

AUTOMATION FOR SWING GATES

FAST SERIES



INSTALLATION MANUAL

F7024N

“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 Destination and conditions of use

2.1 Intended use



The F7024N operator is designed to power residential and condominium swing gates with gate leaves weighing up to 300 kg. Do not install or use unless as otherwise shown in this manual.

2.2 Conditions of use

Gate leaf width	1 m	1,5 m	2 m	2,3 m max
Gate leaf weight	300 kg max	250 kg	215 kg	200 kg
Opening	110° max			

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 standards: EN 12978, UNI EN 954-1, CEI EN 60335-1, UNI EN 12453.

4 Description

4.1 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.

External operator with articulated arm for swing gates.

Self-locking 24V D.C. gearmotor.

4.2 Technical features

Control board power supply: 230V a.c. 50/60Hz

Motor power supply: 24V d.c.

Max draw: 11A

Power: 140W

Max couple: 180Nm

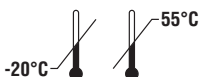
Opening time (90°): from 16 to 45s

Duty Cycle: Intensive use

Protection Rating: IP54

Weight: 28 kg

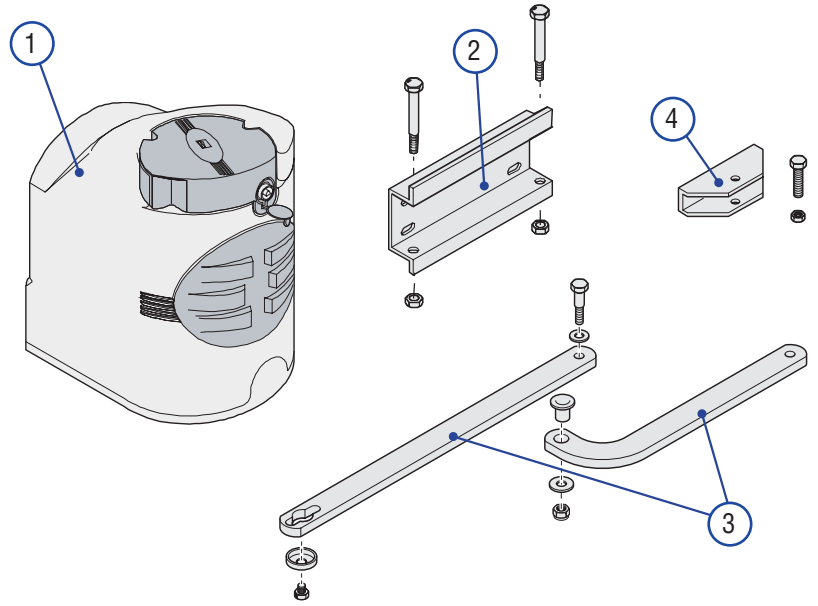
Insulation class:



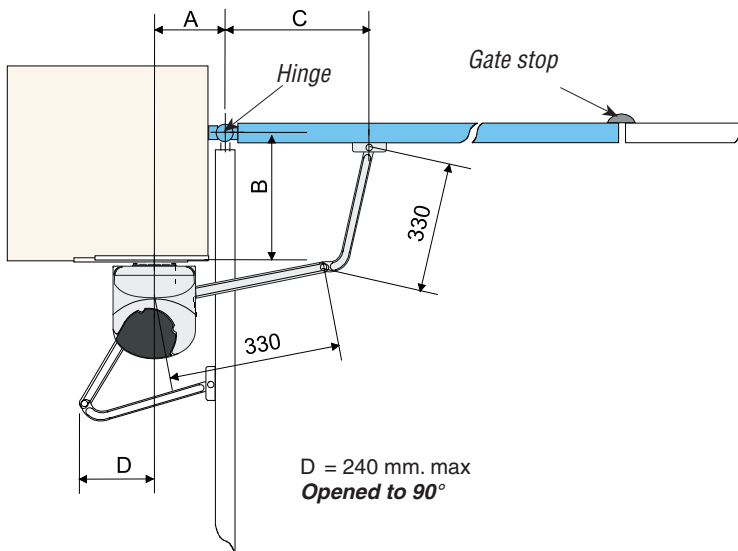
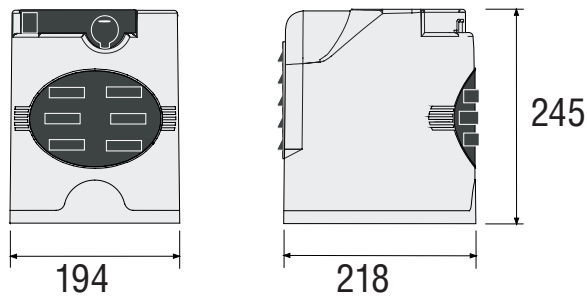
4.3 Description of parts

A1824

- 1) Operator
- 2) Pillar bracket
- 3) Articulated transmission arm
- 4) Gate bracket




4.4 Dimensions and basic measurements




Opening angle	A	B	C
90°	140÷205	0÷50	430
	140÷195	75÷100	430
	140÷185	125÷150	400
	140÷175	175÷200	400
110°	180÷210	0	430
	200÷205	50	430

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 a suitable omnipolar cut-off device with contacts more than 3 mm apart, and independent (sectioned off) power supply;
- Make sure you have suitable tubing and conduits for the electrical cables to pass through and be protected against mechanical damage;
-  Check that any connections inside the container (that provide continuity to the safety circuit) are fitted with additional insulation compared to other internal live parts;
- 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 that there are mechanical endstops for both opening and closing runs.

5.2 Cable list and minimum thickness

Connection	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
Motor power supply 24V		3 x 1 mm ²	3 x 1,5 mm ²	3 x 2,5 mm ²
Flashing lamp		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 connection	RG58	max. 10 m		

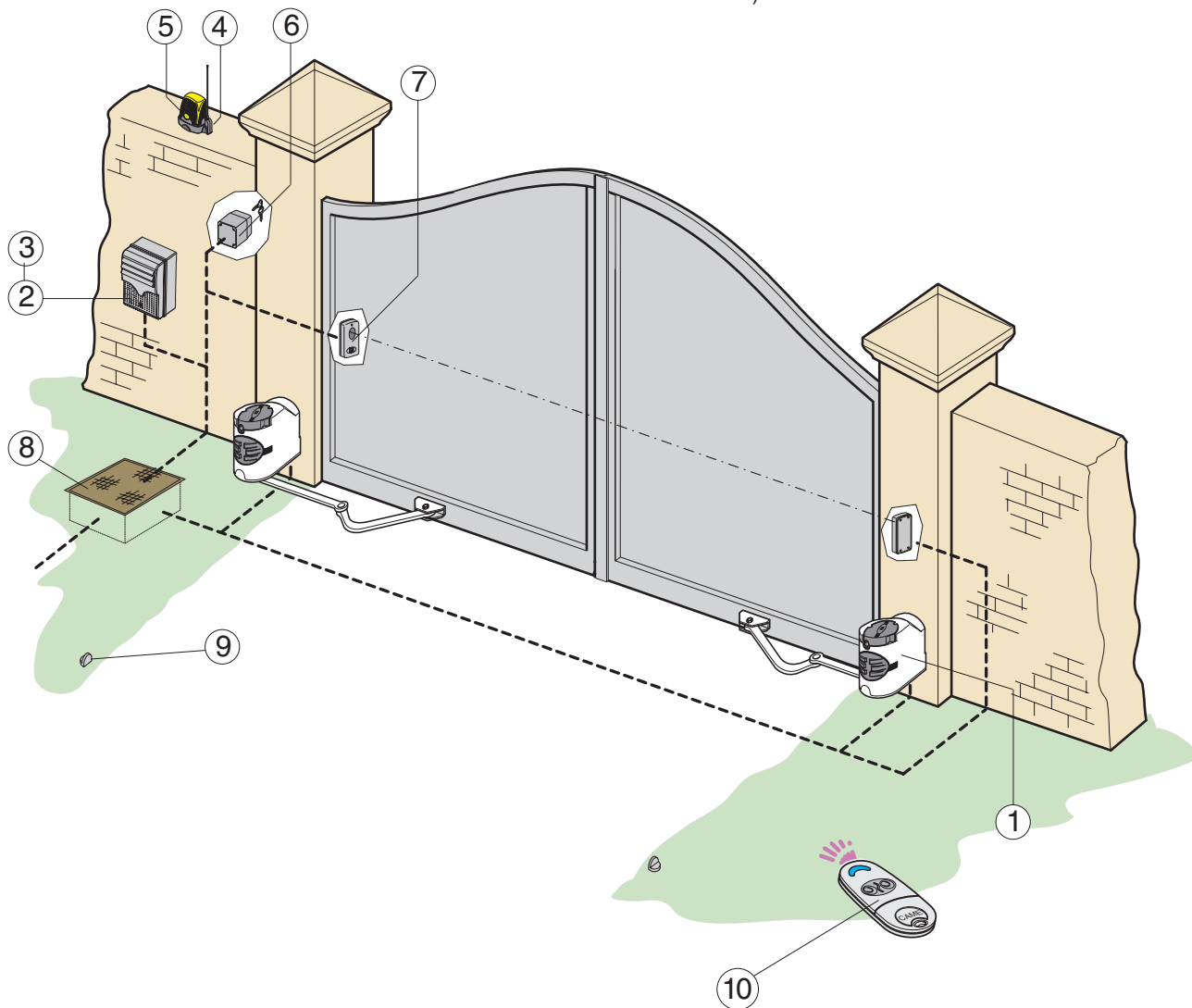
N.B.: If the cable length differs from that specified in the table, then you must determine the proper cable diameter in the basis of the actual power draw by the connected devices and depending on the standards specified in CEI EN 60204-1. For connections that require several, sequential loads, the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

The data and information shown in this manual may be changed by CAME cancelli automatici s.p.a. at any time without prior warning.

5.3 Standard installation

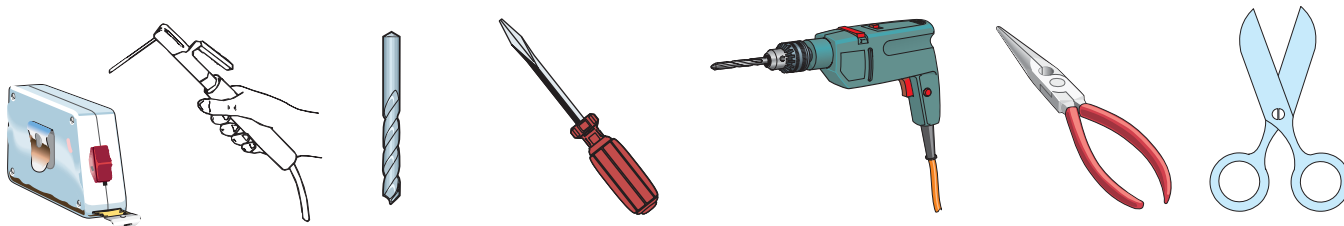
- 1) Automation
- 2) Control panel
- 3) Frequency card
- 4) Antenna
- 5) Flashing light
- 6) Selector switch
- 7) Photocells
- 8) Electric cable junction box
- 9) Mechanical stops
- 10) Transmitter



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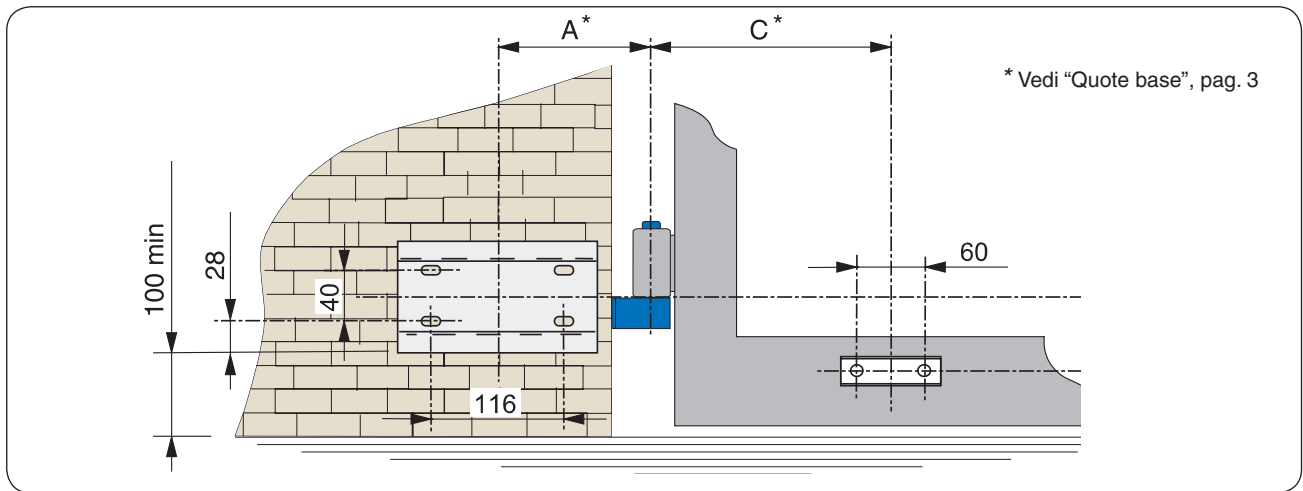
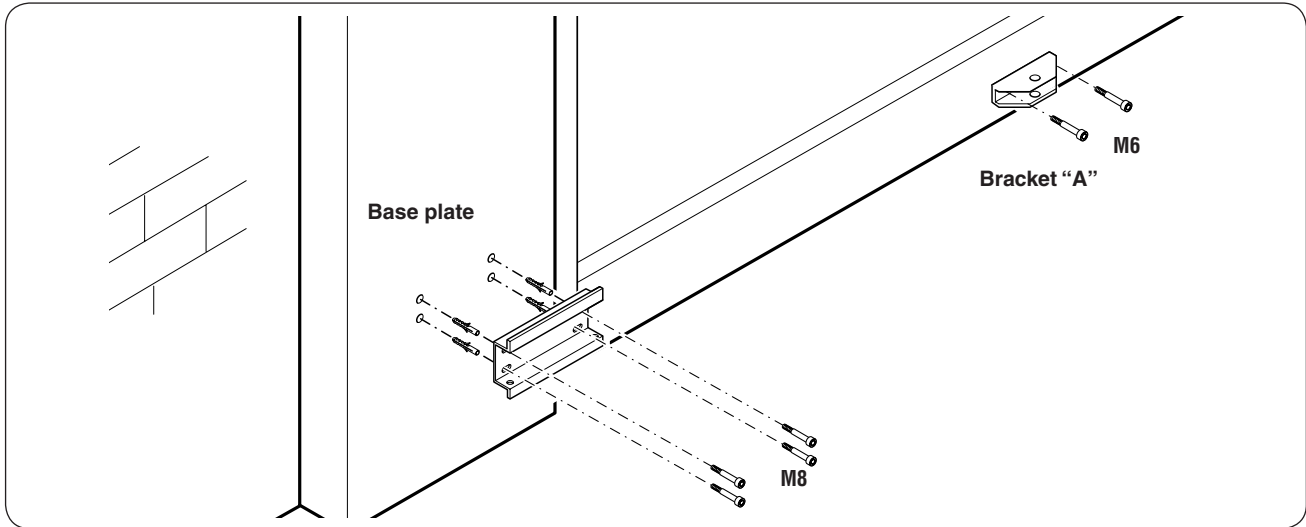
5.4 Tools and materials

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.



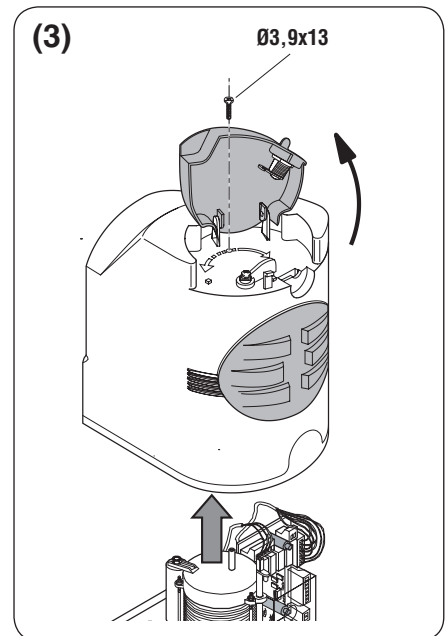
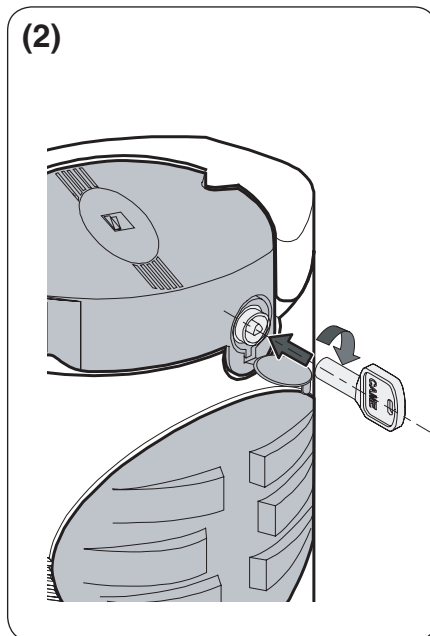
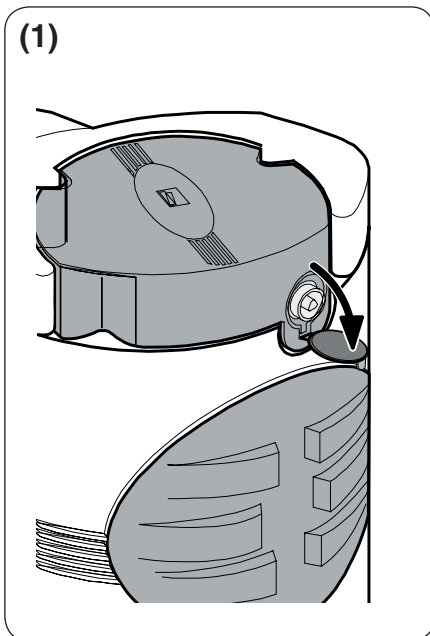
5.5 Applying the base plate and A bracket

- Secure the base plate to the pillar using M8 screws and $\varnothing 14$ mould inserts making sure the minimum distance of 100 mm is from the ground is met.
- Secure the A bracket (using M6 screws or by welding) to the gate leaf making sure the C 68mm distance measurements and are met.



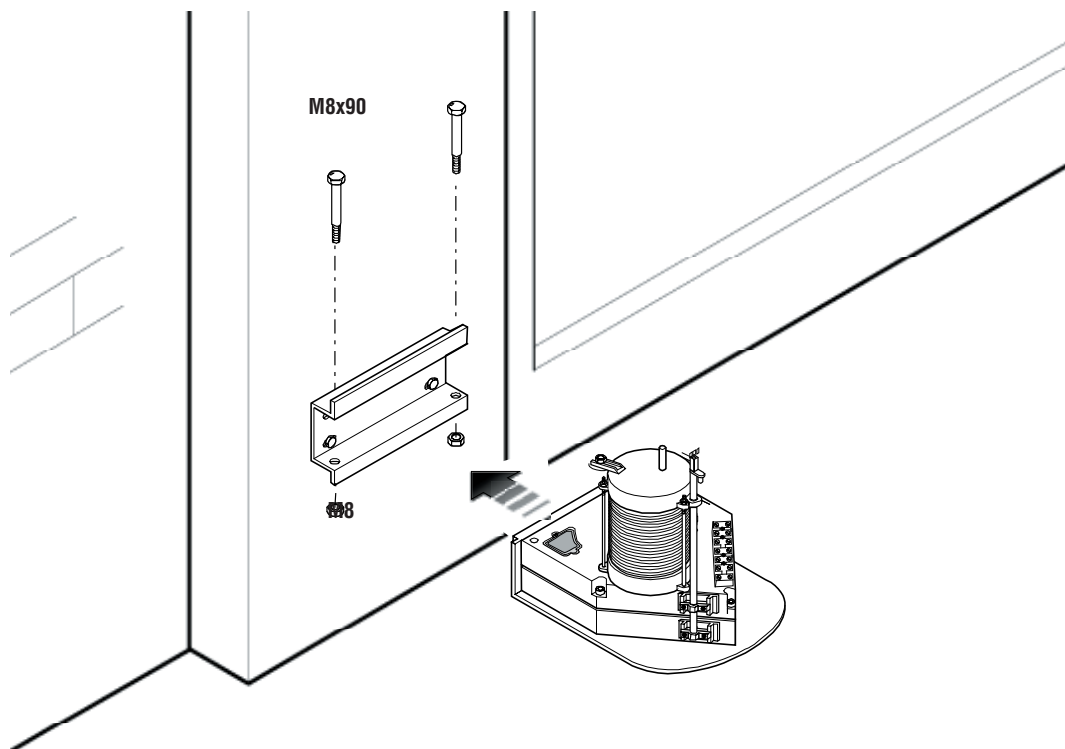
5.6 Installing the gearmotor

- Open the lock cover (1).
- Insert the key, push it down and turn it clockwise (2).
- Lift the cover, loosen the $\varnothing 3,9 \times 13$ screw and remove the cover from the gearmotor assembly (3).



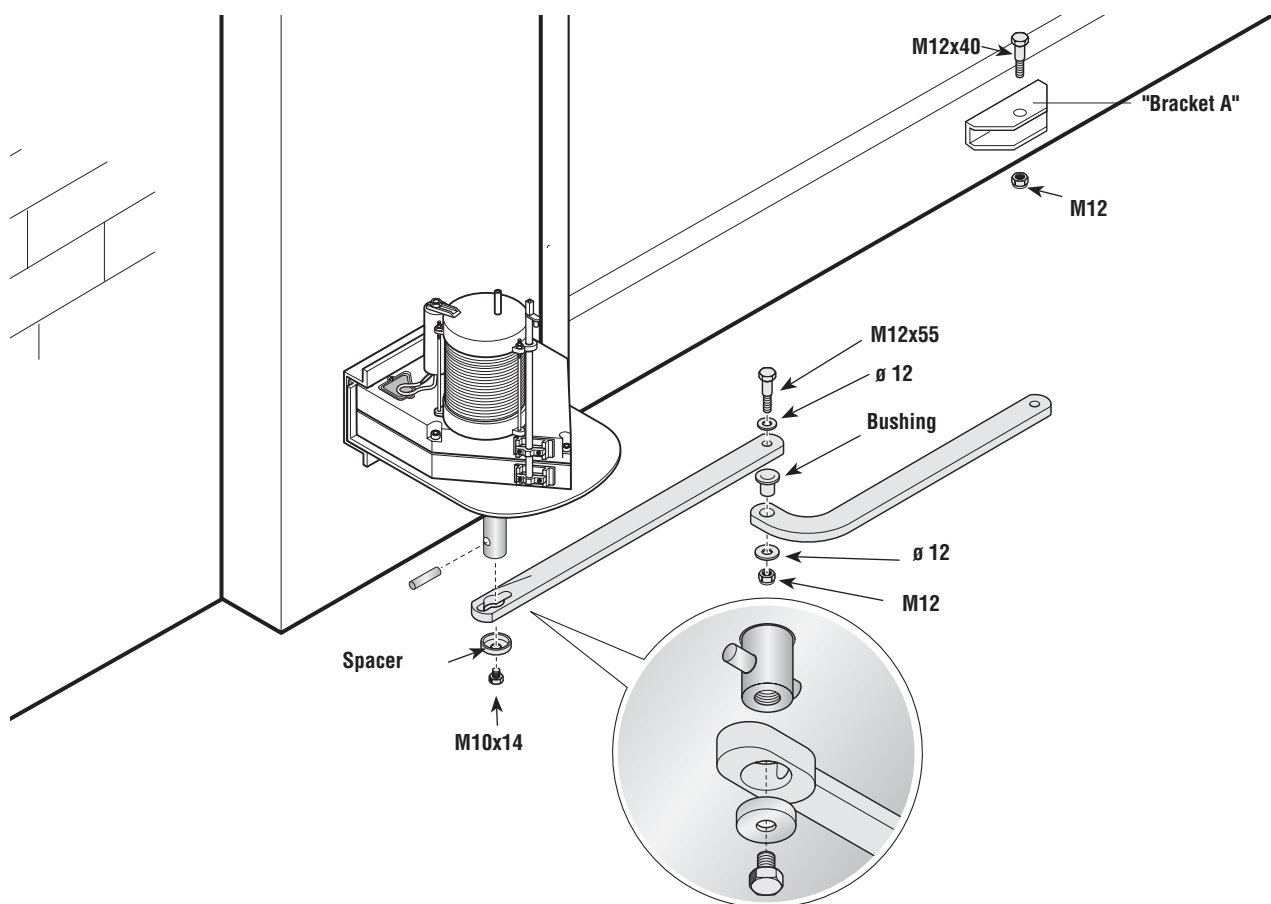
Insert the gearmotor into the base plate's 4 holes and secure it using the two supplied M8x90 screws and relative M8 nuts.

(4)



5.7 Applying the articulated arm

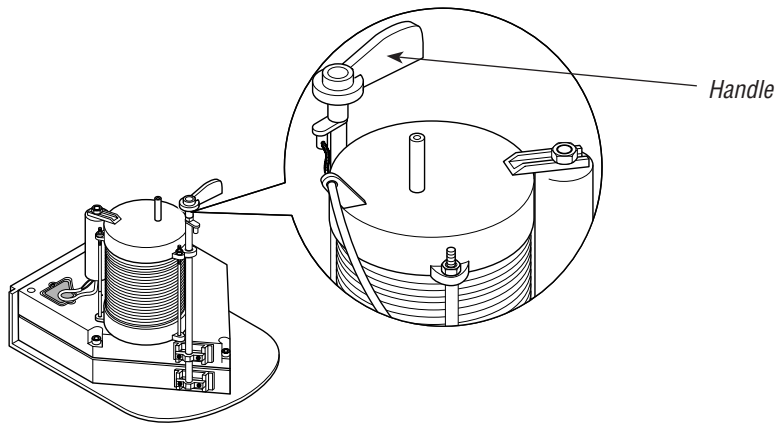
- Insert and secure the straight arm into the gearmotor shaft including the pin with screw and relative spacer. Lubricate the bushing and insert the straight arm, joining it to the curved arm using the screw, washers and nut. Release the gearmotor and secure the curved arm to bracket 'A' using the screw and relative nut, making sure the arm runs freely. For the right hand application see fig. 2.



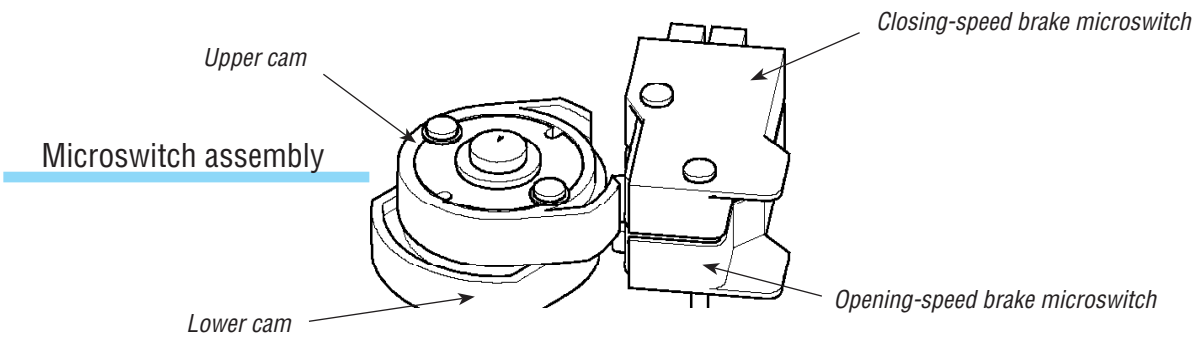
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5.8 Gearmotor release

Before making any adjustments to the microswitches, you must release the gearmotor by turning the opposite handle.

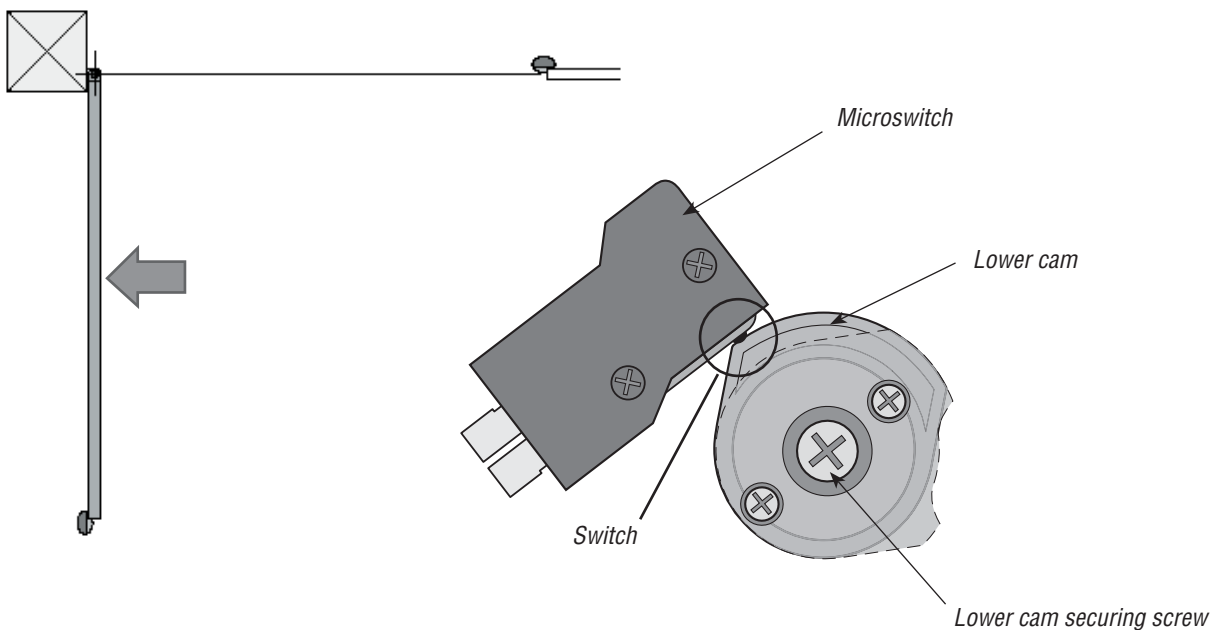


5.9 Adjusting microswitches



5.9.1 Adjusting the opening stop

- 1) Release the gearmotor and manually lead the gate to its fullest opening position (max. 110°).
- 2) Turn the lower cam until the switch is activated.
- 3) Tighten the central screw.

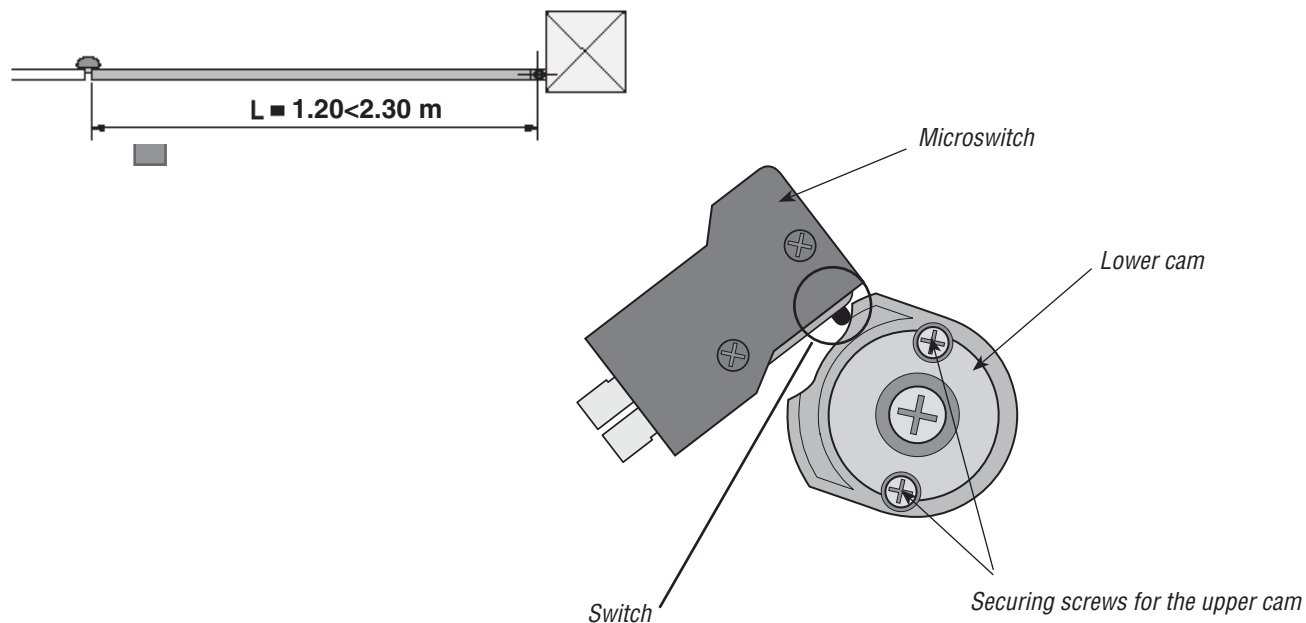


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5.9.2 Adjusting the closing-speed brake

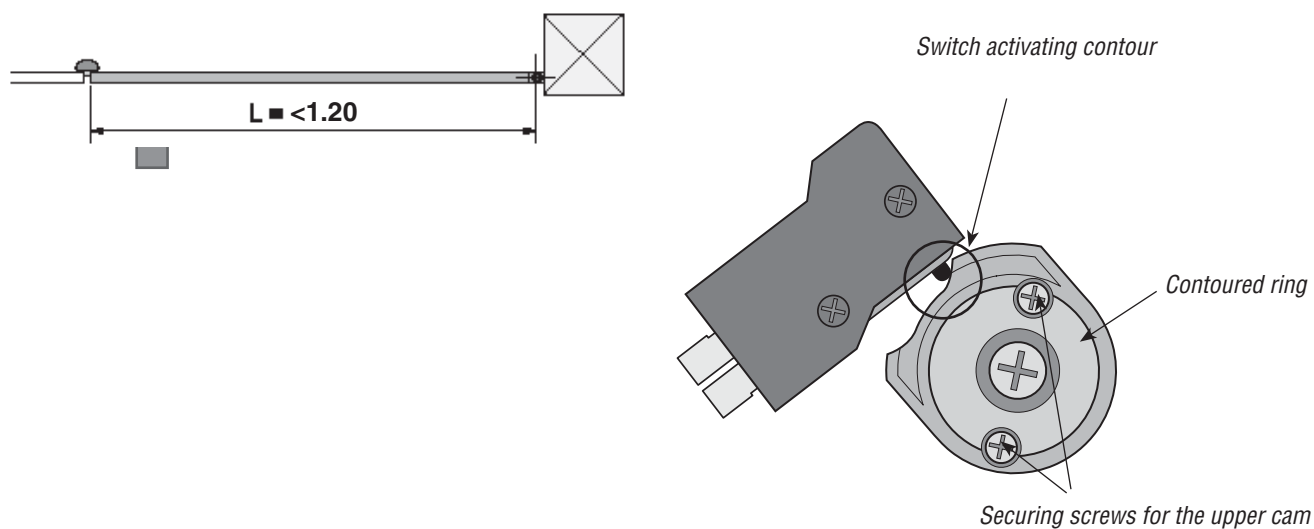
Once the opening endstop is adjusted, then you can adjust the closing-speed brake microswitch.
Always with the gearmotor released ...

- 1) Manually lead the gate leaf to the fully closed position.
- 2) Turn the contoured cam until the micro switch is released as shown in the diagram.
- 3) Tighten the screws.



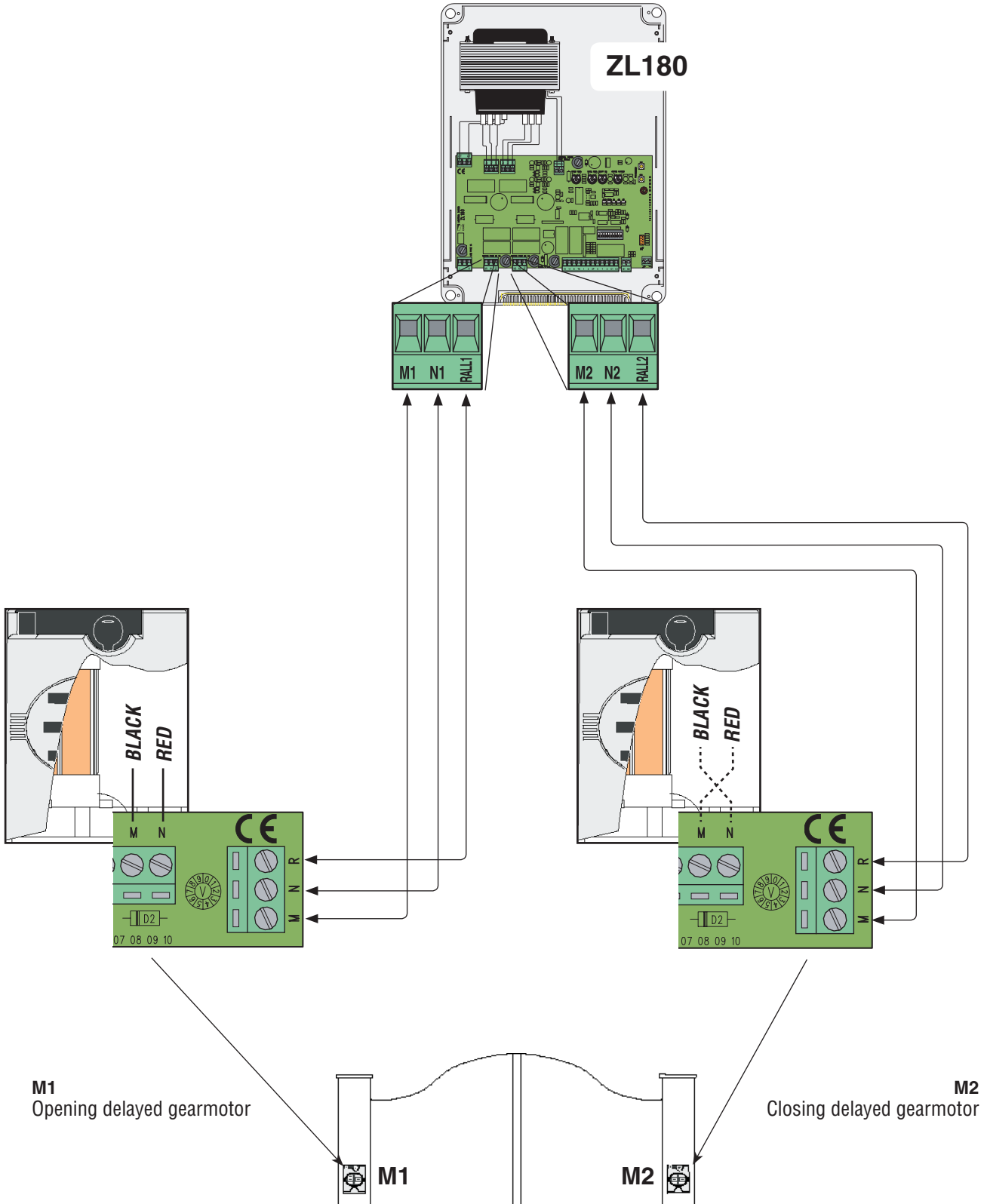
IMPORTANT! The operator is fitted with a standard speed brake microswitch suitable for gate leaf widths of 1.20m to 2.30 m.
CONTRARILY, IF THE GATE LEAF MEASURES LESS THAN 1.20 m, before proceeding as described above, you must...

- A- Remove the 2 adjustment screws;
- B- Remove, turn upside down and replace the shaped ring onto the cam (the contour sizes for activating the switch vary);
- C- Retighten the securing screws.



5.10 Electrical connections to the control panel

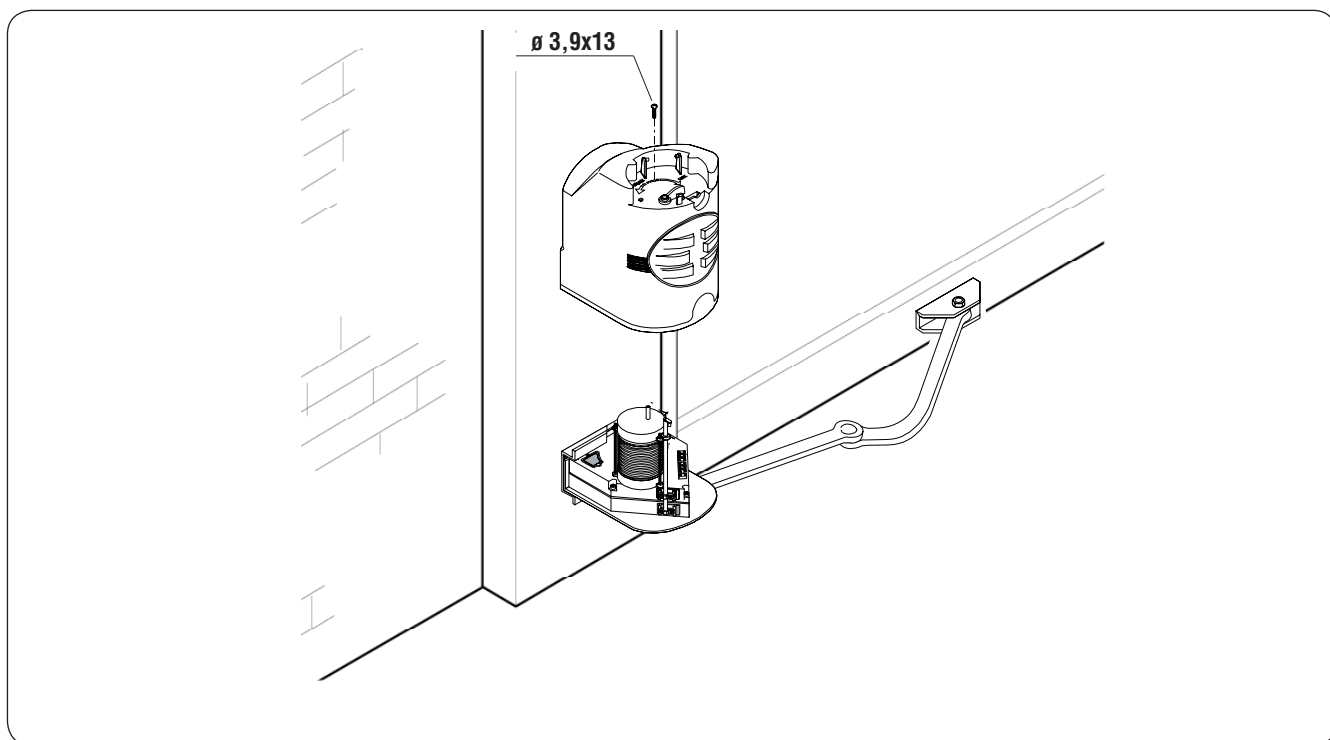
Install the control panel and carry out the electrical connections as shown in the diagram.



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5.11 Cover mounting

Once finished with mounting, electrical connections and adjustments, replace the cover and secure it using the $\varnothing 3,9 \times 13$ screw. Insert the release handle into the 'LOCK' position and secure it.



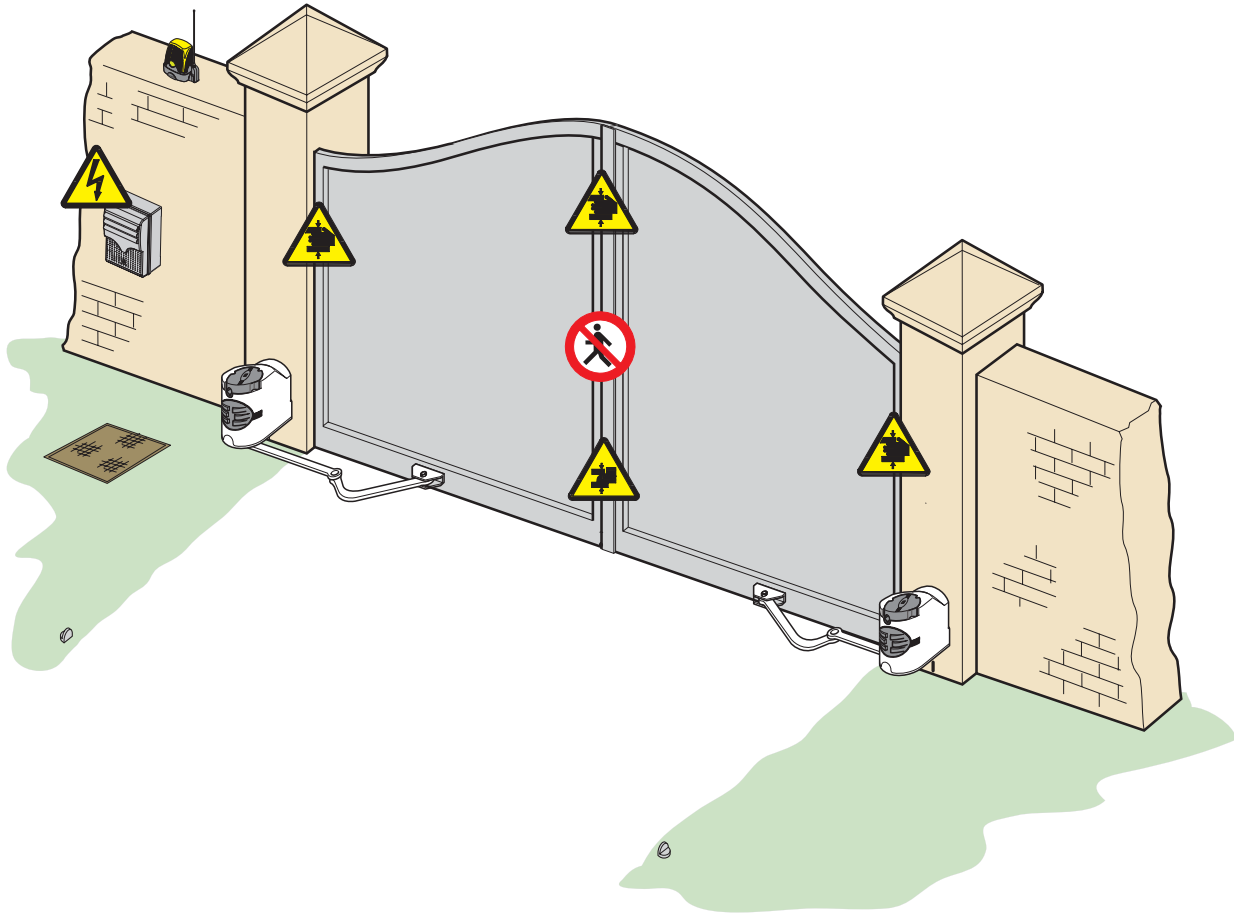
6 Safety instructions

Important safety instructions

This product must only be employed for its originally intended use. 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.

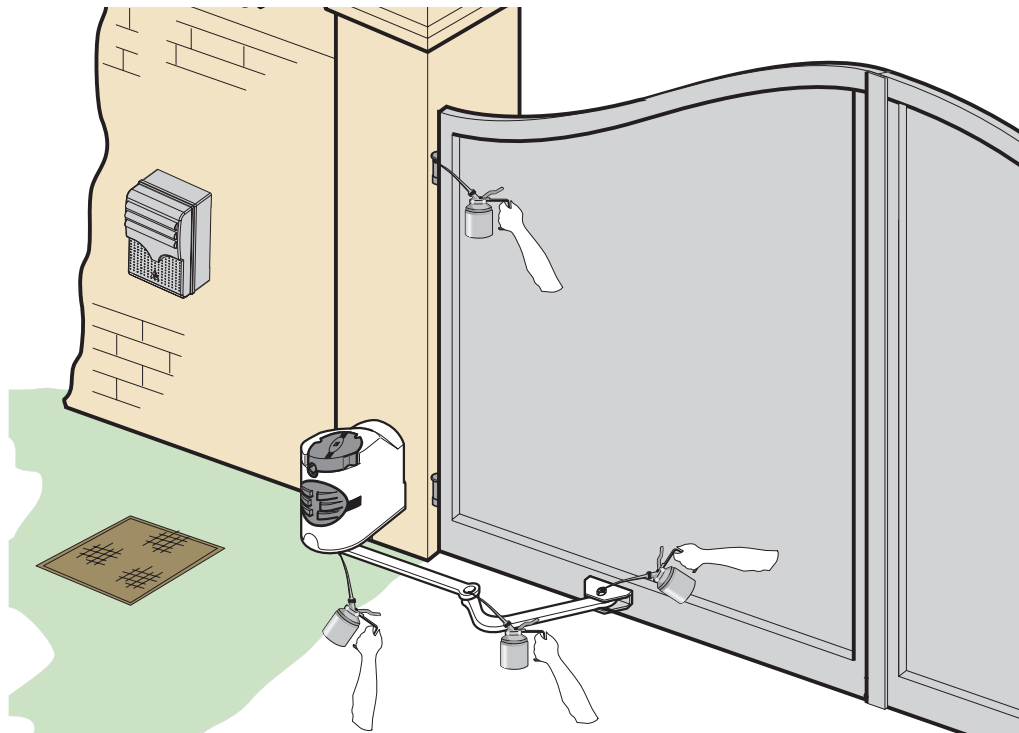
To check the efficiency of the safety devices, move an object in front of the photocells when gate is closing. If the operator inverts the motion or stops, the photocells are working properly.

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.



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	THE FLASHER DOES NOT WORK	POSSIBLE CAUSES
Check and remedies	<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 key selector 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 will not open nor 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 gate opens but will not close	<ul style="list-style-type: none">• The bulb is burnt	<ul style="list-style-type: none">• Call assistance

7.3 Maintenance

Periodic maintenance log kept by the user (every 6 months)

Date	Notes	Signature

7.4 Extraordinary maintenance

 The following table is for logging any extraordinary maintenance, repairs or upgrades performed by licensed, specialised firms.

N.B.: only entrust licensed, specialised firms to perform any extraordinary maintenance.


Extraordinary maintenance log

Installer's stamp	Operator name
	Date of job
	Technician's signature
	Requester's signature
Job performed _____ _____	
Installer's stamp	Operator name
	Date of job
	Technician's signature
	Requester's signature
Job performed _____ _____	
Installer's stamp	Operator name
	Date of job
	Technician's signature
	Requester's signature
Job performed _____ _____	

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Installer's stamp	Operator name
	Date of job
	Technician's signature
	Requester's signature
Job performed _____ _____	
Installer's stamp	Operator name
	Date of job
	Technician's signature
	Requester's signature
Job performed _____ _____	

8 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!

9 Conformity declaration



MANUFACTURER'S DECLARATION OF CONFORMITY

Pursuant to annex II B of the Machinery Directive 98/37/EC



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--- STANDARDS ---

EN 13241-1

EN 12453

EN 12445

EN 12635

EN 12978

EN 60335-1

EN 61000-6-2

EN 61000-6-3

Declares under its own responsibility that the equipments for automatic garage doors and gates listed below:

F7024N

... comply with the National Law related to the following European Directives and to the applicable parts of the following Standards.

--- DIRECTIVES ---

98/37/CE - 98/79/CE

98/336/CEE - 92/31/CEE

73/23/CEE - 93/68/CE

89/106/CEE

MACHINERY DIRECTIVE

ELECTROMAGNETIC COMPATIBILITY DIRECTIVE

LOW VOLTAGE DIRECTIVE

CONSTRUCTION PRODUCTS DIRECTIVE

MANAGING DIRECTOR

Mr. Andrea Menuzzo

Reference code to request a true copy of the original: DDF B EN A001D

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