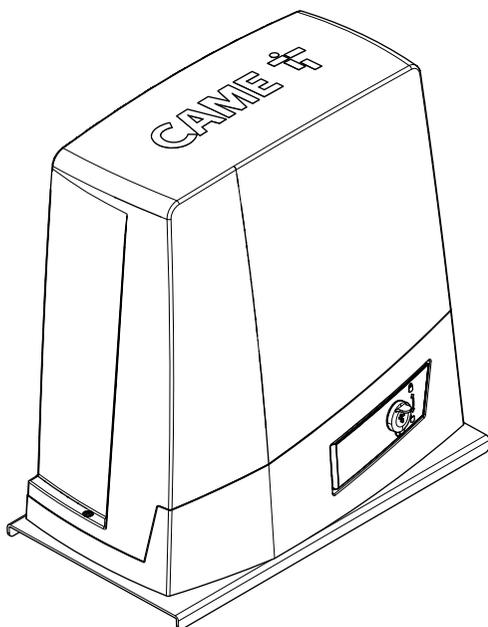Sliding gate operator
BKV series

FA01274-EN

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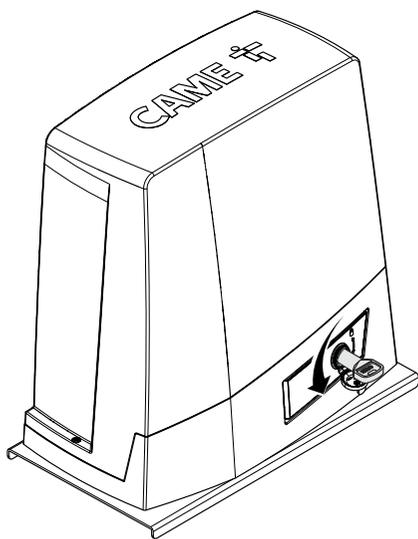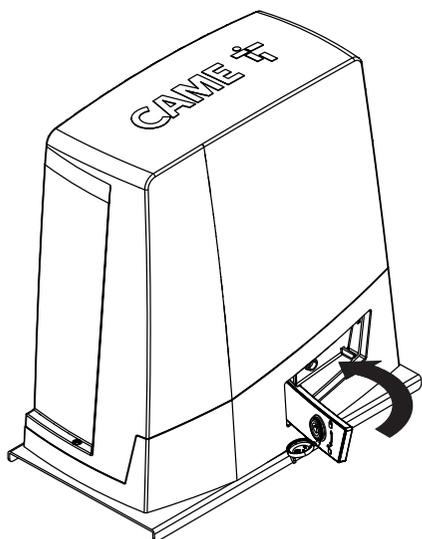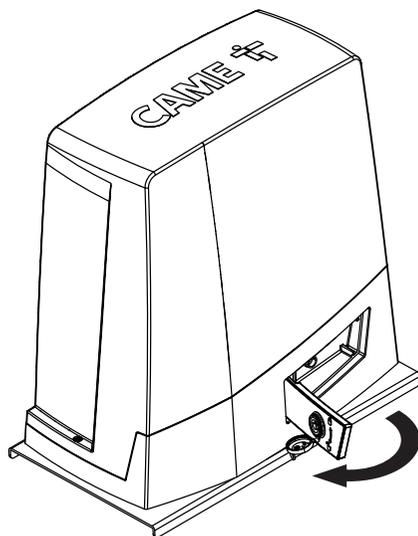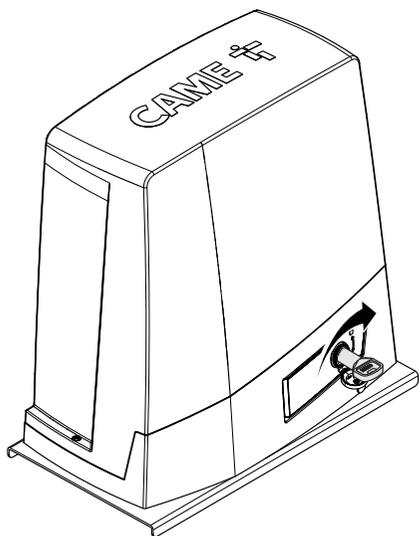**BKV15AGS / BKV20AGS / BKV25AGS**

BKV15ALS / BKV20ALS / BKV25ALS

BKV15AGE / BKV20AGE / BKV25AGE

BKV15RGS / BKV20RGS

INSTALLATION MANUAL

EN English

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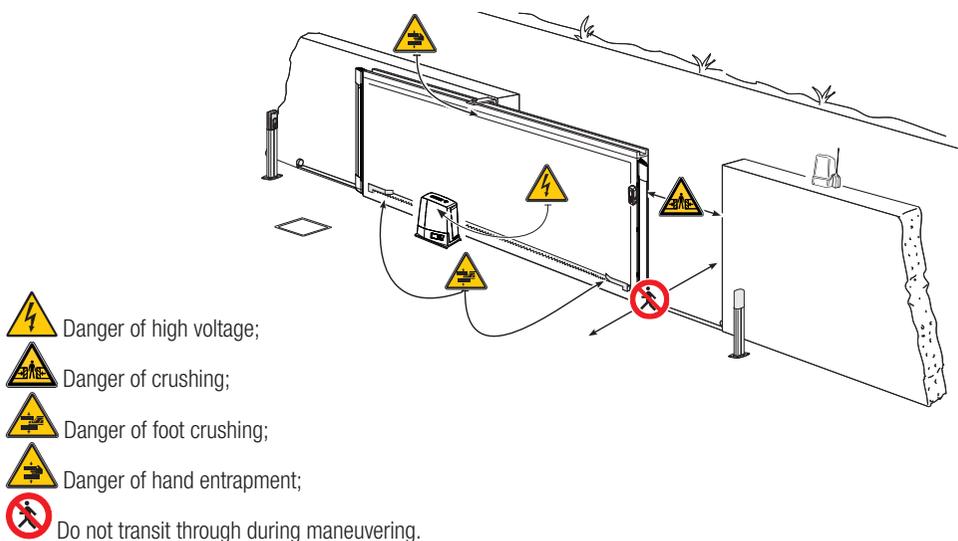*Follow all of these instructions. Improper installation can cause serious bodily harm.*
Before continuing, also read the general precautions for users.

This product must only be used for its specifically intended purpose. Any other use is dangerous. Came S.P.A. is not liable for any damage caused by improper, wrongful and unreasonable use. • This manual's product is defined by machinery directive 2006/42/CE as "partly-completed machinery". Partly-completed machinery is a set that almost constitutes a machine, but which, alone, cannot ensure a clearly defined application. Partly-completed machinery is only destined to be incorporated or assembled to other machinery or other partly-completed machinery or apparatuses to build machinery that is regulated by Directive 2006/42/CE. The final installation must be compliant with European directive 2006/42/CE and current European reference standards. Given these considerations, all procedures stated in this manual must be exclusively performed by expert, qualified staff • The manufacturer declines any liability for using non-original products; which would result in warranty loss • Keep this manual inside the technical folder along with the manuals of all the other devices used for your automation system. • Check that the temperature range shown on the operator is suitable to the locations where it will be installed. • Laying the cables, installation and testing must follow state-of-the-art procedures as dictated by regulations • If the power-supply cable is damaged, it must be immediately replaced by the manufacturer or by an authorized technical assistance center, or in any case, by qualified staff, to prevent any risk • During all phases of the installation make sure you have cut off the mains power source. • The operator cannot be used with gates fitted with pedestrian doors, unless its operation can be activated only when the pedestrian door is in safety position. • Make sure that people are not entrapped between the gate's moving and fixed parts due to the gate's movement. Before installing the operator, check that the gate is in proper mechanical condition, that it is properly balanced and that it properly closes: if any of these conditions are not met, do not continue before having met all safety requirements. • Make sure the gate is stable and the castors function properly and are well-greased, and that it opens and closes smoothly. • The guide rail must be well-fastened to the ground, entirely above the surface and free of any impediments to the gate's movement. • The rails of the upper guide must not cause any friction • Make sure that opening and closing limiters are fitted • Make sure the operator is installed onto a sturdy surface that is protected from any collisions • Make sure that mechanical stops are already installed

• If the operator is installed lower than 2.5 from the ground or from any other access level, fit any protections and signs to prevent hazardous situations.

• Do not fit the operator upside down or onto elements that could yield to its weight. If necessary, add reinforcements to the fastening points • Do not install door or gate leaves on tilted surfaces • Check that no lawn watering devices spray the operator with water from the bottom up. • Any residual risks must be indicated clearly with proper signage affixed in visible areas. All of which must be explained to end users. • Suitably section off and demarcate the entire installation site to prevent unauthorized persons from entering the area, especially minors and children • Affix cautionary signs, such as the door plate, the gate plate, wherever needed and in plain sight. • Use proper protections to prevent mechanical hazards when people are loitering around the machinery's range of action, for example to prevent finger crushing between the rack and pinion • The electrical

cables must run through the cable glands and must not touch any heated parts, such as the motor, transformer, and so on). • Make sure you have set up a suitable dual pole cut off device along the power supply that is compliant with the installation rules. It should completely cut off the power supply according to category lll surcharge conditions. • All opening controls must be installed at least 1.85 m from the perimeter of the gate's working area, or where they cannot be reached from outside the gate. • All switches in maintained action mode must be positioned so that the moving gates leaves, the transit areas and vehicle thru-ways are completely visible, and yet the switches must be also away from any moving parts • Unless the action is key operated, the control devices must be fitted at, at least, 1.5 m from the ground and must not be accessible to the public. • To pass the collision force test use a suitable sensitive safety-edge. Install it properly and adjust as needed. • Before handing over to users, check that the system is compliant with the 2006/42/CE uniformed Machinery Directive Make sure the settings on the operator are all suitable and that any safety and protection devices, and also the manual release, work properly. • Affix a permanent tag, that describes how to use the manual release mechanism, close to the mechanism. • Make sure to hand over to the end user, all operating manuals for the products that make up the final machinery • If hoisting manually, have one person for every 20 kg that need hoisting; otherwise use proper hoisting and moving equipment.

The next figure shows the main hazard points for people.

Danger of high voltage;

Danger of crushing;

Danger of foot crushing;

Danger of hand entrapment;

Do not transit through during maneuvering.

📖 This symbol shows which parts to read carefully.

⚠ This symbol shows which parts describe safety issues

☞ This symbol shows which parts to tell users about.

The measurements, unless otherwise stated, are in millimeters.

DESCRIPTION

BKV15AGS - High performance operator with 36 V motor, featuring a control board with graphic display, Adaptive Speed & Torque Technology, 4 safety inputs, movement and obstruction detecting device for gates weighing up to 1500 kg that are up to 20-m long.

BKV20AGS - High performance operator with 36 V motor, featuring a control board with graphic display, Adaptive Speed & Torque Technology, 4 safety inputs, movement and obstruction detecting device for gates weighing up to 2000 kg that are up to 20-m long.

BKV25AGS - High performance operator with 36 V motor, featuring a control board with graphic display, Adaptive Speed & Torque Technology, 4 safety inputs, movement and obstruction detecting device for gates weighing up to 2500 kg that are up to 20-m long.

BKV15ALS - High performance operator with 36 V motor, featuring a control board with graphic display, Adaptive Speed & Torque Technology, 4 safety inputs, movement and obstruction detecting device for gates weighing up to 1500 kg that are up to 20-m long.

BKV20ALS - High performance operator with 36 V motor, featuring a control board with graphic display, Adaptive Speed & Torque Technology, 4 safety inputs, movement and obstruction detecting device for gates weighing up to 2000 kg that are up to 20-m long.

BKV25ALS - High performance operator with 36 V motor, featuring a control board with graphic display, Adaptive Speed & Torque Technology, 4 safety inputs, movement and obstruction detecting device for gates weighing up to 2500 kg that are up to 20-m long.

BKV15AGE - Plus High performance operator with 36 V motor, featuring a control board with graphic display, Adaptive Speed & Torque Technology, 4 safety inputs, magnetic limit switches and clock accessory included for gates weighing up to 1500 kg that are up to 20-m long.

BKV20AGE - Plus High performance operator with 36 V motor, featuring a control board with graphic display, Adaptive Speed & Torque Technology, 4 safety inputs, magnetic limit switches and clock accessory included for gates weighing up to 2000 kg that are up to 20-m long.

BKV25AGE - Plus High performance operator with 36 V motor, featuring a control board with graphic display, Adaptive Speed & Torque Technology, 4 safety inputs, magnetic limit switches and clock accessory included for gates weighing up to 2500 kg that are up to 20-m long.

BKV15RGS - High performance operator with 36 V motor, featuring a control board with graphic display, Adaptive Speed & Torque Technology, 4 safety inputs, movement and obstruction detecting device for gates weighing up to 1500 kg that are up to 20-m long.

BKV20RGS - High performance operator with 36 V motor, featuring a control board with graphic display, Adaptive Speed & Torque Technology, 4 safety inputs, movement and obstruction detecting device for gates weighing up to 2000 kg that are up to 20-m long.

Intended use

This operator is designed to power sliding gates in apartment block and industrial settings.

📖 Do not install of use this device in any way, except as specified in this manual.

Limits to use

Type	BKV15AGS BKV15ALS BKV15AGE	BKV20AGS BKV20ALS BKV20AGE	BKV25AGS BKV25ALS BKV25AGE	BKV15RGS	BKV20RGS
Maximum gate-leaf length (m)	20	20	20	20	20
Maximum gate-leaf weight (kg)	1.500	2.000	2.500	1.500	2.000
Pinion module	4	4	6	4	4

Technical data

| Tipo	BKV15AGS BKV15ALS BKV15AGE	BKV20AGS BKV20ALS BKV20AGE	BKV25AGS BKV25ALS BKV25AGE	BKV15RGS	BKV20RGS
Protection rating (IP)	44	44	44	44	44
Power supply (V - 50/60 Hz)	230 AC	230 AC	230 AC	120 AC	120 AC
Input voltage motor (V)	36 DC	36 DC	36 DC	36 DC	36 DC
Control board input voltage (V)	26 DC	26 DC	26 DC	26 DC	26 DC
Stand-by consumption (W)	14	14	14	14	14
Stand-by consumption with the RGP1 (W) module	0.8	0.8	0.8	0.8	0.8
Maximum power (W)	200	250	300	200	250
Operating temperature (°C)	-20 to +55	-20 to +55	-20 to +55	-20 to +55	-20 to +55
Thrust (N)	1200	1350	1500	1200	1350
Cycles/hour	CONTINUOUS SERVICES	CONTINUOUS SERVICES	CONTINUOUS SERVICES	CONTINUOUS SERVICES	CONTINUOUS SERVICES
Maneuvering speed (m/min)	12	12	12	12	12
Acoustic pressure level (dB (A))	≤70	≤70	≤70	≤70	≤70
Apparatus class	I	I	I	I	I
Working time (s)	180	180	180	180	180
Weight (Kg)	20	21	21	20	21

Dimensions
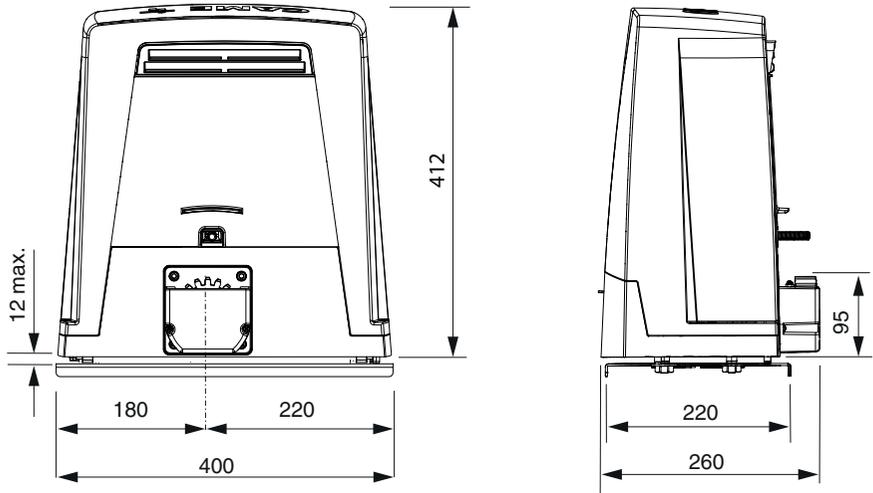
Standard installation

1. Operator
2. Limit-switch fins
3. Rack
4. Selector
5. Flashing light
6. Photocells

7. Photocell post
8. Mechanical gate stop
9. Transmitter
10. Slide guides
11. Junction pit
12. Sensitive safety-edge

Description of parts
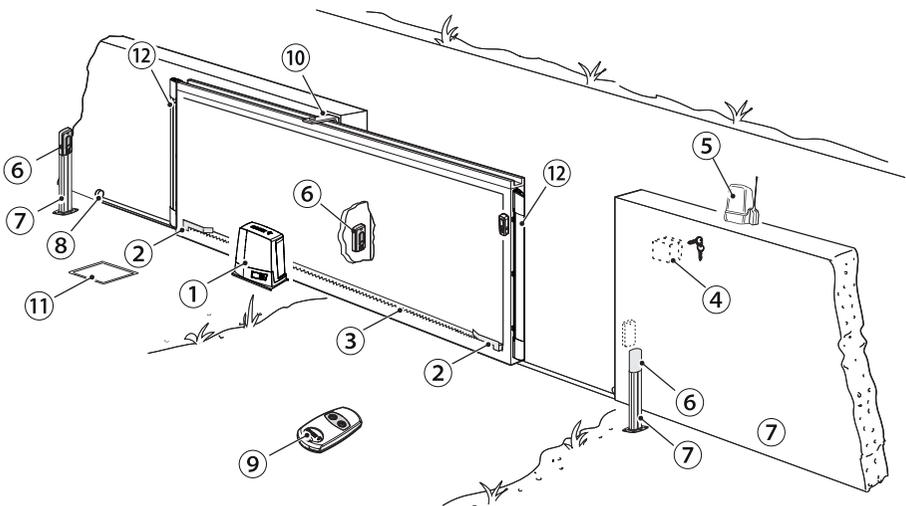
1. Cover
2. Board protecting cover
3. Control board
4. Board-fitting support
5. Gear motor
6. Mechanical limit switch
7. Anchoring plate
8. Housing for two emergency batteries
9. Housing for thermostat with cartridge
10. Housing for the RGSM001 module
11. Housing for the LBB batteries
12. Housing for the RGP1 module
13. Release lever
14. Limit-switch fins
15. Small hardware
16. Housing for UR042 module
17. Holes for the electrical cables to run through
18. Housing for the SMA module
19. Magnetic sensor *
20. Magnetic limit-switch tabs *
21. CLOCK board *

* Only for BKV15AGE, BKV20AGE and BKV25AGE
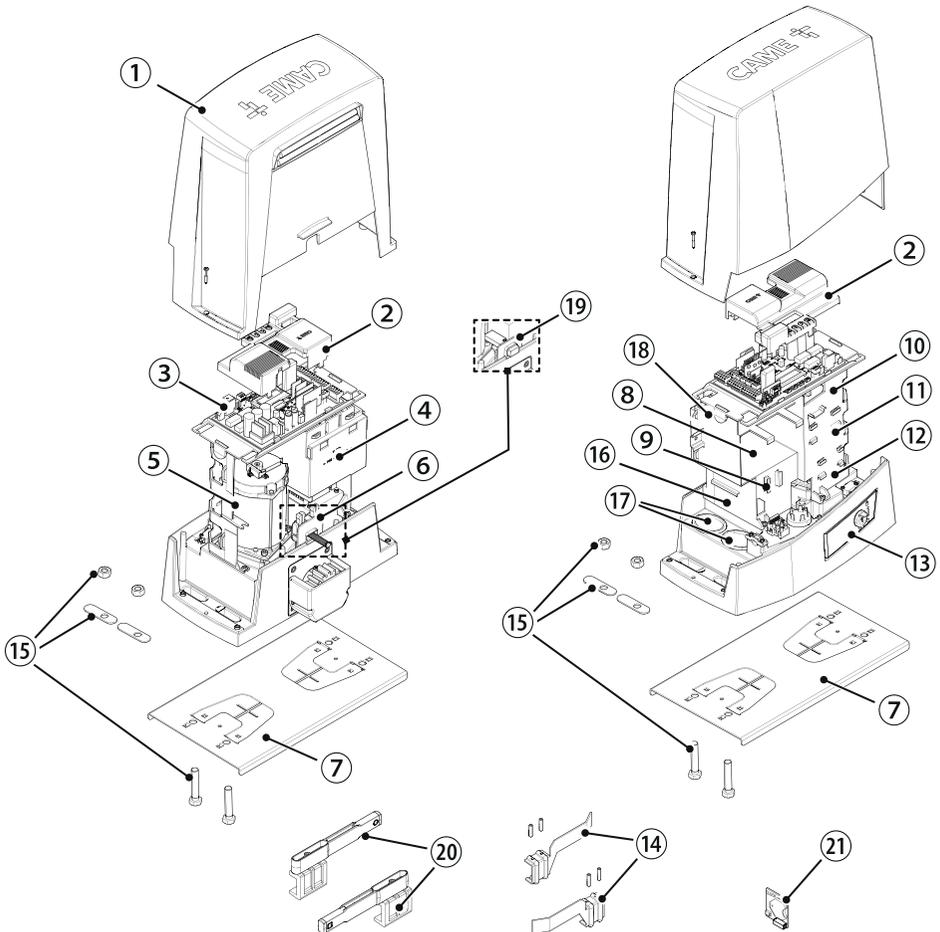
GENERAL INSTALLATION INDICATIONS

⚠ Only skilled, qualified staff must install this product.

Preliminary checks

⚠ Before beginning the installation, do the following:
• check that the upper slide-guides are friction-free;
• make sure there is are opening and closing mechanical gate stops;
• make sure that the point where the gear motor is fastened is protected from any impacts and that the surface is solid enough;
• set up suitable tubes and conduits for the electric cables to pass through, making sure they are protected from any mechanical damage.

Cables for standard installation

CABLE LENGTH (m)	< 20	from 20 to 30
Power-supply at 230 V AC	3G x 1.5 mm^2	3G x 2.5 mm^2
24 V AC - DC Flashing light	2 x 1 mm^2	2 x 1 mm^2
TX Photocells	2 x 0.5 mm^2	2 x 0.5 mm^2
RX photocells	4 x 0.5 mm^2	4 x 0.5 mm^2
Command and control devices	*n° x 0.5 mm^2	*n° x 0.5 mm^2
Antenna	RG58 max 10 m	

*n° = see product mounting instructions.

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

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

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

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

INSTALLING

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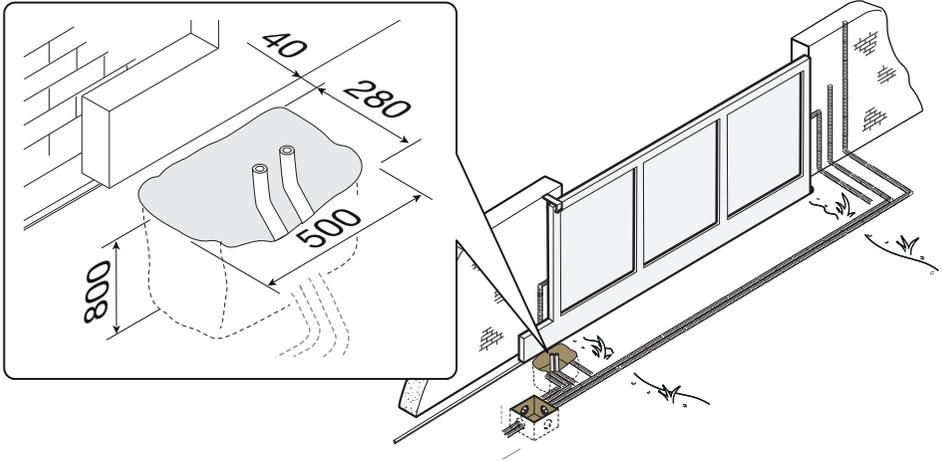
Corrugated tube laying

Dig a hole for the foundation frame.
Set up the corrugated tubes needed for the wiring coming out of the junction pit.
Use Ø 40 mm corrugated tubes to connect the gearmotor to the accessories.
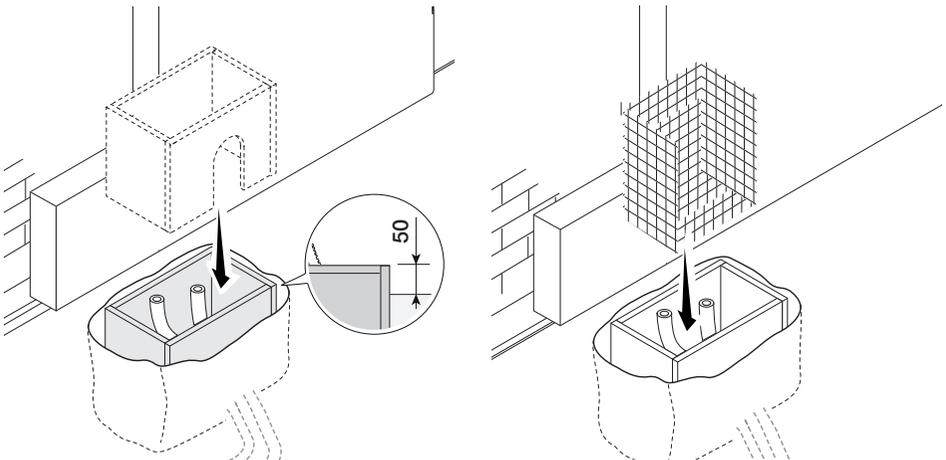📖 The number of tubes depends on the type of system and the accessories you are going to fit.
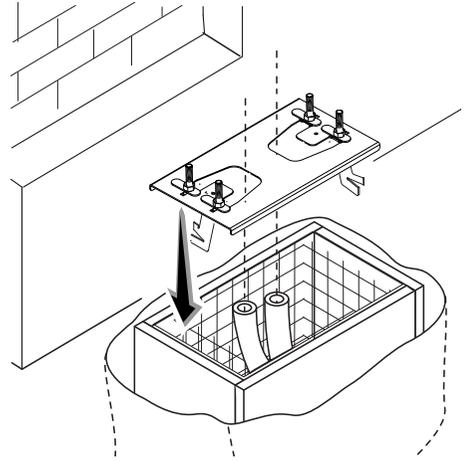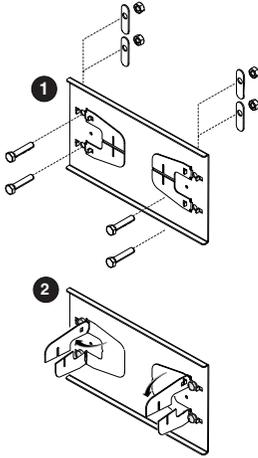

Laying the anchoring plate

Set up a foundation frame that is larger than the anchoring plate and sink it into the dug hole. The foundation frame must jut out by 50 mm above ground level.
Fit an iron cage into the foundation frame to reinforce the concrete.

Fit the bolts into the anchoring plate and tighten them using the nuts. Remove the pre-shaped clamps using a screw driver or pliers.
Fit the plate into the iron cage. Careful! The tubes must pass through their corresponding holes.

If the rack is already there, place the anchoring plate, being careful to respect the measurements shown in the drawing.
Fill the foundation frame with concrete. The plate must be perfectly level with the bolts which are entirely above surface.
Wait at least 24 hrs for the concrete to solidify.
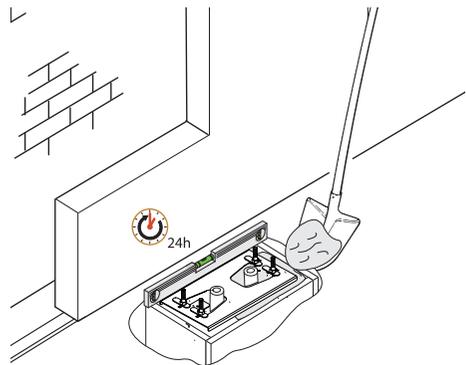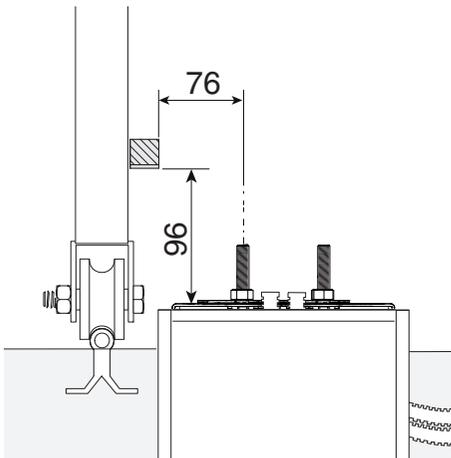
Remove the foundation frame and fill the hole with earth around the concrete block.
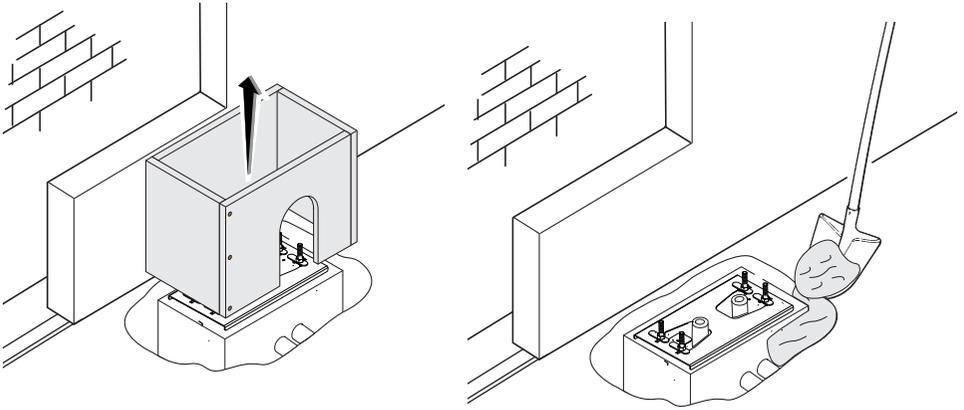
Remove the nuts from the bolts.
Fit the electric cables into the tubes so that they come out about 600 mm.
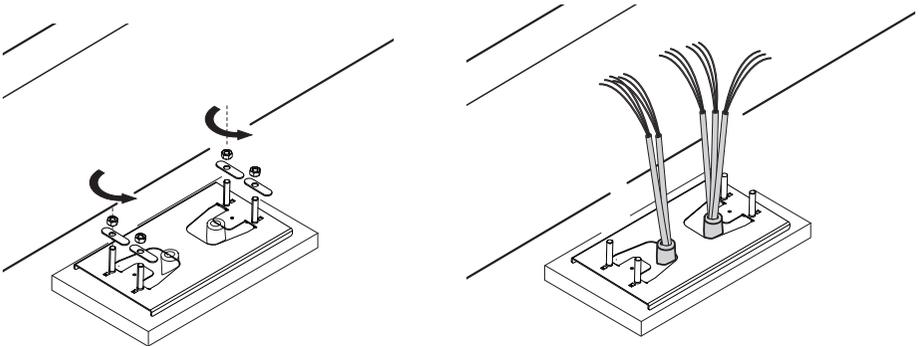
Setting up the operator

Remove the gearmotor cover by loosening the side screws.

Place the operator on top of the anchoring plate.

Careful! The electric cables must pass under the gearmotor case.
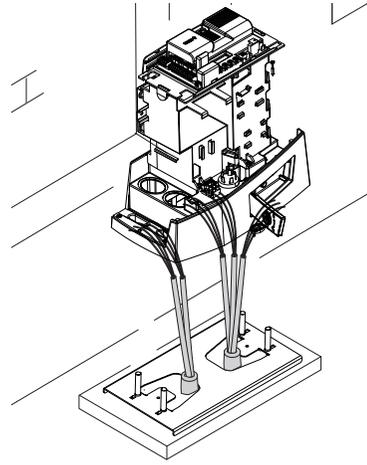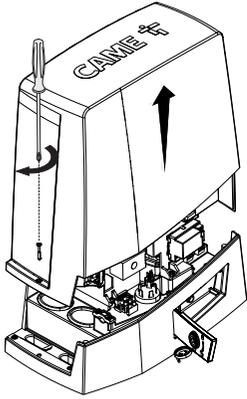
Perforate the cable gland, pass the cables through and fit it into its corresponding housing.

Raise the gearmotor by 5 to 10 mm from the plate by turning the threaded feet, to make room for further pinion and rack adjustments.

5 ÷ 10
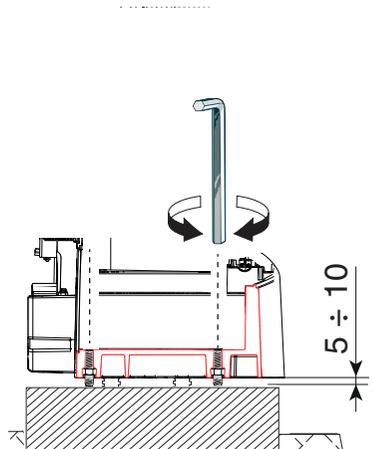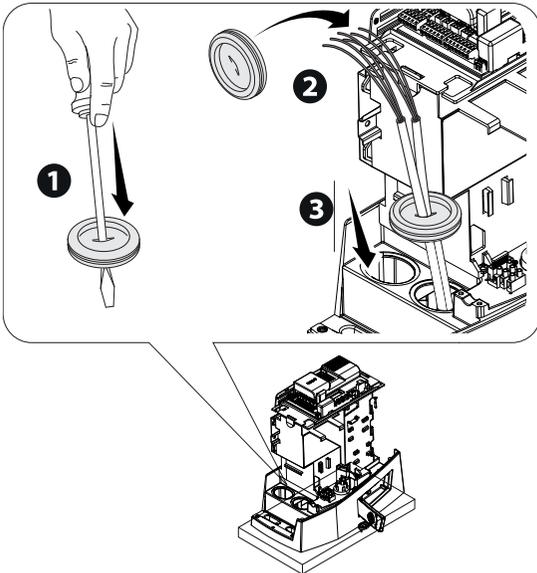
Fastening the rack

📖 If the rack is already set up, the next step should be to adjust the rack-and-pinion coupling distance, otherwise, fasten it:
- release the operator ❶;
- rest the rack above the operator pinion ❷;
- either weld or fasten the rack along the entire length of the gate ❸❹.

📖 To assemble the rack modules, use an extra piece and rest it under the joint, then fasten it using two clamps.
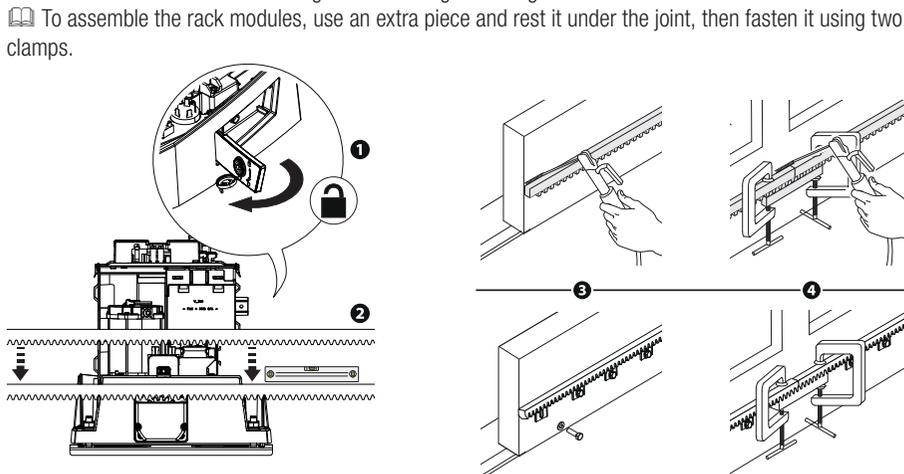
Adjusting the pinion-rack coupling

Manually open and close the gate and adjust the pinion-rack coupling distance using the threaded feet (vertical adjustment) and the holes (horizontal adjustment).

📖 The weight of the gate must not bear down upon the operator
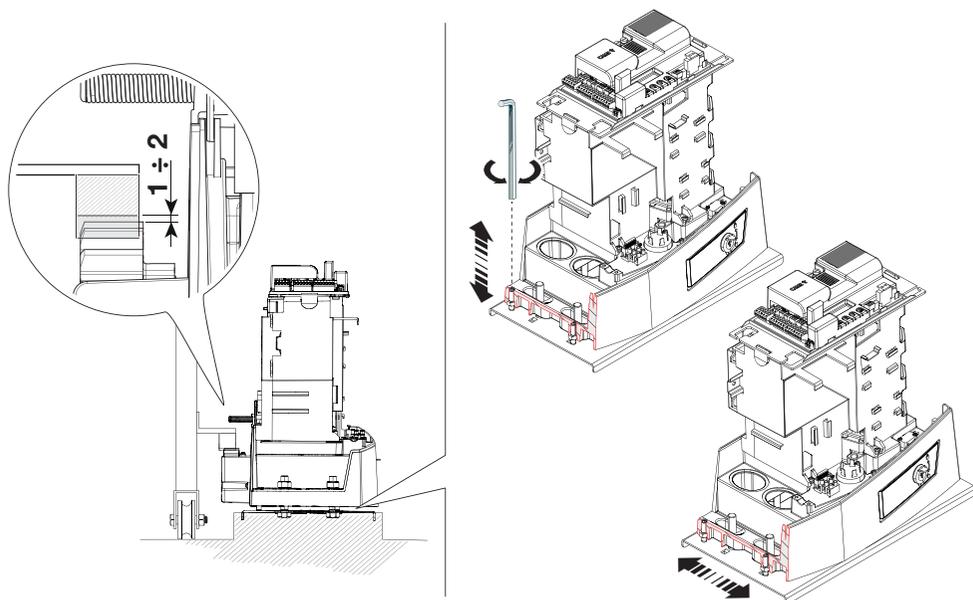
Fastening the operator

Complete the adjusting, fasten the gearmotor to the plate using the washers and nuts.
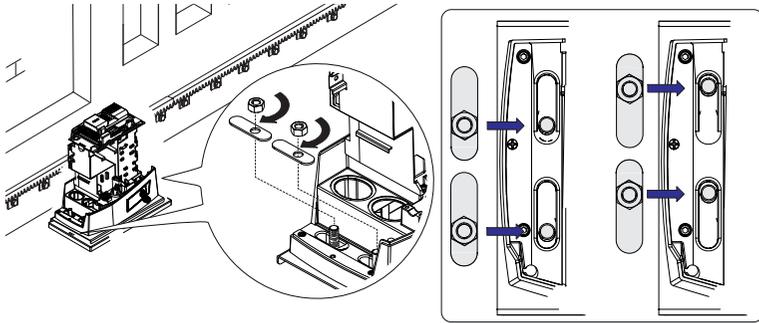
Establishing the limit-switch points

Mechanical limit-switches

For opening:

- open the gate ❶;

- fit the opening limit-switch fin onto the rack until the micro switch activates (spring) and fasten it using the grub screws ❷ ❸.
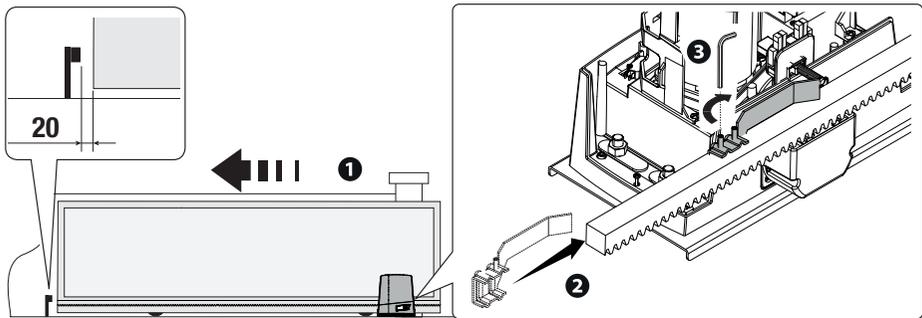
For closing:

- close the gate ❹;

- fit the closing limit-switch fin into the rack until the micro-switch is activated (spring) and fasten it using the grub screws ❺ ❻.
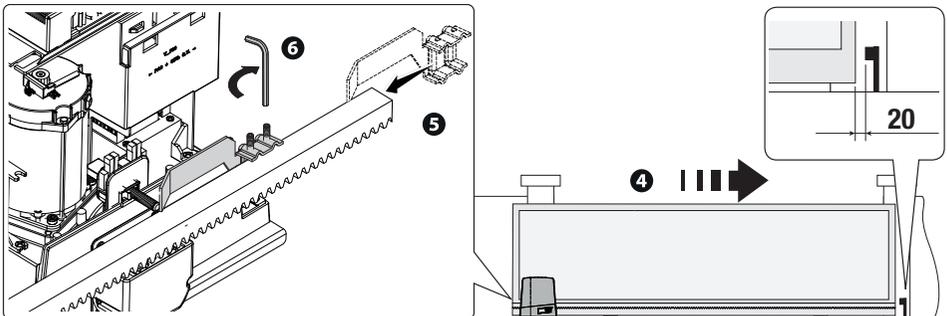
Limit switch with magnetic sensor (only for BKV15AGE, BKV20AGE and BKV25AGE)
For opening:
- open the gate; ❶
- insert the limit switch magnetic tab at the rack opening holding the magnet at a distance between 10 and 30 mm from the magnetic sensor; ❷ ❸
- fasten the tab support to the rack using the headless bolts; ❹
- place the tab magnet perpendicularly to the magnetic sensor; ❺
- tighten the screw to fasten the tab. ❻
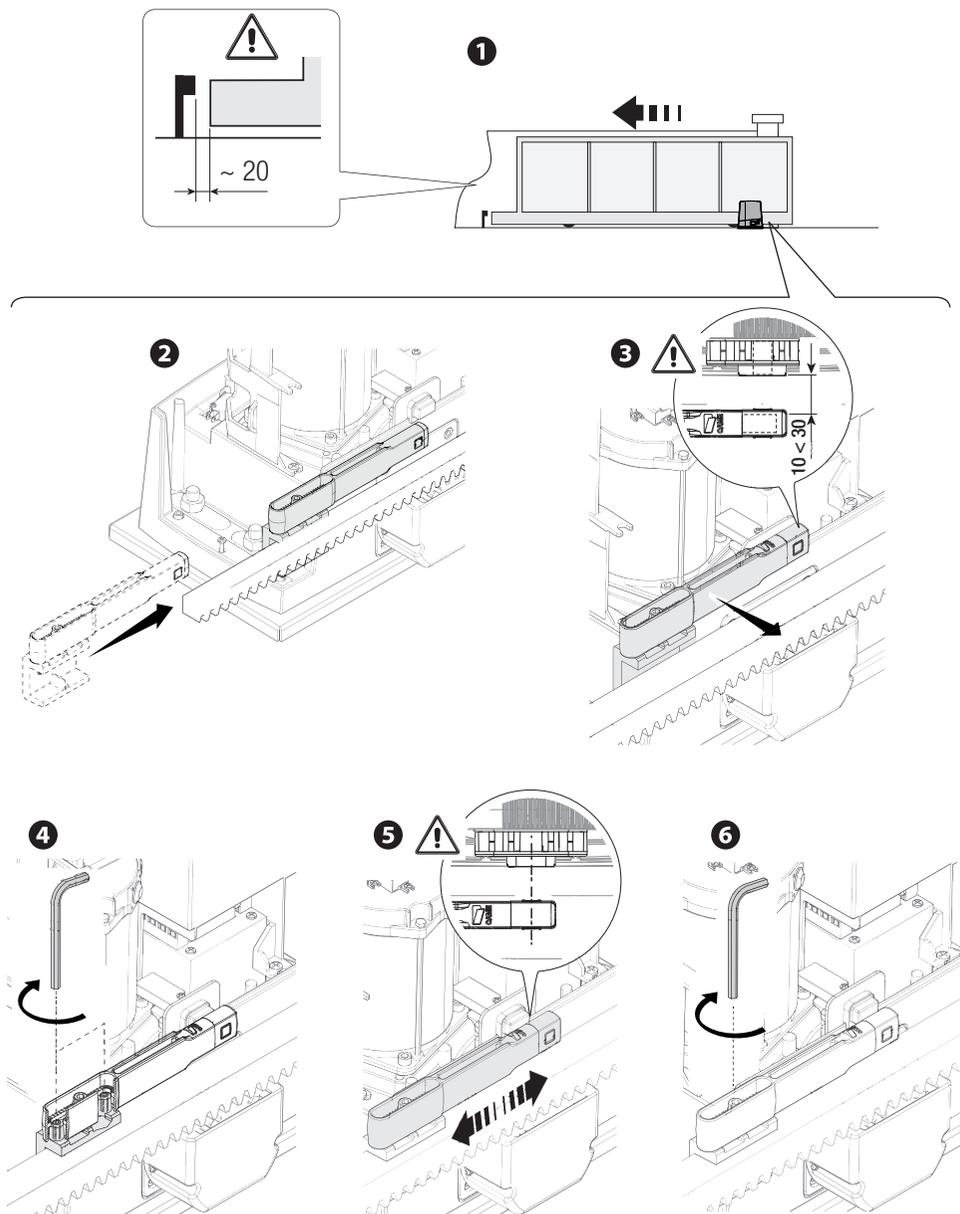
Likewise, set the closing limit-switch magnetic tab with the gate closed, this time. ❼

~ 20

❼

10 < 30

CONTROL BOARD

⚠ Caution! Before doing any work on the control board, cut off the mains power supply, and disconnect any batteries.

The functions on the input and output contacts, the time settings and user management, are set and viewed on the graphic display.

All wiring connections are quick-fuse protected.

Fuses	ZN8
LINE - Line	2 A-F (230 V AC) 4 A-F (120 V AC)
C.BOARD - Card	630 mA-F
ACCESSORIES - Accessories	1.6 A-F

Description of parts

1. Gear motor terminals
2. Terminals for encoders
3. Terminals for the RGP1 module and the LBB battery charger
4. Programming buttons
5. RSE card slot
6. Connector for CAME KEY
7. AF card slot
8. Antenna terminal
9. Terminals for safety devices
10. Terminals for combined or CRP connection
11. Command and control devices terminals
12. Keypad selector terminal
13. Terminal board for transponder selector
14. Terminals for signaling devices
15. B1-B2 terminals
16. R700/R800 card connector
17. Connector for the RIOCN8WS module
18. Connector for the SIPA06 card
19. Limit-switch terminals
20. Accessories fuse
21. Control-board fuse
22. Transformer terminals
23. Memory Roll card connector
24. Display
25. Line fuse
26. Power supply terminal board

⚠ Connect all wires and cables in compliance with the law.
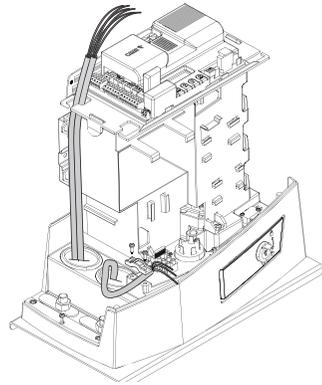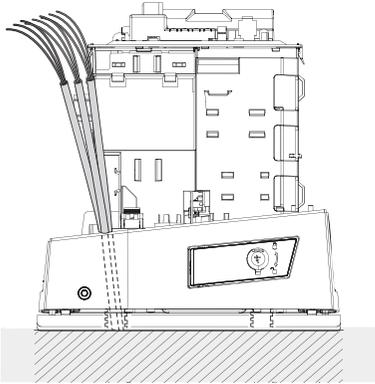
Remove the control board's cover as shown in the figure.
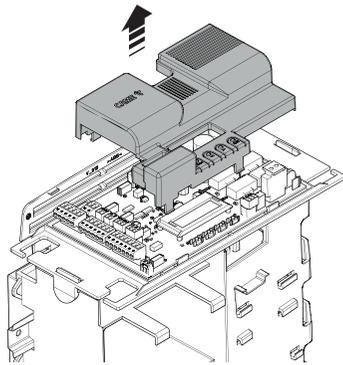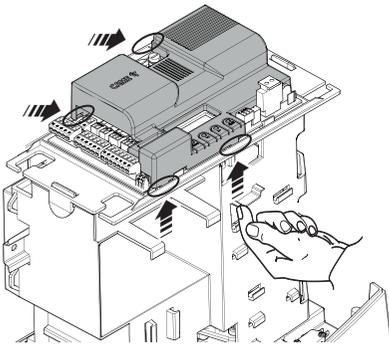
WARNING! For the system to work properly, before fitting any plug-in card (e.g. the AF R800), you MUST CUT OFF THE MAIN POWER SUPPLY and remove any batteries.
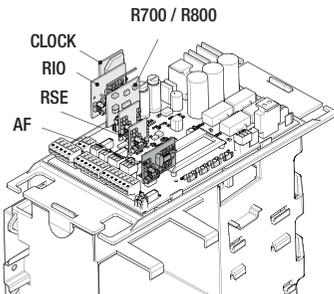
Input voltage

(L-N) Line voltage input at 120 / 230 V AC (1P+N+PE) - 50/60 Hz.

(10-11) Accessories power supply output 24 V AC/DC, max 20 W.
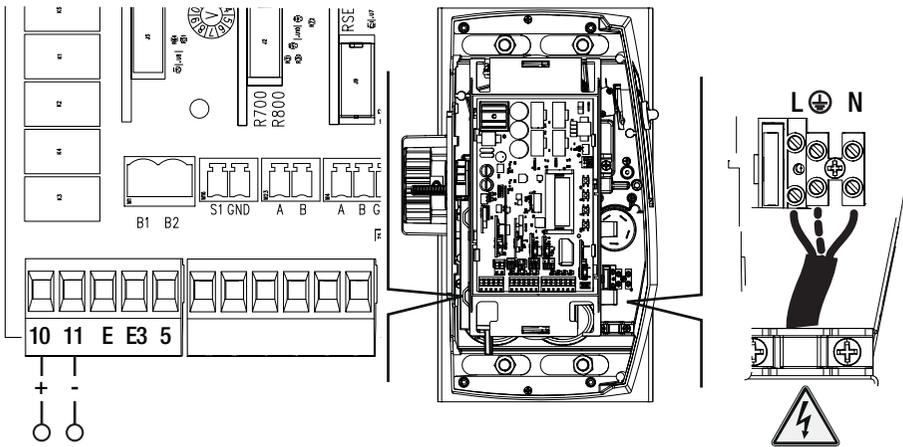
Signaling devices

(10-E) Flashing light connection output (Contact rated at: 24 V AC/DC - 3 W max).

(10-E3) Additional light connection output (contact rated at: 24 V AC/DC - 12 W max).

(10-5) Gate state warning output (contact rated for 24 V AC/DC - 3 W max.).
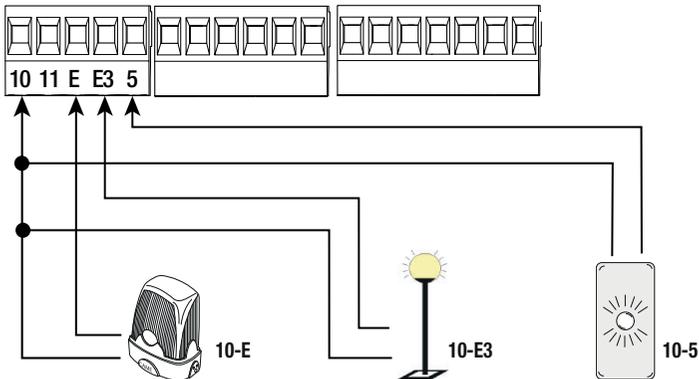
Command and control devices

(R700/R800) R700 card for using the transponder selector or card reader, or, R800 card for using the keypad selector.

📖 Set the type of selector when programming.

(S1-GND) LT001 transponder selector or card reader

(A-B) Keypad selector.

(1-2) STOP button (NC contact). For stopping the gate while excluding automatic closing. To resume movement either press the control button or any other control device.

📖 Turn on the [Total Stop] function when programming. If the button is unused, leave this function off.

(2-3) OPEN ONLY function from control device with NO contact.

📖 In MAINTAINED ACTION mode you must connect the control device onto 2-3.

(2-3P) PARTIAL OPENING feature from command device (NO contact).

(2-4) ONLY CLOSE function from control device (NO contact).

📖 In MAINTAINED ACTION mode, the control device must be connected to 2-4**.**

(2-7) OPEN-CLOSE-INVERT (step-step) function from control device (NO contact). Alternatively, when programming on [Command 2-7], turn on the OPEN-STOP-CLOSE-STOP (sequential) command.

(**AF43S/AF868**) Plug-in radio-frequency card for controlling the gate via a transmitter.

(**TOP-A433N/A862N)** Antenna with TOP-RG58 cable for remote control of the gate.
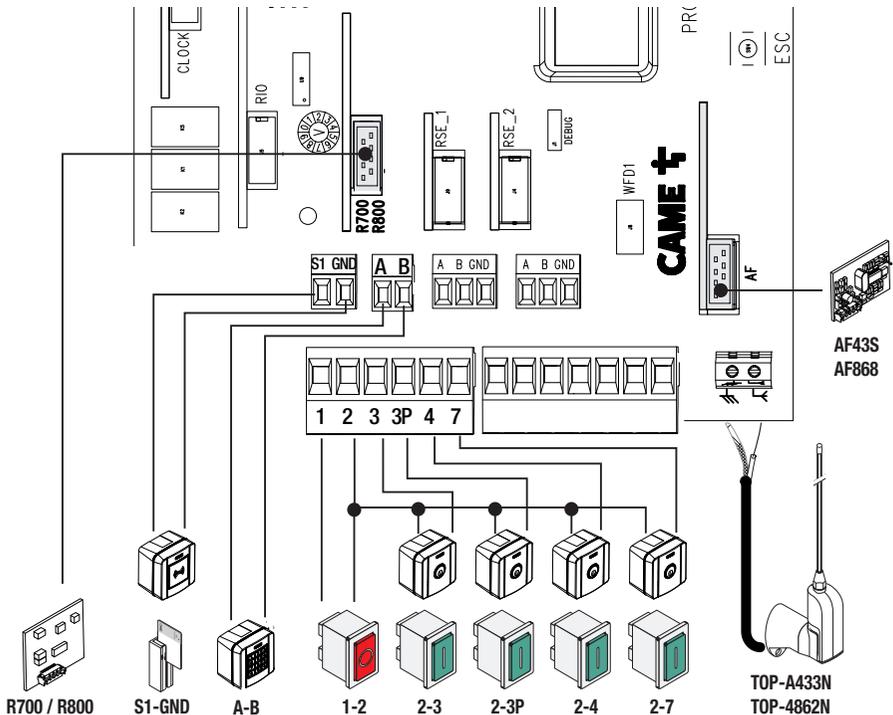
Photocells

Configure contact CX, CY, CZ or CK (NC), input for safety devices such as photocells as:

- **[C1]**reopening during closing. When the gate is closing, opening the contact causes the inversion of movement until opening is complete;

- **[C2]**reclosing during opening. When the gate is opening, opening the contact triggers the inversion of movement until the gate is completely closed.

- **[C3]**partial stop. Stopping of the gate, if it is moving, with consequent automatic closing (if the automatic closing function has been entered);

- **[C4]**obstruction wait. Stopping of the gate, if it is moving, which resumes movement once the obstruction is removed.

- **[C13]** reopening when closing with immediate reclosing once the obstruction is removed even when the gate is stopped.

📖 If contacts CX, CY, CZ or CK unused, turn them off when programming.
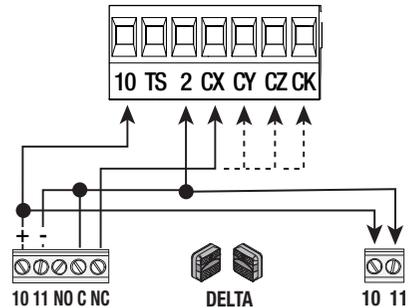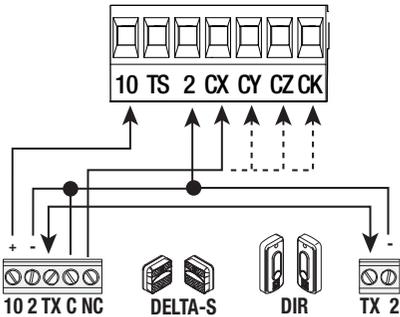
Photocells safety test

At each opening and closing command, the control board checks the efficacy of the safety devices (such as, photocells).

A malfunction will prevent any command from working and **the display will read [Services test failed]**

Enable the [Safety **devices test]** function when programming.
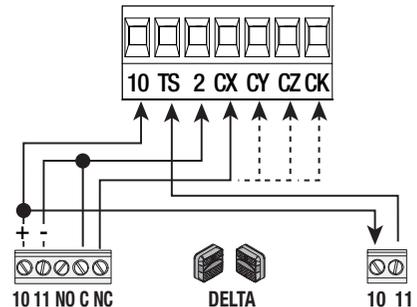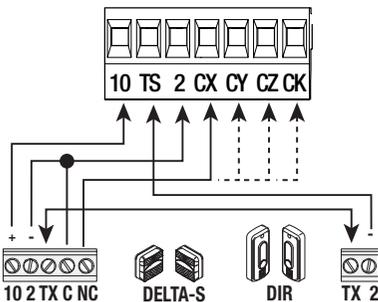
Sensitive safety-edge

Configure contact CX, CY, CZ or CK (NC), input for safety devices such as sensitive safety-edges as:
-edge with clean contact) or [r7] (sensitive safety-edge with 8K2 resistor), reopening when closing. When the gate is closing, opening the contact triggers the inversion of movement until the gate is fully open again;
- edge with clean contact) or [r7] (sensitive safety-edge with 8K2 resistor), reclosing when opening. When the gate is opening, opening the contact triggers the inversion of movement until the gate is fully closed again (*);
If the [Remove **obstruction] function** is turnedon, opening the contact triggers the inversion of movement until there is enough space to remove the obstruction.

If unused, contacts CX, CY, CZ or CK (NC) must be turned off when programming.
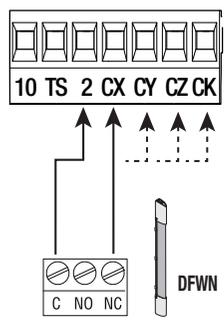
Pair of sensitive safety-edges

Configure contact CX, CY, CZ or CK (NC), input for safety devices such as sensitive safety-edges as:
- [r7 (two sensitive safety-edges)]one pair sensitive safety-edges (with 8K2 resistor), reopening when closing. When the gate is closing, opening the contact triggers the inversion of movement until the gate is fully open again; (*);**- [r8 (two sensitive safety-edges**)] , one pair sensitive safety-edges (with 8K2 resistor), reclosing when opening. When the gate is opening, opening the contact triggers the inversion of movement until the gate is fully closed again;(*);
(*) If the [Remove **obstruction] function** is turnedon, opening the contact triggers the inversion of movement until there is enough space to remove the obstructions.

If unused, contacts CX, CY, CZ or CK (NC) must be turned off when programming.

Parallel connection of a pair (this is best)   *Serial connection of a pair*
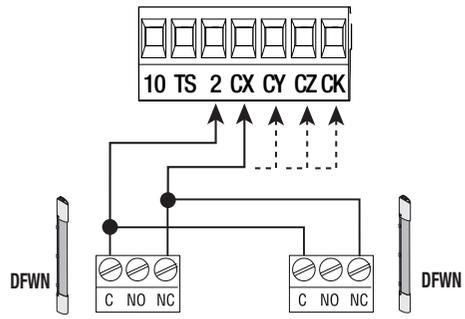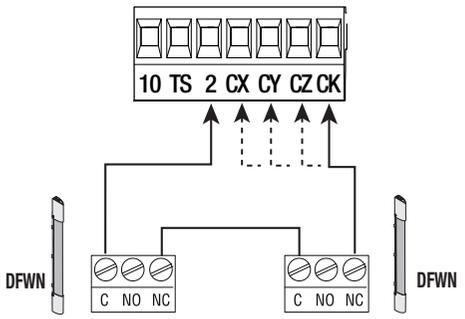
Rio System Wireless devices

Plug-in radio-control module for managing safety and warning devices over radio frequencies.
Plug the RIOCN8WS card into the corresponding connector on the control board.
Set the function to be associated with the following wireless devices: [RIO ED T1], [RIO ED T2], [RIO PH T1] and [RIO PH T2], when programming.
Configure the RIOED8WS, RIOPH8WS and RIOLX8WS wireless accessories by following the indications shown in the folder enclosed with each accessory.

📖 If the devices are not configured with the RIOCN8WS module, the display will show **the [RIO system not configured] error message**.

⚠ If the system's radio-frequencies are disturbed, the wireless system will prevent the operator from functioning normally, and the [RIO **system is unreachable] will appear on the display**.

RIOCN8WS

RIOLX8WS

RIOED8WS

RIOPH8WS
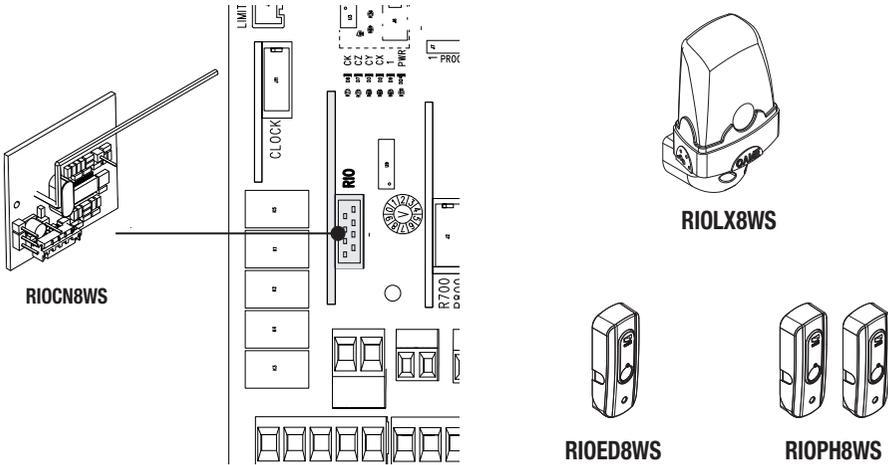
Timer device

This lets you view the date and time, set the way you want the operator and the B1-B2 auxiliary contact to function, by turning them on at a preset time.
Plug the CLOCK card into the connector on the control board.

📖 For more details, see the MANAGE TIMER paragraph in the PROGRAMMING chapter.

806SA-0120
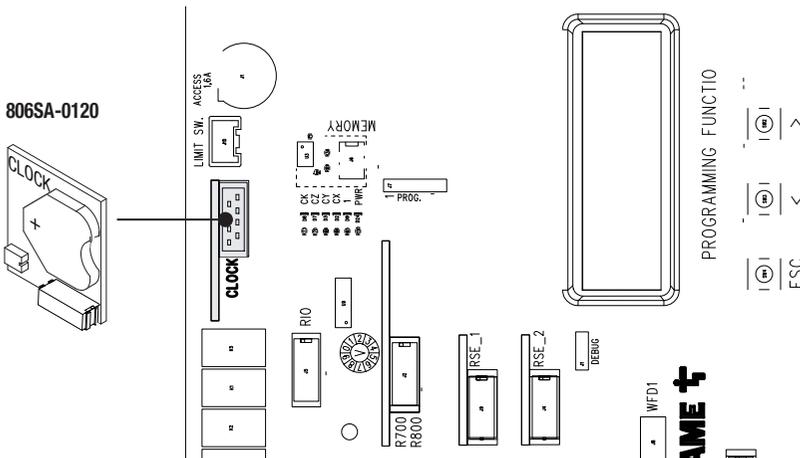
CRP-based connection system

It is for controlling and configuring the system from either a remote or an onsite connection.

Remote connection

Connectthe RGSM or UR042 module to the control board using a CAT 5 (max 1000 m) cable to terminals A-A / B-B / GND-GND.

Plug the RSE card into the RSE_1 connector of the control board.

Configure the RSE_1 port when **programming.**

📖 If an RSE card - configured for combined connections - is plugged into the RSE_1 connector, use the RSE_2 connector. In this case, the onsite connection with CAME KEY is excluded.

📖 For additional details, see the folder that comes with the module.
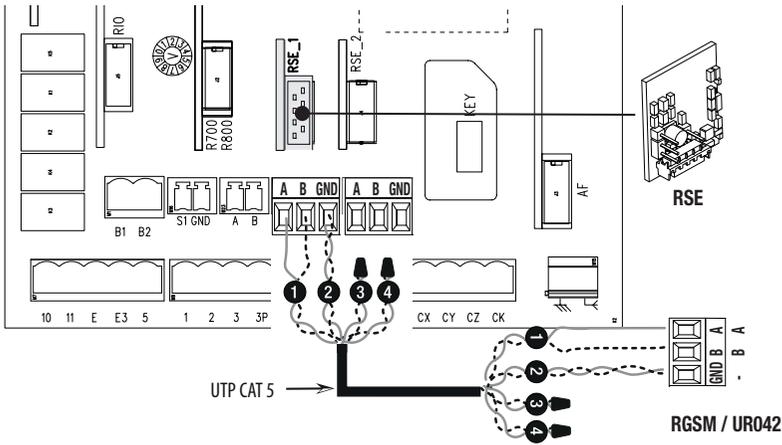
Onsite connection

Fit the CAME KEY into the corresponding connector on the control board.

Download and configure the CAME SetUp app on a PC, Tablet or Smartphone.

📖 For greater details, see CAME KEY manual.

Combined connection

Connecting two operators with a single control.
Connectthe two control boards by using a CAT 5 (max 1.000 m) cable to terminals A-A / B-B / GND-GND.
Plug the RSE card into the RSE_1 connector on the control board of both operators.
Configure the RSE_1 port as **[Combined]** when programming the MASTER control board.
For additional details, see the chapter called COMBINED OPERATION.

UTP CAT 5

Memory Roll

It is for saving user data, time settings and system configuration, and reuse them with another control board.
For more details, see the chapter called SAVING AND UPLOADING DATA USING THE MEMORY ROLL.

MEMORY ROLL

SETTING UP

Once you have finished the electrical connections and installed the limit-switches, have skilled, qualified staff commission the operator.

Before proceeding, check that the maneuvering area is free of any obstructions, then check that the limit-switches work properly and that there both opening and closing mechanical stops are in place.

After powering up the system for the first time, perform the preliminary procedures that appear on the display.

1. Select the language you prefer, and confirm with ENTER.

2. Perform the guided procedure, and confirm with ENTER.

3. Select the system type [Single] or [Combined], then confirm with ENTER.

4. Select the gate's opening direction [Left] or [Right], then confirm with ENTER.

5. Configure contact CX as [Disabled], [C1], [C2], [C3], [C4], [C7], [C8], [C13], [r7], [r8], [r7 (two sensitive safety-edges)] or [r8 (two sensitive safety-edges)], confirm with ENTER. , , , , , , , , , ,

6. Configure also for contacts CY, CZ and CK.

7. If the RIOCN8WS module is plugged into the control board, set the function as [Disabled], [P0], [P7] or [P8] for the wireless device on [RIO ED T1]. , ,

8. Also set the function for the **device on [RIO ED T2]**.

9. Set the function as [Disabled], [P1], [P2], [P3], [P4],o **[P13] for the wireless device on [RIO PH T1].** , , , Also set the function for the device **on [RIO PH T2].**

11. Confirm whether to add the users or not **[Confirm? YES]** or **[Confirm? NO]**, see the **[New user] function** on the **[Manage users] MENU**.

12. Perform the gate travel calibration [Gate-travel **calibration], and** confirm with ENTER.

13. The gate will close and open at a constant, reduced speed until it reaches the limit-switches.

14. Then, the gate will close and open at the speeds set up on the [Gate-travel settings] menu, until **the limit-switches** are reached.

❶
| Language |
| English (en) |

❷
| Guided procedure (Wizard) |
| Confirm? YES |

❸
| System type |
| Single |

❹
| Opening direction |
| Left |

❺
| input CX |
| C1 |

❻
| CY input |
| C1 |

❼
| RIO ED T1 |
| P0 |

❽
| RIO ED T2 |
| P0 |

❾
| RIO PH T1 |
| P1 |

❿
| RIO PH T2 |
| P1 |

⓫
| Adding users |
| Confirm?   NO |

⓬
| Gate-travel calibration |
| Confirm?   YES |

⓭

| Calibrating (1/4) | Calibrating (3/4) ⊕ |
| Calibrating (2/4) | Calibrating (4/4) ⊕ |

⓮
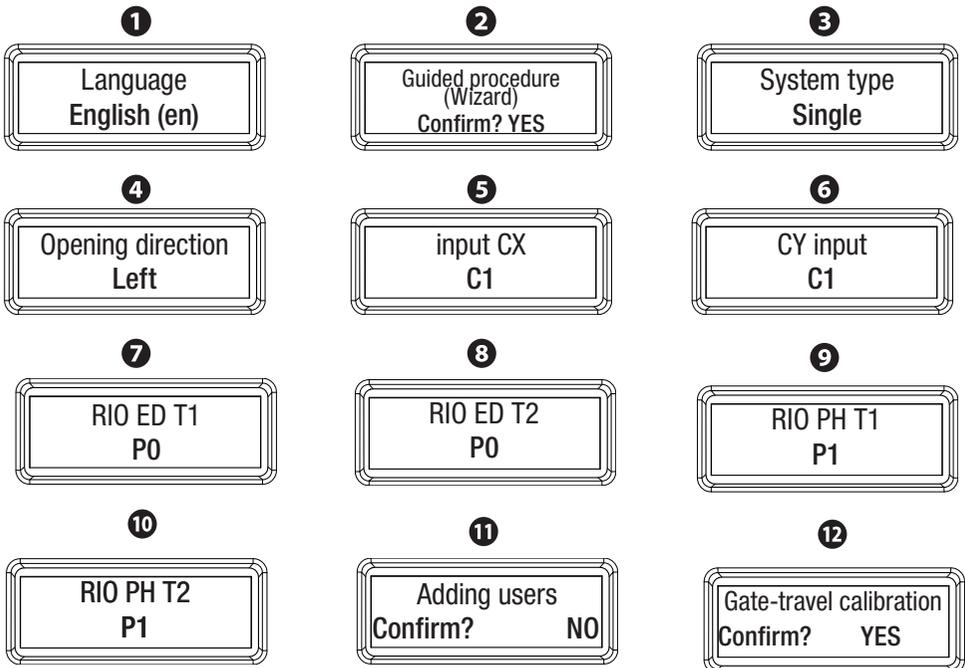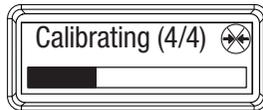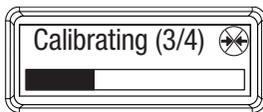
PROGRAMMING

Description of programming commands

CAME ⫯

Esc < > Ent

The ESC button is for:
- exiting menus;
- cancelling changes.
- returning to the previous screen during the guided procedure;
- stopping the gate when it is functioning.

The < > keys are for:
- moving from one item to another;
- increasing or decreasing values.
- opening or closing the gate in functioning mode.
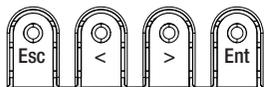
The ENTER key is for:
- accessing menus;
- confirming or memorizing set values.

Description of symbols on the display

Icon	Description
⊕	It shows that the operator is in self-learning mode, that is, it saves the opening and closing maneuver absorptions, as concerns **the parameters set up in [Gate-travel settings].**
→	It shows that the operator has detected an obstruction when the gate was moving to the right.
⊢	It shows that the operator has detected an obstruction when the gate was moving to the left.
2⊢	It shows that the operator has detected two obstructions when the gate was moving to the left. 📖 When the maximum number of detections is reached, the operator stops and the display reads out the following error **message [Maximum number of obstructions in ...]**.
→|2	It shows that the operator has detected two obstructions when the gate was moving to the right. 📖 When the maximum number of detections is reached, the operator stops and the display reads out the following error **message [Maximum number of obstructions in ...]**.
⏱	It shows that the control board has at least one scheduled timer saved in the memory.
⧗	It shows that the control board is running a scheduled timer. 📖 Only when the scheduled timer is in **[Open]** function, users may not control the operator, except for the 2-3, 2-4 and 2-7 hard-wired commands.

📖 The default parameters are in bold case

Main menu	Level 2 menu	Level 3 menu	Parameters
Configuration	Motor settings	Opening direction	**Left** / Right
		Motor test	Press the < > keys
		Gate-travel calibration	Confirm? NO / Confirm? YES
		Motor type	BKV1500 / BKV2000 / BKV2500
	Gate travel settings	Opening speed	40% > ... > **100%**
		Closing speed	40% > ... > **100%**
		Opening slow-down speed	15% > ... > **50%** > ... > 60%
		Closing slow-down speed	15% > ... > **50%** > ... > 60%
		AST control (run)	**Disabled** / Minimum / Medium / Maximum / Customize
		AST control (slowd.)	**Disabled** / Minimum / Medium / Maximum / Customize
		Soft Start	**Off** / On
		Part. open point	10% > ... > **20%** > ... > 100%
		Opening slow-down point	10% > ... > **25%** > ... > 60%
		Closing slow-down point	10% > ... > **25%** > ... > 60%
	Hard-wired safety devices	Total Stop	**Off** / On
		input CX	**Disabled** / C1 / C2 / C3 / C4 / C7 / C8 / C13 / r7 / r8 / r7 (Two sensitive safety edges) / r8 (Two sensitive safety edges)
		CY input	**Disabled** / C1 / C2 / C3 / C4 / C7 / C8 / C13 / r7 / r8 / r7 (Two sensitive safety edges) / r8 (Two sensitive safety edges)
		CZ input	**Disabled** / C1 / C2 / C3 / C4 / C7 / C8 / C13 / r7 / r8 / r7 (Two sensitive safety edges) / r8 (Two sensitive safety edges)
		CK input	**Disabled** / C1 / C2 / C3 / C4 / C7 / C8 / C13 / r7 / r8 / r7 (Two sensitive safety edges) / r8 (Two sensitive safety edges)
		Safety devices test	**On** / Off
		Obstruction with motor stopped	**On** / Off
	RIO safety devices	RIO ED T1	**Disabled** / P0 / P7 / P8
		RIO ED T2	**Disabled** / P0 / P7 / P8
		RIO PH T1	**Disabled** / P1 / P2 / P3 / P4 / P13
		RIO PH T2	**Disabled** / P1 / P2 / P3 / P4 / P13
	Command inputs	Command 2-7	**Step by step** / Sequential

Configuration	Functions	Maintained action	**On** / Off
		Output B1-B2	**Bistable** Monostable (1 > 180 sec.)
		Remove obstruction	**On** / Off
	Times	Automatic close	**Off** / 1 > 180 sec.
		Automatic partially close	Off / 1 >...> **10** >...> 180 sec.
	Manage lights	Gate-open warning light	**Warning light** on / flashing
		Light E3	**Disabled** /Cycle light / courtesy light
		Courtesy time	**60** > 180 sec.
		Pre-flashing time	**Off** / 1 > 10 sec.
	RSE communication	RSE1	Off / On / **CRP**
		CRP address	**1** > 254
		RSE1 speed	1200 bps / 2400 bps / 4800 bps / 9600 bps / 14400 bps / 19200 bps / **38400 bps** / 57600 bps / 115200 bps
		RSE2 speed	1200 bps / 2400 bps / 4800 bps / 9600 bps / 14400 bps / 19200 bps / **38400 bps** / 57600 bps / 115200 bps
	External memory	Saving data	
		Reading data	
	Guided procedure (Wizard)	Single	
		Combined	
Manage users	New user	Step-by-step / Sequential / Open / Partially open / Output B1-B2	
	Remove user	No.: 1>250 RADIO	
	Remove all	Confirm? NO Confirm? YES	
	Radio-frequency decoding	All decodings Rolling code / TW Key block	
	Sensor type	Keypad / Transponder	
	Change mode	No.: 1>250 RADIO	
Technical	FW version	FW x.x.xx (firmware)	
		GUI x.x (graphics)	
	Maneuvers counter	Total maneuvers	
		Partial maneuvers	

Technical	Set up maintenance	**Off** / 1X100 > 250X100	
	Maintenance reset	Confirm? NO Confirm? YES	
	Resetting parameters	Confirm? NO Confirm? YES	
	Errors list		
Manage timer	Show clock		
	Set the clock	Date and time	
	Automatic DST	**On** / Off	
	Time format	24 hours / 12 hours (AM/PM)	
	Create new timer	Open / Partially open / Output B1-B2	Start time Stop time
	Remove timer		
Commands	Open		
	Partially open		
	Close		
	Stop		
Language	Italiano (IT)		
	English (EN)		
	Francais (FR)		
	Deutsch (DE)		
	Espanol (SP)		
	Português (PT)		
	Polski (PL)		
	Русский (RU)		
Password	Enable password		
	Remove password		
	Change password		
"F" Menu	F1, F2, F3, F4,.... (Simplified functions menu)		

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

Configuration

Motor settings

[Opening direction] ➡ [Left] > [Right]
Setting the gate-opening direction.

[Motor test] ➡ [Press the < > keys]
This test checks whether the gate opens in the proper direction. Use the < > keys when programming.

[Gate-travel calibration]
Self-learning of the gate's travel.
⚠ Before calibrating the gate travel, check that the maneuvering area is free of any obstructions and check the proper positioning of the limit-switches.
⚠ The mechanical gate stops and the limit-switches are obligatory.
Important! During calibration, all safety devices will be disabled.

1. Select **[Calibrate gate travel]**. Press ENTER.
2. The gate will close and then open at a slow, constant speed until the limit-switches are reached.
3. Then, the gate will close and open at the speeds you have set in the [Gate-travel settings] menu, until the limit-switches are reached.

📖 Regardless of how long the gate leaf is, the opening and closing slow-down points are set at 60 cm from the closing strike-plate.

❶

| Setting up the motor |
| Gate-travel calibration |

❷

| 1 / 4 |
| 2 / 4 |

❸

| 3 / 4 ✦ |
| 4 / 4 ✦ |
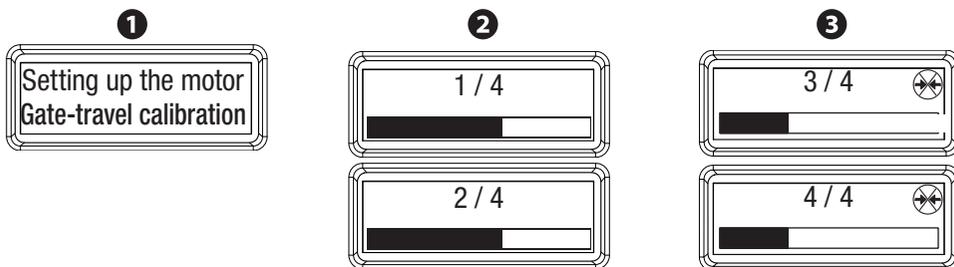
[Motor Type] ➡ [BKV1500] > [BKV2000] > [BKV2500]
Setting the type of gearmotor installed in the system.

Gate travel settings

[Opening speed] ➡ [40%] > ...> [100%]
To set the gate's opening speed, calculated as a percentage.

[Closing speed] ➡ [40%] > ...> [100%]
To set the gate's closing speed, calculated as a percentage.

[Opening slow-down speed] ➡ [15%] > ... > [60%]
To set the gate's opening slow-down speed, calculated as a percentage.

[Closing slow-down speed] ➡ [15%] > ... > [60%]
To set the gate's closing slow-down speed, calculated as a percentage.

[AST control (run)] ➡ [Disabled] > [Minimun] > [Medium] > [Maximum] > [Costumize] (from 10% maximum sensitivity to 100% sensitivity disabled).
To set the obstruction-detection sensitivity when the gate is motion.

[AST control (slowd.)] ➡ [Disabled] > [Minimun] > [Medium] > [Maximum] > [Costumize] (from 10% maximum sensitivity to 100% sensitivity disabled).
Adjusting the obstruction detection sensitivity when the gate is slowing down.

[Slowed-down start] ➡ [Off] > [On]
Upon each opening and closing command. The gate starts slowly for some seconds.

[Partially open point] ➡ [10%] > ... > [100%]
To adjust the partial opening of the gate, calculated as a percentage of the total gate travel.

[Open slw-dwn point] ➡ [10%] > ... > [60%]
To adjust the point where the gate starts to slow down when opening, calculated as a percentage of the total gate travel.

[Closing slow-down point] ➡ [10%] > ... > [60%]
To adjust the point where the gate starts to slow down when closing, calculated as a percentage of the total gate travel.

⚠ Each time a change is made to the **parameters of** , **the following** , **functions** , , , **[Opening speed], Openingslow-down speed], [Closingslow-down** speed], [Slowed-down start], [Opening slow-down point] and [Closing slow-down point], the absorptions of either the first opening or closing maneuver will be automatically recorded. During this entire phase, the symbol on the top right of the display will remain visible.⊗
Important! During the self-learning, check that the system is free of any obstructions.
Caution! During this phase, the obstruction detecting sensitivity is imprecise. Any obstruction simulations should only be done when the warning symbol is no longer visible on the display⊗.

Hard-wired safety devices

[Total Stop] function ➡ [Off] > [On]
NC input – Gate stop that excludes any automatic closing; to resume movement, use the control device. Plug the device into contact 1-2.

[CX Input] ➡ [Disabled] > [C1] > [C2] > [C3] > [C4] > [C7] > [C8] > [C13] > [r7] > [r8] > [r7 (two sensitive safety-edges)] > [r8 (two sensitive safety-edges)].
Input NC - Can associate: [C1] = reopening when closing by photocells, [C2] = reclosing when opening by photocells, [C3] = partial stop, [C4] = obstruction wait, [C7] = reopening when closing by sensitive safety-edges, [C8] = reclosing when opening by sensitive safety-edges, [C13] = , reopening when closing and with immediate stop once the obstruction is removed even if the gate is stopped, [r7] = reopening during closing by sensitive safety-edges (with 8k2 resistor), [r8] = reclosing during opening by sensitive safety-edges (with 8k2 resistor), [r7 (two sensitive safety-edges)] = reopening during closing by a pair of sensitive safety-edges (with 8k2 resistor), [r8 (two sensitive safety-edges)] = reclosing during opening by a pair of sensitive safety-edges (with 8k2 resistor), [Disabled].
📖 Function [C3] **is** enabled only if the [Automatic close] function is on.

[CY input]
Input NC – See function **[CX Input]**

[CZ input]
Input NC – See function **[CX Input]**

[Input CK]
Input NC – See function **[CX Input]**

[Safety devices test] ➡ **[Off]** > **[On]**
After every opening or closing command, the board will check whether the photocells are working properly.
📖 The safety test is always active for wireless devices.

[Obst. with motor stopped] ➡ **[Off]** > **[On]**
When the gate is closed, open or, after a total stop, the operator stays idle if the safety devices, namely, photocells or sensitive safety-edges detect an obstruction.

RIO safety devices

[RIO ED T1] ➡ **[Disabled]** > **[P0]** > **[P7]** > **[P8]**
RIO-EDGE wireless safety-device to associate to one of the available functions: **[P0]**= gate stops with exclusion of any automatic closing; to resume movement, use the control device,**[P7]** = reopen when closing, **[P8]** reclose when opening or **[Off].** To program, see the instructions enclosed with the accessory.

📖 This function only appears if the RIOCN8WS card is plugged into the control board.

[RIO ED T2]
RIO-EDGE wireless safety device - See function called **[RIO ED T1]**

[RIO PH T1] ➡ **[Disabled]** > **[P1]** > **[P2]** > **[P3]** > **[P4]** > **[P13]**
RIO-CELL wireless device associated to one of the available functions: **[P1]** = reopen when closing; **[P2]** = reclose when opening; **[P3]** = partial stop; **[P4]** = obstruction wait; **[P13]** = reopen when closing with immediate closing once the obstruction is removed, even when the gate is stopped. **[OFF]** = off.

📖 This function only appears if the RIOCN8WS card is plugged into the control board.
📖 The [P3] **function** is enabled on if if the [Automatic close] automatic **close is turned on.**

[RIO PH T2]
RIO-CELL wireless device - See the **[RIO PH T1] function**

Command inputs

[Command 2-7] function ➡ **[Step-by-step]** > **[Sequential]**
From the safety device connected to 2-7, it performs the (open, stop-close-stop) sequential (open-close-invert) step-by-step command,

Functions

[Maintained action] ➡ [Off] > [On]
The gate opens and closes by keeping the button pressed. Opening button on contact 2-3 and closing button on contact 2-4. All other control devices, even radio-based ones, are excluded.

[Output B1-B2] ➡ [Bistable] > [Monostable 1 sec.] > ... > [Monostable 180 sec.]
To configure the B1-B2 contact in Bistable mode (switch) or Monostable mode (the contact stays closed between 1 and 180 secs.).

[Remove obstruction] ➡ [Off] > [On]
When this function is on and an obstruction detected by the sensitive safety-edge, the control board inverts the movement to give enough space to remove said obstruction. When this function is off, the movement is inverted until the gate reaches the limit-switch.

Times

[Automatic Cls.] function ➡ [Off] > [1 sec.] > ... > [180 sec.]
The wait before the automatic closing starts once the opening limit-switch point is reached. The automatic closing does not work if any of the safety devices trigger when an obstruction is detected, or after a total stop, or during a power outage.

[Automatic partially close] ➡ [Off] > [1 sec.] > ... > [180 sec.]
The wait before the automatic closing starts after a partial opening command, and for a preset time.
The automatic closing does not work if any of the safety devices trigger when an obstruction is detected, or after a total stop, or during a power outage.

Manage lights

[Gate open warning light] ➡ [Warning light on] > [Warning light flashing]
Configure the warning light connected to contact 10-5 as: **[Warning light on]** = to show the gate is open or moving **[Warning light flashing]** = to show that the gate is moving, it stays on when the gate is open.

[Light on E3] ➡ [Disabled]: > [Cycle light] > [Courtesy light]
Configure the light connected to contact 10-E3 as: **[Cycle light]** = it stays on from the moment the gate starts opening until itis completely closed (including the automatic closing time). If the automatic closing is not on, the light stays off, **[Courtesy light]** = it turns on from the moment the gate starts opening until the opening limit-switch is reached,and stays on for the set time, see [Courtesy **time**].

[Courtesy time] ➡ [60 sec.] > ... > [180 sec.]
To set the courtesy light turn-on time after a complete opening maneuver.

[Pre-flashing time] ➡ [Off] > [1 sec.] > ... > [10 sec.]
After an open or close command, the flashing light connected to 10-E flashes for a preset time before starting the maneuver.

RSE communication

[RSE1] ➡ **[Off]** > **[Combined]** > **[CRP]**
Configure the RSE1 connector as: **[Combined]** = to work in MASTER mode for controlling the two operators; **[CRP]** = remote connection system or **[Off]**.

[CRP Address] ➡ **[1]** > ... > **[255]**
Associate an address number that uniquely identifies each control board, when the system has two or more operators and a remote connection system.

[RSE1 speed] ➡ **[1200 bps]** > **[2400 bps]** > **[4800 bps]** > **[9600 bps]** > **[1200 bps]** > **[14400 bps]** > **[19200 bps]** > **[38400 bps]** > **[57600 bps]** > **[115200 bps]**
To set the communication speed used in the remote connection system on the RSE1 port.

[RSE2 speed] ➡ **[1200 bps]** > **[2400 bps]** > **[4800 bps]** > **[9600 bps]** > **[1200 bps]** > **[14400 bps]** > **[19200 bps]** > **[38400 bps]** > **[57600 bps]** > **[115200 bps]**
To set the communication speed used in the remote connection system on the RSE2 port.

External memory

[Saving data]
To save the users, time settings and configurations stored in the memory roll.*

[Reading data]
To upload the data stored in the memory roll.*

* See the chapter called SAVING AND UPLOADING DATA USING THE MEMORY ROLL

Guided procedure (Wizard)

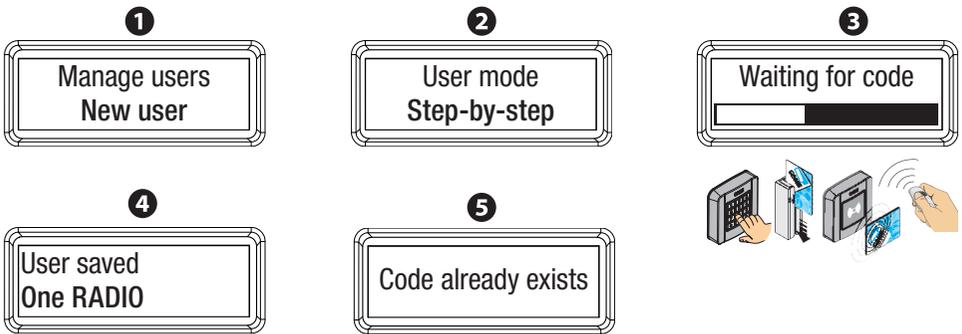See the chapter called COMMISSIONING.

New user

To add up to 250 users and associate to each, one of the available commands: **[Step-by step]**, **[Sequential]**, **[Open]**, **[Partially open]** or **[Output B1-B2].** Enter the data by using a transmitter or other control device.

📖 Before registering the users, if you are adding them by using a transmitter, make sure the antenna fitted with the RG58 cable is connected to the corresponding terminals, and that the AF card is plugged into its corresponding connector. If you are using a transponder or a keypad, make sure the R700 or R800 card is plugged into the corresponding connector.

1. On the **[Manage users] menu**, select **[New User]**. Press ENTER to confirm.
2. Choose a control mode. Press ENTER.
3. The system will ask for a code to enter via transmitter, keypad, swipe card or transponder.
4. Once the code is entered, a user number and the type of control will appear.
5. If the code is already in used, **the [Code already in use] wording will appear**.

📖 Repeat the same procedure for adding another user.

❶
Manage users
New user

❷
User mode
Step-by-step

❸
Waiting for code

❹
User saved
One RADIO

❺
Code already exists

📖 From the docs.came.com portal, download the **L20180423** module for registering the users.

Remove user

Removing single users.

1. From the **[Manage users] menu**, select **[Remove User]** Press the ENTER key.
2. Select the user number to remove by using the $<>$ keys and press ENTER.
3. Select **[Confirm? YES]** and press ENTER to confirm the deletion.

📖 Repeat the same procedure to delete another user or press ESC to exit.

📖 Alternatively, you can delete the user without using the $<>$ keys by sending a command to the corresponding user. Thedisplay will show the position number with the type of command. Press ENTER to delete after the confirmation message.

❶
Manage users
Remove user

❷
Remove user
One RADIO

❸
Remove user
Confirm? YES

Done

Remove all

Deleting all users.

1. From the **[Manage users] menu**, select [Remove all]. Press ENTER.
2. Select **[Confirm? YES]** and press ENTER to confirm the deletion of all users.

❶

Manage users
Remove all

❷

Remove all
Confirm? YES

Done
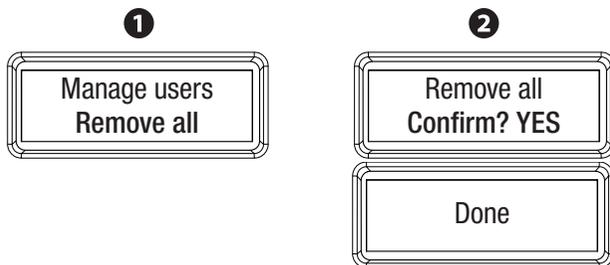
Radio-frequency decoding

To establish the type of radio-frequency coding for the transmitter you want to save to the control board, among the available coding types: **[All decodings]**, **[Rolling code]** or **[TW key block]**.

📖 When you select the [Rolling code] **radio-frequency coding,** all saved transmitters are automatically deleted, save for those with Rolling code radio coding.

📖 When you select the [TW key **block] radio-frequency coding,** all saved transmitters are automatically deleted.

📖 The TWIN coding lets you save multiple users with the same key (Key block).

1. From the **[Manage users] menu**, select **[Decode radio frequency]** Press the ENTER key.
2. Select the type of radio-frequency coding. Press ENTER.
3. Select **[Confirm? YES]** and press ENTER to confirm the type of coding.

❶

Manage users
Radio-frequency decoding

❷

Radio-frequency decoding
All coding types

❸

Radio-frequency decoding
Confirm? YES

Done
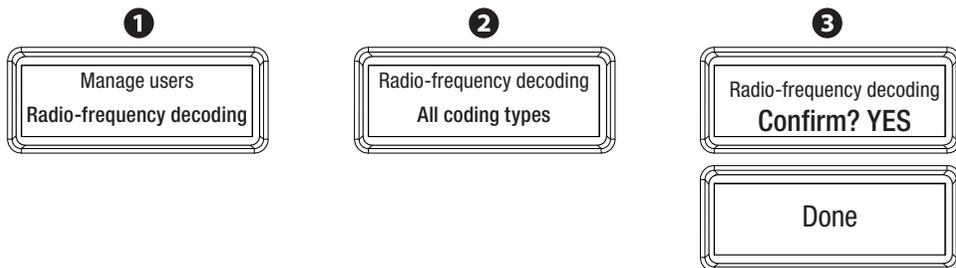
Sensor type

To set the type of accessory for controlling the operator.

1. From the **[Manage users] menu**, select **[Sensor type].** Press the ENTER key.
2. Select the type of accessory for controlling the operator, between **[Transponder]** or **[Keypad].** Press ENTER to confirm the type of accessory.

❶

Manage users
Sensor type

❷

Manage users
Transponder

❸

Datum saved
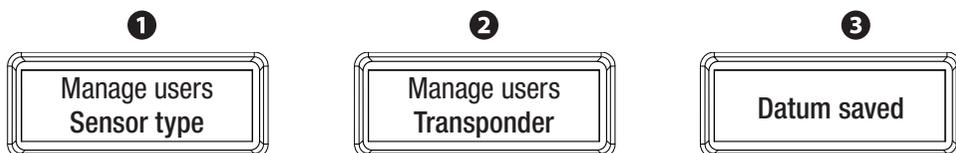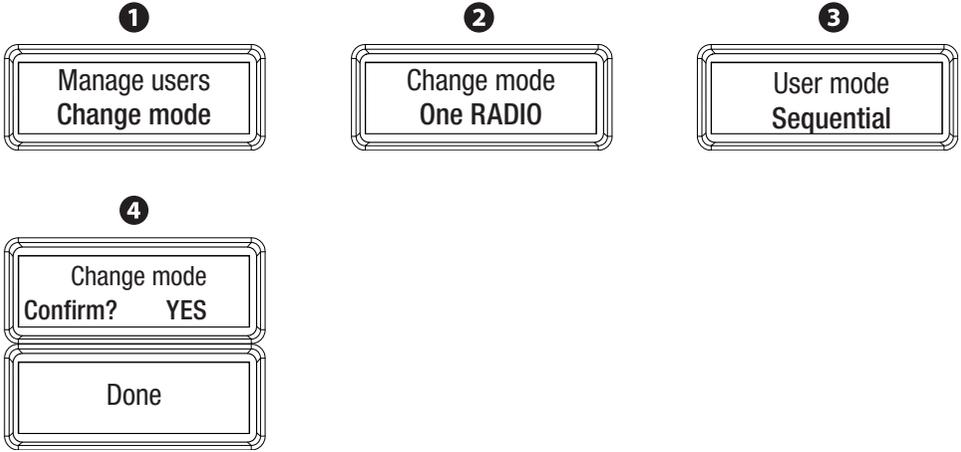
Change mode

To change the command of the operator oof an added user.

1. From the **[Manage users] menu**, select **[Change mode].** Press the ENTER key.
2. Select the user for whom you want to change the command. Press ENTER.
3. Select the new command to associate to the user. Press ENTER.
4. Select **[Confirm? YES]** and press ENTER to confirm the new command.

📖 Alternatively, you can change a user's command without using the < > keys. Just send a command from the corresponding user and press ENTER to confirm.

❶

```
Manage users
Change mode
```

❷

```
Change mode
One RADIO
```

❸

```
User mode
Sequential
```

❹

```
Change mode
Confirm?     YES
```

```
Done
```

Information

FW version

View the firmware version. Press the ENTER key.

Maneuvers counter ➡ [Total maneuvers] > [Partial maneuvers]

[Total maneuvers] = to view the gate's total number of maneuvers.

[Partial maneuvers] = to view the total number of maneuvers completed by the gate between maintenance sessions.

Set maintenance

To set the number of gate maneuvers before performing maintenance jobs on the system.
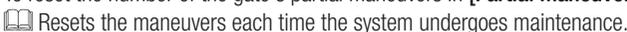This number can be set from **[1x100]** up to **[250x100].**
📖 (e..g. 1x100 = 100 maneuvers; 100x100 = 10000 maneuvers)
When the set number is reached, the warning light connected to 10-5 will blink three times, twice every hour.

Maintenance reset

To reset the number of the gate's partial maneuvers in **[Partial maneuvers].**
📖 Resets the maneuvers each time the system undergoes maintenance.

Resetting parameters

To reset the initial settings, except for the [Decode radio frequency] and [Motor type] functions.

Select **[Confirm? YES]** and press ENTER.

Errors list

It shows the last eight errors, in chronological order, during the operator's life cycle. The complete list of errors can be deleted.

Select **[Confirm? YES]** and press ENTER.

📖 The error messages are shown on a table, see the chapter called LIST OF ERROR MESSAGES, POSSIBLE CAUSES AND FIXES.

Commands

Commands only to use for testing procedures. Select one, among:
[Open] = to open the gate;
[Partially open] = to partially open the gate;
[Close] to close the gate;
[Stop] = to stop the gate.

📖 The [Commands] **function** is on even when in operating mode.

Language

Select one of the available languages:
[Italiano (IT)];
[English (EN)];
[Francais (FR)];
[Deutsch(DE)];
[Espanol (SP)];
[Português (SP)];
[Polski (SP)];
[Русский (RU)].

Password

To set a password to protect the access to the main menu, that is, configuring, managing users, and so on.

Enable password

1. From the **[Password]**, select **[Enable password].** Press the ENTER key.
2. Enter four digits by using the < > keys, then press ENTER;
3. Reconfirm password.

❶   ❷   ❸

Password Enable password		New Password 0___		Repeat Password 0___

Done

Remove password

1. From the **[Password]**, select **[Remove password].** Press the ENTER key.
2. Select **[Confirm? YES]** and press ENTER.

❶

```
Password
Remove password
```

❷

```
Remove Password
Confirm? YES
```

```
Done
```

Change password

1. On the **[Password]** menu, **select [Change password].** Press the ENTER key.
2. Enter four digits by using the < > keys, then press ENTER;
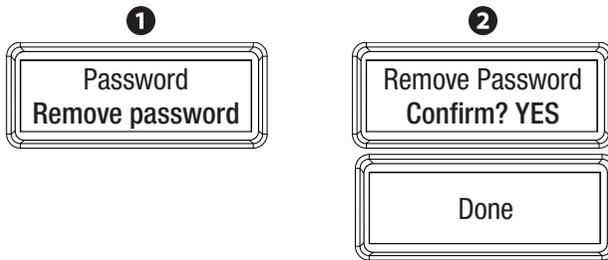3. Reconfirm password.

❶

```
Password
Change password
```

❷

```
New Password
0___
```

❸

```
Repeat Password
0___
```

```
Done
```

📖 If you lose the password, you will need to reset the control board to its factory settings. The reset the control board procedure, deletes all saved users, the set times and the calibration data.
On the control board, use the following resetting procedure:
- cut the main power supply to the control board;
- keep pressed the < and > keys, then power up the control board. Keep the keys pressed until the display reads [Factory reset], then press ENTER**to confirm.**;
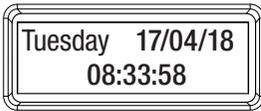-select **[Confirm? YES]**
Once confirmed, set the language you prefer and follow the guided procedure.

📖 The Manage Timer menu appears only if a SIPA06 control board is plugged in.

Show clock

View date and time.

```
Tuesday   17/04/18
        08:33:58
```

Set the clock

Date and time settings.

1. On the [Manage Timer] menu, select [Set Clock]. Press the ENTER key.
2. Set the day, month and year by using the < > keys, then press ENTER.
3. Then, in the same way, set the hour, minutes and seconds.

❶
```
Timer
Set the clock
```

❷
```
Day Month Year
   17 04 18
```

❸
```
Hour Minutes
Seconds 17 04 18
```
```
Done
```
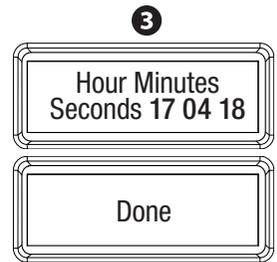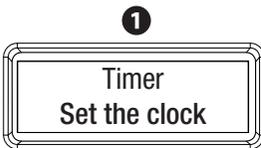
Automatic DST

Set the Automatic DST/Winter time change.

1. From the [Manage timer] menu, select [Automatic DST] Press the ENTER key.
2. Select [On] Press ENTER to confirm choosing the automatic time-change setting.

❶
```
Manage timer
Automatic DST
```

❷
```
Automatic DST
     On
```
```
Datum saved
```
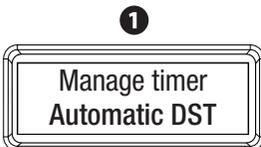
Time format

To set the time format from **[24 hour clock]** to **[12 hour clock (am/pm)]**.

```
Tuesday   17/04/18
    24:00:00
```

```
Tuesday   17/04/18
   12:00:00 PM
```

Create new timer

To manage the operating times of one or more of the following available functions:**[Open]**, **[Partially open]** and **[Output B1-B2]**.

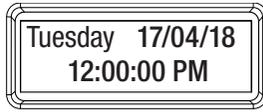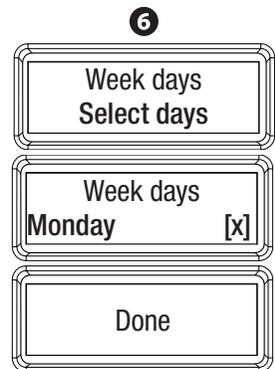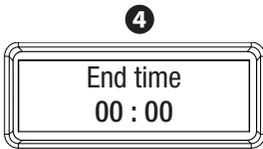📖 Only with the [Open] **function**, users are not enabled to control the operator. In any case, any hard-wired control devices remain on.

1. From the **[Manage timer] menu**, select **[Create new timer]** Press the ENTER key.
2. Select a function. Press ENTER.
3. Set the command's start time by using the < > keys and the Enter key;
4. Then, in the same way, set the command's stop time;
5. Select **[Entire week]**to set the command for all days of the week. Press ENTER to confirm.
6. Alternatively, select **[Select days]**, to set the command for certain days of the week. Select which days and confirm them by using the < > keys and the Enter key.

❶
```
Manage timer
Create new timer
```

❷
```
Timer Command
     Open
```

❸
```
Start time
  00 : 00
```

❹
```
End time
 00 : 00
```

❺
```
Week days
Entire week
```
```
        Done
```

❻
```
Week days
Select days
```
```
Week days
Monday       [x]
```
```
          Done
```

📖 After creating a new time, the display will show a letter representing a type of function:
- O = open;
- P = partially open;
- B = output B1-B2.

Remove timer

Deleting the timer.

1. From the **[Manage timer] menu**, select **[Remove timer]** Press the ENTER key.
2. The display will show the type of command that is activated (O = Open, P = Partially open or B = Output B1-B2) and the commands' start and stop times. Press ENTER again.
3. Select **[Confirm? YES]** and press ENTER to confirm deleting the timer.

❶

```
Manage timer
Remove timer
```

❷

```
    Remove timer
P   00:00 00:00
```

❸

```
  Remove timer
Confirm? YES
```

```
      Done
```
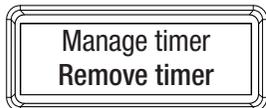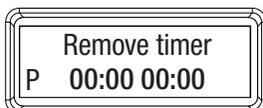
"F" Menu

Simplified functions menu.

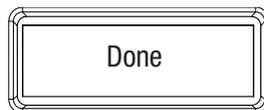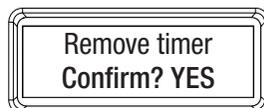|				
F1	Total Stop		U1	New user
F2	CX input		U2	Remove user
F3	CY input		U3	Remove all
F4	CZ input		U4	Decode radio-frequency
F5	Safety devices test			
F6	Maintained action		H1	Software version
F7	Command 2-7			
F9	Obstruction block			
F10	Gate open warning light			
F11	Exclude Encoder			
F12	Slowed-down start			
F14	Sensor type			
F18	Light on E3			
F19	Automatic closing time			
F20	Partially close time			
F21	Preflashing time			
F25	Courtesy light time			
F28	Opening time			
F29	Closing time			
F30	Opening slow-down time			
F31	Closing slow-down time			
F34	Gate travel sensitivity			
F35	Slow-down sensitivity			
F36	Partially open point			
F37	Opening slow-down point			
F38	Closing slow-down point			
F49	RSE1			
F50	Saving data			
F51	Reading data			
F 54	Opening direction			
F56	CRP address			
F58	Total maneuvers			
F63	RSE1 speed			
F65	RIO ED T1			
F66	RIO ED T2			
F67	RIO PH T1			
F68	RIO PH T2			

|	
A1	Type of motor
A2	Motor test
A3	Gate-travel calibration
A 4	Resetting parameters
A5	View and reset maneuvers

SAVING AND UPLOADING DATA USING THE MEMORY ROLL

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

1. Plug the MEMORY ROLL into the corresponding connector on the control board.
2. On the [Configuration] menu, select [External memory] and press ENTER. Select [Saving data] and press ENTER to confirm the saving of data in the Memory Roll.
3. Unplug the MEMORY ROLL and plug it into another control board.
4. On the [Configuration] menu, select [External memory] and press ENTER. Select [Reading data] and press ENTER to confirm the reading of Memory roll data.

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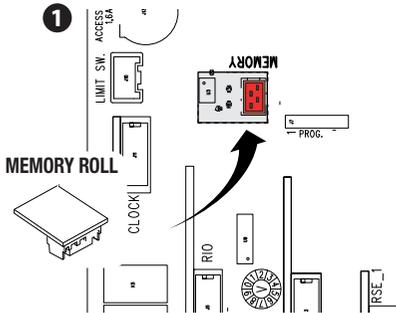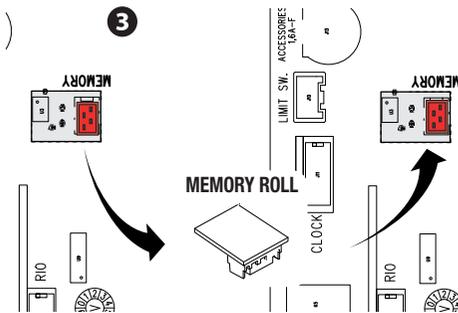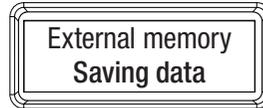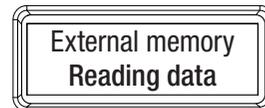
Electrical wiring

Plug the RSE card into the RSE_1 connector on the control board of both operators.

Connectthe two control boards by way of a CAT 5 (max. 1000 m) cable onto terminals A-A / B-B / GND-GND.

Connect all the control, safety devices and cards, such as the R700, AF, and so on, only on the MASTER control board.

MASTER   SLAVE
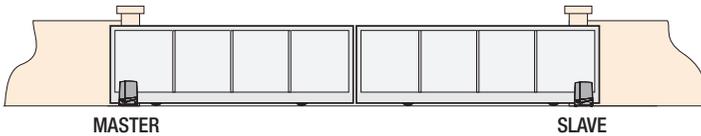
Saving users

Only perform the enter-user procedure on the MASTER control board.

Programming

On the MASTER control board, select the [Combined] system **type** when following the guided procedure, or configure the RSE1 port **to [Combined] mode**.

📖 After programming the MASTER in [Combined] **mode,** the second operator automatically becomes the SLAVE, and the programming keys are disabled.

Operating modes

Either STEP-STEP or ONLY OPEN command.

Both leaves open.

MASTER   SLAVE

PARTIAL OPENING command. Only the leaf on the MASTER operator opens until it reaches the partially open point programmed in [Set up gate travel].

MASTER   SLAVE

For the types of commands you can select and combined with users, see the MANAGE USERS paragraph.

LIST OF ERROR MESSAGES, POSSIBLE CAUSES AND FIXES

ERROR MESSAGE	POSSIBLE CAUSES	FIXES
[Calibration error]	Obstruction on the gate rail during the calibration procedure	Remove the obstruction and repeat the calibration procedure
[The Encoder does not work]	Encoder is disconnected or out-of-order	Check connections or replace the motor
[Services test failed]	One or more obstructions detected by the photocells	Remove any obstructions blocking the photocell beams
	Wrong connections or configuration of the photocells	Check the connections or the configuration
	Photocell out-of-order	Replace photocell
[Hatch is open]	Operator is released	Make sure the release hatch is closed.
[Maximum number of closing obstructions]	There are one or more obstructions during the closing maneuver	Remove obstructions
[Maximum number of opening obstructions]	There are one or more obstructions during opening maneuver	Remove obstructions
[Maximum number of obstructions]	There are one more obstructions during closing and opening maneuvers	Remove the obstructions
[Communication error]	The UTP CAT5 connection cable is damaged	Check whether the cable is connected and undamaged
	Configured on the wrong RSE port	Check that the configuration of the RSE port is for "combined" on the MASTER operator and CRO on the SLAVE
[Incompatible radio-frequency control]	Non-CAME transmitters	Use CAME transmitters
	The coding settings are different to the transmitter's	Make sure the radio is coded to match the transmitters you are using
	TWIN transmitters with different key block	Use TWIN transmitters that have the same key block
[Slave hatch is open]	SLAVE operator is released	Check that the release hatch is shut on the operator.
[RIO system is unreachable]	RIO module... not plugged into the connector on the control board	Make sure the module is plugged in
	RIO module ... out-of-order	Replace the module
[RIO system not configured]	RIO module ... is not configured with the control board	Configure the RIO inputs to match the control board
	The RIO devices are not configured	Configure the devices (see corresponding instructions for RIO accessories)

FINAL OPERATIONS

Once the electrical connections are done the set up is finished, fasten the cables to the gearmotor jumper using a cable tie.

Fit the control board protection cover and tightly fasten the operator-casing screws on the side.
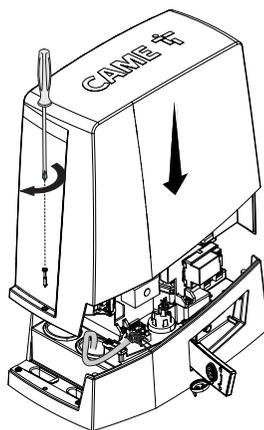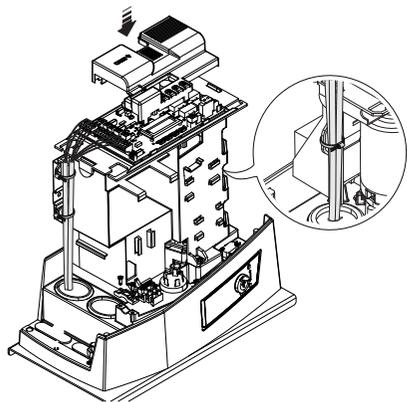
DISMANTLING AND DISPOSAL

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

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

♻ DISPOSING OF THE PACKAGING

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

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

DISPOSE OF RESPONSIBLY!

♻ DISMANTLING AND DISPOSAL

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

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

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

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

DISPOSE OF RESPONSIBLY!

Fabbricante / Manufacturer / Hersteller / Fabricant / Fabricante / Fabricante / Wytwórca / Fabrikant

Came S.p.a.

indirizzo / address / adresse / adresse / direcciòn / endereço / adres / adres
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CAME

DICHIARA CHE LE AUTOMAZIONI PER CANCELLI SCORREVOLI / DECLARES THAT THE DRIVES FOR SLIDING GATES / ERKLÄRT DASS DIE AUTOMATISIERUNGEN FÜR SCHIEBETORE / DECLARE QUE LES AUTOMATISATIONS POUR PORTAILS COULISSANTS / DECLARA QUE LAS AUTOMATIZACIONES PARA PUERTAS CORREDERAS / DECLARA QUE AS AUTOMATIZAÇÕES PARA PORTÕES DE CORRER / OSWIADCZA ZE AUTOMATYKA DO BRAM PRZESUWNYCH / VERKLAART DAT DE AUTOMATISERING VOOR SCHUIFHEKKEN

BKV15AGS ; BKV20AGS ; BKV25AGS
BKV15ALS ; BKV20ALS ; BKV25ALS
BKV15RGS ; BKV20RGS ; BKV15AGE
BKV20AGE ; BKV25AGE

SONO CONFORMI ALLE DISPOSIZIONI DELLE SEGUENTI DIRETTIVE / THEY COMPLY WITH THE PROVISIONS OF THE FOLLOWING DIRECTIVES / DEN VORGABEN DER FOLGENDEN RICHTLINIEN ENTSPRECHEN / SONT CONFORMES AUX DISPOSITIONS DES DIRECTIVES SUIVANTES / CUMPLEN CON LAS DISPOSICIONES DE LAS SIGUIENTES DIRECTIVAS / ESTÃO DE ACORDO COM AS DISPOSIÇÕES DAS SEGUINTES DIRECTIVAS / SA ZGODNE Z POSTANOWIENIAMI NASTEPUJACYCH DYREKTYW EUROPEJSKICH / VOLDOEN AAN DE VOORSCHRIFTEN VAN DE VOLGENDE RICHTLIJNEN:

- COMPATIBILITA' ELETTROMAGNETICA / ELECTROMAGNETIC COMPATIBILITY / ELEKTROMAGNETISCHE VERTRÄGLICHKEIT / COMPATIBILITÉ ÉLECTROMAGNETIQUE / COMPATIBILIDAD ELECTROMAGNÉTICA / COMPATIBILIDADE ELETROMAGNÉTICA / KOMPATYBILNOŚCI ELEKTROMAGNETYCZNEJ / ELEKTROMAGNETISCHE COMPATIBILITEIT : 2014/30/UE.

Riferimento norme armonizzate ed altre norme tecniche / Refer to European regulations and other technical regulations / Harmonisierte Bezugsnormen und andere technische Vorgaben / Référence aux normes harmonisées et aux autres normes techniques / Referencia normas armonizadas y otras normas técnicas / Referência de normas harmonizadas e outras normas técnicas / Odnosne normy ujednolicone i inne normy techniczne / Geharmoniseerde en andere technische normen waarnaar is verwezen

EN 61000-6-2:2005
EN 61000-6-3:2007+A1:2011
EN 62233:2008
EN 60335-1:2012+A11:2014
EN 60335-2-103:2015

RISPETTANO I REQUISITI ESSENZIALI APPLICATI: / MEET THE APPLICABLE ESSENTIAL REQUIREMENTS: / DEN WESENTLICHEN ANGEWANDTEN ANFORDERUNGEN ENTSPRECHEN: / RESPECTENT LES CONDITIONS REQUISES NECESSAIRES APPLIQUEES: / CUMPLEN CON LOS REQUISITOS ESENCIALES APLICADOS: / RESPEITAM O REQUISITOS ESSENCIAIS APLICADOS: / SPELNIAJA PODSTAWOWE WYMAGANE WYRUNKI: / VOLDOEN AAN DE TOEPASBARE MINIMUM EISEN:

1.1.3; 1.1.5; 1.2.1; 1.2.2; 1.3.2; 1.3.7; 1.3.8.1; 1.4.1; 1.4.2; 1.5.1; 1.5.6; 1.5.8; 1.5.9; 1.5.9; 1.5.13; 1.6.1; 1.6.3; 1.6.4; 1.7.1; 1.7.2; 1.7.4

PERSONA AUTORIZZATA A COSTITUIRE LA DOCUMENTAZIONE TECNICA PERTINENTE / PERSON AUTHORISED TO COMPILE THE RELEVANT TECHNICAL DOCUMENTATION / PERSON DIE BEVOLLMÄCHTIGT IST, DIE RELEVANTEN TECHNISCHEN UNTERLAGEN ZUSAMMENZUSTELLEN / DOCUMENTATION TECHNIQUE SPECIFIQUE D'AUTORISATION A CONSTRUIRE DE / PERSONA FACULTADA PARA ELABORAR LA DOCUMENTACIÓN TÉCNICA PERTINENTE / PESSOA AUTORIZADA A CONSTITUIR A DOCUMENTAÇÃO TÉCNICA PERTINENTE / OSOBA UPOWAZNIONA DO ZREDAGOWANIA DOKUMENTACJI TECHNICZNEJ / DEGENE DIE GEMACHTIGD IS DE RELEVANTE TECHNISCHE DOCUMENTEN SAMEN TE STELLEN.

CAME S.p.a.

La documentazione tecnica pertinente è stata compilata in conformità all'allegato VIIB. / The pertinent technical documentation has been drawn up in compliance with attached document VIIB. / Die relevante technische Dokumentation wurde entsprechend der Anlage VIIB ausgestellt. / La documentation technique spécifique a été remplie conformément à l'annexe IIB / La documentación técnica pertinente se ha rellenado en cumplimiento con el anexo VIIB. / A documentação técnica pertinente foi preenchida de acordo com o anexo VIIB. / Odnosna dokumentacja techniczna zostala zredagowana zgodnie z zalacznikiem VIIB. / De technische documentatie terzake is opgesteld in overeenstemming met de bijlage VIIB.

CAME S.p.A. si impegna a trasmettere, in risposta a una richiesta adeguatamente motivata dalle autorità nazionali, informazioni pertinenti sulle quasi macchine, e / Came S.p.A., following a duly motivated request from the national authorities, undertakes to provide information related to the quasi machines, and / Die Firma Came S.p.A. verpflichtet sich auf eine angemessen motivierte Anfrage der staatlichen Behörden Informationen über die unvollständigen Maschinen, zu übermitteln, und / Came S.p.A. s'engage à transmettre, en réponse à une demande bien fondée de la part des autorités nationales, les renseignements relatifs aux quasi machines / Came S.p.A. se compromete a transmitir, como respuesta a una solicitud adecuadamente fundada por parte de las autoridades nacionales, informaciones relacionadas con las cuasimáquinas / Came S.p.A. compromete-se em transmitir, em resposta a uma solicitação motivada apropriadamente pelas autoridades nacionais, informações pertinentes às partes que componham máquines / Came S.p.A. zobowiazuje sie do udzielenia informacji dotyczacych maszyn nieukonczonych na odpowiednio umotywowana prosbe, zlozona przez kompetentne organy panstwowe / Came S.p.A. verbindt zich ertoe om op met redenen omkleed verzoek van de nationale autoriteiten de relevante informatie voor de niet voltooide machine te verstrekken.

VIETA / FORBIDS / VERBIETET / INTERDIT / PROHIBE / PROIBE / ZABRANIA SIE / VERBIEDT

la messa in servizio finché la macchina finale in cui deve essere incorporata non è stata dichiarata conforme, se del caso alla 2006/42/CE. / commissioning of the above mentioned until such moment when the final machine into which they must be incorporated, has been declared compliant, if pertinent, to 2006/42/CE / die Inbetriebnahme bevor die „Endmaschine" in die die unvollständige Maschine eingebaut wird, als konform erklärt wurde, gegebenenfalls gemäß der Richtlinie 2006/42/EU. / la mise en service tant que la machine finale dans laquelle elle doit être incorporée n'a pas été déclarée conforme, le cas échéant, à la norme 2006/42/CE. / la puesta en servicio hasta que la máquina final en la que será incorporada no haya sido declarada de conformidad de acuerdo a la 2006/42/CE. / a colocação em funcionamento, até que a máquina final, onde devem ser incorporadas, não for declarada em conformidade, se de acordo com a 2006/42/CE. / Uruchomienia urzadzenia do czasu, kiedy maszyna, do której ma byc wbudowany, nie zostanie oceniona jako zgodna z wymogami dyrektywy 2006/42/WE, jesli taka procedura byla konieczna. / deze in werking te stellen zolang de eindmachine waarin de niet voltooide machine moet worden ingebouwd in overeenstemming is verklaard, indien toepasselijk met de richtlijn 2006/42/EG.

Dosson di Casier (TV)
9 Novembre / November / November /
Novembre / Noviembre / Novembro /
Listopad / November 2018

Amministratore Delegato / Managing Director /
General Direktor / Directeur Général / Director General /
Administrador Delegado / Dyrektor Zarzadzajacy /
Algemeen Directeur

Andrea Menuzzo

Fascicolo tecnico a supporto / Supporting technical dossier / Unterstützung technische Dossier / soutenir dossier technique / apoyo expediente técnico / apolar dossier técnico / wspieranie dokumentacji technicznej / ondersteunende technische dossier: 801MS-0320