

CONTROL PANEL FOR 230V OPERATORS

Z
SERIES



INSTALLATION MANUAL
ZM3E - ZM3EC

English

EN

“IMPORTANT INSTALLATION, SAFETY INSTRUCTIONS”

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

“THIS MANUAL IS ONLY FOR PROFESSIONAL INSTALLERS OR QUALIFIED PERSONS”



1 Legend of symbols



This symbol indicates sections to be read with particular care.



This symbol indicates sections concerning safety.



This symbol indicates notes to communicate to users.

2 Intended use and application

2.1 Intended use

The ZM3 control panel is designed to command the following swing-gate operators ATI, AXO, FAST, FERNI, FROG, KRONO. The ZM3EC control panel is engineered to command CBX - F4000 industrial doors. It comes with its own safety release and buttons.



The use of this product for purposes other than as described above and installation executed in a manner other than as instructed in this technical manual are prohibited.

2.2 Application

Make sure you respect the distances and cable diameters as shown in “cable types and minimal thicknesses” table. The overall power of the motors must not exceed 750 W.

3 Reference Standards

For its quality processes management Came Cancelli Automatici is ISO 9001:2000 certified, and for its environmental management it is ISO 14001 certified. Came designs and manufactures entirely in Italy.

This product complies with the following standards: see Declaration of Compliance.

4 Description

This product is engineered and manufactured by CAME cancelli automatici s.p.a. and complies with current safety regulations. Guaranteed 24 months if not tampered with.

The control panel works on 230V a.c. of power, 50/60Hz frequency.

Both command and control devices and accessories are 24V powered. Warning! Accessories must not exceed 35 W overall.

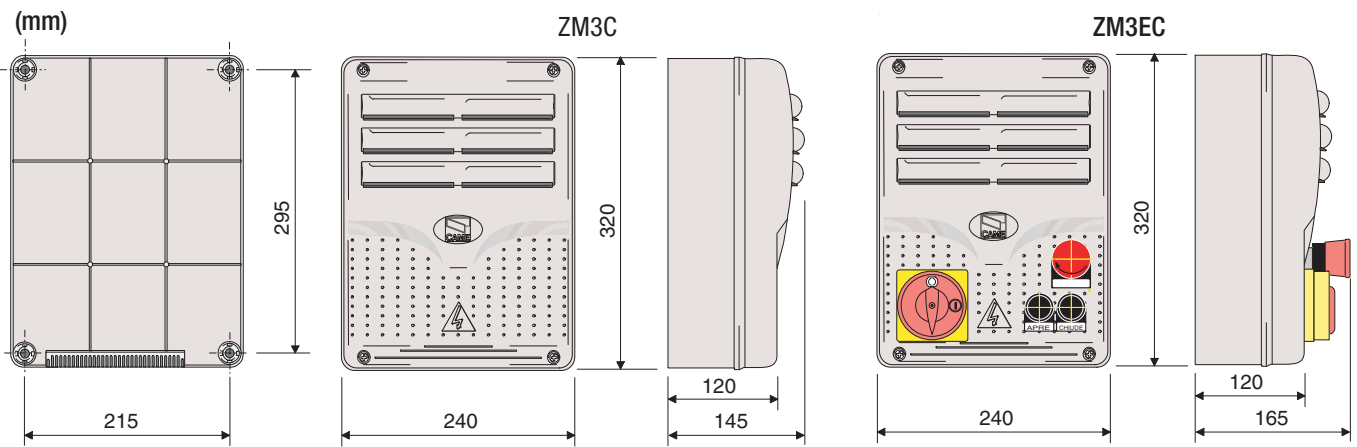
All connections are protected by quick fuses, see table.

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

TECHNICAL FEATURES	
Power supply	230V - 50/60Hz
max. rated power	750W
Power draw when idling	85mA
Max power of 24V accessories	35W
Insulation rating	II
Material	ABS
Protection rating	IP54
operating temperature	-20 / +55°C

FUSES	
protection:	fuse type:
Electrolock	3.15A-F
Electronic board (power supply line)	5A-F
Accessories	1.6A-F
Control devices	630mA-F

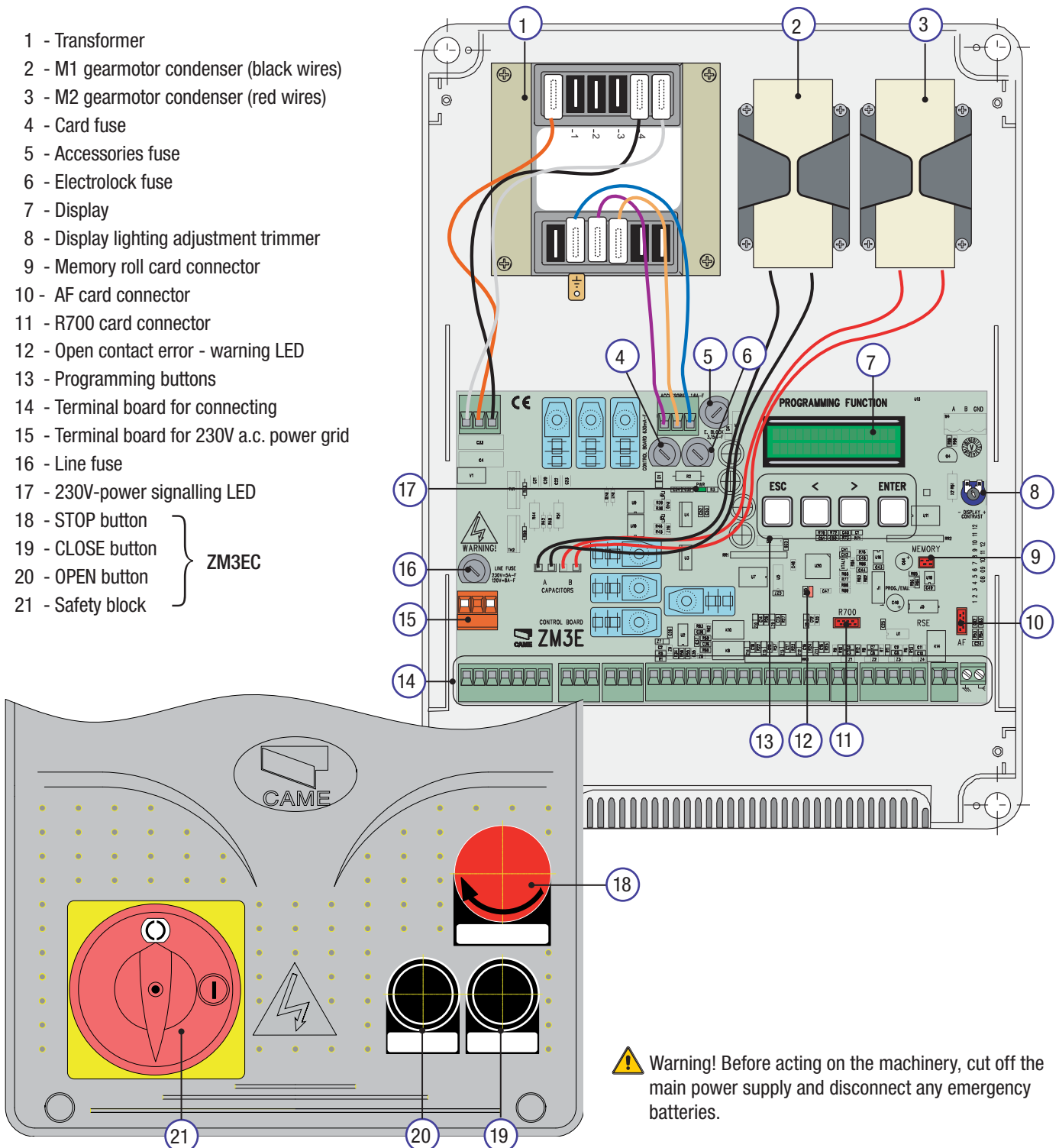
4.1 Dimensions, spans and anchoring holes



4.2 Main components

- 1 - Transformer
- 2 - M1 gearmotor condenser (black wires)
- 3 - M2 gearmotor condenser (red wires)
- 4 - Card fuse
- 5 - Accessories fuse
- 6 - Electrolock fuse
- 7 - Display
- 8 - Display lighting adjustment trimmer
- 9 - Memory roll card connector
- 10 - AF card connector
- 11 - R700 card connector
- 12 - Open contact error - warning LED
- 13 - Programming buttons
- 14 - Terminal board for connecting
- 15 - Terminal board for 230V a.c. power grid
- 16 - Line fuse
- 17 - 230V-power signalling LED
- 18 - STOP button
- 19 - CLOSE button
- 20 - OPEN button
- 21 - Safety block

ZM3EC



5 Installation

! Installation must be carried out by expert qualified personnel and in full observance of regulations in force.

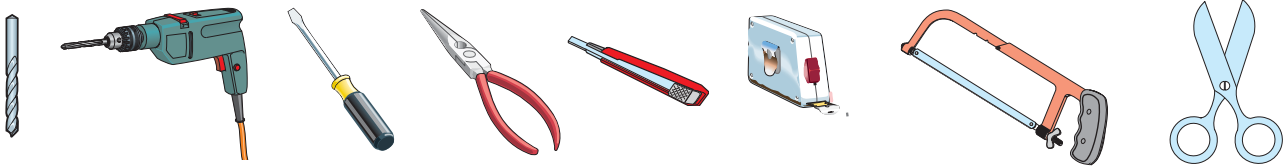
5.1 Preliminary checks

! Before installing do the following:

- Check that the panel's anchoring point is protected from possible blows, and that the anchoring surface is solid. Also check that the anchoring is done using the appropriate bolts, screws etc.;
- Make sure you have a suitable omnipolar cut-off device with contacts more than 3 mm apart, and independent (sectioned off) power supply;
- \oplus Make sure that any connections inside the case (that provide continuance to the protective circuit) are fitted with extra insulation as compared to the other conductive parts inside;
- Make sure you have suitable tubing and conduits for the electrical cables to pass through and be protected against mechanical damage.

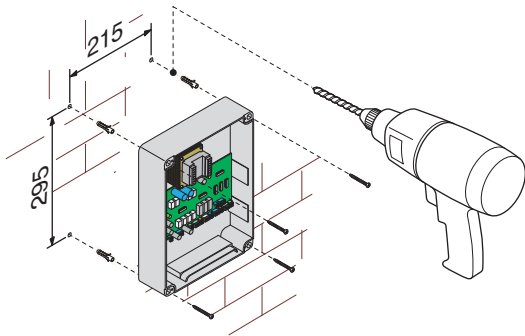
5.2 Tools and materials

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. Here are some examples.



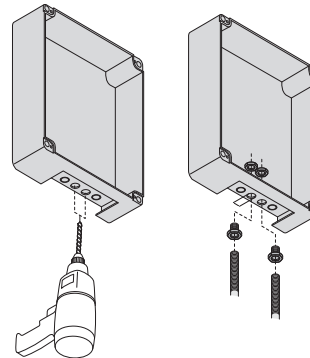
5.3 Fixing and mounting the box

1) Fix the base of the panel in a protected area; we suggest using round top Phillips recessed head screws of max. 6mm in diameter.

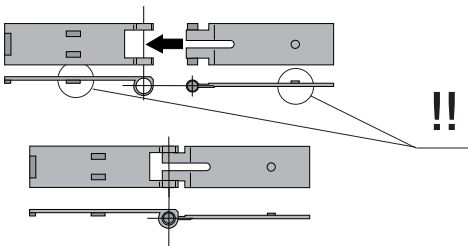


2) Perforate the pre-punched holes and insert the cable glands with the corrugated tubing for the electrical cables to travel through.

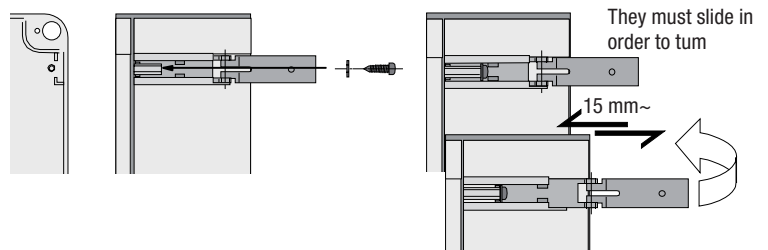
N.B.: diameter of the pre-punched holes: 20 mm.



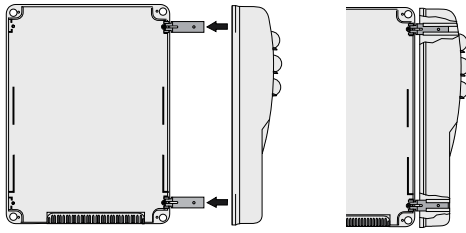
3) Assemble the pressure hinges.



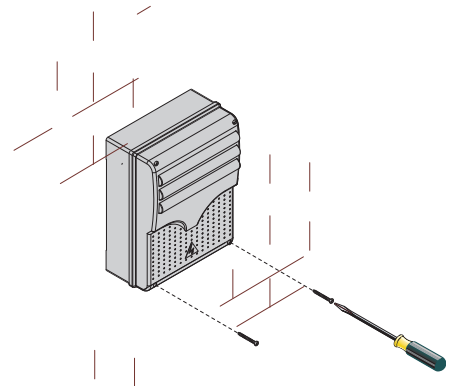
4) Insert the pressure hinges into the box (on the left or right as you wish) and set them using the provided screws and washers.



5) Snap the cover into place onto the hinges. Close it and fix it using the provided screws.



6) After the adjustments and settings, fix the cover using the provided screws.



6 Electrical connections

6.1 Cable and type and section

Connections	Type of cable	Length of cable 1 < 10 m	Length of cable 10 < 20 m	Length of cable 20 < 30 m
Control panel power supply	FROR CEI 20-22 CEI EN 50267-2-1	3G x 1,5 mm ²	3G x 1,5 mm ²	3G x 2,5 mm ²
Motor power supply		3G x 1,5 mm ²	3G x 1,5 mm ²	3G x 2,5 mm ²
flashing lamp		2 x 1,5 mm ²	2 x 1,5 mm ²	2 x 1,5 mm ²
Transmitter photocells		2 x 0,5 mm ²	2 x 0,5 mm ²	2 x 0,5 mm ²
Receiver photocells		4 x 0,5 mm ²	4 x 0,5 mm ²	4 x 0,5 mm ²
Power supply to accessories		2 x 0,5 mm ²	2 x 0,5 mm ²	2 x 1 mm ²
Control and safety devices		2 x 0,5 mm ²	2 x 0,5 mm ²	2 x 0,5 mm ²
Encoder connection	2402C 22AWG	max. 30 m		
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 based on the actual power draw from the connected devices and according to the CEI EN 60204-1 standards.


For connections that require several, sequential loads, the sizes given on the table must be re-evaluated based on actual power draw and distances.

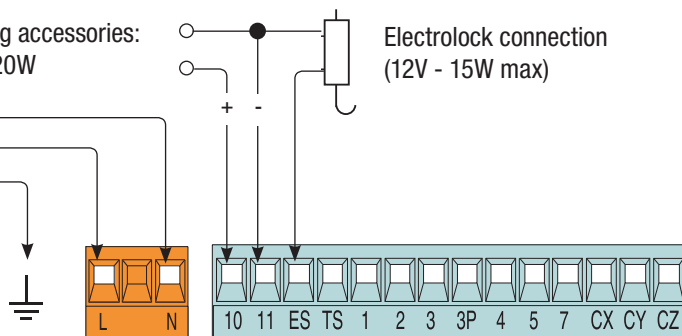
When connecting products that are not specified in this manual, please follow the documentation provided with said products.

6.2 Electrical connections

Power supply to accessories

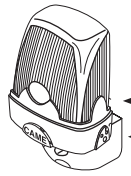
Terminals for powering the following accessories:
- 24V A.C. Overall power allowed: 20W


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



Signalling and Lighting devices

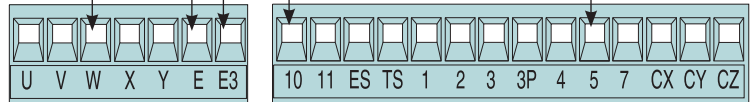
Signal Flasher (socket rating: 230V - 25W max.) Flashes during opening and closing phases.



Open gate indicator-light (socket rating: 24V - 3W max.). Turns on when the gate is ajar or open. It turns off when the gate is closed.

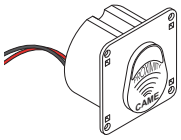


Cycle lamp: (contact rating: 230V - 60W max.) It lights up the driving area and stays on from the moment the gate begins to open until it is fully closed (including the automatic closing time). If automatic closing is not activated, the lamp stays on only during movement or for a set time of 5 minutes if used as a courtesy lamp.

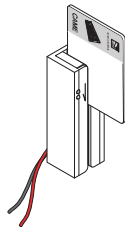


Command devices

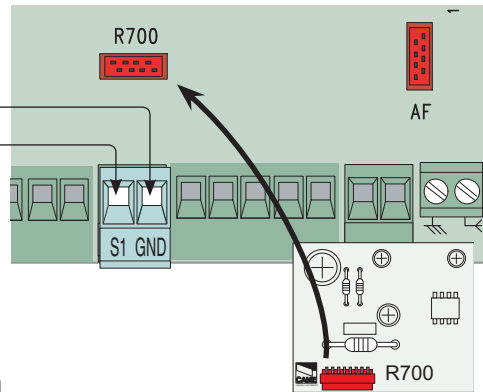
TSP00 - Transponder sensor



LT001 - Magnetic card reader

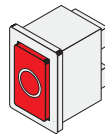


N.B.: insert the R700 encoding card for the TSP00 sensors and LT001 card readers to be recognised.

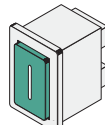


Stop button (N.C. contact) - Button to stop gate while excluding the automatic closing cycle. For movement to resume you must press the command button or transmitter button.

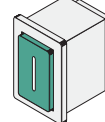
N.B.: if contact is unused, select Disabled on the "FUNCTIONS" menu.



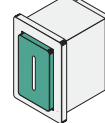
Key selector and/or opening button (N.O. contact) - Gate opening command.



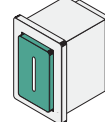
Key selector and/or partial opening button (N.O. contact) - Partial gate opening for pedestrian access.



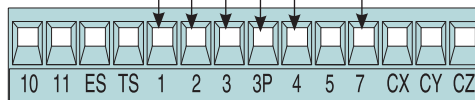
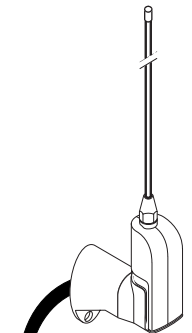
Key selector and/or closing button (N.O. contact) - Gate closing command.



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.



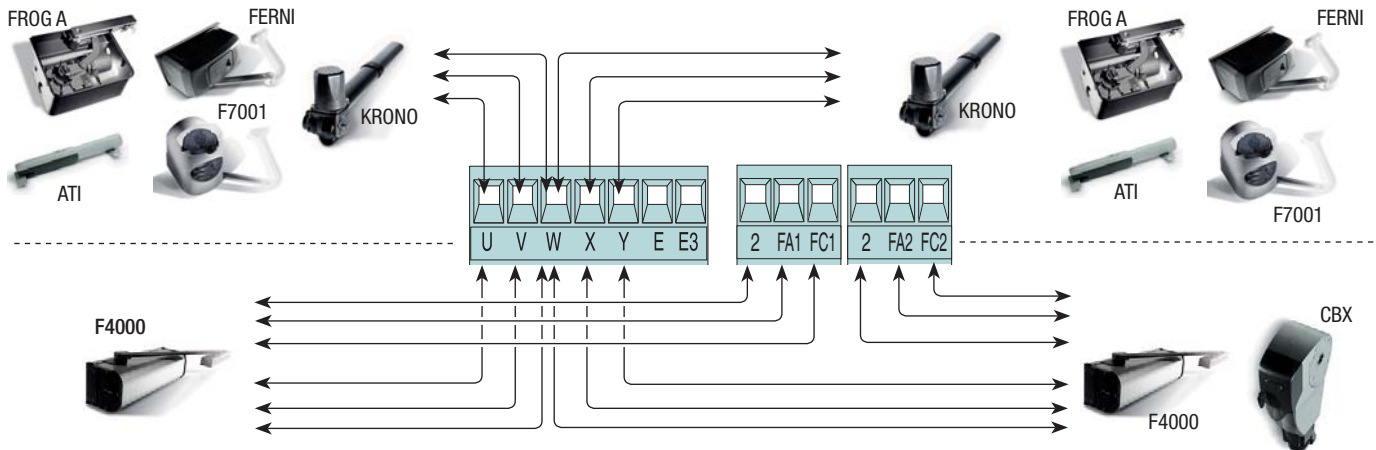
Antenna with RG58 cable for the remote control.



Gearmotor, mechanical stops

M1 - 230V A.C. gearmotor featuring delayed action on opening

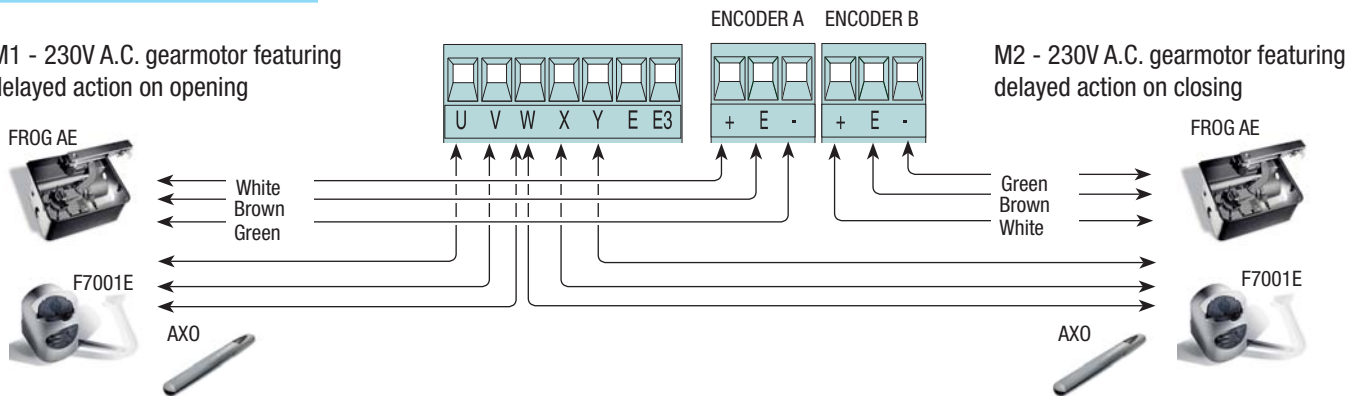
M2 - 230V A.C. gearmotor featuring delayed action on closing



Gearmotor, encoder

M1 - 230V A.C. gearmotor featuring delayed action on opening

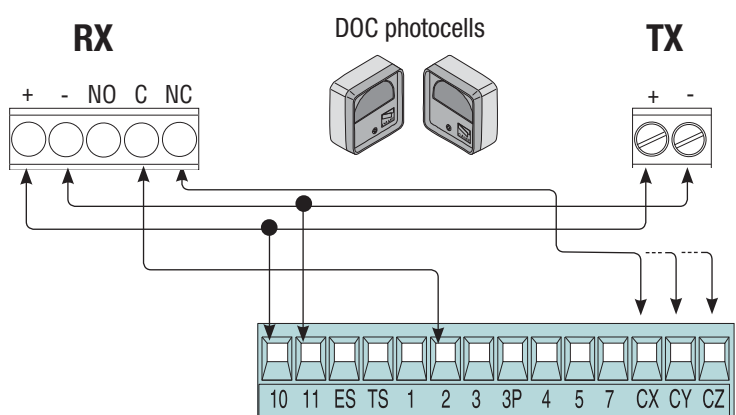
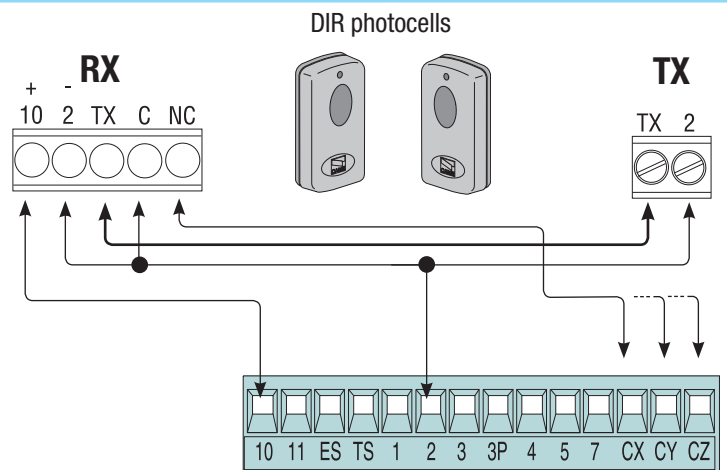
M2 - 230V A.C. gearmotor featuring delayed action on closing



Safety devices

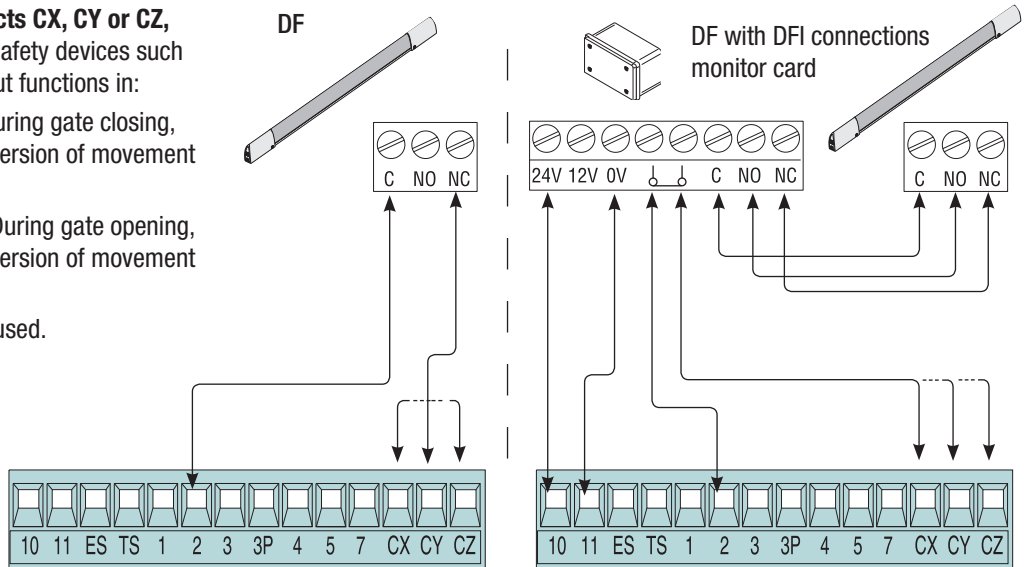
Configure either (N.C.) contacts CX, CY or CZ, input for safety devices such as **photocells**, that comply with EN 12978 standards. See CX, CY or CZ input functions in:

- **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»**, Halts moving gate leaves and causes them to automatically close (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 contact is unused.



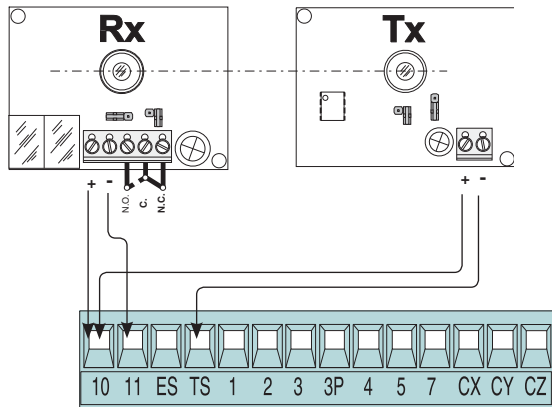
Configure either (N.C.) contacts CX, CY or CZ, input for EN 12978 compliant safety devices such as sensitive edges. See CX input functions in:

- **C7 «Open while closing»**, During gate closing, opening the contact causes inversion of movement until gate is fully open;
- **C8 «close while opening»**, During gate opening, opening the contact causes inversion of movement until gate is fully close.
- **Deactivated**, if contact is unused.

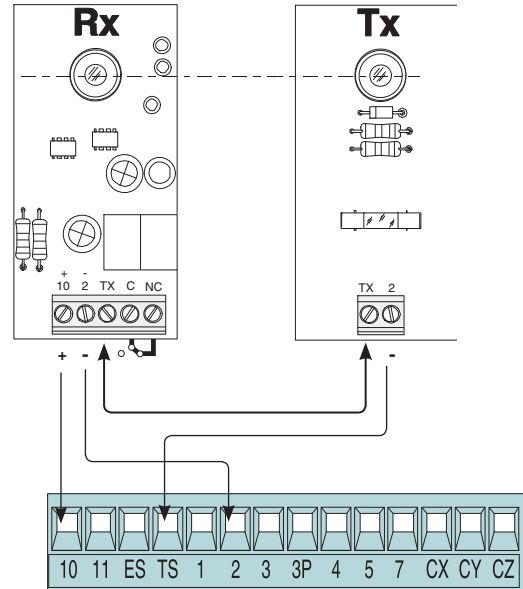


6.3 Electrical connection for the photocells functions test

(DOC)



(DIR)



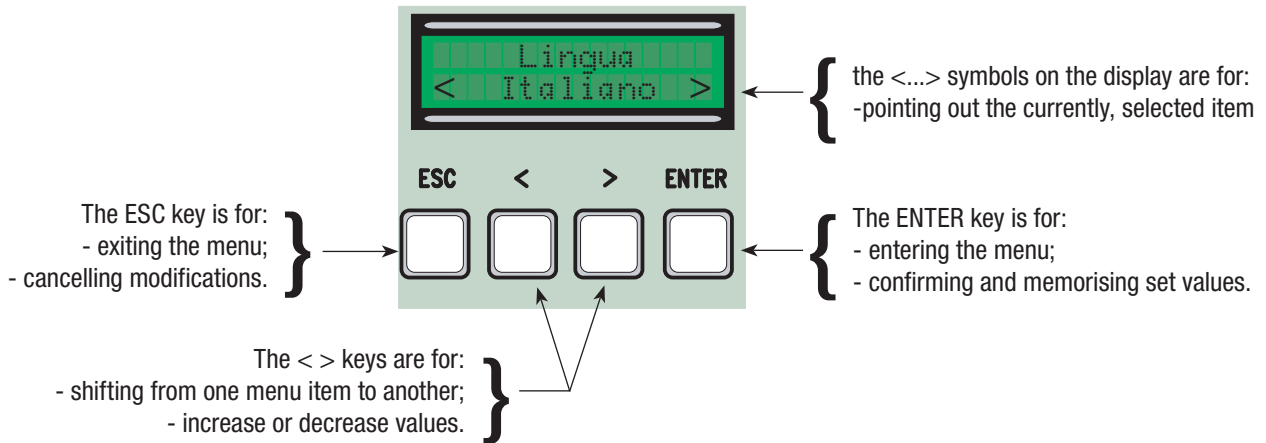
At each opening and closing command, the control board assesses the efficiency status of the control devices (photocells). Any anomaly found is signalled with the flashing of the LED on the control panel. Consequently it cancels any commands coming from the remote control or the button.

Electrical connection to enable the photocell safety test:

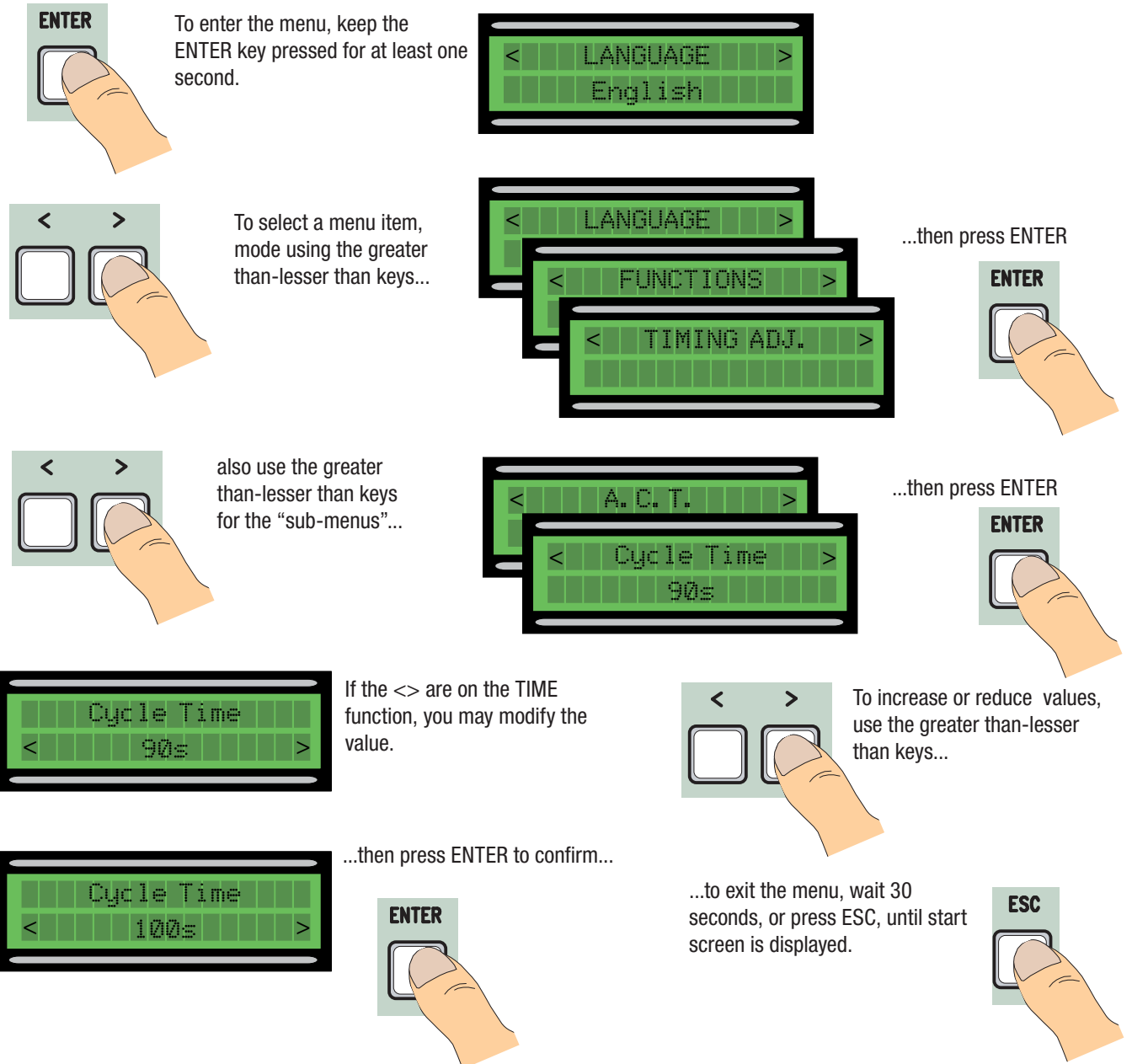
- the transmitter and the receiver, must be connected as per the diagram;
- from the functions menu, select "safety tests" and select either CX - CY - CZ input/s to activate the test.

7 Programming

7.1 Description of display commands



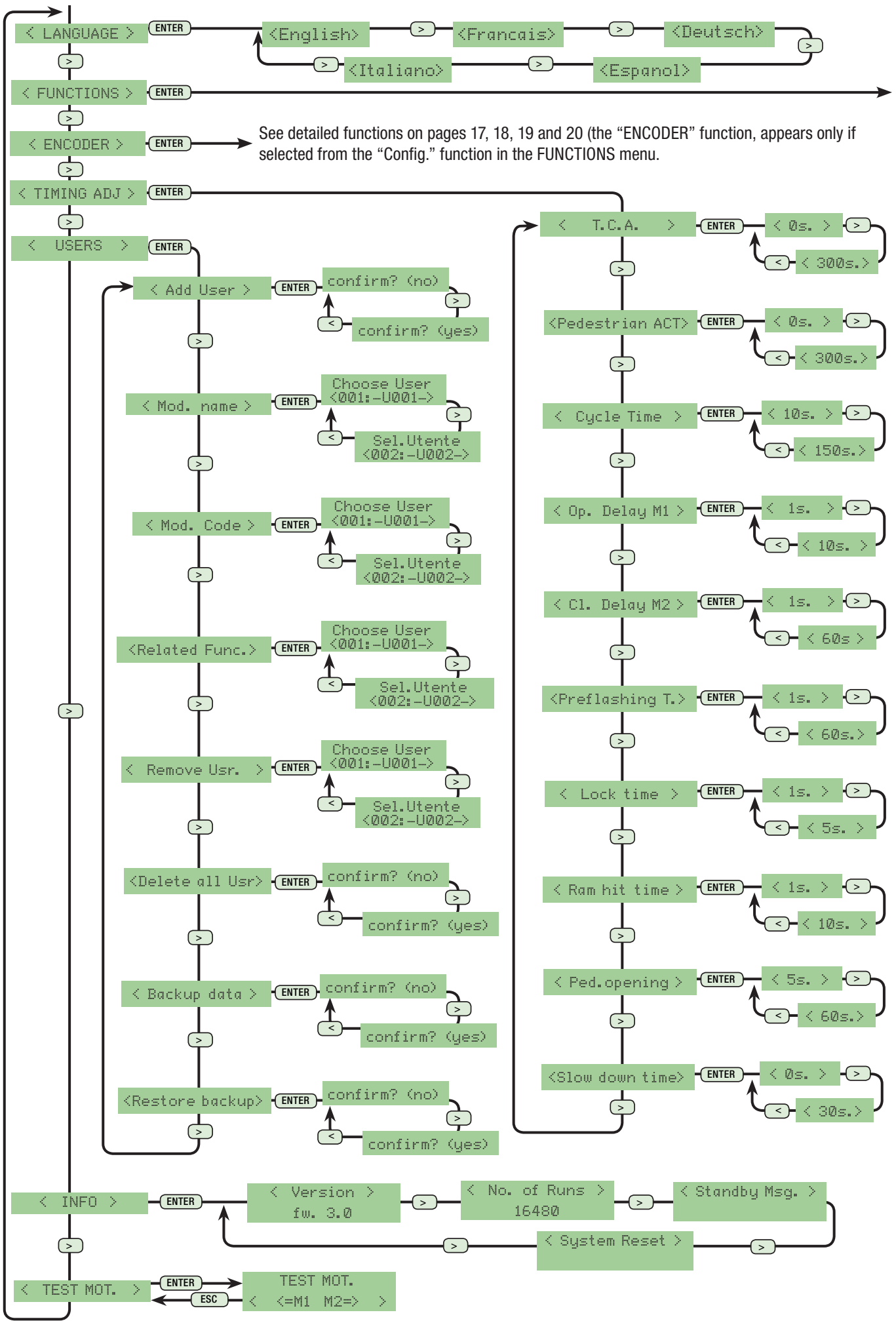
7.2 Browsing the menu



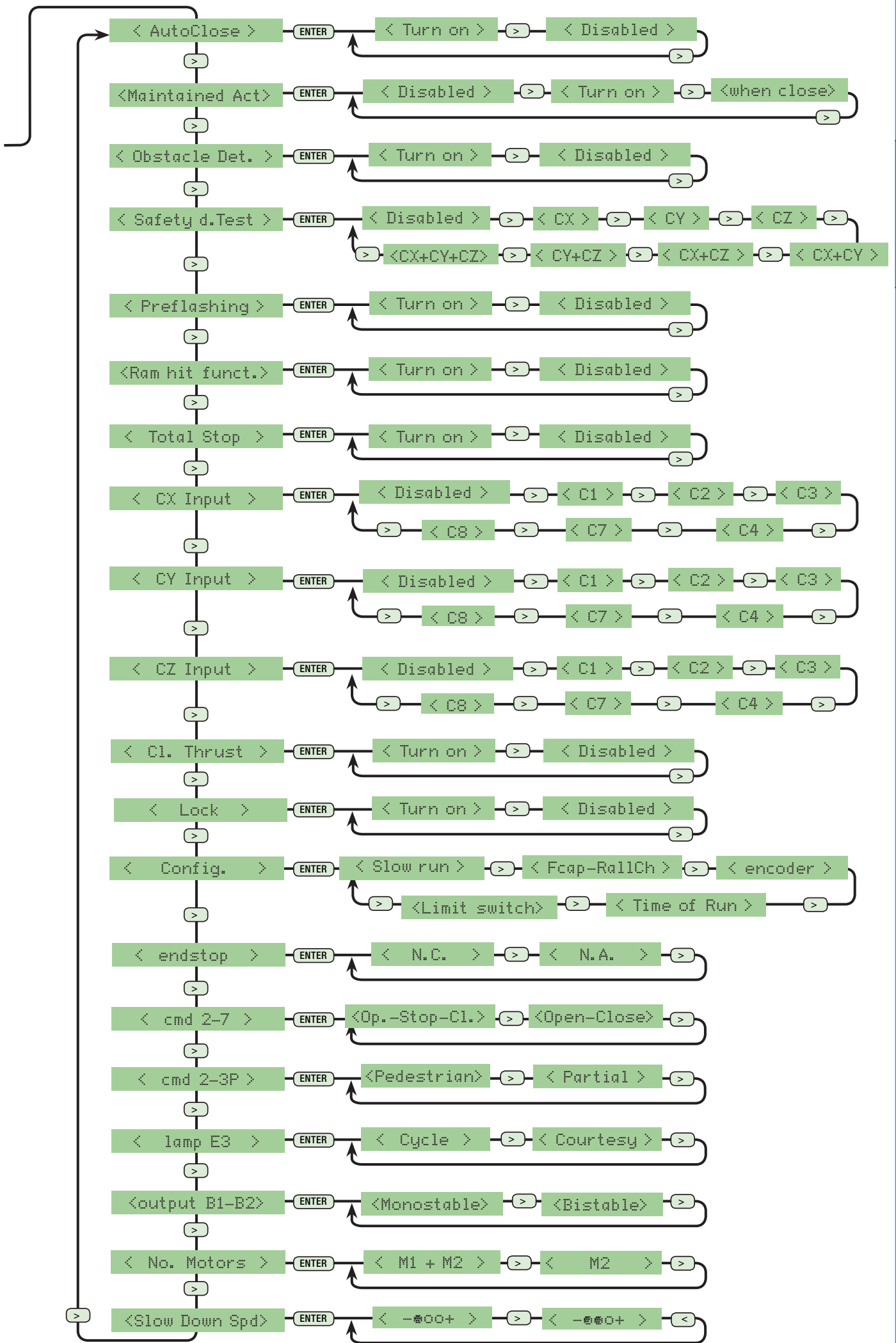
N.B.: when the menu is active, the system cannot be used.

7.3 Menu structure

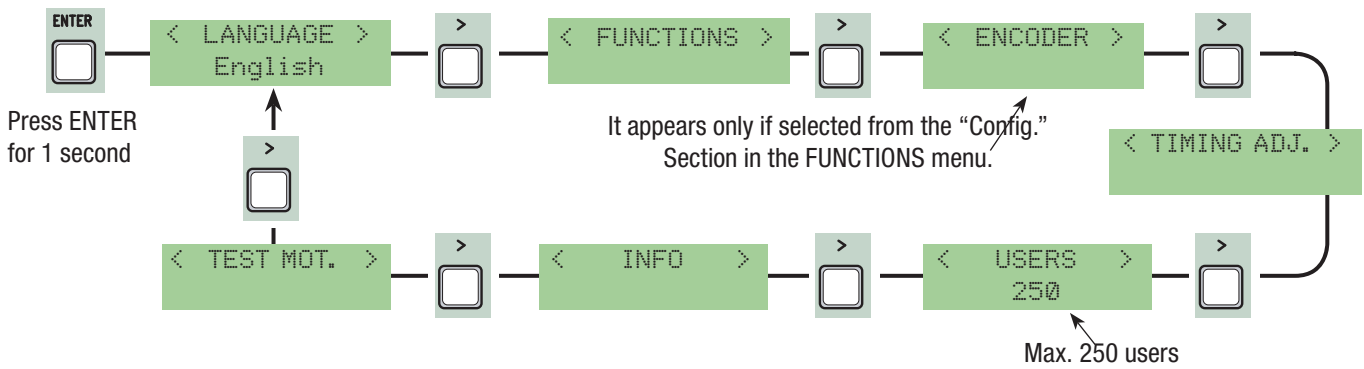
ENGLISH



See detailed functions on pages 17, 18, 19 and 20 (the "ENCODER" function, appears only if selected from the "Config." function in the FUNCTIONS menu).

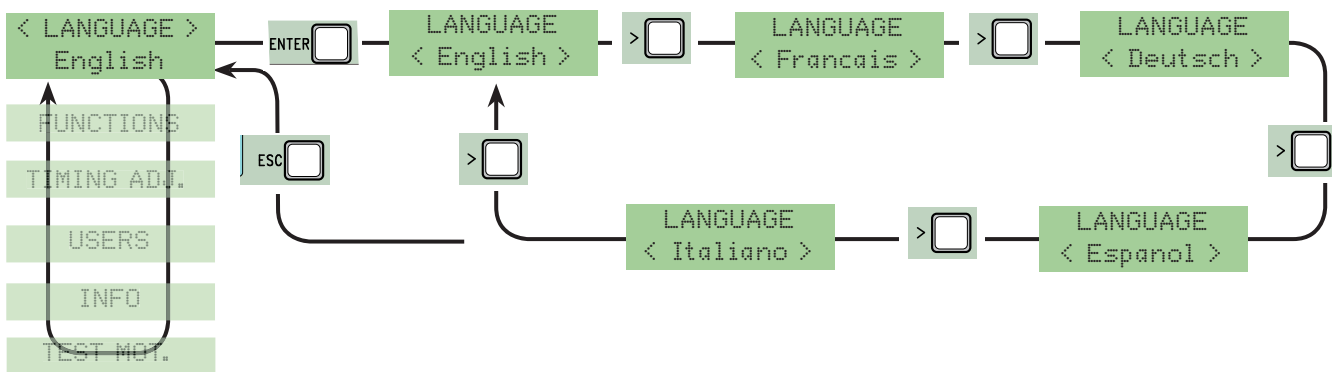


7.4 Main menu



7.5 Language menu

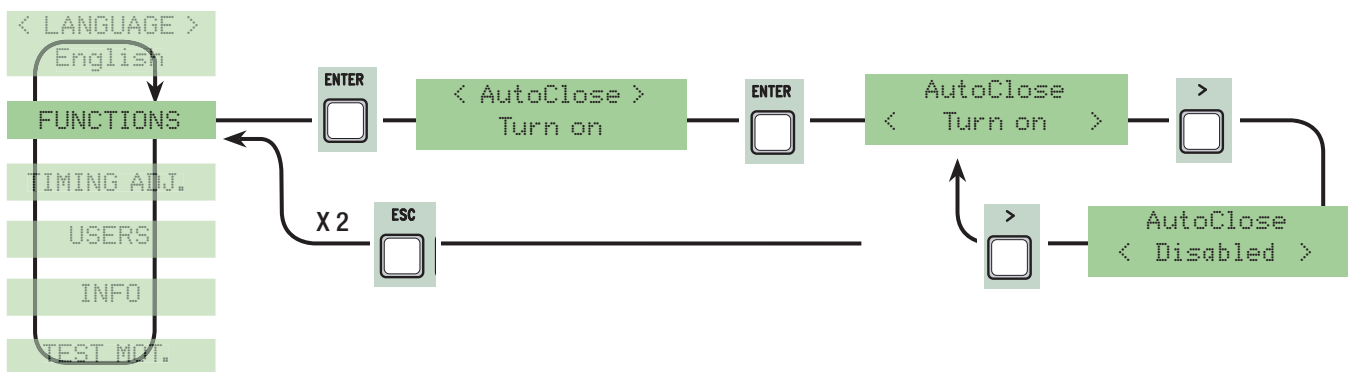
Select language: selects among the languages displayed.



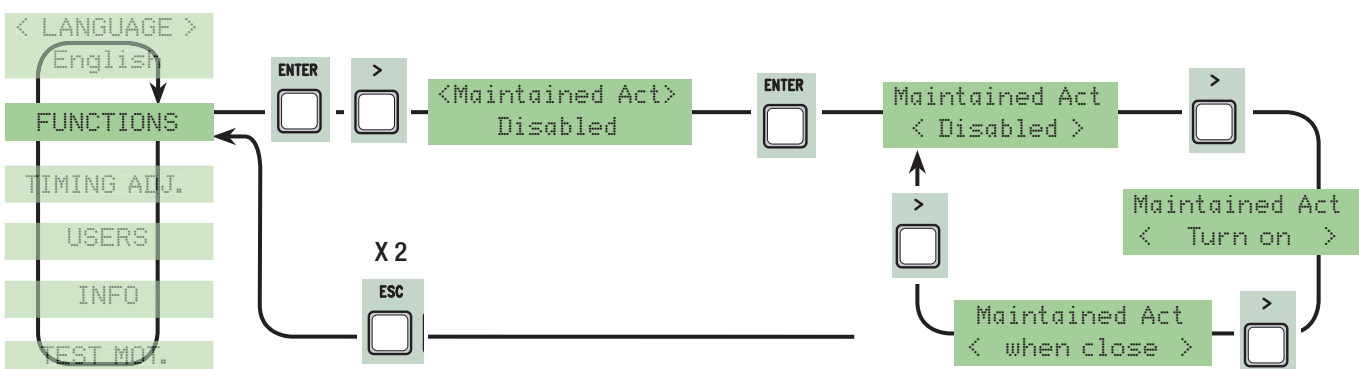
7.6 Functions menu

Automatic Closing: activates or deactivates the automatic closing function.

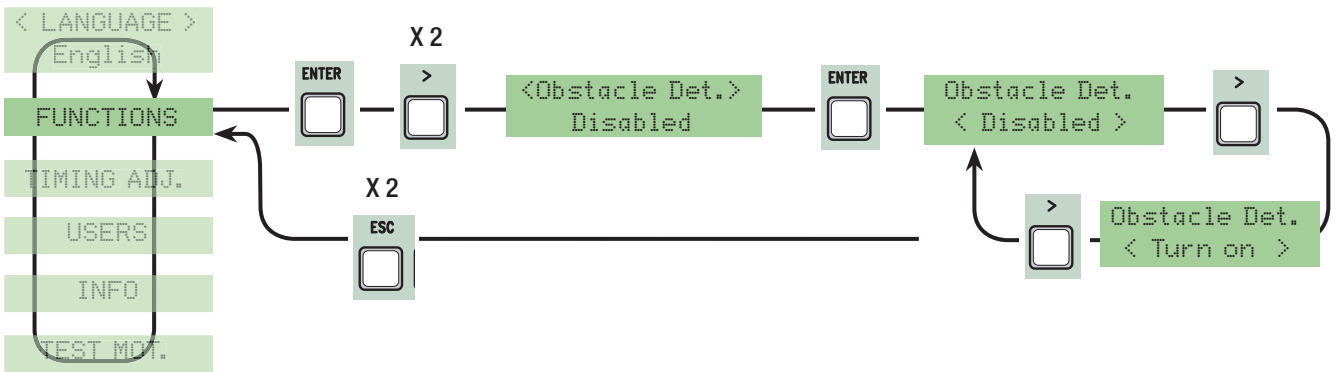
The automatic closing timer activates at each opening endpoint. The predetermined time may be adjusted, and is in any case dependent on any safety devices that may activate; and it does not activate after a total safety "stop" or during a power outage.



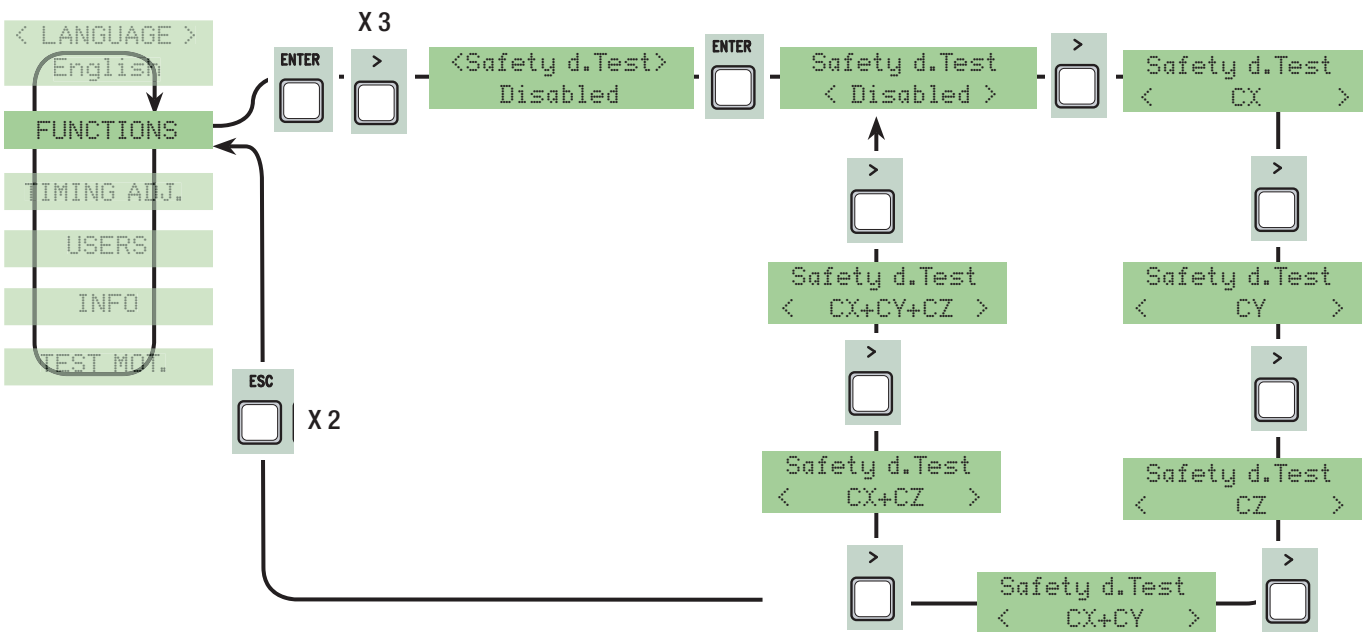
Maintained action: the gate works by keeping the button pressed (button 2-3 for opening, button 2-4 for closing, or if set to the "On Closing" function, only with button 2-4.



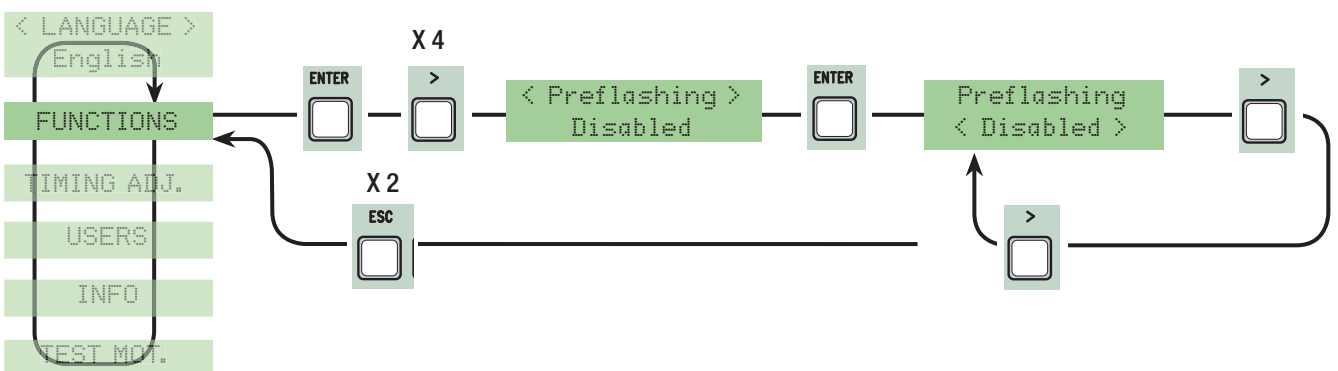
Obstacle detected: when motor is stopped (gate closed or after a total stop command) it prevents any movement if safety devices, such as photocells, detect any obstacles.



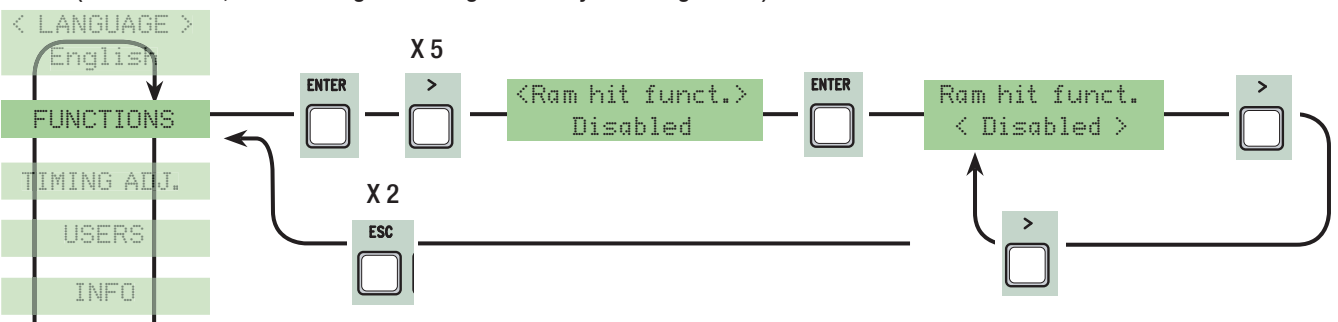
Safety test: allows the card to check the efficiency of any safety devices (i.e. photocells) after every opening or closing command.



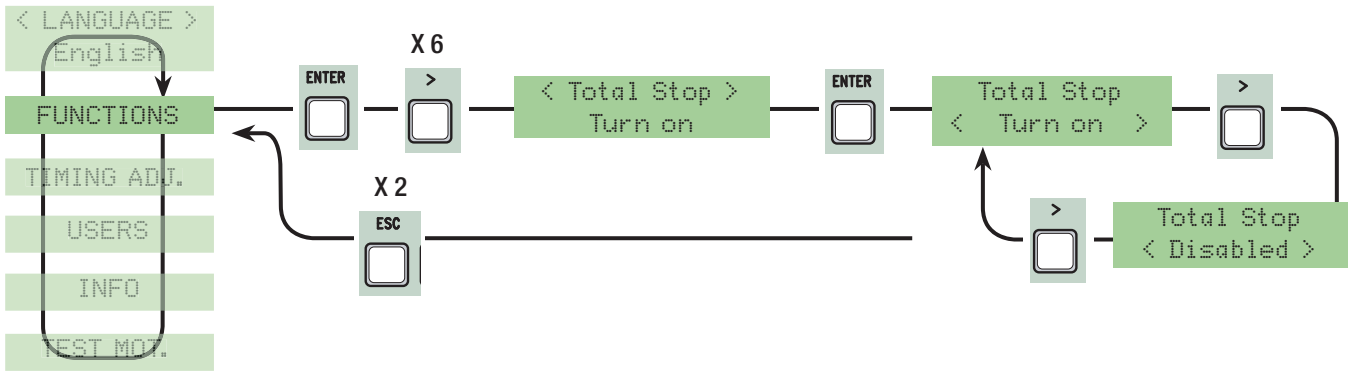
Pre-flashing: after an opening or closing command, the flashing light, connected to W-E, starts flashing before the gate begins its run (to set the time, see "Pre-flashing timing" from the Adjust Timings menu)



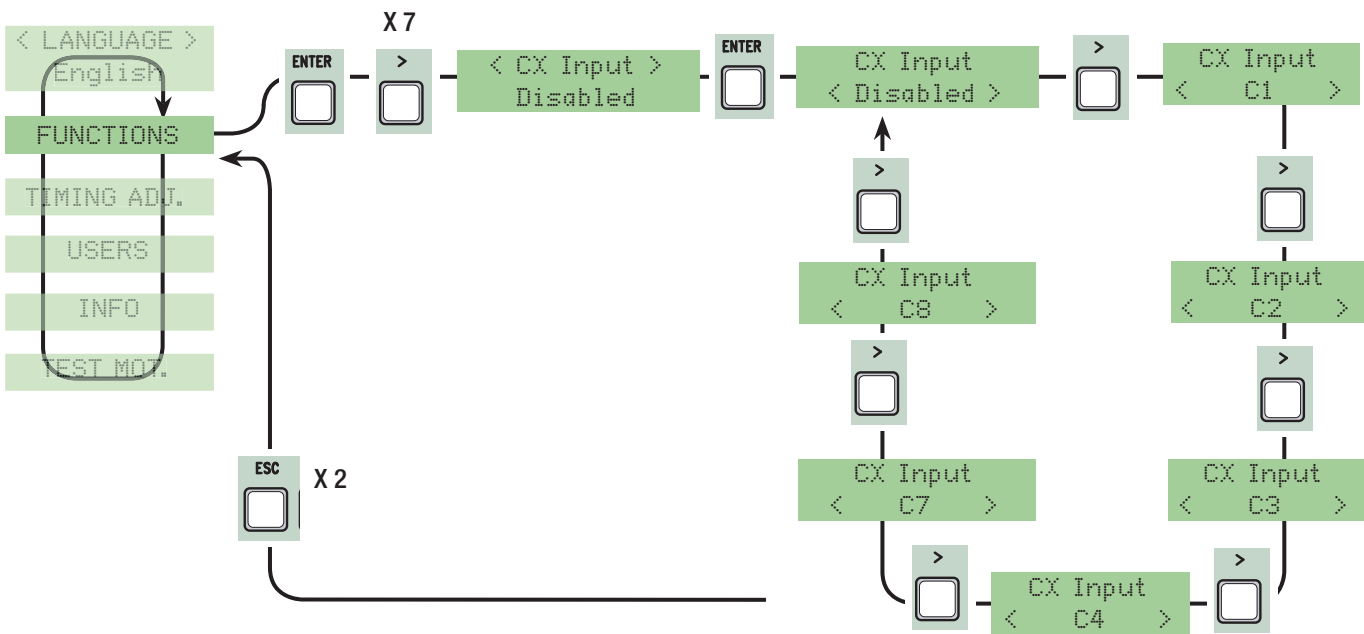
Ram blow: before any opening run, the gate leaves will press onto the mechanical endstop for a few seconds, to help release the electrolock (to set the time, see "Starting ram timing" in the Adjust Timings menu).



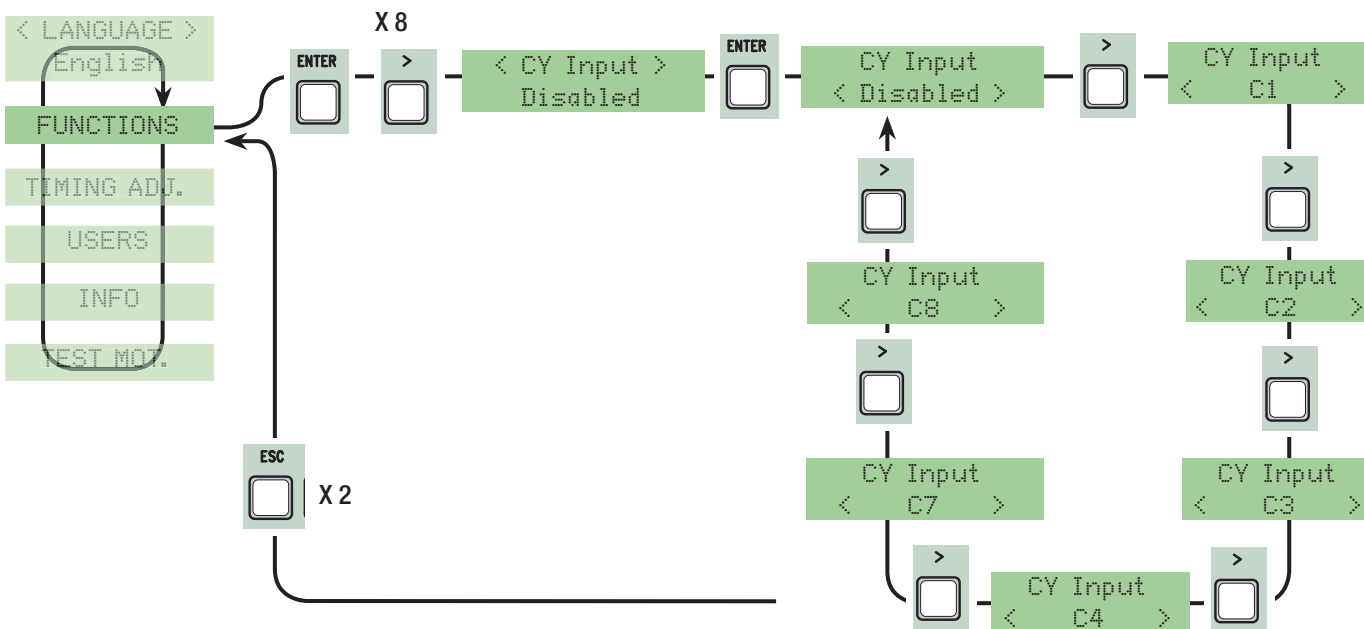
Total Stop: this function stops the gate and consequently excludes any automatic closing cycle; for movement to resume, you need to use the keypad or transmitter. Insert safety device on [1-2]; Insert the safety device on [1 -2]; if unused, select "Deactivated"



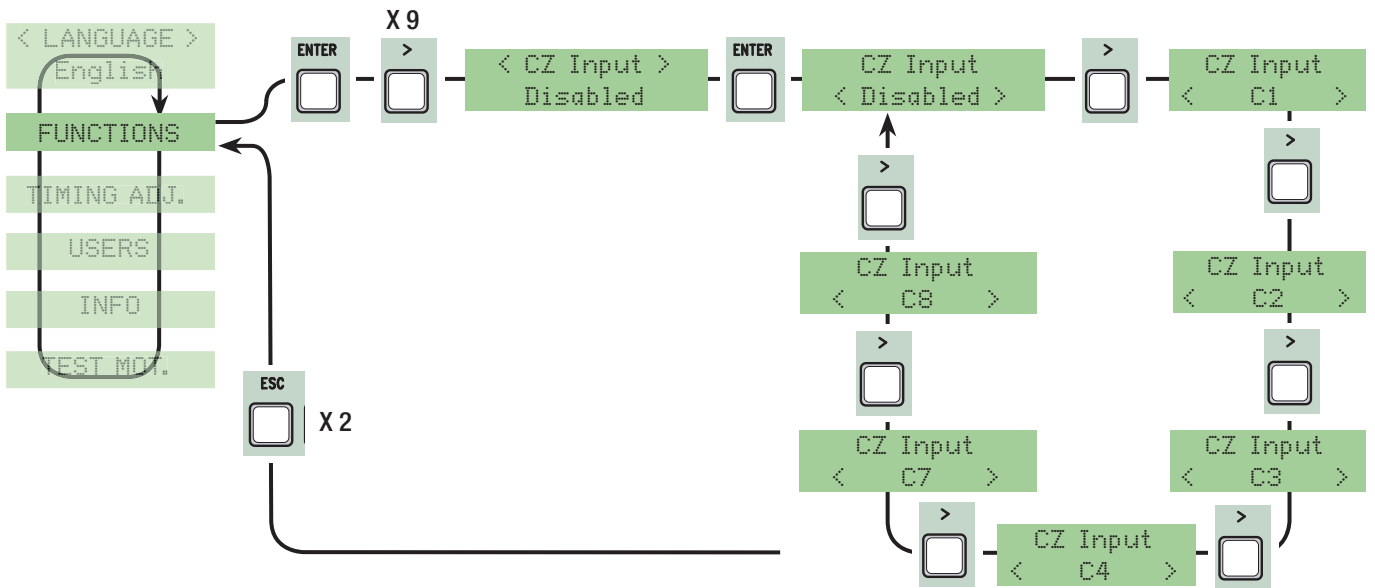
CX input: the N.C. safety contact input can take on the following functions: C1 (re-opening when closing), C2 (re-closing when opening), C3 (partial stop), C4 (obstacle stall), C7 (re-opening when closing, for sensitive edges), C8 (re-closing when opening, for sensitive edges) or, be deactivated. See safety devices on electrical connections.



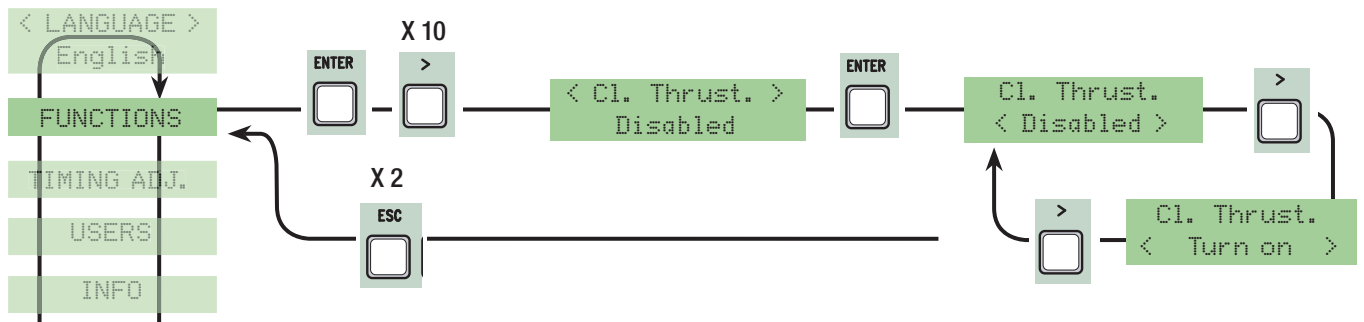
CY input: safety contact input can take on the following functions: C1 (re-opening when closing), C2 (re-closing when opening), C3 (partial stop), C4 (obstacle stall), C7 (re-opening when closing, for sensitive edges), C8 (re-closing when opening, for sensitive edges) or, be deactivated. See safety devices on electrical connections.



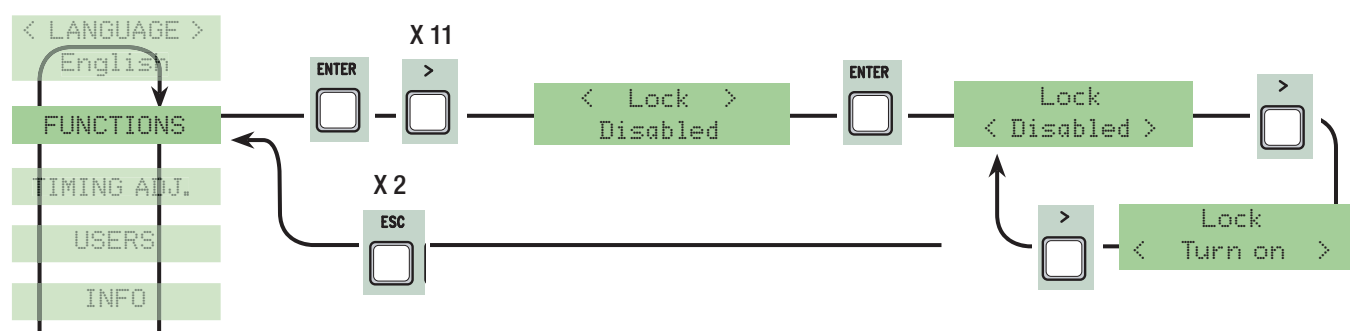
CZ input: safety contact input can take on the following functions: C1 (re-opening when closing), C2 (re-closing when opening), C3 (partial stop), C4 (obstacle stall), C7 (re-opening when closing, for sensitive edges), C8 (re-closing when opening, for sensitive edges) or, be deactivated. See safety devices on electrical connections.



Closing thrust: at the endpoint stage during closing, the gearmotors perform a final closing-thrust of the doors for a few seconds.

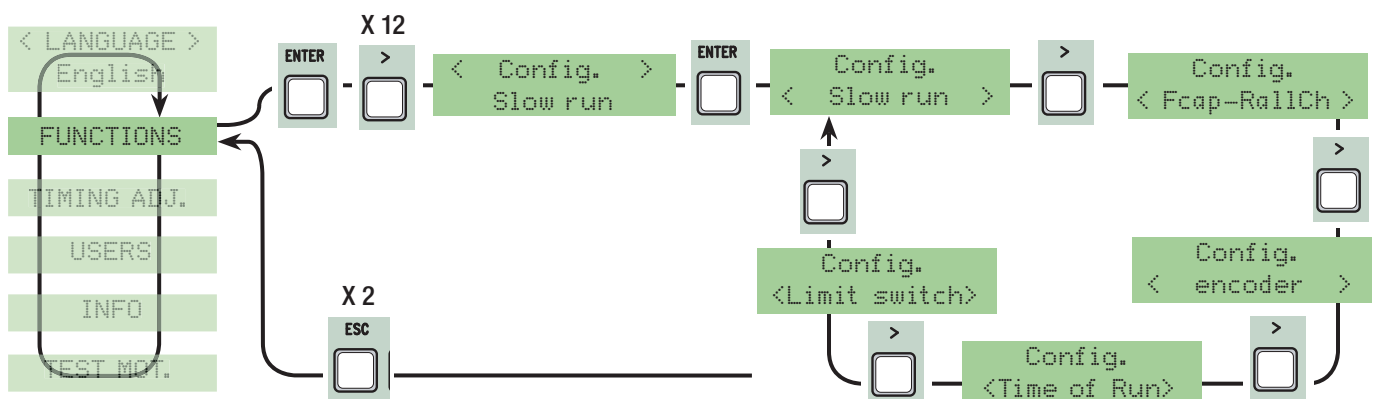


Lock: to lock the gate leaves. Required for gate leaves longer than 2.50 m.



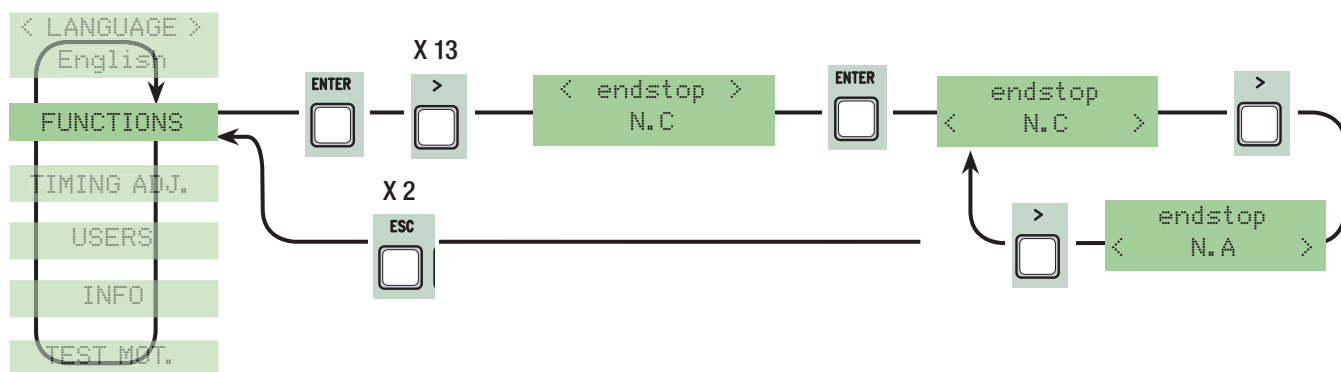
Deceleration configuration: configuring decelerations when opening or closing:

- slow run: decelerations when opening and closing;
- Fcap-RallCh.: end stop when opening and deceleration when closing;
- ecoder: managing decelerations, obstacle detection and sensitivity; → (FROG-AE)
- Time of Run: timed end stop (default function); → (FROG-A, FERNI 230V, ATI 230V, FAST 230V and KRONO)
- Limit switch (endstop): opening and closing endstop. → (C-BX and F4000)

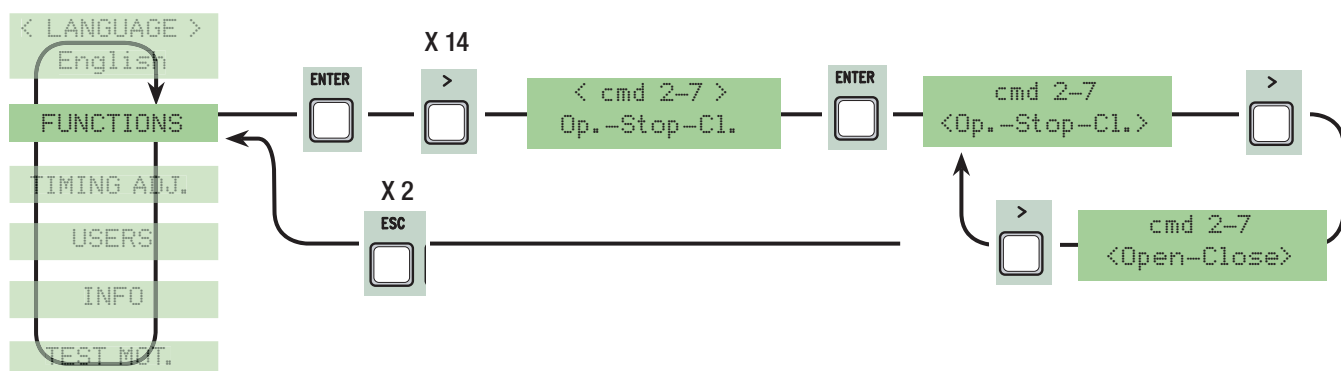


Endstop: configure the endpoints are normally closed or open contacts.

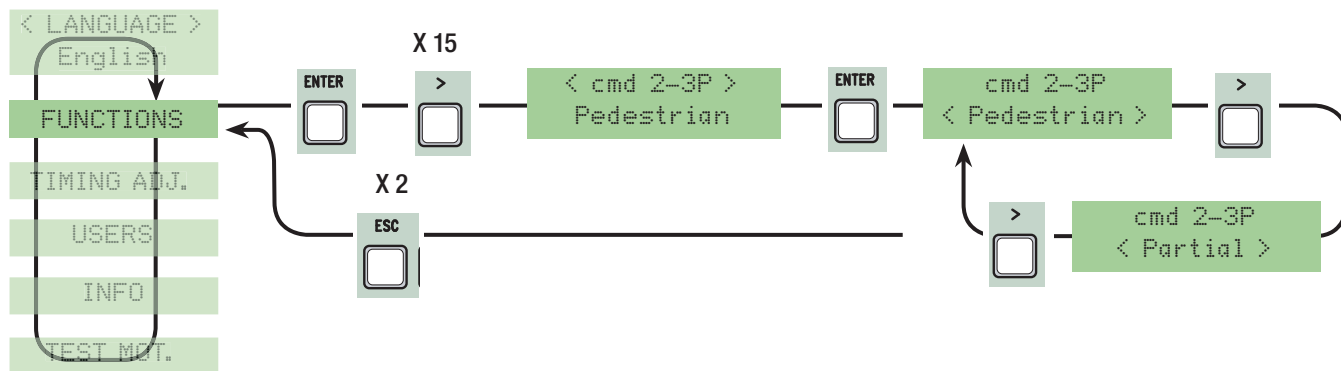
N.B.: this function appears only if selected from the "Config." function in the FUNCTIONS menu.



Command 2-7: setting the 2-7 contact to step-by- step mode (open-close) or sequential (open-stop-close-stop).

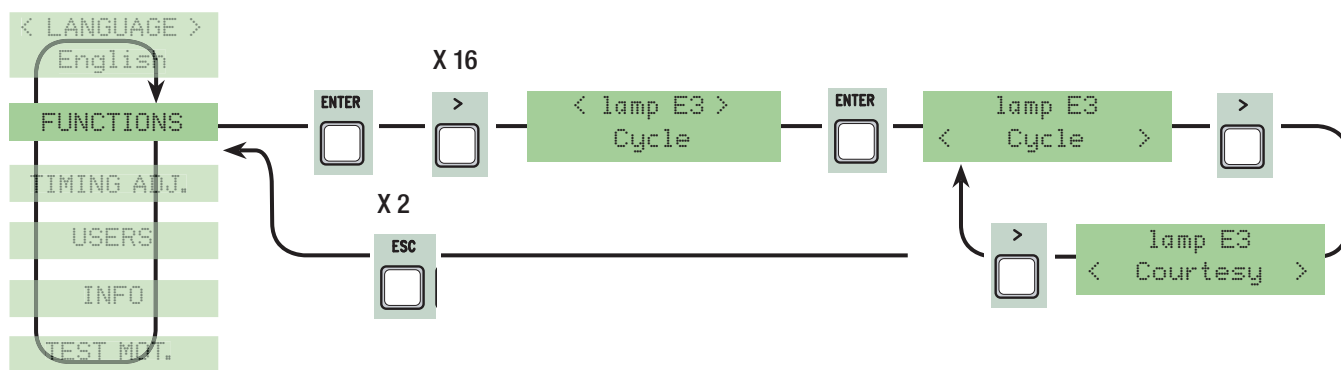


Command 2-3P: setting the 2-3P contact to pedestrian opening (second gate leaf opens fully) or partial (second gate leaf opens partially depending on the time set on "Partial opening" from the Adjust Times menu).

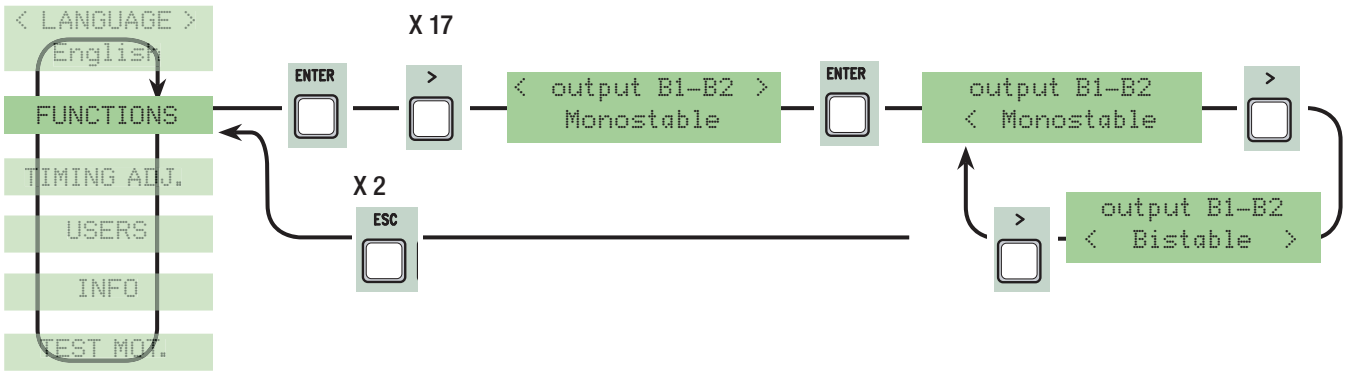


E3 lamp: configuring the lamp connected to E-E3:

- 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.

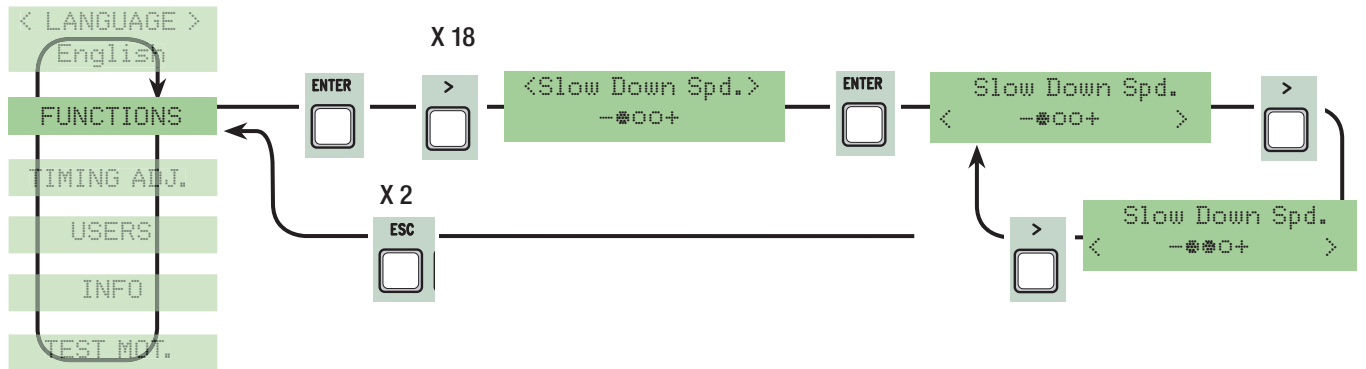


B1-B2 output: setting contact B1-B2 to MONO-STABLE or BI-STABLE (switch) mode.

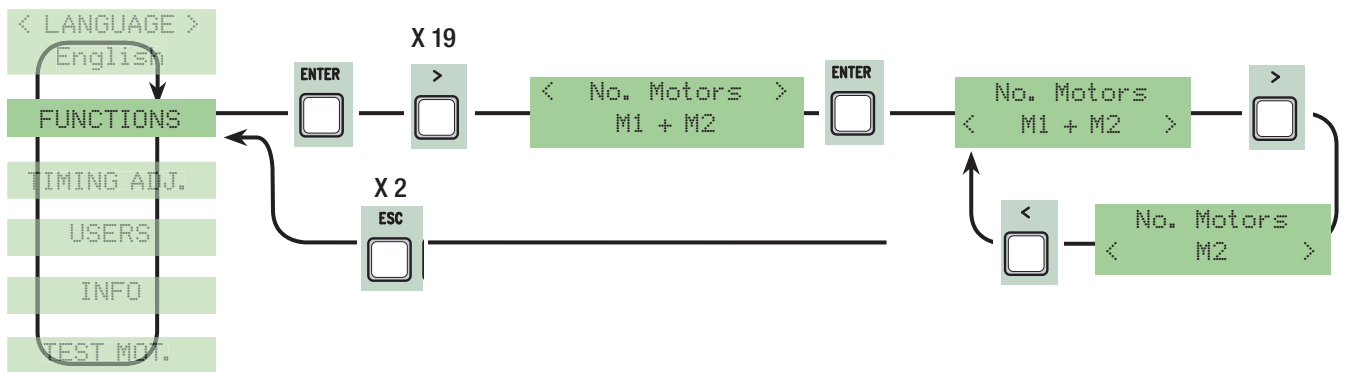


Slow Down: setting the deceleration speed when opening or closing, or only when closing if said deceleration is configured as (Fcap-RallCh).

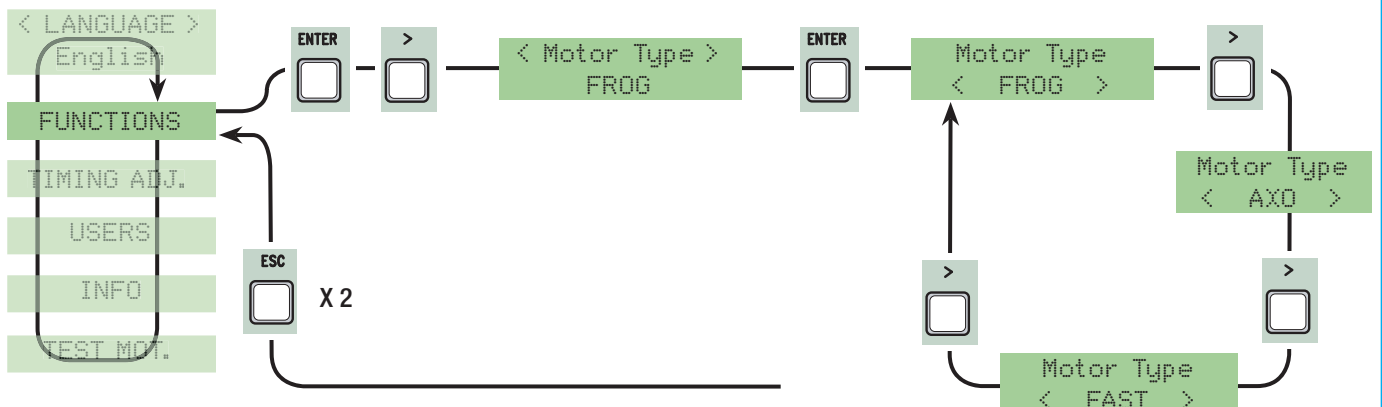
N.B.: this function only appears if the decelerations are selected.



Number of motors: setting the number of motors, either one or two, depending on the number of gate leaves installed on the system.



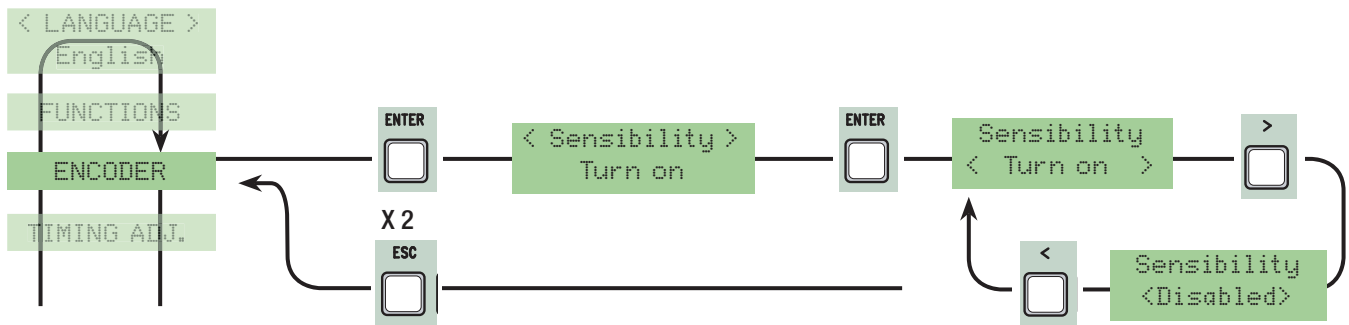
Motor Type: setting up the type of swing gate motor installed in the system.



7.7 Encoder Menu (the ENCODER menu, appears only if selected from the “Config.” function in the FUNCTIONS menu.)

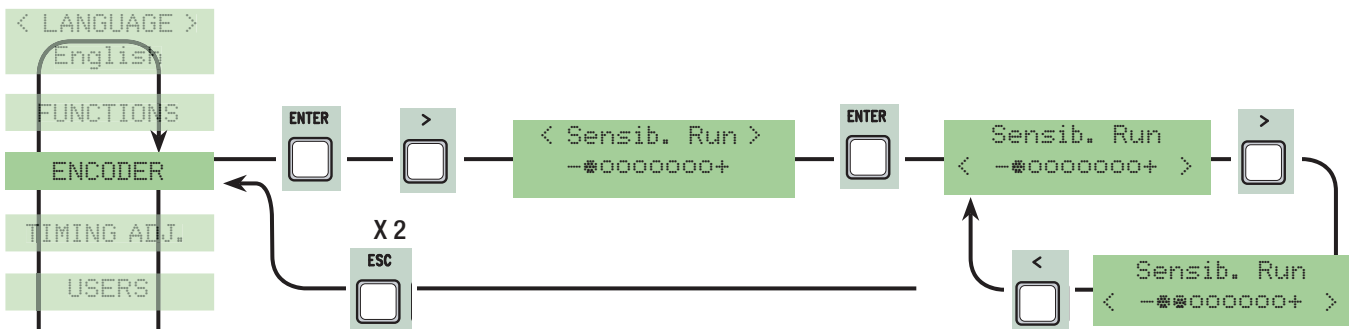
N.B.: before setting the functions in the encoder menu, run the gearmotor checks to verify the proper turning direction.

Sensitivity: the obstacle detection function is activated during gate operation and deceleration.



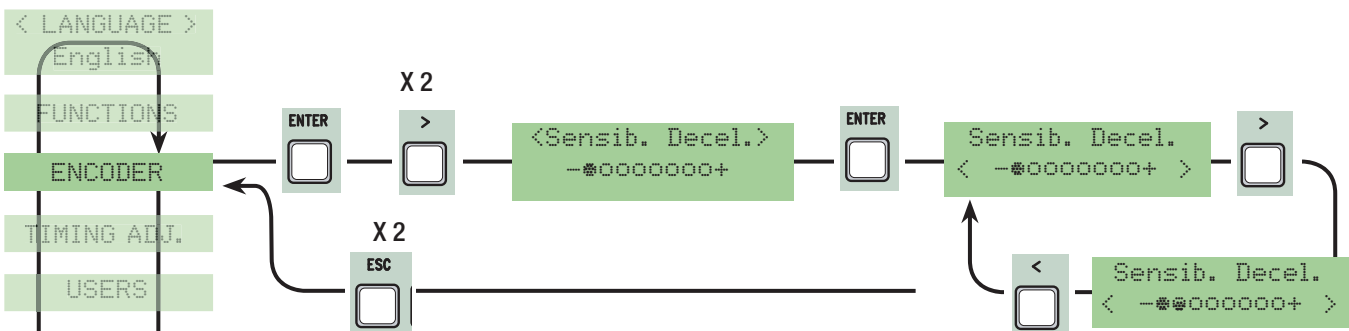
Gate operation sensitivity: this adjusts the obstacle detection sensitivity during opening and closing gate operation.

N.B.: this function appears only if the “sensitivity” function is activated in the ENCODER menu.

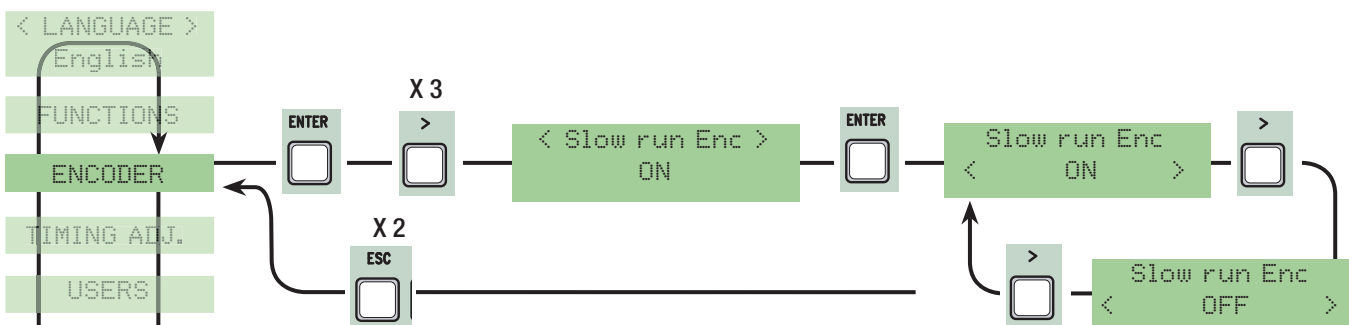


Deceleration sensitivity: it adjusts the obstacle detection sensitivity during opening and closing gate deceleration.

N.B.: this function appears only if the “sensitivity” function is activated in the ENCODER menu.



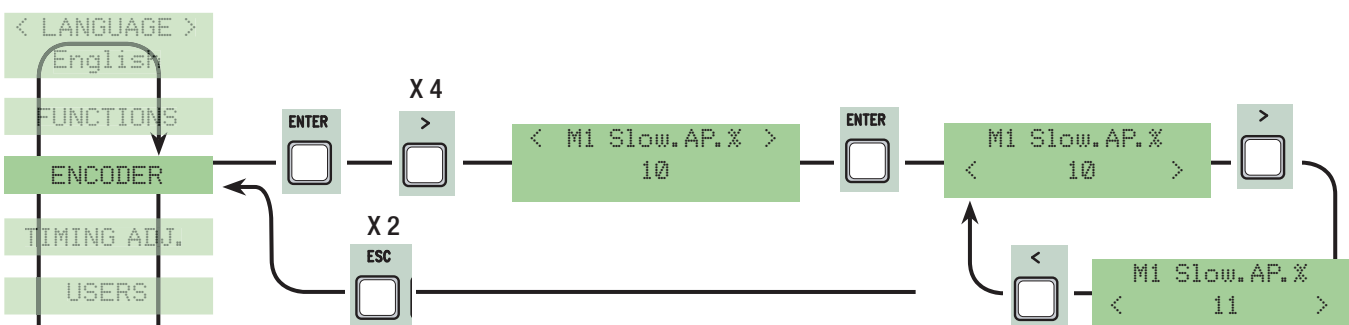
Encoder Deceleration: this activates the opening and closing deceleration starting points.



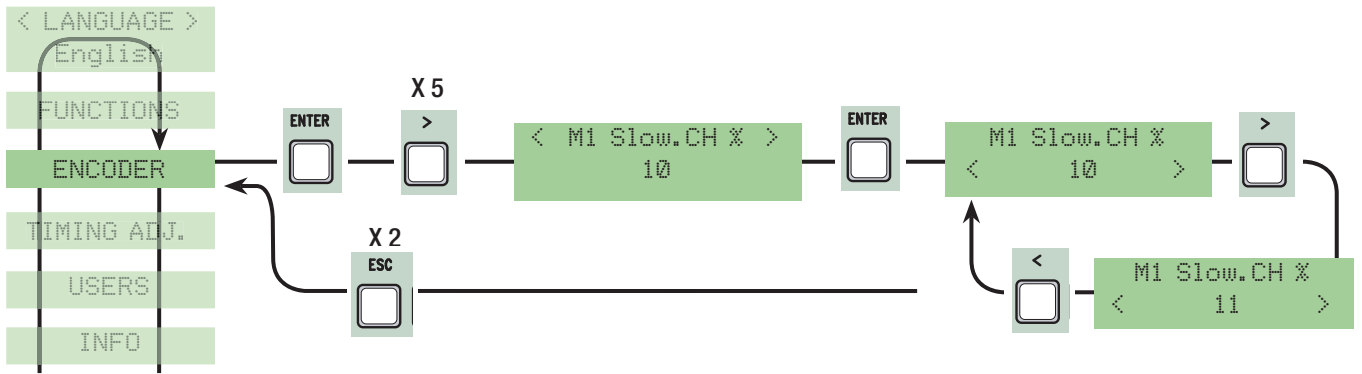
M1 opening deceleration%: this adjusts the (M1) first motor’s deceleration starting point before the opening endpoint.

The deceleration starting point is calculated as a percentage (from 1% to 40% of a full gate run). See illustration on page 28.

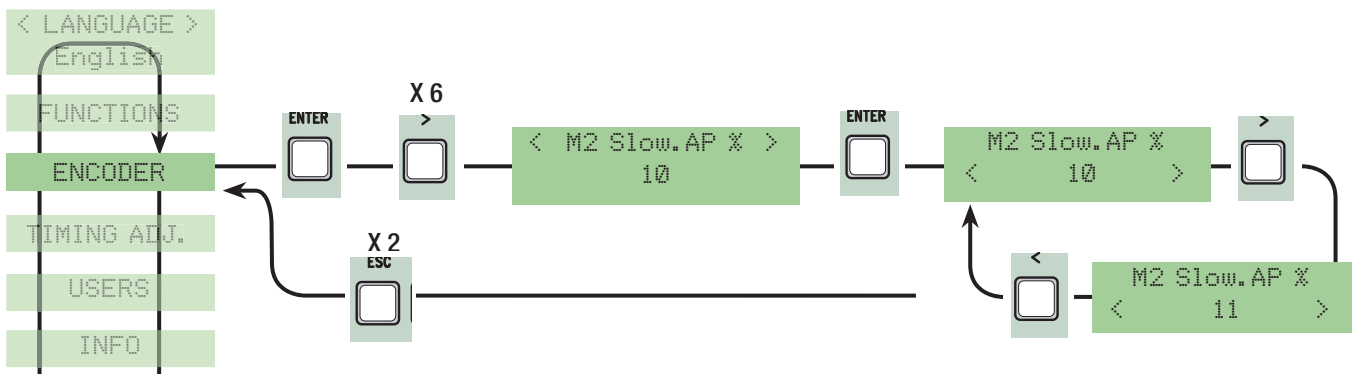
N.B.: this function appears only if it is activated in the “decel. Enc” function in the ENCODER menu.



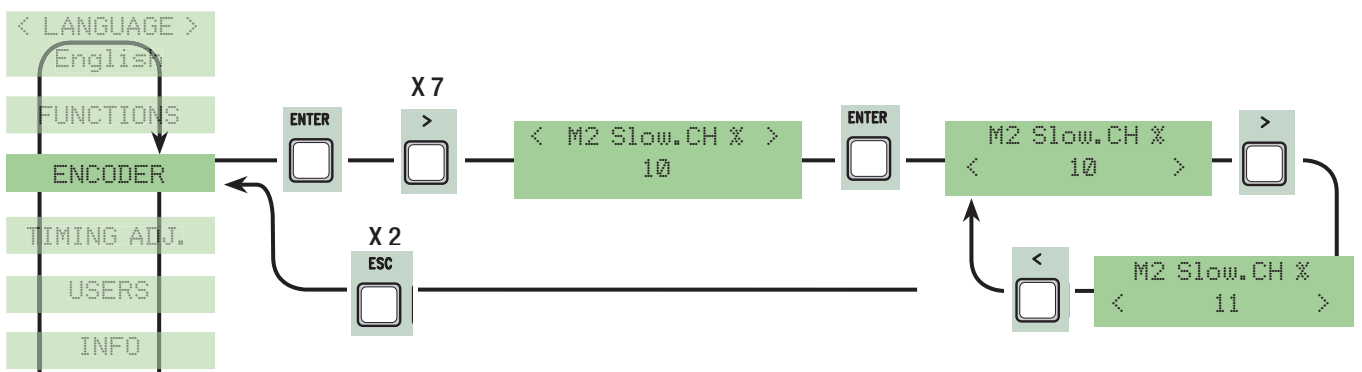
M1 closing deceleration%: this adjusts the (M1) first motor's deceleration starting point before the closing endpoint. The deceleration starting point is calculated as a percentage (from 1% to 40% of a full gate run). See illustration on page 28. N.B.: this function appears only if it is activated in the "decel. Enc" function in the ENCODER menu.



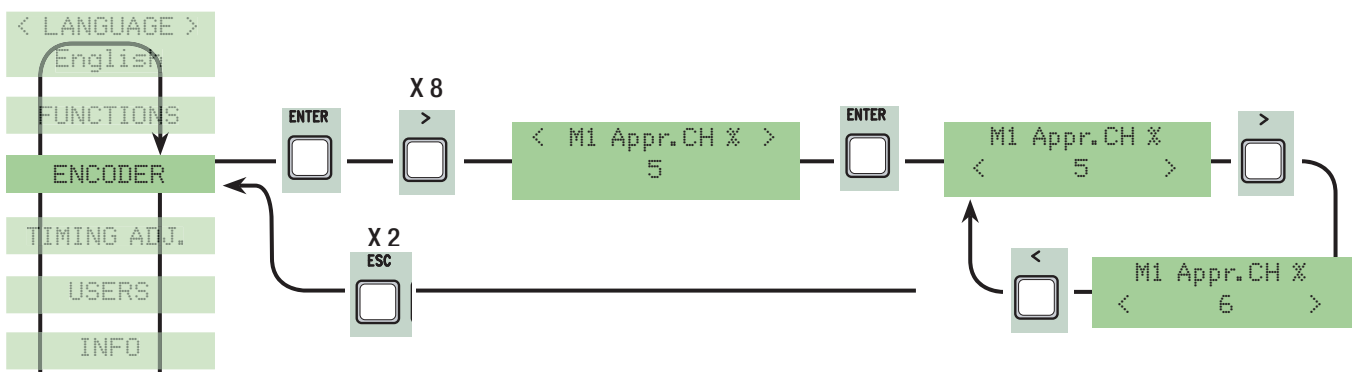
M2 opening deceleration%: this adjusts the (M2) second motor's deceleration starting point before the opening endpoint. The deceleration starting point is calculated as a percentage (from 1% to 40% of a full gate run). See illustration on page 28. N.B.: this function appears only if it is activated in the "decel. Enc" function in the ENCODER menu.



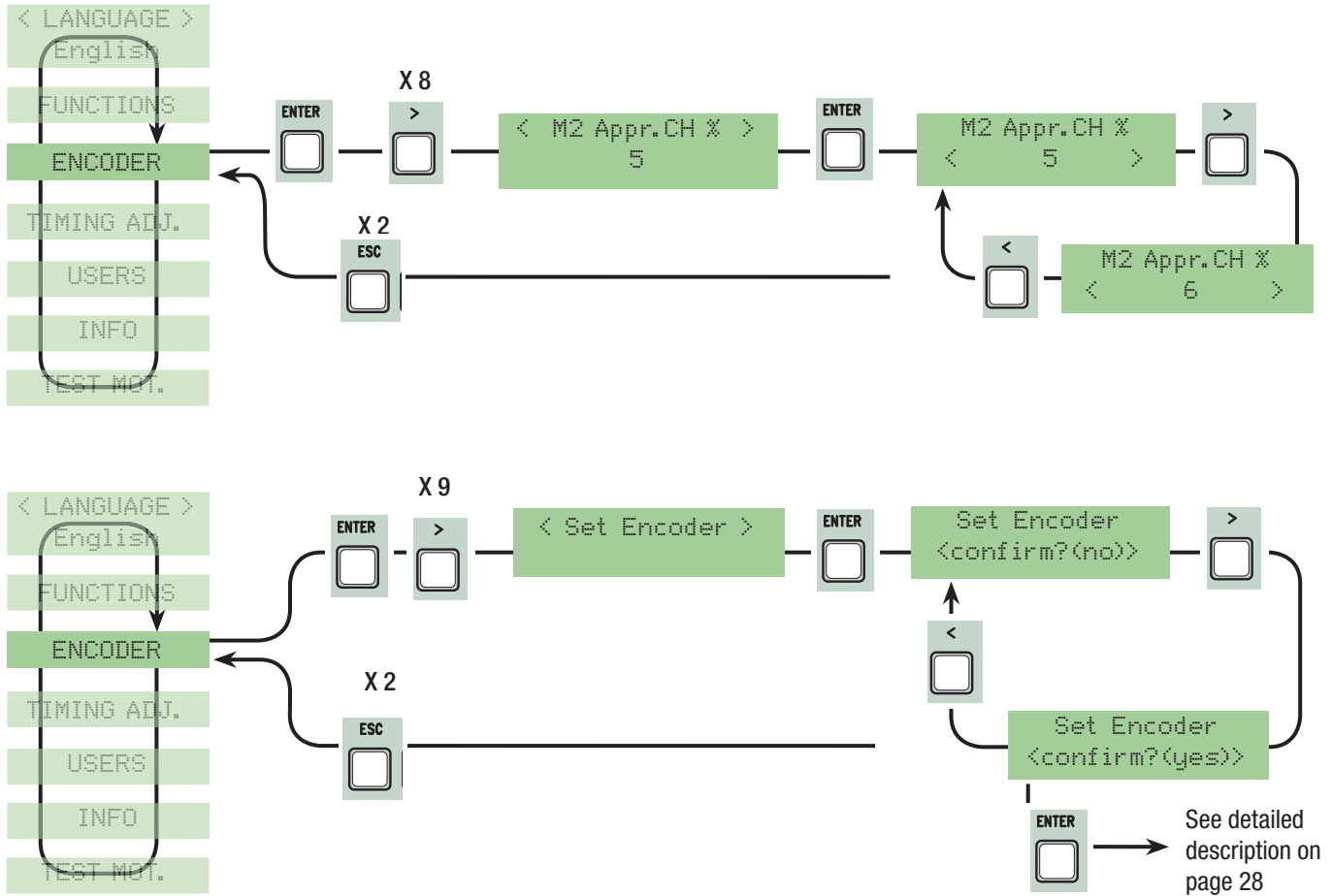
M2 closing deceleration %: this adjusts the (M2) second motor's deceleration starting point before the closing endpoint. The deceleration starting point is calculated as a percentage (from 1% to 40% of a full gate run). See illustration on page 28. N.B.: this function appears only if it is activated in the "decel. Enc" function in the ENCODER menu.



M1 closing acceleration %: this adjusts the (M1) first motor's percentage rate of approach to the final closing and opening points before reaching the opening and closing endpoints. The percentage rate of approach to (goes from 1% to 15% of the full gate run). See illustration on page 28.



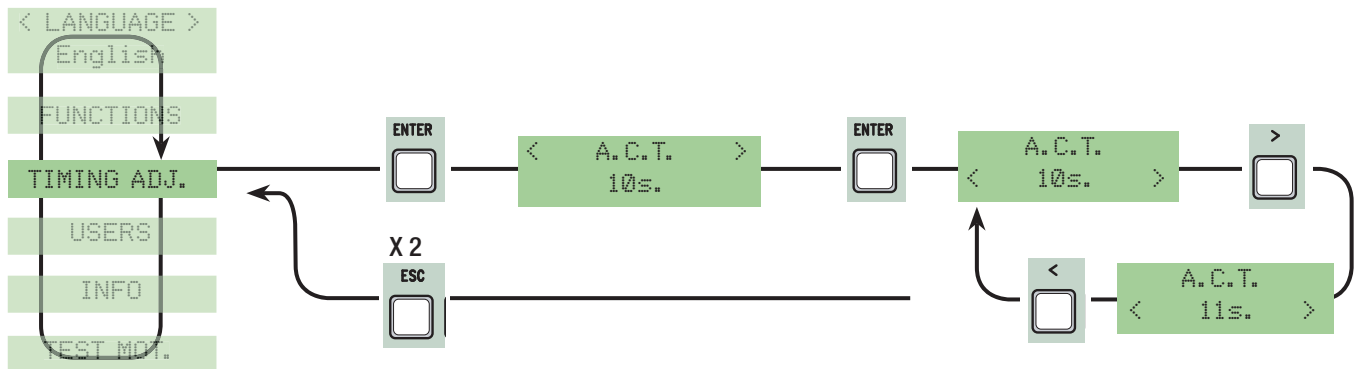
M2 closing acceleration %: this adjusts the (M2) second motor's percentage rate of approach to the final closing and opening points before reaching the opening and closing endpoints. The percentage rate of approach to (goes from 1% to 15% of the full gate run). See illustration on page 28.



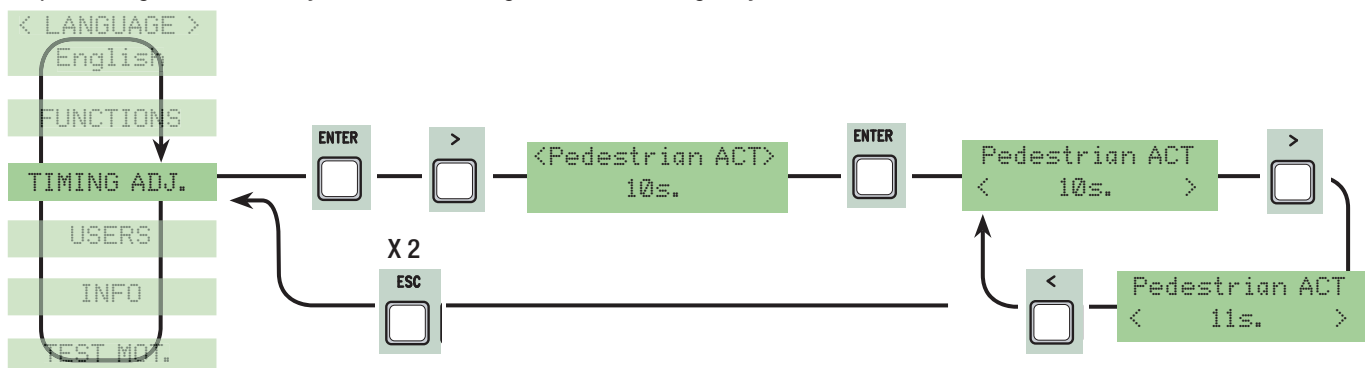
7.8 Time setting menu

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

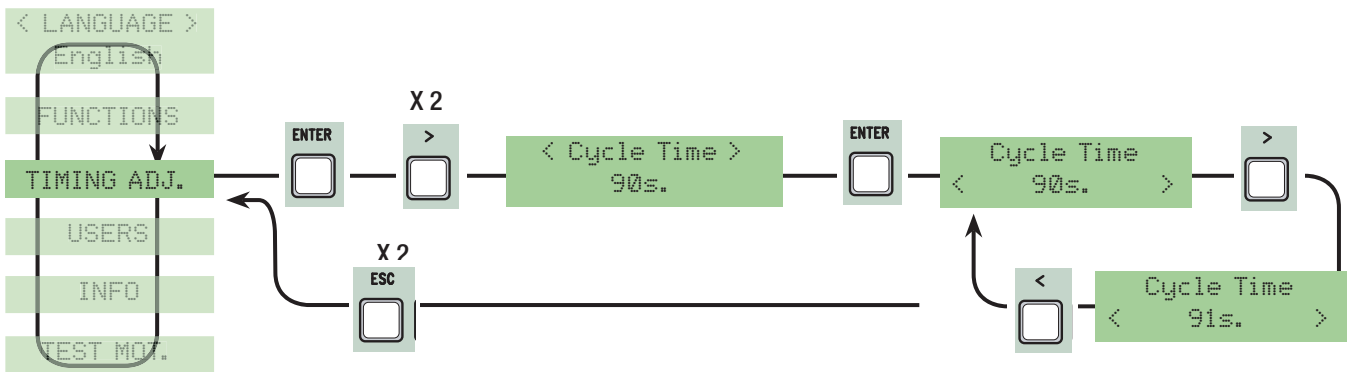
Once this time is elapsed, the gate closes automatically. The waiting time can be set to between 0" and 300".



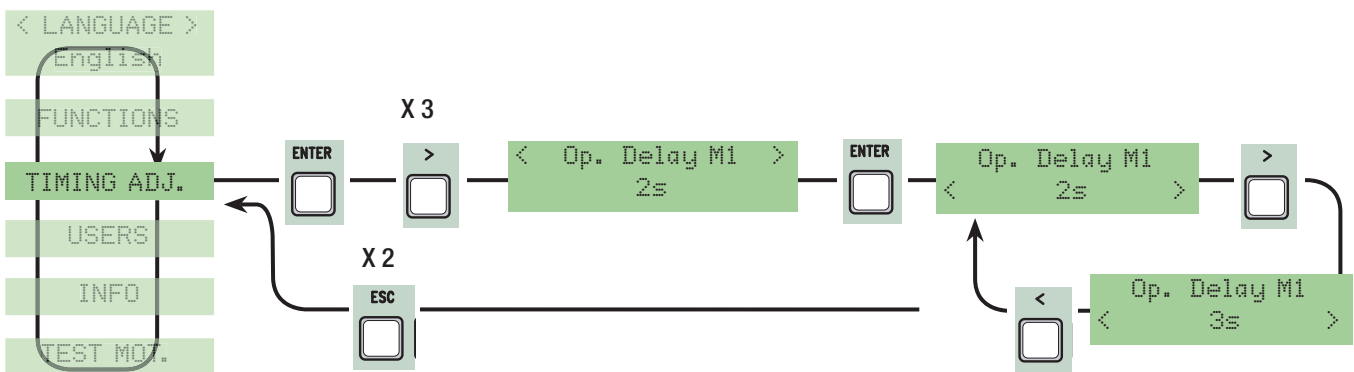
Automatic Pedestrian Closing: waiting time of the (M2) second gate leaf when in the open position. Once this time interval has elapsed, the gate automatically closes. The waiting time interval can go anywhere from 0" to 300".



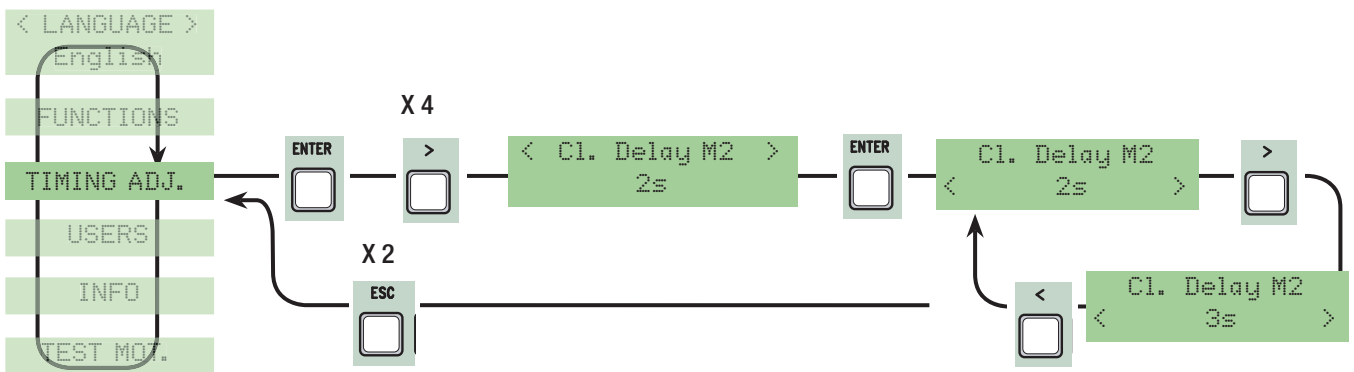
Cycle time: the working time of the motor during opening or closing phases is anywhere from 10" to 150".



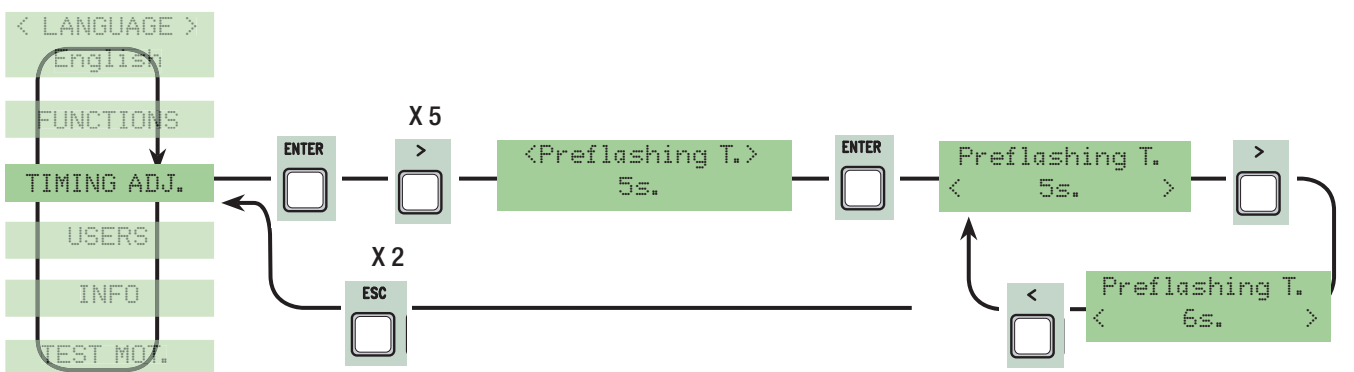
M1 delayed opening: the waiting time of the (M1) first gate lead, unlike the (M2) second one, after each opening command. The waiting time can be set to between 0" and 10".



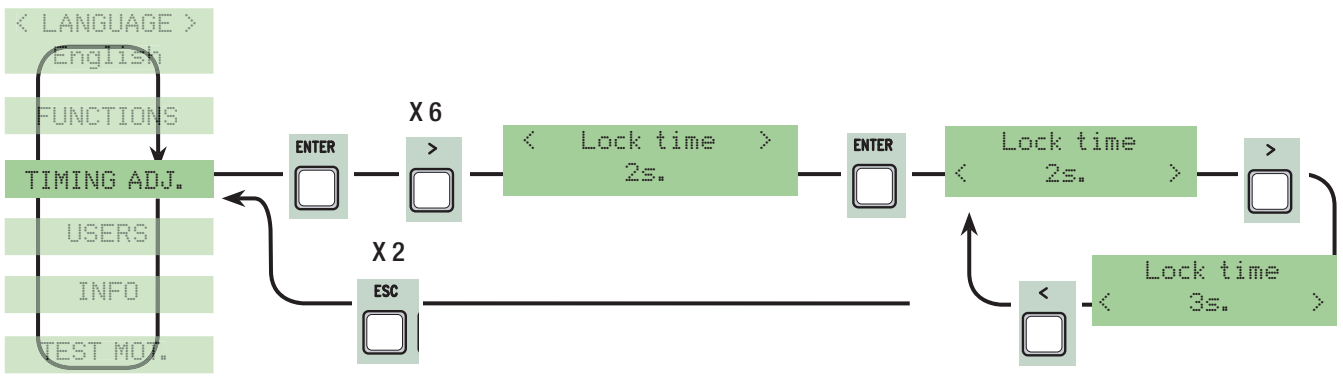
M2 delayed closing: the waiting time of the (M2) second gate leaf, unlike the (M1) first one, after each closing command. the waiting time can be set to between 0" and 60".



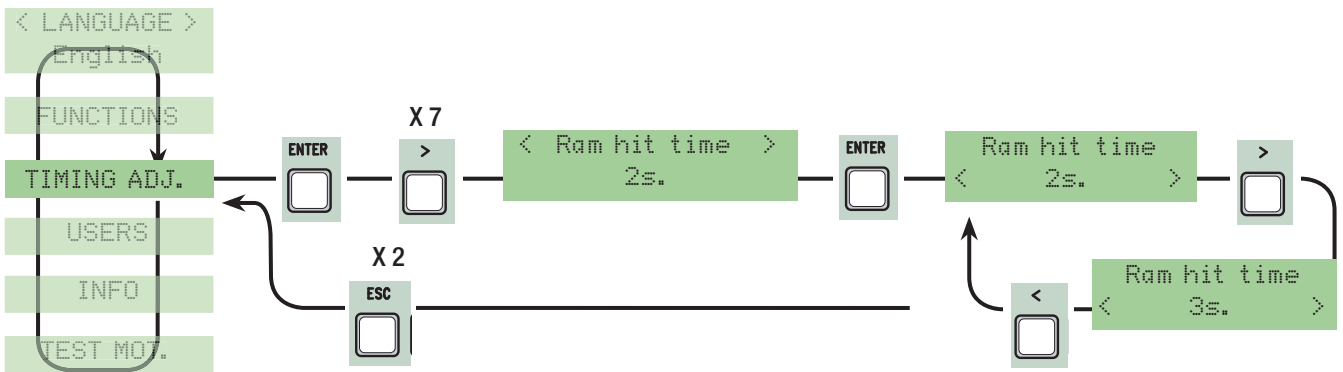
Pre-flashing time: after an opening or closing command is given, the flasher connected to "W-E), flashes for between 1" and 60", before the gate begins to move.



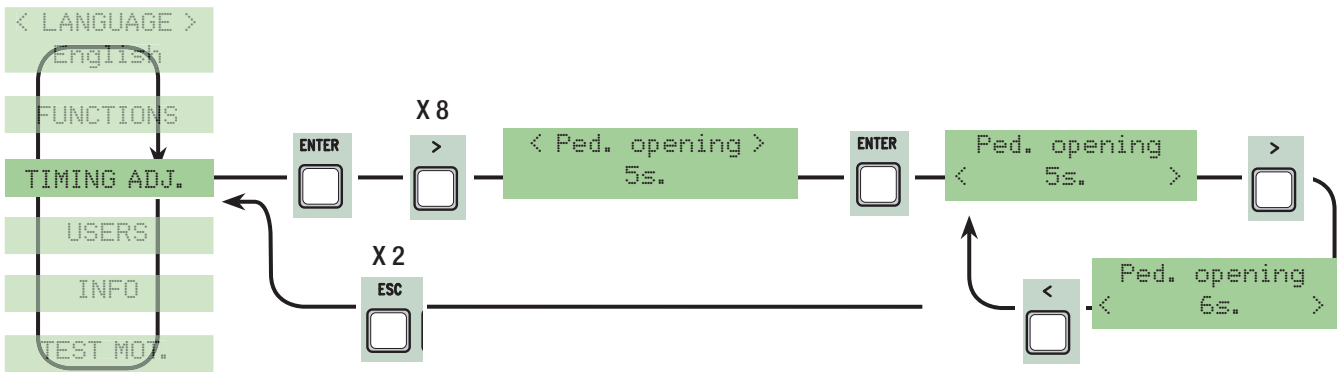
Lock time: the time required for releasing the electro-lock after each opening command. The time of operation can be set to between 1" and 5".



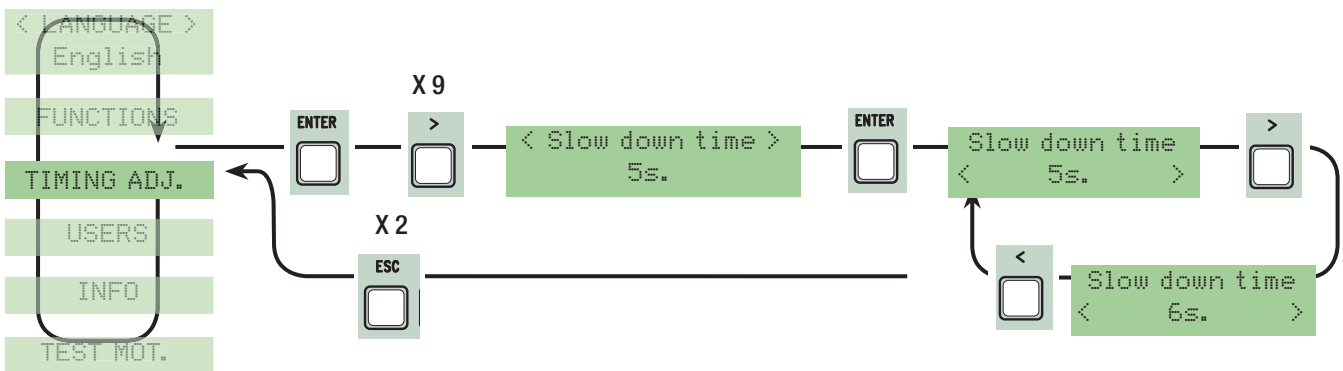
Ram hit time: the gearmotor's thrust time when fully closing after each opening command. The thrust time can be set to between 1" and 10".



Partial opening: the opening time of the (M2) second gate leaf. The time can be set to between 5" and 60".

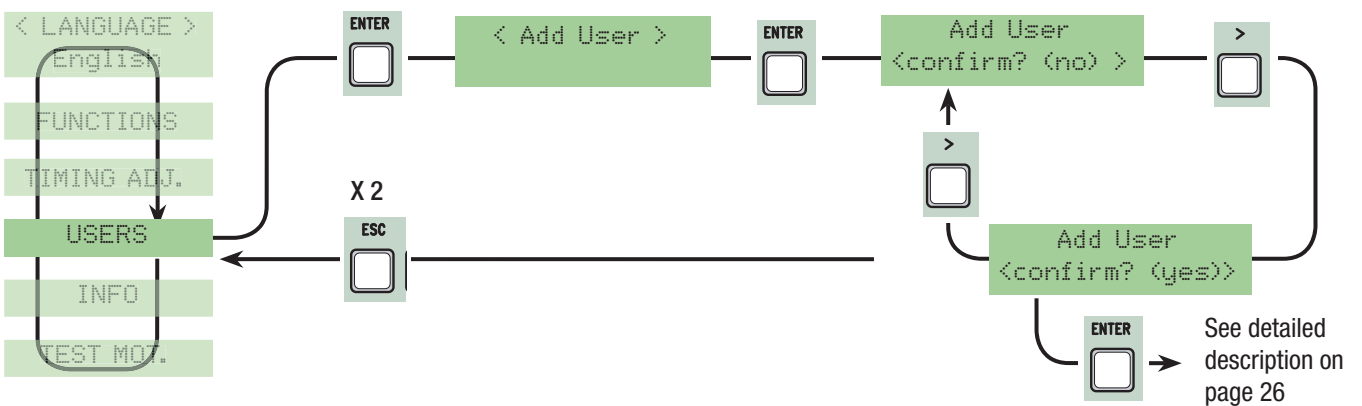


Slow down time: the gate leaf's deceleration time before every endpoint. The time can be set to between 0" and 30".
N.B.: this function only appears if the decelerations are selected.

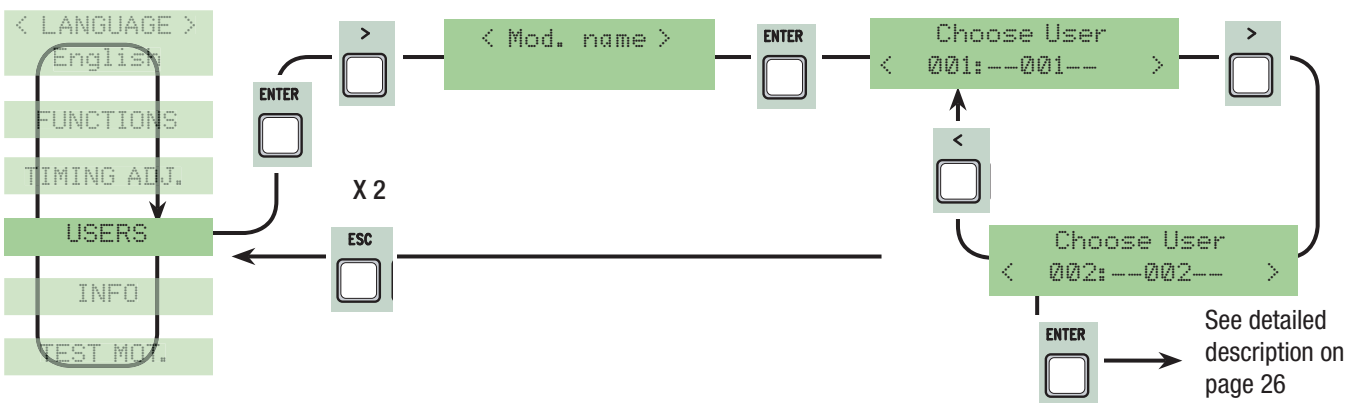


7.9 Users Radio Menu

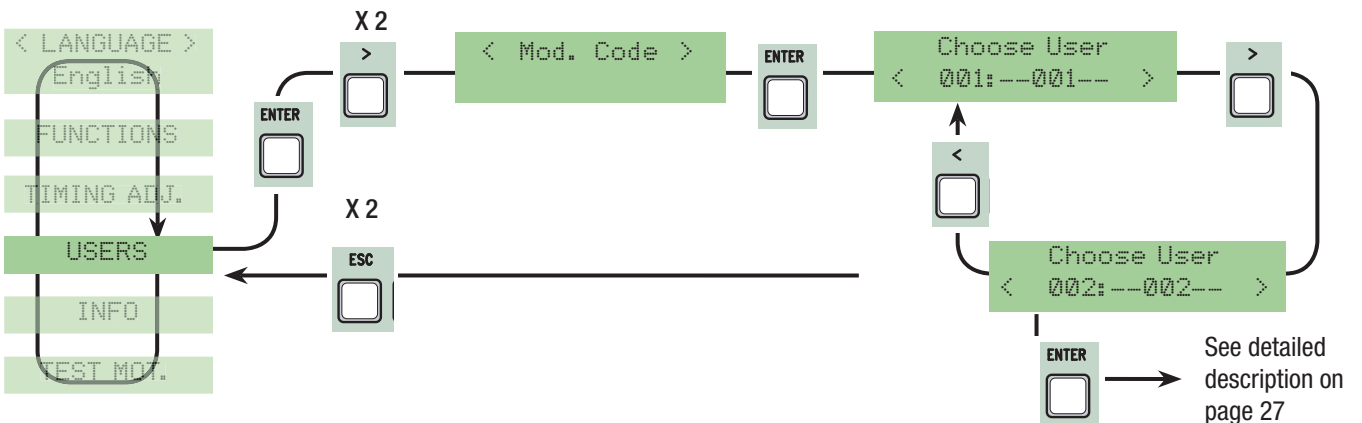
Add User: to create a new user and assigned function (max. 250 users).



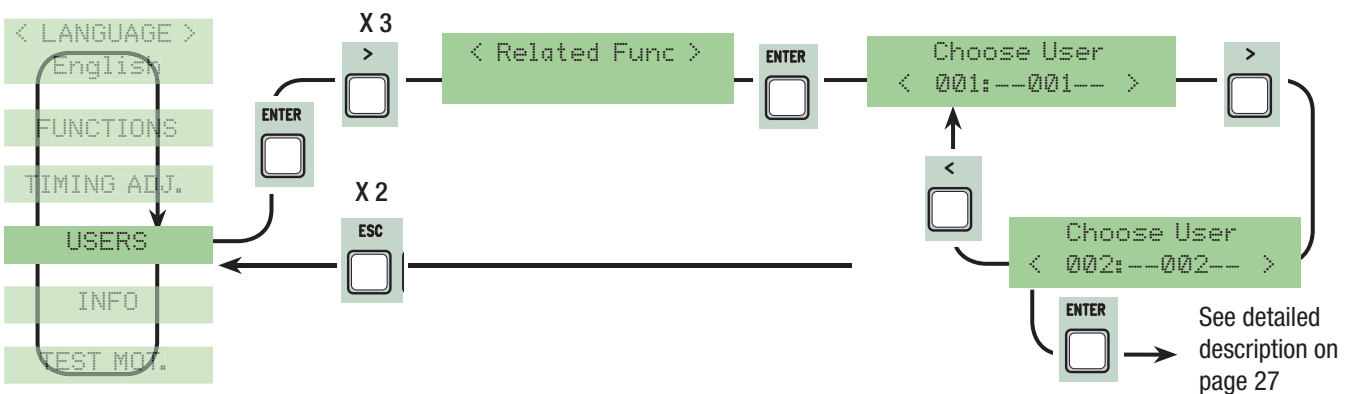
Mod. Name: to change a user number or existing name to another name.



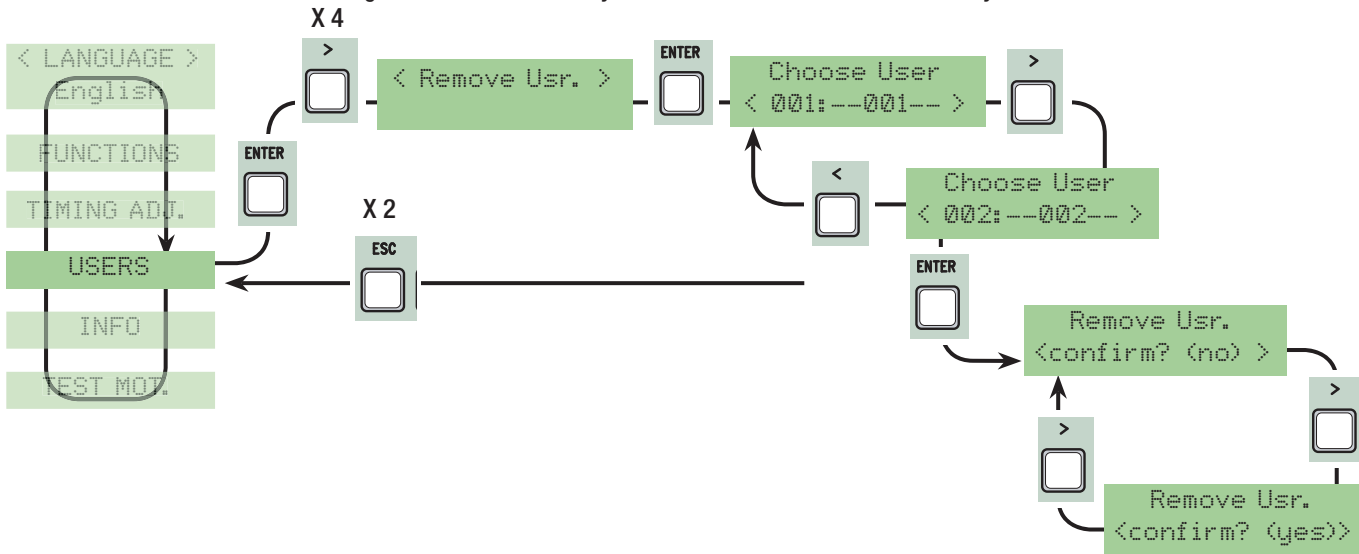
Mod. Code: to change a user's current code.



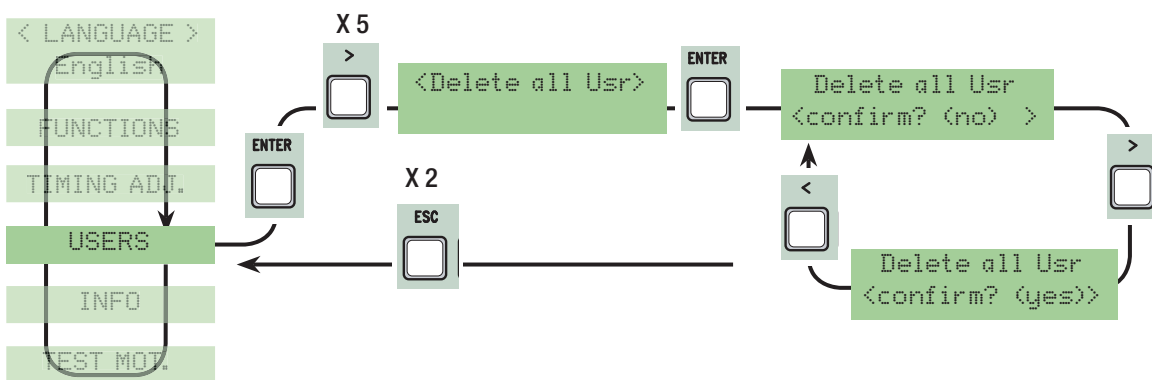
Related Function: to change the function assigned to the user.



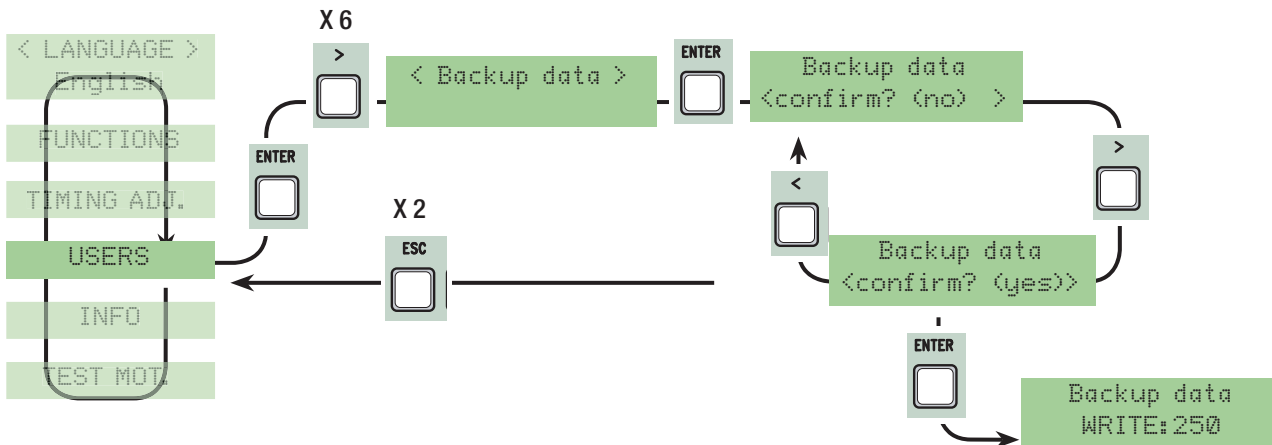
Remove user: to remove an existing user. Confirm the use you wish to remove with the ENTER key.



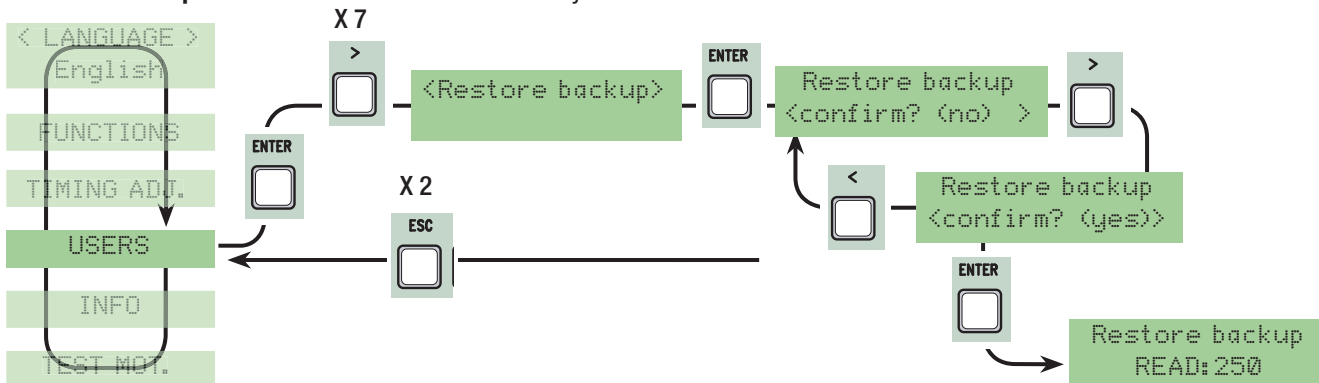
Delete all user: to cancel all registered users. Confirm cancellation of all users with ENTER.



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



Restore backup: to load the data saved on the memory roll onto card.



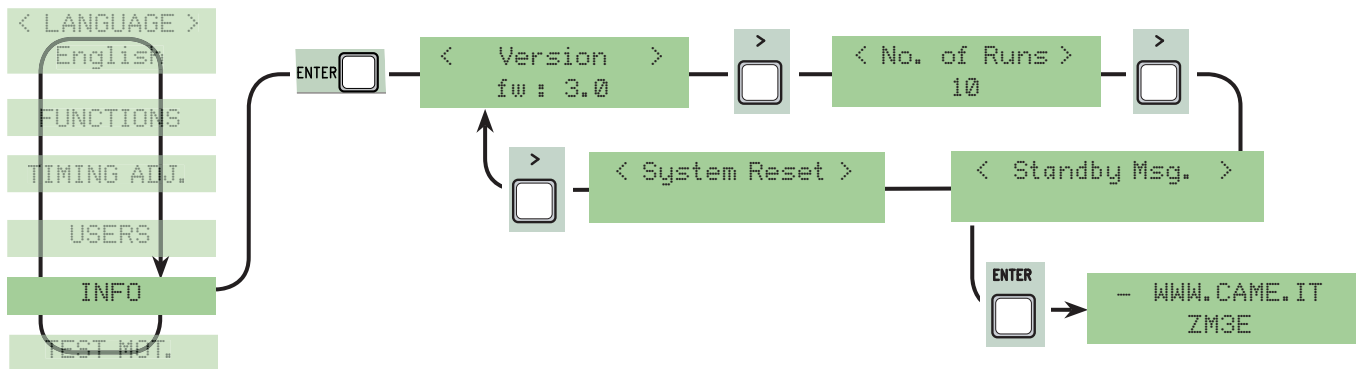
7.10 nfo Menu

Version: to view software version.

Number of gate runs: to view the number of runs performed by the gate.

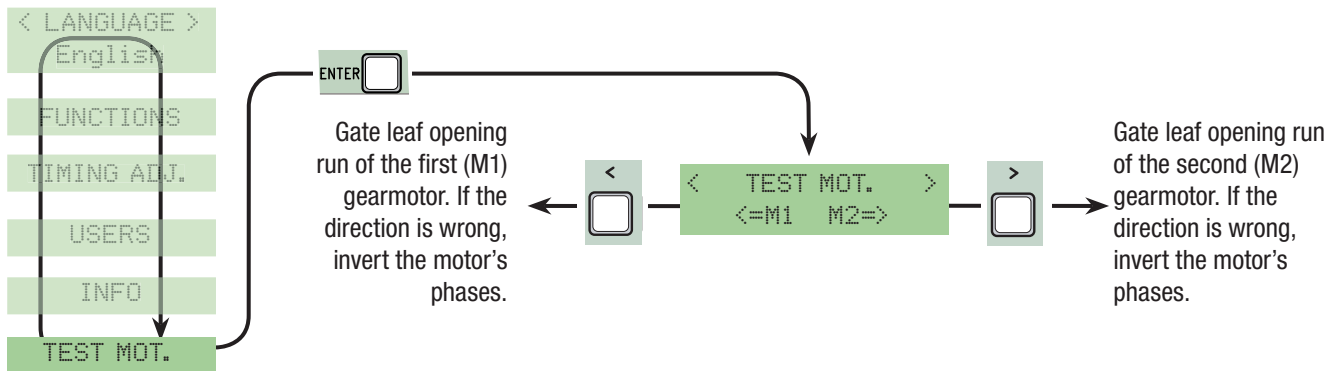
Starting Mssg: to view the starting message, confirm with ENTER to change text. Use the ENTER key to move the cursor forward, ESC to move it backwards and <> to select the letter of number. Confirm the text by pressing the ENTER key for a few seconds.

System reset: it resets the system to its original settings. Press ENTER key to confirm.



7.11 Motor test menu

TEST MOT.: Test to check the proper direction of the gearmotors.



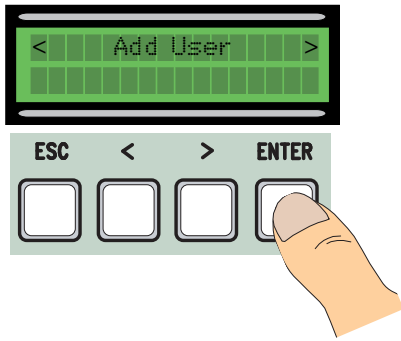
7.12 Decoding card

Connect the required (R700, AF43S cards) to insert, change, remove and command the operator via transmitter, card or transponder. Insert the memory roll to save and load all setting including users registered by another card.

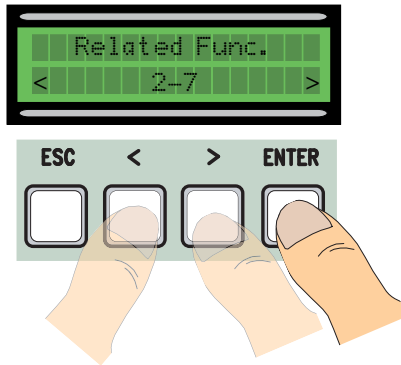
Frequency/MHz	Card	Transmitter
FM 26.995	AF130	TFM
FM 30.900	AF150	TFM
AM 26.995	AF26	TOP
AM 30.900	AF30	TOP
AM 433.92	AF43S	TAM / TOP ATOMO / TWIN
AM 433.92	AF43TW	TWIN
AM 40.685	AF40	TOUCH
AM 868.35	AF868	TOP

7.13 Inputting users

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



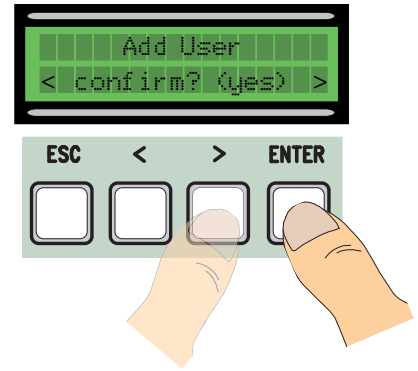
3) Choose which function to assign to the user...



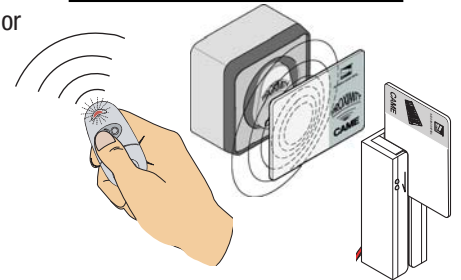
5) ... once the code is inputted, the user name will come up showing the type of command that was memorised...



2) Select "confirm (yes)" and press ENTER key to confirm.



4) ... will ask to input a code. Send the code with the radio-command button or slide-through card or transponder.

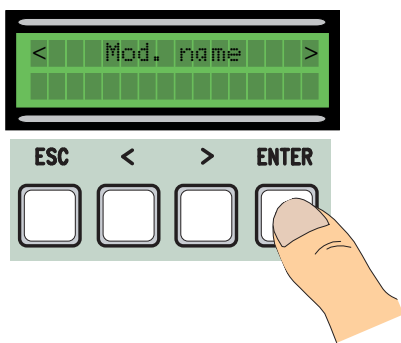


... or if the code is already inputted, "Existing Code" will appear.

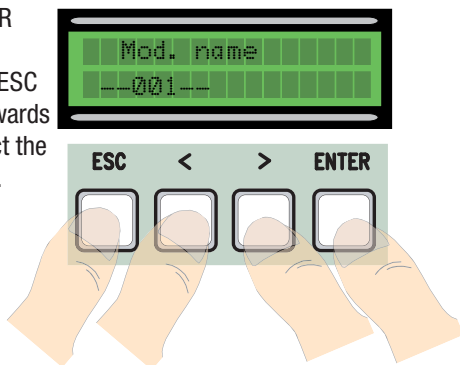


7.14 Changing users

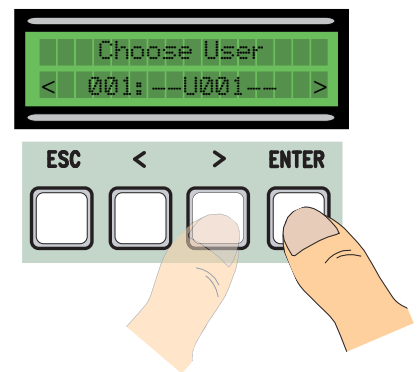
1) From the Users menu, choose "Mod. name". Press ENTER to confirm.



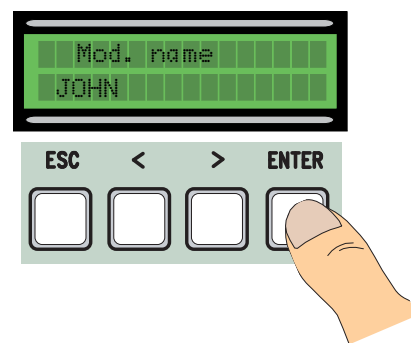
3) Use the ENTER key to move the cursor forward, ESC to move it backwards and < > to select the letter or number.



2) Choose the user number or name you wish to change the text of and press ENTER to confirm.

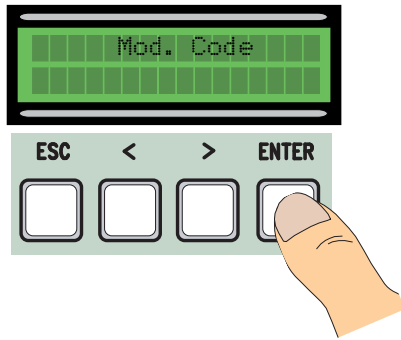


4) Confirm the text by pressing the ENTER key for a few seconds.

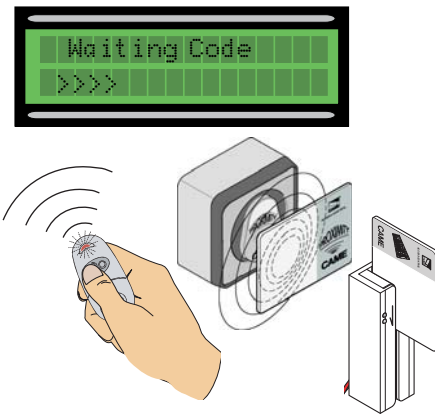


7.15 Changing code

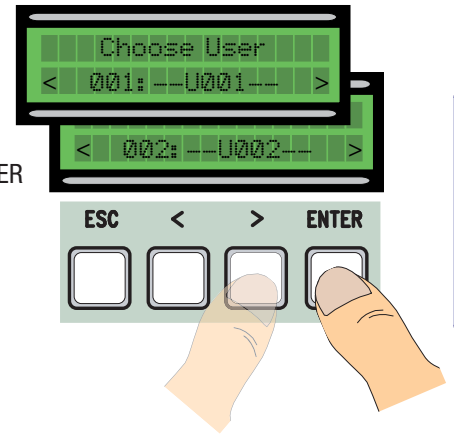
1) From the Users menu, choose "Mod. Code". Press ENTER to confirm.



3) you will be asked to input a code. Send the code using the transmitter button or the slide-through card or the transponder.



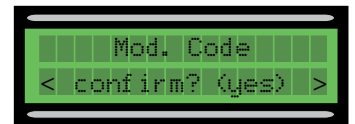
2) Choose the user name for which you wish to change the code and press ENTER to confirm.



4) .. once the code is inputted, the user name will come up showing the type of command that was memorised...

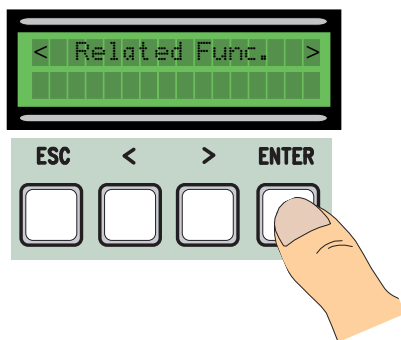


5) Select "confirm (yes)" and press ENTER key to confirm.

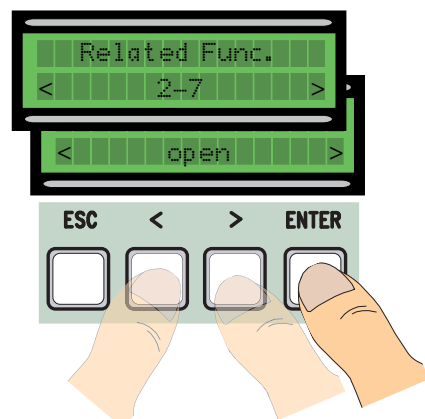


7.16 Function assigned to the user

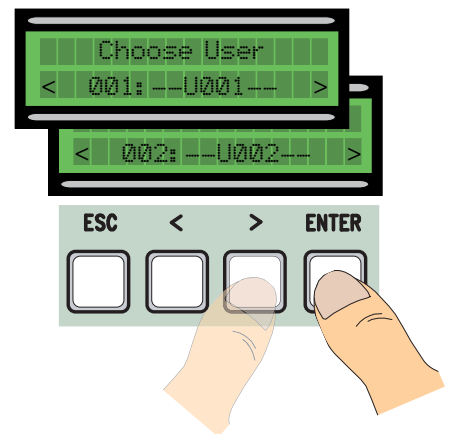
1) From the Users menu, choose "Related Func.". Press ENTER to confirm.



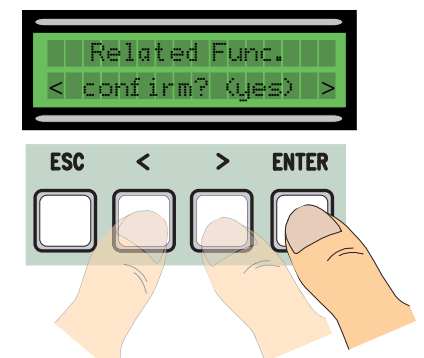
3) Choose the new function to assign to the user. Press ENTER to confirm.



2) Choose the user name for which you wish to change the command function and press ENTER to confirm.



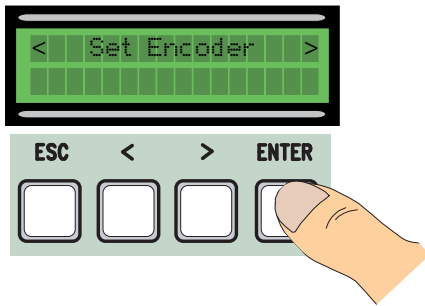
4) Choose "confirm (yes)" and press ENTER to confirm.



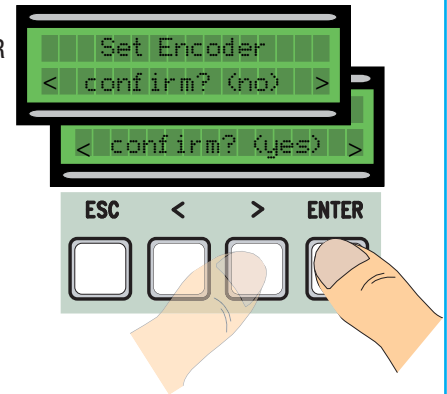
7.17 Gate run calibration

N.B. before calibrating the gate run, check that the manoeuvring area is free of any obstacles and check the proper direction of rotation of the gearmotors. (para. 7.11)

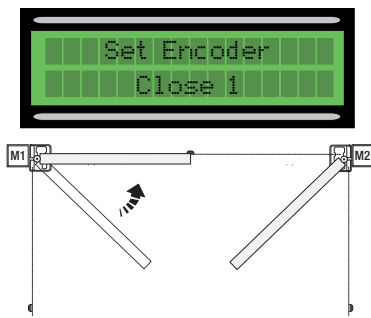
1) From the Encoder menu, select "Set Encoder". Press ENTER to confirm.



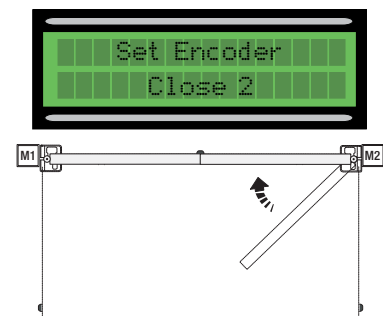
2) Select "confirm (yes)" and press ENTER to confirm.



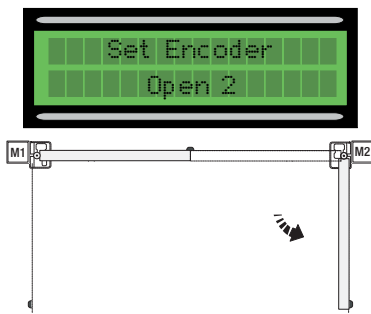
3) the gate leaf of the first motor will perform a closing run until fully closed.....



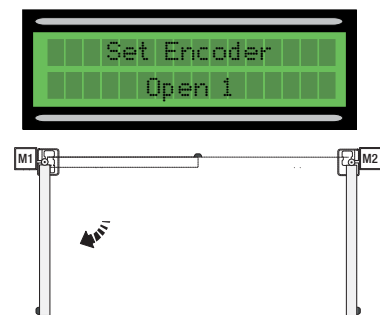
4) ...then, the gate leaf of the second motor will perform the same manoeuvre...



5) ...then, the gate leaf of the second motor, will perform an opening run until fully open...



6) ...after which, the gate leaf of the first motor will perform the same manoeuvre...



7) When the procedure is finished, the display will show "Set Encoder ok" for a few seconds.



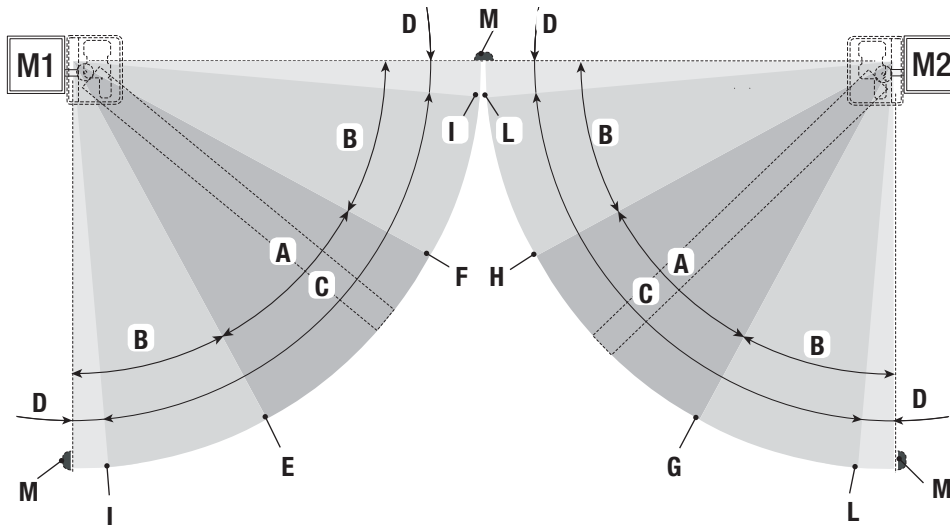
7.18 Error messages

- "encoder ERROR"**: check proper connections or functionality of the device and possibly even the motor's torque"
- "safety d. test ERROR"**: malfunctioning of safety devices, check proper functioning of connections and functionalities;
- "end stop ERROR"**: check proper connections on end point connections or functionality of devices;
- "cycle time ERROR"**: check the working time settings, the set time may be insufficient to complete the duty cycle.
- **Safety STOP, C1, C3, C4"**: check proper functioning of connections and functionalities of devices.

7.19 Illustration depicting the areas and points of deceleration and final opening and closing approaches per encoder device.

Note: the areas and points of deceleration and final opening and closing approaches are tested according to the parameters set forth by Technical Norms EN12445 and EN12453 regarding compatibility of impact forces generated by moving gate leaves.

- A = Area of movement at normal speed
- B* = Run zone at decelerated speed
- C = Encoder intervention zone with movement inversion
- D= Encoder intervention zone with movement stop
- E = Opening deceleration beginning point (M1 Open Deceler %)
- F = Closing deceleration beginning point (M1 Close Deceler %)
- G = Opening deceleration beginning point (M2 Open Deceler %)
- H = Closing deceleration beginning point (M2 Close Deceler %)
- I** = Closing and opening final phase beginning point (M1 Final Close %)
- L** = Closing and opening final phase beginning point (M2 Final Close %)
- M= endstops



* Minimum 600 mm from the Final full stop.

**Set the function's final phase % "M1 Final Close" for the first (M1) motors and "M2 Final Close" for the second (M2) motor from the "ENCODER" menu so as to obtain a distance of between 1 and 50 mm maximum from the final full stop.

8 Demolition and disposal



In its premises, CAME CANCELLI AUTOMATICI S.p.A. implements an Environmental Management System certified in compliance with the UNI EN ISO 14001 standard to ensure environmental protection.

Please continue our efforts to protect the environment—which CAME considers one of the cardinal elements in the development of its operational and market strategies—simply by observing brief recommendations as regards disposal:



DISPOSAL OF PACKAGING

The packaging components (cardboard, plastic, etc.) are all classifiable as solid urban waste products and may be disposed of easily, keeping in mind recycling possibilities.

Prior to disposal, it is always advisable to check specific regulations in force in the place of installation.

PLEASE DISPOSE OF PROPERLY!



PRODUCT DISPOSAL

Our products are made up of various types of materials. Most of them (aluminium, plastics, iron, electrical wires, etc.) may be disposed of in normal garbage collection bins and can be recycled by disposing of in specific recyclable material collection bins and disposal in authorized centres. Other components (electrical boards, remote control batteries, etc.), however, may contain polluting substances.

They should therefore be removed and given to qualified service companies for proper disposal.

Prior to disposal, it is always advisable to check specific regulations in force in the place of disposal.

PLEASE DISPOSE OF PROPERLY!

9 Manufacturer's warranty



MANUFACTURER'S DECLARATION OF CONFORMITY

Pursuant to the Low Voltage Directive 2006/95/EC



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

ZM3E - ZM3EC

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

2006/95/EC
2004/108/EC
EN 60335-1
EN 13241-1

LOW VOLTAGE DIRECTIVE
ELECTROMAGNETIC COMPATIBILITY DIRECTIVE
EN 61000-6-2
EN 61000-6-3

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

MANGING DIRECTOR
Mr. Andrea Menuzzo

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