

## AUTOMATIC BARRIERS

FA00583-EN



INSTALLATION MANUAL

# G4040EZT

EN English



## **WARNING!** **important safety instructions for people:** **READ CAREFULLY!**



### **PREMISE**

• THIS PRODUCT SHOULD ONLY BE USED FOR THE PURPOSE FOR WHICH IT WAS EXPLICITLY DESIGNED. ANY OTHER USE IS DANGEROUS. CAME S.p.A. IS NOT LIABLE FOR ANY DAMAGE CAUSED BY IMPROPER, WRONGFUL AND UNREASONABLE USE. • THE SAFETY OF THIS PRODUCT AND ITS PROPER FITTING DEPENDS, THEREFORE, ON RESPECTING ITS TECHNICAL CHARACTERISTICS AND PROPER FITTING, TO BE DONE IN STATE-OF-THE-ART FASHION, AND UNDER SAFE CONDITIONS AS EXPRESSLY EXPLAINED IN THE LITERATURE THAT COMES WITH THE PRODUCT. • KEEP THESE PRECAUTIONS TOGETHER WITH THE INSTALLATION AND OPERATION MANUALS THAT COME WITH THE OPERATOR.

### **BEFORE INSTALLING**

*(CHECKING WHAT'S THERE: IF SOMETHING IS MISSING, DO NOT CONTINUE UNTIL YOU HAVE COMPLIED WITH ALL SAFETY PROVISIONS)*

• FITTING AND TESTING MUST BE ONLY PERFORMED BY QUALIFIED TECHNICIANS • LAYING THE CABLES, INSTALLATION AND TESTING MUST FOLLOW STATE-OF-THE-ART PROCEDURES AS DICTATED BY REGULATIONS • BEFORE BEGINNING ANY OPERATION IT IS MANDATORY TO CAREFULLY READ ALL INSTRUCTIONS; IMPROPER INSTALLATION MAY RESULT IN SERIOUS HARM TO PEOPLE AND THINGS. • MAKE SURE THE BOOM IS IN GOOD MECHANICAL STATE, BALANCED AND ALIGNED, AND THAT IT OPENS AND CLOSES PROPERLY. ALSO, IF NEEDED, FIT SUITABLE PROTECTIONS OR USE PROPER SAFETY SENSORS • IF THE OPERATOR IS TO BE INSTALLED AT A HEIGHT OF LESS THAN 2.5 M FROM THE GROUND OR OTHER ACCESS LEVEL, MAKE SURE YOU HAVE ANY NECESSARY PROTECTIONS AND/OR WARNINGS IN PLACE • MAKE SURE THAT THE OPENING AUTOMATIC BARRIER DOES NOT CONSTITUTE A HAZARD • DO NOT FIT UPSIDE DOWN OR ONTO ELEMENTS THAT COULD BEND. IF NECESSARY, ADD SUITABLE REINFORCEMENTS TO THE ANCHORING POINTS • MAKE SURE THE TEMPERATURE RANGE SHOWN ON THE PRODUCT LITERATURE IS SUITABLE TO THE CLIMATE WHERE IT WILL BE INSTALLED • DO NOT INSTALL ON TILTED, SLOPED OR UNEVEN SURFACES • MAKE SURE ANY SPRINKLER SYSTEMS CANNOT WET THE OPERATOR FROM THE GROUND UP.

### **INSTALLING**

• SUITABLY SECTION OFF AND DEMARCATÉ THE ENTIRE INSTALLATION SITE TO PREVENT UNAUTHORIZED PERSONS FROM ENTERING THE AREA, ESPECIALLY MINORS AND CHILDREN • BE CAREFUL WHEN HANDLING OPERATORS THAT WEIGH OVER 20 KG. IF NEED BE, USE PROPER SAFETY HOISTING EQUIPMENT • THE CE-MARKED SAFETY DEVICES (PHOTOCELLS, STEPPING PLATES, SENSITIVE SAFETY-EDGES, EMERGENCY BUTTONS, AND SO ON), MUST BE FITTED IN COMPLIANCE WITH THE REGULATIONS IN EFFECT AND ACCORDING TO STATE-OF-THE-ART CRITERIA, TAKING INTO ACCOUNT THE ENVIRONMENT, THE TYPE OF REQUIRED SERVICE AND OF THE WORKING FORCES APPLIED TO MOVING BARRIERS. ANY SHEARING OR CONVEYING POINTS MUST BE SENSOR-PROTECTED • ANY RESIDUAL RISKS MUST BE CLEARLY SHOWN • ALL OPENING COMMANDS (THAT IS, BUTTONS, KEY SWITCHES, MAGNETIC READERS, AND SO ON) MUST BE INSTALLED AT LEAST 1.85 M FROM THE PERIMETER OF THE BARRIER'S WORKING AREA, OR WHERE THEY CANNOT BE REACHED FROM OUTSIDE THE BARRIER. ALSO, ANY DIRECT COMMANDS (BUTTONS, TOUCH PANELS, AND SO ON) MUST BE INSTALLED AT LEAST 1.5 M FROM THE GROUND AND MUST NOT BE REACHABLE BY UNAUTHORIZED PERSONS • THE AUTOMATIC BARRIER MUST VISIBLY SHOW ITS IDENTIFICATION DATA. • BEFORE CONNECTING THE MAINS POWER SUPPLY MAKE SURE THAT THE IDENTIFICATION DATA CORRESPOND TO THE THOSE OF THE NETWORK • THE AUTOMATIC BARRIER MUST BE CONNECTED TO AN EFFECTIVE REGULATION GROUNDING SYSTEM.

• THE MANUFACTURER DECLINES ANY LIABILITY FOR USING NON-ORIGINAL PRODUCTS; WHICH WOULD RESULT IN WARRANTY LOSS • ALL MAINTAINED ACTION COMMANDS, MUST BE FITTED IN PLACES FROM WHICH THE MOVING BARRIER AND TRANSIT AND DRIVING AREAS ARE VISIBLE • APPLY, IF MISSING, A PERMANENT SIGN SHOWING THE POSITION OF THE RELEASE DEVICE • BEFORE DELIVERING TO THE USERS, MAKE SURE THE SYSTEM IS EN 12453 AND EN 12445 STANDARD COMPLIANT (REGARDING IMPACT FORCES), AND ALSO MAKE SURE THE SYSTEM HAS BEEN PROPERLY ADJUSTED AND THAT ANY SAFETY, PROTECTION AND MANUAL RELEASE DEVICES ARE WORKING PROPERLY • APPLY WARNING SIGNS WHERE NECESSARY AND IN A VISIBLE PLACE, (SUCH AS, (SUCH AS THE GATE'S LICENSE PLATE)

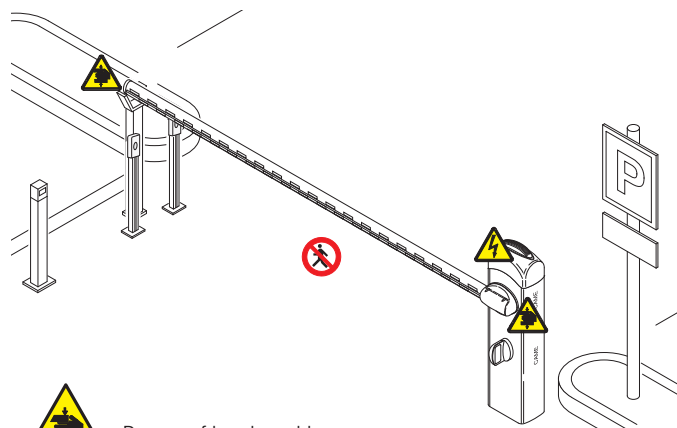
### **SPECIAL USER-INSTRUCTIONS AND RECOMMENDATIONS**

• KEEP BARRIER OPERATION AREAS CLEAN AND FREE OF ANY OBSTRUCTIONS. MAKE SURE THE PHOTOCELL'S OPERATING FIELD IS CLEAR OF ANY OBSTRUCTIONS • DO NOT ALLOW CHILDREN TO PLAY WITH FIXED COMMANDS, OR TO LOITER IN THE BARRIER'S MANEUVERING AREA. KEEP ANY REMOTE CONTROL TRANSMITTERS OR ANY OTHER COMMAND DEVICE AWAY FROM CHILDREN, TO PREVENT THE OPERATOR FROM BEING ACCIDENTALLY ACTIVATED • THE APPARATUS MAY BE USED BY CHILDREN OF EIGHT YEARS AND ABOVE AND BY PHYSICALLY, MENTALLY AND SENSORY-CHALLENGED

PEOPLE, OR EVEN ONES WITHOUT ANY EXPERIENCE, PROVIDED THIS HAPPENS UNDER CLOSE SUPERVISION OR ONCE THEY HAVE BEEN PROPERLY INSTRUCTED TO USE THE APPARATUS SAFELY AND TO THE POTENTIAL HAZARDS INVOLVED. CHILDREN MUST NOT PLAY WITH THE APPARATUS. CLEANING AND MAINTENANCE BY USERS MUST NOT BE DONE BY CHILDREN, UNLESS PROPERLY SUPERVISED • FREQUENTLY CHECK THE SYSTEM FOR ANY MALFUNCTIONS OR SIGNS OF WEAR AND TEAR OR DAMAGE TO THE MOVING STRUCTURES, TO THE COMPONENT PARTS, ALL ANCHORING POINTS, INCLUDING CABLES AND ANY ACCESSIBLE CONNECTIONS. KEEP ANY HINGES, MOVING JOINTS AND BOOM FLANGE CLEAN, FRICTION FREE AND PROPERLY LUBRICATED. PERFORM FUNCTIONAL CHECKS ON THE PHOTOCELLS AND EVERY SIX MONTHS. CONSTANTLY CLEAN THE PHOTOCELLS' GLASS COVERS USING A SLIGHTLY WATER-MOISTENED CLOTH; DO NOT USE SOLVENTS OR CHEMICALS THAT COULD DAMAGE THE DEVICES • IF REPAIRS OR MODIFICATIONS ARE REQUIRED TO THE SYSTEM, RELEASE THE OPERATOR AND DO NOT USE IT UNTIL SAFETY CONDITIONS HAVE BEEN RESTORED • CUT OFF THE POWER SUPPLY BEFORE RELEASING THE OPERATOR FOR MANUAL OPENINGS. READ THE INSTRUCTIONS IF THE POWER SUPPLY CABLE IS DAMAGED, IT MUST BE REPLACED BY THE MANUFACTURER OR AUTHORIZED TECHNICAL ASSISTANCE SERVICE, OR IN ANY CASE, BY SIMILARLY QUALIFIED PERSONS, TO PREVENT ANY RISK IT IS FORBIDDEN FOR USERS TO PERFORM ANY OPERATIONS THAT ARE NOT EXPRESSLY REQUIRED OF THEM AND WHICH ARE NOT LISTED IN THE MANUALS. FOR ANY REPAIRS, MODIFICATIONS AND ADJUSTMENTS AND FOR EXTRA-ORDINARY MAINTENANCE, CALL TECHNICAL ASSISTANCE • LOG THE JOB AND CHECKS INTO THE PERIODIC MAINTENANCE LOG.

### **FURTHER RECOMMENDATIONS FOR ALL**

• KEEP AWAY FROM AND DO NOT LOITER NEAR THE BARRIER AND MECHANICAL MOVING PARTS • DO NOT ENTER THE BARRIER'S AREA OF OPERATION WHEN IT IS MOVING • DO NOT COUNTER THE OPERATOR'S MOVEMENT AS THIS COULD RESULT IN DANGEROUS SITUATIONS • ALWAYS PAY SPECIAL ATTENTION TO ANY DANGEROUS POINTS, WHICH HAVE TO BE LABELED WITH SPECIFIC PICTOGRAMS AND/OR BLACK AND YELLOW STRIPES • WHEN USING A SELECTOR SWITCH OR A COMMAND IN MAINTAINED ACTIONS, KEEP CHECKING THAT THERE ARE NO PERSONS WITHIN THE OPERATING RANGE OF ANY MOVING PARTS, UNTIL THE COMMAND IS RELEASED • THE BARRIER MAY MOVE AT ANY TIME AND WITHOUT WARNING • ALWAYS CUT OFF THE MAINS POWER SUPPLY BEFORE PERFORMING ANY MAINTENANCE OR CLEANING.



Danger of hand crushing






Danger! High voltage.



No transiting while the barrier is moving

## LEGEND

-  This symbol shows which parts to read carefully.
-  This symbol shows which parts describe safety issues
-  This symbol shows which parts to tell users about.

## DESCRIPTION

Barrier with encoder made of galvanized varnished steel ready to fit accessories.

### Intended use

The automatic barrier is designed for private and public parking facilities.

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

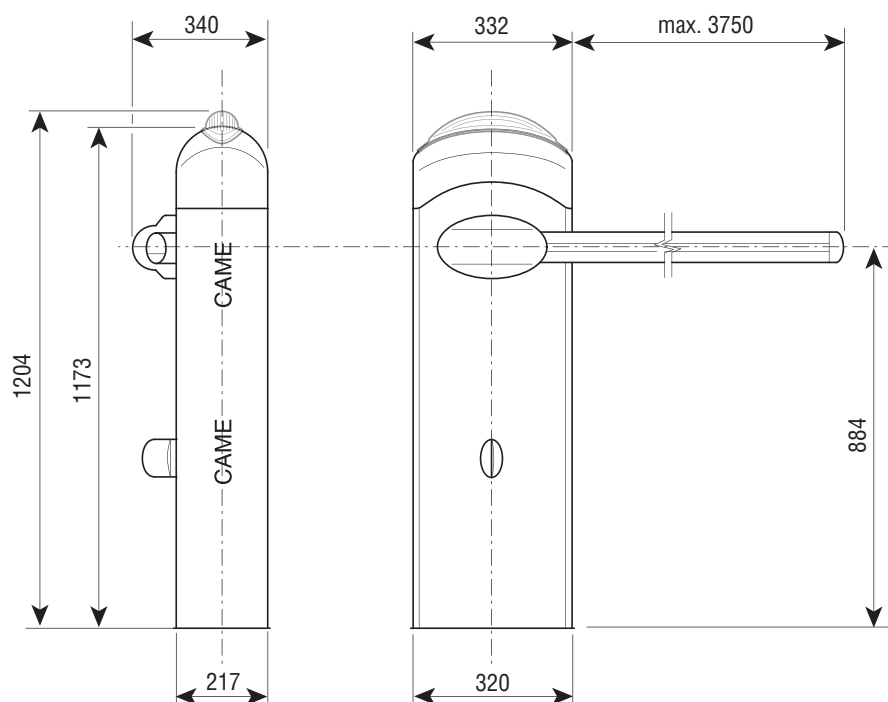
### Limits to use

Type	G4040Ezt
Maximum clearance width of the passage (m)	3.75

### Technical data

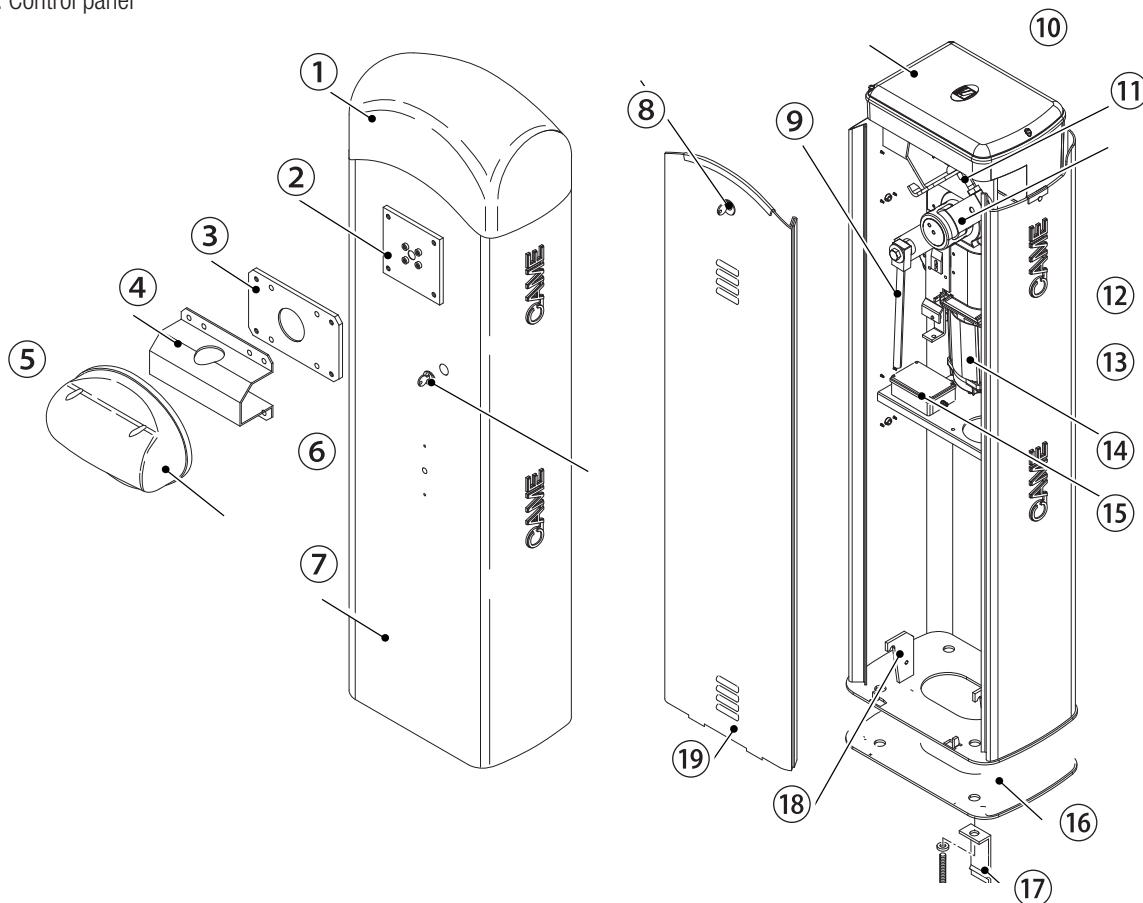
Type	G4040Ezt
Protection rating (IP)	54
Power supply (V - 50/60 Hz)	230 AC
Power supply motor (V)	24 DC
Max draw (A)	15
Power (W)	300
Torque (Nm)	200
Opening time to 90° (s)	2 ÷ 6
Duty cycle	INTENSIVE SERVICE
Operating temperature (°C)	-20 ÷ +55
Reduction ratio (i)	1/202
Insulation class	I
Weight (Kg)	55

### Dimensions (mm)



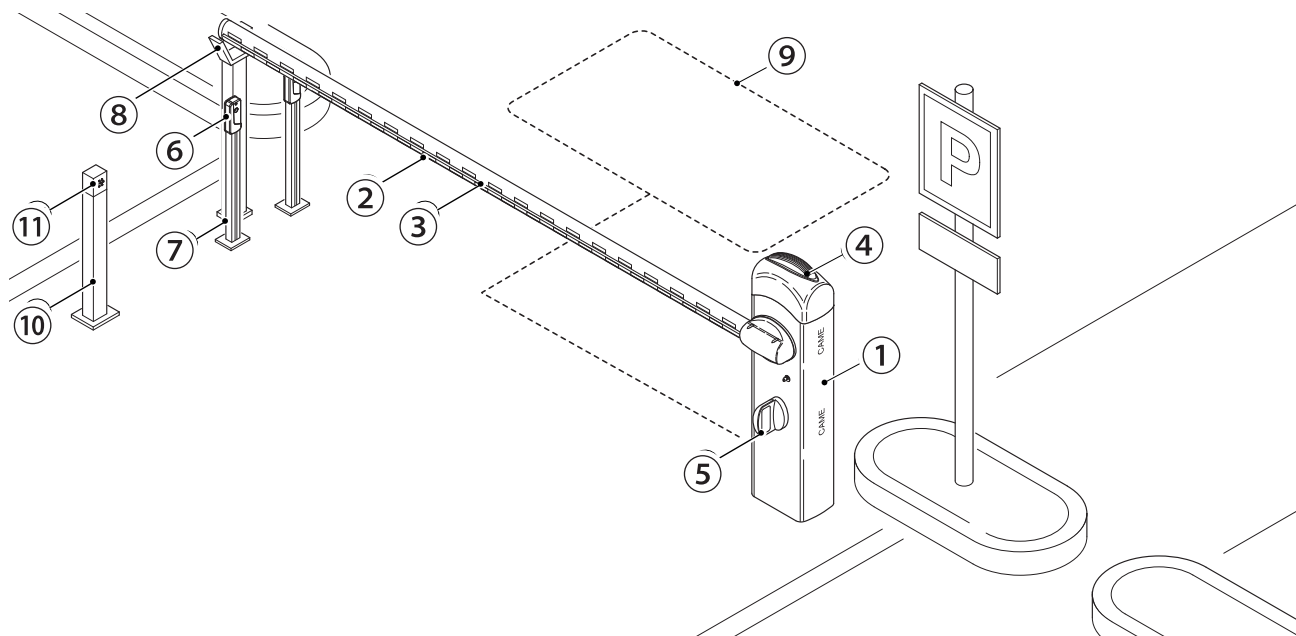
## Description of parts

1. Dome
2. Motor-shaft plate
3. Mid plate
4. Boom-attachment cover
5. Protective casing shear proof
6. Release lock
7. Cabinet
8. Inspection-hatch lock
9. Rod
10. Control panel
11. Boom setting mechanical stop
12. Lever arm
13. Micro-switch support tab
14. Gearmotor with encoder
15. EMC01 filter
16. Anchoring plate
17. Anchoring brace
18. Anchoring bracket
19. Inspection hatch



## Standard installation

1. Barrier with boom
2. Reflective strips
3. Luminous cord
4. Flashing light
5. Photocell casing
6. Photocell
7. Small photocell post
8. Fixed rest
9. Coil
10. Post for control devices
11. Control device (keypad selector, transponder sensor)



## GENERAL INSTALLATION INDICATIONS

⚠ Only skilled, qualified staff must install this product.

Important! Using CAME original control and safety devices and accessories ensures easy system installation and maintenance.

### Preliminary checks

⚠ Before beginning, do the following:

- make sure the plate is anchored to a solid spot;
- make sure you have set up a suitable dual pole cut off device along the power supply that is compliant with the installation rules. It should completely cut off the power supply according to category III surcharge conditions (that is, with minimum contact openings of 3 mm);
- ⊕ Make sure that any connections inside the casing (ones that ensure continuity to the protection circuit) are fitted with additional insulation with respect to those of other electrical parts inside;
- set up suitable tubes and conduits for the electric cables to pass through, making sure they are protected from any mechanical damage.

### Cable types and minimum thicknesses

Connection	Cable type	Cable length 1 < 15 m	Cable length 15 < 30 m
Power supply to the 230 V AC control panel (1P+N+PE)	H05RN-F	3G x 1.5 mm <sup>2</sup>	3G x 2.5 mm <sup>2</sup>
Photocell transmitters	FROR CEI 20-22 CEI EN 50267-2-1	2 x 0.5 mm <sup>2</sup>	
Photocell receivers		4 x 0.5 mm <sup>2</sup>	
Command and safety device		2 x 0.5 mm <sup>2</sup>	
Antenna	RG58	max 10 m	

📖 If cable lengths differ from those specified in the table, establish the cable sections depending on the actual power draw of the connected devices and according to the provisions of regulation CEI EN 60204-1.

For multiple, sequential loads along the same line, the dimensions on the table need to be recalculated according to the actual power draw and distances. For connecting products that are not contemplated in this manual, see the literature accompanying said products

## INSTALLATION

⚠ The following illustrations are mere examples. Consider that the space available where to fit the barrier and accessories will vary depending on the area where it is installed. It is up to the installer to find the most suitable solution.

⚠ Warning! Warning! Use hoisting equipment to transport and position the barrier.

During the set up and installing stages the barrier could be unstable and tip over. So, be careful to not lean on it until it is completely fastened.

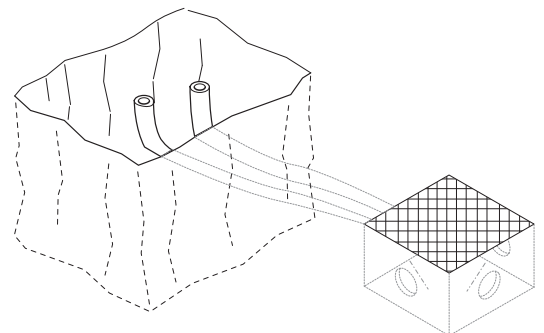
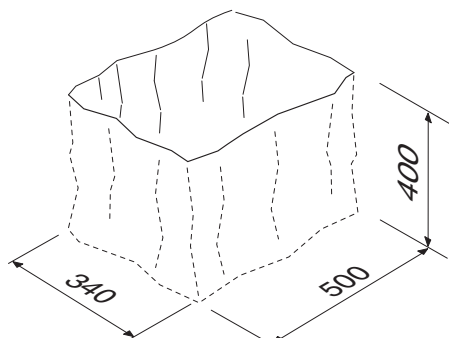
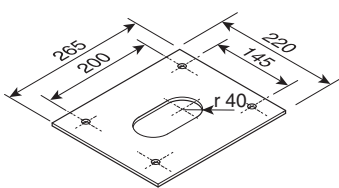
### Preparing the fastening plate.

⚠ If the flooring does not allow for a sturdy fastening of the entry unit, you will have to set up a cement slab.

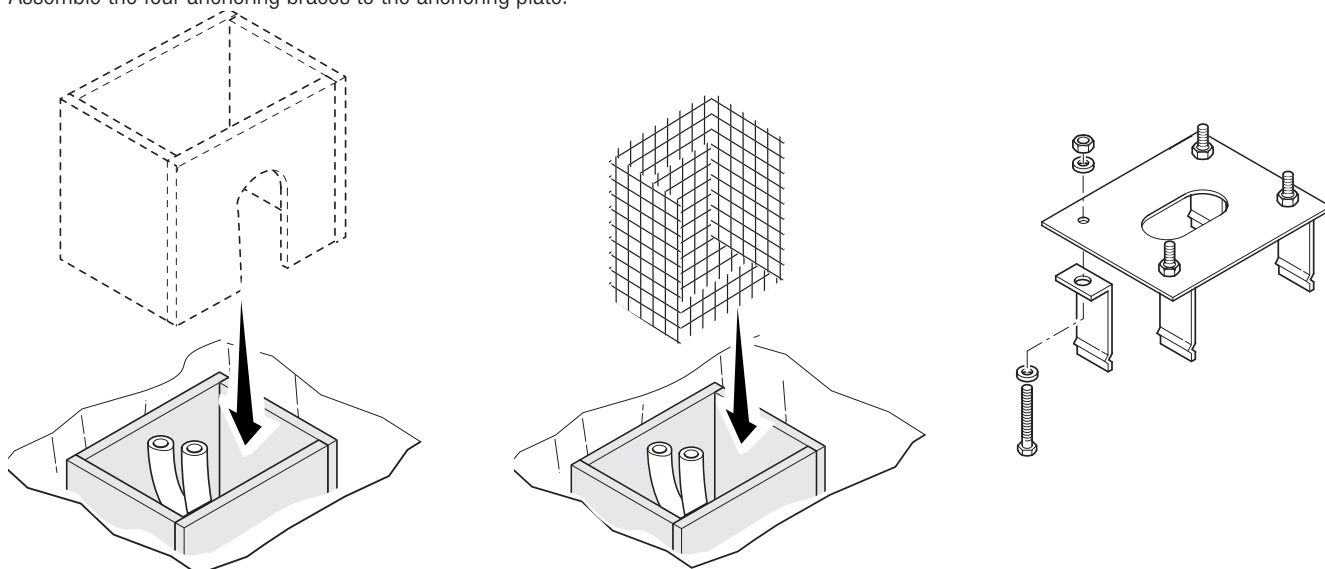
Dig a hole for the foundation frame.

Set up the corrugated tubes needed for making the connections coming out of the junction pit.

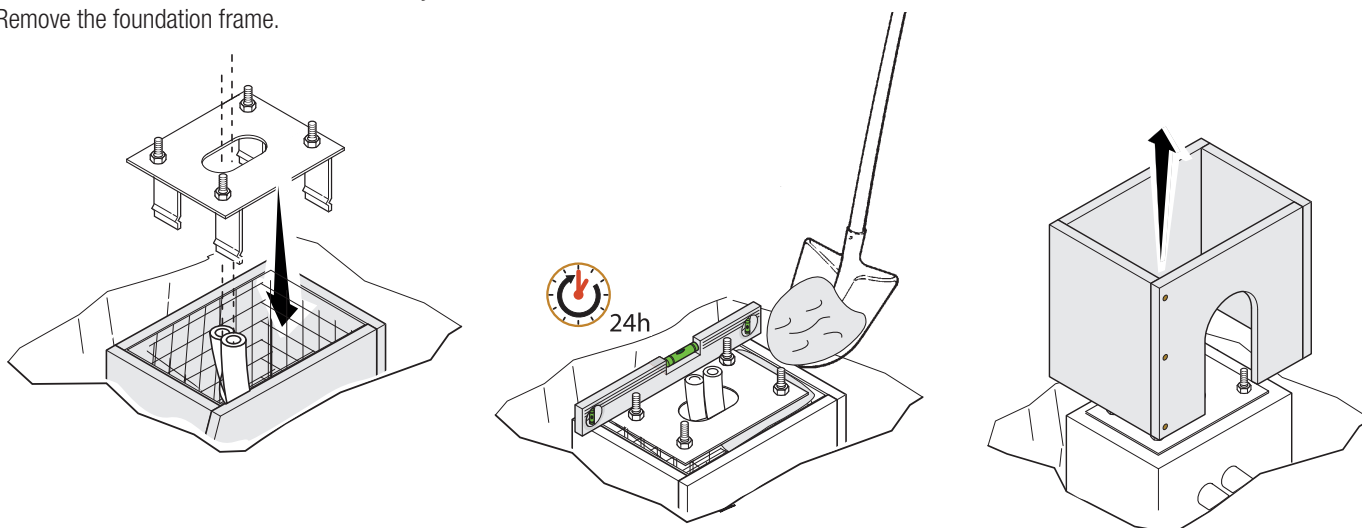
📖 The number of tubes depends on the type of system and the accessories you are going to fit.



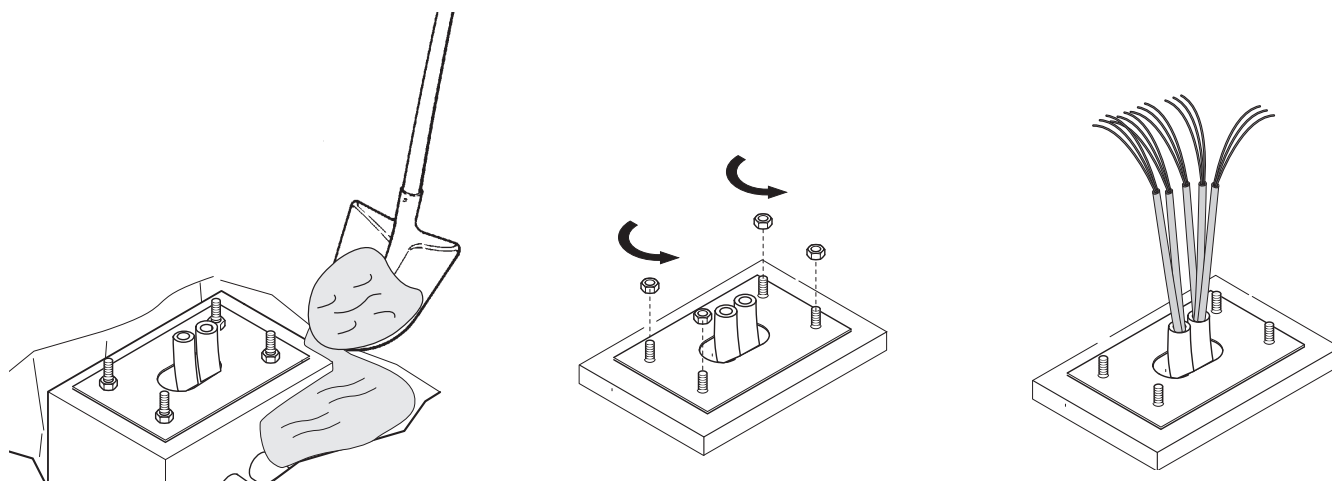
Set up a foundation frame that is larger than the anchoring plate and sink it into the dug hole.  
Fit an iron cage into the foundation frame to reinforce the concrete.  
Assemble the four anchoring braces to the anchoring plate.



Place the plate over the iron cage.  
Fill the foundation frame with concrete. The base must be perfectly level with the bolts which are entirely above surface.  
Wait at least 24 hrs for the concrete to solidify.  
Remove the foundation frame.

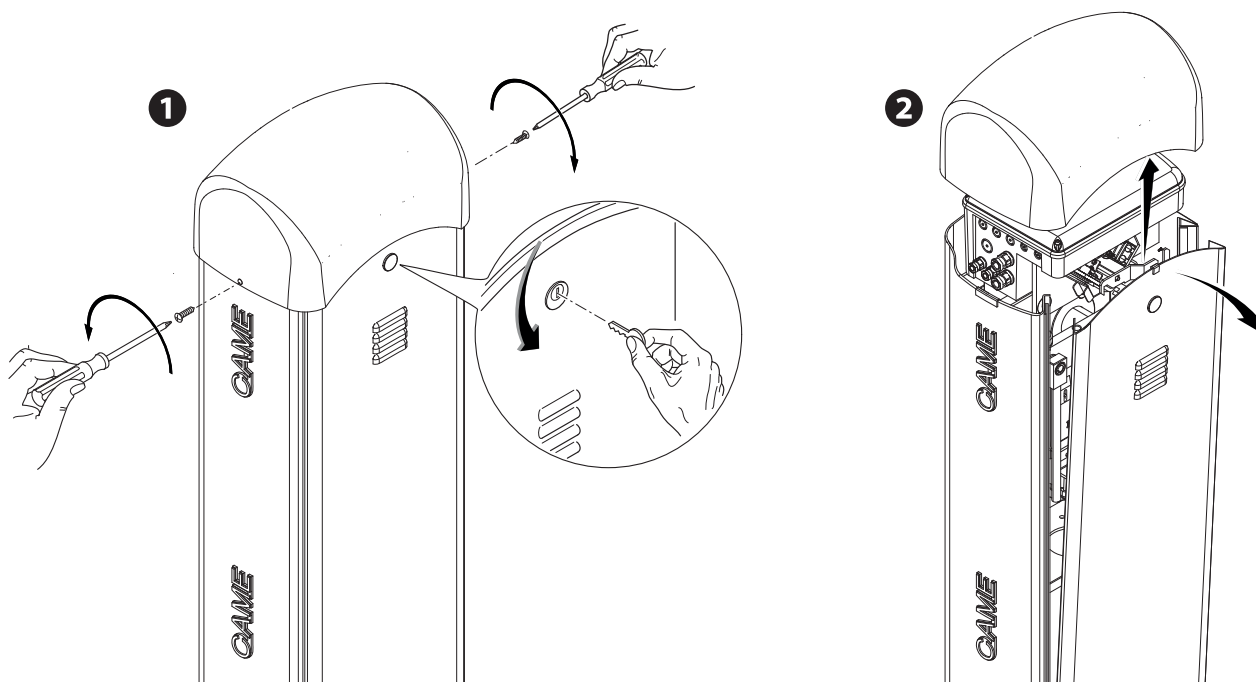


Fill the hole with earth around the concrete block.  
Remove the nut and washer from the bolts  
Fit the electric cables into the tubes so that they come out about 600 mm.



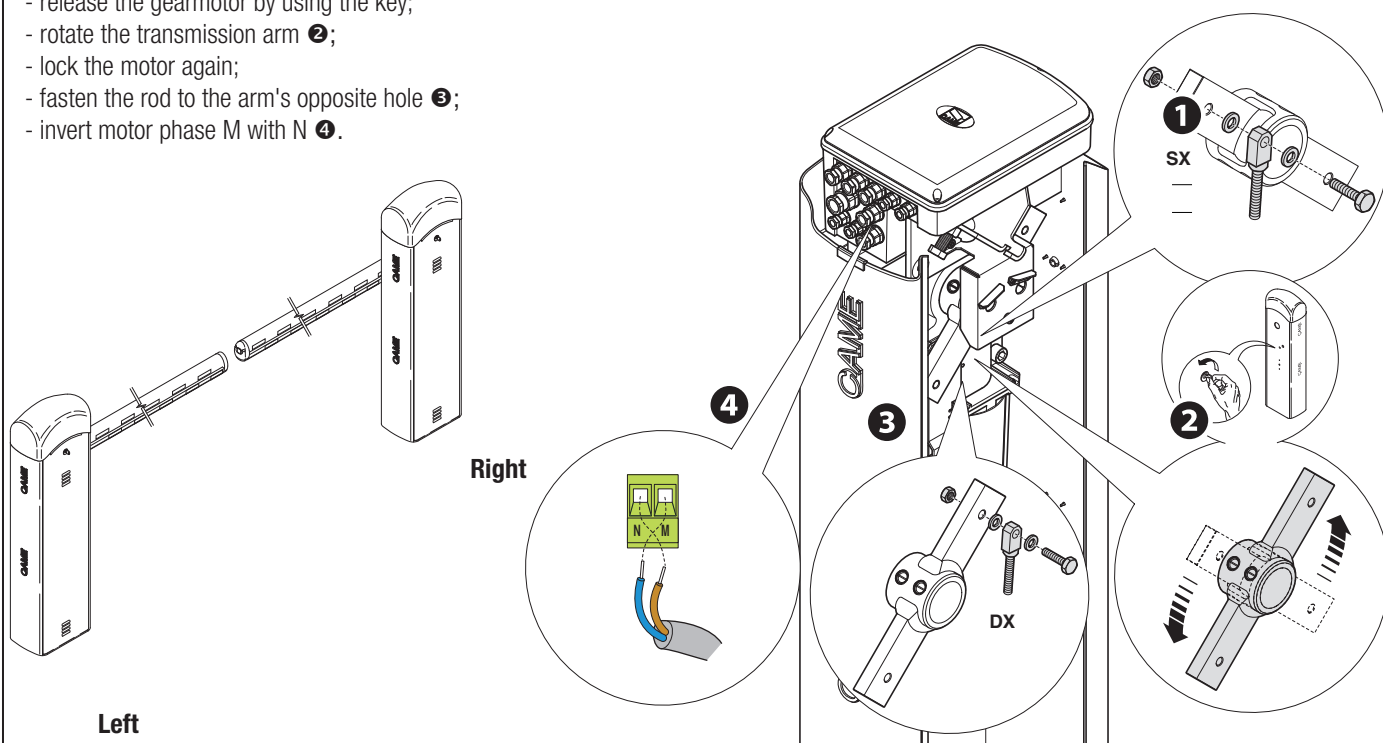
## Preparing the barrier

Remove the screws from the dome, fit the key into the lock and turn it counter clockwise ❶.  
Lift the dome and remove the inspection hatch ❷.




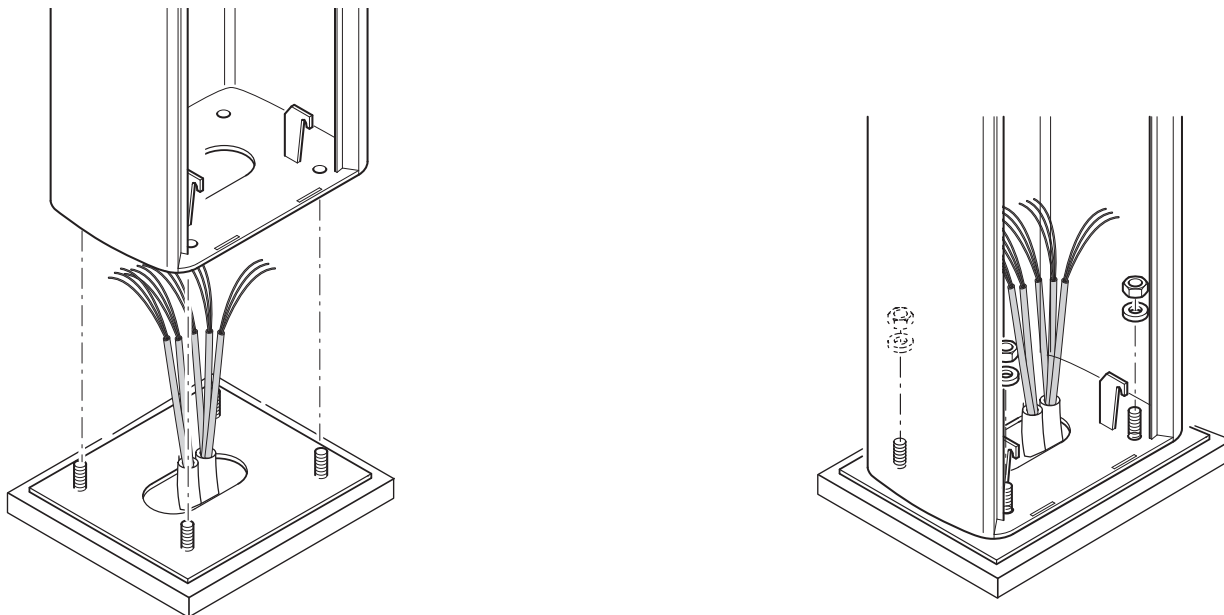
⚠ Warning! The barrier is set up for installing on the left.  
When installing on the right, invert the boom's opening direction, as follows:

- remove the rod from the transmission arm ❶;
- release the gearmotor by using the key;
- rotate the transmission arm ❷;
- lock the motor again;
- fasten the rod to the arm's opposite hole ❸;
- invert motor phase M with N ❹.

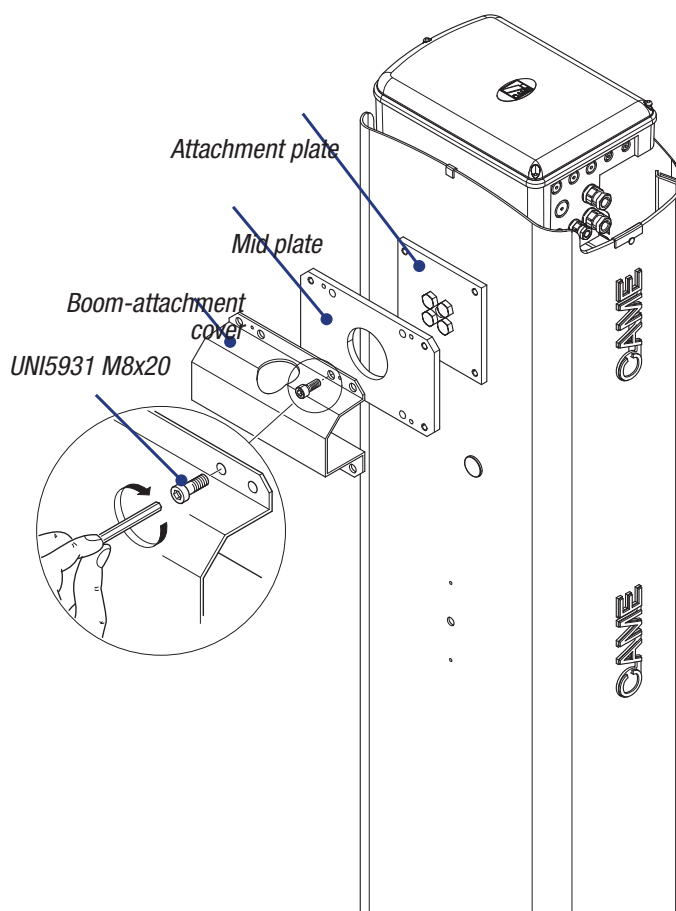


## Installing the barrier

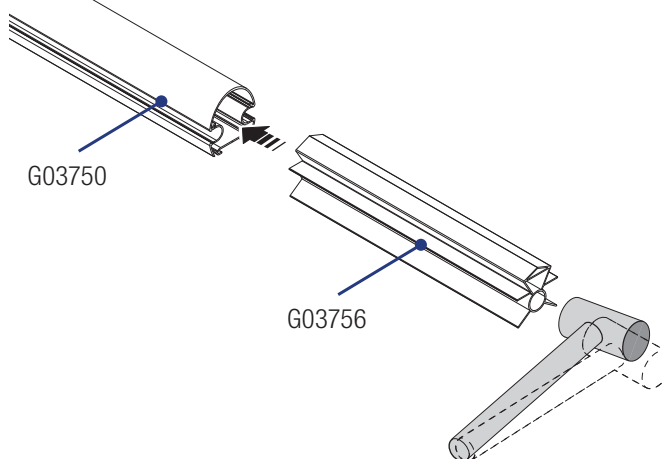
 The cabinet should be installed with the inspection hatch on the most accessible side to make any adjusting easier. Place the cabinet onto the anchoring plate and fasten it using nuts and washers.



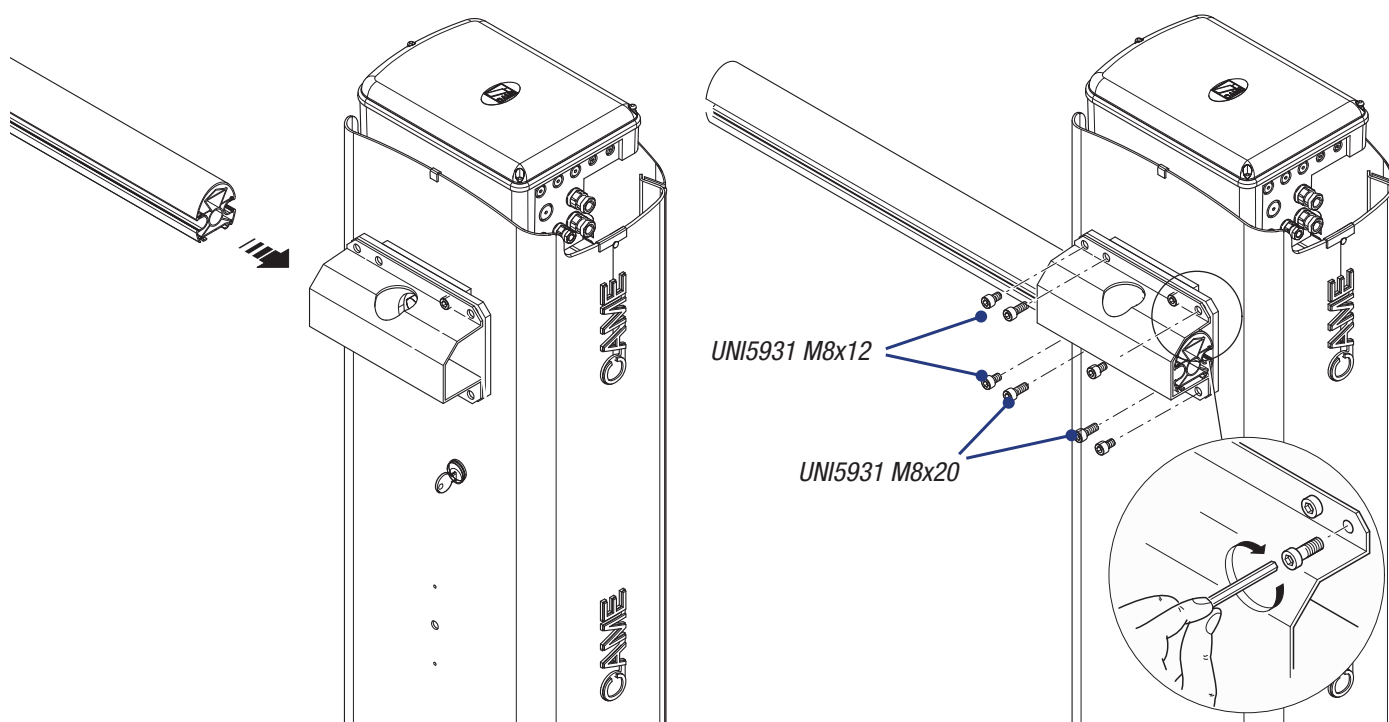
Assemble the boom-attaching cover, the mid plate and motor-shaft plate with a screw. Leave the screw loose to then facilitate fitting the boom.



⚠ To mount with the G03750 boom, you will need to fit the G03756 reinforcement.



Fit the boom into the boom-attaching cover and fasten it using the screws.

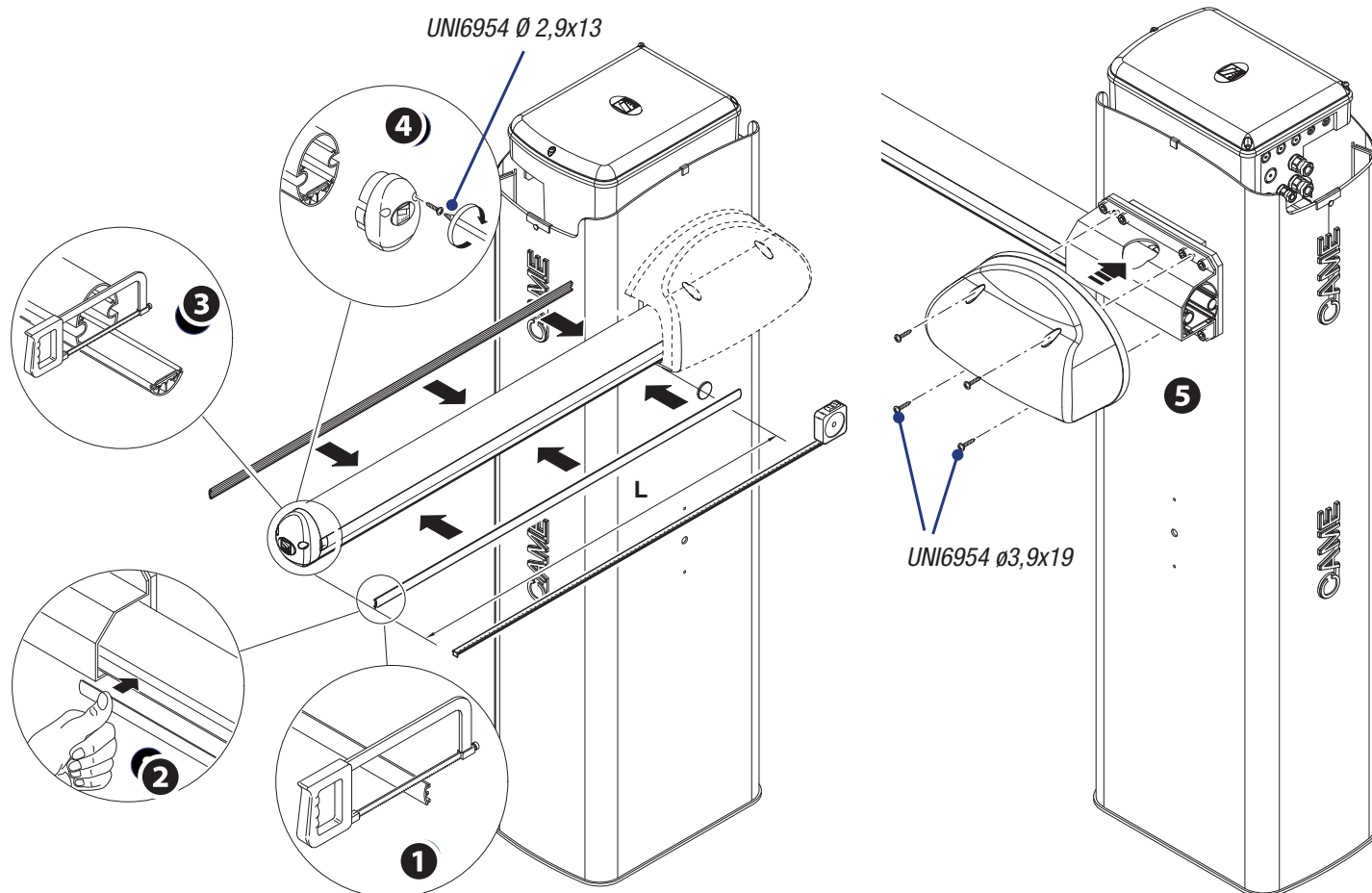


Cut the groove covering frame to the right length and fit them into the boom grooves on either side ❶❷.

Fit the shock-proof frame into the boom and cut any excess ❸.

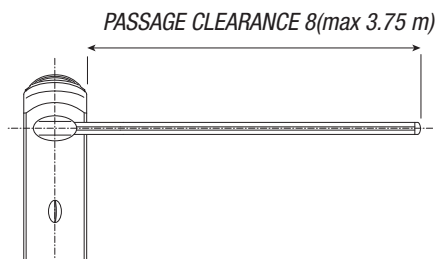
Fasten the end cap using the screws ❹.

Fit the anti-shearing protective cover onto the boom-attachment cover and fasten it with screws. ❺.



## Balancing the boom

Before proceeding, check that the spring you have chosen is suitable for the accessories and the clearance.



	<b>A</b> Spring 001G02040 Ø 40 mm	<b>B</b> Spring 001G04060 Ø 50 mm	<b>C</b> Spring 001G06080 Ø 55 mm			
<b>BOOM COMPOSITION</b>	1.5 ÷ 1.75	1.75 ÷ 2.25	2.25 ÷ 2.75	2.75 ÷ 3.25	3.25 ÷ 3.5	3.5 ÷ 3.75
Boom with shock-proof profile	<b>A</b>	<b>A</b>	<b>A</b>	<b>B</b>	<b>B</b>	<b>C</b>
Boom with shock-proof profile and 001G028401 luminous cord	<b>A</b>	<b>A</b>	<b>B</b>	<b>B</b>	<b>B</b>	<b>C</b>
Boom with skirt 001G0465	<b>A</b>	<b>B</b>	<b>B</b>	<b>C</b>	<b>C</b>	
Boom with 001G028401 luminous cord and 001G0465 skirt	<b>A</b>	<b>B</b>	<b>B</b>	<b>C</b>	<b>C</b>	
Boom with shock-proof profile and 001G02808 swing rest	<b>A</b>	<b>B</b>	<b>B</b>	<b>C</b>		
Boom with shock-proof profile, 001G028401 luminous cord and 001G02808 swing rest	<b>A</b>	<b>B</b>	<b>B</b>	<b>C</b>		

The boom includes the transparent groove cover and end cap.

### ⚠ WARNINGS!

001G02802 Cannot be used on barriers fitted with the 001G0465 skirt or 001G02808 swing rest

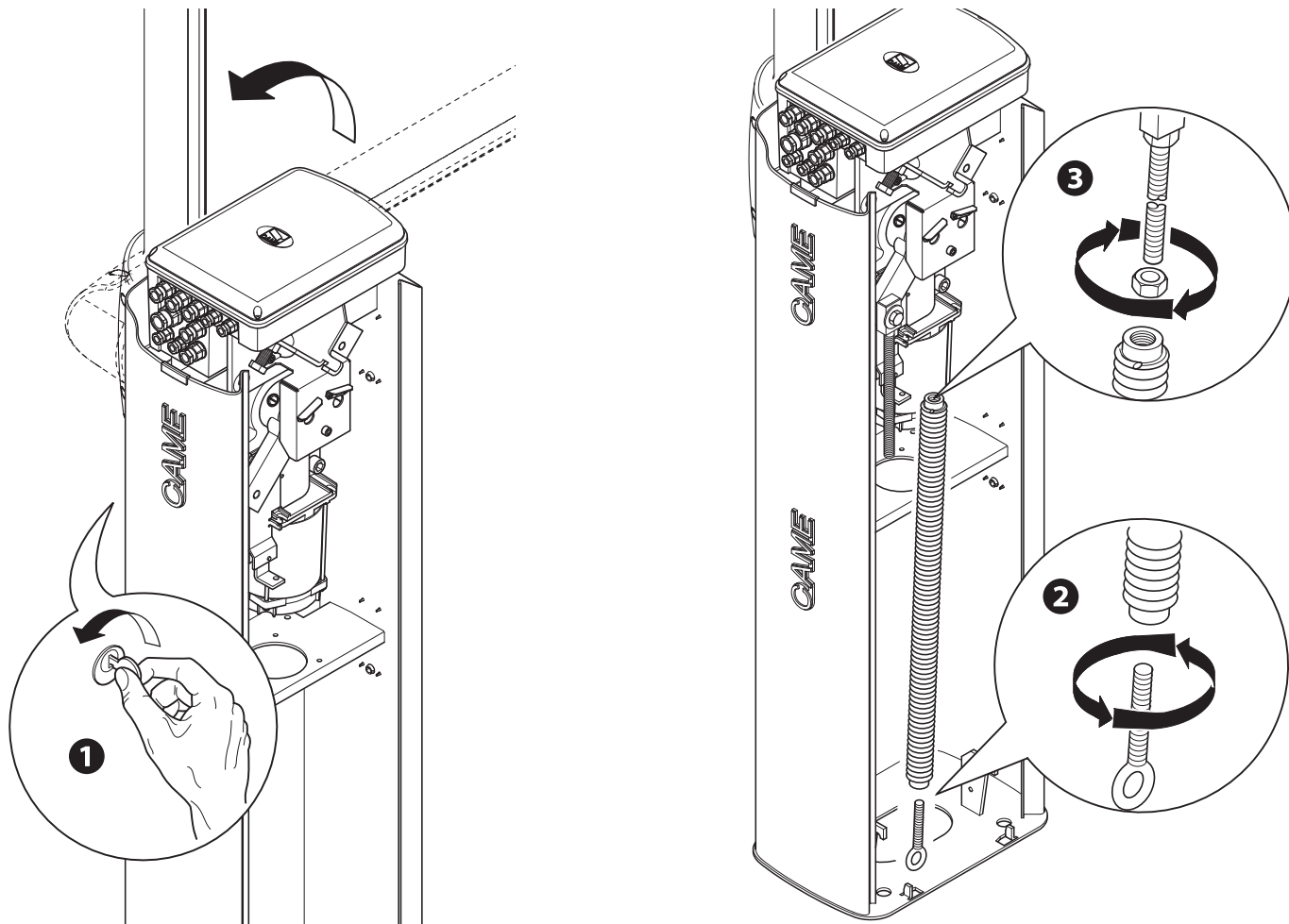
001G02808 For passage widths of up to 3 m.

001G02807 MUST be used with passage widths exceeding 3 m.

001G0465 - 001G02808 Cannot be used together.

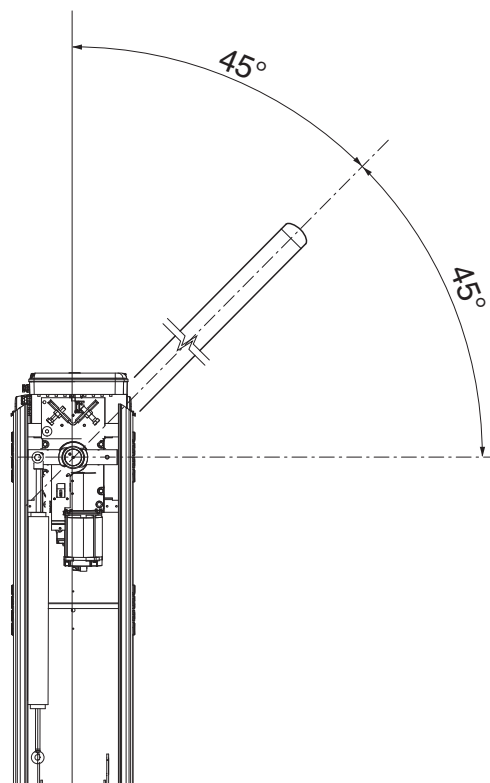
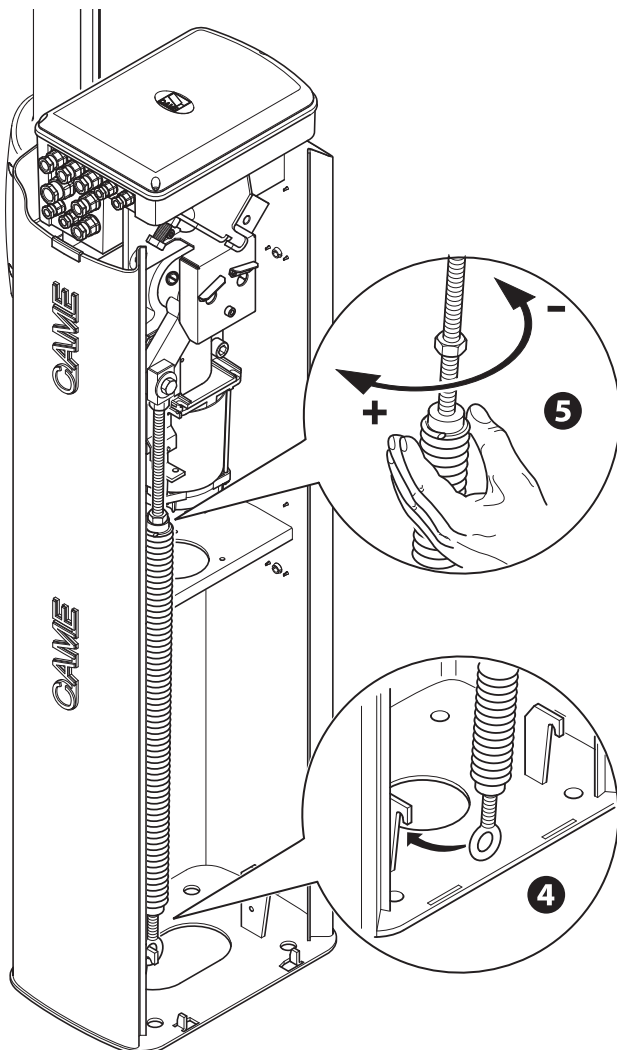
Release the gearmotor and position the boom vertically ❶. Lock the gearmotor again.

Tighten the eyelet tie rod below the spring ❷. The spring should be tightened to the rod which is fastened to the lever arm ❸.




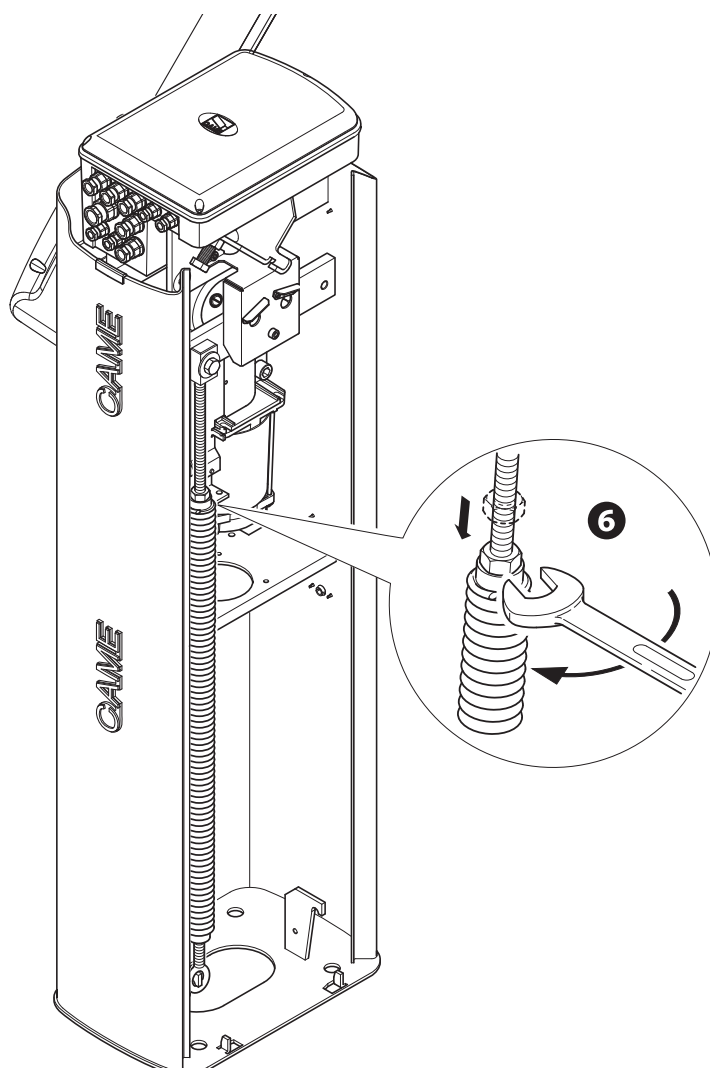
Hook the eyelet rod to the anchoring rod **4**.

Release the gearmotor and manually turn the spring to increase or reduce traction **5**. The boom should stabilize at 45°.



Secure the counter-nut and relock the gearmotor **6**.

 Check the proper working state of the spring. With the boom raised vertically the spring is not taut. With the boom lowered horizontally the spring is taut. Warning! Once the balancing procedures are finished, LUBRICATE THE SPRINGS WITH SPRAY GREASE!



## ELECTRICAL CONNECTIONS

⚠ Warning! Before working on the control panel, cut off the main current supply and, if present, remove any batteries.

Power supply to the control panel and control devices: 24 V AC/DC.

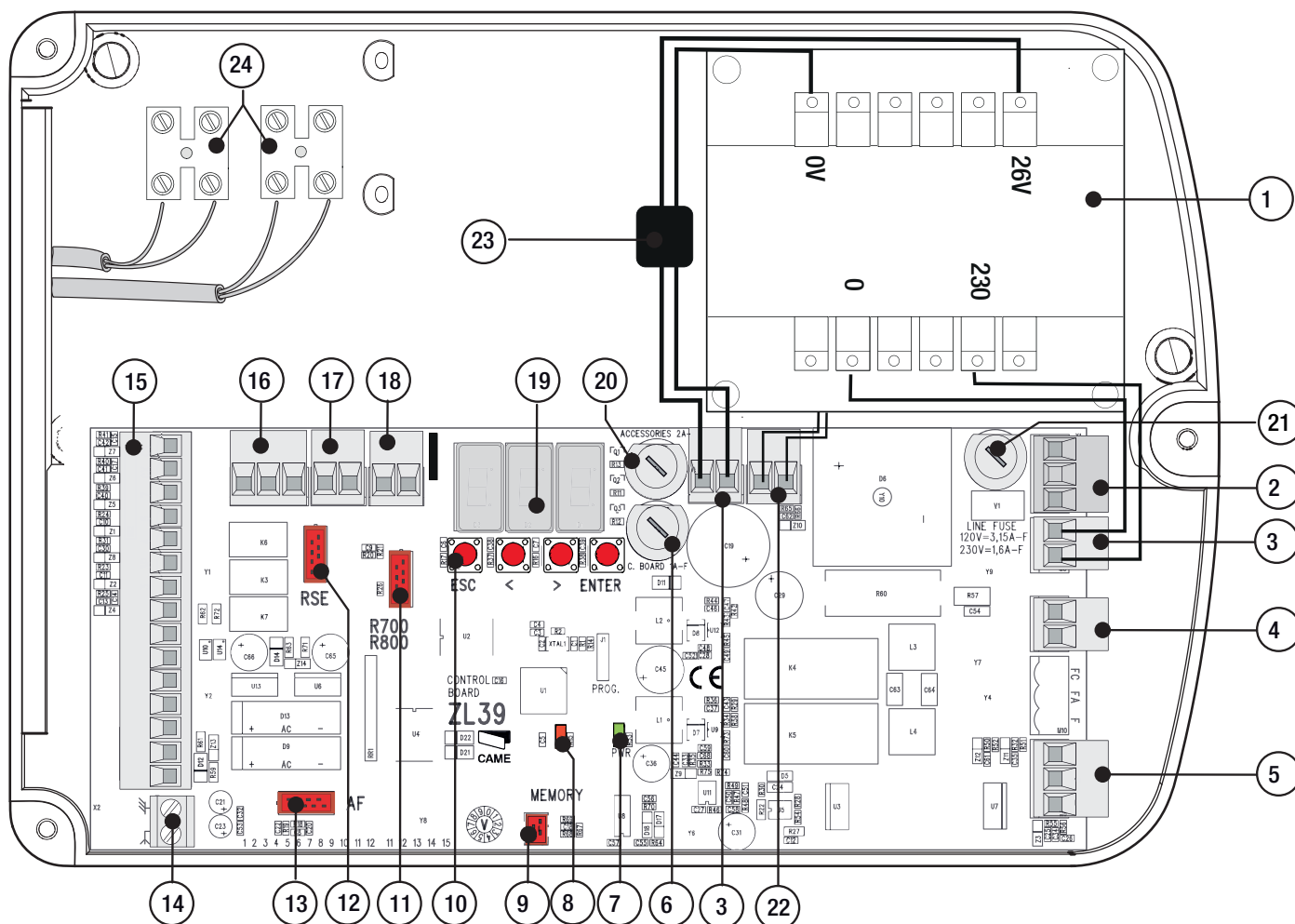
Functions on input and output contacts and time and user management details, are set up and viewable on the control panel's display.

All connections are quick-fuse protected.

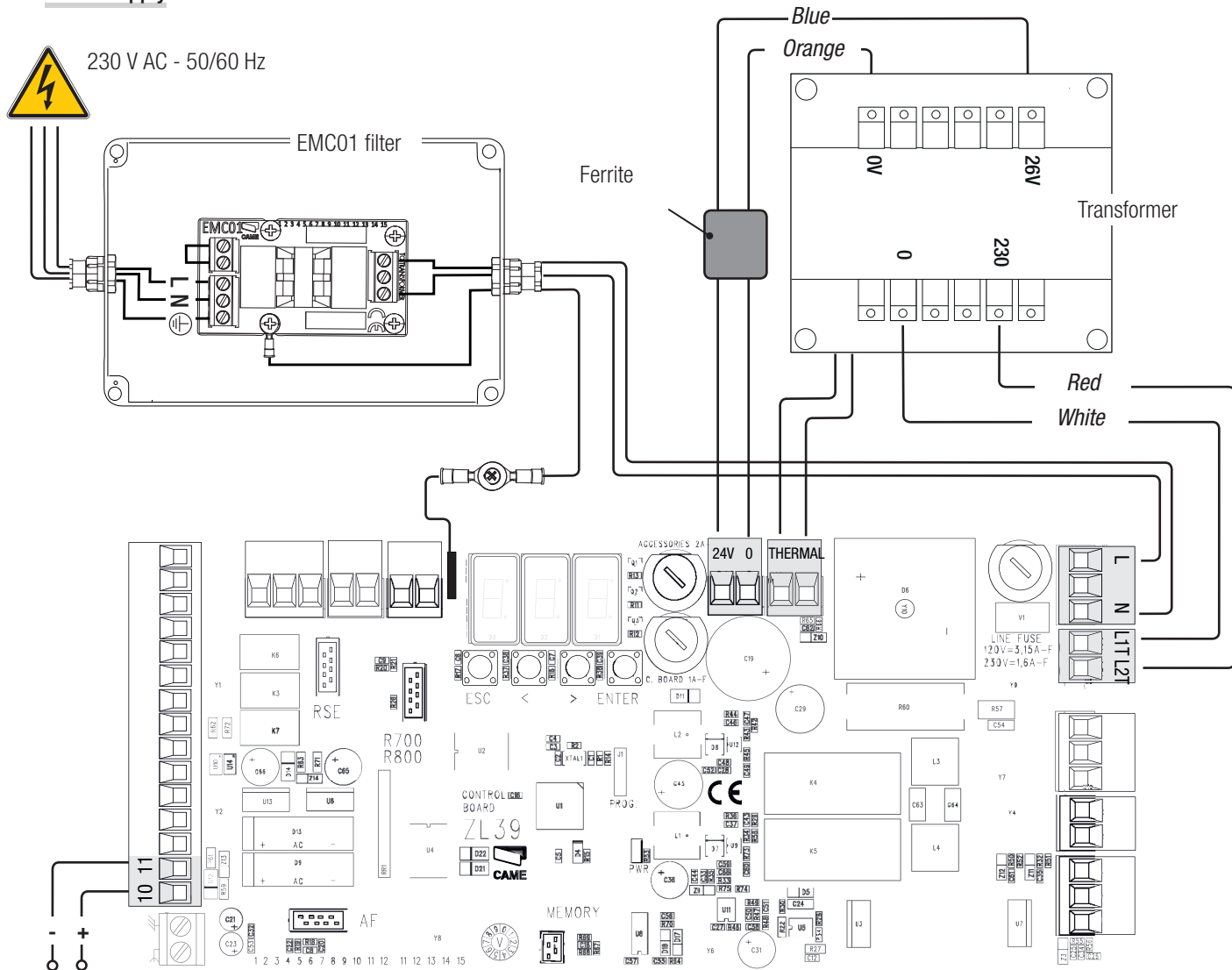
FUSE TABLE	ZL39
LINE - Line	3.15 A-F (120 V) 1.6 A-F (230 V)
C.BOARD - Card	1 A-F
ACCESSORIES - Accessories	2 A-F

### Description of parts

- Transformer
- Power supply terminals
- Transformer terminals
- Terminal for gearmotors
- Encoder terminals
- Control-board fuse
- Power supply on warning LED
- Programming warning LED
- Memory roll board connector
- Programming buttons
- Connector for the R700 / R800 card
- RSE board connector
- AF card connector
- Antenna terminal
- Terminals for control and safety devices
- Terminals for paired / alternate / CRP connections
- Keypad selector terminal
- Terminals for transponder devices
- Display
- Accessories fuse
- Line fuse
- Overheating protection terminals
- Ferrite
- Terminal board for auxiliary output-contacts



## Power supply



Power supply to accessories output:

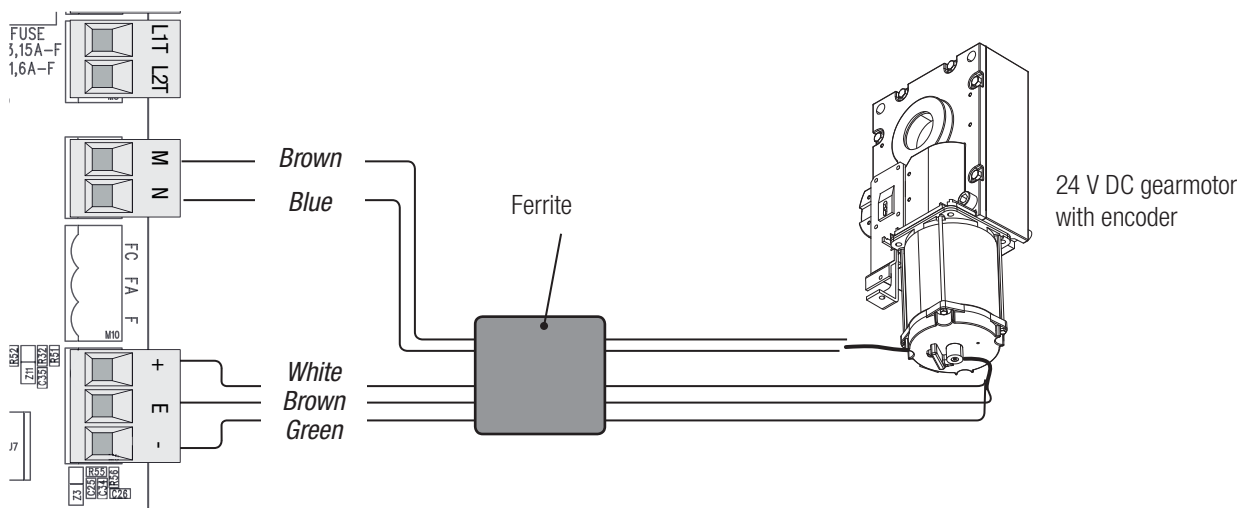
- a 24 V AC normally;
- a 24 V DC when the emergency batteries are operating;

Maximum power: 40 W

## Factory wiring

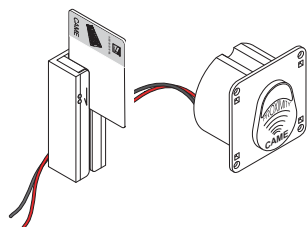
The gearmotor is already connected.

To install the barrier on the right, follow the instructions in the PREPARING THE BARRIER.



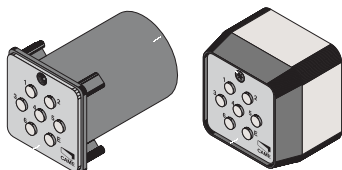
## Command and control devices

Transponder or card reader



Black  
Red

Keypad selector



Blue  
White

OPEN-CLOSE-INVERT function (step-step) from control device (NO contact).

ONLY CLOSE function from control device (NO contact).  
Warning: in MAINTAINED ACTION mode, the control device must be connected to 2-4.

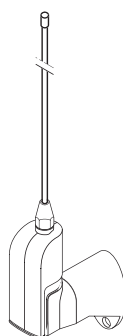
Warning! OPEN ONLY from (NO contact) control device function, to be connected only when using paired or alternate-type systems. (See PAIRED CONNECTION or ALTERNATE CONNECTION)

OPEN ONLY function from control device with NO contact.  
Warning: in MAINTAINED ACTION mode, the control device must be connected to 2-3.

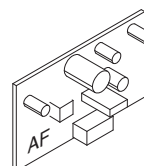
STOP button (NC contact). For stopping the boom while excluding the automatic closing. To resume movement either press the control button or any other control device.

📖 If unused, select 0 (Deactivated) from function F1.

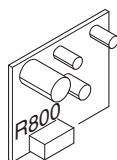
Antenna with RG58 cable



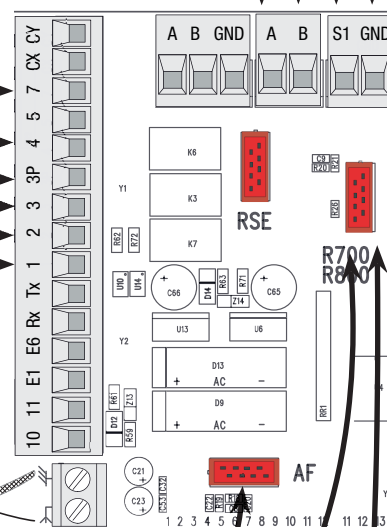
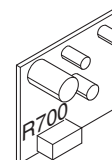
📖 Fit the AF card to control the barrier with a transmitter.



📖 If it the R800 decoding card so that the keypad selector can be recognized.



📖 Fit the R700 decoding card for recognition of the TSP00 sensor or the LT001 card reader.



**WARNING!** Before fitting any plug-in card, such as the AF or R800 one, YOU MUST CUT OFF THE MAINS POWER SUPPLY and, if present, disconnect any batteries.

## Signaling devices

Barrier open signal-output (Contact rated for: 24 V AC - 3 W max).  
It signals the status of the barrier, (function F10).

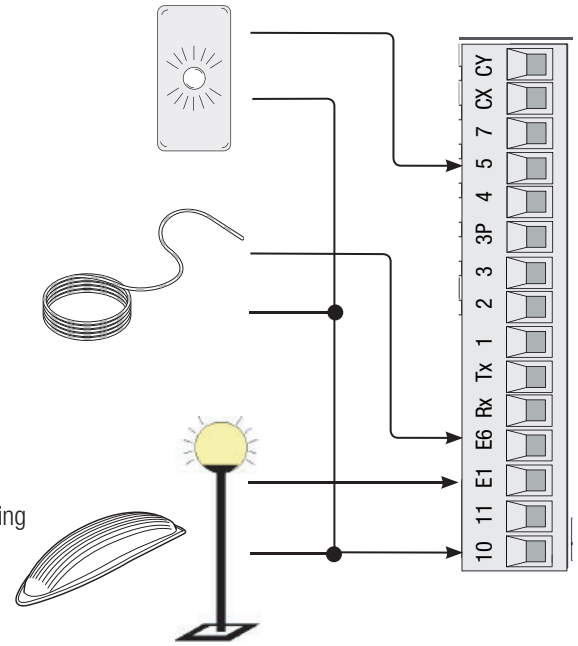
Luminous cord (Contact rated for: 24 V AC - 32 W max).  
It flashes during the boom's opening and closing phases, see function F 15.

Additional light connection output (Contact rated for: 24 V AC - 25 W max):

- flashing light dome, which flashes during the barrier's opening and closing phases.
- cycle or courtesy light, which is a freely positionable outdoor light for enhanced lighting in the driveway.

Cycle light, which stays on from the moment the boom starts opening until it is fully closed (including the automatic closing time).

Courtesy light, which stays on for a settable time between 60 and 180 seconds, see function F18.



## Safety devices

Configure contact (NC) CX or CY, input for safety devices, such as photocells, that comply with EN 12978 provisions.  
CX input (function F 2) or CY (function F 3).

C1 reopening while closing. When the boom is closing, opening the contact causes its movement to invert until fully opened;

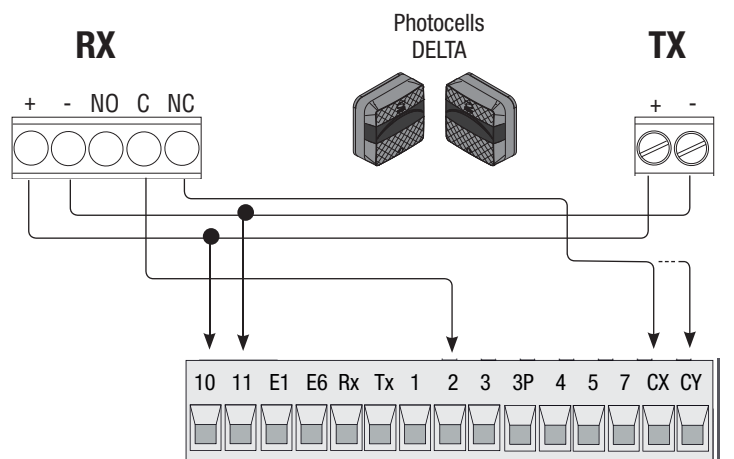
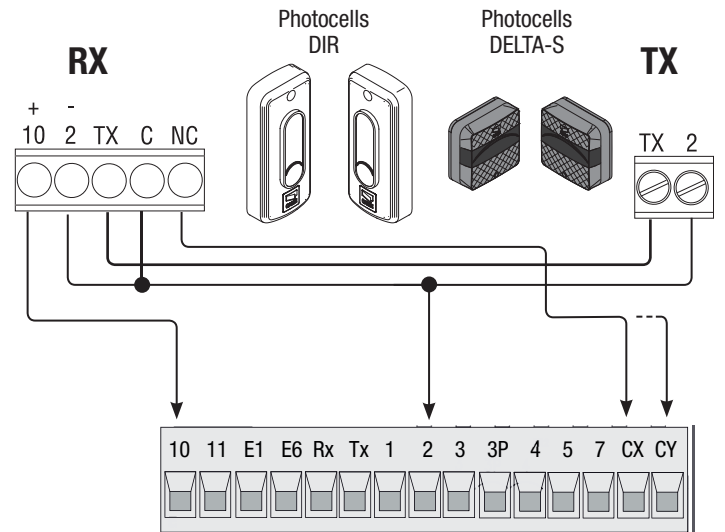
C4 obstruction wait. Stopping the boom, if it is moving, with resumption of movement after the obstruction is removed.

C5 immediate closing. Closing the boom after a vehicle has passed through the operating area of the safety devices.

C9 immediate closing with obstruction wait when closing. Closing the boom after a vehicle has passed through the operating area of the safety devices.

During the closing phase, the devices also perform the C4 obstruction wait function.

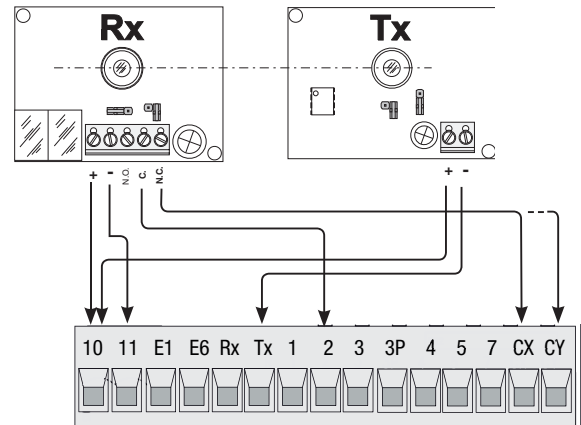
If unused, contacts CX and CY should be deactivated during programming.



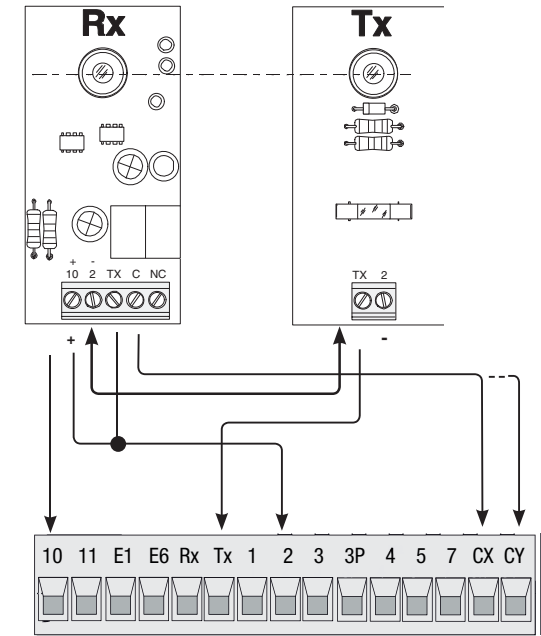
Connecting the safety devices (Safety test)

At each opening and closing command, the control board checks the efficacy of the safety devices (such as, photocells). Any malfunction inhibits any command and the display will show the Er4 wording. Enable function F5 in programming.

DELTA



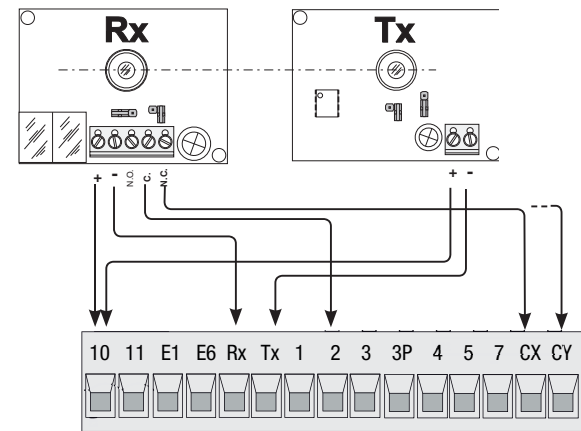
DIR / DELTA S



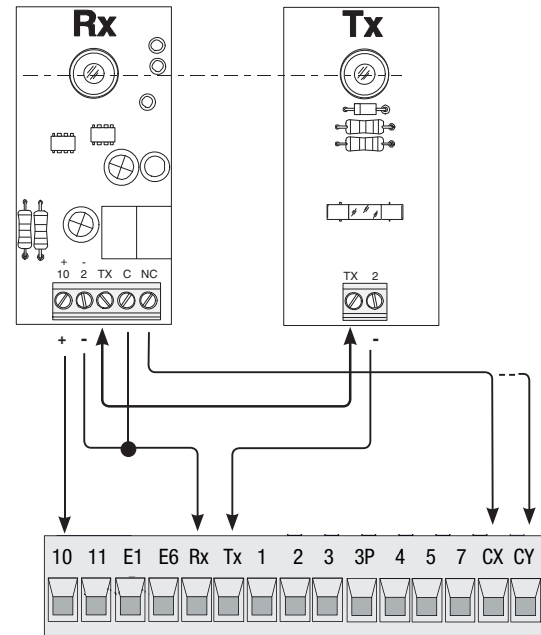
Connecting the safety devices (i.e. Sleep Mode)

The Sleep Mode function cuts down on energy consumption when in stand-by. Select 1 from function F 60.

DELTA

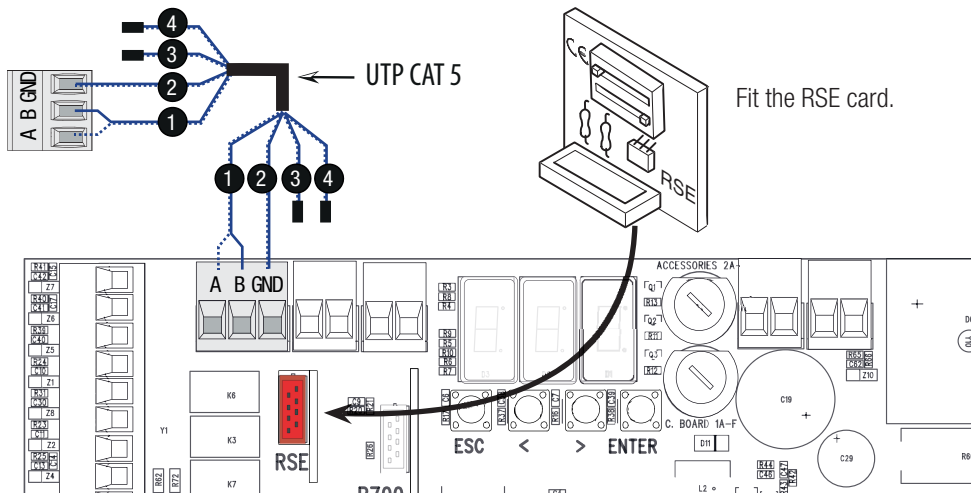


DIR / DELTA S



Connection for either paired or alternate operating mode and the Came Remote Protocol (CRP)

See the PAIRED CONNECTION WITH SINGLE CONTROL chapter.

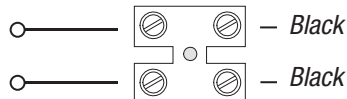


## Auxiliary output contacts

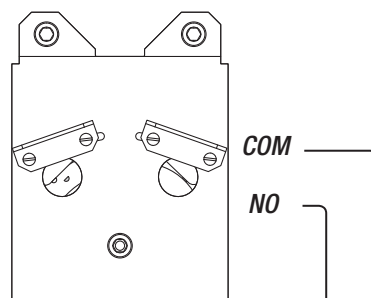
Auxiliary output for (NO) contact it closes when the boom completely opens.  
(Contact rated for: 24 V DC - 1 A max)



Auxiliary output for (NO) contact it closes when the boom completely closes.  
(Contact rated for: 24 V DC - 1 A max)



Micro-switch support tab



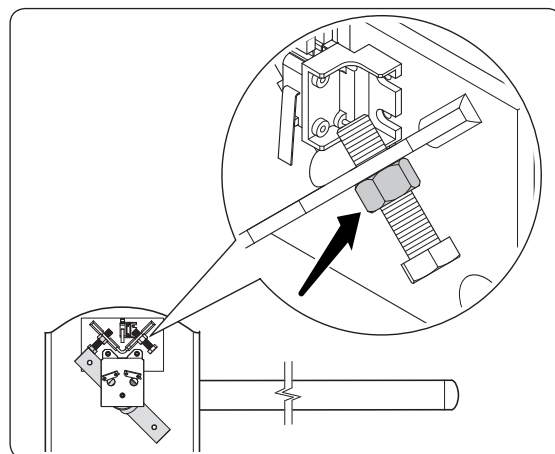
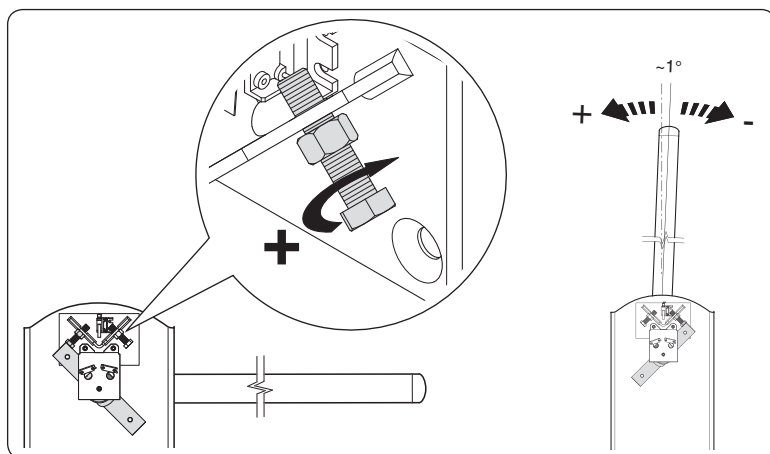
## Establishing the limit-switch points

Close the inspection hatch and power up the system. Move the boom the check that it is parallel to the road surface when closed and at about 89° when open.

⚠ The boom's opening and closing maneuvers must be performed with the inspection hatch closed.

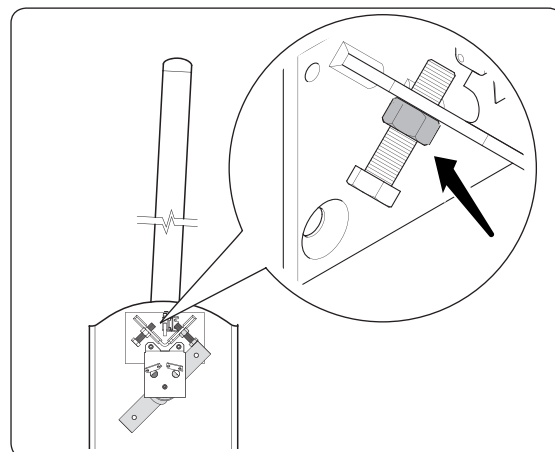
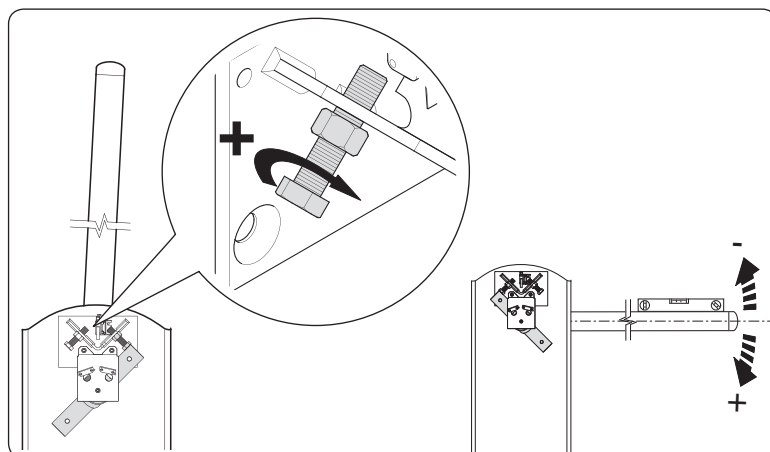
To correct the boom's vertical position:

- lower the boom;
  - open the inspection hatch;
  - turn the mechanical closing stop clockwise to increase the boom travel or turn it counter-clockwise to decrease it ❶.
- Fasten the stop with a counter nut ❷.



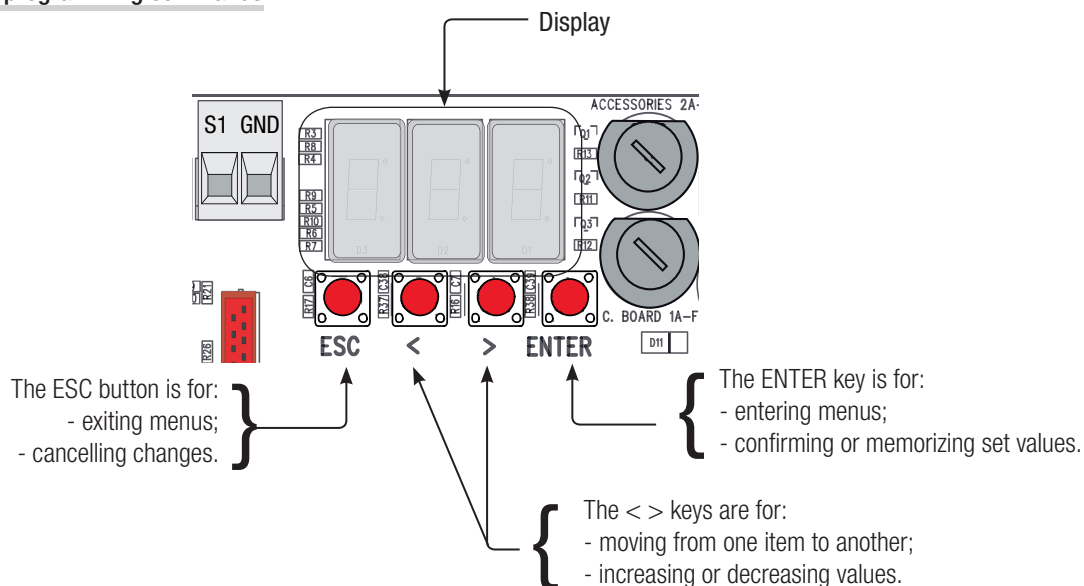
To correct the horizontal position:

- raise the boom;
  - turn the mechanical closing stop clockwise to increase the boom travel or turn it counter-clockwise to decrease it ❸.
- Fasten the stop with a counter nut ❹.

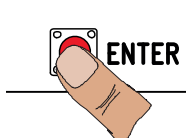


⚠ During programming, the barrier must not be moving.

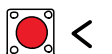
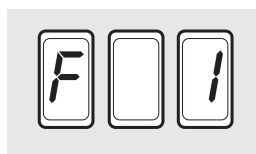
### Description of programming commands



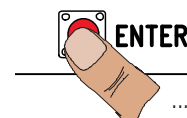
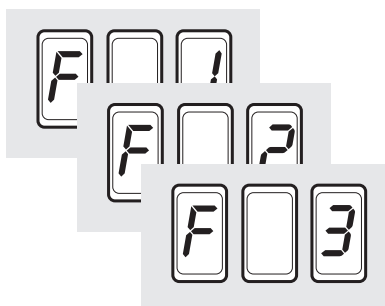
### Browsing the menu



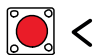
To enter the menu, keep the ENTER button pressed for at least one second.



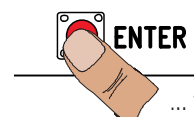
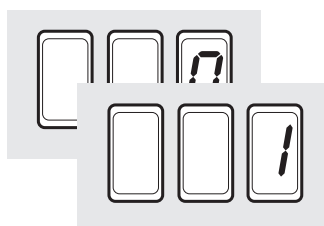
To select menu items, use the arrow keys ...



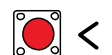
... then press ENTER



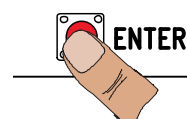
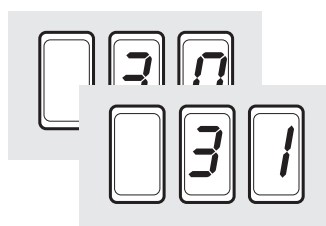
also for the submenus, use the arrow keys to select ...



... then press ENTER



To increase or reduce the value use the arrows...



... the press ENTER to confirm ...



... to exit the menu, wait 10 seconds or press ESC.

## Functions map

F 1	Total stop function (1-2)
F 2	Function associated to input CX
F 3	Function associated to input CY
F 5	Safety test function
F 6	Maintained action function
F 9	Obstruction detection with motor idle function
F 10	Function associated the open-barrier signal output
F11	Exclude Encoder
F 14	Sensor type selection function
F 15	Intermittent luminous cord function
F 18	Additional light function
F 19	Automatic closing time
F 21	Preflashing time
F 22	Working time
F 25	Courtesy light time
F 28	Adjusting opening speed
F 29	Adjusting closing speed
F 30	Adjusting opening slow-down speed
F 31	Adjusting closing slow-down speed
F 33	Adjusting calibration speed
F 34	Sensitivity during travel
F 35	Sensitivity during slow-downs
F 37	Adjusting the opening slow-down starting point
F 38	Adjusting the closing slow-down starting point
F 49	Manage serial connection
F 50	Save data in memory roll
F 51	Reading memory roll data
F 52	Copying parameters from Master to Slave
F 56	Number of the peripheral
F 60	Sleep Mode function
F 61	Pre-flashing function
F 63	Changing COM speed
U 1	Enter new user with an associated command
U 2	Delete single user
U 3	Deleting all users
A 1	Boom-type setting
A 2	Motor test
A 3	Travel calibration
A 4	Resetting parameters
A 5	Counting maneuvers
H 1	Software version

## Functions menu



**IMPORTANT! IMPORTANT! Start programming by first performing the following: A1 BOOM-TYPE SETTING, A2 MOTOR TEST, F1 TOTAL STOP and A3 CALIBRATING BOOM TRAVEL.**

<b>F1 Total stop [1-2]</b>	0 = Deactivated ( <b>default</b> ) / 1 = Activated
NC input - Barrier stops while excluding any automatic closing; to resume movement, use the control device. The safety device is inserted into [1-2].	
<b>F2 Input [2-CX]</b>	0 = Deactivated ( <b>default</b> ) / 1 = C1 / 4 = C4 / 5 = C5 / 9 = C9
NC input – Can associate: C1 = reopening during closing by photocells, C2 = reclosing during opening by photocells, C3 = partial stop, C4 = obstruction wait, C5 = immediate closing, C9 = immediate closing with obstruction wait during closing.	
<b>F3 Input [2-CY]</b>	0 = Deactivated ( <b>default</b> ) / 1 = C1 / 4 = C4 / 5 = C5 / 9 = C9
NC input – Can associate: C1 = reopening during closing by photocells, C2 = reclosing during opening by photocells, C3 = partial stop, C4 = obstruction wait, C5 = immediate closing, C9 = immediate closing with obstruction wait during closing.	
<b>F5 Safety test</b>	0 = Deactivated ( <b>default</b> ) / 1 = CX / 2 = CY / 3 = CX+CY
After every opening or closing command, the board will check whether the photocells are working properly.	

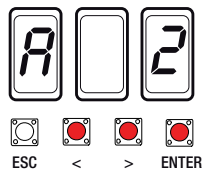
<b>F6 Maintained action</b>	0 = Deactivated ( <b>default</b> ) / 1 = Activated
The barrier opens and closes by keeping a button pressed. Opening button on contact 2-3 and button for closing on contact 2-4. All other command devices, including radio ones, are excluded.	
<b>F9 Obstruction detection with motor idle</b>	0 = Deactivated ( <b>default</b> ) / 1 = Activated
With the barrier closed, open or after a total stop, the operator stays still if the safety devices (photocells and sensitive edges) detect an obstruction.	
<b>F10 Barrier open signal output</b>	0 = lit when barrier is up and moving ( <b>default</b> ) / 1 = flashes intermittently each half second when opening when closing it flashes intermittently every second permanently lit with the boom raised off with the boom lowered
It signals the barrier's status The signal device is connected to contact 10-5.	
<b>F11 Encoder</b>	0 = Activated ( <b>default</b> ) / 1 = Deactivated
Managing slow-downs, obstruction detections and sensitivity.	
<b>F14 Sensor type selection</b>	0 = command with transponder sensor or magnetic card reader / 1 = command with keypad selector ( <b>default</b> ).
Setting the type of sensor for controlling the barrier.	
<b>F15 Luminous cord signal output</b>	0 = Boom in movement ( <b>default</b> ) / 1 = Boom in movement and closed
It uses intermittent lights to alerts as to the state of the barrier. Luminous cord connected to contact 10-E6.	
<b>F18 Additional light</b>	0 = Flashing light ( <b>default</b> ) / 1 = Cycle / 2 = Courtesy
Output on 10-E1. The flashing light works when opening and closing. The cycle light stays on from the moment in which the barrier starts opening until it closes completely (including the automatic closing time). In case the automatic closing is not inserted, it stays on only during the movement. The courtesy light stays on for a fixed 180 seconds or it can be adjusted, see function F 25.	
<b>F19 Automatic closing time</b>	0 = Deactivated ( <b>default</b> ) / 1 = 1 second / ... / 180 = 180 seconds
The automatic-closing wait starts when the opening limit switch point is reached and can be set to between 1 and 180 seconds. The automatic closing does not activate if any of the safety devices trigger when an obstruction is detected, or after a total stop, or during a power outage.	
<b>F21 Preflashing time</b>	0 = Deactivated ( <b>default</b> ) / 1 = 1 second / ... / 5 = 5 seconds
Adjusting the pre-flashing time of the flashing light connected to 10-E1 before each maneuver. The flashing time is adjustable from one to ten seconds.	
<b>F22 Working time</b>	5 = 5 seconds / ... / 120 = 120 seconds ( <b>default</b> )
Gearmotor working time during opening and closing. The working time can be set to between 5 seconds and 120 seconds.	
<b>F25 Courtesy light time</b>	60 = 60 seconds / ... / 180 = 180 seconds ( <b>default</b> )
Supplementary light, that stays lit during the barrier's opening and closing movement. The time can be adjusted between five and 120 seconds.	
<b>F28 Opening maneuver speed</b>	70 = Minimum speed / ... / 100 = Maximum speed.
Setting the boom's opening speed, calculated as a percentage. ⚠ Warning: the speed parameter fields vary depending on the type of boom: - for jointed booms, of 2 m and 4 m, set the speed percentage to between 70 and 100; - for booms of 6 m and 8 m, set the speed percentage to between 80 and 100.	
<b>F 29 Closing maneuver speed</b>	70 = Minimum speed / ... / 100 = Maximum speed.
Setting the boom's closing speed, calculated as a percentage. ⚠ Warning: the speed parameter fields vary depending on the type of boom: - for jointed booms, of 2 m and 4 m, set the speed percentage to between 70 and 100; - for booms of 6 m and 8 m, set the speed percentage to between 80 and 100.	
<b>F 30 Opening slow-down speed</b>	15 = Minimum speed / ... / 40 = Maximum speed
Setting the boom's opening slow-down speed, calculated as a percentage. ⚠ Warning: the speed parameter fields vary depending on the type of boom: - for jointed booms of 2 m, set the slow-down speed percentage to between 20 and 40; - for booms of 4 m, set the slow-down speed percentage to between 20 and 30; - for booms of 6 m and 8 m, set the slow-down speed percentage to between 15 and 40.	

<b>F31 Closing slow-down speed</b>	15 = Minimum speed / ... / 40 = Maximum speed
<p>Setting the boom's closing slow-down speed, calculated as a percentage.</p> <p>⚠ Warning: the speed parameter fields vary depending on the type of boom:</p> <ul style="list-style-type: none"> <li>- for jointed booms of 2 m, set the slow-down speed percentage to between 20 and 40;</li> <li>- for booms of 4 m, set the slow-down speed percentage to between 20 and 30;</li> <li>- for booms of 6 m, set the slow-down speed percentage to between 15 and 30;</li> <li>- for booms of 8 m, set the slow-down speed percentage to between 15 and 20;</li> </ul>	
<b>F33 Calibration speed</b>	20 = 20% of the travel (minimum) / ... / 40 = 40% of the travel (maximum)
Setting the boom's travel automatic calibration, calculated as a percentage	
<b>F34 Boom travel sensitivity</b>	10 = maximum sensitivity / ... / 100 = minimum sensitivity ( <b>default</b> )
Adjusting obstruction detection sensitivity during boom travel.	
<b>F35 Slow-down sensitivity</b>	10 = maximum sensitivity / ... / 100 = minimum sensitivity ( <b>default</b> )
Adjusting obstruction detection sensitivity during slow-down.	
<b>F37 Opening slow-down point</b>	40 = 40% of the travel / ... / 60 = 60% travel
<p>Percentage adjustment of the boom's total travel, from the beginning of the opening slow-down point.</p> <p>Warning! The percentage varies depending on the boom type:</p> <ul style="list-style-type: none"> <li>- for jointed booms of 2 m and 4 m, set the percentage to between 40 and 60;</li> <li>- for booms of 6 m and 8 m, set the percentage to between 60 and 70.</li> </ul>	
<b>F38 Closing slow-down point</b>	20 = 20% of the travel / ... / 75 = 75% of the travel
<p>Establishing the total travel percentage, from the beginning of the closing slow-down point.</p> <p>Warning! The percentage varies depending on the boom type:</p> <ul style="list-style-type: none"> <li>- for jointed booms and 2-meter booms, set the speed percentage to between 20 and 40;</li> <li>- for 2 m booms, set the percentage to between 40 and 60;</li> <li>- for 6 m booms, set the percentage to between 60 and 70;</li> <li>- for 8 m booms, set the percentage to between 65 and 75;</li> </ul>	
<b>F49</b>	0 = Deactivated ( <b>default</b> ) / 1 = Paired / 2 = Alternating / 3 = CRP
For enabling the paired or alternate function or the CRP home automation connection system .	
<b>F50 Save data</b>	0 = Deactivated ( <b>default</b> ) / 1 = Activated
<p>Saving users and saved settings in memory roll.</p> <p>📖 This feature only appears if a memory roll has been fitted into the control board.</p>	
<b>F51 Read data</b>	0 = Deactivated ( <b>default</b> ) / 1 = Activated
<p>Uploading data saved in memory roll.</p> <p>📖 This feature only appears if a memory roll has been fitted into the control board.</p>	
<b>F52 Passing settings in paired/alternating mode</b>	0 = Deactivated ( <b>default</b> ) / 1 = Activated
<p>Loading parameters of the MASTER barrier into the SLAVE barrier.</p> <p>📖 This function appears only if function F 49 is set to either PAIRED or ALTERNATE.</p>	
<b>F56 Peripheral number</b>	1 ----> 225
With systems fitted with several operators and the CRP (Came Remote Protocol) system connection, set an address between 1 and 225 for each control panel.	
<b>F60 Sleep Mode</b>	0 = Deactivated ( <b>default</b> ) / 1 = Activated
To enable a reduction in energy consumption when in stand-by.	
<b>F61 Pre-flashing</b>	0 = when opening and closing ( <b>default</b> ) / 1 = when closing only / 2 = when opening only
<p>After an opening or closing command, the flashing light connected to 10-E1m flashes before starting the maneuver.</p> <p>For setting the time, see function F 21.</p>	
<b>F63 Change COM speed</b>	0=1200 Baud / 1=2400 / 2=4800 / 3=9600 / 4=14400 / 5=19200 / 6=38400 / 7=57600 / 8=115200 Baud
Setting the communication speed used in the CRP (Came Remote Protocol) connection system.	
<b>U 1 Entering a user</b>	1 = Step-step command (open-close) / 3 = Open only command / 4 = partial/pedestrian opening command (for either paired or alternate systems) / 5 = output B1-B2
Entering up to up to a 25 users maximum and associating to each one a function chosen among the existing ones. This must be done via transmitter or other control device (see "ENTERING USERS WITH ASSOCIATED COMMAND paragraph).	
<b>U 2 Deleting a user</b>	
Deleting a single user	
<b>U 3 Deleting users</b>	0 = Deactivated / 1 = Deleting all users
Deleting all users.	

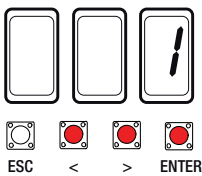
<b>A 1 Setting the boom type</b>	0 = Jointed boom / 2 = Boom 2 m / 4 = Boom 4 m / 6 = Boom 6 m / 8 = Boom m
To establish the boom type. △ The choice of boom type limits certain speed, slow-down and calibration limits. This is to safeguard the entire barrier.	
<b>A 2 Motor test</b>	0 = Disable / 1 = Activate
To verify the boom's proper rotating direction (see MOTOR TEST paragraph).	
<b>A 3 Travel calibration</b>	0 = Disable / 1 = Activate
Automatic calibration of the gate-leaf run (see the TRAVEL CALIBRATION paragraph).	
<b>A 4 Resetting parameters</b>	0 = Disable / 1 = Activate
Warning! The default settings are restored and the travel calibration deleted.	
<b>A 5 Counting maneuvers</b>	
View the number of completed maneuvers (--- = 0 maneuvers; 1 = 1,000 maneuvers; 100 = 100,000 maneuvers; ..... 999 = 999.000).	
<b>H 1 Version</b>	
View the firmware version.	

Motor test

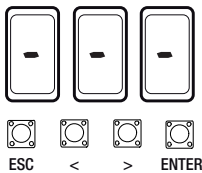
1. Select A 2. Press ENTER to confirm.



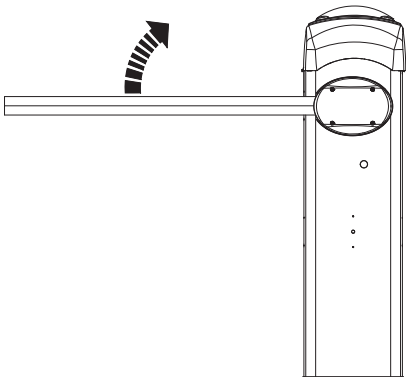
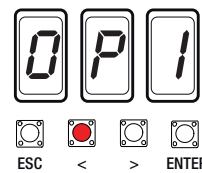
2. Select 1 to activate test. Press ENTER to confirm...



3. ... the dashes (---) will appear while waiting for the command.



4. Keep the < key pressed and check whether the operator performs an opening maneuver.  
If the operator performs a closing maneuver, invert the motor's phases (M with N).

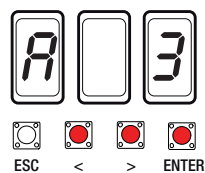


## Travel calibration

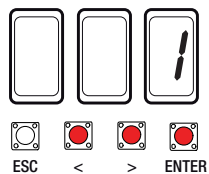
Before doing a travel calibration, establish the boom type, check that the boom is balanced and that the maneuvering area is free of obstructions.

Important! During the calibration, all safety devices will be disabled except for the PARTIAL STOP one.

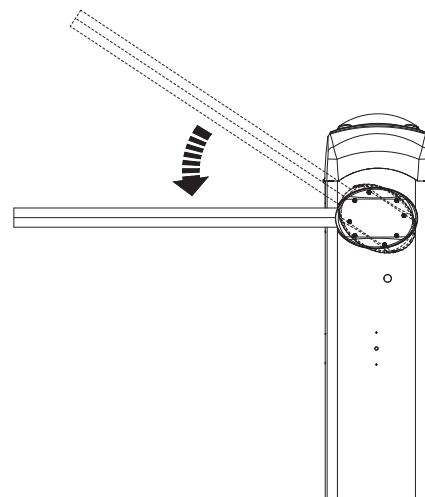
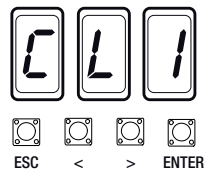
1. Select A 3.  
Press ENTER to confirm.



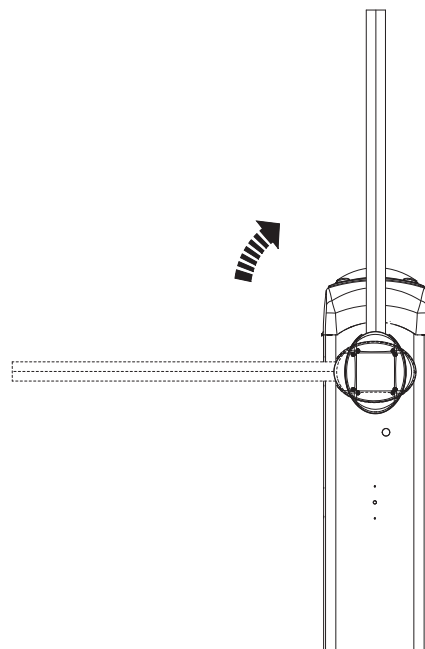
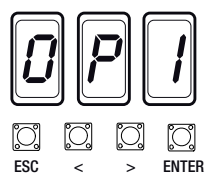
2. Select 1 and press ENTER to confirm the travel calibration operation.




3. The operator will perform a closing maneuver until the endstop point...



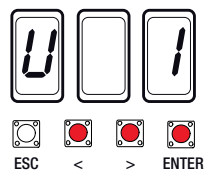
4. then, the barrier will perform an opening maneuver until the endstop point.



 When entering/deleting users, the flashing numbers that appear, are numbers that can be used for other users you may wish to enter (maximum 25 users).


**Entering a user with an associated command**

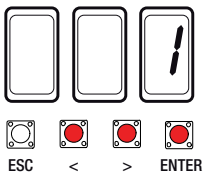
1. Select U 1.  
Press ENTER to confirm.



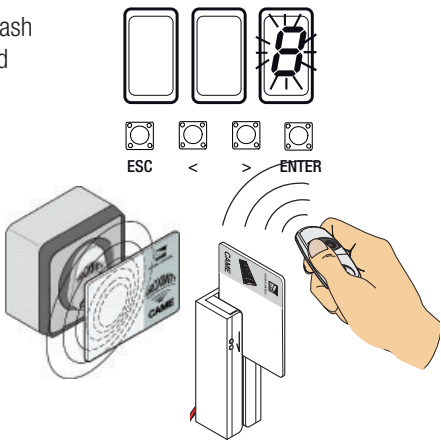
2. Select a command to associate to the user.  
The commands are:

- step-step (open-close) = 1;
- open = 3;
- partial opening/pedestrian = 4.

 The partial/pedestrian command appears only of function F 49 is activated.  
Press ENTER to confirm...



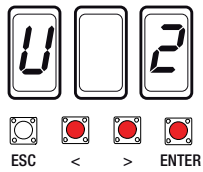
3. an available number between 1 and 25 will flash for a few seconds. This number is then assigned to the user after having sent the code with the transmitter or other control device (sensor, card reader or keypad selector).



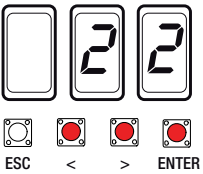
User	Associated command
1 -	
2 -	
3 -	
4 -	
5 -	
6 -	
7 -	
8 -	
9 -	
10 -	
11 -	
12 -	
13 -	
14 -	
15 -	
16 -	
17 -	
18 -	
19 -	
20 -	
21 -	
22 -	
23 -	
24 -	
25 -	

**Deleting a single user**

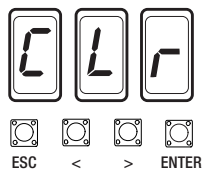
1. Select U 2.  
Press ENTER to confirm.



2. Select the user number to delete by using the arrow keys. Press ENTER to confirm ...



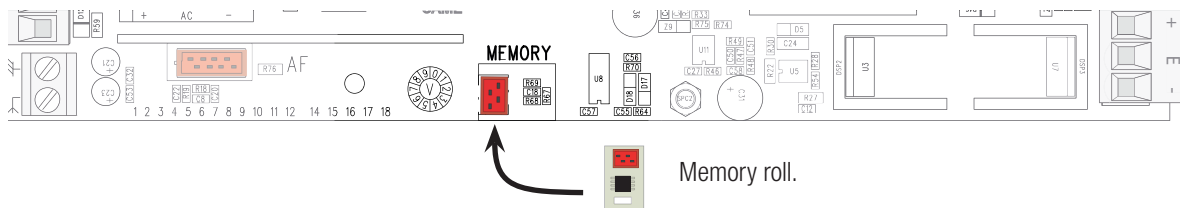
3. ...the abbreviation CLr will appear to confirm the user has been deleted.



## Memory Roll Card

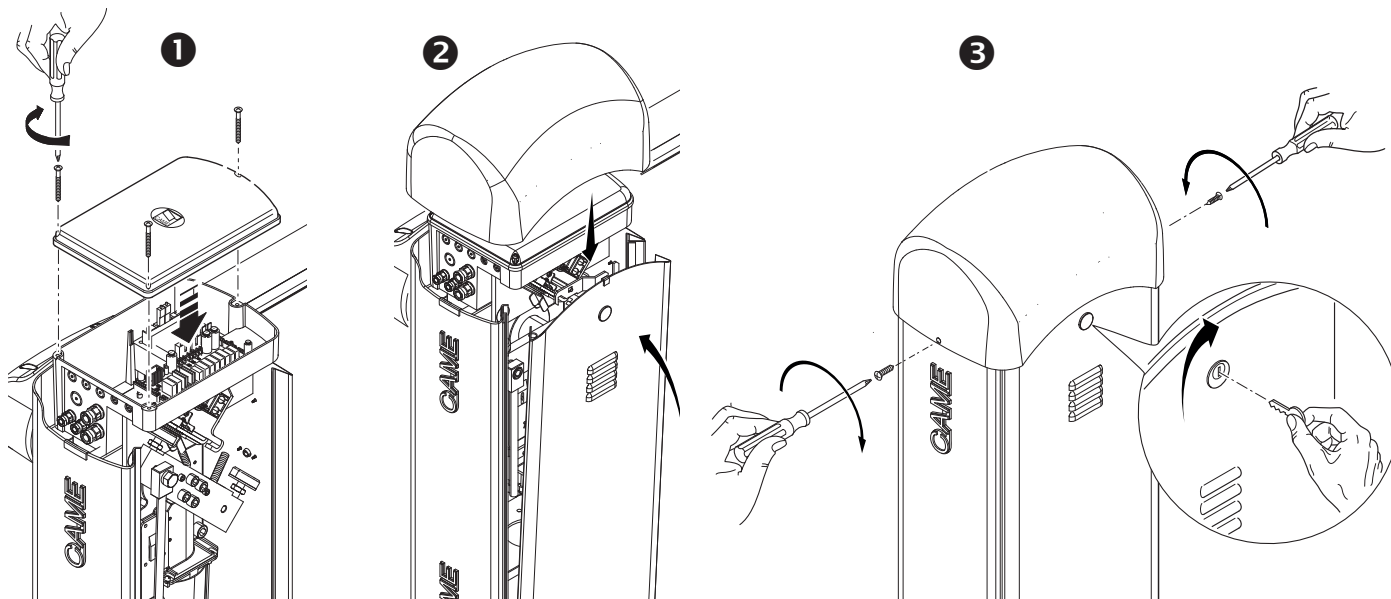
To memorize user data and configure the system, to then reuse them with another control board even on another system.

After memorizing the data, it is best to remove the Memory roll.



## FINAL OPERATIONS

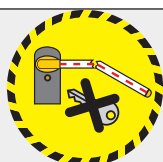
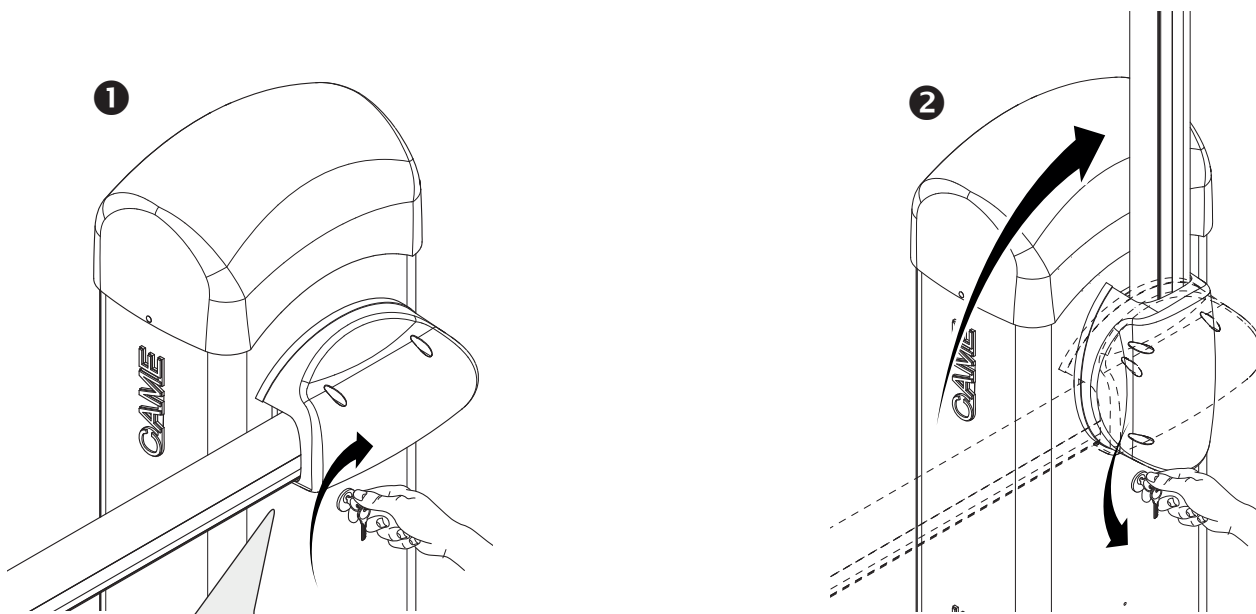
When you are done with the electrical connections and setting up, fit the control panel cover and fasten it with the screws ❶. Replace the inspection hatch and upper dome ❷. Lock the hatch with the key and secure the dome with the screws. ❸.



## RELEASING THE BOOM

⚠ This procedure must be done with the main power cut off.

Fit the key into the lock and turn it clockwise ❶. Manually lift the boom and lock it again by turning the key counter clockwise ❷.



⚠ **WARNING!** This operation is potentially hazardous for user, when for whatever reason, such as the boom being badly fastened, ripped out or broken during an accident, and so on, the loosened springs no longer provide the proper balancing action. This could lead to a sudden rotation of the boom attachment and/or of the boom itself.

 Important! Start by doing the following on both barriers:

Fit the RSE card (with DIP switches sent to OFF) onto the control panel connector of both barriers.

- connect the two control panels via a CAT 5 type-cable (max 1,000 m) to terminals A-A / B-B / GND-GND, see paragraph on CONNECTING FOR PAIRED OR ALTERNATE OPERATING MODE.

- connect all of the control and safety devices to the MASTER control panel.

 Important! Deactivate function F 19 (automatic closing time) on the SLAVE barrier's control panel.

## **Configuring the MASTER operator**

Select function F 49. Press ENTER to confirm.

Select 1 (paired) and press ENTER.

## **Transferring parameters from MASTER to SLAVE**

Select function F 52 on the MASTER control panel.

Select 1 and press ENTER.

## **Programming**

On both barriers, set the following functions:

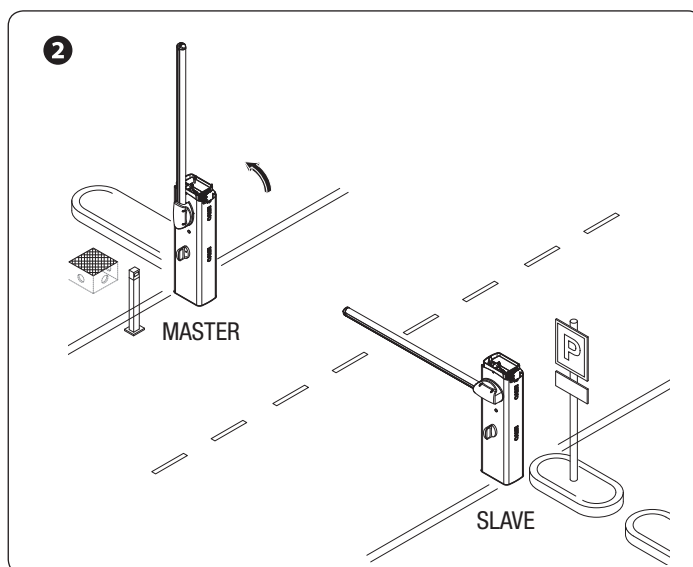
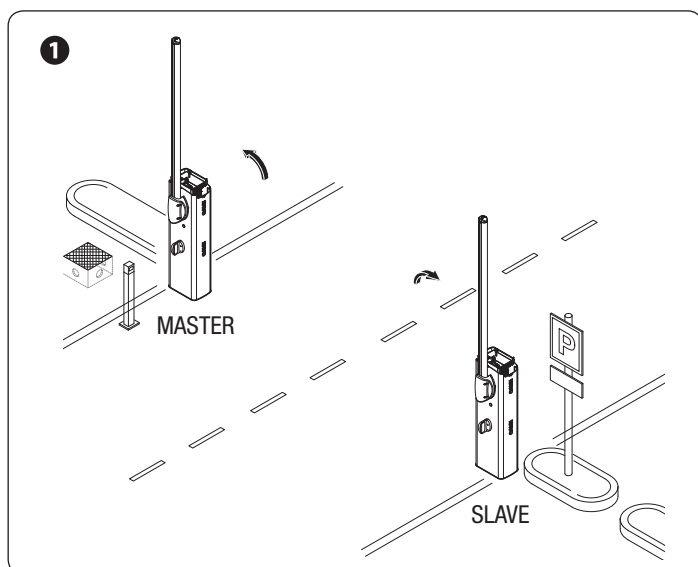
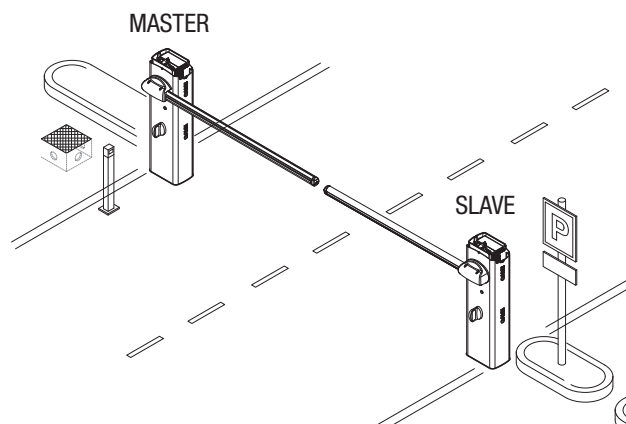
- the type of motor (A1);
- the (A2) motor test;
- total stop (F1);
- travel calibration (A3).

Carry out any settings and adjustments on the MASTER control panel.

## **Operating modes**

- ❶ STEP-STEP or OPEN ONLY command. Both booms open.
- ❷ PARTIAL OPENING/PEDESTRIAN command. Only the MASTER barrier opens.

For the types of command that can be selected and paired to users, see the ENTERING USERS WITH ASSOCIATED COMMANDS.



**Important!** Start by doing the following on both barriers:

Fit the RSE card (with DIP switches sent to OFF) onto the control panel connector of both barriers.

- connect the two control panels via a CAT 5 type-cable (max 1,000 m) to terminals A-A / B-B / GND-GND, see paragraph on CONNECTING FOR PAIRED OR ALTERNATE OPERATING MODE.

- connect all of the control and safety devices to the MASTER control panel.

**Important!** Deactivate function F 19 (automatic closing time) on the SLAVE barrier's control panel.

## Configuring the MASTER operator

Select function F 49. Press ENTER to confirm.

Select 2 (alternate) and press ENTER.

## Transferring parameters from MASTER to SLAVE

Select function F 52 on the MASTER control panel.

Select 1 and press ENTER.

## Programming

On both barriers, set the following functions:

- the type of motor (A1);
- the (A2) motor test;
- total stop (F1);
- travel calibration (A3).

Carry out any settings and adjustments on the MASTER control panel.

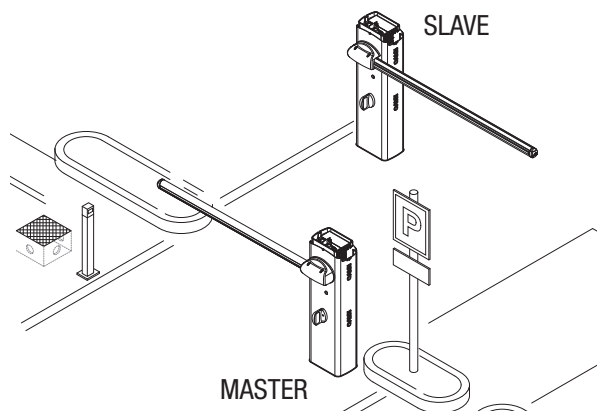
## Operating modes

① ONLY OPEN (contact 2-3) command. For opening MASTER barrier boom.

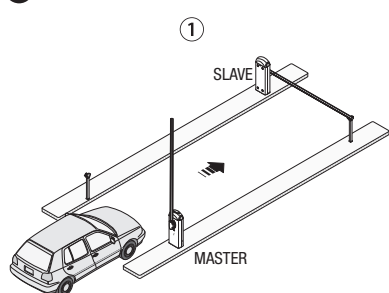
② PARTIAL/PEDESTRIAN OPENING (contact 2-3P) command. For opening the SLAVE barrier boom.

③ STEP-STEP (contact 2-7) command. Both booms open. This is an emergency opening command, to free the passage.

For the types of command that can be selected and paired to users, see the ENTERING USERS WITH ASSOCIATED COMMANDS

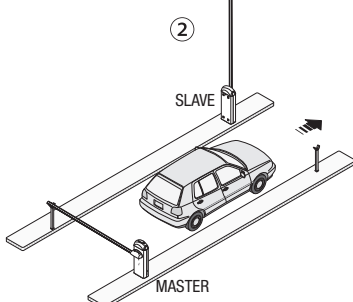


①

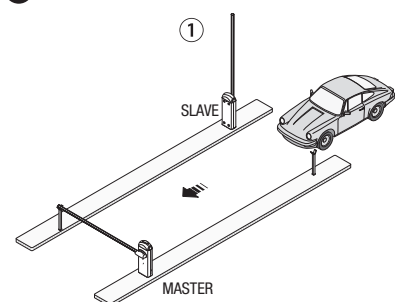


Send the ONLY OPEN command (contact 2-3) from a transmitter or other control device, to open the boom of the MASTER barrier. ①.

Approach the SLAVE barrier. It will automatically open only after the MASTER barrier automatically closes. The automatic closing of the MASTER barrier is excluded in the event that the safety devices detect an obstruction (such as when a car has yet to clear the MASTER barrier). ②.

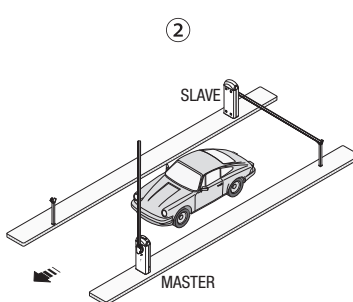


②

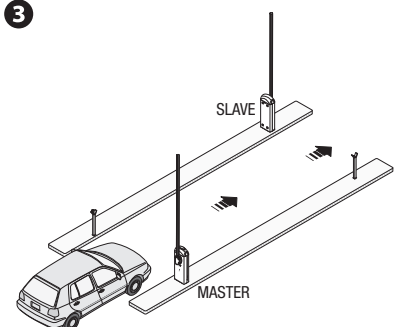


Send the PARTIAL/PEDESTRIAN OPENING command (contact 2-3P) from a transmitter or other control device, to open the boom on the SLAVE barrier. ①.

Approach the MASTER barrier. It will automatically open only after the SLAVE barrier automatically closes. The automatic closing of the SLAVE barrier is excluded in the event that the safety devices detect an obstruction (such as when a car has yet to clear the SLAVE barrier). ②.



③



Send the STEP-STEP (contact 2-7) command from a transmitter or other control device, to simultaneously open the booms of the MASTER and SLAVE barrier.

## ERROR MESSAGE

 The error messages appear on display or are notified by the LEDs.

Er1	The boom travel calibration was interrupted by the activation of the STOP button.
Er3	Encoder is broken.
Er4	Services test error.
Er5	Insufficient working time.
Er6	Maximum number of obstructions detected.
Er7	Transformer overheated / inspection hatch open / boom detached from gearmotor.
Er8	Encoder excluded.
C0	Contact 1-2 (NC) is open.
C1, C4, C5 or C9	The (NC) contacts are open.
The warning LED flashes	The control board is not yet calibrated for the boom travel.

## TROUBLESHOOTING

PROBLEM	REFERENCE	CHECK
The boom neither opens nor closes	1-2-3-4-6-8-13-18	1 - Lock the inspection hatch with the key
The boom opens but does not close	4-7	2 - Deactivate the MAINTAINED ACTION function
The boom closes but does not open	4-7-12-13	3 - Check the power supply and fuses
The barrier does not perform automatic closing	11-12-13	4 - The NC contacts are open
The barrier does not work with the transmitter	2-14-16	6 - Deactivate the MASTER-SLAVE function
The boom's direction of travel is inverted	7-18	7 - Check the boom's balancing and spring tautness
Only one transmitter works	22	8 - Deactivate the OBSTRUCTION DETECTION function
The photocells do not work	12-23-24	11 - Activate the AUTOMATIC CLOSING function
The warning LED flashes quickly	4	12 - Check the proper direction of travel
The warning LED stays lit	13	13 - Check the control devices
The boom does not reach the endstop	7	14 - Replace the AF card
The boom cannot be balanced	7-15	15 - Check the length ration between boom and applied accessories
The barrier does not slow down	7-15	16 - Memorize the radio code again
The barrier does not work with emergency batteries	8-25-26	18 - Adjust the sensitivity
The boom starts slow	7	22 - Enter or duplicate the same code on all transmitters
		23 - Activate the photocells
		24 - Connect the photocells serially instead of in parallel fashion
		25 - Check the batteries
		26 - Respect the photocell's power supply polarities

### Periodic maintenance

 Before doing any maintenance, cut off the power supply, to prevent any hazardous situations caused by accidental boom movements.

**Periodic maintenance log kept by users (every six months)**

[illegible]

## Extraordinary maintenance

⚠ The following table is for logging any extraordinary maintenance jobs, repairs and improvements performed by specialized contractors.

📖 Any extraordinary maintenance jobs must be done only by specialized technicians.

### Extraordinary maintenance log

Fitter's stamp	Name of operator
	Job performed on (date)
	Technician's signature
	Requester's signature
Job performed _____ _____	

Fitter's stamp	Name of operator
	Job performed on (date)
	Technician's signature
	Requester's signature
Job performed _____ _____	

Fitter's stamp	Name of operator
	Job performed on (date)
	Technician's signature
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Job performed _____ _____	

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	Requester's signature
Job performed _____ _____	

Fitter's stamp	Name of operator
	Job performed on (date)
	Technician's signature
	Requester's signature
Job performed _____ _____	

Fitter's stamp	Name of operator
	Job performed on (date)
	Technician's signature
	Requester's signature
Job performed _____ _____	

## DISMANTLING AND DISPOSAL

☞ CAME CANCELLI AUTOMATICI S.p.A. applies a certified Environmental Management System at its premises, which is compliant with the UNI EN ISO 14001 standard to ensure the environment is safeguarded.

Please continue safeguarding the environment. At CAME we consider it one of the fundamentals of our operating and market strategies. Simply follow these brief disposal guidelines:

### ♻️ DISPOSING OF THE PACKAGING

The packaging materials (cardboard, plastic, and so on) should be disposed of as solid household waste, and simply separated from other waste for recycling.

Always make sure you comply with local laws before dismantling and disposing of the product.

DO NOT DISPOSE OF IN NATURE!

### ♻️ DISMANTLING AND DISPOSAL

Our products are made of various materials. Most of these (aluminum, plastic, iron, electrical cables) is classified as solid household waste. They can be recycled by separating them before dumping at authorized city plants.

Whereas other components (control boards, batteries, transmitters, and so on) may contain hazardous pollutants.

These must therefore be disposed of by authorized, certified professional services.

Before disposing, it is always advisable to check with the specific laws that apply in your area.

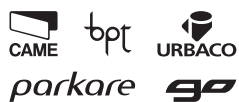
DO NOT DISPOSE OF IN NATURE!

## REFERENCE REGULATIONS

This product complies with the law.

**English** - Manual code: **FA00583-EN v. 1** - 09/2016 - © Came S.p.A.  
The contents of this manual may be changed at any time without prior notice.

**CAME**  
s a f e t y & c o m f o r t



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