



Compliant with UL 325 STD  
and CSA STD C22.2 No. 247  
for both the US & Canada

## AUTOMATION FOR STREET BARRIERS

**GARD4 SERIES**



## INSTALLATION MANUAL G4140ZU - G4140IZU



## IMPORTANT UL-325 SAFETY INSTRUCTIONS

### G4140ZU / G4140IZU



It is extremely important that all parties involved in the installation and operation of the road barrier system read and understand the following warning instructions.

#### **WARNING – To reduce the risk of injury or death:**

- 1. READ AND FOLLOW ALL INSTRUCTIONS.**
- 2. Never let children operate or play with gate controls. Keep the remote control away from children.**
- 3. Always keep people and objects away from the gate. NO ONE SHOULD CROSS THE PATH OF THE MOVING GATE.**
- 4. Test the road barrier monthly. The gate MUST reverse on contact with a rigid object or stop when an object activates the non-contact sensors. After adjusting the force or the limit of travel, re-test the road barrier. Failure to adjust and re-test the road barrier properly can increase the risk of injury or death.**
- 5. Use the emergency release only when the road barrier is not moving.**
- 6. KEEP THE BARRIER PROPERLY MAINTAINED. Read the installation manual and have a qualified service person make repairs to the road barrier hardware.**
- 7. The entrance is for vehicles only. Pedestrians must use separate entrance.**
- 8. SAVE THESE INSTRUCTIONS.**

#### **INSTRUCTIONS REGARDING INTENDED INSTALLATION OF THE ROAD BARRIER.**

- 1. The road barrier is intended for installation only on traffic roads used for vehicles. Pedestrians must be supplied with a separate access opening.**
- 2. The road barrier must be properly installed and work freely in both directions prior to the installation of the road barrier. Do not over-tighten the road barrier or pressure relief valve to compensate for a damaged road barrier.**
- 3. A qualified professional installer should install the road barrier system, its accessories by following these minimum procedures:**
  - a. Power should be disconnected before installing or servicing a road barrier**
  - b. All electrical wiring should comply with all local building and electrical codes**
  - c. All entrapment zones should be covered**
  - d. All installation operating and safety manuals should be left with the owner**

**CAME AMERICAS AUTOMATION, LLC**  
**MANUFACTURER'S LIMITED 3-YEAR WARRANTY**

Verification of the warranty period requires copies of receipts or other proof of purchase.  
Warranty cannot be honored without proof of purchase. Please retain these records.

Came Americas Automation, LLC ("CAME®") products are warranted by CAME® against defects in materials and manufacturer workmanship for a period of thirty-six (36) months from the date of purchase, provided the recommended installation manual and procedure have been followed. CAME®'s sole obligation under this warranty is limited to repairing or replacing, at our option, any parts which shall be determined by CAME® to be defective, and is conditioned upon CAME® receiving notice of any such defect within the warranty period. Claims under this warranty may only be made by a purchaser of CAME® products (the "Customer").

CAME® reserves the right to make the final determination as to whether there is a defect in the materials and/or workmanship, and whether or not a product is within the warranty period. CAME® is not responsible for any damages or other costs caused by, or which may result from installation, handling, non-recommended operation, product abuse, or modifications not authorized by CAME® or for any damages which may arise out of the use of CAME® products.

CAME® sells its products through authorized distributors. This warranty on CAME® products is NOT VALID if the products have been purchased from an unauthorized distributor, reseller, online E-tailer ( e.g., E-bay®), or if a product serial number has been altered, removed, or replaced in any way. To verify that you are buying from an authorized CAME distributor or reseller please call +1 305-433-3307.

In the case of product failure due to defective material or manufacturer workmanship within the thirty-six (36) months warranty period, the product will be repaired or replaced (at the manufacturer's option) at no charge to the Customer, if returned, freight prepaid, to CAME AMERICAS AUTOMATION, LLC, 11345 NW 122nd Street Medley, Florida 33178.

**IMPORTANT:** Obtain a Return Goods Authorization (RGA) number before returning item(s) to our facilities by submitting a warranty claim and request for RGA with our customer service department. Products shipped without an RGA number will not be accepted. Replacements or repaired parts are covered by this warranty for the remainder of the thirty-six (36) month warranty for the original product or six (6) months from the date of repair or replacement, whichever is greater. CAME® will pay shipping costs at the ground transport rate for the return to owner of item(s) repaired under warranty.

The manufacturer will not be responsible for any charges or damages incurred in the removal of the defective parts for repair, or the reinstallation of these parts after repair. Use of any (00021996.doc V.2) components that are not CAME® specified ( e.g. batteries, light bulbs, drive belts, chains or transformers) will void the warranty. This warranty shall be void if damage to the product(s) was due to improper installation or use, neglect, accident, use of non-CAME® specified or approved components or replacement parts, connection to an improper power source, tampering, or if damage was caused by lightning, strikes, power surges, wind, fire, flood, insects, or other natural agents or disasters.

**This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state (or jurisdiction to jurisdiction.) CAME's responsibility for malfunctions and defects in equipment is limited to repair and replacement as set forth in this warranty statement.**

**THE CUSTOMER ACKNOWLEDGES AND AGREES THAT THIS WARRANTY IS MADE EXPRESSLY IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES FOR THE PRODUCT(S), INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER EXPRESS OR IMPLIED WARRANTY ARISING OUT OF LAW, STATUTE, USAGE OF TRADE OR COURSE OF DEALINGS.**

**The warranty hereunder is limited in time to the term of the limited warranty period reflected in this limited warranty. No warranties, whether express or implied, will apply after the limited warranty period has expired. Some states do not allow limitations on the term of an implied warranty, so this limitation may not apply to you.**

CAME® DOES NOT ASSUME, AND SPECIFICALLY DISCLAIMS, ANY LIABILITY OR OBLIGATION WHATSOEVER IN THE SALE OF THE PRODUCT(S), INCLUDING ANY LIABILITY FOR CONSEQUENTIAL, INCIDENTAL, PUNITIVE OR SPECIAL DAMAGES TO YOU OR ANY OTHER PERSON OR ENTITY, INCLUDING, WITHOUT LIMITATION, ANY LIABILITY FOR THIRD-PARTY CLAIMS AGAINST YOU FOR DAMAGES. THE CUSTOMER ACKNOWLEDGES THAT THIS LIMITED WARRANTY PROVIDED IN LIEU OF ALL OTHER WARRANTIES AND CUSTOMER'S WAIVER OF SPECIAL, INCIDENTAL AND CONSEQUENTIAL DAMAGES IS COMMERCIALY NECESSARY AND REASONABLE, AN ESSENTIAL AND MATERIAL ELEMENT OF THIS TRANSACTION, AND UPON WHICH BOTH THE CUSTOMER AND CAME® HAVE RELIED AND HAVE HAD THE OPPORTUNITY TO NEGOTIATE.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. CAME®'s liability will be no more than the amount you paid for the product that is the subject of a claim. This is the maximum amount recoverable under this warranty. The limitations in this section shall apply whether or not the alleged breach or default is a breach of a fundamental or material condition or term, or a fundamental or material breach.

## CAME AUTOMATION GATES UL 325 CLASSES

CLASS	DESCRIPTION	DUTY CYCLE	G4140ZU/ G4140IZU
I	Residential Vehicular Gate Operator Typical use: Home, 1-4 apartment condominium. Limited public access.	Intensive	X
II	Commerical/ General Access Vehicular Gate Operator Typical use: Condominiums, hotels, parking lots. No general public access.	Intensive	X
III	Industrial/ Limited Access Vehicular Gate Operator Typical use: industrial location, Factory, Loading Dock. No general public access.	Intensive	X
IV	Restricted Access Vehicular Gate Operator Typical use: Security area with restricted access. No general public access.	Intensive	X

### Power Connection CAUTION



Be sure that the circuit breaker for the line input power is turned off before connecting the input power to the unit.

**Warning:** CAME SPA is not responsible for researching and complying with local building codes. Be sure to check these codes before installation.

The installer must use 14AWG conductors and ½" conduit for the power connection.

## “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”



## 1 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.

## 2 Destination and limits of use

### 2.1 Destination

The G4140ZU/G4140IZU automatic barrier was designed for use in private or public carparks, in residential areas or in highly trafficked areas.



The use of this product for purposes other than as described above and installation executed in a manner other than as instructed in this technical manual are prohibited.

### 2.2 Limits of use

Passage width of up to 12 ft with a 2 to 6 seconds aperture time.

## 3 Standard followed

Came Cancelli Automatici is ISO 9001:2000 and ISO 14001 Quality and Environmentally certified. Came entirely designs and manufactures its products in Italy. This product complies with the following standards: UL325, and CSA C22.2 NO.247

## 4 Description

### 4.1 Gearmotor

G4140ZU/G4140IZU was designed and manufactured by CAME CANCELLI AUTOMATICI S.p.A. and is compliant with safety regulations in force.

The cabinet is made of 2.5 mm painted galvanized steel or 2 mm AISI 304 satin-finish stainless steel. Inside the cabinet, the electromechanical gearmotor operates with a container for electric board and transformer. Built with a anti-shearing safety system, it includes a safety contact in the inspection hatch lock and in the emergency release lock.

There are two versions of the G4140ZU/G4140IZU model:

G4140ZU - painted galvanized steel automatic barrier with a 24V DC gearmotor with control panel

G4140IZU - satin-finish AISI 304 stainless steel automatic barrier with 24V DC gearmotor with control panel

The G4140ZU/G4140IZU automation system is supplied with the following accessories:

001 G03750 - L. 4m semioval aluminium bar, painted white, with slot cover and shock-resistant profile

001 G03752 - L. 4m oval aluminium bar, painted white, with slot cover

001 G03753 - Attachment flange for elliptical bar

001 G02040 - Ø 40 (yellow) balancing spring

001 G04060 - Ø 50 (green) balancing spring

001 G06080 - Ø 55 (red) balancing spring

002 LB38 - Board for the connection of three 12V-6Ah emergency batteries

The following accessories are optional to the G4140ZU/G4140IZU automation system:

001 G02801 - Flashing dome lamp

001 G02802 - Support for mounting the photoelectric cell (DIR) onto the cabinet (not applicable to barriers with bar and rack and/or mobile foot)

001 G03751 - Emergency battery housing support

001 G028401 - Luminous cord for movement signaling

001 G028402 - Luminous cord connecting cable

001 G02807 - Fixed barrier support

001 G02808 - Mobile barrier support

001 G02809 - Red reflector strips (package of 20)

001 G0465 - Painted aluminium rack in 2m modules

**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.

## 4.2 Technical information

### GEARMOTOR

Power supply: 120V A.C. 50/60Hz  
 Motor power supply: 24V D.C.  
 Max. absorption: 15A (24V)  
 Rated power: 300W  
 Max. torque: 600 Nm  
 Reduction ratio: 1/202

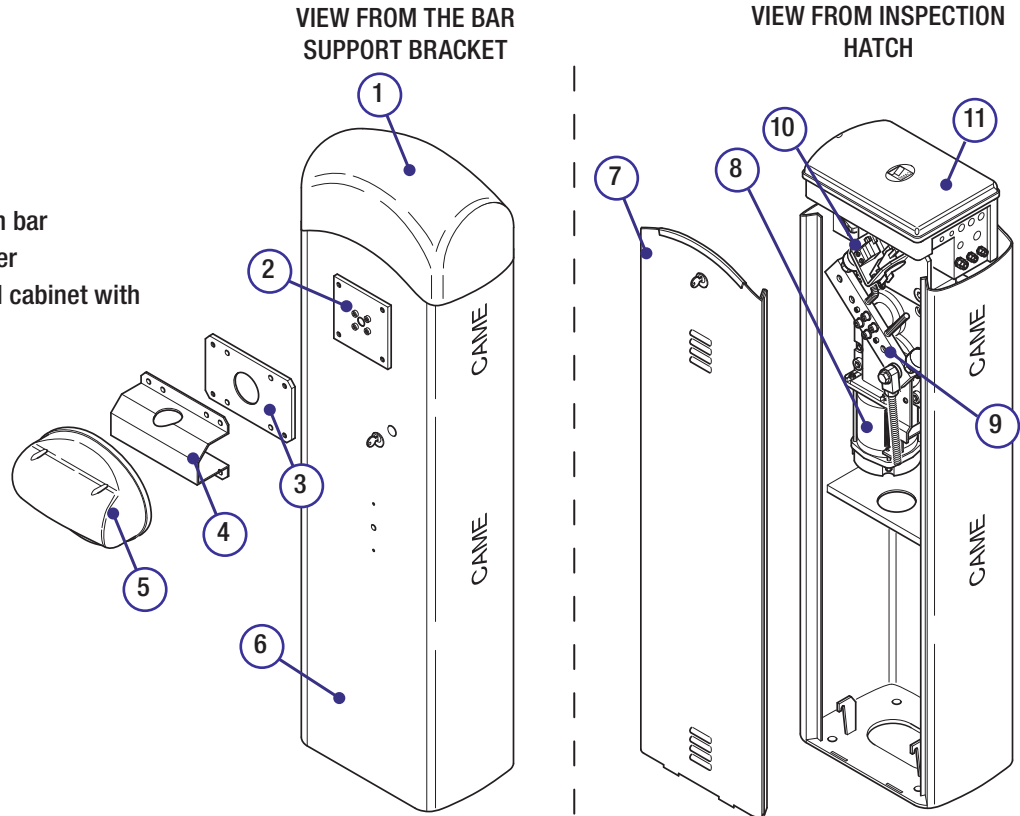
Opening time: 2 - 6 seconds  
 Operative intermittence: intensive operation  
 Protection level: IP54  
 Weight: 110 lb  
 Insulation class: I



## 4.3 Parts description

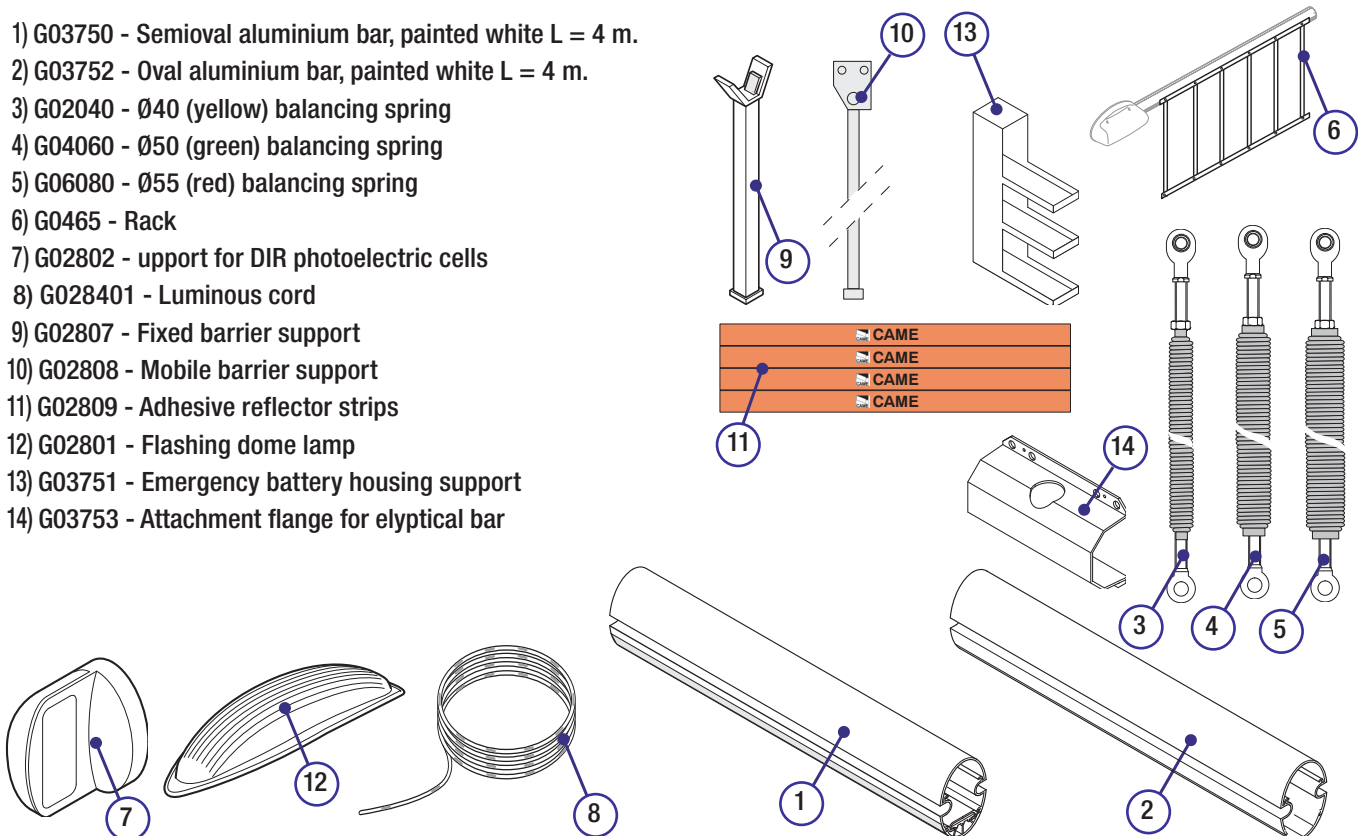
### AUTOMATION UNIT

- 1) Upper dome
- 2) Bar beam plate
- 3) Bar fitting intermediate plate
- 4) Cover for semioval aluminium bar
- 5) Anti-shearing protection cover
- 6) Sheet-steel or stainless steel cabinet with galvanized and painted finish
- 7) Inspection hatch
- 8) Gearmotor
- 9) Lever
- 10) End stop unit
- 11) ZL38 Control panel

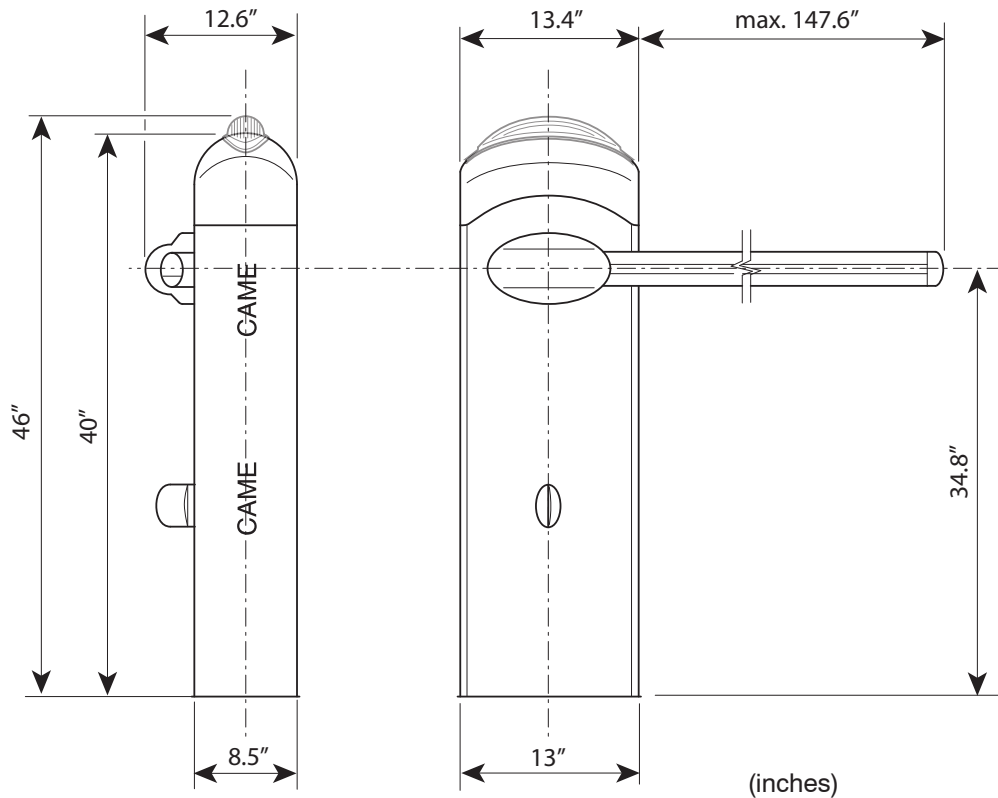


### ACCESSORIES

- 1) G03750 - Semioval aluminium bar, painted white L = 4 m.
- 2) G03752 - Oval aluminium bar, painted white L = 4 m.
- 3) G02040 - Ø40 (yellow) balancing spring
- 4) G04060 - Ø50 (green) balancing spring
- 5) G06080 - Ø55 (red) balancing spring
- 6) G0465 - Rack
- 7) G02802 - support for DIR photoelectric cells
- 8) G028401 - Luminous cord
- 9) G02807 - Fixed barrier support
- 10) G02808 - Mobile barrier support
- 11) G02809 - Adhesive reflector strips
- 12) G02801 - Flashing dome lamp
- 13) G03751 - Emergency battery housing support
- 14) G03753 - Attachment flange for elyptical bar



## 4.4 Size measurements




## 5 Installation

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

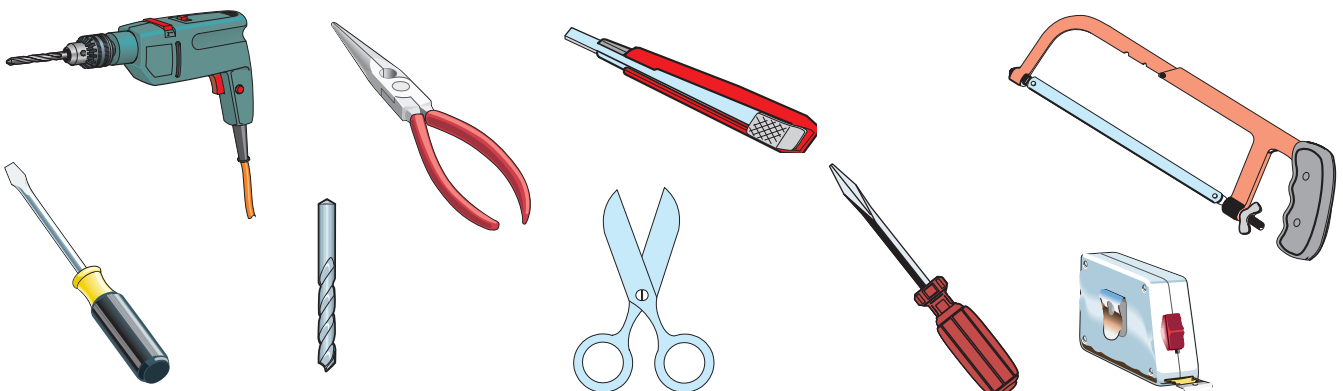
### 5.1 Preliminary checks

**!** Before proceeding with the installation, it is necessary to:

- Make sure the area selected for the mounting of the base and for the unit itself presents no hazards
- 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

### 5.2 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.



### 5.3 Cable list and minimum thickness

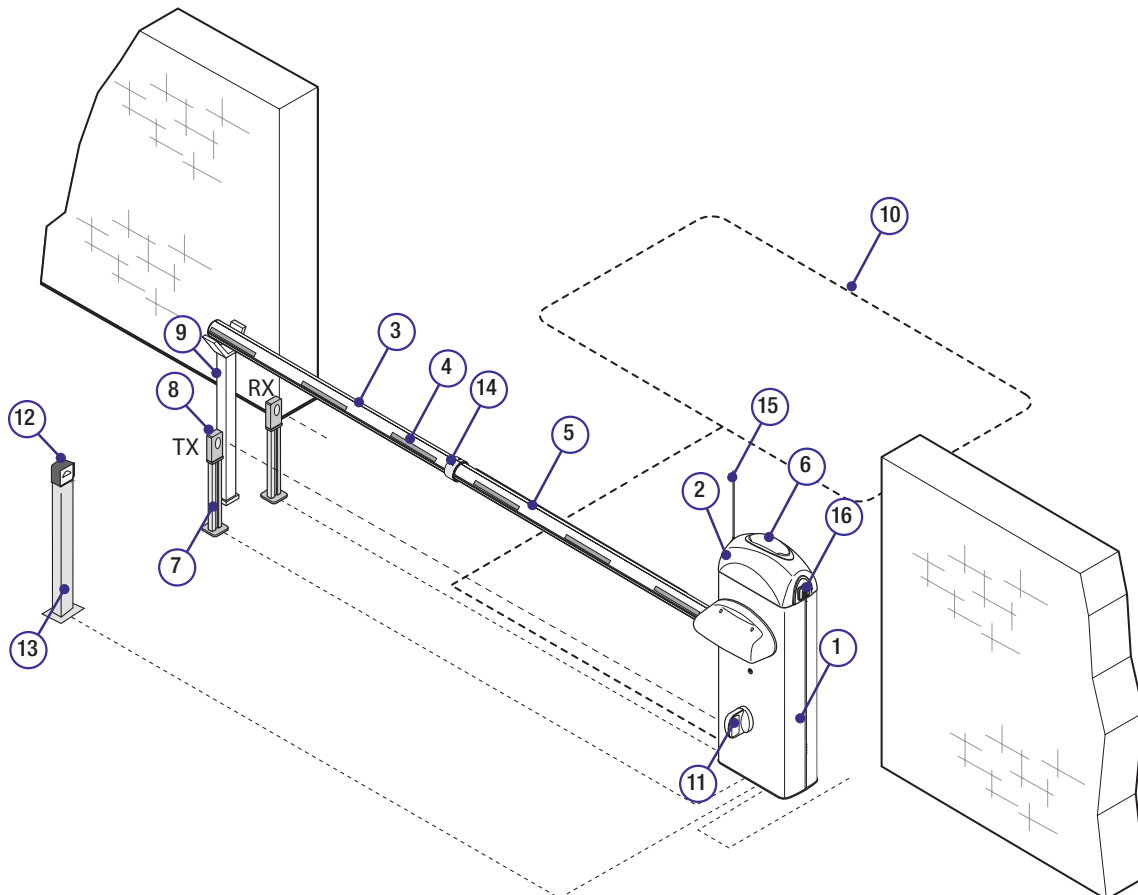
Connections	Type of cable	Length of cable 3 < 32ft	Length of cable 32 < 65ft	Length of cable 65 < 100ft
120V AC power supply	UL LISTED CABLE/WIRE	3G x 14 AWG	3G x 14 AWG	3G x 14 AWG
Photoelectric cells TX		2 x 20 AWG	2 x 20 AWG	2 x 20 AWG
Photoelectric cells RX		4 x 18 AWG	4 x 18 AWG	4 x 18 AWG
24V power supply accessory		2 x 20 AWG	2 x 20 AWG	2 x 20 AWG
Safety and control devices		2 x 18 AWG	2 x 18 AWG	2 x 18 AWG
Antenna connection	RG58	max. 32 ft		
Metallic mass detector	(see documents provided with product)			

Note: 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 local electrical code 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.

### 5.4 Standar installation

- |                                       |                                 |
|---------------------------------------|---------------------------------|
| 1 - G4140ZU unit                      | 8 - Photoelectric cells         |
| 2 - Control panel                     | 9 - Fixed barrier support       |
| 3 - Aluminium bar                     | 10 - Magnetic sensor            |
| 4 - Red phosphorescent strips         | 11 - Photoelectric cell support |
| 5 - Luminous cord                     | 12 - Magnetic reader            |
| 6 - Movement-indicating flashing lamp | 13 - Column for reader          |
| 7 - Column for photoelectric cells    |                                 |

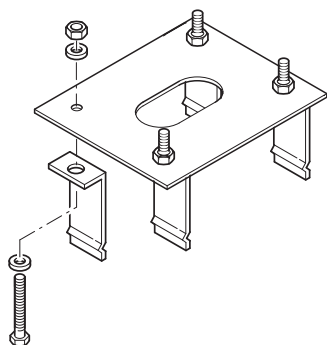
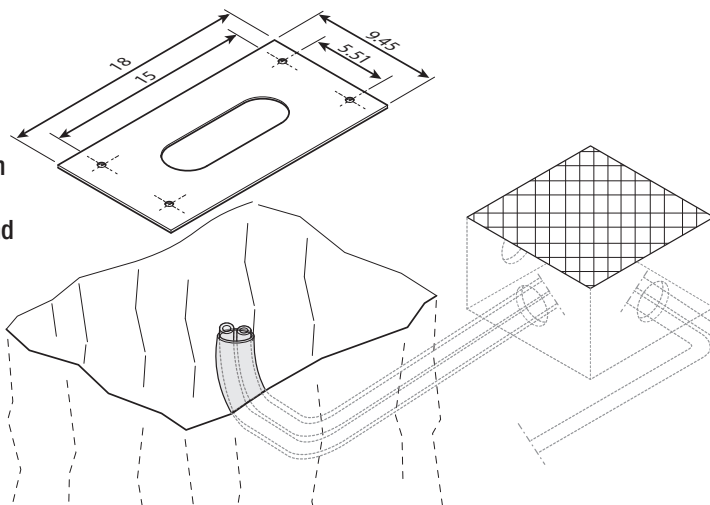




## 5.5 Fitting for unit base

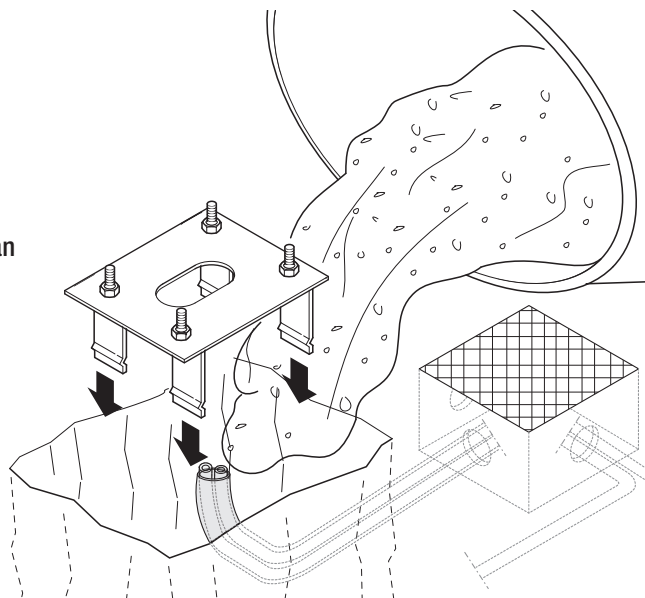
 The following applications are only examples, as the space required for unit installation and the accessories vary depending on dimensions and therefore it is up to the installer to select the best solution.

- Prepare a hole to house the fixing base and prepare sheath tubes from the branch pit for the connections.  
Note: The number of tubes depends on the type of system and the accessories you will hook up.



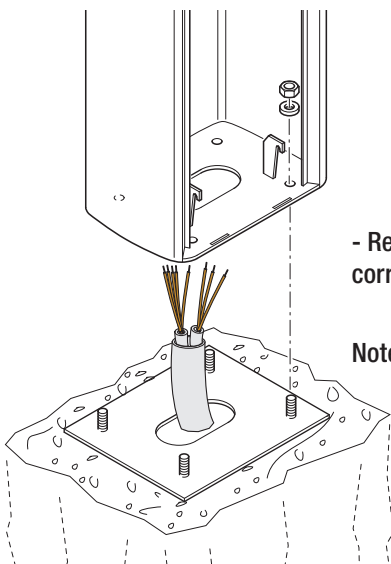
- Assemble the four anchoring clamps at the base.

- Fill the hole with concrete and immerge the clamps and the fixing base, paying particular attention to the sheath tube which must go through the hole at the base. The base must be perfectly level, clean and with the screw threads fully on the surface.



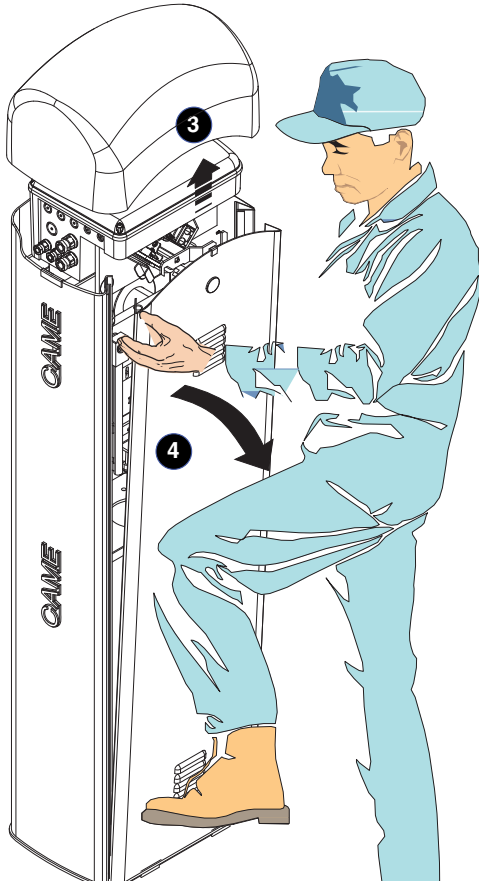
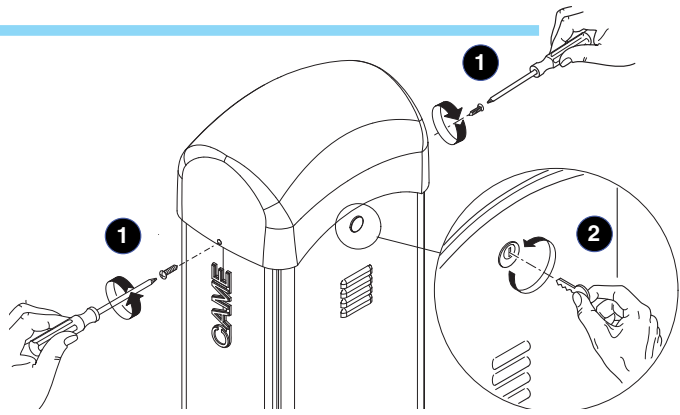
- Remove the nuts and washers from the threaded screws, position the cabinet on the base in correspondence with the 4 threaded screws and secure with the nuts and washers.

Note: We recommend installing the cabinet with the inspection hatch facing the internal area.



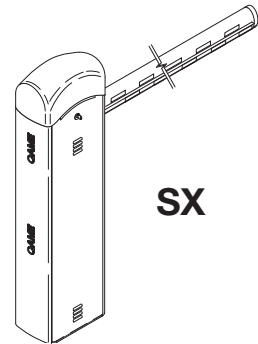
## 5.6 Installation of the Unit

- Remove the two screws from the top crown, insert the key into the slot and turn it counter-clockwise.



- Lift the top crown and remove the cabinet door.

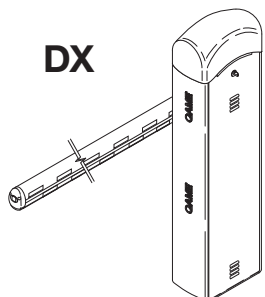
- The barrier is designed to be installed on the left of the gateway as seen from inside.



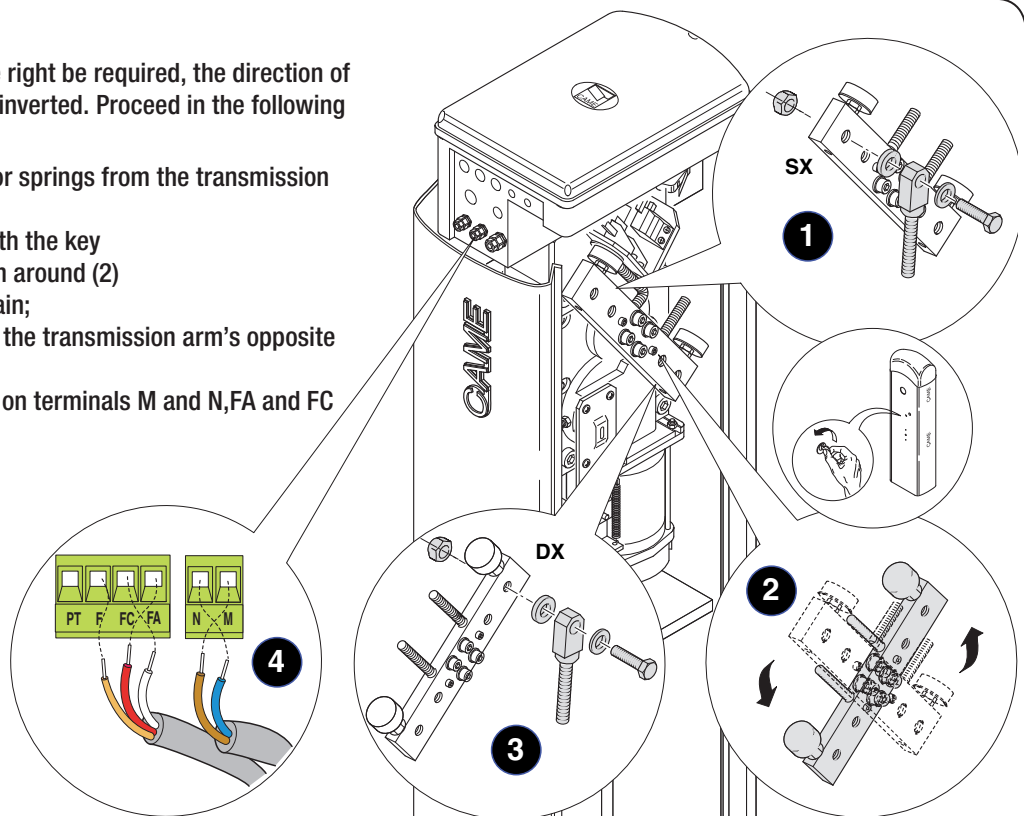
**SX**

- Should installation on the right be required, the direction of the bar's opening must be inverted. Proceed in the following manner:

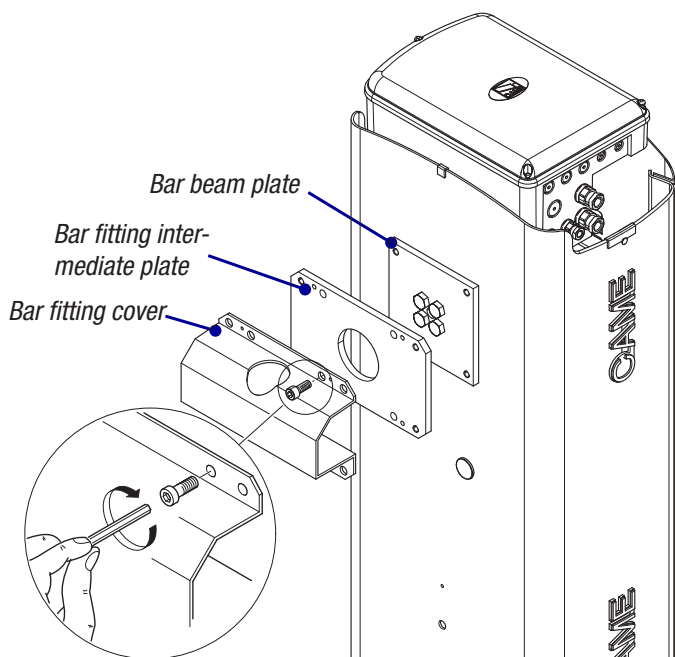
- remove the anchor bolt for springs from the transmission arm (1)
- release the gearmotor with the key
- turn the transmission arm around (2)
- secure the gearmotor again;
- secure the anchor bolt to the transmission arm's opposite hole (3)
- invert the end stop wires on terminals M and N, FA and FC (4).



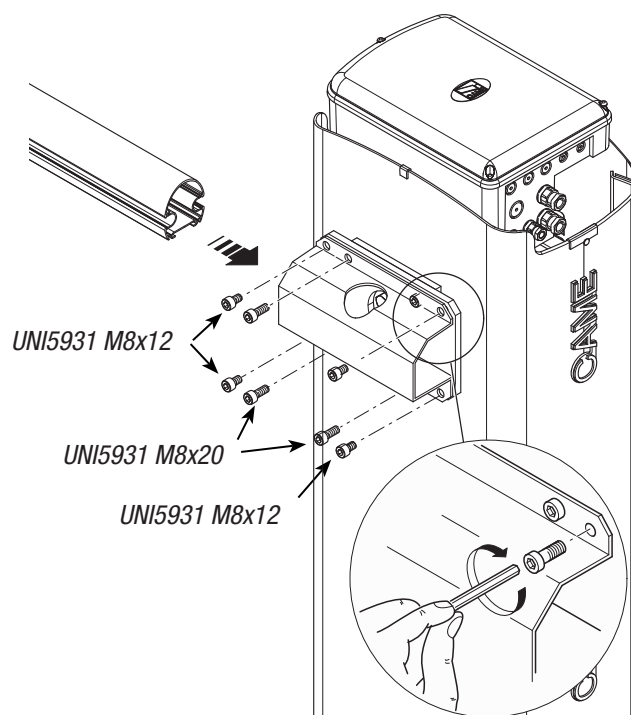
**DX**



- Position the middle plate between the fitting plate and the bar-fitting cover, and put in one UNI 5931 M8x20 screw without tightening it to facilitate bar assembly.

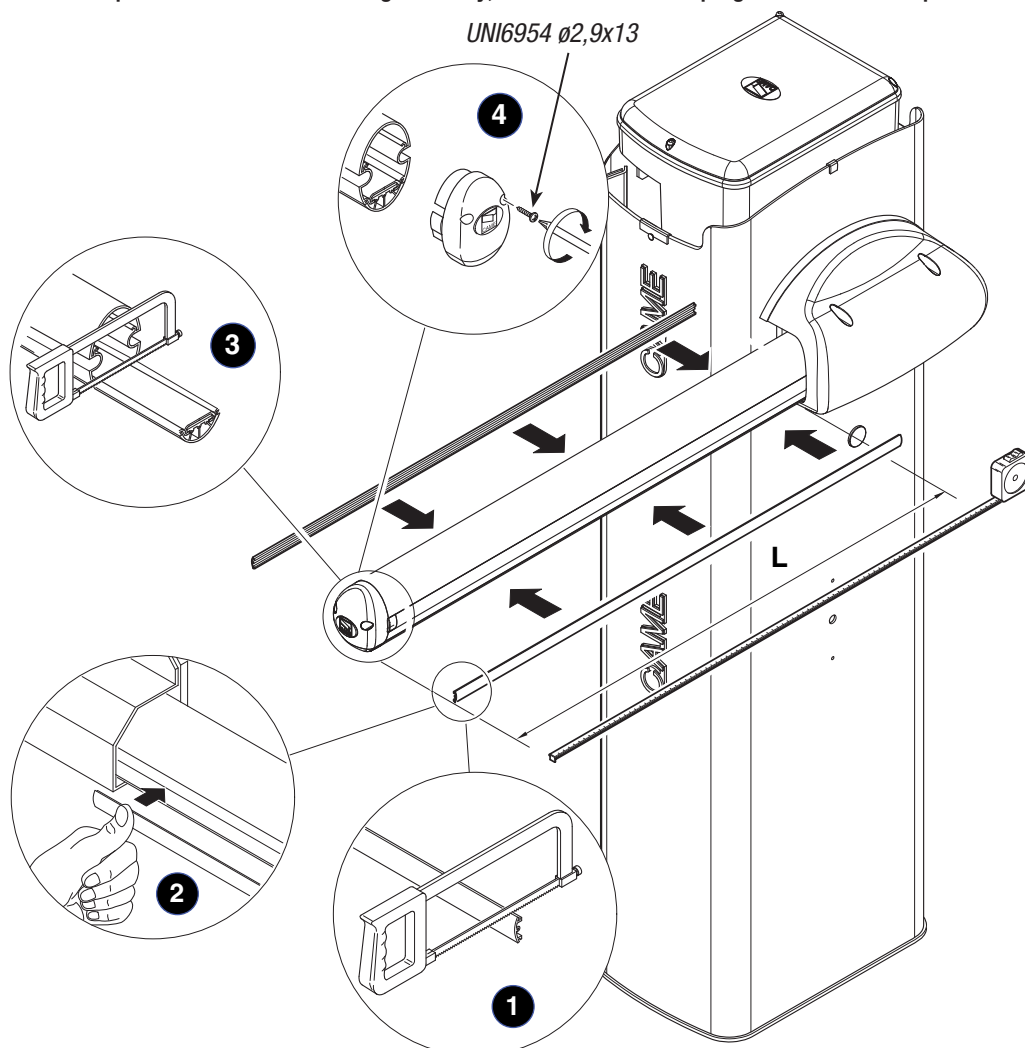


- Insert the bar in the fitting cover and secure it with UNI 5931 M8x20 and M8x12 screws.

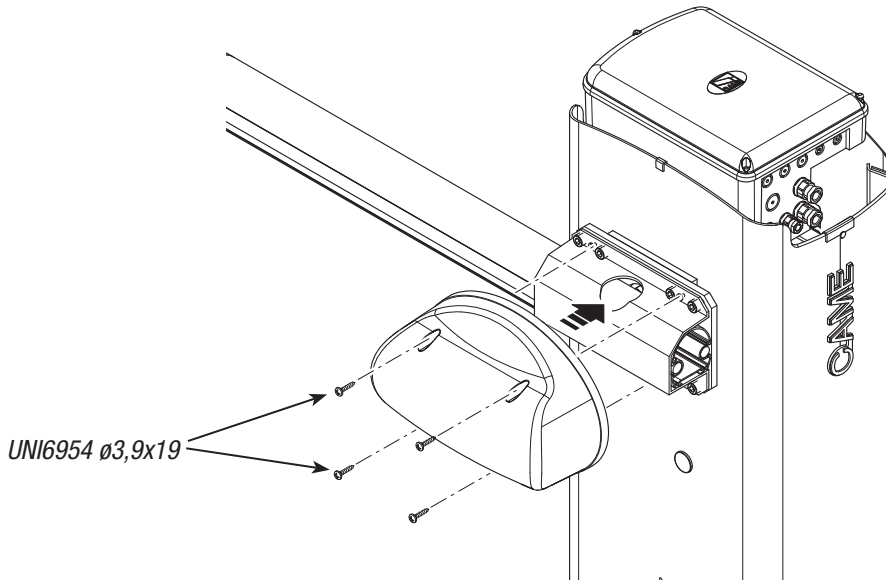


- Measure the length of the bar, cut the bar slot to the same length and insert it in the bar's conduit, a procedure that should be carried out on both sides.

Insert the shock-resistant profile and cut excess length. Lastly, secure the bar end plug with the screws provided.

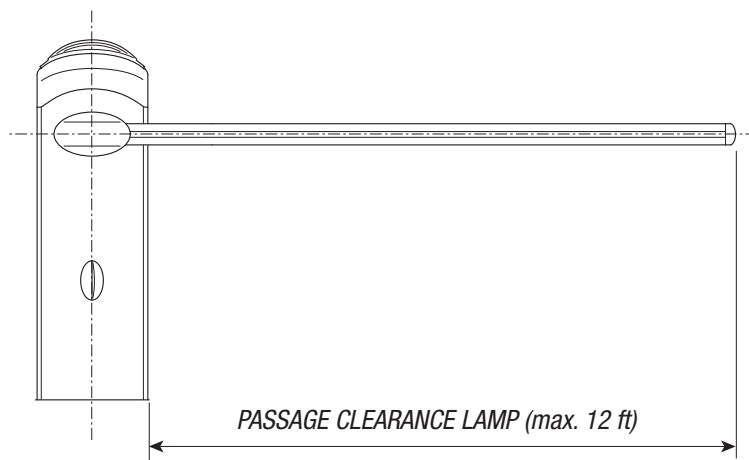


- Tighten the anti-shearing protection cover to the bar fitting with UNI6954 Ø3.9x19 screws.



## 5.7 Bar balancing

- Prior to bar balancing, select a suitable spring depending on the situation at hand. See table below:



### SPRING TYPES

- spring G02040  $\varnothing_e = 1.57$  in
- spring G04060  $\varnothing_e = 1.96$  in
- spring G06080  $\varnothing_e = 2.16$  in

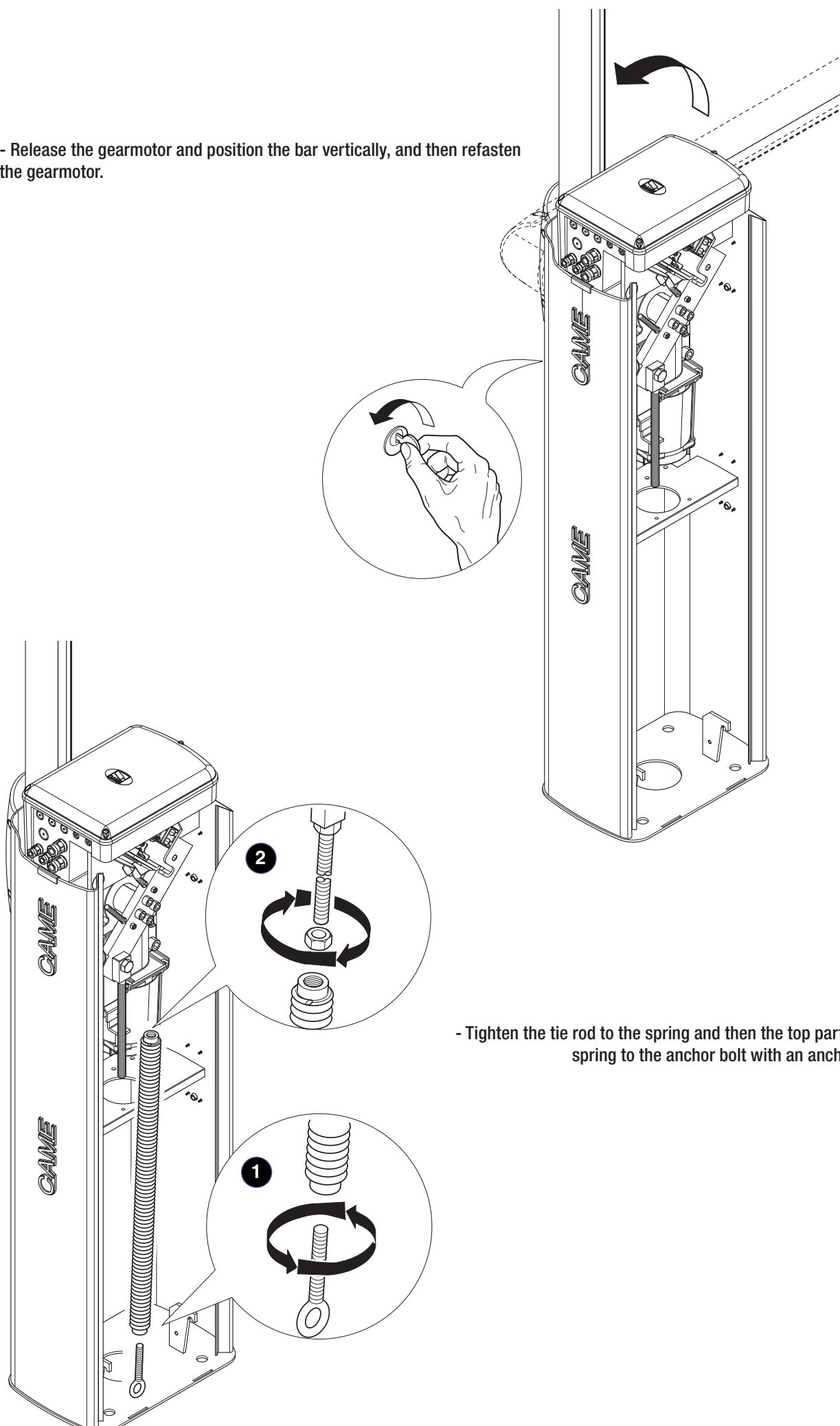
### Passage clearance lamp (ft)

4.9    5.7    6.6    7.4    8.2    9    9.8    10.7    11.5    12

Bare bar* + shock-resistant profile	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Red	Red	Red
Bare bar* + shock-resistant profile and luminous cord	Yellow	Yellow	Yellow	Green	Green	Green	Green	Red	Red	Red
Bare bar* + rack	Yellow	Green	Green	Green	Green	Red	Red	Red	Red	Red
Bare bar* + luminous cord and rack	Yellow	Green	Green	Green	Green	Red	Red	Red	Red	Red
Bare bar* + shock-resistant profile and mobile barrier support	Yellow	Green	Green	Green	Green	Red	Red	Red	Red	Red
Bare bar* + shock-resistant profile, luminous cord and mobile barrier support	Yellow	Green	Green	Green	Green	Red	Red	Red	Red	Red
Bare bar* + rack and mobile barrier support	Yellow	Green	Green	Green	Green	Red	Red	Red	Red	White
Bare bar* + luminous cord, rack and mobile barrier support	Yellow	Green	Green	Green	Green	Red	Red	Red	Red	White

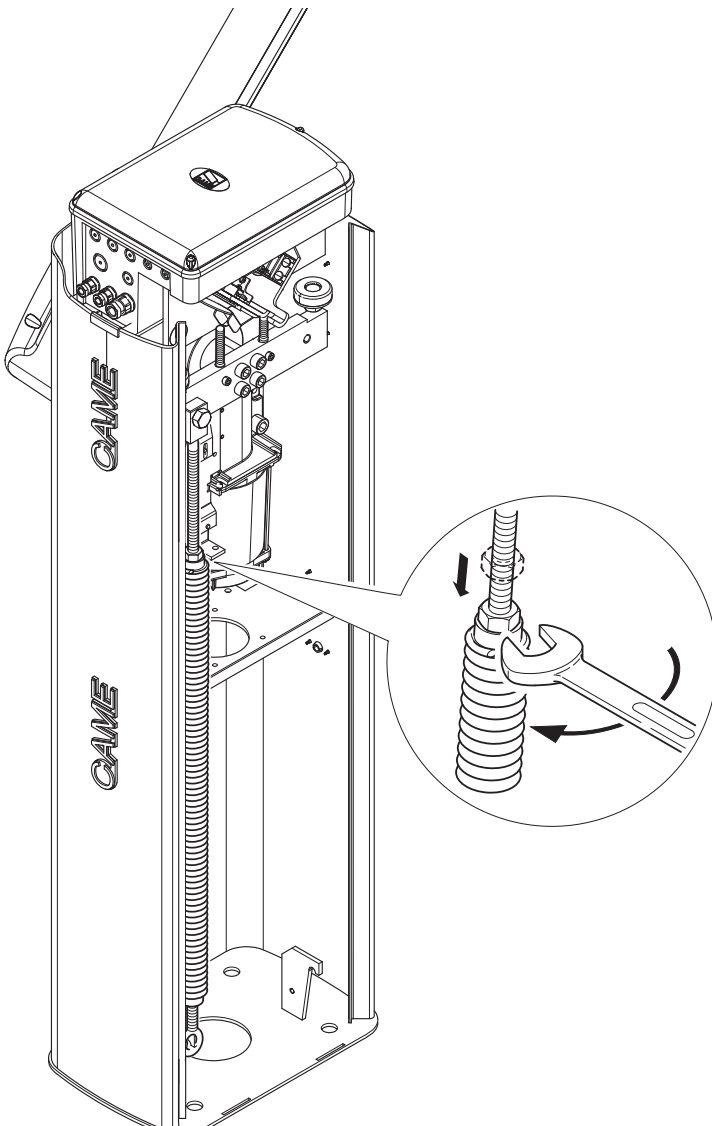
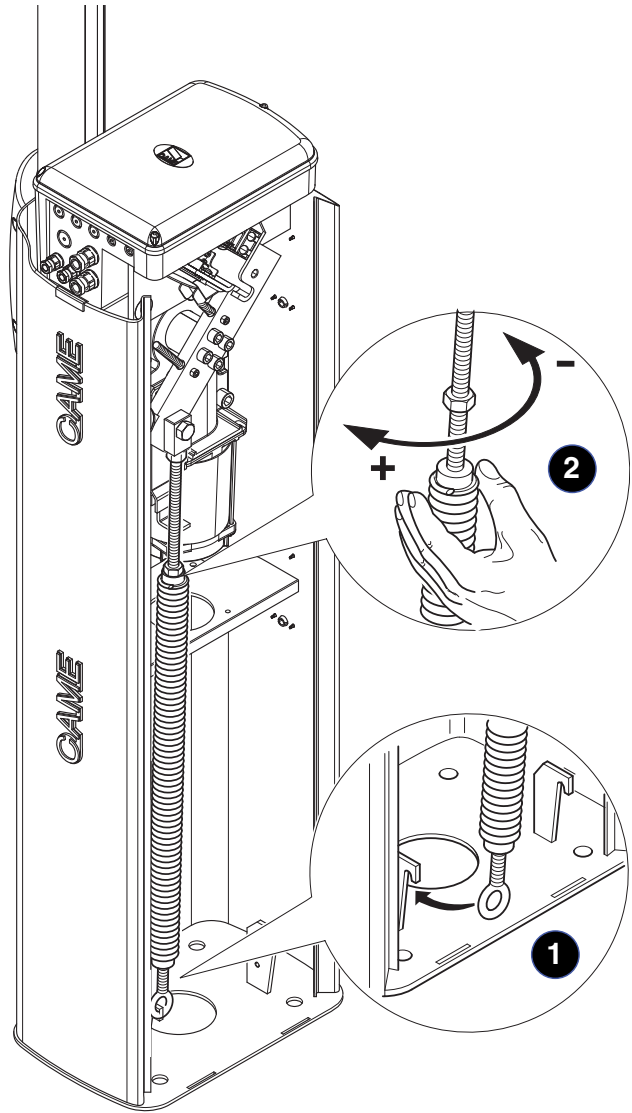
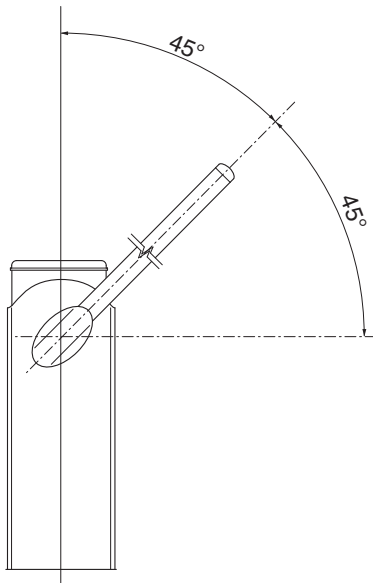
\* By Bare bar we mean a bar complete with the transparent slot cover and end plug.

- Release the gearmotor and position the bar vertically, and then refasten the gearmotor.



- Tighten the tie rod to the spring and then the top part of the spring to the anchor bolt with an anchor nut.

- Hook the tie rod to the anchoring bracket, release the gearmotor and manually turn the spring to increase or decrease traction until the bar rests at 45°.



- Tighten the blocking nut and refasten the gearmotor.

Note: make sure the spring functions properly:


- the spring is loose when the bar is in the vertical position (at rest)
- the spring is tight when the bar is in the horizontal position (tense).

- Perform any electrical connections to the control panel  
(see electrical connections paragraph).

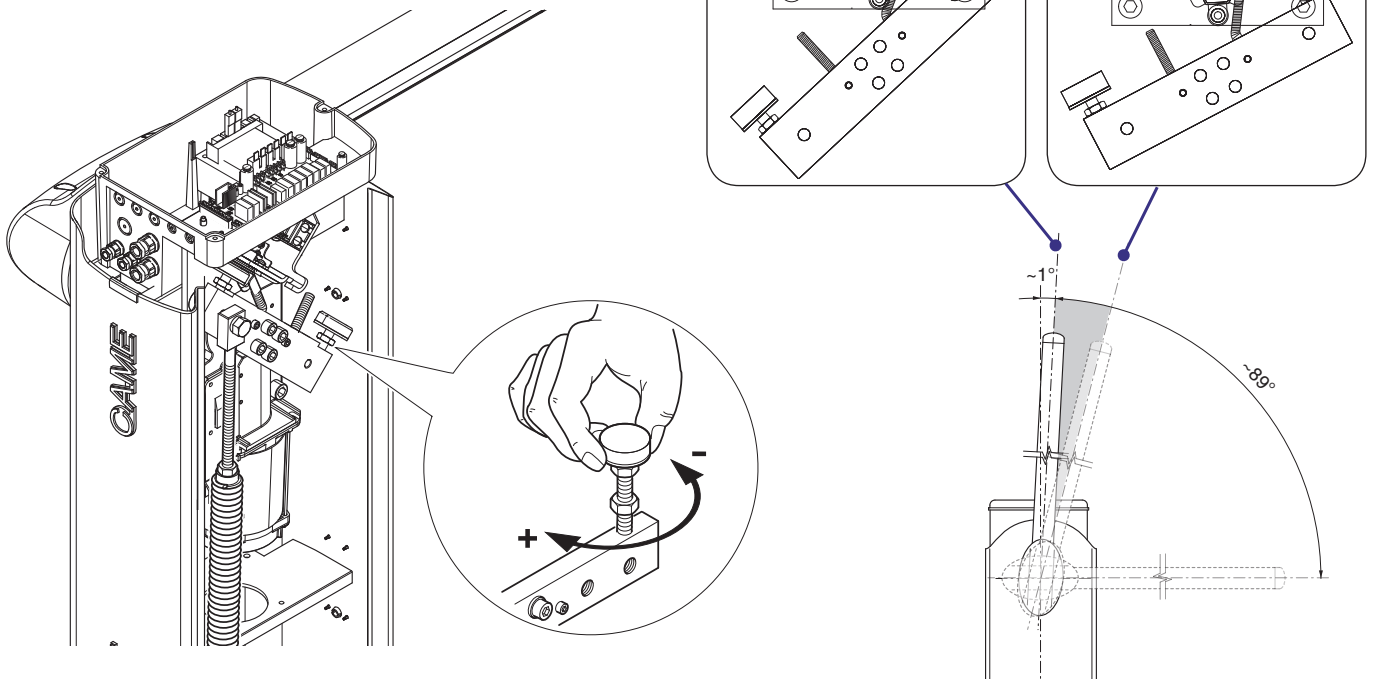
## 5.8 End stop adjustment

Note: perform this procedure after finishing the electrical connections.

Close the door and power up the system, activate the barrier to make sure it is parallel with the closed and at about  $89^\circ$  when open.

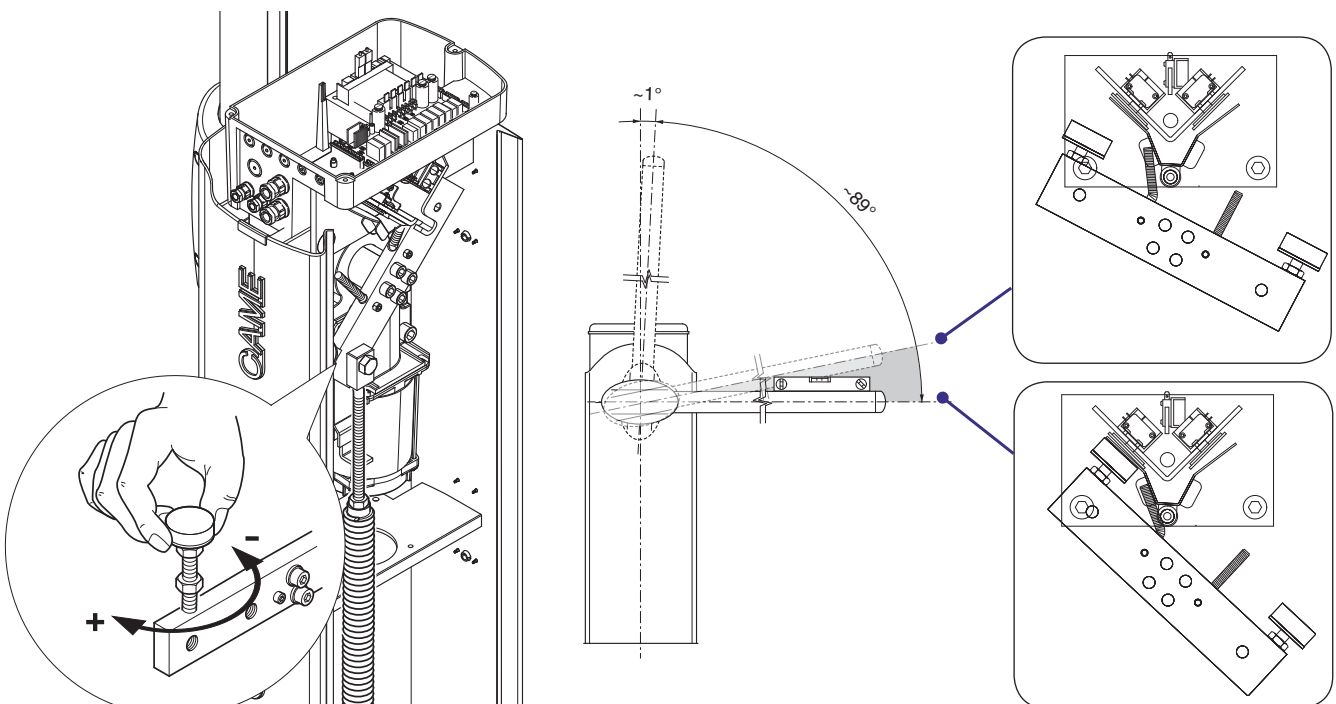
**Warning!** For greater safety and better unit performance, the bar's opening and closing operations should be carried out with  the inspection hatch closed!

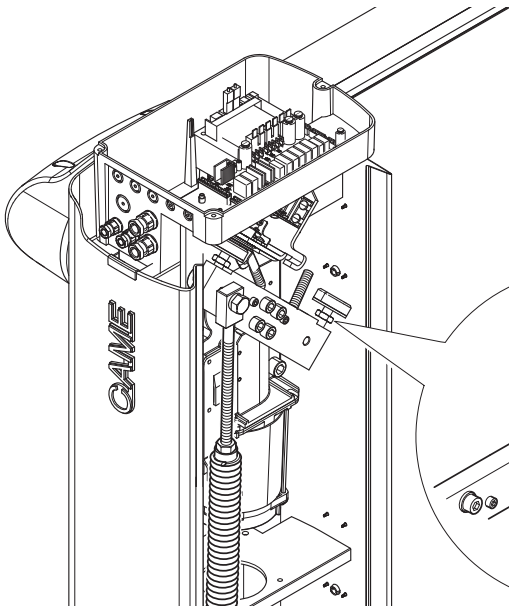
If any adjustment of the vertical position (= opening) is needed, open the inspection door and rotate the free damper clockwise (to increase the bar's run) or counter-clockwise (to decrease the run).



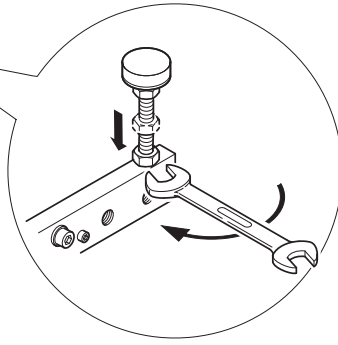
Similarly, open the bar and adjust the free damper, to regulate the horizontal position (= closing).

**Warning!** The bar's stop position is preceded by the slowing phase by means of a tab and spring system that activates the slowing-down microswitch prior to the bar's total stop.

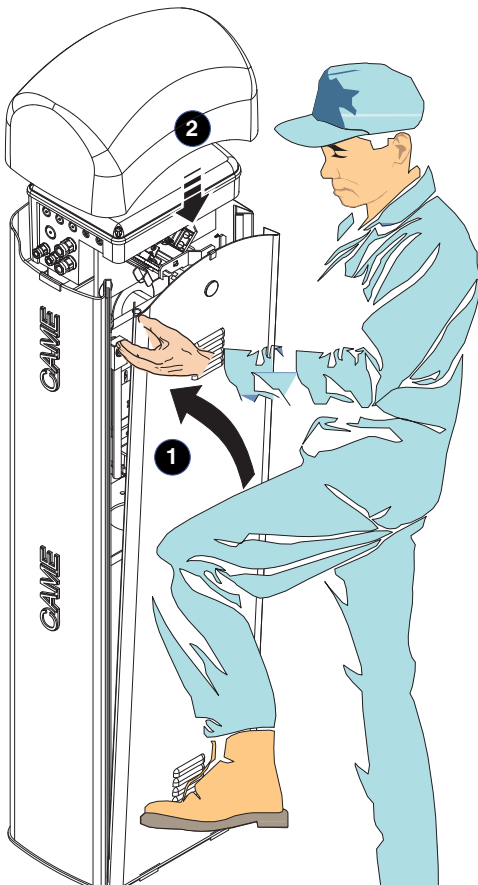
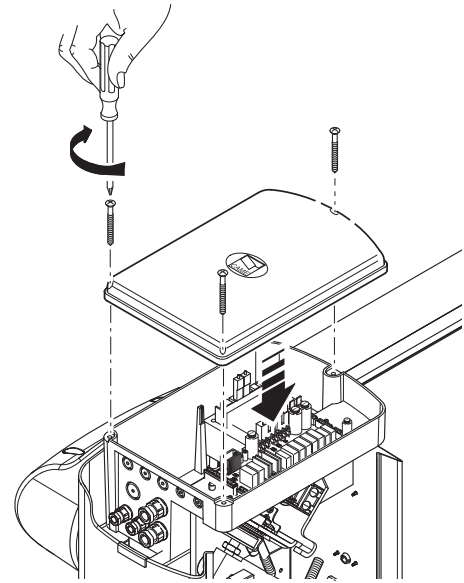




- After bar opening and closing adjustment, tighten the locking nuts under the dampers.

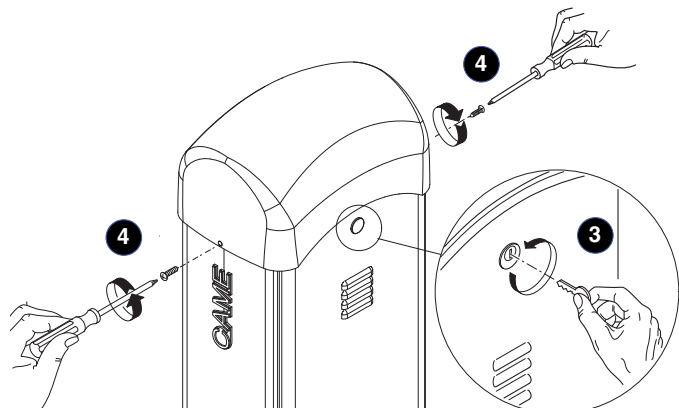


- Once you have completed all mechanical and electronic installation procedures, secure the control panel cover...



- ...reposition the inspection door and top crown.

- Turn the key clock wise and lock the protective top cap using the Ø3,9x13 supplied with the package.



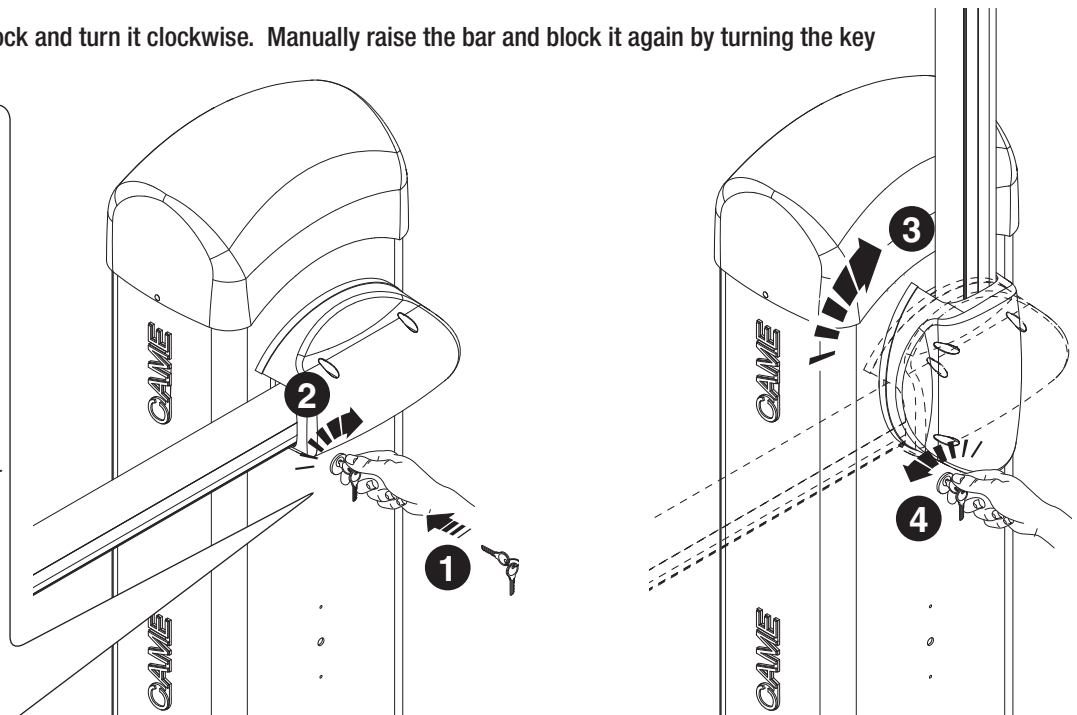


## 5.9 Manual release of the barrier

- Insert the key into the lock and turn it clockwise. Manually raise the bar and block it again by turning the key counter-clockwise.



**⚠ WARNING!** The release procedure may constitute a hazard for the user when, for whatever reason – the bar is fixed improperly to the housing during assembly, or the bar is cracked or broken in an accident, and so on – the tension springs no longer provide balance! These can thus cause a **brusque rotation of the bar attachment and/or of the bar itself.**



## 6 Description control panel

This product is engineered and manufactured by CAME cancelli automatici s.p.a. and complies with current safety regulations. Guaranteed 38 months if not tampered with.

The control panel works on 120V a.c. of power, 50/60Hz frequency.

Both command and control devices and accessories are 24V powered. Warning! Accessories must not exceed 40 W overall.

The control unit is fitted with an amperometric device which constantly regulates the motor's drive coefficient.

When the bar runs into an obstacle, the amperometric sensor immediately detects an overcharge in the drive and redirects the gate's direction of movement, and:

- during opening: the bar stops
- during closing: the bar reverses its direction until it opens completely; automatic closure is thus activated.

**Caution!** After three consecutive direction reversals, the bar will remain up and automatic closure will be discontinued. To close the gate, use the radio remote control or the push-button.

All connections are protected by quick fuses, see table.

The card provides and controls the following functions:

- automatic closing after an open-command
- immediate closure
- pre-flashing by the motion indicator
- obstacle detection when gate is still in any position
- slave function
- function that increases the braking action of the barrier.

The following command modes are possible:

- open/close
- open/close and maintained action
- open

- complete stop.

Apposite trimmers regulate:

- the automatic closing run time
- the amperometric device's detection sensitivity

Optional accessories:

- Flashing Crown and Luminous band.
- bar open light marks the position of opening of the bar; it turns off after the closing operation;
- LB38 Card, provides power supply through a battery, in case of a power outage. When power comes back on, it also recharges the batteries (see relative technical literature).

**Warning!** Before acting on the machinery, cut off the main power supply and disconnect any emergency batteries.

### TECHNICAL FEATURES

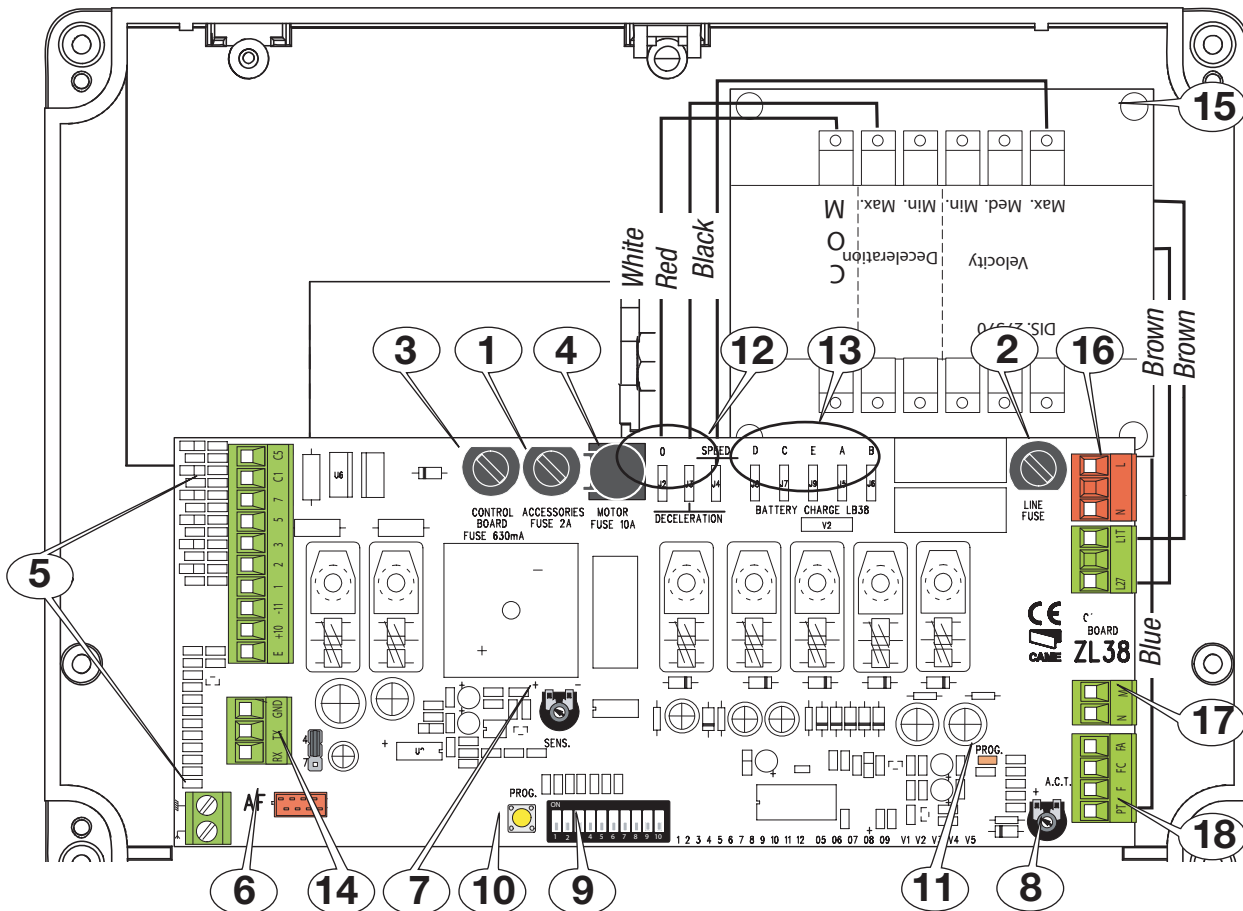
Power supply	120V - 50/60Hz
max. rated power	300W
Power draw when idling	25W
Max power of 24V accessories	40W
Insulation rating	II
Material	ABS

### FUSES

protection:	fuse type:
Motor/s	10A-F
Electronic board (power supply line)	3.15A-F
Accessories	2A-F
Control devices	630mA-F

## 6.1 Main components

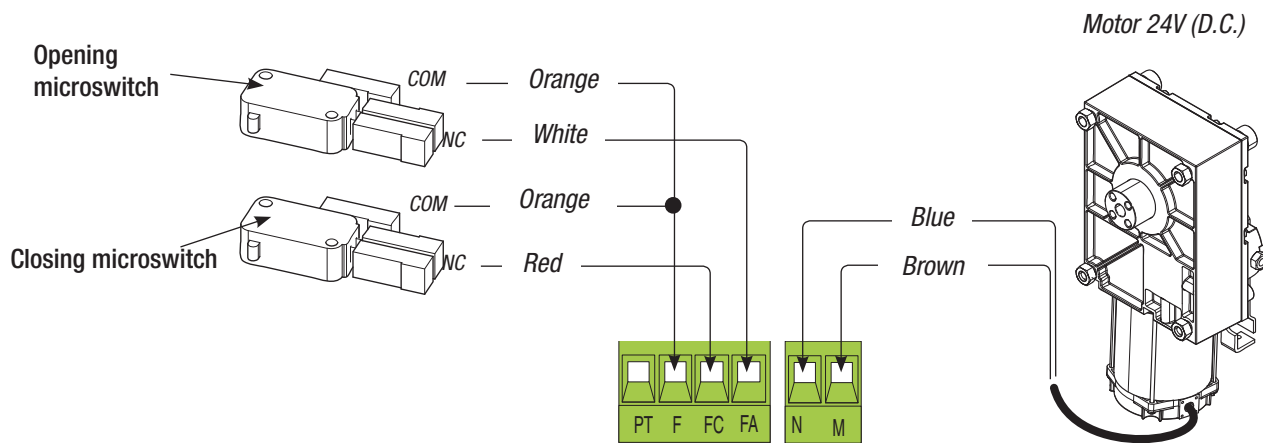
- |  |  |
|--|--|
| 1 - Accessories fuse                               | 10 - Code storing button                               |
| 2 - Line fuse                                      | 11 - Signalling LEDs for radio codes/automatic closing |
| 3 - Control unit fuse                              | 12 - Adjustment connectors for deceleration speed      |
| 4 - Motor fuse                                     | 13 - Connectors for LB38 battery charger               |
| 5 - Accessories terminals                          | 14 - Command-type selection jumper for button 2-7      |
| 6 - Radio-frequency card input (see table page 19) | 15 - Transformer                                       |
| 7 - SENS Trimmer: adjusts amperometric sensitivity | 16 - Power supply Terminals                            |
| 8 - TCA Trimmer: adjusts automatic closing time    | 17 - Motor Terminals                                   |
| 9 - "Function selector" Dip switch                 | 18 - Endstop Terminals                                 |



## 6.2 Electrical connections

### Gearmotor, endstop

Description of required electrical connections. When installing on the right side, see page 7.



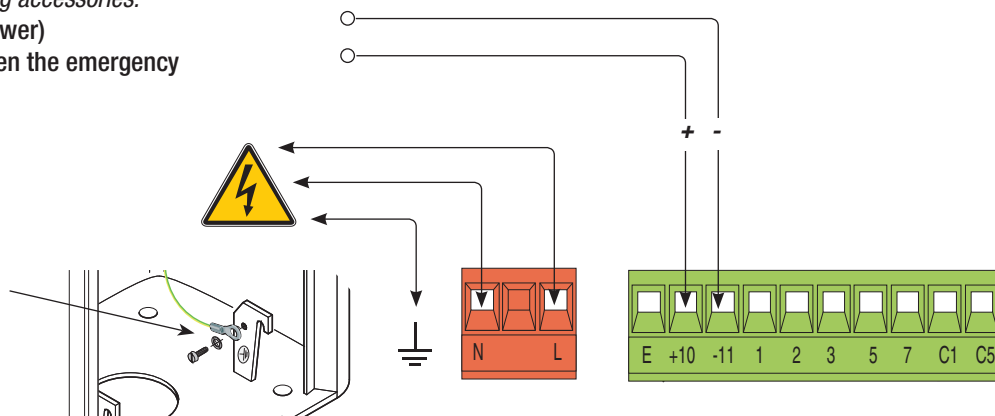
## Power supply to accessories

Terminals for powering the following accessories:

- 24V a.c. (normally alternated power)
  - 24V a.c. (continuous power) when the emergency batteries are in operation
- Overall power allowed: 40W

Power supply 120V (a.c.) 50/60 Hz

Cable lug with bolt and washer for connecting to earth



## Command devices

**Pulsante Stop button (N.C. socket)** - Bar stop button. Excludes automatic closing.

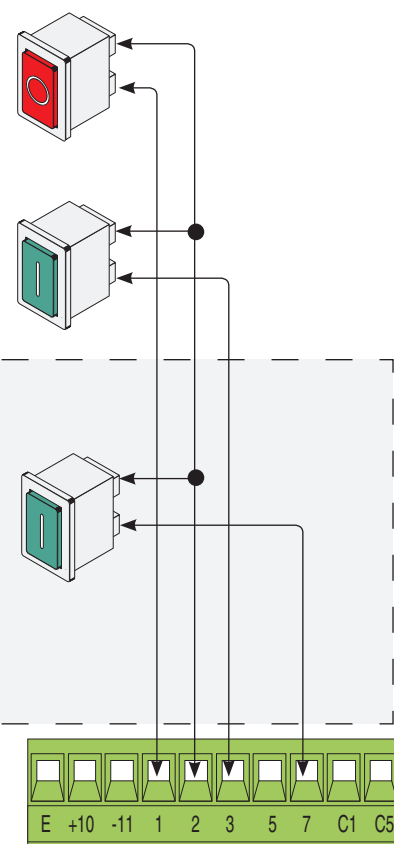
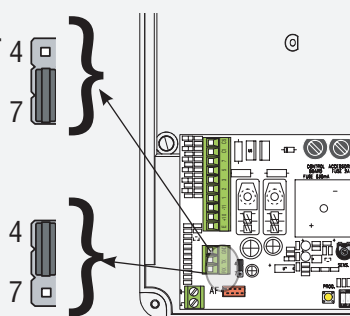
For motion to resume, press the command button or the remote control button.

If it is not used, place the dip 9 on.

**Opening button (N.O. contact)** - Bar opening command.

**Command button (N.O. contact)** - Bar opening or closing button. By pressing on the button, the bar opens or inverts its movement depending on the selection made on Dipswitch 2. Check setting of the Jumper (n. 14, page 15), as per figure.

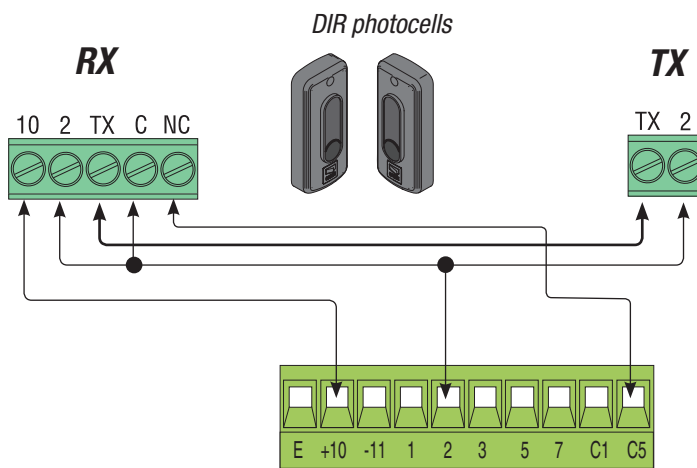
**Closing button (N.O. contact)** - Bar closing command. Obligatory in the event of "maintained action" function. Set jumper according to figure.



**(N.C.)Contact for "immediate closing"**

Automatic bar closing after an obstacle comes within the range of the safety devices.

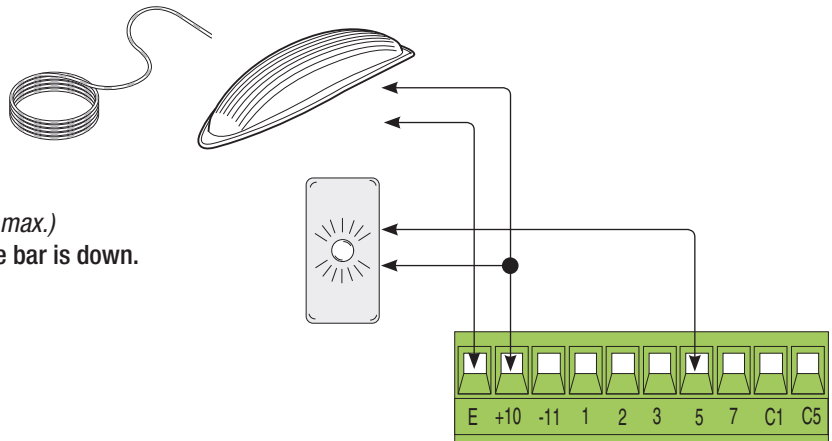
If unused, set Dip switch 8 to ON.



## Warning devices

**Flashing Crown and/or Luminous band** (Contact rating: 24V - 32W max.) - Flashes when bar is opening and closing.

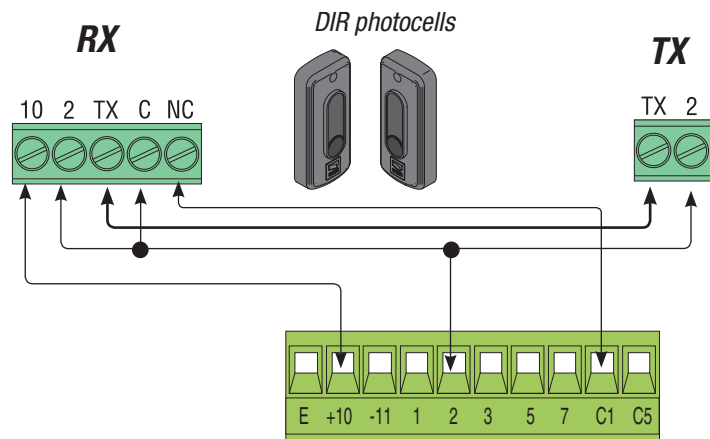
**Open barrier warning light** (contact rating: 24V – 3W max.)  
- Signals when bar is in 'up' position, turns off once bar is down.



## Safety devices

**(N.C.) contact for «re-open during closing phase»**  
- Input for safety devices such as photocells, sensitive edges and other UL 325 compliant devices. When bar leaves are closing, opening the contact causes reversal until total opening is obtained.

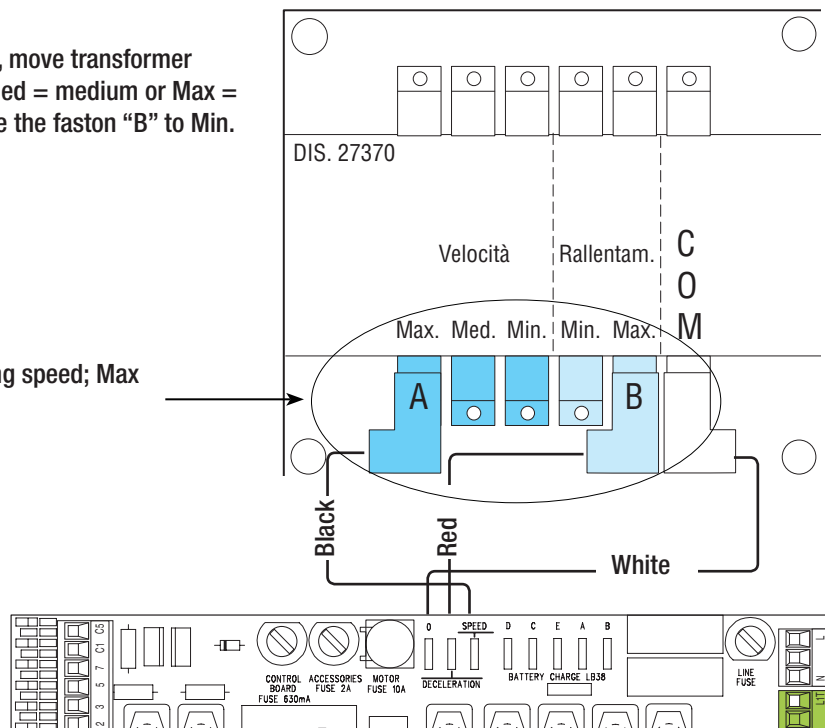
**If not used, short circuit contact 2-C1.**



## 6.3 Adjusting movement and deceleration speeds

To adjust the opening and closing speed, move transformer faston, labeled "A" to Min = minimum, Med = medium or Max = maximum, while, for decelerations move the faston "B" to Min. or Max..

Max opening or closing speed; Max decelerations.

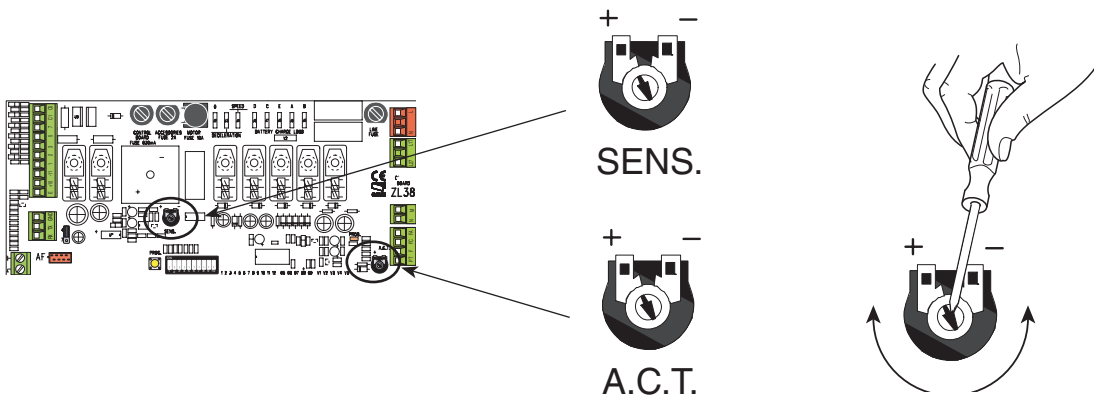


## 6.4 Selecting functions



- 1 ON - **Automatic closing** - the automatic closing timer is activated when on opening the bar leaf has reached the full open stroke. The time is preset and adjustable, and is subject to the action of any safety devices. It does not activate after a total safety “stop” or during a power outage (1 OFF - deactivated)
- 2 OFF - **“Open-close”** function with button [2-7] and remote control (with built-in radiofrequency card).
- 2 ON - **“Open only”** function with remote control (featuring built-in radiofrequency card).
- 3 ON - 24V power output on contact (10-E) bar in motion and in open position
- 3 OFF- 24V power output on contact (E-10) bar in motion
- 4 ON - **Maintained action** - the bar works by keeping the button pressed (one button [2-3] for opening, and one button [2-7] for closing) (Set jumper n°14 according to figure pag. 16).
- 5 ON - **Pre-Opening and closing flasher** - Following and opening and closing command, the flasher connected to [10-E], flashes for 5 seconds before motion begins.
- 6 ON - **Obstacle detected** - When motor is stopped (bar closed or after a total stop command) it prevents any movement if safety devices, such as photocells, detect any obstacles.
- 7 ON - **“Slave” function** - Activate when two barriers are coupled (see connecting two coupled barriers paragraph)
- 8 OFF - **Immediate bar closing** - Immediately closes bar when obstacle comes within the range of the safety devices. Insert safety device on [2-C5]; if unused set Dipswitch to ON.
- 9 OFF - **Total stop** - This function stops the bar and then excludes any automatic closing cycle; to set in motion again, use either the keypad or transmitter. Insert the safety device in [1-2]; If unused, set DIP switch to ON.
- 10 ON - **Brake Action** - increases braking action on the bar when closing (10 OFF – deactivated)

## 6.5 Adjustments



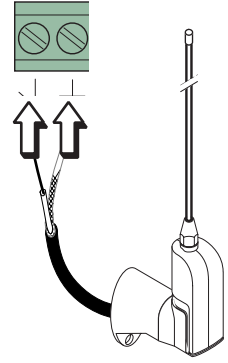
### ELENCO TRIMMER DI REGOLAZIONI:

- **«A.C.T.»** Sets the waiting time while open. Once this time has elapsed, closing automatically takes place. The waiting time may be set from 1 to 120 seconds.
- **«SENS»** Sets the amperometric sensitivity that controls the force generated by the motor during movement; if the force exceeds the set level, the system intervenes by inverting the direction of motion.

## 7 Activating the remote control

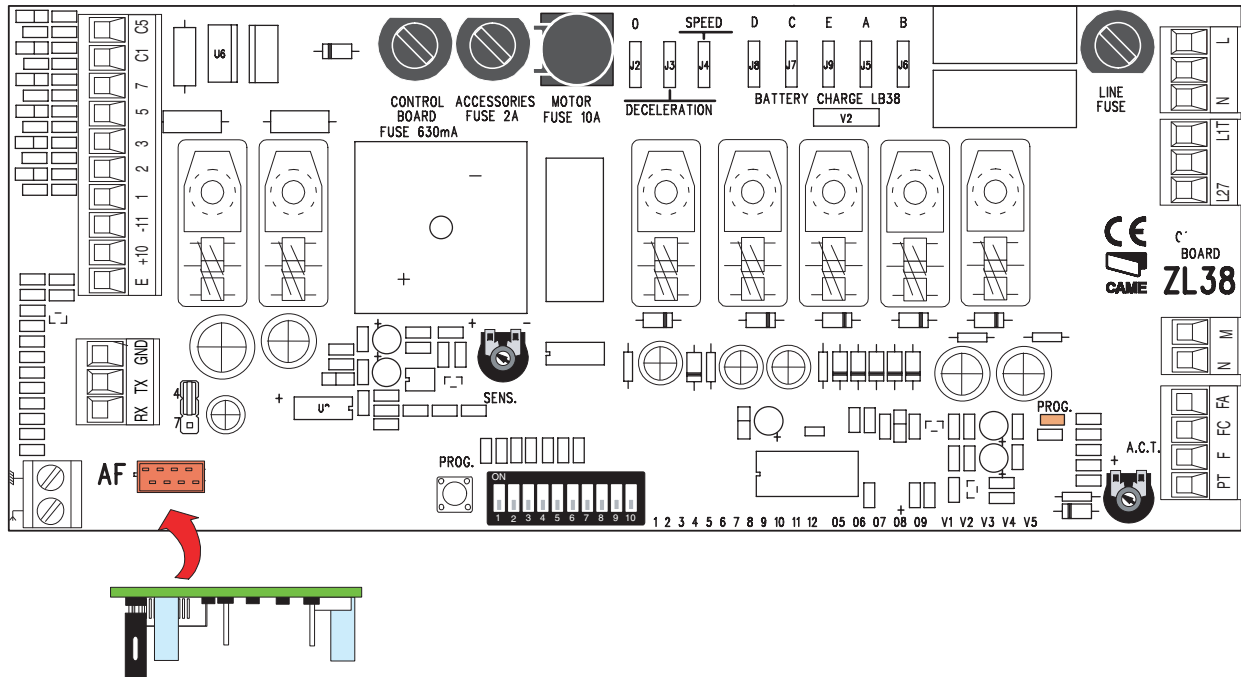
### Antenna

Connect the antenna's RG58 cable to the opposite terminals.

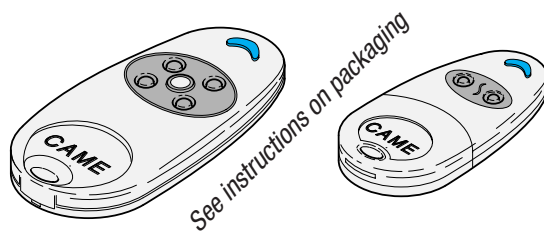


### Radiofrequency card

Lock the radiofrequency card into the electronic card **AFTER CUTTING OFF THE POWER SUPPLY** (or after disconnecting the batteries).  
**Note:** the electronic card only recognises the radiofrequency card when the power is on.

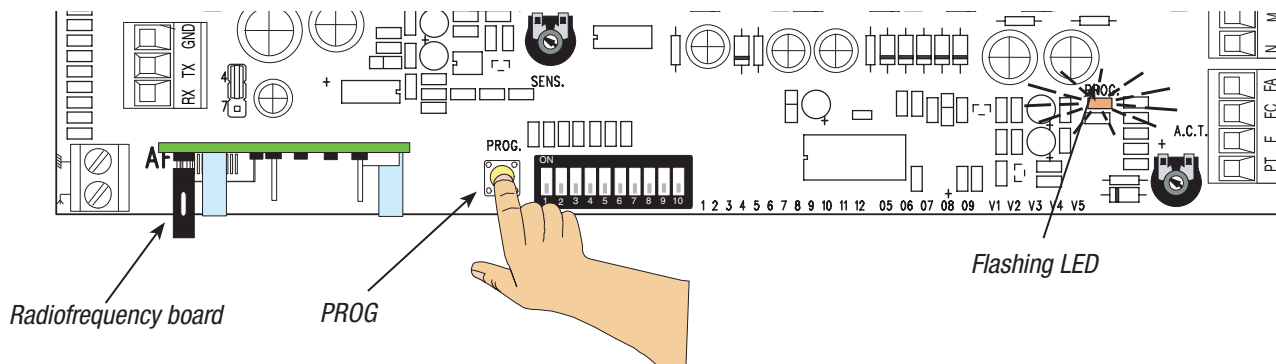


TOP  
TOP-432NA • TOP-434NA

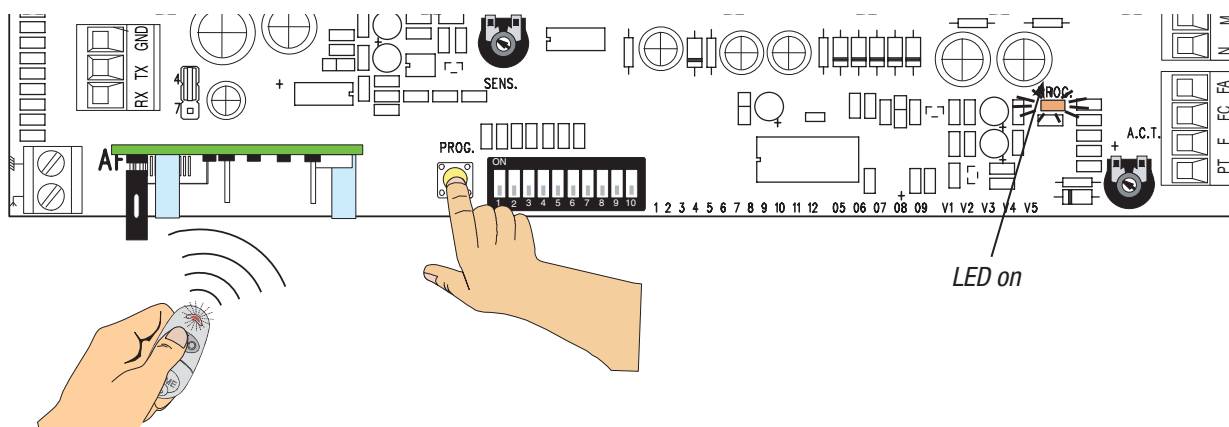


Memorization

- Keep pressed the **PROG** button on the electronic card. The LED will flash.

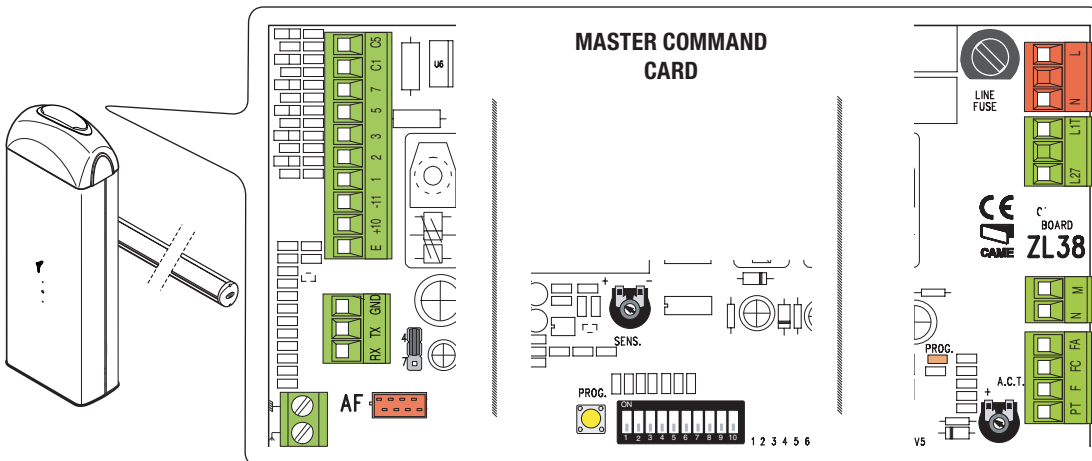
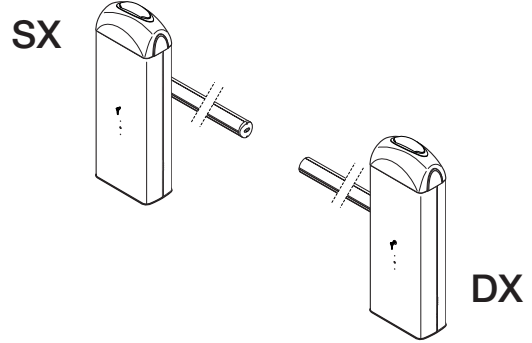


- Press the button of transmitter to memorise. The LED will stay on to signal memorization.



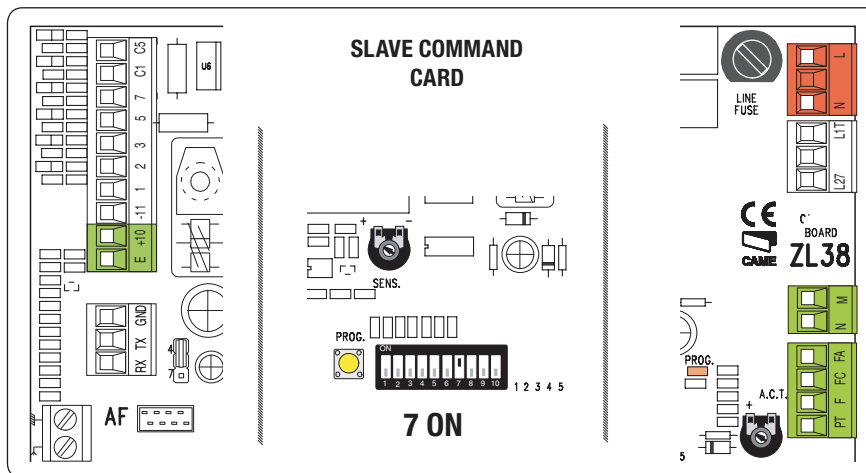
## 8 Connecting two coupled barriers to one command

- Determine the Master and Slave barrier.

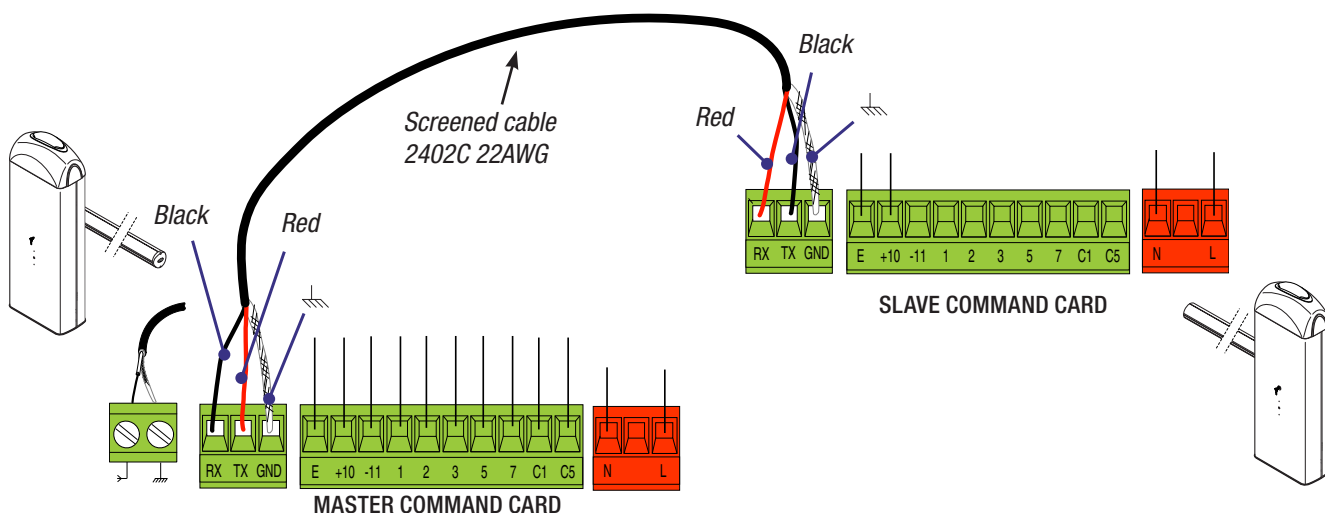


- On the pre-chosen Master command card, perform all the connections (see electrical connections paragraph) the installation procedure for the remote control, settings and adjustments.

- on the pre-chosen Slave command card, set Dipswitch 7 to ON, perform power connection on terminal L-N, connect the device to 10-E terminal output, adjust to the same speed and deceleration as for the Master barrier.



- Perform connection between two command cards through RX-TX GND terminals.





## 9 Safety instructions

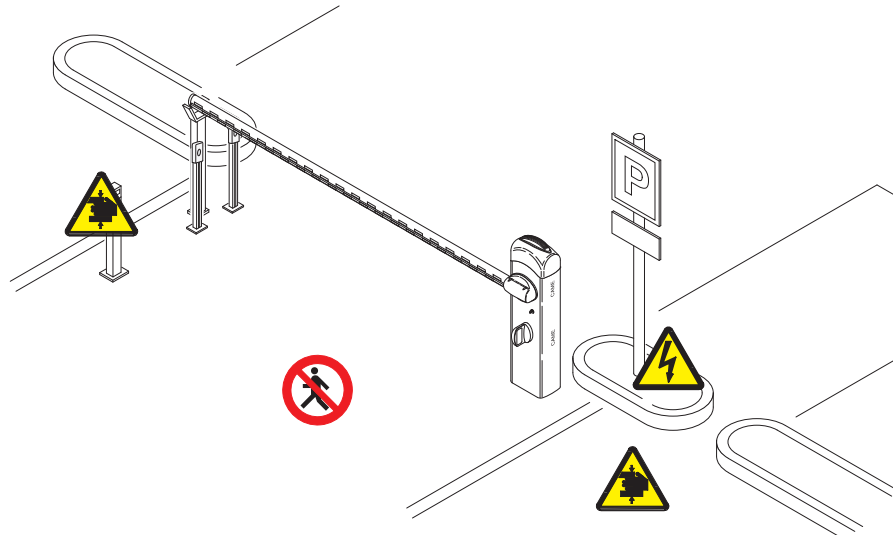
### **Important safety instructions**

This product must only be employed for its originally intended use. The automation installation using these gearmotors requires adequate safety systems on the gate leaves to detect any obstacles (e.g. sensitive edges), in compliance with UL325 standards and CSA G22.2 No. 247 for both US and Canada. 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 using near mechanical moving 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



No transit during operation

## 10 Maintenance

### 10.1 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 obstruction.

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

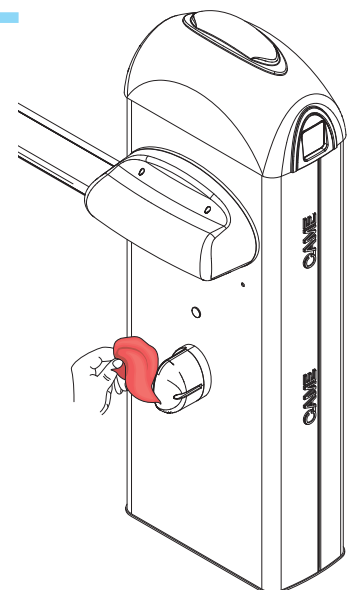
working properly.

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 bar movement.

-To clean the photocells use a water dampened cloth. Do not use solvents or other chemical products which may ruin the devices.


-Make sure there are no plants within the photocell's beam, and that the bar motion is free of any obstacles.



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

Date	Notes	Signature

**10.2 Extraordinary maintenance**

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

Note: Any extraordinary maintenance must be performed by specialized technicians.

**Extraordinary maintenance log**

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

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

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

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

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

### 10.3 Problem solving

**Troubleshooting must be performed by a professional installer or competent person.**

MALFUNCTIONS	REFERENCES	CHECKS
The unit neither opens nor shuts	1-2-3-4-6-8-18	1 - Close the inspection hatch with the key and check the release lock
The unit opens but does not close	4-7-10	2 - Disable "steady movement" with dipswitch
The unit shuts but does not open	4-7-9	3 - Check power supply and fuses
No automatic closure	11-12-13	4 - N.C. safety contacts open (1-2 / 2-C1 / 2-C5)
The unit does not work if the remote control is used	2-14-16	6 - Disable master-slave function
The unit inverts direction	7-18	7 - Check spring tension and balancing
The unit works only with remote control	22	8 - Disable obstacle detection with dipswitch
The photoelectric cell does not react	12-23-24	9 - Check if end stop opens
The signalling LED indicator flashes rapidly	4	10 - Check if end stop closes
The signalling LED indicator remains on	13	11 - Activate "automatic closure" dip switch
The unit does not end its run	7	12 - Check the correct direction of movement
The bar is not properly balanced	7-15	13 - (2-3 / 2-4 / 2-7) command button
The unit does not slow down	7-15	14 - Check jumper on AF43S, turn on/off power
The unit does not work with the back-up batteries	8-25-26	15 - Check the bar length ratio with mountable accessories
The unit is slow to respond	7	16 - Re-save radio code
		18 - Adjust sensitivity
		22 - Enter or duplicate the same code in all the remote controls
		23 - Activate the photoelectric cell with the dipswitch
		24 - Connect the photoelectric cells in a series, not in parallel
		25 - Dead batteries
		26 - Respect the photoelectric cells' polarity

## 11 Demolition and disposal




In its premises, CAME CANCELLI AUTOMATICI S.p.A. implements an Environmental Management System certified in compliance with the UNI EN ISO 14001 standard to ensure environmental protection.

Please continue our efforts to protect the environment—which CAME considers one of the cardinal elements in the development of its operational and market strategies—simply by observing brief recommendations as regards disposal:

 **DISPOSAL OF PACKAGING** – The packaging components (cardboard, plastic, etc.) are all classifiable as solid urban waste products and may be disposed of easily, keeping in mind recycling possibilities.

Prior to disposal, it is always advisable to check specific regulations in force in the place of installation.

**PLEASE DISPOSE OF PROPERLY!**

 **PRODUCT DISPOSAL** – Our products are made up of various types of materials. Most of them (aluminium, plastics, iron, electrical wires, etc.) may be disposed of in normal garbage collection bins and can be recycled by disposing of in specific recyclable material collection bins and disposal in authorized centres. Other components (electrical boards, remote control batteries, etc.), however, may contain polluting substances. They should therefore be removed and given to qualified service companies for proper disposal.

Prior to disposal, it is always advisable to check specific regulations in force in the place of disposal.

**PLEASE DISPOSE OF PROPERLY!**



Intertek Testing Services NA Inc.  
165 Main Street, Cortland, NY 13045  
Telephone 800-345-3851 or 607-753-6711 Fax 607-756-6699

<b>Standard(s):</b>	STANDARD FOR DOOR, DRAPERY, GATE, LOUVER, AND WINDOW OPERATORS AND SYSTEMS (UL 325, 5th edition, dated 7 June, 2002 with revisions through and including 14 January, 2009)  Standard for Operators and Systems of Doors, Gates, Draperies, and Louvres, CSA C22.2 No. 247-92, First Edition, Dated 12/01/1992 (R 2004)
<b>Product:</b>	VEHICULAR BARRIER ARM OPERATOR
<b>Models:</b>	G4000UL, G6000UL, G4140ZU, G4140IZU, G2180ZU, and G2180IZU



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Compliant with UL 325 STD  
and CSA STD C22.2 No. 247  
for both the US & Canada