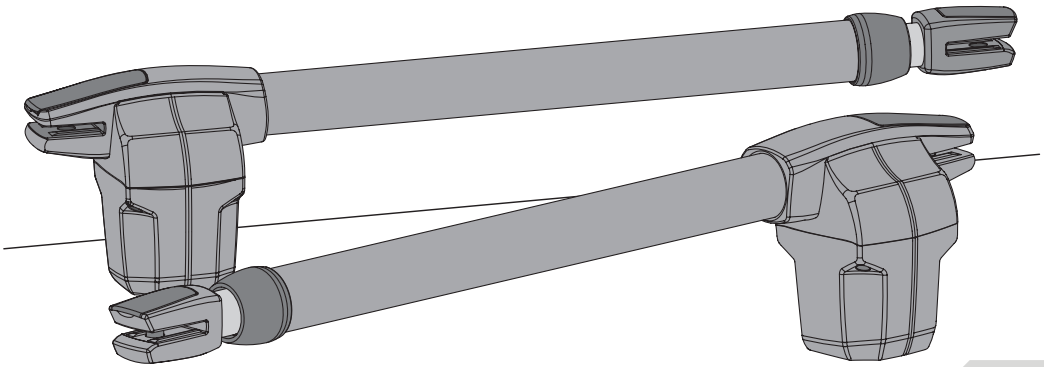
PORTUGAL

move automation

SELECT
300 / 400 / 600

USER'S AND INSTALLER'S MANUAL



EN

WARNING

Please read the manual carefully before installation and use.
The installation of your new door opener must be carried out by a technically qualified or licensed person.
Attempting to install or repair the door opener without suitable technical qualification may result in severe personal injury, death and / or property damage.

00. CONTENT

INDEX

01. SAFETY INSTRUCTIONS

STANDARDS TO FOLLOW

ATTENTION:

CE	This product is certified in accordance with European Community (EC) safety standards.
RoHS	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

STANDARDS TO FOLLOW

- It is important for your safety that these instructions are followed.
- Keep these instructions in a safe place for future reference.
- The supplier is not responsible for the improper use of the product, or other use than that for which it was designed.
- The Move Automation is not responsible if safety standards were not taken into account when installing the equipment, or for any deformation that may occur.
- The Move Automation is not responsible for insecurity and malfunction of the product when used with components that were not sold by the them.
- This product was designed and manufactured strictly for the use indicated in this manual.
- This control board is not appropriate for inflammable or explosive environments.
- Any other use not expressly indicated may damage the product and/or can cause physical and property damages, and will void the warranty.
- Do not make any changes to the automation components and/or their accessories.
- Control board for indoor use with 24Vdc/110Vac/230Vac connection.
- 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.
- The installer must have certified professional knowledge at the level of mechanical assemblies in doors and gates and control board programmation. He should also be able to perform electrical connections in compliance with all applicable regulations.
- The installer should inform the customer how to handle the product in an emergency and provide him the manual.
- This device can be used by children 8 year old or older and persons whose physical, sensory or mental capacities are reduced, or by persons without experience or knowledge if they have received supervision or instructions on the use of the device in a safe manner and understood the hazards involved. Children should not play with the device. Cleaning and maintenance by the user must not be carried out by unsupervised children.
- Automatism powered by very low safety voltage, with electronic board/control board/control unit (only applicable to 24V motors).
- Before installing, the installer must verify that the temperature range indicated on the automatism is appropriate to the location of the installation.
- Before installing, the installer must verify that the equipment to be automated is

01. SAFETY INSTRUCTIONS

STANDARDS TO FOLLOW

in good mechanical condition, correctly balanced and opens and closes properly.

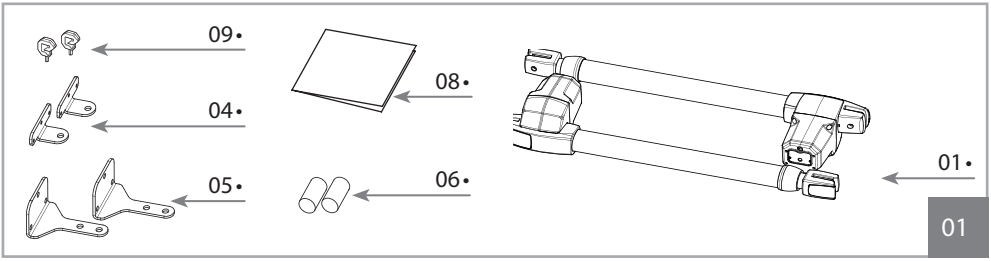
- If the automation is to be installed at a level higher than 2,5 m above ground level or other level of access, , should be followed the minimum safety and health requirements for the use of work equipment workers at work in Directive 2009/104/EC of the European Parliament and of the Council of 16th September of 2009.
- In the case of the equipment where the automation will be installed, have a pedestrian door, be aware that it must be closed when the automation is activated.
- After installation, make sure that the mechanism is properly adjusted and that the protection system and any manual unlocker works correctly.
- In order to protect the electrical cables against mechanical stress, you should use conduit for the electrical wires, essentially on the power cable.
- When programming the control unit, pay particular attention to touching only the location intended for that purpose. Failure to do so may result in electric shock.
- Replacement of the power cable in the automation can only be carried out by specialized technicians or by the manufacturer.

02. PACKAGE

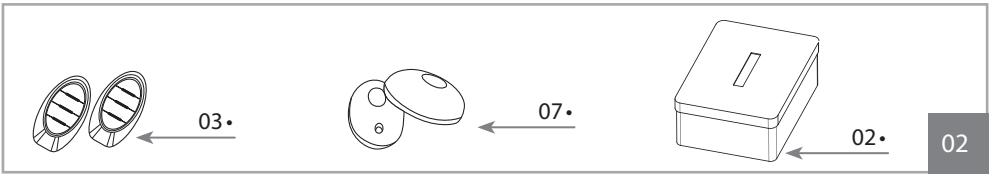
INSIDE PACKAGE

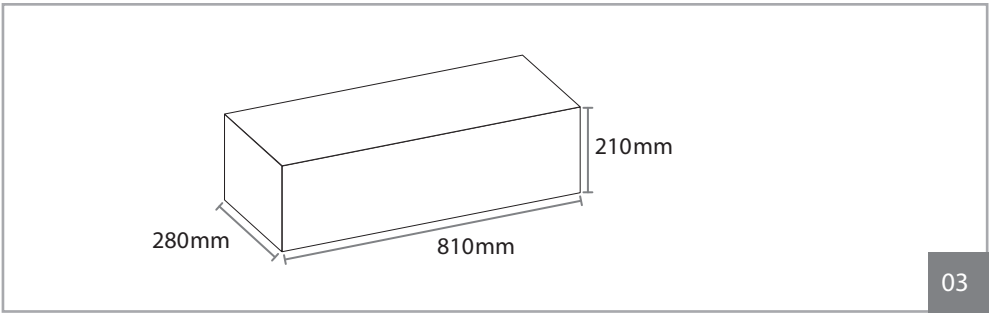
In the package you will find the following components:

01 • 02 Swing operators SELECT
02 • 01 Control Board
03 • 02 transmitters
04 • 02 Front supports
05 • 02 Rear supports
06 • 02 Capacitors [only available with the 230V (8µF) and 110V(20µF) models]
07 • 01 Photocells
08 • 01 User's manual
09 • 02 Release keys



Electronic components the kit:



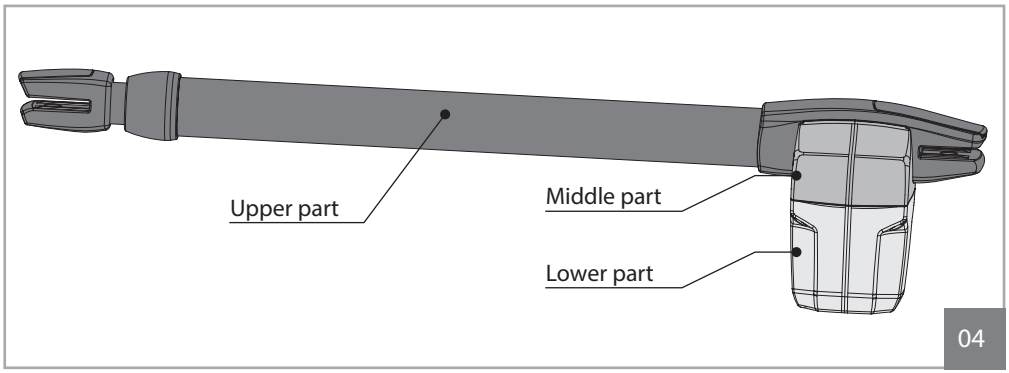


03. OPERATOR

CHANGE MOTOR DIRECTION

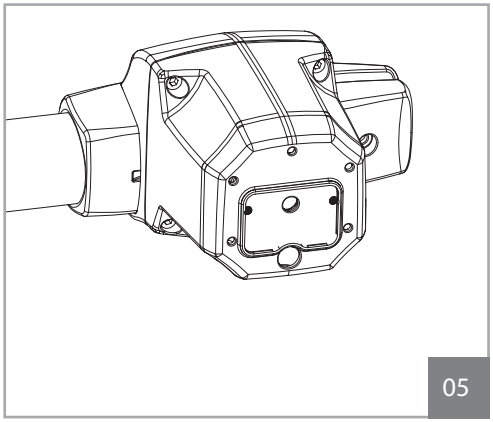
The operator SELECT, is a product developed exclusively for the automatic opening of swing gates.

Besides being pratical, safe and powerful, this product has a new function incorporated so that you can transform a motor to apply on right leaves to left leaves.
This allows greater flexibility in the use of each operator.



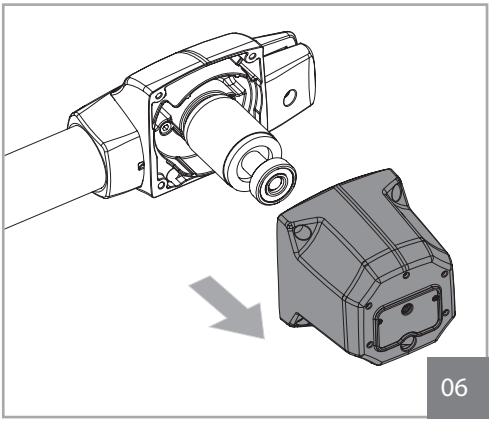
04

Motor disassembly and assembly process, in order to transform motor, must be done as follows:



05

01 • Loosen the screws that secure the Lower Part to Middle Part.

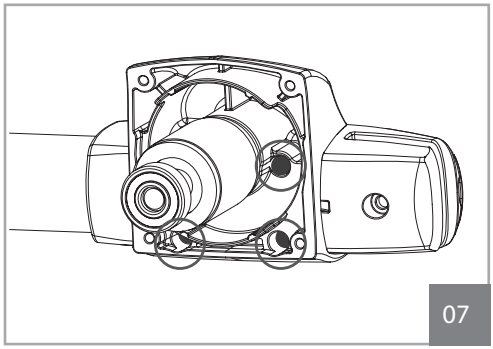


06

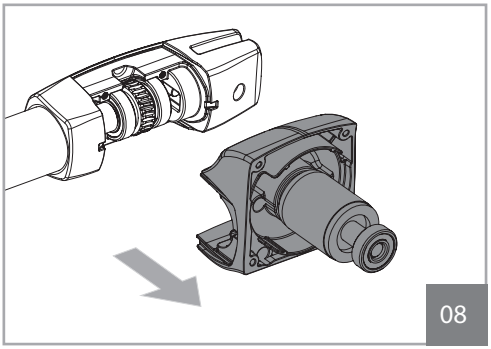
02 • Remove Lower Part.

03. OPERATOR

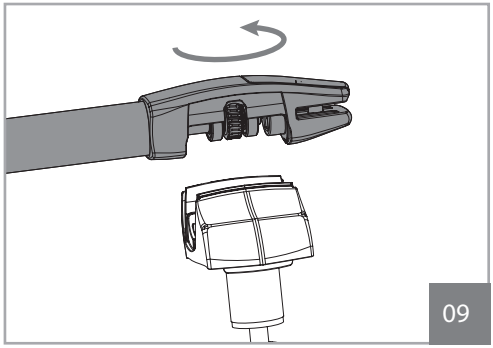
CHANGE MOTOR DIRECTION



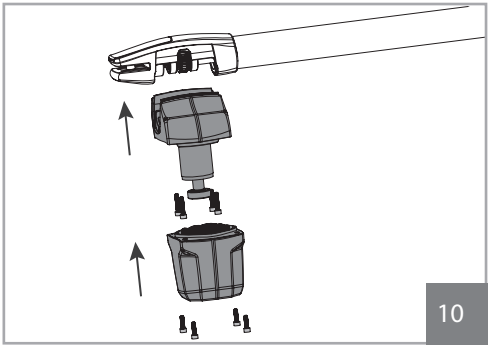
03 • Loosen the screws of the Middle Part.



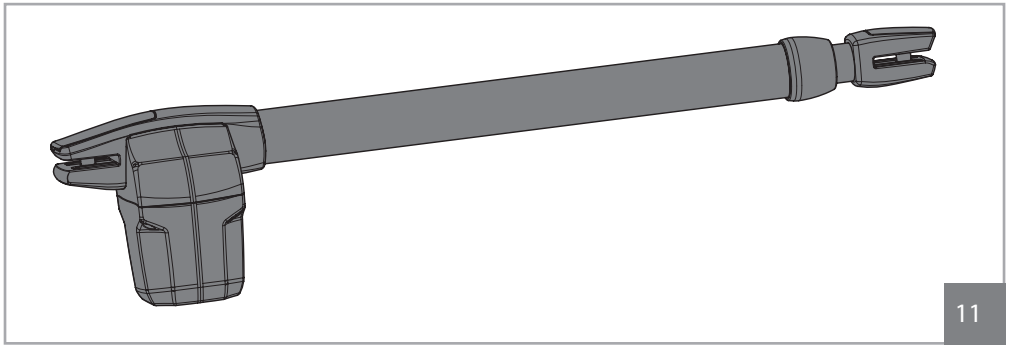
04 • Remove Middle Part.



05 • Rotate Upper Part 180°.



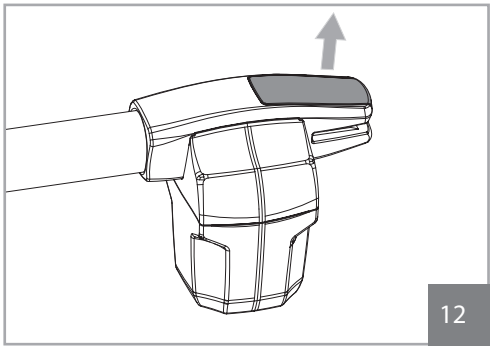
06 • Assemble operator by tightening all components with the screws.



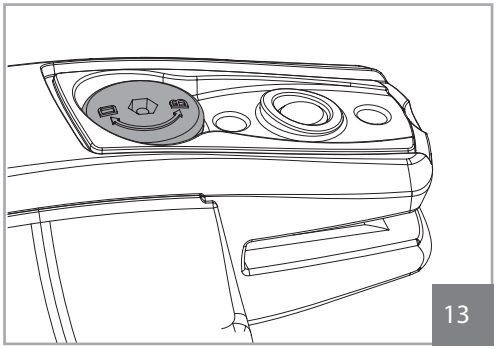
07 • Full transformed operator.

03. OPERATOR

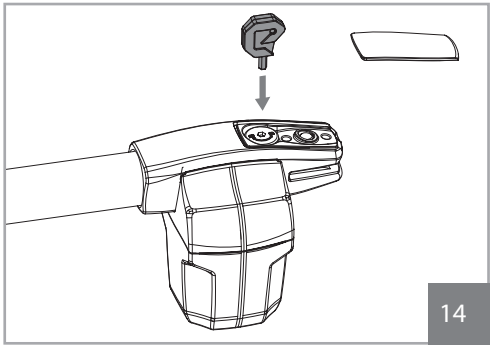
UNLOCK OPERATOR



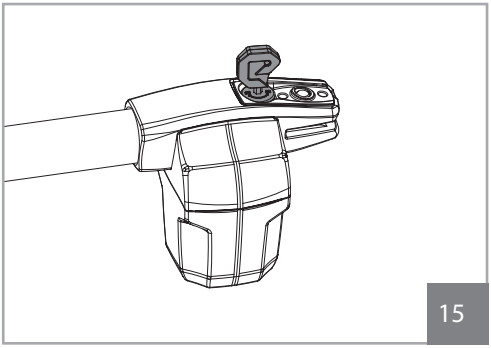
01 • Remove the plastic cap from the rear end.



Information engraved on the unlock shaft.
D= Unlock || B= Lock



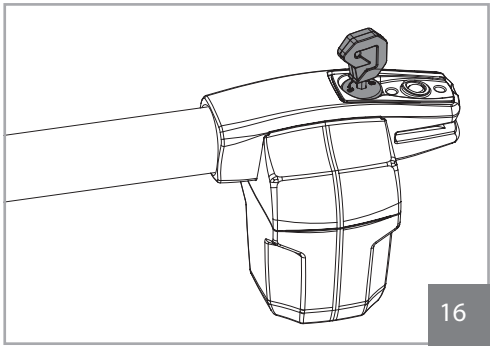
02 • Insert Release key on the unlock shaft.



03 • Rotate key 180 ° in the direction indicated in the figure to unlock.

04 • Operator unlocked.

Note • To lock operator so it can work automatically, must do it by turning the key anticlockwise.

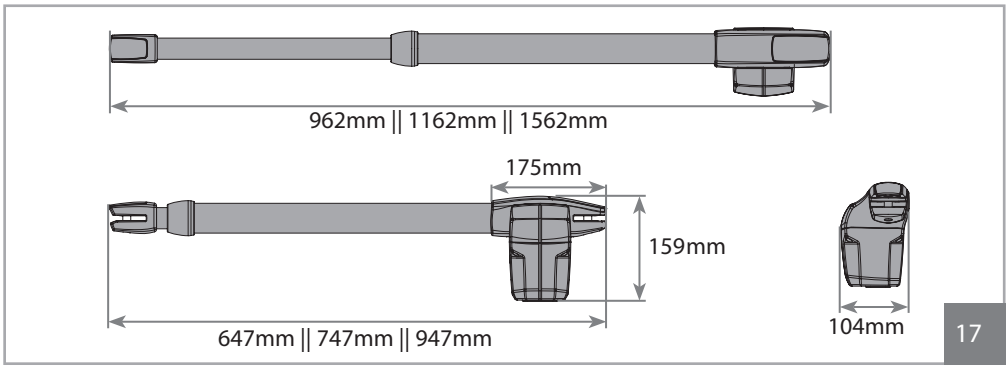


03. OPERATOR

TECHNICAL SPECIFICATIONS

		SELECT 300	SELECT 400	SELECT 600
• Power Supply	230V	230Vac 50/60Hz	230Vac 50/60Hz	230Vac 50/60Hz
	110V	110Vac 50/60Hz	110Vac 50/60Hz	110Vac 50/60Hz
	24V	24Vdc	24Vdc	24Vdc
• Power	230/110V	180W	180W	180W
	24V	60W	60W	60W
• Current	230V	1,3A	1,3A	1,3A
	110V	2,5A	2,5A	2,5A
	24V	1A to 3A	1A to 3A	1A to 3A
• RPM	230/110V	1400 RPM	1400 RPM	1400 RPM
	24V	1600 RPM	1600 RPM	1600 RPM
• Noise level		LpA <= 50 dB (A)	LpA <= 50 dB (A)	LpA <= 50 dB (A)
• Force		2300N	2300N	2300N
• Operating temperatures		-25°C to 65°C	-25°C to 65°C	-25°C to 65°C
• Thermal protection		120°C	120°C	120°C
• Protection class		IP54	IP54	IP54
• Working frequence	230/110V	25%	25%	25%
	24V	Intensive	Intensive	Intensive
• Opening time		8 sec. to 13 sec.	13 sec. to 18 sec.	20 sec. to 28 sec.
• Course		300mm	400mm	600mm
• Max leaf lenght		2500mm	3000mm	4000mm
• Capacitor	230V	8µF	8µF	8µF
	110V	20µF	20µF	20µF

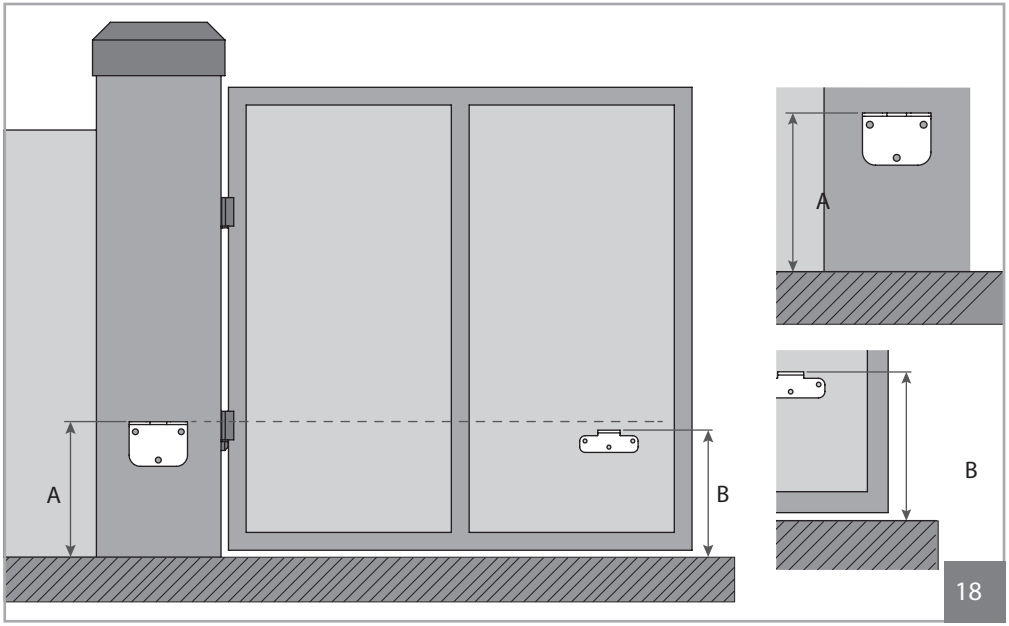
SELECT 300 || 400 || 600 dimensions are the following:



04. INSTALLATION

HEIGHT OF THE SUPPORTS

The operator SELECT must be installed with a small inclination , to prevent water infiltration through the extension arm.
For this, the front support must be fixed to the gate with a height lower than the height of the rear support. See example below:



18

Dimension A • Vertical distance from the floor to the top of the rear support .
Dimension B • Vertical distance from the floor to the top of the front support.

A	? mm
B	A- 10mm

• Set dimension A (this can be any size of your choice).
• After you set dimension A , subtract 10mm to find dimensionB .

Example:
• If the height of the rear bracket (dimension A)is set at 600 mm, then the height of the front bracket (dimension B) will be 590 mm (600mm-10mm).

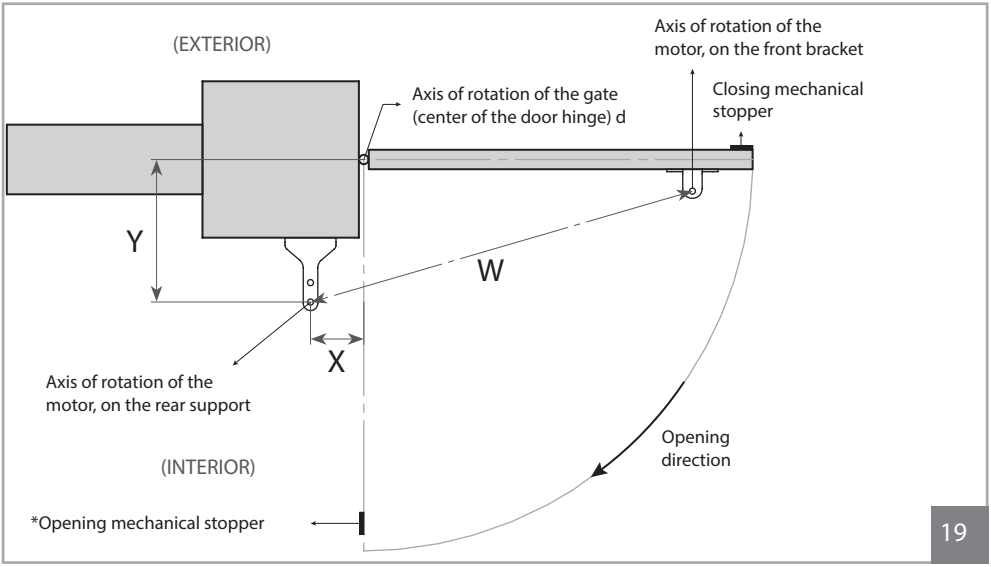
It is very important that these dimensions are respected! Only this way can be assured the correct functioning and durability of the operators!
It is also very important to have a levelled ground/terrain!

04. INSTALLATION

EXTERNAL OPENING INSTALLATION QUOTAS

On the Illustrated diagrams below and on the next page, are the dimensions for the installation of the automated system.

* The installation of opening stopper is not mandatory.



W 895 a 900

SELECT 300			
Cotas Y	Cotas X		
	140	150	160
140	98º	94º	91º
150	94º	91º	-
160	90º	-	-

W 1095 a 1100

SELECT 400							
Cotas Y	Cotas X						
	170	180	190	200	210	220	230
170	108º	107º	103º	100º	97º	95º	93º
180	108º	103º	100º	97º	95º	93º	91º
190	103º	99º	96º	94º	92º	90º	-
200	99º	96º	93º	91º	-	-	-
210	95º	92º	90º	-	-	-	-
220	92º	-	-	-	-	-	-

Legend:

Dimension X - Horizontal distance between hinge axis of the door and the rear axle of the motor.
Dimension Y - Vertical distance between hinge axis of the door and the rear axle of the motor.
Dimension W - Distance between axis of the motor brackets.

When installing the automation, it is mandatory to respect the dimensions x and y, indicated in the tables. Within this area, it is possible to identify the maximum opening angle that the gate reaches in these dimensions.

X, Y and W shown in (mm)

It is very important that these dimensions are respected! Only this way can be assured the correct functioning and durability of the operators!

SELECT 600

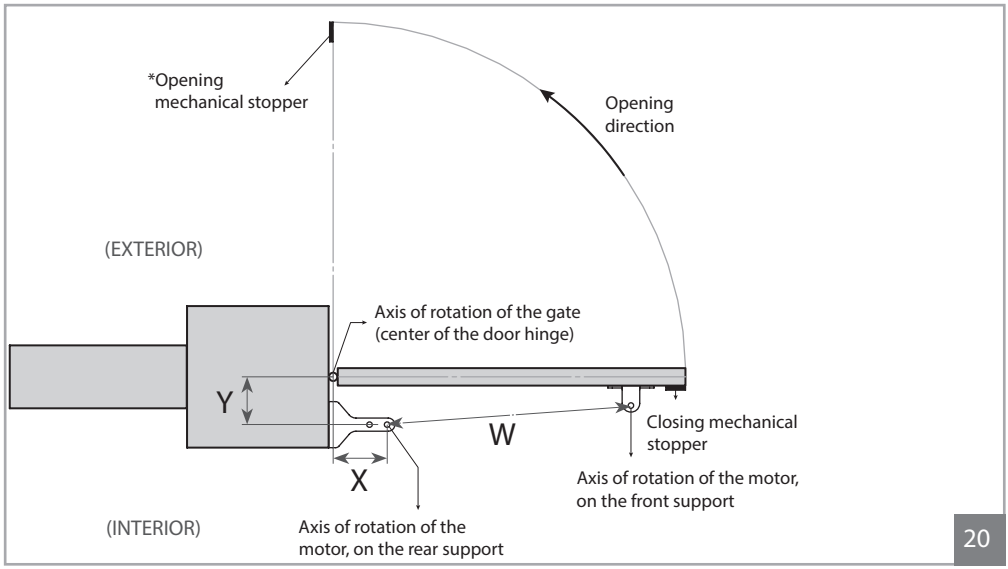
W 1495 a 1500

Cotas Y	Cotas X															
	200	210	220	230	240	250	260	270	280	290	300	320	340	360	380	400
220	105º	107º	110º	112º	114º	116º	118º	119º	114º	111º	108º	104º	101º	98º	96º	95º
230	105º	107º	109º	111º	113º	115º	117º	115º	111º	109º	106º	102º	99º	97º	95º	93º
240	104º	106º	109º	111º	113º	115º	116º	112º	109º	106º	104º	100º	98º	95º	93º	92º
250	104º	106º	108º	110º	112º	114º	112º	109º	106º	104º	102º	98º	96º	94º	92º	91º
260	104º	106º	108º	110º	112º	113º	109º	106º	103º	101º	100º	97º	94º	92º	91º	-
270	103º	105º	107º	109º	111º	109º	106º	103º	101º	99º	97º	95º	93º	91º	-	-
280	103º	105º	107º	109º	110º	106º	103º	101º	99º	97º	96º	93º	91º	-	-	-
290	103º	105º	107º	108º	106º	103º	100º	98º	96º	95º	94º	91º	-	-	-	-
300	103º	104º	106º	106º	103º	100º	98º	96º	94º	93º	92º	-	-	-	-	-
320	102º	104º	102º	99º	97º	95º	93º	92º	90º	-	-	-	-	-	-	-
340	102º	98º	96º	93º	92º	90º	-	-	-	-	-	-	-	-	-	-
360	94º	92º	90º	-	-	-	-	-	-	-	-	-	-	-	-	-

04. INSTALLATION

EXTERNAL OPENING INSTALLATION QUOTAS

On the Illustrated diagrams below and on the next page, are the dimensions for the installation



W 595 a 600

SELECT 300			
Cotas Y	Cotas X		
	150	160	170
120	95º	97º	92º
130	95º	93º	
140	94º		
150	90º		

W 695 a 700

SELECT 400							
Cotas Y	Cotas X						
	170	180	190	200	210	220	230
150	97º	99º	102º	104º	101º	97º	93º
160	96º	99º	101º	103º	98º	94º	91º
170	95º	98º	100º	100º	95º	92º	
180	95º	97º	100º	97º	93º		
190	94º	97º	99º	94º	90º		
200	94º	96º	96º	91º			
210	94º	96º	93º				
220	93º	94º					
230	93º	94º					

of the automated system.

* The installation of opening stopper is not mandatory.

Legend:

Dimension X - Horizontal distance between hinge axis of the door and the rear axle of the motor.
Dimension Y - Vertical distance between hinge axis of the door and the rear axle of the motor.
Dimension W - Distance between axis of the motor brackets.

When installing the automation, it is mandatory to respect the dimensions x and y, indicated in the tables. Within this area, it is possible to identify the maximum opening angle that the gate reaches in these dimensions.

X, Y and W shown in (mm)

It is very important that these dimensions are respected! Only this way can be assured the correct functioning and durability of the operators!

SELECT 600

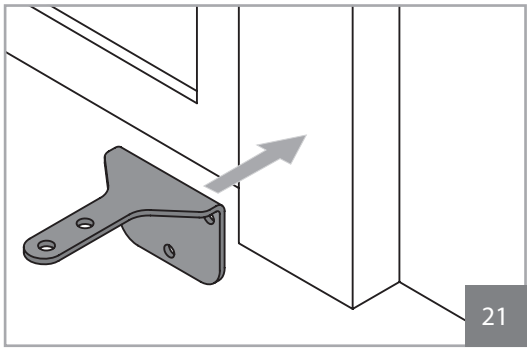
W 900 a 905

Cotas Y	Cotas X													
	200	210	220	230	240	250	260	270	280	290	300	320	340	360
200	96º	99º	101º	102º	104º	106º	108º	109º	111º	112º	114º	105º	99º	93º
210	96º	98º	100º	102º	104º	105º	107º	109º	110º	112º	111º	103º	97º	92º
220	96º	98º	99º	101º	103º	105º	106º	108º	109º	111º	109º	101º	95º	90º
230	95º	97º	99º	101º	102º	104º	106º	107º	109º	110º	107º	99º	93º	
240	95º	97º	98º	100º	102º	104º	105º	107º	108º	109º	104º	97º	92º	
250	94º	96º	98º	100º	101º	103º	105º	106º	107º	106º	102º	96º	90º	
260	94º	96º	98º	99º	101º	102º	104º	105º	107º	104º	100º	94º		
270	94º	96º	97º	99º	100º	102º	103º	105º	106º	102º	98º	92º		
280	94º	95º	97º	98º	100º	101º	103º	104º	104º	100º	96º	90º		
290	93º	95º	97º	98º	100º	101º	102º	104º	102º	98º	94º			
300	93º	95º	96º	98º	99º	101º	102º	103º	99º	96º	93º			
320	92º	94º	96º	97º	98º	100º	101º	99º	95º	92º				
340	92º	94º	95º	97º	98º	99º	99º	95º	92º					
360	92º	93º	95º	96º	97º	99º	95º	91º						
380	92º	93º	94º	96º	97º	95º	91º							
400	92º	93º	94º	95º	95º	91º								

04. INSTALLATION

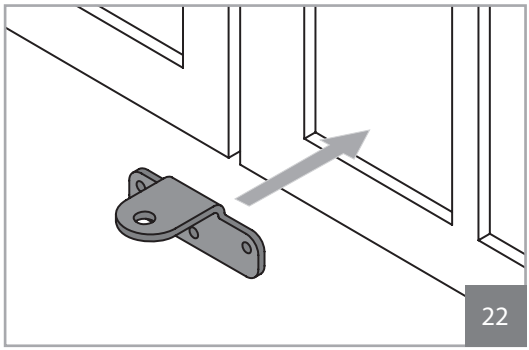
INSTALLATION STEPS

Pay attention to installation dimensions mentioned on pages 5B, 6 and 7!



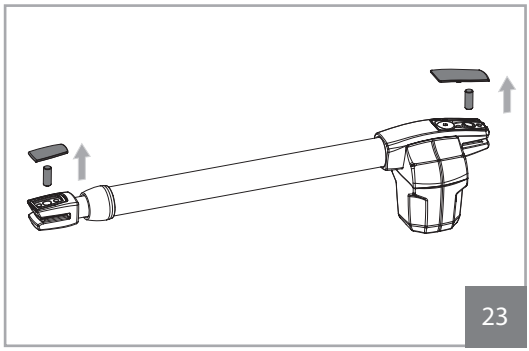
01 • Fixing rear support

• The Rear support must be fixed to the pillar or wall using dimensions provided in the preceding pages.
It can be fixed using screws with mechanical bushing or chemical welding process, or one of your choice since it provides an appropriate support.



02 • Fixing front support

• The Front support should be fixed to the gate, respecting height dimensions and distance to the rear support.
This may be fixed by using screws, welding process, or to choose another long as it provides a secure proper support.



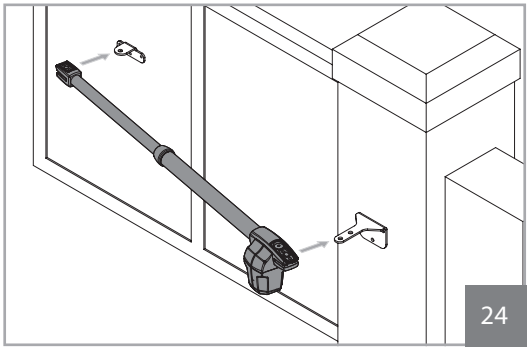
03 • Remove caps and pins from motor

• Before installing motor, remove caps and pins from motor.

• At the end of the installation, put back plastic covers for a better visual finish of the operator.

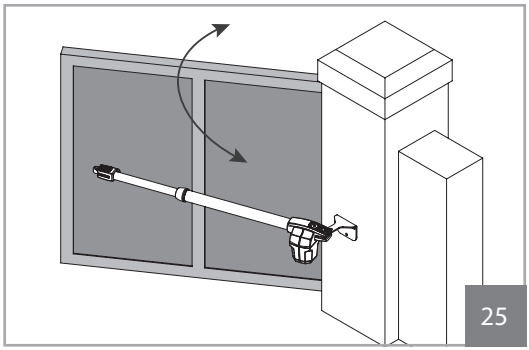
04. INSTALLATION

INSTALLATION STEPS



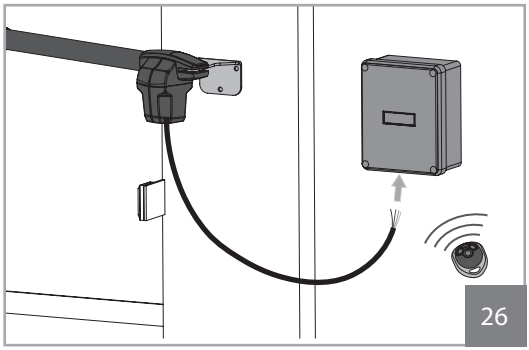
04 • Install operator on the supports

• The operator must be placed on both supports the same time to avoid leaving the operator suspended by only one of the supports.
To make the task easier, you should unlock the operator in order to be able to stretch/ retract arm easily (see page 3B),to get the correct position for supports.



05 • Test movement

• Install the pins removed earlier on each place with a small amount of lubricant for less friction.
• Move the door manually to see if the door opens and closes uniformly and correctly, without any irregular friction during its entire travel;
This will ensure that operator is not subjected to problems during operation.



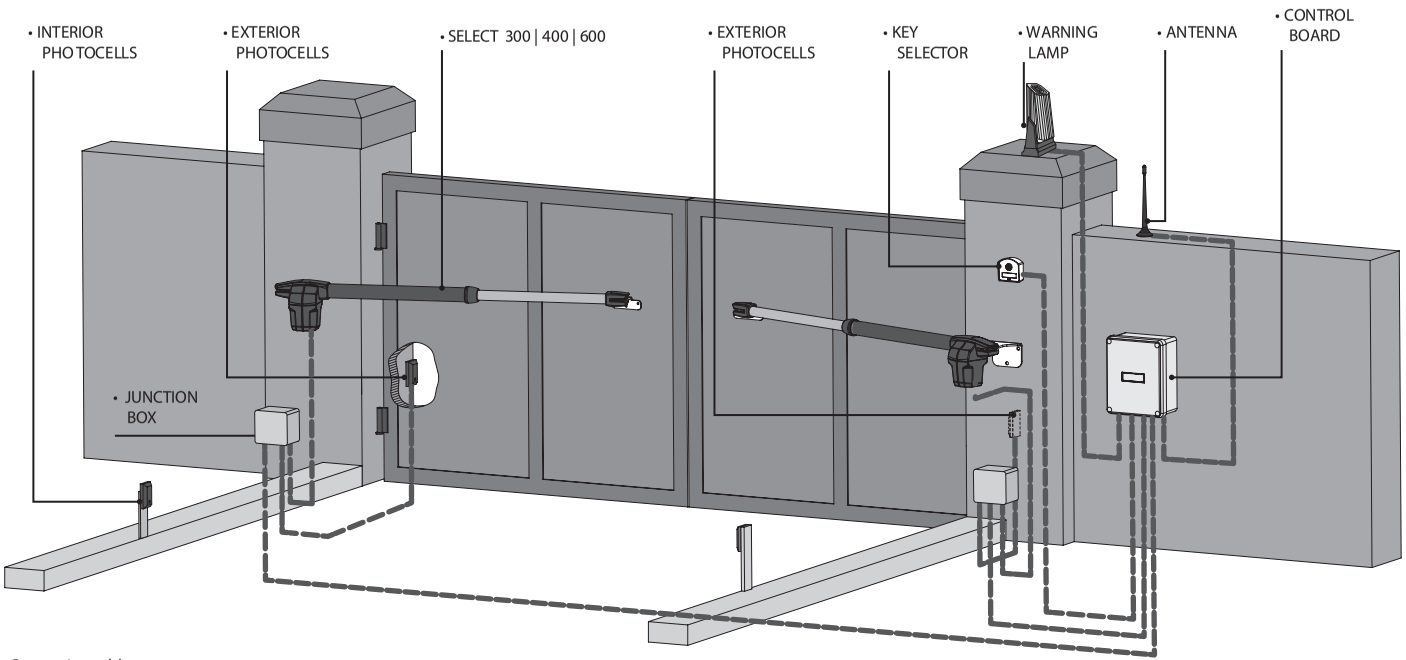
06 • Connecting operator to control board and configuring control devices.

• With the operator installed, connect it to control board for system configuration (see control board user manual).
Must also configure the desired control devices (transmitters, wall switch, etc.) and other additional components such as antenna, warning light, key selector, among others.

It is important to respect this installation order!
Otherwise, it is not possible to ensure correct installation and operators may not work properly!

04. INSTALLATION

INSTALLATION MAP



LEGEND:

- Connection cables

It is important to use mechanical stoppers in the opening and closing position of the gate. If not respected, components of the automation may suffer efforts for which they were not prepared, and as a result will be damaged.

It is important to use junction boxes for connections between motors, components and control unit. All cables must enter and exit on the bottom of the junction and control board box.

05. TROUBLESHOOTING

FINAL CONSUMERS INSTRUCTIONS

INSTRUCTIONS FOR SPECIALIZED INSTALLERS

Anomaly	Procedure	Behavior	Procedure II	Discovering the origin of the problem			
• Motor doesn't work at all	•Make sure you have power in the automation control board and if it is working properly.	• Still not working	• Consult a qualified technician.	1 • Open control box and check if it has 230V/110V/24V power supply; 2 • Check input fuses;	3 • Disconnect motors from control board and test them by connecting directly to power supply in order to find out if they have problems see page 11A/11B).	4 • If the motors work, the problem is on the control board. Pull it out and send it to our technical services for diagnosis;	5 • If the motors doesn't work, remove them from installation site and send to our technical services for diagnosis.
• Motor doesn't move but makes noise	• Unlock motor and move gate by hand to check for mechanical problems on the gate.	• Is the gate closed?	• Consult an experienced gate expert	1 • Check all motion axis and associated motion systems related with gate and operators (pins, hinges, etc.) to find out what is the problem.			
		•Gate moves easily?	• Consult a qualified technician.	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 (see page 11A/11B).	3 • If the motors work, the problem is from control board. Pull it out and send it to our technical services for diagnosis;	4 • If the motors doesn't work, remove them from installation site and send to our technical services for diagnosis.
• Motor opens but doesn't close	• Unlock motor and move gate by hand to closed position. Lock motor(s) again and turn off power supply for 5 seconds. Reconnect it and send order to open gate using transmitter.	• Gate opened but didn't close again.	1 • Check if there is any obstacle in front of the photocells; 2 • Check if any of the control devices (key selector, push button, video intercom, etc.) of the gate are jammed and sending permanent signal to control unit; 3 • Consult a qualified technician.	All control boards have LEDs that easily allow to conclude which devices are with anomalies. All safety devices LEDs (DS) in normal situations remain On. All "START" circuits LEDs in normal situations remain Off. If LEDs devices are not all On, there is some security systems malfunction (photocells, safety edges), etc. If "START" circuits LEDs are turn On, there is a control device sending permanent signal.	A) SECURITY SYSTEMS: 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. 2 • Remove one shunt at a time until you find the malfunction device . 3 • Replace it for a functional device and check if the operator works correctly with all the other devices. If you find another one defective, follow the same steps until you find all the problems.	B) START SYSTEMS: 1 • Disconnect all wires from START terminal input. 2 • If the LED turned Off, try reconnecting one device at a time until you find the defective device. NOTE: n case procedures described in sections A) and B) don't result, remove control board and send to our technical services for diagnosis.
• Motor 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	1 • Check all motion axis and associated motion systems related with gate and operators (pins, hinges, etc.) to find out what is the problem.			
		• Gate moves easily?	• Consult a qualified technician.	1 • Check capacitors, testing 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 are faulty; 3 • If the motors doesn't work, remove them from installation site and send to our technical services for diagnosis.	4 • If motors work well and move gate at full force during the entire course, the problem is from controller. Set force using trimmer on the board. Make a new working time programming , giving suffient time for opening and closing with appropriate force (see manual of the controller in question).	5 • If this doesn't work, remove control unit and send it to technical services services.	NOTE : Setting force of the controller should be sufficient to make the gate open and close without stopping, but should stop 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.).

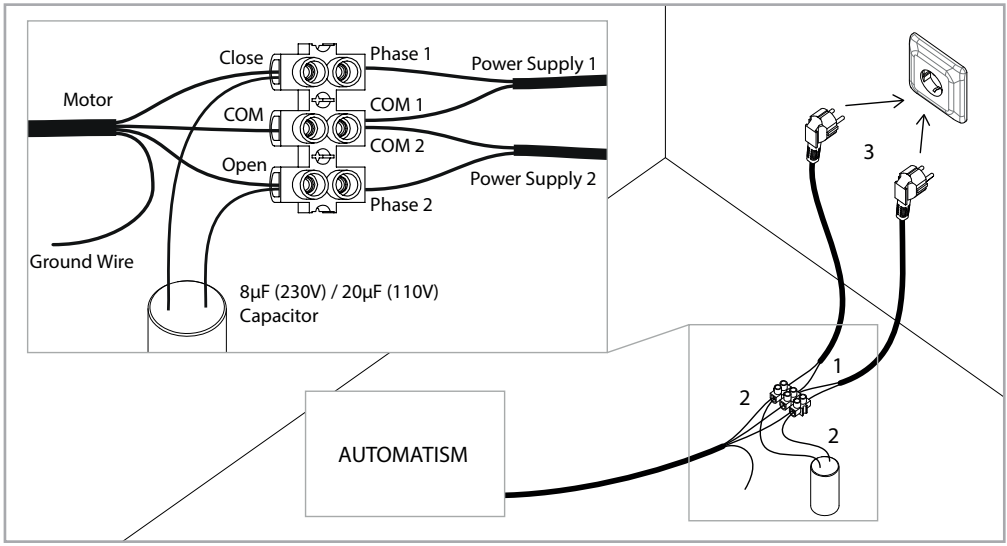
06. COMPONENTS TEST

230V/110V MOTOR

To detect if the malfunction is on the control board or on the motor is, sometimes, necessary to perform tests with connection directly to a 110V/230V power supply.
For this, it is necessary to interpose a capacitor on the connection in order to the automatism to work (check the type of capacitor to be used in the product manual). The diagram below, shows how to make that connection and how to merge the different components wires.

NOTES:
- To perform the tests, there is no need to remove the automatism from the place it is installed, because in this way, it is possible to understand if the automatism can function properly connected directly to the current.
- You should use a new capacitor during this test to ensure that the problem does not lie on it.

01 • Connect the power wires to the terminal, as shown below.
02 • Connect the automatism wires in the terminal, interposing a capacitor in the opening and closing wires.
03 • Once these connections are completed, connect to a 110V/230V power outlet, depending on the motor/control board in test.



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

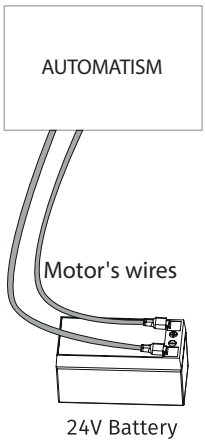
06. COMPONENTS TEST

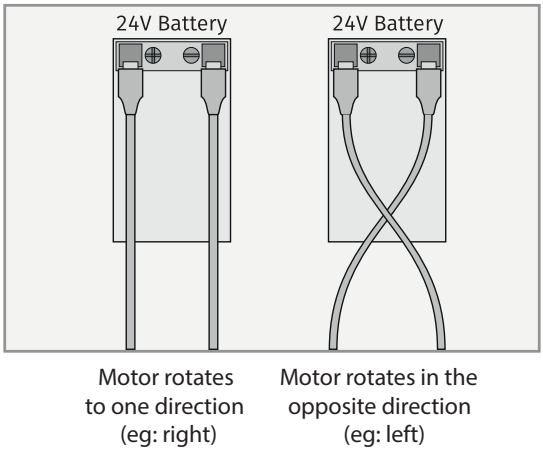
24V MOTOR

To detect which are the components with problems in a 24V automatism instalation, it's sometimes necessary to run a test directly to a external power supply (another 24V battery). The diagram below shows how to connect the motor to the battery.

NOTES:

- To make these tests it isn't necessary to remove it from the location where it is installed, because in this way, you can understand of the automatism works properly directly connected to the external battery.
- Once you connect the wires to a battery 24V, the motor must work for one direction. To test the opposite movement, change the position of the wires connected to the battery.

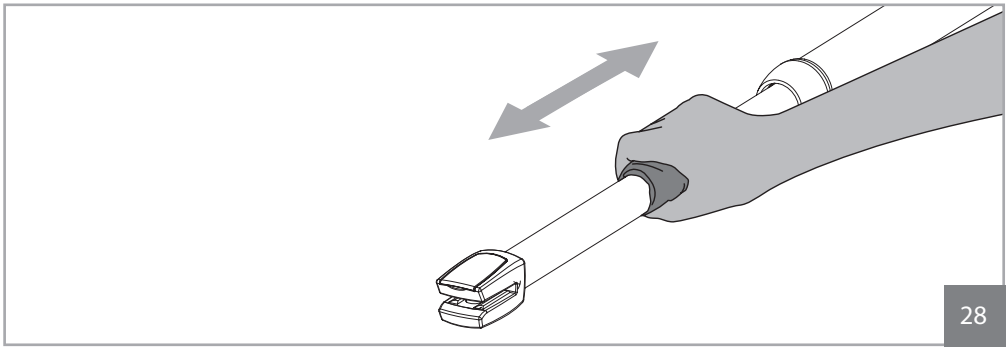




All tests must be performed by qualified personnel due to serious danger associated with the misuse of electrical systems!

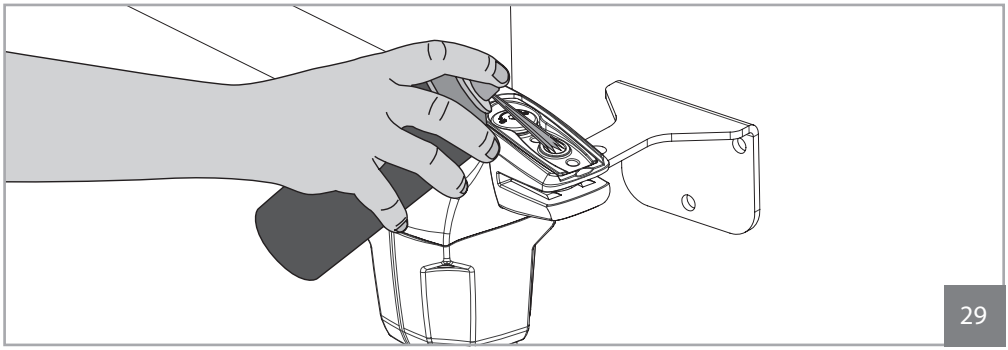
07. MAINTENANCE

MAINTENANCE



• Clean stainless steel arm

• With a cloth soaked in lubricant spray, wipe any residue that accumulates on the operator's stainless steel arm.
• Apply a small amount of spray lubricant on the arm and using a dry cloth remove the excess, leaving a homogeneous layer of lubricant over the arm.

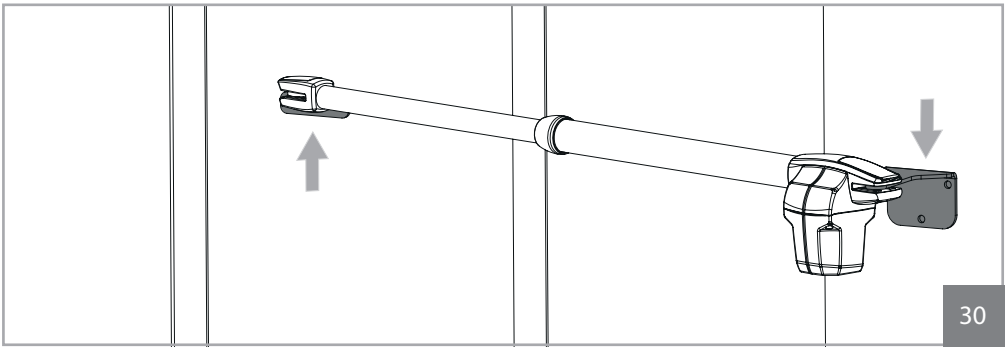


• Lubricate pins

• Remove front and rear caps
• Place a small amount of lubricant on the holes that contains support pins.
• Install caps on the respective holders.

07. MAINTENANCE

MAINTENANCE



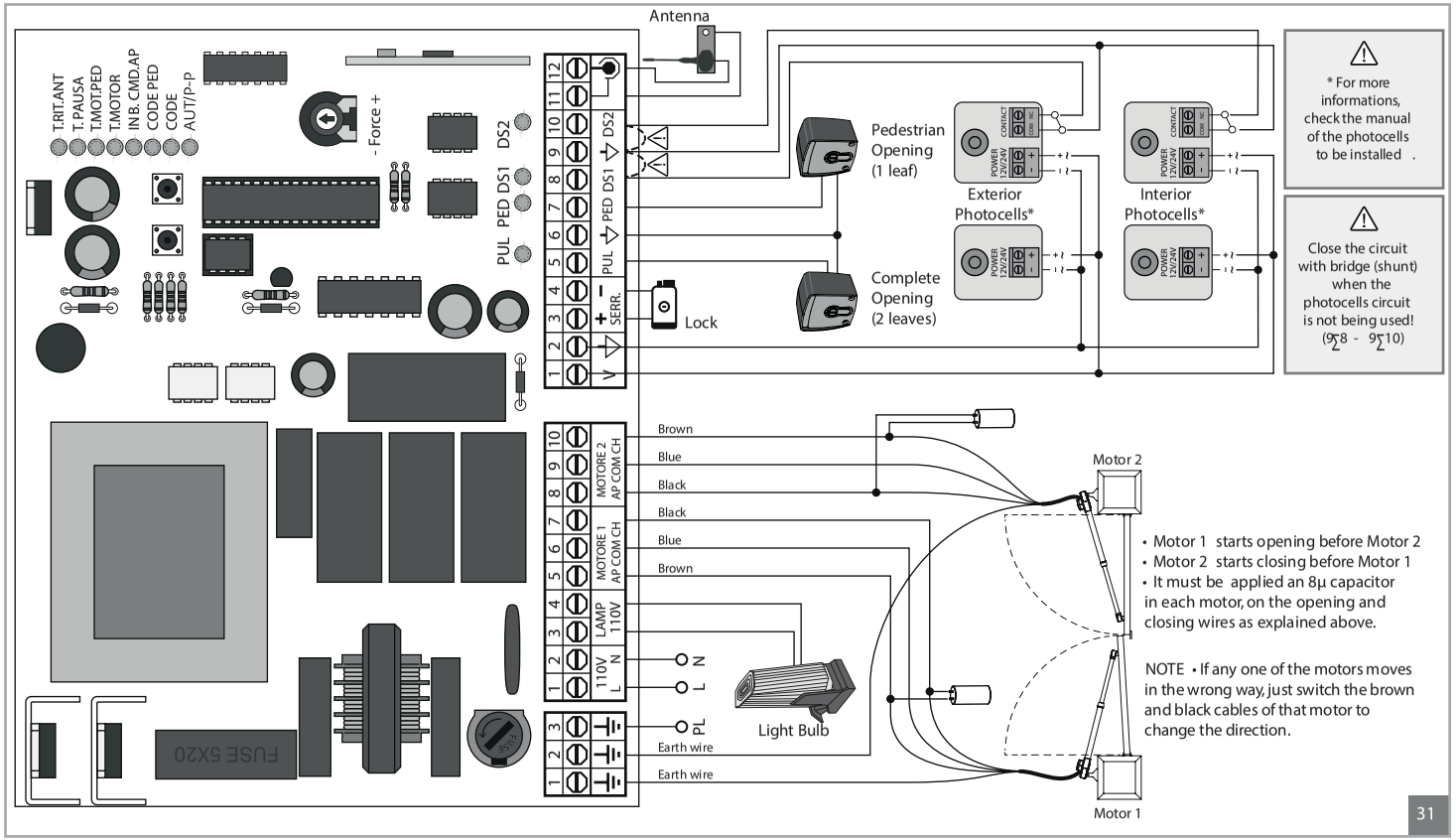
- Check motor supports

•Make sure that supports remain well fixed on the pillars 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.

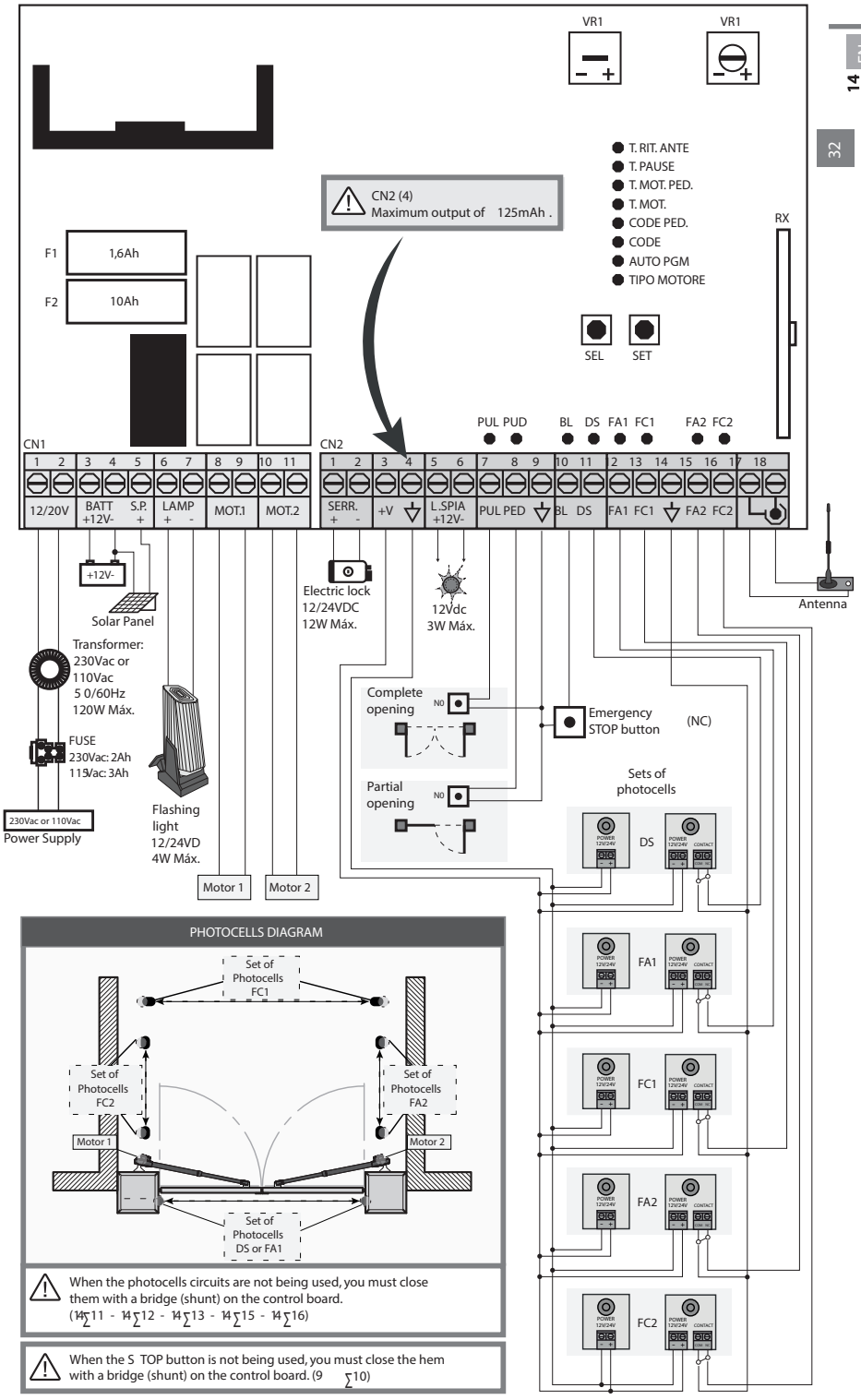
08. CONTROL BOARD 230V/110V

230/110V CONNECTIONS SCHEME



09. CONTROL BOARD 24V

24V CONNECTIONS SCHEME



When the photocells circuits are not being used, you must close them with a bridge (shunt) on the control board.
(14∑11 - 14∑12 - 14∑13 - 14∑15 - 14∑16)

When the S TOP button is not being used, you must close the hem with a bridge (shunt) on the control board. (9 ∑10)

PORTUGAL

move automation

CE

Parque Empresarial de Padreiro, Lote 13
4970-500 Arcos de Valdevez, Portugal

+351 258 931 334 / 5
geral@moveautomation.com

www.moveautomation.com