

119BV85EN

# OPERATOR FOR SLIDE GATES



INSTALLATION MANUAL

BX-64 / BX-64B BX-68 / BX-68B



English



## **CAUTION!** important personal safety instructions: READ CAREFULLY!



#### **Foreword**

• This product should only be used for the purpose for which it was explicitly designed. Any other use is 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 automation system.

#### **Before installing**

(preliminary check: in case of a negative outcome, do not proceed until you have complied with the safety requirements)

· Check that the part you intend to automate is in good mechanical condition, balanced and aligned, and that it opens and closes properly. 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 leaves fitted with pedestrian entrances onto which you will install an operator must have a blocking mechanism when the leaf is in motion . Make sure that the opening of the automated leaf 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 leaves not on level ground • Check that any lawn watering devices will not wet the operator 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. In case, procure the tools required for safe gate movement • All opening commands (buttons, key selectors, magnetic readers etc.) must be installed at least 1.85 m from the perimeter of the area of turnstile movement, or where they cannot be reached from outside through the turnstile. In addition, direct controls (button, touch sensitive keys, etc.) must be installed at a height of at least 1.5 m and must not be accessible to the public • All 'hold-to-run' 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 user, check 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)

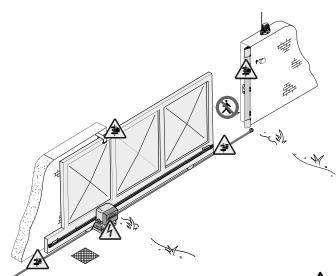
#### Special instructions and advice for users

· Keep the gate's area of operation clean and clear of any obstacles. Check that there is no vegetation in the area of operation of the photocells and that there are no obstacles in the area of operation of the operator • 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) or any control devices away from children as well, to prevent the operator from being activated accidentally . The operator is not designed to be used by persons (including children) whose physical, sensorial or mental capacities are limited, or who are lacking in experience or knowledge, unless said persons can be supervised or given instructions regarding using the operator by a person responsible for their safety . 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. To check that the photocells work, pass an object in front of them during closing. If the operator reverses the direction of movement or comes to a halt, the photocells work correctly. This is the only maintenance operation that must be carried out while the operator is live. Ensure that the glass on the photocells is kept clean (use a cloth slightly moistened with water; do not use solvents or any other chemicals as these could damage the devices) • 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 and before any other operation, to prevent dangerous situations. Read the instructions • If the power cable is damaged, it must be replaced by the manufacturer or the technical assistance service or by a person with a similar qualification so as to prevent any risks • It is STRICTLY FORBIDDEN for users to perform OPERATIONS THEY ARE NOT EXPLICITLY REQUIRED AND ASKED to do in the manuals. For repairs, adjustments and extraordinary maintenance, CONTACT THE SPECIALIST TECHNICAL SERVICE CENTRE • 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 'hold-to-run' 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 or performing maintenance.



Danger of crushing feet



Danger of hand crushing



Danger - live parts



No transit during the manoeuvre

p. 2 - Manual code: 119BV85 ver. 2 04/2014 © CAME cancelli automatici s.p.a. - The data and information in this manual may be changed at any time and without obligation on the part of Came Cancelli Automatici s.p.a. to notify said changes

#### IMPORTANT SAFETY INSTALLATION INSTRUCTIONS

# WARNING: IMPROPER INSTALLATION MAY RESULT IN SERIOUS HARM. PLEASE FOLLOW ALL INSTALLATION INSTRUCTIONS THIS MANUAL IS ONLY INTENDED FOR PROFESSIONAL INSTALLERS OR OTHER COMPETENT INDIVIDUALS

# Legend of symbols



This symbol means parts must be read carefully.



This symbol means the parts describe safety issues.



This symbol tells you which notes to notify the user.

### 2 Conditions of use

#### 2.1 Intended use

The BX-64/64B gearmotor is engineered to power sliding gates in homes; the BX-68/68B, however, may be also used in apartment blocks.

Any installation and use other than that specified in this manual is forbidden.

#### 2.2 Limitations to use

BX-64/64B: maximum gate weight is 400 kg.

BX-68/68B: maximum gate weight is 800 kg; for apartment blocks is 600 kg.

### 3 Reference standards

Came Cancelli Automatici employs an ISO 9001 certified quality management system and an ISO 14001 environmental management system. Came entirely engineers and manufactures in Italy.

This product is compliant with: see statement of compliance.

# 4 Description

#### 4.1 Operator

This product is engineered and built by CAME CANCELLI AUTOMATICI S.p.A. in compliance with current applicable safety laws. The operator is built partly with cast aluminium inside of which operates an irreversible, electro-mechanical gearmotor, and partly with an ABS plastic coating inside of which there is an electronic card with a transformer .

Important! Make sure that the command and safety equipment and accessories are CAME originals; this ensures that the system is easily operated and maintained.

#### 4. 2 Technical data

#### BX-64 / BX-64B GEARMOTOR

Power supply to control panel: 230V A.C. 50/60 Hz Motor power supply: 230V A.C. 50/60 Hz

Maximum draw: 2.6A Power: 200W

Maximum Torque: 24 Nm Reduction ratio: 1/33 Thrust: 300=N

Maximum speed: 10 m/min

Duty cycle: 30% Protection rating: IP54 Insulation class: I Weight: 15 kg Condenser: 20 µF

Motor heat protection: 150°C



#### BX-68 GEARMOTOR / BX-68B

Power supply to control panel: 230V A.C. 50/60 Hz

Motor power supply: 230V A.C. 50/60 Hz

Power draw: 2.4A Power: 300 W

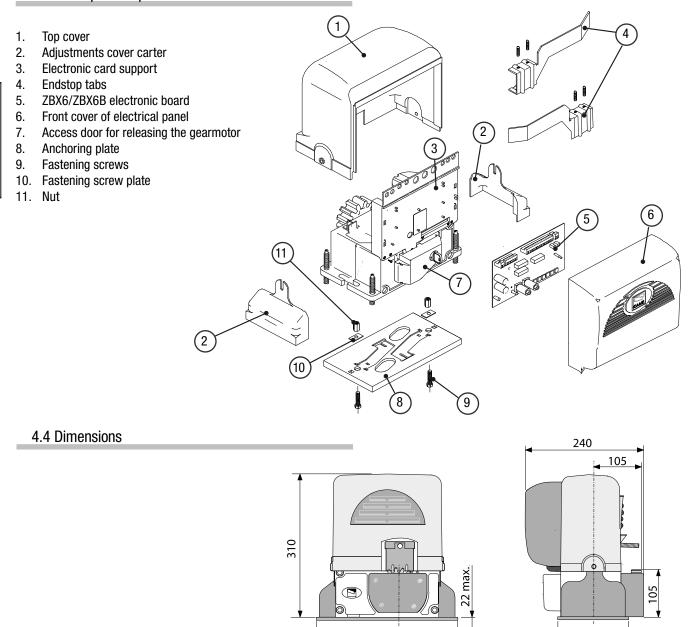
Maximum Torque: 32 Nm Reduction ratio: 1/33 Thrust: 800=N

Maximum speed: 10 m/min

Duty cycle: 30% Protection rating: IP54 Insulation class: I Weight: 15 kg

Condenser: 20 µF

Motor heat protection: 150°C



# **5 Installation**



Installation must be carried by skilled, qualified technicians in accordance with current regulations.

#### 5. 1 Preliminary checks



A Before beginning to install, the following is necessary:

- Make sure the gate is stable, and that the castor-wheels are properly greased and in good working order.
- The floor guide must be well-fastened to the ground, completely on the surface and free of any irregularities that may obstruct the gate movement.

300

- The upper guide-sleds must not cause friction.
- Make sure there are opening and closing strike plates.
- Make sure that the point where the gearmotor is fastened is in an impact-free zone, and that the surface is solid;

Set\_up a suitable omnipolar cut-off device, with distances greater than 3 mm between contacts, wit sectioned power source;

- 🖶 Check that any connections inside the container (made for continuity purposes of the protective circuit) be fitted with extra insulation compared to other internal conductive parts;
- Set up proper conduits and electric cable raceways, making sure these are protected from any mechanical damage.

170









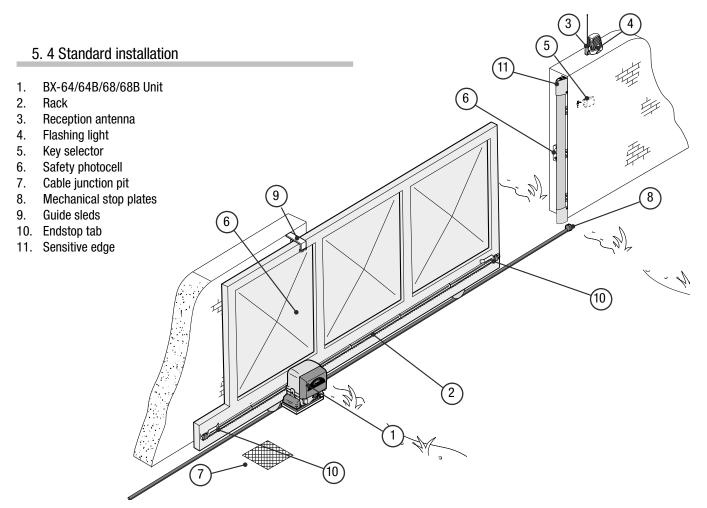


# 5.3 Cable types and minimum thickness

Connection for	Cable type	Cable length 1 < 10 m	Cable length 10 < 20 m	Cable length 20 < 30 m
230 V power source to control panel		3G x 1.5 mm <sup>2</sup>	3G x 2.5 mm <sup>2</sup>	3G x 4 mm <sup>2</sup>
Flashing light	FROR CEI	2 x 0.5 mm <sup>2</sup>	2 x 1 mm <sup>2</sup>	2 x 1.5 mm <sup>2</sup>
Photocell transmitters	20-22	2 x 0.5 mm <sup>2</sup>	2 x 0.5 mm <sup>2</sup>	2 x 0.5 mm <sup>2</sup>
Photocell receivers	CEI EN	4 x 0.5 mm <sup>2</sup>	4 x 0.5 mm <sup>2</sup>	4 x 0.5 mm <sup>2</sup>
Accessories power source	50267-2-1	2 x 0.5 mm <sup>2</sup>	2 x 0.5 mm <sup>2</sup>	2 x 1 mm <sup>2</sup>
Safety and command devices		2 x 0,5 mm <sup>2</sup>	2 x 0.5 mm <sup>2</sup>	2 x 0.5 mm <sup>2</sup>
Antenna connection	RG58		max. 10 m	

N.B. If cables are of a different length than that shown in the table, determine the cable section based on the actual draw and the number of connected devices and according the what is set forth in the CEI EN 60204-1 code of regulations.

For connections featuring several loads on the same line (i.e. sequential ones), the dimensions shown on the table must be reconsidered according to the total draw and actual distances. When connecting products not featured in this manual, only refer to the literature accompanying such products.



### 5.5 Fastening the plate and fitting the motor assembly

The following illustrations are just examples, in that the space for securing the operator and accessories depends on the overall measurements it varies depending on the overall measurements. It is up to the installer to choose the most suited solution.

- Dig a pit at the end of the gate (see measurement quotas in drawing).

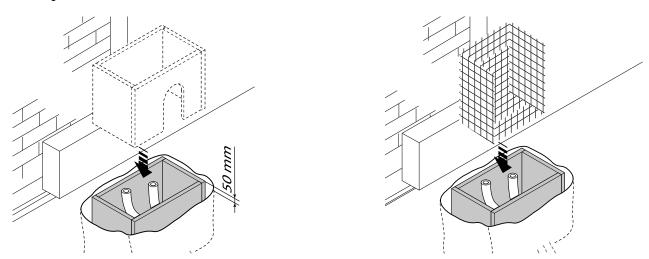
Set up the necessary corrugated tubing for connections coming from the junction pit.

N.B. the number of tubes depends on the type of installation and accessories used.

Tubes for electrical cables to pass through

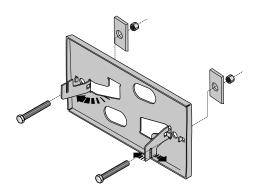
- Prepare a foundation box that is larger than the anchoring plate and fit it into the foundation box. The wooden form must protrude from the ground by at least 50 cm.

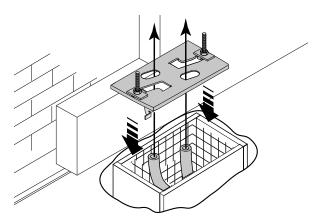
Insert an iron grille into the wooden form to reinforce the concrete.



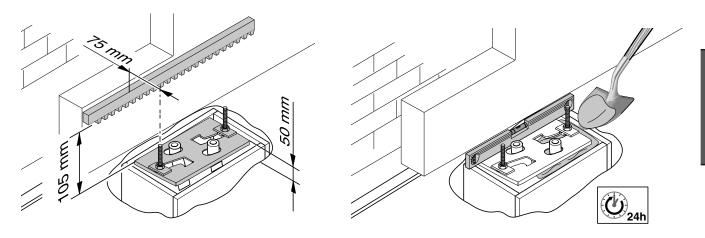
- Set up the anchoring plate, by threading the bolts and tightening them with the supplied nuts and washers. Extract the pre-shaped brackets, using a screwdriver or pliers.

Position the plate above the grille. Warning! The tubes need to be threaded through the pre-set holes.

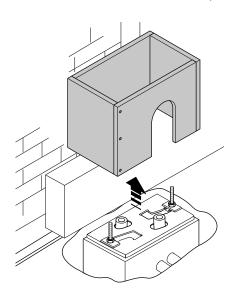


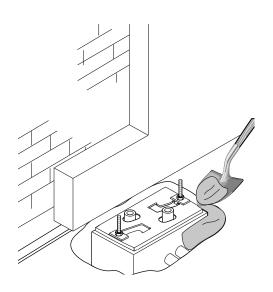


- For positioning the plate with respect to the rack, see and follow the instructions in the drawing. Fill the wooden form with concrete and wait at least 24 hrs for it to solidify.



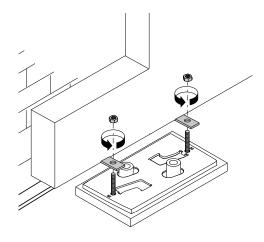
- Remove the wooden frame, use earth to fill the pit around the cement block.

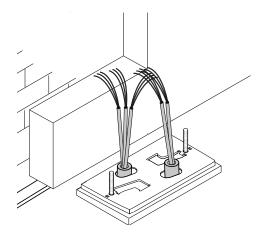




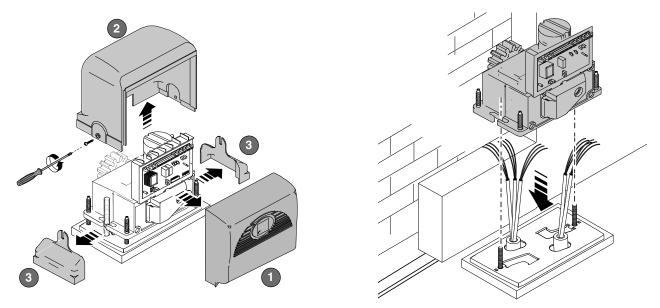
- Unscrew the washers and nuts from the bolts. The anchoring plate must be free of any debris, perfectly level and with the bolt threads completely emerged from the surface.

Insert the electrical cables into the tubes until they protrude by about 400 mm .

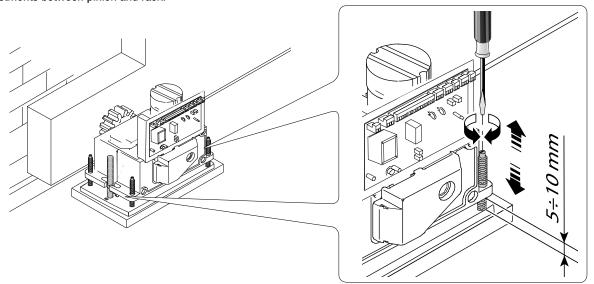




- Remove the cover of the gearmotor by turning the laterl screws. Position the gearmotor onto the plate. **Warning!**The electrical cables must pass through the inside of the gearmotor box.



- Lift the gearmotor from the anchoring base by between 5 and 10 mm by turning the threaded-steel feet to allow room any later adjustments between pinion and rack.



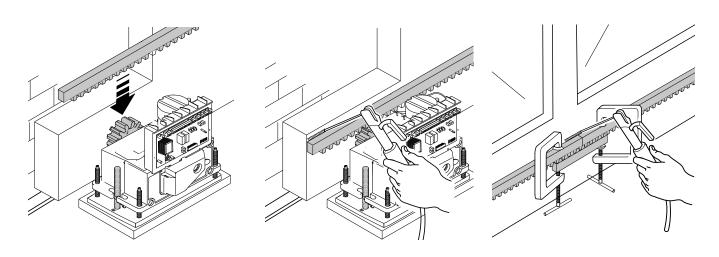
- The following illustrations for fastening the rack, are just applicative examples. It is up to the installer to choose the most suitable solution.

Release the gearmotor (see paragraph on manual release). Rest the rack onto the gearmotor pinion.

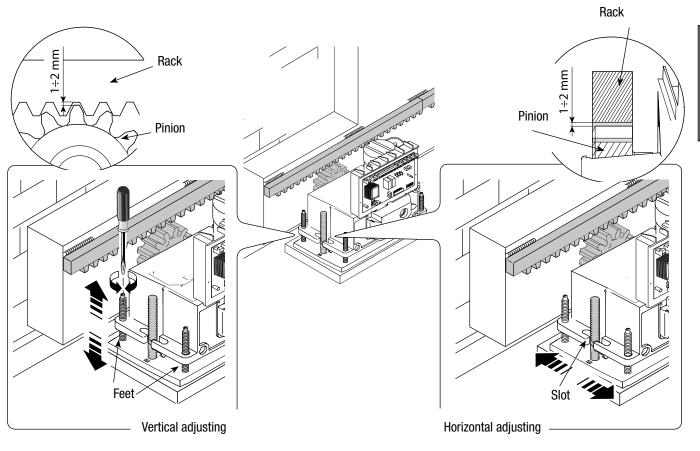
Either weld or fasten the rack along the entire length.

To assemble the rack modules, use a spare lenght of rack and rest it under the joining point and then lock it into place using two clamps.

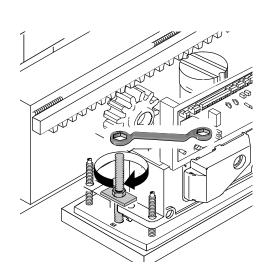
Note: If the rack is already installed, proceed directly with adjusting the joining pinion-rack distance.

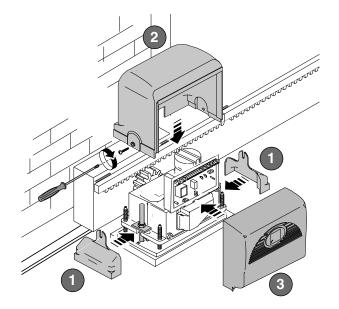


- Manually open and close the gate and adjust the distance of the pinion-rack coupling by acting on the threaded-steel feet (vertical adjustments) and the slots (horizontal adjustments). This helps prevent the weight of the gate from bearing down on the operator.



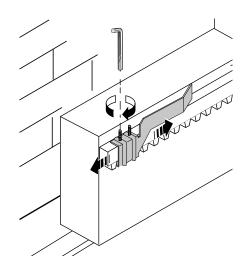
Once adjustments are complete, fasten the assembly with nuts an bolts. Add and fasten the cover after adjustmentsand electronic settings on card are both complete.

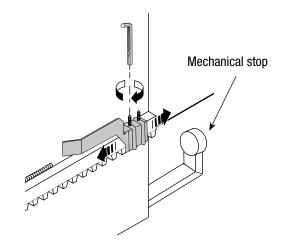




Position the endstop tabs onto the rack and fasten them with the 3 mm Allen wrench key. Their position, marks the limit of the gate runs

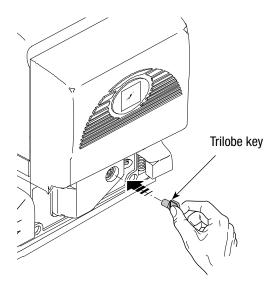
Note: avoid that the gate strikes the mechanical stop, whether when closing or opening.

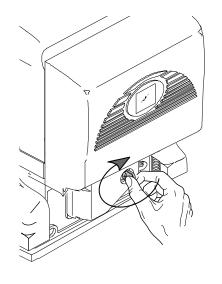




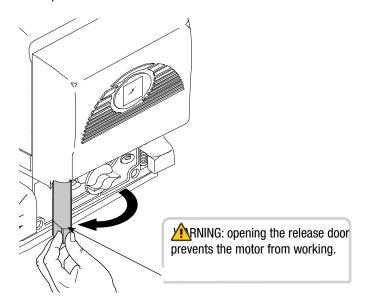
# 5.7 Manually releasing the gearmotor

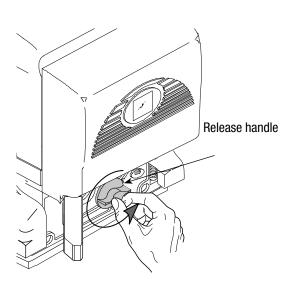
- Insert the key into the lock and turn it clockwise,  $\dots$ 





... open the inspection door and turn the release handle counter-clockwise.





# 6 - Electronic card

#### 6.1 Technical sheet description

The electronic board is powered by 230V A.C., on terminals L1-L2, with a max frequency of 50/60Hz.

The command devices and accessories are powered by 24V. Warning!The accessories must not exceed 20 W overall.

The photocells may be set up for re-opening during closing (2-C1) or for total stop.

All connections are protected by quick fuses, see table.

The card provides and controls the following functions:

- automatic closing after an opening command;

The available command modes are: opening / closing (BX-64/BX-68);

- opening / stop / closing / stop (BX-68B);
- -opening/closing with maintained action;
- total stop.

Special trimmers regulate:

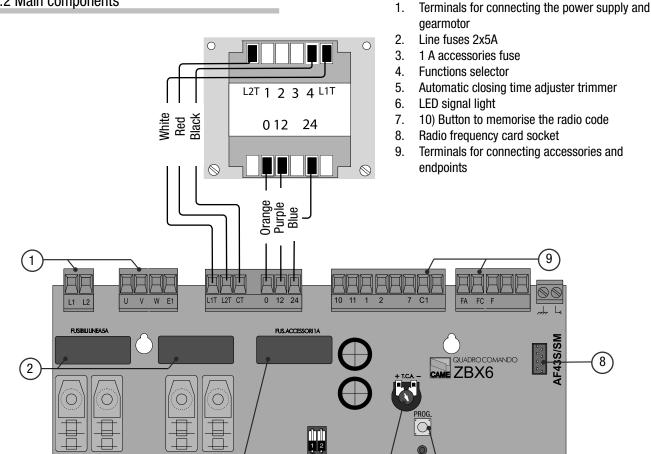
- the working time for automatic closing;

MARNING: before acting inside the equipment, cut the main power supply and disconnect the batteries (if they are connected).

TECHNICAL I	DATA
Power supply voltage	230 V - 50/60 Hz
Maximum allowed power load	200 W (BX64-BX64B) 300 W (BX68-BX68B)
Power draw when idle	2.6A (BX64-BX64B) 2.4A (BX68-BX68B)
maximum power for 24 V accessories	20W

FUSE TABI	LE
to protect:	fuses for:
Electronic board (line)	5 A-F
Accessories	1 A-F

# 8.2 Main components

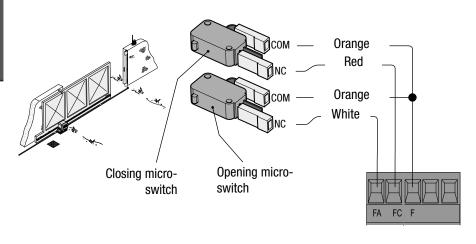


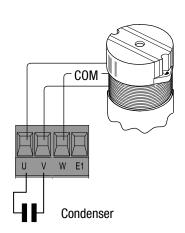
3

6

p. 11 - Manual code: 119BV85 ver. 12 04/2014 © 09/2010 © CAME cancelli automatici s.p.a. - The data and information in this manual may be changed at any time and without obligation on the part of Came Cancelli Automatici S.p.a. to notify said changes.

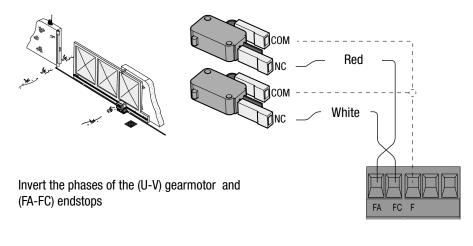
### Description of electrical connections which are already established for left-hadn isntallation

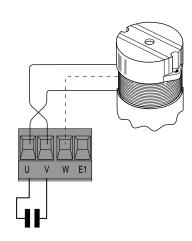




230 V AC motor

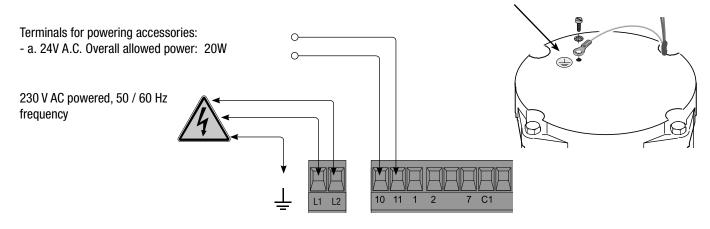
Changes to electrical connections for installing on the right-hand side.





Power source and accessories

Eyelet terminal with screw and washer for ground connection



p. 12 - Manual code: 1198V85 ver. 2 04/2014 © CAME cancelli automatici s.p.a. - The data and information in this manual may be changed at any time and without obligation on the part of Came Cancelli Automatici S.p.a. to notify said changes.

#### Gate close indicator light

Contact rated for: 24 V - 3 W Max.). Signals the closed gate position. Switches off when the gate is open.

#### Gate open indicator-light

Contact rated for: 24 V - 3 W Max.). Signals the position of the open gate. It switches off when the gate is closed.

### Command devices

Stop button (N.C. contact.) .

- Button to stop gate with exclusion of automatic closing cycle. to resume movement pres command button or trasmitter key.

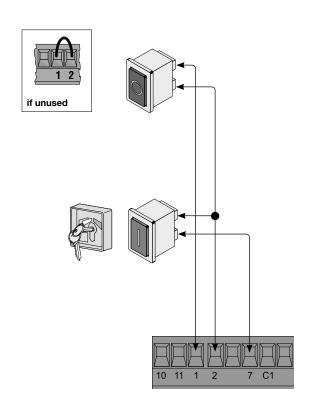
N.B.: if contact is unused, short circuit on terminals 1-2.

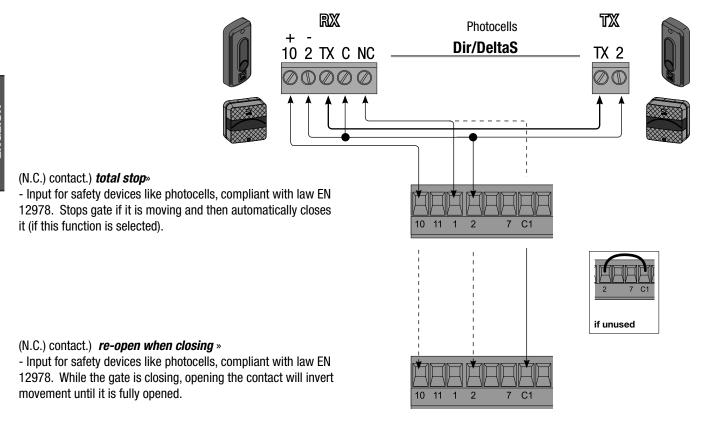
 $\mathbf{BX-64/BX-68} = \mathbf{Key}$  switch selector and/or command button OPENS-CLOSES (NO contact).

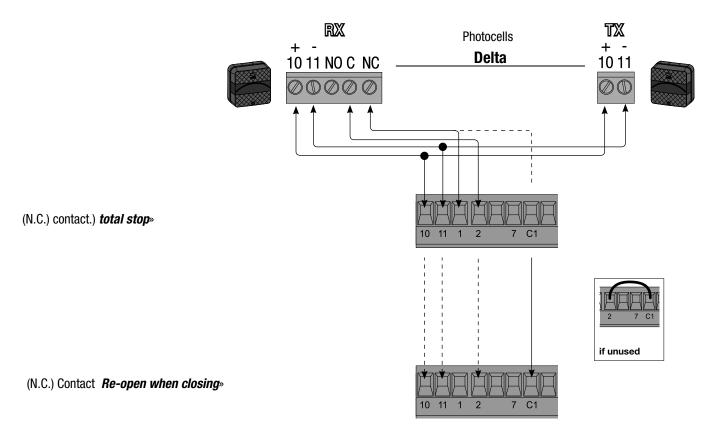
- Gate opening and closing commands; during movement, any new commands (even from transmitters) invert the direction

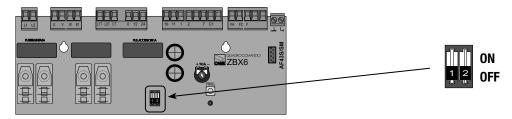
**BX-64B/BX-68B** = Key switch selector and/or command button OPEN-STOP-CLOSE-STOP (contatto NO).

- Gate opening and closing commands; during movement, any new commands (even from tramistters) stop the gate and the next command inverts the direction of travel.



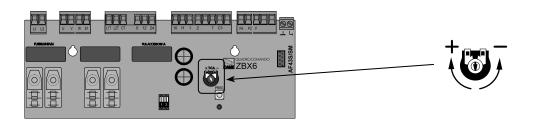






- 1 ON Maintained action The gate works only by keeping pressedan opening or closing button on terminals2-7 (excludes functioning with radio command).
- 2 ON Automatic closing The automatic closing timer activates at the closing endpoint. The preset time is adjustable, and is anyway subordinated by any safety accessories and is excluded after a total "stop" action or when the power goes out.

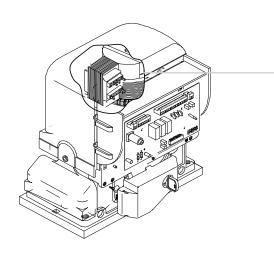
# 6.5 Adjusting the trimmers

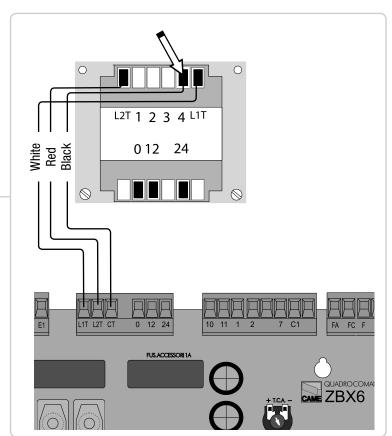


**Trimmer T.C.A.** = Automatic closing time. Adjusts opening waiting time; Once the time is elapsed, a closing run is automatically activated. The waiting time can be adjusted to between 1 and 120 seconds.

### 6.8 Motor torque limiter

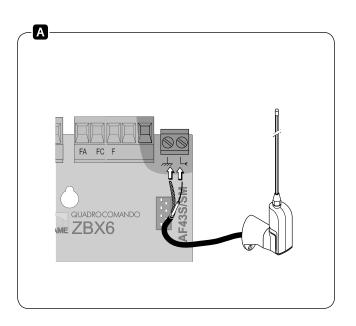
To change motor torque, move the faston (the one with the black wire) to one of the four settings: 1 min  $\div$  4 max.

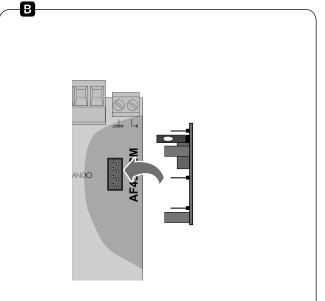




# 7 Activating the radio control

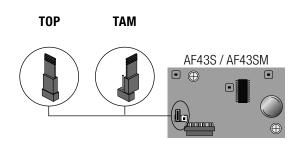
- A Connect the antenna's RG58 cable.
- ⚠ Cut off the main power supply, and remove any batteries.
- **B** Fit the AF board onto the electronic board.
- The electronic board recognizes the AF board only when the operator is powered up again.
- **C** Keep the CH1 button on the electronic board pressed: the warning LED flashes.
- Press any button on the transmitter to send the code: the LED will stay on to let you know that the code has been stored. Repeat for any other transmitter buttons.

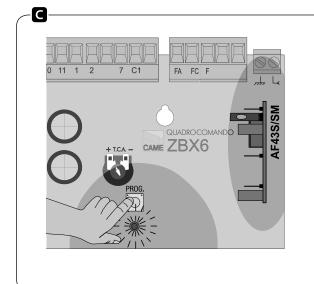


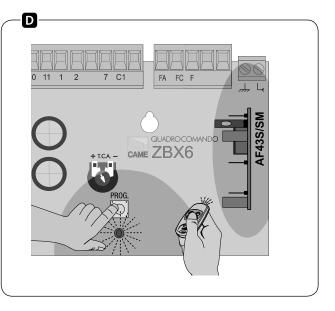


Only for the AF43S / AF43SM radi-frequency cards.

- position jumper as shown depending on the series of transmitters you are using.







# 8 Safety instructions

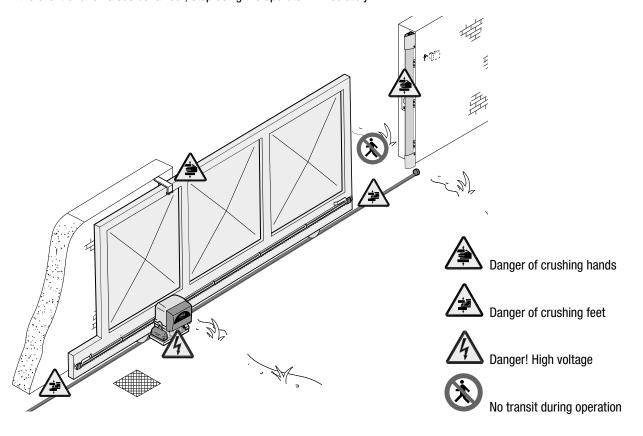


Important safety instructions

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.



### 9 Maintenance

#### 9.1 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.

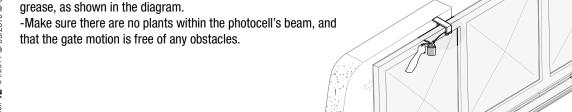
We suggest checking the state of lubrication and tightness of the anchoring screws on the operator.

-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.

-In the event of any strange vibrations or squeaking, lubricate the joints with

- -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.





Date	Notes	Signature

# 9.2 Trouble shooting

MALFUNCTIONS	POSSIBLE CAUSES	CHECK AND REMEDIES
The gate will not open nor close	<ul> <li>There is no power</li> <li>The gearmotor is in release mode and the release door is open</li> <li>The transmitter's batteries are run down</li> <li>The transmitter is broken</li> <li>The stop button is either stuck or broken</li> <li>The opening/closing button or the key selector are stuck</li> <li>Fhotocells in partial stop mode</li> </ul>	<ul> <li>Check that the power is up</li> <li>Call assistance</li> <li>Replace batteries</li> <li>Call assistance</li> <li>Call assistance</li> <li>Call assistance</li> <li>Call assistance</li> <li>Call assistance</li> </ul>
The gate opens but will not close	<ul><li>The photocells are engaged</li><li>Sensitive edge triggered</li></ul>	<ul> <li>Check that photocells are clean and in good working order</li> <li>Call assistance</li> </ul>
The gate closes but will not open	Sensitive edge triggered	Call assistance
The flasher does not work	The bulb is burnt	Call assistance

# 9.3 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.

Job performed  Installer's stamp	Date of job Technician's signature Requester's signature  Operator name
	Technician's signature Requester's signature
	Requester's signature
Installer's stamp	Operator name
Installer's stamp	Operator name
<del>-</del>	
	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
Installer's stamp	Operator name Date of job
Installer's stamp	Operator name Date of job Technician's signature

# 10 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!**

# 11 Declaration of conformity

Declaration C € - Came Cancelli Automatici S.p.A. declares that this device complies with the essential requirements and other relevant provisions established in Directives 2006/42/EC and 2014/30/UE.

A true copy of the declaration of conformity is available upon request.



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:



