CAME

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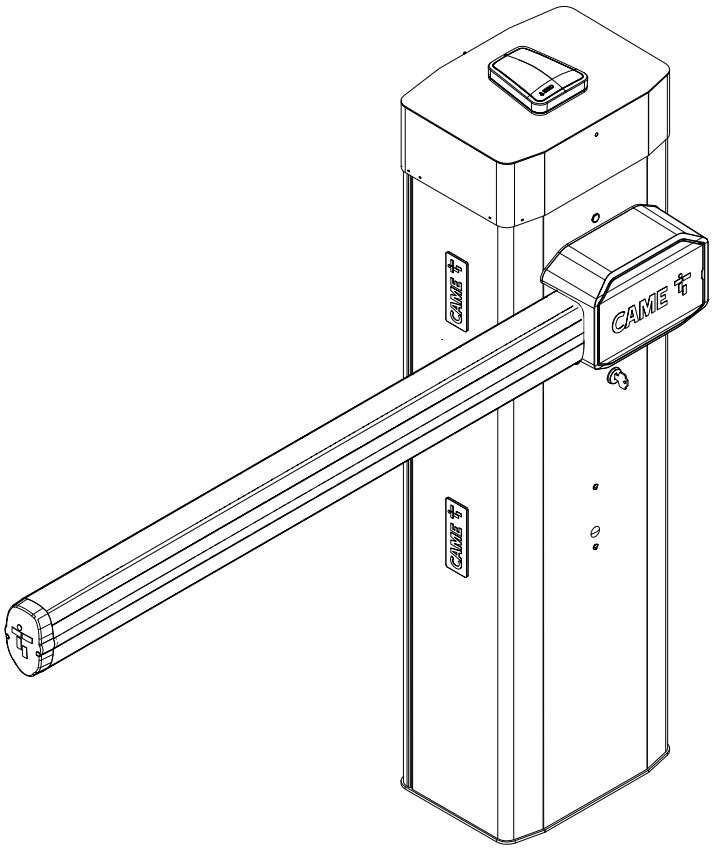
Automatic road barriers

FA02101-EN



GGT40UGS GGT40UX4 GGT40UCS

INSTALLATION MANUAL

EN English

GENERAL PRECAUTIONS FOR INSTALLERS

⚠ Important safety instructions.
⚠ Keep this information.
⚠ Please follow all of these instructions. Improper installation may cause serious bodily harm.
⚠ Before continuing, please also read the general precautions for users.

Only use this product for its intended purpose. Any other use is hazardous. • The manufacturer cannot be held liable for any damage caused by improper, unreasonable or erroneous use. • Partly completed machinery means an assembly which is almost machinery but which cannot in itself perform a specific application. • The manufacturer declines any liability for using non-original products, which would also void the warranty. • All operations indicated in this manual must be carried out exclusively by skilled and qualified personnel and in full compliance with the regulations in force. • The device must be installed, wired, connected and tested according to good professional practice, in compliance with the standards and laws in force. • Make sure the mains power supply is disconnected during all installation procedures. • Check that the temperature ranges given are suitable for the installation site. • Make sure that opening the automatic barrier does not constitute a hazard. • Do not install on slopes i.e. any surfaces that are not perfectly level. • Do not install the operator on surfaces that could yield and bend. If necessary, add suitable reinforcements to the anchoring points. • Make sure that no direct jets of water can wet the product at the installation site (sprinklers, water cleaners, etc.). • Make sure you have set up a suitable dual-pole cut-off device along the power supply that is compliant with the installation rules. • Demarcate the entire site properly to prevent unauthorised personnel from entering, especially minors. • In case of manual handling, have one person for every 20 kg that needs hoisting; for non-manual handling, use proper hoisting equipment in safe conditions. • When the operator is being fixed in place, it may be unstable and overturn. Be careful and do not lean on it until it is fully fastened in place. • Use suitable protection to prevent any mechanical hazards due to persons loitering within the operating range of the operator. • The electrical cables must pass through special pipes, ducts and cable glands in order to guarantee adequate protection against mechanical damage. • Make sure that the moving mechanical parts are suitably far away from the wiring. • The electrical cables must not touch any parts that may overheat during use (such as the motor and transformer). • All fixed controls must be clearly visible after installation, in a position that allows the guided part to be directly visible, but far away from moving parts. In the case of a hold-to-run control, this must be installed at a minimum height of 1.5 m from the ground and must not be accessible to the public. • If the passage is wider than 3 m, you must use a fixed support for the boom. • If not already present, apply a permanent tag that describes how to use the manual release mechanism close to it. • Make sure that the operator has been properly adjusted and that the safety and protection devices and the manual release are working properly. • Any residual risks must be indicated clearly with proper signage affixed in visible areas, and explained to end users. • Put the machine's ID plate in a visible place when the installation is complete. • If the power supply cable is damaged, it must be immediately replaced by the manufacturer or by an authorised technical support service, or in any case, by qualified staff, to prevent any risk. • Keep this manual inside the technical folder along with the manuals of all the other devices used for your automation system. • Make sure to hand over to the end user all the operating manuals of the products that make up the final machinery. • The product, in its original packaging supplied by the manufacturer, must only be transported in a closed environment (railway carriage, containers, closed vehicles). • The installation, programming, commissioning and maintenance of the product must only be carried out by technicians who are qualified and properly trained in compliance with the regulations in force, including as regards health and safety, and disposal of packaging. • If the product malfunctions, stop using it and contact customer services at https://www.came.com/global/en/contact-us or via the telephone number on the website.

🕮 The manufacture date is provided in the production batch printed on the product label. If necessary, contact us at https://www.came.com/global/en/contact-us.

🕮 The general conditions of sale are given in the official CAME price lists.

GENERAL PRECAUTIONS FOR USERS

⚠ *Important safety instructions.*
WARNING - *To reduce the risk of severe injury or death:*

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

Only use this product for its intended purpose. Any other use is hazardous. • The manufacturer cannot be held liable for any damage caused by improper, unreasonable or erroneous use. • Partly completed machinery means an assembly which is almost machinery but which cannot in itself perform a specific application. • The manufacturer declines any liability for using non-original products, which would also void the warranty. • All operations indicated in this manual must be carried out exclusively by skilled and qualified personnel and in full compliance with the regulations in force. • For further information regarding residual installation risks, please ask a qualified expert installer, who will also be able to explain how the control devices operate. • Please ensure you receive and store all usage manuals for the products that make up the completed piece of machinery. • Users may not perform any operations which are not expressly required of them or mentioned in the manuals. For any repairs, adjustments and non-standard maintenance, please contact a specialist technical support centre. • Do not use if repairs or adjustments are required. • Depending on its application, the product can be equipped with an emergency manual release. • If any repairs or modifications are required to the system, release the operator and do not use it until the safety conditions have been restored by a qualified professional. • Manual release may cause the operator to move in an uncontrolled manner due to a mechanical fault or an imbalance. • In the event of a malfunction or any structural damage, stop using the device immediately and contact a qualified professional. • Disconnect the electrical power supply before releasing the operator to open it manually, and before any other operation, to prevent any potentially hazardous situations. Please read the instructions or usage manuals. • If the power cable is damaged, it must be replaced by the manufacturer or an authorised technical support service or, in any case, by a suitably qualified professional, to avoid any risks. • Keep people and objects away from the operating range of the operator. • Do not activate the operator if there are people, animals or objects within the operating range. • When using a selector switch or a hold-to-run control, always check that nobody is within the operating range of the moving parts. • Always pay specific attention to any dangerous areas, which must be labelled with the relevant pictograms and/or black and yellow safety tape. • Do not oppose the direction of movement of the operator as this may cause a safety hazard. • The device emits a sound pressure level of less than or equal to 70 dB (A).

DISMANTLING AND DISPOSAL

CAME S.p.A. employs an Environmental Management System at its premises. This system is certified and compliant with the UNI EN ISO 14001 standard to ensure that the environment is respected and safeguarded. Please continue safeguarding the environment. At CAME we consider it one of the fundamentals of our operating and market strategies. Please follow these brief disposal guidelines:

DISPOSING OF THE PACKAGING

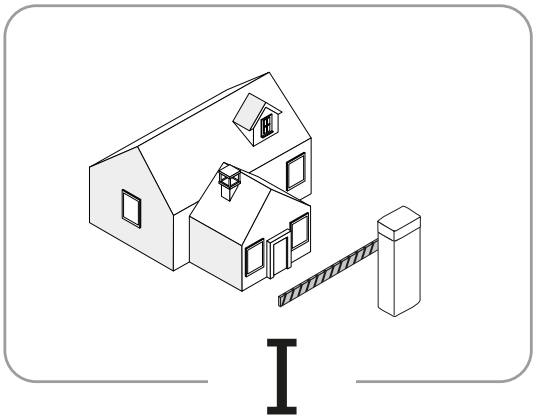
The packaging materials (cardboard, plastic, etc.) can be disposed of easily as solid urban waste, separated for recycling.
Before dismantling and disposing of the product, please always check the local laws in force.
DISPOSE OF THE PRODUCT RESPONSIBLY.

DISPOSING OF THE PRODUCT

Our products are made of various materials. Most of these materials (aluminium, plastic, iron and electrical cables) are classified as solid urban waste. They can be separated for recycling and disposed of at authorised waste treatment plants.
Other components (electronic boards, transmitter batteries, etc.) may contain pollutants.
These must be removed and disposed of by an authorised waste disposal and recycling firm.
It is always advisable to check the specific laws that apply in your area.
DISPOSE OF THE PRODUCT RESPONSIBLY.

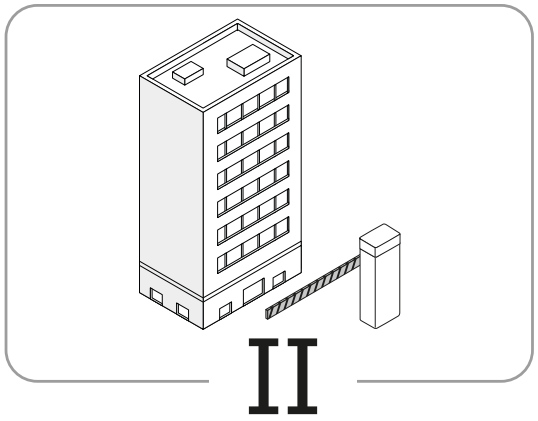
UL325 INSTALLATION CLASSES

The operator is compatible with the following installation classes:



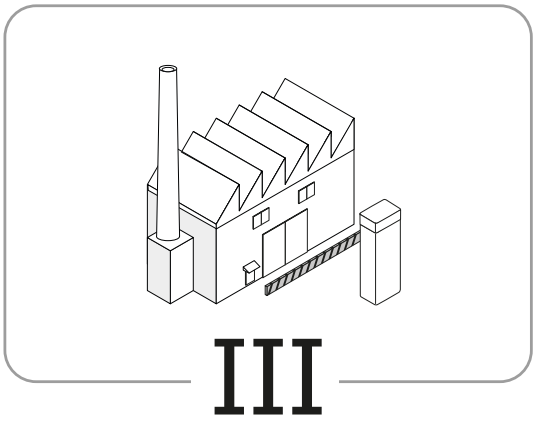
Class I - Residential vehicular gate operator

A vehicular gate operator (or system) intended for use in garages or parking areas associated with a residence of one to four single families.



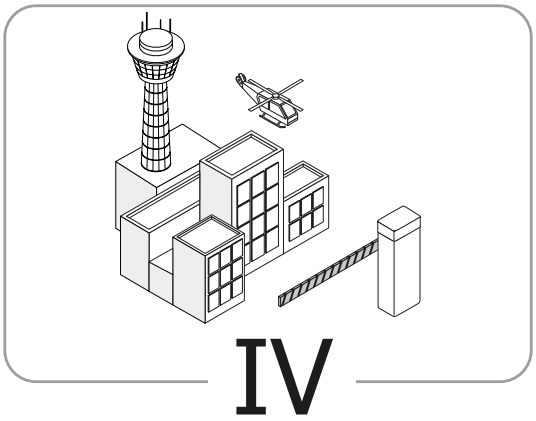
Class II - Commercial/general access vehicular gate operator

A vehicular gate operator (or system) intended for use in a commercial location or building such as a multi-family housing unit (five or more single family units), hotels, garages, retail stores, or other buildings accessible by or servicing the general public.



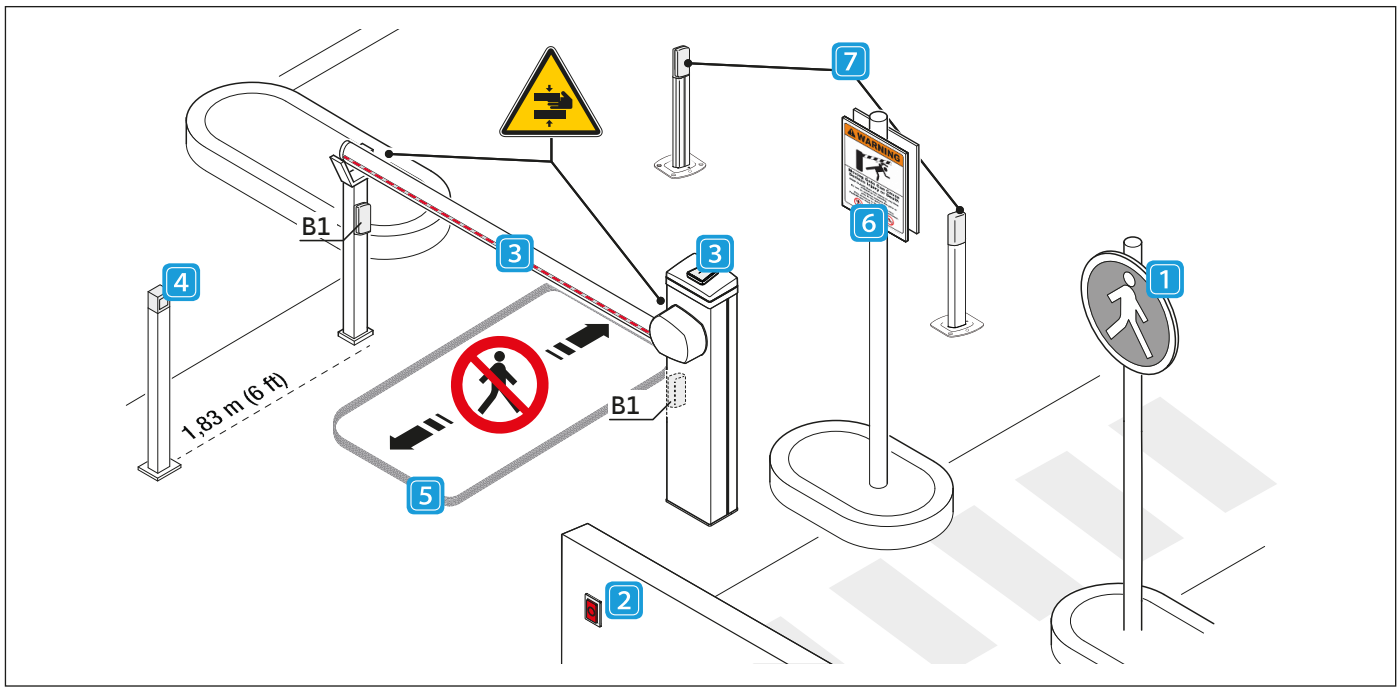
Class III - Industrial/limited access vehicular gate operator

A vehicular gate operator (or system) intended for use in an industrial location or building used as a factory or loading dock area or other locations not accessible by or intended to service the general public.



Class IV - Restricted access vehicular gate operator

A vehicular gate operator (or system) intended for use in a guarded industrial location or building such as an airport security area or other restricted access locations not servicing the general public, in which unauthorized access is prevented via supervision by security personnel.



Risk of trapping hands.

No transiting.

The vehicular barrier must be installed in a location so that enough clearance is supplied between the barrier and adjacent structures when opening and closing to reduce the risk of entrapment.

1 The operator is intended for installation only on barriers used for vehicles. Pedestrians must be supplied with a separate access opening. The pedestrian access opening shall be designed to promote pedestrian usage. Locate the barrier gate such that persons will not come in contact with the vehicular barrier through the crossing.

2 **The Stop and/or Reset button must be located in the line-of-sight of the gate. Activation of the reset control shall not cause the operator to start.**

3 LED strips and flashing beacons increase the visibility of the boom and operator.

4 Command and control devices intended for user activation must be located at least 1.83 m (6 ft) away from any moving part of the barrier and where the user is prevented from reaching over, under, around or through the barrier to operate the controls.

📖 Emergency access controls only accessible by authorized personnel (e.g. fire, police, EMS) may be placed at any location in the line-of-sight of the gate.

6 **A minimum of two (2) WARNING SIGNS shall be installed in the area of the gate. Each placard is to be visible by persons located on the side of the gate on which the placard is installed**

5 7 Installing additional photocells and magnetic loops increases vehicle detection and reduces the risk of impact with the boom.

⚠ An operator for a vehicular barrier (arm) that is not intended to move toward a rigid object closer than 406 cm (16 in) and does not have a pinch point between moving parts, is not required to be provided with means to protect against entrapment.

UL325 Entrapment protection for vertical barrier arm

A vehicular barrier (arm) operator shall have provisions for a minimum of two independent entrapment protection means as specified in the following table.

Entrapment protection types	Description
A	Inherent entrapment protection system
B1	Non-contact sensor (photoelectric sensor or equivalent)

📖 The non-contact sensor **B1** shall be located directly under the arm.

📖 The same type of device shall not be utilized for both entrapment protection means. Use of a single device to cover both the opening and closing directions is in accordance with the requirement.

For a vehicular barrier (arm) operator utilizing Type B1, non-contact entrapment protection:

- see instructions on the placement of non-contact sensors for each type of application;

- care shall be exercised to reduce the risk of nuisance tripping, such as when a vehicle trips the sensor while the gate is still moving;

- one or more non-contact sensors shall be located where the risk of entrapment or obstruction exists, such as the perimeter reachable by a moving barrier.

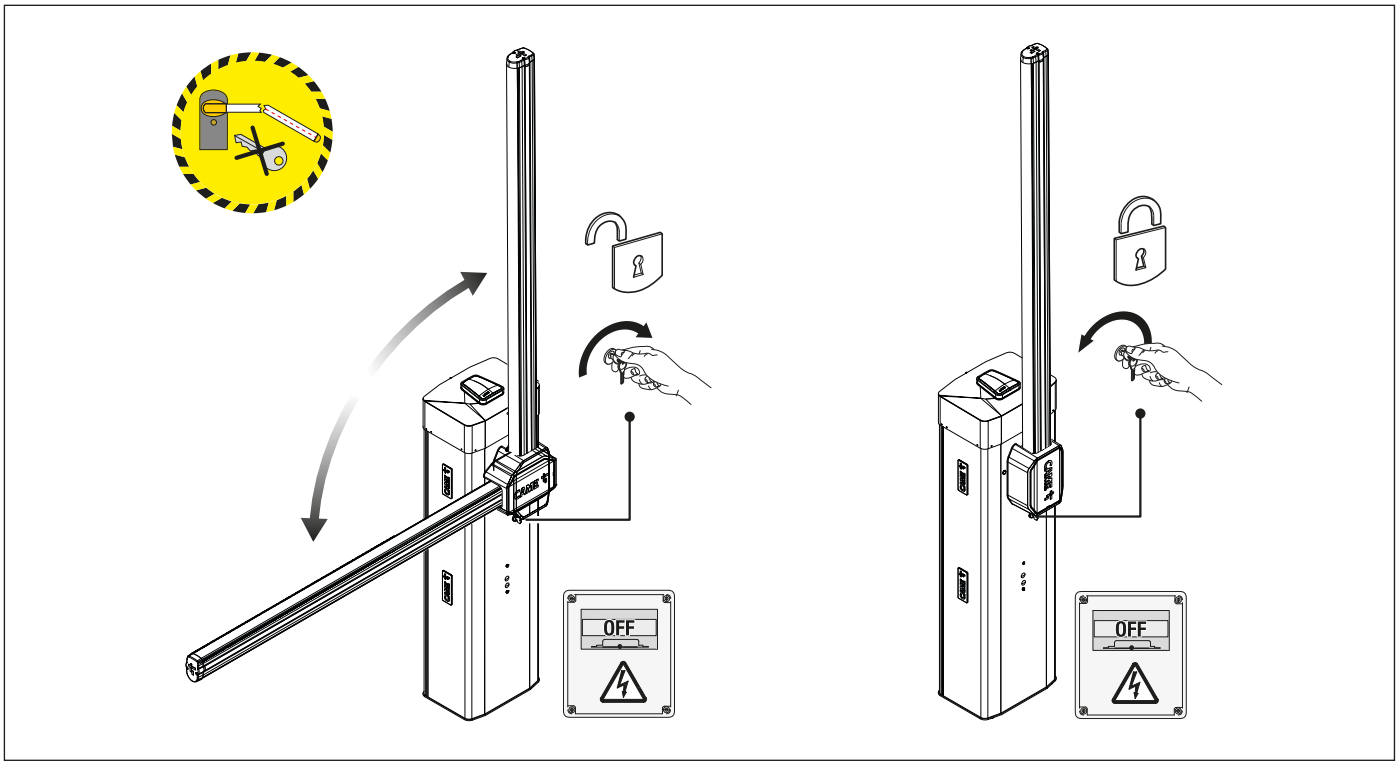
📖 The installed alarm triggers after two sequential activations of a type A entrapment protection device. The alarm remains active for 5 minutes or until a renewed manual input from an integral control or a permanently mounted control located in the line of sight of the barrier arm has been entered.

DEVICE MANUAL RELEASE

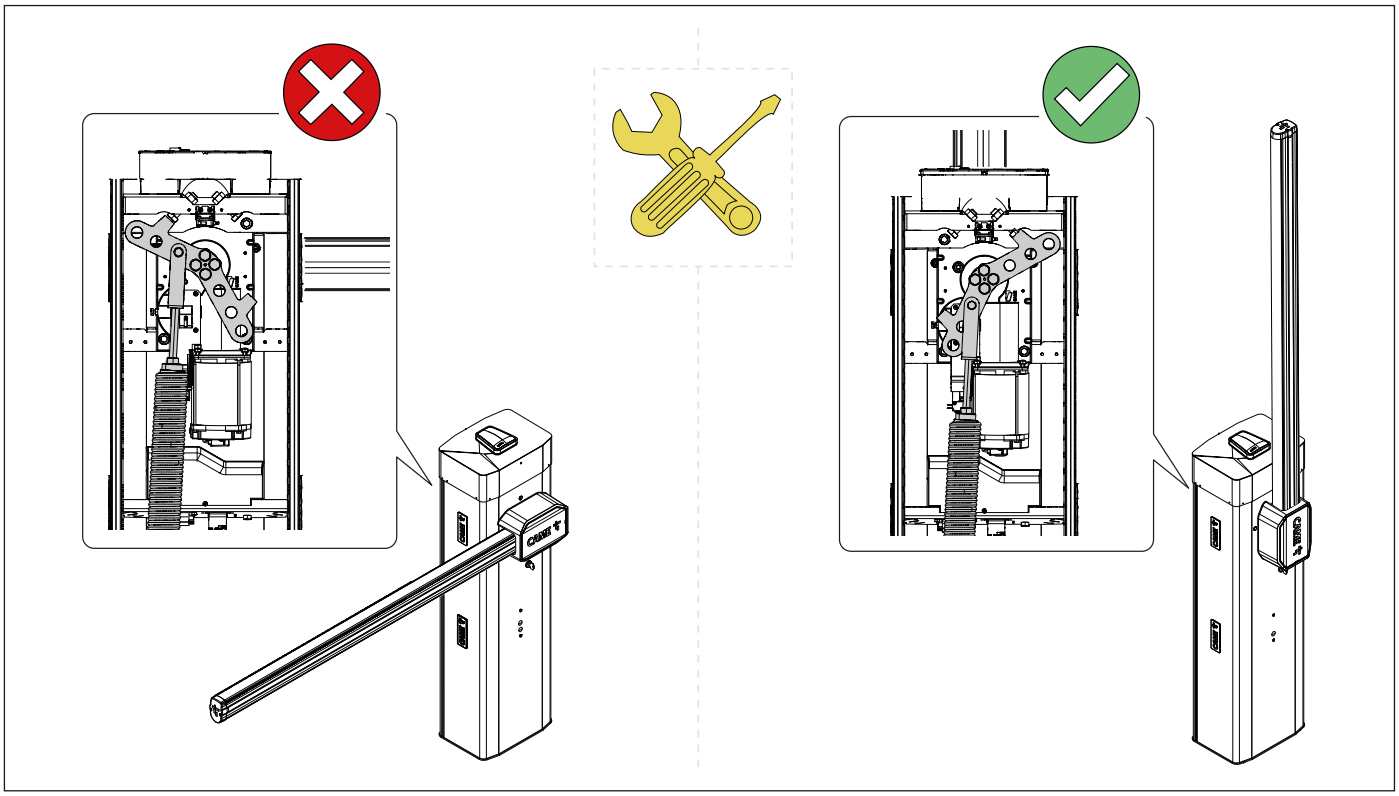
⚠ Releasing the device may be dangerous for the user, if the boom fastening has been damaged or if the boom is no longer intact, as the result of an accident or installation error. In these cases, the tensioned springs no longer guarantee that the boom is balanced. The boom may suddenly rotate when being released.

⚠ Manual release may cause the operator to move in an uncontrolled manner due to a mechanical fault or an imbalance.

📖 With the gearmotor released, the operator does not work.



⚠ The balance springs must not be tensioned (boom vertical) when performing maintenance on the barrier.



Key

📖 This symbol shows which parts to read carefully.
⚠ This symbol shows which parts describe safety issues.
☛ This symbol shows what to tell users.

PRODUCT DATA AND INFORMATION

Description

803BB-0540
GGT40UGS - Automatic barrier with irreversible gearmotor 24 V DC with encoder; painted galvanised steel cabinet; accessories available. Balance spring included. Compliant with standard ANSI/CAN/UL Std. 325.

803BB-0560
GGT40UX4 - Automatic barrier with irreversible gearmotor 24 V DC with encoder; satin-finish AISI 304 steel cabinet; accessories available. Balance spring included. Compliant with standard ANSI/CAN/UL Std. 325.

803BB-0580
GGT40UCS - Automatic barrier with irreversible gearmotor 24 V DC with encoder; custom-RAL painted galvanised steel cabinet; accessories available. Balance spring included. Compliant with standard ANSI/CAN/UL Std. 325.

Intended use

The ideal solution for access roads with heavy transit flows

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

Usage limitations

MODELS	GGT40UGS	GGT40UX4	GGT40UCS
Max. net clearance width (m | ft)	5 | 16,4	5 | 16,4	5 | 16,4

Technical data

MODELS	GGT40UGS	GGT40UX4	GGT40UCS
Power supply (V - 50/60 Hz)	120 AC	120 AC	120 AC
Motor power supply (V)	24 DC	24 DC	24 DC
Board power supply (V)	17 AC	17 AC	17 AC
Standby consumption (W)	7	7	7
Power (W)	240	240	240
Maximum current draw (A)	2,2	2,2	2,2
Colour	7024	-	RAL X
Storage temperature (°C | °F)*	-20 ÷ +70 | -4 ÷ +158	-20 ÷ +70 | -4 ÷ +158	-20 ÷ +70 | -4 ÷ +158
Operating temperature (°C | °F)	-20 ÷ +60 (-40 with item 803XA-0710) | -4 ÷ +140 (-40 with item 803XA-0710)	-20 ÷ +60 (-40 with item 803XA-0710) | -4 ÷ +140 (-40 with item 803XA-0710)	-20 ÷ +60 (-40 with item 803XA-0710) | -4 ÷ +140 (-40 with item 803XA-0710)
Torque (Nm)	300	300	300
Opening time at 90° (s)	2 ÷ 6	2 ÷ 6	2 ÷ 6
Cycles/day	5400	5400	5400
Cycles/hour at 55°C	350	350	350
Cycles/hour at 60°C	300	300	300
Protection rating (IP)	54	54	54
Insulation class	I	I	I
Weight (kg)	56	56	56
Average life (cycles)**	3.000.000	3.000.000	3.000.000

(*) Before installing the product, keep it at room temperature where it has previously been stored or transported at a very high or very low temperature.
(**) The average product life specified should be understood purely as an indicative estimate. It applies to normal usage conditions and where the product has been installed and maintained in compliance with the instructions provided in the CAME technical manual. The average product life is also affected, including significantly, by other variables such as, but not limited to, climatic and environmental conditions (where present, see the MCBF table). The average product life should not be confused with the product warranty.

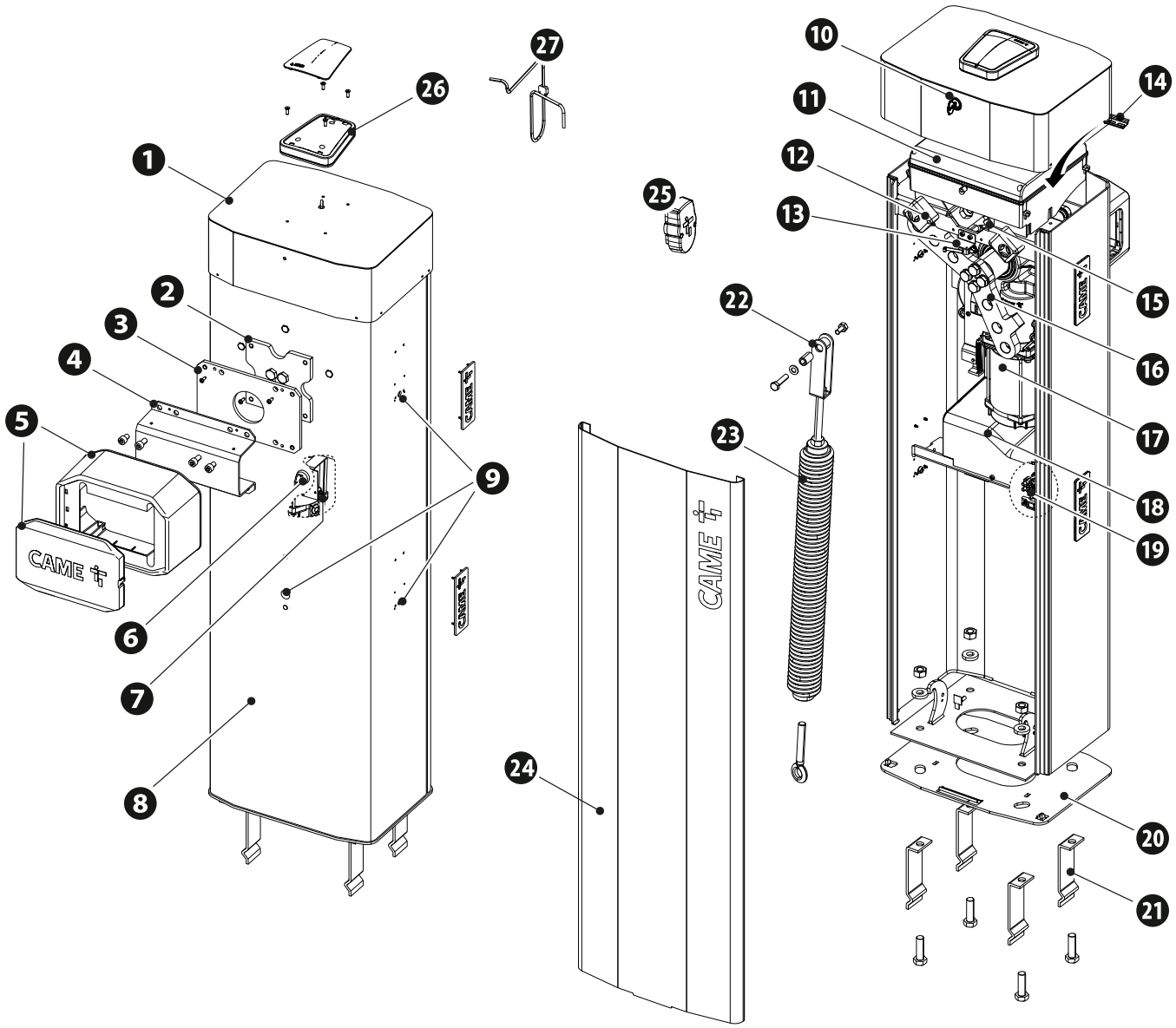
Fuse table

MODELS	GGT40UGS	GGT40UX4	GGT40UCS
Line fuse	3.15 A-F	3.15 A-F	3.15 A-F
Accessory fuse	2 A-F	2 A-F	2 A-F
Control board fuse	4 A-F	4 A-F	4 A-F
Motor fuse	10 A-F	10 A-F	10 A-F

Description of parts

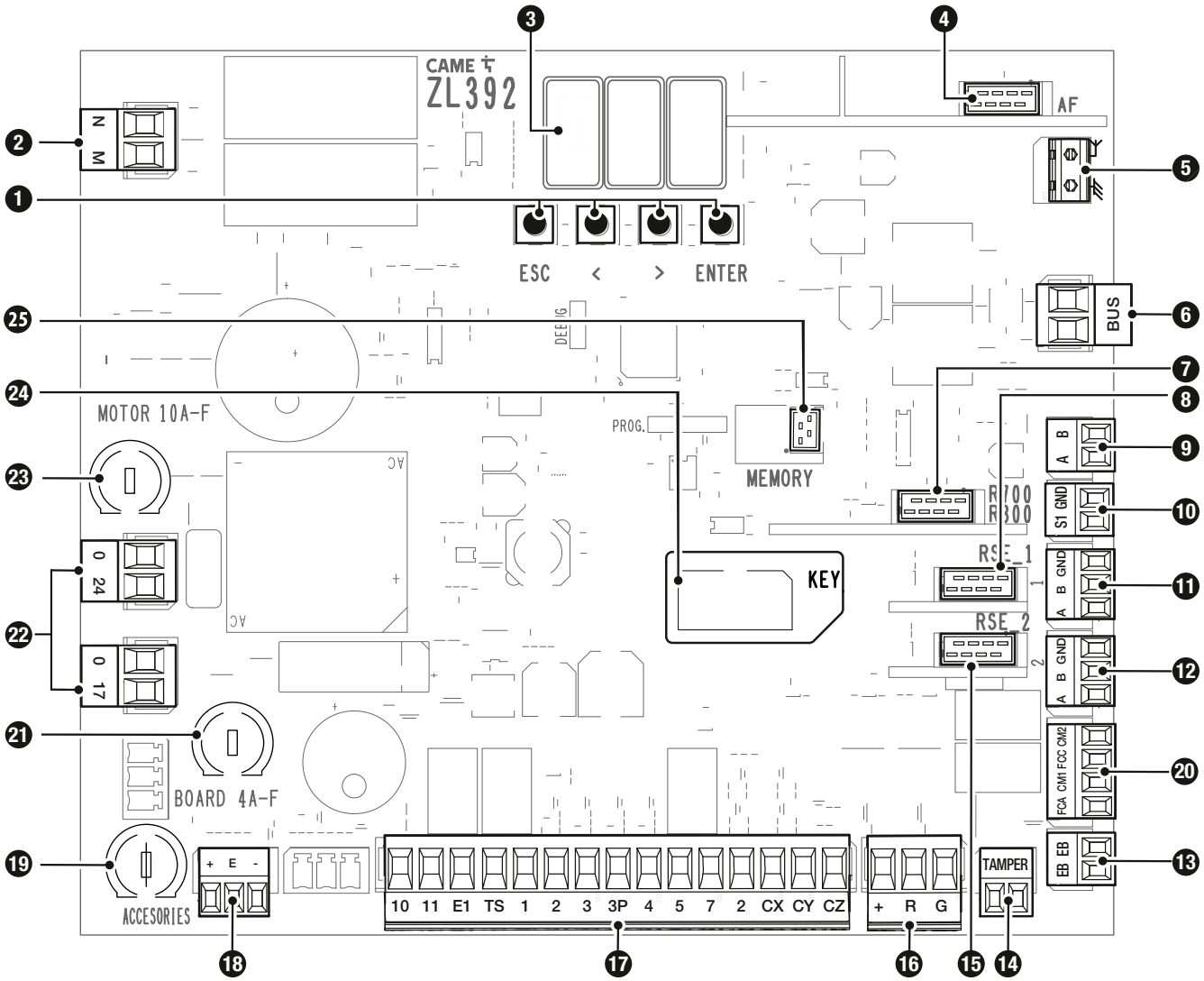
Barrier

1. Cover
2. Boom anchoring plate
3. Intermediate plate
4. Fastening flange
5. Anti-shearing cover
6. Lock for release
7. Released gearmotor safety microswitch
8. Cabinet
9. Photocell holes
10. Inspection-hatch lock
11. Control panel
12. Warning sirens
13. Safety microswitch with cover open
14. DIN rail
15. Mechanical stop for the boom adjustment
16. Lever arm
17. Gear motor with encoder
18. Auxiliary
19. Power supply terminal board
20. Anchoring plate
21. Anchoring bracket
22. Spring anchoring pin
23. Balance spring Ø 55 mm.
24. Inspection hatch
25. Boom profile end cap
26. Flashing beacon KLT1FDSW
27. Connection cable and connector for KLT flashing beacon



Control board

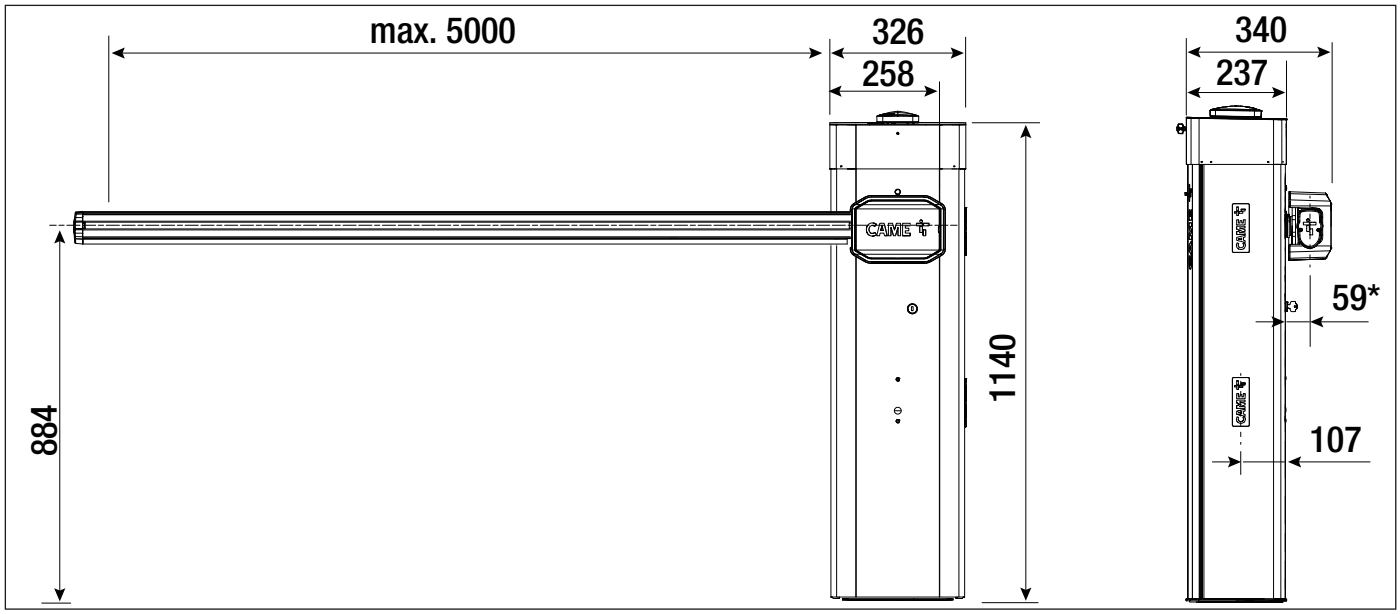
❶ Programming buttons
❷ Terminal board for motor power supply
❸ Display
❹ Connector for plug-in radio frequency card (AF)
❺ Terminal board for connecting the antenna
❻ Terminal board for CXN BUS accessories
❼ Connector for the R700 or R800 decoding card
❽ RSE_1 connector for RSE card
❾ Terminal board for connecting the keypad selector
❿ Terminal board for connecting the transponder selector switch
⓫ Terminal board associated with the RSE_1 connector for paired, alternate or CRP connection
⓬ Terminal board associated with the RSE_2 connector for CRP connection, IO 485 card or Modbus RTU interface
⓭ Terminal board for connecting warning sirens
⓮ Terminal board for connecting the safety microswitch with cover open and gearmotor released (NC contact)
⓯ RSE_2 connector for RSE card
⓰ Terminal board for connecting the LED strips and KLT flashing beacons
⓱ Terminal board for connecting control and safety devices
⓲ Terminal board for connecting the encoder
⓳ Accessories fuse
⓴ Terminal board for barrier status (dry contact)
㉑ Control board fuse
㉒ Terminal board for power supply to the control board
㉓ Motor fuse
㉔ Connector for CAME KEY
㉕ Memory Roll card connector

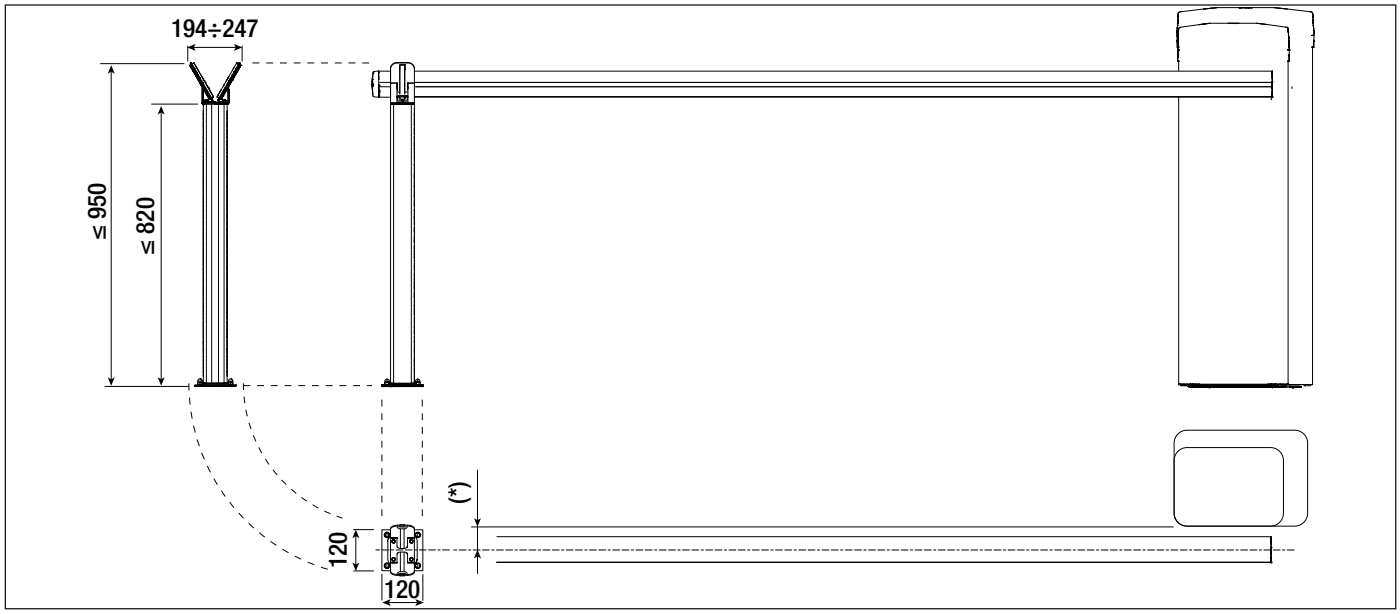


Optional compatible accessories

Code	Type of accessory
803XA-0020	LED strip for booms up to 4 m / 13 ft long
803XA-0150	LED strip for booms up to 3 m / 10 ft long
803XA-0160	LED strip with joint for booms up to 2 m / 6.5 ft long
803XA-0270	Boom 4.2 m / 13.8 ft
803XA-0300	Auxiliary contacts assembly for boom
803XA-0310	Boom joint
803XA-0320	Detachable boom attachment
803XA-0330	Swing rest
803XA-0340	Skirt
803XA-0350	Full-height skirt
803XA-0440	Bracket for swing support and skirt
803XA-0450	Support for road sign
803XA-0680	Cabinet - skirt bracket
803XA-0710	GARD GT UL heater cartridge kit
806SA-0110	Wi-Fi interface board (CAME KEY)
001AF43S	Control board 433.92 MHz
001G02807	Fixed support
001R700	Control board for decoding and managing access control (transponder)
001R800	Control board for decoding and managing access-control (keypad)
002RSE	Interface board
009SMA2	Two-channel magnetic sensor
009SMA	Magnetic sensor

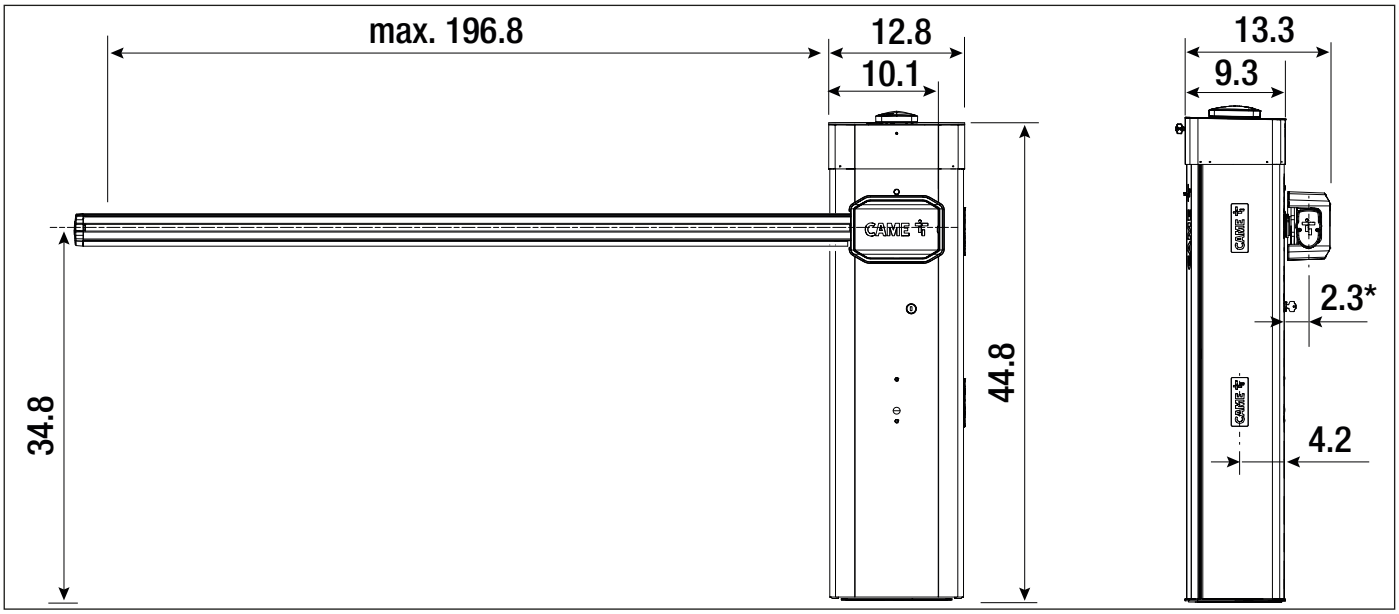
Size (mm)

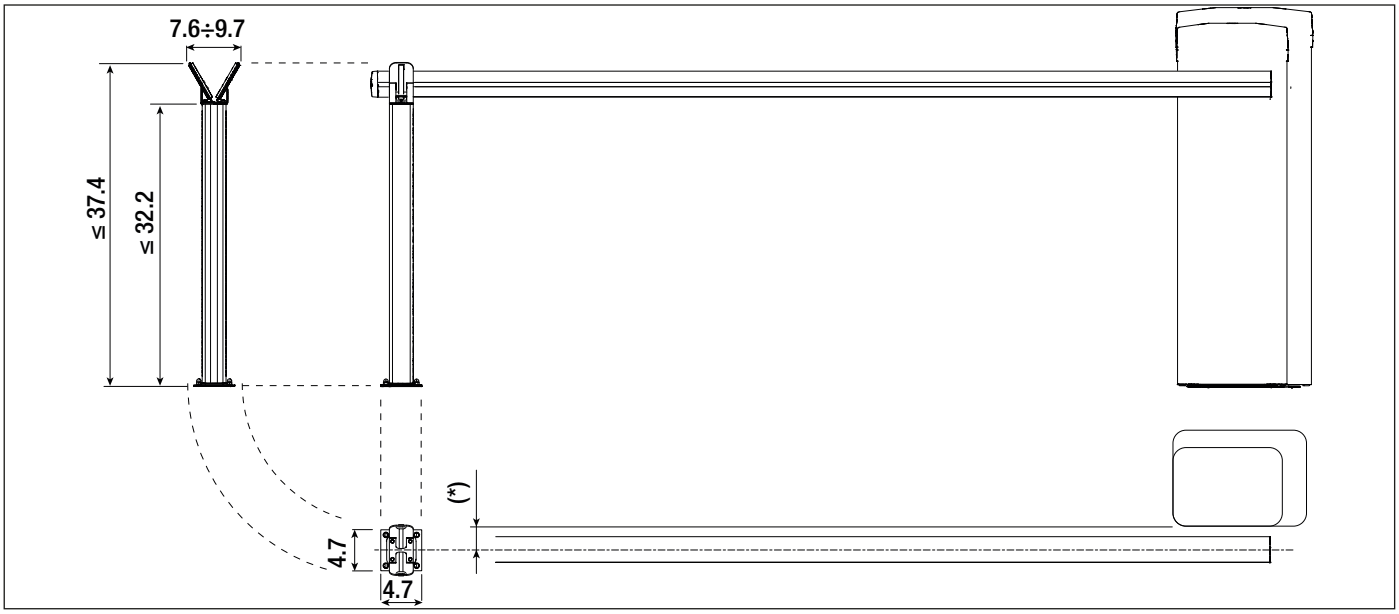




*This measurement refers to the position of the fixed foot.

Size (in)





*This measurement refers to the position of the fixed foot.

Cable types and minimum thicknesses

Cable length (m)	<100 ft or 30m	<300 ft or 100m
120 V AC power supply	12 AWG or 2.5 mm²	10 AWG or 4 mm²
24 V AC/DC flashing beacon	18 AWG or 1 mm²	15 AWG or 1.5 mm²
TX Photocells	20 AWG or 0.5 mm²	18 AWG or 1 mm²
RX photocells	20 AWG or 0.5 mm²	18 AWG or 1 mm²
Command and control devices	20 AWG or 0.5 mm²	18 AWG or 1 mm²

* no. = see product assembly instructions - Warning: the cable cross-section is indicative and varies according to the motor power and cable length.

📖 To connect the antenna, use RG58 cable (up to 5 m / 16.5 ft).

📖 For paired connection and CRP, use UTP CAT5 cable (up to 1,000 m / 3300 ft).

📖 For multiple, sequential loads along the same line, recalculate the values in the table according to the actual power draw and distances. For information on connecting products not covered in this manual, please see the documentation accompanying the products themselves.

Wind resistance

🕮 The table shows the boom wind-load resistance.

🕮 The value relates to the boom only and does not refer to any applicable accessories.

🕮 Resistance class with reference to the EN 13241 standard.

🕮 The boom should not be left open for long periods in windy conditions or in particularly windy areas.

Type	Boom 3.2 m	Boom 4.2 m	Boom 5.2 m
Resistance class	5	4	3
Wind pressure [Pa]	1500	900	570
Maximum wind speed [km/h]	190	145	115
Type	**Boom 10 ft**	**Boom 14 ft**	**Boom 17 ft**
Resistance class	5	4	3
Wind pressure [Pa]	1500	900	570
Maximum wind speed [mph]	118	90	70

INSTALLATION

📖 The following illustrations are examples only. The space available for fitting the operator and accessories varies depending on the area where it is installed. It is up to the installer to find the most suitable solution.

In case of manual handling, have one person for every 20 kg (44 lbs) that needs hoisting; for non-manual handling, use proper hoisting equipment in safe conditions.

When the operator is being fixed in place, it may be unstable and overturn. Be careful and do not lean on it until it is fully fastened in place.

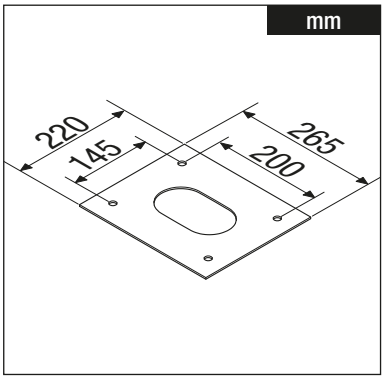
Preliminary operations

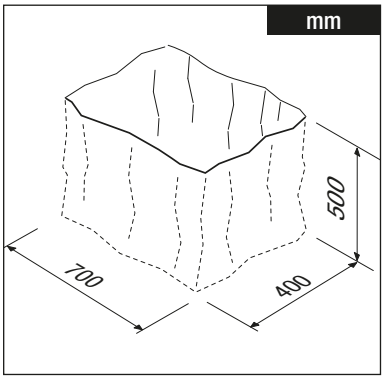
📖 If the flooring does not allow the device to be fastened in a solid and stable way, lay a cement slab.

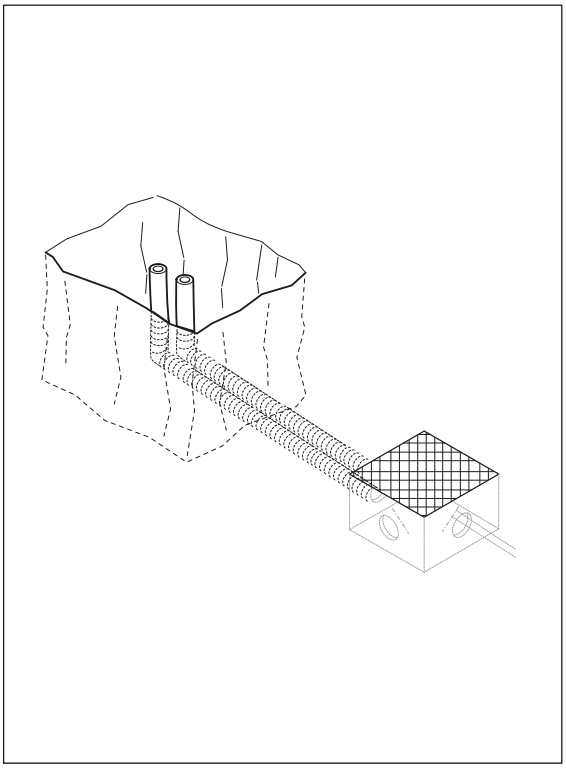
Dig a hole for the foundation frame.

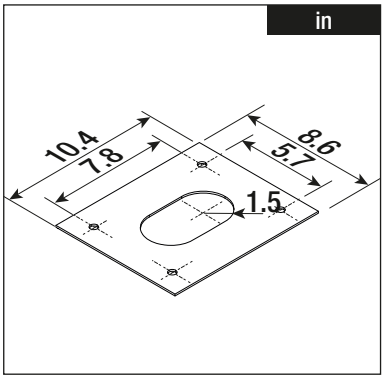
Set up the corrugated tubes needed for the wiring coming out of the junction pit.

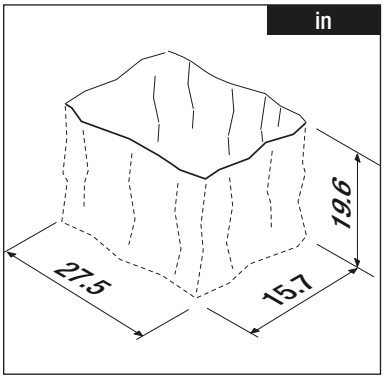
📖 The number of tubes depends on the type of system and the accessories that are going to be fitted.









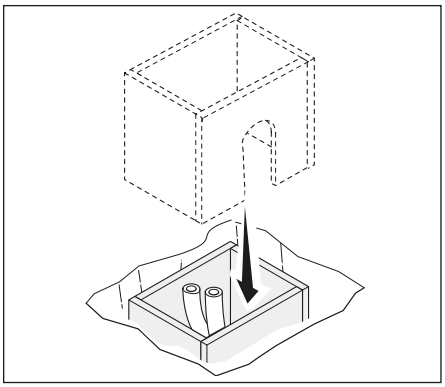


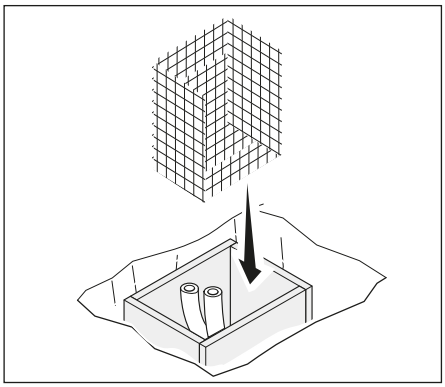
Laying the anchoring plate

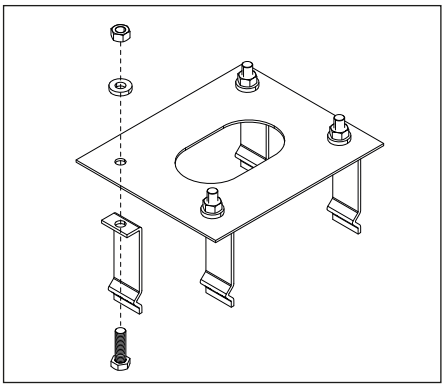
Set up a foundation frame that is larger than the anchoring plate.

Fit an iron cage in the foundation frame to reinforce the concrete.

Assemble the anchoring braces to the plate.







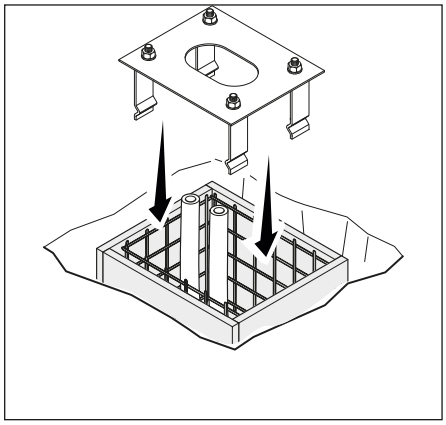
Fit the anchoring plate in the iron cage.

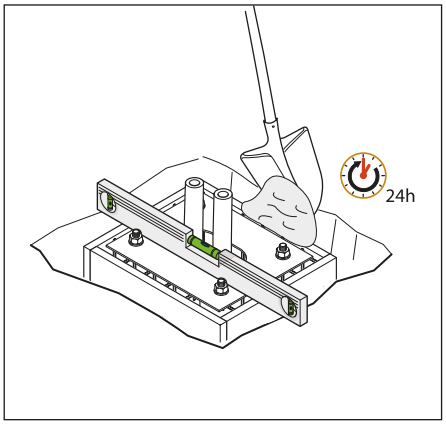
📖 The tubes must pass through the existing holes.

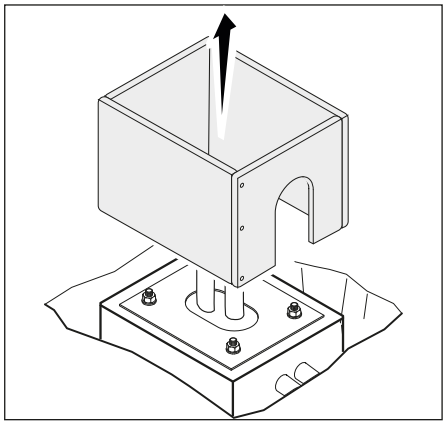
Cast cement into the foundation frame.

📖 The plate must be perfectly level and the screw threads completely above surface.

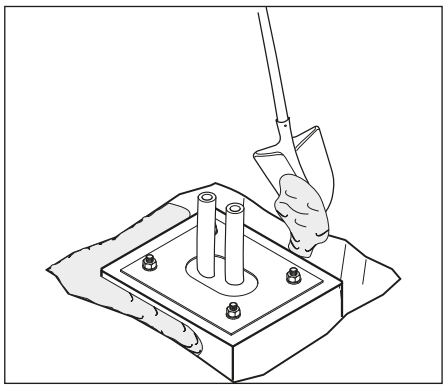
Wait at least 24 hours for the cement to dry.

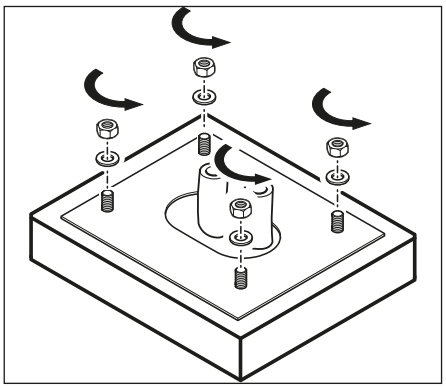


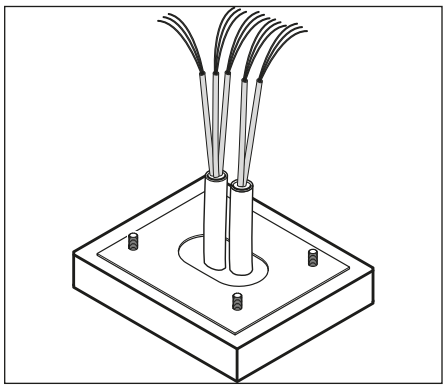




Fill the hole with soil around the concrete block.
Remove the nuts from the screws.
Thread the electrical cables into the tubes so that they protrude by about 1500 mm.

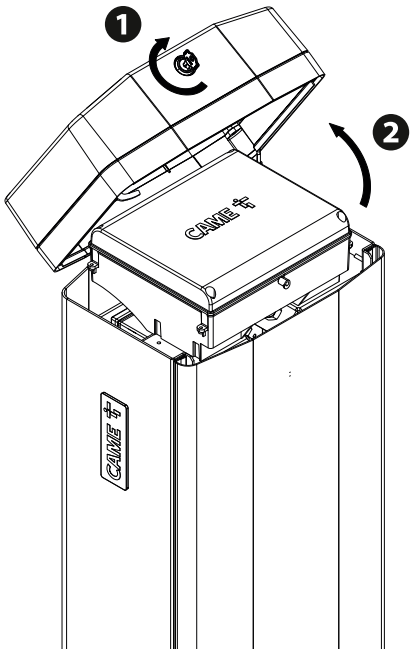


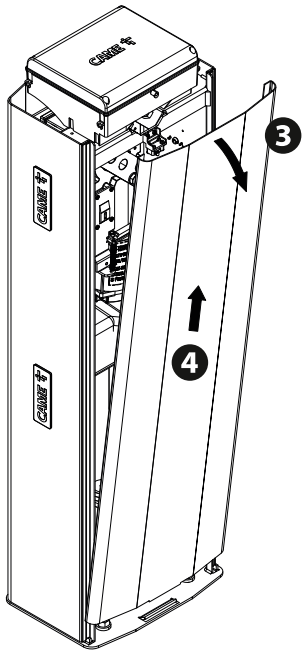


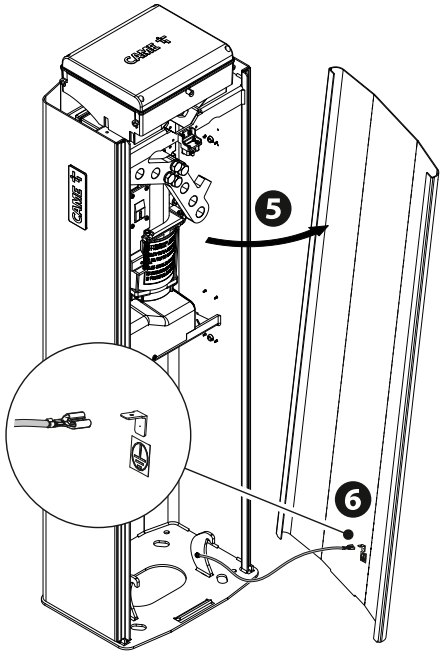


Preparing the barrier

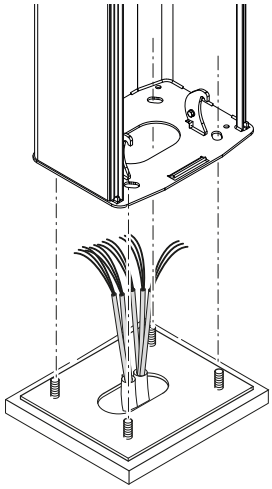
📖 With the inspection hatch open, the operator does not work.

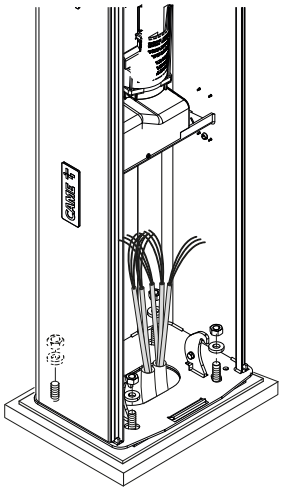




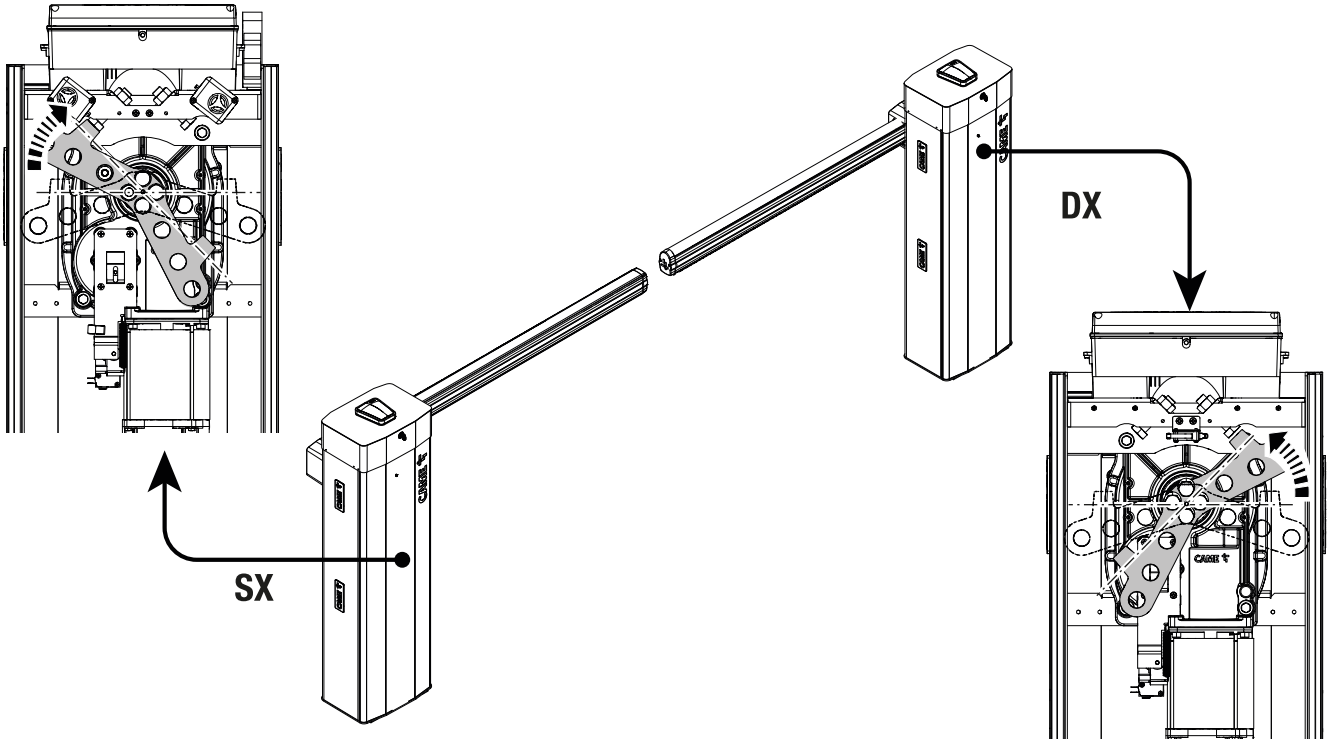


Fastening the barrier





Changing the boom opening direction

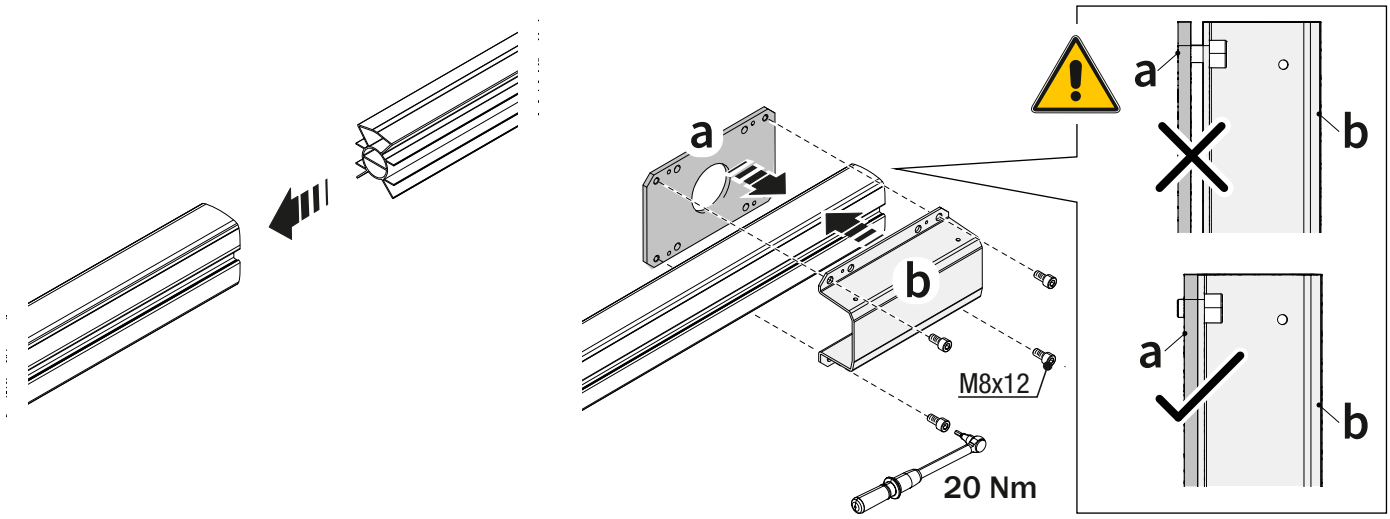


Boom installation

Insert the reinforcement inside the boom.
Fix the flange and the intermediate plate to the boom.

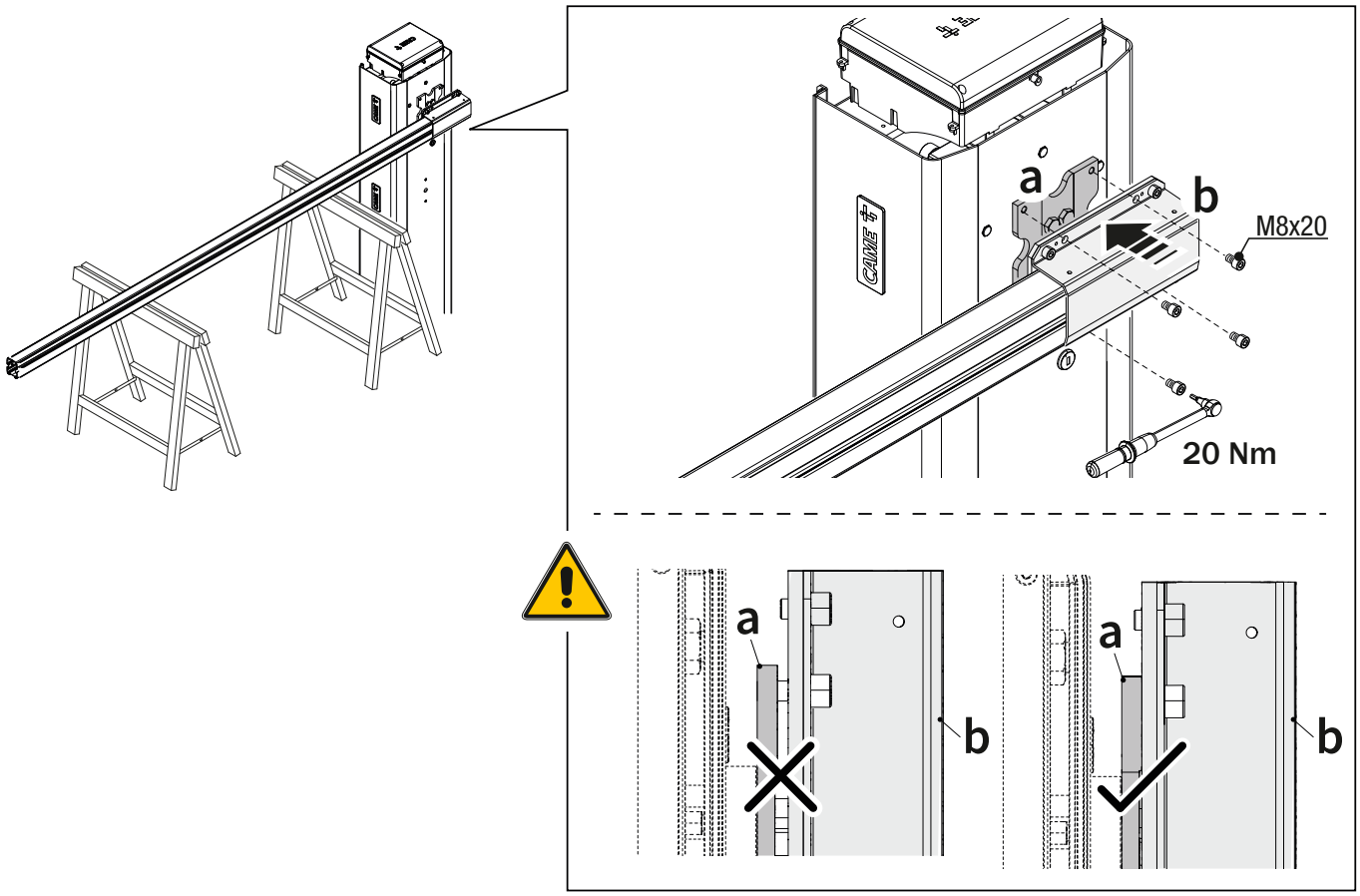
First install the LED strip (where applicable), ONLY THEN fix the flange and the intermediate plate.

Tighten the screws using a torque wrench and a torque of 20 Nm.

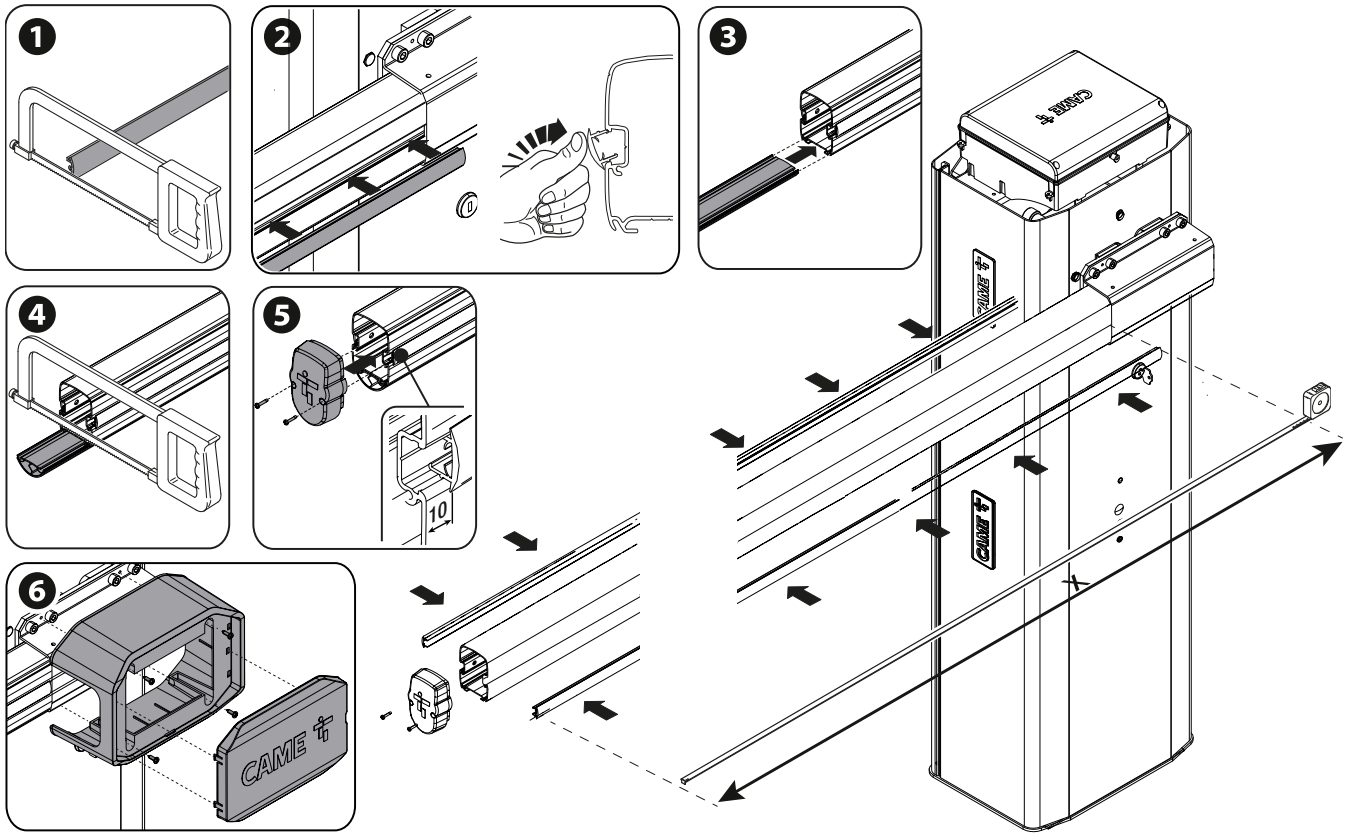


Fix the boom to the anchoring plate.

Tighten the screws using a torque wrench and a torque of 20 Nm.



❶ Cut the slot-cover profiles to the same size as the boom slot minus 10 millimetres (0.39 inches).
❷ Insert the slot-cover profiles into the grooves on both sides of the boom.
❸ Insert the anti-impact rubber profile into the groove.
❹ Cut off the excess part of the profile.
❺ Use the screws to fasten the boom end cap.
❻ Fit the anti-shearing protective cover onto the boom-attachment cover and fasten it using the screws supplied.



Choosing the hole for fixing the balance spring

Passage width clearance (m)	2,25 < 2,75	2,75 < 3,25	3,25 < 3,50	3,50 < 3,75	3,75 < 4,00	4,00 < 5,00
Boom with LED strip	❶	❶	❶	❷	❷	❸
Boom with LED strip and single skirt	❶	❷	❷	❸	❸	-
Boom with LED strip and full-height skirt	❶	❷	❸	❸	❸*	-
Boom with LED strip and swing rest	-	-	❷	❷	❸	-
Boom with LED strip, single skirt and swing rest	❷	❷	❸	-	-	-
Boom with LED strip, full-height skirt and swing rest	❷	❸	❸*	-	-	-
Passage width clearance (ft)	**7 < 9**	**9 < 10.5**	**10.5 < 11.5**	**11.5 < 12.5**	**12.5 < 13**	**13 < 16.5**
Boom with LED strip	❶	❶	❶	❷	❷	❸
Boom with LED strip and single skirt	❶	❷	❷	❸	❸	-
Boom with LED strip and full-height skirt	❶	❷	❸	❸	❸*	-
Boom with LED strip and swing rest	-	-	❷	❷	❸	-
Boom with LED strip, single skirt and swing rest	❷	❷	❸	-	-	-
Boom with LED strip, full-height skirt and swing rest	❷	❸	❸*	-	-	-

* The boom must be stabilised at 60° during the balancing procedure.

📖 Simple boom means the boom complete with slot cover, cap and rubber profile.

📖 If the passage is wider than 3 m (10 ft), you must use a boom support (fixed or mobile).

📖 With a boom over 3.5 metres (11.5 ft), LED strip and single skirt, you must used a fixed support.

📖 With a boom over 3.25 metres (10.5 ft), LED strip and full-height skirt, you must used a fixed support.

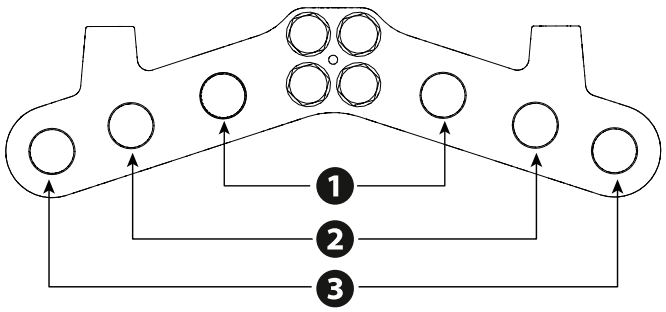
📖 With a boom over 4 m (13 ft) and LED strips, you must used a fixed support.

📖 Single skirt (803XA-0340):

- max 2 modules for 4 m / 13 ft booms

📖 Full-height skirt (803XA-0350):

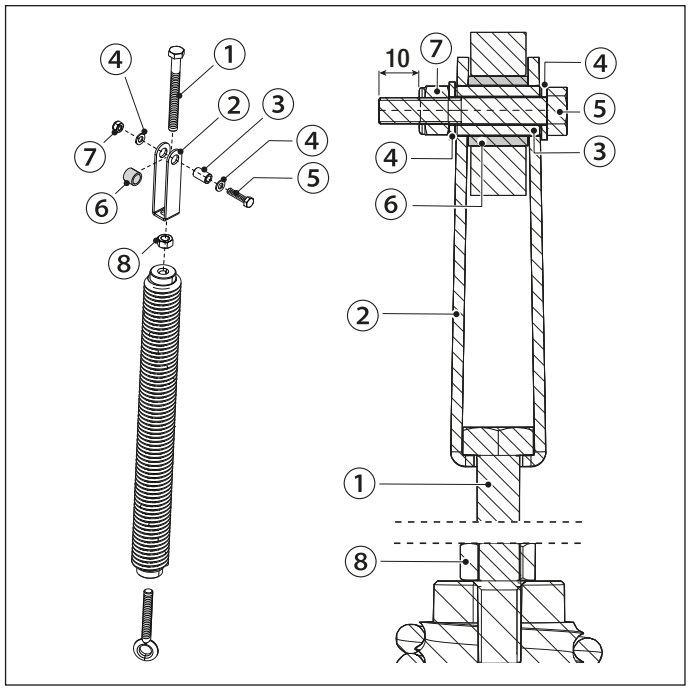
- max 2 modules for 4 m / 13 ft booms

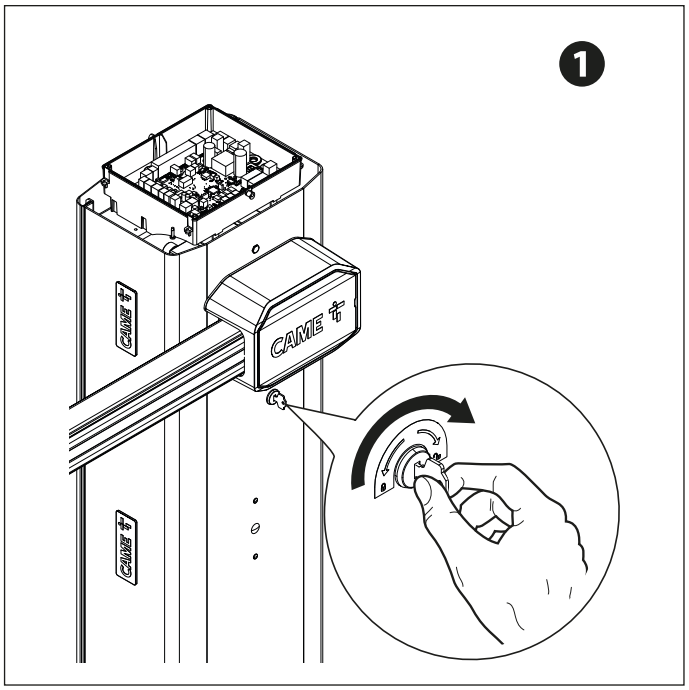


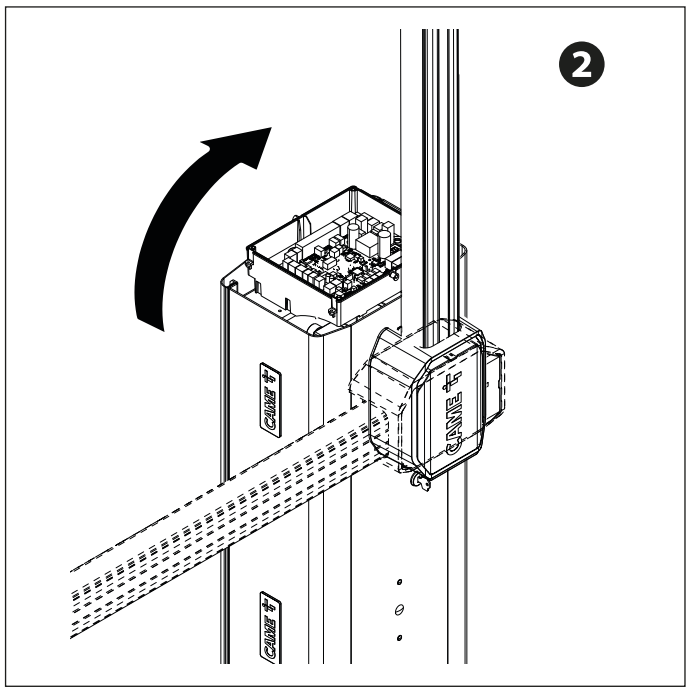
Assembling the balance spring

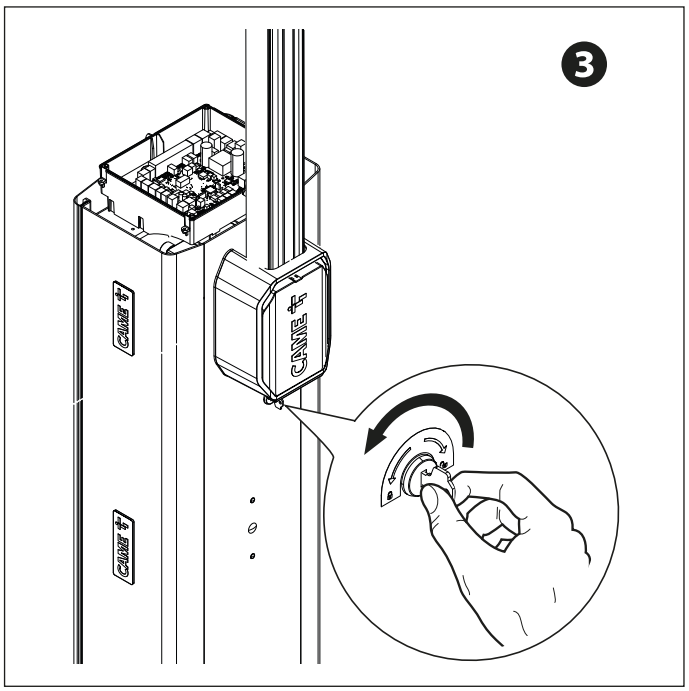
① Hex-head screw M12 x 120
② Top spring attachment
③ Bushing Ø13.8
④ Washer M8
⑤ Hex-head screw M8 x 45
⑥ Bushing Ø19
⑦ M8 self-locking nut
⑧ M12 nut

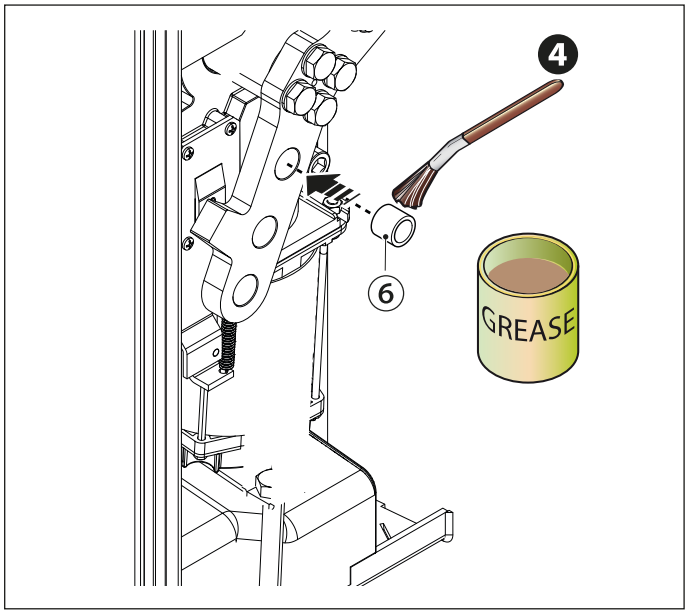
❶ Release the gearmotor.
❷ Position the boom vertically.
❸ Lock the gearmotor
❹❺❻ Assemble the anchoring pin and fix it on the lever arm.
❼ Tighten the eyelet tie rod to the lower part of the spring.
❽ Screw the spring to the anchoring pin.
❾ Hook the eyelet rod onto the anchoring bracket.
❿ Lubricate the spring when it is fully extended.







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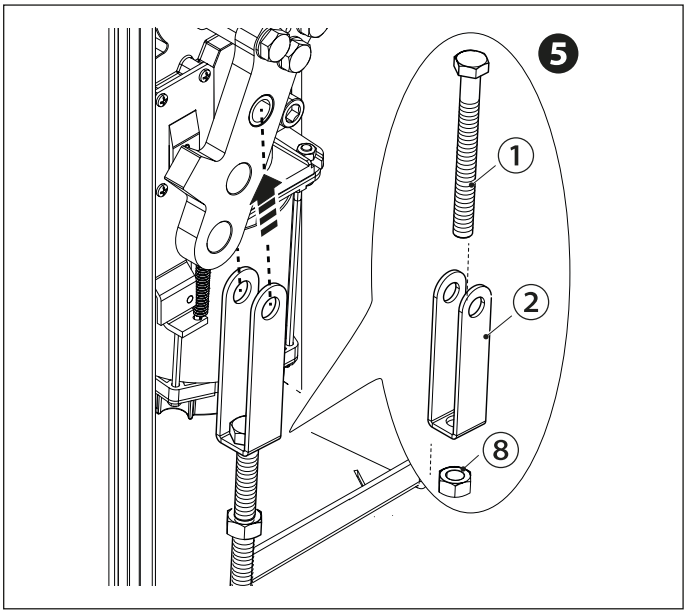
GREASE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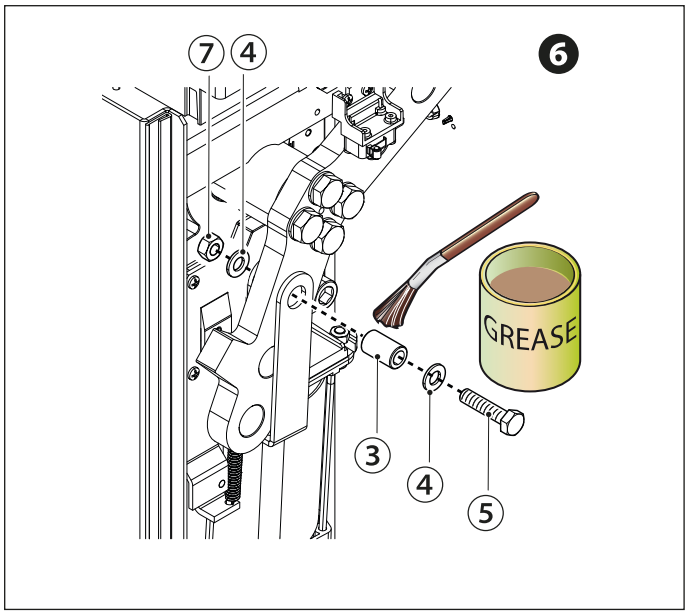
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GREASE
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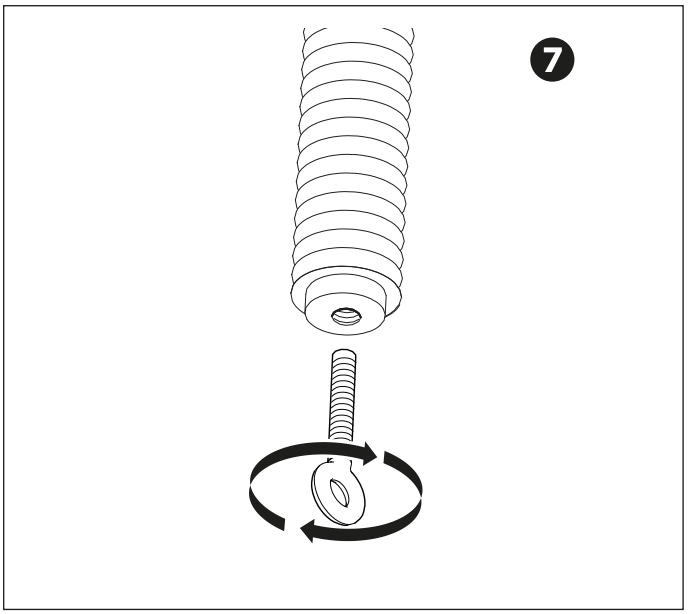
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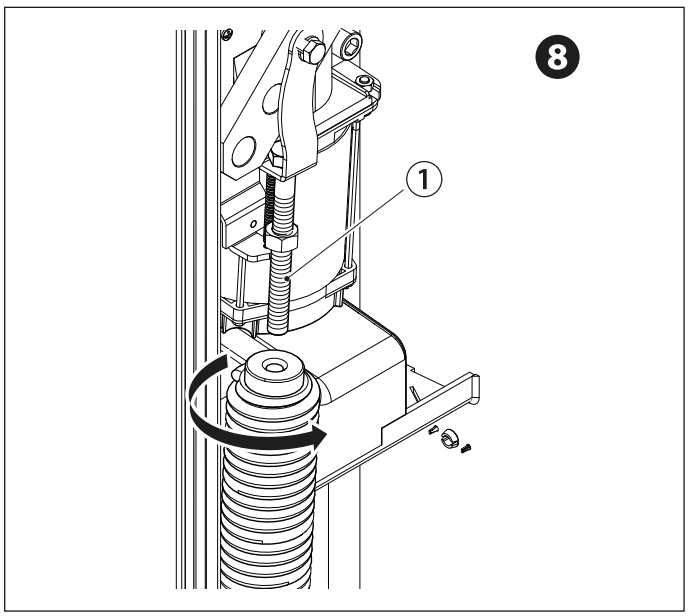
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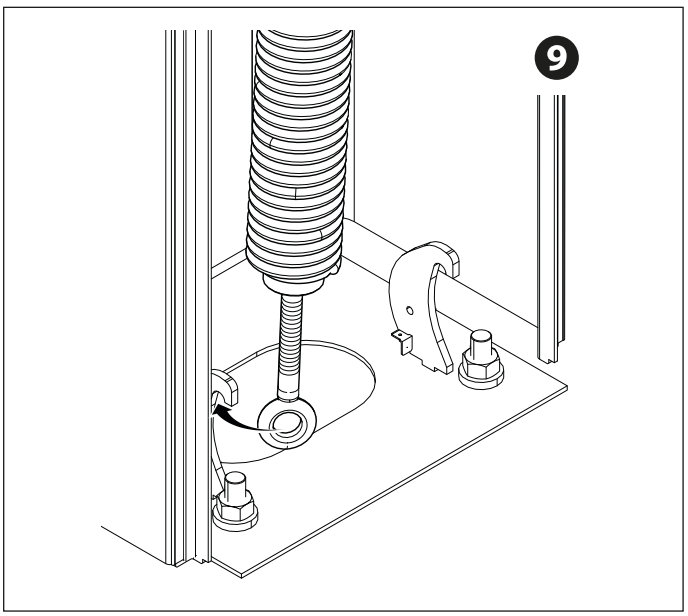
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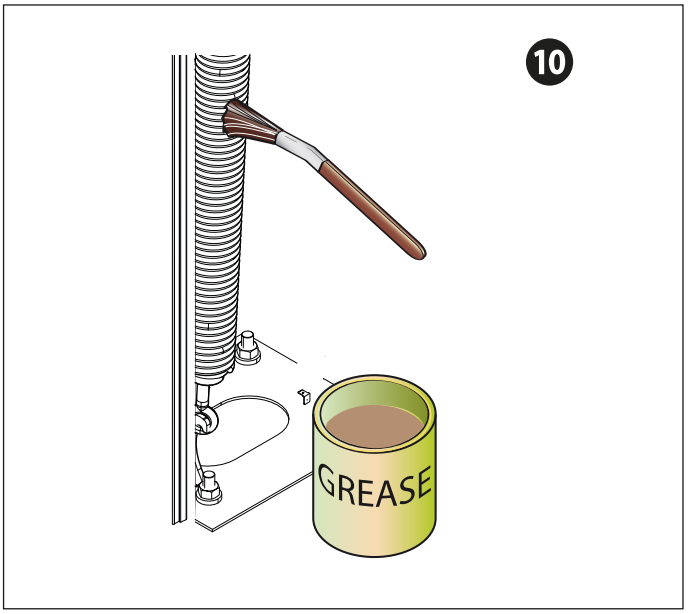
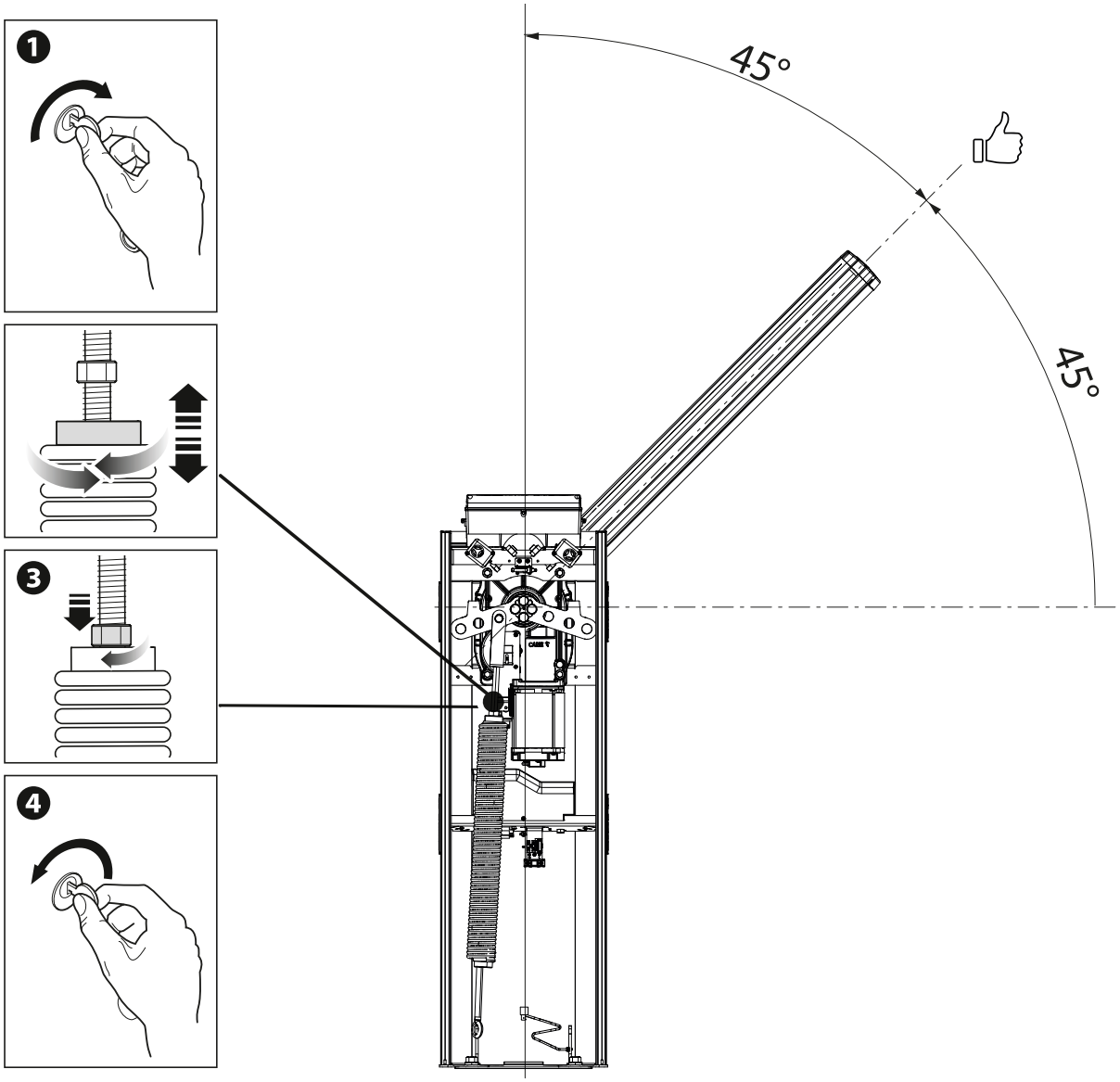


Balancing the boom

❶ Release the gearmotor.
❷ Manually turn the spring to increase or reduce the traction. The boom should stabilise at 45°.
❸ Fasten the locknut.
Position the boom vertically.

❹ Lock the gearmotor

Check the proper working state of the spring. When the boom is vertical, the spring is not taut. When the boom is horizontal, the spring is taut.



Determining the travel end points with mechanical limit switches

Check that the boom is parallel to the road surface when it is in the closed position and at about 89° when it is in the open position.

Correct the boom's horizontal position

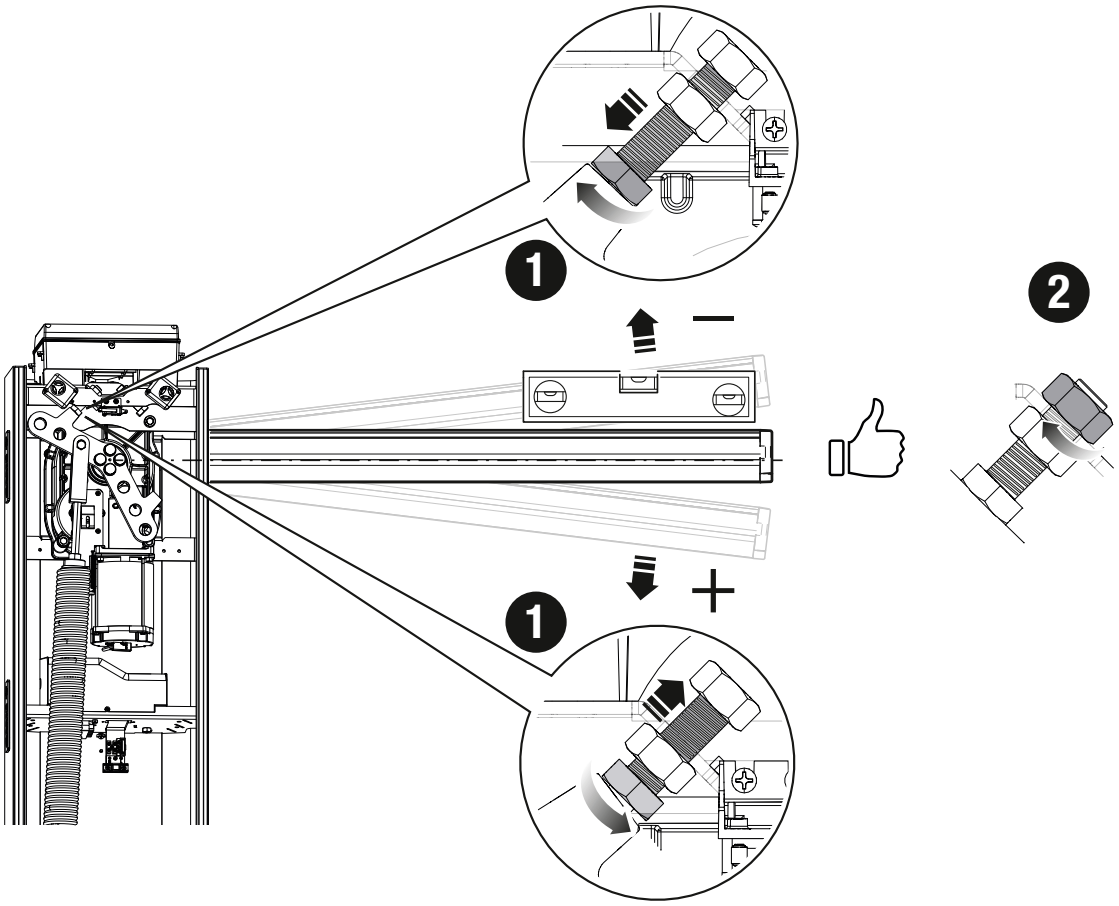
Release the gearmotor.

Open the inspection hatch.

❶ Turn the mechanical stop until you reach the desired boom position.

❷ Fasten the mechanical stop with a locknut.

Lock the gearmotor



Correct the boom's vertical position

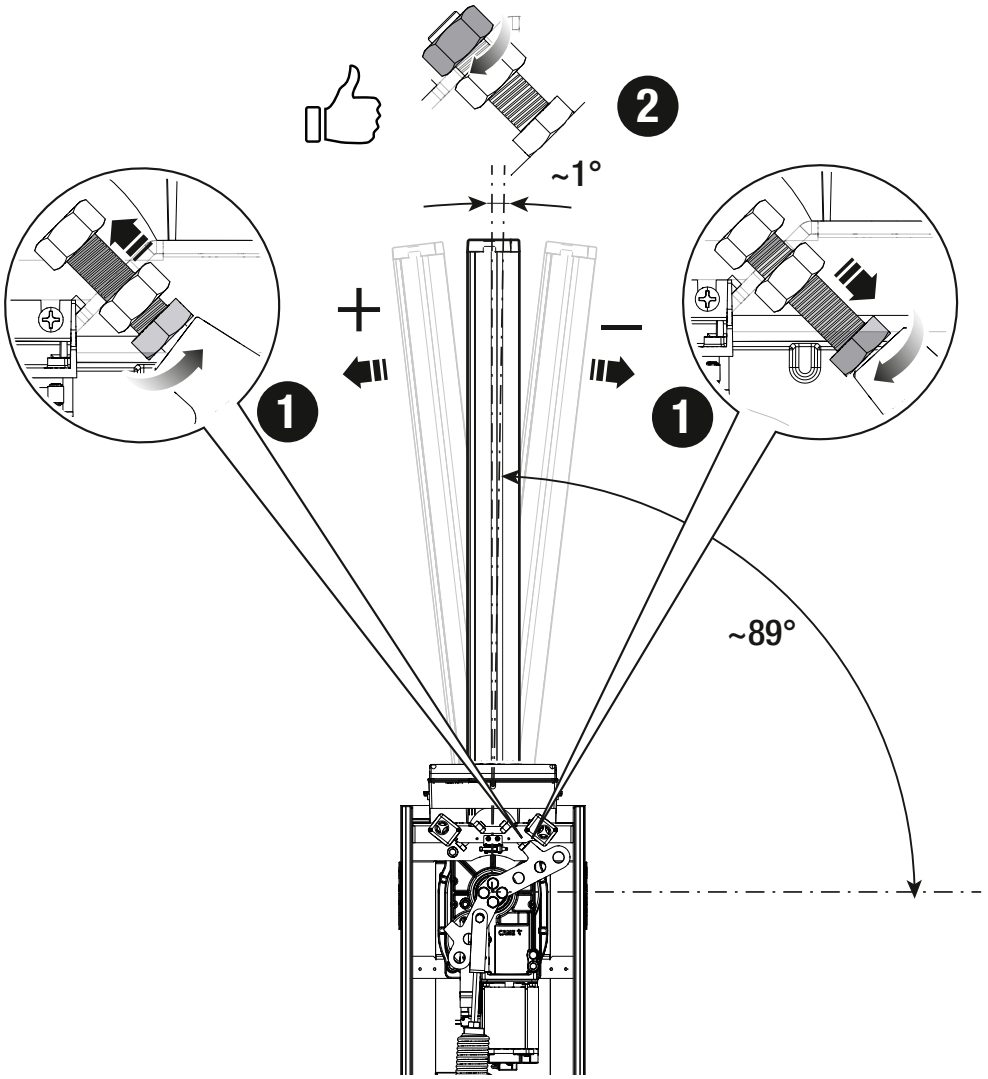
Release the gearmotor.

Open the inspection hatch.

❶ Turn the mechanical stop until you reach the desired boom position.

❷ Fasten the mechanical stop with a locknut.

Lock the gearmotor



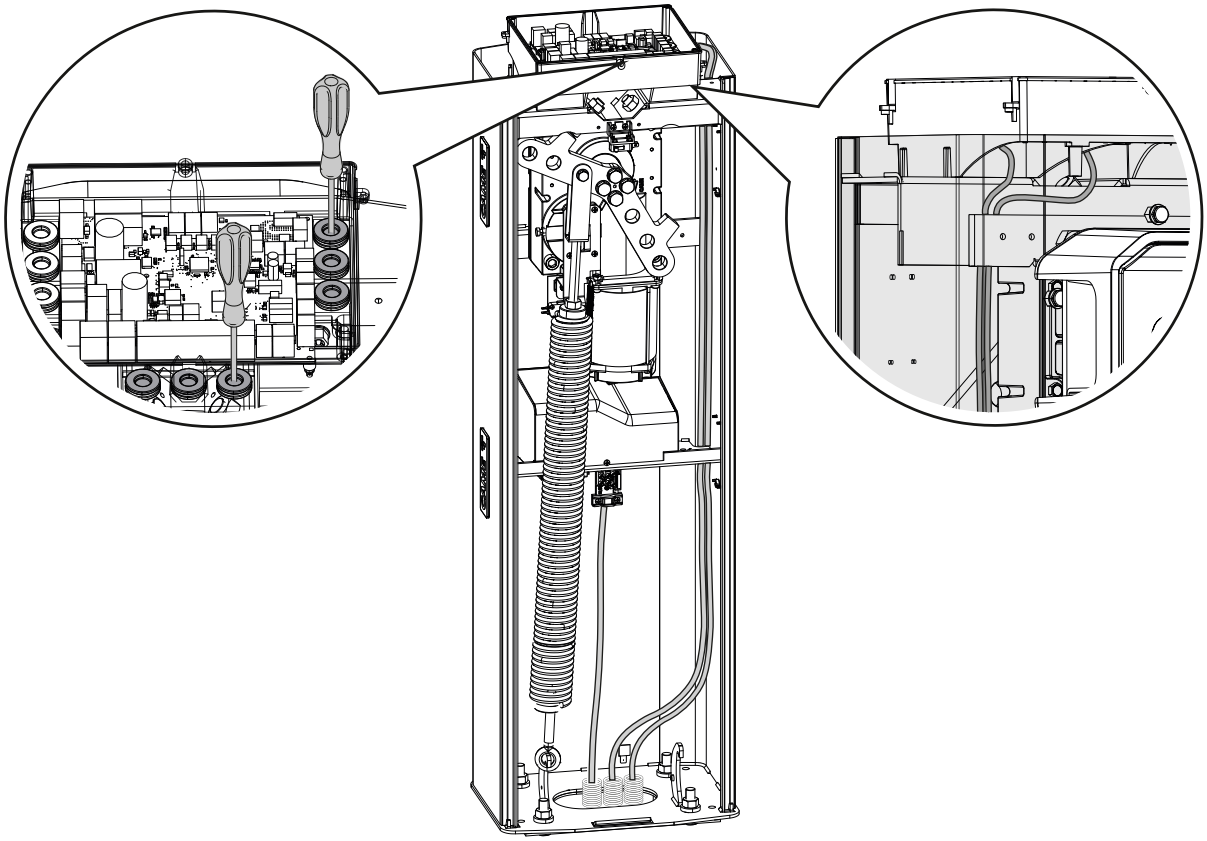
ELECTRICAL CONNECTIONS

⚠ The permanent wiring is to be employed and required by local codes.

Passing the electrical cables

The electrical cables must not touch any parts that may overheat during use (such as the motor and transformer).

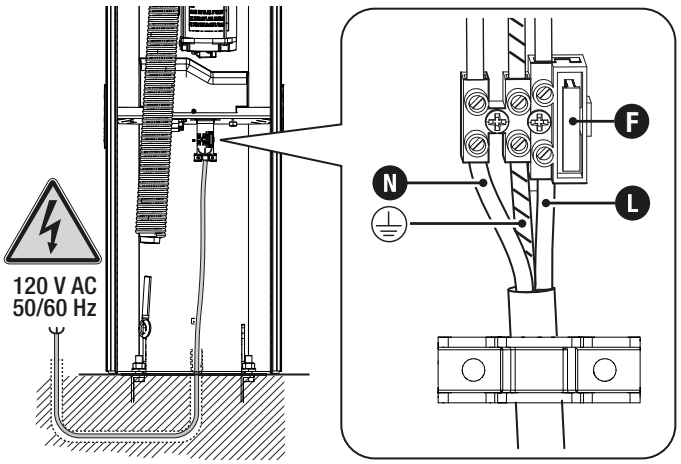
Make sure that the moving mechanical parts are suitably far away from the wiring.



Connecting to the electrical network

Make sure the mains power supply is disconnected during all installation procedures.

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



Power supply 120 V AC - 50/60 Hz

L - Phase
N - Neutral
F - Line fuse
⏚ - Earth

Connecting accessories

⚠ Before connecting the accessories, cut off the main power supply and disconnect the batteries where present.

Power supply output for accessories 24 V

📖 The total power of the outputs listed below must not exceed the maximum output power [Accessories]

Device	Output	Power supply (V)	Maximum power (W)
Accessories	10 - 11	24 AC	40
Flashing beacon	10 - E1	24 AC	15
Additional light	10 - E1	24 AC	15
Passage-open warning light	10 - 5	24 AC	3

CXN BUS connection

⚠ The output is set for CAME CXN BUS accessories only.

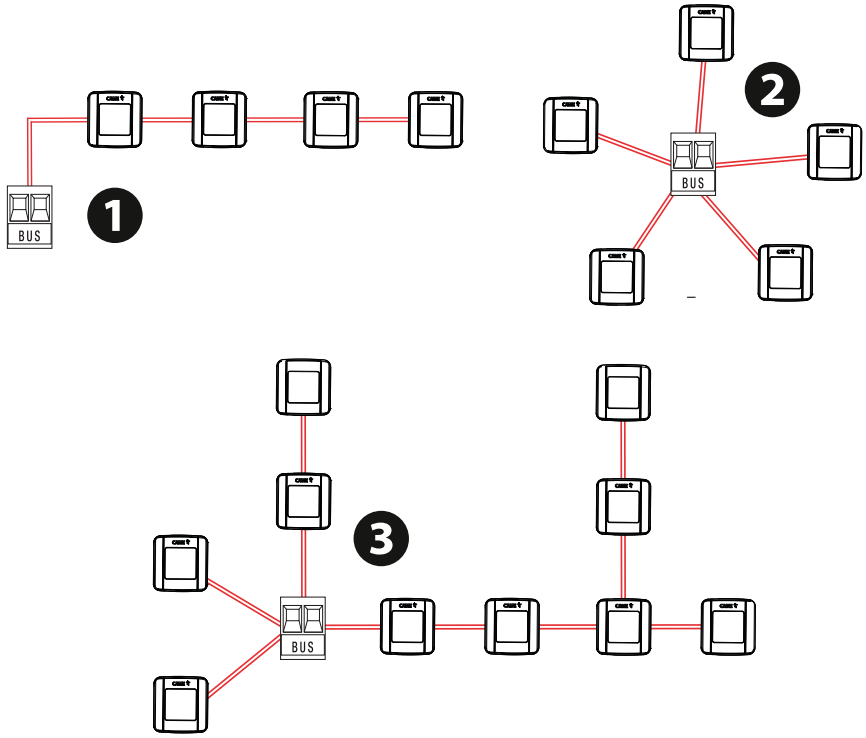
Device	Output	Power supply (V)	Maximum power (W)
BUS CXN	BUS	15 DC	15

Connecting accessories with BUS CXN system

The CXN CAME system is a two-wire non-polarised communication BUS which allows you to connect up all compatible CAME devices. Connection to the BUS can be in a chain, star or mixed formation. Once the system has been wired, and after having set the address on each device, the function of each accessory can be configured on the control panel. This method allows you to configure the set-up immediately without having to work directly on the accessories and system wiring later. The CXN BUS can support control devices, interfaces, photocells, safety devices, beacons and gateways at the same time.

Cabling

❶ Chain connection
❷ Star connection
❸ Mixed connection



Cable length

Cable type	Single branch max. length (m | ft)	Sum total of branches (m | ft)
18 AWG or 1 mm²	50 | 164	150 | 492

📖 Do not use a shielded cable.

Maximum number of devices that can be connected, by type

Type of device	Maximum number of devices per type
Selectors	8
Photocell pairs	8
Interfaces	2
Flashing beacons	2

BUS CXN device consumption

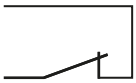
LINK

📖 BUS CXN device consumption is calculated in CXN units.

Scan the QR code to access an interactive table showing consumption data, and calculate the maximum number of BUS devices you can connect to the control panel.

Command and control devices

1
2

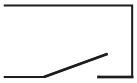


STOP button (NC contact)

📖 See the [F1 – Total stop] function.

📖 When the contact is being used, it must be activated during programming.

2
3

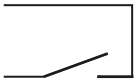


Control device (NO contact)

Open command

📖 When the [F6 – Hold-to-run] function is active, a control device must be set to OPEN.

2
3P

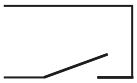


Control device (NO contact)

Partial Opening command

📖 The contact must only be used for operators working in paired mode.

2
4

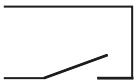


Control device (NO contact)

Close command

📖 When the function [F6 - Hold-to-run] is active, a control device must be set to CLOSE.

2
7



Control device (NO contact)

Open command
Close command

S1
GND

Transponder selector switch and card reader

📖 Insert the R700 card into the corresponding connector.

📖 See function [F14 Sensor type].

A
B

Keypad selector

📖 Insert the R800 card into the corresponding connector.

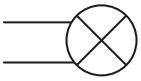
📖 See function [F14 Sensor type].

Antenna with RG58 cable

📖 Insert the AF card into the corresponding connector for remote control with transmitter.

Signalling devices

10
E1

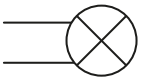


Flashing beacon or additional light

Depending on configuration, it flashes when the operator opens and closes, or increases lighting in the manoeuvre area.

📖 See function [F18].

10
5

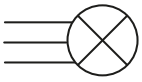


Operator status warning light (Passage-open warning light)

It notifies the user of the operator status.

📖 See function [F10 - Passage-open warning light].

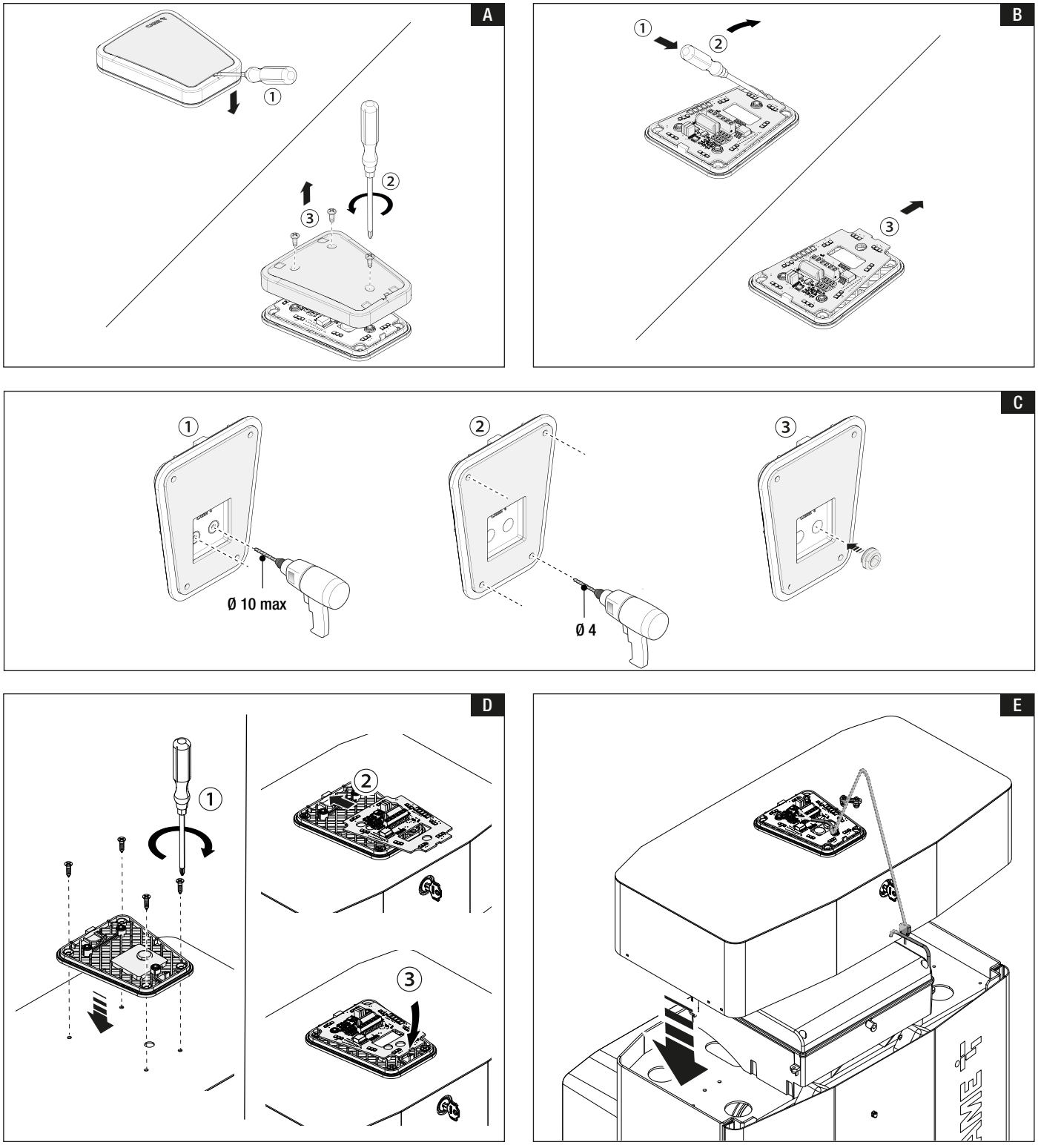
+
R
G



LED strip and/or KLT flashing beacon

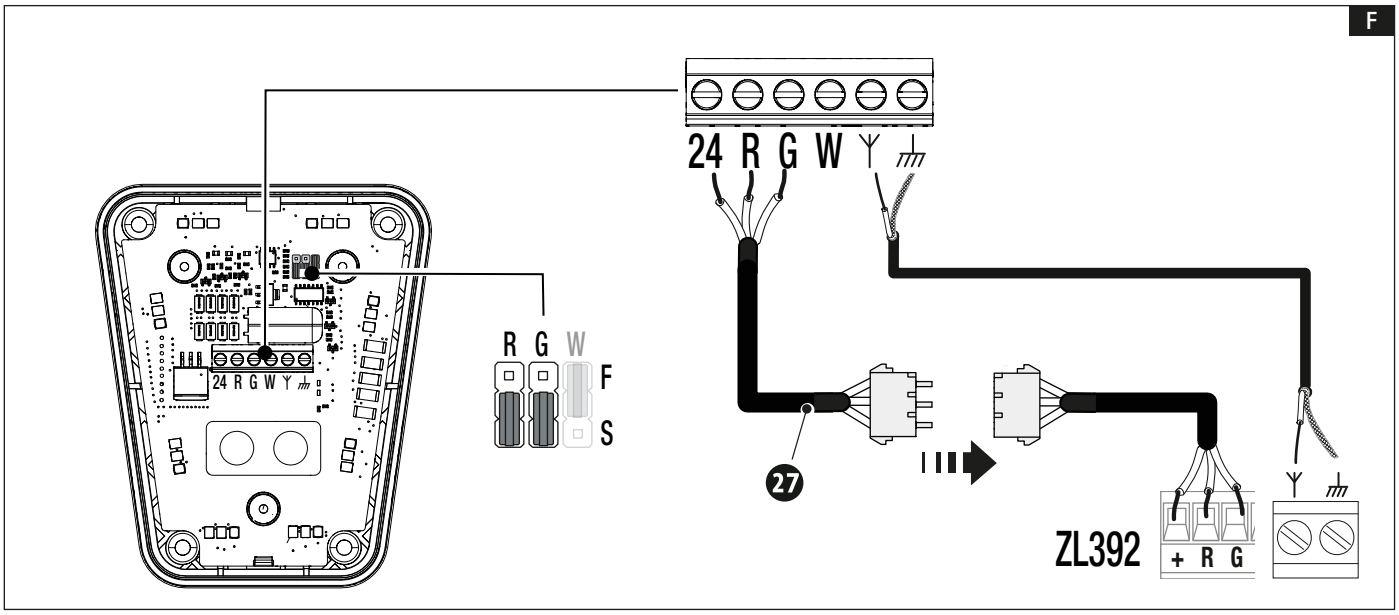
Choose the operating mode for the LED strip light and/or KLT flashing beacon.

Assembling flashing beacon KLT1FDSW

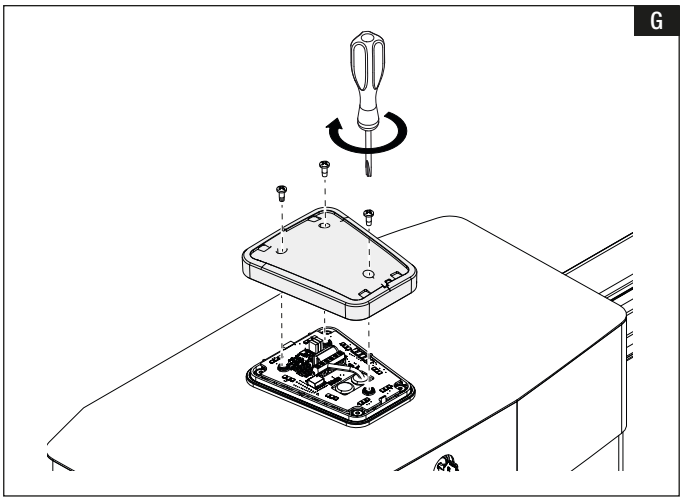


⚠ Connect the earth wire to the Faston terminal to be welded on the cover before closing it. See paragraph [Final operations].

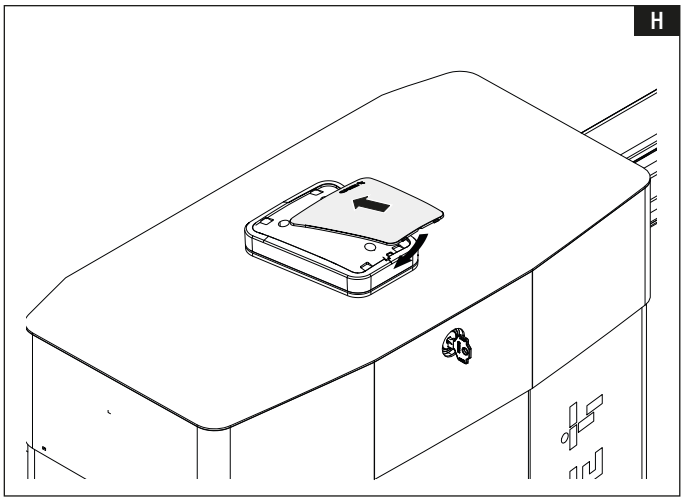
F



G



H



Compatible safety devices

Photocell tested and validated during operator certification tests as per UL325:2023

Type	Manufacturer	Manufacturing part
Photo Eyes (Retroreflective)	Seco-Larm	E-936-S45RRGQ

Other compatible photocells

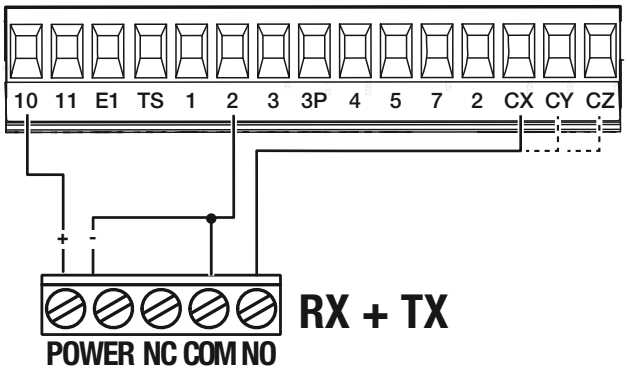
⚠ Only use in compliance with standard UL325:2023.

Type	Manufacturer	Manufacturing part
Photo Eyes (Thru-Beam)	Seco-Larm	E-960-D90GQ
Photo Eyes (Retroreflective)	EMX	IRB-RET2

On photocells compliant with standard UL325:2023, the [F5 = Safety devices test] function must always be active, unless the resistive contact is used.

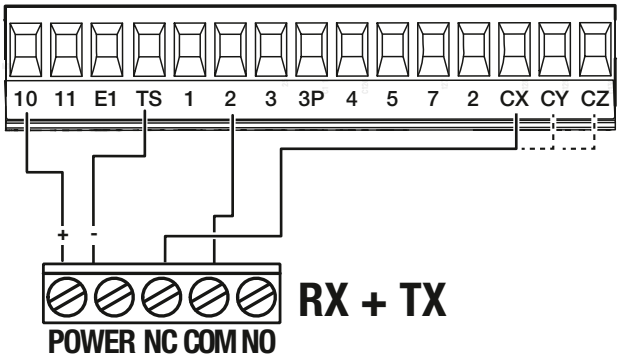
Photocells E-936-S45RRGQ

Resistive connection



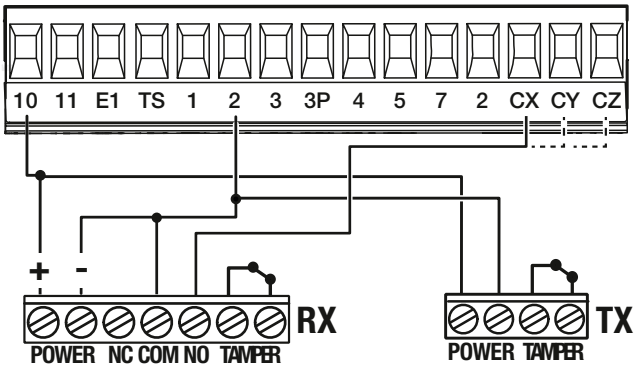
Connection with safety test

See function [F5 – Safety devices test].



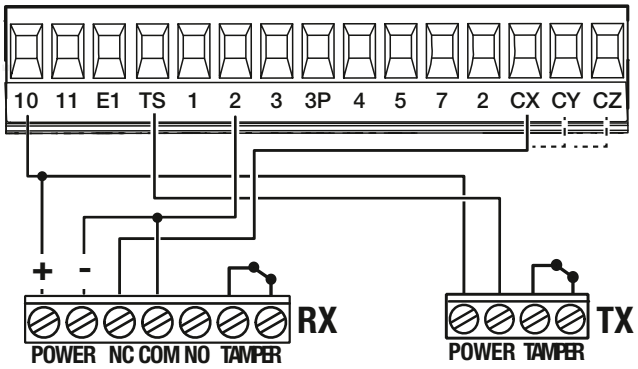
Photocells E-960-D90GQ

Resistive connection



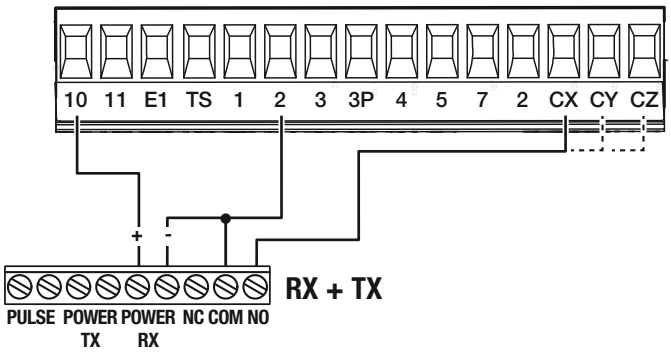
Connection with safety test

See function [F5 – Safety devices test].



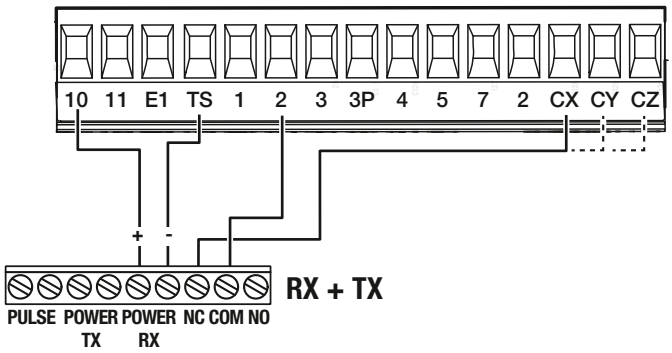
Photocells IRB-RET2

Resistive connection



Connection with safety test

See function [F5 – Safety devices test].



Other detection devices

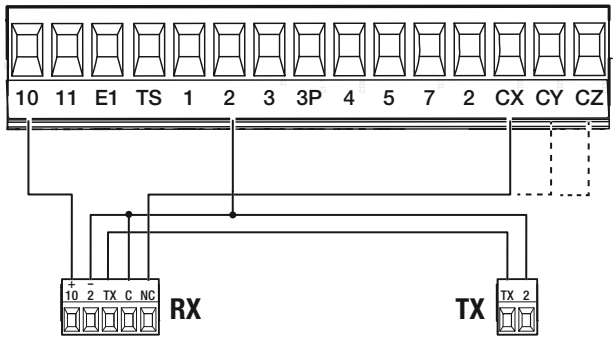
Connect the safety devices to the CX, CY and/or CZ inputs (NC contacts).
During programming, configure the type of action that must be performed by the device connected to the input.

If contacts CX, CY and CZ are used, they must be configured during programming.

For systems with multiple pairs of photocells, please see the manual for the relevant accessory.

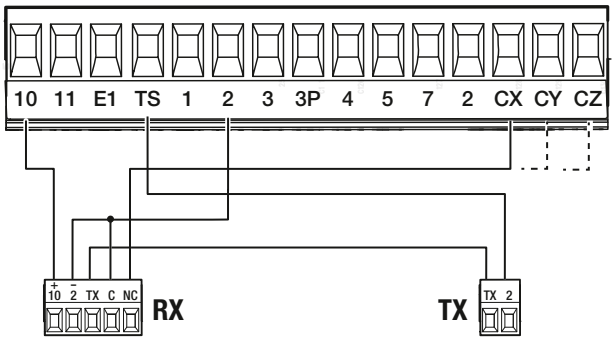
DIR photocells

Standard connection



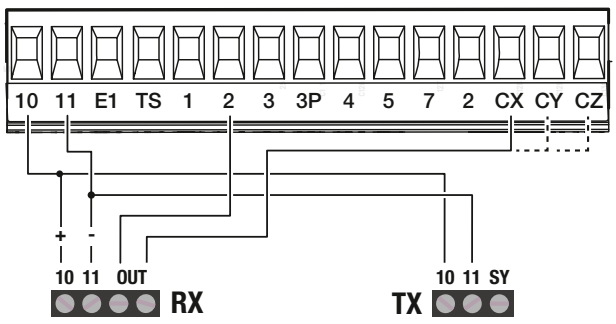
Connection with safety test

See function [F5 – Safety devices test].



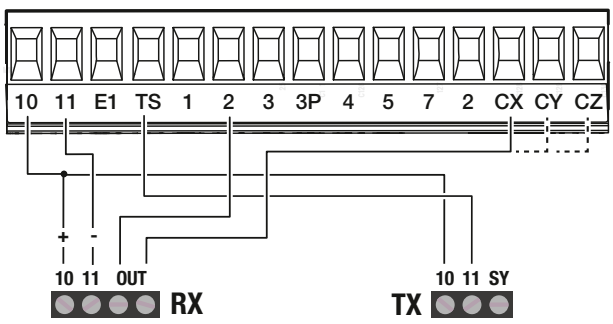
DXR/DLX photocells

Standard connection

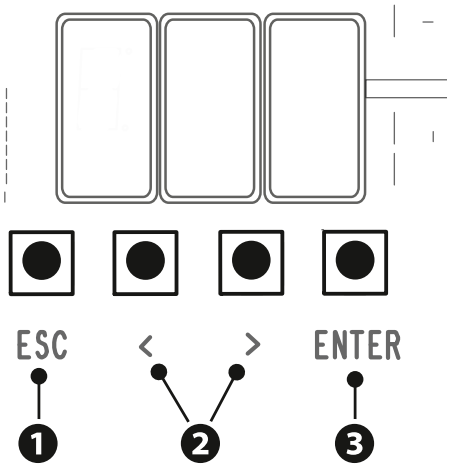


Connection with safety test

See function [F5 – Safety devices test].



Programming button functions



❶ ESC button

The ESC button is used to perform the operations described below.
Exit the menu
Delete the changes
Go back to the previous screen

❷ < > buttons

The < > buttons are used to perform the operations described below.
Navigate the menu
Increase or decrease values

❸ ENTER button

The ENTER button is used to perform the operations described below.
Access menus
Confirm choice

📖 During movement, outside the menu, the ESC key stops the gate and the <> keys open and close the gate.

Getting started

📖 Once the electrical connections have been made, proceed with commissioning. Only skilled and qualified staff may perform this operation.
Check the warning and safety devices are working properly.
Make sure that there are no obstacles in the way.
Power up and proceed with the operations indicated below.

A1 **Boom length**

F54 **Opening direction**

A2 **Motor test**

A3 **Travel calibration**

📖 After powering up the system, the first manoeuvre is always to open the gate Wait for the manoeuvre to be completed.

📖 Press the ESC button or STOP button immediately in the event of any faults, malfunctions, strange noises or vibrations, or unexpected behaviour in the system.

📖 If "A3" scrolls across the display, this means that the electronic board has not yet been calibrated.

At the end of commissioning, check the correct operation of the device using the buttons near the display. Check that the accessories also work correctly.

⚠ **When using a CAME KEY device, always update the board firmware to the latest version.**

Functions menu

Total stop
This stops the boom and excludes automatic closing. Use a control device to resume movement.

F1	ON OFF (Default)

CX input , CY input , CZ input

Associate a function with the input CX CY CZ

F2 **F3** **F4**	OFF (Default) C1 = Reopen while closing (photocells) C4 = Obstacle standby (photocells) C5 = Immediate closure at the travel end during opening C7 = Reopen while closing (sensitive edges) C9 = Immediate closure at the travel end during opening with obstacle standby during closure C10 = Immediate closure during opening with obstacle standby during closure (NO contact) C11 = Immediate closure during opening with obstacle standby during closure (NC contact) C13 = Reopen while closing, with immediate closure once the obstruction has been removed, even if the boom is not in motion r1 = Reopen while closing (photocells with resistance 8k-10k) r4 = Obstacle standby (Photocells with resistance 8k-10k) r7 = Reopen while closing (sensitive edge with 8K2 resistor)

Safety devices test

Check that the photocells connected to the inputs are operating correctly, after each opening and closing command.

F5	OFF (Default) 1 = CX 2 = CY 3 = CX+CY 4 = CZ 5 = CX+CZ 6 = CY+CZ 7 = CX+CY+CZ

Hold-to-run

With the function active, the operator stops moving (opening or closing) when the control device is released.

📖 When the function is active, it excludes all other control devices.

F6	OFF (Default) ON

Command 2-3P

Associate a command to the connected device on 2-3P.

F8	1 = Partial opening (Default) 3 = Enable opening With Enable opening active, the input performs as follows: • Input open = opening permitted; all opening commands are performed. • Input closed = opening not permitted; all opening commands are stored but not performed. • Input switches from closed to opened = opening command stored previously is performed. 📖 This setting limits opening solely from command 2-3.

Obstacle with motor stopped

With the function active and the operator stopped, an open or close command is not performed if the safety devices detect an obstacle.

F9	OFF (Default) ON

Passage-open warning light

Barrier status signal.

F10	0 = Warning light on (default) - The light stays on when the boom is moving or open. 1 = Warning light flashing - The warning light flashes every half a second when the boom is opening and remains on when the boom is open. The light flashes every second when the boom is closing, and remains off when the boom is closed.

Sensor type

Choose the type of access device.

F14	1 = Keypad (Default) 0 = Transponder

Additional light

Choose the operating mode for the lighting device connected to output E1.

F18	0 =Flashing beacon (Default) 1 = Cycle light The lamp stays on during the manoeuvre. 📖 The light remains off if an automatic closing time is not set. 2 = Courtesy lamp The light switches on when a manoeuvre starts and remains on once the manoeuvre has finished, for the time set under the function [F25 Courtesy time].

Automatic closure

Set the time before automatic closure is activated, once the opening travel end point has been reached.

📖 The function does not work if any of the safety devices are triggered when an obstacle is detected, or after a complete stop, or during a power outage.

F19	OFF (Default) From 1 to 180 seconds

Pre-flashing time

Set the time for which the beacon is activated before each manoeuvre.

F21	OFF (Default) 1 to 10 seconds

Courtesy time

Set the lighting device operation time.

F25	60 to 180 seconds (Default 180 seconds)

Opening speed

Set the opening speed (percentage of maximum speed).

📖 For booms complete with accessories (swing rest and/or skirt), reduce the speed.

F28	50% to 100% (Default 70%)

Closing speed

Set the closing speed (percentage of maximum speed).

📖 For booms complete with accessories (swing rest and/or skirt), reduce the speed.

F29	from 30% to 100% (Default 50%)

Travel sensitivity

Adjust the obstruction detection sensitivity during the gate travel in percentage terms.

F34	10% to 100% (Default 100%) 10% = minimum thrust and high obstruction sensitivity 100 % =maximum thrust and low obstruction sensitivity

RSE communication

Configure the function performed by the boards connected to the RSE1 and RSE2 connectors.

If an RSE card – configured for paired connections – is plugged into the RSE_1 connector, use the RSE_2 connector for remote connection (CRP). In this case, a CAME KEY cannot be connected.

F49	**rE1** 1 = Paired 3 = CRP/CAME KEY (Default) 4 = Alternate	**rE2** 3 = CRP/CAME KEY (Default) 5 = I/O - RS485 6 = ModBus

Save data

Save user data, timings and configurations to the memory device (memory roll or USB key).

📖 The function is displayed only when a USB stick is inserted into the USB port or a memory roll card is inserted into the control board.

F50	OFF (Default) ON (Run operation)

Read data

Upload user data, timings and configurations from the memory device (memory roll or USB key).

📖 The function is displayed only when a USB stick is inserted into the USB port or a memory roll card is inserted into the control board.

F51	OFF (Default) ON (Run operation)

Transferring MASTER-SLAVE parameters

Share parameters programmed on the Master barrier with the Slave barrier.

📖 This only appears if the F49 function is set to [Paired] or [Alternate].

F52	OFF (Default) ON

Opening direction

Set the boom opening direction.

F54	0 = To the left (default) 1 = To the right

CRP address

Assign a unique identification code (CRP address) to the control board.

📖 The function is used where there are multiple operators connected to the same communication BUS using the CRP protocol.

F56	1 to 254

Configure maintenance

Set the number of manoeuvres the operator can perform before a maintenance warning signal is generated.

📖 The warning is displayed as an [SEr] message and signalled by 3 + 3 flashes every hour on the device [Passage-open warning light].

F58	OFF (Default) 1 to 999 (1 = 1000 manoeuvres)

Pre-flashing

Choose the type of manoeuvre that activates the flashing beacon in advance.

📖 Set how much earlier the flashing beacon is activated under the function [Pre-flashing time].

F61	0 = when opening and closing (Default) 1 = only when closing 2 = only when opening

RSE speed

Set the remote connection system communication speed on ports RSE1 and RSE2.

F63	**rE1** 2 = 4800 bps 3 = 9600 bps 4 = 14400 bps 5 = 19200 bps 6 = 38400 bps (default) 7 = 57600 bps 8 = 115200 bps	**rE2** 2 = 4800 bps 3 = 9600 bps 4 = 14400 bps 5 = 19200 bps 6 = 38400 bps (default) 7 = 57600 bps 8 = 115200 bps

FCA FCC warnings

Configure the method with which the FCA and FCC outputs report the boom status.

F70	OFF (Default) 1 = Impulse When the boom reaches the travel end point (while opening or closing), the FCA-CM1 or FCC-CM2 contact closes for one second. 2 = Steady When the boom reaches the travel end point (while opening or closing), the FCA-CM1 or FCC-CM2 contact closes and remains closed. 3 = Custom The FCA-CM1 contact is closed with the boom in the open travel end position and during the opening manoeuvre. The FCC-CM2 contact is closed with the boom in the closed travel end position and during the closing manoeuvre. 4 = Forward commands The contact FCA-CM1 closes for 1s following any opening command. The contact FCC-CM2 closes for 1s following any closing command. 📖 This mode is only available with wired commands 2-3 and 2-4.

Opening counter

With the function active, you can send a series of opening commands corresponding to the number of vehicles which have to be authorised to pass through the gate. The function can only be operated by control devices connected to the contact 2-3. The magnetic contact, to which the loop that counts vehicles in transit is connected, is connected to an input. This input must be programmed to operate in C5/C9/C10 mode. At the end of the count the passage is closed.

F75	OFF (Default) ON

Emergency battery operation

Emergency function in the event of a power outage. Batteries required.

F93	OFF (Default) 1 = Immediate opening - In the event of a power outage, the operator runs an opening command within 1 minute and all other commands are blocked until power is restored.

New user

Register up to a maximum of 250 users and assign a function to each one.

📖 The operation can be carried out by using a transmitter or a BUS selector device (e.g. a keypad or transponder reader). The boards that manage the control devices (AF - R700 - R800) must be inserted into the connectors.

U1	1 = Step-by-step - The first command is to open and the second to close. 2 = Sequential - The first command is to open, the second to STOP, the third to close and the fourth to STOP. 3 = Open 4 = Pedestrian/partial opening 📖 When the barrier is in [Paired] mode, the [Partial Opening] command opens the Master barrier. 6 = BUS 1 module relay - Activate output 2 (relay output) on BUS 1 I/O module 7 = BUS 2 module relay - Activate output 2 (relay output) on BUS 2 I/O module Choose the function to be assigned to the user. Press ENTER to confirm. The free position in the memory is shown intermittently for a maximum of 10 seconds. During this phase, send the code from the control device. Repeat the procedure to add other users.

Remove user

Remove one of the registered users.

U2	Use the arrows to change the status from OFF to ON and press ENTER to confirm. Use the arrows to choose the number associated with the user you want to remove. No. 1 > 250 Alternatively, the control device associated with the user you want to remove can be activated. Press ENTER to confirm. 📖 "CLr" will appear to confirm deletion.

Remove all
Remove all registered users.

U3	OFF (Cancel operation) On (Run operation)

Radio decoding
Choose the type of radio coding for the transmitters enabled to control the operator.

🕮 If you choose the type of radio coding for the transmitters [Rolling code] or [TW key block], any transmitters with a different type of radio coding saved previously will be deleted.

U4	1 = All decoding (default) 2 = Rolling code 3 = TW key block

Self-Learning Rolling
Save a new rolling code transmitter by activating acquisition from a rolling code transmitter that has already been saved. The saving and acquisition procedures are explained in the transmitter manual.

U8	OFF (Default) ON

Boom length
Set the boom length.

A1	3 = 3 m boom 4 = 4 m boom 5 = 5 m boom 6 = 6 m boom 8 = 8 m boom

Motor test
Check the boom opens in the correct direction.

🕮 If the keys do not execute the commands correctly, invert the boom opening direction.

A2	The button > makes the motor turn in clockwise direction. The button < makes the motor turn in an anticlockwise direction.

Travel calibration
Start the travel self-learning.

A3	OFF (Cancel operation) ON (Run operation)

Parameter reset
Restore the factory configurations except for: [users], [boom length], [CRP address], [RSE2 settings], [password] and the settings related to the travel calibration.

A4	OFF (Cancel operation) ON (Run operation)

Manoeuvre counter
View the number of total or partial operator manoeuvres (after maintenance).

🕮 The number of manoeuvres is the number shown multiplied by 1000.

A5	Tot = total manoeuvres - Manoeuvres performed since the operator was installed. Par = partial manoeuvres - Manoeuvres carried out after the last maintenance. 🕮 Under the [Par] parameter, press the ENTER key to reset the number of partial manoeuvres. [Clr] will appear on the screen to confirm deletion.

FW version
Display the firmware version number.

H1	

Enable password

Set a 3-digit password. The password will be requested to anyone who wants to access the main menu.
Remove the password that protects access to the main menu.

H3	ON Use the arrows and the Enter button to dial the desired code.	OFF Press ENTER to confirm deletion.

Forgotten password

If you lose the password, you will need to reset the board to its factory settings. See [Factory reset].

Factory reset

To restore the electronic board data to factory settings:
Disconnect the control board from the power supply.
Press and hold the < and > buttons, then reconnect the control board to the power supply.
Continue to press and hold the < > buttons until [ON/OFF] is displayed.
Select [ON].
Press ENTER to confirm.

📖 When you reset the control board, all saved users, set times and calibration operations are deleted.

BUS device status

Show the status of all devices that can be connected to the BUS and managed by the firmware in use.

Key

b = BUS photocells
d = BUS selector
L = BUS flashing beacon
i = I/O BUS module
<x> is the device status.

<x> device status

ll = Conflicting address
o = Working
c = Working with alarm signal
F = Device fault
- = No communication or not present

H4	b(1 ÷ 8).<x> d(1 ÷ 8).<x> L1/L2.<x> i1/i2.<x>

BUS photocells

Associate a function with the input for the BUS photocells.

📖 [b1] corresponds to the pair of photocells 1, as set on the photocell DIP switch.

📖 [b8] corresponds to the pair of photocells 8, as set on the photocell DIP switch.

📖 The function only appears if there is a BUS photocell connected.

b1 **b2** **b3** **b4** **b5** **b6** **b7** **b8**	OFF (Default) C1 = Reopen while closing (photocells) C4 = Obstacle standby (photocells) C5 = Immediate closure at the travel end during opening C9 = Immediate closure at the travel end during opening with obstacle standby during closure C10 = Immediate closure during opening with obstacle standby during closure C13 = Reopen while closing, with immediate closure once the obstruction has been removed, even if the boom is not in motion C23 = Open command C24 = Close command

I/O BUS module - Inputs

Associate a function with the I/O module inputs.

[b11] corresponds to the I/O module 1, as set on the device DIP switch.

[b12] corresponds to the I/O module 2, as set on the device DIP switch.

The function only appears if there is a BUS I/O module connected.

b11 **b12**	**I1** **I2**	OFF (Default) C0 = This stops the operator and excludes automatic closing. Use a control device to resume movement. If it is activated, the input is used as a normally closed contact. r7 = Reopen while closing (sensitive edge with 8K2 resistor). C22 = Partial opening C23 = Open C24 = Close C27 = Step-by-step - The first command is to open and the second to close.

I/O BUS module - Light output

Associate a function with output 1 on the I/O modules.

[b11] corresponds to the I/O module 1, as set on the device DIP switch.

[b12] corresponds to the I/O module 2, as set on the device DIP switch.

The function only appears if there is a BUS I/O module connected.

b11 **b12**	**o1**	0 = Passage-open warning light - It notifies the user of the operator status [F10 - Passage-open warn. light]. 1 = Cycle light - The lamp stays on during the manoeuvre. 2 = Courtesy light - The light switches on when a manoeuvre starts and remains on once the manoeuvre has finished, for the time set under the function [F25 - Courtesy time].

I/O BUS module - Relay output

Associate a function with output 2 on the I/O modules.

[b11] corresponds to the I/O module 1, as set on the device DIP switch.

[b12] corresponds to the I/O module 2, as set on the device DIP switch.

The function only appears if there is a BUS I/O module connected.

b11 **b12**	**o2**	0 = Bistable ON - from 1 to 180 seconds (Default 1)

BUS key selector

Associate a function with the BUS key selector inputs. Different functions can be set according to the key turning direction.

[b21] corresponds to selector 1, as set on the device DIP switch.

[b27] corresponds to selector 7, as set on the device DIP switch.

The function only appears if there is a BUS key selector connected.

b21 **b22** **b23** **b24** **b25** **b26** **b27**	**rIG** = Key to the right **LEF** = Key to the left	Choose the command to associate with the key movement. 0 = Step-by-step - The first command is to open and the second to close. 1 = Sequential - The first command is to open, the second to STOP, the third to close and the fourth to STOP. 2 = Open 3 = Close 4 = Partial opening 5 = Stop 7 = BUS 1 module relay - Activate output 2 (relay output) on BUS 1 I/O module 8 = BUS 2 module relay - Activate output 2 (relay output) on BUS 2 I/O module

BUS flashing beacon <Automatic closing time colour>

Set the BUS flashing beacon colour during the automatic closing time.

📖 The function only appears if there is a BUS flashing beacon connected.

b40	**L1**	OFF 1 = White 2 = Yellow 3 = Orange 4 = Red 5 = Purple 6 = Blue 7 = Light blue 8 = Green (Default)

<Opening colour> BUS flashing beacon

Set the BUS flashing beacon colour during operator opening.

📖 The function only appears if there is a BUS flashing beacon connected.

b40	**L2**	1 = White 2 = Yellow 3 = Orange 4 = Red (Default) 5 = Purple 6 = Blue 7 = Light blue 8 = Green

<Closing colour> BUS flashing beacon

Set the BUS flashing beacon colour during operator closing.

📖 The function only appears if there is a BUS flashing beacon connected.

b40	**L3**	1 = White 2 = Yellow 3 = Orange 4 = Red (Default) 5 = Purple 6 = Blue 7 = Light blue 8 = Green

<Pre-flashing colour> BUS flashing beacon

On the BUS flashing beacon, set the flash colour for before opening and closing manoeuvres (pre-flash).

📖 The function only appears if there is a BUS flashing beacon connected.

b40 >	**L4**	1 = White (Default) 2 = Yellow 3 = Orange 4 = Red 5 = Purple 6 = Blue 7 = Light blue 8 = Green

<Signal error> BUS flashing beacon

Set the colour of the BUS flashing beacon in the event of an error signal.

📖 The warning light is activated after sending a command for movement.

📖 The function only appears if there is a BUS flashing beacon connected.

b40 >	**L5**	OFF (Default) 1 = White 2 = Yellow 3 = Orange 4 = Red 5 = Purple 6 = Blue 7 = Light blue 8 = Green

Signal maintenance

Set the colour of the flash on enabled BUS devices (flashing beacons and selectors) when maintenance is necessary. With the function activated, these devices will signal that maintenance needs to be carried out at the start of each manoeuvre.

📖 Configure maintenance and set the number of manoeuvres. See the function [F58 - Configure maintenance].

📖 The function only appears if there is a BUS flashing beacon or a BUS selector connected.

b43	OFF (Default) 1 = White 2 = Yellow 3 = Orange 4 = Red 5 = Purple 6 = Blue 7 = Light blue 8 = Green

Import/export data

❶ Insert the MEMORY ROLL card into the corresponding connector on the control board.
❷ Press the "Enter" button to access programming.
❸ Use the arrows to choose the desired function.

📖 The functions are displayed only when a MEMORY ROLL card is inserted.

[F50] - Save data

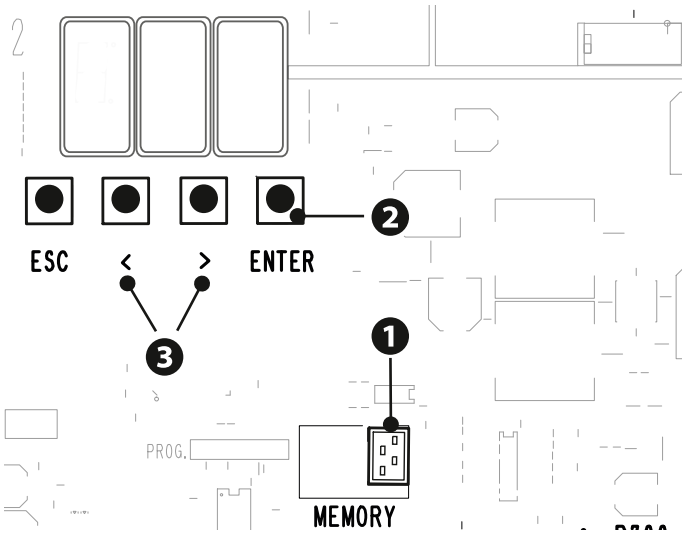
Save user data, timings and configurations to the memory device (memory roll or USB key).

[F50] - Read data

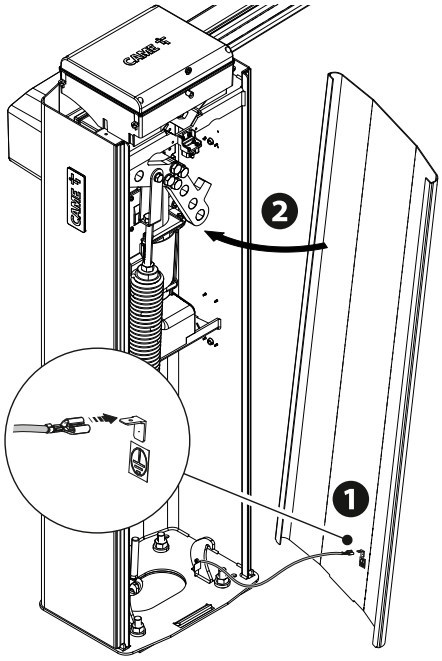
Upload user data, timings and configurations from the memory device (memory roll or USB key).

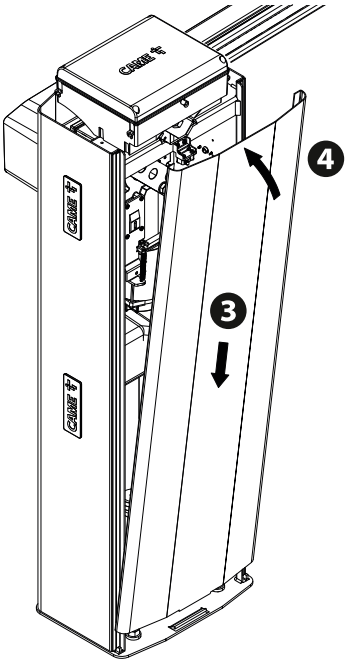
⚠ Before inserting and removing the MEMORY ROLL card, DISCONNECT THE MAINS POWER SUPPLY TO THE LINE.

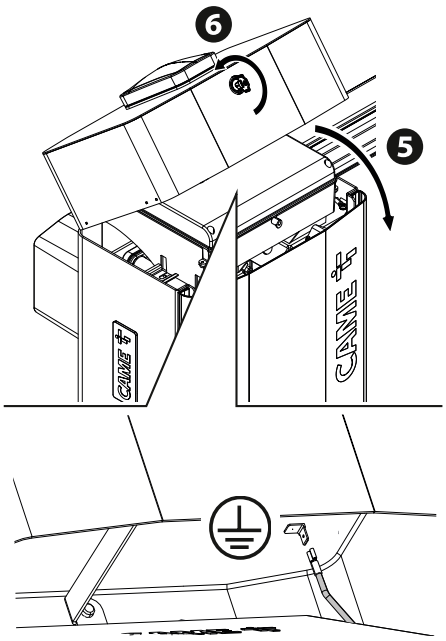
📖 Remove the MEMORY ROLL card after the data has been loaded.



FINAL OPERATIONS







PAIRED OPERATION

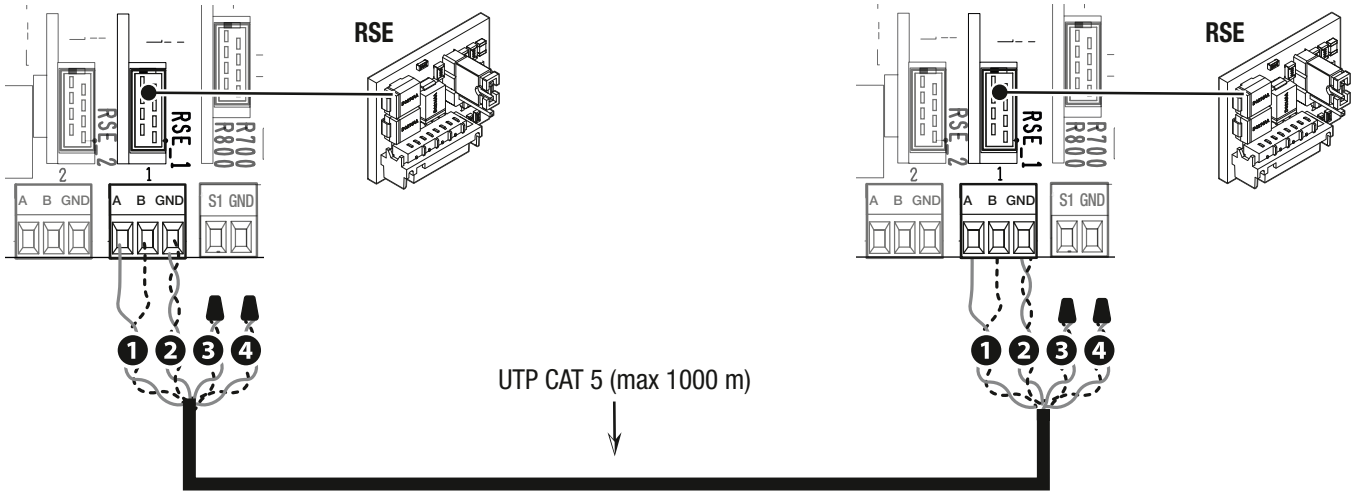
Two connected operators are controlled with one command.

Electrical connections

Connect the two electronic boards with a UTP CAT 5 cable.
Fit an RSE card on both control boards, using the RSE_1 connector.
Connect up the electrics for the devices and accessories.

📖 For information on connecting the electrics for the devices and accessories, please see the “ELECTRICAL CONNECTIONS” section.

📖 The devices and accessories must be connected to the control board which will be set as the MASTER.



Programming

📖 All programming operations described below must be performed only on the control board set as the MASTER.
Configure the RSE_1 port in [Paired].
Enable the sharing of parameters programmed on the Master barrier with the Slave barrier.

📖 After programming the MASTER operator in [Paired], the second operator automatically becomes SLAVE.

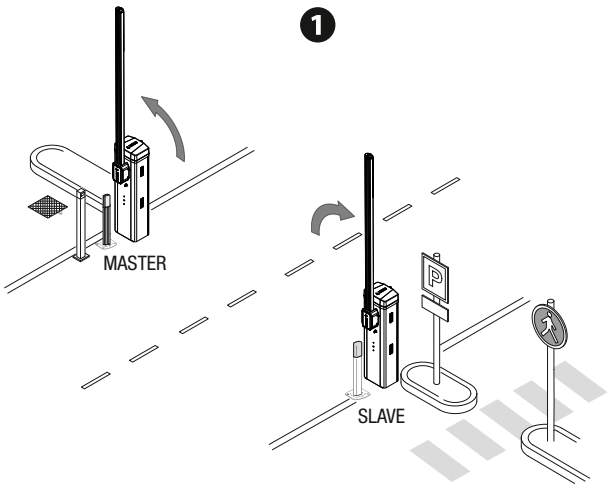
Saving users

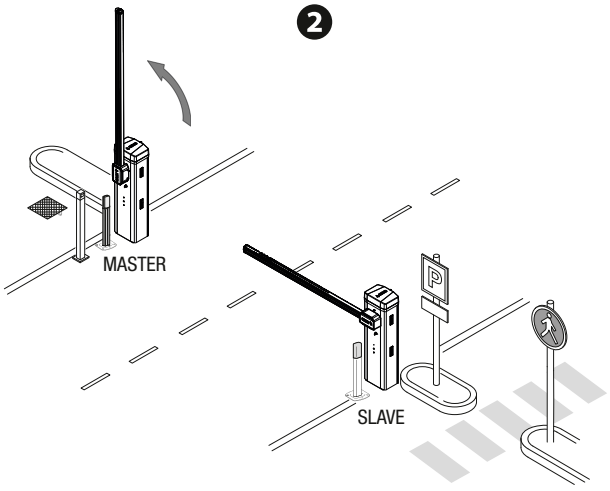
📖 All save user operations must be performed only on the control board set as the MASTER.

📖 For user storage operations, see the [New user] function.

Operating modes

❶ OPEN-CLOSE command (2-7), OPEN ONLY (2-3) or CLOSE ONLY (2-4)
❷ PARTIAL OPENING command (2-3P)





ALTERNATE OPERATION

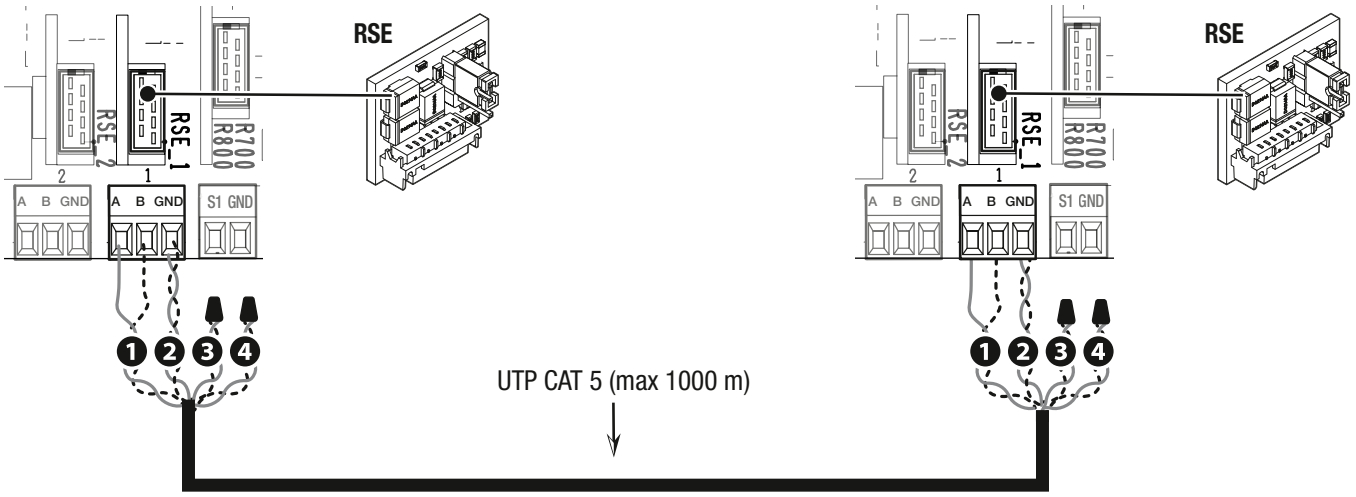
The first barrier opens, the vehicle passes, the first barrier closes, the second barrier opens, the vehicle passes and the second barrier closes.

Electrical connections

Connect the two electronic boards with a UTP CAT 5 cable.
Fit an RSE card on both control boards, using the RSE_1 connector.
Connect up the electrics for the devices and accessories.

📖 For information on connecting the electrics for the devices and accessories, please see the “ELECTRICAL CONNECTIONS” section.

📖 The control and safety devices must be connected on both electronic boards.



Programming

On one of the two barriers, configure the [RSE_1] function in [Alternate].
It activates the function [Automatic close] on both control boards.

Saving users

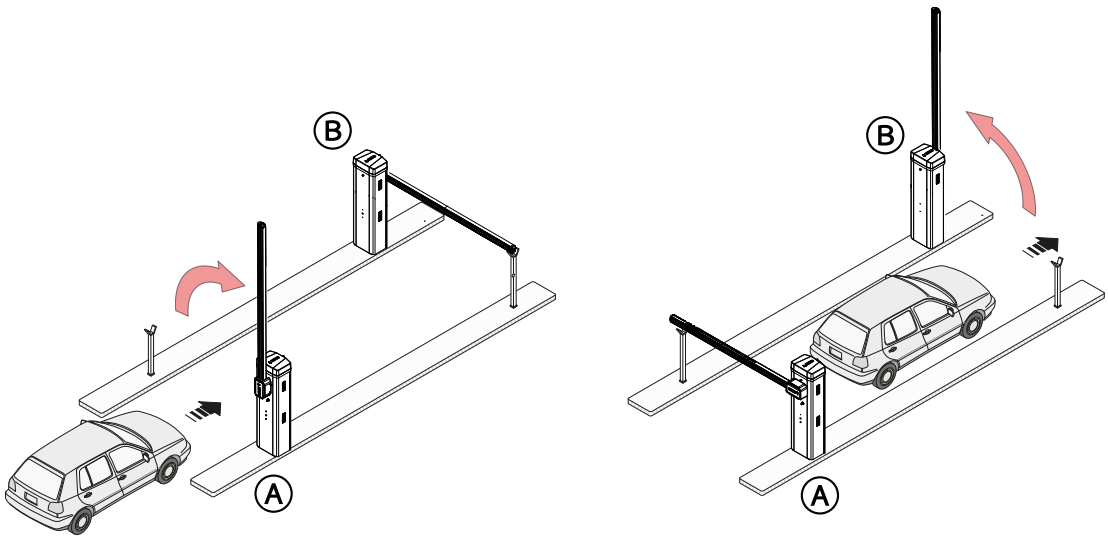
📖 For user storage operations, see the [New user] function.

📖 When programming users, do not use the 2-3P OPEN ONLY command.

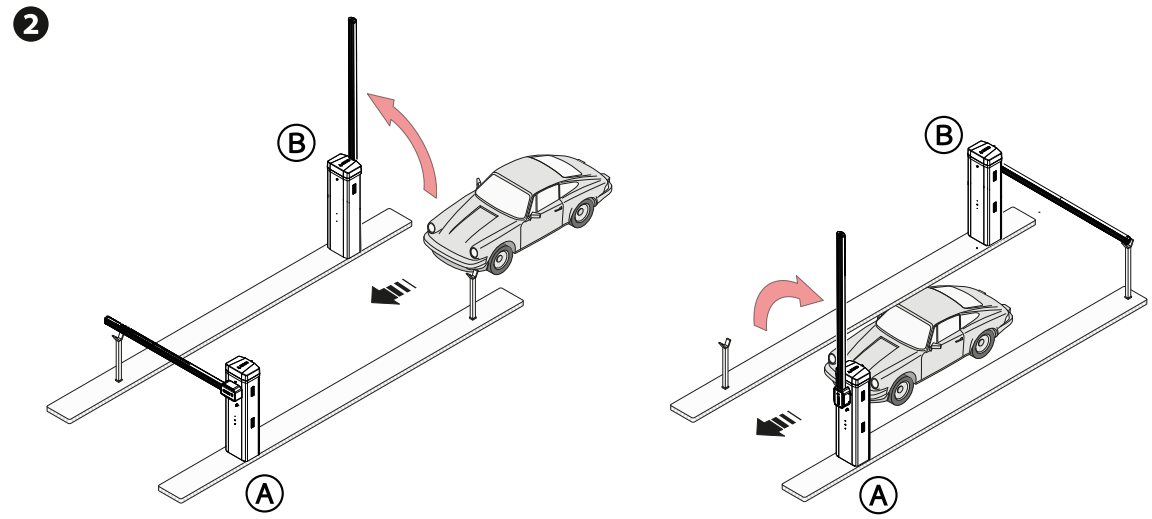
Operating modes

❶ ONLY OPEN command (2-3) on barrier A

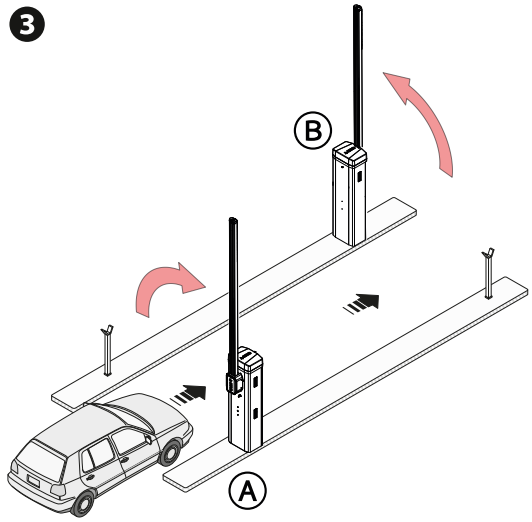
❶



❷ ONLY OPEN command (2-3) on barrier B



❸ OPEN-CLOSE command (2-7) on barrier A or B for emergency opening



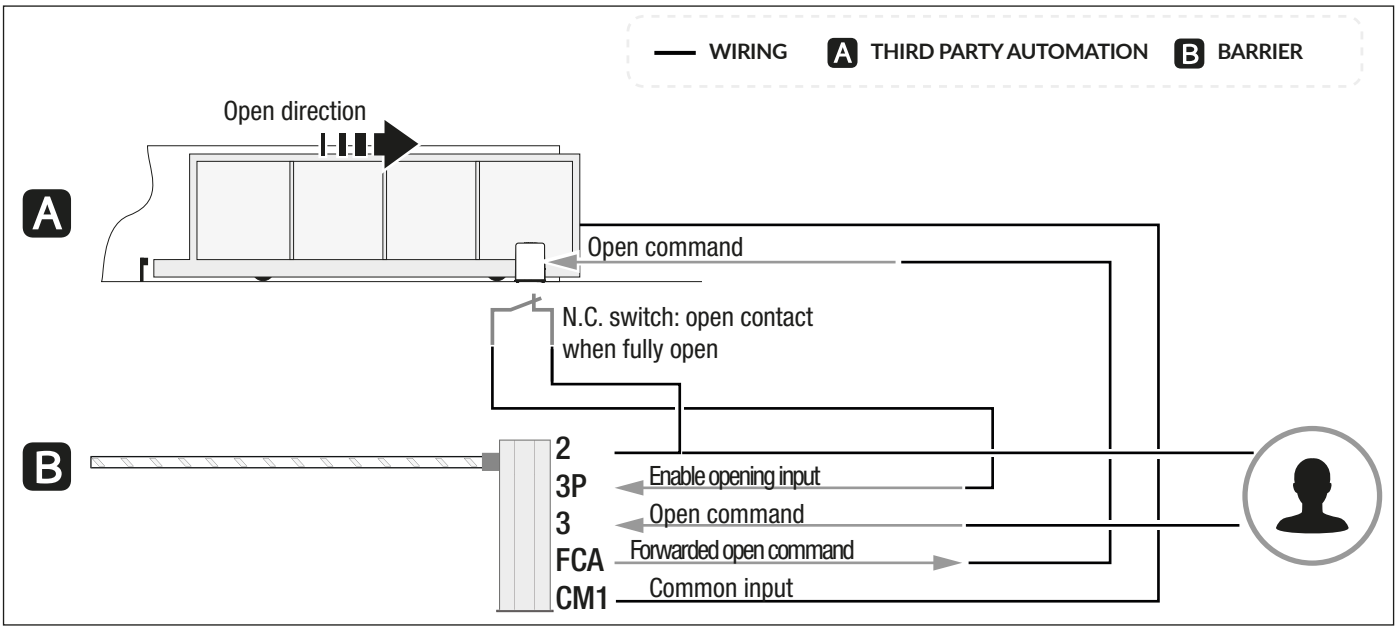
AMF (ACCESS MANAGMENT FUNCTION)

The function allows the opening of the barrier to be dependent on the opening of a second operator (gate, barrier). The barrier only opens when the operator is fully open. The function can be activated in two different modes.

Sequential mode

In sequential mode the opening command is sent to the barrier and the barrier forwards the command to the operator.

Set barrier functions as follows: **F70** = 4 (Forward commands) and **F8** = 3 (Enable opening).



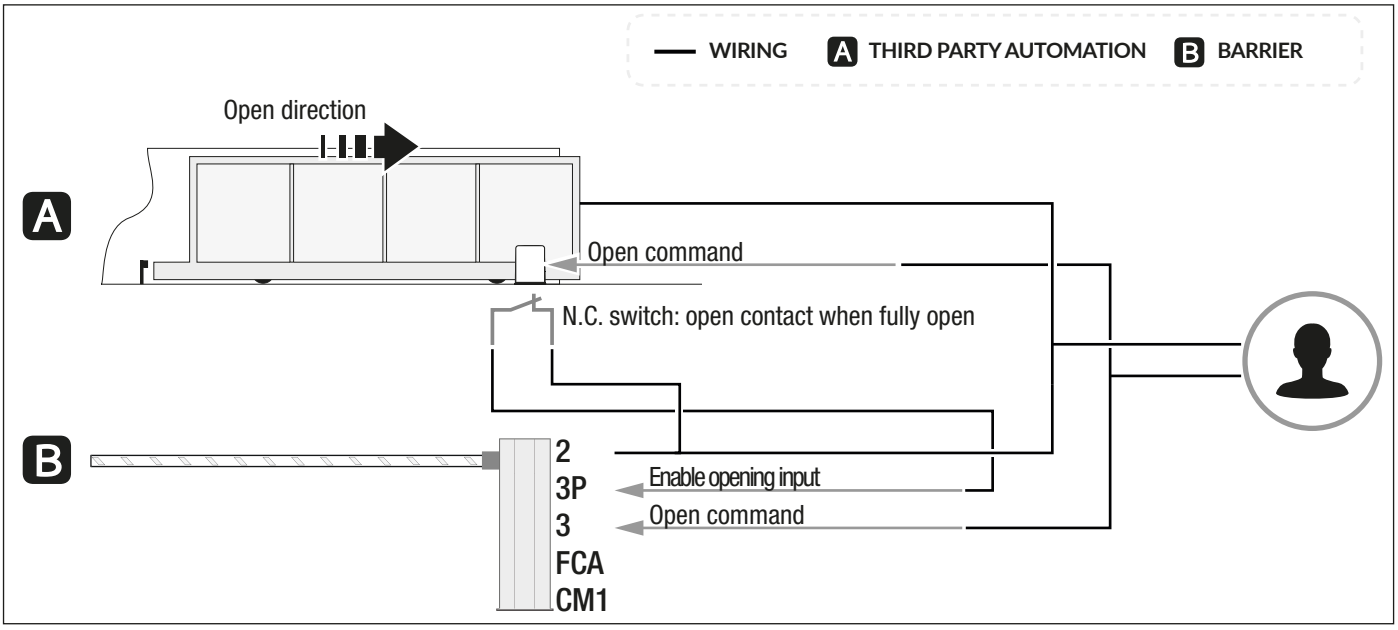
In this mode, when an opening command is sent:

- The barrier **B** stays closed until the operator **A** has reached fully open position.
- If the operator **A** is already fully open, the barrier **B** opens immediately.
- If the operator **A** is closed, it opens.
- The barrier **B** opening command is sent to the operator **A** via an FCA relay impulse regardless of the status of input 2-3P.

Parallel mode

In parallel mode the opening command is sent to the barrier and operator simultaneously.

Set barrier functions as follows: **F8** = 3 (Enable opening).



In this mode, when an opening command is sent:

- The barrier **B** stays closed until the operator **A** has reached fully open position.
- If the operator **A** is already fully open, the barrier **B** opens immediately.
- If the operator **A** is closed, it opens.

MCBF	
Models	**GT**
Standard boom L=4.2 m/14 ft	3.000.000
Skirt	-20%
Mobile foot	-20%
Articulated joint	-20%
Modular boom L=5.2 m/17 ft	-20%
Full-height skirt	-30%

📖 The MCBF value relates to the barrier only and does not refer to any applicable accessories.

📖 The GARD GT barrier has been designed to perform up to 3 million cycles. Thanks to its 24V DC motor, it is extremely reliable and requires very little maintenance.

⚠ Before carrying out any cleaning or maintenance, or replacing any parts, disconnect the device from the power supply.
⚠ This document informs the installer of the checks that must be carried out during maintenance.
⚠ If the barrier is not used for long periods of time, e.g. for installations at sites with seasonal closures, release the spring and remove the boom.
📖 For information on correct installation and adjustments, please see the product installation manual.
📖 For information on choosing products and accessories, please see our product catalogue.
📖 If the barrier with an articulated joint is used, check that the moving parts of the joint are in good condition. Replace them if necessary.

Every 250,000 cycles and, in any case, every 6 months of operation, you must perform the maintenance work indicated below.

Perform a general and complete check of the tightness of the nuts and bolts.
Lubricate the spring when it is fully extended.
Check the 45° boom balance and if necessary tension the balance spring, adjusting its traction operating on the hooking tie rods.
Grease all of the moving mechanical parts.
Check the warning and safety devices are working properly.
Check that the microswitch connected to the cabinet hatch is working correctly.
Check the microswitch connected to the manual release is working properly, and the microswitch connected to the release accessories (optional).
Check for any wear on the moving mechanical parts and check that they are working properly.
Check the cables are intact and connected correctly.

Every 1,000,000 cycles and, in any case, every 24 months of operation, you must perform the maintenance work indicated below.

Replace the balance spring.

ERROR MESSAGES	
E2	Adjustment error
E3	Encoder failure error
E4	Service test failure error
E7	Operating time error
E8	Open release-hatch error
E9	Obstacle detected during closing
E10	Obstacle detected during opening
E11	The maximum number of obstacles detected consecutively has been exceeded
E12	No line voltage
E14	Serial communication error
E15	Incompatible transmitter error
E16	Open SLAVE-motor hatch error
E24	Communication error or malfunction of a BUS safety device
E25	Conflicting addresses for configured BUS devices

NOTICES	
C0	Wire contact 1-2 (NC) is open.
i3	The wire contact 2-3 (NO) is closed.
i3P	The wire contact 2-3P (NO) is closed.
i4	The wire contact 2-4 (NO) is closed.
i7	The wire contact 2-7 (NO) is closed.

⚠

AFFIX THE PRODUCT LABEL FROM THE BOX HERE

CAME

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