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JEDI



**ELECTROMECHANICAL ACTUATOR FOR SPRING
AND COUNTERWEIGHT BALANCED DOORS**

EC DECLARATION OF INCORPORATION FOR PARTLY COMPLETED MACHINERY

(Directive 2006/42/EC, Annex II-B)

The manufacturer (*) **V2 S.p.A.**, headquarters in **Corso Principi di Piemonte 65, 12035, Racconigi (CN), Italy**

Under its sole responsibility hereby declares that:

the partly completed machinery model(s):

JEDI-700 (*), JEDI-700-120V
JEDI-1000 (*), JEDI-1000-120V

Identification number and year of manufacturing: **typed on nameplate**

Description: **electromechanical actuator for garage doors**

- is intended to be installed on **garage doors** to create a machine according to the provisions of the Directive 2006/42/EC. The machinery must not be put into service until the final machinery into which it has to be incorporated has been declared in conformity with the provisions of the Directive 2006/42/EC (annex II-A).
- is compliant with the applicable essential safety requirements of the following Directives:
Machinery Directive 2006/42/EC (annex I, chapter 1)
Low Voltage Directive 2006/95/EC
Electromagnetic Compatibility Directive 2004/108/EC
Radio Directive 99/05/EC
Directive ROHS2 2011/65/EC

The relevant technical documentation is available at the national authorities' request after justifiable request to:

V2 S.p.A., Corso Principi di Piemonte 65, 12035, Racconigi (CN), Italy

The person empowered to draw up the declaration and to provide the technical documentation:

Cosimo De Falco

Legal representative of V2 S.p.A.
Racconigi, 11th January 2010



(*) made in extra EU Countries on behalf of V2 S.p.A.

TECHNICAL SPECIFICATIONS

	JEDI-700	JEDI-1000
Power supply	230Vac - 50Hz	230Vac - 50Hz
Absorbed power	100W	160W
Max accessories load 24V	12W	12W
Protection fuses	SOURCE = 2,5A	SOURCE = 2,5A
Door area	≤ 10m ²	≤ 15m ²
Average speed	110mm/s	110mm/s
Peak force	700N	1000N
Nominal force	550N	850N
Working temperature	-20 ÷ +40 °C	-20 ÷ +40 °C
Rated Operating Time	> 4 min.	> 4 min.
Protection degree	IP20	IP20
Weight	12Kg	12Kg

	JEDI-700-120V	JEDI-1000-120V
Power supply	120Vac - 60Hz	120Vac - 60Hz
Absorbed power	100W	160W
Max accessories load 24V	12W	12W
Protection fuses	SOURCE = 3,5A	SOURCE = 3,5A
Door area	≤ 10m ²	≤ 15m ²
Average speed	110mm/s	110mm/s
Peak force	700N	1000N
Nominal force	550N	850N
Working temperature	-20 ÷ +40 °C	-20 ÷ +40 °C
Rated Operating Time	> 4 min.	> 4 min.
Protection degree	IP20	IP20
Weight	12Kg	12Kg

IMPORTANT REMARKS

For any installation problem please contact our Customer Service at the number +39-0172.812411 operating Monday to Friday from 8:30 to 12:30 and from 14:00 to 18:00

V2 S.p.A. has the right to modify the product without previous notice; it also declines any responsibility to damage or injury to people or things caused by improper use or wrong installation.



PLEASE READ THIS INSTRUCTION MANUAL VERY CAREFULLY BEFORE INSTALLING AND PROGRAMMING YOUR CONTROL UNIT.

- This instruction manual is only for qualified technicians, who specialize in installations and automations.
- The contents of this instruction manual do not concern the end user.
- Every programming and/or every maintenance service should be done only by qualified technicians.

AUTOMATION MUST BE IMPLEMENTED IN COMPLIANCE WITH THE EUROPEAN REGULATIONS IN FORCE:

EN 60204-1 (Machinery safety. electrical equipment of machines, part 1: general rules)

EN 12445 (Safe use of automated locking devices, test methods)

EN 12453 (Safe use of automated locking devices, requirements)

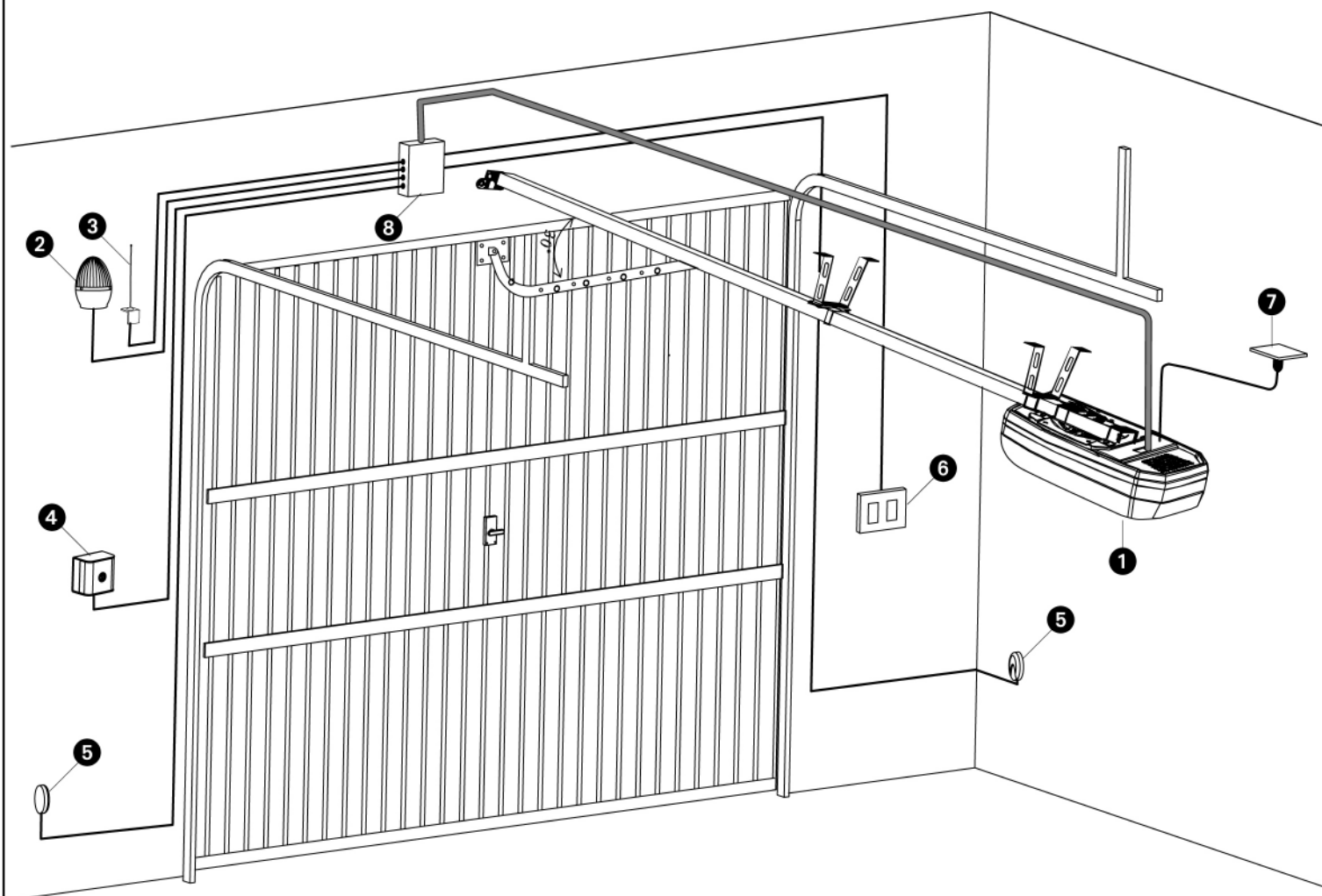
- The installer must provide for a device (es. magnetothermal switch) ensuring the omnipolar sectioning of the equipment from the power supply. The standards require a separation of the contacts of at least 3 mm in each pole (EN 60335-1).
- Installation requires mechanical and electrical skills, therefore it shall be carried out by qualified personnel only, who can issue the Compliance Certificate concerning the whole installation (Machine Directive 98/37/EEC, Annex IIA).
- The automated vehicular gates shall comply with the following rules: EN 12453, EN 12445, EN 12978 as well as any local rule in force.
- Also the automation upstream electric system shall comply with the laws and rules in force and be carried out workmanlike. V2 S.p.A. declines any responsibility in case of automation upstream electric system not complying with the laws and rules in force and not carried out workmanlike.
- The door thrust force adjustment shall be measured by means of a proper tool and adjusted according to the max. limits, which EN 12453 allows.
- The use of JEDI in dusty, saline or explosive environment is forbidden
- The opener is designed for operation in dry rooms exclusively.
- For the safety and life of persons it is absolutely necessary to follow all instructions.
- Keep these instructions save for later reference
- Do not permit children to play with the automated garage door. Transmitters are to be kept safe and away from children!
- Only operate the door if the entire door area is in your field of view. Always be sure, that no persons or objects are located within traveling range of the door.
- Do not use the opener when service or adjustment work is required. A badly balanced door, or a faulty garage door system may cause injuries.
- Please inform all persons using the door system on how to operate it correctly and safely. Demonstrate and test the reversion (with a 50 mm high obstacle at max. 150 N) as well as the mechanical release.
- For the safety of persons and objects a safety check has to be performed. Before finishing the initial operation make sure that the drive stops and reverses according to the valid norms (EN 12453) when hitting an obstacle (max. 150N force, equivalent to approx. 15 kg, more than 50 mm above ground).
- This test and measurement of force may only be performed by a professional.
When hitting an obstacle the door has to stop and reverse (completely or partially, depending on the setting of the PCB). If the door does not run the correct path or if the door does not reverse when hitting an obstacle the programming of force and path has to be repeated.
Then please repeat the test.
If the door after the performed corrections does not stop and reverse according to the valid norms, the door may not be operated automatically.
- Check regularly that the gate reverse when detected a 40mm high obstacle
- Check often the automation, particularly the cables, springs and mechanic parts for wear and tear, damages and unbalancing
- The plug must be at easy reach, after the installation
- The data on the plate of the product are written on the label put next to the connection terminal board
- Permanently mounted auxiliary devices (such as push buttons etc.) should be mounted within view of the door. The distance between moving parts and the height must be at least 1.5 meters. It is essential that they are mounted out of reach of children!
- Affix warning signs indicating the risk of being caught in the door where they may be seen immediately or in the vicinity of the permanently mounted push button.

PRELIMINARY CHECKINGS

Before installing JEDI, please check the following basic points:

- The door must be suitable to be automated (check the door operation manual and directions). The door structure itself must be stout and appropriate to be automated.
- Fix the engine steadily and using suitable material.
- If necessary, make the structural calculation and enclose to the technical specification paper.
- Check the door to be provided with anti-fall system (independent of the suspension system)
- The door must be functional and safe.
- The door must open and close easily without any friction.
- The door must be properly balanced both before and after its automation: stopping the door in any position, it must not move (carry out a balance weight adjustment, if necessary).
- It is advisable to install the geared motor in the centre of the door; it is permitted to move aside 100 mm to install the sliding arm accessory **162504** (see paragraph 3 page 18).
- In case of counterbalanced door, check that the minimum distance between the track and the door must not be under 20 mm.

INSTALLATION LAYOUT



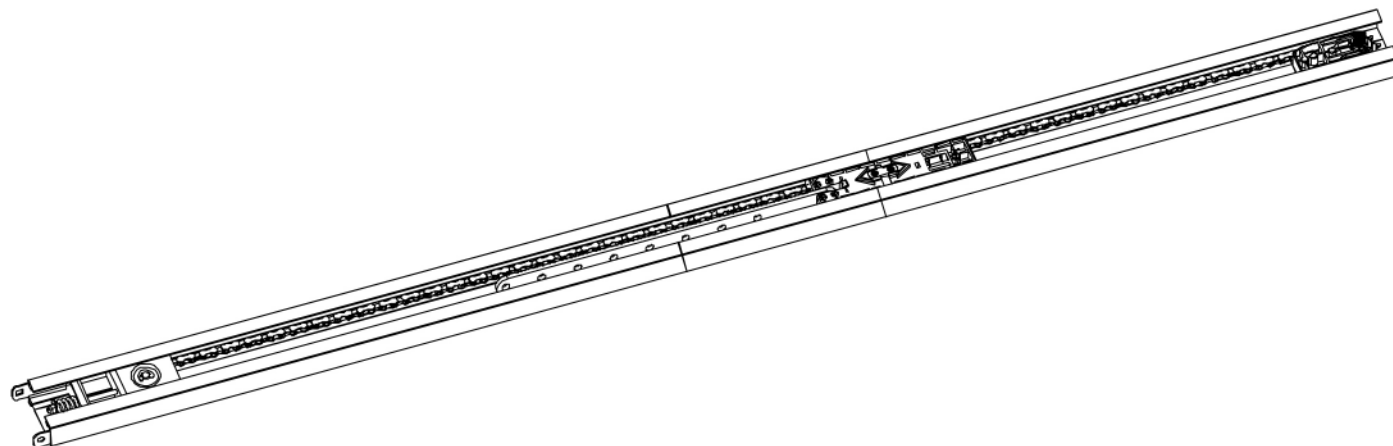
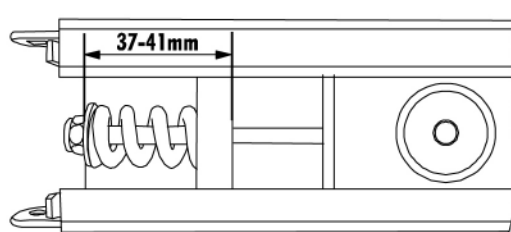
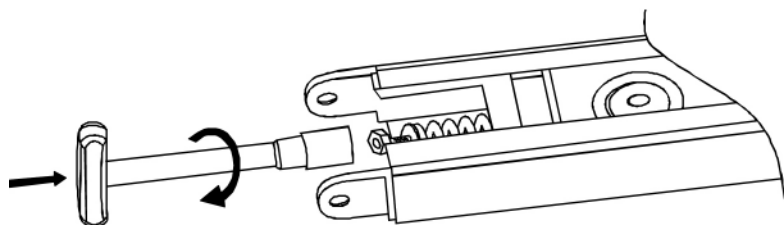
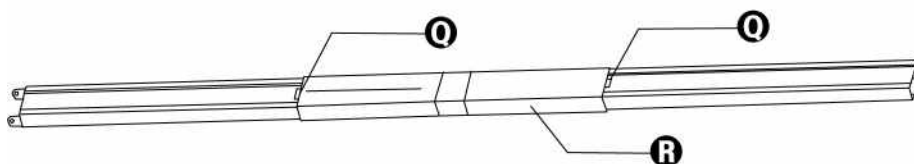
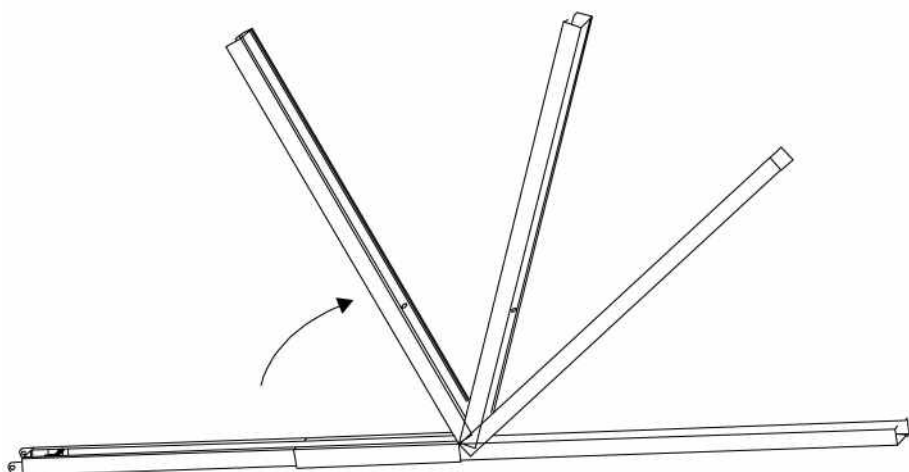
① Actuator JEDI	cable with plug 2 x 0.75 mm ²
② Blinker	cable 2 x 0.5 mm ²
③ Aerial	cable RG-58
④ Key switch	cable 3 x 0.5 mm ²

⑤ Photocells	cable 4 x 0,5 mm ² (RX) cable 2 x 0,5 mm ² (TX)
⑥ Inside push-button panel	cable 3 x 0,5 mm ²
⑦ Schuco socket	-
⑧ Junction box	-

INSTALLATION OF GUIDE SECTION BAR

1. Remove the section bar from its cardboard packaging and check its integrity.
2. Unfold the section bar as indicated in the figure below.
3. Once the section bar is elongated, slide the connecting section bar **R** to the end position indicated by the two holes **Q** on the chain-guide section bar.
4. Adjust the tension of the chain using the Allen-head screw with a 10 mm Allen-wrench: turn the bolt until the chain is sufficiently tight.

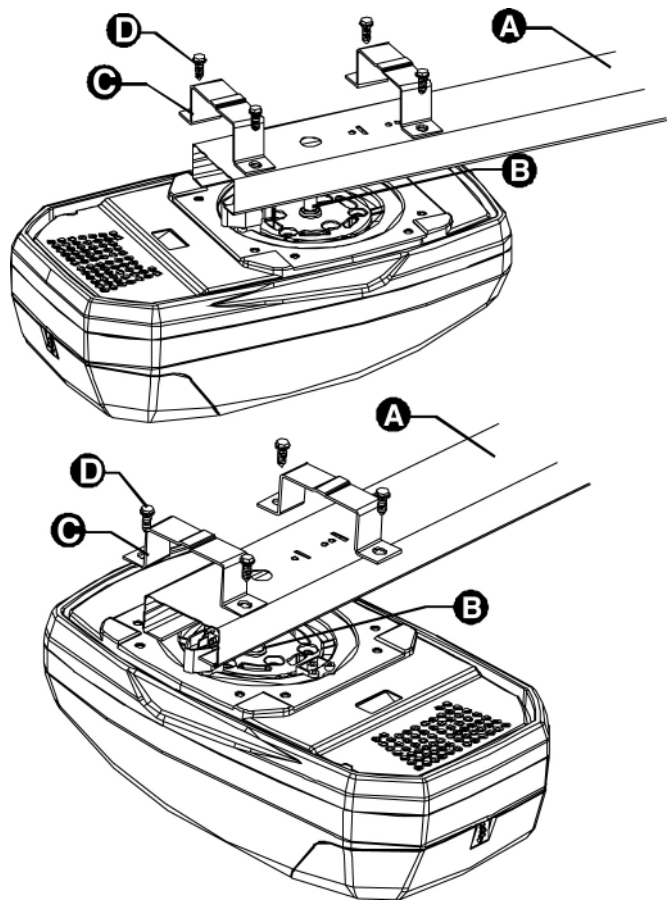
⚠ CAUTION: Make certain that the draw slide slides freely along the entire length of the guide. Eliminate any friction prior to proceeding with the next phases of installation.



INSTALLATION OF MOTOR ON SECTION BAR

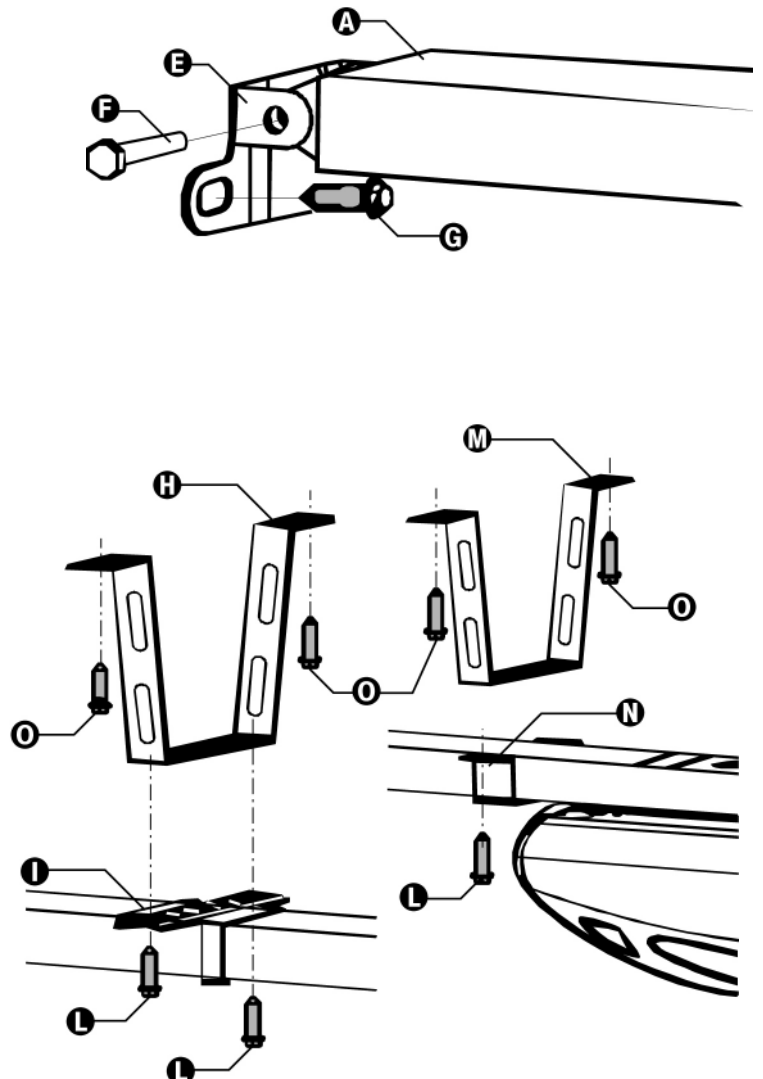
1. Insert the shaft/pinion adapter on the motor shaft.
2. Position the section bar **A** on the motor: the shaft/pinion adapter **B** must fit into the seat on the section bar. Verify that the section bar fits snugly against the motor.
3. Position the two omega brackets **C** on the section bar so that they correspond with the holes on the base of the motor.
4. Fasten the two omega brackets using the 6 x 15 self-threading screws provided **D**.

⚠ In case of lack of space, the motor can be mounted rotated of 90°

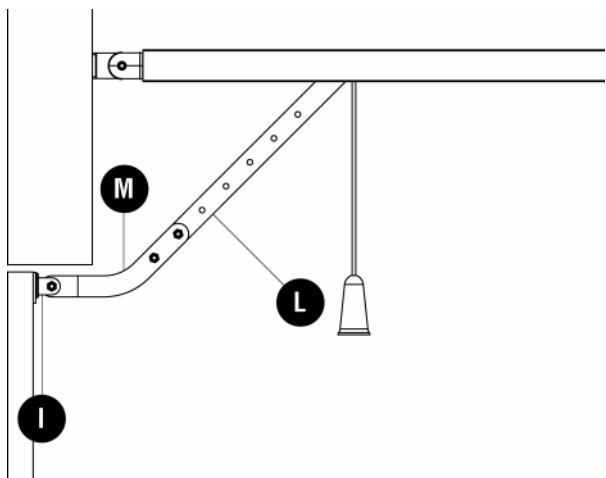


INSTALLATION

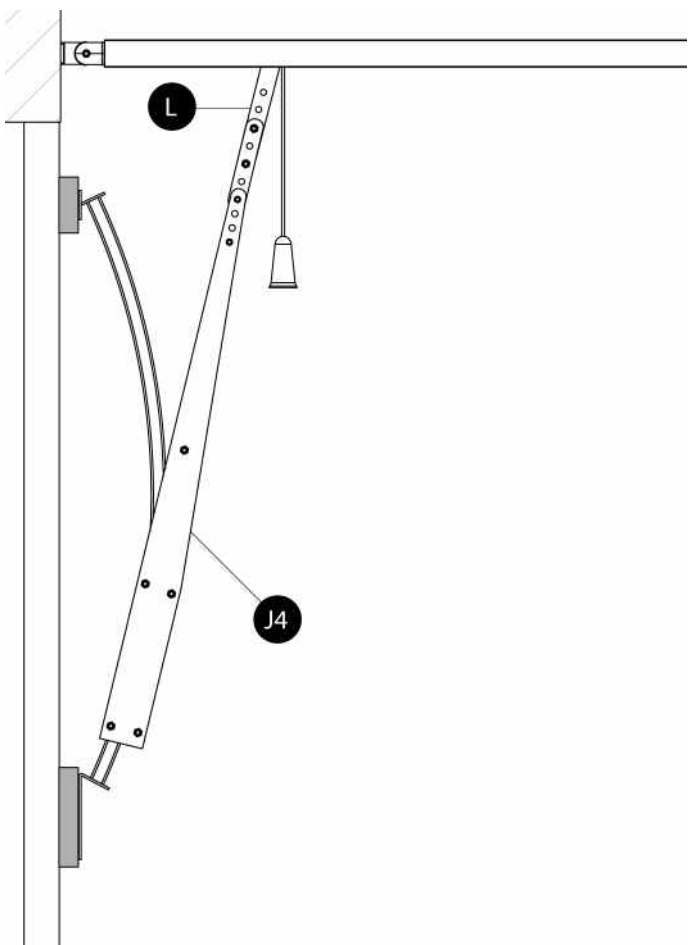
- 2.1 Disassemble the door's locking system.
- 2.2 Measure the door, and at exactly half its height mark the reference points on the upper crossbeam and on the ceiling to facilitate positioning of the guide section bar.
- 2.3 Fasten the bracket **E** to the upper crossbeam of the door using plugs **G** suitable for the type of wall (\varnothing minimum 8 mm).
- 2.4 Hook the section bar **A** to the bracket using the hexagonal-head **F** 6x80 screw with its self-blocking nut
- 2.5 Bend the 2 pierced bar at the desired length
- 2.6 Fix the front pierced bar **H** to the fixing bracket **I** in the section bar using the 8x20 screws **L** with their nuts
- 2.7 Fix the rear pierced bar **M** to the omega bracket **N** using the 8x20 screws **L** with their nuts
- 2.8 Following the references previously marked on the ceiling, locate the fixing points for the bars **H** and **M** and using the screws **O** suitable for the type of ceiling (minimum \varnothing 8 mm) anchor the automation



- 2.9 Only for sectional and spring operated garage doors**
 Fasten the draw slide **I** on the upper portion of the door maintaining the previously marked reference points. Connect the perforated bar **L** and the curved arm **M** using 2, 6 x 15 bolts. Connect the curved arm **M** and the draw plate **I** using the cylindrical headed pivot with the provided split pin.

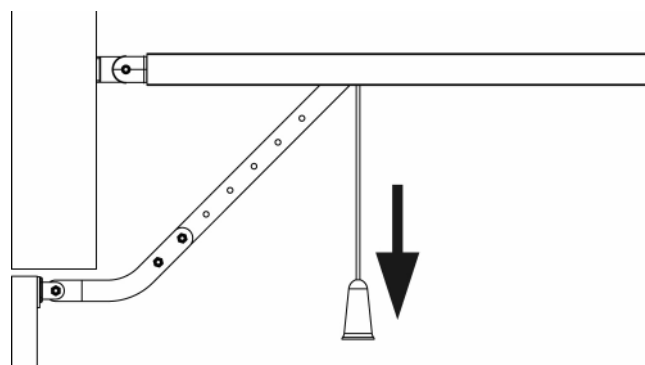


- 3. Only for counter-weighted garage doors**
 Fasten the arch arm **162504** on the upper portion of the door maintaining the previously marked reference points. The two anchor plates (upper and lower) of the arch **162504** must be in the same plane. If not, add shims. Connect the perforated bar **L** to the perforated bar of the arch arm using 2, 6 x 15 bolts.



RELEASE OF THE AUTOMATION

In order to release the automation from inside, pull the knob downwards.



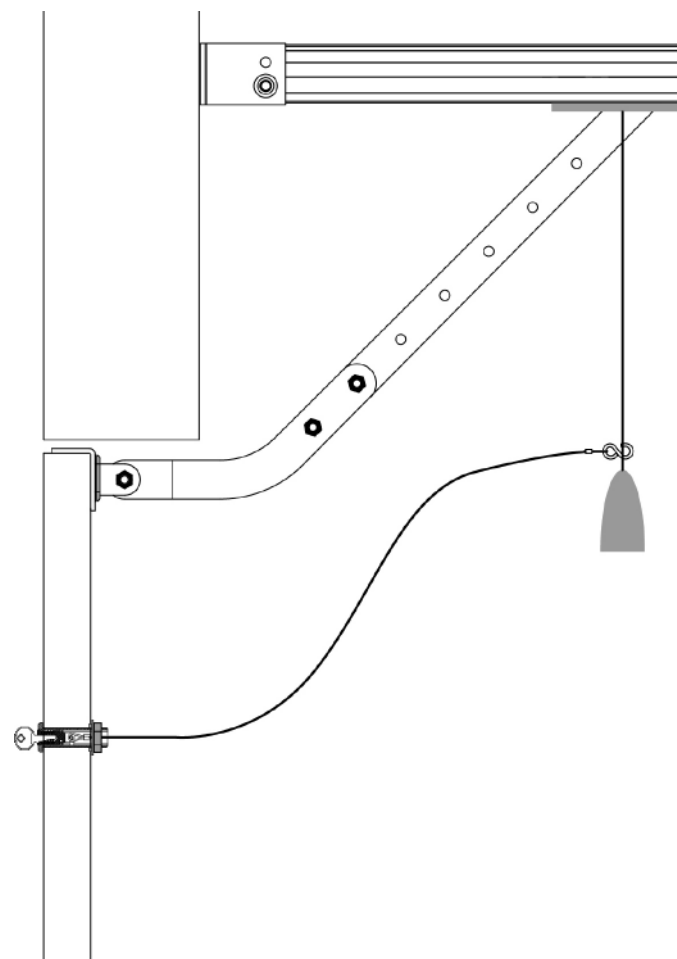
⚠ CAUTION: Do not use the knob to open the door. It is prohibited to hand objects off the release cord.

In order to release the automation from outside, install the accessory release kit (code **162518**).

⚠ WARNING: If the door is unlocked to be opened, when it will be closed it is automatically locked for security reasons.

If the power supply is not available, the door can be opened only by acting again on the release knob.

If there are no secondary accesses to the garage we recommend the installation of the device to unlock from the outside (code 162518)

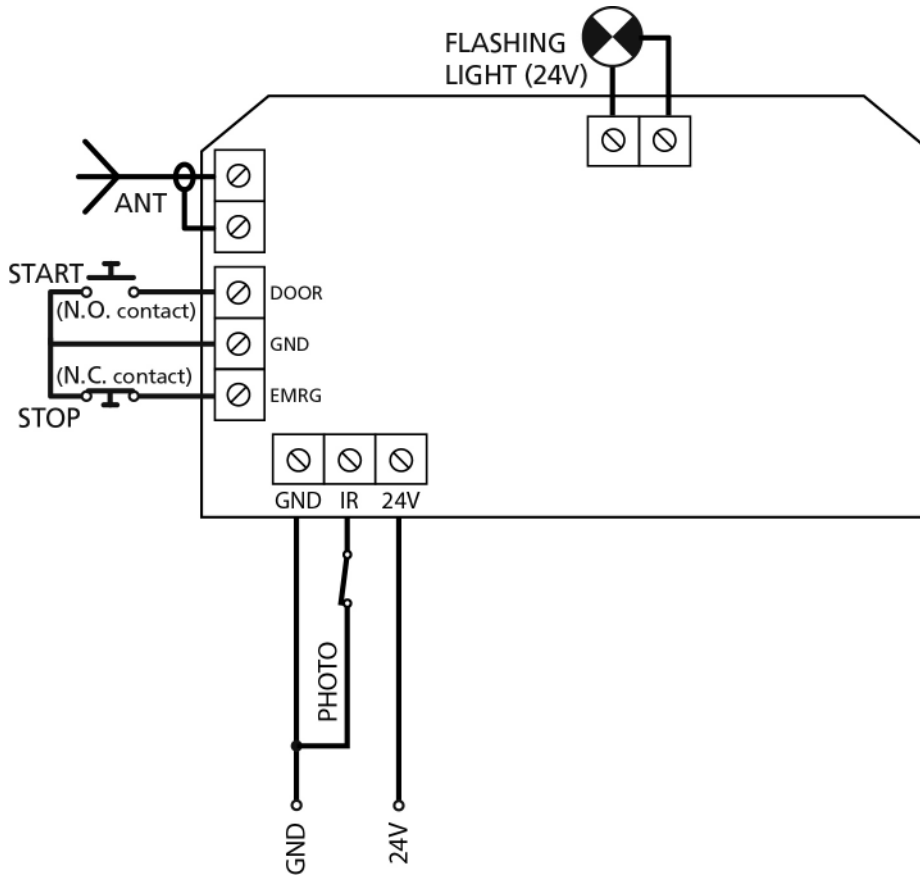


ELECTRICAL CONNECTIONS

The control panel inside JEDI is already cabled.

You just need to plug it in the electrical outlet to proceed with operational parameter programming.

To connect the photocells and the START button, please refer to the following diagram:



SET-UP OF OPERATIONAL PARAMETERS

JEDI is equipped with a practical interface that allows rapid and simple on-display programming

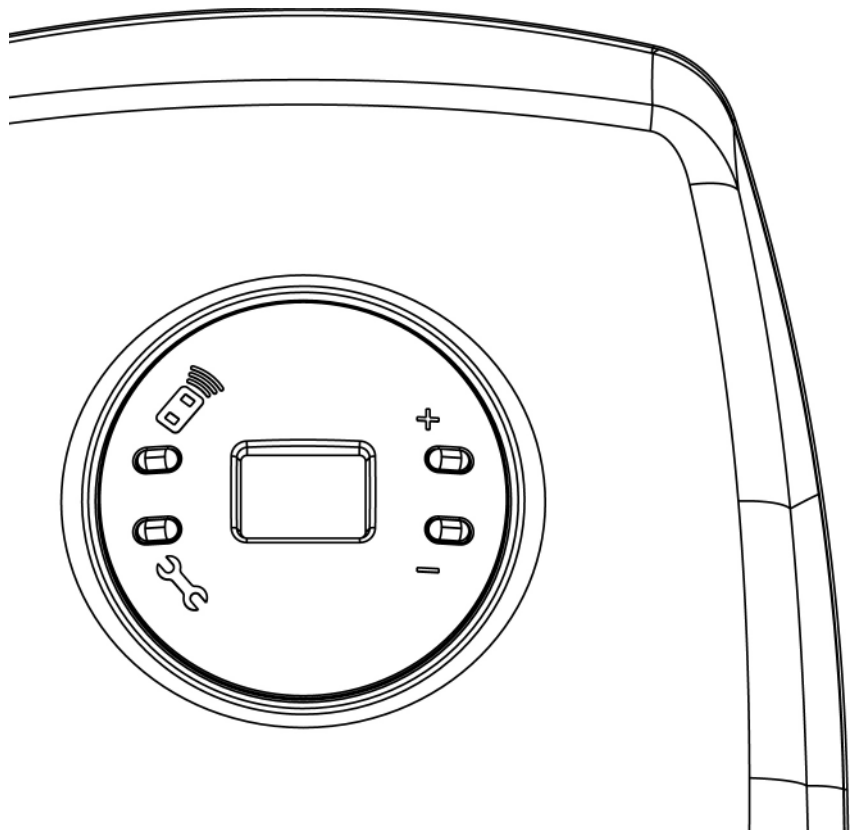
using four keys: , , +, -.

Preliminary operations:

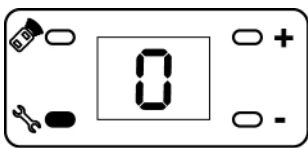
1. Move the door so as to hook on the drive trolley.
2. Power up the device: the courtesy light comes on, the control unit emits a BEEP and the segments of the display are illuminated one at a time until the display shows 0.

⚠ PLEASE NOTE: if programming is not completed (by means of function 10. End programming) the parameters set are lost.

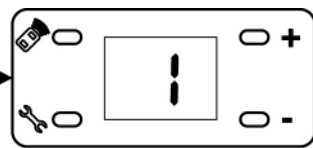
If there is an error in the set parameters, simply power off the device, restore power and then repeat the programming operation.



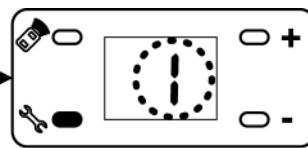
1. Setting the open limit switch



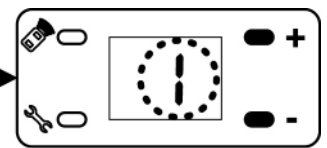
Press the  key for 5 seconds



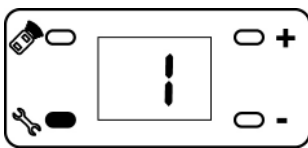
The device emits a beep and the display shows 1




Press the  key: 1 flashes



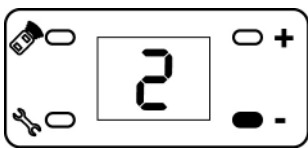
Press and hold the + (the door opens) or - (the door closes) key to reach the fully open position



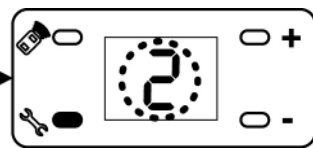
When the door reaches the desired position, press the  key to save the settings

⚠ PLEASE NOTE: The open limit switch must be stored prior to the close limit switch. If this procedure is used erroneously to set the close limit switch, the parameter is NOT stored.

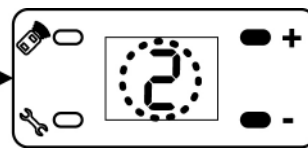
2. Setting the close limit switch



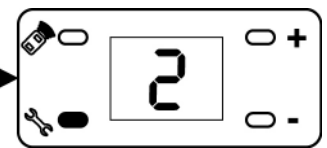
Press the - key, the display shows 2




Press the  key: 2 flashes

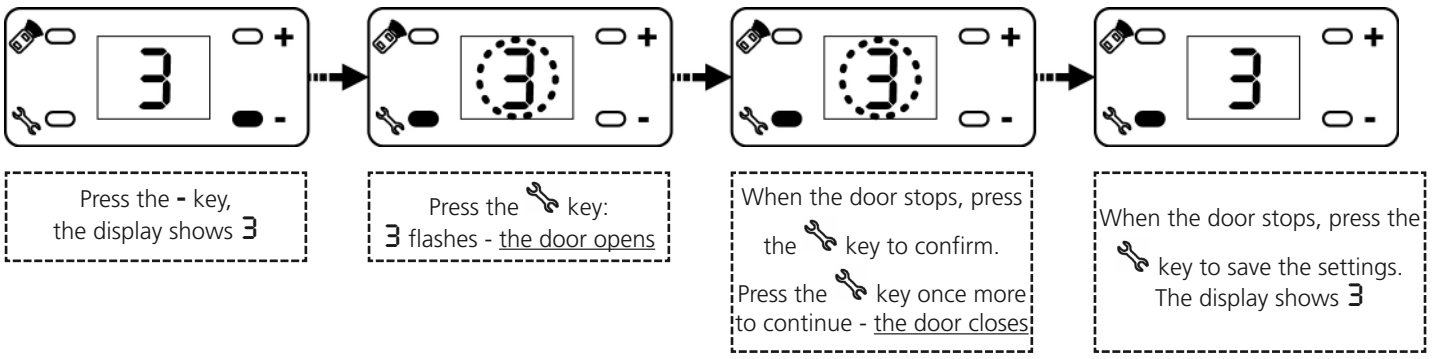


Press and hold the + (the door opens) or - (the door closes) key to reach the fully close position



When the door reaches the closed position, wait 2 seconds, then press the  key to save the settings

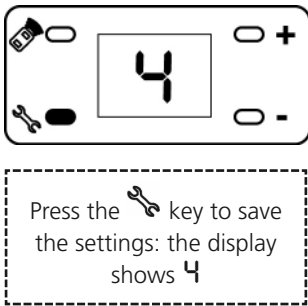
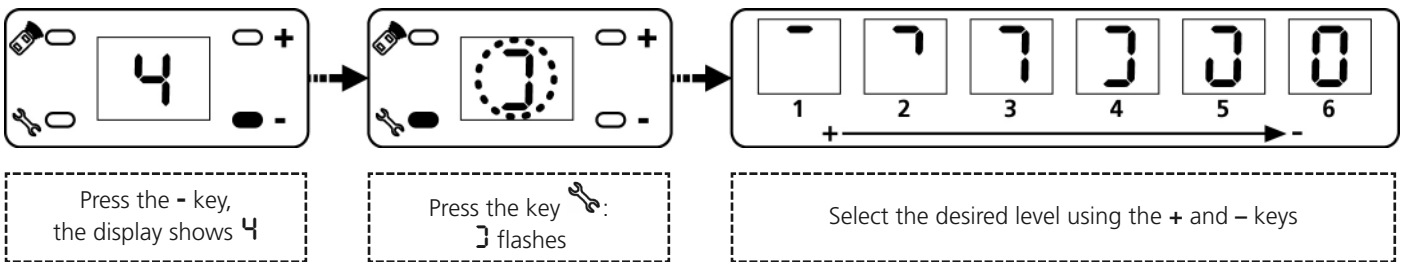
3. Self learning of the forces



⚠ PLEASE NOTE: On completion of the procedure, it is possible to exit the programming procedure, storing the parameters set: press and hold the key for 5 seconds until the segments of the display illuminate one at a time until showing 0

4. Adjusting the sensitivity (default: 4)

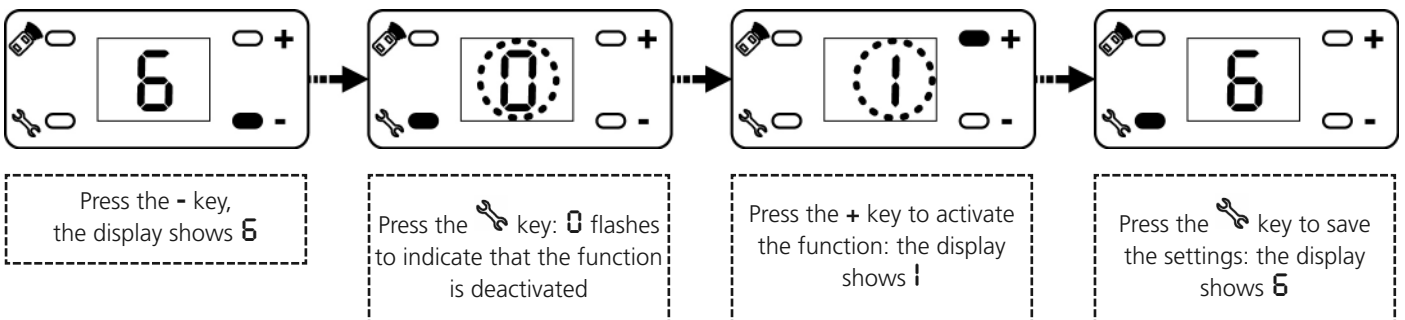
This menu allows the sensitivity of the device, when the door encounters an obstacle, to be increased or decreased. **This parameter is already set to a mid value (4) that should be ideal for the majority of installations.**



⚠ PLEASE NOTE: if this parameter is modified, then on completion of programming, it is necessary to conduct a complete open/close cycle, during which the control unit automatically conducts a fresh force training operation (during this cycle, the motor works at maximum force, so particular attention must be paid).

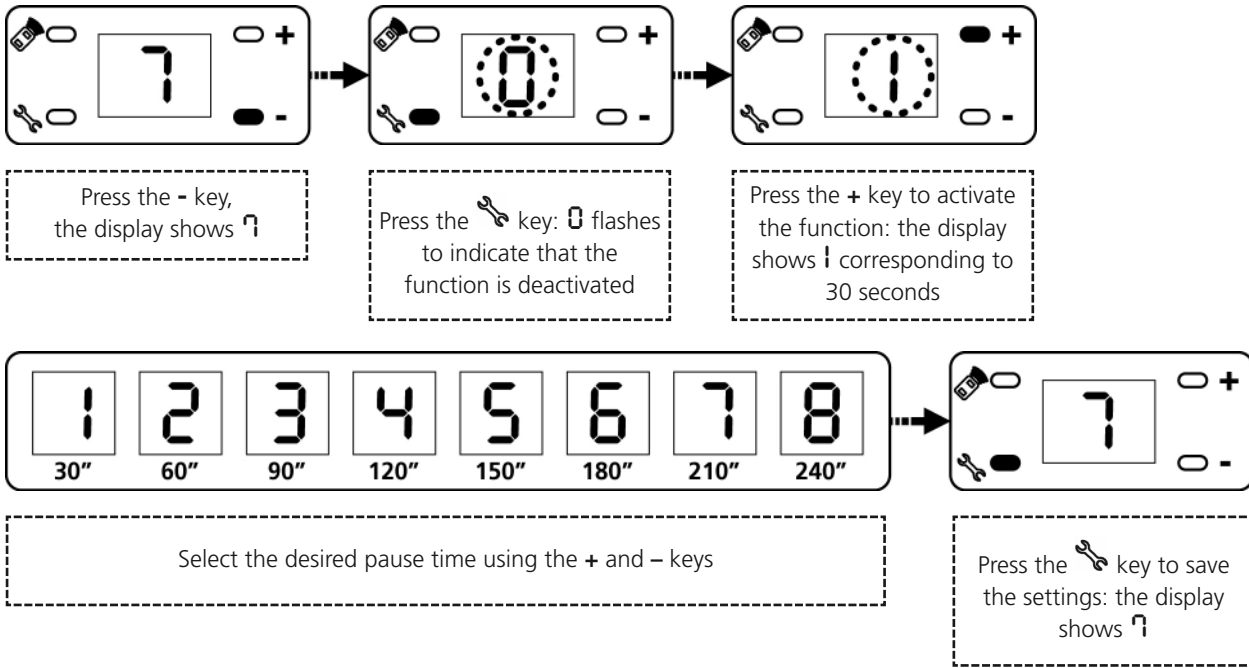
6. Open alarm (default: 0 – function deactivated)

If this function is activated, the device emits BEEPs for 30 seconds when the door remains open for longer than 10 minutes. The alarm is repeated every 10 minutes. Close to door to interrupt the alarm.



7. Automatic closure (default: 0 – function deactivated)

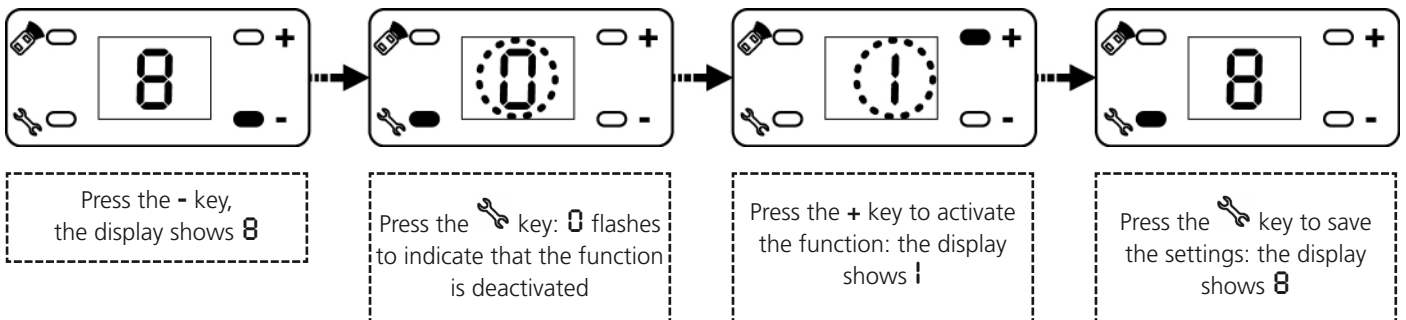
If this function is activated, the device automatically closes the door after the set period of time. Prior to closing the door, the device emits BEEPs for 20 seconds.



8. Maintenance alarm (default: 0 – function deactivated)

If this function is activated, the device emits BEEPs when the motor reaches 2000 operational cycles. This alarm may be useful for scheduling maintenance operations.

To interrupt the alarm, simply press and hold the START button for 5 seconds, or power off the device for several seconds.

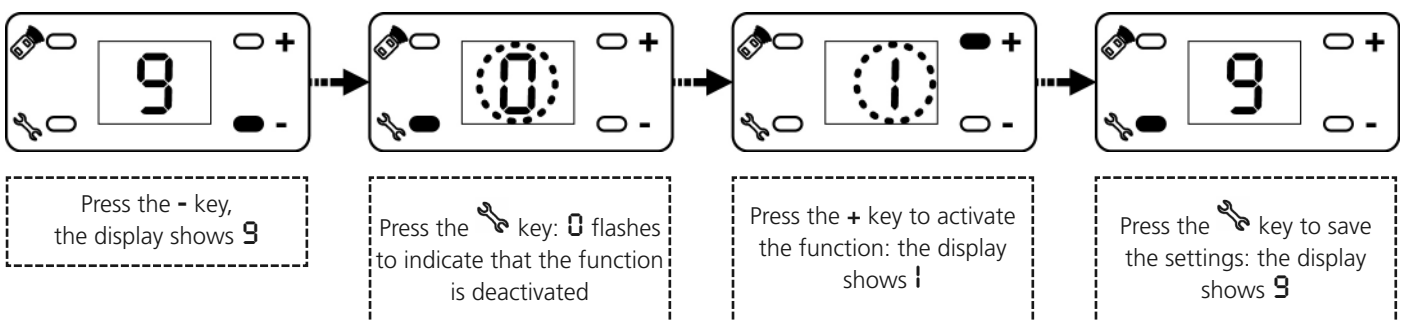


9. Condominium function (default: 0 - function disabled)

⚠ CAUTION: To enable the condominium function it is necessary to activate automatic closing

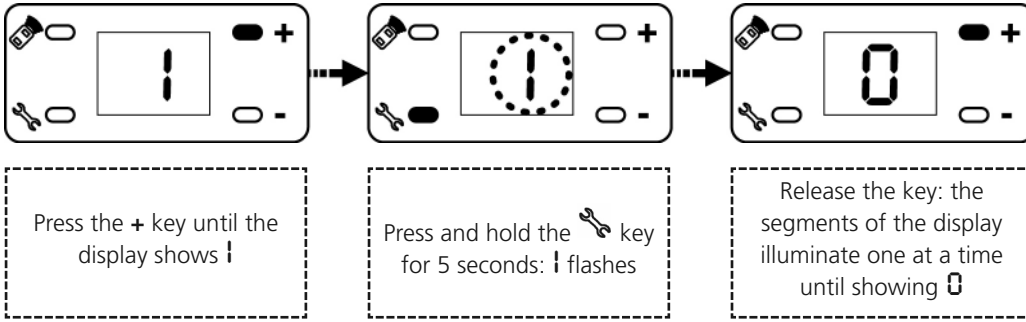
The condominium function provides the following operation logics:

- 1 - during the opening phase any start command is ignored
- 2 - during a pause a start command re-charge the pause time
- 3 - during the closing phase a start command causes the door movement to reverse



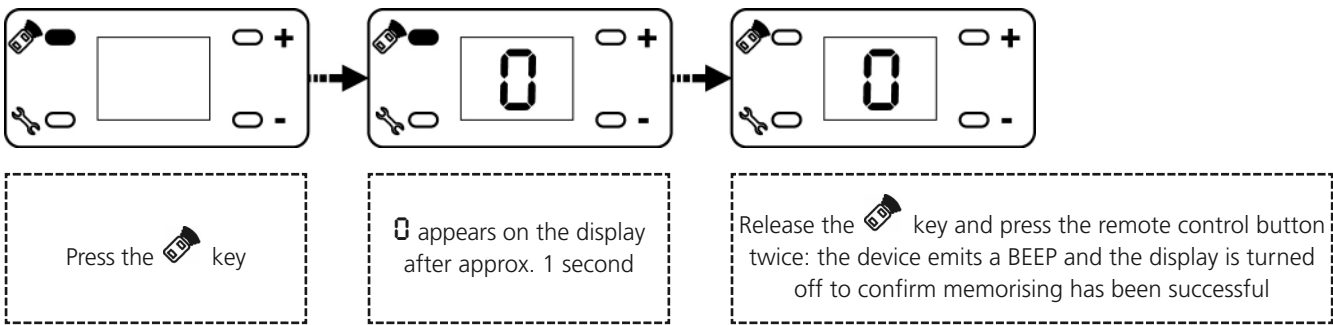
10. End programming

To exit the programming and store the settings of the different parameters, it is necessary to follow this procedure:

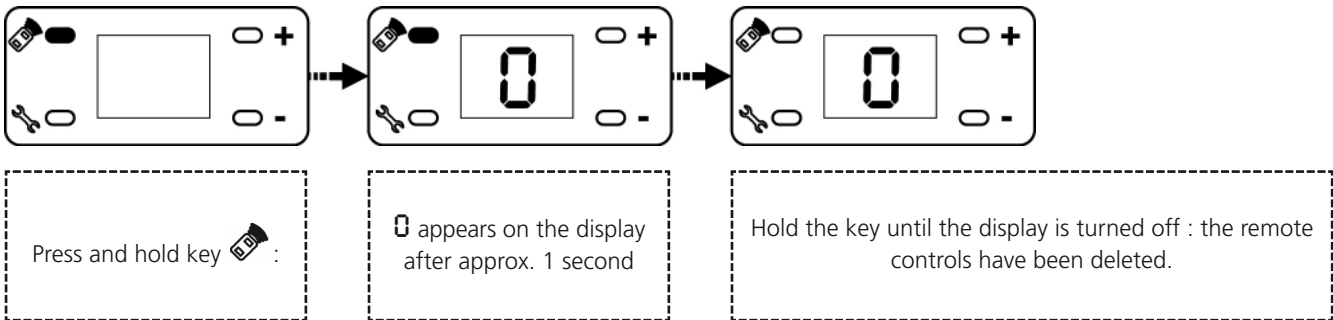


MEMORISING REMOTE CONTROL UNITS

The device can memorise up to 15 remote control units. To memorise a remote control unit, proceed as follows:



DELETING REMOTE CONTROL UNITS



DISPLAY MESSAGES

Display	Reason
L	The display shows the letter L when the actuator is working normally and the red cam positioned on the chain activates the micro switch on the motor
F	The display shows the letter F when the door encounters an obstacle
H	The display shows the letter H when the encoder or the control unit is malfunctioning
A	The display shows the letter A when the photocell intervenes