CAME

119DU25EN

AUTOMATION
FOR SWING GATES



INSTALLATION MANUAL

A3024N
A5024N

English EN

ENGLISH

WARNING!
important safety instructions:
READ CAREFULLY!

Introduction

• Use this product only for the specific purpose for which it is designed. Any other use is therefore improper and dangerous. CAME Cancelli Automatici S.p.A. is not liable for any damage due to improper, erroneous and unreasonable use • Keep these warnings together with the installation and users' manual for the automation system.

Before installing

(check what's there: if you find something wrong, proceed only after correcting the problem so the equipment is safe to use)

• Check that the part you want to automate is in good mechanical condition, that it is balanced and aligned, and that it opens and closes properly. Make sure you have suitable mechanical stops • If the operator will be installed less than 2.5 m from the floor or from any other access level, check whether you need additional protections and/ or warnings • With pedestrian doors framed into the doors that will be automated, a system must be in place to block their opening during movement • Make sure the opening of the automated door leaf does not cause any trapping situations involving any surrounding fixed parts • Do not install the operator upside down or on any elements that may bend. If necessary, add suitable reinforcements at the fastening points • Do not install on sloping ground (only install on flat ground) • Check that any watering devices cannot wet the gearmotor from the bottom upwards.

Installation

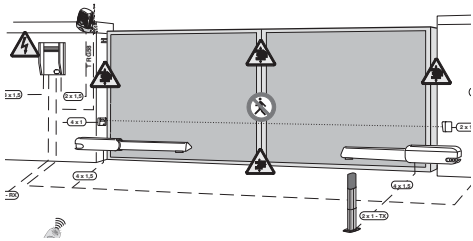
• Properly signal and demarcate the entire site prevent any careless people from entering the works area • Be careful when handling operators that weigh more than 20 kg (see installation manual. If such is the case, make sure you have proper hoisting equipment. All opening commands (buttons, key selectors, magnetic card readers, and so on) must be installed at least 1.85 M from the gate's area of movement, or so that they are unreachable from the outside. Moreover, the direct commands (from buttons, swipe cards, and so on) must be installed 1.5 m high off the ground and must not be reachable by the public • All "hold-to-run" commands must be placed where the operating gate leaves and transit areas are completely visible. • Apply a permanent label that shows the position of the release device • Before turning over the installation to the user, check that the system conforms to standards EN 12453 and EN12445 (impact testing), making sure the device has been properly adjusted and that the safety and protection and release devices function properly • Where necessary apply the Warning Signs so that they are clearly visible (e.g. the gate plate)

Instructions and special recommendations for users

• Keep the barrier's areas of operations unobstructed. Check that the photocells are free of any vegetation blocking them, and that there are no obstacles to the free movement of the operator. Do not allow children to play with the fixed command devices, or in the barrier's area of operation. Keep transmitters and any other command devices away from children, to prevent the operator from being activated by mistake • Frequently check the system, to scan for any anomalies or wear and tear in the moving structures, the operator's components, all fastening points and devices, the cables and accessible connections. Keep any jointed parts like hinges lubricated and clean of debris and the guide-sleds free of any friction • Perform functional checks to the photocells and sensitive edges every six months. To check that the photocells work properly, wave an object in front of them during closing; if the operator inverts its direction of travel or blocks movement, then the photocells are working properly. This is the only maintenance job that can be done to the gate when it is powered up. Ensure proper cleaning of the glass on the photocells (use a slightly damp cloth); do not use any solvents or other chemical products that may ruin the devices) • Should any repairs or changes to the system settings be needed, release the operator and refrain from using it until safety conditions have been restored • Cut the power off before releasing the operator for manual opening, to avoid any hazardous situations. Check instructions • It is FORBIDDEN for users to perform ANY OPERATIONS THAT ARE NOT EXPRESSLY REQUESTED OF SAID USERS in the manuals. Any repairs, adjustments or extra-ordinary maintenance, EXCLUSIVELY CALL TECHNICAL ASSISTANCE • Log any service jobs onto the periodic maintenance journal.

Special instructions and recommendations for everyone

• Keep away from the hinges and any moving mechanical parts • Stay out of the operating range of the operator while it is moving • Do not oppose the movement of the operator as this may result in danger • Always be careful around the dangerous parts, which must be properly indicated with warning signs and black and yellow stripes • When using a selector switch or a maintained-action mode command, keep checking that no persons come within the operating range of the moving parts, until the command is released • The gate may move at any moment without warning. Always cut off the main electric power supply before performing any cleaning or maintenance.





Hand crushing hazard



Danger high voltage



Danger of crushing feet



No transit during operation

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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.

Intended use and restrictions

Intended use

The ATI 24V N gearmotor is specifically engineered to automate residential and condominium swing gates, even under intensive use.

Any use, other than that described above or installations performed in ways other than those described herein, are forbidden.

Restrictions

Gate leaf width m	Gate leaf weight kg	
	A3024N	***A5024N***
2.00	800	1000
2.50	600	800
3.00	400	600
4.00	/	500
5.00	/	400

With swing gates it is always advisable to install and electro-lock. This is to ensure a reliable closing and to protect the gearmotor's inner workings.
But whereas with reversible operators it is merely advisable, with irreversible ones, beyond 4 m, it is obligatory.

Reference Standards

The company: Came Cancelli Automatici is ISO 9001 quality certified; is 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 standards: *see declaration of compliance.*

Description

Gearmotor

This product is engineered and manufactured by CAME CANCELLI AUTOMATICI S.p.A. and complies with current safety regulations.

The gearmotor is composed of two, cast aluminium half shells inside of which rest the gearmotor and endstops – with electro blocking – and an endless screw, epicycloidal gear reduction system.

Technical features

Control board power supply: 230 A.C. 50/60Hz
Motor power supply: 24V D.C. 50/60Hz
Max draw.: 10A
Power: 120W
Opening time (90°): adjustable

Gear ratio: 1/36
Duty Cycle: Intensive use
Protection Rating: IP44
Weight:
A3024N = 10 kg
A5024N = 11 kg

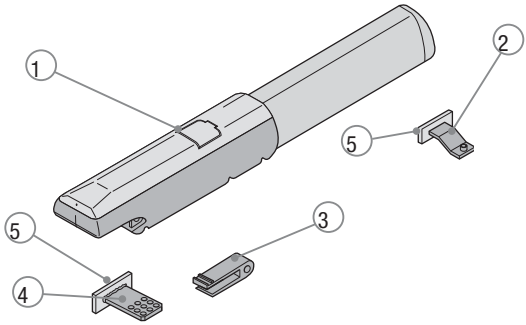


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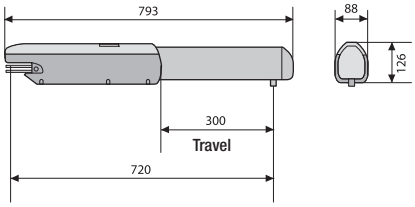
Description of parts

1) Gearmotor
2) Front bracket
3) Back swivel-joint
4) Back bracket
5) Anchoring plate

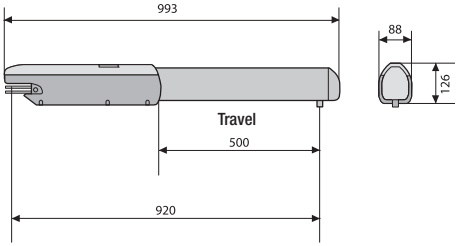


4.4 Overall dimensions

A3024N



A5024N

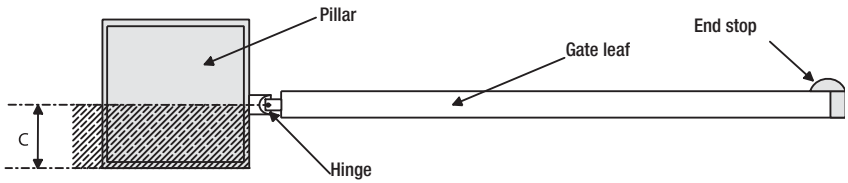


5 Installation

5.1 Preliminary checks

⚠ Before installing, do the following:

- make sure the structure of the gate is sturdy, the hinges work and that there is no friction between moving parts and non-moving parts;
- measurement C cannot be greater than the value shown in Tab. 3, p. 5. In this case you need to work on the pillar until said measurement is obtained;
- the path of the electrical cables must comply with the command and safety instructions;
- there must be a soundly secured to the ground mechanical stop to prevent the gate leaf/gearmotor from over extending.
- ⏚ Any connections inside the case (that provide continuance to the protective circuit) must be fitted with extra insulation as compared to the other conductive part inside;
- Make sure you have suitable tubing and conduits for the electrical cables to pass through and be protected against mechanical damage.



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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.

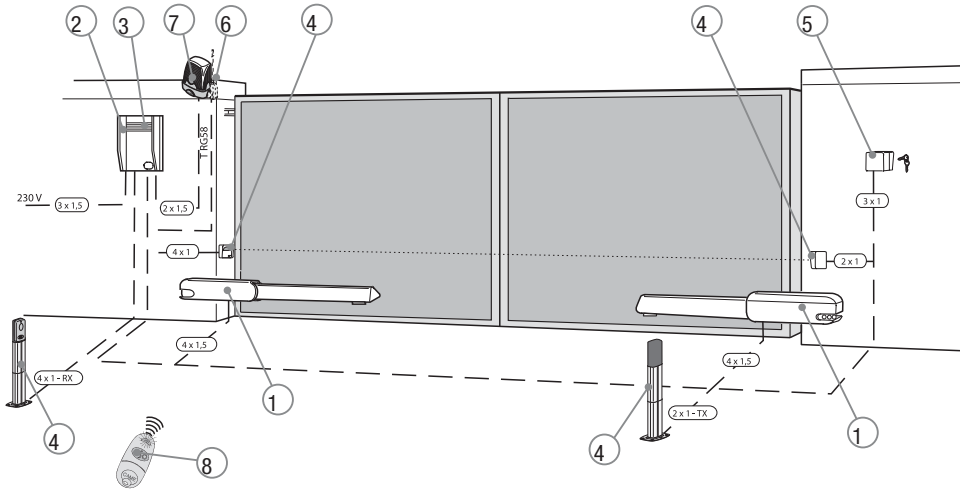


Cable list and minimum thickness

Connections	Type of cable	Length of cable 1 < 10 m	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
Flashing light 24V		3 x 1 mm^2	3 x 1,5 mm^2	3 x 2,5 mm^2
Photocell transmitters		2 x 0,5 mm^2	2 x 1 mm^2	2 x 1,5 mm^2
Photocell receivers		2 x 0,5 mm^2	2 x 0.5 mm^2	2 x 0,5 mm^2
24V Accessories power supply		4 x 0,5 mm^2	4 x 0,5 mm^2	4 x 0,5 mm^2
Command buttons		2 x 0,5 mm^2	2 x 0,5 mm^2	2 x 1 mm^2
Endstop		2 x 0,5 mm^2	2 x 0,5 mm^2	2 x 0,5 mm^2
Encoder plug		3 x 0,5 mm^2	3 x 1 mm^2	3 x 1,5 mm^2
Antenna connection	RG58	max. 50 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.

Standard installation

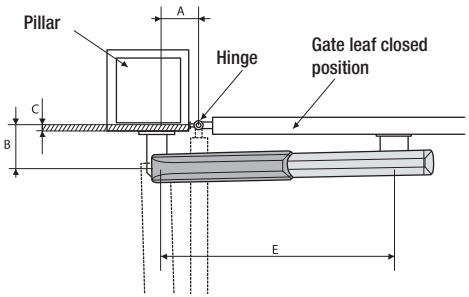


1) Operator
2) Control panel
3) Radio receiver
4) Photocells
5) Selector switch
6) Antenna
7) Flashing light
8) Transmitter

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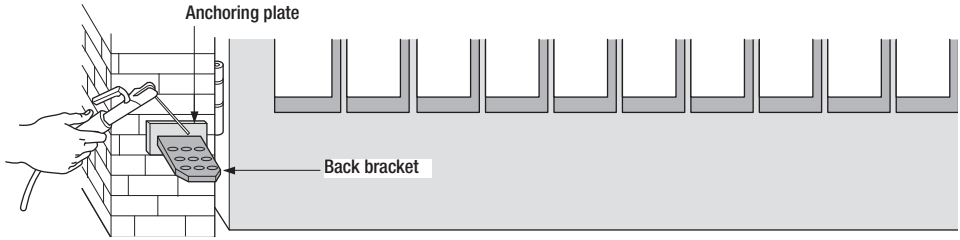
Mounting

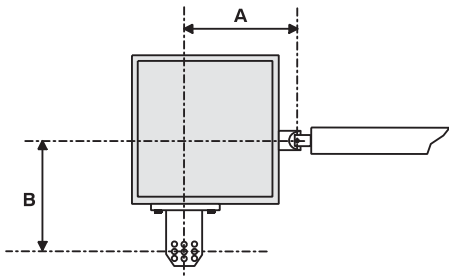
⚠ The following are just example applications, given that the space for securing the operator and accessories may vary depending on the dimensions. It is thus up to the installer to choose the most suitable solution.

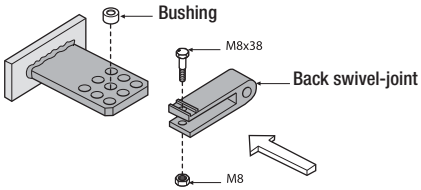


Tab. 3

Opening	*A* mm	*B* mm	*C* < mm	*E* mm
Gate leaves < 3 m				
90°	130	130	60	720
120°	130	110	50	720
Gate leaves < 5 m				
90°	200	200	120	920
120°	200	140	70	920

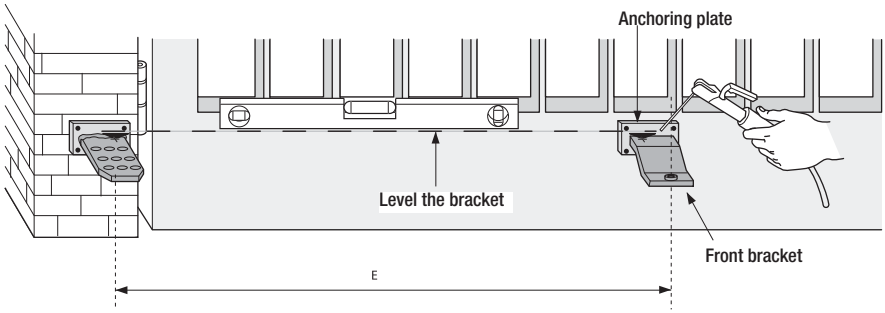






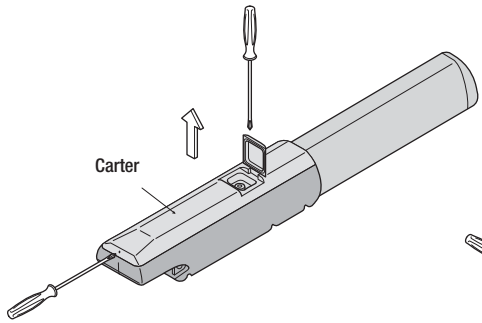
Apply the anchoring plate to the pillar using the back bracket (fig. 1) making sure the A and B measurements are right (Tab. 3) between the hinge axis and central bore hole on the bracket. The back bracket has several other holes for changing the opening angle of the gate.

N.B.: increasing the B measurement decreases the opening angle resulting in slower peripheral speed and greater motor thrust on the gate leaf. Increasing measurement A increases the opening angle resulting in greater peripheral speed and reduced motor thrust on the gate leaf.

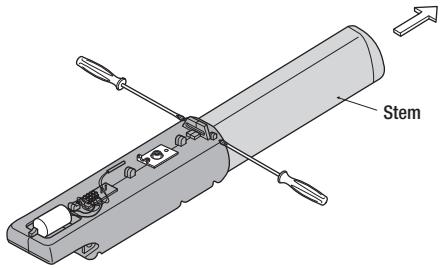


With the gate closed apply the anchoring plate to the gate leaf, making sure that the front bracket is lined up horizontally with the back bracket and ensuring that measurement E is met.

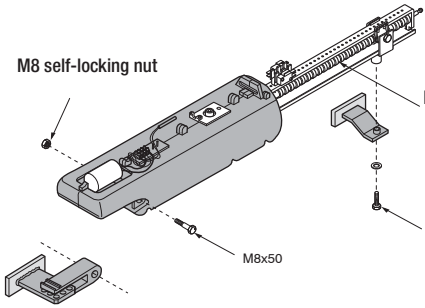
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Unscrew the two securing screws and remove the carter.



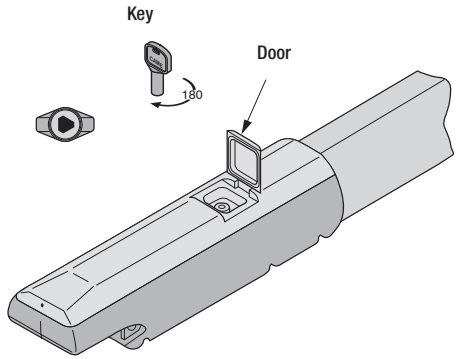
Unscrew the two securing screws and remove the stem.



Begin mounting the gearmotor to the two brackets.

N.B.: we suggest lubricating (using neutral grease) the endless screw and the bushing upon installation.

Release with customised key

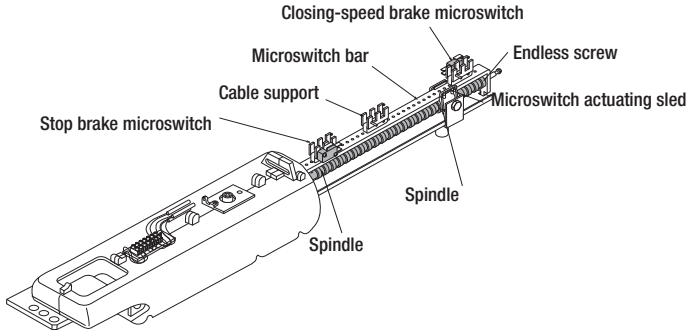


Release only with motor stopped:
1) raise the door;
2) insert and turn key which immediately releases door;
3) manually push or pull gate leaf.

To lock gate leaf again into place just insert key again and turn.

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Securing and adjusting the endstop



OPENING PHASE: (stop)

Release the gearmotor and swing the gate-leaf to the fully open position you desire, then, unscrew the securing screws on the opening stop micro-switches assembly.

Slide the micro-switch assembly along the micro-switch bar until it is inserted by contact on the micro-switch activating sled

Secure the micro-switch assembly using the respective screws.

CLOSING PHASE (deceleration)

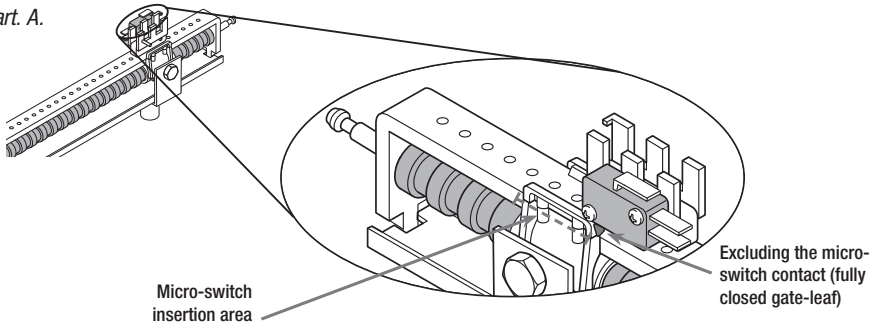
Swing the gate until fully closed.

Unscrew the securing screws on the closing decelaration micro-switch assembly.

Slide the micro-switch assembly along the micro-switch bar until it is completely passing the contact point on the micro-switch activating sled (as shown in part A.)

Secure the micro-switch assembly using the respective screws.

Part. A.



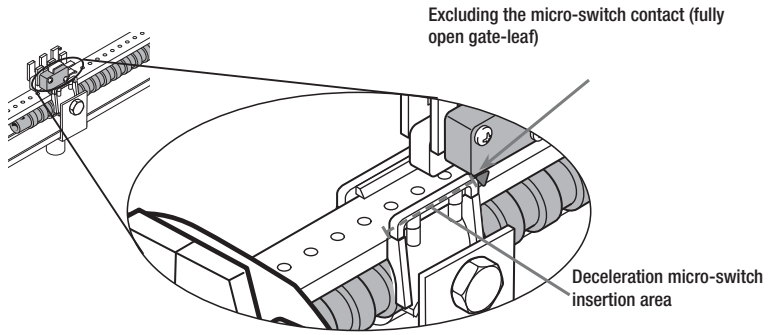
OPENING PHASE (deceleration if set up on the control panel):

Release the gearmotor and swing the gate-leaf to the fully open position you desire, then, unscrew the securing screws on the opening stop micro-switches assembly.

Slide the micro-switch assembly along the micro-switch bar until it is completely passing the contact point on the micro-switch activating sled (as shown in part B.).

Secure the micro-switch assembly using the respective screws.

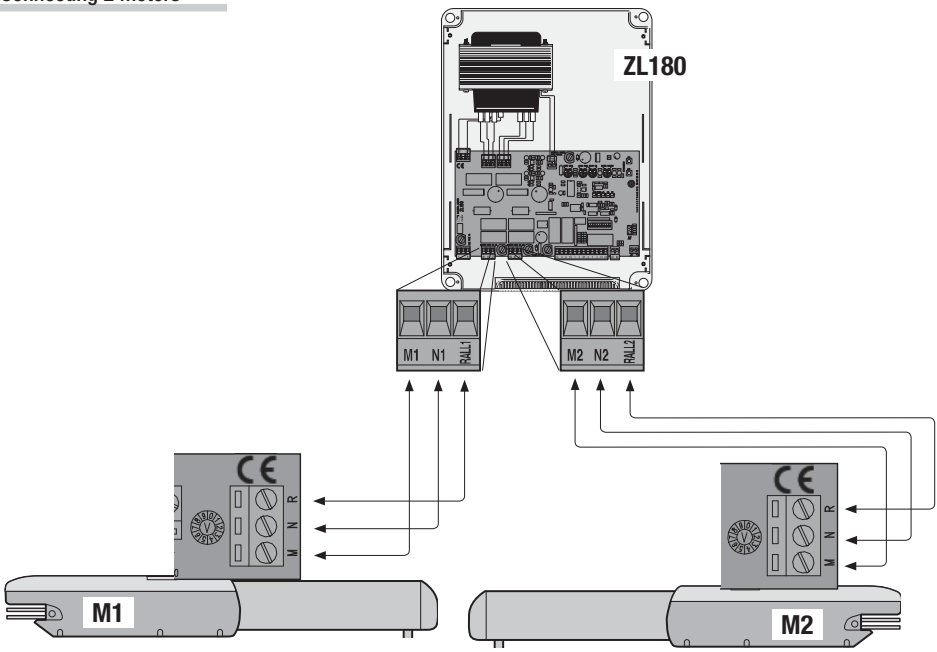
Part. B.



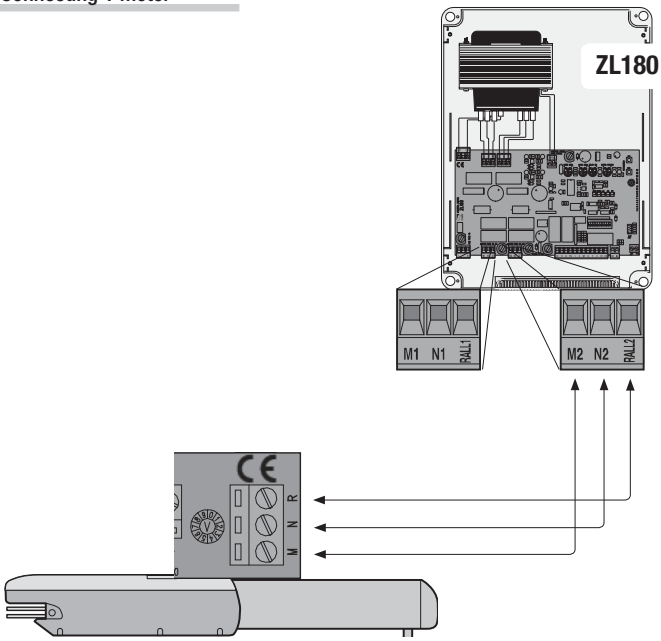
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Connecting to the ZL180 control panel

Connecting 2 motors



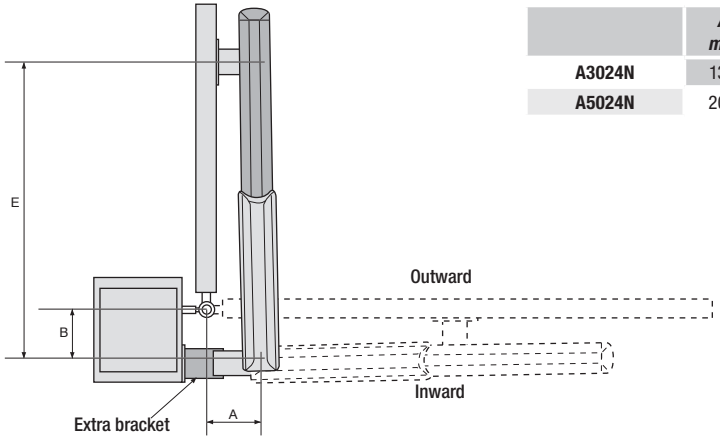
Connecting 1 motor



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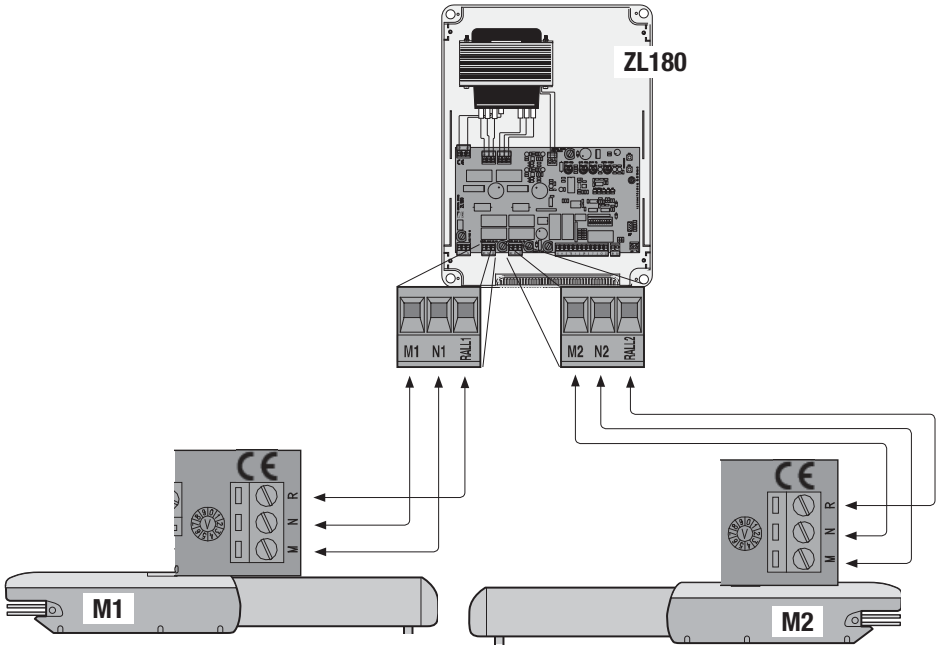
Application for outward opening



Tab. 4

	A *mm*	*B* *mm*	*E* *mm*
A3024N	130	130	720
A5024N	200	200	920

- Measure values A and B (Tab. 4)
- Secure the tail bracket to an extra bracket and apply to post.
- Open gate (max 90°), measure value E (Tab. 4) and secure head bracket to gate leaf.
- Perform electrical connections;
- Reposition and adjust openin stop microswitch.



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7 Maintenance

Periodic maintenance

☞ Before doing any maintenance, cut off the power supply, to prevent any hazardous situations caused by accidentally activating the operator.

Periodic maintenance log kept by users (every six months)

Date	Notes	Signature

Extraordinary maintenance

⚠ The following table is for logging any extraordinary maintenance jobs, repairs and improvements performed by specialized contractors.
🕮 Any extraordinary maintenance jobs must be done only by specialized technicians.

Extraordinary maintenance log

Installer's stamp	Name of operator
	Job performed on (date)
	Technician's signature
	Requester's signature
Job performed _____	

Installer's stamp	Name of operator
	Job performed on (date)
	Technician's signature
	Requester's signature
Job performed _____	

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Trouble shooting

MALFUNCTIONS	POSSIBLE CAUSES	CHECK AND REMEDIES
The gate will not open nor close	• 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 keyswitch are stuck	• Check that the power is up • Lock gearmotor (Chapt. 5.6) • Replace batteries • Call assistance • Call assistance • Call assistance
The gate opens but will not close	• The photocells are engaged	• Check that photocells are clean and in good working order • Call assistance
The flashing light does not work	• The bulb is burnt	• Call assistance

Phasing out and disposal

CAME CANCELLI AUTOMATICI S.p.A. employs a UNI EN ISO 14001 certified and compliant environmental protection system at its plants, to ensure that environmental safeguarding.
We ask you to keep protecting the environment, as CAME deems it to be one of the fundamental points of its market operations strategies, by simply following these brief guidelines when disposing:

DISPOSING THE PACKING MATERIALS
The packing components (cardboard, plastic, etc.) are solid urban waste and may be disposed of without any particular difficulty, by simply separating them so that they can be recycled.
Before actions it is always advisable to check the pertinent legislation where installation will take place.
DO NOT DISPOSE OF IN NATURE!

DISPOSING OF THE PRODUCT
Our products are made using different types of materials. The majority of them (aluminium, plastic, iron, electric cables) can be considered to be solid urban waste. They may be recycled at authorised firms.
Other components (electrical circuit board, remote control batteries etc.) may contain hazardous waste.
They must, thus, be removed and turned in to licensed firms for their disposal.
Before acting always check the local laws on the matter.
DO NOT DISPOSE OF IN NATURE!

DECLARATION OF CONFORMITY

Declaration CE Came Cancelli Automatici S.p.A. declares that this device conforms to the essential, pertinent requirements provided by directives 2006/42/CE, 2004/108/CE.
An original copy of the declaration of conformity is available on request.

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