFICATIONS

Z10 specifications are as follow:

	Z10.160	Z10.360
Power Supply	230Vac 50/60Hz	24Vdc
Power	630W	1260W
Current	2.7 A	5,4 A
Capacitor	20 μ F	2x20 μ F
RPM	10	
Noise level	LpA <= 50 dB (A)	
Force	2300 N	
Operating temperatures	-25°C to 65°C	
Thermal protection	4 min	
Protection class	IP44	
Lift	160kg	360 kg
Maximun door height	6 m	

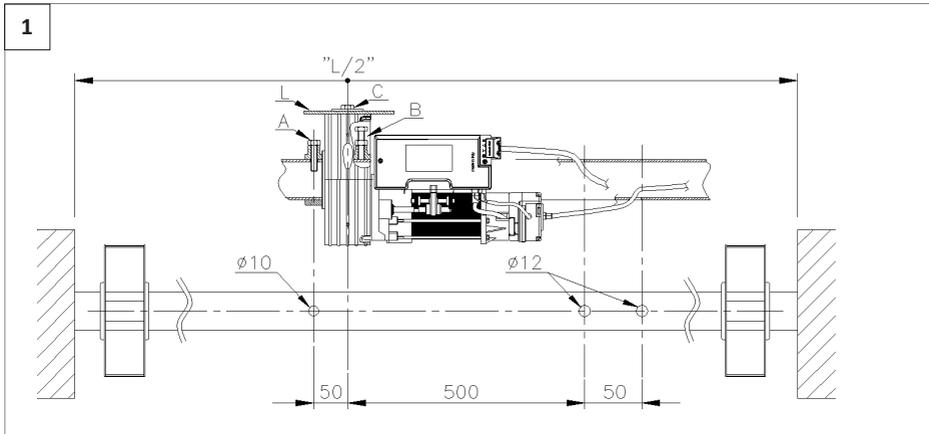
DIMENSIONS

Z10 dimensions are the following:

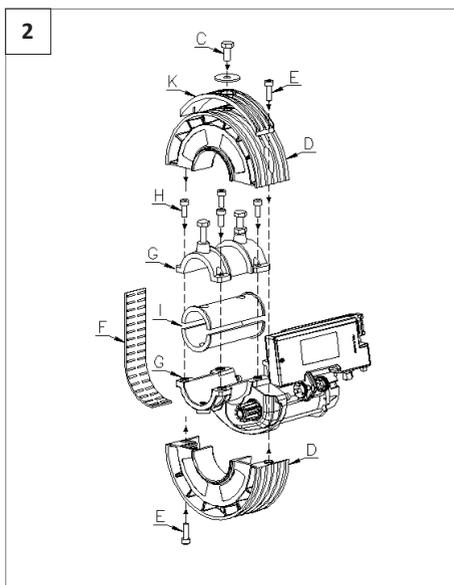


03. INSTALLATION

INSTALLATION STEPS



01. Close the rolling shutter.
02. Effect on the tube of the shutter 3 perforations as shown in figure 1.
03. Remove the M10 screw (C) from the crown of the gearmotor (see fig.2)
04. Remove the two semi-crown (D) unscrewing the two M8 screws (E) as shown in figure 2.
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 $\varnothing 33$ / $\varnothing 42$ / $\varnothing 48$ (I) positioning them on the 10mm hole drilled previously (see figure 1).
08. Assemble on the tube of the shutter the two elements of the gearmotor (G) using the four M8 screws (H) removed before.
09. Screw the M10 screw (A) without hexagon nut, screwing it inside the hole 10mm (see figure 1).
10. Tighten the M10 screw with nut (B) so as to block the gearmotor on the shaft and tighten said nut.
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) (see figure 2).
13. Make 12 mm hole in the last element of the shutter, in correspondence of the filleted hole M10 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 (see figure 1).
15. Make the electrical connections as shown in figure 3 passing the 4x1mm cable supplied, inside the shutter shaft avoiding any contact with the rotating parts (see figure 1). In presence of motor with electrobrake, insert the sheath of the brake inside the other hole $\varnothing 12$.
16. Connect the power supply cable to the limit switch respecting the right direction (see figure 4).



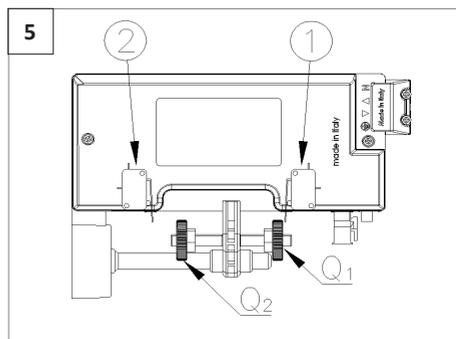
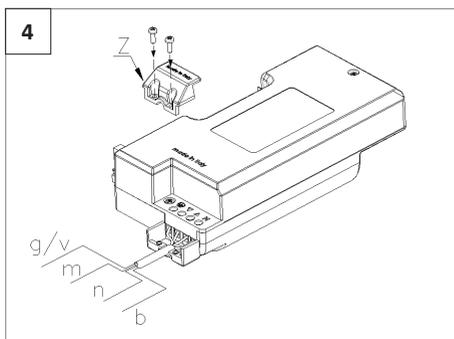
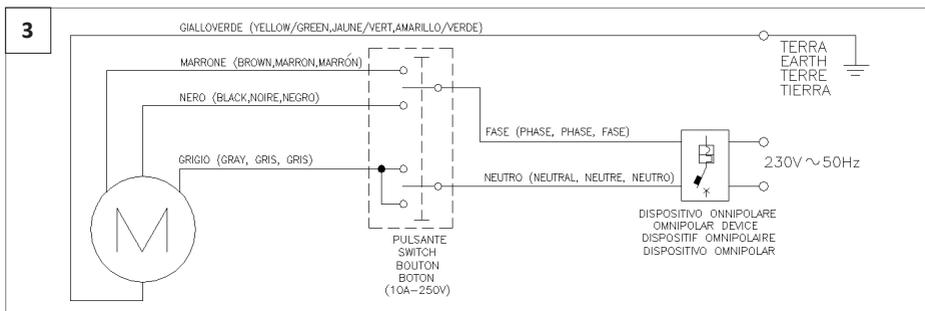
17. Close the limit switch through the plastic cover (Z) and then tighten with the two screws checking the correct disposition of the cables (see figure 4).

18. After having installed the mechanical parts and electrical connections, proceed to the regulation of the limit switches as shown in figure 5.

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

20. 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, stop in desired point. Adjustments of the position can be effected acting always on the same plastic washer and operand through electric command.

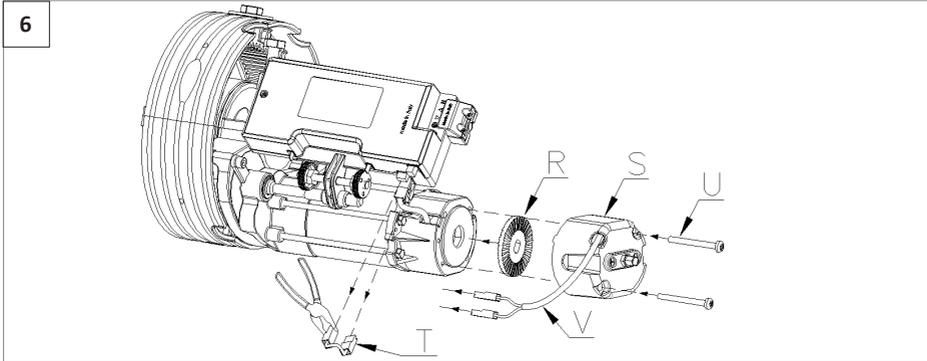
21. Should the shutter need to be installed contrary to the description in fig.1, the steps described above should be carried out to the contrary as microswitch 2 will stop the descent and microswitch 1 will stop the opening.



It is very important that these dimensions are respected! Only this way can be assured the correct functioning and durability of the operators!
It is also very important to have a levelled ground/terrain!

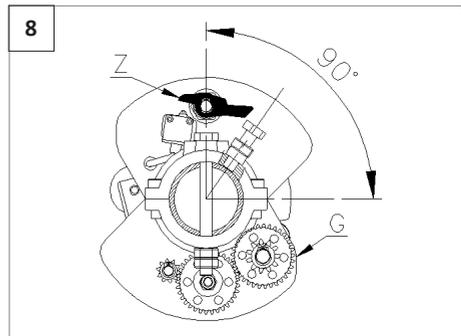
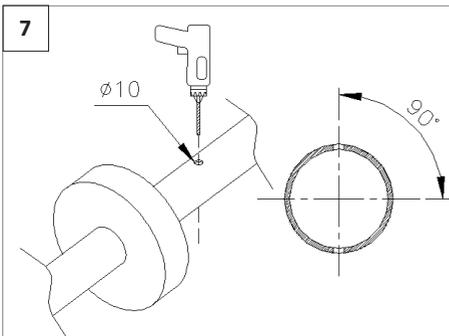
ELECTROBRAKE INSTALLATION

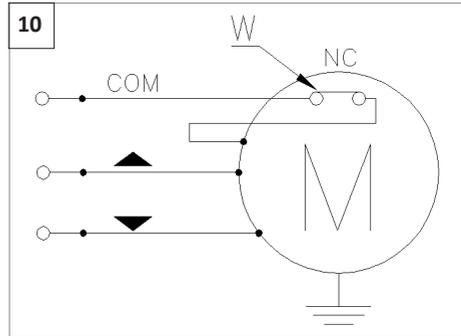
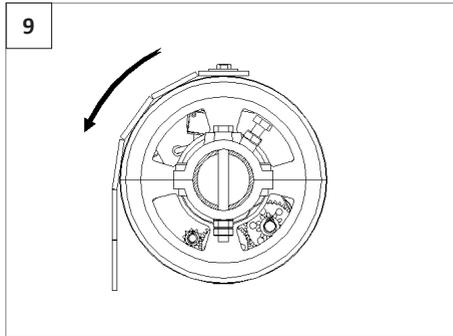
1. Insert the brake (R) on the back of the electrical motor (see figure 6).
2. Fixing the electrobrake (S) to the motor through the screws M5x50 (U).
3. Remove the bridge (T) from the limit switch. Do not damage the bridge pulling on the wire and keep it for future use
4. Connect the electric cables (V) of the brake to the terminal of the limit switch.

**CENTRAL MOTOR WITH SAFETY DEVICE**

SAFETY | SAFETY PLUS: Central motor with safety device carried out to the stop the free fall of roller shutters and at the same time, in Plus version, to interrupt the motoreductor's feeding.

1. Effect on the tube of the shutter a passing perforation $\varnothing 10$ perpendicular to the axis. (see figure 7).
2. 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 (see figure 8).
3. The downward run of the roller shutter shall be consistent with the downward run of the safety brake. Place the gear motor as shown in figure 9.
4. For Plus Versions, connect the micro switch's cable (W) in series to the feeding cable (common) of the gearmotor (see figure 10).





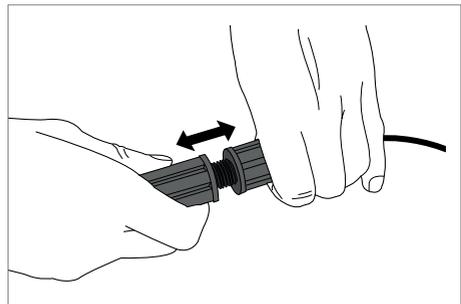
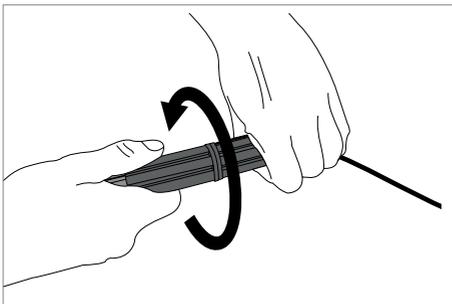
04. MAINTENANCE



Check motor supports: Make sure that supports remain well fixed on the shaft and gate to ensure proper functioning of the equipment. These maintenance measures must be applied every year in order to insure proper functioning of the automated system.

MANUAL RELEASE

To open manually the door in case of electric power failure or in case of damage, follow the below steps:



01 • 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.

05. TROUBLESHOOTING

Problem	Procedure	Behavior	Procedure II
Door doesn't work	Make sure you have 230V power supply connected to control board and if it is working properly.	Still not working.	Consult a qualified ZERO technician.
Motor doesn't move but makes noise	Unlock motor and move the gate by hand to check for mechanical problems on the movement	Encountered problems?	Consult an experienced gate expert.
		The gate moves easily?	Consult a qualified ZERO technician.
Motor opens but doesn't close	Unlock motor and move the gate by hand to closed position. Lock motor again and turn off power supply for 5 seconds. Reconnect it and send start signal using transmitter.	Gate opened but didn't close again.	Check if there is any obstacle in front of the photo-cells;
			Check if any of the control-devices (key selector, push button, video intercom, etc.) of the gate are jammed and sending permanent signal to control unit;
			Consult a qualified ZERO technician.
Gate doesn't make complete route	Unlock motor and move gate by hand to check for mechanical problems on the gate	Encountered problems?	Consult an experienced gate expert.
		The gate moves easily?	Consult a qualified ZERO technician.

Discovering the origin of the problem				
1. Open control board and check if it has 230V power supply	3. Disconnect the motor from control board and test them by connecting directly to 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 our ZERO technical services for diagnosis.	5. If the motor doesn't work, remove them from installation site and send to our ZERO technical services for diagnosis.	
2. Check input fuses				
Check all motion axis and associated motion systems related with the motor and the gate to find out what is the problem.				
1. Check capacitors, testing operator with new capacitors;	2. If capacitors are not the problem, disconnect motors from control board and test them by connecting directly to power supply in order to find out if they have problems.	3. If the motors work, the problem is from control board. Pull it out and send it to our ZERO technical services for diagnosis;	4. If the motors don't work, remove them from installation site and send to our ZERO technical services for diagnosis	
<p>All ZERO control boards have LEDs that indicate the functioning of connections to allow easy diagnosis of faults. All safety devices LEDs (DS) in normal situations remain On. All "START" circuits LEDs in normal situations remain Off.</p> <p>If LEDs devices are not all On, there is some security systems malfunction (photocells, safety edges), etc.</p> <p>1 • Close with a shunt all safety systems on the control board (check manual of the control board in question). If the automated system starts working normally check for the problematic device.</p> <p>2 • Remove one shunt at a time until you find the malfunction device .</p> <p>3 • Replace it for a functional device and check if the motor works correctly with all the other devices. If you find another one defective, follow the same steps until you find all the problems.</p>				
1. Check capacitors, testing with new capacitors;	3. If the motor doesn't work, remove it from installation site and send to our ZERO technical services for diagnosis.	4. If motor work well and move gate at full force during the entire course, the problem is from controller. Set force using P1 button on the board. Make a new working time programming, giving sufficient time for opening and closing with appropriate force.	5. If this doesn't work, remove control unit and send it to ZERO technical services services.	
2. If capacitors are not the problem, disconnect motor from control board and test it by connecting directly to power supply in order to find out if it is broken;				
Check all motion axis and associated motion systems related with the motor and the gate to find out what is the problem.				
<p>NOTE: Setting force of the controller should be sufficient to make the gate open and close without stopping, but should stop and invert with a little effort from a person. In case of safety systems failure, the gate shall never cause physical damaged to obstacles (vehicles, people, etc.).</p>				

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