



CE

119BS54EN

AUTOMATION
FOR SLIDING GATES



INSTALLATION MANUAL
BK-2200T



English

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.



Came Cancelli Automatici s.p.a.

address Via Martiri della Libertà Street n. 15 postal code 31030
location Dosson di Casier province Treviso state Italia

DECLARES THAT THE PARTLY COMPLETED MACHINERY

SLIDING GATE OPERATORS

BX-A; BX-B; BX-E; BX-241; BX-E241;
BX-64; BX-68; BX-324; BX-74; BX-78; BX-10; BX-P; BX-243; BX-243C; BX-246;
BK-221; BK-800; BK-1200; BK-1200P; BKE-1200; BK-1800; BKE-1800;
BK-2200; BKE-2200; BK-2200T;
BY-3500T; BK800S;
ZBX-6; ZBX-7; ZBX-8; ZBX-10; ZBX-24; ZBX-241;
ZBK; ZBK-E; ZBKs;
ZT4; ZT6; ZT6C; B4336;
ZN2; ZD2;
LBD2; LB90;
LINE24D

MEET THE APPLICABLE ESSENTIAL REQUIREMENTS

1.1.3 - 1.1.5 - 1.2.1 - 1.2.2 - 1.3.2 - 1.3.7 - 1.3.8.1 - 1.4.1 - 1.4.2 - 1.4.2.1 - 1.5.1 - 1.5.6 - 1.5.8 -
1.5.9 - 1.5.13 - 1.6.1 - 1.6.3 - 1.6.4 - 1.7.1 - 1.7.2 - 1.7.4

COMPLIES WITH THE PROVISIONS OF THE FOLLOWING DIRECTIVES

DIRECTIVE 2006/42/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 17 May 2006 on machinery, and amending Directive 95/16/EC.

DIRECTIVE 2004/108/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 15 December 2004 on the approximation of the laws of the Member States relating to electromagnetic compatibility.

PERSON AUTHORISED TO COMPILE THE RELEVANT TECHNICAL DOCUMENTATION

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location Dosson di Casier province Treviso state Italia

The pertinent technical documentation has been drawn up in compliance with attached document IIB
Came Cancelli Automatici S.p.A., following a duly motivated request from the national authorities, undertakes to provide information
related to the quasi machines,

and FORBIDS

commissioning of the above mentioned until such moment when the final machine into which they must be incorporated, has been
declared compliant, if pertinent, to 2006/42/CE.

Dosson di Casier (TV)
28 June 2012

Gianni Michielan
Managing Director

DDI B EN **B001a** ver. 4.2 01 February 2011
Translation of the Declaration in the original language

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“IMPORTANT SAFETY INSTRUCTIONS FOR INSTALLATION”

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

“THIS MANUAL IS ONLY FOR PROFESSIONAL INSTALLERS OR QUALIFIED PERSONS”



Legend

- This symbol indicates sections to be read with particular care.
- This symbol indicates sections concerning safety
- This symbol indicates notes to communicate to users.

Destination and limits of use

Destination

The BK2200T gearmotor is designed for automating sliding gates on residential, condominium and industrial buildings.

The use of this product for purposes other than the one intended and installation carried out in a manner other than as instructed in this technical manual are prohibited.

Limits of use

For intensive or condominium use: maximum gate weight 2200 kg with maximum length of 23 meters.

Standard followed

The company CAME cancelli automatici 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 legislation: *see Declaration of Compliance*.

Description

Gearmotor

The BK2200T ratiomotor is designed and built by CAME CANCELLI AUTOMATICI S.p.A. and it meets the safety standards in force. The case consists partly of cast aluminium, inside of which operates the non-reversible electromechanical gearmotor, and partly of a covering in ABS plastic inside of which is an electronic card, the transformer and the emergency battery holder.

Modello:

001BK2200T – Gearmotor for gates weighing up to 2200 kg and 23 m long, with a 6 meter module pinion.

Control panels:

002ZT6 – Control panel.

002ZT6C – Control panel complete with safety block and keys.

Completion accessories

001 R001 - Lock cylinder with DIN keys;

009CGZ6 – Galvanised 30 x 30 6 module rack in laminated steel.

001 BRC515 - Power supply cable winding device for sensitive safety profiles;

001 B4353 - Chain transmission device;

009 CCT - Simple 1/2” chain;

009 CGIU - 1/2” chain joint.

Important! Check that the safety equipment and accessories are CAME originals; this is a guarantee that also makes the system easy to set up and upkeep.

Technical information

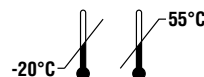
Power supply: 400/230V a.c.
Motor power supply: 230/400V a.c. trifase
Max. absorption: 1,5 A
Rated power: 600 W
Reduction ratio: 1/28
Push: 1650 N
Max. speed: 10,5 m/min

Operation intermittence: 50%

Protection level: IP54

Weight: 21 kg

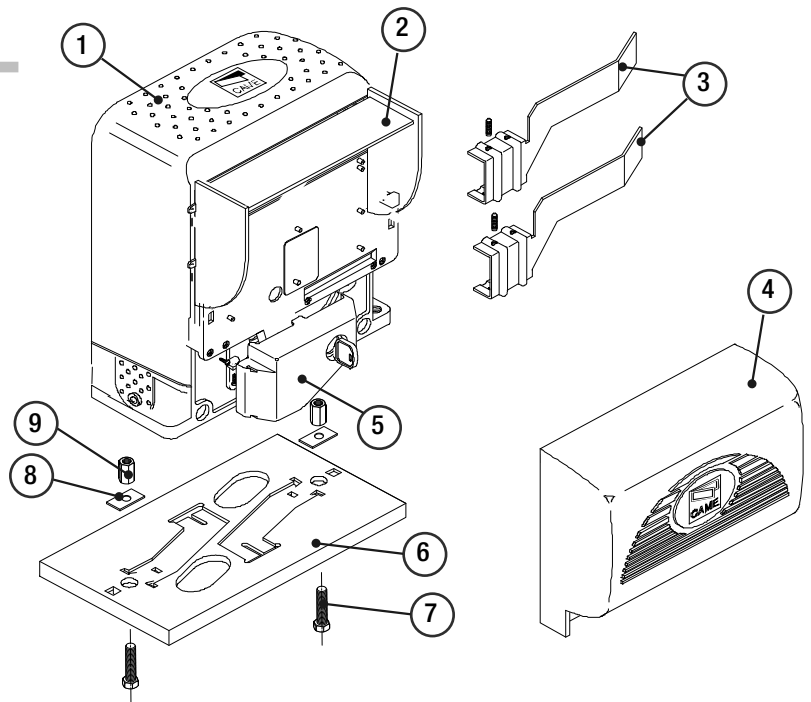
Operating temperature:



Parts description

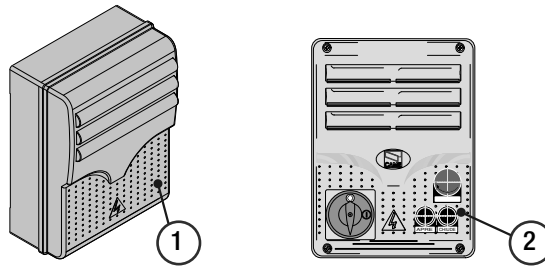
GEARMOTOR UNIT

- 1 - Gearmotor
- 2 - Board cover support
- 3 - End-stop flaps
- 4 - Electric board front cover
- 5 - Release door
- 6 - Base plate
- 7 - Securing screws
- 8 - Plates for securing screws
- 9 - Nuts



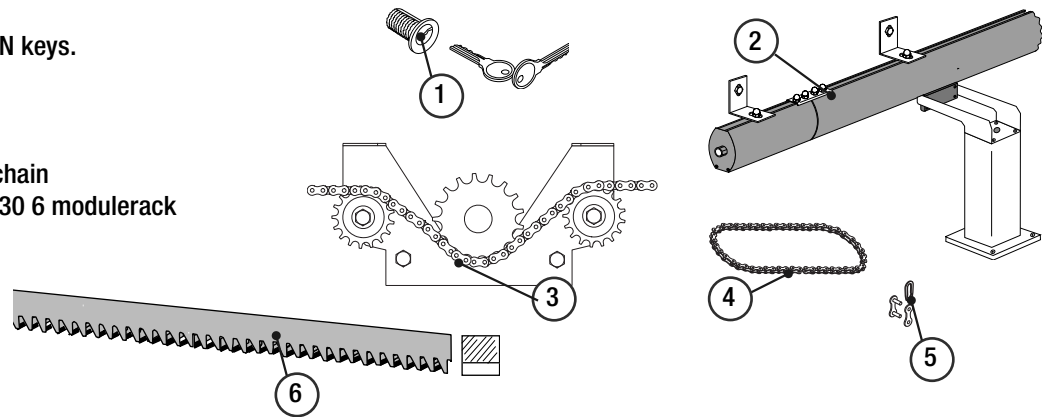
CONTROL PANEL

- 1 - ZT6 - Control panel
- 2 - ZT6C - Control panel complete with safety block and keys



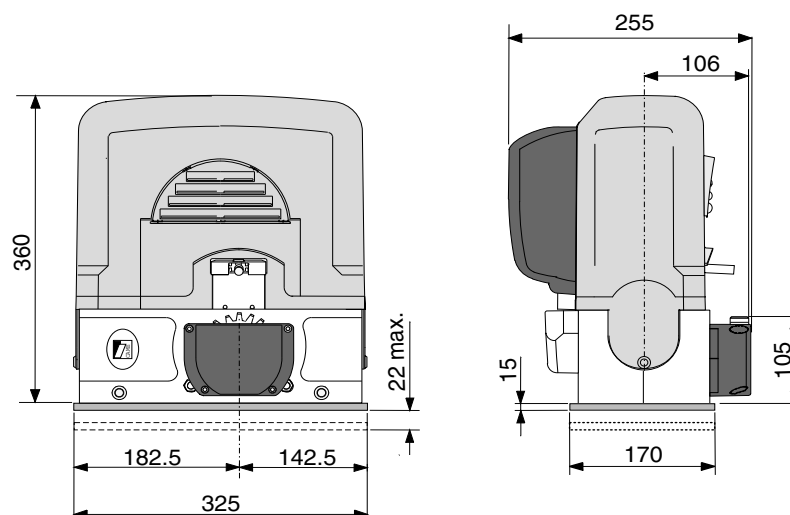
COMPLETION ACCESSORIES

- 1 - R001 - Yale lock with DIN keys.
- 2 - BRC15 - Cable duct
- 3 - B4353 - Chain drive
- 4 - CCT - Simple 1/2" chain
- 5 - CGIU - Coupling for 1/2" chain
- 6 - CGZ6 - Galvanised 30 x 30 6 modulerack



Overall dimensions

Measurements in mm




Installation

⚠ Installation must be carried out by expert qualified personnel and in full observance of regulations in force.

Preliminary checks

⚠ Before proceeding with the installation, it is necessary to:

- Make sure the door is rigid and compact and that the sliding wheels are well oiled and in good condition.
- The ground guide must be well fastened to the ground, fully on the surface for the entirety of its length and without irregularities that might obstruct the gate's movement.
- The upper guide runners must not create friction.
- Provide for a gate stopper for opening and one for closing, and for the path of electrical cables as per standard system.
- Make sure the point in which the ratiomotor is fixed is in an area protected from shocks or bumps, and that the anchoring surface is solid.
- Provide for suitable omnipolar disconnection device with more than 3 mm between contacts to section power supply.
-  Connections inside the case made for protection circuit continuity are allowed as long as they include additional insulation with respect to other internal drive parts.
- Install suitable tubes and ducts for electric cable passage to guarantee protection against mechanical damage.

Tools and materials

Make sure all tools and materials necessary are within reach to install the edge in maximum safety, according to regulations in force. The following figure illustrates the minimum equipment for the installer.

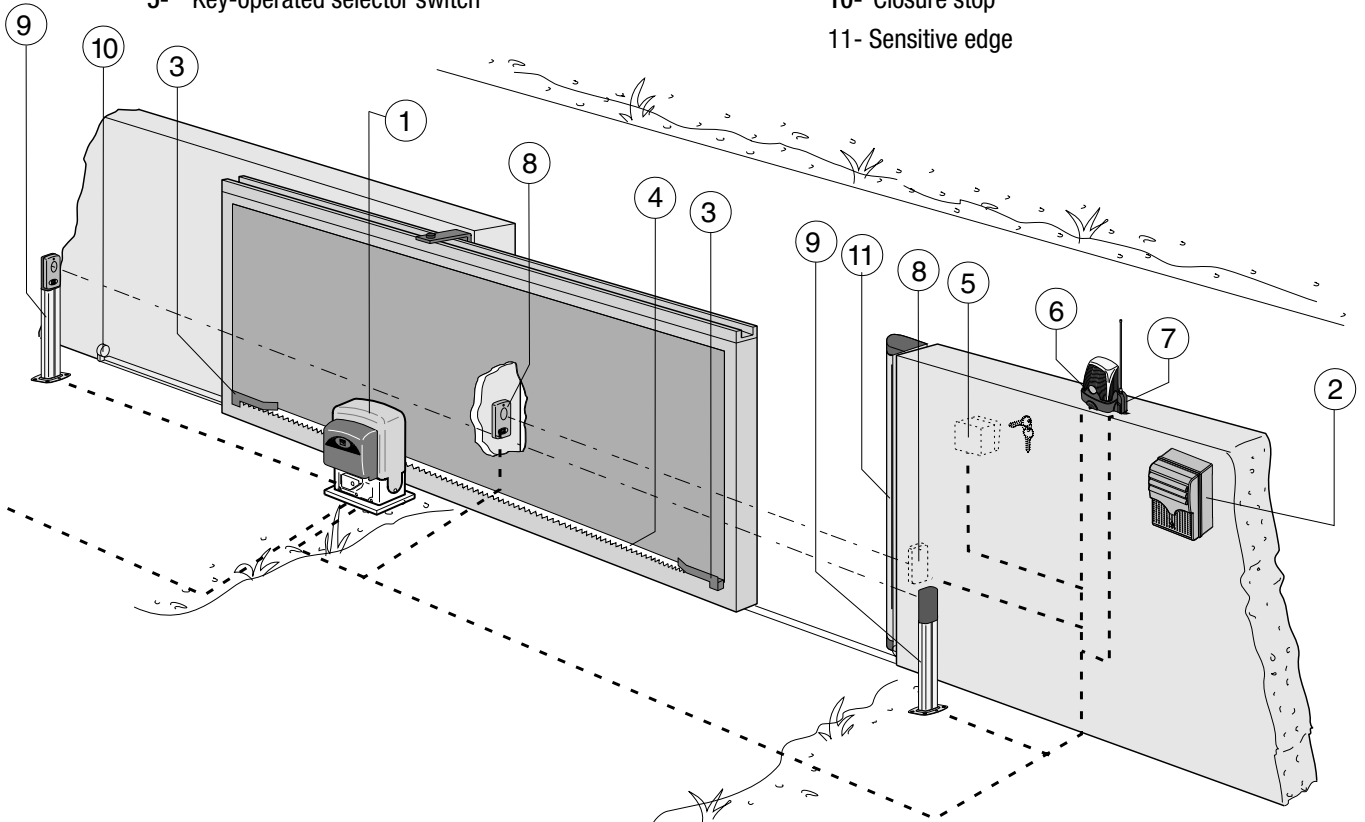


Cable list and minimum thickness

Connections	Type of cable	Length of cable 1 < 10 m	Length of cable 10 < 20 m	Length of cable 20 < 30 m
230/400V power supply	FROR CEI 20-22 CEI EN 50267-2-1	4G x 1,5 mm ²	4G x 2,5 mm ²	4G x 4 mm ²
Motor power supply 230V/400V		4G x 1,5 mm ²	4G x 1,5 mm ²	4G x 2,5 mm ²
24V - 230V flashing lamp		2 x 1,5 mm ²	2 x 1 mm ²	2 x 1,5 mm ²
Photoelectric cells TX		2 x 0,5 mm ²	2 x 0,5 mm ²	2 x 0,5 mm ²
Photoelectric cells RX		4 x 0,5 mm ²	4 x 0,5 mm ²	4 x 0,5 mm ²
24V power supply accessory		2 x 0,5 mm ²	2 x 0,5 mm ²	2 x 1 mm ²
Control button		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.: An evaluation of the size of the cables with lengths other than the data in the table must be made based on the effective absorption of the connected devices, according to the instructions indicated by the CEI EN 60204-1 standards. For connections that require several loads on the same line (sequential), the size given on the table must be re-evaluated based on actual absorption and distances.

- 1 – Gearmotor
- 2 – ZTC/ZT6C control panel
- 3- Limit-switch tabs
- 4- Rack
- 5- Key-operated selector switch
- 6- Flashing light indicating door movement
- 7- Antenna
- 8- Safety photocells
- 9- Photocell column
- 10- Closure stop
- 11- Sensitive edge

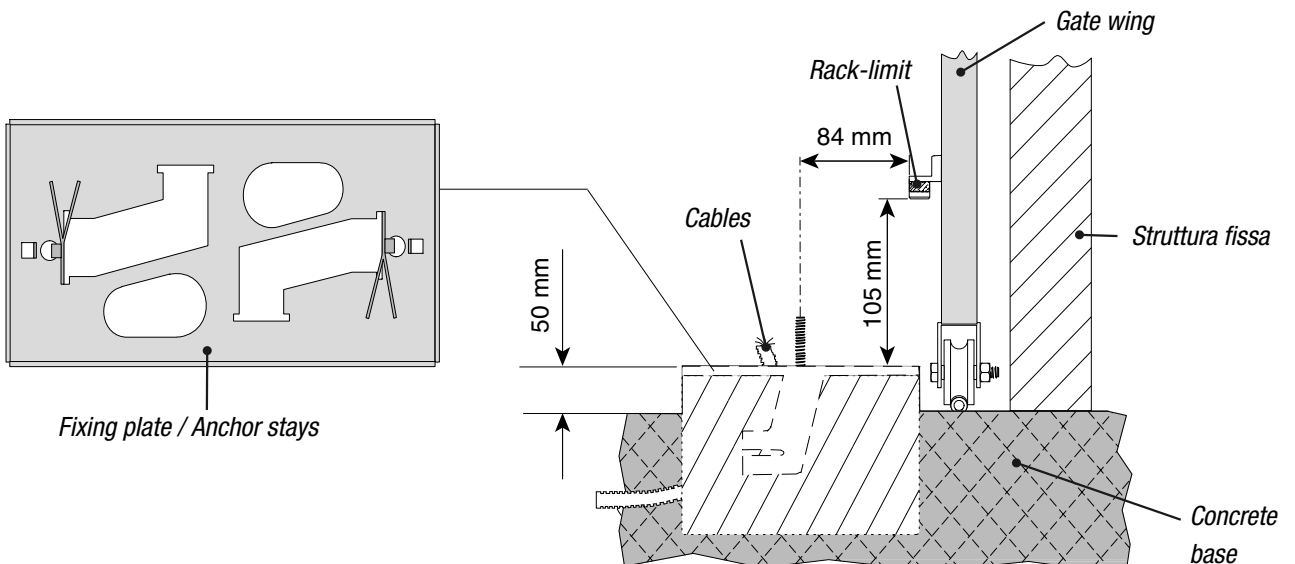


Motor to base anchorage

⚠ The following applications are only examples, as the space required for unit installation and the accessories vary depending on dimensions and therefore it is up to the installer to select the best solution.

Install the screws in the anchor plate and fasten them with a nut, then bend the preformed clamps downwards. Construct a cement foundation that is large enough to accommodate the gear motor (it is a good idea to protrude 50 mm. from the ground). When pouring the foundation, embed the gear motor anchor plate and the relative clamps in the cement. The anchor bolts should be embedded in the concrete in the positions indicated; the drive unit is then attached to these bolts. The anchor plate must be perfectly level and absolutely clean; the bolts threads must be completely exposed.

N.B.: The flexible tubes for the electrical wiring must be embedded in the base and protrude in the correct position.

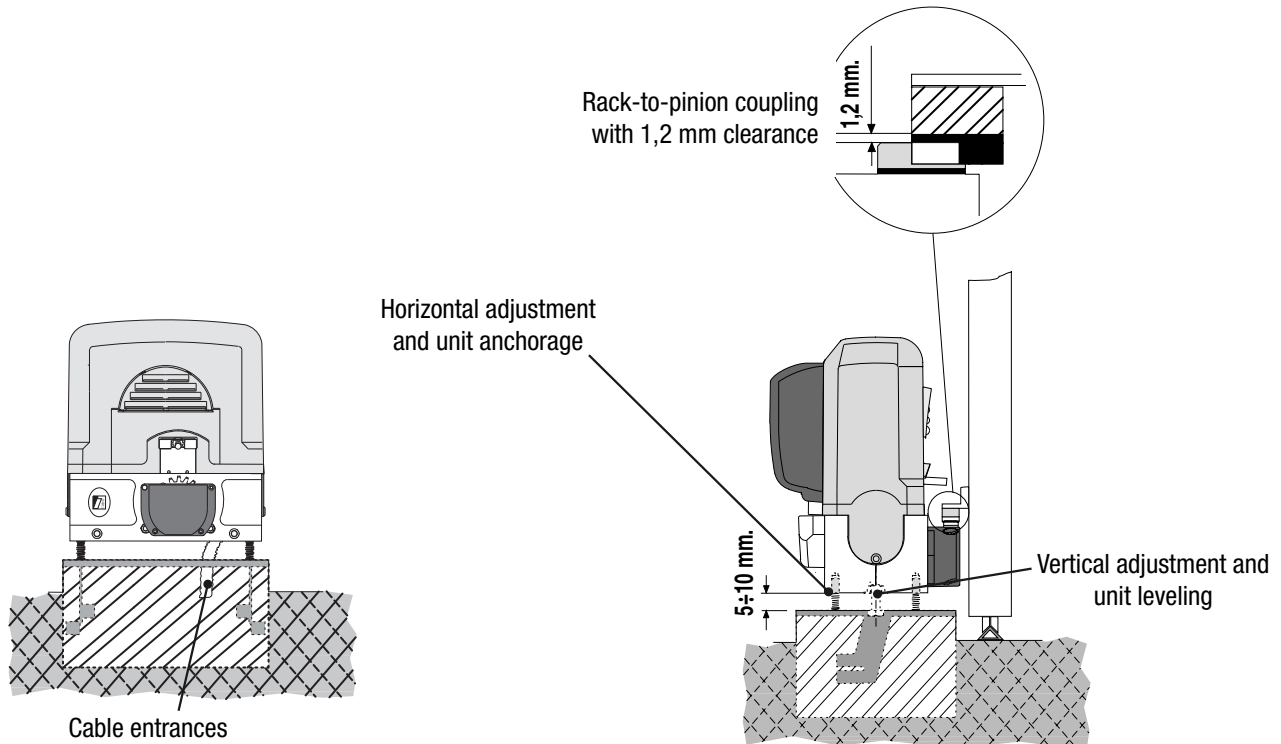


Unit installation

During the initial phase of installation, the feet should protrude by 5-10 mm. in order to allow for alignment, anchorage of the rack and further adjustments.

Perfect alignment with the guide rail is made possible by the (patented) built-in regulation system, which consists of:

- slots for horizontal adjustment;
- threaded steel feet for vertical adjustment and levelling;
- plates and bolts for anchorage to the base.



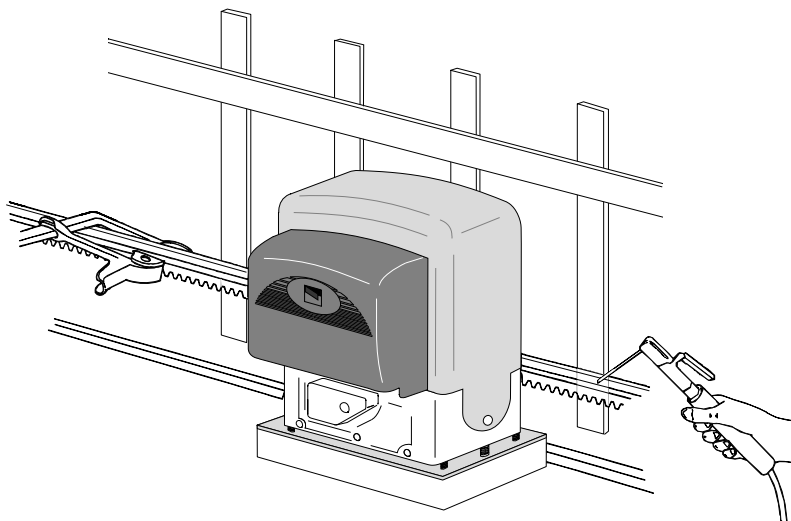
Attaching the rack/limit

Attach the rack to the gate as described below:

- Release the gearmotor (parag. 5.8);
- position the rack on the pinion of the gearmotor and slide the gate manually in order to attach the rack along its entire length;
- when the rack is attached to the gate, adjust the feet using a screwdriver until the play between the pinion and the rack is correct (1,2 mm.).

N.B.: This position ensures that the weight of the gate does not rest on the gearmotor.

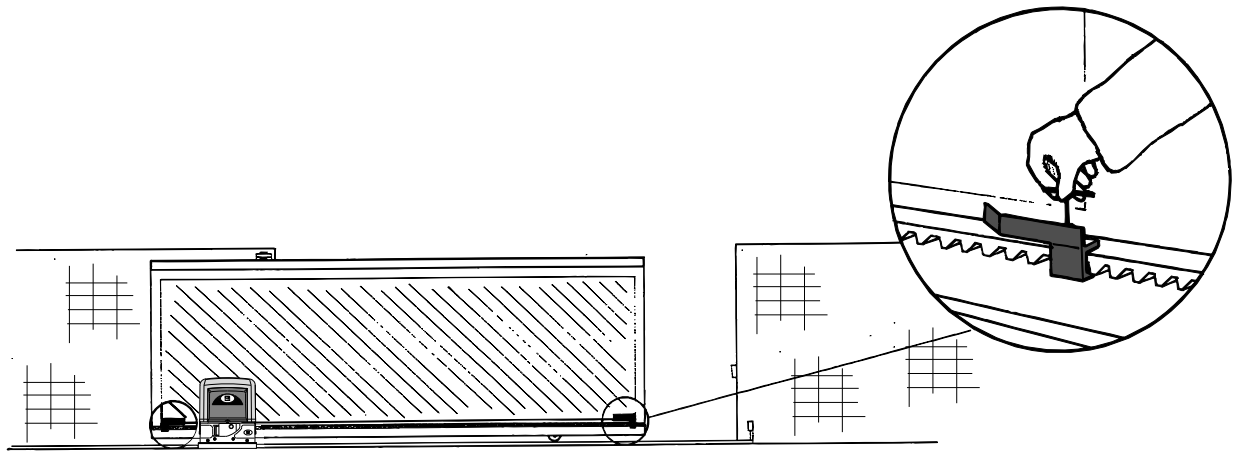
- If the rack is already attached, proceed directly to the adjustment of the rack/pinion coupling.
- when the necessary adjustment have been completed, fasten the unit in position by tightening the two anchor bolts.



Attaching the switch tabs

Position the limit-switch tabs (whose positions determine the limits of gate travel) on the rack.

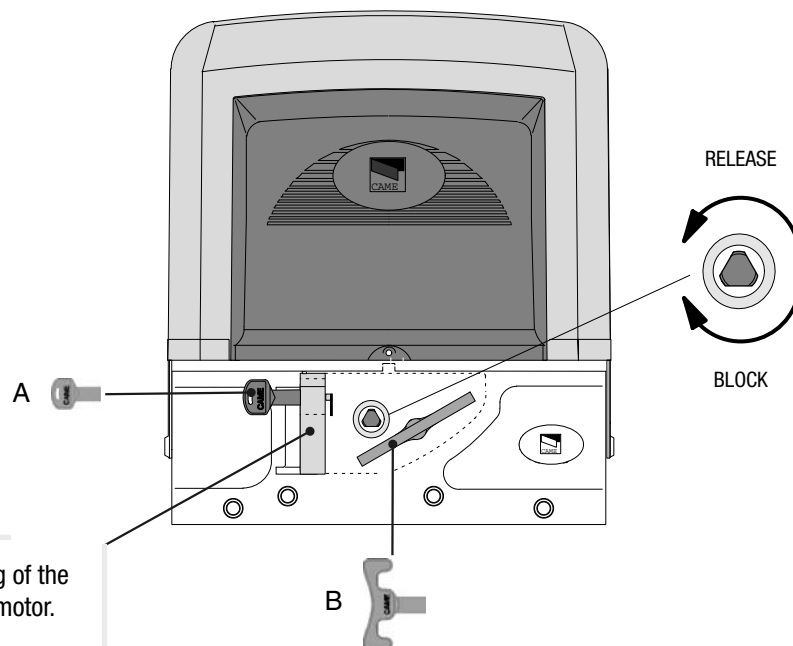
Note: do not allow the gate to strike the mechanical stops in the open or closed positions.



Manual release of the gearmotor

To open the access door, insert the key A, push down and rotate clockwise. Then release the ratio motor by using key B on the three-lobed pin and turning it in the direction indicated.

To re-lock the reduction gear, turn key B in the direction indicated until it will move no further, without forcing it: the three-sided pin will settle into place at the first movement.

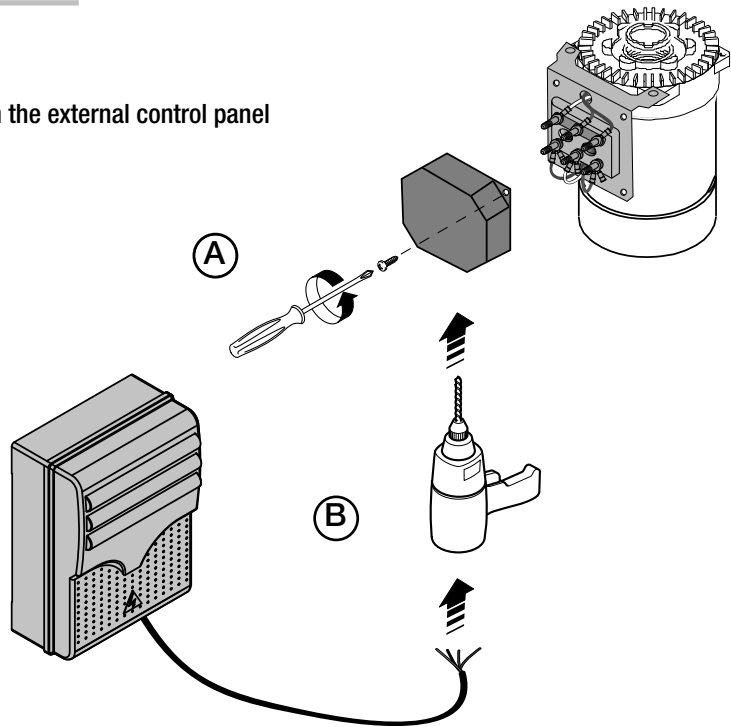


⚠ ATTENTION: the opening of the unblock panel arrests the motor.

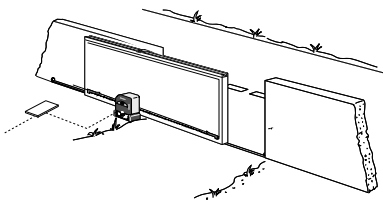
Electrical connections

Connection for gear motor, limit switch or encoder

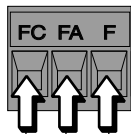
- Open the motor and unscrew the protection box;
- Drill the protection box and pass through the cables from the external control panel



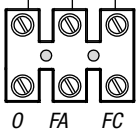
Gearmotor end-stop assembly already connected for installation on the left-hand side seen from inside.



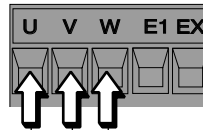
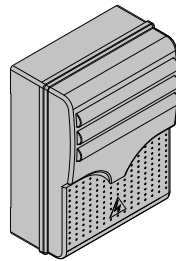
ZT6/ZT6C



GREEN
WHITE
RED

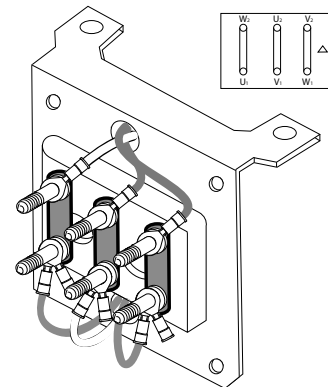
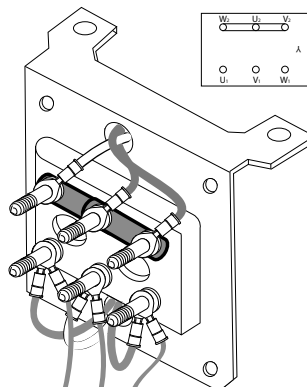


connecting the standard endstop assembly



Outlet for the 400V (AC) motor connection

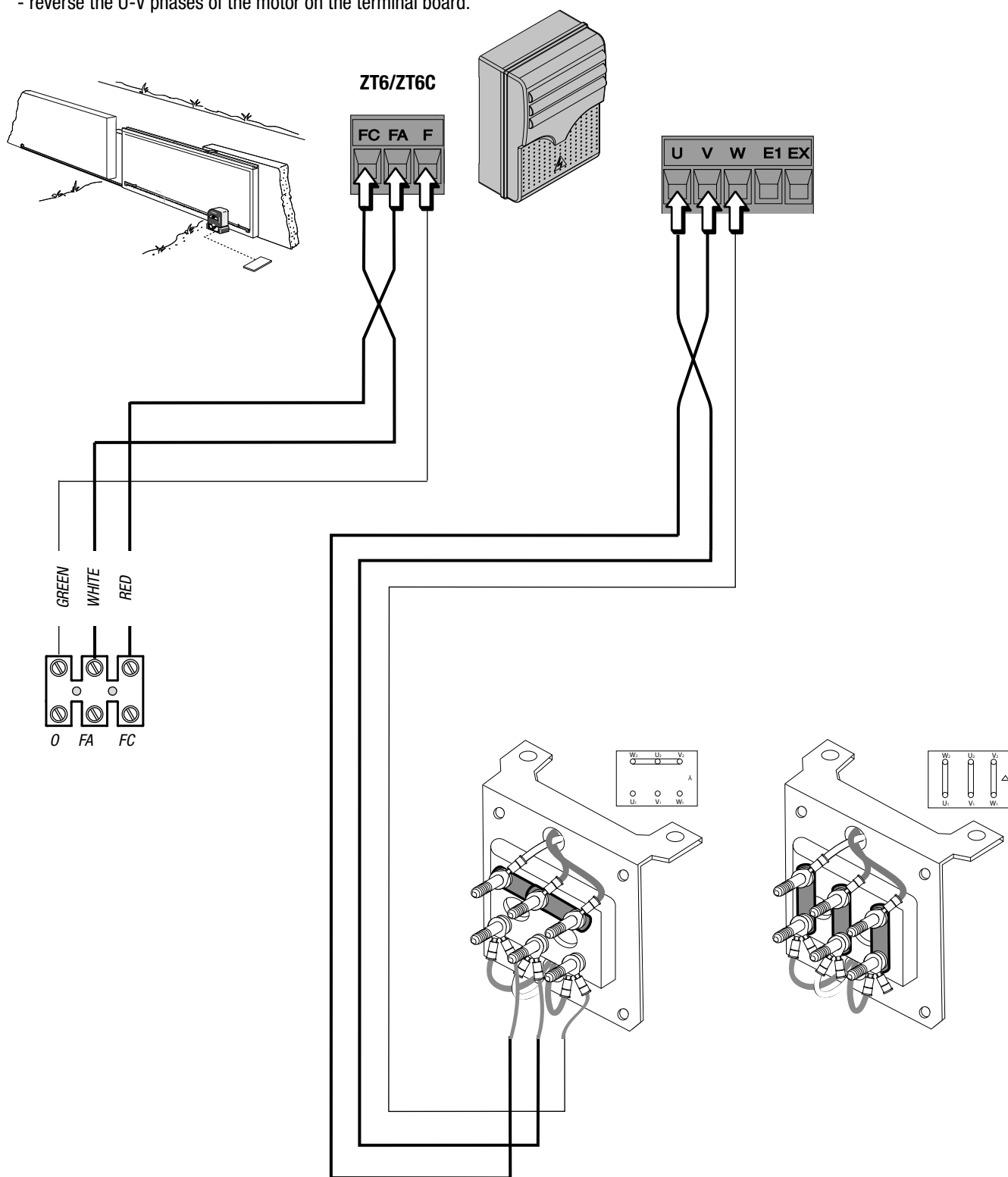
For 230V (AC) connections, change the contacts as shown.



Alterations to the electric connections for installing a gearmotor on the right

For right-hand installation:

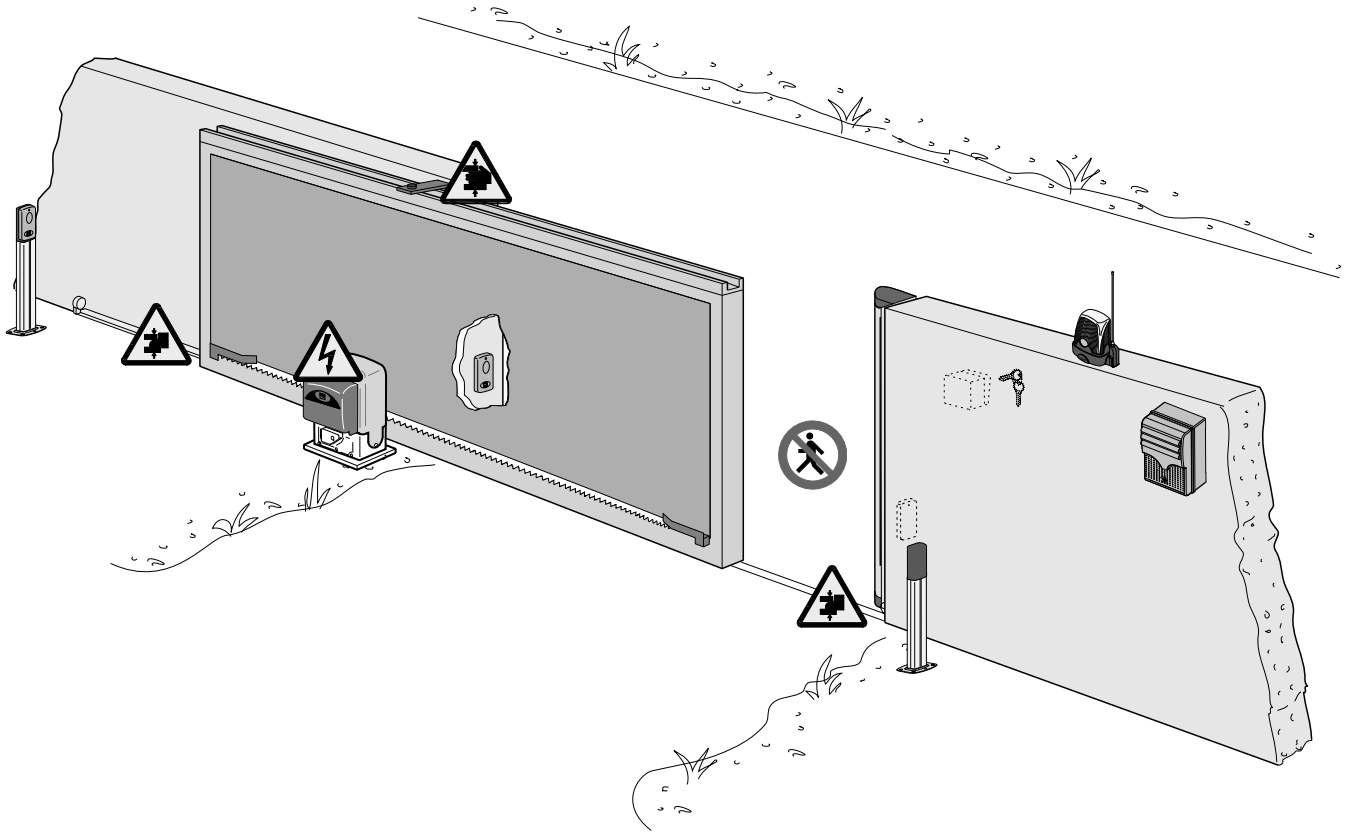
- reverse FA-FC of the end stops on the terminal board;
- reverse the U-V phases of the motor on the terminal board.



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

Maintenance

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.

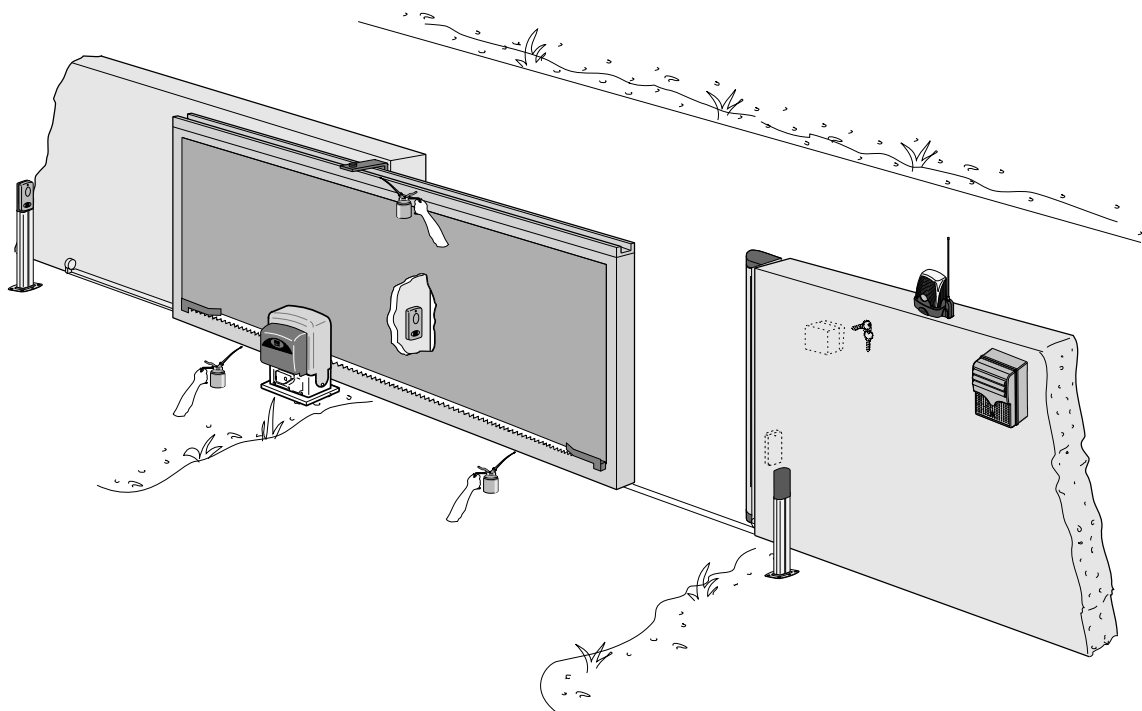
-To check the efficiency of the safety devices, move an object in front of the photocells when gate is closing. If the operator inverts the motion or stops, the photocells are working properly. This is the only maintenance procedure to be carried out with the power source connected.

-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.



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 key selector are stuck • Photocells in partial stop mode 	<ul style="list-style-type: none"> • Check that the power is up • Lock the gearmotor • Replace batteries • Call assistance • 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
The flasher does not work	<ul style="list-style-type: none"> • The bulb is burnt 	<ul style="list-style-type: none"> • Call assistance

Periodic maintenance log for end-user (every 6 months)

Date	Notes	Signature

Extra-ordinary maintenance

 The following table serves to note down any extraordinary maintenance, repairs or improvements performed by specialised firms.

N.B.: Any extraordinary maintenance must be performed by specialised technicians.

Extra-ordinary 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 _____ _____ _____	

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 _____ _____ _____	

Phasing out and disposal

 On its premises, CAME Cancelli Automatici S.p.A. implements a certified Environmental Management System in compliance with the UNI EN ISO 14001 standard to ensure environmental protection.

Please help us to safeguard the environment. At CAME we believe this to be one of the fundamentals in its market operations and development strategies. Just follow these short disposal instructions:

DISPOSING OF THE PACKAGING

The components of the packaging (i.e. cardboard, plastic, etc.) are solid urban waste and may be disposed of without much trouble, simply by separating them for recycling.

Before proceeding it is always a good idea to check your local legislation on the matter.

DO NOT DISPOSE OF IN NATURE!

PRODUCT DISPOSAL

Our products are made up of various materials. Most of these (aluminium, plastic, iron, electric cables) are solid urban waste. These can be disposed of at local solid waste management dumps or recycling plants.

Other components (i.e. electronic cards, remote control batteries, etc.) may contain hazardous substances.

These must therefore be handed over to the specially authorised disposal firms.

Before proceeding it is always a good idea to check your local legislation on the matter.

DO NOT DISPOSE OF IN NATURE!



English - Manual code: **119BS54** ver. **3** 01/2013 © CAME cancelli automatici s.p.a.
The data and information reported in this installation manual are susceptible to change at any time and without obligation on CAME cancelli automatici s.p.a. to notify users.

IT • Per ogni ulteriore informazione su azienda, prodotti e assistenza nella vostra lingua:
EN • For any further information on company, products and assistance in your language:
FR • Pour toute autre information sur la société, les produits et l'assistance dans votre langue :

DE • Weitere Infos über Unternehmen, Produkte und Kundendienst bei:

ES • Por cualquier información sobre la empresa, los productos y asistencia en su idioma:

NL • Voor meer informatie over het bedrijf, de producten en hulp in uw eigen taal:

PT • Para toda e qualquer informação acerca da empresa, de produtos e assistência técnica, em sua língua:

PL • Wszystkie inne informacje dotyczące firmy, produktów oraz usług i pomocy technicznej w Waszym języku znajdują się na stronie:

RU • Для получения дополнительной информации о компании, продукции и сервисной поддержке на вашем языке:

HU • A vállalatra, termékeire és a műszaki szervizre vonatkozó minden további információért az Ön nyelvén:

HR • Za sve dodatne informacije o poduzeću, proizvodima i tehničkoj podršci:

UK • Для отримання будь-якої іншої інформації про компанію, продукцію та технічну підтримку:



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CAMEGROUP

CAME Cancelli Automatici S.p.a.

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