



CAME Automation for Swing Gates Installation Guide

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CAME



AUTOMATION FOR SWING GATES



INSTALLATION MANUAL

F500 / F510



WARNING!

important safety instructions for people:



READ CAREFULLY!

Premise

- Employ this product only for the use for which it was expressly made. Any other use is dangerous. CAME S.p.A. is not liable for any damage caused by improper, wrongful, and unreasonable use
- Keep these warnings together with the installation and operation manuals that come with the operator.

Before installing

(checking what's there: if your evaluation is negative, do not proceed before having complied with all safety requirements)

- Check that the automated parts are in good mechanical order, that the operator is level and aligned, and that it opens and closes properly. Make sure you have suitable mechanical stops
- If the operator is to be installed at a height of over 2.5 m from the ground or other access levels, make sure you have any necessary protections and/or warnings in place

- If any pedestrian openings are fitted into the operator, there must also be a system to block their opening while they are moving
- Make sure that the opening automated door or gate cannot entrap people against the fixed parts of the operator
- Do not install the operator upside down or onto elements that could yield and bend. If necessary, add suitable reinforcements to the anchoring points
- Do not install door or gate leaves on tilted surfaces
- Make sure any sprinkler systems cannot wet the operator from the ground up
- Make sure the temperature range shown on the product literature is suitable to the climate where it will be installed
- Follow all instructions as improper installation may result in serious bodily injury
- It is important to follow these instructions for the safety of people. Keep these instructions.

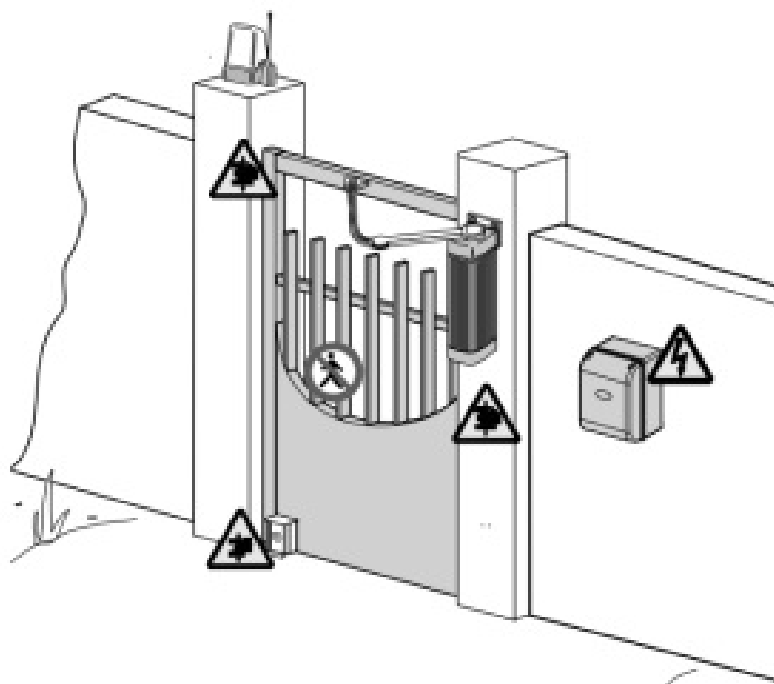
Installing

- Suitably section off and demarcate the entire installation site to prevent unauthorized persons from entering the area, especially minors and children
- Be careful when handling operators that weigh over 20 kg. If need be, use proper safety hoisting equipment
- All opening commands (that is, buttons, key switches, magnetic readers, and so on) must be installed at least 1.85 m from the perimeter of the gate's working area, or where they cannot be reached from outside the gate. Also, any direct commands buttons, touch panels, and so on) must be installed at least 1.5 m from the ground and must not be reachable by unauthorized persons
- All maintained action commands must be fitted in places from which the moving gate leaves and transit and driving areas are visible
- Apply, if missing, a permanent sign showing the position of the release device
- Before delivering to the users, make sure the system is EN 12453 standard compliant (regarding impact forces), and also make sure the system has been properly adjusted and that any safety, protection, and manual release devices are working properly
- Apply Warning Signs (such as the gate's plate) where necessary and in a visible place Special user instructions and recommendations
- Keep gate operation areas clean and free of any obstructions. Make sure that the photocells are free of any overgrown vegetation and that the operator's area of operation is free of any obstructions
- Do not allow children to play with fixed commands, or to loiter in the gate's maneuvering area. Keep any remote control transmitters or any other command device away from children, to prevent the operator from being accidentally activated.
- The apparatus may be used by children of eight years and above and by physically, mentally, and sensorially challenged people, or even ones without any experience, provided he happens under close supervision or once they have been properly instructed to use the apparatus safely and about the potential hazards involved. Children must not play with the apparatus. Cleaning and maintenance by users must not be done by children unless properly supervised
- Frequently check the system for any malfunctions or signs of wear and tear or damage to the moving structures, to the component parts, all anchoring points, including cables, and any accessible connections. Keep any hinges, moving joints and slide rails properly lubricated

- Perform functional checks on the photocells and sensitive safety edges, every six months. To check whether the photocells are working, wave an object in front of them while the gate is closing; if the operator inverts its direction of travel or suddenly stops, the photocells are working properly. This is the only maintenance operation to do with the power on. Constantly clean the photocells' glass covers using a slightly water-moistened cloth; do not use any solvents or other chemical products that may ruin the devices
- If repairs or modifications are required to the system, 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 and before any other operation, to prevent potentially hazardous situations. Read the instructions
- If the power supply cable is damaged, it must be replaced by the manufacturer or authorized technical assistance service, or in any case, by similarly qualified persons, to prevent any risk
- It is FORBIDDEN for users to perform any OPERATIONS THAT ARE NOT EXPRESSLY REQUIRED OF THEM AND WHICH ARE NOT LISTED in the manuals. For any repairs, modifications, and adjustments and for extraordinary maintenance, CALL TECHNICAL ASSISTANCE
- Log the job and check into the periodic maintenance log.

Additional special recommendations for everyone

- Keep away from hinges and mechanical moving parts
- Do not enter the operator's area of operation when it is moving
- Do not counter the operator's movement as this could result in dangerous situations
- Always pay special attention to any dangerous points, which have to be labeled with specific pictograms and/or black and yellow stripes
- While using a selector switch or a command in maintained actions, keep checking that there are no persons within the operating range of any moving parts until the command is released
- The gate may move at any time and without warning
- Always cut off the power supply before performing any maintenance or cleaning.





The danger of foot crushing



The danger of hand crushing



Danger! High voltage.



No transiting while maneuvering

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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

2.1 Intended use



The ATI F500 – F510 Gearmotor is specifically engineered to automate residential and condominium swing gates, even under intensive use.

2.2 Restrictions

Length of gate leaf (m)	0,8
Weight of gate leaf (kg)	150

We suggest you always fit an electro lock onto swing gates for more reliable closure.

Reference Standards

The company: CAME S.p.A. is ISO 9001 quality certified; it has also obtained the ISO 14001 environmental safeguarding certification.

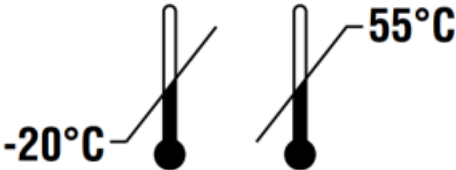
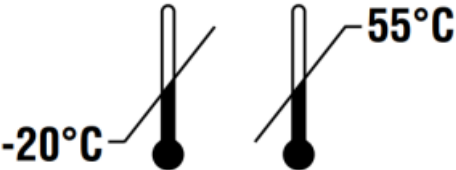
Came engineers and manufactures all of its products in Italy.
This product complies with the following standards: see declaration of compliance.

Description

4.1 Gearmotor

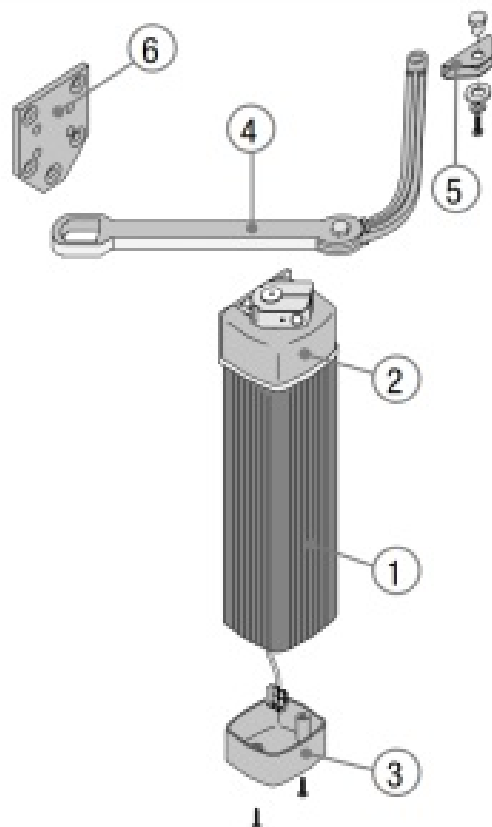
This product is engineered and manufactured by CAME S.p.A. and complies with current safety regulations.
The Gearmotor is reversible and made from drawn aluminum., with an epicyclical reduction.

4.2 Technical features

<p>F500 Gearmotor Control board power supply: 230 A.C. 50/60Hz Motor power supply: 24V D.C. Max draw.: 2A Power: 48W Maximum torque: 100 Nm Opening time (90°): 13” Gear ratio: 1/531 Duty Cycle: Intensive use Protection Rating: IP54 Weight: 5 kg</p>	<p>F510 Gearmotor Control board power supply: 230 A.C. 50/60Hz Motor power supply: 24V D.C. Max draw.: 2A Power: 48W Maximum torque: 100 Nm Opening time (90°): 9” Gear ratio: 1/531 Duty Cycle: Intensive use Protection Rating: IP54 Weight: 6,5 kg</p>
<p>Operating temperature:</p> 	<p>Operating temperature:</p> 

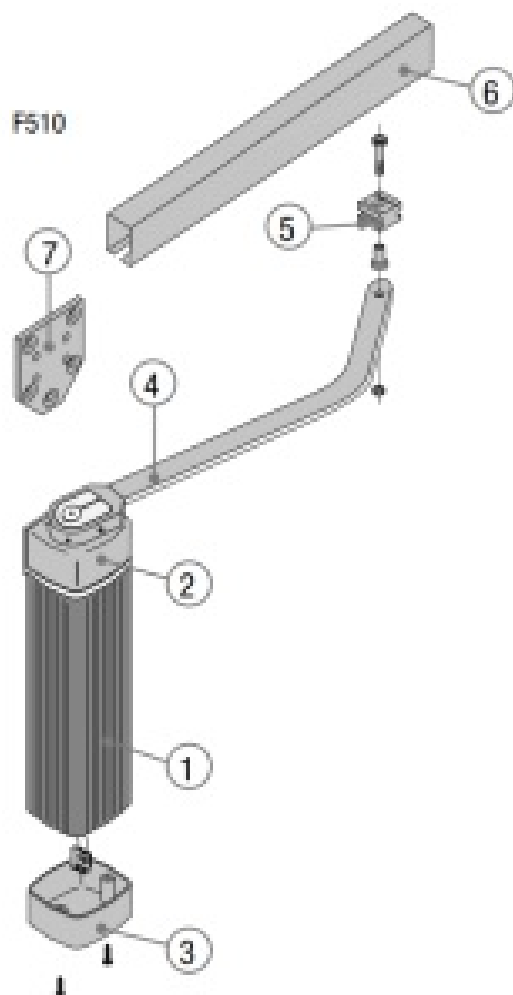
4.3 Description of parts

F500



- 1) Gearmotor central body
- 2) Upper casing
- 3) Lower casing

- 4) Articulated arm
- 5) Arm fi xing bracket
- 6) Gearmotor fi xing bracket

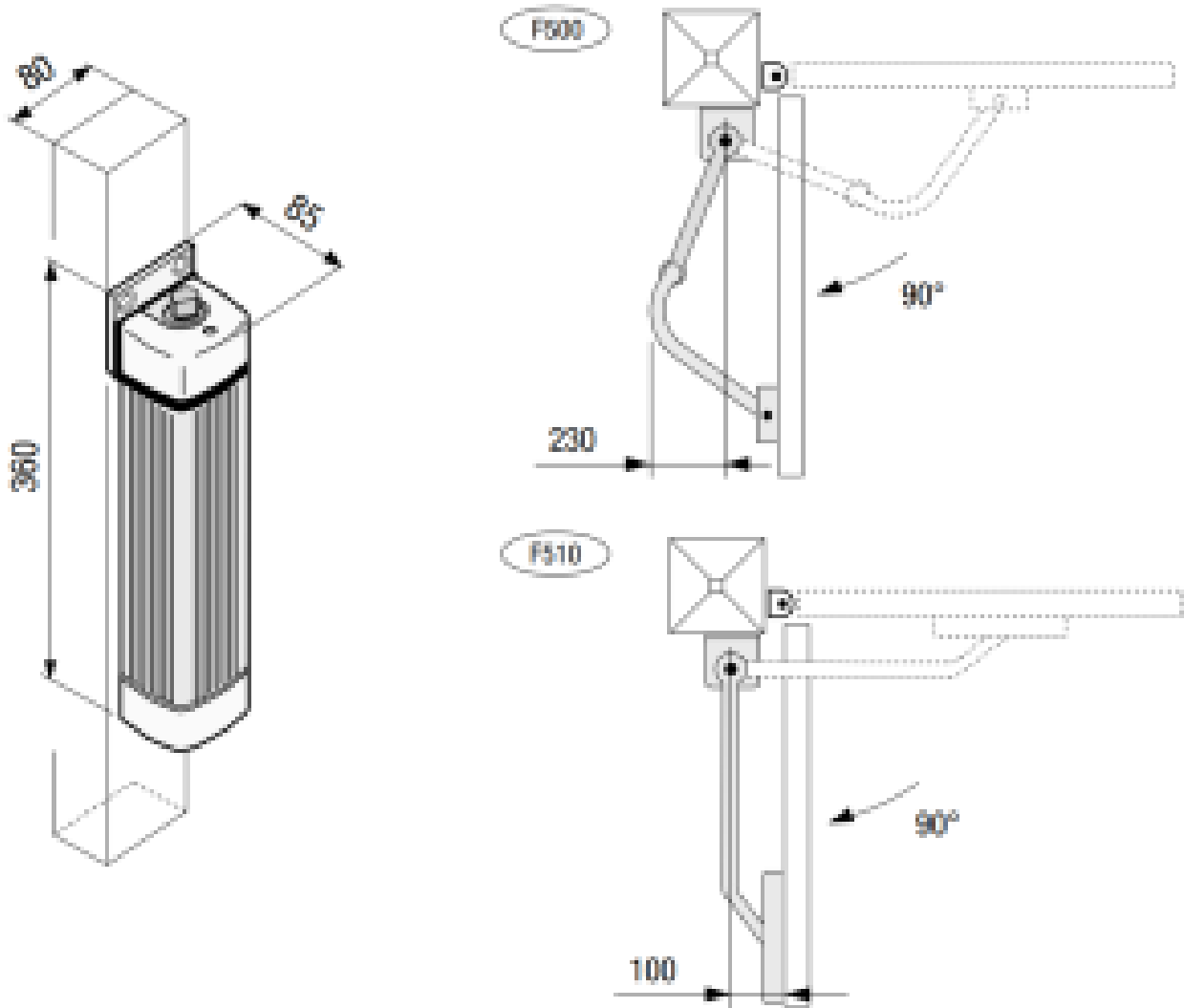


- 1) Gearmotor central body
- 2) Upper casing
- 3) Lower casing
- 4) Arm

- 5) Slide block
- 6) Runner
- 7) Gearmotor fi xing bracket

4.4 Dimensions

Measurements in mm



Installation




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

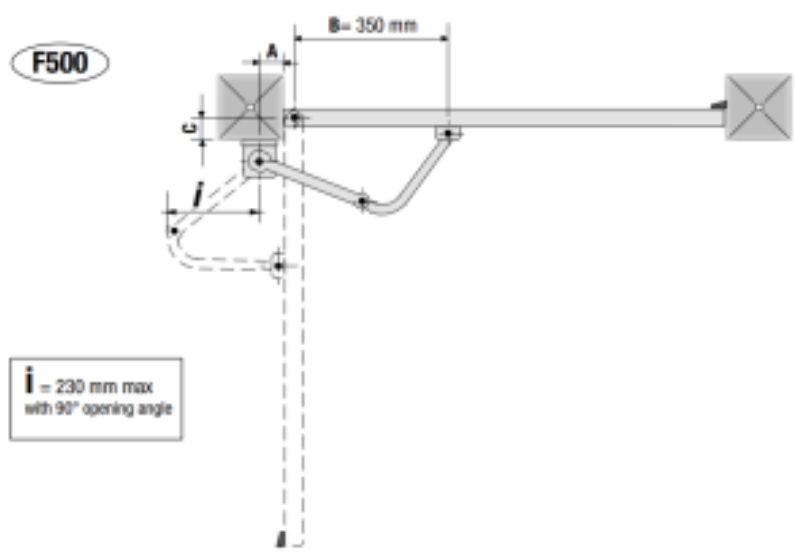
5.1 Preliminary checks



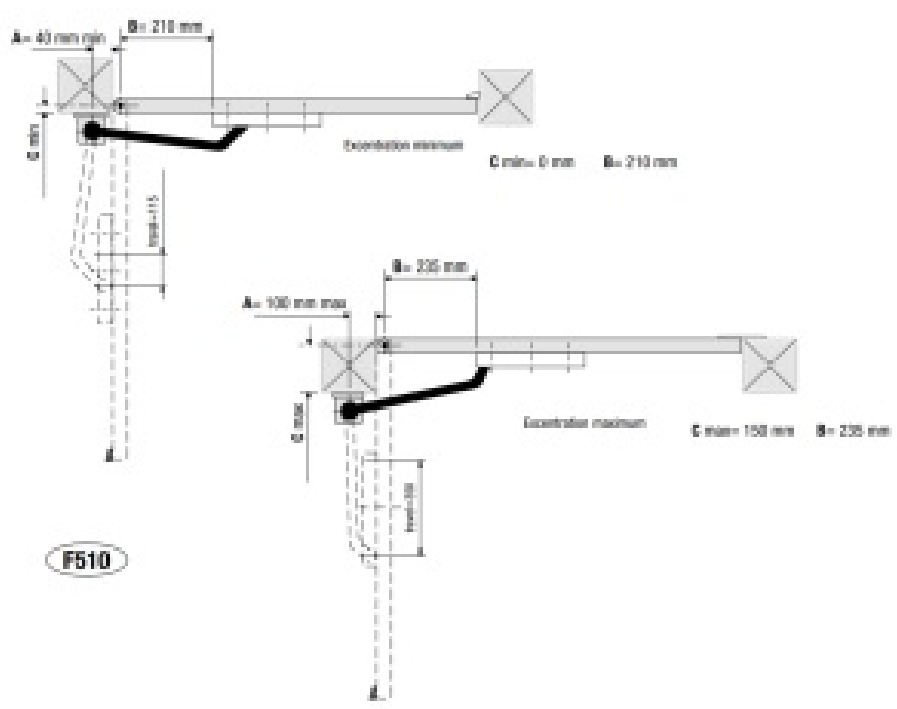
Before installing, do the following:

- 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.



GATE WING WIDTH	
m.	Kg.
0,80	150
1,20	125
1,60	100
A	C
40÷100	0÷150



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

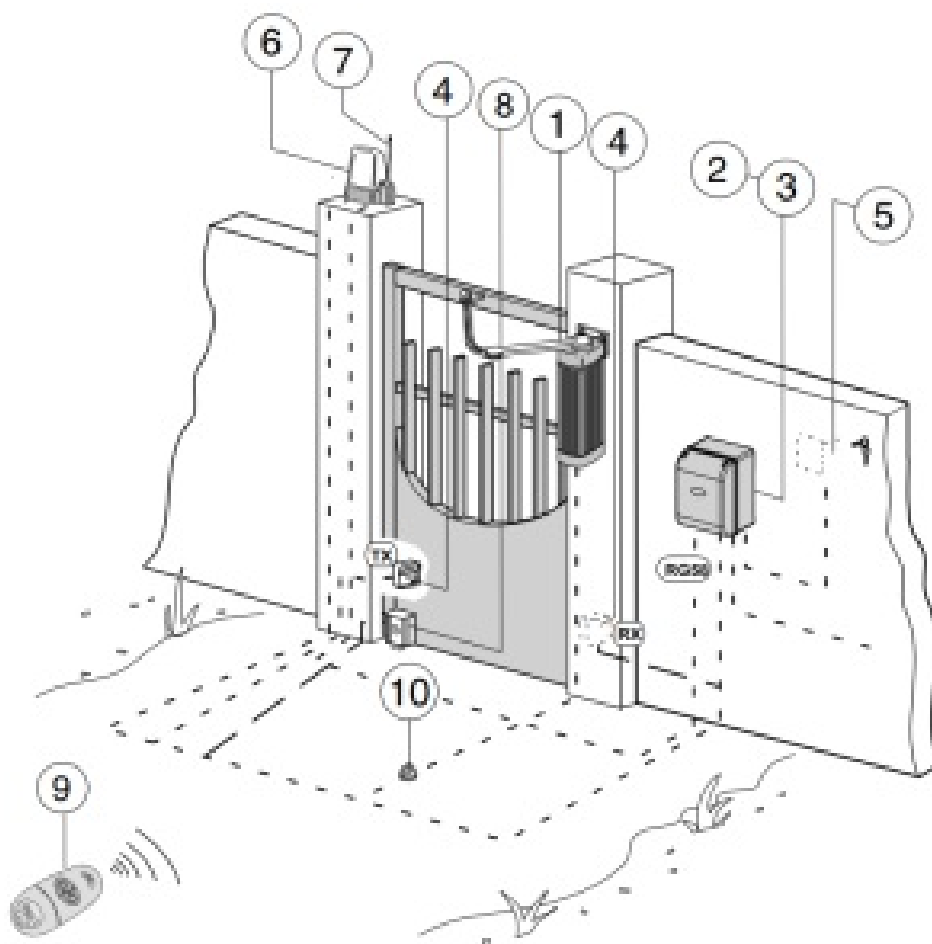
Connections	Type of cable	Type of cable	Length of cable 10 < 20 m	20 < 30 m
Control panel power supply 230V	FROR CEI 20-22 CEI EN 502 67-2-1	3G x 1,5 mm ²	3G x 2,5 mm ²	3G x 4 mm ²
Motor power supply 24V		3G x 1,5 mm ²	3G x 1,5 mm ²	3G x 2,5 mm ²
Flashing light		2 x 0,5 mm ²	2 x 1 mm ²	2 x 1,5 mm ²
Photocell 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 on 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



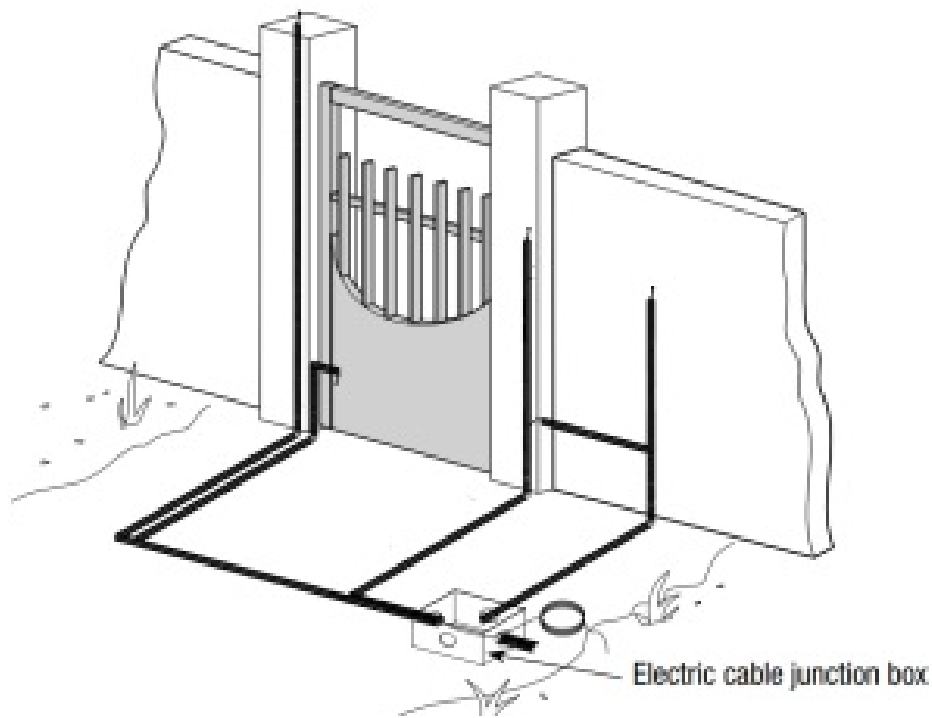
1) Gear motor unit	6) Flasher
2) Control panel	7) Antenna
3) Radio receiver	8) Electric lock
4) Photocells	9) Transmitter
5) Protruding key-operated selector switch	10) Mechanical gate stop

5.5 Installing the operator



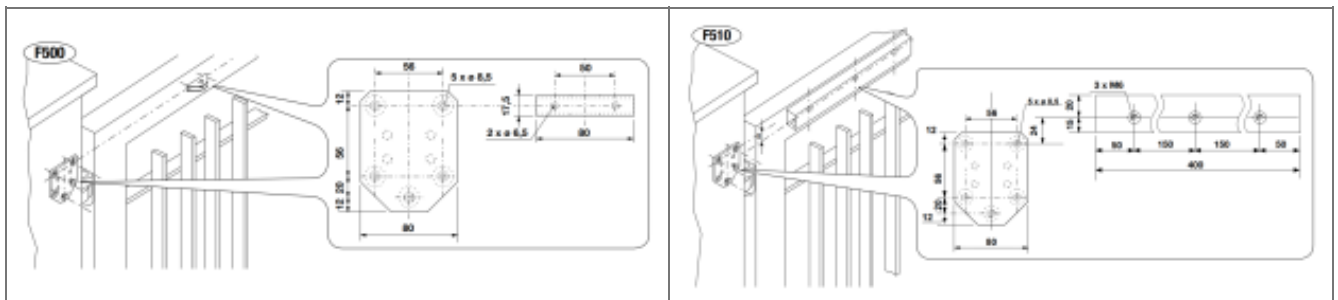
The following illustrations are only examples, given that the space available for anchoring the operator and accessories may vary from gate to gate. It is up to the installer, thus, to choose the most suitable solution. Lay the corrugated tubing needed for the connections deriving from the junction box.

N.B. the number of tubes depends on the type of system and accessories employed.

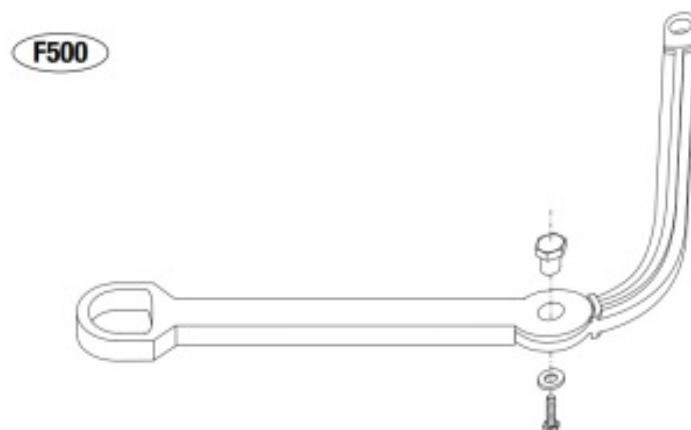


1. Trace the center lines and external dimensions of the entire assembly in accordance with the diagrams on pages 2 and 3.

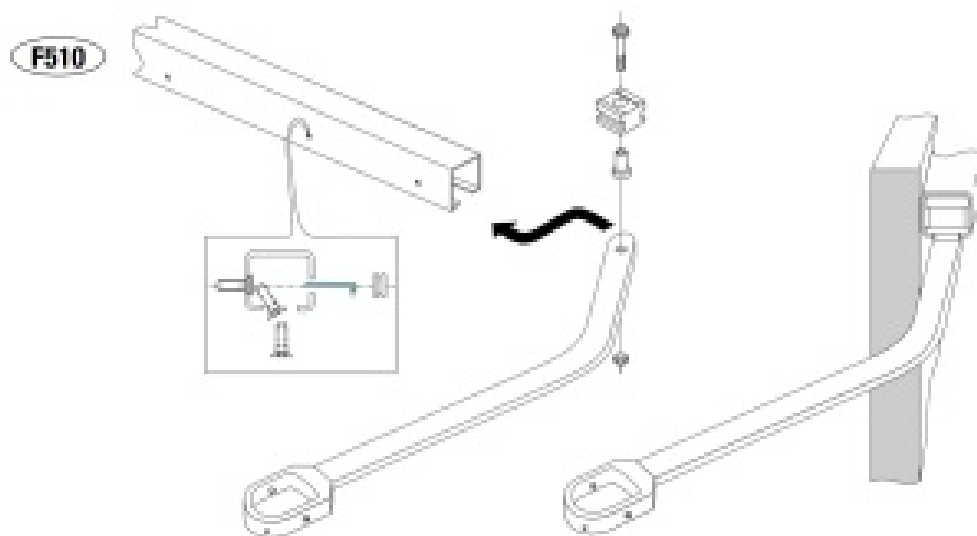
Next, mount the flange for the gear motor on the wall or pillar, and mount the anchor block for gear motor F500 on the gate.



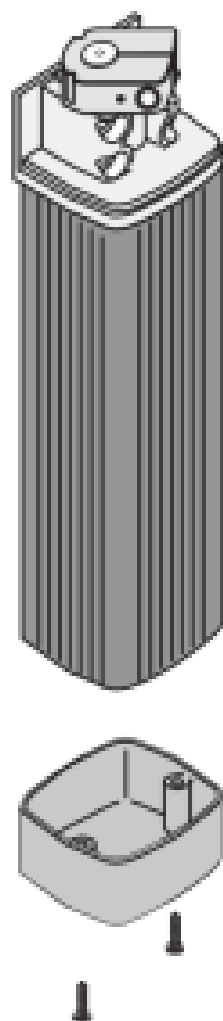
2. **2a)** Use the hardware provided with the unit to join the two halves of the articulated arm together.



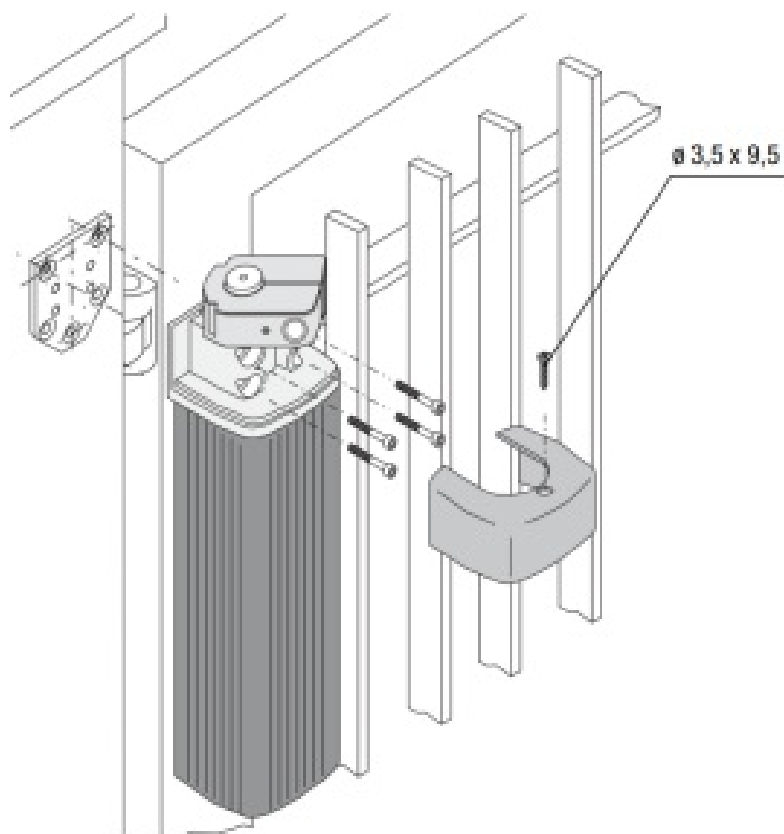
- 2b) Secure the runner to the wing and insert the straight arm.



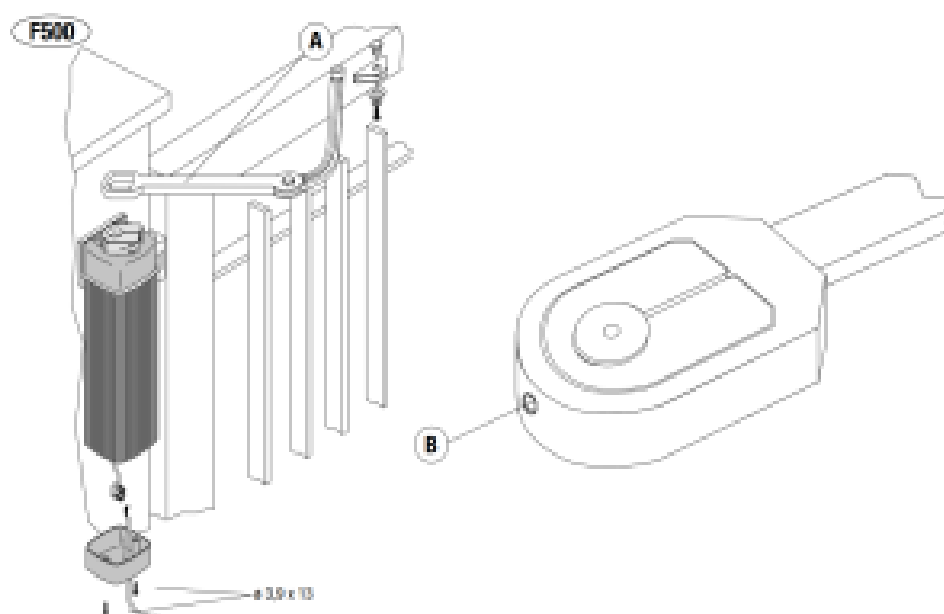
3. Remove the cover at the bottom of the gear motor.



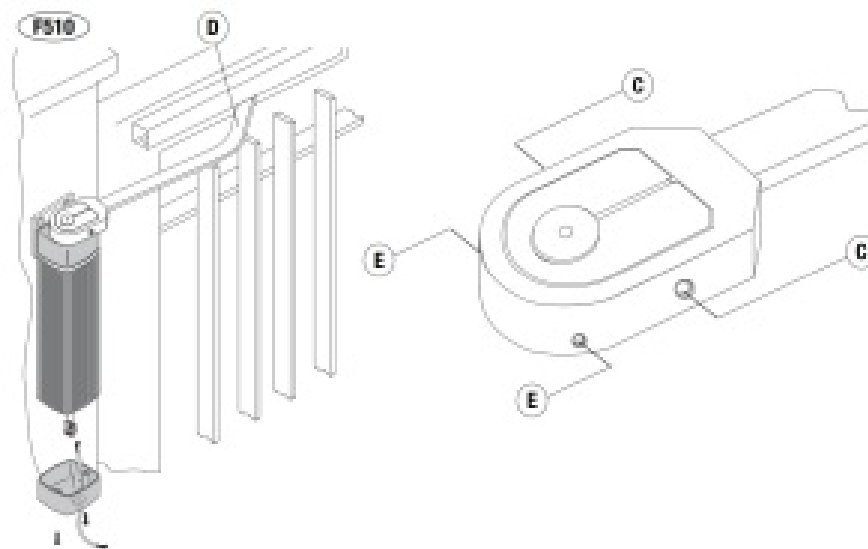
4. Using the four screws provided with the unit, install the gear motor on the flange. Fix the upper cap.



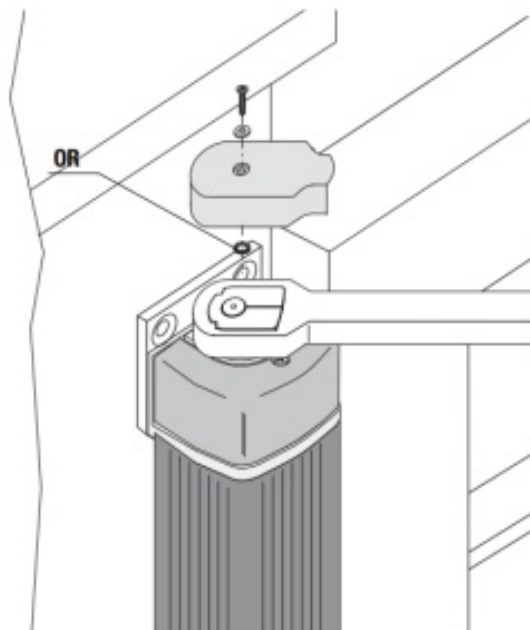
5. **5a)** – Assemble the articulated arm (A) onto the intermediate bush which is all in one with the ratio motor shaft;
- using the hardware provided with the unit, install the bracket on the gate;
 - make the electrical connection, supply voltage to the ratio-motor during the closure, and secure the arm with the M6 (B) grub screw;
 - fix the lower cap.



- 5b)** – Assemble the articulated arm (D) onto the intermediate bush which is all in one with the ratio motor shaft;
- make the electrical connection, supply voltage to the ratio-motor during the closure, and secure the arm with the M6 (C) grub screws;
 - fix the lower cap.



6. Complete installation by mounting the upper cover with its OR gasket.



Electrical connections

Electric connections to the ZL150N control panel

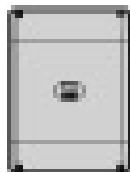
24 V D.C. gearmotor featuring
delayed action on opening

M1

FLEX



Red
Green



24 V D.C. gearmotor featuring
delayed action on closing

M2

FLEX



Green
Red

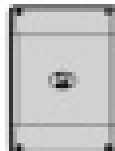
Electric connections to the ZL160N control panel

24 V D.C. gearmotor

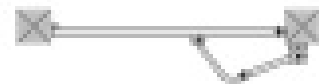
FLEX



Red
Green



For mounting on the right side,
invert the connection leads:
(M-red, N-green)



9.3 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

9.4 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	Product name
	Date of job
	Technician's signature
	Customer's signature
Job carried out	
Installer's stamp	Product name
	Date of job
	Technician's signature
	Customer's signature
Job carried out	

Installer's stamp	Product name
	Date of job
	Technician's signature
	Customer's signature
Job carried out	

8.2 Troubleshooting

MALFUNCTIONS	POSSIBLE CAUSES	CHECK AND REMEDIES
The gate will not open nor close	<ul style="list-style-type: none"> •There is no power •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 •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

Phasing out 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 of.

DISPOSING OF 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 the installation will take place.

DO NOT DISPOSE OF IT IN NATURE!



DISPOSING OF THE PRODUCT

Our products are made using different types of materials. The majority of them (aluminum, plastic, iron, electric cables) can be considered to be a solid urban waste. They may be recycled at authorized 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 IT IN NATURE!

DECLARATION OF CONFORMITY

Declaration  CAME S.p.A. declares that this device conforms to the essential, pertinent requirements provided by directives 2006/42/CE, 2014/30/UE.

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



www.came.com

For any further information on company, products, and assistance in your language:


Manual code: 119DS56EN

119DS56EN ver. 5 5 01/2015 © CAME S.p.A. –

The data and information reported in this installation manual are susceptible to change at any time and without obligation on CAME S.p.A. to notify users.



Documents / Resources

	<p>CAME Automation for Swing Gates [pdf] Installation Guide CAME, F500, F510, Automation, for, Swing Gates, 119DS56EN</p>
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