

AUTOMATION FOR SWING GATES

AXO SERIES



INSTALLATION MANUAL
AX3024 / AX5024

English

EN

EN

WARNING!

Important instructions for the safety of people: READ CAREFULLY!



Foreword

• Use of the products must be restricted to its intended use (i.e. that for which it was expressly built for). Any other use is to be considered dangerous. CAME Cancelli Automatici S.p.A. is not liable for any damage resulting from improper, wrongful or unreasonable use • Keep these warnings with the installation and use manuals issued with the automated system.

Before installing

(preliminary check: in case of a negative outcome, do not proceed before having complied with the safety obligations)

• Make sure that the parts you intend to automate are in good working order, and that they are properly balanced and aligned. Also, make sure that proper mechanical stops are already in place • If the operator will be installed at a height of less than 2.5 m from the ground or other access level, check whether you will need any protections and/or warnings • Any gate leaves, fitted with pedestrian entrances, onto which you will install an operator, must have a blocking mechanism when the gate is in motion • Make sure that the opening of the automated gate is not an entrapment hazard as regards any surrounding fixed parts • Do not mount the operator upside down or onto any elements that may fold under its weight. If needed, add suitable reinforcements at the points where it is secured • Do not install onto gates on either an upward or downward slope (i.e. that are not on flat, level ground) • Check that any lawn watering devices will not wet the gearmotor from the bottom up.

Installation

• Carefully section off the entire site to prevent unauthorised access, especially by minors and children • Be careful when handling operators that weigh more than 20 Kg (see installation manual). In such cases, employ proper weight handling safety equipment • All opening commands (e.g. buttons, key selectors, magnetic detectors, etc.) must be installed at least 1.85 m from the gate's area of operation perimeter - or where they cannot be reached from the outside of the gate. Also, the direct commands (e.g. push button, or proximity devices, etc.) must be installed at a height of at least 1.5 m and must not be accessible to the public • All 'maintained action' commands, must be placed where the moving gate leaves, transit areas and driveways are completely visible • If missing, apply a permanent label that shows the position of the release mechanism • Before delivering to the client, verify that the system is EN 12453 (impact test) standard compliant. Make sure that the operator has been properly adjusted and that the safety and protection devices, as well as the manual release

are working properly • Where necessary and in plain sight, apply the Warning Signs (e.g. gate plate).

Special instructions and advice for users

• Keep the gate's area of operation clean and clear of any obstacles. Trim any vegetation that may interfere with the photocells • Do not allow children to play with the fixed command devices, or in the gate's area of operation. Keep any remote control devices (i.e. transmitters) away from the children as well • Frequently check the system, to see whether any anomalies or signs of wear and tear appear on the moving parts, on the component parts, on the securing points, on the cables and any accessible connections. Keep any joints (i.e. hinges) lubricated and clean, and do the same where friction may occur (i.e. slide rails) • Perform functional tests on photocells and sensitive edges, every six months. Keep glass panels constantly clean (use a slightly water-moistened cloth; do not use solvents or any other chemical products) • If the system requires repairs or modifications, release the operator and do not use it until safety conditions have been restored • Cut off the power supply before releasing the operator for manual openings. See instructions • Users are FORBIDDEN to carry out ANY ACTIONS THAT THEY HAVE NOT BEEN EXPRESSLY ASKED TO DO OR SO INDICATED in the manuals. Any repairs, modifications to the settings and extraordinary maintenance MUST BE DONE BY THE TECHNICAL ASSISTANCE STAFF • On the periodic maintenance log, note down the checks you have done.

Special instructions and advice for all

• Avoid working near the hinges or moving mechanical parts • Stay clear of the gate's area of operation when in motion • Do not resist the direction of movement of the gate; this may present a safety hazard • At all times be extremely careful about dangerous points that must be indicated by proper pictograms and/or black and yellow stripes • When using a selector or command in 'maintained action' mode, keep checking that there are no people in the area of operation of the moving parts. Do this until you release the command • The gate may move at any time without warning • Always cut the power when cleaning performing maintenance.



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General conditions of sale



1. GENERAL POINTS

These general conditions shall apply to all purchase agreements for Came Cancelli Automatici SpA materials, hereinafter called "the company".

2. OFFERS AND QUOTATIONS

The company's quotations are valid for a 30-day period at the most starting from the date they are sent.

3. ORDERS

The sale agreement is executed once the written order is confirmed by Came Cancelli Automatici SpA or when the order is fulfilled by the company. Orders that are addressed, and signed by clients, to Came Cancelli Automatici SpA are deemed to be firm and irrevocable for 30 days starting from the date they are received by the company. Any change or addition to the single provisions of these general conditions or single provisions of the order which was originally addressed by the client, shall have no validity unless otherwise approved in writing by the company. For any changes to the order, the company reserves the right to cancel both the changes and the original order. The delivery date for the goods appearing on the orders is always and in any case exclusively indicative, and any delays of such term may never justify claims for compensation or cancellation of contract.

Particularly, the company reserves the right to extend the delivery terms or cancellation of order in the event of: force majeure or events that are beyond the control of the company; change of the Client's legal status; difficulty in sourcing raw materials and component parts.

4. DELIVERY AND FORWARDING

The place of production or registered office of the company shall be the place of fulfilment for delivery. The cost and risk of the travelling goods is borne by the buyer ex works, pursuant to the 2000 incoterms. Unless otherwise agreed, the company establishes, for and on behalf of the client, the type of shipping, the travel route and type of carrier. The company reserves the right to carry out partial deliveries and fulfilment of orders, thereby issuing a separate invoice each time: in this case all partial deliveries shall be autonomously invoiced and the terms of payment shall begin as of the date on each invoice; the client may not, therefore, defer payment of partial orders, until the last delivery is made as concerns the original order.

5. PRICES AND PRICE LISTS

The prices are intended for goods delivered free to the company's registered office, not including VAT, with normal packaging, and not including forwarding expenses. Any reference to list prices shall refer to the latest price list published by the company, which theretofore cancels any previous price lists.

6. PAYMENTS

Non-payment within the established terms, shall result in the application of interest pursuant to Lgs. Decr. 09/10/2002 n. 231 and subsequent amendments and upgrades, with any possible greater damage unprejudiced. Any delay in payment, shall mean that the client shall owe the company, any losses due to exchange rates. The client may not advance any demands nor raise any exceptions as concerns the company, unless after having paid the goods it purchased. The company reserves the right to block all shipping and supply orders underway in the face of any irregularities in the payments, without need of prior notice nor compensatory damages of any kind.

7. RETURNS AND CLAIMS

All claims must be filed in writing within 8 days of receiving the goods, whether such claims refer to the quantity or quality of the delivered goods. Returned goods shall be accepted by company only following a written agreement, and only for new and packaged goods. Any returned goods must be complete of their relative transport documents, showing the company's written authorisation to accept the returned goods including the quality and quantity of the returned goods.

The returned goods shall not be accepted by the company unless carried out in the above mentioned manner and, especially, returned goods shall not be accepted if received at any of the company's premises.

8. GUARANTEE

The company guarantees the proper functioning of the products that it provides, as per the technical characteristics that are expressly shown on its products' technical sheets. The guarantee shall not apply in the case of any environmental interferences of any nature, which could cause disturbances in the functioning of any existing or future installations (radio frequencies – proximity of electric power lines...). The guarantee does not cover the normal wear and tear of the equipment, or mistakes made during the mounting phase or due to maintenance flaws, and in any case it does not cover any cases in which flaws in the functioning can be traced back to factors stemming from anything other than manufacturing.

The deadlines for filing a claim for any flaws or for the statute of limitations for actions to which the buyer is entitled are those foreseen by Italian law. The company at its own leisure, may decide to withdraw any goods supplied which it has ascertained as faulty, or decide to repair said ascertained flaws. The client may not request to be compensated for any indirect damages, missed gains, production losses, and in any case may not expect as compensation any sums greater than the value of the supplied components or products.

9. REPAIRS

Repairs to purchased items request by the client shall be carried out by the company following an agreement on the price of said repairs. In any case the expenses for labour and shipping (roundtrip) shall be borne by the client.

10. RESERVATION OF TITLE

It is expressly agreed that, any delivered goods remain owned by the company until the client pays the entire balance, regardless of who is in possession of said goods. Transport expenses and any other expenses needed to retrieve the equipment, therein including any extraordinary expenses as well as any repeatable ones, shall be borne by the client.

11. APPLICABLE LAW – SETTLEMENT OF ANY DISPUTES Any arising dispute resulting from the sale agreement, shall be settled according to the Italian law, thereby excluding any other law and in supplement to the Vienna Convention on the international sale of goods. All disputes shall be subject to Italian jurisdiction and come under the exclusive competence of the Tribunal of Treviso, Italy.

12. PROVISIONS ON THE SAFEGUARDING OF PERSONAL DATA.

Pursuant to current legislation for the safeguarding of personal data, clients are aware that their personal data is inputted into the company's databank, which is necessary for the proper carrying out of the contractual relationship and for compliance with certain provisions of law, as well as for purposes of statistics, promotion, marketing, commercial, credit protection, management and transfer of the same.

The personal data of the buying party are processed through automated and paper-based tools by authorised persons, by using safety procedures designed to guarantee confidentiality. The personal data of the client may be shared with Public Bodies, companies of the group, credit recovery firms, or consortiums or associations with business scopes, market research scopes, or marketing scopes. The data processor shall be the company, and the client may address said company to uphold their own rights as per law. To this end the buying party is aware that at any time it may access its personal data, ask that it be updated, corrected and/or prohibit it from being used.




“IMPORTANT INSTALLATION, SAFETY INSTRUCTIONS”

“CAUTION: IMPROPER INSTALLATION MAY CAUSE SERIOUS DAMAGE, FOLLOW ALL INSTALLATION INSTRUCTIONS CAREFULLY”

“THIS MANUAL IS ONLY FOR PROFESSIONAL OR QUALIFIED INSTALLERS”



1 Legend of symbols

-  This symbol tells you to read the section with particular care.
-  This symbol tells you that the sections concern safety issues.
-  This symbol tells you what to say to the end-users.

2 Intended use and application

2.1 Intended use

The AXO operator is designed to automate swing gates used in residential or condominium settings..

-  The use of this product for purposes other than those described above and installation executed in a manner other than as instructed in this technical manual are prohibited.

2.2 Application

Type	AX3024		
Length of gate leaf (m)	2	2.5	3
Weight of gate leaf (kg)	800	600	500

Type	AX5024				
Length of gate leaf (m)	2	2.5	3	4*	5*
Weight of gate leaf (kg)	1000	800	700	500	400

* The electrolock must be installed onto the door-leaf.

3 Reference Standards

The company CAME cancelli automatici is ISO 9001:2000 quality certified; it has also obtained the ISO 14001 environmental safeguarding certification. CAME engineers and manufactures all of its products in Italy.

This product complies with the following legislation: see declaration of compliance.

4 Description

4.1 Gate Operator

This product is engineered and manufactured by CAME cancelli automatici s.p.a. and complies with current safety regulations. Guaranteed 24 months if not tampered with.

The gearmotor is made up of two aluminium alloy half shells housing the Encoder gearmotor – which features an electric blocking mechanism – and an epicyclic reduction system with endless screw.

24V D.C. surface gearmotors:

001AX3024 – irreversible gearmotor with encoder for gate leaves of up to 3 m.

001AX5024 – irreversible gearmotor with encoder for gate leaves of up to 5 m.

Control panel:

002ZLJ24 – Multifunction control panel for gates with two swing-leaves with built-in radio decoder

Accessories:

002LB180 – Board to link up two 12V – 1.2Ah emergency batteries with battery holding bracket

001LOCK81 – Blocking electro-lock – single cylinder

001LOCK82 – Blocking electro-lock – double cylinder

4.2 Technical features

GEARMOTOR AX3024 / AX5024

Control board power supply: 230V A.C. 50/60Hz

Motor power supply: 24V D.C.

Max draw.: 10A

Power: 240W

Adjustable thrust: 500÷4500N

Opening time(90°): adjustable

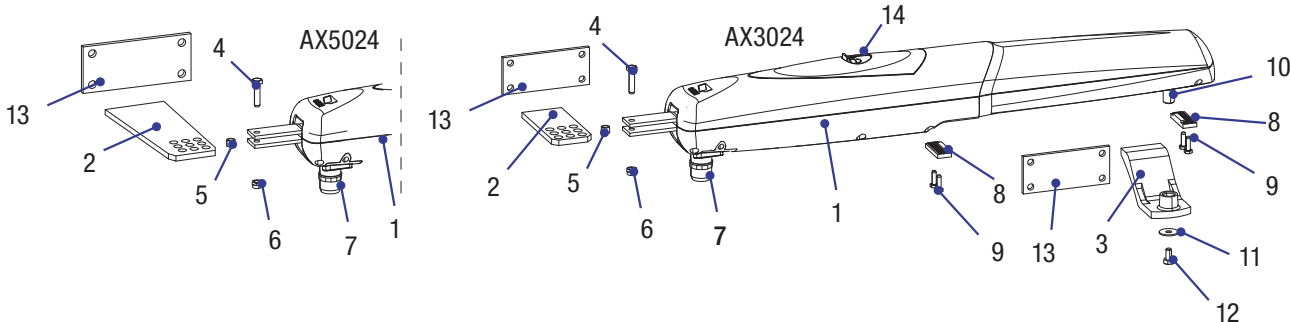
Duty cycle: intensive user

Protection rating: IP44

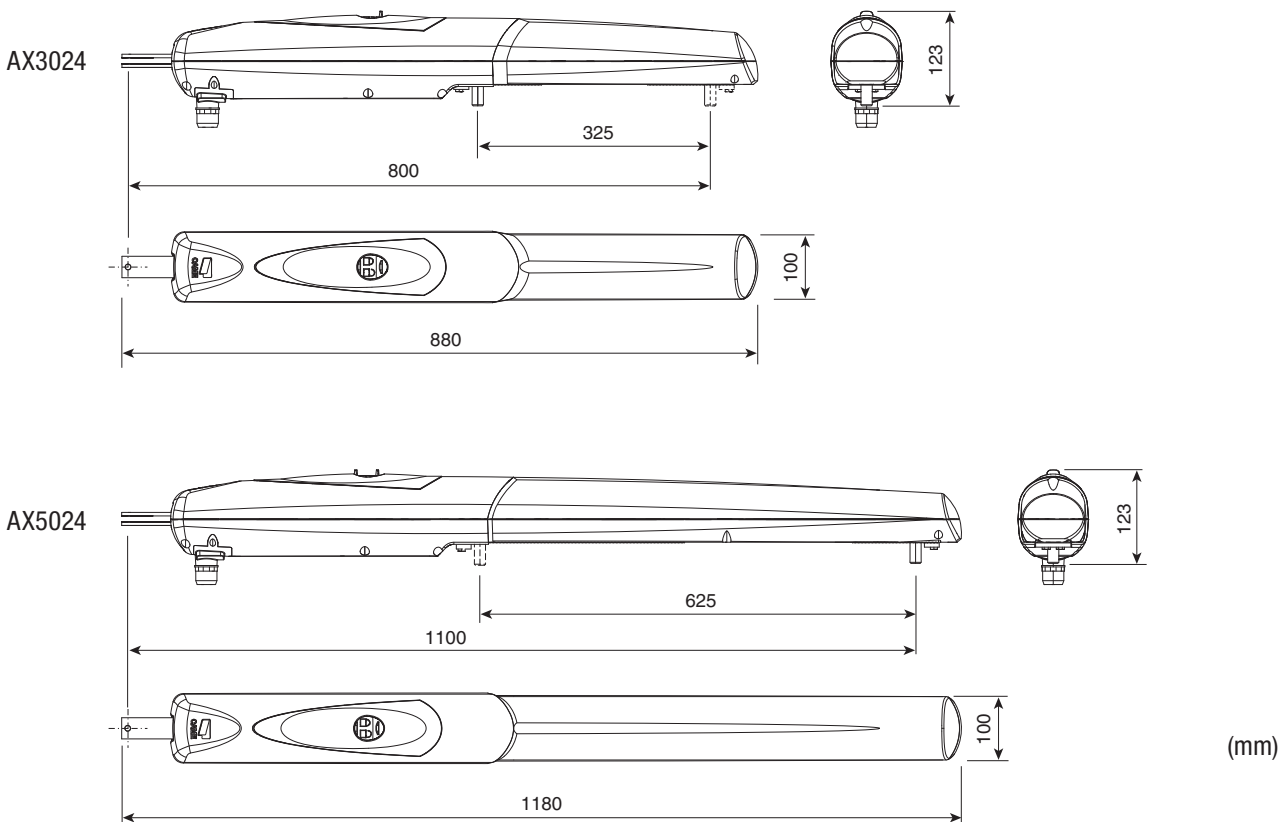


4.3 Description of parts


- | | |
|--|--|
| 1) Operator | 8) Mechanical stop |
| 2) Pilaster bracket | 9) M6X20 UNI5739 screws for mechanical stop |
| 3) Gate bracket | 10) Endless screw pin |
| 4) M8x35 UNI5737 screw for securing pillar bracket | 11) Ø8x24 UNI6593 washer |
| 5) Bushing | 12) Gate bracket screw for securing to M8x10 UNI5739 pin |
| 6) M8 UNI5588 nut for securing pillar bracket | 13) Securing bracket |
| 7) Sheath holder | 14) Small release door |



4.4 Dimensions




5 Installation

 Installation must be carried out by expert qualified personnel and in full compliance with current regulations.

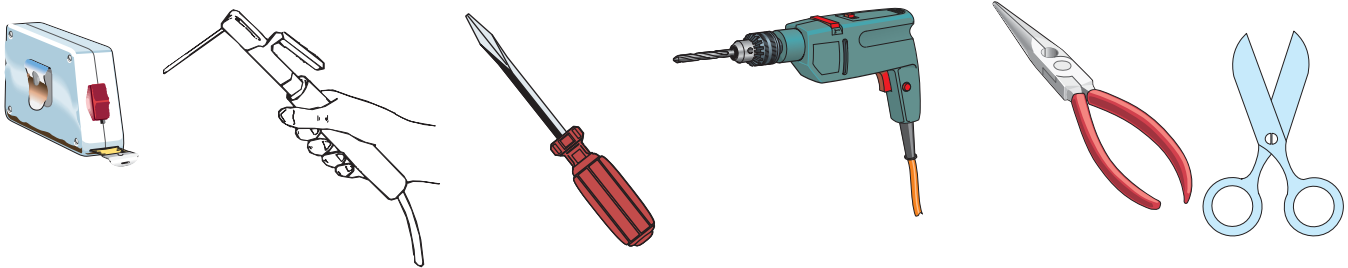
5.1 Preliminary checks

 Before installing, do the following:

- Make sure you have suitable tubing and conduits for the electrical cables to pass through and be protected against mechanical damage;
- Fit tubing to drain away any water leaks which may cause oxidation;
-  Make sure that any connections inside the case (that provide continuance to the protective circuit) be fitted with extra insulation as compared to the other conductive parts inside;
- Make sure the structure of the gate is sturdy, the hinges work and that there is no friction between moving and non-moving parts;
- Make sure there is a mechanical stop for opening and closing.

5.2 Tools and materials

Make sure you have all the tools and materials you will need for the installation at hand to work in total safety and compliance with the current standards and regulations. The following figure illustrates the minimum equipment needed by the installer.



5.3 Cable list and minimum thickness

Connections	Type of cable	Type of cable	Length of cable 10 < 20 m	Length of cable 20 < 30 m
Control panel power supply 230V	FROR CEI 20-22 CEI EN 50267-2-1	3G x 1,5 mm ²	3G x 2,5 mm ²	3G x 4 mm ²
Motor power supply 24V		3G x 1,5 mm ²	3G x 1,5 mm ²	3G x 2,5 mm ²
Flashing light		2 x 0,5 mm ²	2 x 1 mm ²	2 x 1,5 mm ²
Photocell transmitters		2 x 0,5 mm ²	2 x 0,5 mm ²	2 x 0,5 mm ²
Photocell receivers		4 x 0,5 mm ²	4 x 0,5 mm ²	4 x 0,5 mm ²
Accessories power supply		2 x 0,5 mm ²	2 x 0,5 mm ²	2 x 1 mm ²
Control and safety devices		2 x 0,5 mm ²	2 x 0,5 mm ²	2 x 0,5 mm ²
Antenna	RG58	max. 10 m		

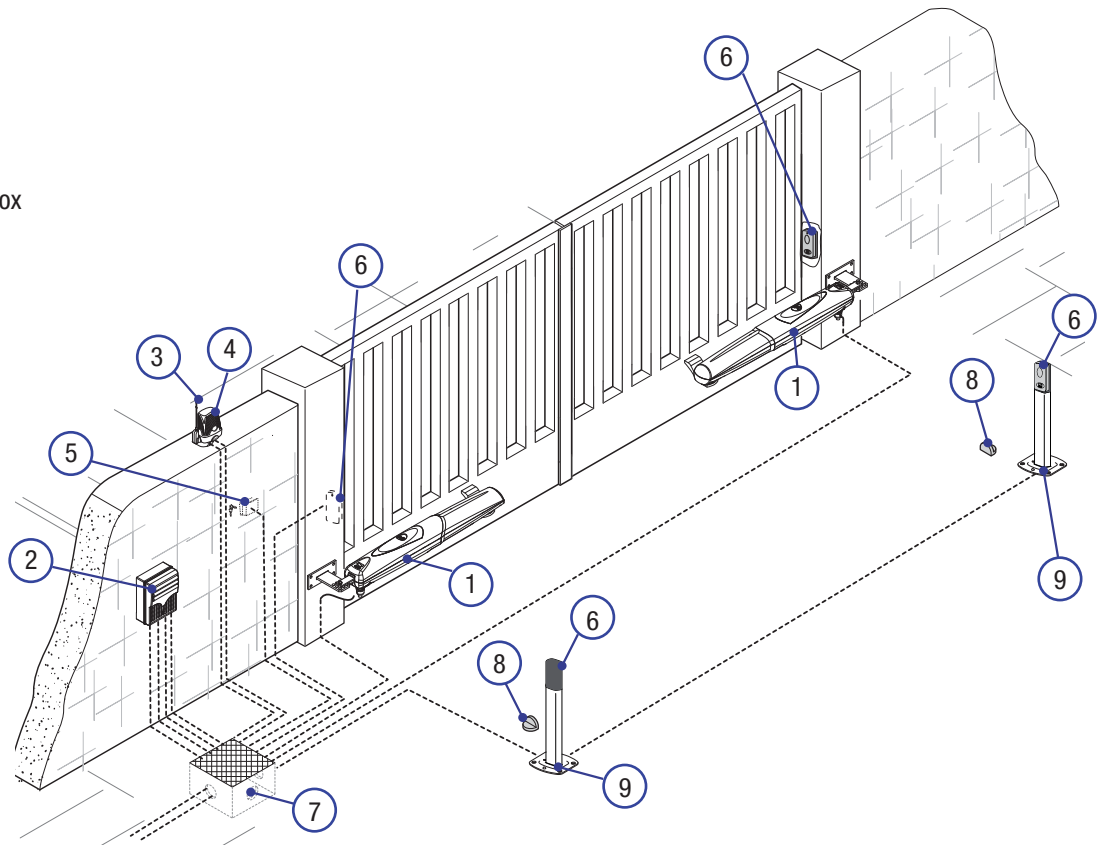
N.B.: If the cable length differs from that specified in the table, then you must determine the proper cable diameter in the basis of the actual power draw by the connected devices and depending on the standards specified in CEI EN 60204-1.

For connections that require several, sequential loads, the sizes given on the table must be re-evaluated based on actual power draw and distances.

When connecting products that are not specified in this manual, please follow the documentation provided with said products.

5.4 Standard installation

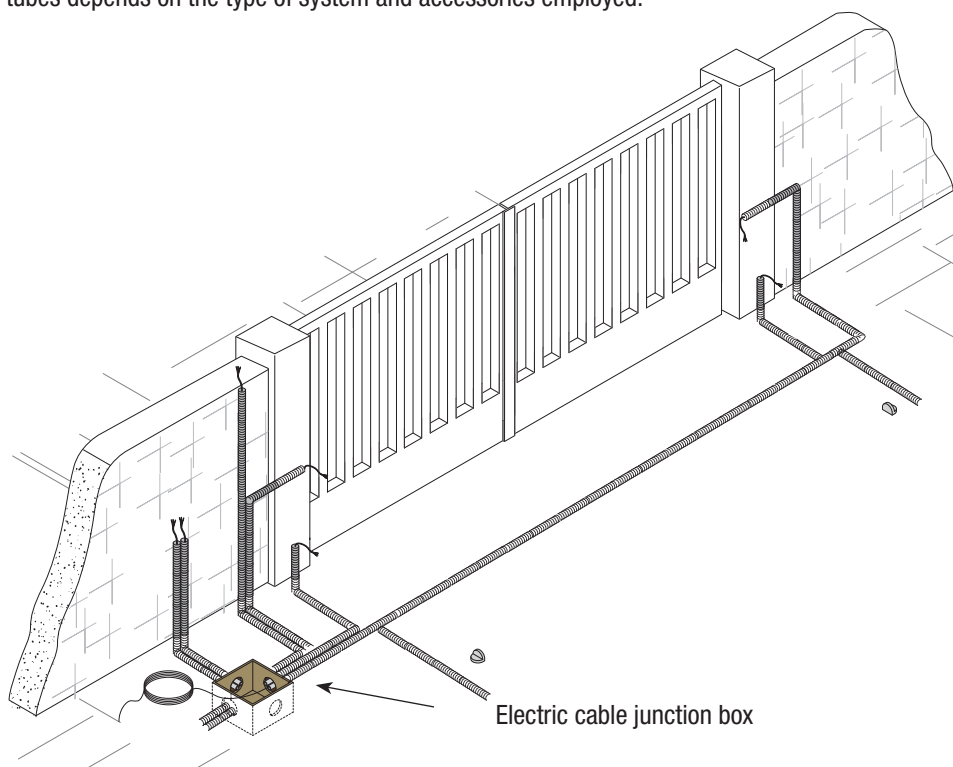
- 1) AXO operator
- 2) Control panel
- 3) Reception antenna
- 4) Flashing light
- 5) Selector switch
- 6) Photocells
- 7) Electric cable junction box
- 8) Mechanical gate stops
- 9) Photocell column



5.5 Installing the operator

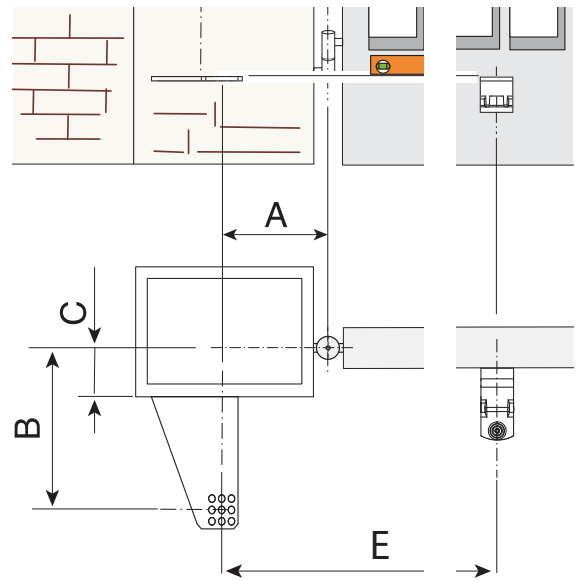
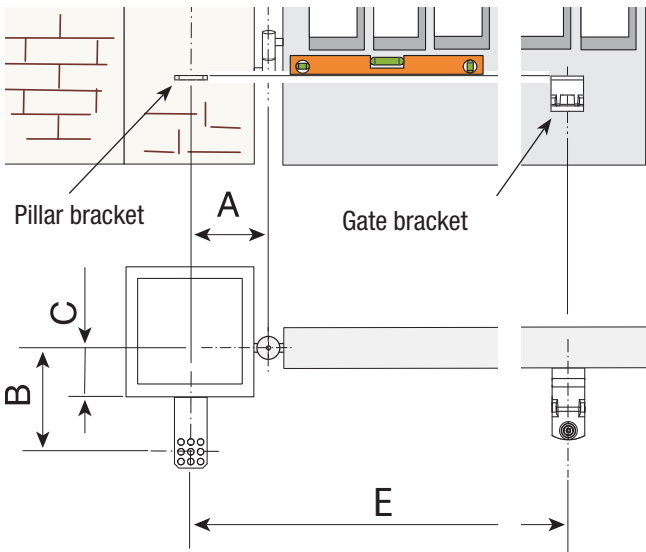
⚠ The following illustrations are only examples, given that the space available for anchoring the operator and accessories may vary from gate to gate. It is up to the installer, thus, to choose the most suitable solution.

Lay the corrugated tubing needed for the connections deriving from the junction box.
N.B. the number of tubes depends on the type of system and accessories employed.



Warning: after establishing the best point to which you will secure the gate bracket, secure the bracket to the pillar and make sure the quotas shown in the table below are met.

Note: by increasing measure B, the opening angle and gate speed are reduced, while the gearmotor thrust is increased. By increasing the measure A, the opening angle and gate speed are increases, while the gearmotor thrust is decreased.



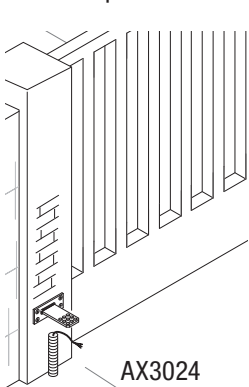
AX3024

Gate leaves of up to 3m				
Opening angle	A mm	B mm	C max mm	E mm
90°	130	130	70	800
120°	150	80	0	800
120°	140	100	50	800

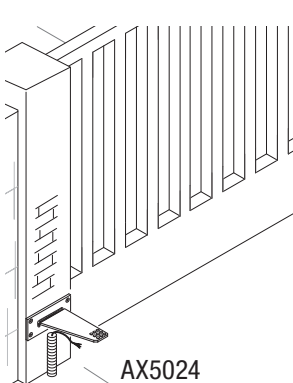
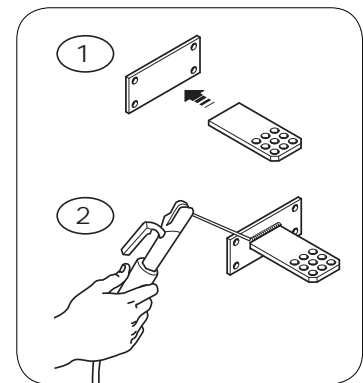
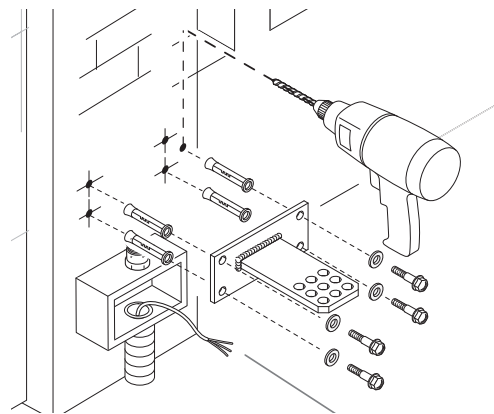
AX5024

Gate leaves of up to 5 m				
Opening angle	A mm	B mm	C max mm	E mm
90°	200	220	150	1100
120°	220	220	100	1100

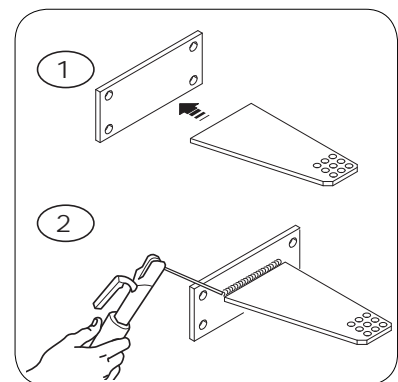
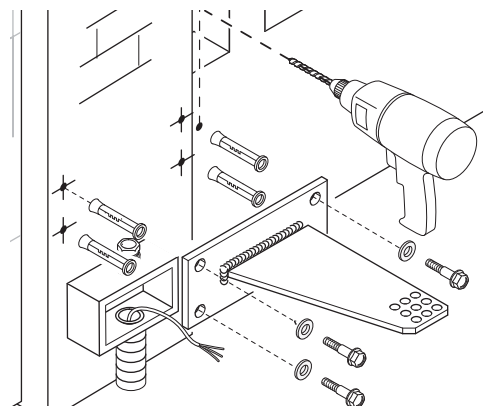
Assemble and weld the two parts of the pillar bracket. Secure the bracket to the point you have chosen with proper plugs and screws or - if the pillar is made of metal - weld it on.



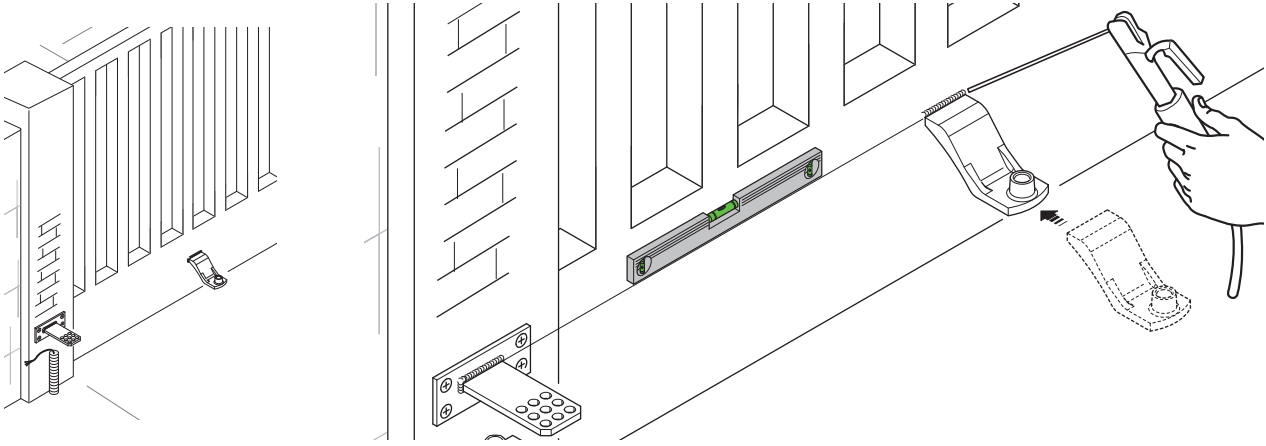
AX3024



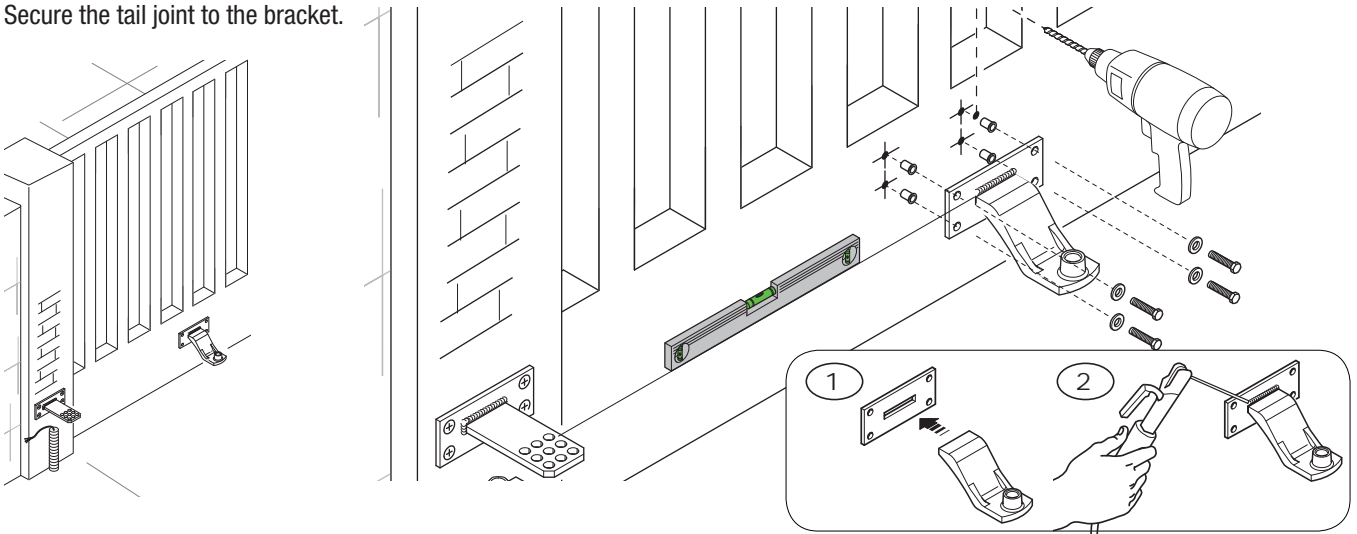
AX5024



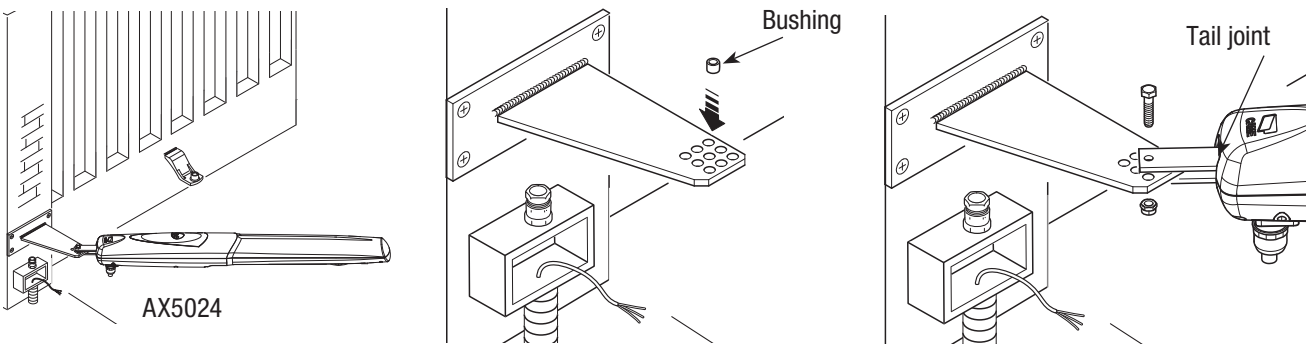
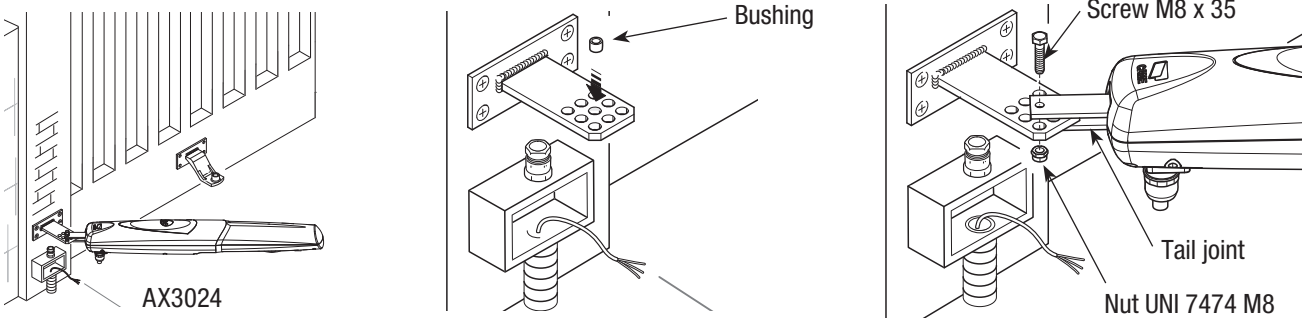
Weld the gate bracket to the gate leaf making sure the quotas shown in the table are met.
 Note: for AX5024 gearmotors, require an additional 10 mm shim between the gate and the bracket.



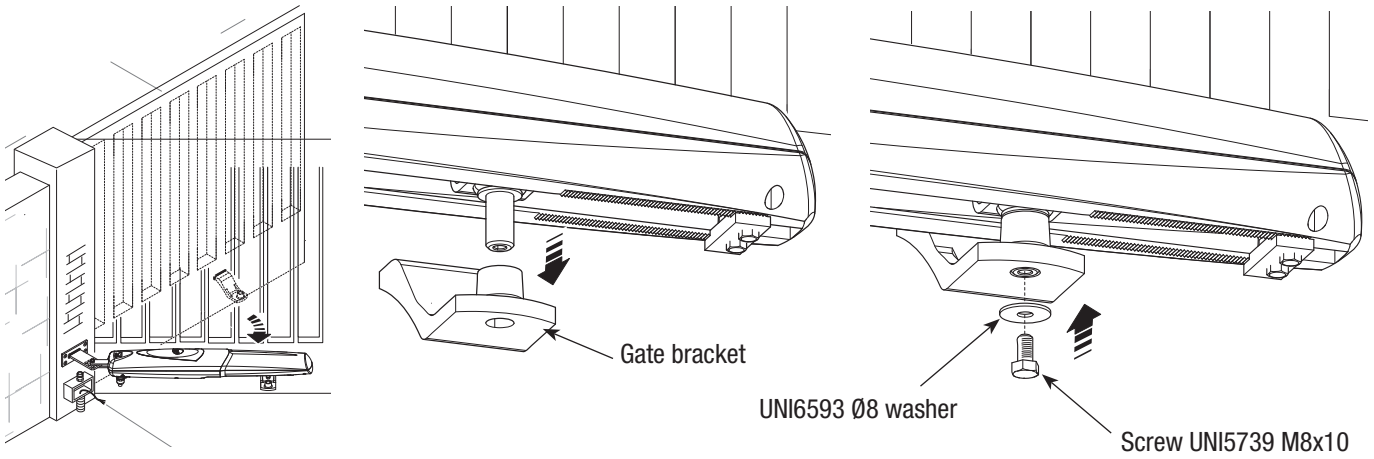
Note: on non-metal gate leaves assemble and weld the two parts of the bracket and secure them with proper screws.
 Secure the tail joint to the bracket.



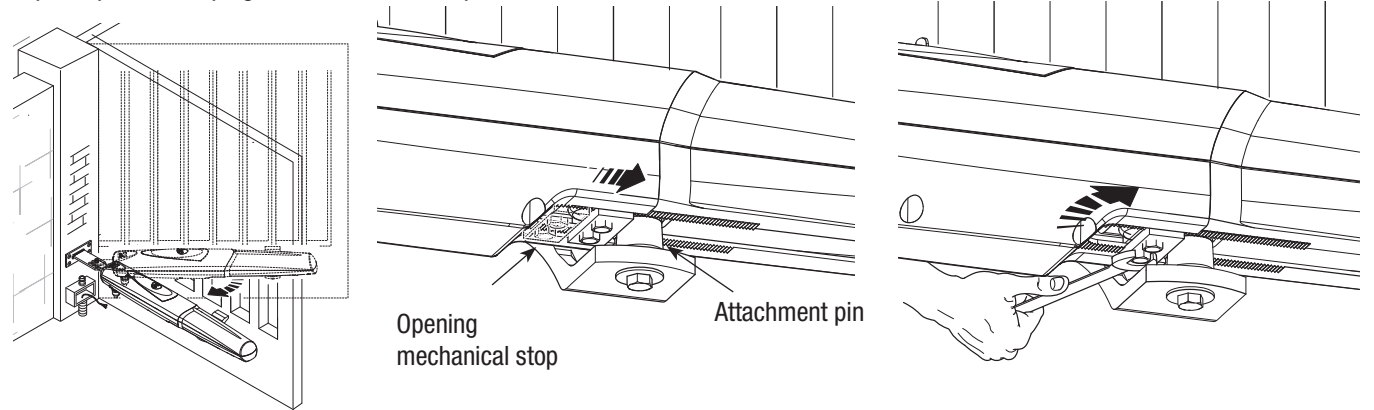
Insert the bushing (lubricated) into the pillar bracket's hole. The bracket has holes that allow the opening angle to be changed. Secure the tail joint to the bracket.



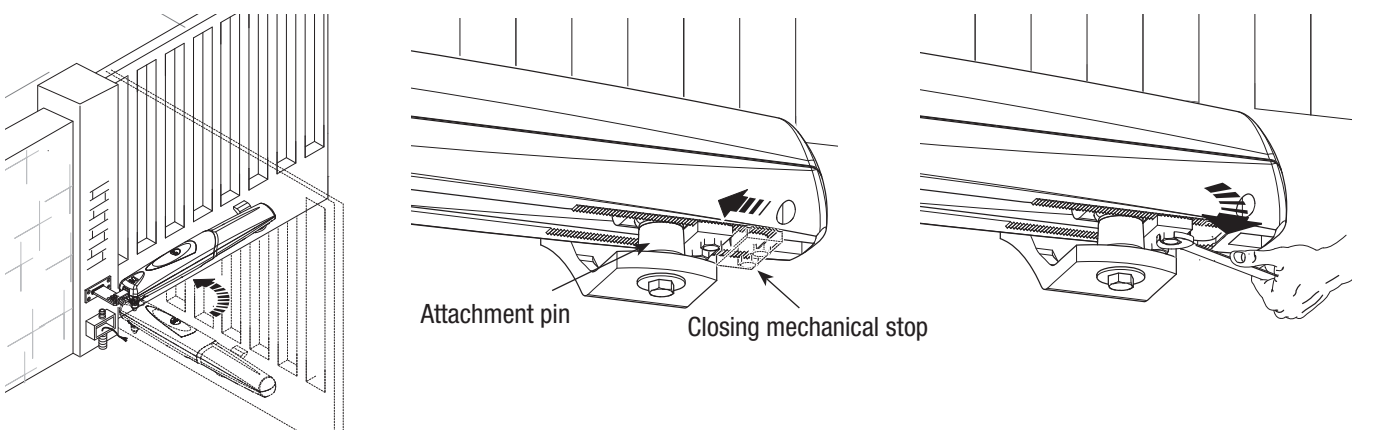
Open the gate leaf and insert the pin into the gate bracket and secure it using a washer and nut.



Release the gearmotor (see paragraph on manual release), completely open the gate leaf, loosen the nuts of the opening mechanical stop and position it up against the attachment pin, then secure it.

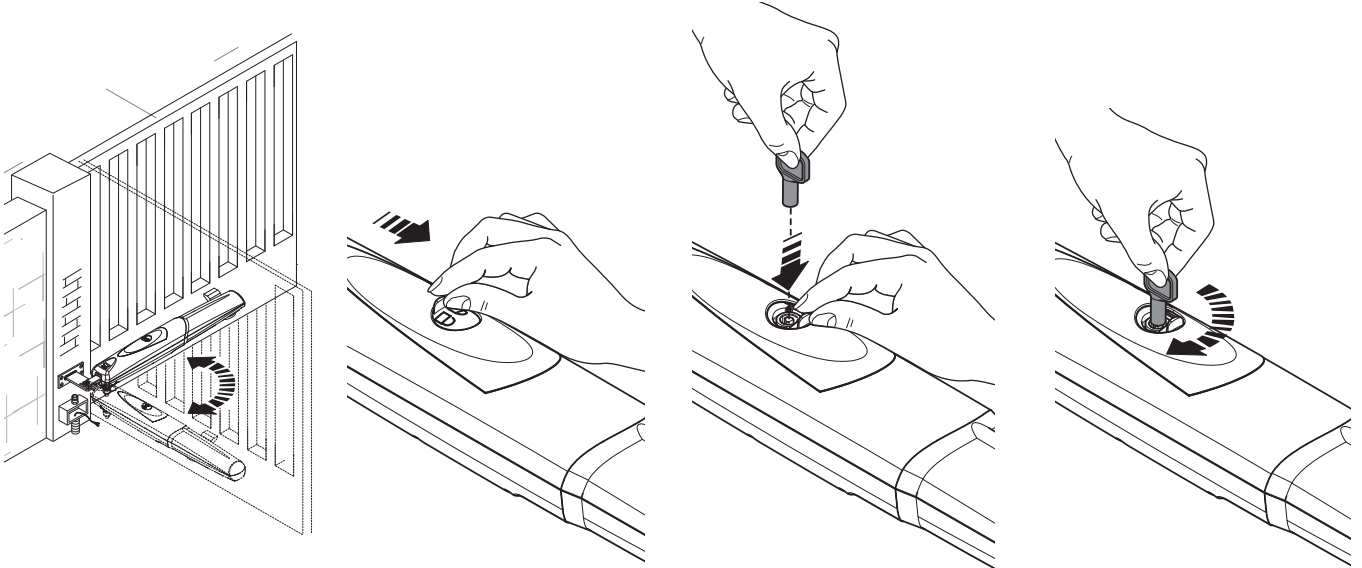


Close the gate leaf, loosen the nuts on the closing mechanical stop, place it up against the attachment pin, then secure it.



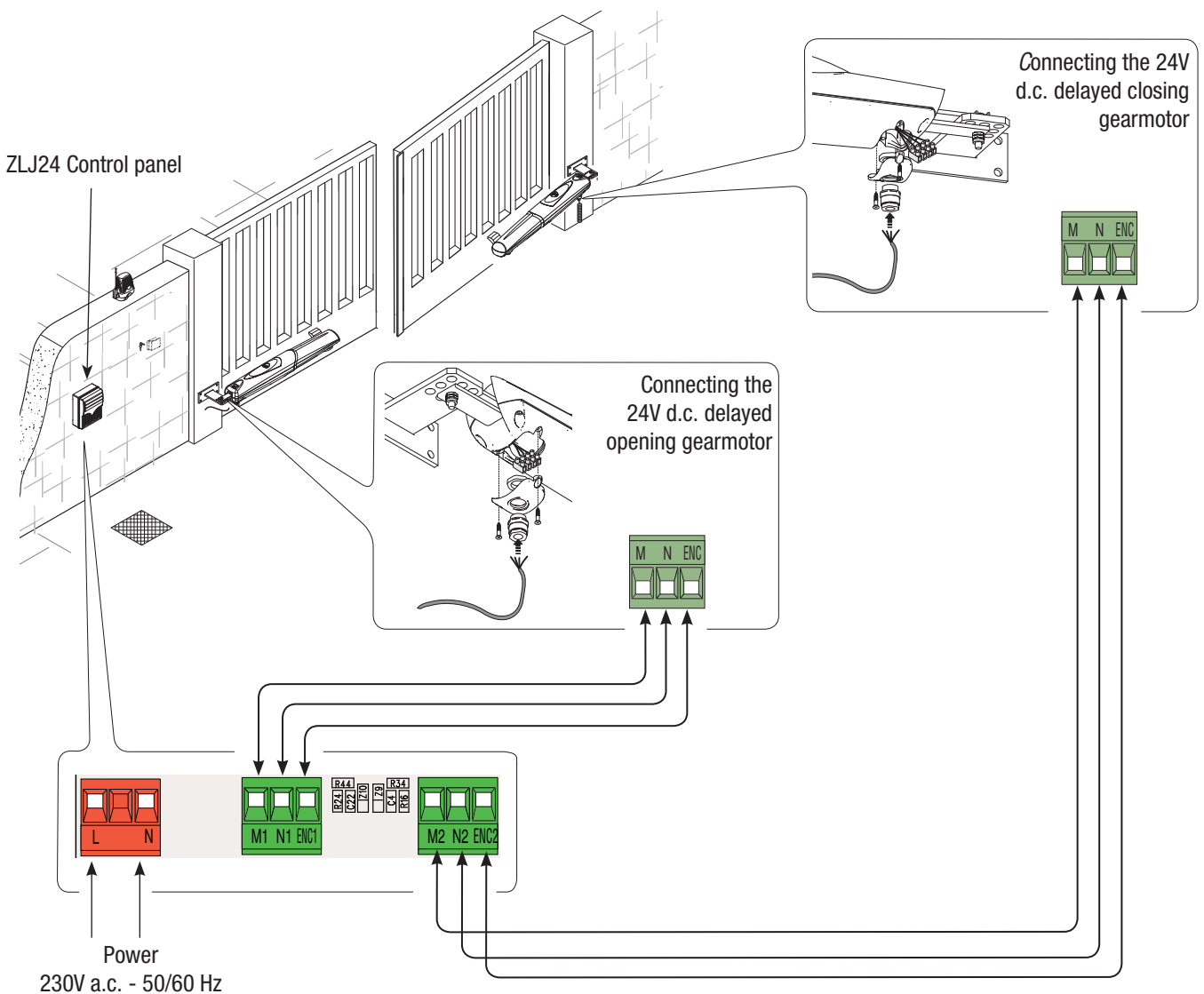
5.6 Manual release of the gearmotor

Slide open the small door that protects the release, insert the tri-lobed key and turn it.



5.7 Connecting to the control panel

For the electrical connection procedures, use the junction box and branching boxes.



5.8 Outward opening installation

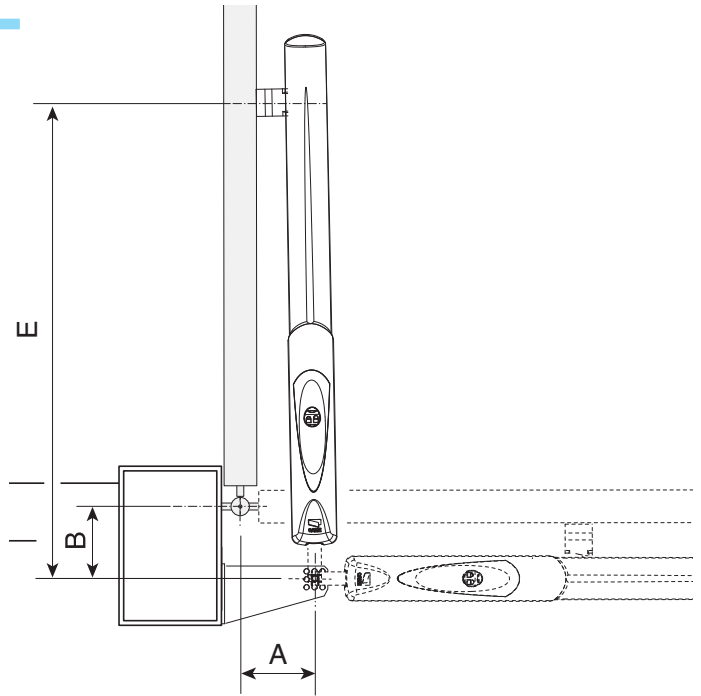
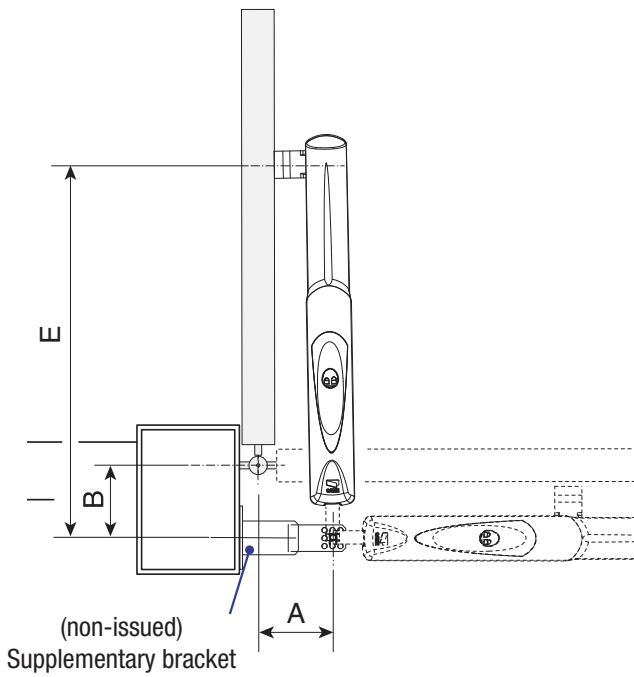


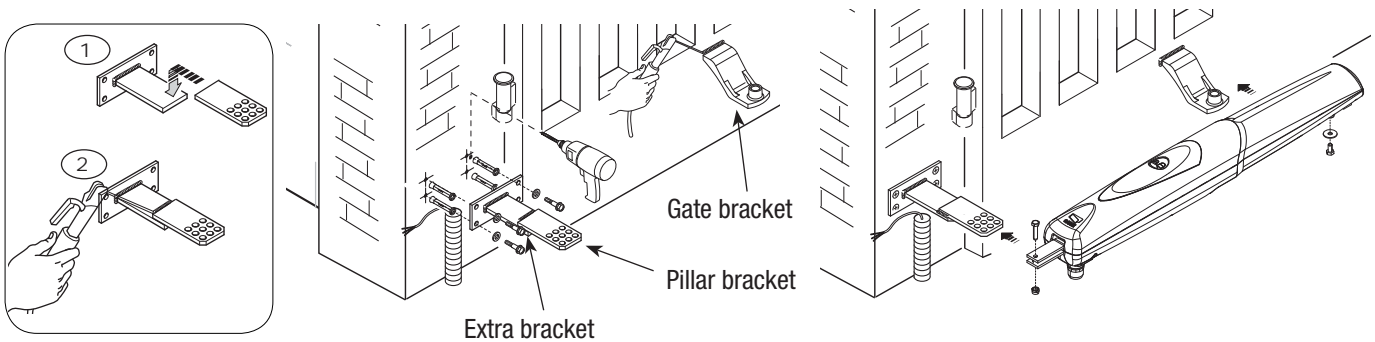
TABLE 1

Opening	A (mm)	B (mm)	E (mm)
90°	130	130	800

TABLE 2

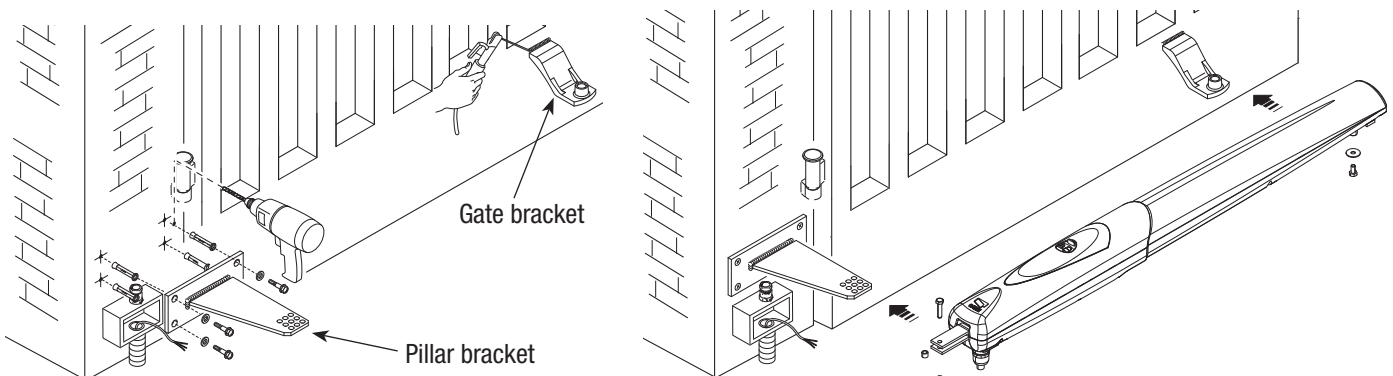
Opening	A (mm)	B (mm)	E (mm)
90°	200	220	1100

Weld pillar bracket to the non-issued supplementary bracket, while gate is open, then secure the brackets to the pillar, making sure the "A" and "B" quotas shown in table 1 are met. Weld, or secure with proper screws, the gate bracket, making sure the "E" quota is met, as shown in table 1. Finally, secure the gearmotor to the brackets with the issued screws and washers.

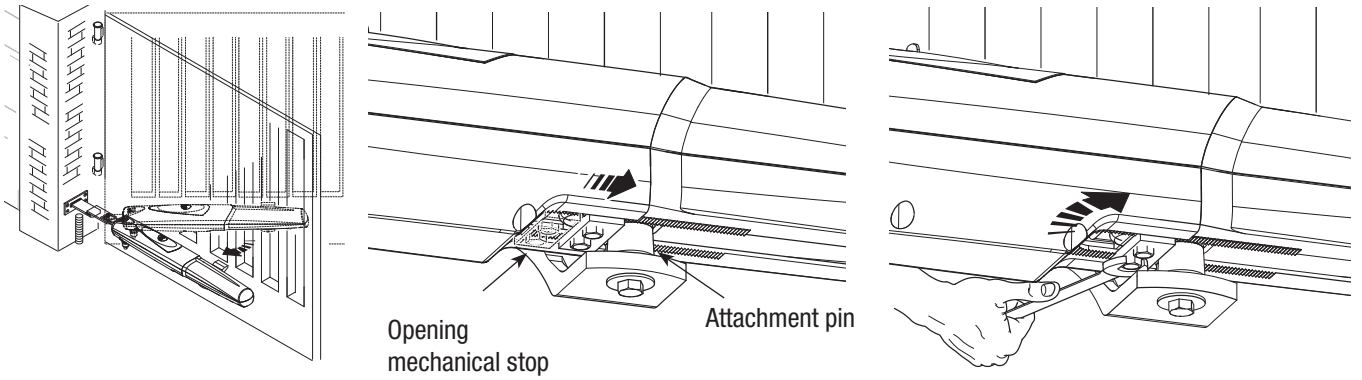


For AX5024 gearmotors, directly secure the standard issue bracket to the pillar without using the supplementary bracket, while taking into account the measurements shown in table 2.

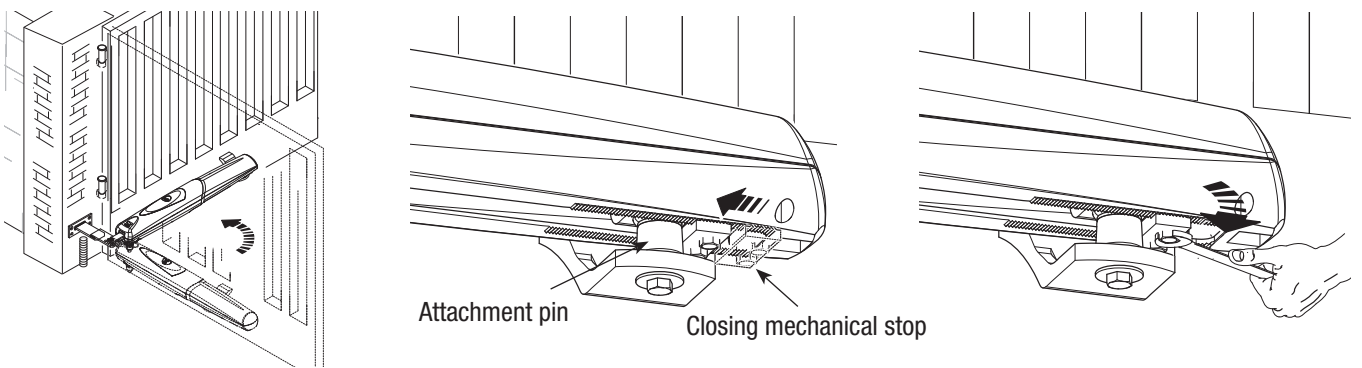
Finally, secure the gearmotor to the brackets with the issued screws and washers.



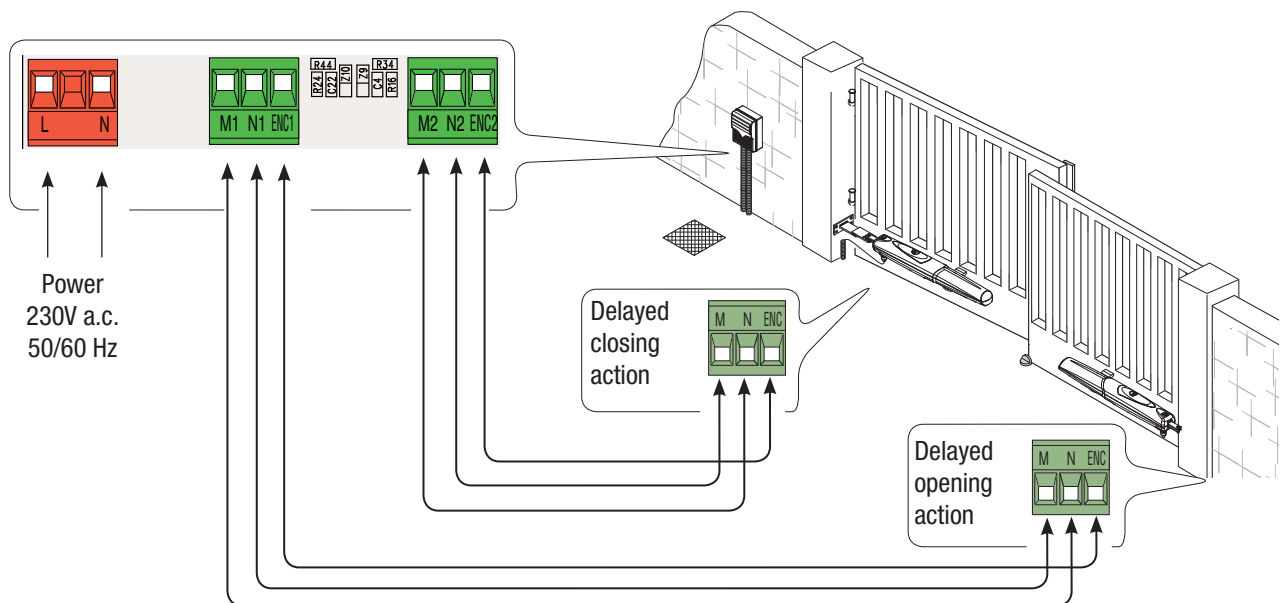
Fully close the gate-leaf, place the mechanical stop against it with the pin attachment and fix it in place.



Fully open the gate-leaf, place the mechanical stop against it with the pin attachment and fix it in place.



Connect the gearmotors to the panel as shown in the diagram.

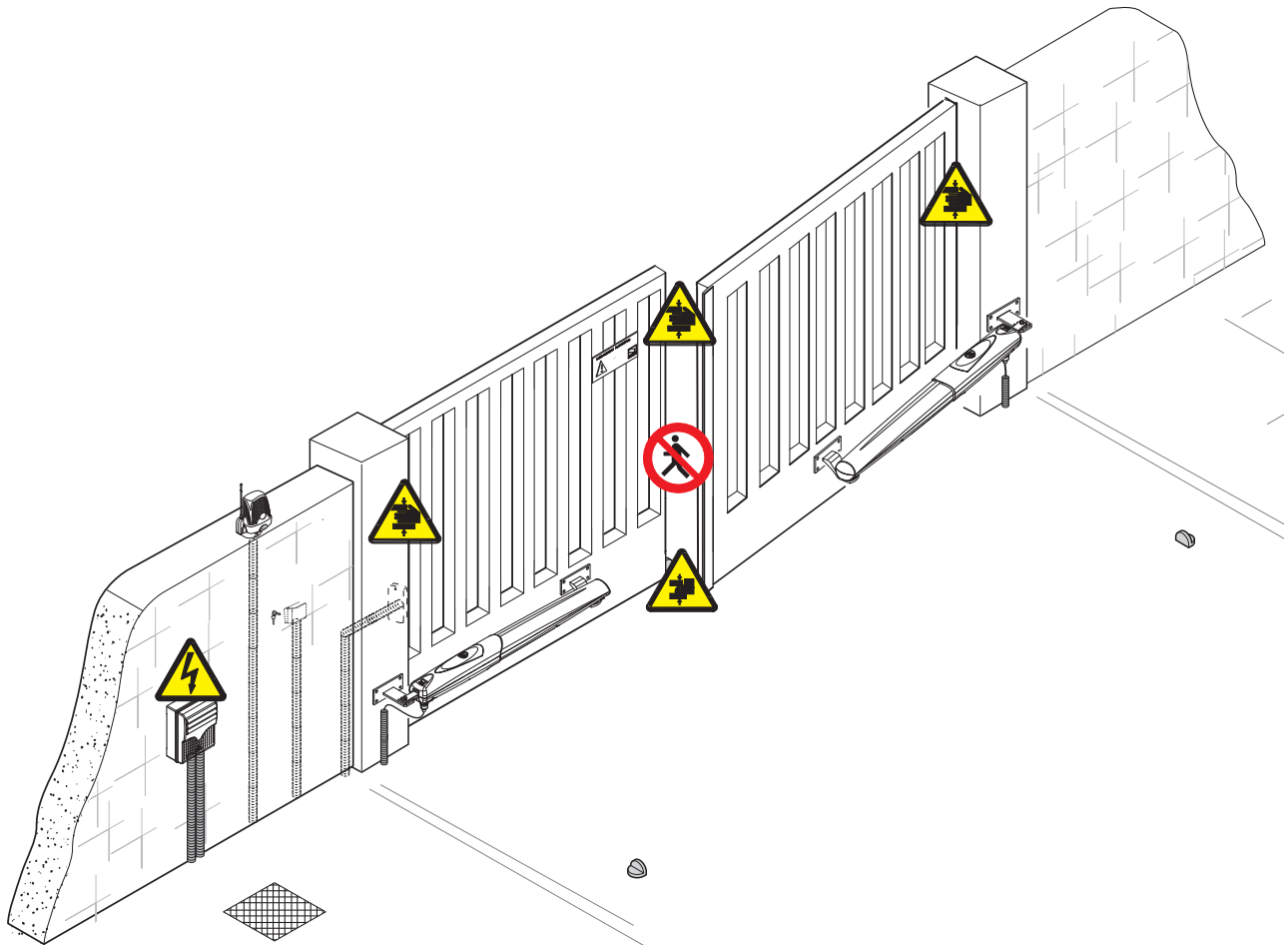


6 Safety instructions

Important safety instructions

This product must only be employed for its originally intended use. The automation installation using these gearmotors requires adequate safety systems on the gate leaves to detect any obstacles (e.g. sensitive edges), in compliance with EN12445 and EN12453 Technical Standards relative to the impact force generated by the moving gate. Any other use is wrong and potentially dangerous. The manufacturer cannot be held liable for any damages resulting from wrongful, erroneous or negligent uses.

Avoid working close to the hinges or other moving mechanical parts. Stay out of the opening/closing arc when operator is in motion. Do not exercise force against the motion of the operator as this could result in potentially dangerous situations.



Do not allow children to play or loiter within the opening/closing arc of the operator.

Keep remote controls and any other command device out the reach of children, to prevent operator from being activated by accident.

In the event of anomalous behaviour, stop using the operator immediately.



Danger of crushing hands



Danger! High voltage




Danger of crushing feet



No transit during operation

7 Maintenance

7.1 Periodic maintenance

 Periodic maintenance to be carried out by the end-user is as follows: wipe clean the glass surface of the photocells; check that the safety devices work properly; remove any obstructions.

We suggest checking the state of lubrication and tightness of the anchoring screws on the operator.

To check the efficiency of the safety devices, move an object in front of the photocells when gate is closing. If the operator inverts the motion or stops, the photocells are working properly.

This is the only maintenance procedure to be carried out with the power source connected.

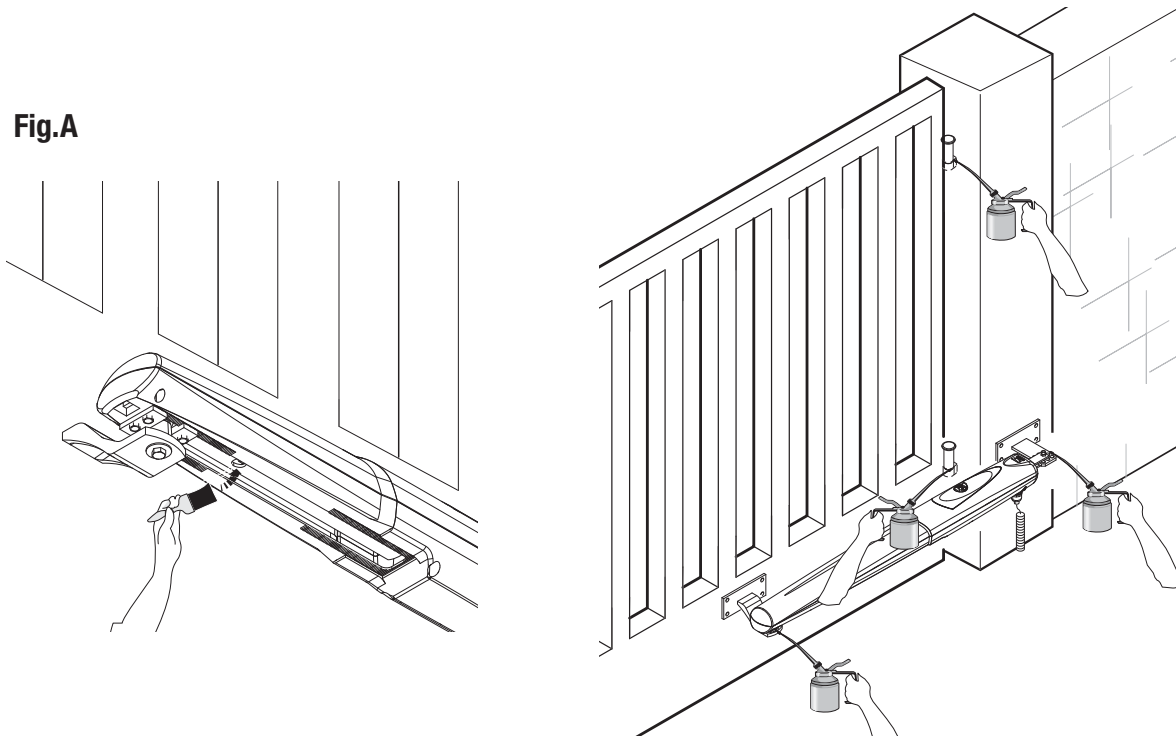
Before performing any maintenance procedures, cut off the main power, to prevent possible accidents due to gate movement.

To clean the photocells use a water dampened cloth. Do not use solvents or other chemical products which may ruin the devices.

In the event of any strange vibrations or squeaking, lubricate the joints with grease, as shown in the diagram.

Lubricate the endless screw via the hole located under the die-casting of the motor (fig. A)

Fig.A



Make sure there are no plants within the photocell's beam, and that the gate motion is free of any obstacles.

7.2 Trouble shooting

MALFUNCTIONS	POSSIBLE CAUSES	CHECK AND REMEDIES
The gate will not open nor close	<ul style="list-style-type: none"> • There is no power • The gearmotor is released • The transmitter's batteries are run down • The transmitter is broken • The stop button is either stuck or broken • The opening/closing button or the selector switch are stuck 	<ul style="list-style-type: none"> • Check that the power is up • Call assistance • Replace batteries • Call assistance • Call assistance • Call assistance
The gate opens but will not close	<ul style="list-style-type: none"> • The photocells are engaged 	<ul style="list-style-type: none"> • Check that photocells are clean and in good working order • Call assistance
The Flashing light does not work	<ul style="list-style-type: none"> • The bulb is burnt 	<ul style="list-style-type: none"> • Call assistance

CONTROL PANEL FOR 24 V GEARMOTORS



FA00038-EN



Official Partner



MILANO 2015

FEEDING THE PLANET
ENERGY FOR LIFE




INSTALLATION MANUAL

ZLJ24

EN English

IMPORTANT SAFETY INSTRUCTIONS WHEN INSTALLING
WARNING! IMPROPER INSTALLATION MAY RESULT IN SERIOUS DAMAGE, FOLLOW ALL INSTALLATION INSTRUCTIONS
THIS MANUAL IS EXCLUSIVELY INTENDED FOR PROFESSIONAL, SKILLED STAFF

LEGEND

-  This symbol shows which parts to read carefully.
-  This symbol shows which parts describe safety issues
-  This symbol shows which parts to tell users about.

REFERENCE REGULATIONS

Came S.p.A. is certified for the: ISO 9001 quality and ISO 14001 environmental management systems.
 This product complies with the current regulations mentioned in the declaration of conformity.

DESCRIPTION

Multifunction control panel for two leaved swing-gates, with graphic programming-display and warning and self-diagnosing safety devices.
 The functions on the input and output contacts, the time settings and user management, are set and viewed on the graphic display.
 All connections are quick-fuse protected.

Intended use

Control panel	Gearmotor
ZLJ24	AMICO - AXO - F4000 - FAST - FERNI - FROG - FROG J - MYTO

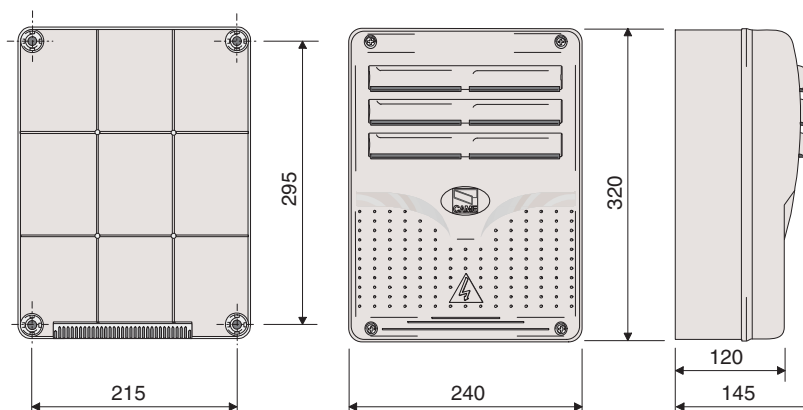
 Any installation and/or use other than that specified in this manual is forbidden.

Technical data

Type	ZLJ24
Protection rating (IP)	54
Power supply (V - 50/60 Hz)	230 AC
Maximum power (W)	500
Maximum power of the 24 V (W) accessories	50
Stand-by consumption (W)	10
Operating temperature (°C)	-20 ÷ +55
Material	ABS
Insulation class	II

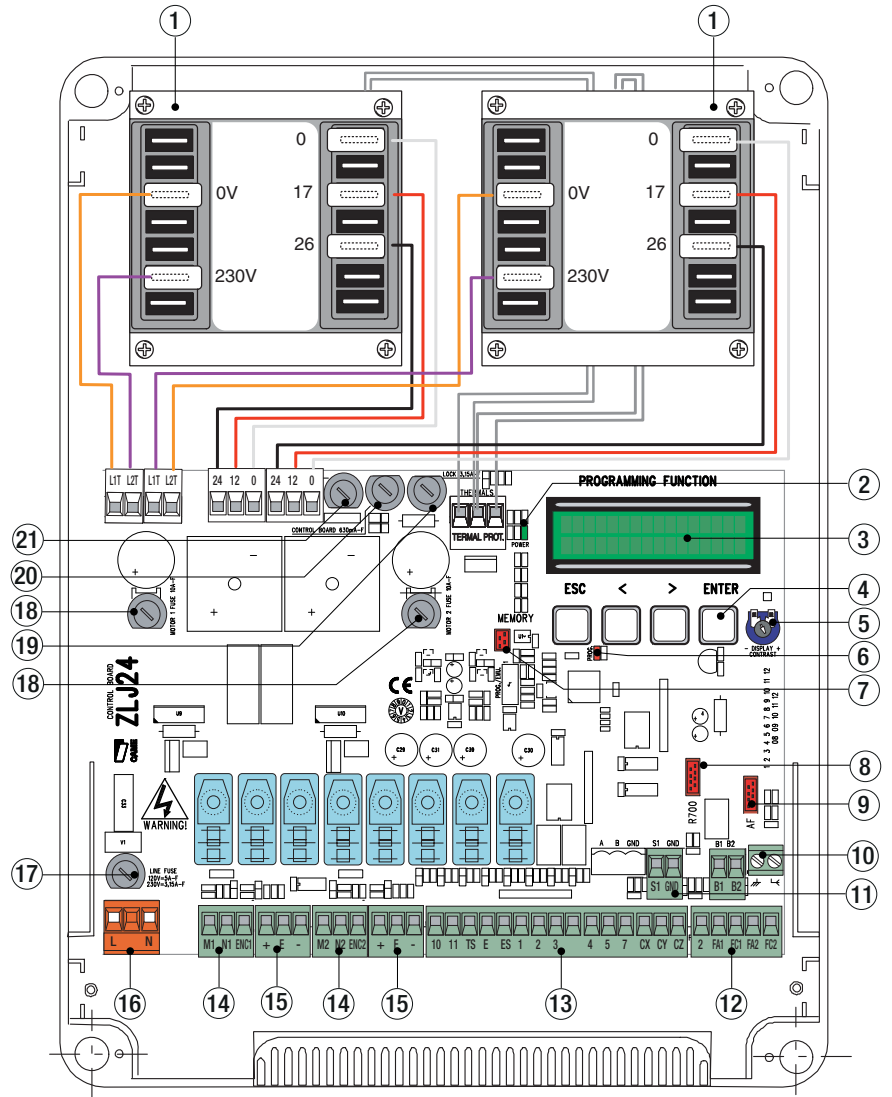
Fuses	ZLJ24
LINE-FUSE - Line	3.15 A-F
CONTROL BOARD - Card	600 mA-F
ACCESSORIES - Accessories	2 A-F
MOTOR 1 / MOTOR 2 - Motor	10 A - 250 V Ø 6.3x22 UFG632310 (Spare parts code 119RIR316)
E.LOCK - Electrolock	3.15 A-F

Dimensions (mm)



Description of parts

1. Transformer
2. Power supply on warning LED
3. Display
4. Programming buttons
5. Display brightness adjusting trimmer
6. Programming warning LED
7. Memory roll board connector
8. Connector for the R700 card
9. AF card connector
10. Antenna terminal
11. Transponder terminals
12. Endstop terminals
13. Terminals for control and safety devices
14. Terminals for gearmotors
15. Encoder terminals
16. Power supply terminals
17. Line fuse
18. Motor fuse
19. Electrolock fuse
20. Control board fuse
21. Accessories fuse



GENERAL INSTRUCTIONS FOR INSTALLING

- ⚠ Only skilled, qualified staff must install this product.
- ⚠ Before working on the control panel, cut off the main current supply and, if present, remove any batteries.

Preliminary checks

- ⚠ Before installing the control panel it is necessary to:
 - make sure that the point where the control panel is fastened is protected from any impacts and that the anchoring surface is solid enough, and that proper tools are used (that is, screws, anchors, and so on);
 - make sure you have set up a suitable dual pole cut off device along the power supply that is compliant with the installation rules. It should completely cut off the power supply according to category III surcharge conditions (that is, with minimum contact openings of 3 mm);
 - ⚡ Make sure that any connections inside the container (ones that ensure continuity to the protection circuit) are fitted with additional insulation with respect to those of other electrical parts inside.

Tools and materials

Make sure you have all the tools and materials you will need for installing in total safety and in compliance with applicable regulations. The figure shows some of the equipment installers will need.



Cable types and minimum thicknesses

Connection	Cable type	Cable length 1 < 10 m	Cable length 10 < 20 m	Cable length 20 < 30 m
Control panel power-supply	FROR CEI 20-22 CEI EN 50267-2-1	2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 2.5 mm ²
Encoder gearmotor power supply*		3 x 1.5 mm ²	3 x 1.5 mm ²	3 x 2.5 mm ²
Power supply to gearmotor**		2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 2.5 mm ²
Flashing light		2 x 0.5 mm ²		
Photocell transmitters		2 x 0.5 mm ²		
Photocell receivers		4 x 0.5 mm ²		
Command and safety device		2 x 0.5 mm ²		
Endstop***		3 x 0.5 mm ²		
Antenna	RG58	max 10 m		
Encoder****	2402C 22AWG	max 30 m		

* AXO ** FROG-A24, F4024, F1024, FROG-A24E, F7024E *** FROG-A24, F4024, F1024 **** FROG-A24E, F7024E, F4024E

📖 If cable lengths differ from those specified in the table, establish the cable sections depending on the actual power draw of the connected devices and according to the provisions of regulation CEI EN 60204-1.

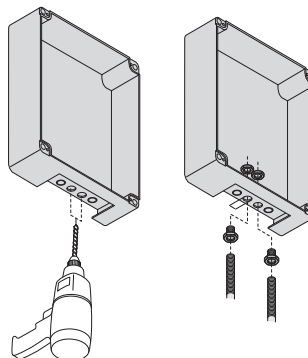
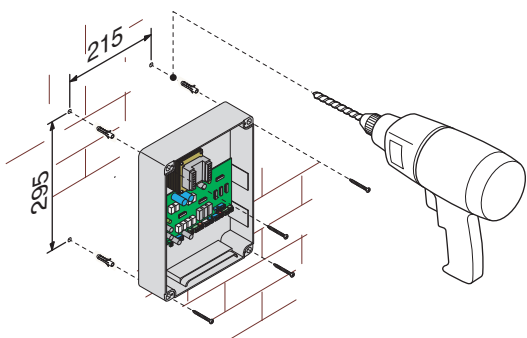
For multiple, sequential loads along the same line, the dimensions on the table need to be recalculated according to the actual power draw and distances. For connecting products that are not contemplated in this manual, see the literature accompanying said products

INSTALLATION

Fasten the control panel in a protected area using suitable screws, anchors and braces.

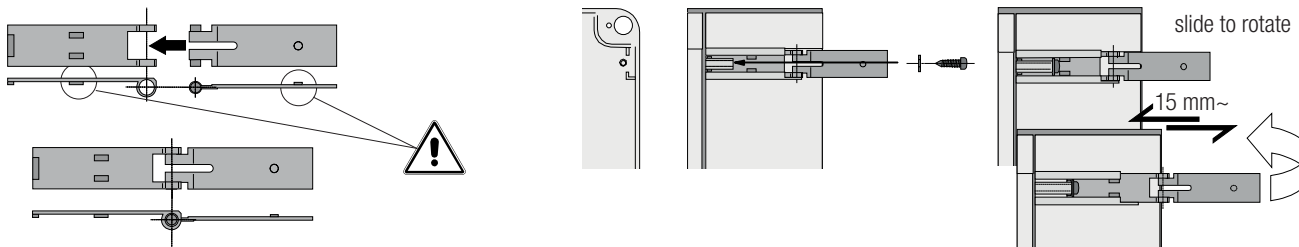
Drill through the pre-perforated holes and fit the cable gland with corrugated pipes for passing through the electric cables.

📖 Pre-perforated hole diameter: 20 mm.



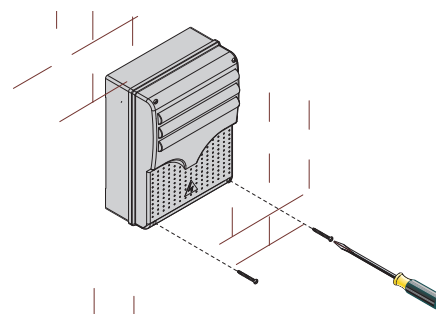
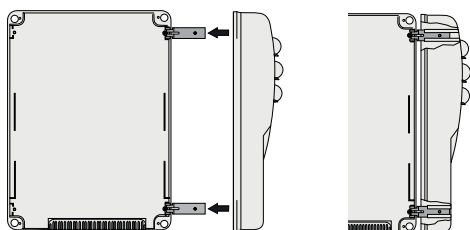
Assemble the pressure hinges.

Fit the hinge into the box (either on the right or left) and fasten them using the supplied screws and washers.



Snap the cover onto the hinges. Close it and secure it using the supplied screws.

After the settings and adjustments, fasten the cover using the supplied screws.

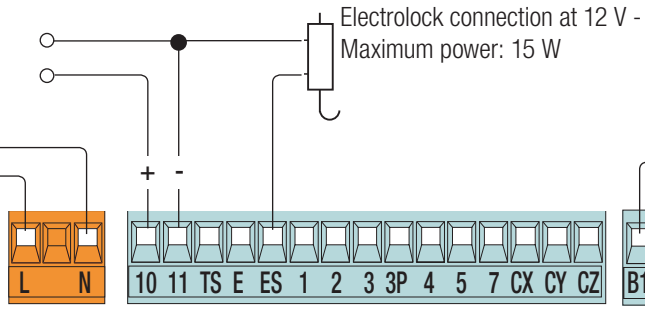


ELECTRICAL CONNECTIONS

Power supply to accessories

Terminal board for 24 V AC / DC accessories - Maximum power: 50 W

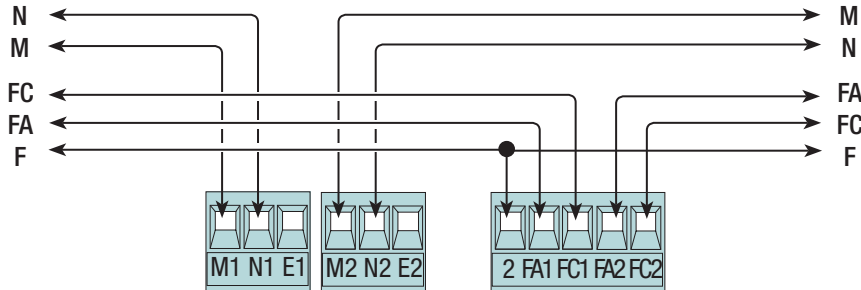
230 V AC - 50/60 Hz



Possible output of the second radio-receiver channel (NO contact). Contact rated for: 500 mA - 24 V DC.

Connecting the gearmotors with endstops

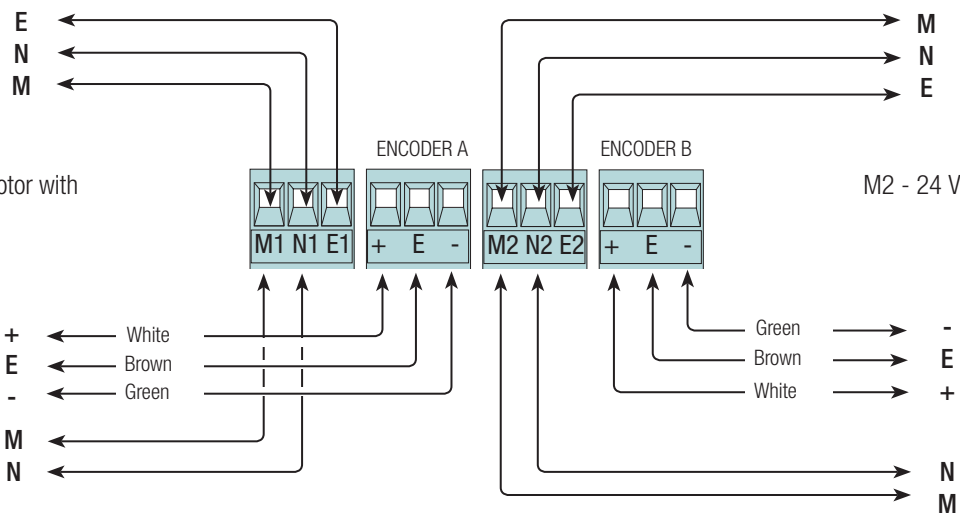
M1 - 24 V DC gearmotor with delayed opening.



M2 - 24 V DC gearmotor with delayed closing.

Connecting the encoder gearmotors

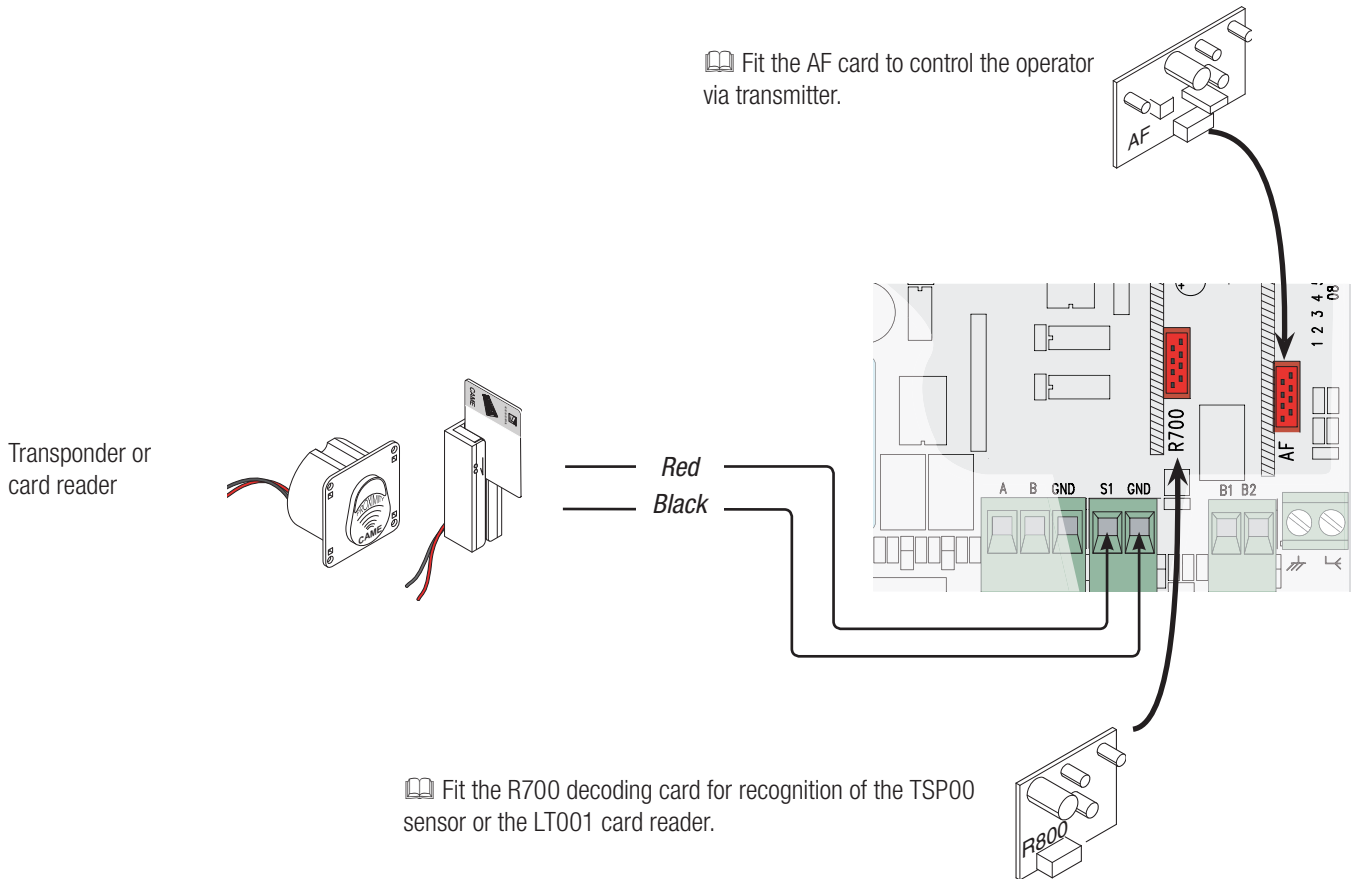
M1 - 24 V DC gearmotor with delayed opening.



M2 - 24 V DC gearmotor with delayed closing.

Command and control devices

⚠ Before fitting any snap-in cards (such as the AF or R700), YOU MUST CUT OFF THE POWER MAINS, and disconnect the power mains.



Stop button (NC contact). For stopping the gate leaves while excluding automatic closing. To resume movement press the control button or use another control device.

📖 If unused, select **[Disabled]** from the **[Total Stop]** function in the **[FUNCTIONS]** menu.

OPEN ONLY function from control device with NO contact.

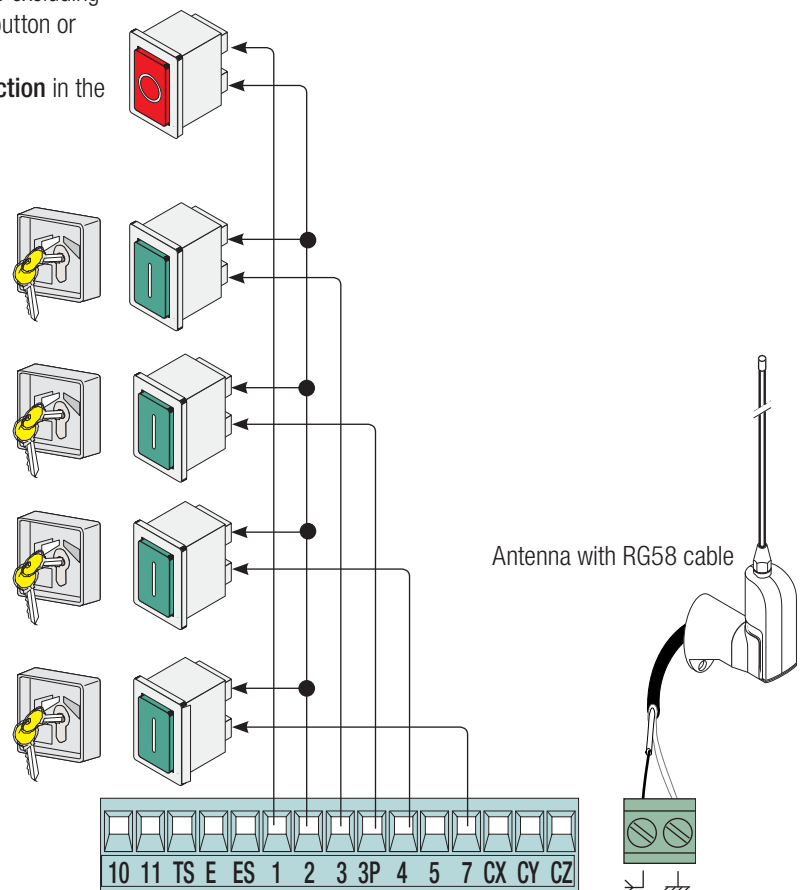
PARTIAL or PEDESTRIAN OPENING function from a control device (NO contact).

See the **[Command 2-3P]** function in the **[FUNCTIONS]** menu.

ONLY CLOSE function from control device (NO contact).

OPEN-STOP-CLOSE-STOP sequential function / OPEN-CLOSE-INVERT step-step from a control device (NO contact).

See the **[Command 2-7]** function in the **[FUNCTIONS]** menu.



Warning devices

Flashing light (contact rated for: 24 V - 25 W max). Flashes when the gate is opening and closing.

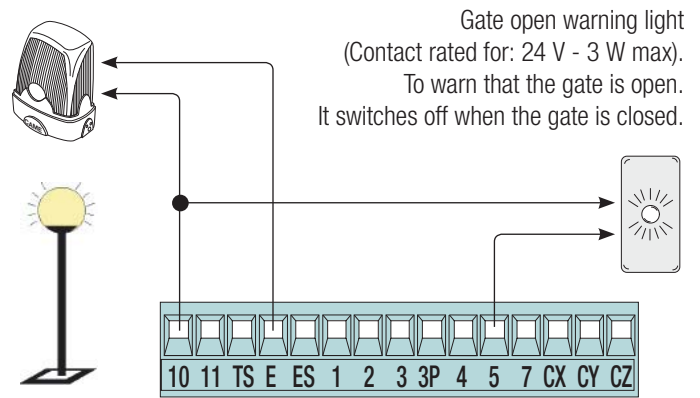
Alternatively, you can connect up a cycle or courtesy light (contact rated for: 24 V - 25 W max).

Auxiliary connection of an outdoor light which can be positioned where you like, to increase lighting in the driveway/parking area.

Cycle: it stays lit from the moment that the gate leaf starts opening until it is completely closed (including the automatic closing time).

Courtesy: it stays on for a fixed time of five minutes.

See the **[Light E]** function in the **[FUNCTIONS]** menu.



Safety devices

Photocells

Configure contact CX, CY or CZ (NC), input for EN 12978 safety devices like photocells.

See functions **[input CX]**, **[input CY]** or **[input CZ]**.

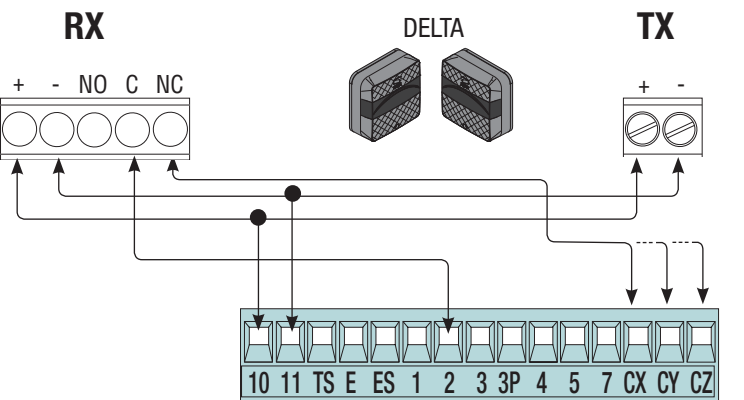
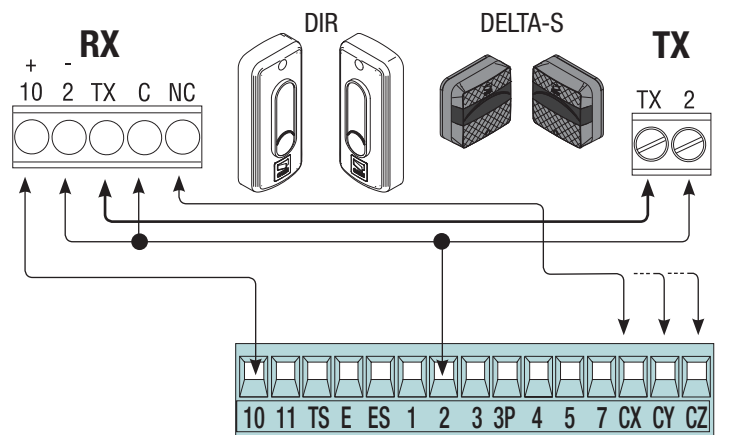
- C1 reopening during closing. When the gate leaves are closing, opening the contact causes their movement to invert, until they are fully opened;

- C2 closing during opening. When the gate leaves are opening, opening the contact causes their movement to invert, until they are fully closed;

- C3 partial stop. Stops the gate leaves, if they are moving, and turns on automatic closing (if the automatic closing function is on);

- C4 obstacle wait. Stops the gate leaves, and resumes their movement once the obstruction is removed.

If unused, contacts CX, CY and CZ should be disabled during programming.



Sensitive Safety Edges

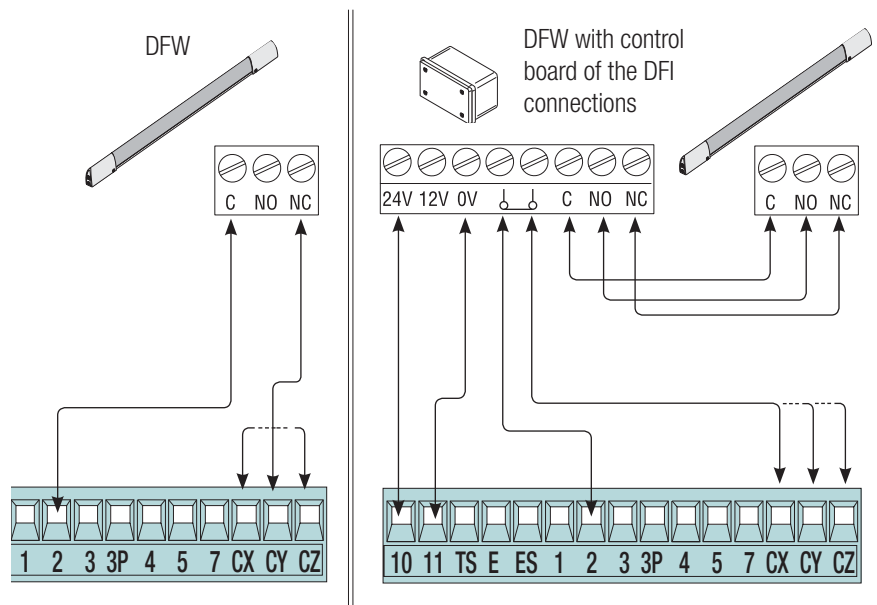
Configure contact CX, CY or CZ (NC), input for EN 12978 safety devices such as sensitive safety-edges.

See functions **[input CX]**, **[input CY]** or **[input CZ]**.

- C7 reopening during closing. When the gate leaves are closing, opening the contact causes their movement to invert, until they are fully opened;

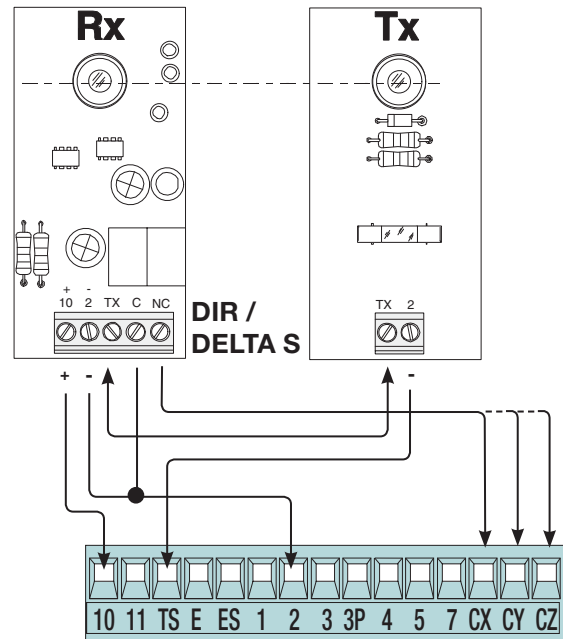
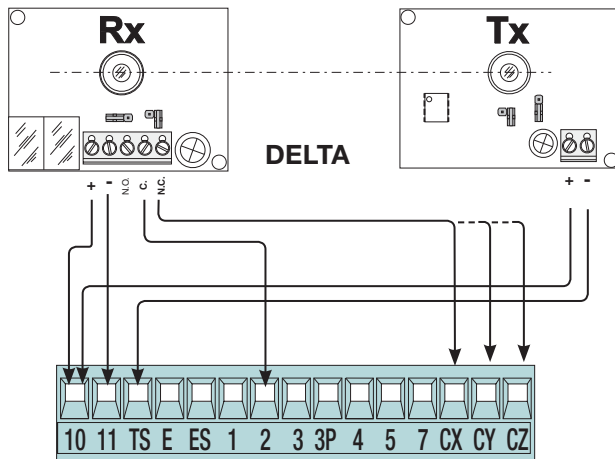
- C8 reclosing during opening. When the gate leaves are opening, opening the contact inverts their movement until they are fully closed.

If unused, contacts CX, CY and CZ should be disabled during programming.

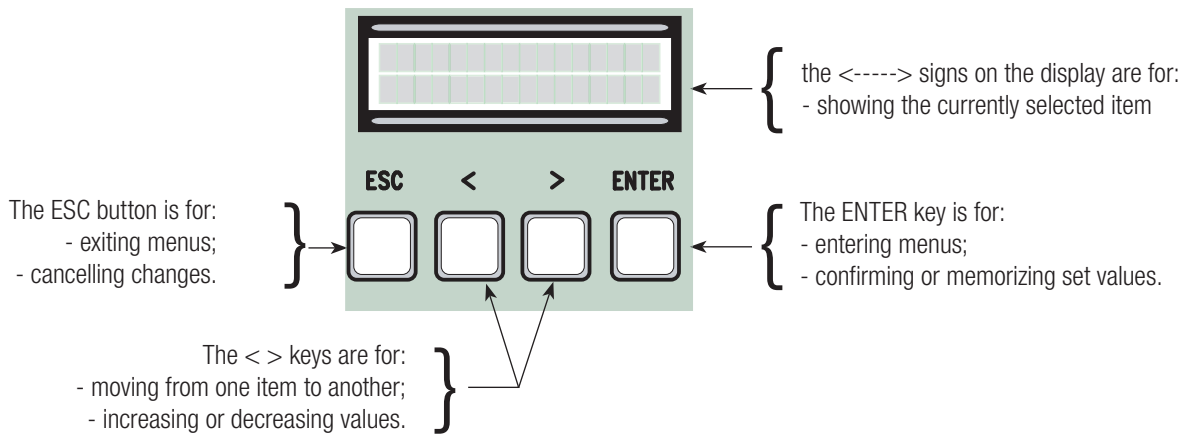


Photocell's safety connection

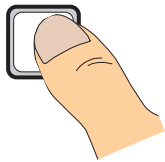
At each opening and closing, the card checks whether the photocells are working. Any anomalies will inhibit all commands. Select from the **[Safety Test]** function which of inputs CX, CY or CZ to turn on.



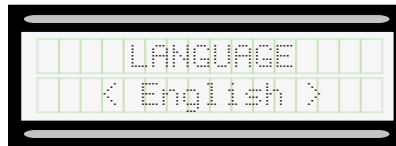
Description of programming commands



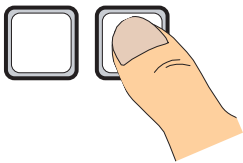
ENTER



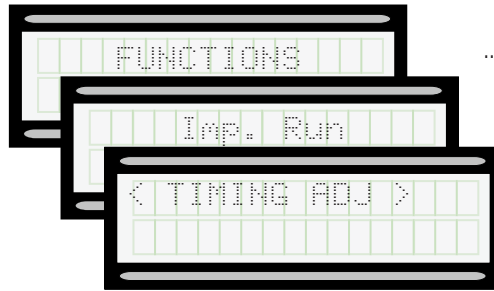
To enter the menu, keep the ENTER button pressed for at least one second.



< >

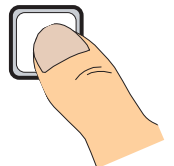


To select menu items, use the arrow keys ...

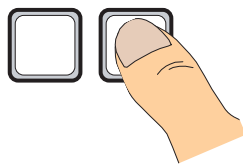


.. then press ENTER

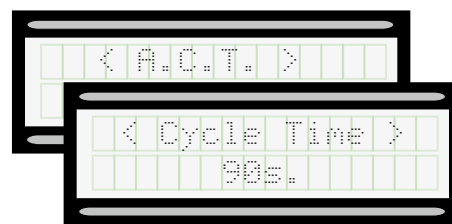
ENTER



< >

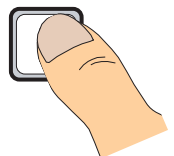


also for the submenus, use the arrow keys to select ...

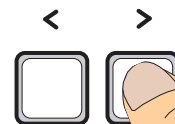


.. then press ENTER

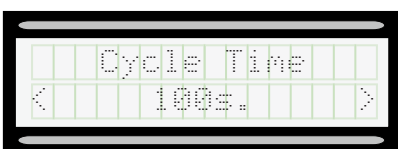
ENTER



If the < > arrows are set to the **[Working Time]**, you may edit their value.

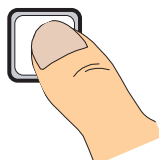


To increase or reduce the value use the arrows...



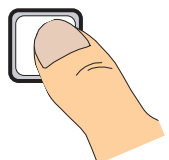
... the press ENTER to confirm ...

ENTER



... to exit the menu wait 30 seconds, or press ESC, until the start up screen appears.

ESC



Meaning of the menu items abbreviations

[Run Amperom]	Gate Run Sensibility
[Partial Op.]	Partial Opening
[Maintained Act]	Maintained Action
[Automatic Cl.]	AutoClose
[Config]	Configuration
[Associated Func.]	Associated Feature
[Set Gate Travel]	Set gate run
[M1 OP. Appr. %]	M1 Opening approach as a percentage
[M1 CL. Slwdwn %]	M1 Closing approach as a percentage
[M1 Appr.AP %]	M1 Opening slow-down as a percentage
[M1 Appr.CH %]	M1 Closing slow-down as a percentage
[M2 OP. Rest. %]	M2 Opening approach as a percentage
[M2 CL. Appr. %]	M2 Closing approach as a percentage
[M2 Slow. AP %]	M2 Opening slowdown as a percentage
[M2 Slow.CH %]	M2's Closing Slowdown as a percentage
[Edit. Code]	Mod. name
[Standby Msg]	Starting message
[Motor Num.]	Motor number
[Soft Start]	Soft Start
[Slow run Enc]	Opening and closing slow-downs with ENCODER
[Obstacle Det]	Obstacle Detection
[Remove Usr.]	Remove User
[M1 Op. Dly.]	Closing Delay M1
[Cl. Delay M2]	M2 Closing Delay
[Amperom. Sens.]	Amperom Sens
[Sensib. Run]	Sensib. Run
[Sensib. Decel]	Sensib. Decel
[Cl. Thrust]	Closing thrust
[Ram hit time]	Ram-jolt Time
[Preflashing T.]	Preflashing Time
[Slow down time]	Slow-down Time
[Lock time]	Lock Time
[A.C.T.]	Automatic Closing Time
[Pedestrian ACT]	Pedestrian Automatic Closing Time
[Slow Down Spd.]	Slow-down Speed
[Highspeed %]	Gate run speed

Menu map

[LANGUAGE]		Default
[Italiano] / [English] / [Français] / [Deutsch] / [Español] / [Portugues euro]/[Portugues bras]		English
[FUNCTIONS]		Default
[Autom. Closing]	[Disabled] / [Activated]	[Activated]
[Maintained Act]	[Disabled] / [Activated] / [When closing]	[Disabled]
[Obstacle Det]	[Disabled] / [Activated]	[Disabled]
[Safety Test]	[Disabled] / [CX] / [CY] / [CZ] / [CX+CY] / [CX+CZ] / [CY+CZ] / [CX+CY+CZ]	[Disabled]
[Pre-flashing]	[Disabled] / [Activated]	[Disabled]
[Ram hit funct]	[Disabled] / [Closing] / [Opening] / [Open-Close]	[Disabled]
[Total Stop]	[Disabled] / [Activated]	[Activated]
[input CX]	[Disabled] / [C1] / [C2] / [C2] / [C4] / [C7] / [C8]	[C1]
[Input CY]	[Disabled] / [C1] / [C2] / [C2] / [C4] / [C7] / [C8]	[C3]
[Input CZ]	[Disabled] / [C1] / [C2] / [C2] / [C4] / [C7] / [C8]	[Disabled]
[Cl. Thrust]	[Disabled] / [Activated]	[Disabled]
[Lock]	[Disabled] / [Closing] / [Opening] / [Open-Close]	[Disabled]
[Config]	[Time of Run] / [Endstop] / [Slwdwn] / [Lscl-CISlwdwn] / [ENCODER]	[ENCODER]
[Endstop]	[N.C. / N.O.]	[N.C.]
[Command 2-7]	[Open-Close] / [Op. Stop Cl.]	[Open-Close]
[Command 2-3P]	[Partial] / [Pedestrian]	[Pedestrian]
[Light E]	[Fl. light] / [Courtesy] / [Cycle]	[Fl. light]
[Output B1-B2]	[Bistable] / [Monostable]	[Bistable]
[SET TRAVEL]		Default
[No. Motors]	[M1+M2] / [M2];	[M1+M2]
[Motor Type]	[FROG-F4024E] / [FROG J] / [FROG-FL] / [AMICO] / [MYTO] / [AXO] / [FAST] / [FERNI]	[FROG-F4024E]
[High speed %]	[20%] ⇒ [100%]	[100%]
[Slow Down Spd. %]	[5%] ⇒ [80%]	[80%]
[Soft Start]	[Activated] / [Disabled]	[Disabled]
[Sens. Amperom]*	[Activated] / [Disabled]	[Activated]
[Run Amperom]**		
[Slow down time]**	[0 s] ⇒ [30 s]	[20 s]

*This function does not appear if [ENCODER] from the [Config] function.

**This function only appears if [Slwdwn.] or [Lsop-CISlwdwn] from the [Config] function.

[-●●●●●●●●○○○○○+]

[ENCODER]		Default
[Sensibility]	[Activated] / [Disabled]	[Activated]
[Travel Sens.]		[-●○○○○○○○○○○○○○○○+]
[Slwdwn Sens.]		[-●○○○○○○○○○○○○○○○+]
[Slow run Enc]	[ON] / [OFF]	[ON]
[M1 Appr.CH %]	[1%] ⇔ [60%]	[10%]
[M1 Slow.CH %]	[1%] ⇔ [60%]	[10%]
[M2 Slow.AP %]	[1%] ⇔ [60%]	[10%]
[M2 Slow.CH %]	[1%] ⇔ [60%]	[10%]
[M1 CL. Slwdwn %]	[1%] ⇔ [15%]	[15%]
[M2 Appr. CL %]	[1%] ⇔ [15%]	[15%]
[M1 Appr. OP %]	[1%] ⇔ [15%]	[15%]
[M2 Appr. OP %]	[1%] ⇔ [15%]	[15%]
[Gate Travel Calibration]	[Confirm? (no)] / [Confirm? (yes)]	

[TIMING ADJ]		Default
[A.C.T.]	[0 s] ⇔ [300 s]	[10 s]
[A.C.T. Pedestrian]	[0 s] ⇔ [300 s]	[10 s]
[Working Time]	[10 s] ⇔ [150 s]	[90 s]
[M1 Op. Delay]	[0 s] ⇔ [10 s]	[2 s]
[Cl. Delay M2]	[0 s] ⇔ [60 s]	[2 s]
[Preflashing T]	[one second] ⇔ [60 s]	[5 s]
[Lock time]	[one second] ⇔ [5 s]	[2 s]
[Ram hit time]	[one second] ⇔ [3 s]	[one second]
[Ped.opening]	[5 s] ⇔ [60 s]	[10 s]

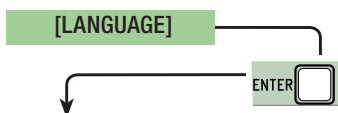
[USERS]	
[Add User] (250 max)	
[Mod. name]	
[Edit Code]	
[Associat. Func.]	[2-7] / [Open] / [B1-B2] / [2-3P] / [Disabled];
[Remove Usr]	
[Remove ALL]	[Confirm? (no)] / [Confirm? (yes)]
[Backup data]	[Confirm? (no)] / [Confirm? (yes)]
[Restore backup]	[Confirm? (no)] / [Confirm? (yes)]

[INFO]
[Version] / [Number of Runs] / [Standby msg.] / [System Reset]

[MOT TEST]
[<=M1 M2=>]

IMPORTANT! Start programming by first executing the following functions [MOTOR TYPE][MOTOR NUMBER], [TOTAL STOP] and [RUN CALIBRATION] function.

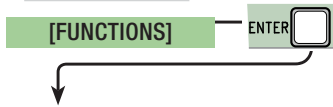
Language menu




[Italiano] / [English] / [Français] / [Deutsch] / [Español] / [Portugues euro] / [Portugues bras]

Select one of the available languages

Functions menu



[Automatic Cl.]	[Disabled] / [Turn on]
The first automatic-closing wait starts when the opening endstop point is reached and can be set to between 0 and 300 s. The automatic closing does not turn on if any of the safety devices trigger when an obstruction is detected, after a total stop or during a power outage.	
[Maintained Act]	[Disabled] / [Turn on] / [Closing]
The gate leaves close by keeping a button pressed. Opening button on contact 2-3 and closing button on contact 2-4. All other control devices, even radio-based ones, are excluded.	
[Obstacle Det]	[Disabled] / [Turn on]
With the gate-leaves closed, open or after a total stop, the operator stays idle if the safety devices (photocells and sensitive safety-edges) detect an obstruction.	
[Safety Test] function	[Disabled] / [CX] / [CY] / [CZ] / [CX+CY] / [CX+CZ] / [CY+CZ] / [CX+CY+CZ]
After every opening or closing command, the board will check whether the photocells are working properly.	
[Prelashing]	[Disabled] / [Turn on]
After an opening or closing command, the flashing light connected to 10-E, flashes before the maneuver starts. To set the time, see [Prelashing T] in the [ADJUST TIMES] menu.	
[Ram hit funct]	[Disabled] / [Closing] / [Opening] / [Open-Close]
Before any opening and closing maneuver, the gate leaves thrust inward to help release the electro-lock. To adjust this thrust time, select [Ram hit time] in the [ADJUST TIMES] menu.	
[Total Stop] function	[Turn on] / [Disabled]
NC input - Gate-leaves stop with automatic closing excluded; to resume movement, use the control device. The safety device is inserted into [1-2].	
[CX Input]	[Disabled] / [C1] / [C2] / [C3] / [C4] / [C7] / [C8]
NC input – Can associate: C1 = reopening during closing by photocells, C2 = reclosing during opening by photocells, C3 = partial stop, C4 = obstruction wait, C7 = reopening during closing by sensitive safety-edges, C8 = reclosing during opening by sensitive safety-edges.	
[CY input]	[Disabled] / [C1] / [C2] / [C3] / [C4] / [C7] / [C8]
NC input – Can associate: C1 = reopening during closing by photocells, C2 = reclosing during opening by photocells, C3 = partial stop, C4 = obstruction wait, C7 = reopening during closing by sensitive safety-edges, C8 = reclosing during opening by sensitive safety-edges.	
[CZ input]	[Disabled] / [C1] / [C2] / [C3] / [C4] / [C7] / [C8]
NC input – Can associate: C1 = reopening during closing by photocells, C2 = reclosing during opening by photocells, C3 = partial stop, C4 = obstruction wait, C7 = reopening during closing by sensitive safety-edges, C8 = reclosing during opening by sensitive safety-edges.	
[Cl. Thrust]	[Disabled] / [Turn on]
When the run reaches the endstop, the operator performs a closing thrust for a some seconds.	
[Lock]	[Disabled] / [Closing] / [Opening] / [Open-Close]
Set the electro-lock, for blocking the gate leaves, among one of the chosen available functions.	
[Config]	[Slwdown.] / [Lsop-Clslwdown] / [ENCODER] / [Time of Run] / [Endstop]
Configuring the opening and closing slow-downs	
[Slw. Dwn.]*	➔ opening and closing slow-downs.
[Lsop-Clos.]	➔ opening endstop and closing slow-down.
Slw]*	➔ slow-down management, obstruction detection and sensitivity.
[ENCODER]	➔ timed endstop.
menu	➔ opening and closing endstop.
[Time of Run]	*slowdowns configurable with the [Slow down time] function in the [Imp. Run]
[End Stop]	
[Endstop]	[N.C] / [N.O]
Configuring the endstops as normally opened or closed contacts.  This function only appears if option is selected between [Endstop] , [Lsop-Clos. Slw] or [Slw. Dwn.] from the [Config] function.	
[Command 2-7] function	[Open-Close] / [Op. Stop Cl]
Configuration contact 2-7 in step-step (open-close) or sequential (open-stop-close-stop).	
[Command 2-3P] function	[Pedestrian] / [Partial]
Configuring contact 2-3P to pedestrian opening (total opening of the second gate-leaf) or partial (partial opening of the second gate leaf) depending on the time set on [Partial Op.] in the [ADJUST TIMES] menu.	

[Light E] function	[Courtesy] / [Cycle] / [Fl. light]
Configuring the light connected to 10-E: - courtesy: freely positionable outdoor light, for increasing lighting in driveway/parking area. It stays on for a preset five minutes; - cycle: freely positionable outdoor light for increasing lighting in the driveway/parking area. It stays lit from the moment that the gate leaf starts opening until it is completely closed (including the automatic closing time). In case the automatic closing is off, it stays on only during the gate-leaves' movement. - flashing: it warns that the gate-leaves are moving to open or close.	
[Output B1-B2]	[Monostable] / [Bistable]
Configuring contact B1-B2 in Monostable or Bistable mode (switch).	

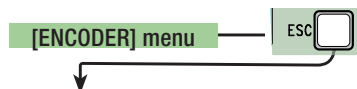
Gate run setting menu







[Motor Number]	[M1+M2] / [M2]
Setting the number of motors from one to two depending on how many gate-leaves the system has.	
[Motor Type]	[FROG-F4024E] / [FROG-J] / [FROG-FL] / [AMICO] / [MYTO] / [AXO] / [FAST] / [FERNI] / [ATI]
Setting the type of operator for the swing gates on the system.	
[High speed %]	[20%] ⇌ [100%]
Adjusting the maneuvering speed, calculated as a percentage.	
[Slow Down Spd. %]	[5%] ⇌ [80%]
Adjusting the slow-down speed, calculated as a percentage.	
[Soft Start]	[Disabled] / [Turn on]
After each opening and closing command, the leaves start at slowed down speed for a few seconds.	
[Amperom. Sens.]	[Disabled] / [Turn on]
Obstruction detection sensitivity. ⓘ This function does not appear if [Encoder] is set in the function [Config] function . When an obstruction is met the function intervenes in the following way: - [Time of Run] it stops the gate leaves during a maneuver; - [Endstop] it inverts the gate leaves during a maneuver; - [Slw. Dwn.] it inverts the gate leaf movement during a maneuver and stop the movement during a slow down. - [Lsop-Clos. Slw] it inverts the gate leaves during a maneuver and stops them only during the closing slow-down. When the function is disabled, it stops the gate leaves when the maximum voltage threshold is exceeded.	
[Amperom Run]	[-●●●●●○○○○○+]
Adjusting the Amperometric sensibility. ⓘ You need to turn on the [Sens.Amperom] in the [Set Travel] .	
[Slow down time]	[OFF] ⇌ [30 s]
Slow-down time of the gate leaves before every endstop. The time can be set to between zero and 30 s. ⓘ This function only appears if the [Slw. Dwn.] or [Lsop-Clos. Slw] from the [Config] function .	

ENCODER menu

ⓘ The **[ENCODER]** menu appears only when the **[Config]** in the **[FUNCTIONS]** menu.



[Sensibility]	[Turn on] / [Disabled]
Obstruction detection sensibility.	
[Trav. Sens.]	[-●○○○○○○○○○○○+]
Obstruction detection sensibility during gate run (both opening and closing). ⓘ You need to turn on the [Sensitivity] in the [ENCODER] menu .	
[Slwdwn. Sens.]	[-●○○○○○○○○○○○+]
Obstruction detection sensibility during slow-down (both opening and closing). ⓘ You need to turn on the [Sensitivity] in the [ENCODER] menu .	
[Enc. Slwdwn.]	[ON] / [OFF]
Activating the opening and closing slow-down starting points.	

[M1 Slow.AP %]	[1%] ⇔ [60%]
Adjusting M1's slow-down starting point before the opening endstop. The slow-down starting point is calculated as a percentage (from 1% to 60% of the complete gate-leaf run).  This function only appears if the [Enc. Slwdwn.] function in the [ENCODER] menu.	
[M1 Slow. CH %]	[1%] ⇔ [60%]
Adjusting M1's slow-down starting point before the closing endstop. The slow-down starting point is calculated as a percentage (from 1% to 60% of the complete gate-leaf run).  This function only appears if the [Enc. Slwdwn.] function in the [ENCODER] menu.	
[M2 Appr. AP %]	[1%] ⇔ [60%]
Adjusting M2's slow-down starting point before the opening endstop. The slow-down starting point is calculated as a percentage (from 1% to 60% of the complete gate-leaf run).  This function only appears if the [Enc. Slwdwn.] function in the [ENCODER] menu.	
[M2 Slow. CH %]	[1%] ⇔ [60%]
Adjusting M2's slow-down starting point before the closing endstop. The slow-down starting point is calculated as a percentage (from 1% to 60% of the complete gate-leaf run).  This function only appears if the [Enc. Slwdwn.] function in the [ENCODER] menu.	
[M1 CL. Appr. %]	[1%] ⇔ [15%]
M1's approach starting point is calculated as a percentage (from 1% to 15% of the complete gate-leaf run) before the closing endstop.	
[M2 CL. Appr. %]	[1%] ⇔ [15%]
M2's resting starting point is calculated as a percentage (from 1% to 15% of the complete gate-leaf run) before the closing endstop.	
[M1 Appr.CH %]	[1%] ⇔ [15%]
M1's approach starting point is calculated as a percentage (from 1% to 15% of the complete gate-leaf run) before the closing endstop.	
[M2 OP. Appr. %]	[1%] ⇔ [15%]
M2's approach starting point is calculated as a percentage (from 1% to 15% of the complete gate-leaf run) before the opening endstop.	
[Run Calibration]	
Automatic calibration of the gate-leaf run (see the CALIBRATING GATE-LEAF RUN paragraph).	

Time settings menu



[A.C.T]	[0 s] ⇔ [300 s]
The first automatic-closing wait starts when the opening endstop point is reached and can be set to between 0 and 300 s. The automatic closing does not turn on if any of the safety devices trigger when an obstruction is detected, after a total stop or during a power outage.	
[Pedestrian ACT]	[0 s] ⇔ [300 s]
Waiting time of M2's second leaf in the open position. Once this time elapses, a closing maneuver is automatically performed. The waiting time can be set to between 0 and 300 seconds.	
[Working Time] function	[10 s] ⇔ [150 s]
Gearmotor working time during opening and closing. The working time can be set to between 10 and 150 seconds.	
[Op. Delay M1]	[0 s] ⇔ [10 s]
M1 opening delay with respect to M2 after each opening command. The waiting time can be set to between 0 and 10 seconds.	
[Cl. Delay M2]	[0 s] ⇔ [60 s]
M2's closing delay with respect to M1's closing after each closing command. The waiting time can be set to between 0 and 60 seconds.	
[Preflashing T]	[1 s] ⇔ [60 s]
After an opening or closing command, the flashing light connected on 10-E, flashes between one and sixty seconds before starting the maneuver.	
[Lock time]	[1 s] ⇔ [5 s]
Intervention time for the electrolock to release after each opening command. The intervention time can be adjusted to between one second and five seconds.	
[Ram hit time]	[1 s] ⇔ [3 s]
The closing and opening jolt thrust-time of the gearmotors after each command. The thrust time can be set to between one and three seconds.	

[Ped.opening] [5 s] ⇔ [60 s]

M2's opening time. The time can be adjusted to between five seconds and 60 seconds.

Users Menu

[USERS]

ENTER

[Add User]

Entering up to 250 users and associating to each one a function of choice among those included. The entering must be done via transmitter or other control device (see paragraph on ENTERING NEW USERS).

[Mod. name]

For modifying the user number or name

[Mod. Code]

To modify the command code that is associated to a user.

[Related Func]

- [2-7] ➔ Step-step command (open-close) or sequential command (open-stop-close-stop)
- [Opens] ➔ Open only command
- [2-3P] ➔ Pedestrian or partial opening
- [B1-B2] ➔ Contact B1-B2 output

[Remove Usr]

To remove a user. Confirm removal with ENTER.

[Delete all Usr]

To remove all users. Confirm removal with ENTER.

[Backup data]

To save system users and settings in memory roll. Confirm saving with ENTER.

[Restore backup]

For uploading the data saved in the memory roll onto the electronic board.

 If the boards feature different versions, you may only upload the users.

Info menu

[INFO]

ENTER

[Version]

View software version.

[Number of Runs]

View the number of completed maneuvers.

[Open. Msg.]

View opening message. To edit the text, press ENTER. Use ENTER to move the cursor forward, ESC for moving the cursor backward and < > to select the letter of figure. Confirm text by pressing the ENTER key for some seconds.

[Reset System]

To restore the initial settings. Press ENTER to confirm the Reset.

Motors Test menu

[TEST MOT]

ENTER

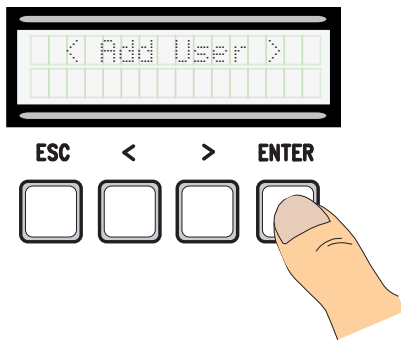
[<= M1 M2=>]

For checking the proper rotation direction of the gearmotors.

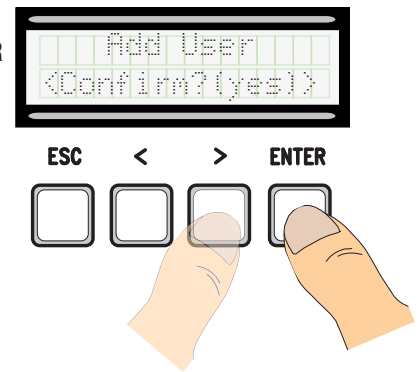
Keep the < key pressed for some seconds and check that M1's leaf has opened. If the rotation direction is wrong, invert the motor's phases. Keep the > key pressed for some seconds and check that M2's leaf has opened. If the rotation direction is wrong, invert the motor's phases.

Entering a new user

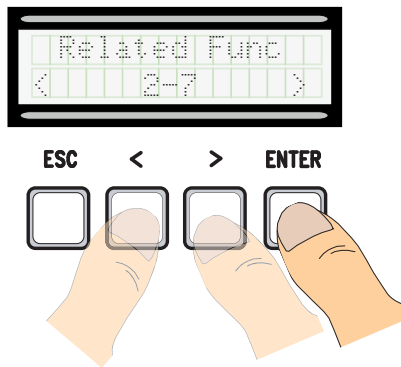
1. From the [USERS], select [Add User] function. Press ENTER to confirm.



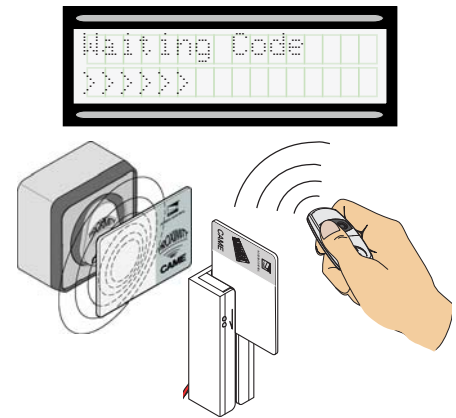
2. Select [confirm (yes)] and press ENTER to confirm.



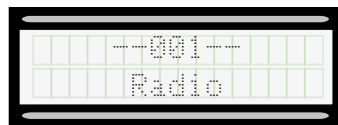
3. Select the function to associate to users. Press ENTER to confirm...



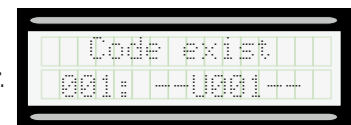
4. ... a code to enter will be requested. Send the code from the transmitter, with the swipe card or transponder.



5. Once the code is entered, the user number will appear with the memorized number ...

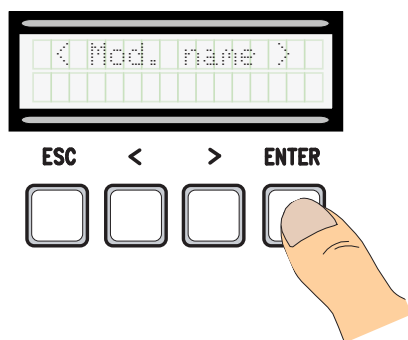


6. ... or, if the code is already entered, then [Code exist] will appear.

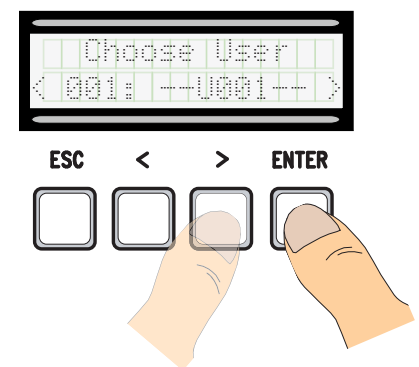


Modify user name

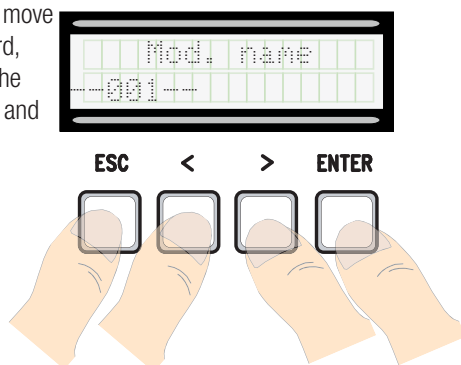
1. From the [USERS], select [Mod. name]. Press ENTER to confirm



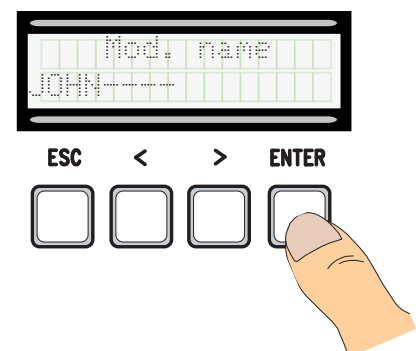
2. Select the user number or name to edit and press ENTER to confirm.



3. Use ENTER to move the cursor forward, ESC for moving the cursor backward and <> to select the letter of figure.

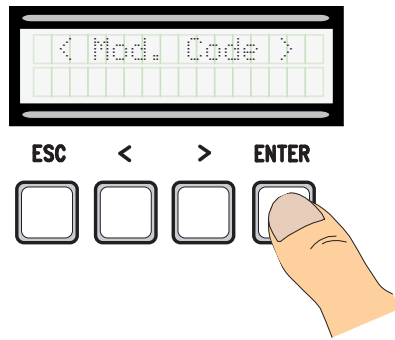


4. Press ENTER for a few seconds to confirm the text.

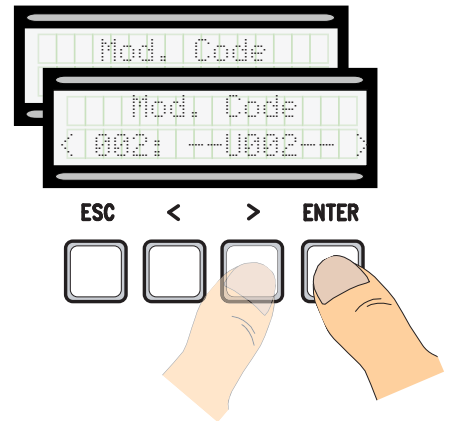


Modify code

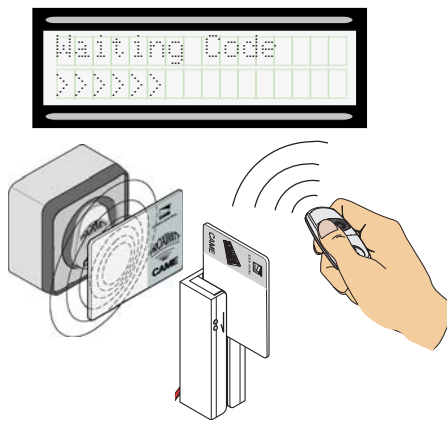
1. From the [USERS], select [Mod. Code]. Press ENTER to confirm



2. Select the user name of which you want to edit the code and press ENTER to confirm.



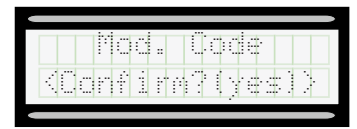
3. ... a code to enter will be requested. Send the code from the transmitter, with the swipe card or transponder.



4. ... once the code is entered, the user number and type of memorized command will appear...

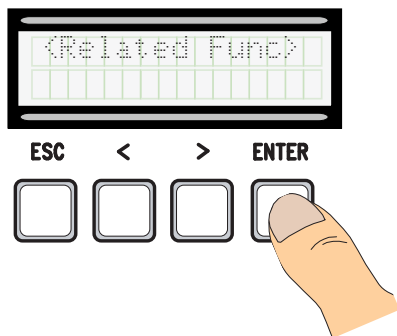


5. Select [confirm (yes)] and press ENTER to confirm.

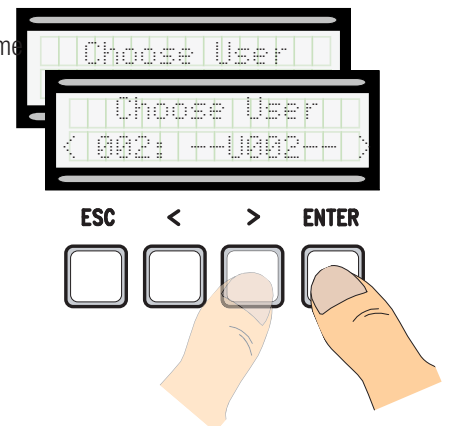


Function related to the user

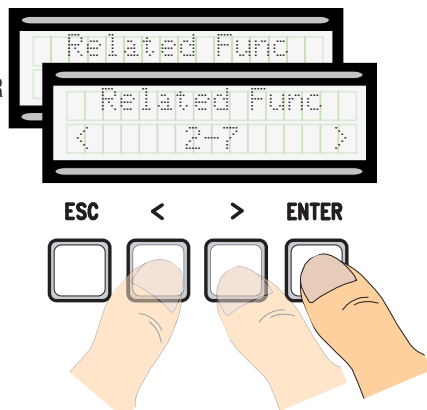
1. From the [USERS], select [Related Func]. Press ENTER to confirm



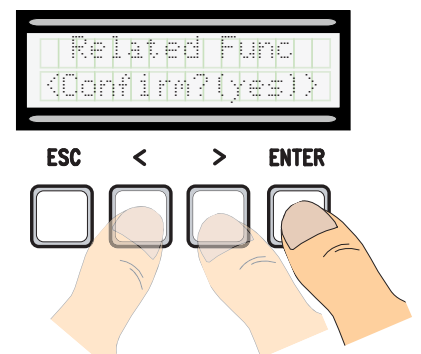
2. Select the user name for which you want to change the function and press ENTER to confirm.



3. Select the new function to relate to the user. Press ENTER to confirm.



4. Select [confirm (yes)] and press ENTER to confirm.



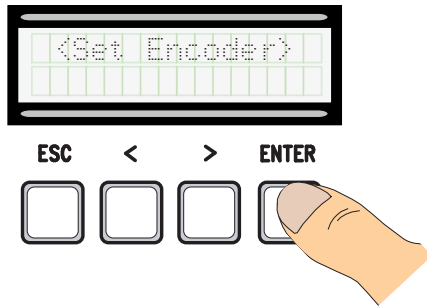
Travel calibration

⚠ Before calibrating the gate run, check that the maneuvering area is free from any obstruction and that there are both opening and closing mechanical stops.

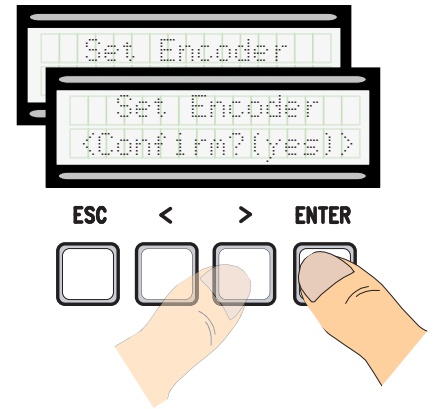
⚠ The mechanical end-stops are obligatory.

Important! During the calibration, all safety devices will be disabled except for the PARTIAL STOP one.

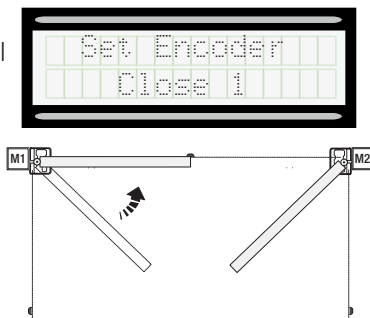
1. From the [ENCODER] menu, select [Travel Calibration]. Press ENTER to confirm



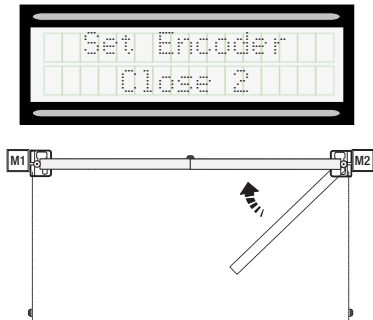
2. Select [confirm (yes)] and press ENTER to confirm.



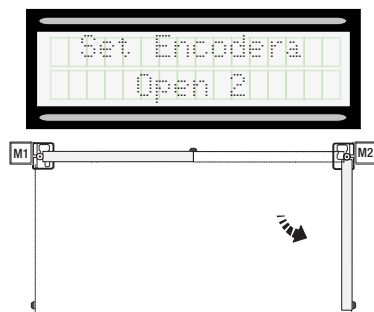
3. M1's gate leaf will perform a new closing until it completely stops...



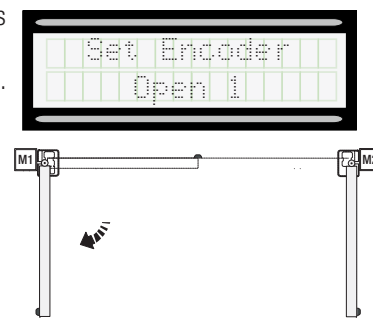
4. ...then, M2's gate leaf will perform the same closing...



5. ... and then M2's gate leaf will perform a full opening...



6. ... after which, M1's gate leaf will also perform a full opening.



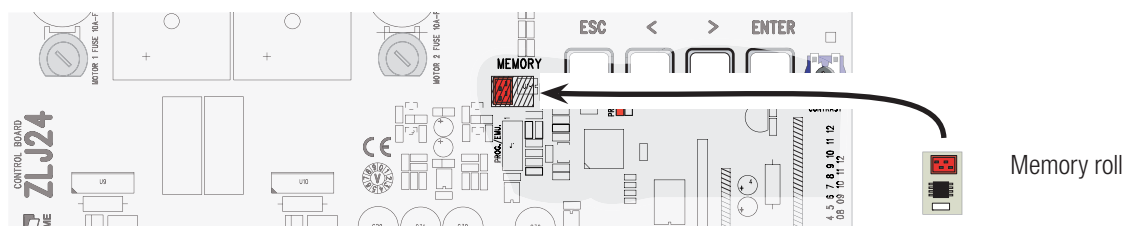
7. Once the procedure is completed, the display will read [Travel Calibration OK] for a few seconds.



Memory Roll Card

For memorizing user and system configuration data, then using them on another control board.

📖 After memorizing the data, it is best to remove the Memory Roll card while the control board is in operation.



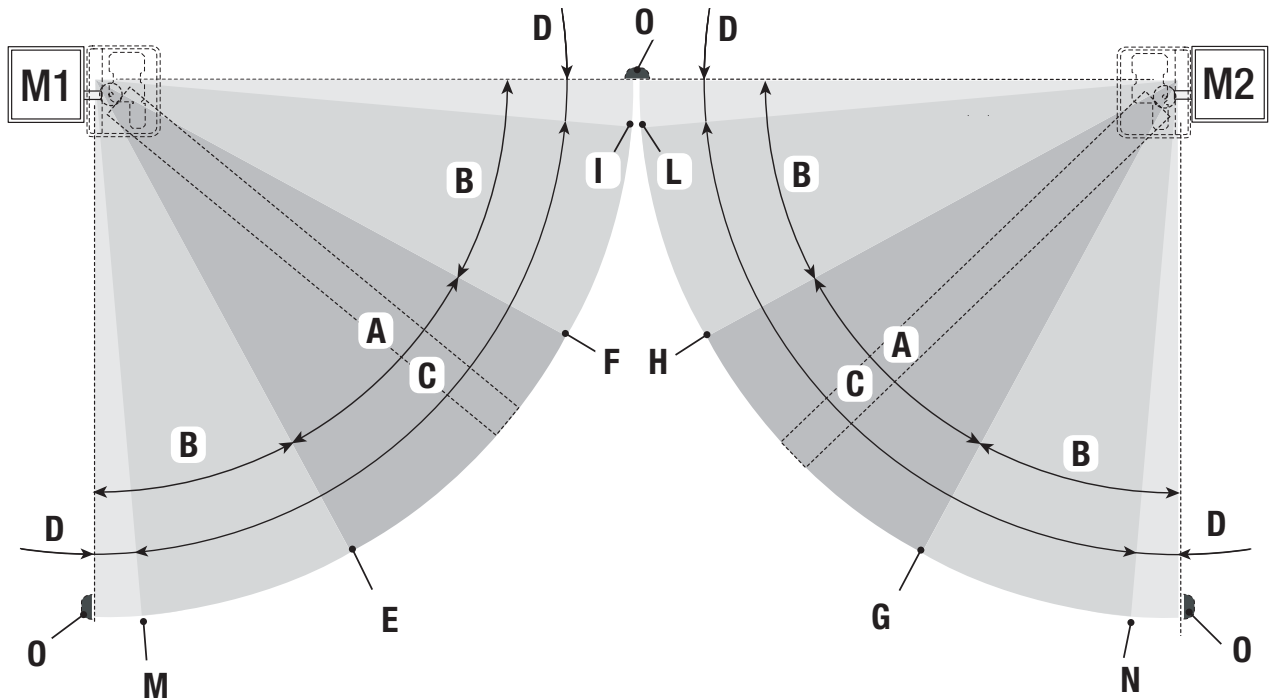
ERROR MESSAGE

📖 Error messages appear on the display.

[Encoder - ERROR], [Error!]	Broken encoder or wrong connection.
[Safety test - ERROR]	Safety devices malfunctioning.
[Endstop - ERROR]	Malfunctioning endstop contacts
[Working Time - ERROR]	Insufficient working time
[Safety - STOP], [C1], [C3], [C4], [C7] or [C8]	Malfunctioning safety devices or wrong connection

DIAGRAM OF THE SLOW-DOWN AND FINAL APPROACH POINTS AND FOR THE ENCODER DEVICE

The run area and slow down and approach points are tested according to the parameters set forth by Technical Standards EN 12455 and EN 12453 for compliance with the impact forces generated by the running leaves.



- A = Normal speed
- B* = Slowed-down speed
- C = Encoder intervention zone with movement inversion
- D = Encoder intervention zone with movement stopped
- E = Opening slow-down starting point [M1 Appr.AP %]
- F = Closing slow-down starting point [M1 Slow.CH%]
- G = Opening slow-down starting point [M2 Slow. AP %]
- H = Closing slow-down starting point [M2 Slow. CH%]
- I** = Closing approach starting point [M1 CL. Appr. %]
- L** = Closing approach starting point [M2 CL. Appr. %]
- M = Opening slow-down starting point [M1 OP. Appr. %]
- N = Opening slow-down starting point [M2 Appr. AP%]
- O = Strike plates

* Minimum 600 mm from the strike plate.

** Set the final approach percentage for the function [M1 CL. Appr. %] for M1 and [M2 CL. Appr. %] for M2 from the [ENCODER] menu so as to obtain a distance of between 1 and 50 mm maximum from the final strike plate point.

DISMANTLING AND DISPOSAL

Always make sure you comply with local laws before dismantling and disposing of the product. The packaging materials (cardboard, plastic, and so on) should be disposed of as solid urban waste, and simply separated from other waste for recycling.

Whereas other components (control boards, batteries, transmitters, and so on) may contain hazardous pollutants. These must therefore be disposed of by authorized, certified professional services.

DO NOT DISPOSE OF IN NATURE!

DECLARATION OF CONFORMITY

Declaration CE - Came S.p.A. declares that this device conforms to the essential, pertinent requirements provided by directives 2004/108/EC and 2006/42/CE.

An original copy of the declaration of conformity is available on request.