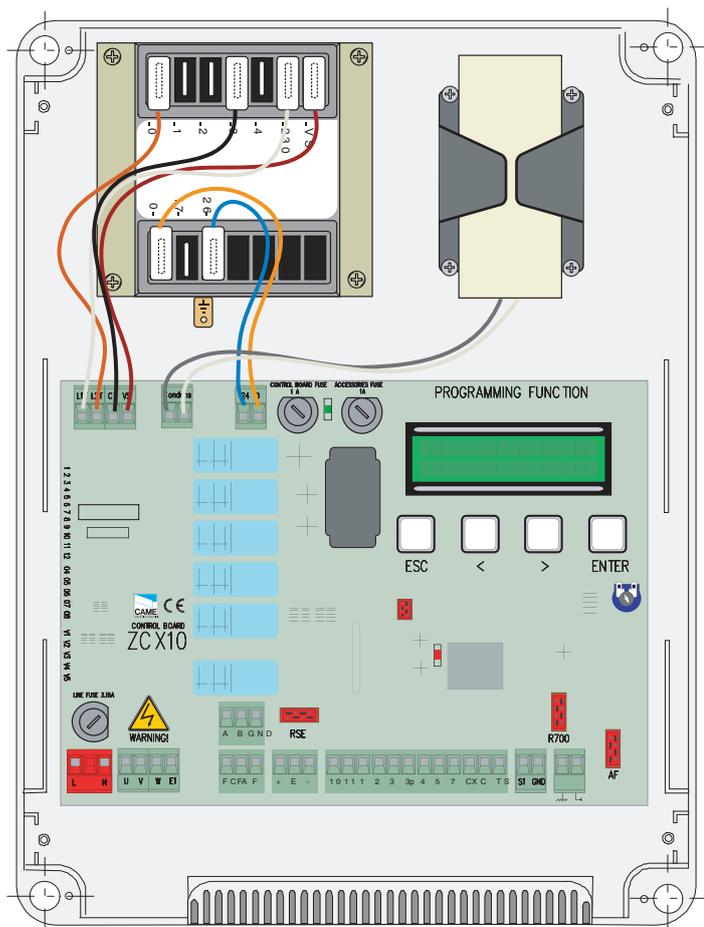


ZCX10



**230V control board
for C-BXE gearmotors**

1 Legend symbols

 This symbol indicates sections to read carefully.

 This symbol indicates sections regarding safety.

2 Intended use and use limits

2.1 Intended use

The ZCX10 electric board has been designed for the CBX E automation control of sectional-, sliding- and industrial swing gate movement.

 Any use other than the above, and installations with procedures different to those in the following technical manual, are forbidden.

2.2 Use limits

 This manual is intended only for the technical personnel qualified for the installation.

3 Product description

3.1 Board description

The ZCX10 electric board has been designed for controlling the CBX automation, for moving sectional-, sliding- and swing gates, 230V-powered with power up to 600W, and 50–60 Hz frequency.

Designed and built entirely by CAME S.p.A., it meets the UNI EN 12453 standards.

ABS casing with IP54 protection level, equipped with intake for air circulation and complete with transformer.

The circuit should be powered at 230V in the L-N terminals and protected by a 5A fuse, while the low voltage command devices are protected with a 1A fuse.

The total power of the (24V) accessories must not exceed 20W.

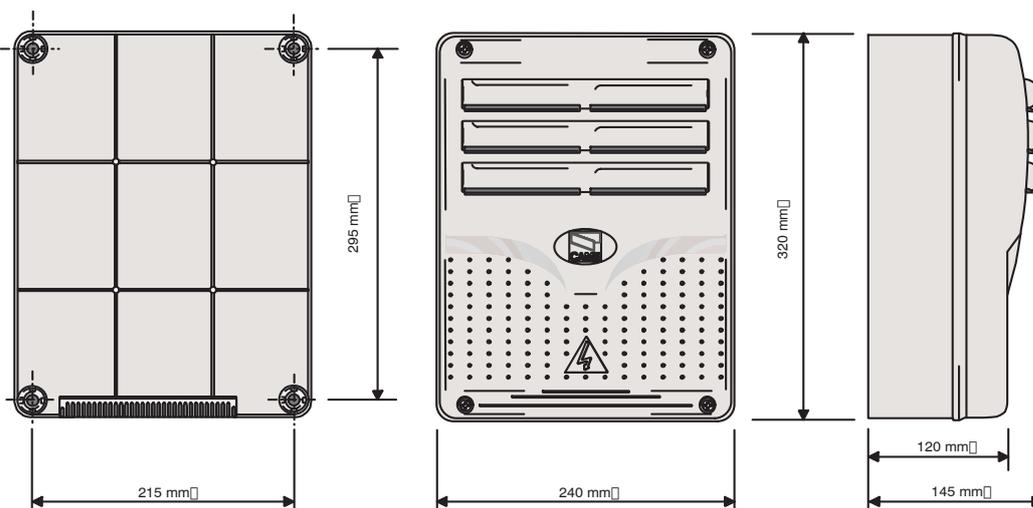
The board includes the manoeuvre pick-up function, which is activated at the start of the gate's opening and closing phases

 - Class of isolation II;

 - Earth's connection for the electric safety of the parts non functional day-pupils to the container with electronic card of command are to perform on the suitable points.

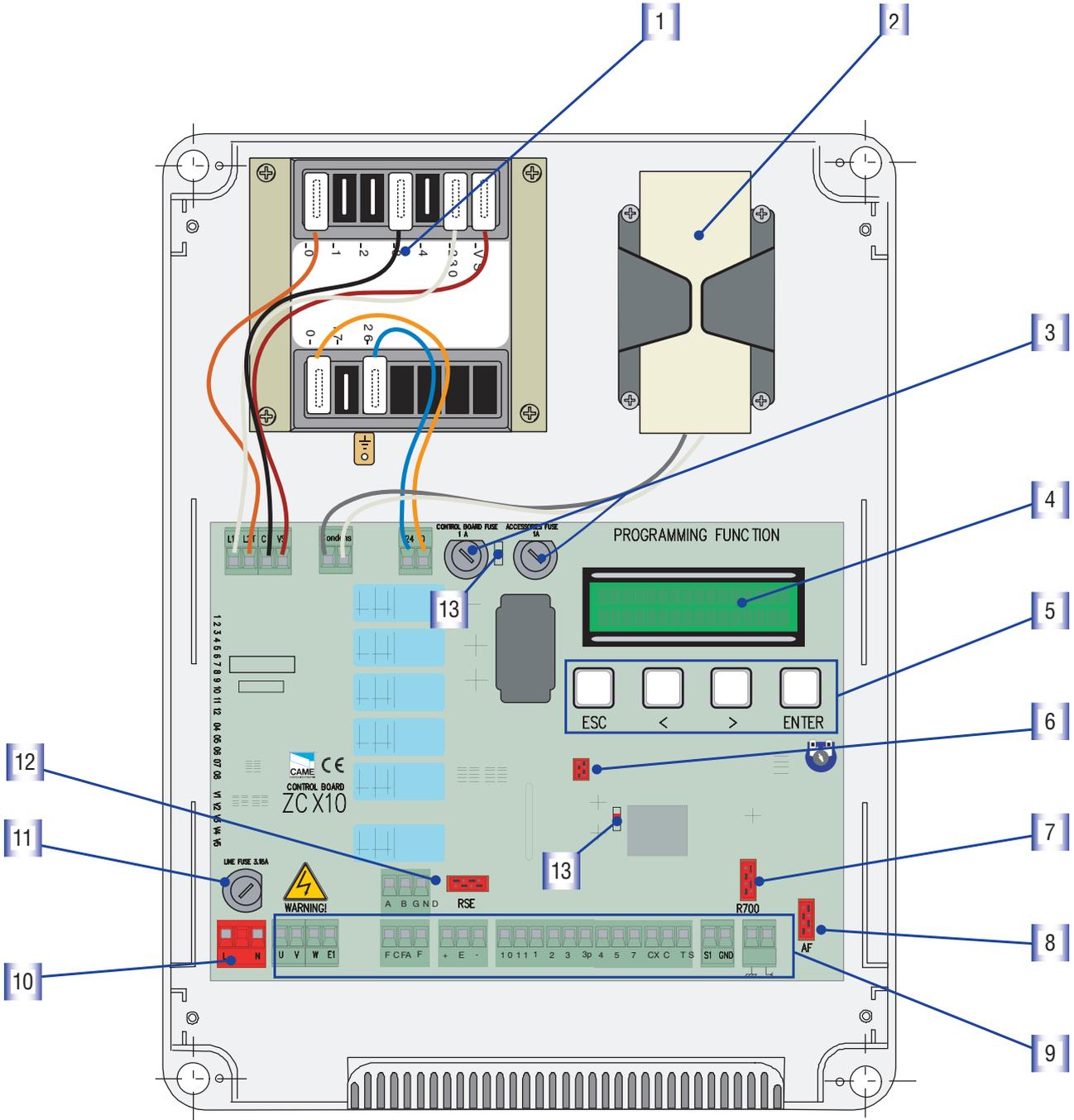
 **Attention:** before intervening inside the equipment to remove the tension of line

3.2 Dimensions and interaxes of fixing holes



3.3 Board description

Tutti i dati e le informazioni qui contenute sono da ritenersi suscettibili di modifica in qualsiasi momento e a nostro giudizio



1 - Transformer (not included)

2 - Condenser bracket

3 - Board Fuses 1 A, Accessories fuse 1A.

4 - Display

5 - Programming buttons

6 - Memory roll connector

7 - Connector for R700 board

8 - HF card connector

9 - Terminal board

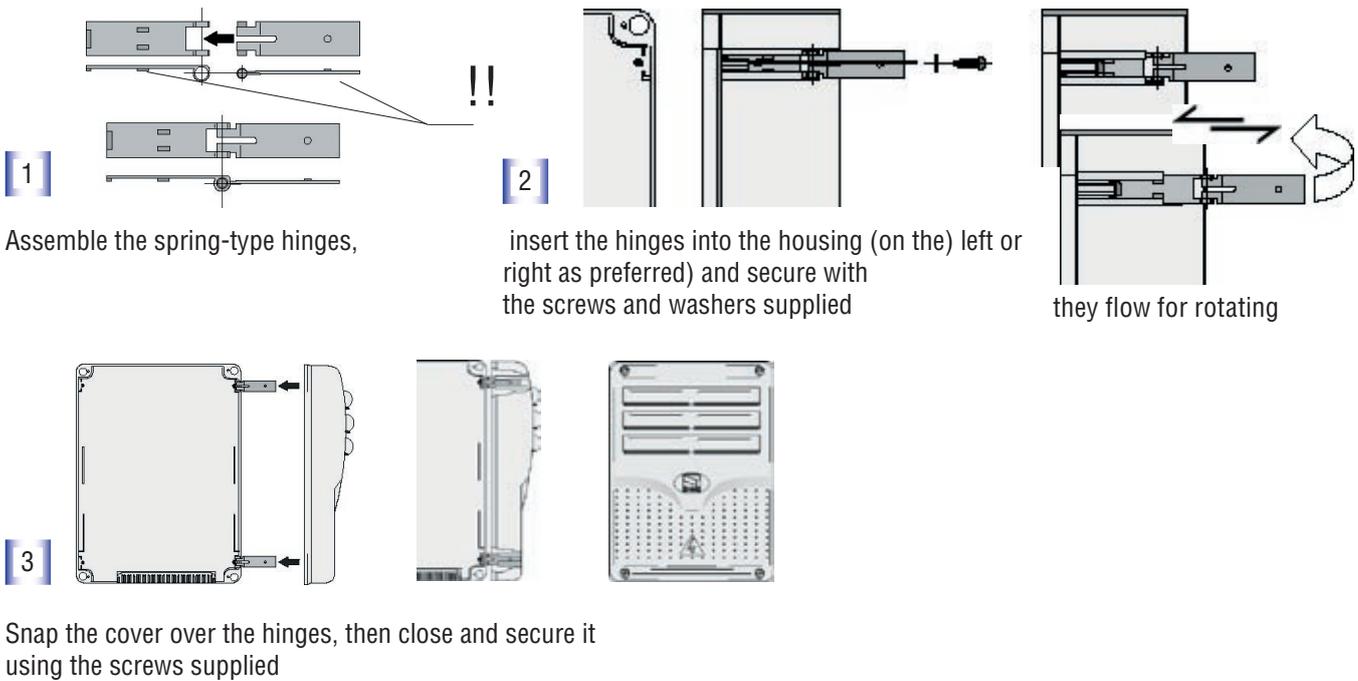
10 - Power supply

11 - Line Fuse 3.15 A

12 - RSE card connector

13 - Led -- of signaling

3.4 Assembling hinge housing



4 Installation

4.1 Preliminary checks



Installation must be carried out by qualified and expert personnel, fully respecting the current standards.

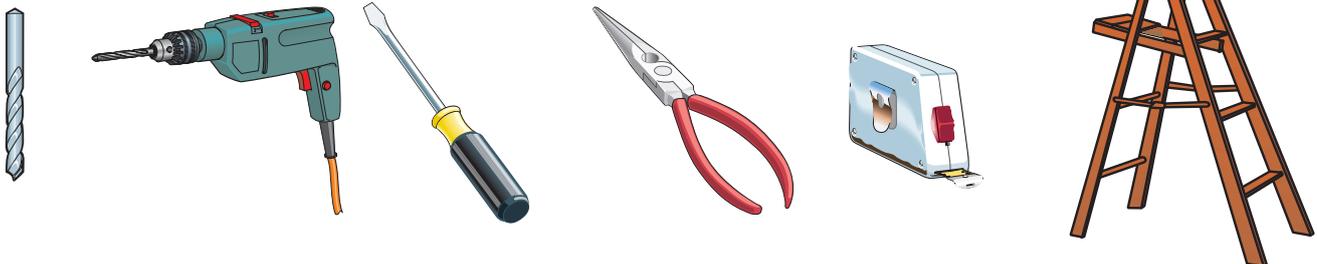


Before attempting installation, you must:

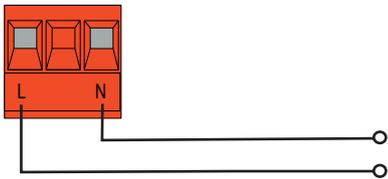
- Ensure that the control board fixing point is in an area protected from bumps and that the anchoring surfaces are secure and solid.
- Make provision for a suitable omnipolar disconnection device, with power supply cut-off, leaving more than 3 mm between the contacts

4.2 Tools and materials

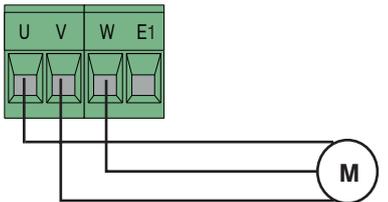
Ensure you have all the tools and materials necessary for carrying out the installation according to current safety standards. See the following examples.



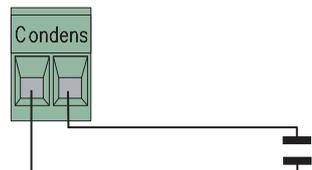
4.3 Electrical connections



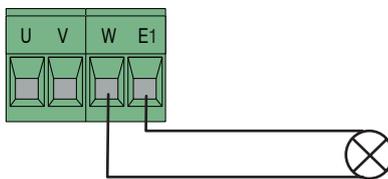
230V power supply



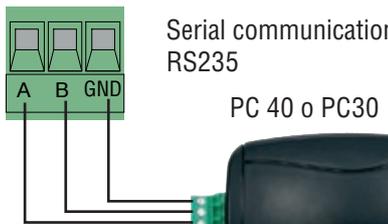
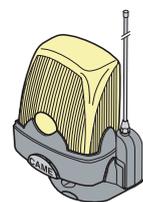
Single phase 230V A.C motor max capacity: 600 W



Condenser 20 μ F 420V.



230V AC Output 25W max. (in movement) for flashing lamp

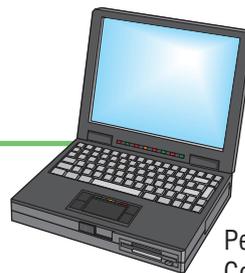


Serial communication for PC connection, use bipolar shielded cable mod. RS235

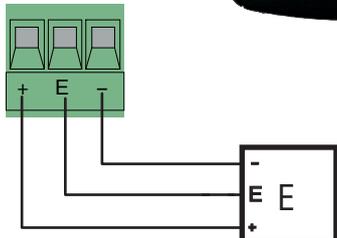
PC 40 o PC30



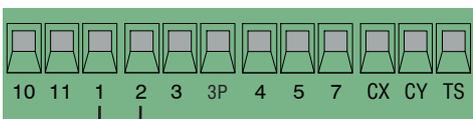
RS232 cable



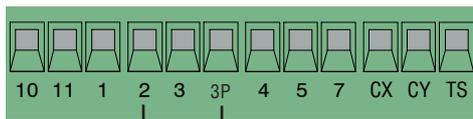
Personal Computer



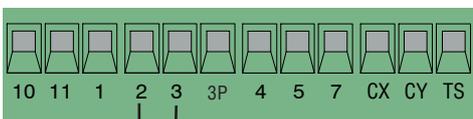
Connection for encoder (for the connection between the automation and the electric picture to use cable screened type 2402C 22AWG)



(1.2) STOP pushbutton Normally Closed



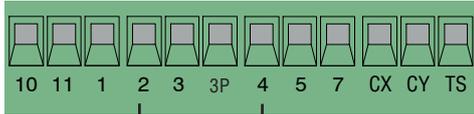
(2.3P) Partial opening pushbutton Normally open



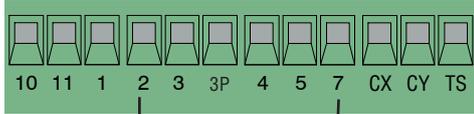
(2.3) Total opening pushbutton Normally open

Tutti i dati e le informazioni qui contenute sono da ritenersi suscettibili di modifica in qualsiasi momento e a nostro giudizio

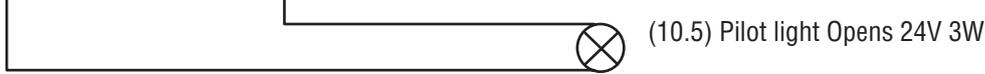
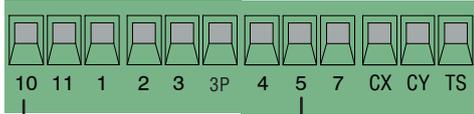
4.3 Electrical connections



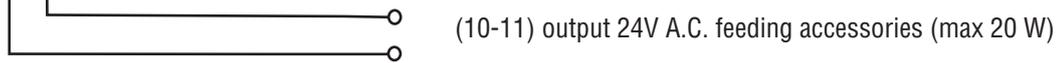
(2.4) Close pushbutton Normally Open (N.O.)



(2.7) Stepper contact, Normally Open sequence

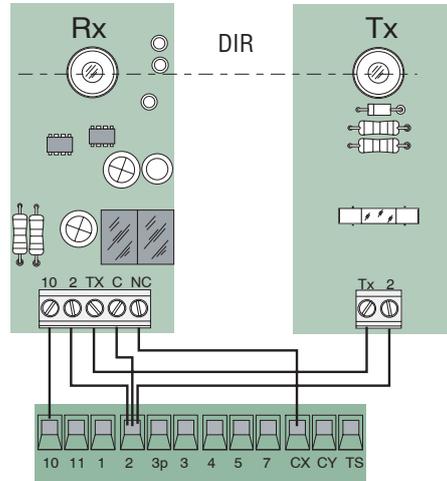
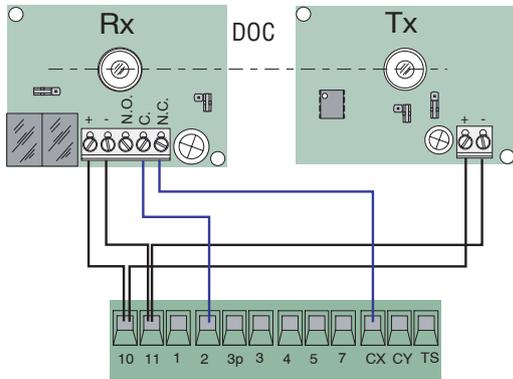


(10.5) Pilot light Opens 24V 3W

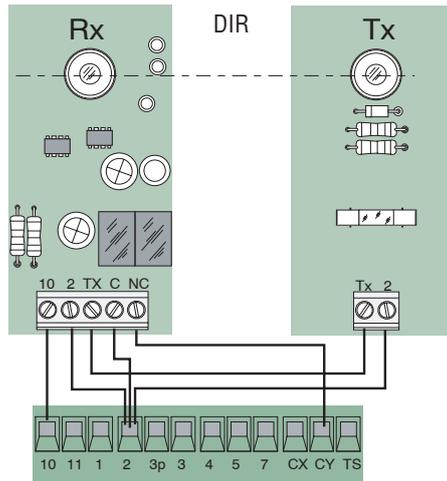
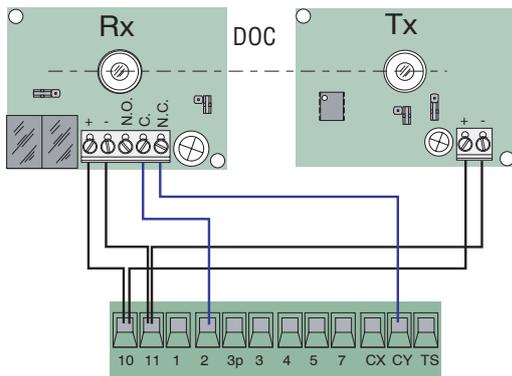


(10-11) output 24V A.C. feeding accessories (max 20 W)

(2,CX) DOC and DIR photoelectric cell connection DIR



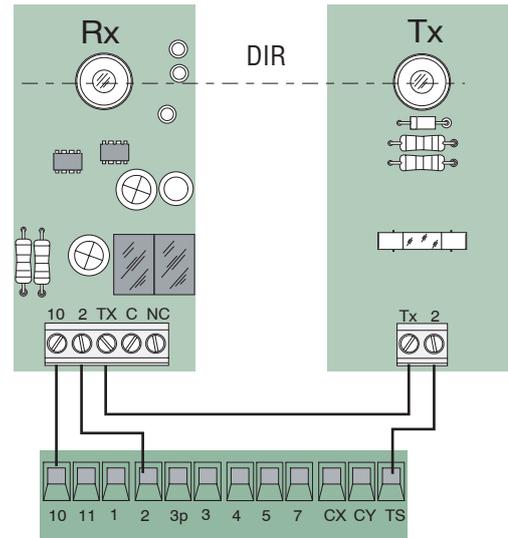
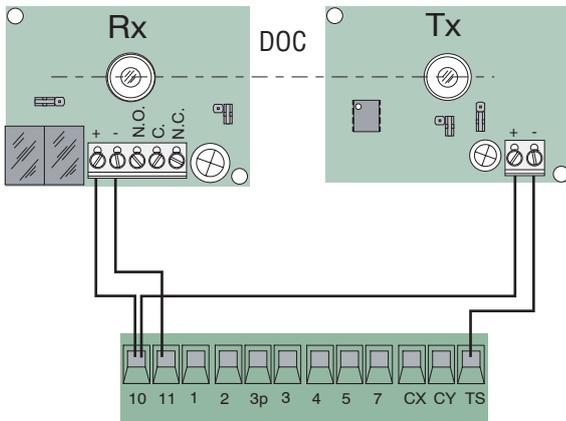
(2,CY) DOC and DIR photoelectric cell connection DIR



Tutti i dati e le informazioni qui contenute sono da ritenersi suscettibili di modifica in qualsiasi momento e a nostro giudizio

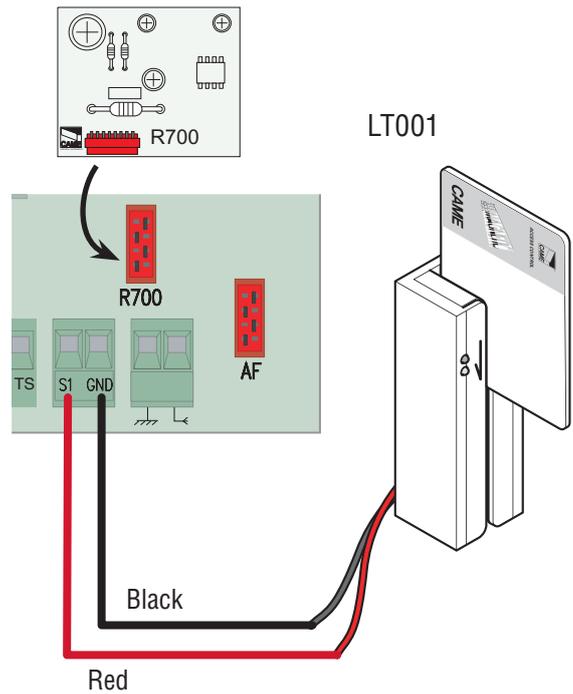
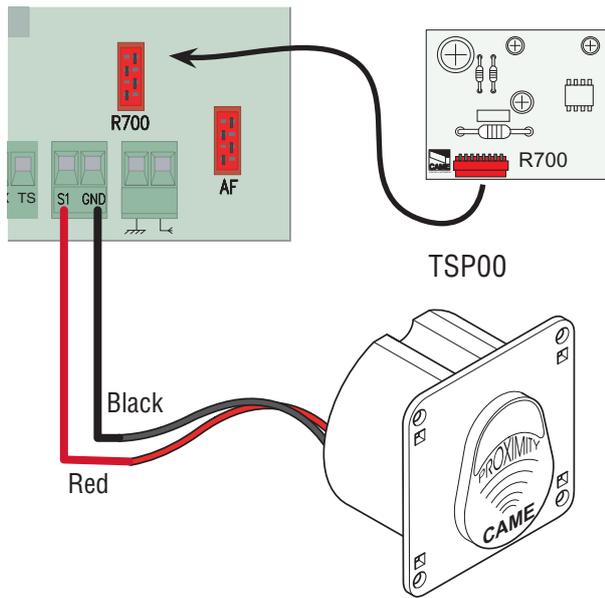
4.3 Electrical connections

DOC and DIR photoelectric cell TEST

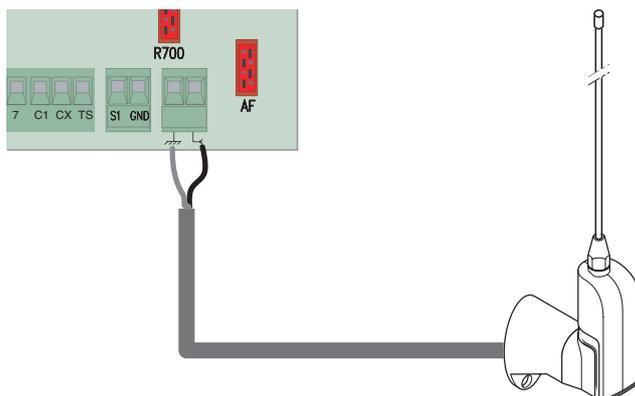


(S1-GND) connection sensory TSP00 (trasponder) LT001 (creeping)

N.B. to make to recognize the sensors to the card, needs to connect the special card of coding (R700)..



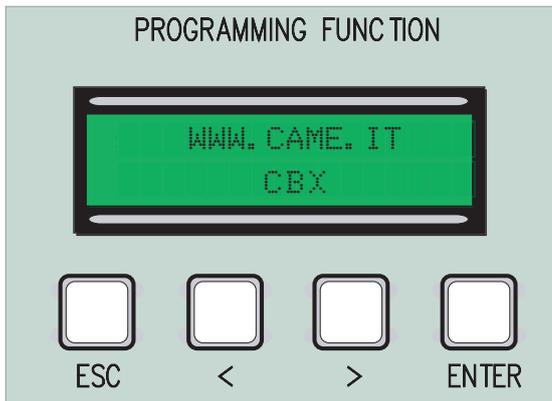
Antenna connection



Tutti i dati e le informazioni qui contenute sono da ritenersi suscettibili di modifica in qualsiasi momento e a nostro giudizio

5 Programming

5.1 Display commands description



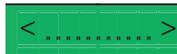
The ENTER button is used for :
- entering the menu
- confirming and saving the default value



The ESC button is used for:
- quitting the menu
- cancelling changes



The < > buttons are for:
- moving from one menu to another
- increasing or decreasing a value

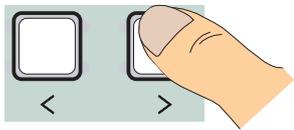


< > are for:
- confirming the currently selected item

5.2 Moving around the menu



To enter the menu, hold down ENTER for at least one second.



To select the menu item, move the arrows until you reach the one required.



Then press ENTER



also for the menus below, move the arrows until you reach the one required..



Then press ENTER



If the <> arrows are pointing on the time, this means it can be changed.



To increase or decrease the value, click on the arrows until you reach the one required.



Then press ENTER to confirm

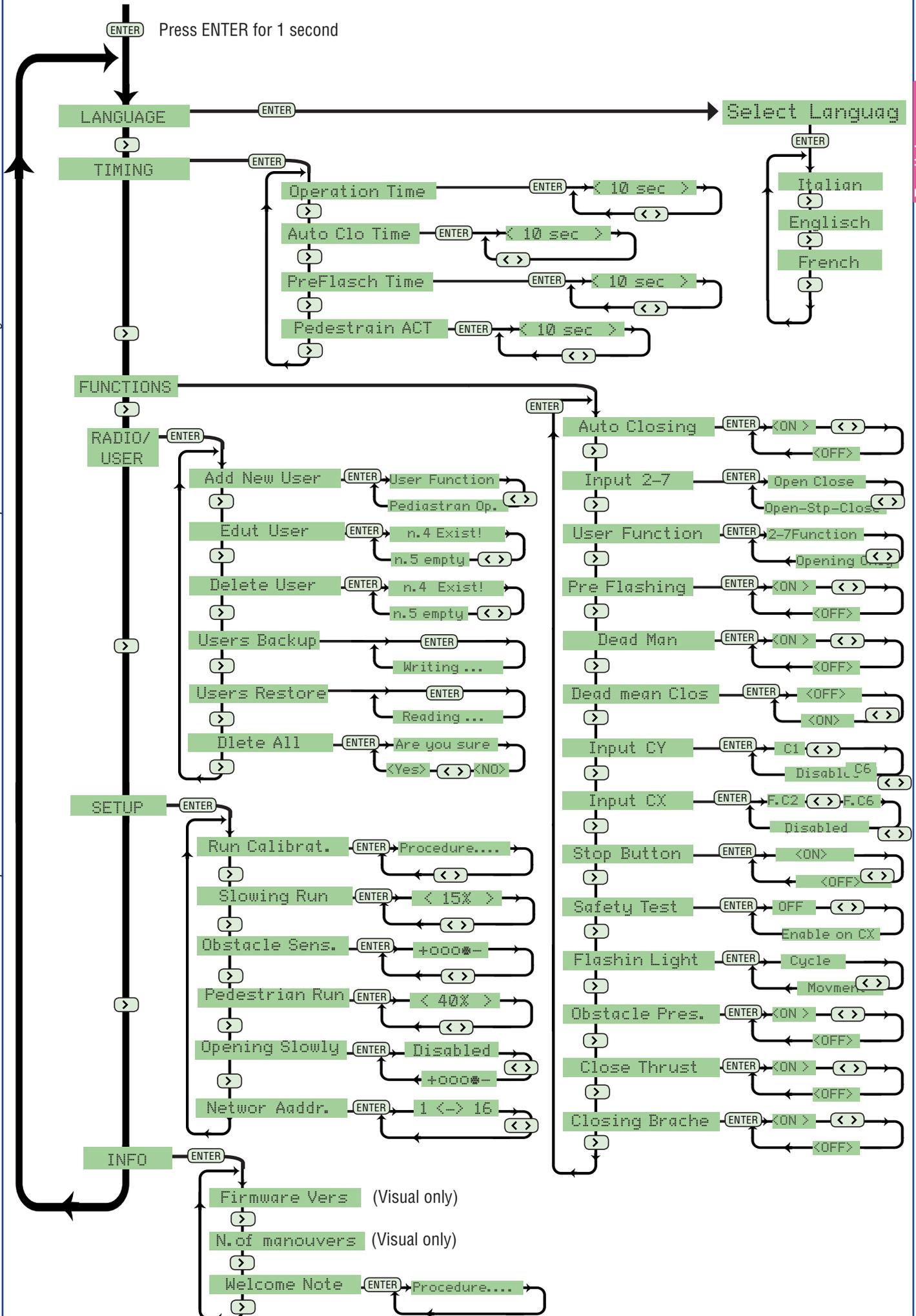
To quit the menu, wait 30 seconds or press ESC, until the initial screen appears



 N.B. when the menu is active, you cannot carry out any manoeuvres.

5.3 Menu structure

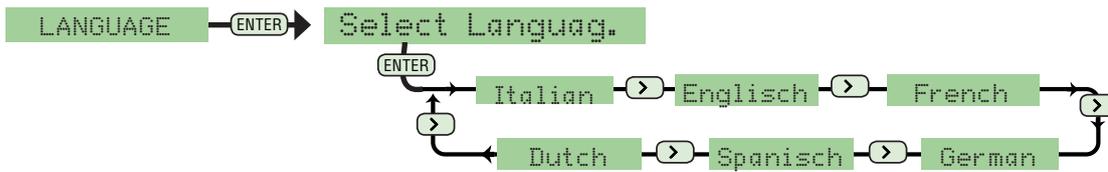
Tutti i dati e le informazioni qui contenute sono da ritenersi suscettibili di modifica in qualsiasi momento e a nostro giudizio



5.4 Menu items

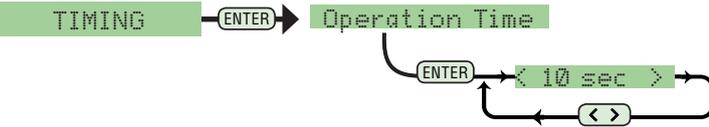
Language

Language selection: select the language required.

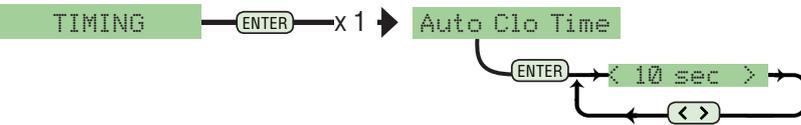


Times

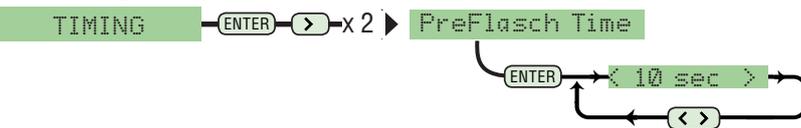
Work time: Time of motor operation in the single opening/closing phase



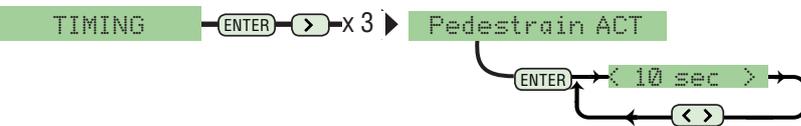
A.C.T.: automatic closing time after an opening command..



Pre-flashing time: pre-flashing duration.

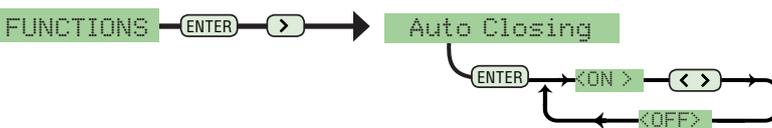


Pedestrian A.C.T.: automatic closing time after an pedestrian opening command

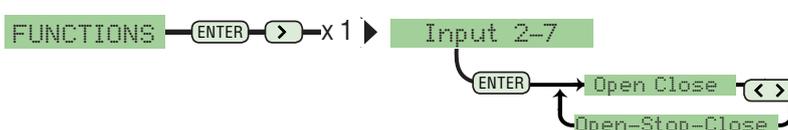


Functions

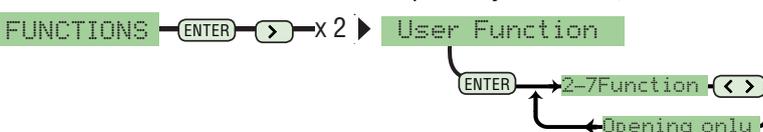
Automatic Closure: Enables/disables the automatic closing function



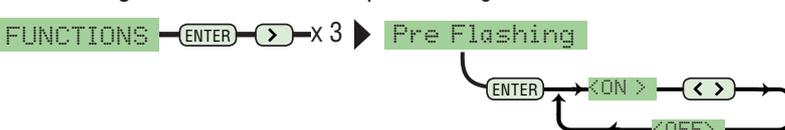
Command 2-7: Sets the sequential- or stepper contact.



User function: Sets to the user or the open-only command, or the function associated to the 2-7 command.



Pre-flashing: Enables/disables the pre-flashing function.



5.4 Menu items

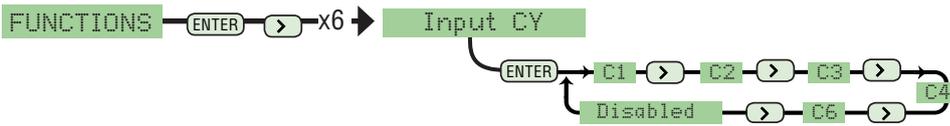
Person Present (Dead Man): Enables/disables person-present function.



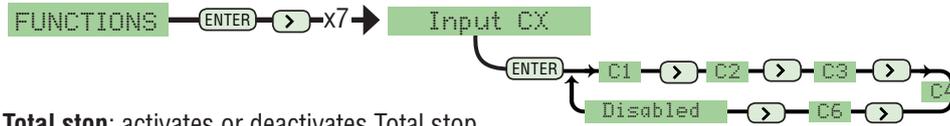
Pres. during closing.(Dead man Clos): Enables/disables the 'Person present during closing' function.



CY Input : NC safety contacts input, with the possibility of associating the following functions: C1: Re-opening during closure, C2: Re-closing during opening, C3: Partial stop, C4: Obstacle delay interval, C6: Re-opening during closure due to sensitive rib.



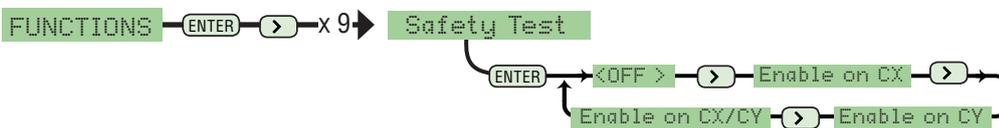
Entrance CX: Input of NC safety contacts with the possibility of associating the following functions:C1: Re-opening during closure, C2: Re-closing during opening, C3: Partial stop, C4: Obstacle delay interval,C6: Re-opening during closure due to sensitive rib.



Total stop: activates or deactivates Total stop.

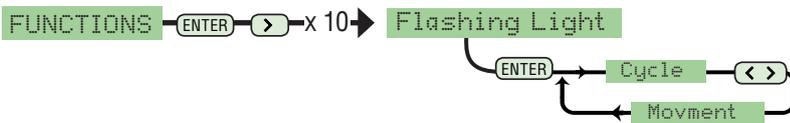


Services test : Check the safety devices are correctly working and select which entrance they are connected to.



Light socket: Socket for connecting the 220V flashing lamp, which can be set to two working modes,

- Cycle: the flashing lamp works until the automation returns to its closed position.
- Movement: The lamp flashes only with the automation moving.



Detects obstacle: During closure with obstacle present, the automation does not move



Close Thrust : Supplementary thrust to optimise closure.



Closing brake : To resist the gate's momentum.



5.4 Menu items

Radio/Users

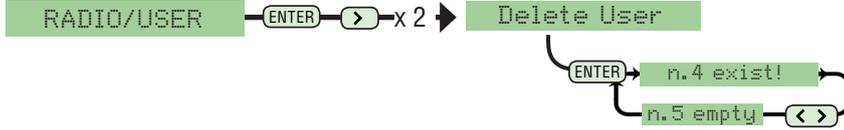
New User: Creates new users



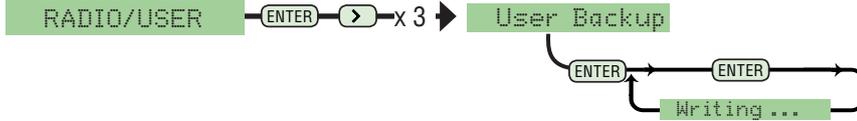
Change User: For changing the functions associated to the user.



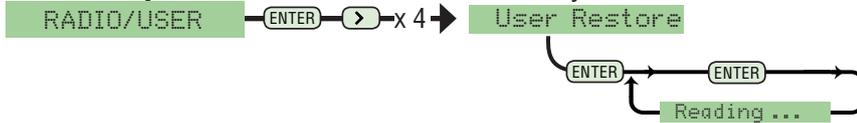
Remove user: Removes a user from the system.



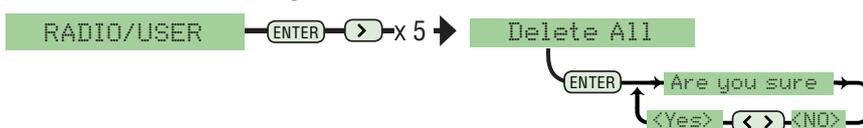
Save memory: Save the users in the memory roll



Load memory: Loads the data saved from the memory roll.



Delete all: Delete all the registered users



Calibrations

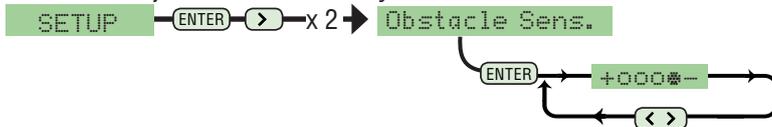
Run calibration: Adjusts the run and the Opening/Closure directions.



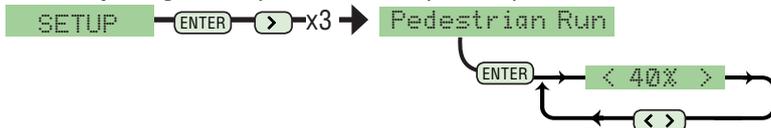
Slow down: Adjusts the slow-down speed.



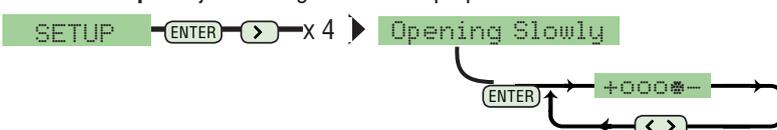
Rib Sens.: Adjusts the rib sensitivity



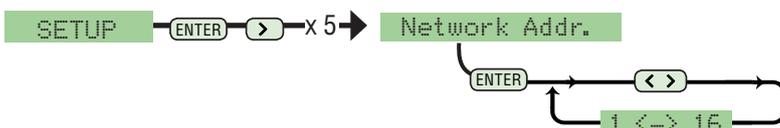
Partial-opening run: Adjusts the run of partial openi



Slow start-up : Adjusts the gate's start-up speed.



Network address.: It assigns a value from 1 to 16 for the recognition by software .



INFO

Version: Displays the Software version **Number of manoeuvres:** Displays the number of manoeuvres carried out..

Start-up Msg.: Sets the start-up message on the display.

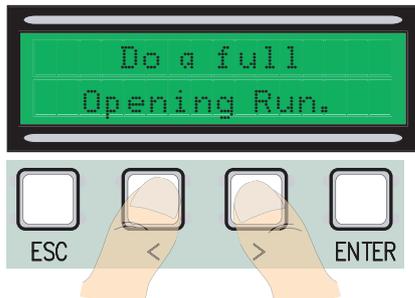


5.5 Run calibration

[1] From the calibrations menu, select Run calibration, then confirm by pressing ENTER



[2] Perform a complete opening run using (< >) until reaching the maximum opening point



[3] Then confirm with ENTER.



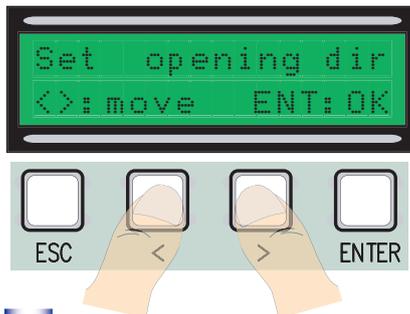
[4] Perform a full closing run by using (< >), until reaching the maximum closing point



[5] Then confirm by pressing ENTER.



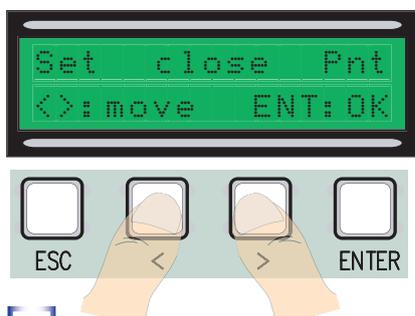
[6] Move the gate in the opening direction for at least 3 s.



[7] Then confirm by pressing ENTER.



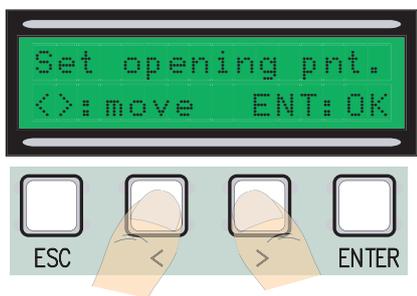
[8] Use the (< >) to move the gate to the closing position.



[9] Then confirm by pressing ENTER.



[10] Use the (< >) move the gate to the opening position.



[11] Then confirm by pressing ENTER.



[12] If the calibration has not been performed correctly, the "reprogram" message will appear and you will return to step 1.

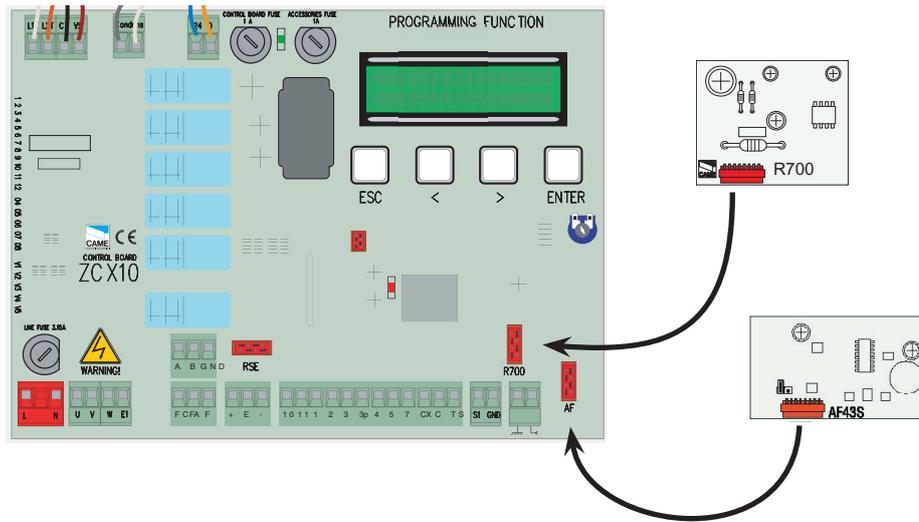
Tutti i dati e le informazioni qui contenute sono da ritenersi suscettibili di modifica in qualsiasi momento e a nostro giudizio

5.6 Decoding boards

To control the board by remote control or pass, you must first connect the appropriate decoding board: R700 for the passes and AF for the radio-controls.

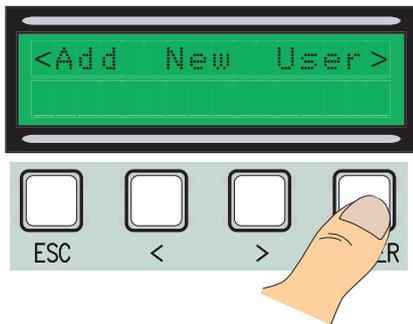


N.B. if you don't install the appropriate decoding board, you won't be able to add any users.

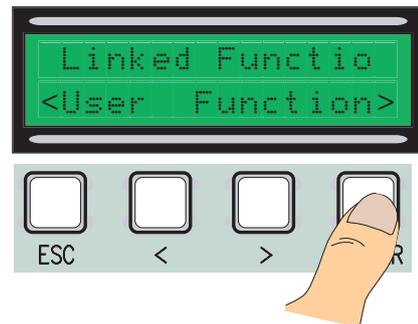


5.7 Adding users.

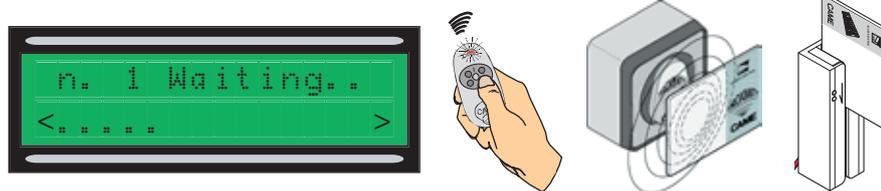
1 From the Radio/Users menu, select New User and confirm with ENTER



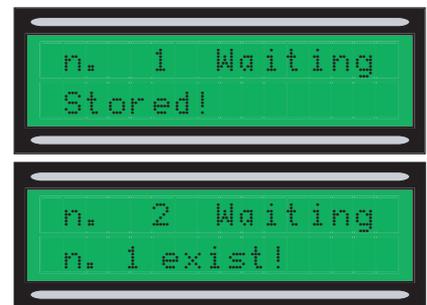
2 Select the function to associate to the user between User function and Partial opening, then confirm with ENTER...



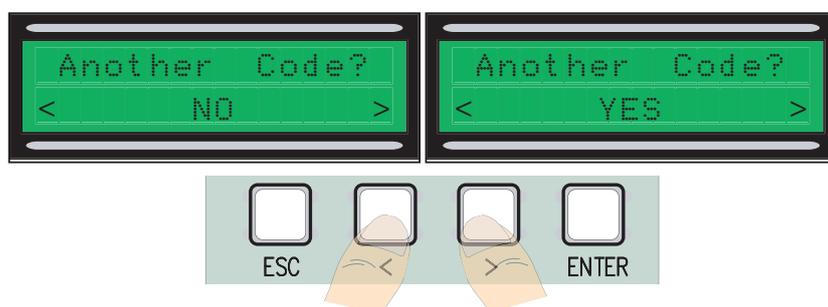
3 ..you will be prompted for a code that may be entered by radio-control, swipe card or transponder, depending on the type of sensors installed in the system in question.



as soon as the code is read from the remote control or pass, the message "Saved" will appear if the code has not already been used, otherwise you will be notified that it already exists.



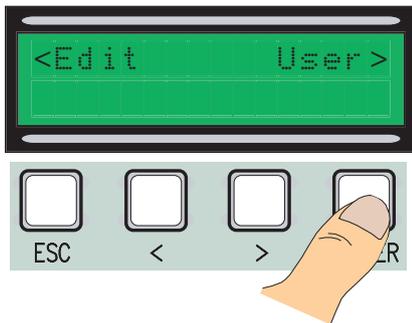
4 Whichever the case, a dialog will appear prompting you to enter a new code or number.



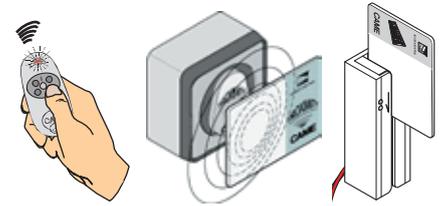
By selecting NO, the procedure for adding users will end while by selecting YES, the procedure goes back to step 3

5.8 Changing users (user functions)

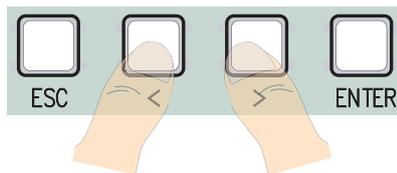
1 From the Radio/Users menu, select Changing users, confirm by pressing ENTER



2 Select the user whose function you want to change by the arrows (<>), or by pressing the transmitter button associated to it, or by swiping the pass over the sensor, and confirming with ENTER.

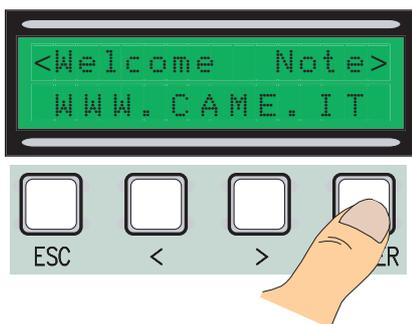


3 select the function you want to associate to the user and confirm with ENTER
NB Confirming with ENTER will take you back to the "Changing users" dialog..



5.9 Change start-up message.

1 From the INFO menu, select Start-up Msg., confirm with ENTER



The ENTER button is used for:
- Moving the cursor to the right
- If pressed for more than 3 secs., to confirm



The ESC button is used for:
- Moving the cursor to the left
- If pressed for more than 3 secs., for quitting



The <> buttons are for:
- selecting the desired letter or the empty space

2 Move around as described above until you obtain the desired message, remembering that the maximum number of characters is 42 (16 per line). after finishing writing the message, press ENTER for at least 3 secs.



5.10 Error messages

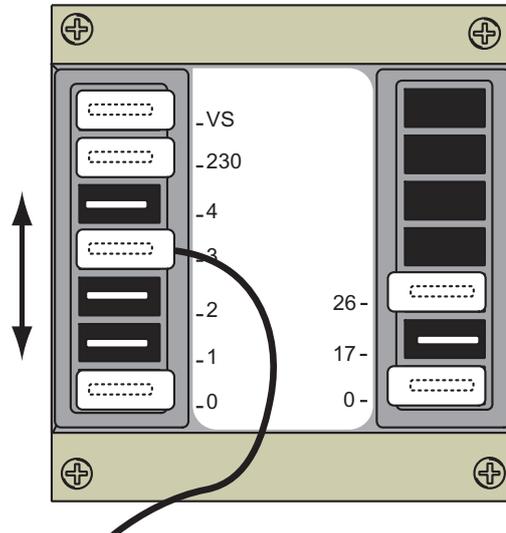
“STOP Contact Open”: Check the connection.

“Services Test!!!”: Safety device malfunction

“Encoder malfunction: check connection.

5.11 Torque change

To alter the torque, move the fast-on marked with black string to one of the 4 remaining positions;
0 min. - 4 max



6 Technical specifications

Electrical characteristics

Power-supply: 230V AC - 50HZ

Absorption in standby mode: 50 mA

Max. rated power of 24V accessories: 20W

Max. rated power of 230V accessories: 25W

Protection level: IP54

Max no. of codes that can be saved: 250

Control systems

Supports CAME 12/18/24 BIT radio and Rolling Code systems (the radio system requires the installation of an HF interface while for Rolling Code an HF43S is enough).

And 125 KHz transponder systems (TSP00).

7 Conformity declaration



MANUFACTURER'S DECLARATION

As per Enclosure II B of Machinery Directive 98/37/CE

Enclosed with the technical documentation (the original copy of the Declaration is available on request)

Date of the present declaration 07/12/2001

The representatives of

CAME Cancelli Automatici S.p.A.
via Martiri della Libertà, 15
31030 Dosson di Casier - Treviso - ITALY
tel (+39) 0422 4940 - fax (+39) 0422 4941
internet: www.came.it - e-mail: info@came.it

Hereby declare, under their own responsibility, that the product/s called ...

ZCX10

Also, they furthermore represent and warrant that the product/s that are the subject of the present Declaration are manufactured in the respect of the following main harmonized provisions:

EN 292 PART 1 AND 2
EN 12453
EN 12445
EN 12978
EN 60335 - 1
EN 60204 - 1
EN 61000 - 6 - 2
EN 61000 - 4 - 4
EN 61000 - 4 - 5

MACHINERY SAFETY.
INDUSTRIAL, COMMERCIAL AND OTHER CLOSING MECHANISMS.
INDUSTRIAL, COMMERCIAL AND OTHER CLOSING MECHANISMS.
SAFETY DEVICES FOR POWER OPERATED DOORS AND GATES
SAFETY IN APPARATUS FOR HOME USE.
MACHINERY SAFETY.
ELECTROMAGNETIC COMPATIBILITY.
ELECTROMAGNETIC COMPATIBILITY.
ELECTROMAGNETIC COMPATIBILITY.

IMPORTANT CAUTION!

It is forbidden to market/use product/s that are the subject of this declaration before completing and/or incorporating them in total compliance with the provisions of Machinery Directive 98/37/CE

Signatures of the Representatives

TECHNICAL MANAGER
Mr. Gianni Michielan

MANAGING DIRECTOR
Mr. Paolo Menuzzo

... comply with the Italian National Legal Provisions that transpose the following Community Directives (where specifically applicable):
MACHINERY DIRECTIVE 98/37/CE
LOW VOLTAGE DIRECTIVE 73/23/EEC - 93/68/EEC
ELECTROMAGNETIC COMPATIBILITY DIRECTIVE 89/336/EEC - 92/31/EEC
R&TTE DIRECTIVE 1999/5/CE