CAME

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FA01905-EN

Automatic road barriers
GARD PX

GPX40MGP GPX40MGS GPX40MXP
GPX40MCP

INSTALLATION MANUAL

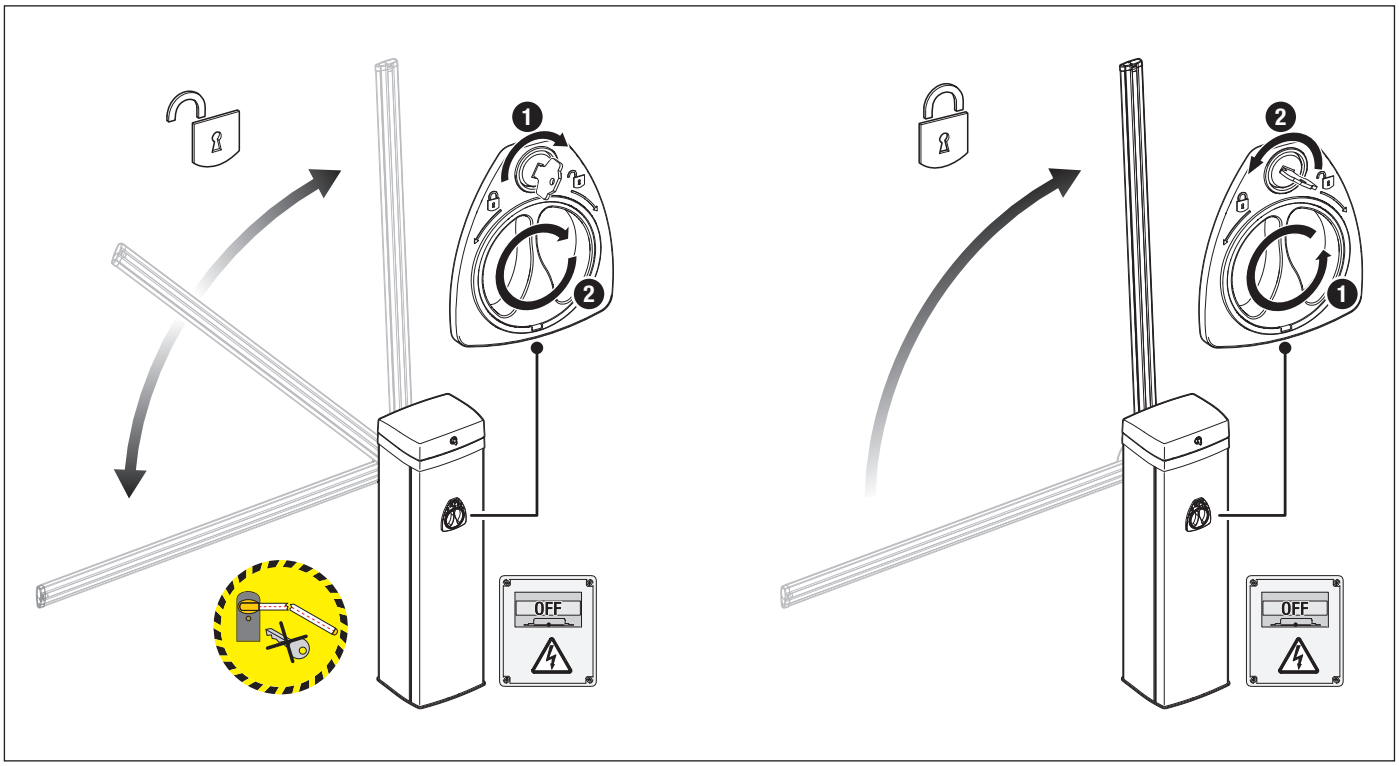
EN English

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.

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



GENERAL PRECAUTIONS FOR INSTALLERS

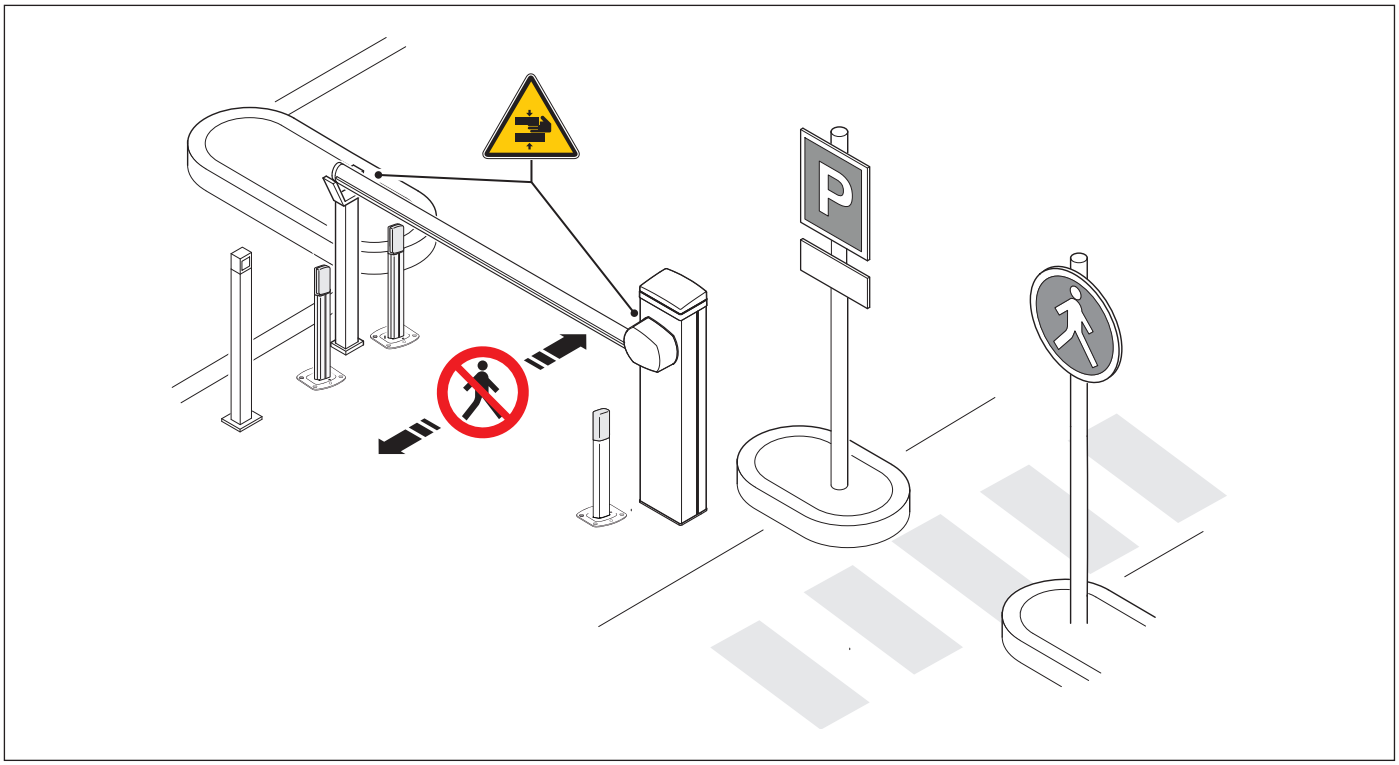
⚠ Important safety instructions.

⚠ 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. • This product is defined by the Machinery Directive (2006/42/EC) as partly completed machinery. • Partly completed machinery means an assembly which is almost machinery but which cannot in itself perform a specific application. • Partly completed machinery is only intended to be incorporated into or assembled with other machinery or other partly completed machinery or equipment thereby forming machinery to which the Machinery Directive (2006/42/EC) applies. • The final installation must comply with the Machinery Directive (2006/42/EC) and the European reference standards in force. • 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. It should completely cut off the power supply according to category III surcharge conditions. • 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. • Before handing over to the final user, check that the system complies with the harmonised standards and the essential requirements of the Machinery Directive (2006/42/EC). • 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 assistance centre, 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). • 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.

Main points of danger for people



Risk of trapping hands.

No transiting.

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. Simply 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.

PRODUCT DATA AND INFORMATION

Key

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

📖 The measurements, unless otherwise stated, are in millimetres.

Description

803BB-0120
GPX40MGS - Automatic barrier with irreversible gearmotor and brushless motor; painted galvanised steel cabinet.

803BB-0100
GPX40MGP - Automatic barrier with irreversible gearmotor and brushless motor; painted galvanised steel cabinet. Supplied complete with: 009SMA and an interface for direct connection to an entrance/exit post for PKE and PKM parking systems.

803BB-0150
GPX40MCP - Automatic barrier with irreversible gearmotor and brushless motor; galvanised steel cabinet painted in a personalised RAL colour. Supplied complete with: 009SMA and an interface for direct connection to an entrance/exit post for PKE and PKM parking systems.

803BB-0340
GPX40MXP - Automatic barrier with irreversible gearmotor and brushless motor; painted AISI 430 steel cabinet. Supplied complete with: 009SMA and an interface for direct connection to an entrance/exit post for PKE and PKM parking systems.

Intended use

The ideal solution for passage ways with heavy transit flows

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

Usage limitations

MODELS	GPX40MGS	GPX40MGP	GPX40MCP	GPX40MXP
Max. net clearance width (m)	3,8	3,8	3,8	3,8

Technical data

MODELS	GPX40MGS	GPX40MGP	GPX40MCP	GPX40MXP
Power supply (V - 50/60 Hz)	100 AC to 240 AC	100 AC to 240 AC	100 AC to 240 AC	100 AC to 240 AC
Motor power supply (V)	36 DC	36 DC	36 DC	36 DC
Standby consumption (W)	2,5	3,3	3,3	3,3
Power (W)	270	270	270	270
Colour	7043	-	7043	7043
Operating temperature (°C)	-20 to +55 (-40 with item 803XA-0260)	-20 to +55 (-40 with item 803XA-0260)	-20 to +55 (-40 with item 803XA-0260)	-20 to +55 (-40 with item 803XA-0260)
Torque (Nm)	100	100	100	100
Opening time at 90° (s)	1 ÷ 2	1 ÷ 2	1 ÷ 2	1 ÷ 2
Duty cycle (%)	CONTINUOUS OPERATION	CONTINUOUS OPERATION	CONTINUOUS OPERATION	CONTINUOUS OPERATION
Protection rating (IP)	54	54	54	54
Insulation class	I	I	I	I
Weight (kg)	62	62,5	62,5	62,5
Storage temperature (°C)*	-20 ÷ +70	-20 ÷ +70	-20 ÷ +70	-20 ÷ +70
Average life (cycles)**	10.000.000	10.000.000	10.000.000	10.000.000

(*) 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. The average product life should not be confused with the product warranty.

Fuse table

MODELS	GPX40MGS	GPX40MGP	GPX40MCP	GPX40MXP
Line fuse	3.15 A F	3.15 A F	3.15 A F	3.15 A F
Accessory fuse	2 A F	2 A F	2 A F	2 A F
Cartridge heater fuse	1 A T	1 A T	1 A T	1 A T

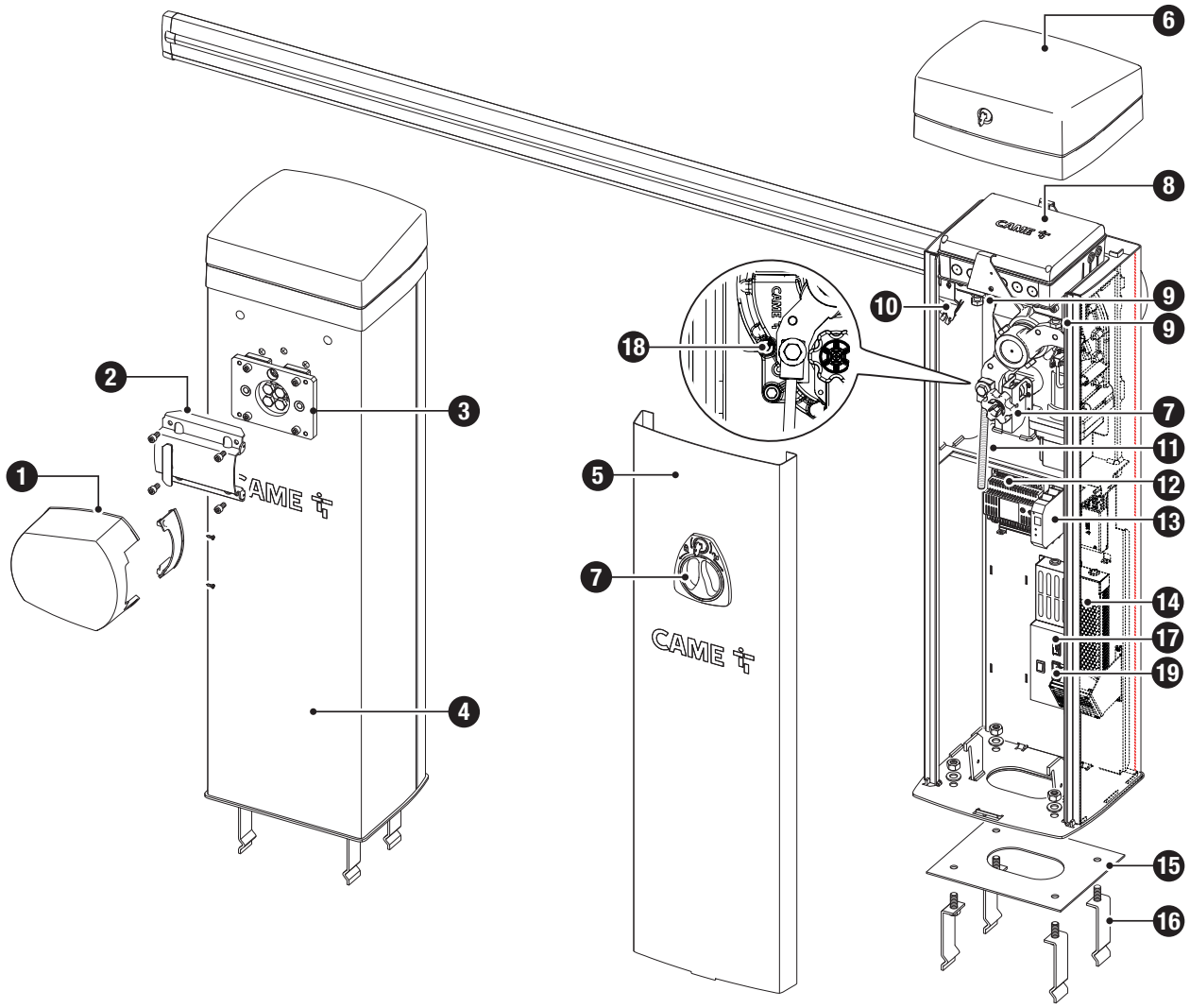
Description of parts

Barrier

1. Anti-shearing cover
2. Fastening flange
3. Boom anchoring plate
4. Cabinet
5. Inspection hatch
6. Cover
7. Boom release/lock knob
8. Control panel
9. Mechanical stop for the boom adjustment
10. Auxiliary status contacts*
11. Spring anchoring pin
12. I/O board RS485*
13. SMA module*
14. Auxiliary
15. Anchoring plate
16. Anchoring bracket
17. Fuse for cartridge heater or fan
18. Cartridge heater**
19. Line fuse

* Only for GPX40MCP, GPX40MGP and GPX40MXP.

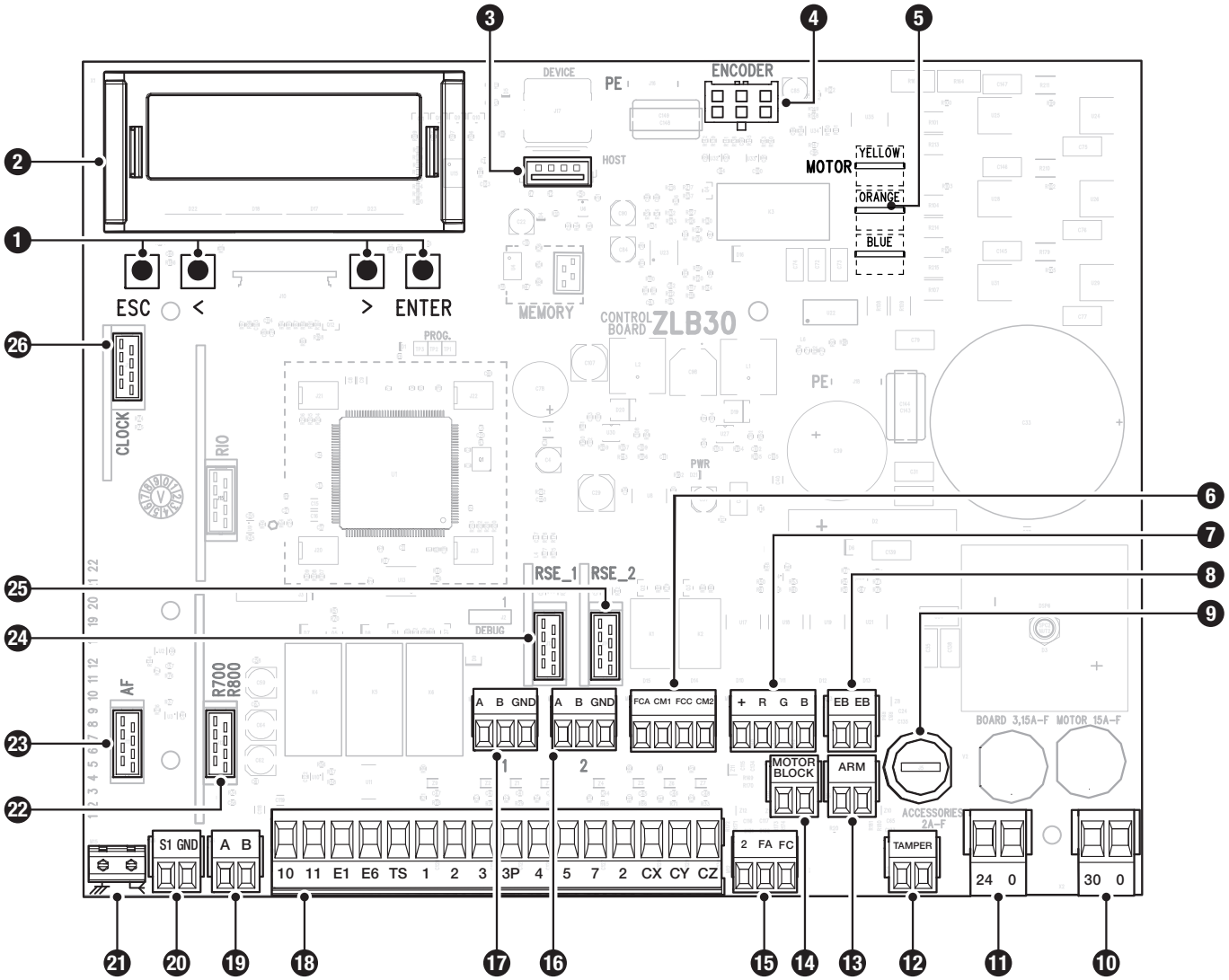
** Only for GPX40MCP, GPX40MGP, GPX40MXP and GPX40MGS.



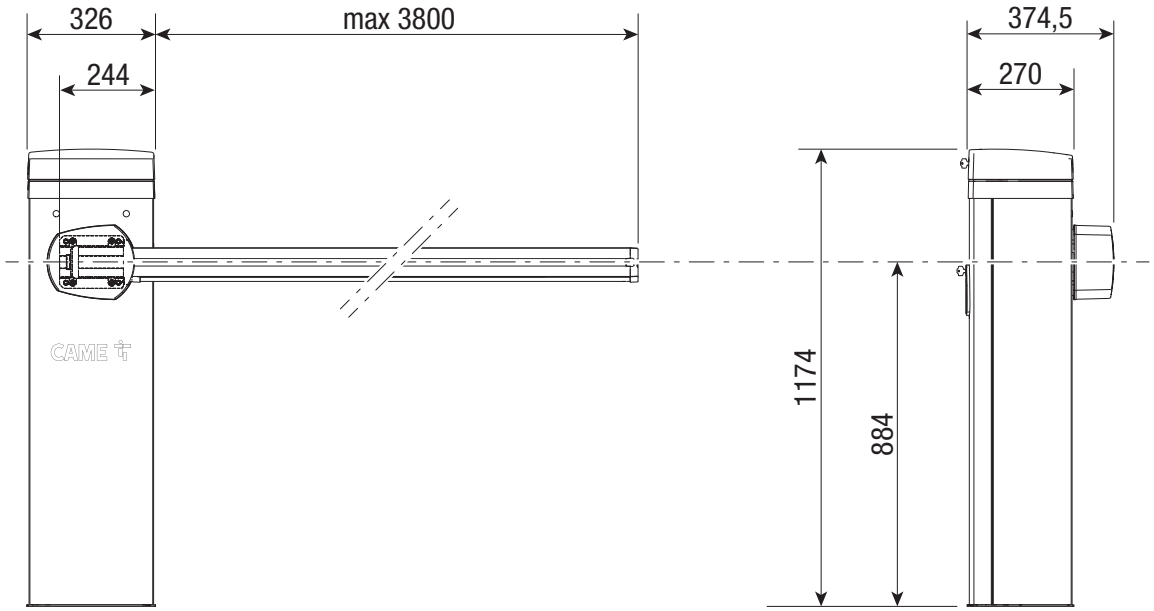
Control board

❶ Programming buttons
❷ Display
❸ USB stick connector
❹ Encoder connector
❺ Motor connector
A p.n. ferrite ECQK922091 is applied to the cable
❻ Terminal board for barrier status
❼ Terminal board for connecting the warning LED strip
❽ Terminal board not used
❾ Accessories fuse
❿ Terminal board for motor power supply
⓫ Terminal board for power supply to the control board
⓬ Terminal board for connecting the open cover safety microswitch (NC contact)
⓭ Terminal board for NC contact for boom drop away
⓮ Terminal board for connecting the released gearmotor safety microswitch (NC contact)
⓯ Terminal boards for connecting micro limit switches (NC contact)*
⓰ Terminal board associated with the RSE_2 connector for CRP connection, IO 485 card or Modbus RTU interface
⓱ Terminal board associated with the RSE_1 connector for paired, alternate or CRP connection
⓲ Terminal board for connecting control and safety devices
⓳ Terminal board for connecting the keypad selector
⓴ Terminal board for connecting the transponder selector switch
㉑ Terminal board for connecting the antenna
㉒ Connector for the R700 or R800 decoding card
㉓ Connector for plug-in radio frequency card (AF)
㉔ RSE_1 connector for RSE card
㉕ RSE_2 connector for RSE card
㉖ Connector for the clock card (806SA-0120)

* Only for GPX40MCP, GPX40MGP and GPX40MXP.



Size



Cable types and minimum thicknesses

CABLE LENGTH (m)	< 10	10 to 20	from 20 to 30
Power supply 230 V AC	3G x 1.5 mm²	3G x 1.5 mm²	3G x 2.5 mm²
24 V AC - DC Flashing beacon	2 x 1 mm²	2 x 1 mm²	2 x 1 mm²
TX Photocells	2 x 0.5 mm²	2 x 0.5 mm²	2 x 0.5 mm²
RX photocells	4 x 0.5 mm²	4 x 0.5 mm²	4 x 0.5 mm²
Command and control devices	*no. x 0.5 mm²	*no. x 0.5 mm²	*no. x 0.5 mm²
Antenna		RG58 max 10 m	

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

📖 For installation in an outdoor environment, use cables with properties at least equivalent to those of type H05RN-F (with designation 60245 IEC 57).

📖 For installation in an indoor environment, use cables with properties at least equivalent to those of type H05VV-F (designation to 60227 IEC 53).

📖 If the cable lengths differ from those specified in the table, define the cable cross-sections according to the actual power draw of the connected devices and in line with regulation CEI EN 60204-1.

📖 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.

📖 For paired and CRP connection, use a UTP CAT5 cable. Maximum length 1000 metres.

Wind resistance

📖 The table shows the boom wind-load resistance.

📖 Resistance class with reference to the EN 13241 standard.

Type	Boom 2.25 m	Boom 3.05 m	Boom 4.05 m
Resistance class	5	4	3
Wind pressure [Pa]	1200	1000	800
Maximum wind speed [km/h]	144	132	118

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 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.

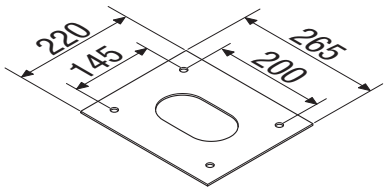
Preliminary operations

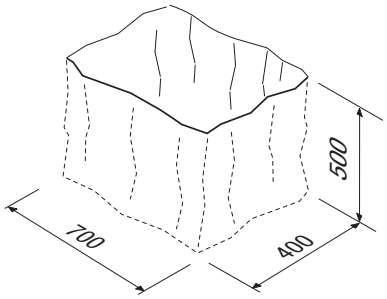
If the flooring does not allow the device to be fastened in a solid and stable way, lay a cement slab.

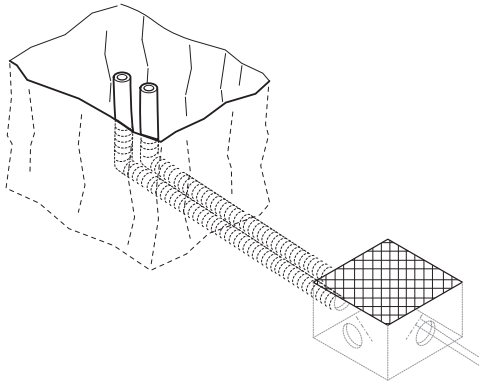
Dig a hole for the foundation frame.

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.





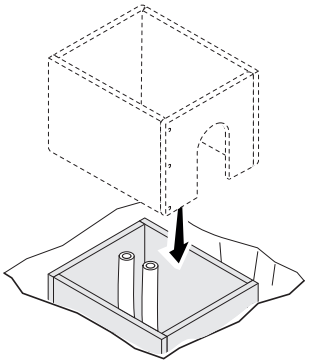


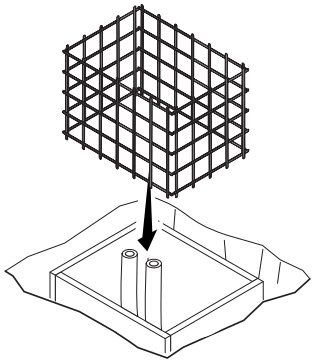
Laying the anchoring plate

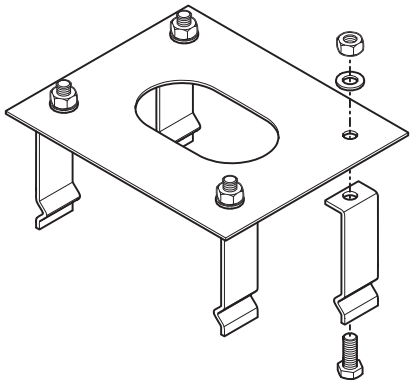
Set up a foundation frame that is larger than the anchoring plate.

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.

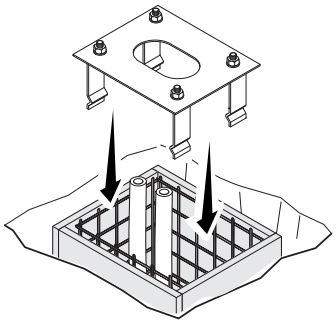
The tubes must pass through the existing holes.

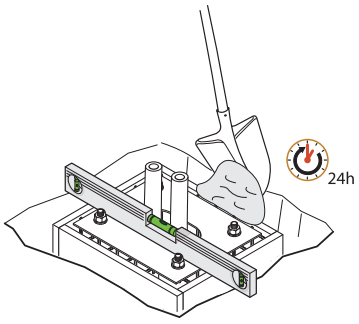
Cast cement into the foundation frame.

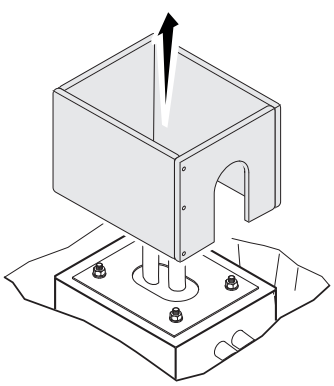
The plate must be perfectly level and the screw threads completely above surface.

Wait at least 24 hours for the cement to dry.

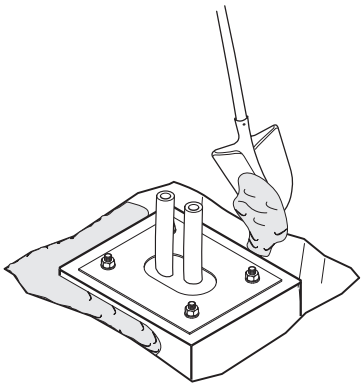
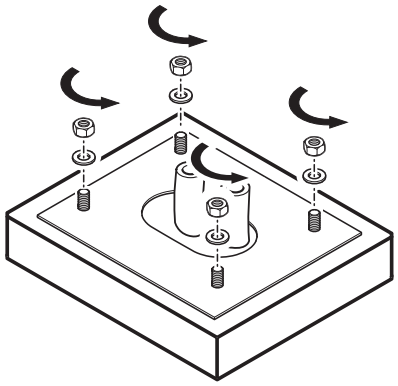
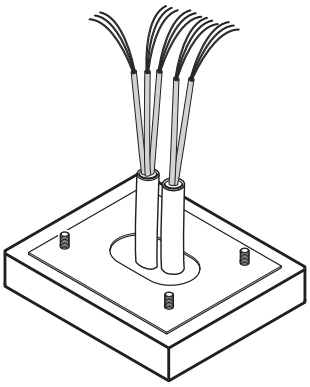
Remove the foundation frame.





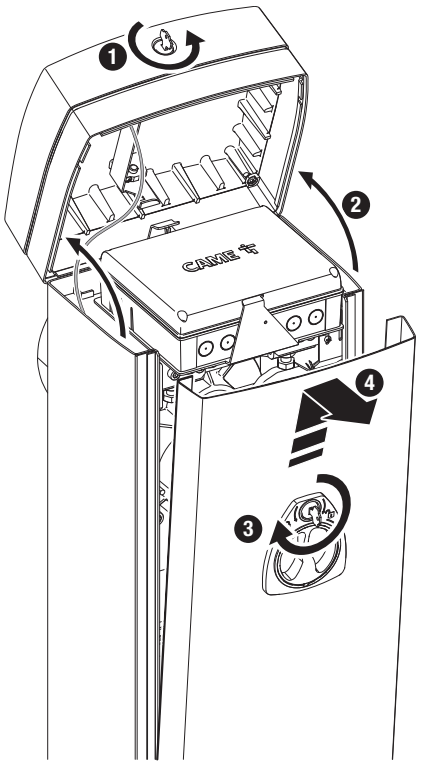


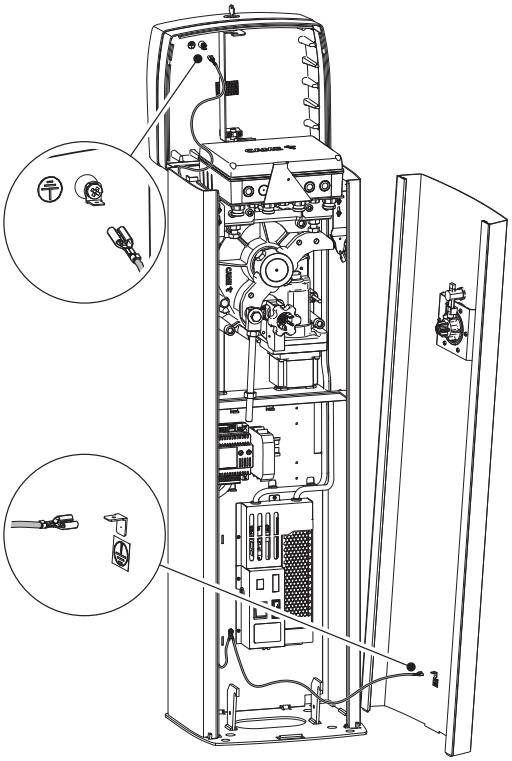
Fill the hole with soil around the concrete block.
Remove the nuts from the screws.
Thread the electrical cables into the tubes so that they protrude by about 1500 mm.

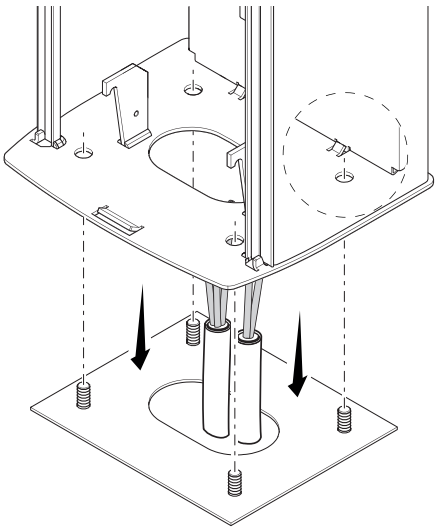
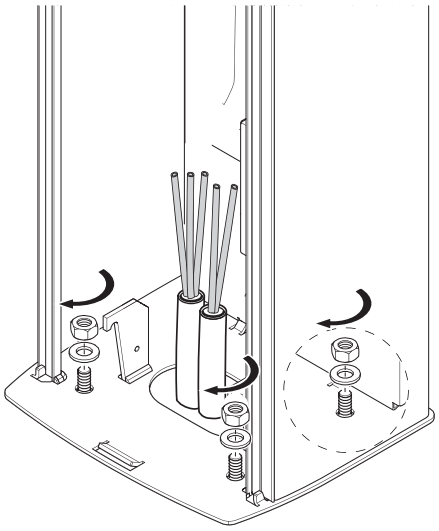
Preparing the barrier

With the cover open, the operator does not work.





Fastening the barrier

Changing the boom opening direction

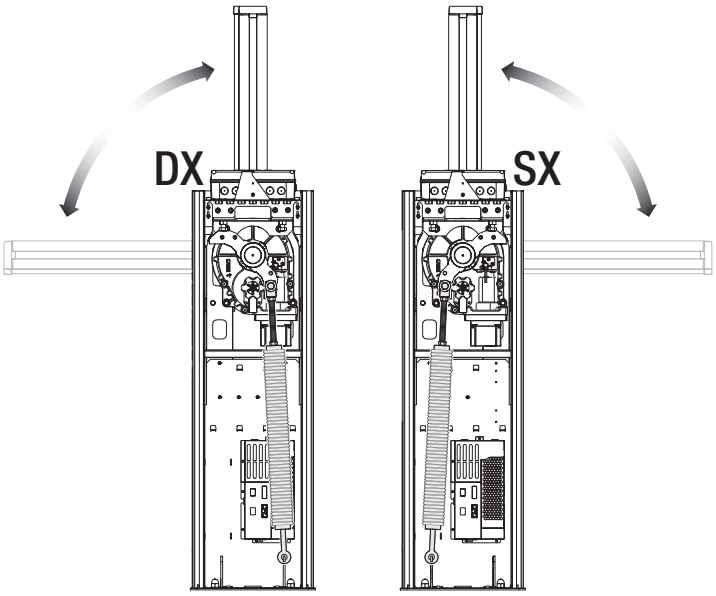
The barrier is set up for installation on the left.

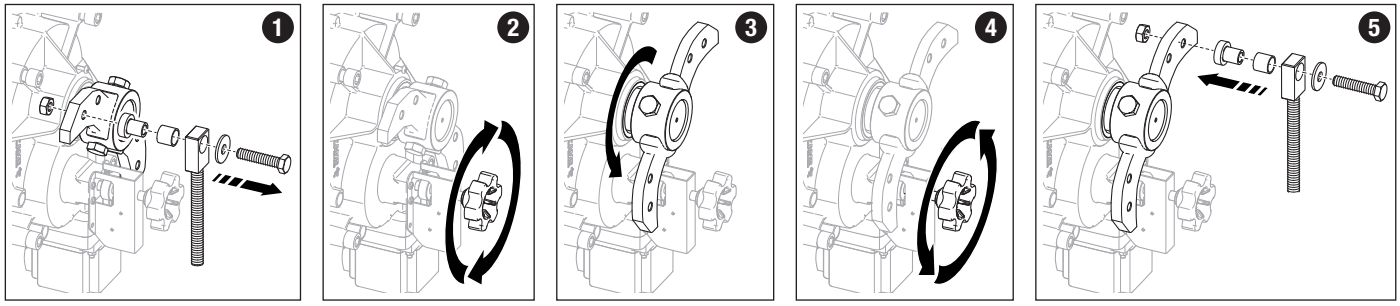
The direction of rotation must be changed without the boom and spring installed.

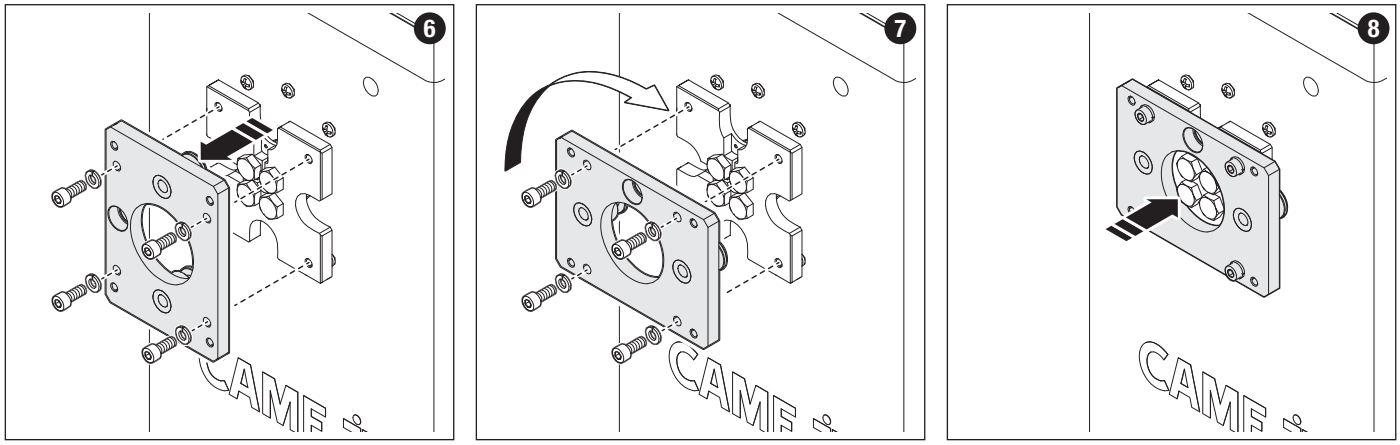
1. Remove the anchoring pin from the lever arm
2. Release the gearmotor turning the knob clockwise.
3. Turn the lever arm by 90°.
4. Lock the gearmotor turning the knob anticlockwise.
5. Fasten the anchoring pin to the opposite hole on the lever arm.

The hole to which fasten the anchor pin also depends on the balance spring chosen according to the boom length. Please see the section [Choosing the balance spring and fastening hole].

6. Removes the boom anchoring plate
7. Turn the boom anchoring plate 90°
8. Fasten the boom anchoring plate to the crankshaft plate

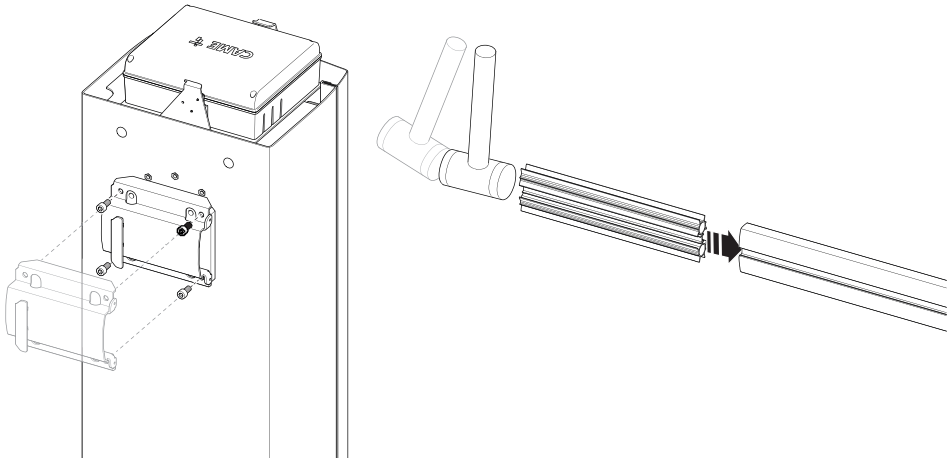




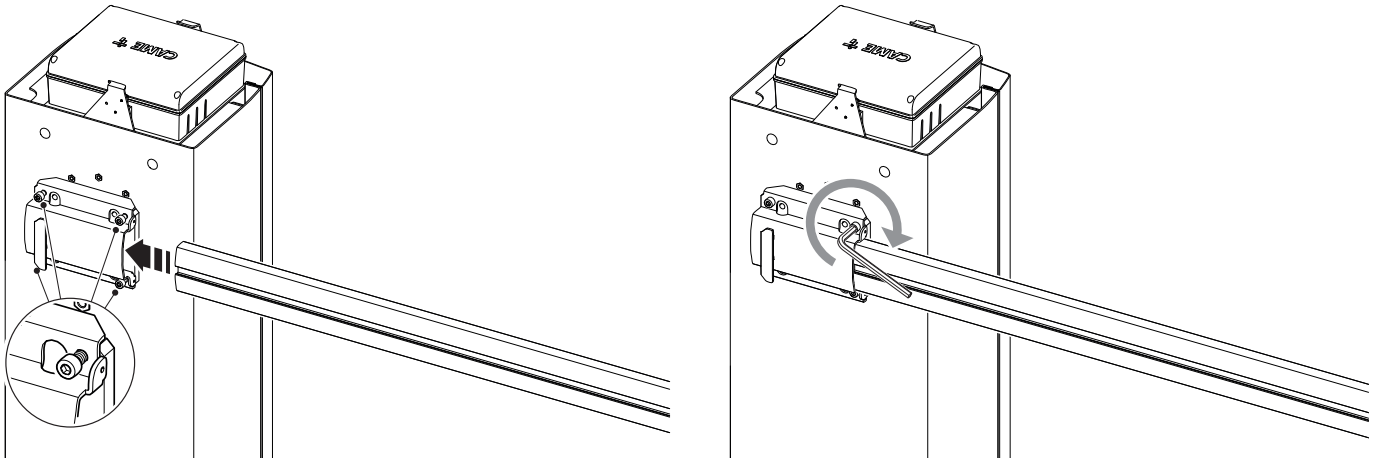


Boom installation

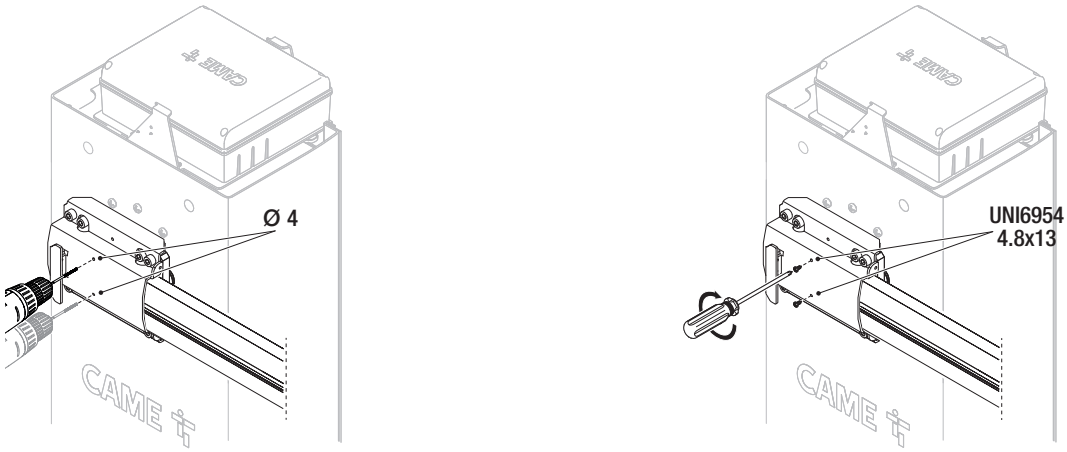
Install the boom-attachment cover on the anchoring plate. Leave the screws slightly loose for easier fitting of the boom later.
Insert the reinforcement inside the boom.



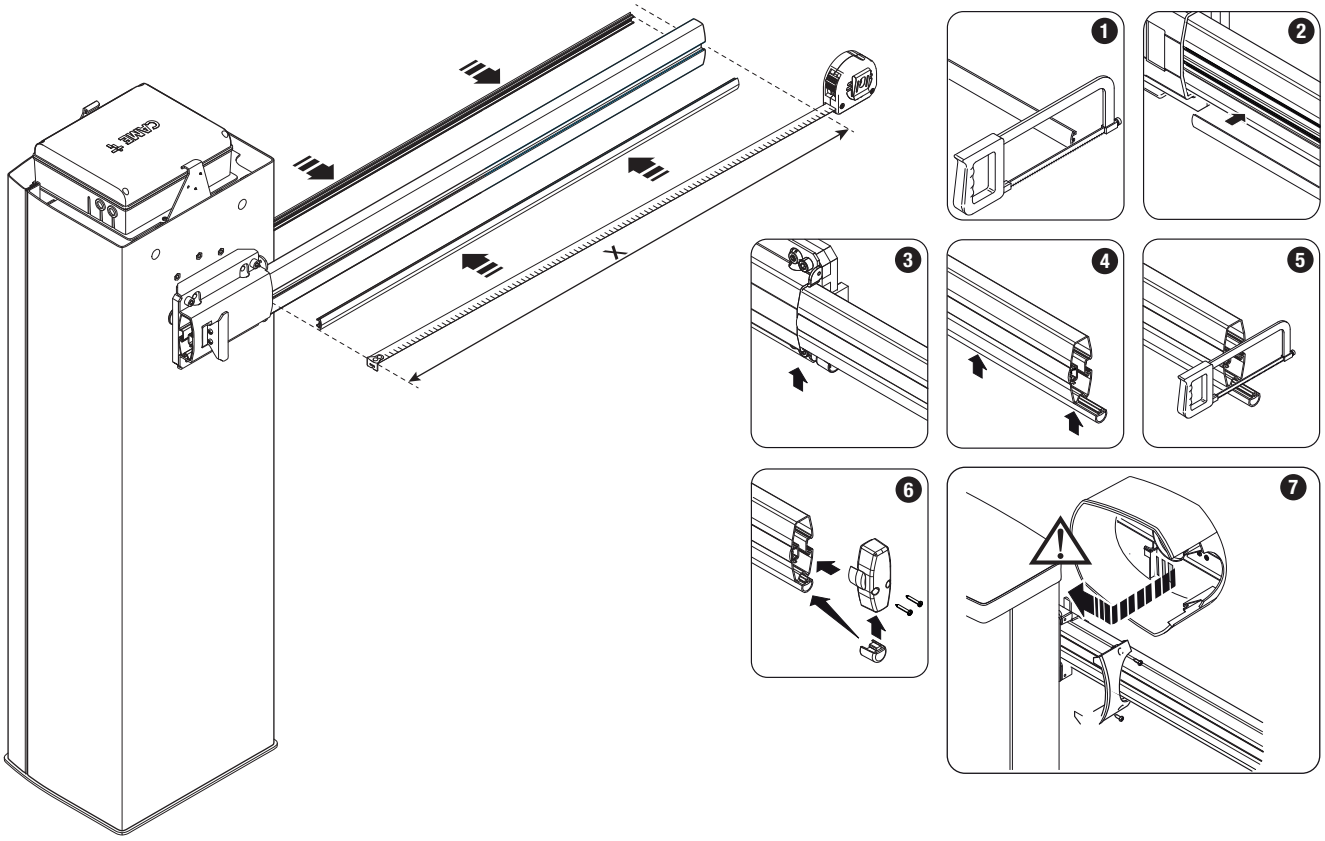
Fit the boom into the fastening flange.
Tighten the screws firmly.



Drill the fastening flange.
Fasten the boom with the screws.



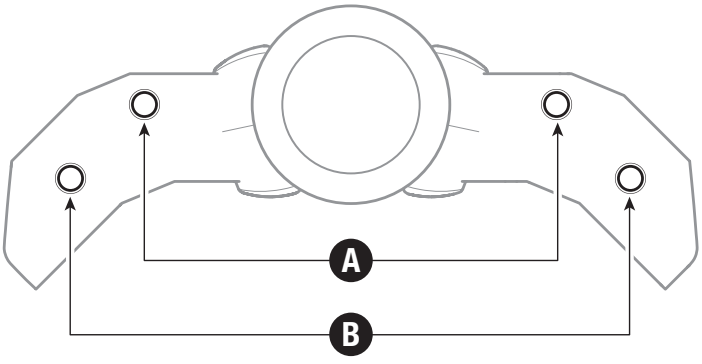
❶ Cut the slot-cover profiles to the same size as the boom slot minus 10 millimetres.
❷ Insert the slot-cover profiles into the grooves on both sides of the boom.
❺ Cut the excess part of the profile, leaving a 7 mm overhang.
❹ Insert the anti-impact rubber profile into the groove, aligning it with the end cap.
❸ Fit the rubber end cap in position.
❻ Insert the rubber profile end cap into the groove in the boom closing cap. Use the screws to fasten the boom end cap.
❼ Fit the anti-shearing protective cover onto the boom-attachment cover and fasten it using the screws supplied.



Choosing balance spring and fastening hole

Spring code (colour)	001G02040 Ø 40 mm (yellow)		001G04060 Ø 50 mm (green)	
Hole to which fasten the spring	A	B	A	B
Passage width clearance (m)	from 1.5 to 1.75	from 1.75 to 2.25	from 2.25 to 2.75.	from 2.75 to 3.75.

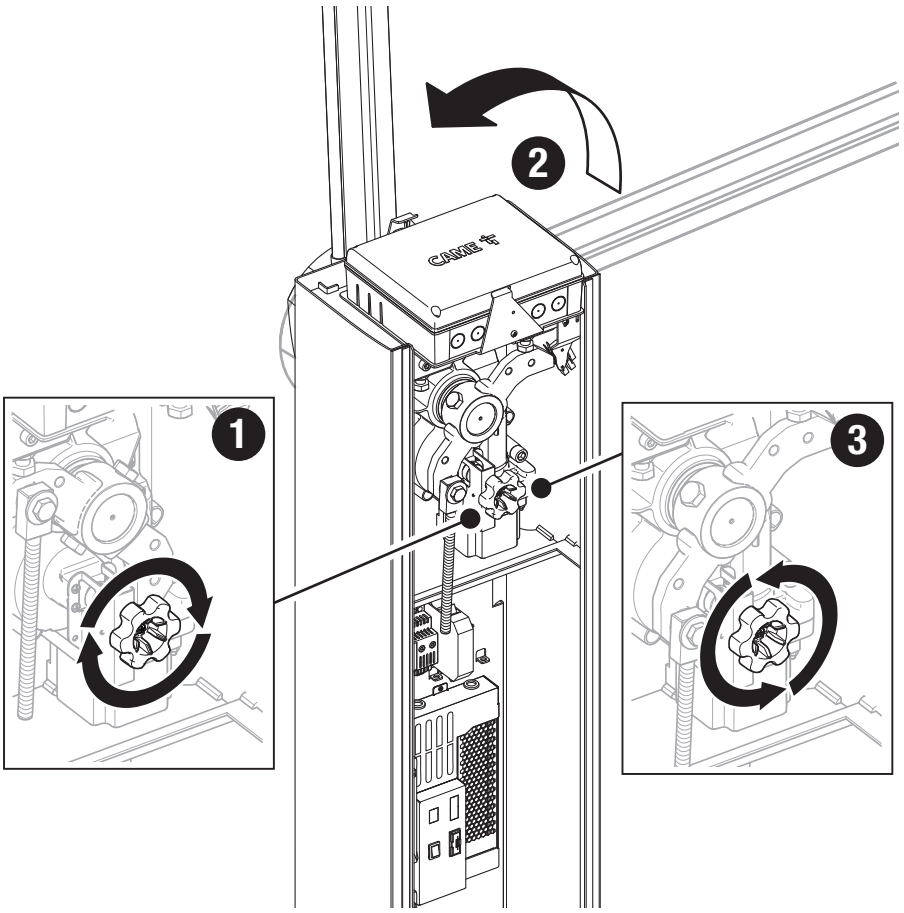
📖 Simple boom means the boom complete with slot cover, cap and rubber profile.

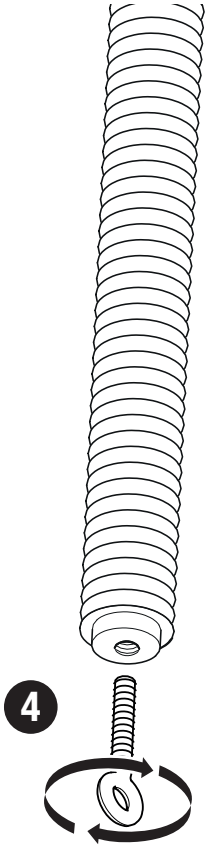


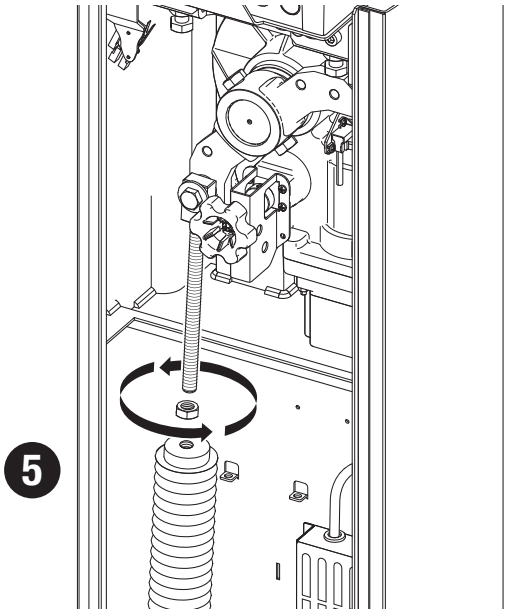
Assembling the balance spring

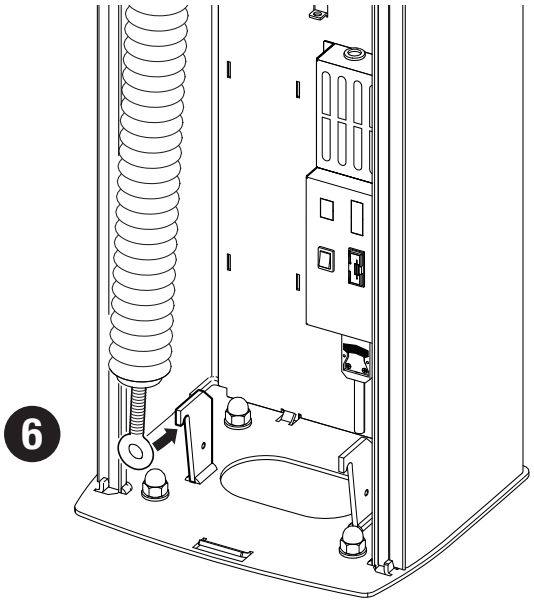
❶ Release the gearmotor.
❷ Position the boom vertically.
❸ Lock the gearmotor

❹ Tighten the eyelet tie rod to the lower part of the spring.
❺ Screw the spring to the anchoring pin.
❻ Hook the eyelet rod onto the anchoring bracket.



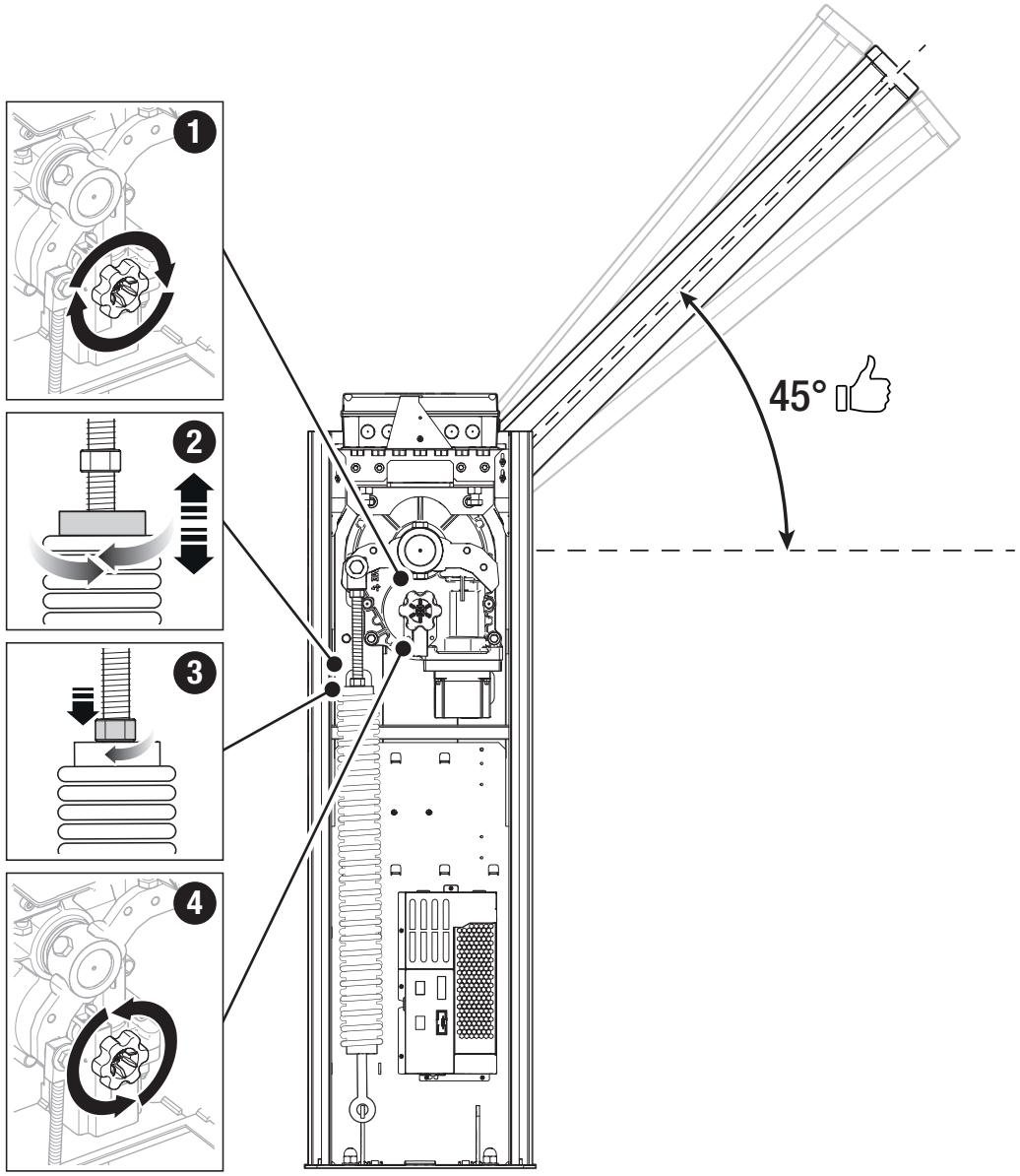






Balancing the boom

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.



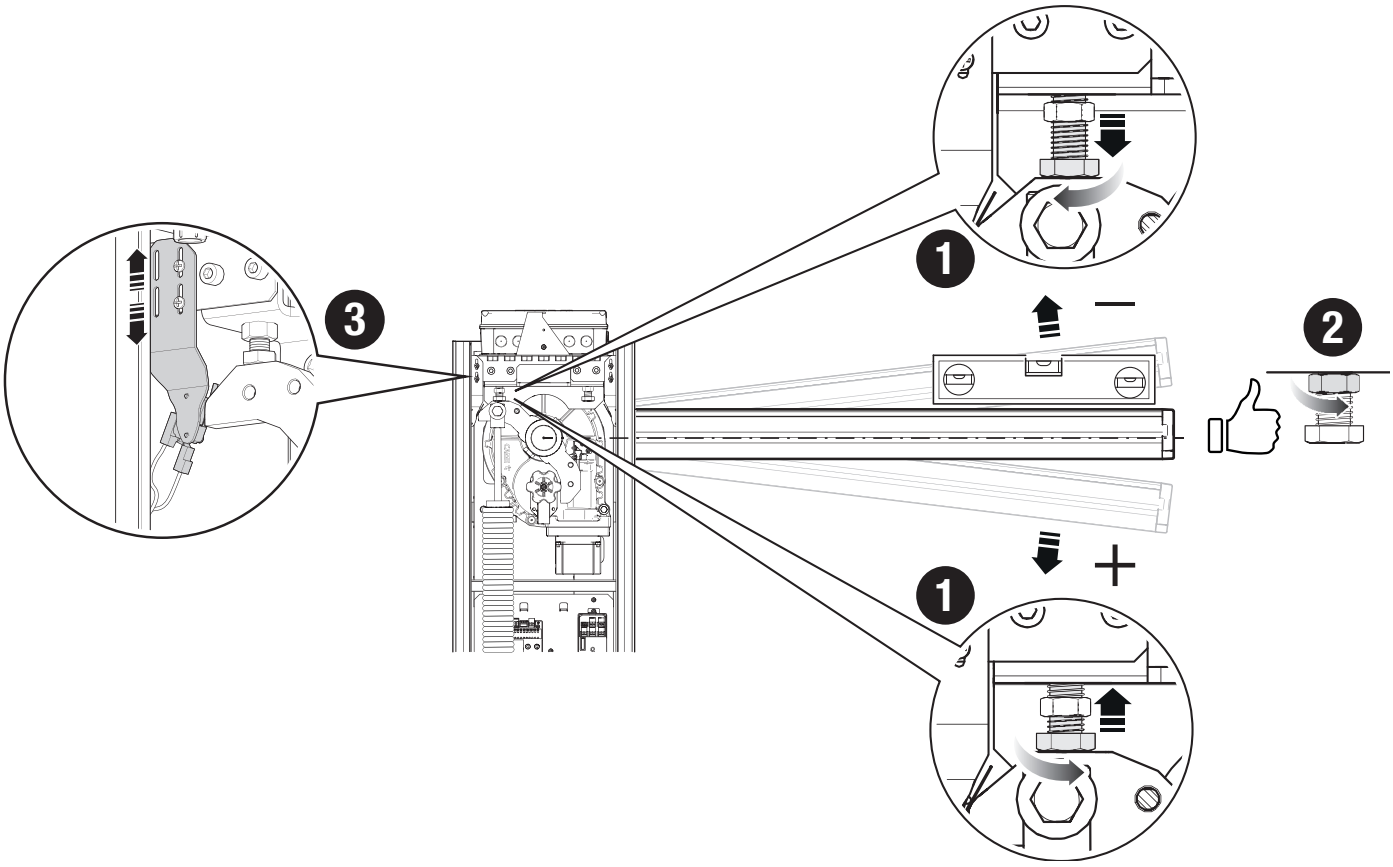
Determining the travel end points with mechanical limit switches

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.
Lower the boom.
❶ Turn the mechanical stop until you reach the desired boom position.
❷ Fasten the mechanical stop with a locknut.
❸ Check that the microswitch that detects the position of the boom clicks correctly.*
Lock the gearmotor

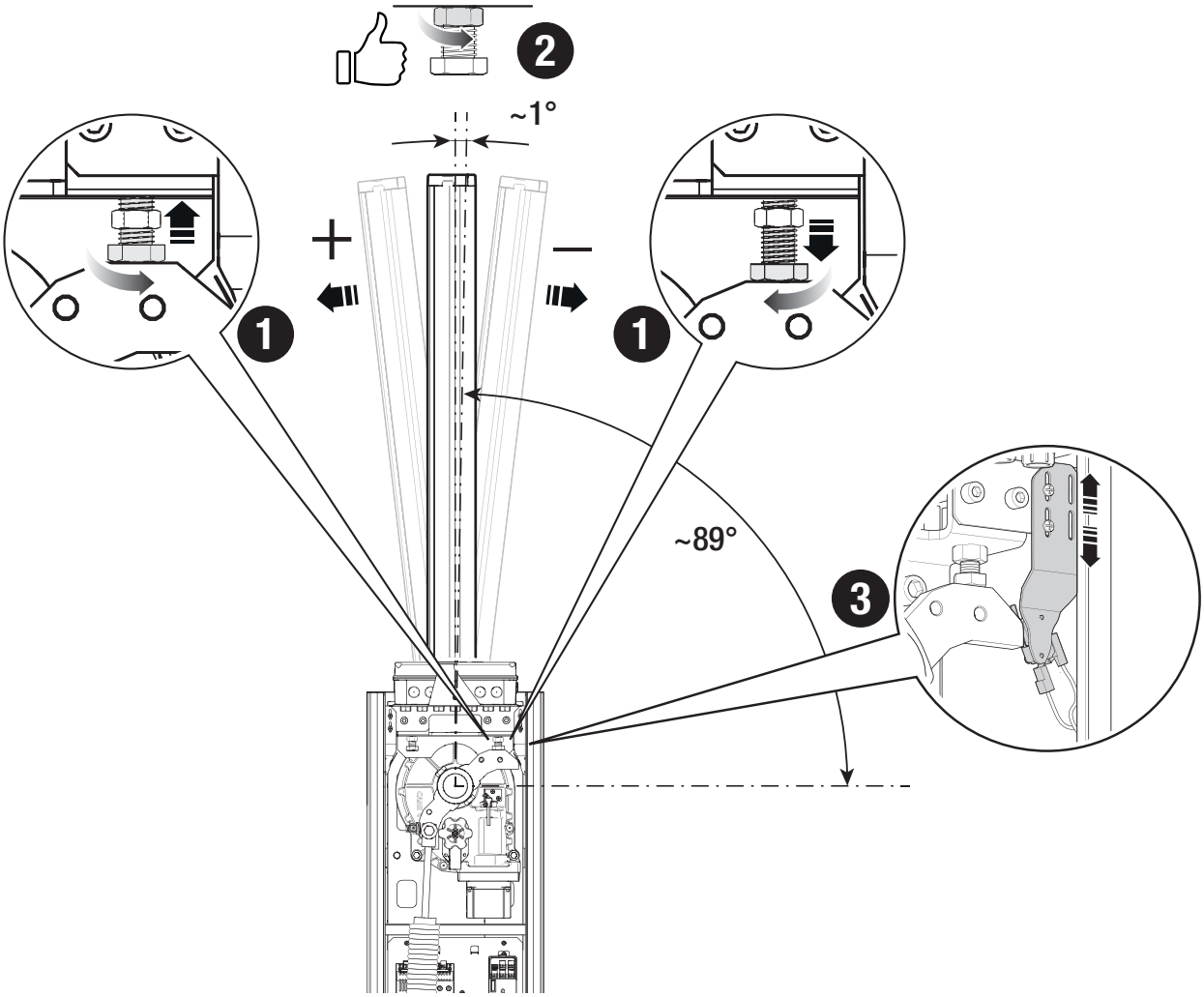
* Only for GPX40MCP, GPX40MGP and GPX40MXP.



Correct the boom's vertical position

Release the gearmotor.
Open the inspection hatch.
Raise the boom.
❶ Turn the mechanical stop until you reach the desired boom position.
❷ Fasten the mechanical stop with a locknut.
❸ Check that the microswitch that detects the position of the boom clicks correctly.*
Lock the gearmotor

* Only for GPX40MCP, GPX40MGP and GPX40MXP.

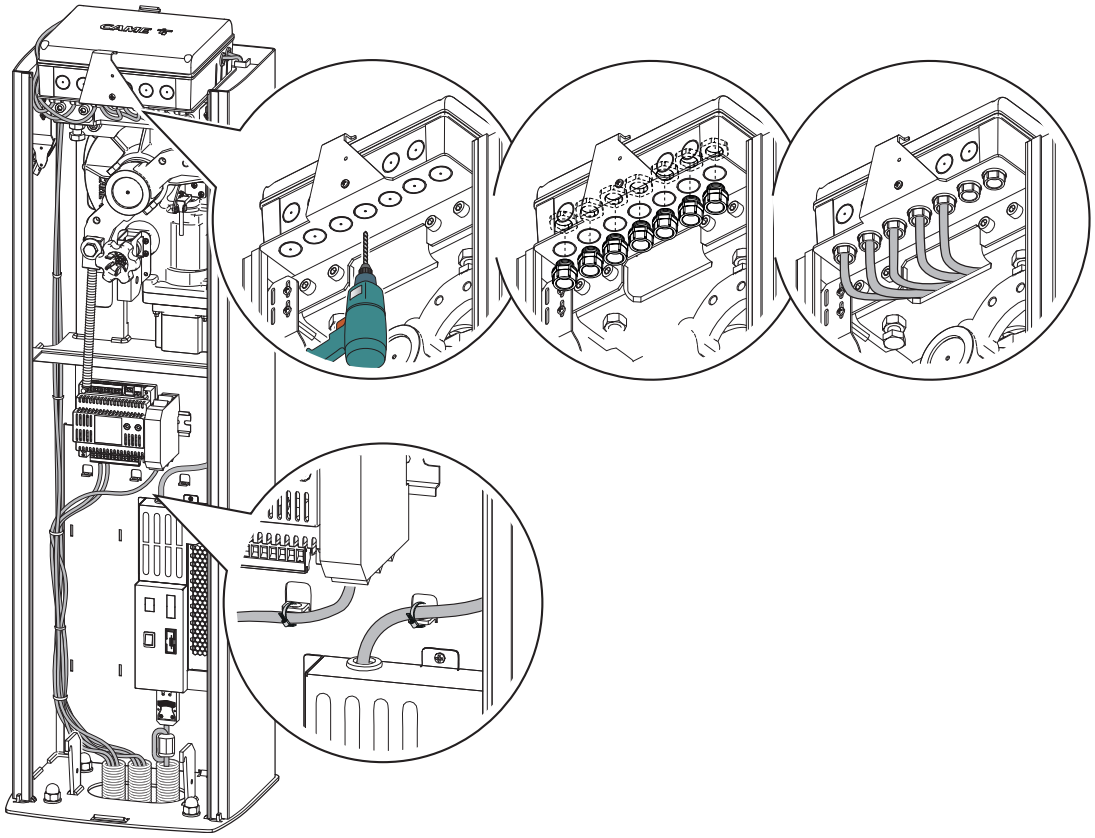


ELECTRICAL CONNECTIONS

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.



Power supply

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.

Connecting to the electrical network

❶ Button for turning the device on/off.

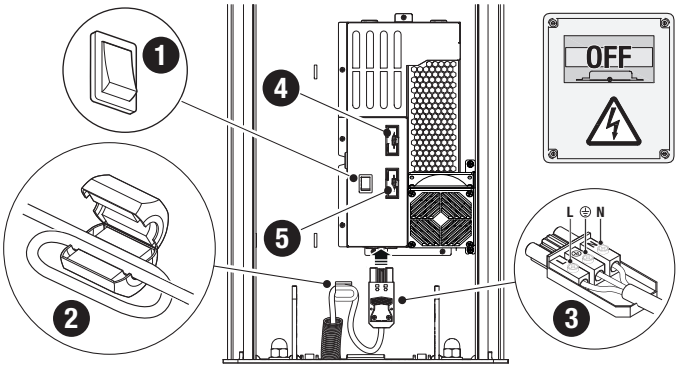
❷ Apply the ferrite supplied to the power supply cable.
Ferrite type p.n. ECQK922091.

📖 The cable must pass through the ferrite twice (2 turns).

❸ Connect the power cable as shown.

❹ Fuse for cartridge heater or fan

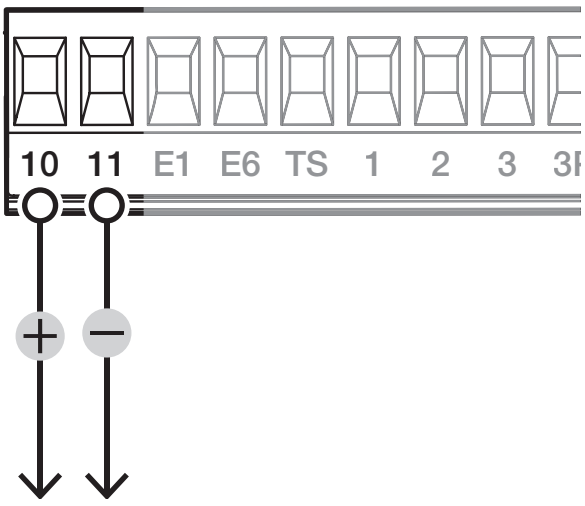
❺ Line fuse



Power supply output for accessories

The output normally delivers 24 V DC.

📖 The sum of the power draw for the connected accessories must not exceed 40 W.



Maximum capacity of contacts

Device	Output	Power supply (V)	Power (W)
Accessories	10 - 11	24 DC	40
Additional light	10 - E1	24 DC	20
Flashing beacon	10 - E1	24 DC	20
Operator status warning light	10 - 5	24 DC	3
RGB LED strip	-	-	13,5

📖 The sum of the power draw for the connected accessories must not exceed 40 W.

Command and control devices

❶ Antenna with RG58 cable

❷ Card reader

❸ Transponder selector switch

❹ Keypad selector

❺ STOP button (NC contact)

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

📖 See function [Total stop].

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

❻ Control device (NO contact)

Open command

📖 When the [HOLD-TO-RUN] function is active, the control device must be connected during OPENING.

❼ Control device (NO contact)

Open command

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

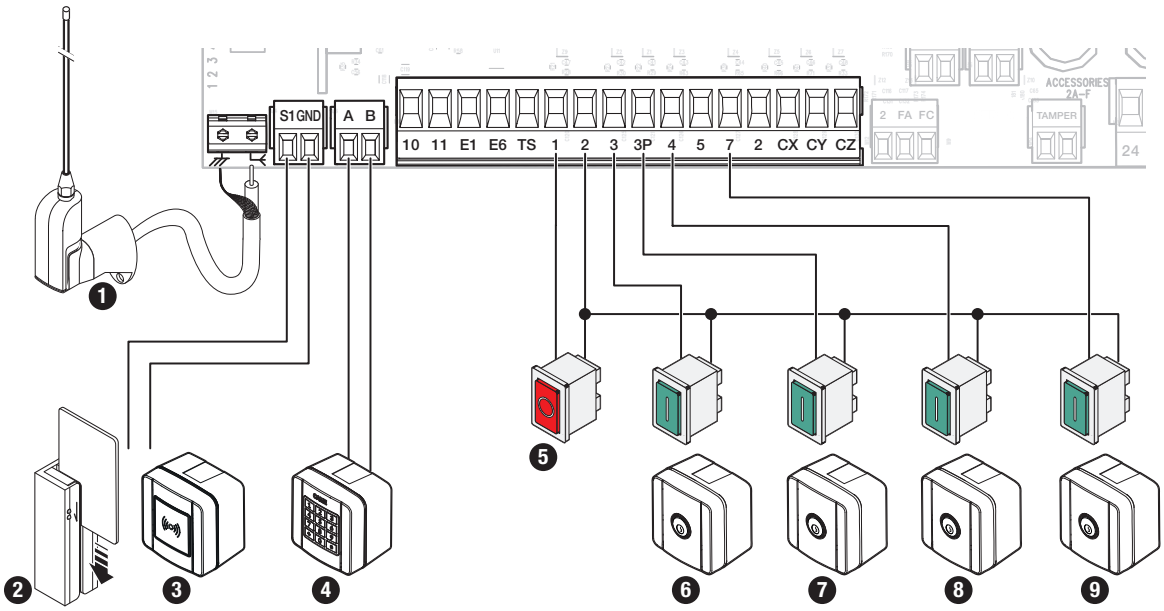
❽ Control device (NO contact)

Close command

📖 When the [HOLD-TO-RUN] function is active, the control device must be connected during CLOSING.

❾ Control device (NO contact)

OPEN-CLOSE function



Signalling devices

❶ Additional light

It increases the light in the manoeuvring area.

❷ Additional flashing beacon

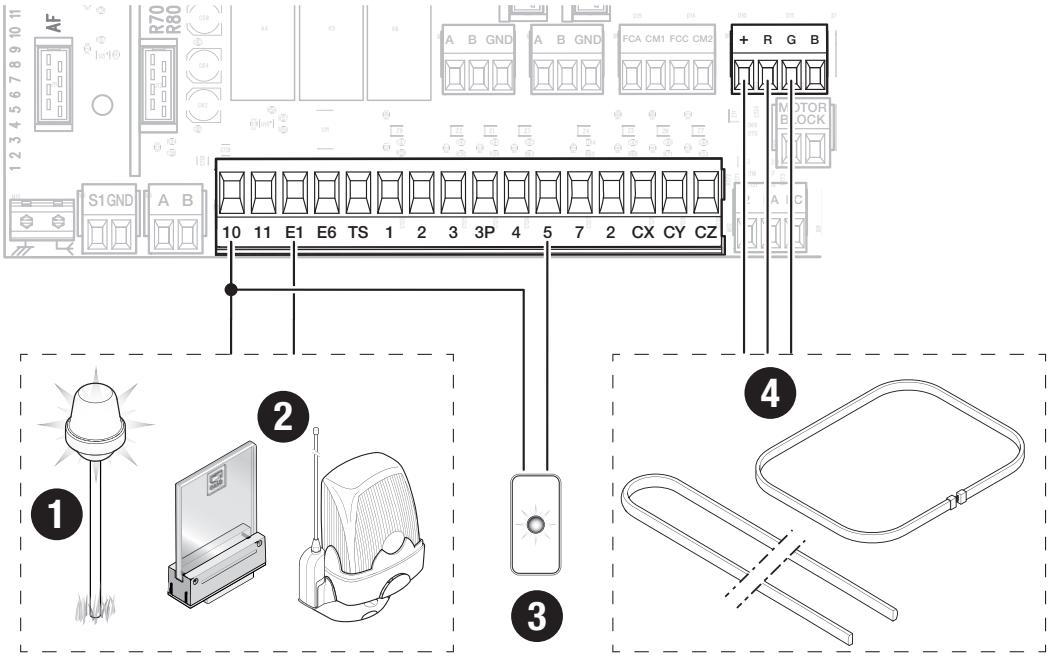
It flashes when the operator opens and closes.

❸ Operator status warning light

It notifies the user of the operator status.

❹ RGB LED strip and/or RGB crown

If the red LEDs are flashing, the operator is moving.
If the green LEDs are on, the operator is open.
If the red LEDs are on, the operator is closed.
If the red LEDs are flashing quickly, the inspection hatch is open, the gearmotor is released or the boom has dropped away.



Safety devices

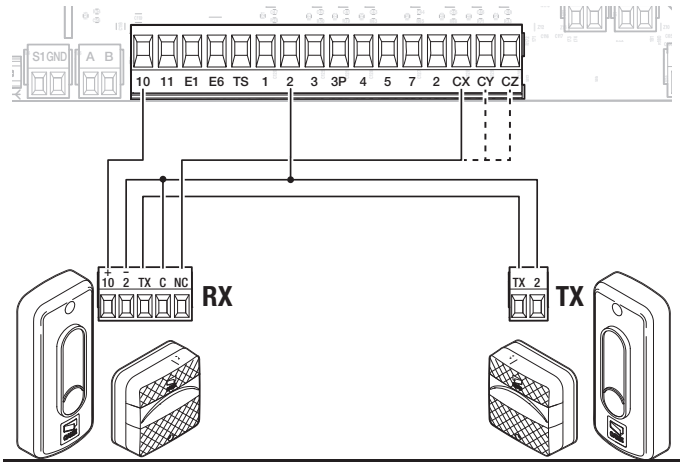
Connect the safety devices to the CX, CY and/or CZ inputs (NC contacts).
During programming, configure the type of action that must be performed by the device connected to the input.

📖 If contacts CX, CY and CZ are not used, they must be deactivated during programming.

DIR / DELTA-S photocells

Standard connection

📖 Multiple photocell pairs can be connected.

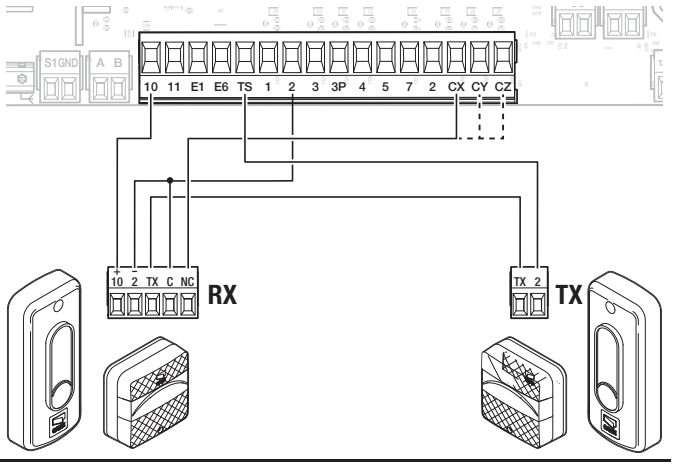


DIR / DELTA-S photocells

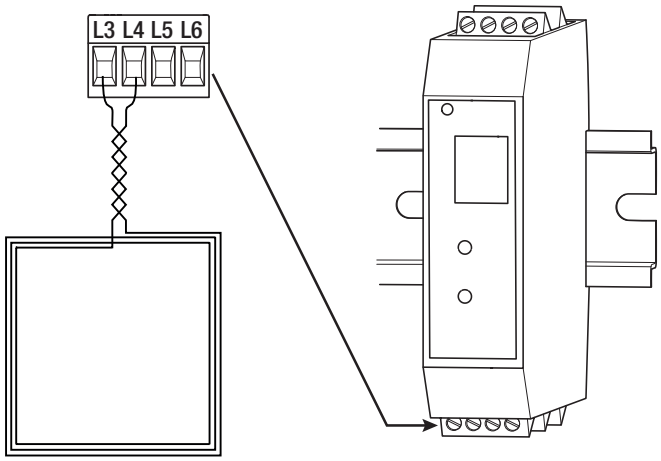
Connection with safety test

📖 Multiple photocell pairs can be connected.

📖 See function [F5] Safety devices test.



Connecting the magnetic loop to the SMA module*

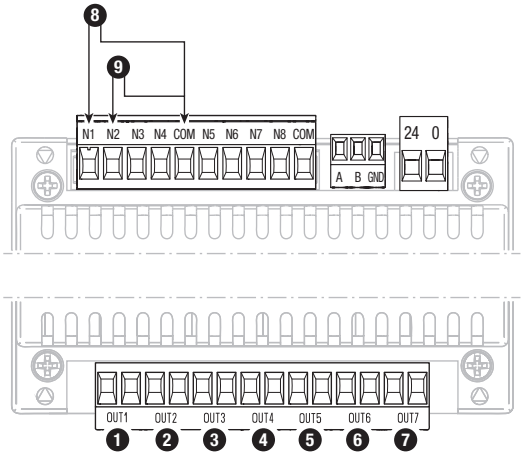


* Only for GPX40MCP, GPX40MGP and GPX40MXP.

Function of the outputs of the RS485 I/O board*

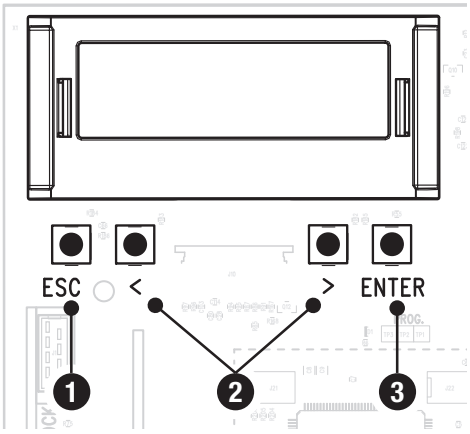
❶ Contact output indicating obstacle detection
❷ Contact output indicating open boom
❸ Contact output indicating closed boom
❹ Contact output indicating boom drop-away
❺ Contact output indicating inspection hatch open
❻ Contact output indicating gearmotor released
❼ Contact output indicating CX input status
❽ Input for connecting a button with OPEN ONLY function (COM-N1)
❾ Input for connecting a button with CLOSE ONLY function (COM-N2)

📖 Each output is a dry contact (NO) with maximum capacity 1A – 24 V DC.



* Only for GPX40MCP, GPX40MGP and GPX40MXP.

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
Stop the operator

❷ < > buttons

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

❸ ENTER button

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

Getting started

📖 Once the electrical connections have been made, proceed with commissioning. Only skilled and qualified staff may perform this operation.
Make sure that there are no obstacles in the way.
Power up the system and follow the wizard that appears on the display.

📖 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.

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.

Functions menu

Opening direction
Set the boom opening direction.

Configuration>Motor settings	**Opening direction**	To the left (Default) To the right

Boom length
Set the boom length.

Configuration>Motor settings	**Boom length**	Up to 3 m Up to 4 m

Motor test
Check the boom opens in the correct direction.

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

Configuration>Motor settings	**Motor test**	The button > makes the motor turn clockwise The button < makes the motor turn anticlockwise

Travel calibration
Start the travel self-learning.

Configuration>Motor settings	**Travel calibration**	Confirm? NO Confirm? YES

Opening speed

Set the opening speed (percentage of maximum speed).

📖 The percentage values automatically adapt to the value entered in the function [Boom length].

Configuration> Gate travel settings	**Opening speed**	50% to 100% (Default 70%)

Closing speed

Set the closing speed (percentage of maximum speed).

📖 The percentage values automatically adapt to the value entered in the function [Boom length].

Configuration> Gate travel settings	**Closing speed**	from 30% to 100% (Default 50%)

Travel sensitivity

It adjusts the obstacle detection sensitivity during the gate travel.

⚠ Change the parameter in compliance with the regulations on impact force.

Configuration> Gate travel settings	**Travel sensitivity**	10% to 100% (Default 100%)

Total stop

This stops the operator and excludes automatic closing. Use a control device to resume movement.

Configuration> Wired safety devices	**Total stop**	Deactivated (Default) On

CX input , CY input , CZ input

Associate a function with the input CX CY CZ

Configuration> Wired safety devices	**CX input** **CY input** **CZ input**	Deactivated (Default) C1 = Reopen while closing (photocells) C4 = Obstacle standby (photocells) C5 = Immediate closure at the travel end during opening C6 = Obstacle standby only while closing (photocells). 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 C13 = Reopen while closing, with immediate closure once the obstruction has been removed, even if the boom is not in motion 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.

Configuration> Wired safety devices	**Safety devices test**	Deactivated (Default) CX CY CZ CX+CY CX+CZ CY+CZ CX+CY+CZ

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.

Configuration>
Wired safety devices	**Obst. with motor stopped**	Deactivated (Default)
On

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.

Configuration>
Functions	**Hold-to-run**	Deactivated (Default)
On

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.

Configuration>
Functions	**Opening counter**	Deactivated (Default)
On

Boom drop-away detection

Activate the contact on the ARM terminal board for detecting the boom drop-away.

Configuration>
Functions	**Boom drop-away detection**	Deactivated (Default)
On

FCA FCC warnings

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

Configuration>
Functions	**FCA FCC warnings**	Off Impulse When the boom reaches the travel end point (while opening or closing), the FCA-CM1 or FCC-CM2 contact closes for one second. Fixed When the boom reaches the travel end point (while opening or closing), the FCA-CM1 or FCC-CM2 contact closes and remains closed. 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.

Temperature control

Control the temperature by activating a cartridge heater or a fan.

Configuration>
Functions	**Temperature control.**	Off
Heater (Default)
Fan

Electric lock

Choose the electric lock activation mode during boom manoeuvring.

Configuration>
Functions	**Electric lock**	Deactivated (Default)
From closed - The electric lock is active when the barrier is closed.

Emergency battery operation

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

📖 The function only activates if batteries are installed (not supplied).

Configuration> Functions	**Battery emergency**	Deactivated (Default) Activated – 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.

Automatic closure

Set the time before automatic closure, 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, after a complete stop, during a power outage or if there is an error.

Configuration> Times	**Automatic close**	Deactivated (Default) From 1 to 180 seconds

Open warning light

Configuration> Manage lights	**Open warning light**	Warning light on (Default) - The light stays on when the boom is moving or open. 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.

Light E1

Choose the type of device connected to output E1.

Configuration> Manage lights	**Light E1**	Flashing beacon (Default) Cycle lamp - The lamp stays on during the manoeuvre. 📖 The light remains off if an automatic closing time is not set.

Pre-flashing time

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

Configuration> Manage lights	**Pre-flashing time**	Deactivated (Default) 1 to 10 seconds

RSE communication - RSE1

Configure the function performed by the board connected to the RSE1 connector.

Configuration> RSE communication	**RSE1**	CRP (Default) Paired Alternate

RSE communication - RSE2

Configure the function performed by the board connected to the RSE2 connector.

Configuration> RSE communication	**RSE2**	CRP (Default) I/O I/O module RTU MODBUS Off

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.

Configuration> RSE communication	**CRP address**	1 to 254

RSE speed

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

Configuration> RSE communication	**RSE1 speed** **RSE2 speed**	4800 bps 9600 bps 14400 bps 19200 bps 38400 bps (Default) 57600 bps 115200 bps

Save data

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

📖 The function is displayed only when a USB stick is inserted into the USB port.

Configuration> External memory	**Save data**	Confirm? NO (Default) Confirm? YES

Read data

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

📖 The function is displayed only when a USB stick is inserted into the USB port.

Configuration> External memory	**Read data**	Confirm? NO (Default) Confirm? YES

Guided procedure (Wizard)

You can use the system configuration wizard.

Configuration>	**Guided procedure (Wizard)**	

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 another control device. The boards that manage the control devices (AF - R700 - R800) must be inserted into the connectors.

Manage users	**New user**	Choose the function to be assigned to the user. Step-by-step - The first command is to open and the second to close. Sequential The first command is to open, the second to STOP, the third to close and the fourth to STOP. Open Partial opening 📖 When the barrier is in [Paired] mode, the [Partial Opening] command opens the Master barrier. Press ENTER to confirm. You will be asked to enter your user code. Send the code from the control device (transmitter, keypad or transponder). Repeat the procedure to add other users.

Remove user

Remove one of the registered users.

Manage users	**Remove user**	Use the arrows to choose the number associated with the user you want to remove. 📖 Alternatively, you can select a user by sending a command from the associated device. Confirm? NO Confirm? YES Press ENTER to confirm "CLr" will appear to confirm deletion.

Remove all

Remove all registered users.

Manage users	**Remove all**	Confirm? NO Confirm? YES

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 saved previously will be deleted.

Manage users	**Radio decoding**	All decoding (Default) Rolling code TW Key block Confirm? NO Confirm? YES

Sensor type

Choose the type of access device.

Manage users	**Sensor type**	Keypad (Default) Transponder

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.

Manage users	**Self-Learning Rolling**	Deactivated (Default) On

Change mode

Change the function assigned to a specific user.

Manage users	**Change mode**	Use the arrows to choose the number associated with the user to be changed. 📖 Alternatively, you can select a user by sending a command from the associated device. Press ENTER to confirm. Choose the command to associate with the user. Step-by-step - The first command is to open and the second to close. Sequential - The first command is to open, the second to STOP, the third to close and the fourth to STOP. Open Partial opening B1-B2 output Press ENTER to confirm. Confirm? NO Confirm? YES

FW version
Display the firmware version and the GUI installed.

Information	**FW version**	

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

Information	**Manoeuvre counter**	Total manoeuvres - Manoeuvres performed since the operator was installed. Partial manoeuvres - Manoeuvres carried out after the last maintenance.

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

📖 The warning is displayed as an [Maintenance required] message and signalled by 3 + 3 flashes every hour on the device connected to the 10-5 output.

Information	**Maintenance conf.**	Deactivated (Default) from 1 to 1000 (1 = 1000 manoeuvres)

Maintenance reset
Reset the number of partial manoeuvres.

Information	**Maintenance reset**	Confirm? NO Confirm? YES

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

Information	**Parameter reset**	Confirm? NO Confirm? YES

Errors list
View the last 8 errors detected. The error list can be deleted.

Information	**Errors list**	📖 Use the arrows to scroll through the list. To cancel the error list, select [Delete errors] Press ENTER to confirm. Confirm? NO Confirm? YES

Update the FW from USB
Update the firmware version of the device.

📖 The function is displayed only when a USB memory stick is inserted.

📖 Make sure the USB stick contains the firmware update file.

Information	**Update the FW from USB**	Confirm? NO Confirm? YES

Show clock
Enable the clock on the display.

Timer management	**Show clock**	

Set the clock
Set the date and time.

Timer management	**Set the clock**	Use the arrows and the Enter button to enter the desired values.

Automatic DST

Enable automatic daylight saving time setting.

Timer management	**Automatic DST**	Deactivated (Default) On Summer changeover: +1 hour on the last Sunday in March (change to daylight saving time). Winter changeover: -1 hour on the last Sunday in October (change to standard time).

Create new timer

Time one or more types of activation chosen from those available.

Timer management	**Create new timer**	Use the arrows to choose the desired command. - Open - Partial opening Press ENTER to confirm. Start time Use the arrows to set the function activation start time. Press ENTER to confirm. End time Use the arrows to set the function activation end time. Press ENTER to confirm. Days of the week Use the arrows to set the function activation days. - Select days - All week Press ENTER to confirm.

Remove timer

Removes one of the saved timings.

Timer management	**Remove timer**	Use the arrows to choose the timing to be removed. 0 = [Opening] P = [Partial opening] Press ENTER to confirm.

Commands

Run certain barrier commands without the control devices.

	Commands	Use the arrows to select the command to be executed. Open Partial opening Close Stop Press ENTER to confirm.

Language

Set the display language.

	Language	Italiano (IT) English (EN) (Default) Français (FR) Deutsch (DE) Español (ES) Português (PT) Русский (RU) Polski (PL)

Enable password
Set a 4-digit password. The password will be requested to anyone who wants to access the main menu.

Password	**Enable password**	Use the arrows and the Enter button to dial the desired code.

Remove password
Remove the password that protects access to the main menu.

Password	**Remove password**	Confirm? NO Confirm? YES

Change password
Change the password protecting access to the main menu.

📖 This option only shows if a password has been enabled.

Password	**Change password**	Use the arrows and the Enter button to dial the desired code.

F Menu
Enable the F functions menu view.

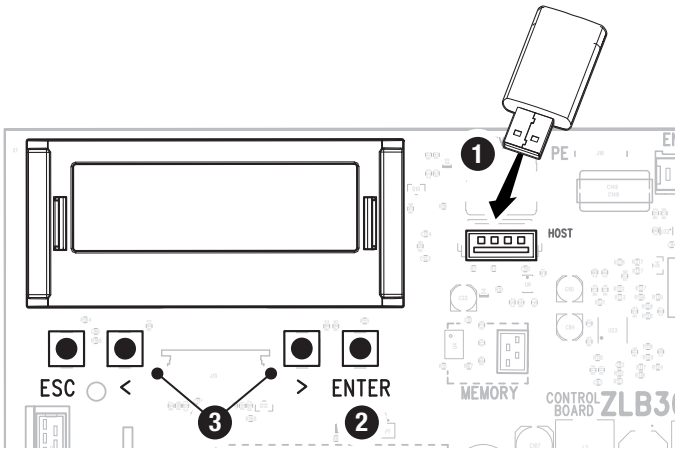
Import/export data

❶ Insert a USB flash drive into the USB port.
❷ Press the "Enter" button to access programming.
❸ Use the arrows to choose the desired function.

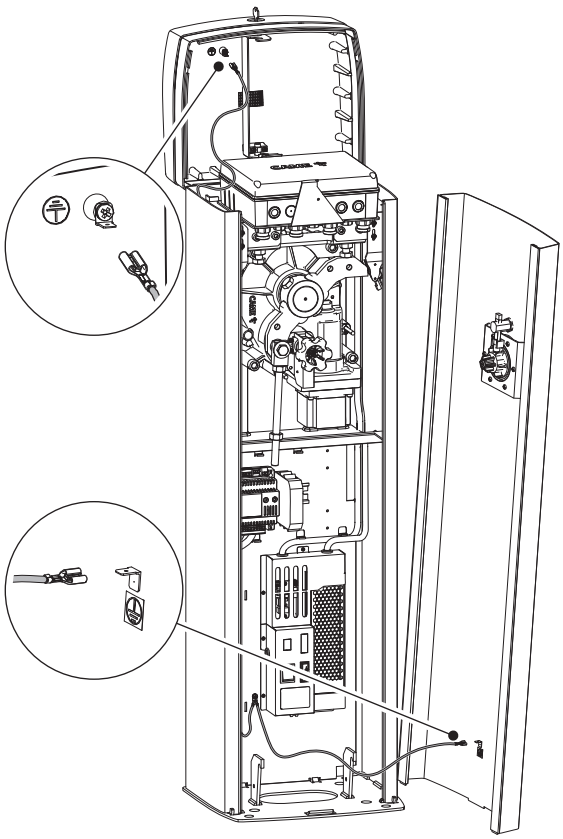
📖 The functions are displayed only when a USB memory stick is inserted.

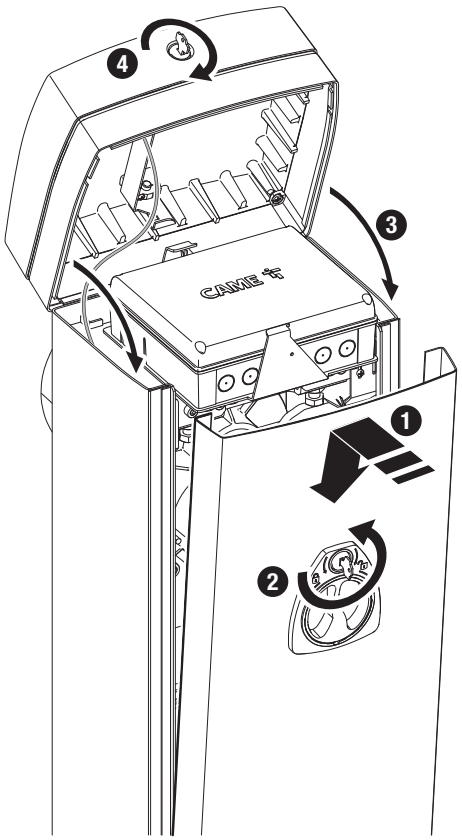
-Save data
Save user data, timings and configurations to the memory device (USB key).
-Read data
Upload user data, timings and configurations from the memory device (USB key).
-Update the FW from USB
Update the firmware version of the device.

📖 Make sure the USB stick contains the firmware update file.



FINAL OPERATIONS





PAIRED OPERATION

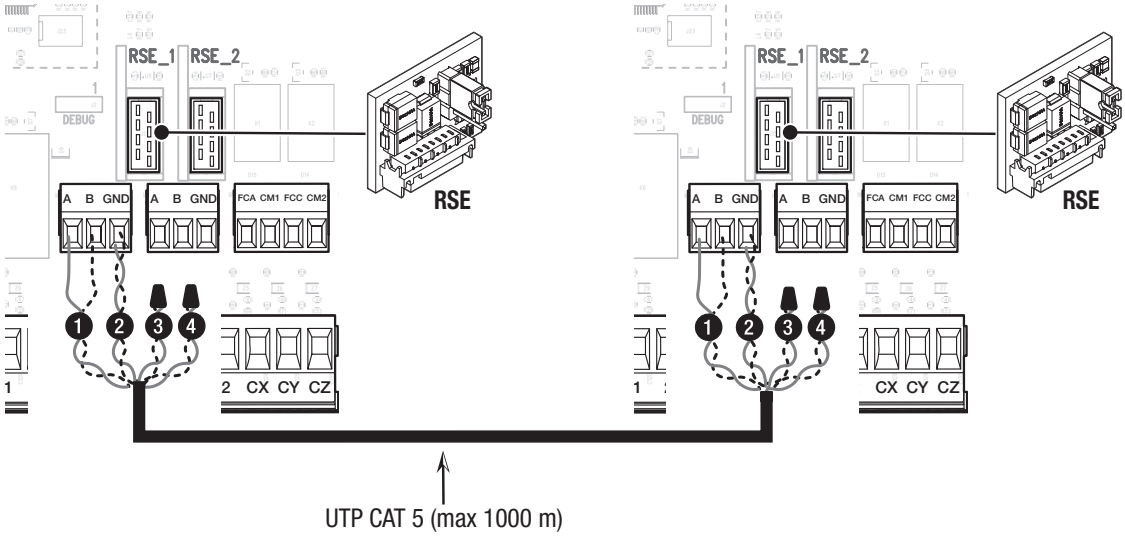
Two connected operators are controlled with one command.

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.
Select the [Paired] system type when following the guided procedure, or configure the RSE_1 port to [Paired] mode.

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

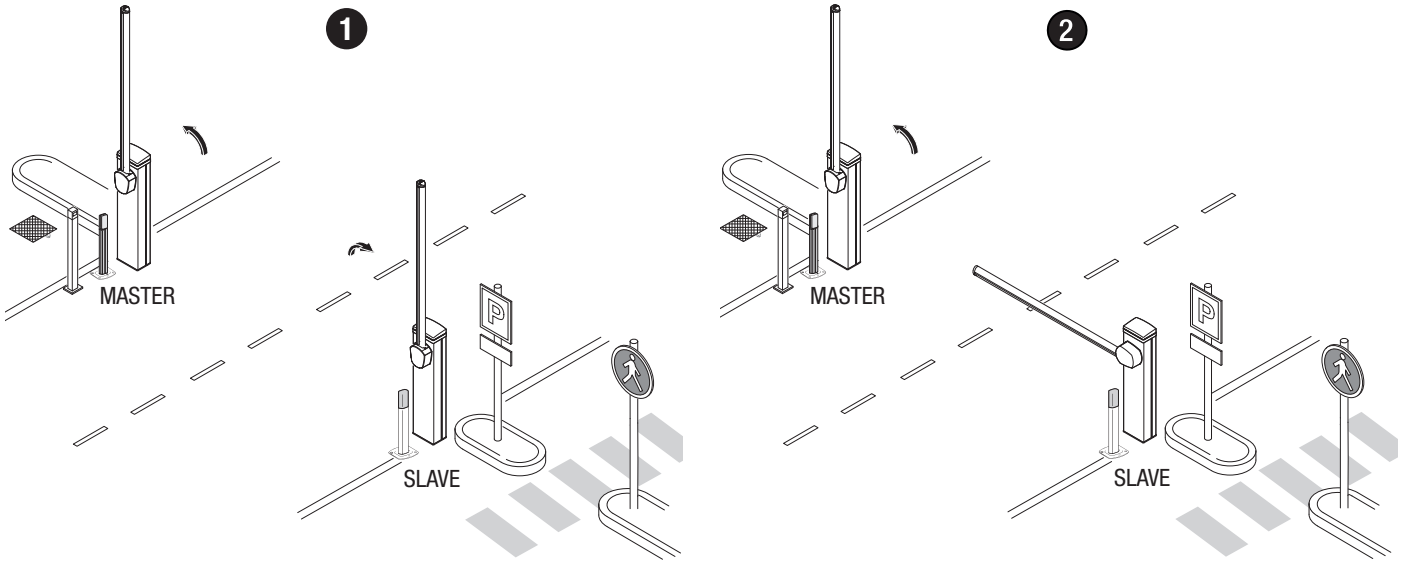
Saving users

📖 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

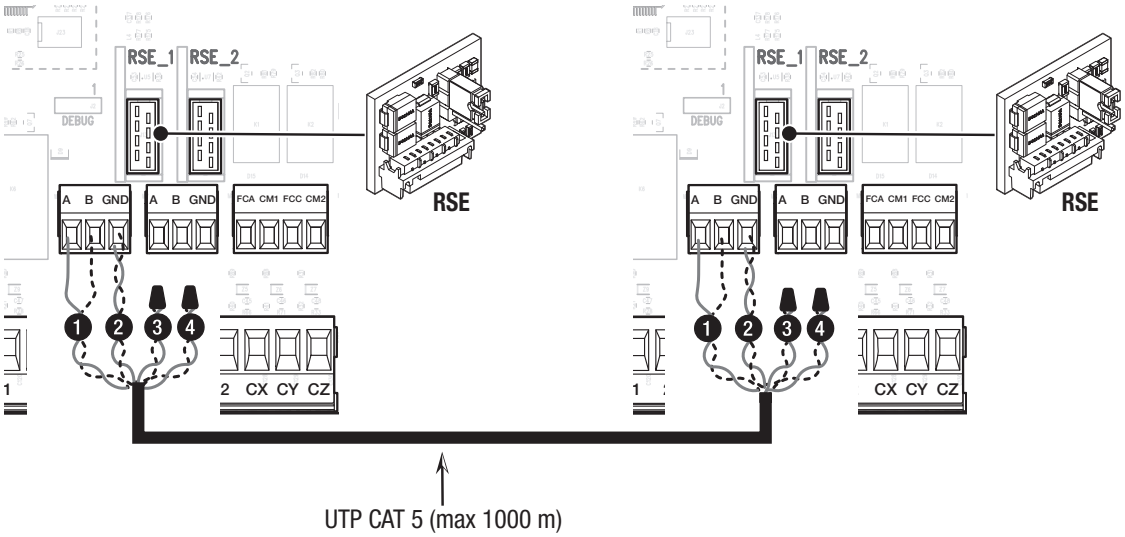
The first barrier opens, the vehicle passes, the first barrier closes, the second barrier opens, the vehicle passes and the second barrier closes.

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

📖 Choose one of the two operations described below.

On one of the two barriers, select [Alternate] as type of installation, during the guided procedure.
On one of the two barriers, configure the [RSE_1] function in [Alternate].
It activates the function [Automatic close] on both control boards.

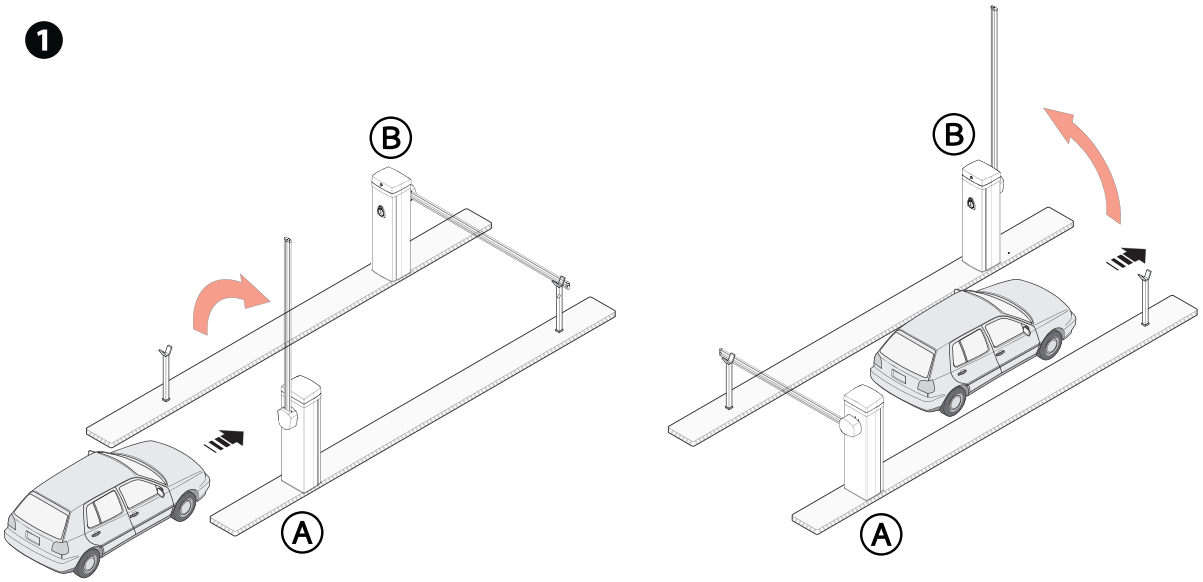
Saving users

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

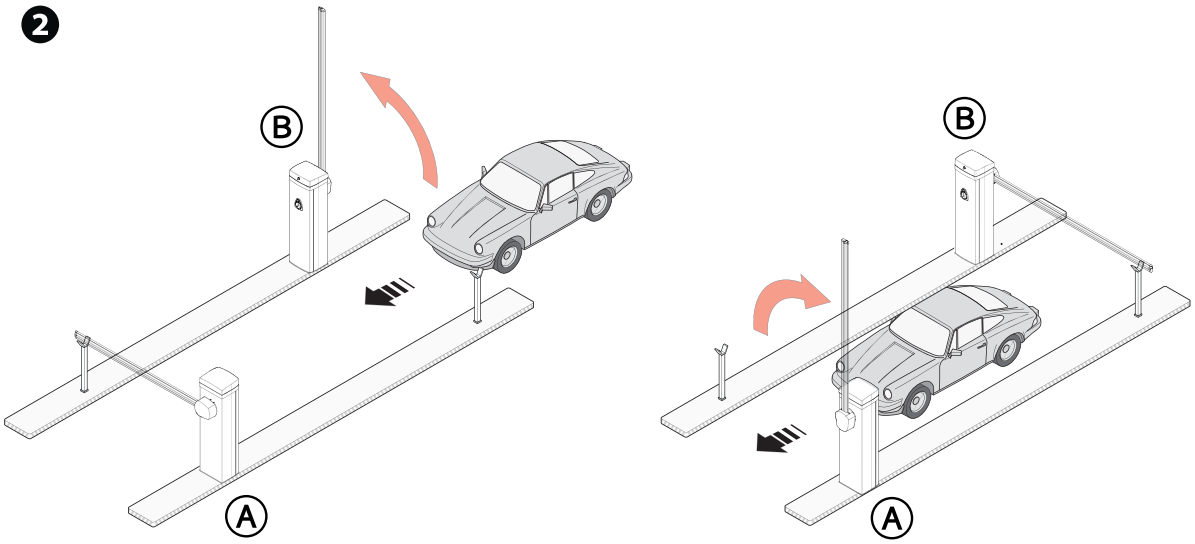
📖 When programming users, do not use the PARTIAL OPENING 2-3P command.

Operating modes

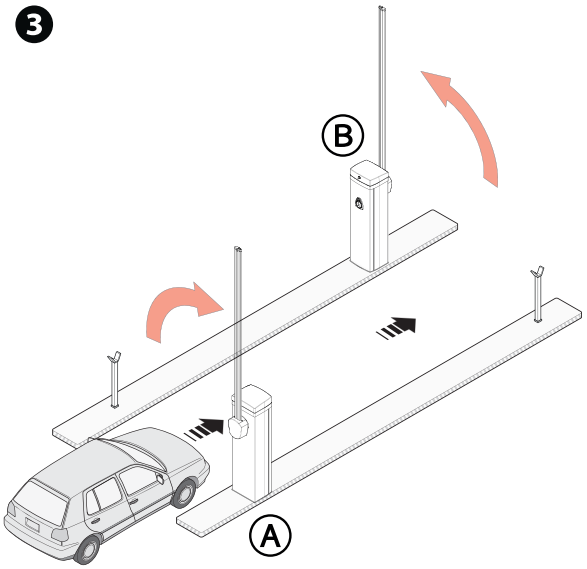
❶ ONLY OPEN command (2-3) on barrier A



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



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



MCBF

Models	GPX40
Std boom L = 3.05 m	10.000.000
Boom L = 4.05 m	-0 %
Boom L = 3.05 m with joint	-0 %
Boom L = 4.05 m with joint	-0 %

📖 The GARD PX barrier has an innovative gearmotor in oil bath and has been designed to perform up to 10 million cycles. Thanks to its ultra-efficient brushless motor, it is extremely reliable and requires very little maintenance.

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

📖 The percentages indicate how much the number of cycles should be reduced in relation to the type and number of accessories installed.

⚠ The installer is responsible for deciding on the type of intervention and the maintenance frequency, considering the use, installation site and number of daily cycles.
⚠ 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 500,000 cycles and, in any case, every 12 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.
- Check the 45° boom balance and if necessary tension the balance spring, adjusting its traction operating on the hooking tie rods.
- Lubricate the spring when it is fully extended.
- Grease all of the moving mechanical parts.
- Check the warning and safety devices are working properly.
- Check that the microswitch connected to the cabinet cover is working correctly.
- Check the microswitch connected to the manual release is working properly, and the microswitch connected to the release accessories (optional).
- Check there are no oil leaks.

Every 2,500,000 cycles and, in any case, every 24 months of operation, you must perform the maintenance work indicated below.

- Replace the spring.

ERROR MESSAGES	
Calibration error	Interruption of the boom travel calibration due to the presence of an obstruction.
The Encoder does not work	The Encoder is disconnected. The Encoder is broken.
Service test failure error	Presence of an obstruction within the range of the photocells. The photocells are not correctly connected or configured. The photocells are faulty.
Work time expired	Finished the maximum work time set.
Door lock open	The operator is released.
Maximum number of closing obstacles	The maximum number of obstacles detected consecutively has been exceeded
Maximum number of opening obstacles	The maximum number of obstacles detected consecutively has been exceeded
Maximum number of obstacles	The maximum number of obstacles detected consecutively has been exceeded
Serial communication error	Configured on the wrong RSE port.
Incompatible remote control	The transmitter used is not CAME. The coding set is different from that of the transmitter. The transmitters are TWIN and have different KEY BLOCK.
Slave door open	The SLAVE operator is released.
Detached boom	The boom was pushed open. Incorrect ARM contact wiring. No boom detection sensor.
Released motor	The boom has been released by the gearmotor and it can be moved manually. Open gearmotor safety microswitch contact.

Affix the product label from the box here

CAME

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