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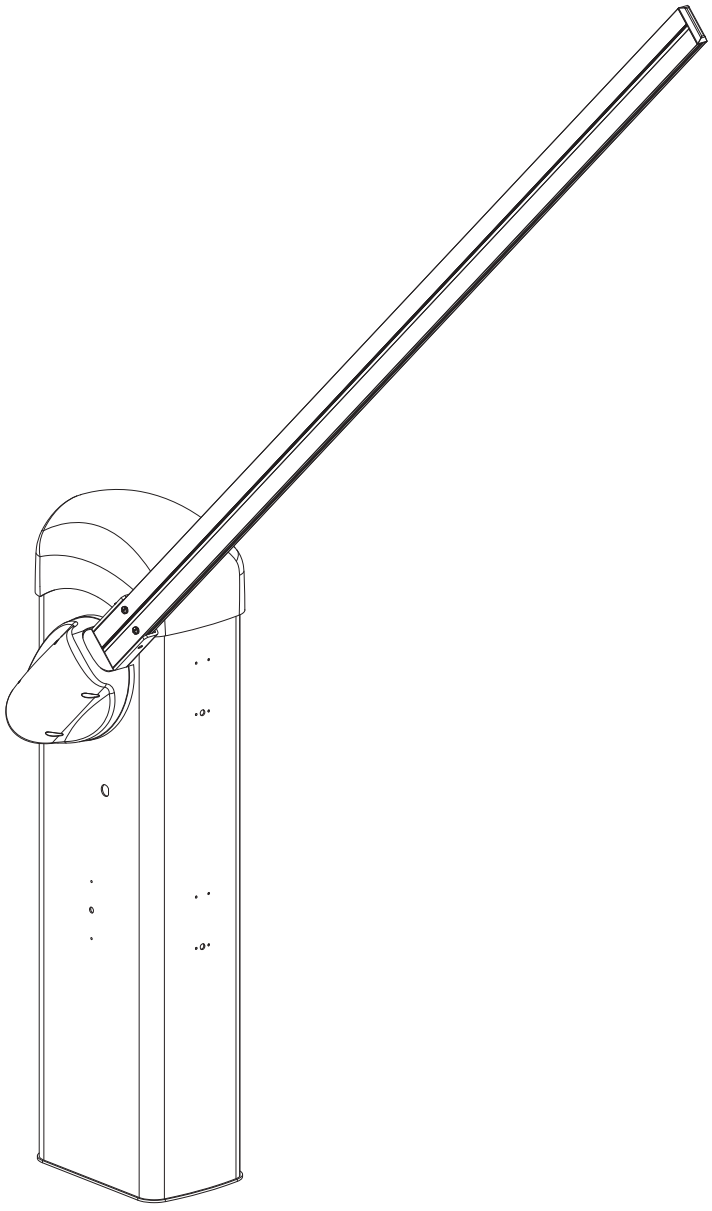
FA01260-EN

CE

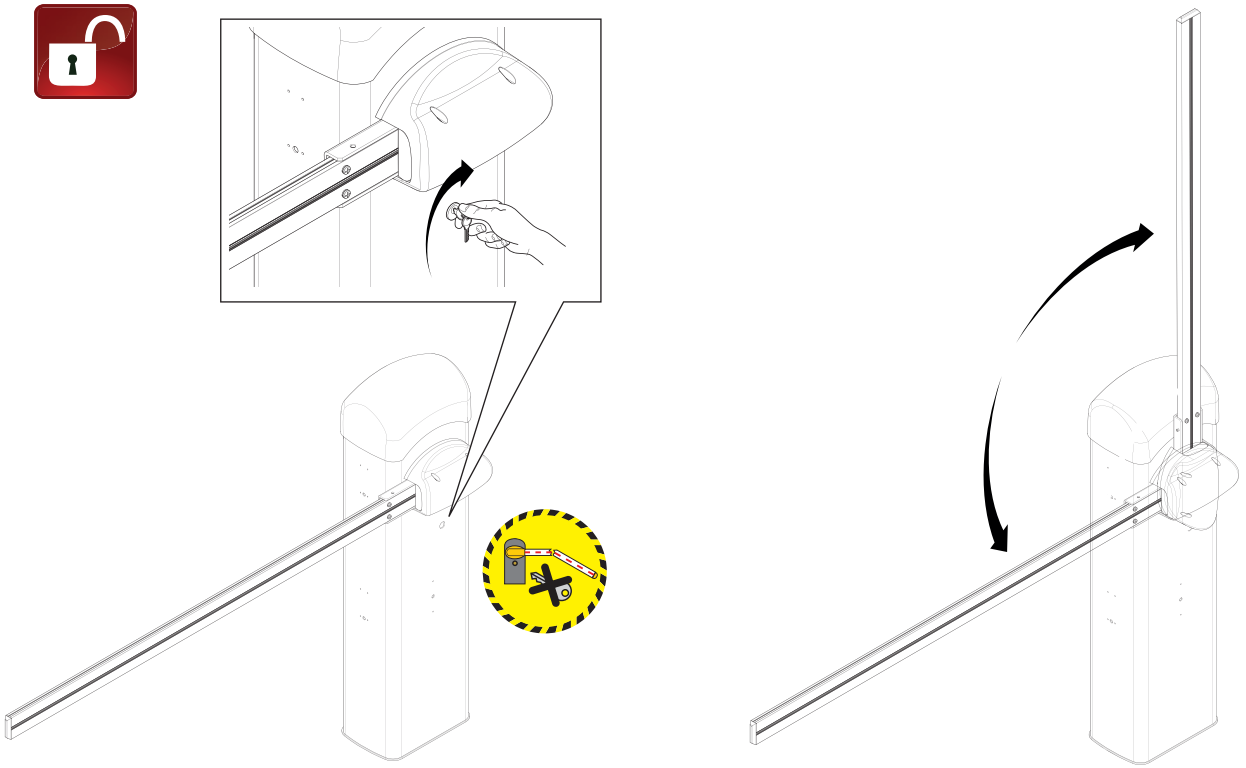
Automatic barrier

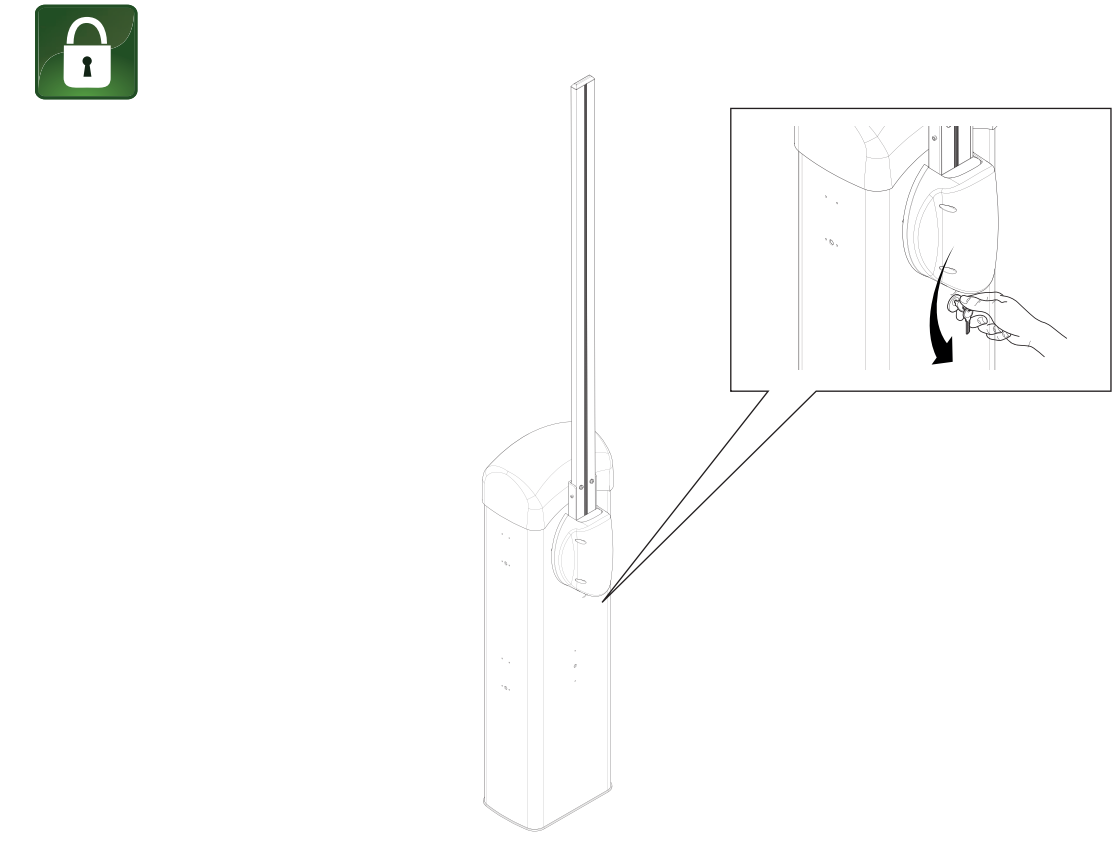


I1PB0500026
I1PB0500027
I1PB0500028

INSTALLATION MANUAL FOR THE

EN English



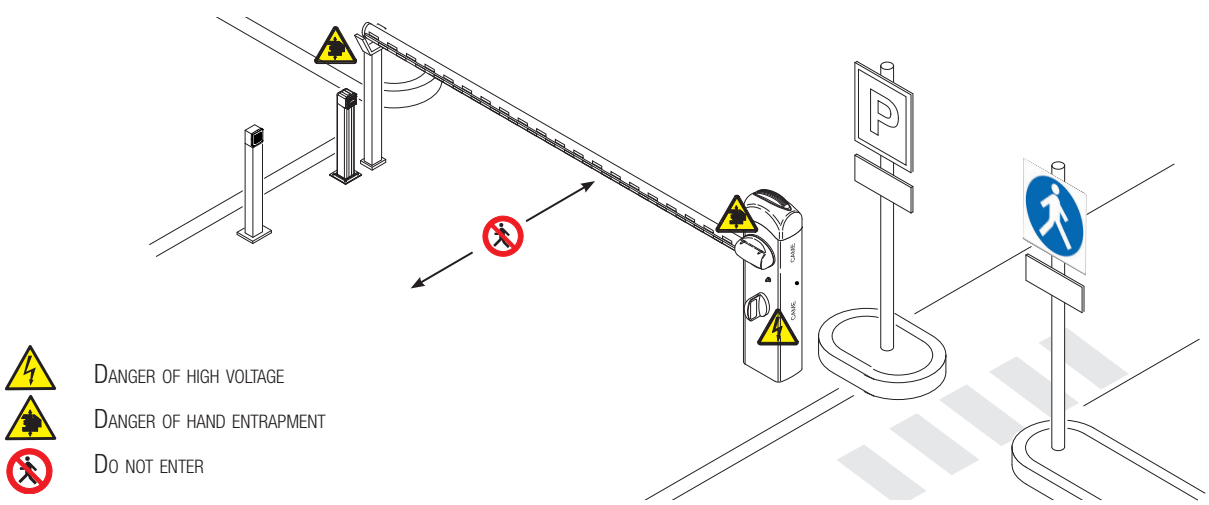


GENERAL PRECAUTIONS FOR INSTALLERS

⚠ CAUTION! Important safety instructions.
Follow all of these instructions. Improper installation can cause serious bodily harm.
Before continuing, also read the general precautions for users.

This product must only be used for its specifically intended purpose. Any other use is dangerous. CAME S.P.A. is not liable for any damage caused by improper, wrongful and unreasonable use. • This manual's product is defined by the Machinery Directive 2006/42/CE as partly-completed machinery. Partly-completed machinery is an assembly that almost constitutes a machine, but which, alone, cannot ensure a clearly defined application. Partly-completed machinery is only destined to be incorporated or assembled to other machinery or other partly-completed machinery or apparatuses to build machinery that is regulated by Directive 2006/42/CE. The final installation must be compliant with European directive 2006/42/CE and European reference standards: EN 13241-1, EN 12453, EN 12445 and EN 12635. • By virtue of these considerations, all the procedures mentioned in this manual must be carried out only by skilled and qualified personnel • Laying of cables, installation and testing must follow state-of-the-art procedures as dictated by applicable standards and laws • make sure that the automatic barrier opening does not cause dangerous situations • Do not install the operator or onto elements that could bend. If necessary, add suitable reinforcements to the anchoring points • Check that the temperature ranges given and those of the location match • Do not install in places uphill or downhill (i.e. that are not level) • Check that no lawn watering devices spray the operator with water from the bottom up • Demarcate the entire site to prevent unauthorized personnel to enter; especially children and minors • Be careful when handling operators weighing more than 20 kg. If necessary use devices for safe handling • Use suitable protections to prevent any mechanical hazards due to persons loitering within the operating range of the machinery.• Any residual risks must be indicated clearly with proper signage affixed in visible areas. All of which must be explained to end users • Fit, in plain sight, the machine's ID plate when the installation is complete. • All command and control devices must be installed at least 1.85 m from the perimeter of the boom movement area or where they cannot be reached from the outside through the barrier • Unless the key operation (e.g. keyboard selector, key selector, transponder selector switch, etc.) is provided, the hold-to-run control devices must be installed at a height of at least 1.5 m in a place not accessible to the public • The manufacturer declines any liability for using non-original products; which would result in warranty loss • All switches in hold-to-run mode must be positioned in places from which the boom manoeuvring area is completely visible, yet away from moving parts • Apply a permanent label describing how to use the manual release mechanism near the relative drive element • Before handing over to users, check that the system is compliant with the 2006/42/CE uniformed Machinery Directive. Make sure that the operator has been properly adjusted and that the safety and protection devices, and the manual release, are working properly • If the power-supply cable is damaged, it must be immediately replaced by the manufacturer or by an authorized technical assistance center, or in any case, by qualified staff, to prevent any risk • Make sure the mains power supply is disconnected during all installation procedures • The electrical cables must run through the cable glands and not touch any parts that may overheat, such as the motor, transformer, and so on. • 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 • When the width of passage is more than 3 m, it is mandatory to use a fixed support for the boom to support it • If the barrier is for mixed use (vehicles and pedestrians), it is mandatory to check the compliance of the impact force according to EN 12453 and EN 12445 • If the barrier is exclusively for vehicle use, it is necessary to provide a pedestrian crossing in the immediate vicinity of the vehicle passage, and indicate, through appropriate signs, the absolute prohibition of transit to pedestrians and bicycles through the gate • Keep the section of this manual related to installation inside the technical folder along with the manuals of all the other devices used for your operator system Remember to hand over to the end users all the operating manuals of the products that make up the final machinery.

- The next figure shows the main hazard points for people -



Danger of high voltage

Danger of hand entrapment

Do not enter

PRODUCT DATA AND INFORMATION

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.

The measurements, unless otherwise stated, are in millimeters.

Description

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

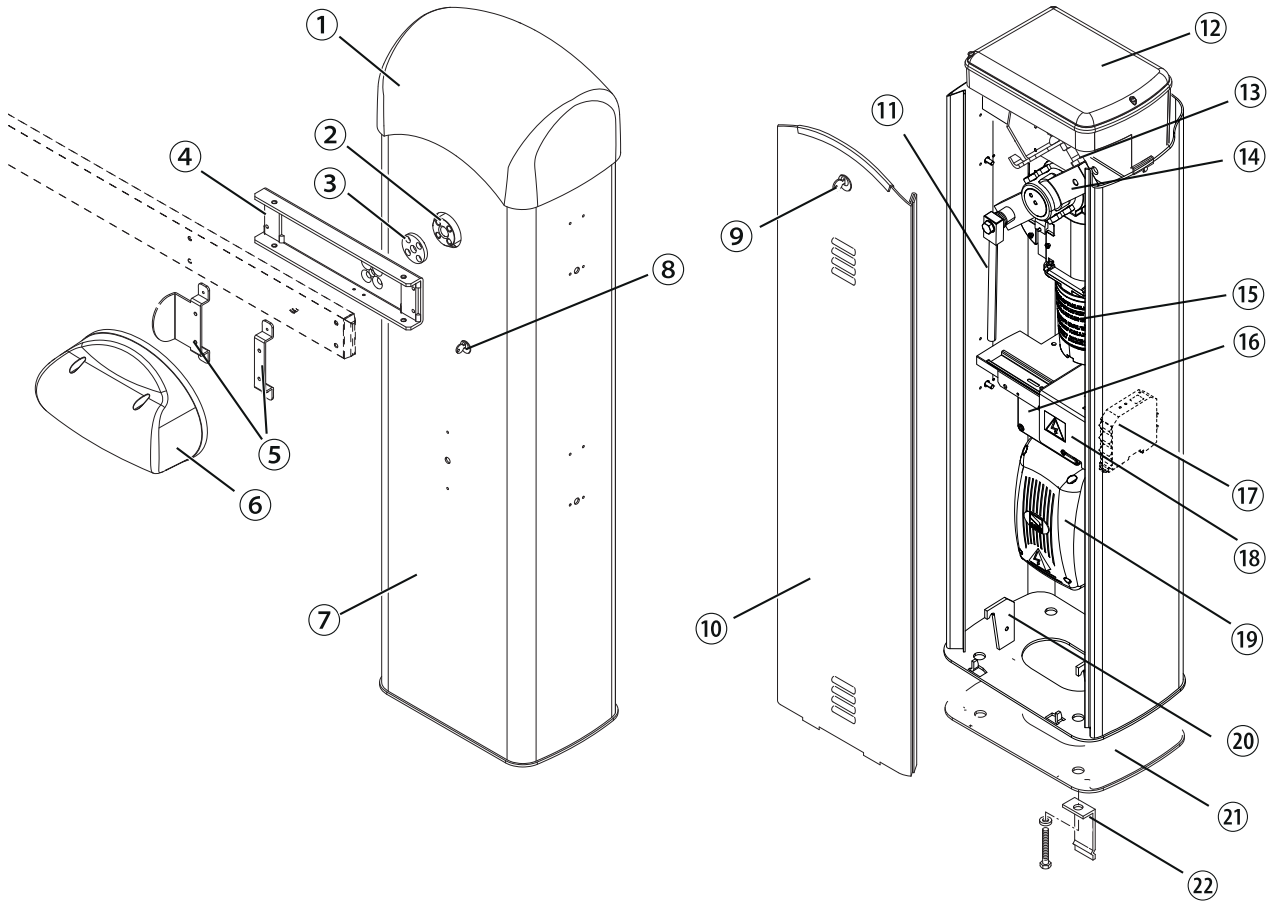
Intended use

The barrier is designed for use in private and public parking facilities, in residential settings and for high-rates of vehicle traffic.
🕮 Do not install of use this device in any way, except as specified in this manual.

Description of parts

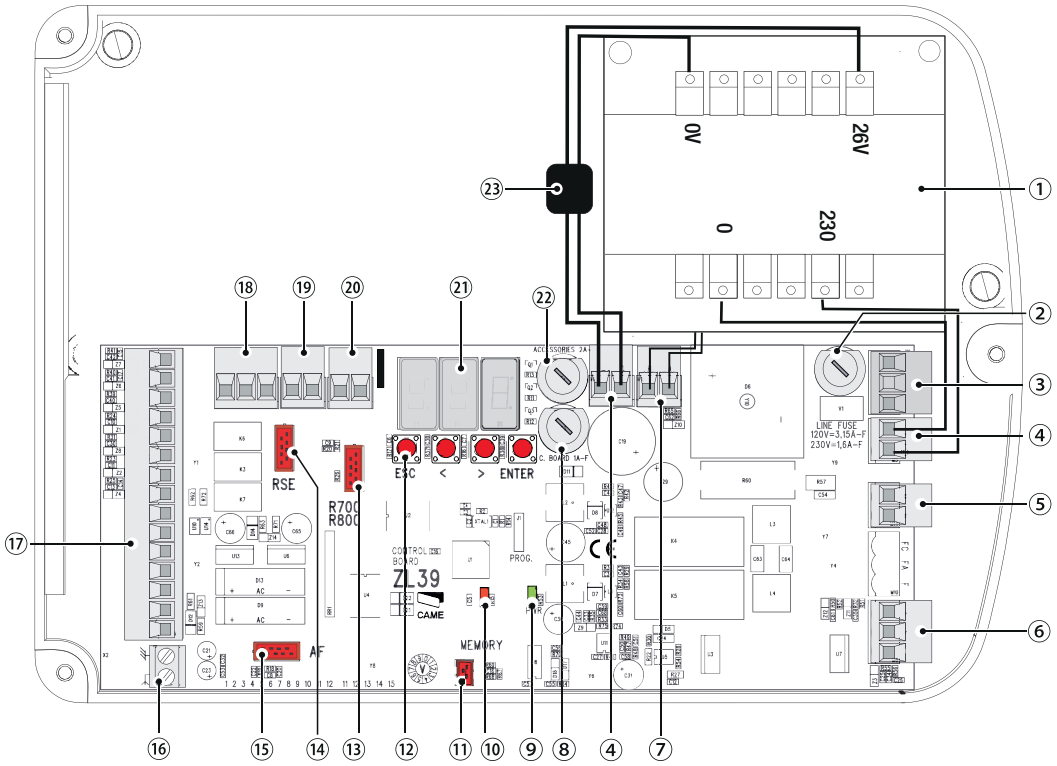
Barrier

1. Cover
2. Motor shaft
3. Spacer
4. Boom attachment
5. Support braces for anti-shearing cover
6. Anti-shearing cover
7. Cabinet
8. Lock to release/lock the boom
9. Inspection-hatch lock
10. Inspection hatch
11. Spring anchoring pin
12. Control panel
13. Mechanical stop for the boom adjustment
14. Lever arm
15. Gearmotor with encoder
16. EMC01 filter
17. SMA module
18. Group of terminals for power supply and devices
19. IO-RS485 control panel
20. Spring anchoring bracket
21. Anchoring plate
22. Anchoring brace

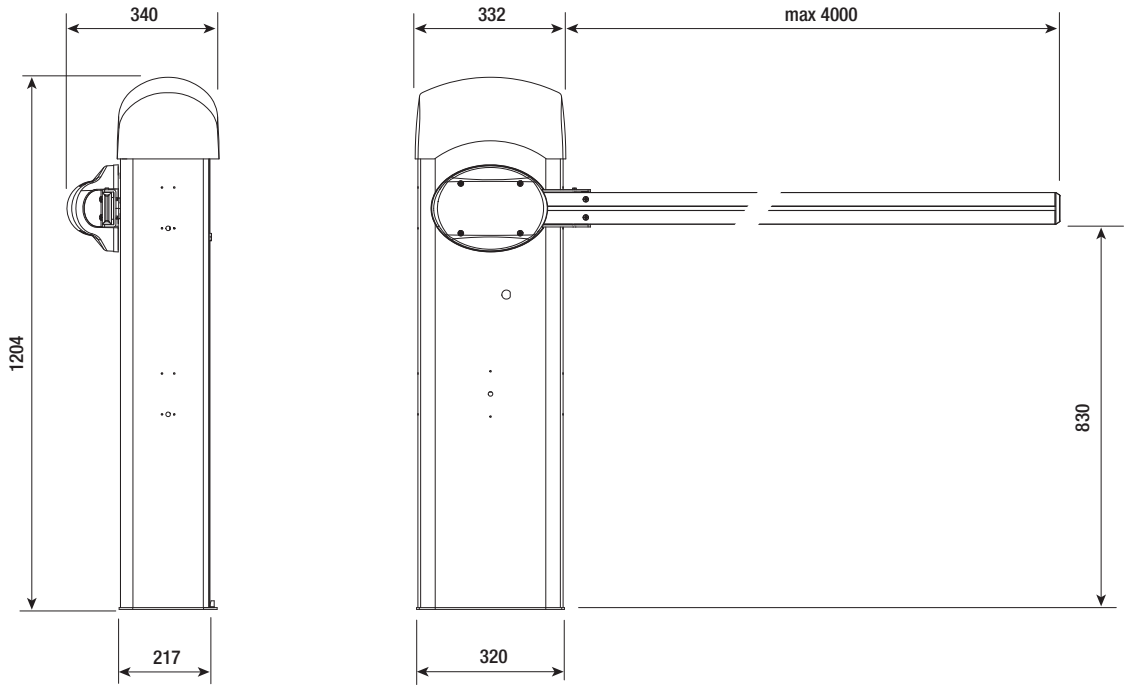


Control panel

1. Transformer
2. Line fuse
3. Terminals for powering the control board
4. Transformer terminals
5. Gearmotor terminals
6. Encoder terminals
7. Overheating protection terminals
8. Control-board fuse
9. Power supply on warning LED
10. Programming warning LED
11. Memory Roll card connector
12. Programming buttons
13. Connector for the R700 or R800 card
14. RSE card slot
15. AF snap in connector for radio frequency board
16. Terminal board for connecting the antenna
17. Terminals for control and safety devices
18. Terminal board for connecting the IO-RS485 control panel
19. Keypad selector terminal
20. Terminals for transponder devices
21. Display
22. Accessories fuse
23. Ferrite



Dimensions (mm)



Limits to use

Type	I1PB0500026 - I1PB0500027 - I1PB0500028
Maximum clearance width of the passage (m)	4 series

Technical data

Type	I1PB0500026 - I1PB0500027 - I1PB0500028
Protection rating (IP)	54 series
Power supply (V - 50/60 Hz)	230 AC
Motor power supply (V)	24 DC
Max draw (A)	15 (24 V) 1.3 (230 V)
Stand-by consumption (W)	8 series
Consumption with Sleep Mode (W)	5 series
Power (W)	300 series
Torque (Nm)	600 series
Opening time at 90° (s)	2 to 6
Duty cycle	CONTINUOUS SERVICES
Operating temperature (°C)	-20 to +55
Reduction ratio (i)	1/202
Insulation class	I
Weight (kg)	55 series

Fuse table

FUSES	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

FUSES	IO-RS485
LINE - Line	200 mA
ACCESSORIES - Accessories	200 mA

Cable types and minimum thicknesses

Connection	cable length	
	< 20 m	20 < 30 m
Input voltage for 230 V AC control board (1P+N+PE)	3G x 1.5 mm^2	3G x 2.5 mm^2
Flashing light	2 x 0.5 mm^2	
Command and control devices	2 x 0.5 mm^2	
TX Photocells	2 x 0.5 mm^2	
RX photocells	4 x 0.5 mm^2	

🕮 When operating at 230 V and outdoors, use H05RN-F-type cables that are 60245 IEC 57 (IEC) compliant; whereas indoors, use H05VV-F-type cables that are 60227 IEC 53 (IEC) compliant. For power supplies up to 48 V, you can use FROR 20-22 II-type cables that comply with EN 50267-2-1 (CEI).

🕮 To connect the antenna, use the RG58 (we suggest up to 5 m).

🕮 For combined connection and CRP, use a UTP CAT5-type cable (up to 1,000 m long).

🕮 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

INSTALLING

⚠ 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.

⚠ Caution! 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 and do not lean on it until it is fully fastened.

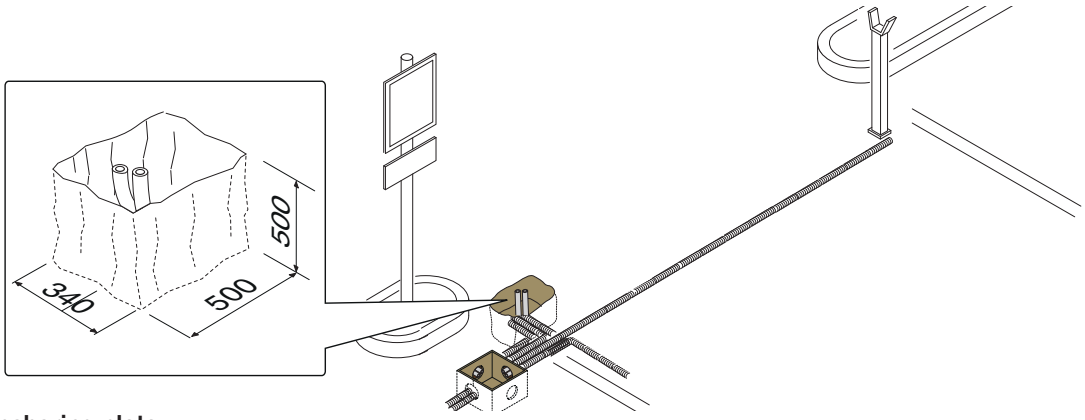
Preliminary operations

⚠ 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.

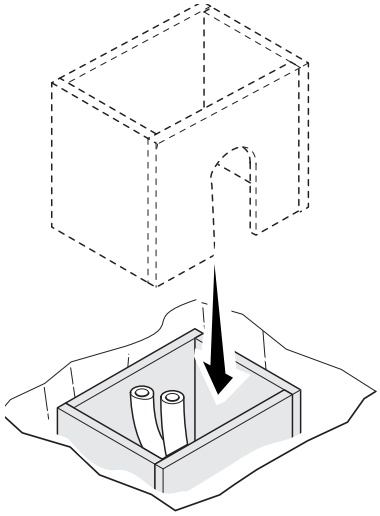
Set up the corrugated tubes needed for the wiring coming out of the junction pit.

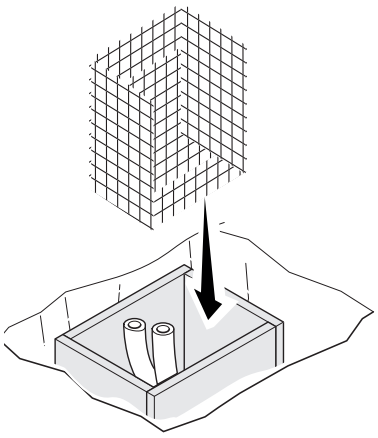
🕮 The number of tubes depends on the type of system and the accessories you are going to be fit.

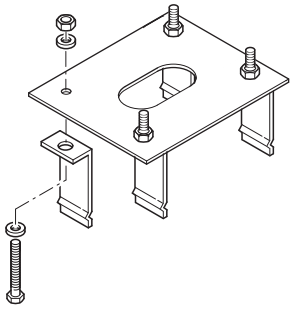


Laying the anchoring plate

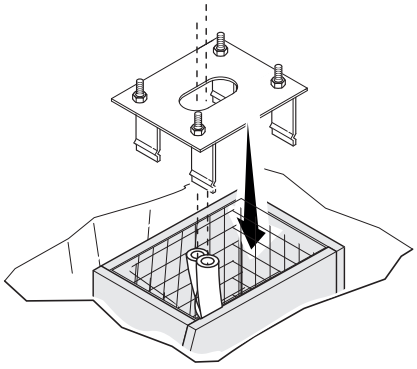
Set up a foundation frame that is larger than the anchoring plate and sink it into the dug hole.
Fit an iron cage into the foundation frame to reinforce the concrete.
Assemble the four anchoring braces to the anchoring plate.

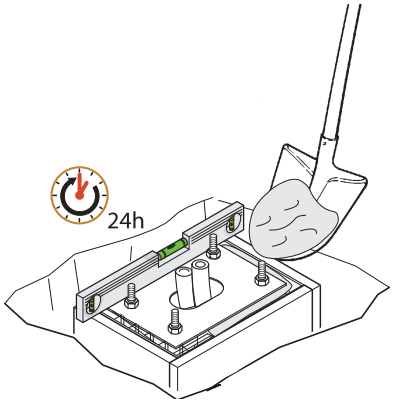


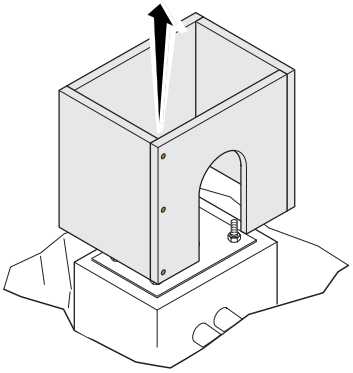




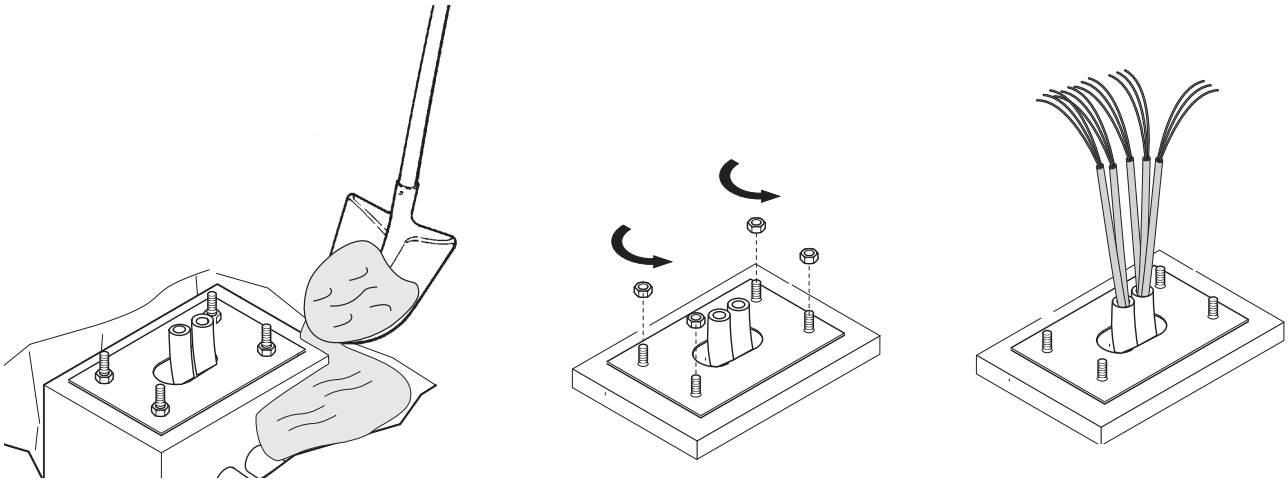
Place the plate over the iron cage.
Fill the foundation frame with concrete; the base must be perfectly level and the screws' threading completely above surface.
Wait at least 24 hrs for the concrete to solidify.
Remove the foundation frame.





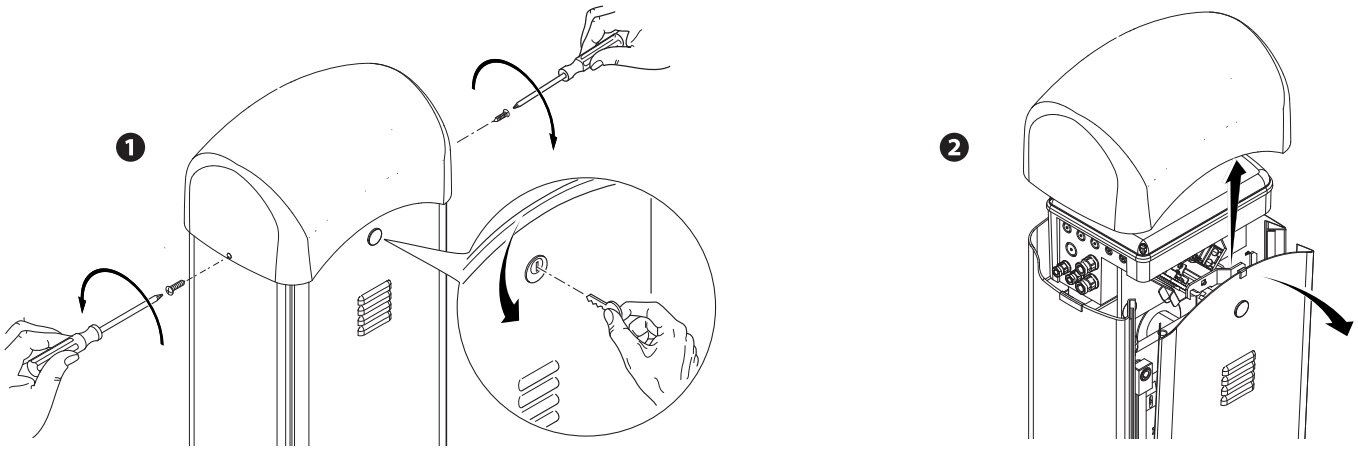


Fill the hole with earth around the concrete block.
Remove the nut and washer from the bolts
Fit the electric cables into the tubes so that they come out about 600 mm.



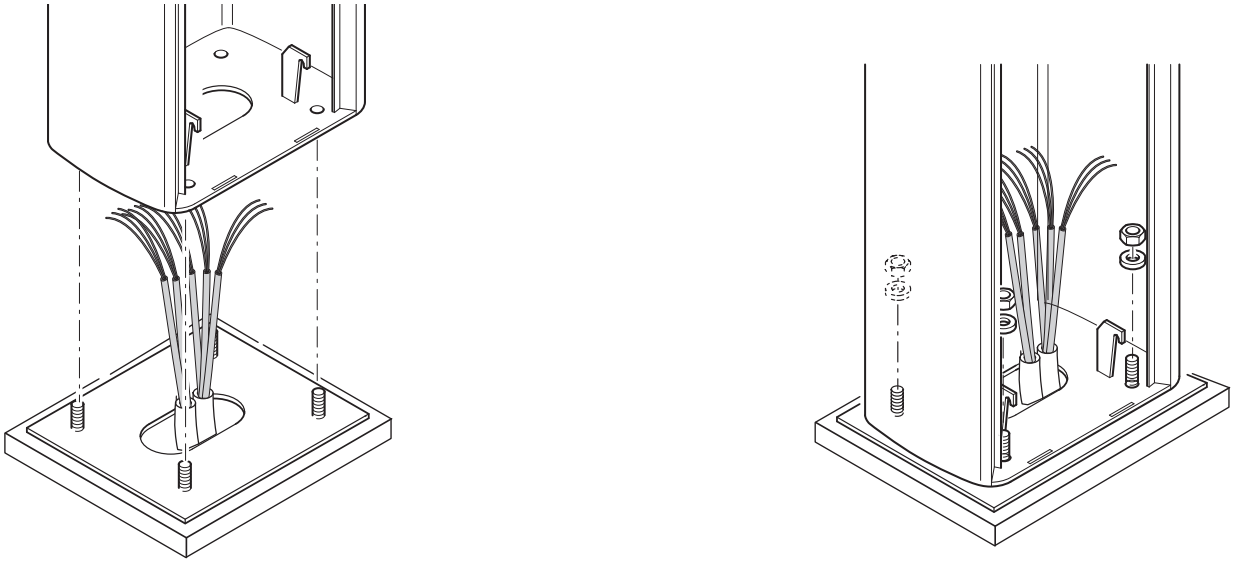
Preparing the barrier

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



Fastening the barrier

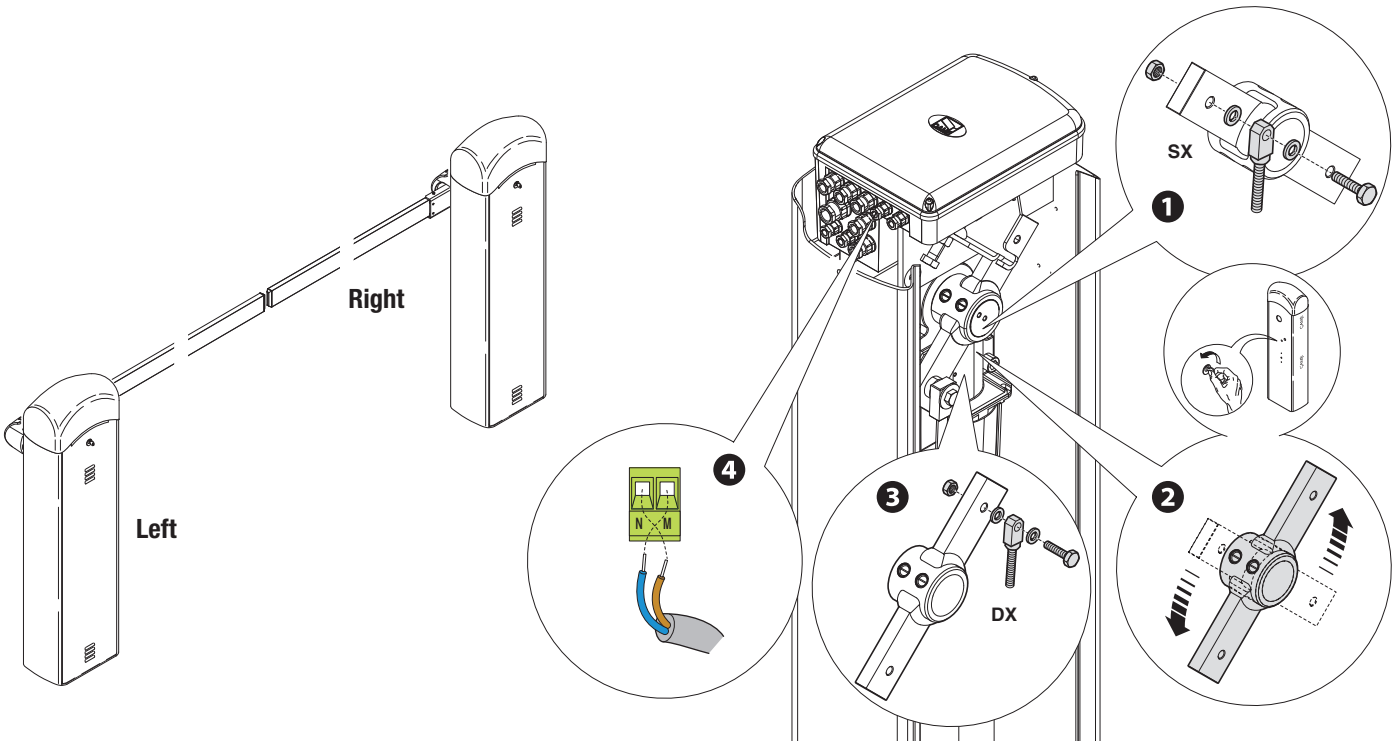
📖 The cabinet should be installed with the inspection hatch on the most accessible side to make any adjusting easier.
Place the cabinet onto the anchoring plate and fasten it using nuts and washers.



Change of the boom opening direction

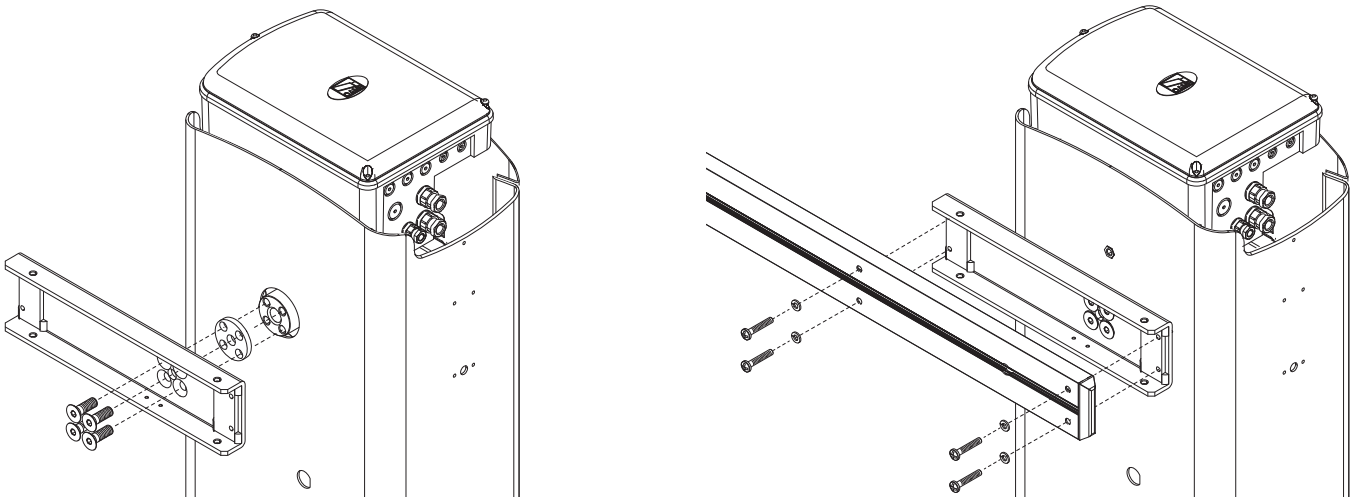
⚠ Caution! The barrier is set up for installing on the left.
When installing on the right, invert the boom's opening direction, as follows:

- remove the spring connection from the transmission arm❶;
- 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.



Boom installation

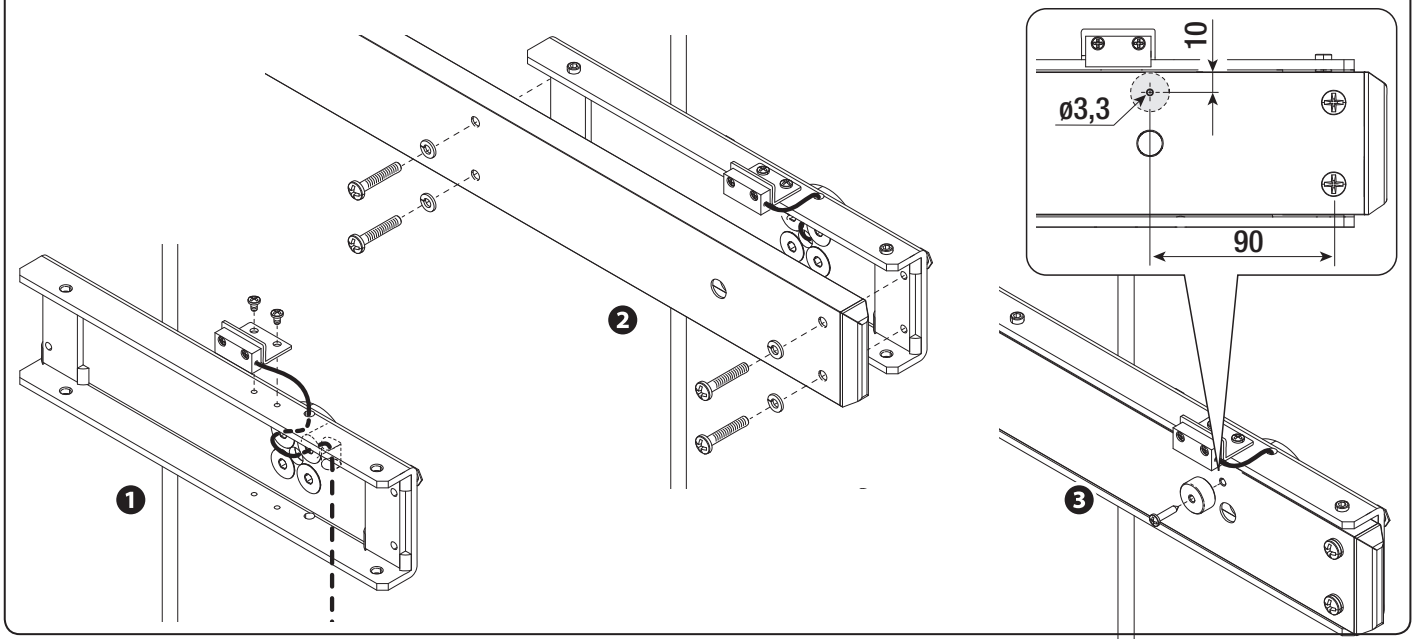
Fasten the boom attacher and distancer onto the motor shaft using four UNI 5933 M12X20 screws.
Fasten the boom to the attacher using the bolts supplied with the boom.



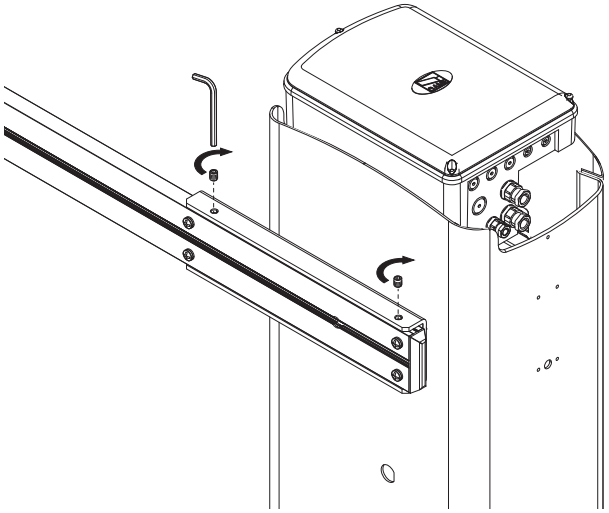
MAGNETIC SENSOR FOR DETECTING BOOM DETACHMENT (OPTIONAL)

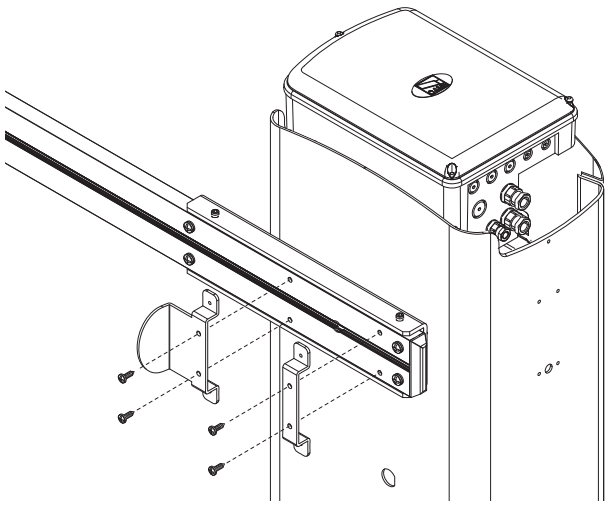
When applying the magnetic sensor, proceed as follows:

- run the micro-switch cable through the motor shaft hole and fasten the micro-switch to the boom attachment ❶;
- fasten the boom to the attachment ❷;
- drill a hole in the boom following the measurements shown for fastening the magnet ❸;
- connect the magnetic sensor to terminals IN1 and COM (see INPUT CONTACTS ON THE IO-RS485 CONTROL PANEL).

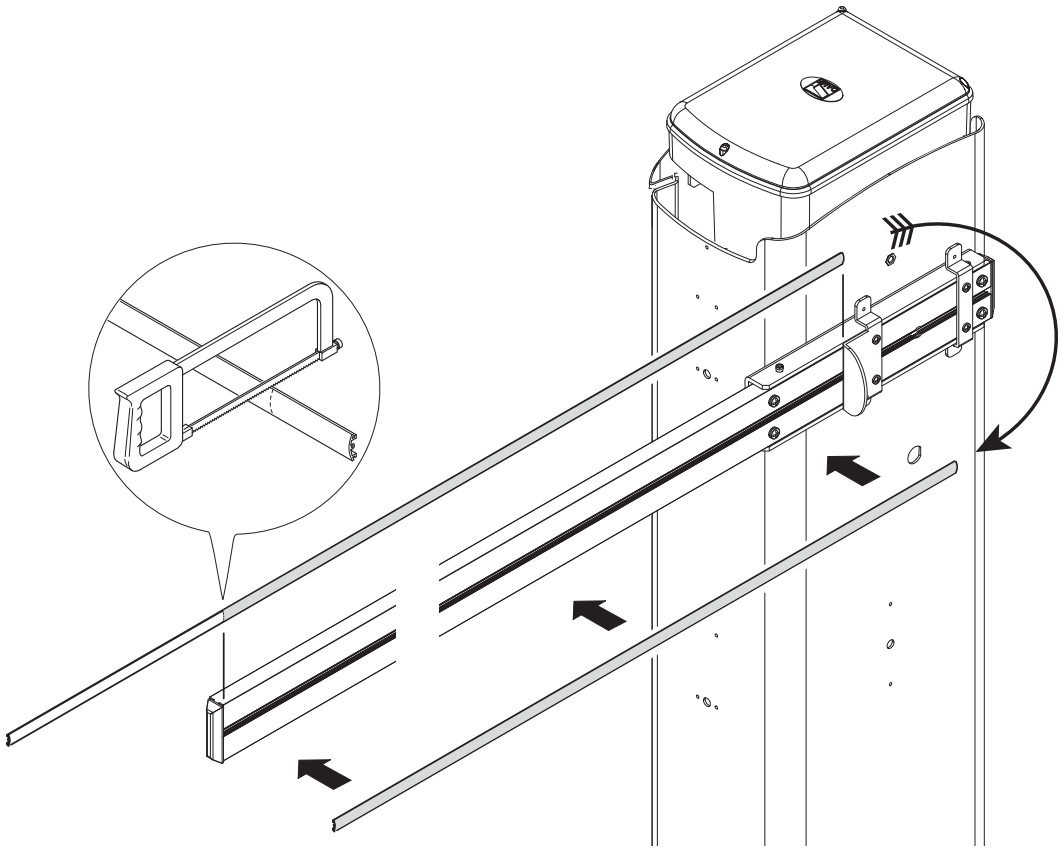


Tighten the two grub screws supplied with the boom into the boom attacher to prevent the boom from oscillating.
Fit the support braces onto the boom for the anti-shearing protective cover.

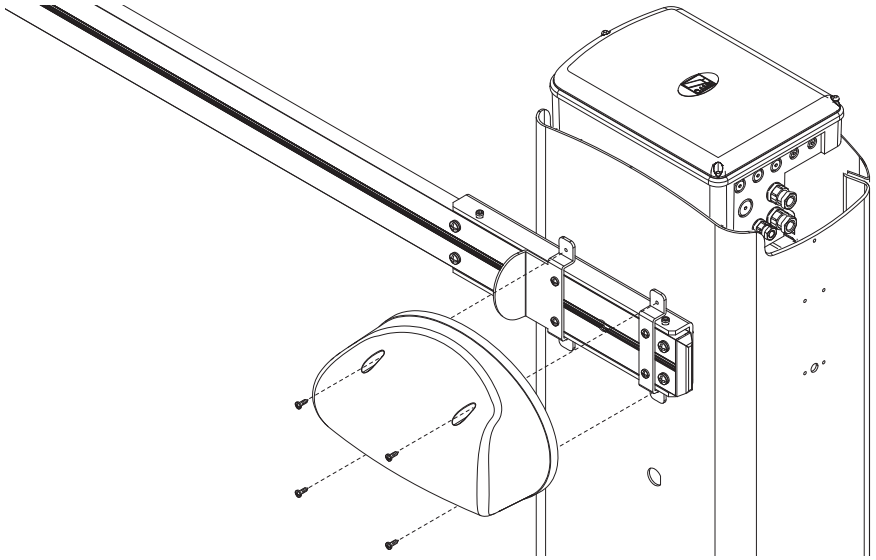




Cut the groove covering frame to the right length and fit it into the boom's groove.



Fit the protective cover onto the support braces and fasten it using the screws.



Choice of balancing spring

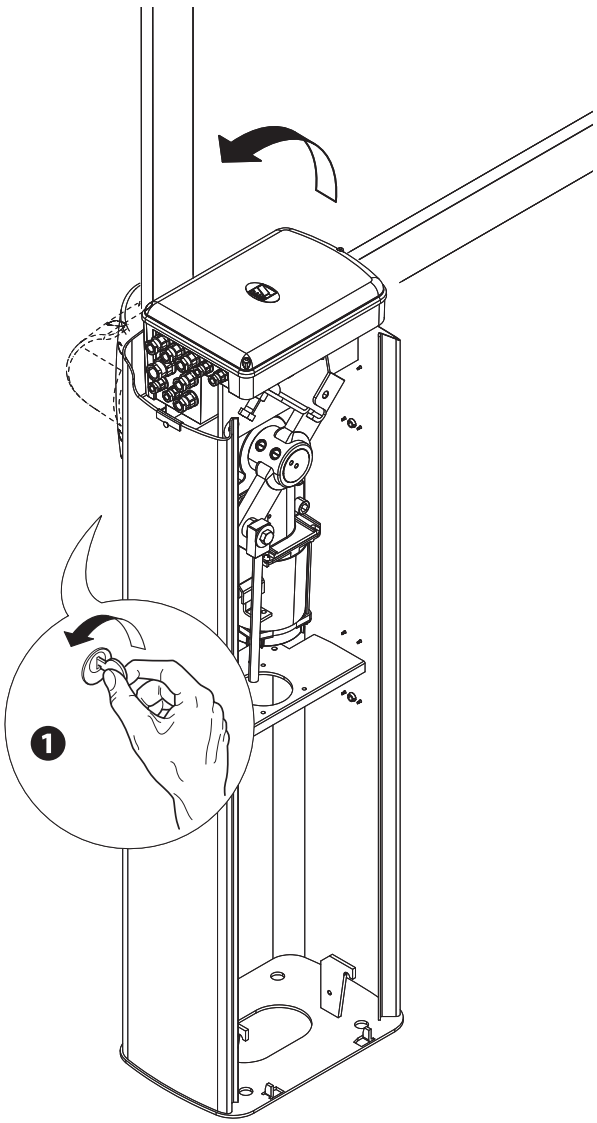
Before proceeding, check that the spring you have chosen is suitable for the accessories and the clearance.

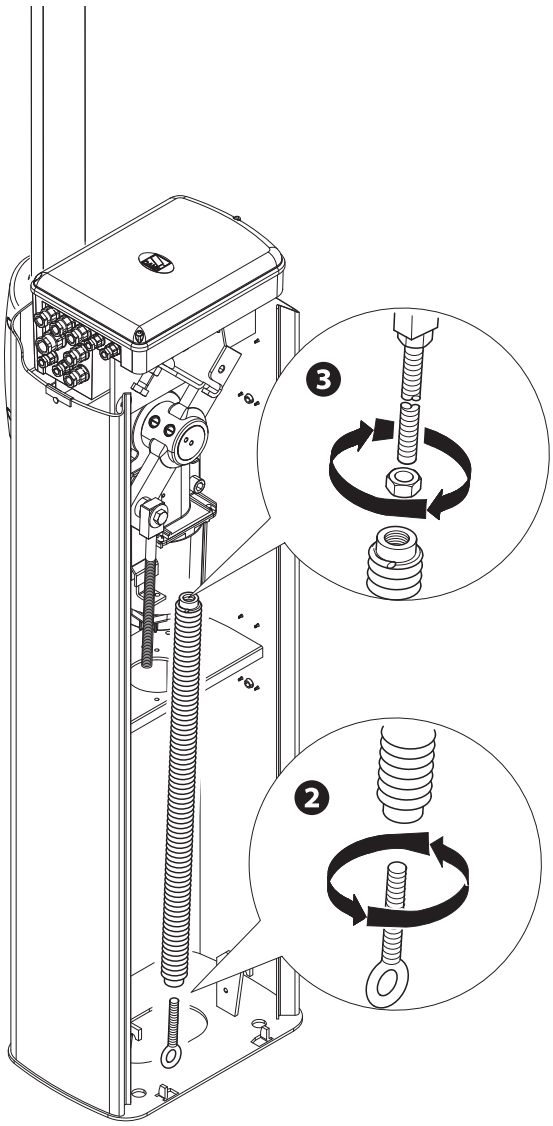
	A I9RT0109013 Ø 40 mm spring	B I9RT0109012 Ø 50 mm spring
BOOM COMPOSITION	**1.5 to 3**	**3 to 4**
Boom with shock-proof profile	A	B
Boon with impact-proof frame and luminous cord	A	B
Jointed boom	B	B

🕮 The boom includes the transparent groove cover and end cap.

Balancing spring assembling

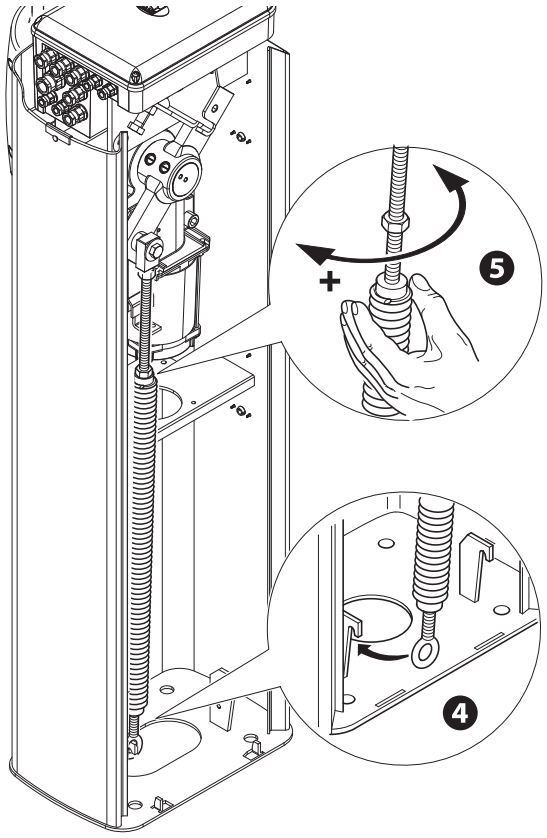
Release the gearmotor and position the boom vertically ❶. Lock the gearmotor once again.
Tighten the eyelet tie rod below the spring ❷. The spring should be tightened to the rod which is fastened to the lever arm ❸.

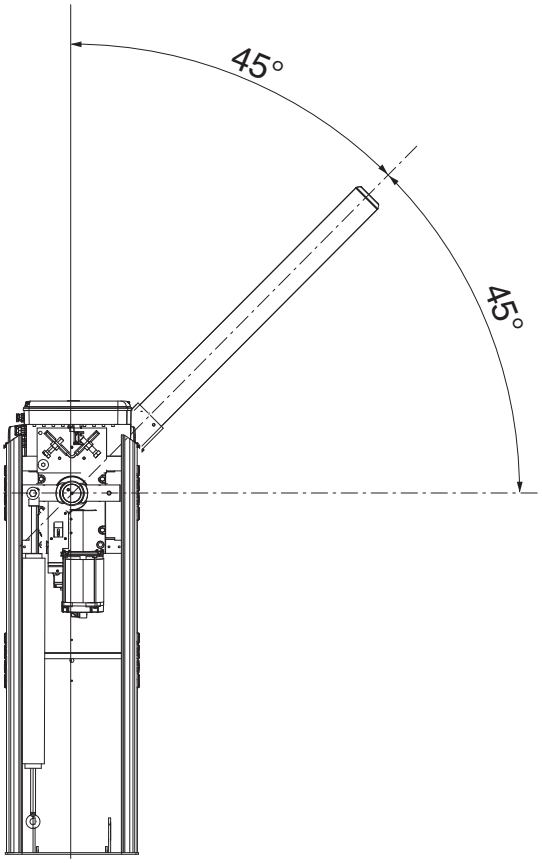




Balancing the boom

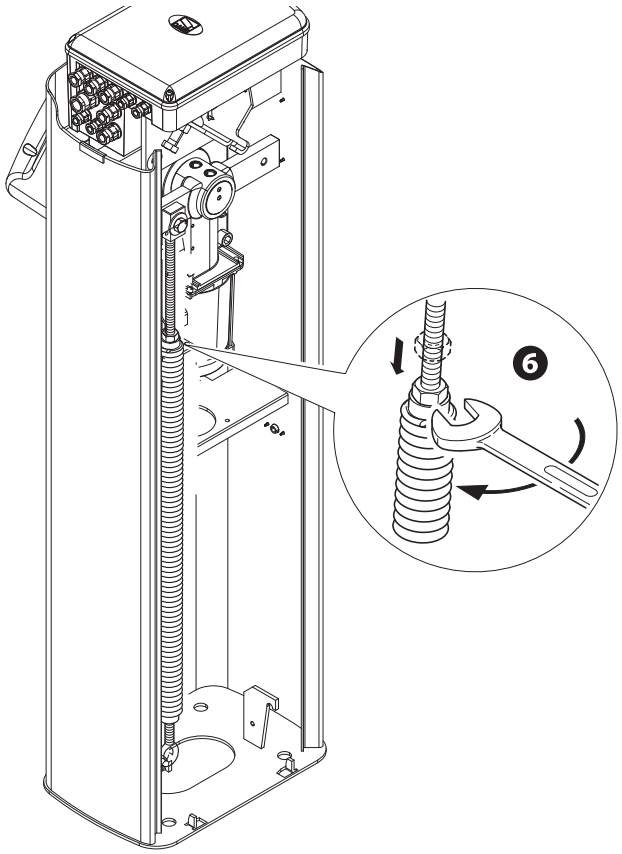
Hook the eyelet rod to the anchoring rod ❹.
Release the gearmotor and manually turn the spring to increase or reduce traction ❺. The boom should stabilize at 45°.





Secure the counter-nut and relock the gearmotor❻.

📖 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.

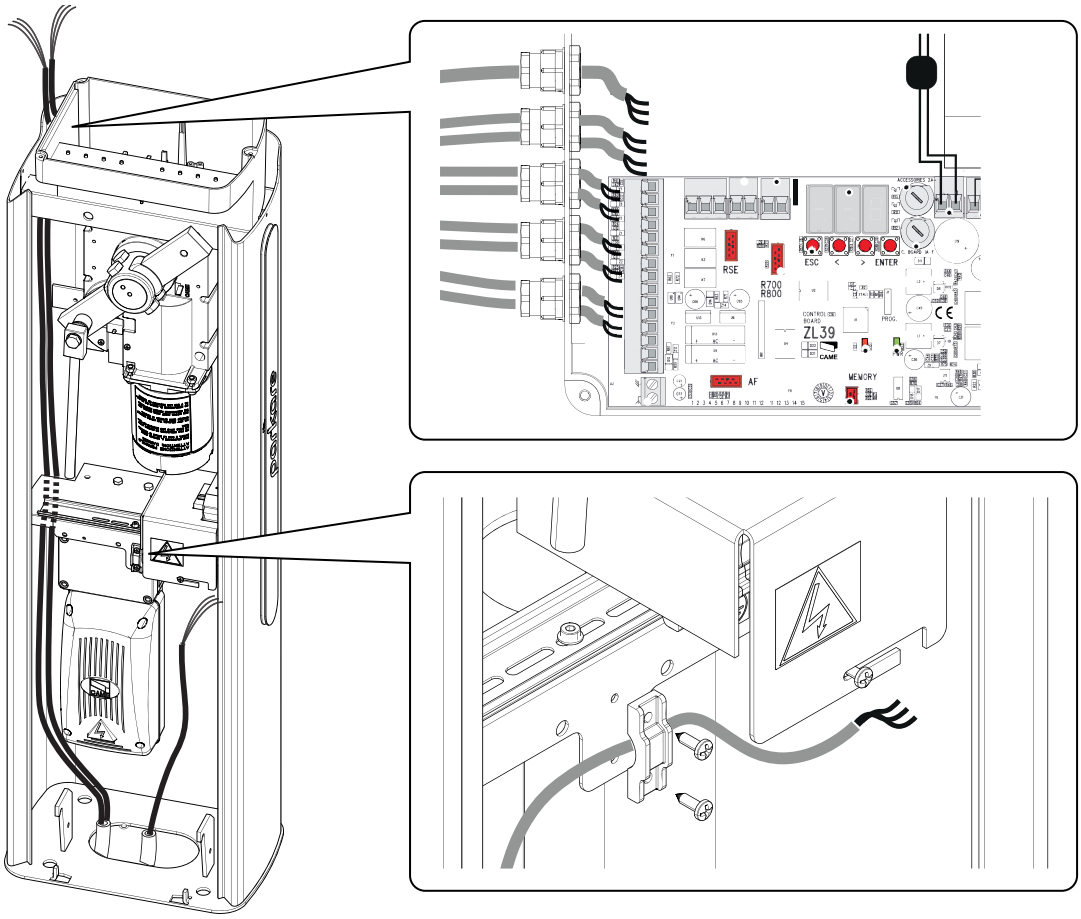


ELECTRICAL CONNECTIONS

⚠ Before working on the control panel, cut off the mains power supply and remove any batteries.

Electric cables passage

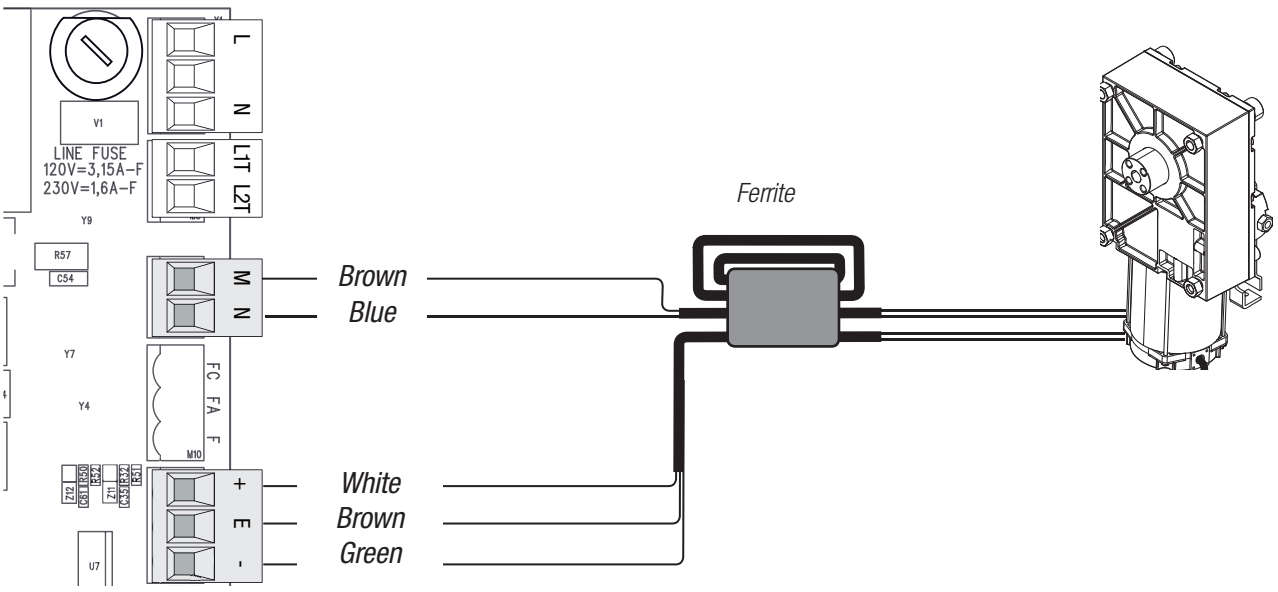
Connect all wires and cables in compliance with the law while using suitable cable glands, as shown in the drawing.
⚠ Use a cable gland only for the 230 V AC power supply cable.
⚠ The electrical cables must not touch any heated parts such as the motor, transformer, and so on.



Factory wiring

The gear motor is already connected.
To install the barrier on the right, follow the instructions in the CHANGING THE BOOM OPENING DIRECTION paragraph.

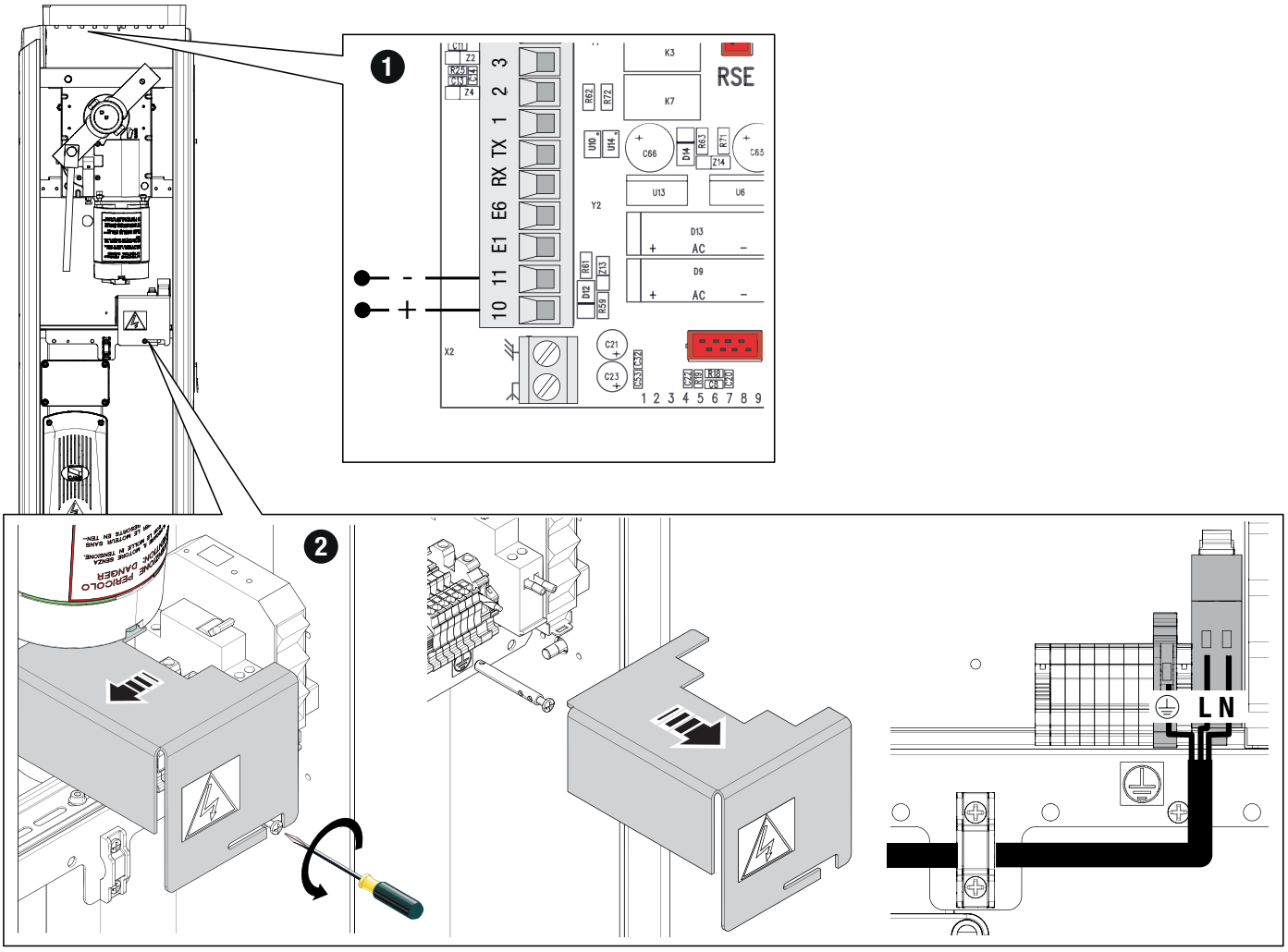
24 V DC gearmotor with encoder



Input voltage

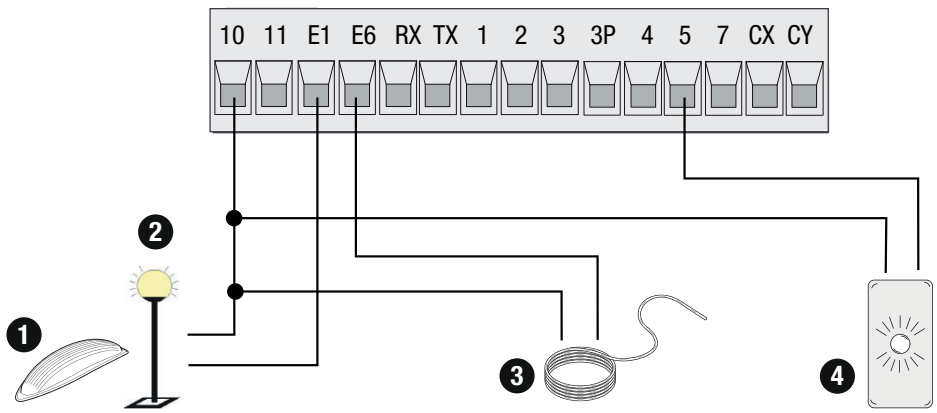
1- Output delivers normally 24 V AC
The output delivers 24 V DC when the batteries start operating.
🕮 The sum of the connected accessories input must not exceed 40 W.

2 - Line voltage input at 230 V AC (1P+N+PE) - 50/60 Hz.



Signalling devices

1 = Flashing light. It flashes during the operator opening and closing phases.
2 - Additional light. Increases the lighting in the manoeuvring area.
3 - Luminous cord. It flashes during the operator opening and closing phases.
4 - Operator status warning light. It warns of the operator status.
⚠ Maximum contact capacity 10-E1 24 V AC/DC - 20 W.
⚠ Maximum contact capacity 10-E6 24 V AC/DC - 32 W.
⚠ Maximum contact capacity 10-5 24 V AC/DC - 3 W.



Command and control devices

1 - Antenna with TOP-RG58 cable.

2 - Button - Total stop - NC contact – Boom stop that excludes any automatic closing; to resume movement, use the control device.
🕮 If the contact is not used, it must be deactivated during the programming.

3 - Control device - OPEN ONLY function- NO contact - Allows only opening.
🕮 The contact can be programmed for the hold-to-run function.

4 - Control device - OPEN ONLY function- NO contact - Allows only opening.
🕮 The contact must be used only for operators working in compass or combined mode.

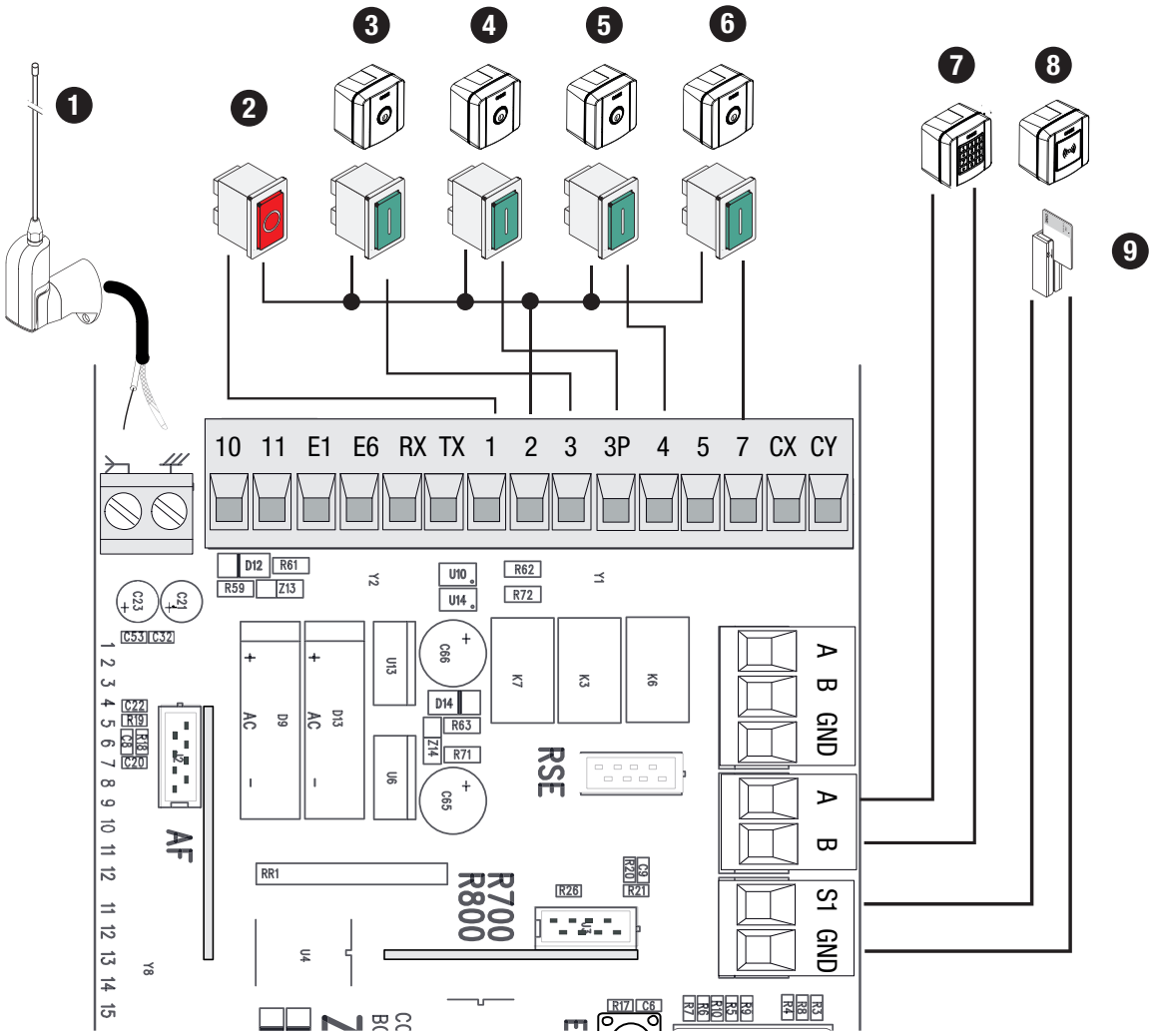
5 - Control device - CLOSE ONLY function- NO contact - Allows only closing.
🕮 The contact can be programmed for the hold-to-run function.

6 - Control device - OPEN -CLOSE function- NO contact - Allows only opening and closing.

7 - Keypad selector.

8 - Transponder selector switch.

9 - Card reader.



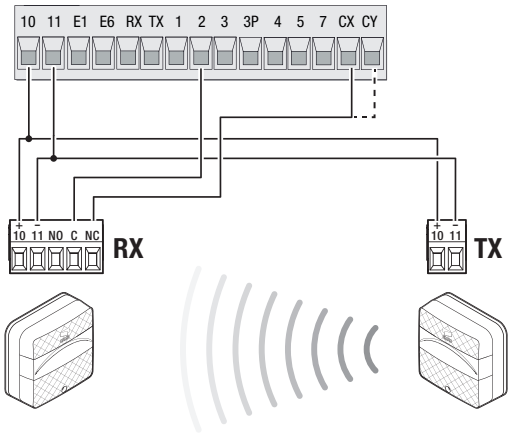
Safety devices

Connect the safety devices to the CX and/or CY inputs.
During programming, configure the type of action that must be performed by the device connected to the input.

🕮 If contacts CX and CY are not used they must be deactivated during programming.

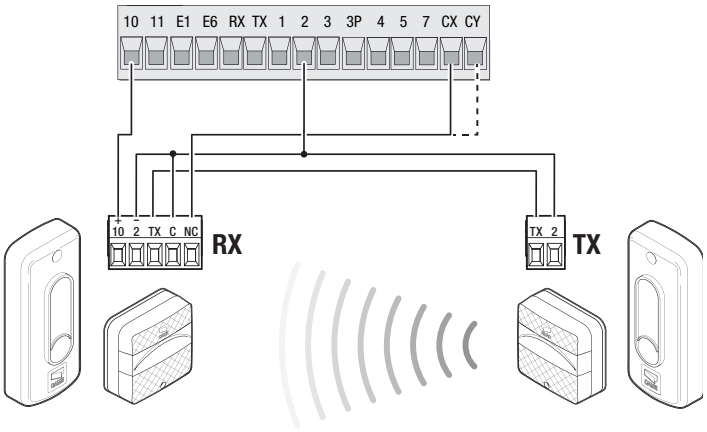
Standard connection

DELTA photocells



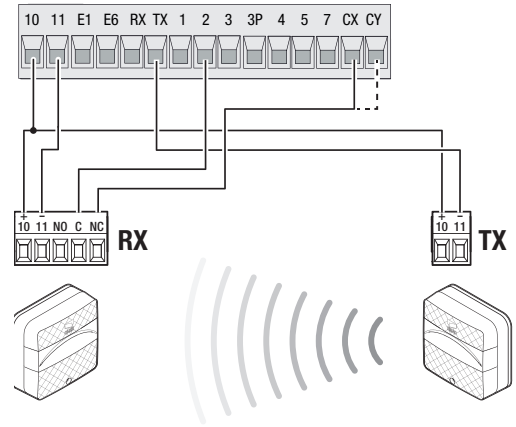
Standard connection

DIR / DELTA-S photocells



Connection with safety test

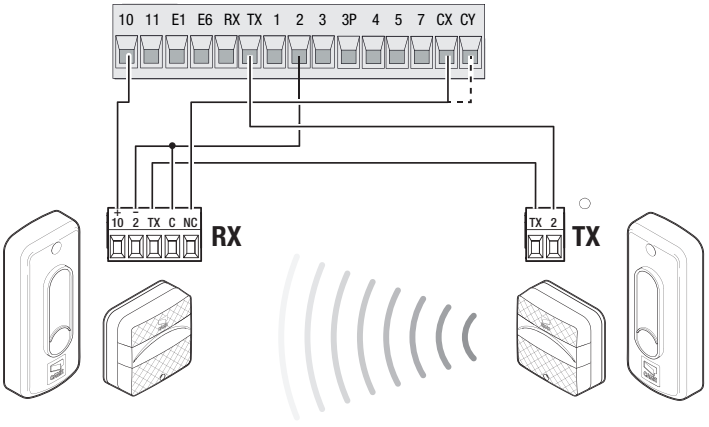
DELTA photocells



🕮 See function F5, safety devices test.

Connection with safety test

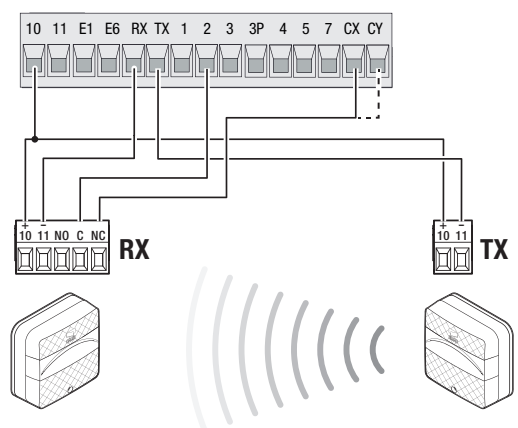
DIR / DELTA-S photocells



🕮 See function F5, safety devices test.

Connection with Sleep Mode

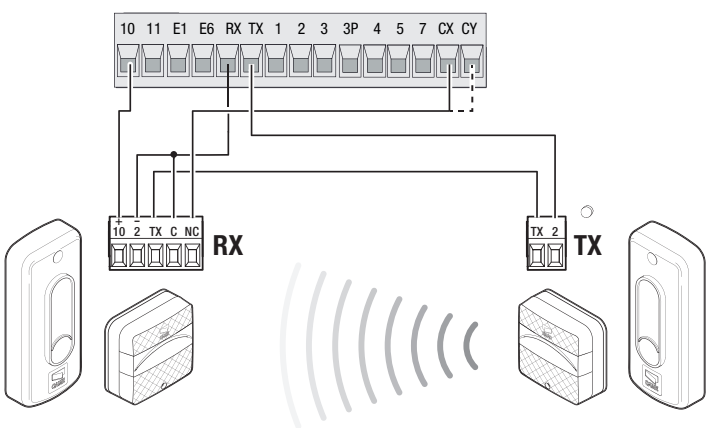
DELTA photocells



🕮 See function F60, Sleep Mode.

Connection with Sleep Mode

DIR / DELTA-S photocells

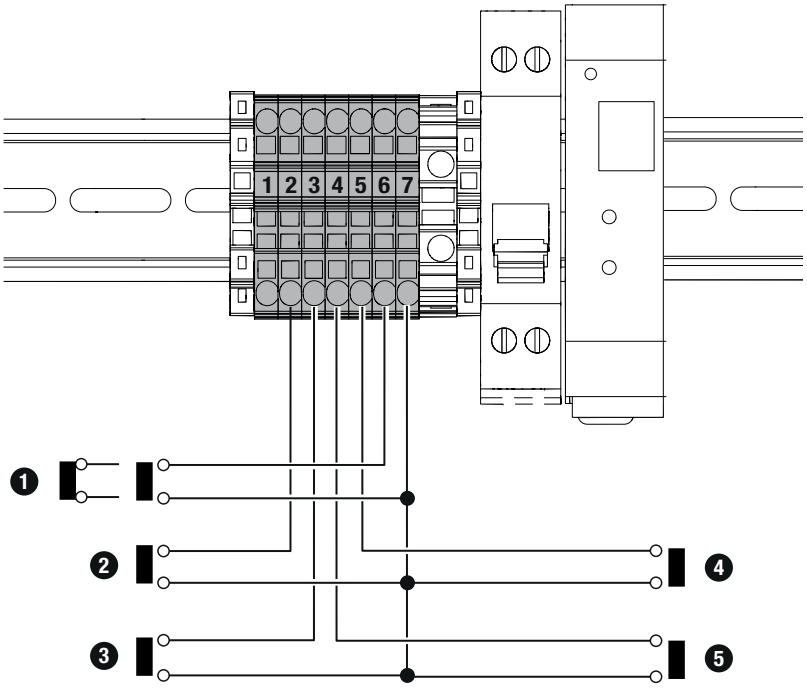


🕮 See function F60, Sleep Mode.

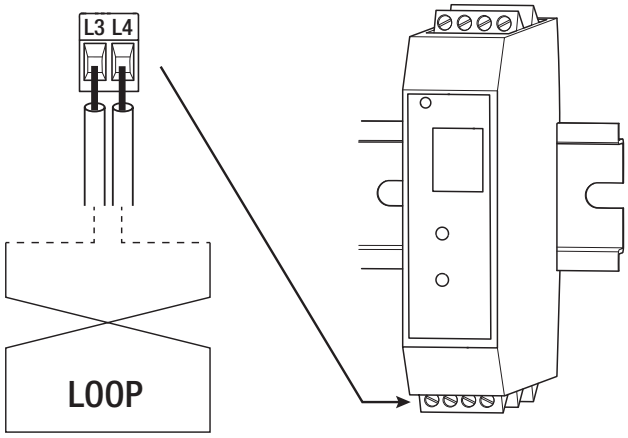
Entry and exit command

1 - NO contact, function with C10 mode or NC contact in C5 or C9
2 - NO contact input, close only function
3 - NO contact input, open only function
4 - NO contact output indicating closed boom
5 - NO contact output indicating open boom

📖 Each output is a clean contact with maximum capacity 1A – 24 V DC.



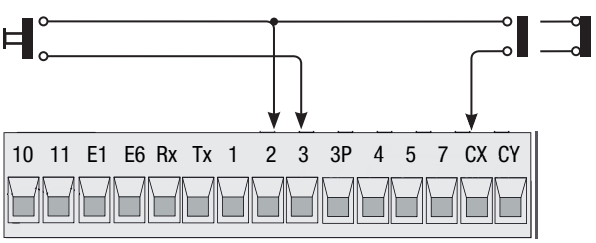
Connecting the magnetic loop to the SMA module



Connecting the devices for controlling vehicle passages

Only if the control device is connected to 2-3, can a series of commands be sent about the number of vehicles that can pass through the barrier. The control is performed by the coil which is connected to the magnetic sensor which will command the barrier's closing after the last scheduled vehicle has passed through.
Connect the devices as shown in the drawing and activate function F 27.

Input for button-operated control device, (NO) contact normally open.



Input for SMA magnetic sensor, (NO) normally open contact in C10 mode, or (NC) contact normally closed to C5 or C9.

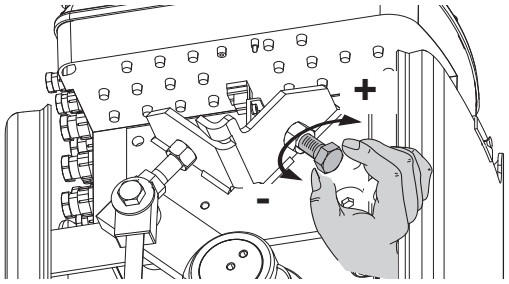
Determination of travel end points

Activate the barrier to check whether the boom 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.

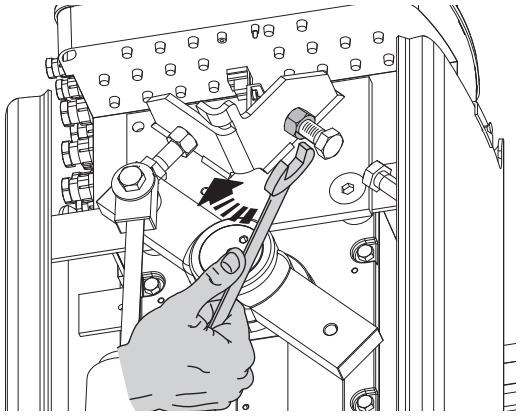
To correct the boom's vertical position:
- lower the boom;
- open the inspection hatch;
- turn the opening mechanical stop clockwise to increase the boom's travel or counter clockwise to reduce it ❶.

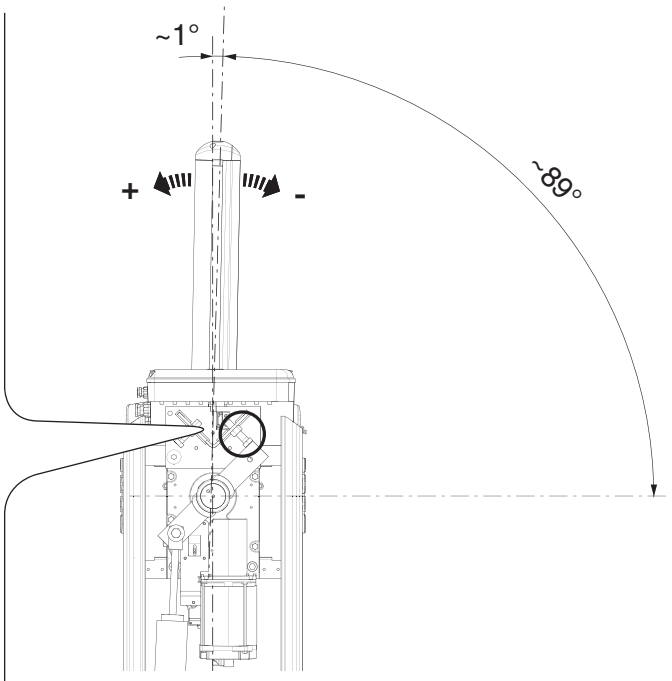
Fasten the stop with a counter nut ❷.

❶



❷

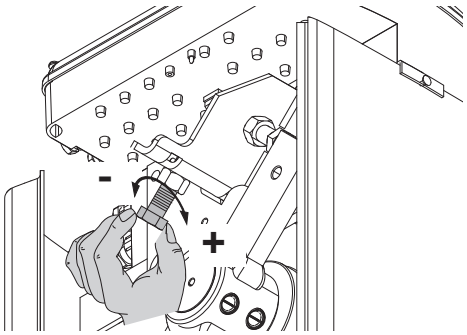




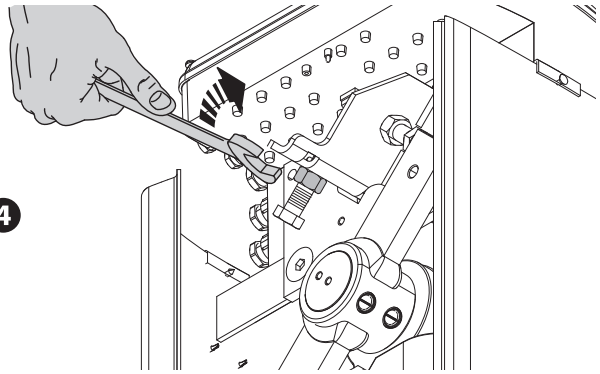
To correct the horizontal position:
- raise the boom;
- turn the closing mechanical stop clockwise to increase the boom's travel or counter clockwise to reduce it ❸.

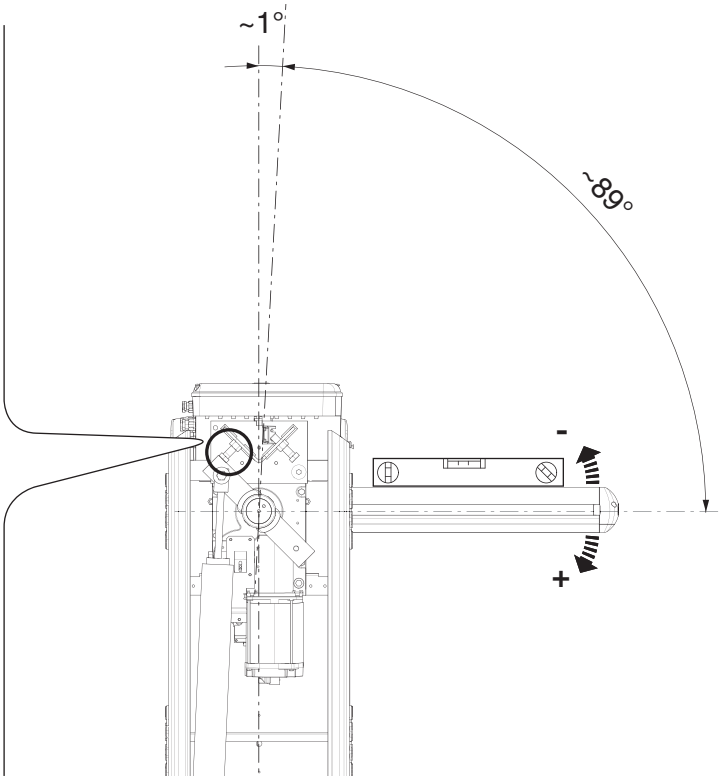
Fasten the stop with a counter nut ❹.

❸



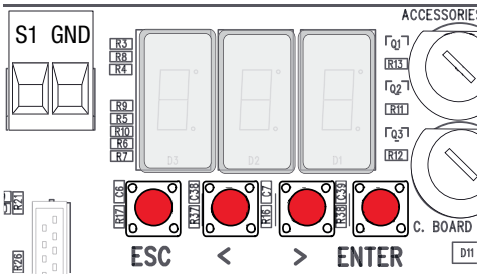
❹





PROGRAMMING

Description of the commands

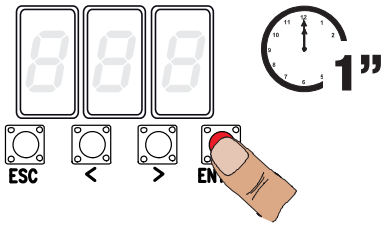


The ENTER key is for:
- accessing menus;
- confirming or memorizing set values.

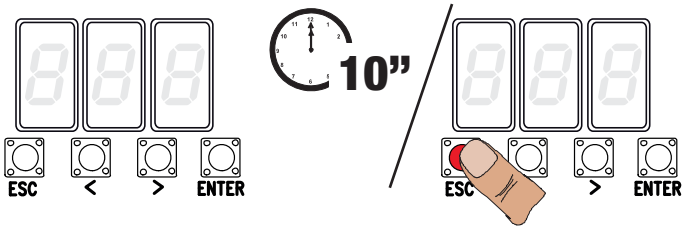
The ESC button is for:
- exiting menus;
- cancelling changes.

The < > keys are for:
- moving from one item to another;
- increasing or decreasing values.

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



📖 To exit the menu, wait 10 seconds or press ESC.



Functions menu

⚠ **When programming, the operator needs to be in stop mode.**

F1	**Total stop**	Stops the boom and excludes the automatic closing. Use a control device to resume movement. 0 =Deactivated (Default) 1 = Activated
F2	**Input CX**	Associate a function with the CX input. 0 =Deactivated (Default) 1 = C1 = Reopening while closing (Photocells) 4 = C4 = Obstruction wait (Photocells) 5 = C5 = Immediate closing at the opening travel end 9 = C9 = Immediate closing at the travel end during opening with obstacle waiting, during closing 10 = C10 = Immediate closing during opening with obstacle waiting during closing
F3	**CY input**	Associate a function with the CY input. 0 =Deactivated (Default) 1 = C1 = Reopening while closing (Photocells) 4 = C4 = Obstruction wait (Photocells) 5 = C5 = Immediate closing at the opening travel end 9 = C9 = Immediate closing at the travel end during opening with obstacle waiting, during closing 10 = C10 = Immediate closing during opening with obstacle waiting during closing
F5	**Safety test**	It activates the check of the correct operation of the photocells after each opening and closing command. 0 =Deactivated (Default) 1 = CX 2 = CY 3 = CX+CY

F6	**Maintained action**	With the function active, the operator movement (opening or closing) is interrupted when the control device is released. 🕮 Activation of the function excludes all other control devices. 0 =Deactivated (Default) 1 = Activated
F9	**Obstruction with motor stopped**	With the function active, the boom remains stopped if the safety devices detect an obstacle. The function activates with: closed rod, open rod or after a total stop. 0 =Deactivated (Default) 1 = Activated
F10	**Open warning light**	It warns of the state of the barrier. 0 = Warning light on (Default) - The light stays on when the boom is moving or open. 1 = Flashing warning light - The warning light flashes every half second when the boom is opening and stays on when the boom is open. The light flashes every second when the boom is closing and is off when the boom is closed.
F11	**Encoder**	It manages operator slowdowns, obstacles detection and sensitivity. 0 =Deactivated (Default) 1 = Activated
F14	**Sensor type**	For setting the type of control device. 0 = Transponder or card reader 1 = Keypad (Default)
F15	**Luminous cord**	It signals the state of the barrier by using intermittent lights. 0 = Moving boom (Default) 1 = Boom in movement and closed
F18	**Additional light**	For choosing the type of device connected to the output. 0 = Flashing light (Default) 1 = Cycle light. The lighting device remains on for the opening and closing time. 🕮 The light remains off if an automatic closing time is not set. 2 = Courtesy light. The lighting device remains on for the time set by the [Courtesy Time] function.
F19	**Cls. Automatic**	Sets the time that must pass before the automatic closing is activated, once the opening travel end has been reached. 🕮 The function does not work if any of the safety devices trigger when an obstruction is detected, or after a total stop, or during a power outage. 0 =Deactivated (Default) 1 > … > 180 sec.
F21	**Pre-flashing time**	Sets the early activation time before each manoeuvre. 0 =Deactivated (Default) 1 > … > 10 sec.
F22	**Operating time**	Sets the gearmotor working time during opening and closing. 5 > … > 120 sec.
F25	**Courtesy time**	Sets the lighting device operation time. 60 > … > 180 sec.
F28	**Opening speed**	Sets the opening speed (percentage of maximum speed). Caution! The speed parameter fields vary depending on the type of boom: - for booms of 2 m to 4 m with jointed boom, 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. 70% > … > 100%
F29	**Closing speed**	Sets the closing speed (percentage of maximum speed). Caution! The speed parameter fields vary depending on the type of boom: - for booms of 2 m to 4 m with jointed boom, 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. 70% > … > 100%

F30	**Opening slow-down speed**	Sets the slowing down speed during opening (percentage of maximum speed). Caution! 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 35. - for booms of 6 m and 8 m, set the slow-down speed percentage to between 15 and 40. 70% > … > 100%
F31	**Closing slow-down speed**	Sets the slowing down speed during closing (percentage of maximum speed). Caution! 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 25. - for booms of 6 m and 8 m, set the slow-down speed percentage to between 15 and 20. 70% > … > 100%
F33	**Calibration speed**	Sets the travel self-learning speed (percentage of maximum speed). 20% > … > 40%
F34	**Travel sensitivity**	Adjusts the obstacles detection sensitivity level during travel (percentage of maximum sensitivity). 10% > … > 100%
F35	**Slow-down sensitivity**	Adjusts the obstacles detection sensitivity level during the slowdown phase. 10% > … > 100%
F37	**Opening slow-down point**	Sets the opening slow down start point (percentage of the total travel). Caution! The percentage varies depending on the boom type: - for jointed 2 m and 4 m booms, set the percentage to between 40 and 60; - for 6 m and 8 m booms, set the percentage to between 60 and 70. 40% > … > 60%
F38	**Closing slow-down point**	Sets the closing slow down start point (percentage of the total travel). Caution! The percentage varies depending on the boom type: - for jointed, 2 m booms, set the speed percentage to between 20 and 40; - for 4 m booms, set the percentage to between 50 and 60; - for 6 m booms, set the percentage to between 60 and 70; - for 8 m booms, set the percentage to between 65 and 75; 20% > … > 75%
F49	**RSE**	Configures the function to be performed by the board connected to the RSE connector. 0 = Deactivated 1 = Paired 2 = Compass 3 = IO-RS485 (Default)
F50	**Saving data**	Save user data, timings and configurations to the memory device (memory roll or USB key). 🕮 This function only appears if a memory roll has been fitted into the control board. 0 =Deactivated (Default) 1 = Activated
F51	**Reading data**	Loads user data, timings and configurations from the memory device (memory roll or USB key). 🕮 This function only appears if a memory roll has been fitted into the control board. 0 =Deactivated (Default) 1 = Activated
F52	**Transferring MASTER-SLAVE parameters**	Uploading settings from Master to Slave. 🕮 This only appears if the F49 function is set to PAIRED or ALTERNATE. 0 =Deactivated (Default) 1 = Activated
F56	**CRP address**	Assigns a unique identification code (CRP address) to the electronic board. The function is necessary if there are more operators connected by CRP. 1 (Default) > … > 225
F60	**Sleep mode**	For reducing energy consumption by the stand-by photocells. 0 =Deactivated (Default) 1 = Activated
F61	**Pre-flashing**	It activates the early pre-flashing function of the flashing light, before each manoeuvre. For setting the time, see function F 21. 0 = when opening and closing (Default) 1 = only when closing 2 = only when opening

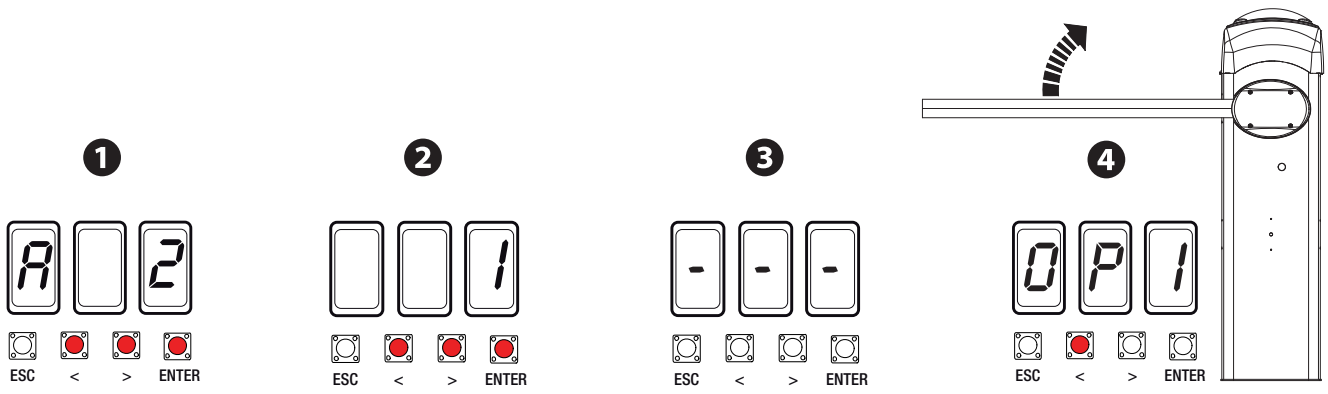
F63	**RSE speed**	Sets the remote connection system communication speed on the RSE port. 0 = 1200 bps 1 = 2400 bps 2 = 4800 bps 3 = 9600 bps 4 = 14400 bps 5 = 19200 bps 6 = 38400 bps (Default) 7 = 57600 bps 8 = 115200 bps
F72	**Opening counter**	With the function active, it is possible to send a series of opening commands corresponding to the number of vehicles which have to be authorized to pass through the gate. The count is carried out by the loop connected to the magnetic sensor, at the end of the count the gate is closed. The function can only be operated by control devices connected to the contact 2-3. 0 =Deactivated (Default) 1 = Activated
U1	**Add User**	It is used to register a maximum of 25 users and assign a function to each one. 📖 The operation can be carried out by using a transmitter or other control device. The boards that manage the control devices (AF - R700 - R800) must be plugged into the connectors. 1 = Step-step 3 = Open 4 = Partial opening
U2	**Remove user**	Removes one of the registered users.
U3	**Remove all**	Removes all registered users. 0 =Deactivated (Default) 1 = Activated
A1	**Boom length**	Sets the boom length Caution! The choice of boom length limits certain speed, slow-down and calibration limits. This is to ensure proper operation of the barrier. 0 = on swivel 2 = up to 2 m 4 = up to 4 m 6 = up to 6 m 8 = up to 8 m
A2	**Motor test**	Verification of the correct opening direction of the boom. If the keys do not execute the commands correctly, invert the boom opening direction. The < button opens. The > button closes.
A3	**Travel calibration**	Starts the travel self-learning. 📖 This function appears only is the Encoder function is activated. 0 =Deactivated (Default) 1 = Activated
A4	**Resetting parameters**	Restore factory settings except for the functions: [Radio decoding], [Motor type] and the settings related to the travel calibration. 0 =Deactivated (Default) 1 = Activated
A5	**Manoeuvres counter**	For viewing the number of maneuvers made by the operator. 1 = 1,000 maneuvers 100 = 100,000 maneuvers 999 = 999,000 maneuvers
H1	**FW version**	Displays the number of the firmware version installed.

Getting started

Once the connections are all set, have skilled, qualified staff commission the barrier into service.
Before continuing, make sure that the way is clear from any obstruction.
Power up and begin configuring the system. **Important!** Start programming by first doing the following functions:
- boom length (see function A1);
- motor test (see MOTOR TEST paragraph);
- total stop (see function F1);
- calibrating travel (see paragraph called CALIBRATING TRAVEL).

motor test

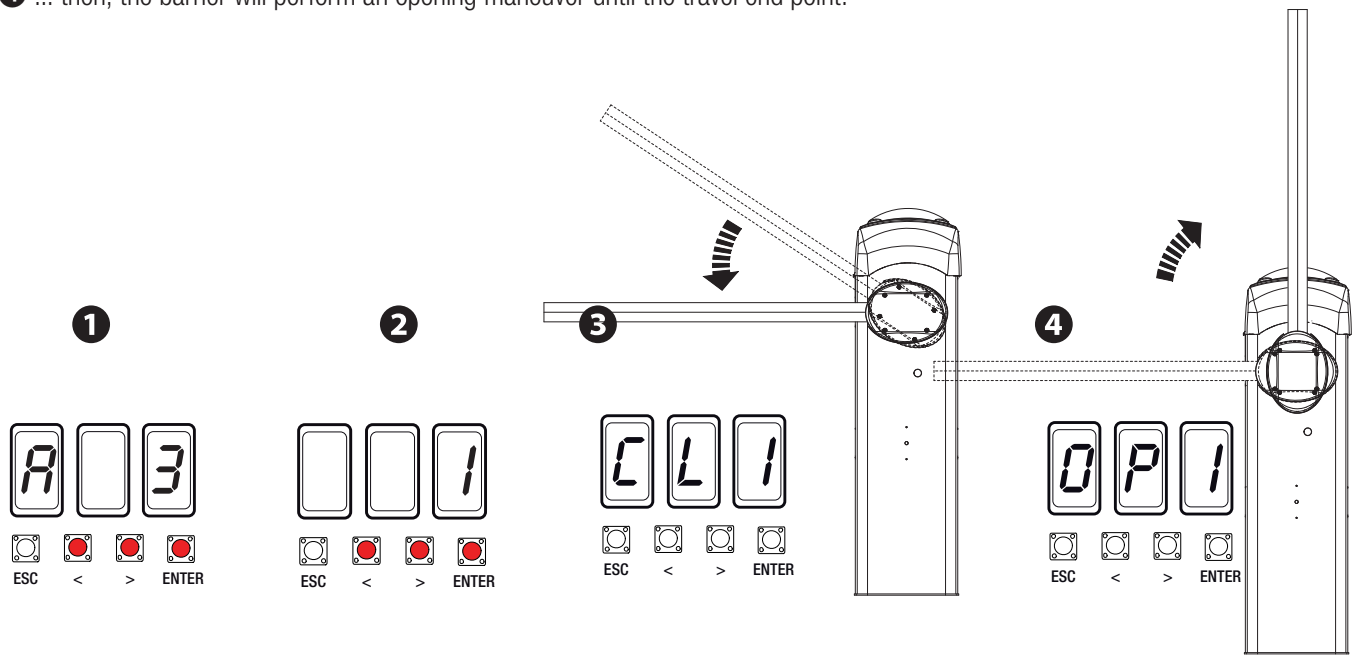
❶ Select **A2**. Press ENTER to confirm.
❷ Select 1 to start the test. Press ENTER to confirm...
❸ ... the following [---] characters will be displayed while waiting for a command
❹ Keep pressed the < key and check whether the barrier opens.
🕮 If the operator performs a closing maneuver, invert the motor's phases (M with N).



Travel calibration

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

❶ Select **A3** and press ENTER to confirm.
❷ Select 1 and press ENTER to confirm the travel calibration operation.
❸ The operator will perform a closing maneuver until the travel end point ...
❹ ... then, the barrier will perform an opening maneuver until the travel end point.



Managing users

📖 When adding/deleting users, the flashing numbers that appear, are numbers that can be used for other users you may wish to add (maximum 25 users).
📖 Before registering the users, make sure the AF radio-frequency card is fitted into the connector (see paragraph called CONTROL DEVICES).

Adding users with an associated command

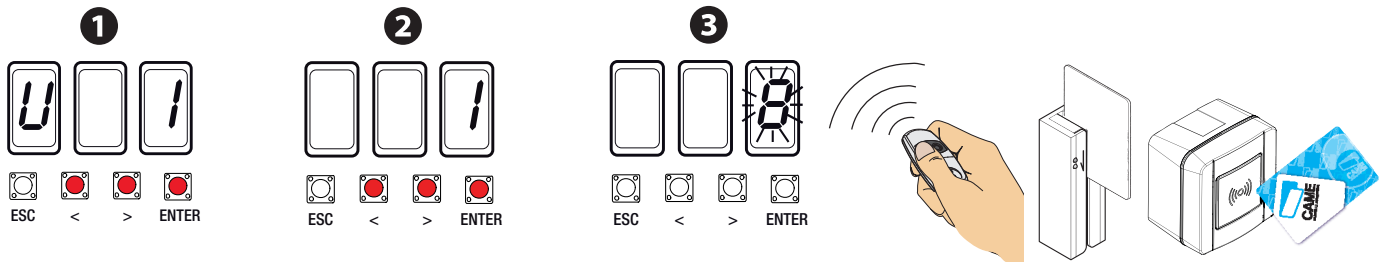
❶ Select **U1.** Press ENTER to confirm.

❷ 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 opening command only appears if the F49 function is activated.
Press ENTER to confirm...

❸ ... a number between 1 and 25 will start flashing for a few seconds. Send the code from the transmitter or other control device such as a sensor, card reader or keypad selector.

📖 If you want to add another command on the same transmitter, repeat the procedure and associated it on another button.



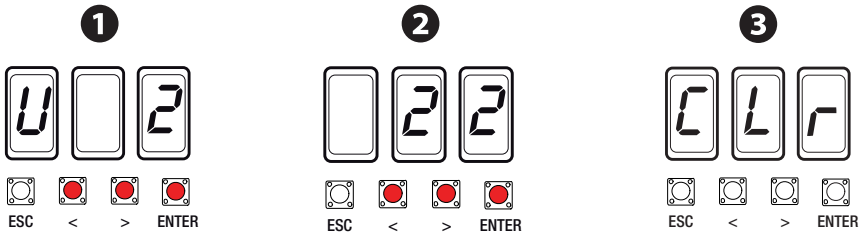
📖 Download the LIST OF REGISTERED USERS form from the portal docs.came.com Enter **L20180423.**

Deleting a single user

❶ Select **U2** and press ENTER to confirm.

❷ Use the arrow keys select the number of the user you wish to delete. Press ENTER to confirm....

❸ ... CLr will appear on the screen to confirm deletion.



Saving and uploading all data (users and configuration) with the memory roll

Procedure for memorizing all of the system's user and configuration data by using the Memory Roll, so they can be used with another control board, even on another system.

Caution! Fitting and extracting the Memory Roll must be done with the mains power disconnected.

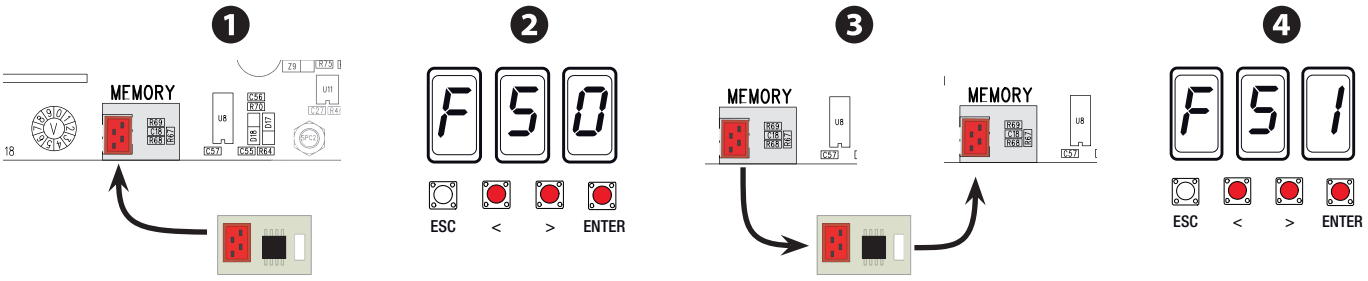
❶ Fit the Memory Roll into the its corresponding connector on the control board.

❷ Select **1** from the function **F50** and press ENTER to confirm saving data in the Memory roll.

❸ Extract the Memory roll and fit it into the connector of another control board.

❹ Select **1** from the function **F51** and press ENTER to confirm the uploading of data into the Memory Roll.

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



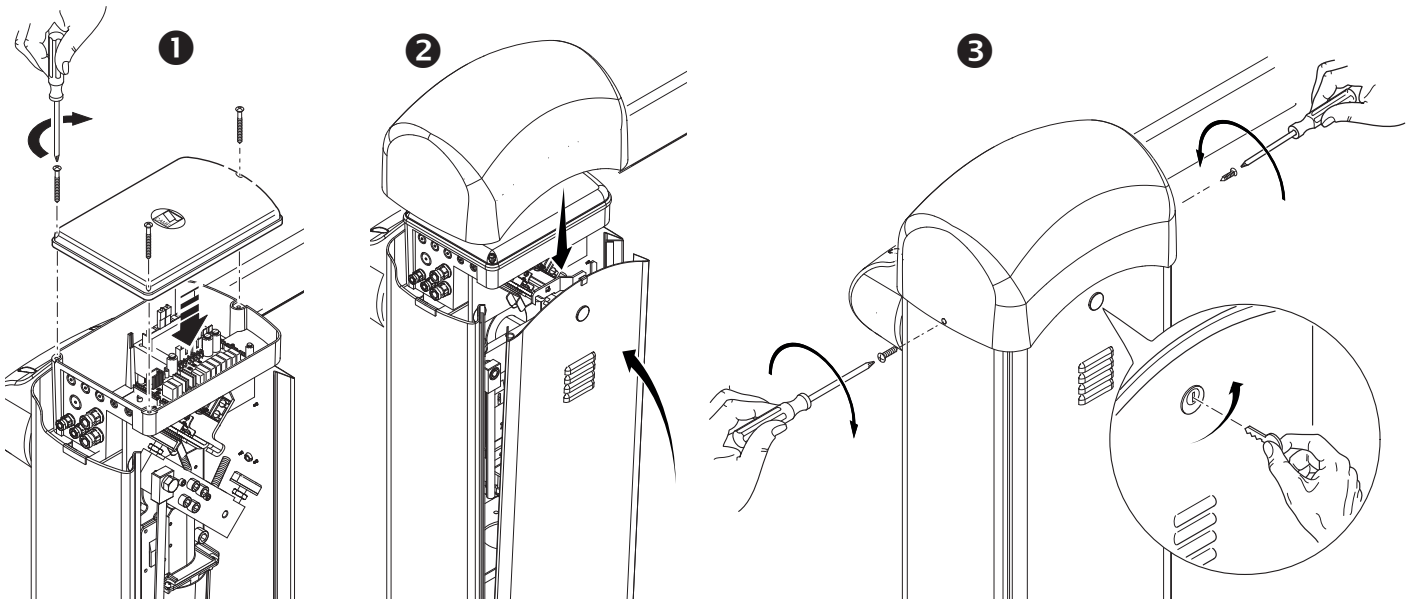
Memory roll

Memory roll

FINAL OPERATIONS

Proceed with the final steps, only once you have completed all connections and made the gate operational.
Fit the panel cover and fasten it using the screws ❶.

Replace the inspection-hatch and the cover ❷. Lock the hatch by using the key and fasten the cover using the screws ❸.



ERROR MESSAGE

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

Er1	The boom travel calibration was interrupted by the activation of the STOP button.
Er3	Encoder is broken.
Er4	Safety test error.
Er5	Insufficient working time.
Er6	Maximum number of obstructions detected.
Er7	Transformer overheating.
Er8	The inspection hatch is open.
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 - Close the inspection hatch using 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 automatically close	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 series	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 series	12 - Check the proper direction of travel
The warning LED stays lit	13 series	13 - Check the control devices
The boom does not reach the travel end	7 series	14 - Replace the AF card
The boom cannot be balanced	7-15	15 - Check the length ratio 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 series	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 input voltage polarities

DISMANTLING AND DISPOSAL

☞ CAME CANCELLI AUTOMATICI S.p.A. employs a certified Environmental Management System at its premises, 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.
DISPOSE OF RESPONSIBLY!
⚽ DISPOSING OF THE PRODUCT
Our products are made of various materials. Most of these (aluminium, plastic, iron, electrical cables) are 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.
DISPOSE OF RESPONSIBLY!

CAME

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