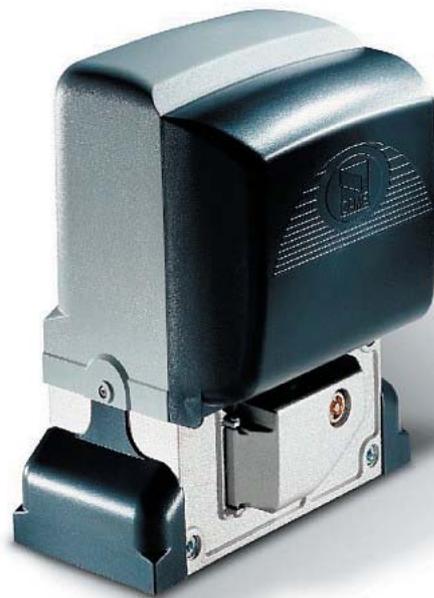


AUTOMATION SYSTEMS FOR SLIDING GATES

BX SERIES



INSTALLATION MANUAL

BX10

English

EN

"IMPORTANT INSTALLATION, SAFETY INSTRUCTIONS"

"CAUTION: IMPROPER INSTALLATION MAY CAUSE SERIOUS DAMAGE, FOLLOW ALL INSTALLATION INSTRUCTIONS CAREFULLY"

"THIS MANUAL IS ONLY FOR PROFESSIONAL OR QUALIFIED INSTALLERS"



1 Legend of symbols



This symbol tells you to read the section with particular care.



This symbol tells you that the sections concern safety issues.



This symbol tells you what to say to the end-users.

2 Conditions of use

2.1 Intended use

The BX10 operator is designed to power sliding gates in residential settings.



Do not install or use unless as otherwise shown in this manual.

2.2 Limitations to use

For intensive or condominium use: max gate weight 800 kg with max gate length 20 m.

3 Reference standards

The company CAME cancelli automatici is ISO 9001:2000 quality certified; it has also obtained the ISO 14001 environmental safeguarding certification. CAME engineers and manufactures all of its products in Italy.

This product complies with the following legislation: *see declaration of compliance*.

4 Description

4.1 Operator

This product is engineered and manufactured by CAME CANCELLI AUTOMATICI S.p.A. in compliance with current safety standards. Guaranteed 24 months if not tampered with.

The operator is made of a cast aluminium part inside of which operates the irreversible, electromechanical gearmotor and an ABS plastic lining which holds the electronic card and transformer

4.2 Technical features

BX-10 OPERATOR

Control panel power supply: 230V A.C. 50/60Hz

Operator power supply: 230V A.C.

Draw: 2.4A

Power: 300 W

Reduction ratio: 1/33

Thrust: 800 N

Max speed.: 10 m/min max.

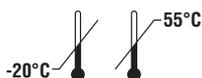
Duty cycle: 30%

Protection rating: IP54

Insulation class: I

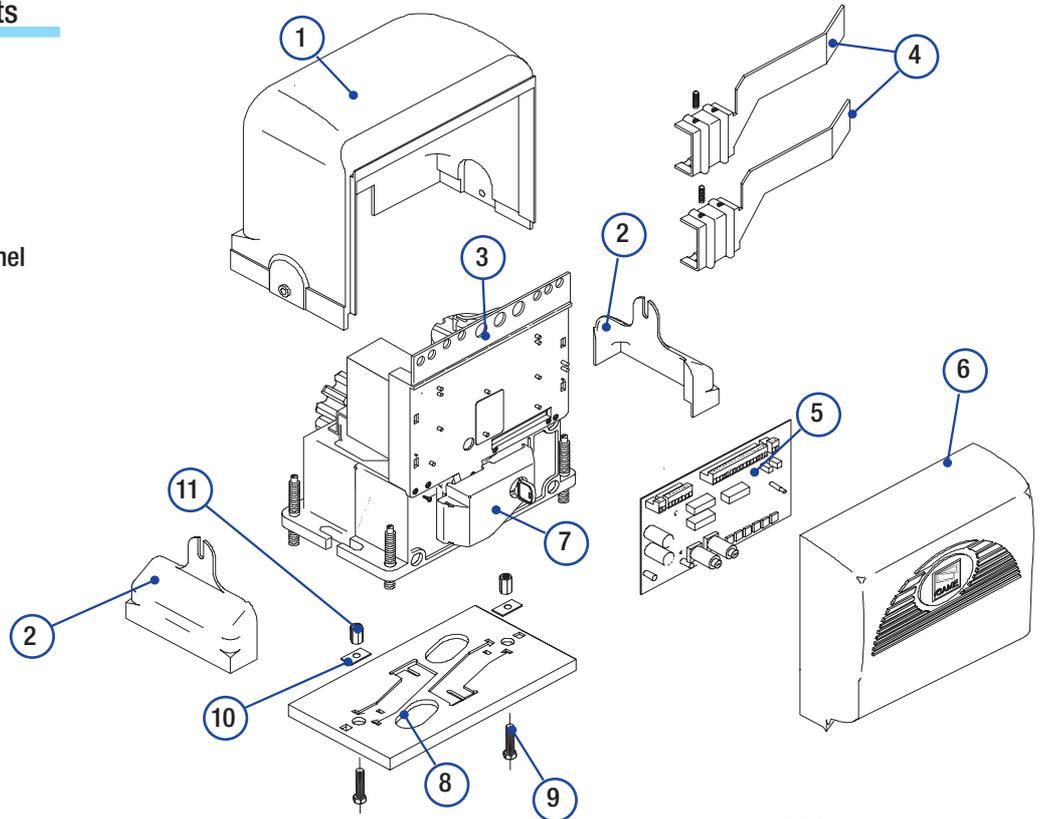
Motor's thermo-protection: 150°

Weight: 15 kg



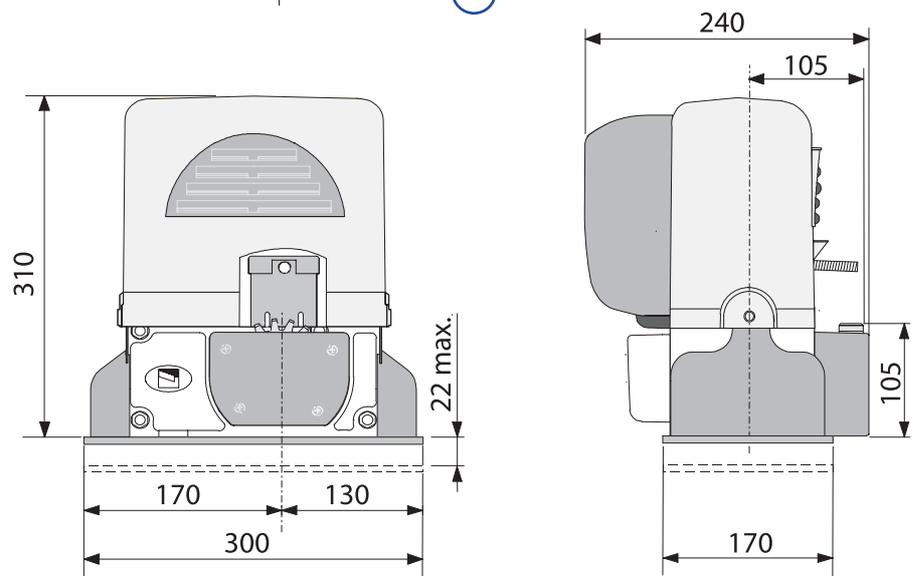
4.3 Description of parts

- 1 - Top cover
- 2 - Settings casing
- 3 - Control board support
- 4 - Endstop fins
- 5 - ZBX10 electronic card
- 6 - Front cover to control panel
- 7 - Gearmotor release door
- 8 - Securing plate
- 9- Securing bolt
- 10- Securing screw plate
- 11- Nut



4.4 Dimensions

(mm)



5 Installation

⚠ Installation must be carried out by expert qualified personnel and in full compliance with current regulations.

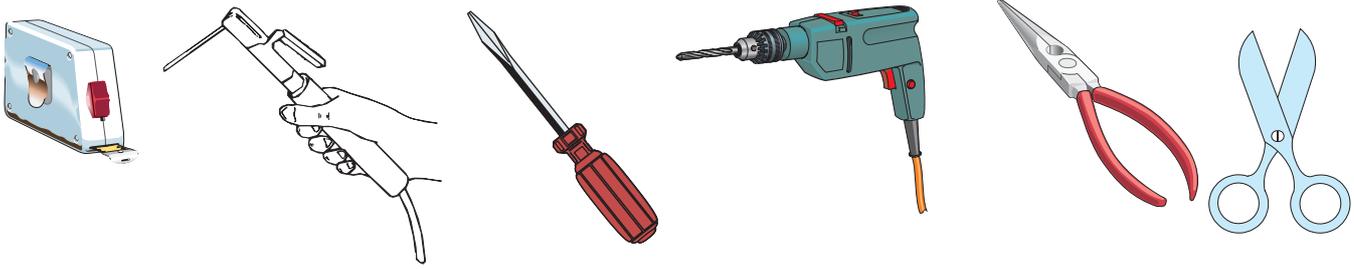
5.1 Preliminary checks

⚠ Before installing, do the following:

- Make sure that the gate is stable, and that the castors are in good working order and properly greased.
- The ground rack must be well secured to the ground, entirely above the surface and free of any irregularities that may obstruct the gate's movement.
- The upper guide rails must not create any friction.
- Make sure that there is a closing and an opening endstops.
- Make sure that the operator is attached to a solid surface and protected from any impacts;
- Make sure you have a suitable omnipolar cut-off device with contacts more than 3 mm apart, and independent (sectioned off) power supply;
- ⚡ Check that any connections inside the container (that provide continuity to the safety circuit) are fitted with additional insulation compared to other internal live parts;
- Make sure you have suitable tubing and conduits for the electrical cables to pass through and be protected against mechanical damage.

5.2 Tools and materials

Make sure you have all the tools and materials you will need for the installation at hand to work in total safety and compliance with the current standards and regulations. The following figure illustrates the minimum equipment needed by the installer.



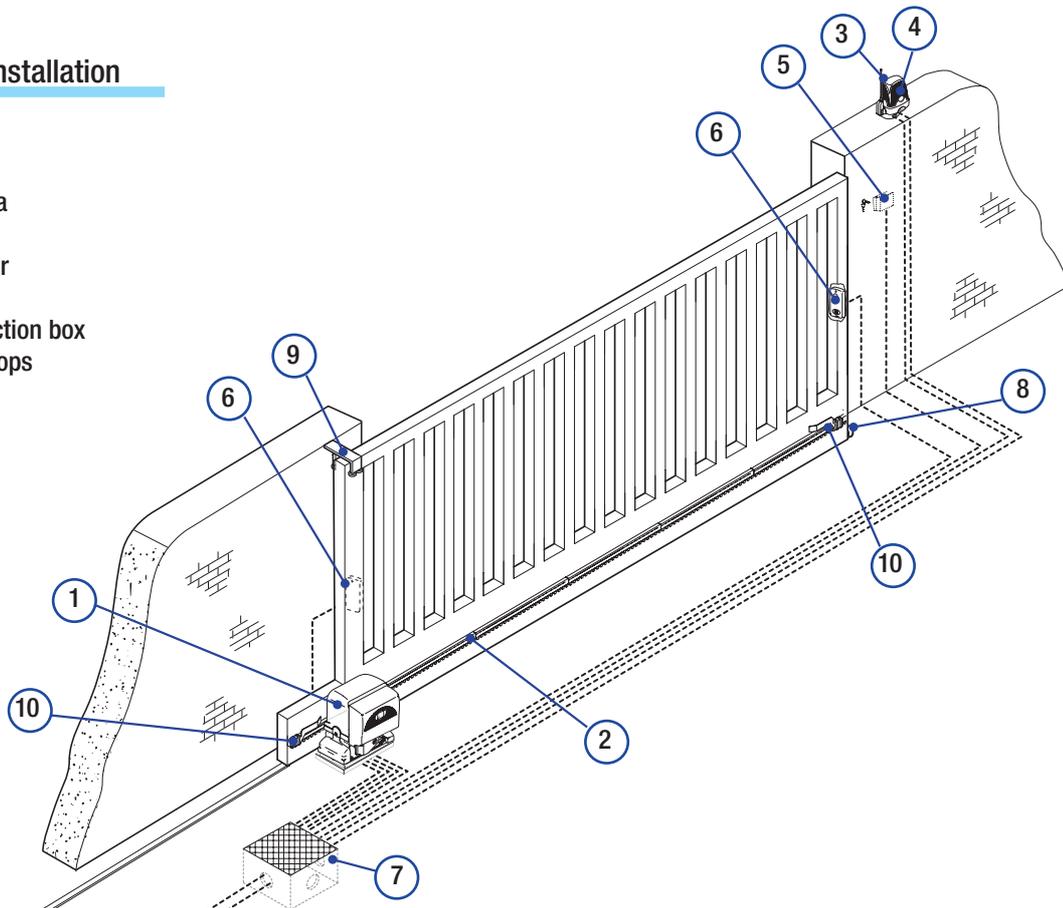
5.3 Cable list and minimum thickness

| Connection | Type of cable | Length of cable 1 < 10 m | Leng. cable 10 < 20 m | Leng. cable 20 < 30 m |
|---------------------------------|------------------------------------|--------------------------|--------------------------|-------------------------|
| Control panel power supply 230V | FROR CEI 20-22 CEI EN 50267-2-1 | 3G x 1,5 mm ² | 3G x 2,5 mm ² | 3G x 4 mm ² |
| Flashing light | | 2 x 0,5 mm ² | 2 x 1 mm ² | 2 x 1,5 mm ² |
| Photocell transmitter | | 2 x 0,5 mm ² | 2 x 0,5 mm ² | 2 x 0,5 mm ² |
| Photocell receiver | | 4 x 0,5 mm ² | 4 x 0,5 mm ² | 4 x 0,5 mm ² |
| Accessories power supply | | 2 x 0,5 mm ² | 2 x 0,5 mm ² | 2 x 1 mm ² |
| Safety and control devices | | 2 x 0,5 mm ² | 2 x 0,5 mm ² | 2 x 0,5 mm ² |
| Antenna connection | RG58 | max. 10 m | | |

N.B.: If the cable length differs from that specified in the table, then you must determine the proper cable diameter in the basis of the actual power draw by the connected devices and depending on the standards specified in CEI EN 60204-1. For connections that require several, sequential loads, the sizes given on the table must be re-evaluated based on actual power draw and distances. When connecting products that are not specified in this manual, please follow the documentation provided with said products.

5.4 Standard installation

- 1) BX10 Assembly
- 2) Rack
- 3) Reception Antenna
- 4) Flashing light
- 5) Keyswitch selector
- 6) Safety photocells
- 7) Electric cable junction box
- 8) Mechanical endstops
- 9) Guide rails
- 10) Endstop fins



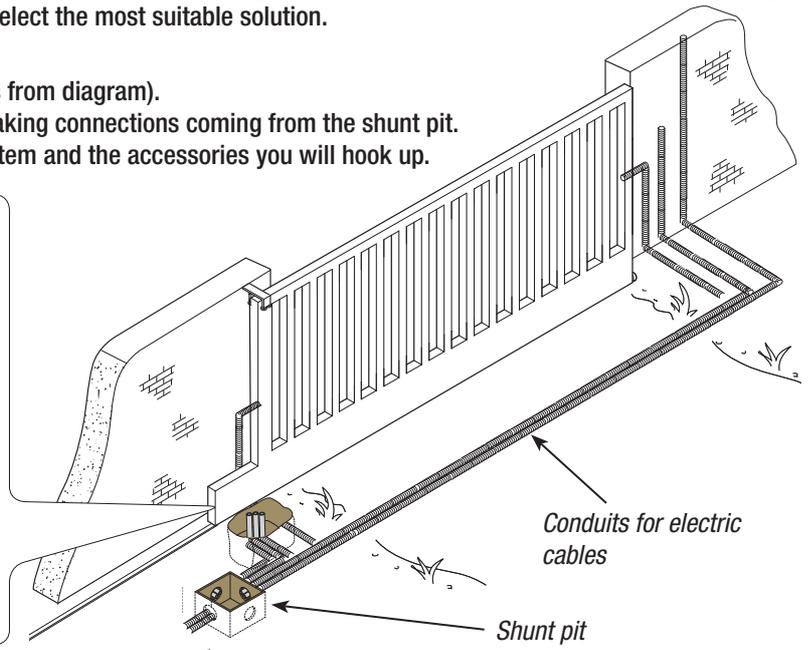
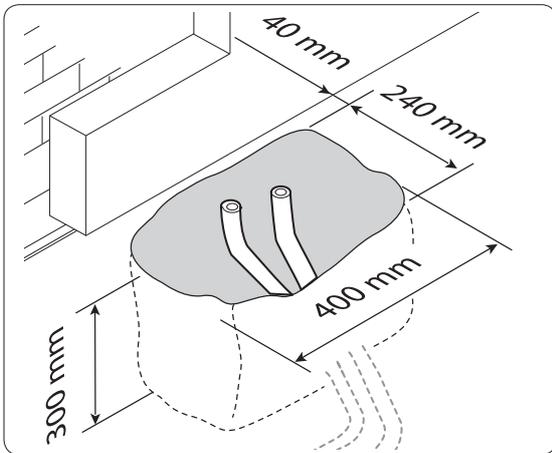
5.5 Securing the plate and installing the assembly

⚠ The following applications are only examples, as the space for installing the ratiomotor and accessories varies according to obstructions. It is thus up to the system installer to select the most suitable solution.

- Dig a pit to the side of the gate (see measurements from diagram).

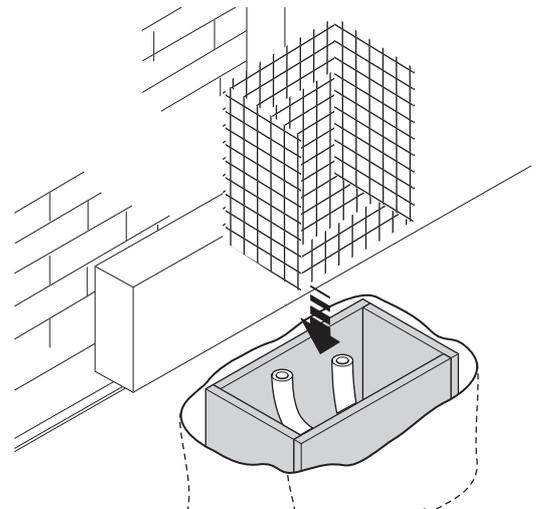
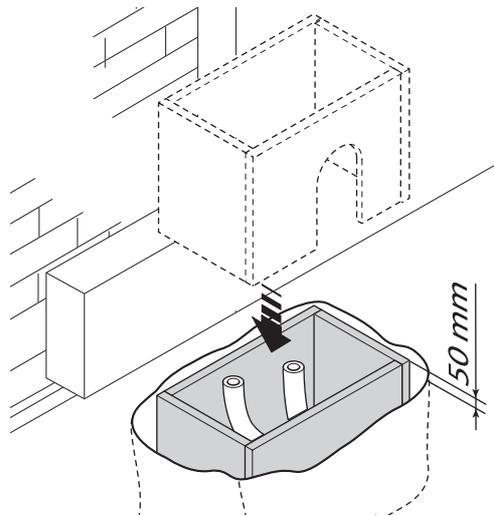
Prepare the corrugated tubes you will need when making connections coming from the shunt pit.

N.B. the number of tubes depends on the type of system and the accessories you will hook up.



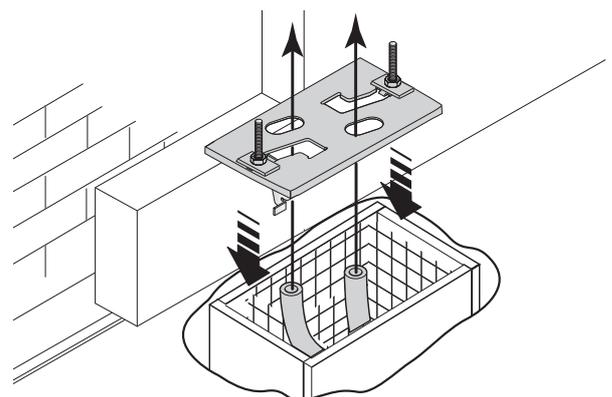
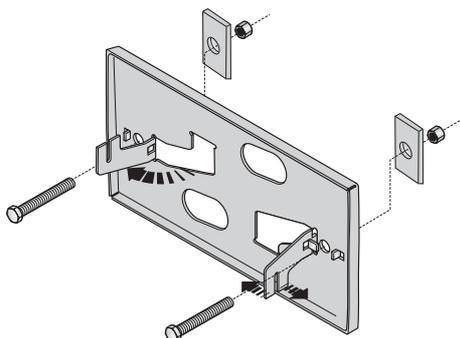
- Prepare a form box that is larger in size than the securing plate and insert it into the pit. The form box should jut 50mm above ground level.

Insert an iron grid inside the form box to reinforce the concrete.

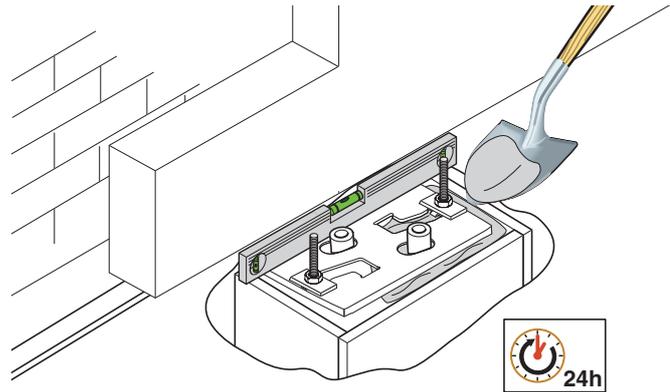
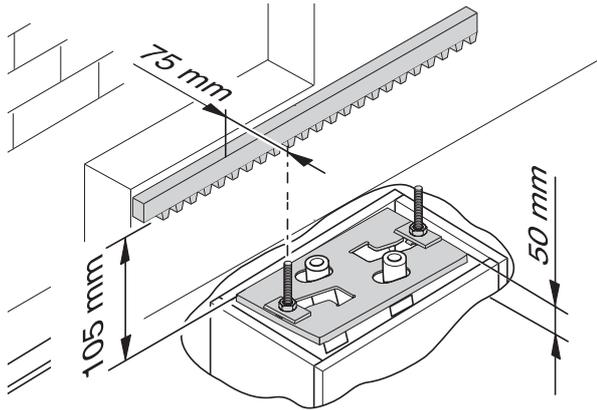


- Prepare the securing plate, insert the bolts into the holes and lock them using the supplied nuts and washers. Extract the preformed brackets using a screw driver or a set of pliers.

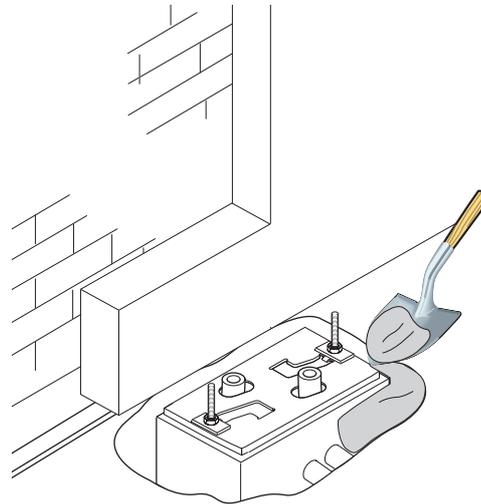
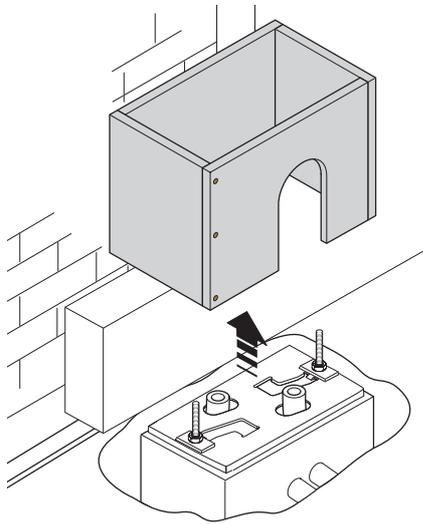
- Position the plate on top of the grid. Careful! The tubes need to pass through the opposite holes.



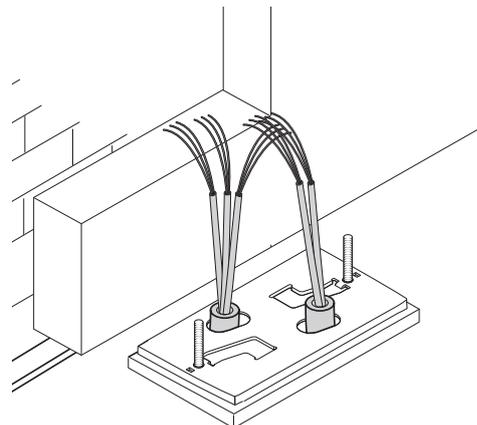
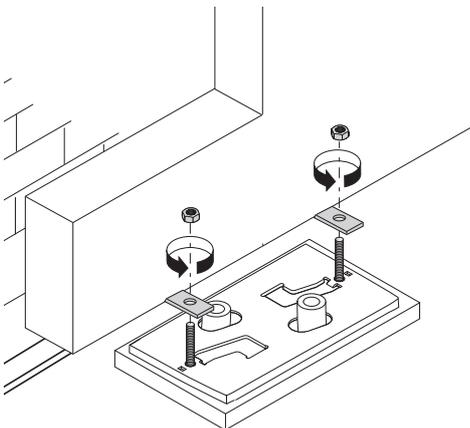
- To position the plate in relation to the rack please see the measurements on the diagram.
Fill the form box with cement and wait for at least 24 hours for it to solidify.



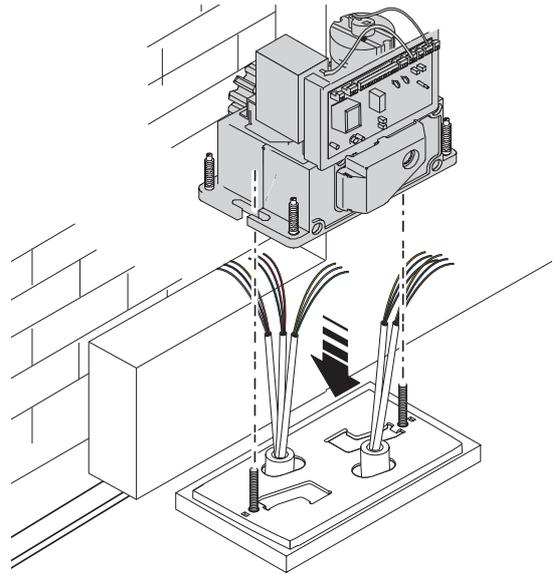
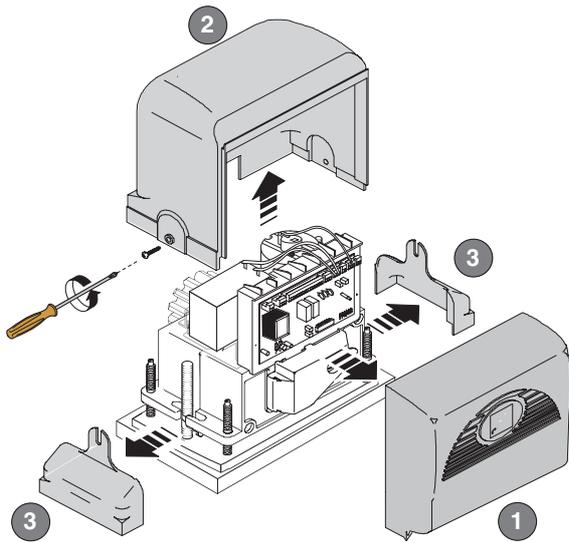
- Remove the form box, fill the pit around the cement block with soil.



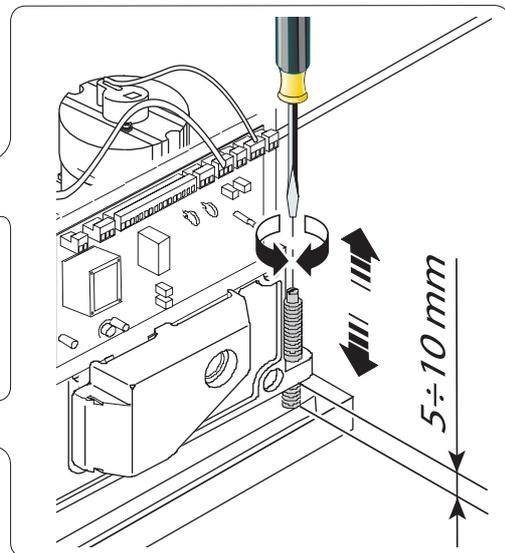
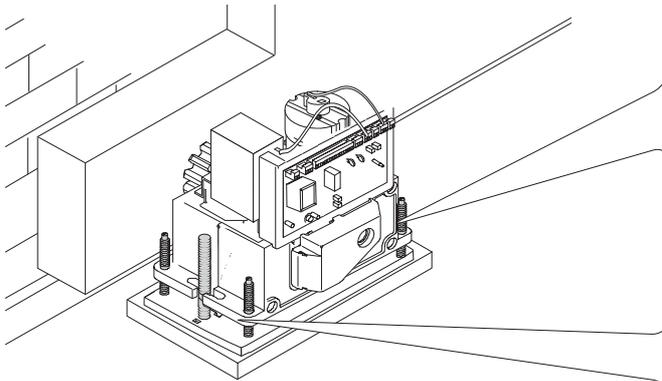
- Unbolt the nuts and washers from the bolts. The securing plate must be clean, perfectly aligned and with the bolt threads completely on the surface.
Insert the electric cables into the tubes until they exit about 400mm.



- Remove the cover from the gearmotor by loosening the side bolts, perforate the cable shafts using a screwdriver or a pair of scissors and position the gearmotor atop the plate. Careful! The electric cables must pass through the cable shafts.



- Lift the gearmotor from the securing plate by about 5 to 10mm by using the threaded steel-leveling feet to allow any later adjustments between the pinion and the rack.



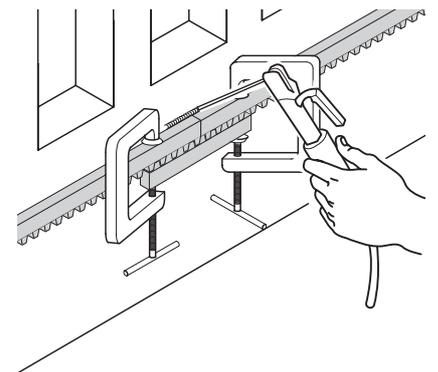
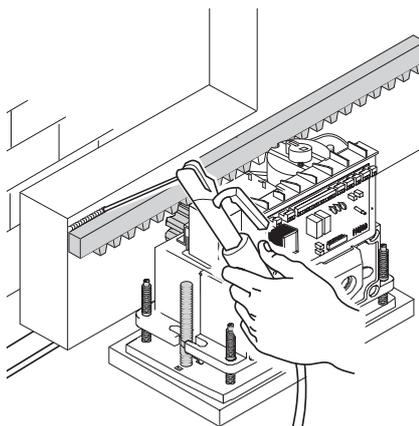
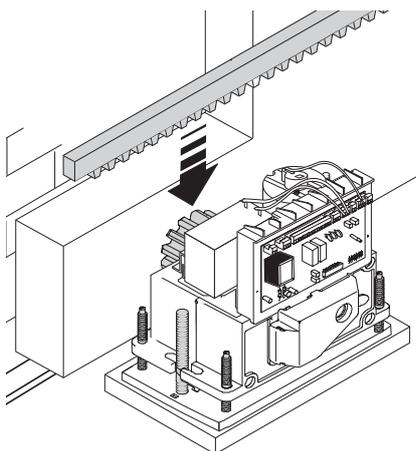
- The following illustrations for the securing the rack, are just examples of applications. It is up to the installer to choose the best solution.

Releasing the gearmotor (see paragraph on manual release). Rest the rack on the gearmotor pinion.

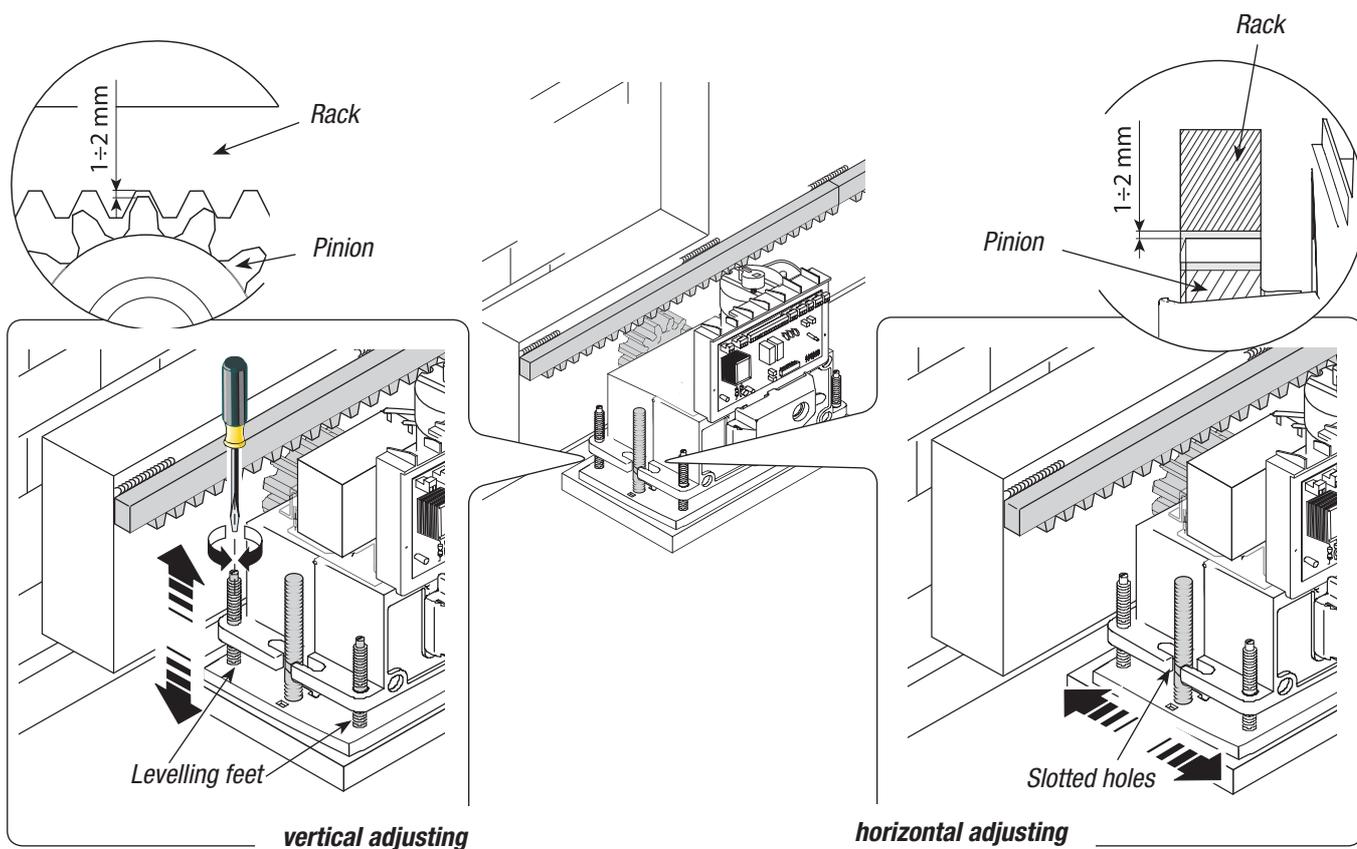
Weld or secure the rack to the gate along its entire length.

To assemble the rack modules, use an excess piece of rack and place it under the joining point, then block it using two C-clamps.

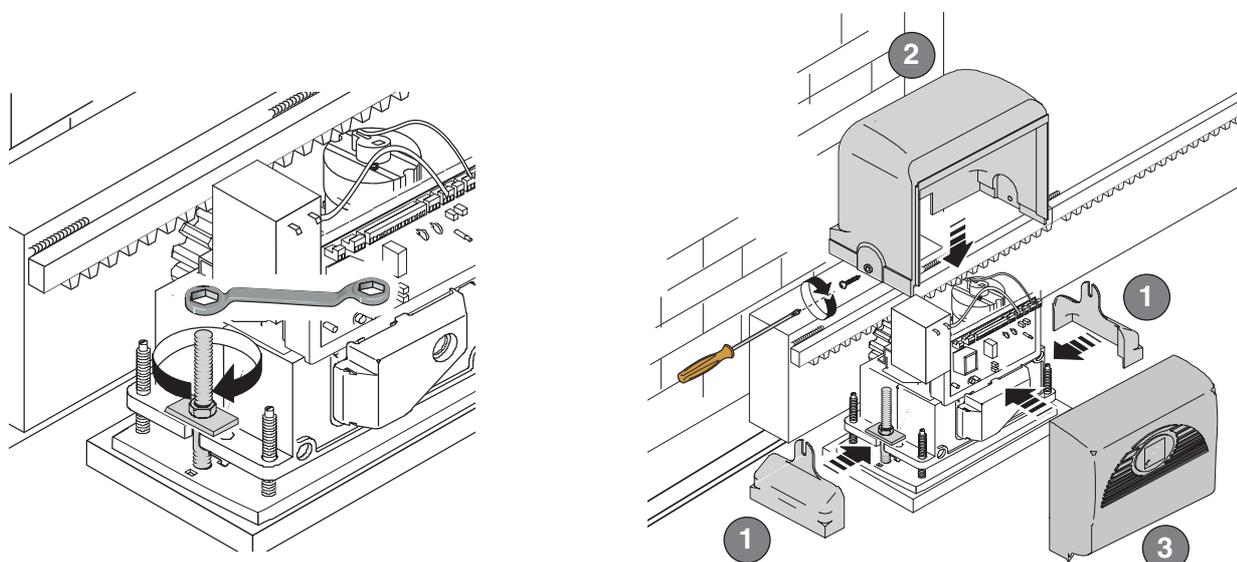
Note: if a rack is already in place, then just adjust the pinion-to-rack distance.



- Open and close the gate manually and register the pinion-to-rack distance using the threaded steel-levelling feet (for vertical adjusting) and the slotted holes (horizontal adjusting). This prevents the weight of the gate from bearing on the operator.



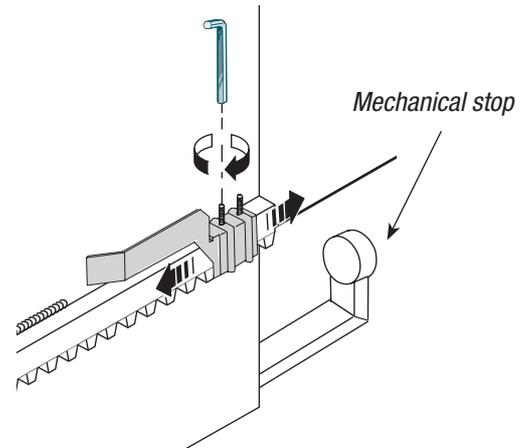
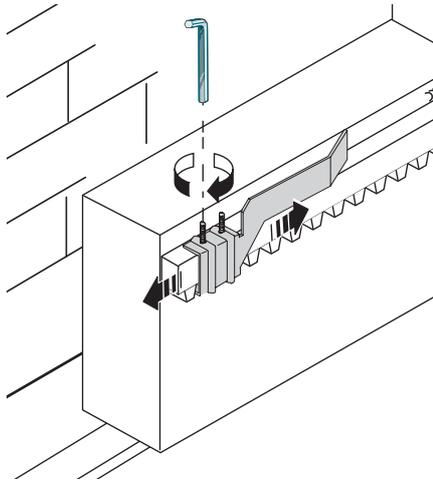
Once adjustments are finished, secure the assembly using the nuts and washers. Insert the cover after performing the adjustments and settings on the electronic card.



5.6 Mounting the endstop fins

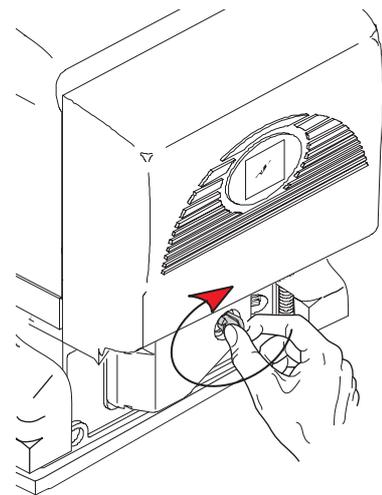
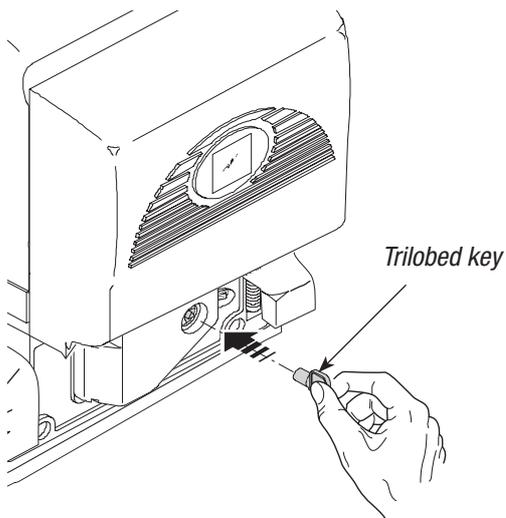
Place the endstop fins onto the rack and secure them using a 3 mm Allen wrench. Their positioning limits the gate run.

Note: the gate should not slam against the mechanical stop, when opening or closing.

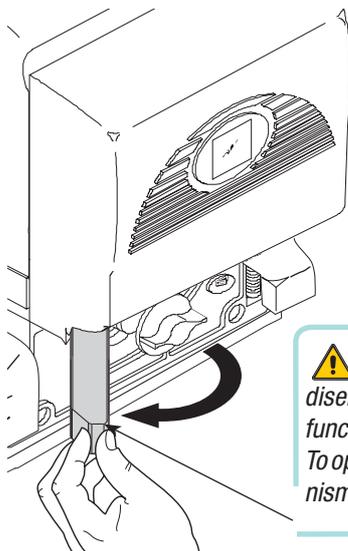


5.7 Manually releasing the gearmotor

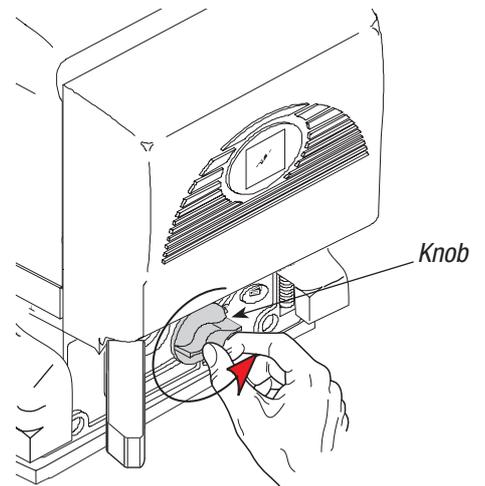
- Insert the trilobed key into the lock, push it in and turn it clockwise



..... open the small door and turn the release handle clockwise.



⚠ WARNING: opening the door will disengage the motor (i.e. it will not function).
To operate the motor the release mechanism must be firmly fastened.



6 Control board

6.1 General description

Use 230V A.C. to power the electronic card using the L-N terminals, at a max 50/60Hz frequency.

Use 24V to power the command devices and accessories. Careful! The accessories cannot exceed 37W of overall power.

All connections are protected by quick-fuses – see table.

The input and output contact functions, the timing settings and users' management, are set and viewed on the display, which is run by software.

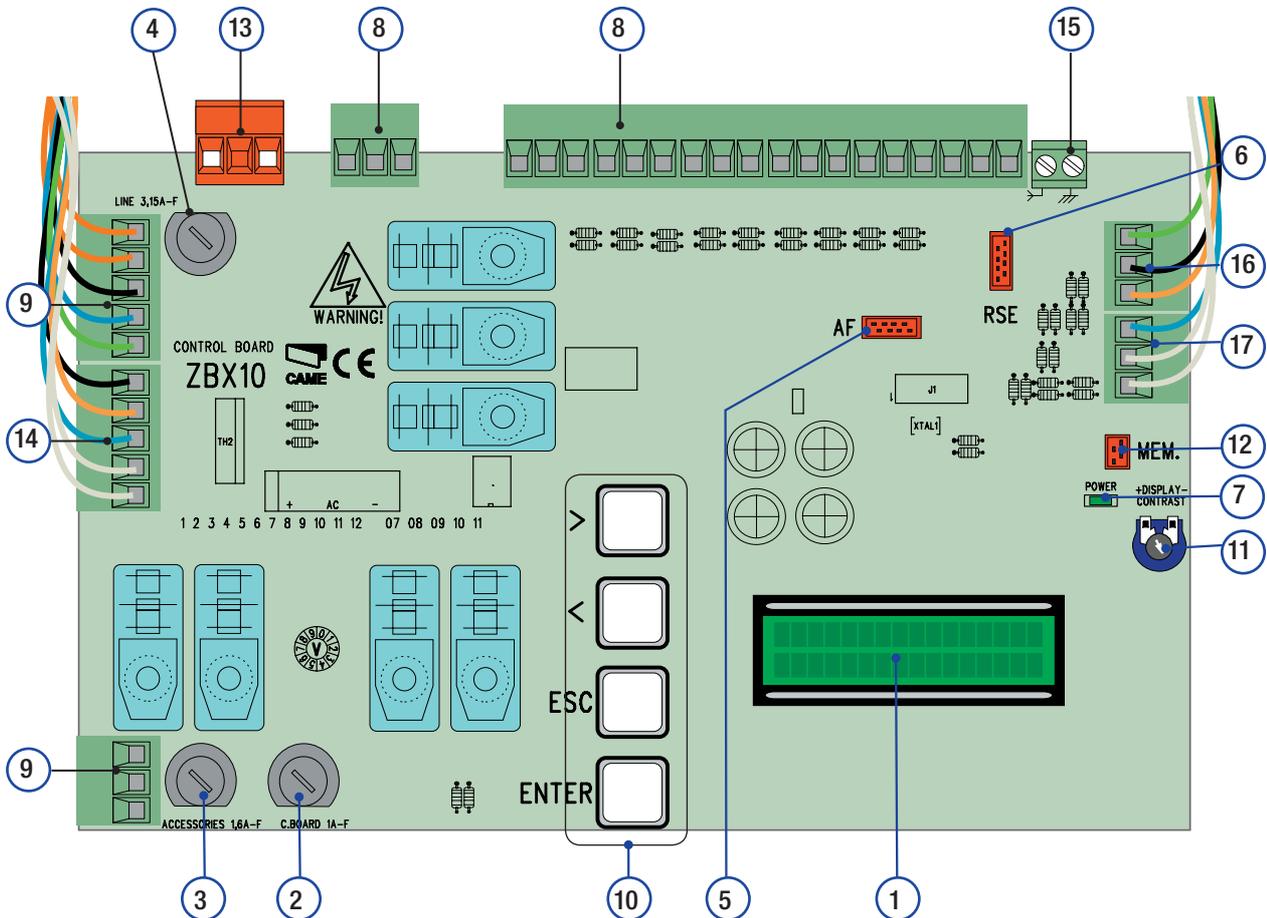
Warning! Before acting on the machinery, cut off the main power supply and disconnect any emergency batteries.

| TECHNICAL INFORMATION | |
|-----------------------------------|-----------------|
| Power supply | 230V - 50/60 Hz |
| Maximum power allowed | 300 W |
| Absorption at rest | 110 mA |
| Maximum power for 24V accessories | 37 W |

| FUSE TABLE ZBX10 | |
|----------------------|---------|
| To protect: | fuse: |
| Control board (line) | 3.15A-F |
| Accessories | 1.6A-F |
| Command devices | 1A-F |

6.2 Main components

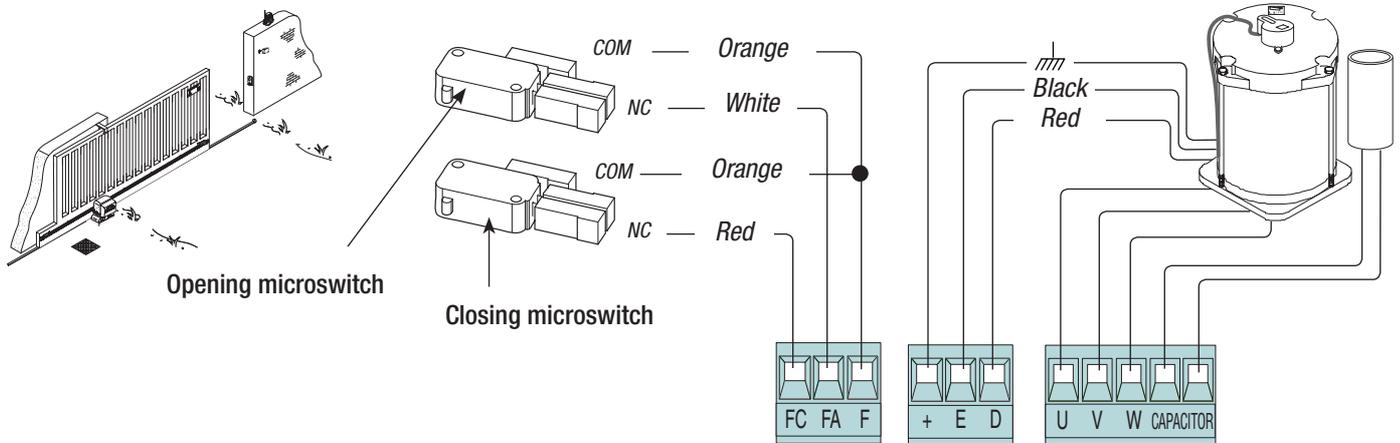
- | | |
|---|---|
| 1) Display | 10) Programming buttons |
| 2) Card fuse | 11) Display lighting adjustment trimmer |
| 3) Accessory fuse | 12) Memory roll board connector |
| 4) Line fuse | 13) Power supply terminals |
| 5) AF card coupling for remote control | 14) Motor terminals |
| 6) RSE card coupling for paired connections | 15) Antenna terminals |
| 7) 230V-power signalling LED | 16) Encoder terminals |
| 8) Connecting terminal board | 17) Endstop terminals |
| 9) Transformer-connecting terminal board | |



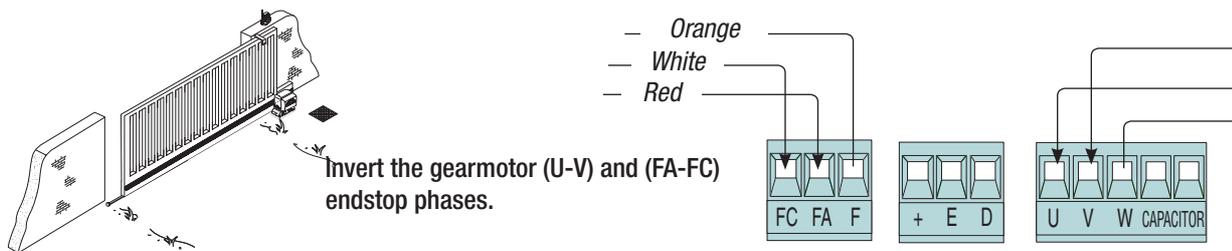
6.3 Electrical connections

Gearmotor, endstop and encoder

Description of the standard electrical connections for left-hand installations



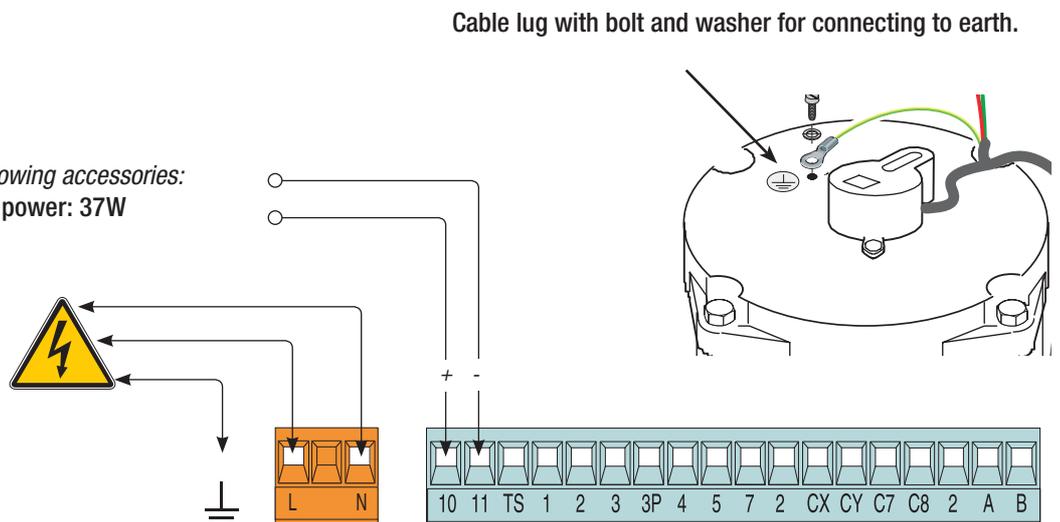
Modifications to the electrical connections for right-hand installations



Power supply for accessories

Terminals for powering the following accessories:
- 24V A.C. Maximum allowed power: 37W

230V (A.C.) Power, 50/60Hz frequency



Warning devices

Movement flashing light

(Contact range: 230V – 25W max)

- Flashes during the gate's opening and closing phases.



Cycle lamp: (contact rating: 230V – 60W max.)

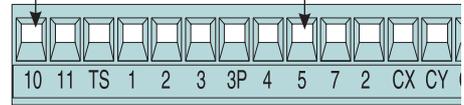
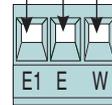
It lights up the driving area and stays on from the moment the gate begins to open until it is fully closed (including the automatic closing time). If automatic closing is not activated, the lamp stays on only during movement or for a set time of 5 minutes if used as a courtesy lamp.



Open-gate status light

(contact range: 24V – 3W max)

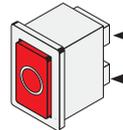
- Signal that gate is open; turns off when gate is closed.



Command and control devices

Stop button (N.C. contact) - Gate stop button. Excludes automatic closing. For motion to resume, press the command button or the remote control button.

N.B.: if contact is unused, select OFF on the "FUNCTIONS" menu.



Key selector and/or opening button (N.O. contact)

- Gate opening command.



Key selector and/or partial opening button (N.O. contact)

- Partial gate opening for pedestrian access.



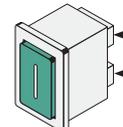
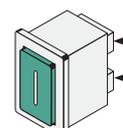
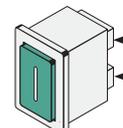
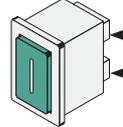
Key selector and/or closing button (N.O. contact)

- Gate closing command.

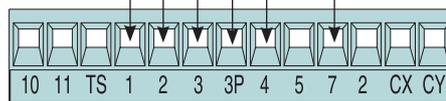
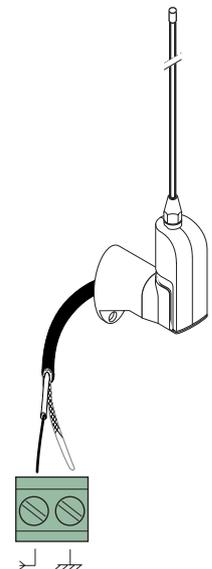


Key selector and/or commands button (N.O. contact)

Commands for opening and closing the gate – pressing the button or turning the key-switch, inverts the gate's movement or stops it depending on how it is set on the 2-7 command in the "FUNCTIONS" menu

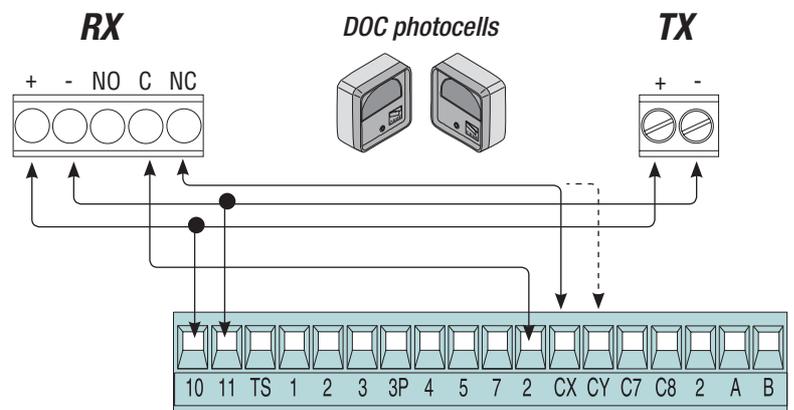
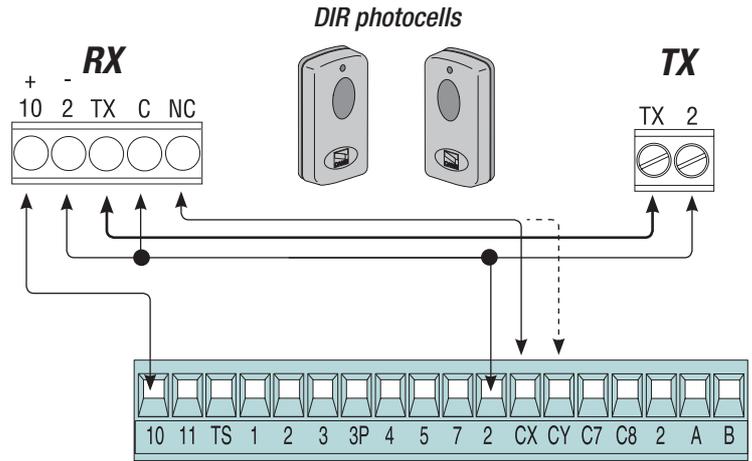


Antenna with RG58 cable for the remote control.



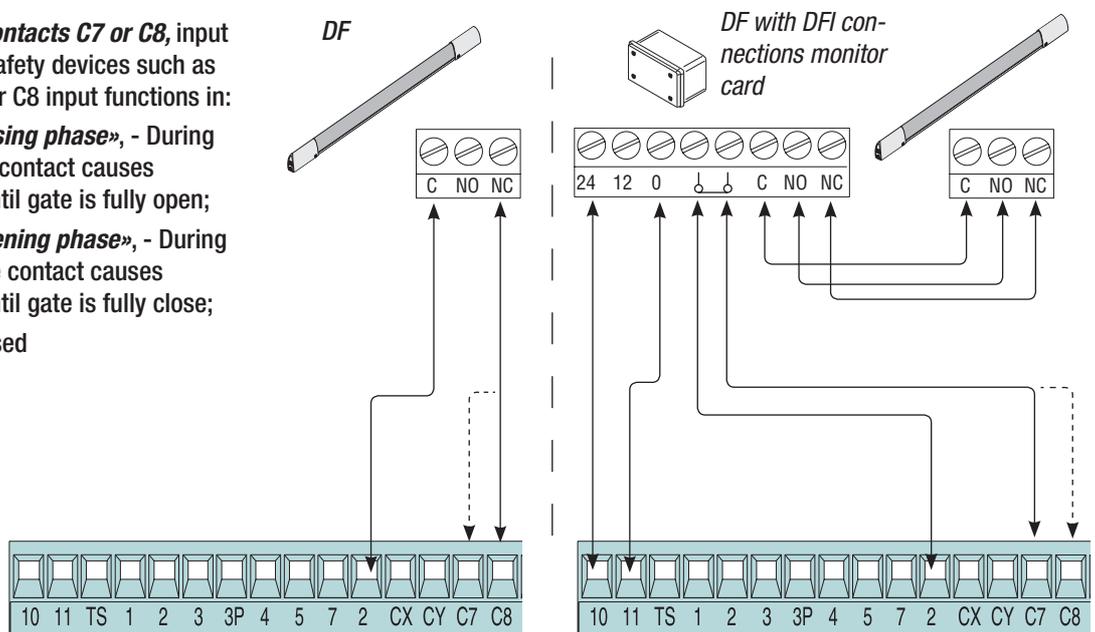
Configure either (N.C.) contacts CX or CY, input for safety devices such as photocells, that comply with EN 12978 standards. See CX or CY input functions in:

- **C1 «re-open during closing phase»**, When the gate leaf is closing, opening the contact triggers the inversion of the direction of movement until the gate leaf is fully open.
- **C2 «re-close during opening phase»**, When gate is opening, if the contact is opened it triggers an inversion of the direction until gate is fully closed;
- **C3 «partial stop»**, gate stops if moving and automatically shuts (if this functions has been selected);
- **C4 «stand-by Obstacle»**, Halts the moving gate leaves causing them to start moving again once obstacle is removed.
- Deactivated, if the contact is unused.



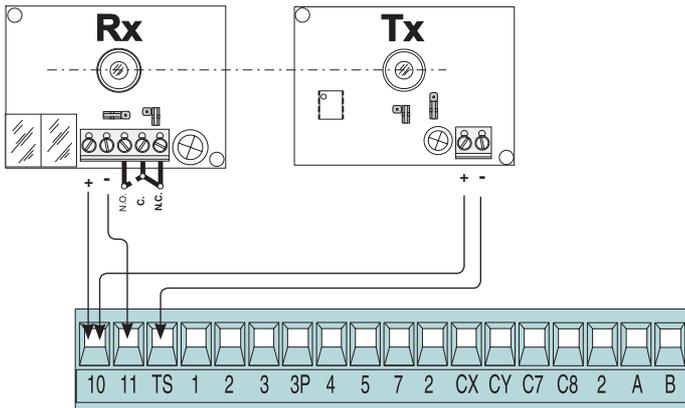
Configure either (N.C.) contacts C7 or C8, input for EN 12978 compliant safety devices such as sensitive edges. See C7 or C8 input functions in:

- **C7 «re-open during closing phase»**, - During gate closing, opening the contact causes inversion of movement until gate is fully open;
- **C8 «re-close during opening phase»**, - During gate opening, opening the contact causes inversion of movement until gate is fully close;
- OFF, is the contact is unused

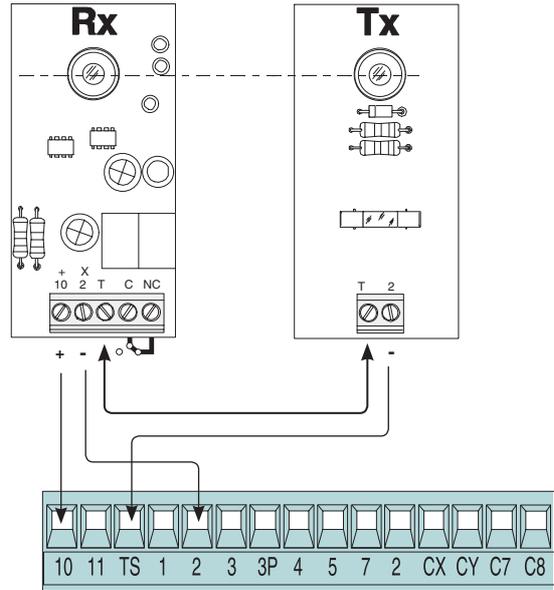


6.4 Electrical connection to operate the photocells' safety test

(DOC)



(DIR)

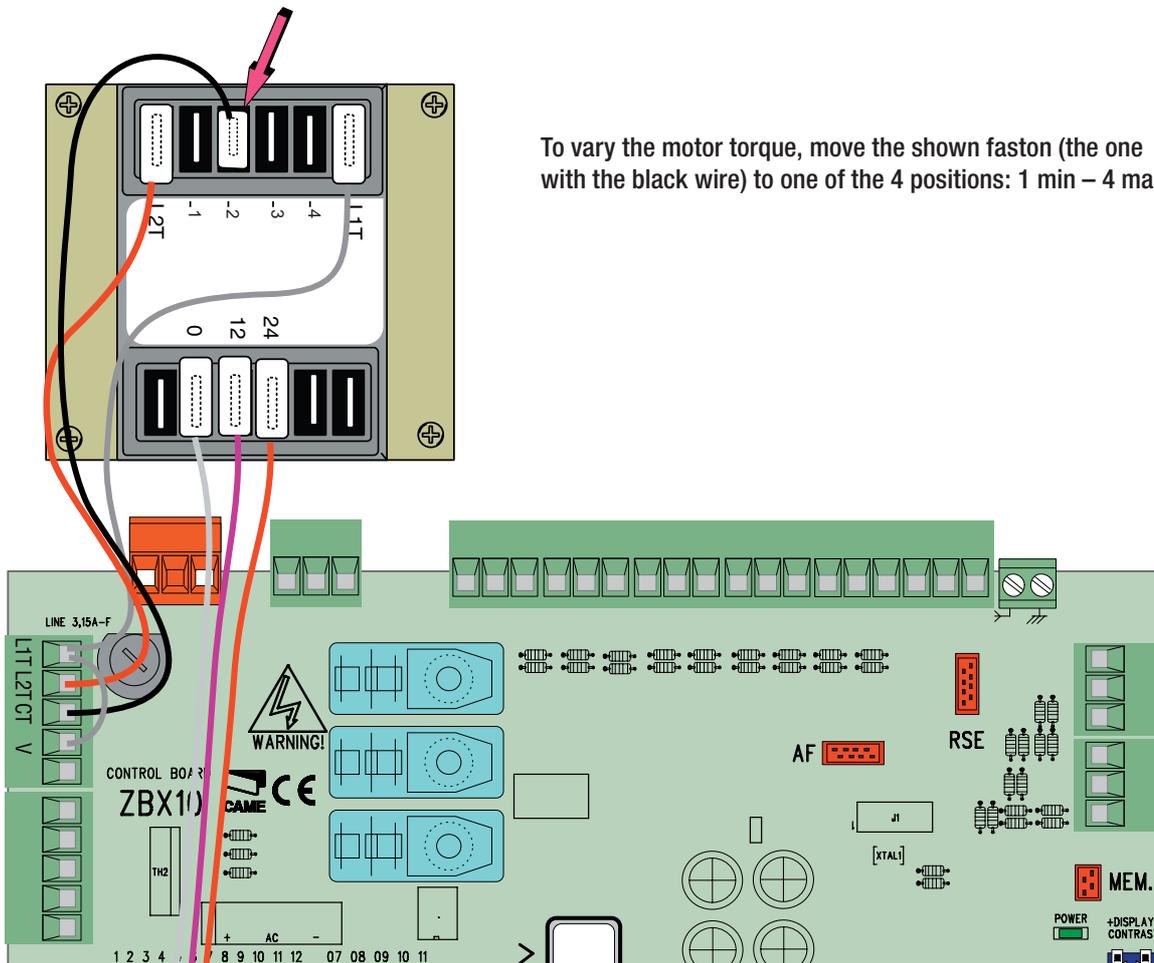


At each open/close command, the card check the photocells' efficiency. Any problems with the photocells will cause the (PROG) Led to flash on the electronic card, which cancels any commands from the radio transmitter or push-button.

Electrical connection to operate the photocells' safety test:

- The transmitter and receiver, must be connected as shown in the diagram;
- from the functions menu, select "safety tests" and select either CX or CY input/s to activate the test.

6.5 Motor torque limiter



To vary the motor torque, move the shown faston (the one with the black wire) to one of the 4 positions: 1 min – 4 max.

7 Programming

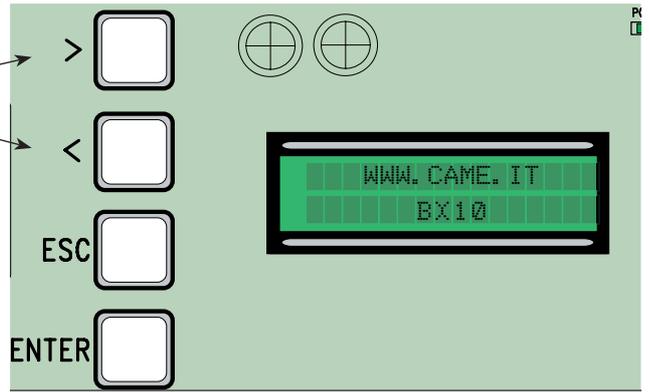
7.1 Description of display commands

The <> keys are for:
- shifting from one menu item to another
- increase or decrease values

The ESC key is for:
- exiting the menu
- cancelling modifications

The ENTER key is for:
- entering the menu
- confirming and memorising set values

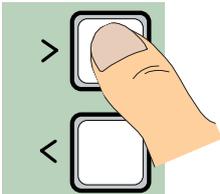
the <...> symbols on the display are for:
- pointing out the currently, selected item



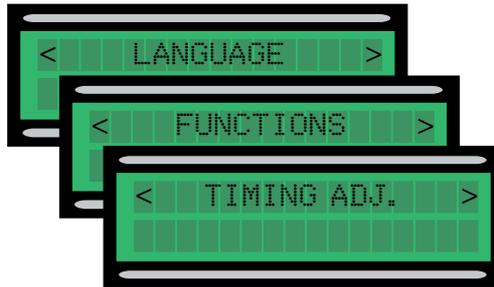
7.2 Browsing the menu



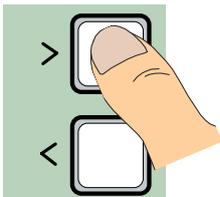
To enter the menu, keep the ENTER key pressed for at least one second.



To select a menu item, mode using the greater than-lesser than keys...



...then press ENTER



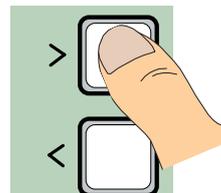
also use the greater than-lesser than keys for the "sub-menus"...



...then press ENTER



If the <> are on the TIME function, you may modify the value.



To increase or reduce values, use the greater than-lesser than keys...



...then press ENTER to confirm...



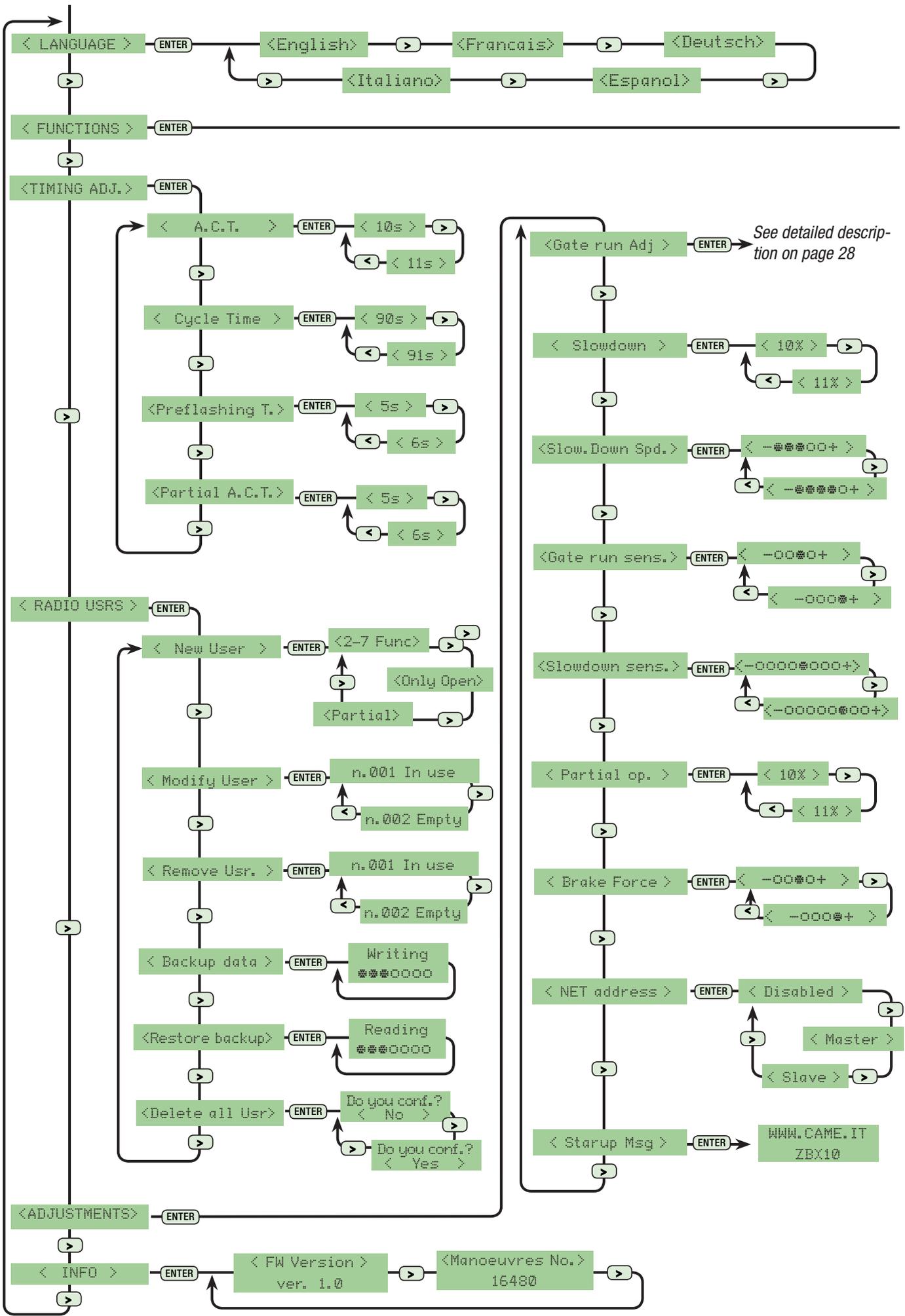
...to exit the menu, wait 30 seconds, or press ESC, until start screen is displayed.



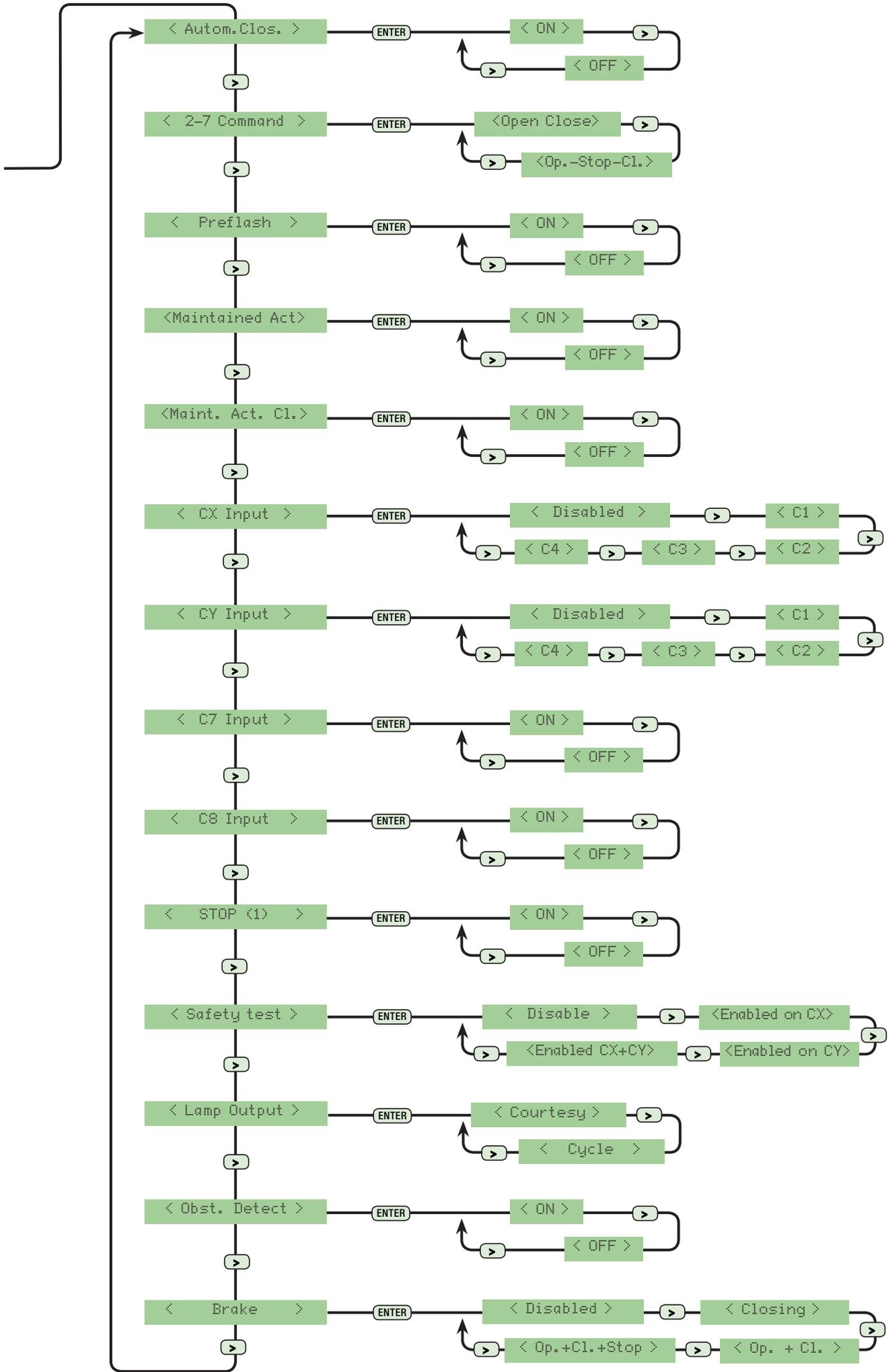
N.B.: when the menu is active, the system cannot be used.

7.3 Menu structure

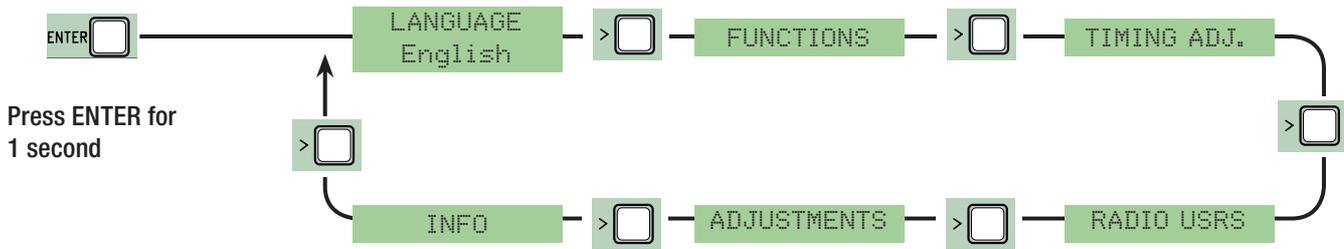
ENGLISH



See detailed description on page 28

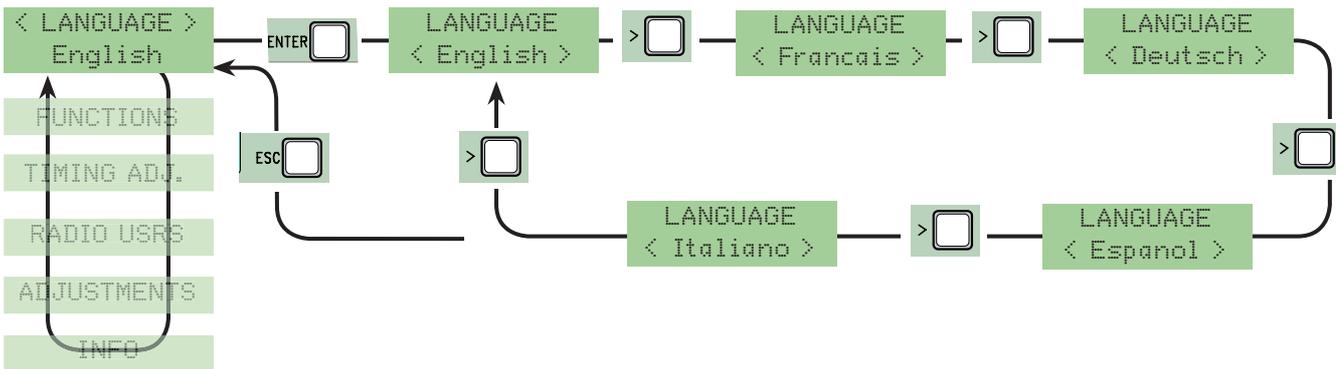


7.3 Main menu



7.4 Language menu

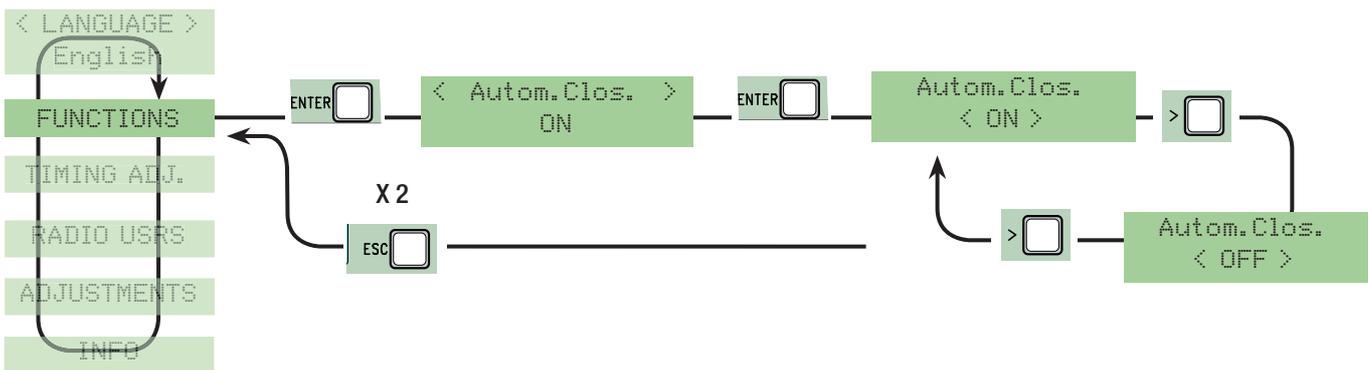
Select language: selects among the languages displayed.



7.5 Functions menu

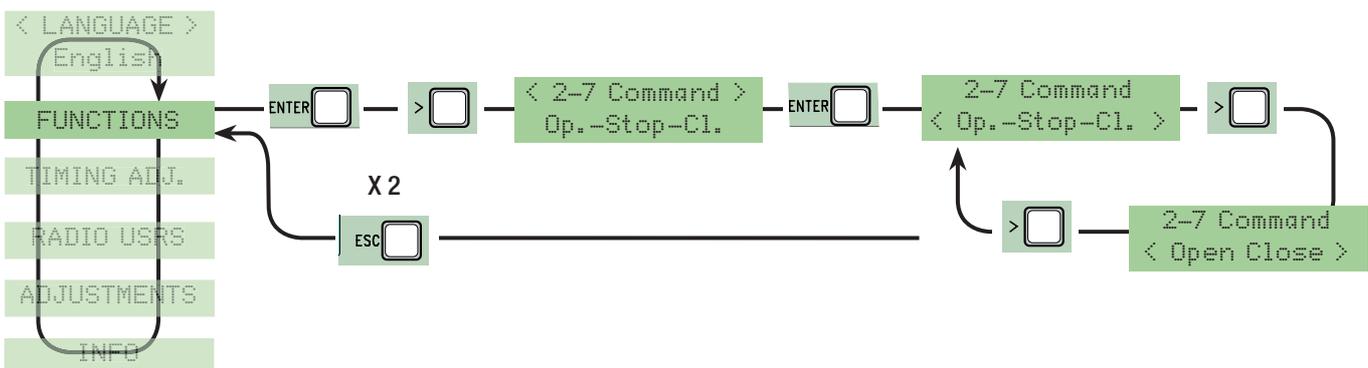
Automatic Closing: activates or deactivates the automatic closing function.

The automatic closing timer activates at each opening endpoint. The predetermined time may be adjusted, and is in any case dependent on any safety devices that may activate; and it does not activate after a total safety “stop” or during a power outage.

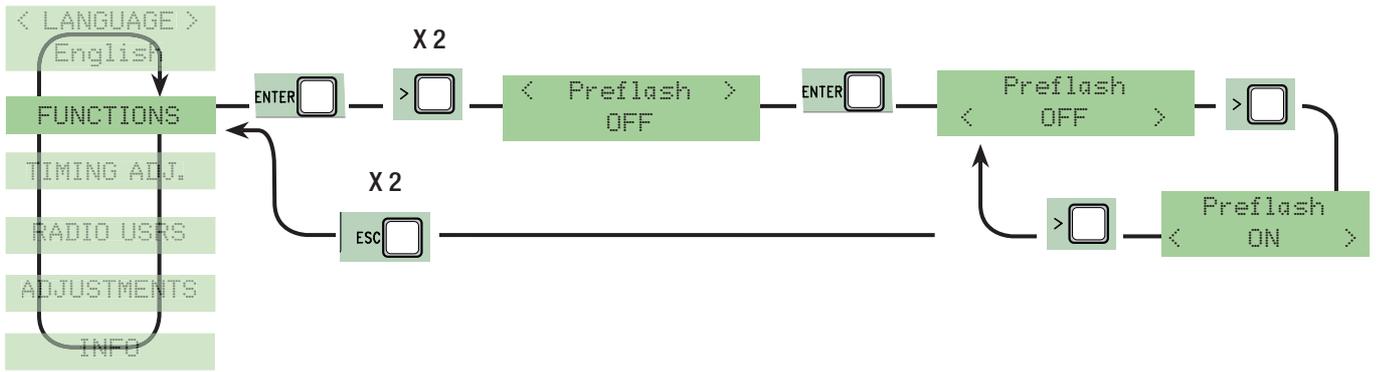


2-7 Command: sets the sequential command.

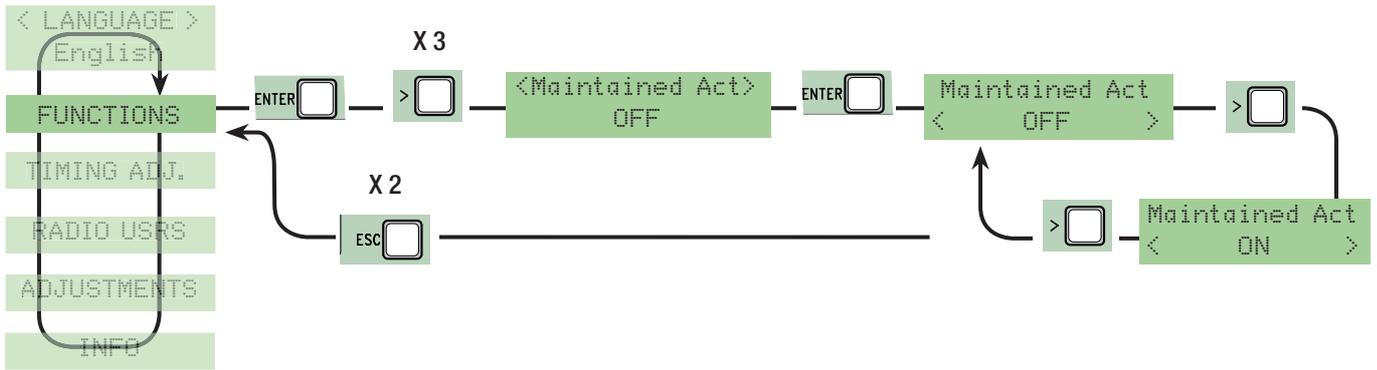
“Open-close” or “open-stop-close-stop” function with button [2-7] and radio transmitter (when radio-frequency card is inserted)



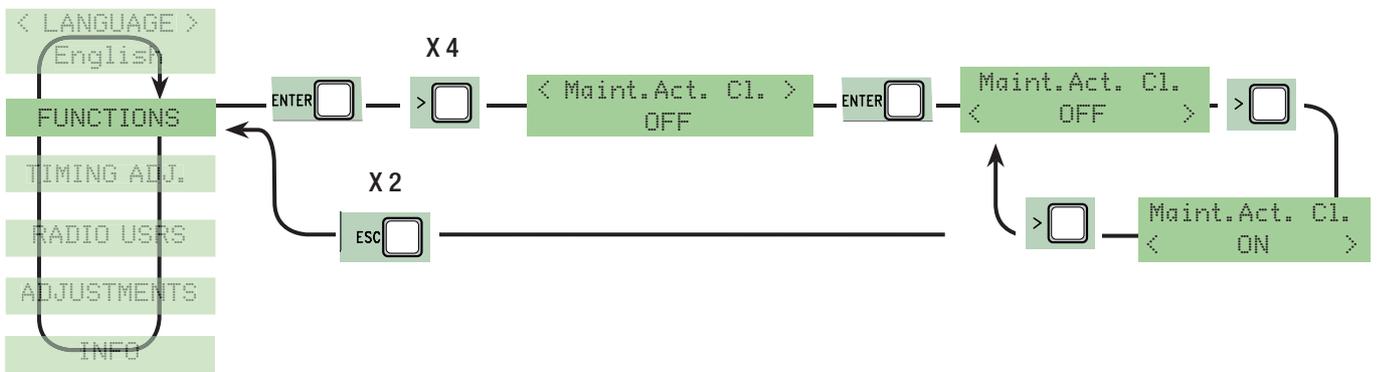
Pre-flashing: after an opening or closing command, the flashing light, connected to W-E1, starts flashing before the gate begins its run (to set the time, see “Pre-flashing timing” from the Adjust Timings menu)



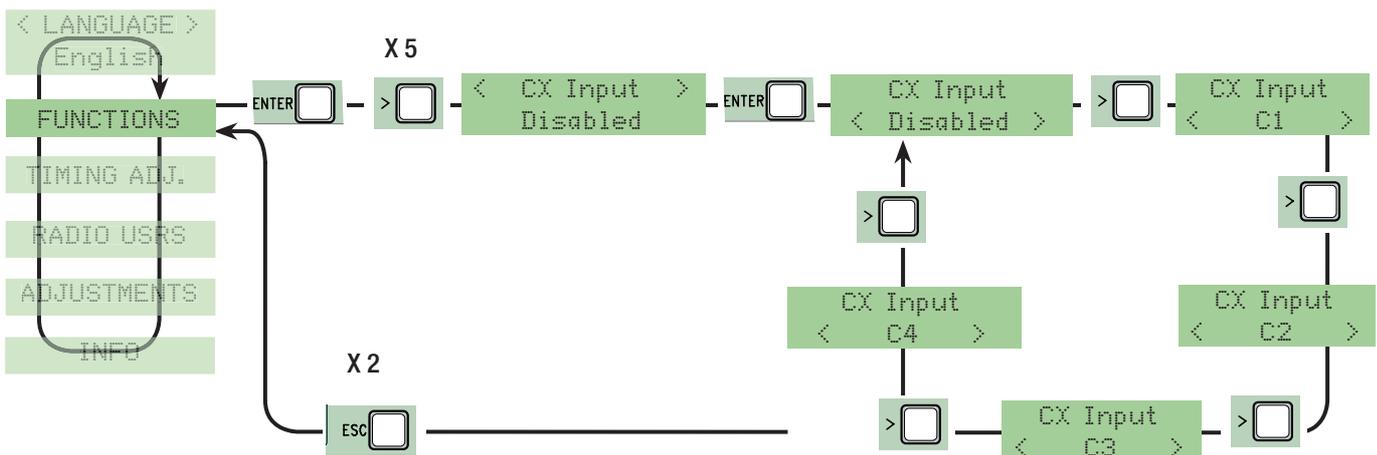
Maintained action: The gate works by keeping the button pressed (button 2-3 for opening, button 2-4 for closing, or if set to the “On Closing” function, only with button 2-4).



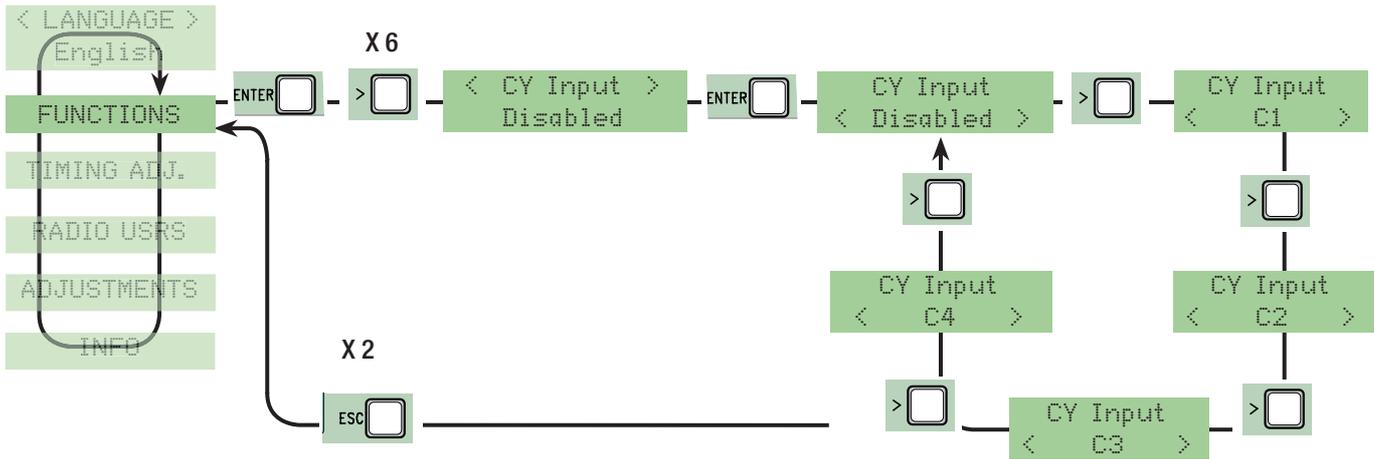
Closing maintained action: the gate closes by keeping the button pressed (only for the 2-4 closing button).



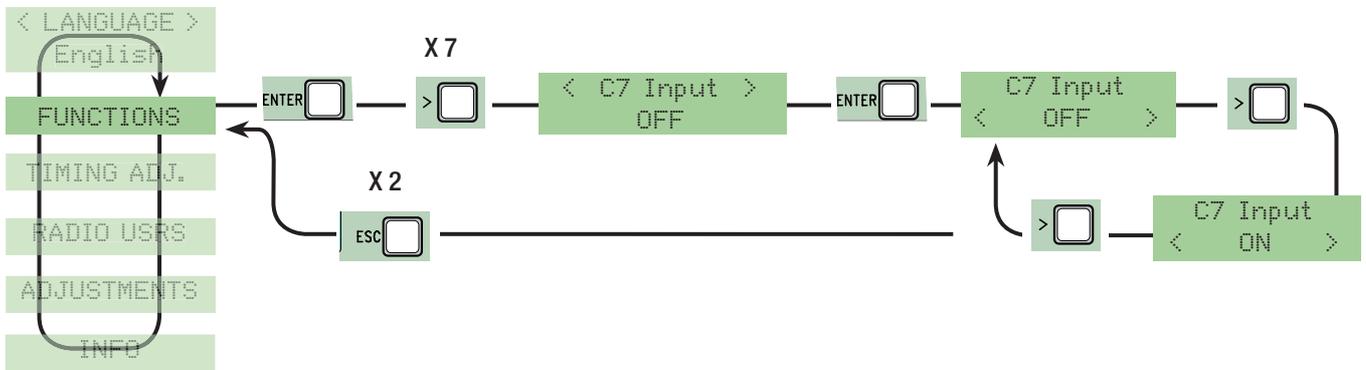
CX input: N.C. safety contact input, lets you pair up the following functions: C1 (re-opening during closing), C2 (re-closing during opening), C3 (partial stop), C4 (obstacle stall), or, deactivated



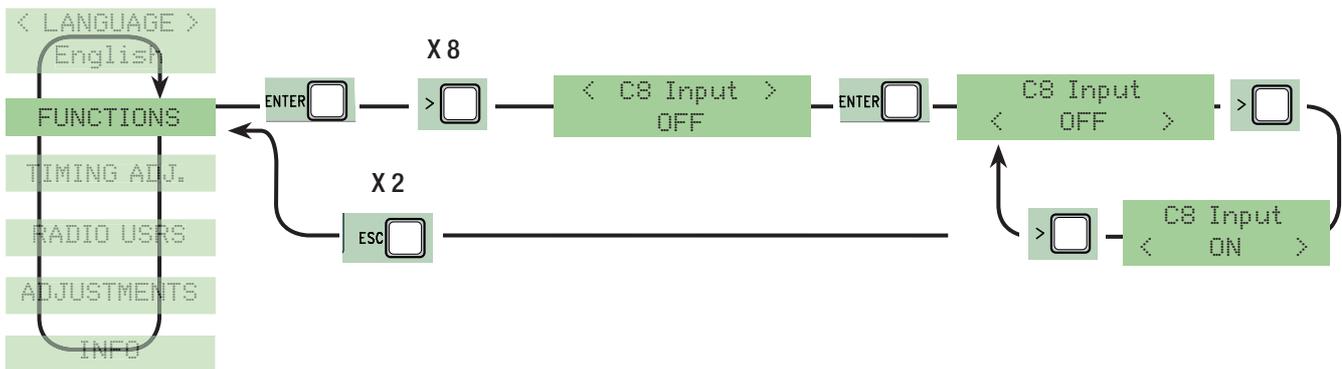
CY input: N.C. safety contact input, lets you pair up the following functions: C1 (re-opening during closing), C2 (re-closing during opening), C3 (partial stop), C4 (obstacle stall), or deactivated



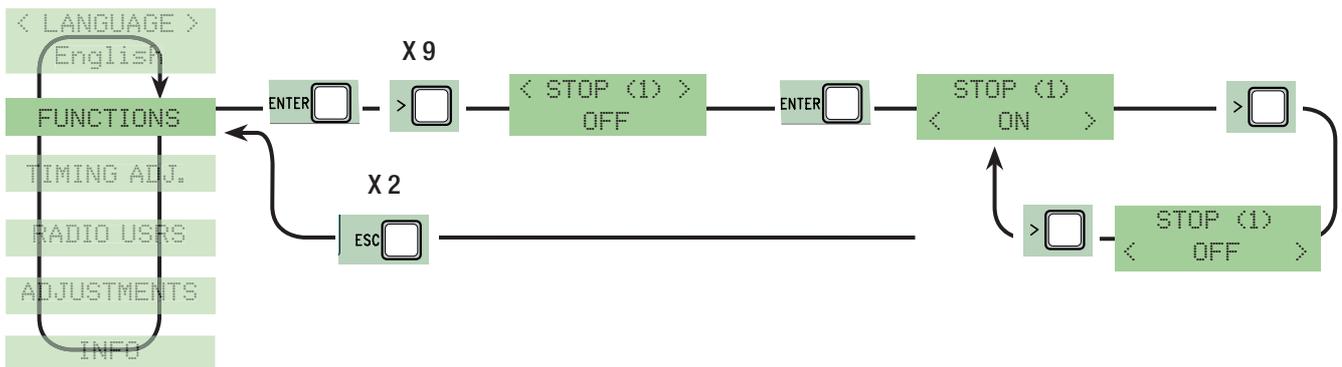
C7 input: N.C. safety contact input (re-opening when closing). This input is for EN 12978-compliant safety devices, like sensitive edges. When the gate is closing, the open contact triggers an inversion in the gate's movement until it is fully opened.



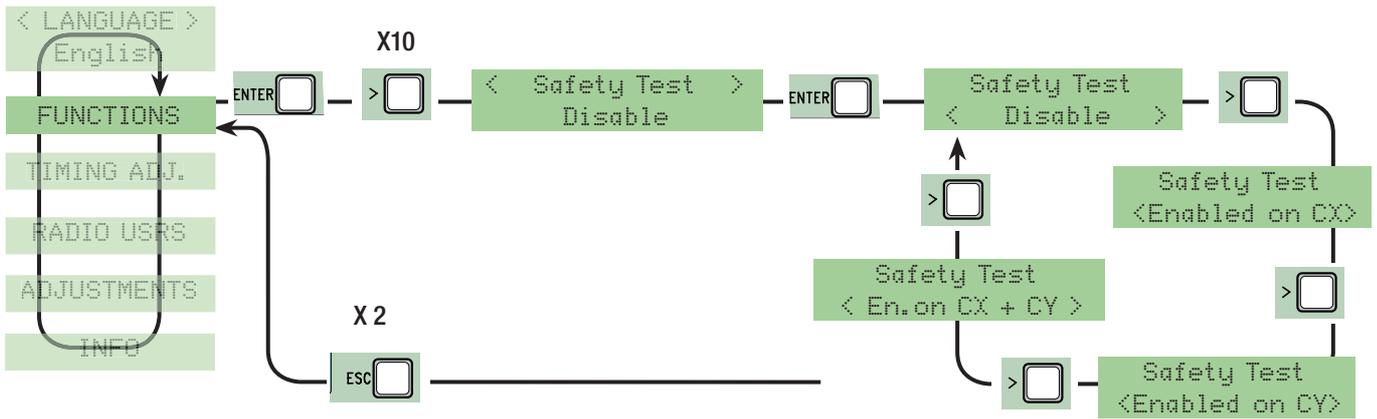
C8 input: N.C. safety contact input (re-closing during opening). This input is for EN 12978-compliant safety devices, like sensitive edges. When the gate is opening, the open contact triggers an inversion in the gate's movement until it is fully closed.



STOP (1): this function stops the gate and consequently excludes any automatic closing cycle; for movement to resume, you need to use the keypad or transmitter. Insert safety device on [1-2]; is unused, select "OFF" and confirm with ENTER.

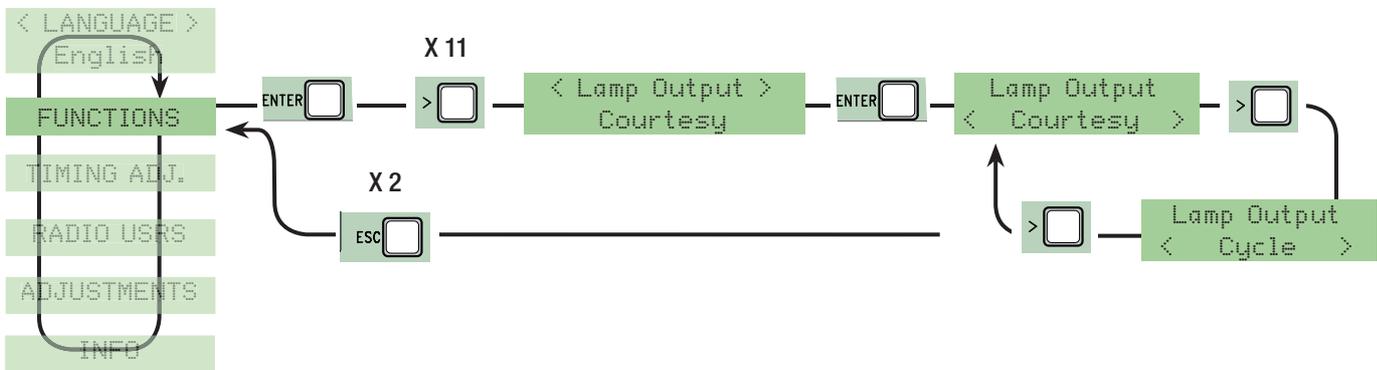


Safety test: Allows the card to check the efficiency of any safety devices (i.e. photocells) after every opening or closing command.

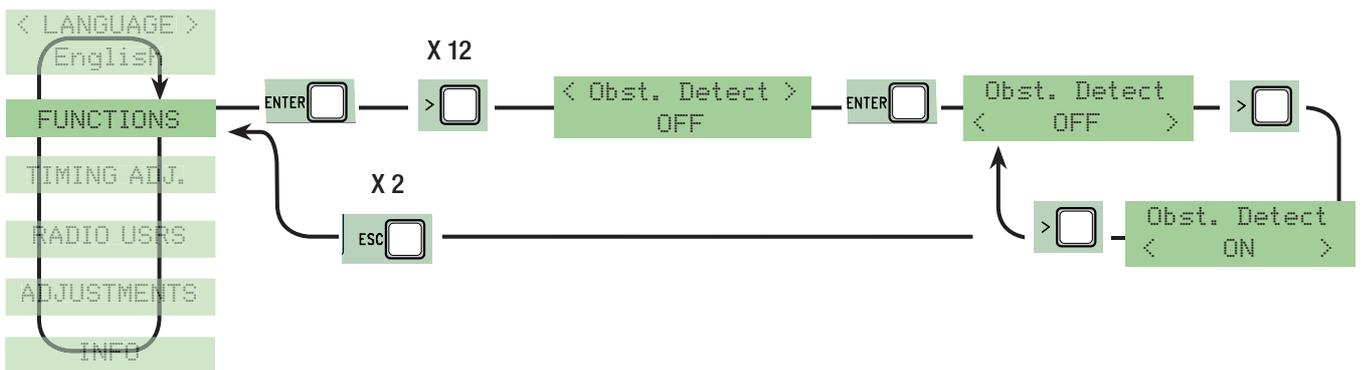


Lamp output: to configure the lamp connected to E1-Ex:

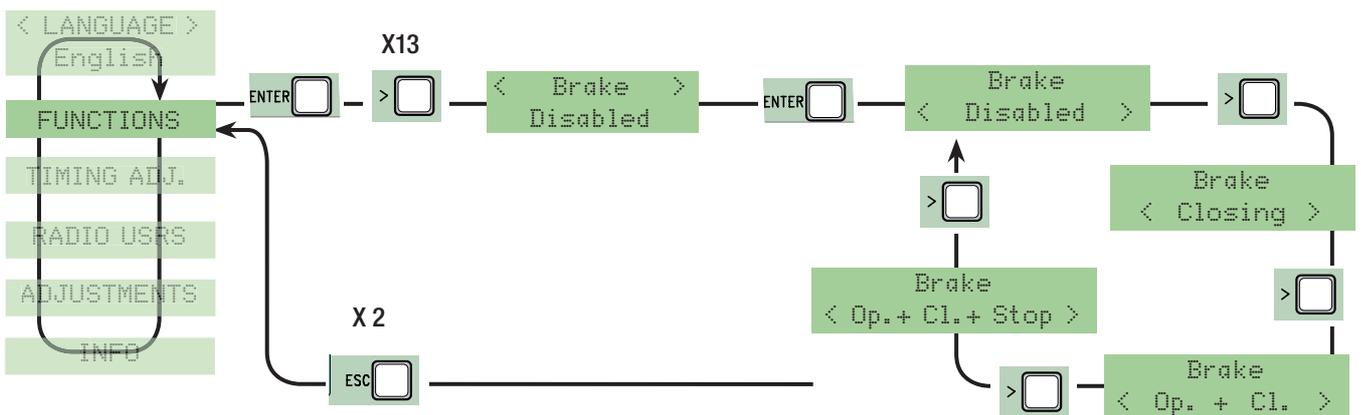
- cycle: outdoor lamp, which can be positioned at leisure, for better illumination in the parking/driveway area. It stays on from the moment the gate leaf begins to open, until it is fully closed (including automatic closing time). In case the automatic closing function is not inserted, it stays on only during gate movement.
- courtesy: outdoor lamp, which can be positioned at leisure, for better illumination in the parking/driveway area. It stays on for a set time of 5 minutes.



Obstacle detected - When motor is stopped (gate closed or after a total stop command) it prevents any movement if safety devices, such as photocells, detect any obstacles.



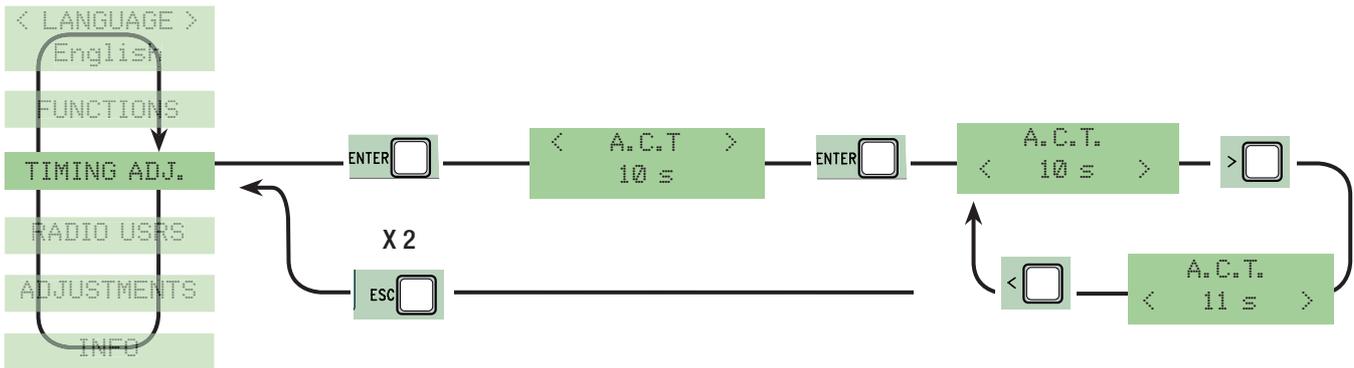
Brake: brake force on the gate during inverted gate-runs and endstops (the force may be adjusted, see "Brake force" – Calibration menu).



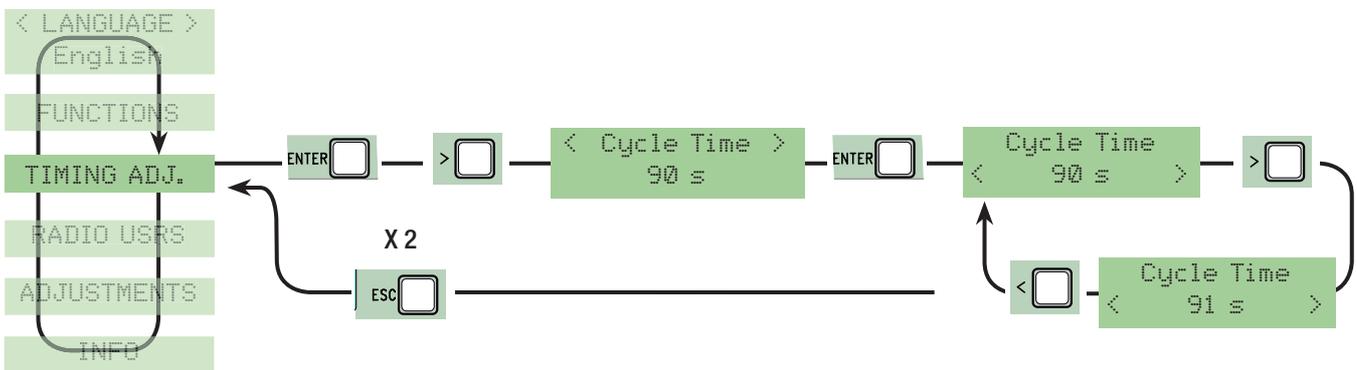
7.6 Time setting menu

Automatic closing: to set the waiting time when gate is in the open position.

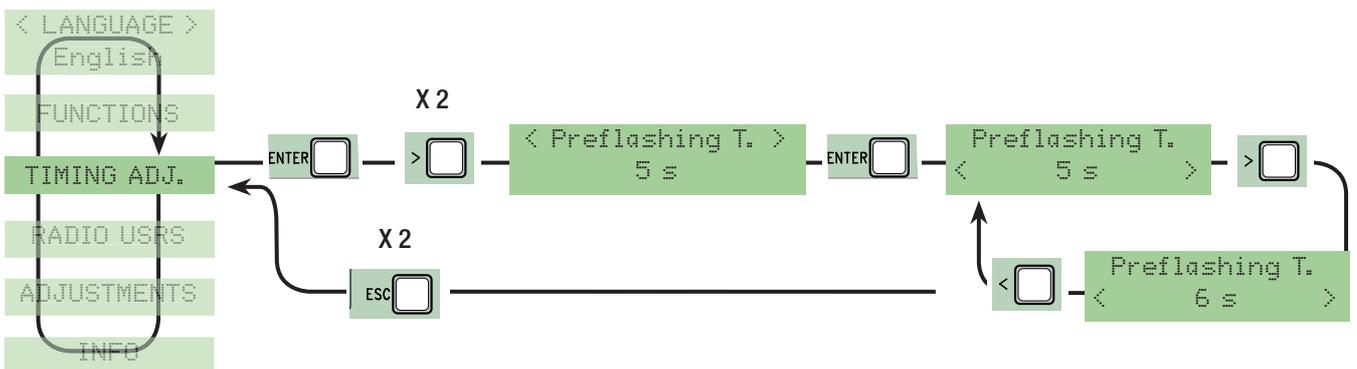
Once this time is elapsed, the gate closes automatically. The waiting time can be set to between 0" and 120".



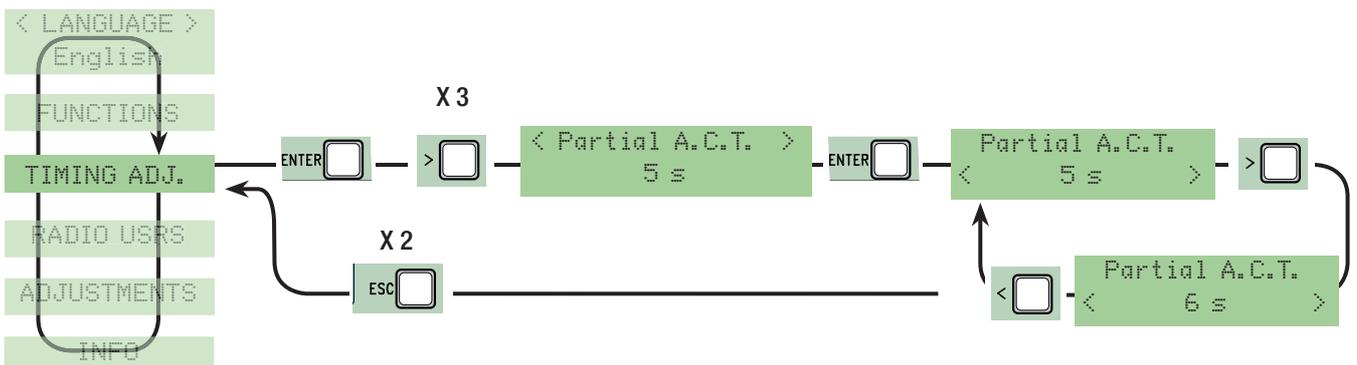
Working time: the motor's working time during opening or closing; from 10" to 120".



Pre-flashing time: after an opening or closing command is given, the flasher connected to "W-E1), flashes for between 1" and 10", before the gate begins to move.

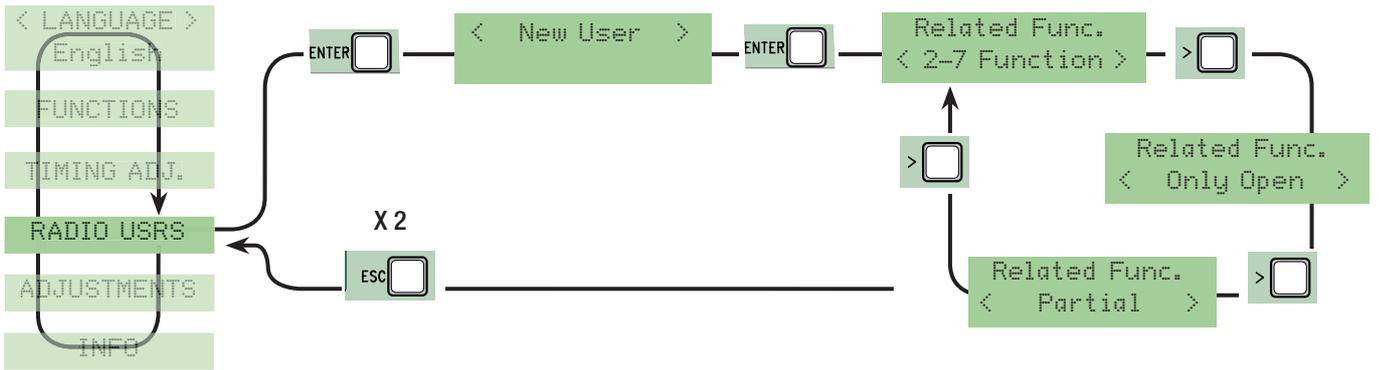


Automatic partial closing: gate leaf's waiting time, after a partial opening command is given. The waiting time can be set to between 0" and 120".

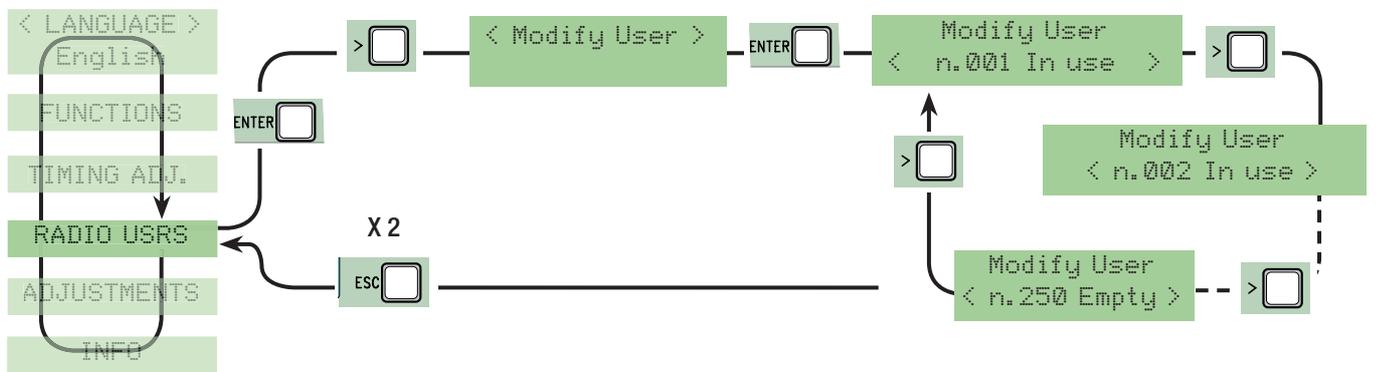


Users Radio Menu

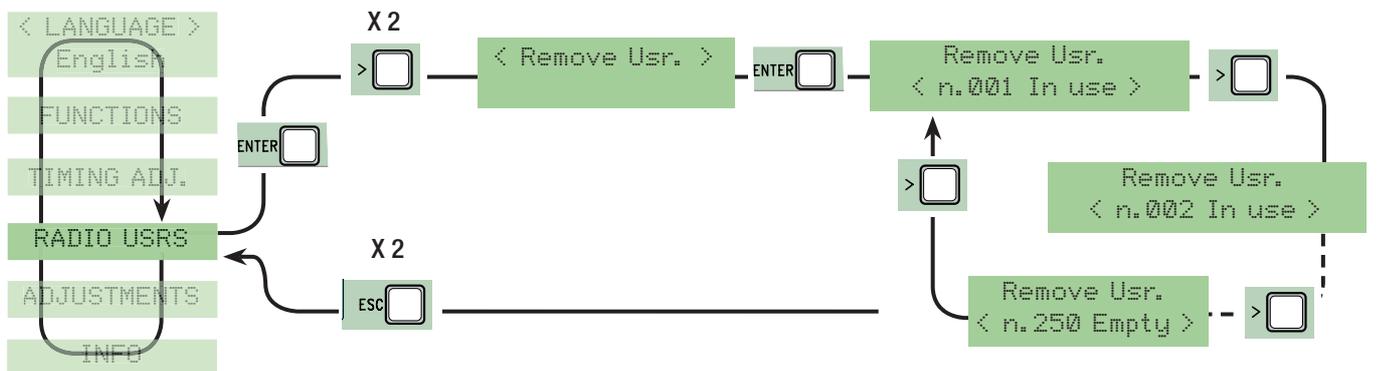
New user: to create a new user and assigned function (see detailed function on page 27).
The user will be assigned a number (max. 250 users) with a function.



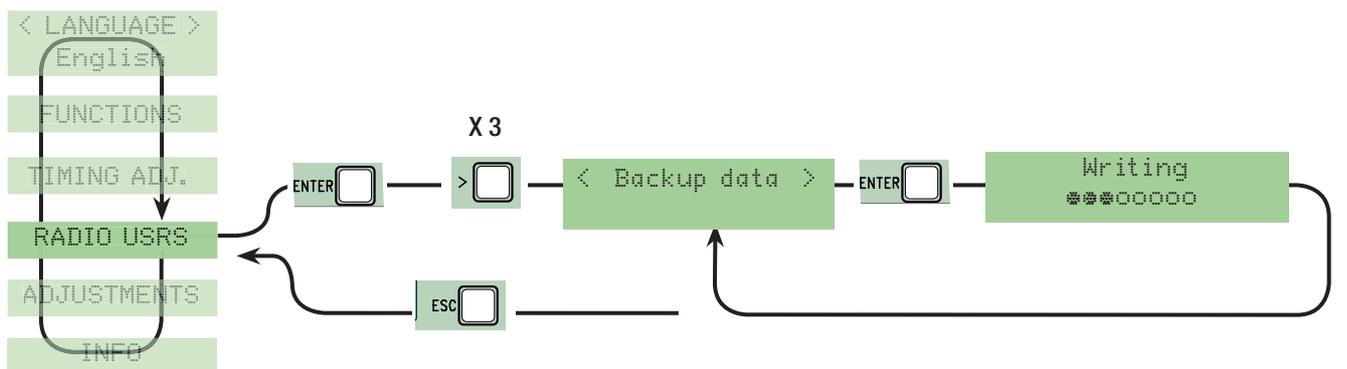
Modify User: to modify a user's assigned function (see detailed function on page 28)



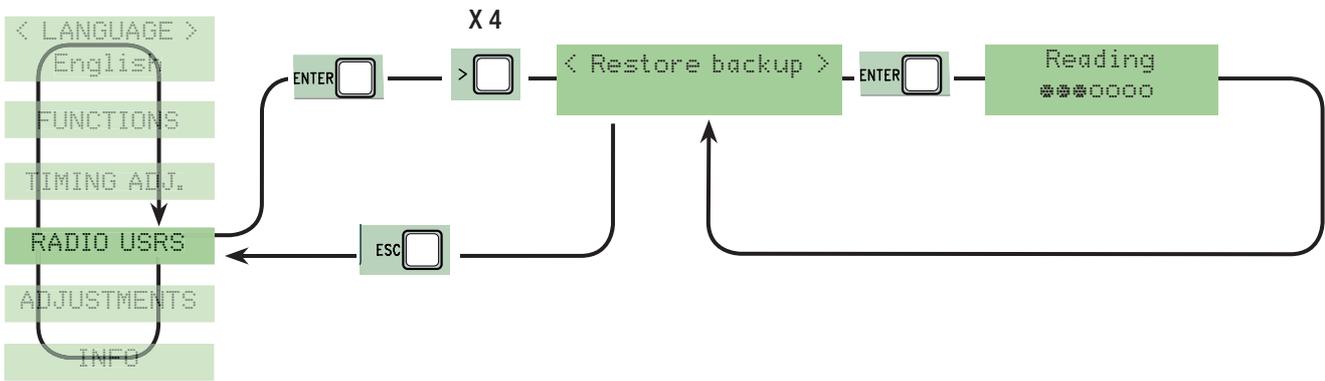
Remove user: to remove an existing user. Confirm the user you wish to remove with the ENTER key.



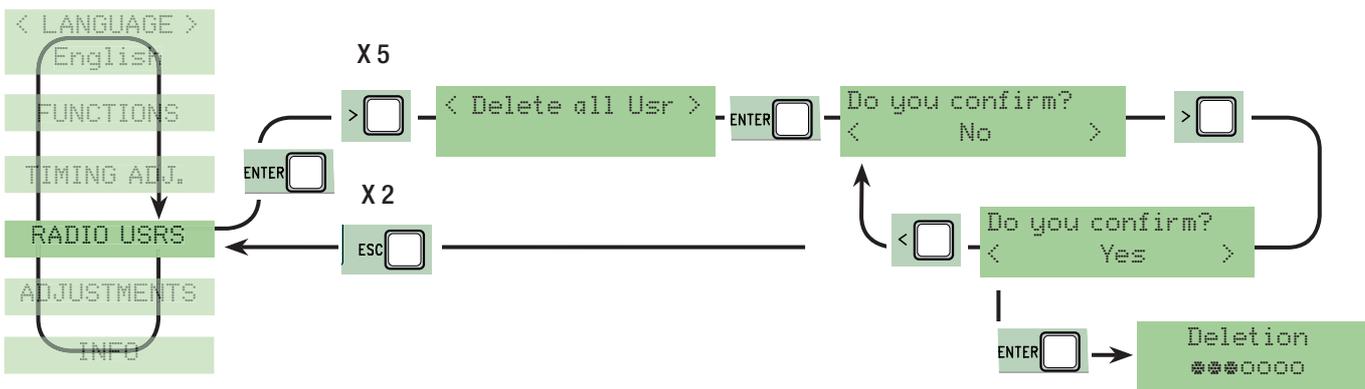
Save memory: to save the users in the memory roll. Confirm saving of users on the memory roll with ENTER.



Load memory: to load the data saved on the memory roll onto card

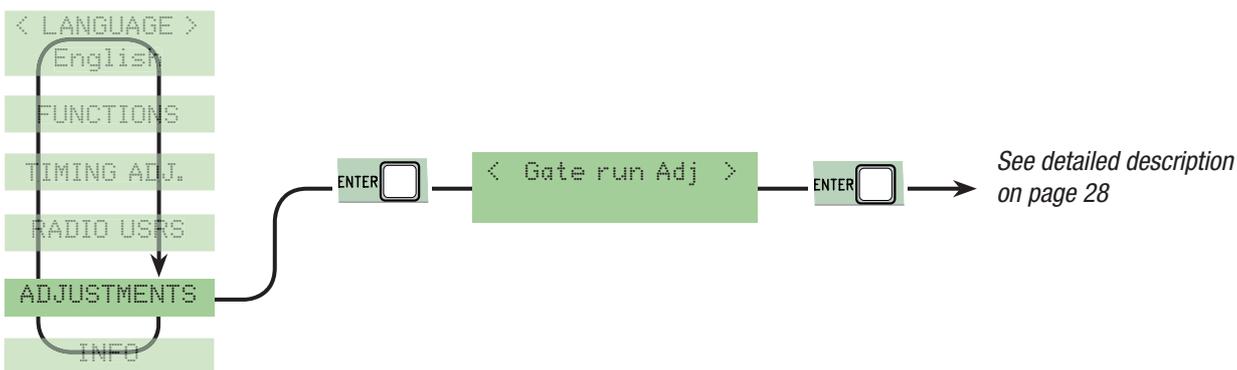


Cancel all: to cancel all registered users. Confirm cancellation of all users with ENTER.

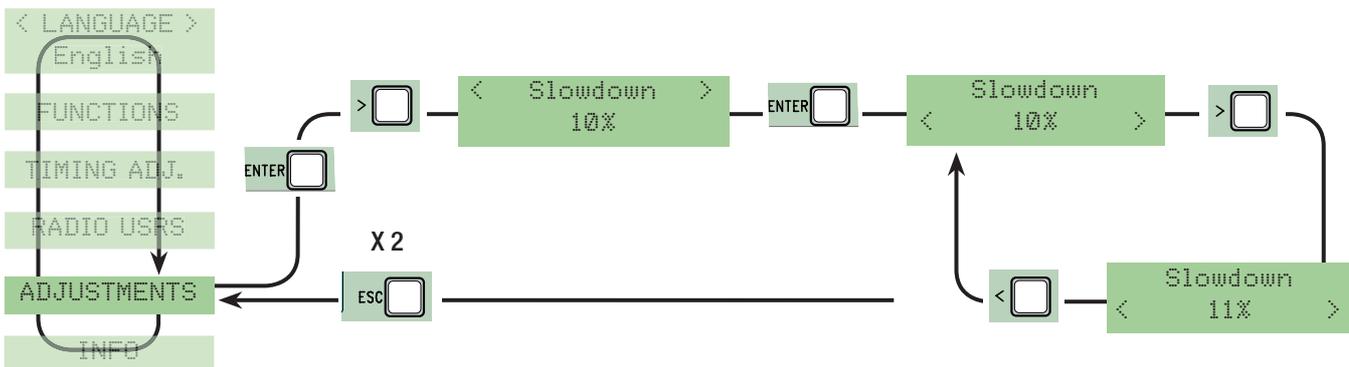


7.8 Calibration Menu

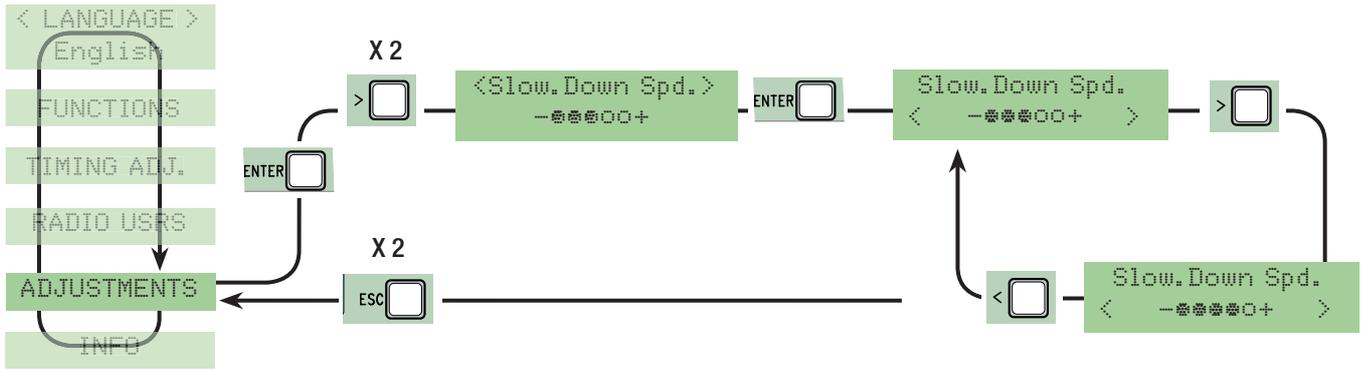
Gate-run calibration: to calibrate the opening and closing gate-run.



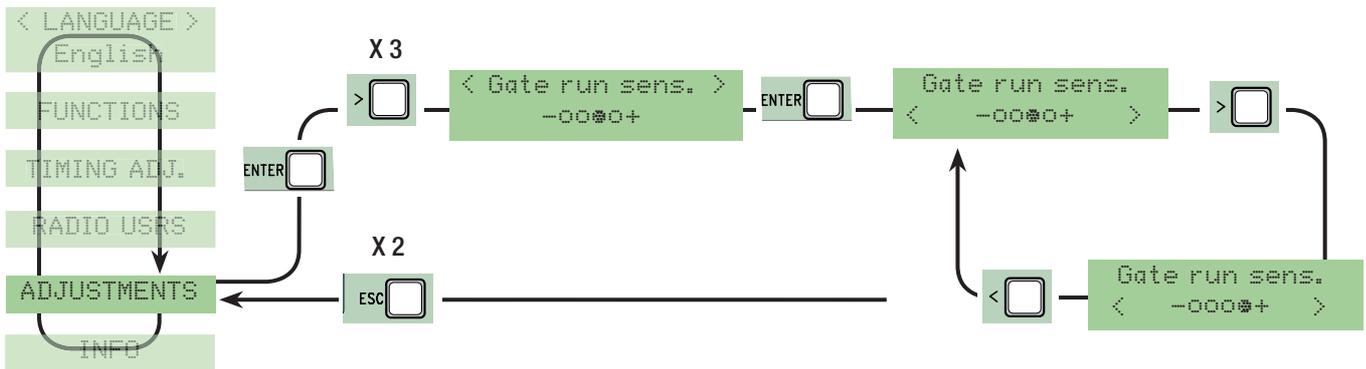
Deceleration: to adjust the deceleration's starting point before the endstop, both when opening and closing. The deceleration is calculated in percentage terms (from 0% to 40%).



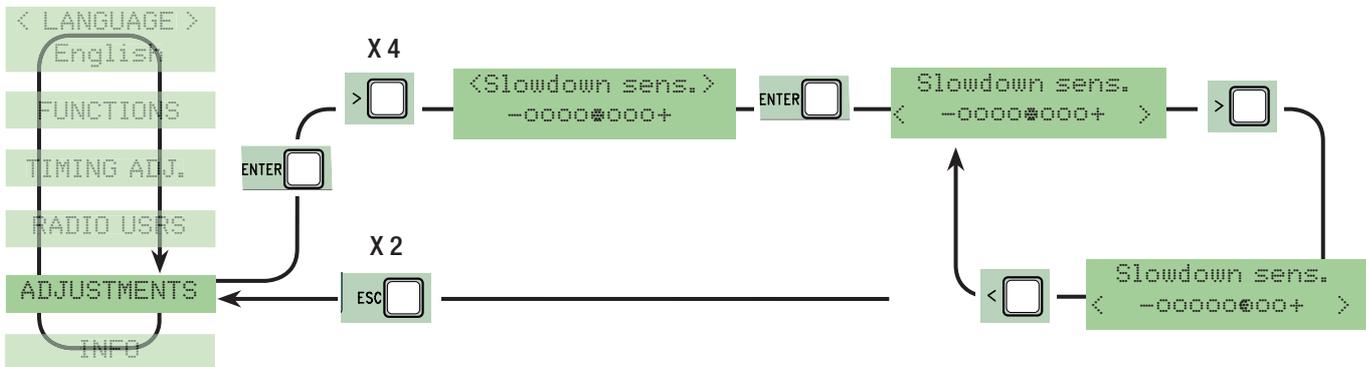
Deceleration speed: to adjust the deceleration speed when opening and closing.



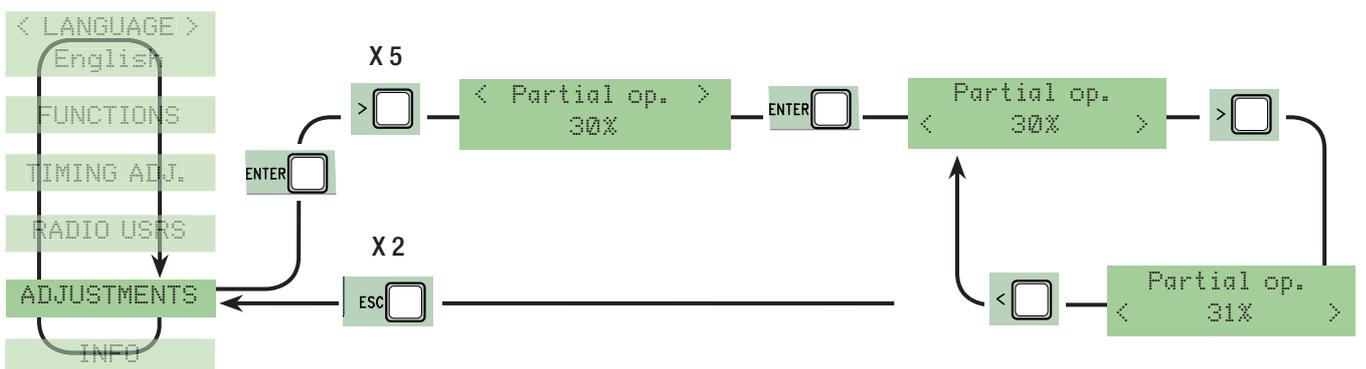
Gate-run sensitivity: to calibrate the amperometric sensitivity that controls the force generated by the motor during movement; if the force exceeds the calibrated level, the system intervenes by reversing the direction of movement.



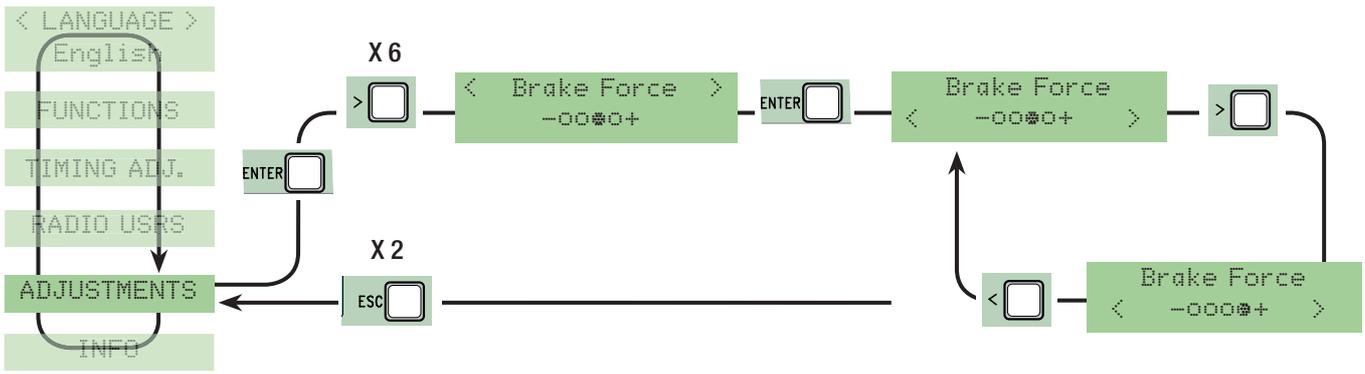
Deceleration sensitivity: to calibrate the amperometric sensitivity that control the force generated by the motor during decelerations; if the force exceeds the calibrated level, the system intervenes by reversing the direction of movement



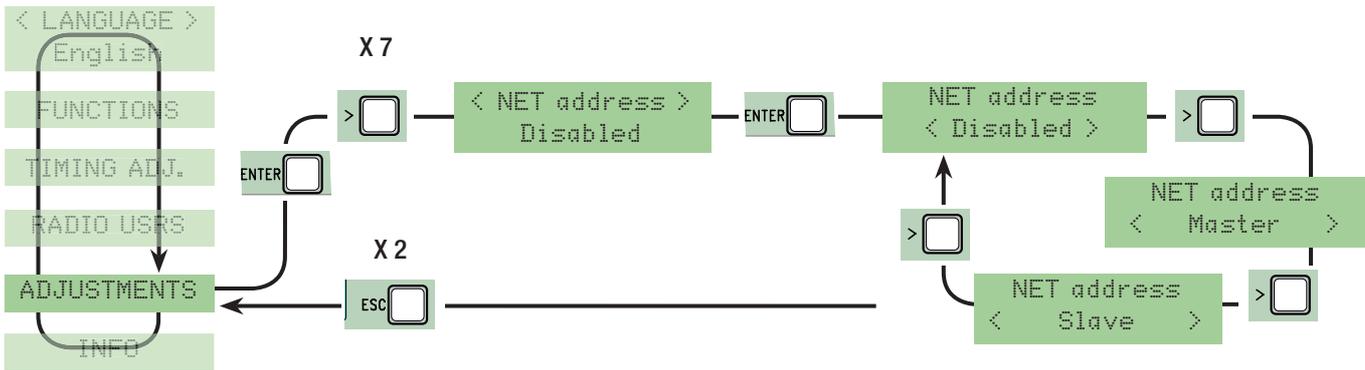
Partial opening: to calibrate the percentage of the gate's opening width (from 10% to 80%) for the entire gate-run.



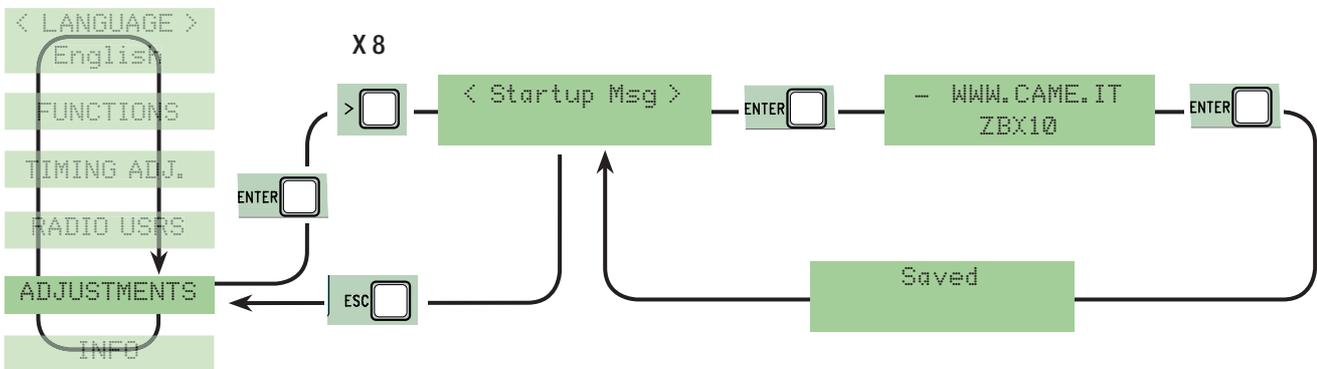
Brake force: to calibrate the braking force on the gate during run-inversions and at endstops.



Web address: to define the master card or slave in paired connections (see detailed function on page 29).

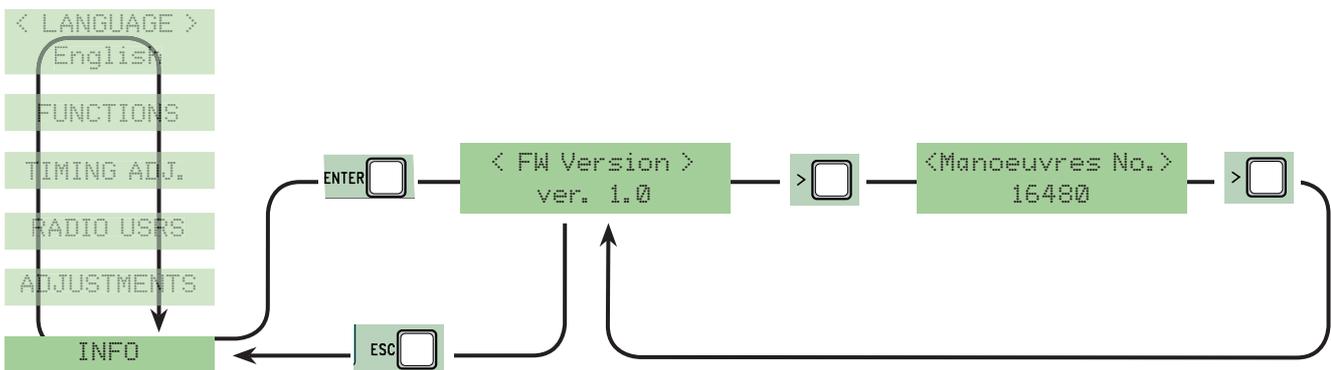


Initial message: shows the starting message. Confirm with ENTER to modify the text. Use the ENTER key to shift the cursor forwards, ESC to shift it backwards and < > to select the letter or number. Confirm the text by pressing ENTER for a few seconds.



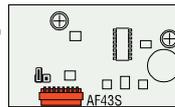
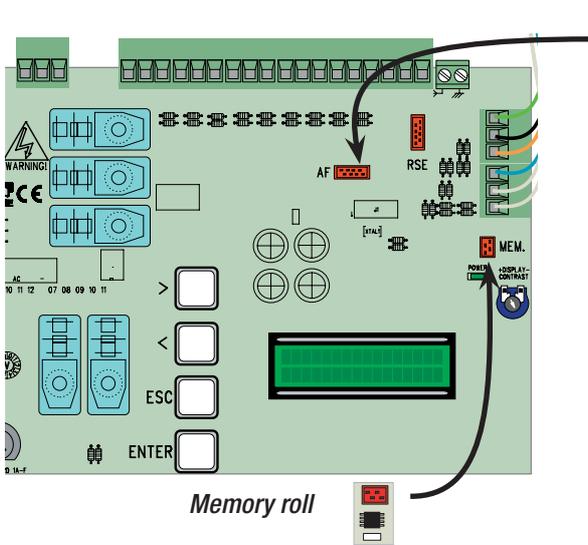
7.9 Info Menu

Fw Version: shows software version.
Number of Gate-runs: shows the number of gate-runs performed by the gate.



7.10 Decoding card

Insert the (AF43S) radio card which command the operator and insert, modify or remove any users using the transmitter. Insert the memory roll to save and upload the registered users onto another card.



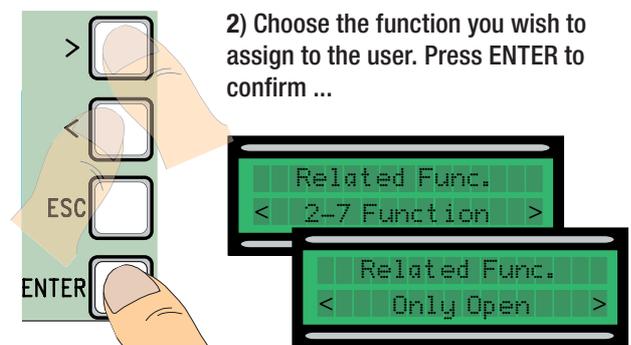
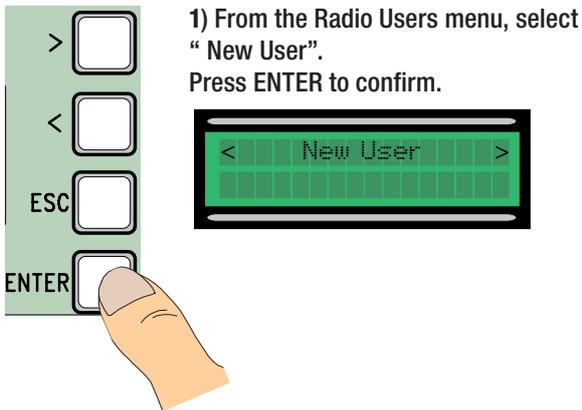
AF Card



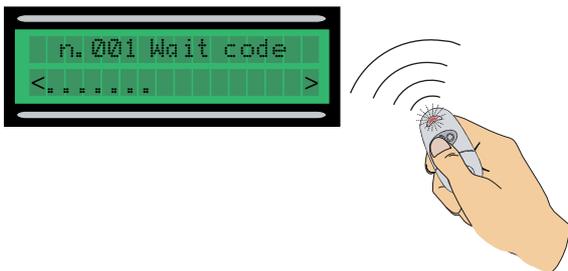
| Frequency/MHz | Card | Transmitter |
|---------------|--------|---------------------------|
| FM 26.995 | AF130 | TFM |
| FM 30.900 | AF150 | TFM |
| AM 26.995 | AF26 | TOP |
| AM 30.900 | AF30 | TOP |
| AM 433.92 | AF43S | TAM / TOP ATOMO / TWIN |
| AM 433.92 | AF43TW | TWIN |
| AM 40.685 | AF40 | TOUCH |



7.11 Inputting users



3) ...you will be prompted to input a code. Send the code using the transmitter button...



4) ...once the code is inputted, the read out will say "Saved"...



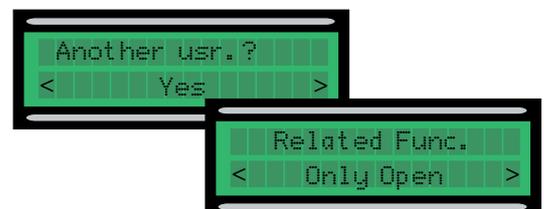
...or "existing" (if the code has already been inputted).



5) ...then you will be asked whether you wish to input a new code or not. By selecting and confirming "No", the user input procedure will be terminated.



6)by selecting and confirming "Yes", you will begin again from point 2.



7.12 Modifying user (modifying the function)

1) From the Users Radio menu, select "Modify User". Press ENTER to confirm.

2) Select the user number or name for which you wish to modify the assigned function and press ENTER to confirm.

3) Select the assigned function.

4) ...once you have selected the function to assign, you will get the "Modify User" readout...

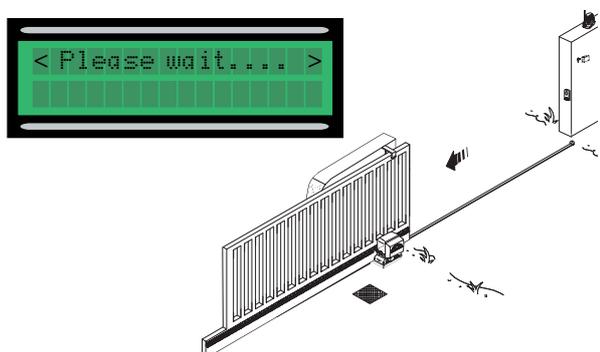


7.13 Gate-run calibration

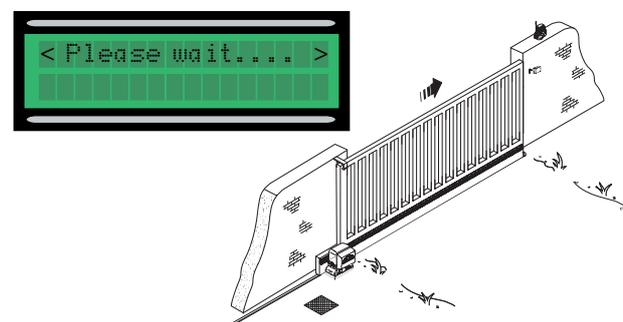
1) From the Calibration menu, select "Gate-run Adj.". Press ENTER to confirm.

2) ...The display will show "Press a key". Confirm by pressing any key launch calibration of the gate.

3) The gate will open to its full extent ...



... and then close to its full extent.



7.14 Net address

The “NET address” function is set when connecting two paired operators.

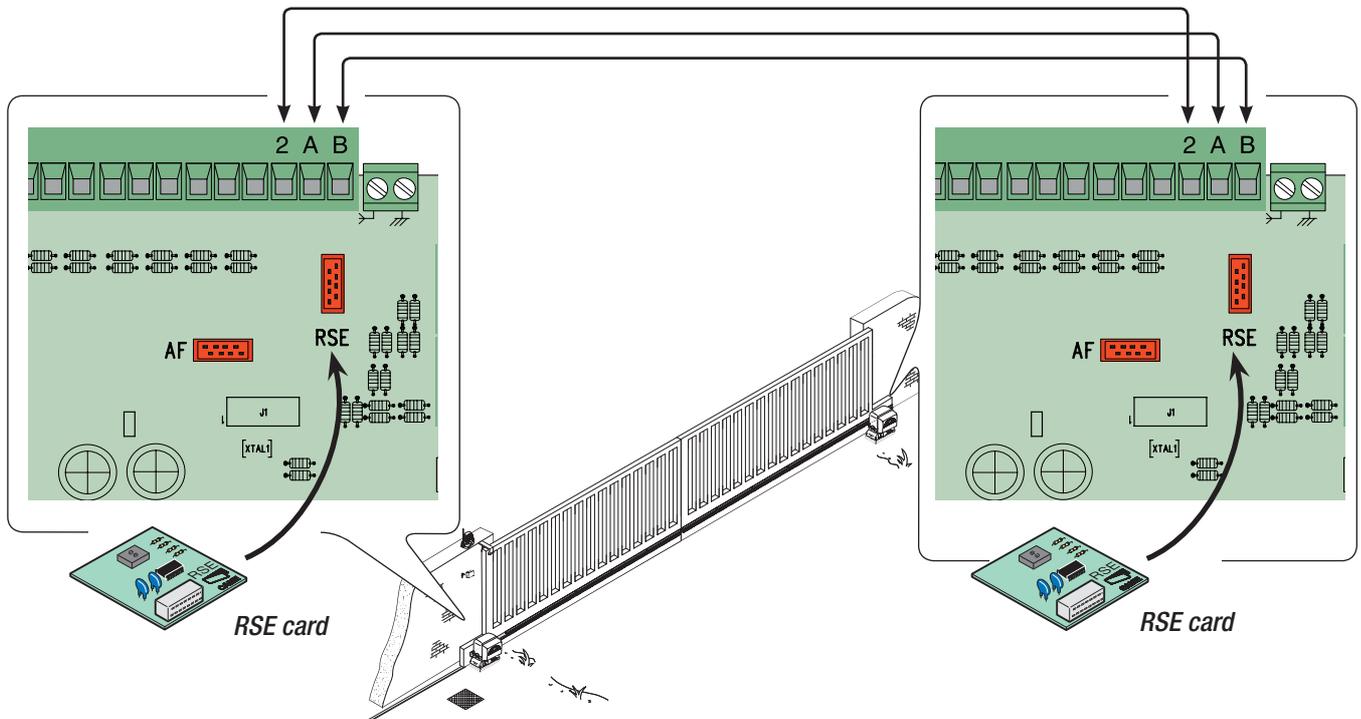
Connect the two cards using the (2-A-B) terminals and insert the RSE cards into both.

On the “MASTER” card you have selected, make all of the required electrical connections and set the functions and adjustments (see specific paragraphs).

If the system is fitted with sensitive edges on both gate leaves, carry out the electrical connections on (C7/C8) also for the “SLAVE” card.

In the event that the “Maintained action” function is activated, set it to (ON) on both of the cards and deactivate (OFF) the “Automatic Closing” function on both.

If you wish to activate the “Automatic Closing” function, select is on both of the cards.



1) On the Master card.
From the Calibration Menu, select “NET address” and press ENTER.

```

< NET address >
  Disabled
  
```

2) Select “Master” and press ENTER to confirm the calibration.

```

NET address
< Disabled >
NET address
< Master >
  
```

3) Select “Slave” for another card.

```

NET address
< Disabled >
NET address
< Slave >
  
```

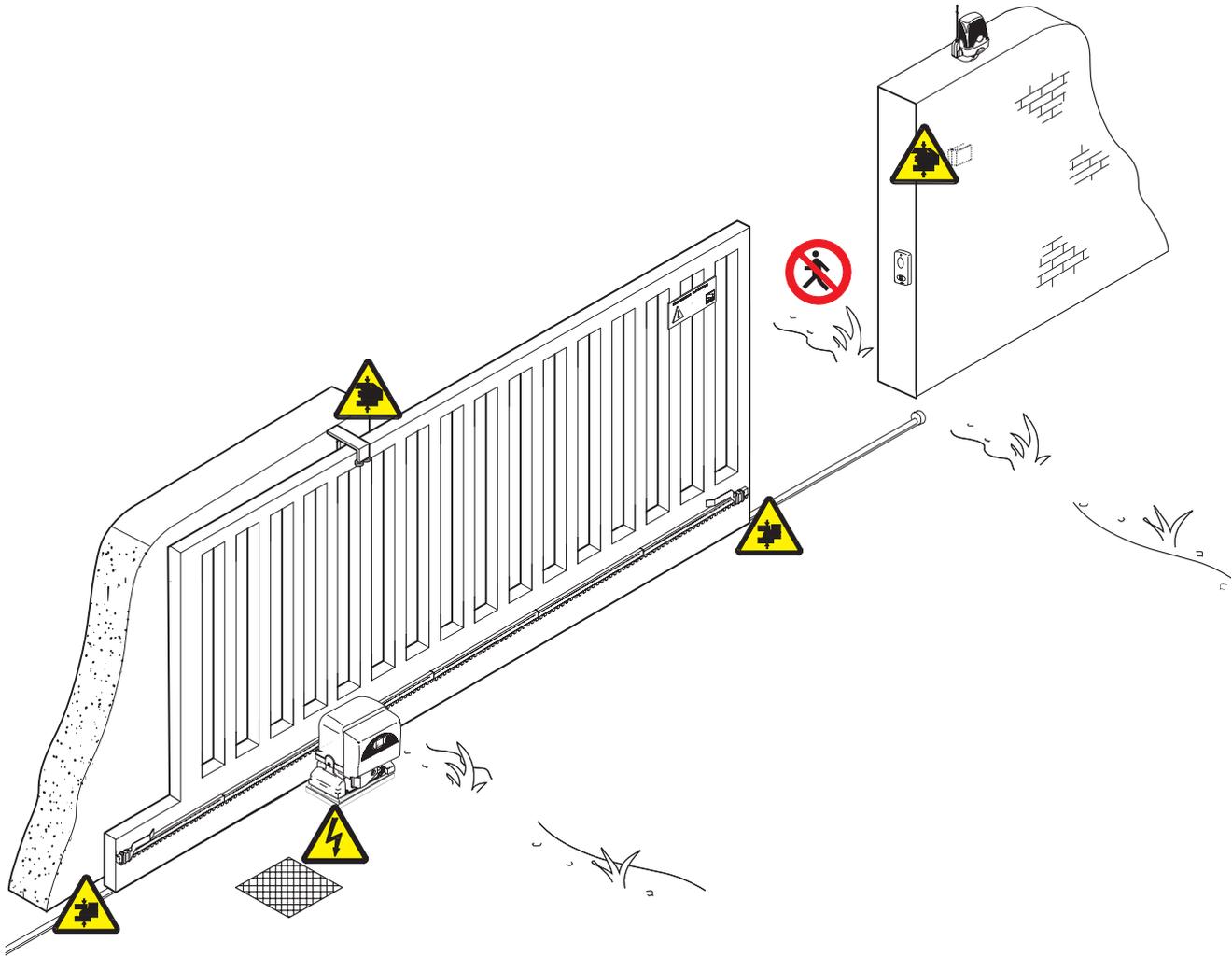
8 Safety instructions

Important safety instructions

This product must only be employed for its originally intended use. Any other use is wrong and potentially dangerous. The manufacturer cannot be held liable for any damages resulting from wrongful, erroneous or negligent uses.

Avoid working close to the hinges or other moving mechanical parts. Stay out of the opening/closing arc when operator is in motion.

Do not exercise force against the motion of the operator as this could result in potentially dangerous situations.



Do not allow children to play or loiter within the opening/closing arc of the operator. Keep remote controls and any other command device out the reach of children, to prevent operator from being activated by accident.

In the event of anomalous behaviour, stop using the operator immediately.



Danger of crushing hands



Danger! High voltage



Danger of crushing feet



No transit during operation

9 Maintenance

9.1 Periodic maintenance

 Periodic maintenance to be carried out by the end-user is as follows: wipe clean the glass surface of the photocells; check that the safety devices work properly; remove any obstructions.

We suggest checking the state of lubrication and tightness of the anchoring screws on the operator.

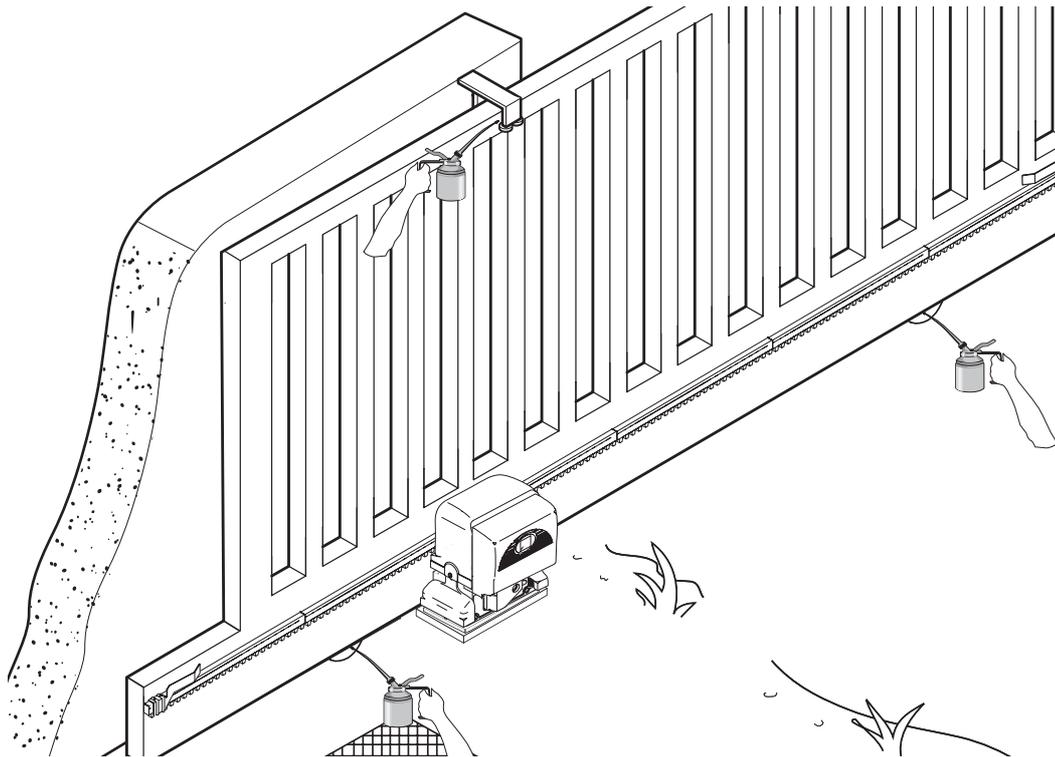
-To check the efficiency of the safety devices, move an object in front of the photocells when gate is closing. If the operator inverts the motion or stops, the photocells are working properly.

This is the only maintenance procedure to be carried out with the power source connected.

-Before performing any maintenance procedures, cut off the main power, to prevent possible accidents due to gate movement.

-To clean the photocells use a water dampened cloth. Do not use solvents or other chemical products which may ruin the devices.

-In the event of any strange vibrations or squeaking, lubricate the joints with grease, as shown in the diagram.



-Make sure there are no plants within the photocell's beam, and that the gate motion is free of any obstacles.

9.2 Trouble shooting

| MALFUNCTIONS | POSSIBLE CAUSES | CHECK AND REMEDIES |
|-----------------------------------|---|--|
| The gate will not open nor close | <ul style="list-style-type: none">• There is no power• The gearmotor is in release mode and the release door is open• The transmitter's batteries are run down• The transmitter is broken• The stop button is either stuck or broken• The opening/closing button or the key selector are stuck• Photocells in partial stop mode | <ul style="list-style-type: none">• Check that the power is up• Call assistance• Replace batteries• Call assistance• Call assistance• Call assistance• Call assistance |
| The gate opens but will not close | <ul style="list-style-type: none">• The photocells are engaged• Sensitive edge triggered | <ul style="list-style-type: none">• Check that photocells are clean and in good working order• Call assistance |
| The gate closes but will not open | <ul style="list-style-type: none">• Sensitive edge triggered | <ul style="list-style-type: none">• Call assistance |
| The flasher does not work | <ul style="list-style-type: none">• The bulb is burnt | <ul style="list-style-type: none">• Call assistance |

Periodic maintenance log for end-user (every 6 months)

| Date | Notes | Signature |
|------|-------|-----------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

9.3 Extra-ordinary maintenance

 The following table serves to note down any extraordinary maintenance, repairs or improvements performed by specialised firms.

N.B.: Any extraordinary maintenance must be performed by specialised technicians.

Extra-ordinary maintenance log

| | |
|------------------------------|------------------------|
| Installer's stamp | Operator name |
| | Date of job |
| | Technician's signature |
| | Requester's signature |
| Job performed _____ _____ | |

| | |
|------------------------------|------------------------|
| Installer's stamp | Operator name |
| | Date of job |
| | Technician's signature |
| | Requester's signature |
| Job performed _____ _____ | |

| | |
|------------------------------|------------------------|
| Installer's stamp | Operator name |
| | Date of job |
| | Technician's signature |
| | Requester's signature |
| Job performed _____ _____ | |

| | |
|------------------------------|------------------------|
| Installer's stamp | Operator name |
| | Date of job |
| | Technician's signature |
| | Requester's signature |
| Job performed _____ _____ | |

| | |
|------------------------------|------------------------|
| Installer's stamp | Operator name |
| | Date of job |
| | Technician's signature |
| | Requester's signature |
| Job performed _____ _____ | |

10 Phasing out and disposal

 CAME CANCELLI AUTOMATICI S.p.A. employs a UNI EN ISO 14001 certified and compliant environmental protection system at its plants, to ensure that environmental safeguarding.

We ask you to keep protecting the environment, as CAME deems it to be one of the fundamental points of its market operations strategies, by simply following these brief guidelines when disposing:

DISPOSING THE PACKING MATERIALS

The packing components (cardboard, plastic, etc.) are solid urban waste and may be disposed of without any particular difficulty, by simply separating them so that they can be recycled.

Before actions it is always advisable to check the pertinent legislation where installation will take place.

DO NOT DISPOSE OF IN NATURE!

DISPOSING OF THE PRODUCT

Our products are made using different types of materials. The majority of them (aluminium, plastic, iron, electric cables) can be considered to be solid urban waste. They may be recycled at authorised firms.

Other components (electrical circuit board, remote control batteries etc.) may contain hazardous waste.

They must, thus, be removed and turned in to licensed firms for their disposal.

Before acting always check the local laws on the matter.

DO NOT DISPOSE OF IN NATURE!

11 Conformity declaration



MANUFACTURER'S DECLARATION OF CONFORMITY

Pursuant annex II B of the Machinery Directive 98/37/EC



CAME Cancelli Automatici S.p.A.
via Martiri della Libertà, 15
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IMPORTANT WARNING!

Do not use the equipment specified here above, before completing the full installation
In full compliance with the Machinery Directive 98/37/EC

Declares under its own responsibility that the equipments for automatic garage doors and gates listed below:

BX-10

... comply with the National Law related to the following European Directives and to the applicable parts of the following Standards.

| | |
|---------------------|---|
| 98/37/CE - 98/79/CE | MACHINERY DIRECTIVE |
| 2004/108/CE | ELECTROMAGNETIC COMPATIBILITY DIRECTIVE |
| 2006/95/CE | LOW VOLTAGE DIRECTIVE |
| 89/106/CEE | CONSTRUCTION PRODUCTS DIRECTIVE |

| | | |
|------------|------------|--------------|
| EN 13241-1 | EN 12635 | EN 61000-6-2 |
| EN 12453 | EN 12978 | EN 61000-6-3 |
| EN 12445 | EN 60335-1 | EN 60204-1 |

MANAGING DIRECTOR
Mr. Andrea Menuzzo

Reference code to request a true copy of the original: **DDF B EN B001c**

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