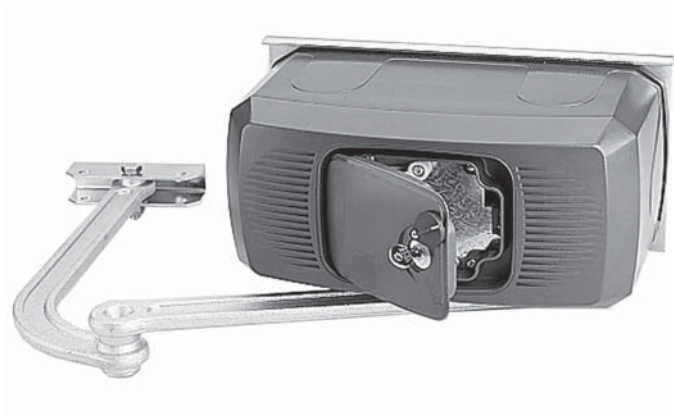


Operator for swing gates

FA01175-EN



F1000-F1100

INSTALLATION MANUAL

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 FERNI 230V operator is specifically engineered to automate residential and condominium swing gates.

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.

Restrictions

Length of gate wings: up to 4 metres. Max. angle of gate wing when open: 90°.

Gate leaf width m	Gate leaf weight kg
2.00	800
2.50	600
3.00	500
3.50	450
4.00	400

We suggest you always fit an electrolock onto swing gates for a more reliable closure.

Fitting electrolocks onto reversible operators makes for anti-intrusion security.

You must install electrolocks onto irreversible operators with gate leaves exceeding 2.5 m.

Description

Gearmotor

This product is engineered and manufactured by CAME 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

Version F1000

Irreversible gearmotor

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

Max draw: 1,3A

Power: 150W

Gear ratio: 1/709

Opening time (90°): 18 s

Max. torque: 320 Nm

Duty Cycle: 30%

Protection Rating: IP54

Weight: 14 kg

Operating temperature

Version F1100

Reversible gearmotor

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

Max draw: 1A

Power: 110W

Gear ratio: 1/678

Opening time (90°): 18 s

Max. torque: 380 Nm

Duty Cycle: 50%

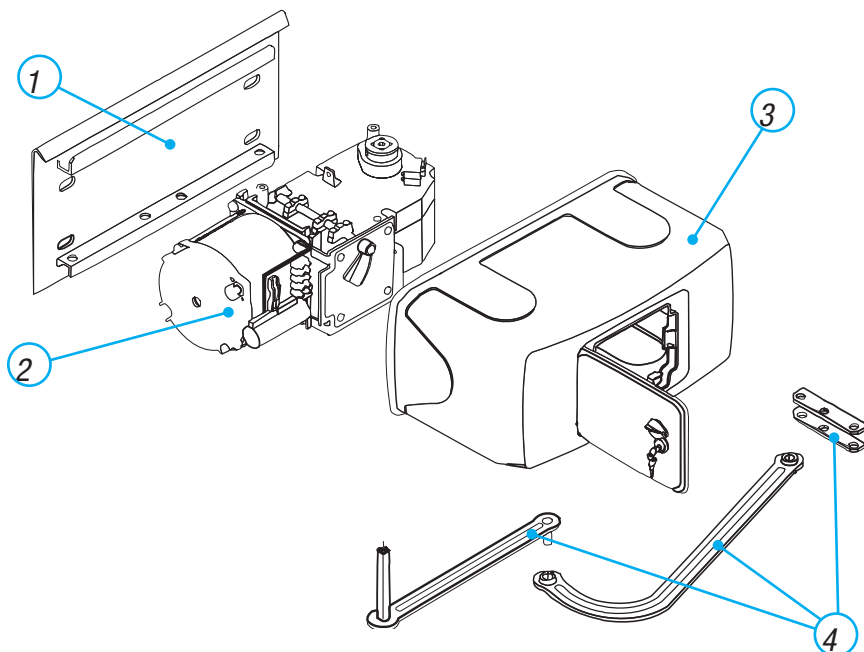
Protection Rating: IP54

Weight: 13 kg

Operating temperature

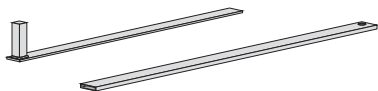
Description of parts

- 1) Base plate
- 2) Gearmotor assembly
- 3) Motor cover
- 4) Articulated transmission arm

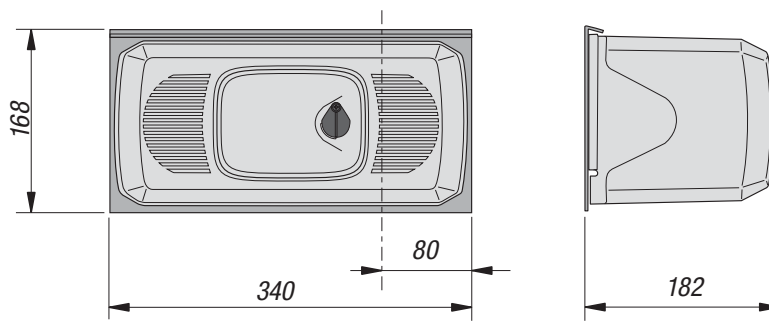


Optional accessory :

F1001 Straight telescopic arm (for single gate wings that are 0,5 to 2 m max long).



Overall dimensions




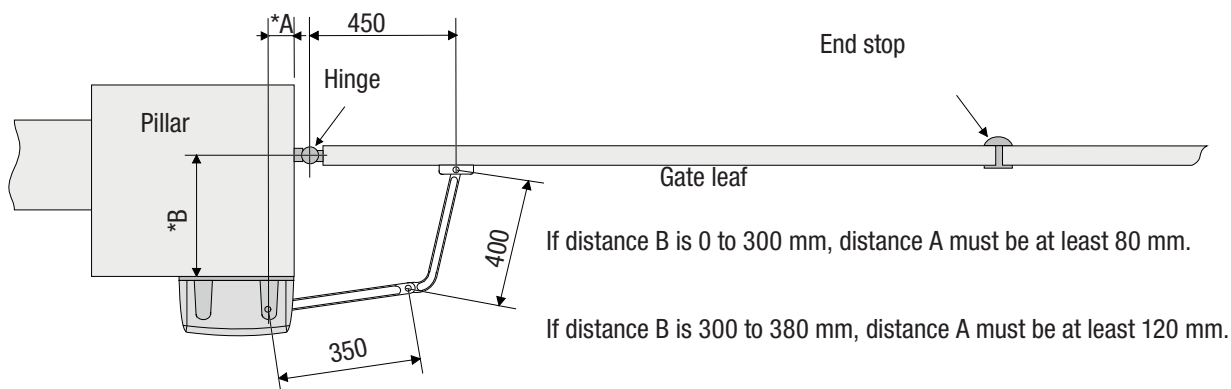
Installation

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

Preliminary checks

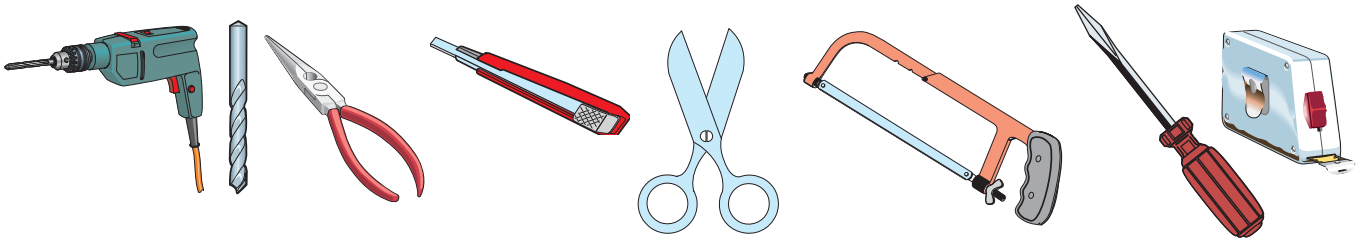
 Before installing, do the following:

- Make sure the structure of the gate is sturdy, the hinges work and that there is no friction between moving and non-moving parts;
- Make sure the path of the electrical cables complies with the command and safety instructions;
- That there is a (soundly secured to the ground) mechanical stop to prevent the gate leaf/gearmotor from over extending
-  You may perform internal back up circuit connections, provided you use additional insulation when compared to the other internal live parts;
- Make sure you have suitable tubing and conduits for the electrical cables to pass through and be protected against mechanical damage.



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.



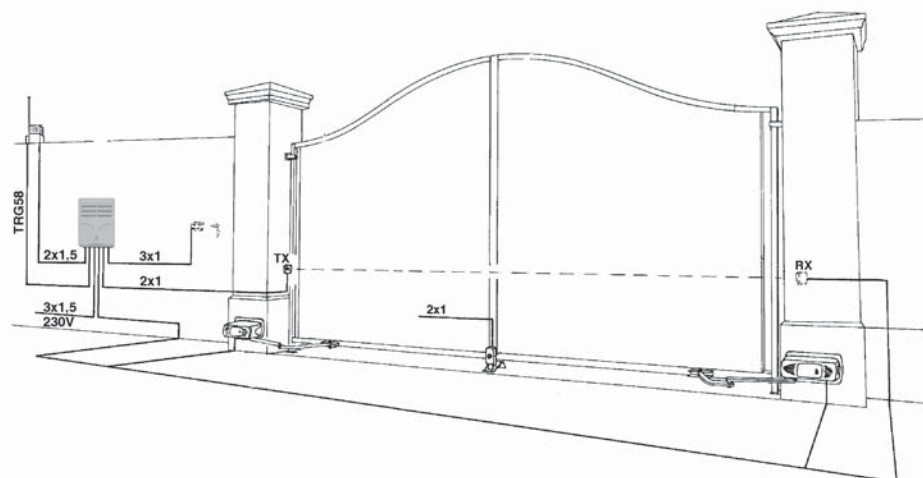
Cable list and minimum thickness

Connection	Type of cable	Cable length 1 < 10 m	Cable length 10 < 20 m	Cable length 20 < 30 m
230 V control panel power supply	FROR CEI 20-22 CEI EN 50267-2-1	3G x 1.5 mm ²	3G x 1.5 mm ²	3G x 2.5 mm ²
230 V motor power supply		3G x 1.5 mm ²	3G x 1.5 mm ²	3G x 2.5 mm ²
Flashing light		2 x 1.5 mm ²	2 x 1.5 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 1.5 mm ²	4 x 1.5 mm ²	4 x 1.5 mm ²
Accessories power supply		2 x 0.5 mm ²	2 x 0.5 mm ²	2 x 1 mm ²
Command 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 drawn 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.

Standard installation

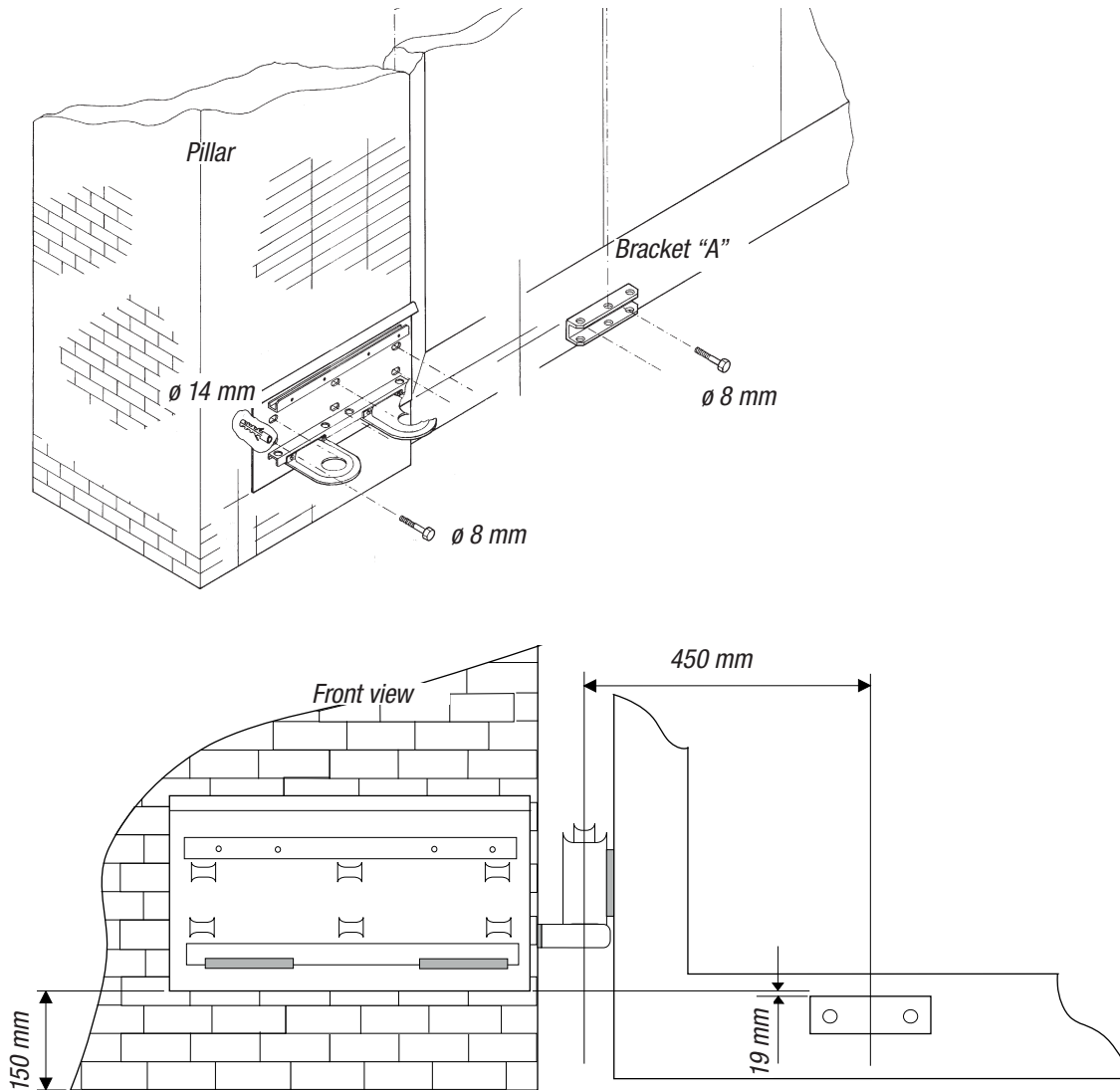


- 1 - Operator
- 2 - Control panel
- 3 - Radio receiver
- 4 - Antenna

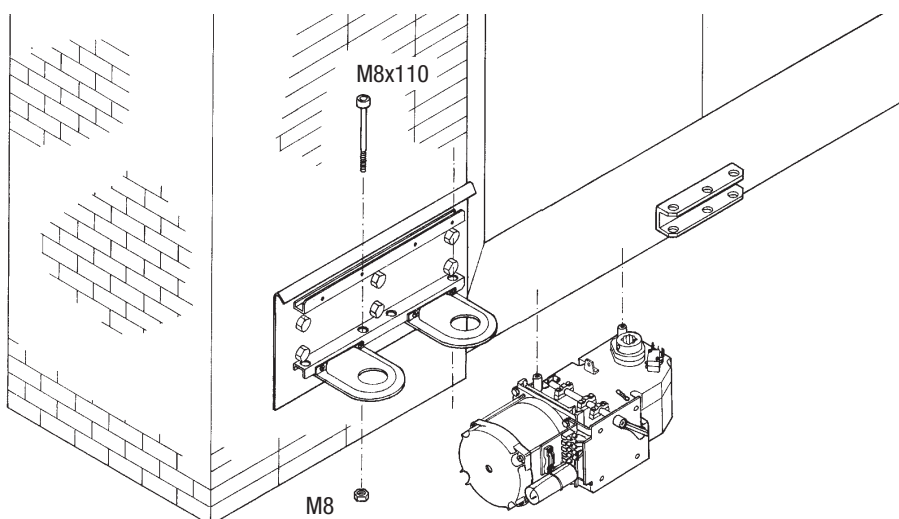
- 5 - Flashing light
- 6 - Selector switch
- 7 - Photocells
- 8 - Electric lock

Mounting

- Secure the base plate to the pillar using $\varnothing 8$ screws and $\varnothing 14$ moulded inserts making sure the minimum distance of 150mm from the ground is met.
- Secure the A bracket (using $\varnothing 8$ screws or by welding) to the gate leaf making sure the 450mm and 19mm distances measurements and are met.

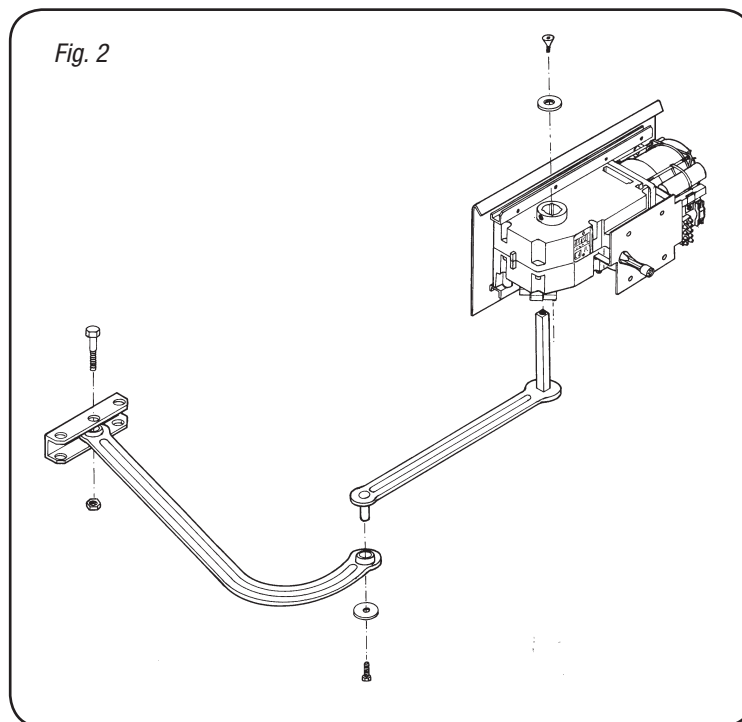
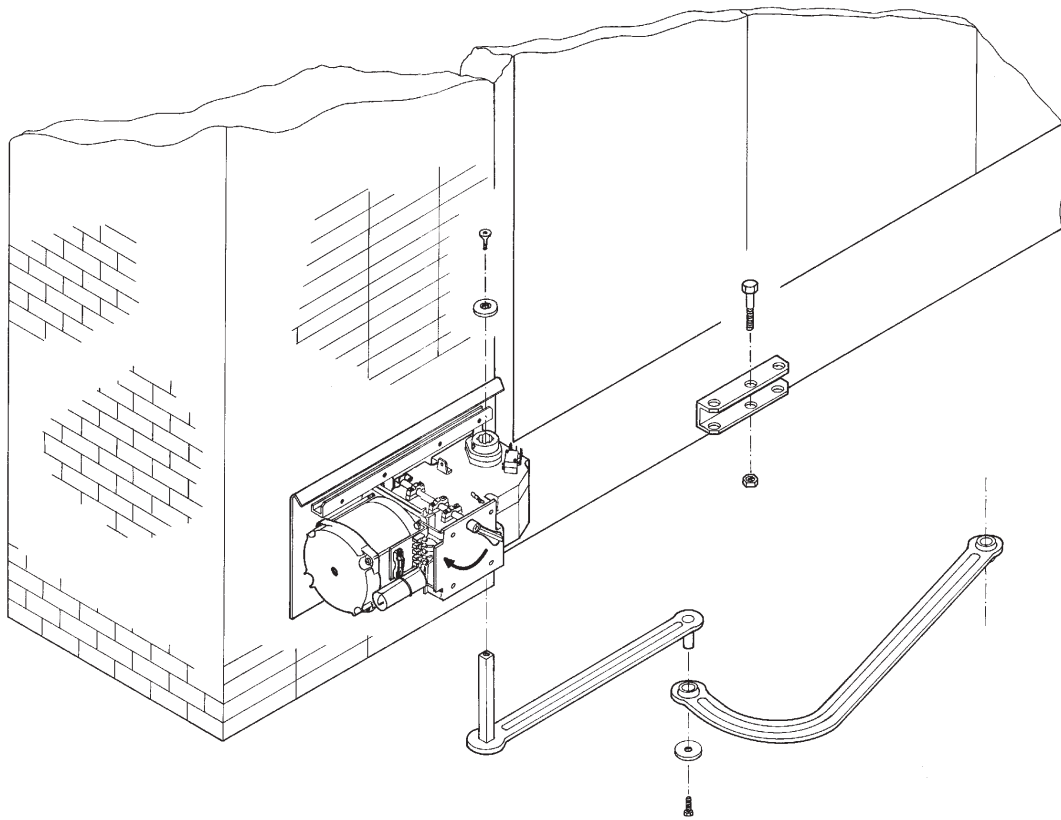


- Insert the gearmotor into the base plate and secure it using the two supplied M8x110 screws and M8 nuts.



- Insert the straight semi-arm into the motor shaft. Apply the flared washer, the M6x20 screw and lock the semi-arm using the two grub screws.

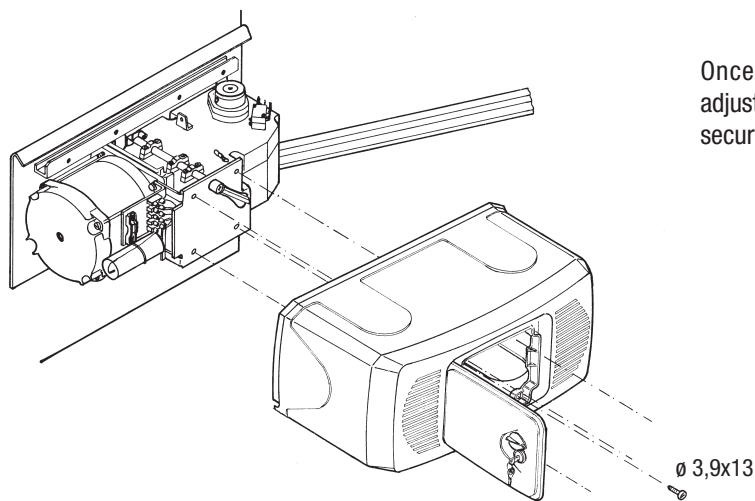
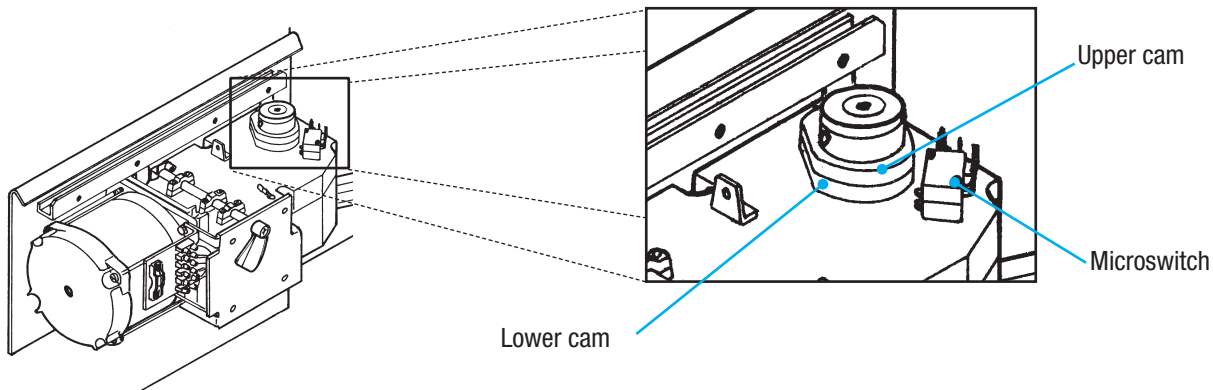
Join and secure the two arms using the washer and M8x16 screw. Release the motor (see p. 7) and secure the curved semi-arm to the "A" bracket using the M12X50 screw and the M12 nut making sure it runs freely. For right-hand application see fig. 2.



Adjusting the closing and opening-speed brake microswitches

During opening: release and move the door to the open position desired. Turn the upper cam until the microswitch is activated and screw the screw in the related cam.

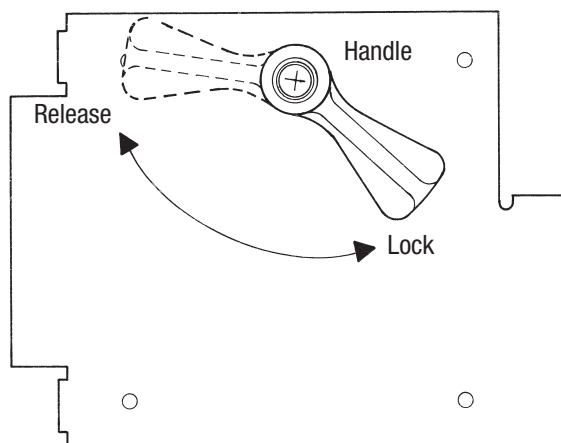
During closure (F 1000 only): release the door and move it to the desired closing position. Turn the lower cam until the microswitch is activated and screw the screw in the related cam.



Once finished with mounting, electrical connections and adjustments, lock the motor back into place and replace the cover securing it with the 4 issued screws.

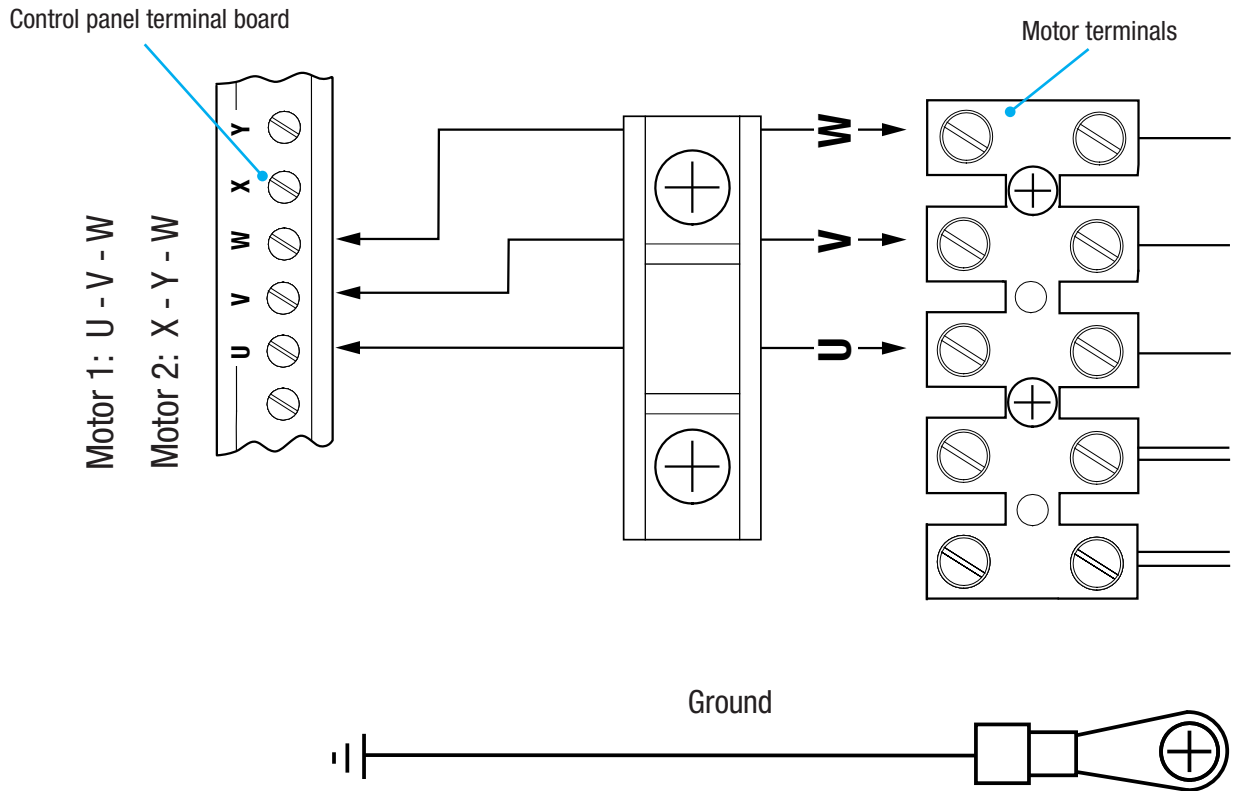
Manually releasing the motor

 Carry out when motor is not in operation



In the event of power outages or breakdowns, release the gearmotor using the apposite handle.

Connecting to the ZA3N/ZF1N/ZM3E control panel



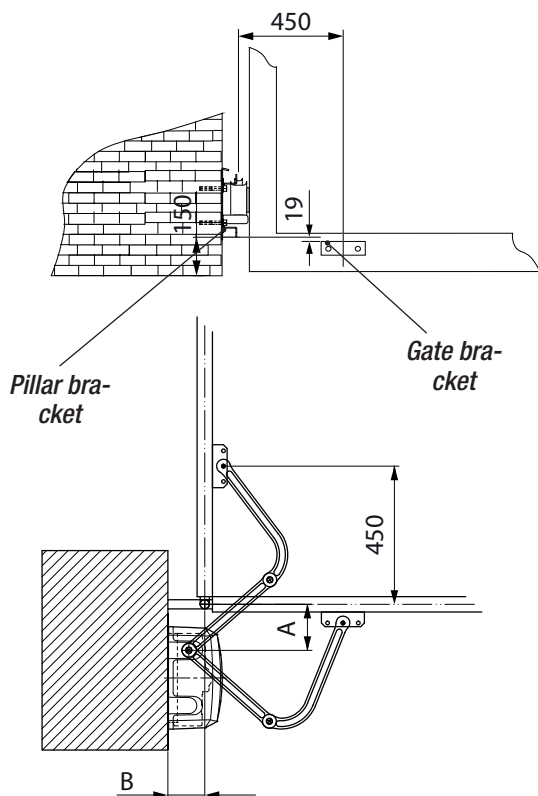
☞ If only using one motor, such as with one-leaf gates, connect it to W X Y (M2) regardless of which side it is installed on.

INSTALLING AND CONNECTIONS FOR OUTWARD-OPENINGS

Below are the only procedures that vary compared to standard installations:

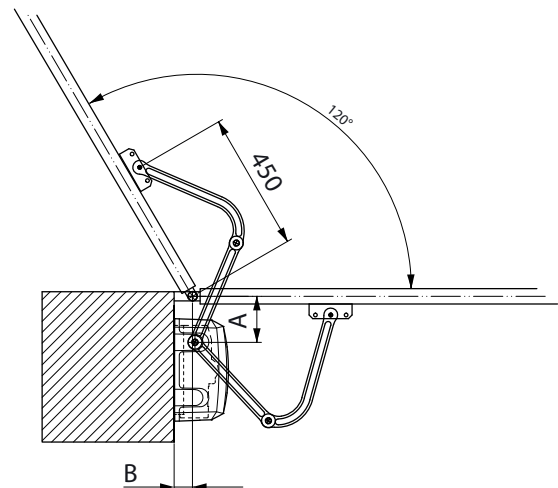
Securing the brackets

N.B. the drawings refer to installation of the left-hand gearmotor. The installation of the right-hand gearmotor is symmetrical. Determine the fixing point for the gate bracket and calculate the fixing point of the pillar bracket, respecting the values shown in the drawings and table.



Application size

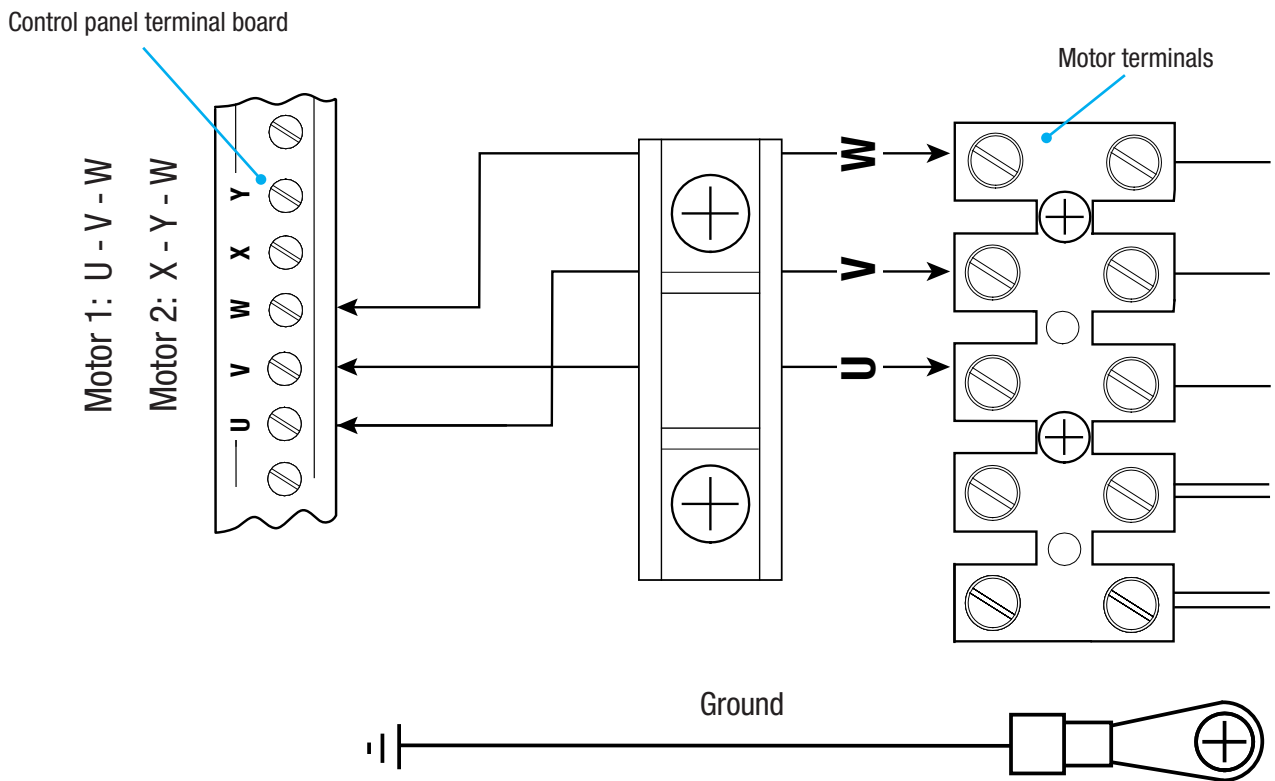
Leaf opening	A	B
90°	150	0 ÷ 120
120°	150	0 ÷ 60



Electrical connections

For electrical connection operations, use the chamber and the junction boxes.

For further information regarding functions and adjustment, refer to the technical documentation for the control panel.



☞ If only using one motor, such as with one-leaf gates, connect it to W X Y (M2) regardless of which side it is installed on.

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 _____ _____ _____	

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 _____ _____ _____	

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 keyswitch are stuck 	<ul style="list-style-type: none"> • Check that the power is up • Lock gearmotor (Chapt. 5.8) • 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

Demolition and disposal

 CAME 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!

Reference regulations

The product complies to the reference regulations in effect.

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