



CE

119G56EN

OPERATOR
FOR STREET BARRIERS

SERIES
GARD



INSTALLATION MANUAL

G12000



English

EN



WARNING!

Important instructions for the safety of people:

READ CAREFULLY!



Foreword

• Use of the products must be restricted to its intended use (i.e. that for which it was expressly built for). Any other use is to be considered dangerous. Came Cancelli Automatici S.p.A. is not liable for any damage resulting from improper, wrongful or unreasonable use • Keep these warnings with the installation and use manuals issued with the automated system.

Before installing

(preliminary check: in case of a negative outcome, do not proceed before having complied with the safety obligations)

• Make sure that the parts you intend to automate are in good working order, and that they are properly balanced and aligned. Also, make sure that proper mechanical stops are already in place • If the operator will be installed at a height of less than 2.5 m from the ground or other access level, check whether you will need any protections and/or warnings • Any gate leaves, fitted with pedestrian entrances, onto which you will install an operator, must have a blocking mechanism when the gate is in motion • Make sure that the opening of the automated gate is not an entrapment hazard as regards any surrounding fixed parts • Do not mount the operator upside down or onto any elements that may fold under its weight. If needed, add suitable reinforcements at the points where it is secured • Do not install onto gates on either an upward or downward slope (i.e. that are not on flat, level ground) • Check that any lawn watering devices will not wet the gearmotor from the bottom up.

Installation

• Carefully section off the entire site to prevent unauthorised access, especially by minors and children • Be careful when handling operators that weigh more than 20 Kg (see installation manual). In such cases, employ proper weight handling safety equipment • All opening commands (e.g. buttons, key selectors, magnetic detectors, etc.) must be installed at least 1.85 m from the gate's area of operation perimeter - or where they cannot be reached from the outside of the gate. Also, the direct commands (e.g. push button, or proximity devices, etc.) must be installed at a height of at least 1.5 m and must not be accessible to the public • All 'maintained action' commands, must be placed where the moving gate leaves, transit areas and driveways are completely visible • If missing, apply a permanent label that shows the position of the release mechanism • Before delivering to the client, verify that the system is EN 12453 (impact test) standard compliant. Make sure that the operator has been properly adjusted and that the safety and protection devices, as well as the manual release

are working properly • Where necessary and in plain sight, apply the Warning Signs (e.g. gate plate).

Special instructions and advice for users

• Keep the gate's area of operation clean and clear of any obstacles. Trim any vegetation that may interfere with the photocells • Do not allow children to play with the fixed command devices, or in the gate's area of operation. Keep any remote control devices (i.e. transmitters) away from the children as well • Frequently check the system, to see whether any anomalies or signs of wear and tear appear on the moving parts, on the component parts, on the securing points, on the cables and any accessible connections. Keep any joints (i.e. hinges) lubricated and clean, and do the same where friction may occur (i.e. slide rails) • Perform functional tests on photocells and sensitive edges, every six months. Keep glass panels constantly clean (use a slightly water-moistened cloth; do not use solvents or any other chemical products) • If the system requires repairs or modifications, release the operator and do not use it until safety conditions have been restored • Cut off the power supply before releasing the operator for manual openings. See instructions • Users are FORBIDDEN to carry out ANY ACTIONS THAT THEY HAVE NOT BEEN EXPRESSLY ASKED TO DO OR SO INDICATED in the manuals. Any repairs, modifications to the settings and extraordinary maintenance MUST BE DONE BY THE TECHNICAL ASSISTANCE STAFF • On the periodic maintenance log, note down the checks you have done.

Special instructions and advice for all

• Avoid working near the hinges or moving mechanical parts • Stay clear of the gate's area of operation when in motion • Do not resist the direction of movement of the gate; this may present a safety hazard • At all times be extremely careful about dangerous points that must be indicated by proper pictograms and/or black and yellow stripes • When using a selector or command in 'maintained action' mode, keep checking that there are no people in the area of operation of the moving parts. Do this until you release the command • The gate may move at any time without warning • Always cut the power when cleaning performing maintenance.



Came Cancelli Automatici s.p.a.

address	Via Martiri della Libertà	Street n.	15	postal code	31030
location	Dosson di Casier	province	Treviso	state	Italia

DECLARES THAT THE PARTLY COMPLETED MACHINERY

AUTOMATIC ROAD BARRIERS

G2080Z; G2080IZ; G2081Z;
 G4040Z; G4040IZ; G4041Z;
 G2500; G2500N; G2510;
 G3250; G3750; G3751;
 G3000DX; G3000SX; G3000IDX; G3000ISX;
 G4000; G4000C; G4000D; G4000E; G4000N; G4001; G4001E; G4010; G4011;
 G6000; G6000B; G6000E; G6001; G6001E; G6010; G6011;
 G6500; G6501;
 G12000; G12000A; G12000S
 G02040; G04060; G06080
 G02801; G02803;
 G03755DX; G03755SX

MEET THE APPLICABLE ESSENTIAL REQUIREMENTS

1.1.3 - 1.1.5 - 1.2.1 - 1.2.2 - 1.3.2 - 1.3.7 - 1.3.8.1 - 1.4.1 - 1.4.2 - 1.4.2.1 - 1.5.1 - 1.5.6 - 1.5.8 - 1.5.9 - 1.5.13 - 1.6.1 - 1.6.3 - 1.6.4 - 1.7.1 - 1.7.2 - 1.7.4

COMPLIES WITH THE PROVISIONS OF THE FOLLOWING DIRECTIVES

DIRECTIVE 2006/42/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
 of 17 May 2006 on machinery, and amending Directive 95/16/EC.

DIRECTIVE 2004/108/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
 of 15 December 2004 on the approximation of the laws of the Member States relating to electromagnetic compatibility.

PERSON AUTHORISED TO COMPILE THE RELEVANT TECHNICAL DOCUMENTATION

Came Cancelli Automatici s.p.a.

address	Via Martiri della Libertà	Street n.	15	postal code	31030
location	Dosson di Casier	province	Treviso	state	Italia

The pertinent technical documentation has been drawn up in compliance with attached document IIB

Came Cancelli Automatici S.p.A., following a duly motivated request from the national authorities, undertakes to provide information related to the quasi machines,

and FORBIDS

commissioning of the above mentioned until such moment when the final machine into which they must be incorporated, has been declared compliant, if pertinent, to 2006/42/CE.

Dosson di Casier (TV)
 29 september 2011

Gianni Michielan
 Managing Director

DDI B EN **G001a** ver. 4.2 01 February 2011
 Translation of the Declaration in the original language

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
 info@came.it - www.came.com

Cap. Soc. 1.610.000,00 € - C.F. e P.I. 03481280265 - VAT IT 03481280265 - REA TV 275359 - Reg Imp. TV 03481280265

“IMPORTANT SAFETY INSTALLATION INSTRUCTIONS”

“WARNING: IMPROPER INSTALLATION MAY RESULT IN SERIOUS HARM. PLEASE FOLLOW ALL INSTALLATION INSTRUCTIONS”

“THIS MANUAL IS INTENDED ONLY FOR PROFESSIONAL INSTALLERS OR OTHER COMPETENT INDIVIDUALS”



Legend of symbols



This symbol shows parts which must be read with care.



This symbol means the parts which describe safety issues.



This symbol tells you what to tell the end-user.

Intended use and limits to use

2.1 Intended use

The G12000 barrier is engineered and built by Came Cancelli Automatici S.p.A. for controlling passages of extra large vehicles.



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

2.2 Limitations to use

Passage width is up to 12 metres and opening time is 10 seconds.

3 Reference standards

Came Cancelli Automatici employs an ISO 9001 certified quality management system and an ISO 14001 environmental management system. Came only engineers and manufactures in Italy.

This product is compliant with: *see statement of compliance*.

4 Description

4.1 Barrier

Additional accessories

001G0121 White-varnished, aluminium tube arm consisting of:

1) Fixed support

1 tube arm L = 6200 mm \varnothing 120 mm

1 tube arm L = 6000 mm \varnothing 100 mm

1 accessory for extending the arm.

Optional accessories:

002LB38 Card for connecting three 12V - 7Ah batteries;

001G0461 Package of red reflective strips.

Important! Make sure that the command and safety equipment and accessories are CAME originals; this ensures easy and safe installation and maintenance for your system.

4.2 Technical data

Power supply: 230 V AC 50/60 Hz

Motor power supply: 24 V DC 50 / 60 Hz

Maximum draw: 1.3 A (230 V) / 15 A (24 V)

Power: 300 W

Maximum Torque: 600 Nm

Reduction ratio: 1/202

Opening interval: 10 S

Duty cycle: 50%

Protection rating: IP54

Weight: 783 Kg *

Insulation class: I

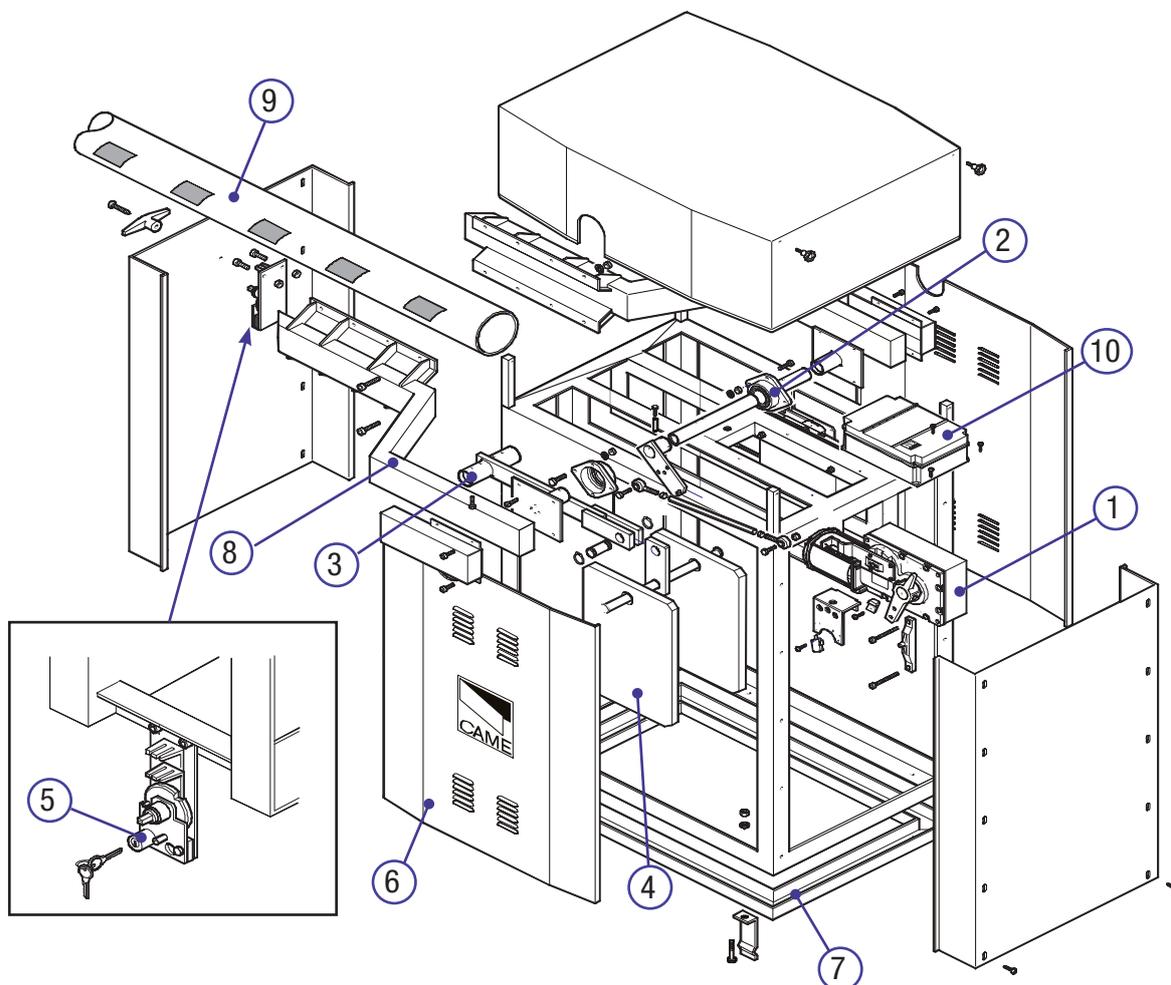
Working temperature:



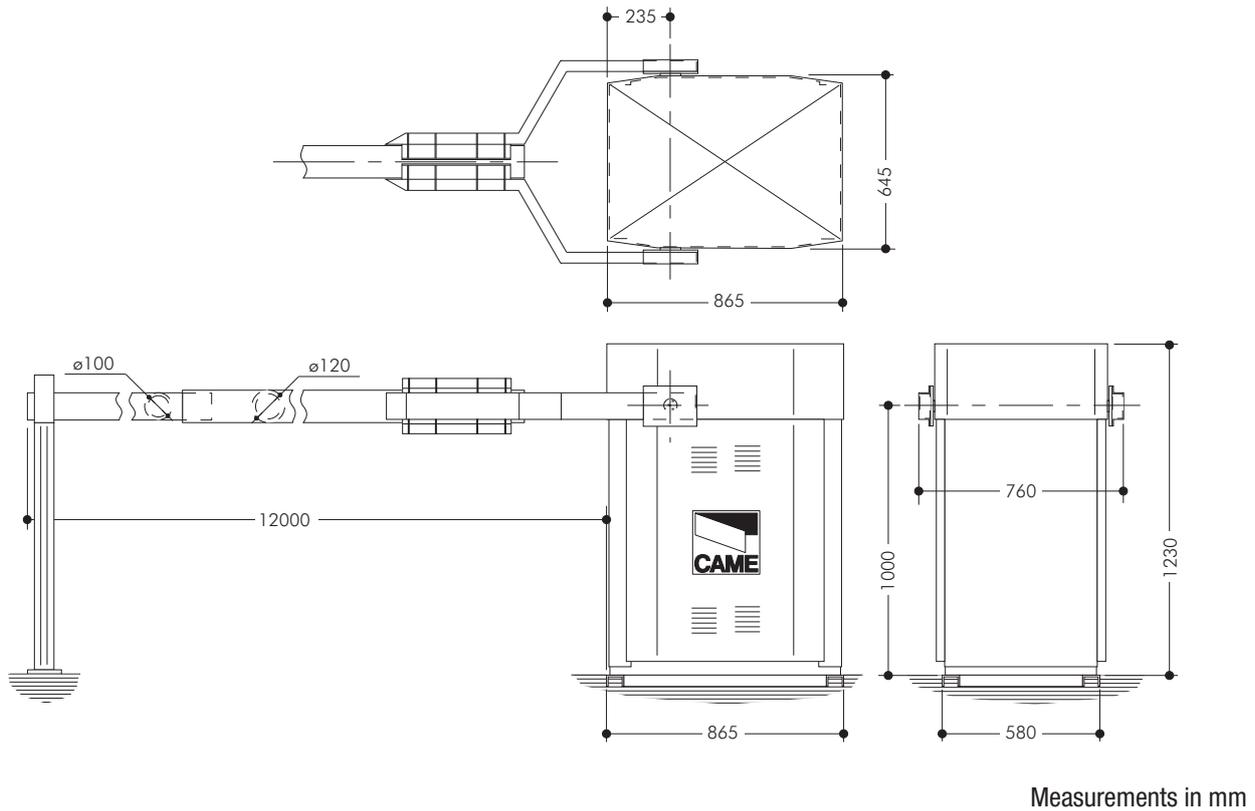
* G12000 Barrier's structural weight = 250 Kg - Counter weight plates' weight = 500 Kg - 001G0121 Barrier-arm's weight = 33 Kg

4.3 Description of parts

1. Gearmotors powered by 24 V DC (irreversible gearmotor with die-cast aluminium box; worm-screw based reduction system with permanent fluid grease lubrication).
2. Forged, galvanised steel transmission levers. adjusting rods in hexagonal tubing; self-lubricating joints.
3. Drive shaft made of tempered C40 steel, fitted onto mono-block supports with terminal flanges to fasten the barrier-arm fork.
4. Modular counter-weight system, with 25 kg rectangular plates;
5. Manual release, with PVC handle and cord on a self-lubricating sheath; security lock.
6. Cabinet: supporting structure in profiled steel and outer cladding in 25/10 press-bent sheet metal; both galvanised and varnished with RAL 2004.
7. U-shaped counter-base profile, bolts and structure fastener.
8. Barrier-arm attaching fork made of galvanised steel and black varnished in RAL 9005; supplied in two ready-to-assemble symmetrical parts.
9. Aluminium barrier-arm, 6060 alloy, white varnished in RAL 9010; supplied in two circular (\varnothing 120 e \varnothing 100 mm) section trunks to assemble in the measurement you wish
10. Control panel: ABS box protection rated at IP54, fitted horizontally.



4.4 Dimensions



5 Installation

! Installation must be carried by skilled, qualified technicians in accordance with current regulations.

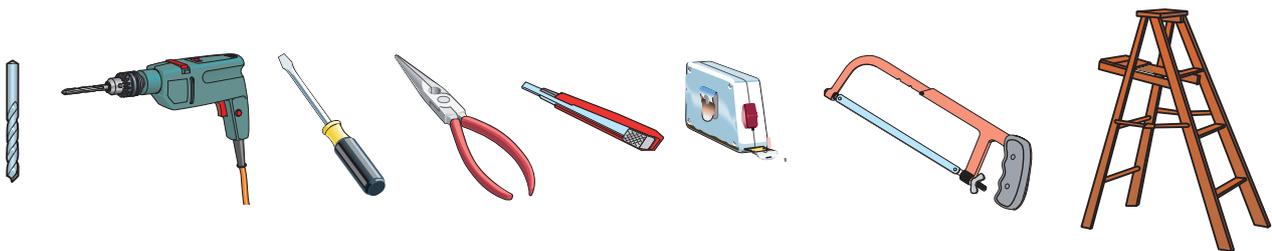
5.1 Preliminary checks

! Before beginning to install, the following is necessary:

- Check that installing the operator does not create any hazardous situations;
- Set up a suitable omni polar cut-off device, with distances greater than 3 mm between contacts, with sectioned power source;
-  Check that any connections inside the container (made for continuity purposes of the protective circuit) be fitted with extra insulation compared to other internal conductive parts;
- Set up proper conduits and electric cable raceways, making sure these are protected from any mechanical damage

5.2 Tools and equipment

Make sure you have all the tools and materials needed to carry out the installation in total safety and in accordance with current regulations. The figure shows some examples of the tools needed by installers.



5.3 Cable types and minimum thickness

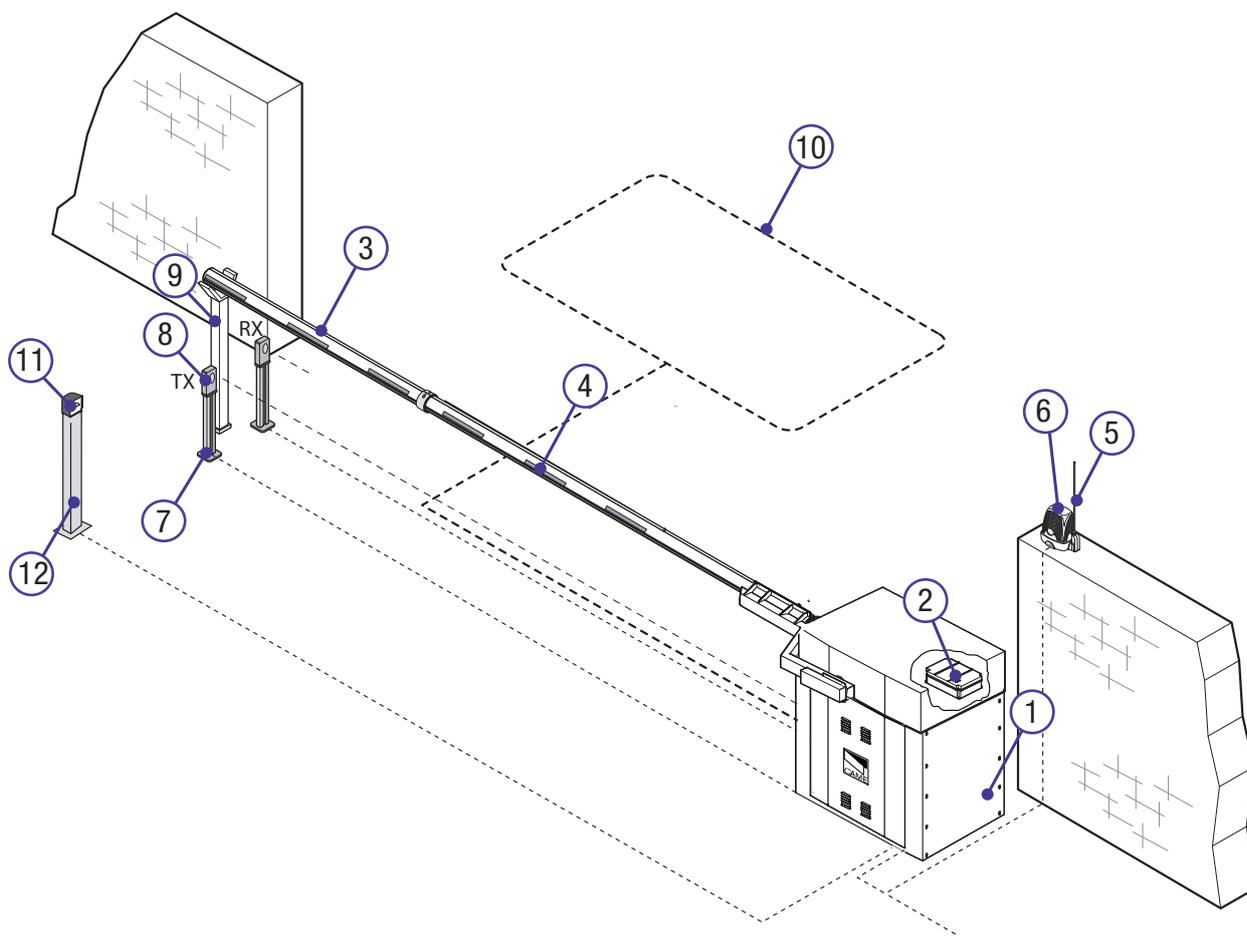
Connection for	Type of cable	Cable length 1 < 10 m	Cable length 10 < 20 m	Cable length 20 < 30 m
Power supply 230 V 2F	FROR CEI 20-22 CEI EN 50267-2-1	3G x 1.5 mm ²	3G x 2.5 mm ²	3G x 4 mm ²
Photocell transmitters		2 x 0.5 mm ²	2 x 0.5 mm ²	2 x 0.5 mm ²
Photocell receivers		4 x 0.5 mm ²	4 x 0.5 mm ²	4 x 0.5 mm ²
Accessories power supply 24 V DC		2 x 0.5 mm ²	2 x 0.5 mm ²	2 x 1 mm ²
Safety and command 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 cables are of a different length than that shown in the table, determine the cable section based on the actual draw and the number of connected devices and according to what is set forth in the CEI EN 60204-1 code of regulations.

For connections featuring several loads on the same line (that is, sequential ones), the dimensions shown on the table must be reconsidered according to the total draw and actual distances.

5.4 Standard installation

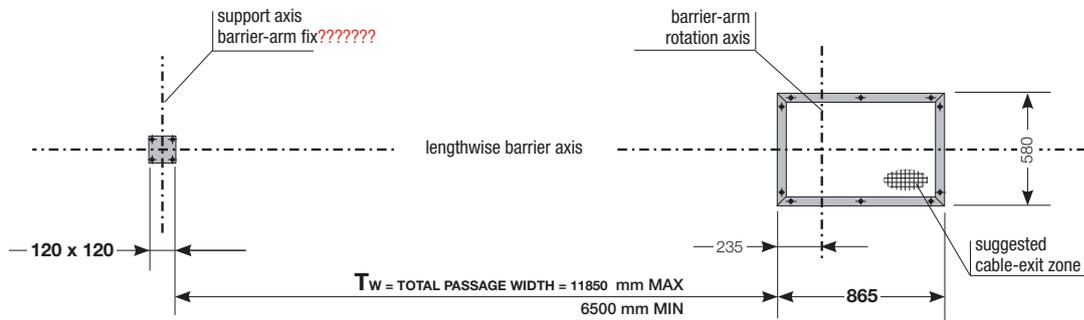
1. G12000 barrier
2. Control panel
3. Aluminium barrier arm
4. Red reflective strips
5. Antenna
6. Flashing light
7. Small post for photocells
8. Photocells
9. Fixed support
10. Magnetic sensor
11. Keypad selectors
12. Column for selector-switch



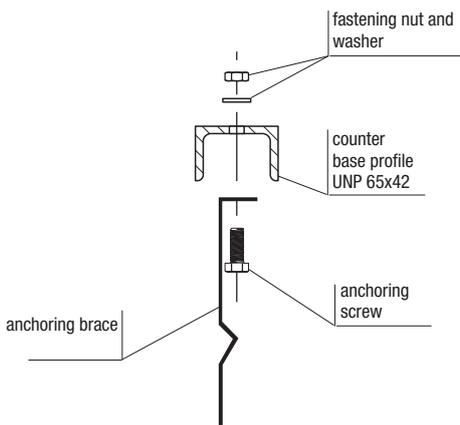
5.5 Preparing the base

! The following illustrations are just examples, in that the space for securing the operator and accessories depends on the overall measurements. It is up to the installer to choose the most suited solution.

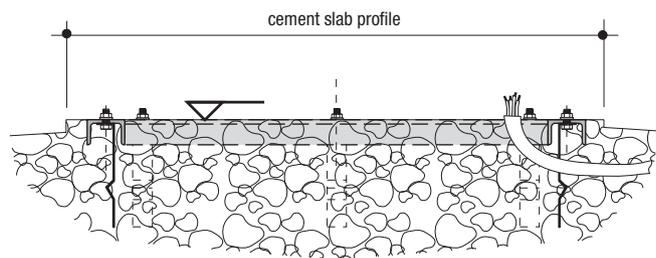
a) Trace the lengthwise and perpendicular axis of the barrier by locating the right positions of the arm's fixed support and that of the cabinet.



b) Detach the cabinet counter-base and mount the anchoring braces, while protecting the protruding upper threads and/or removable tape).



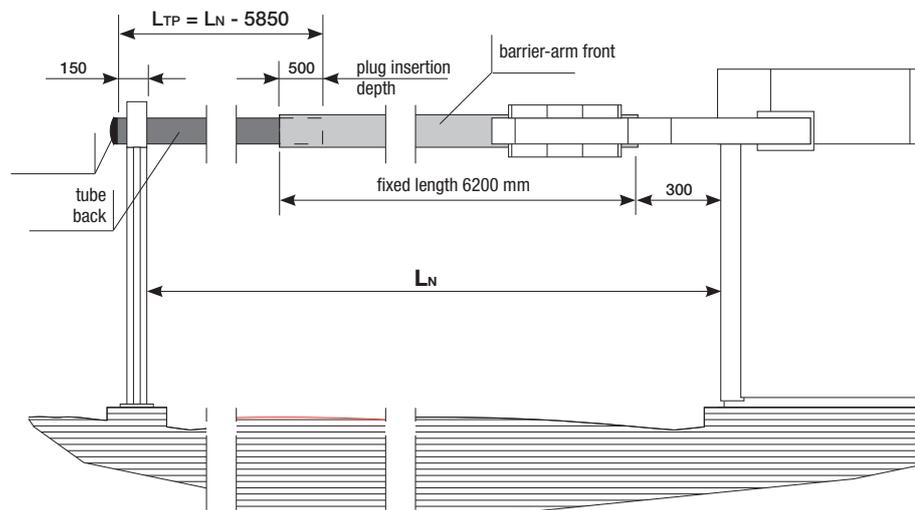
c) Sink the whole lot into the cement, level everything, while making sure the electric cables extend out as shown.



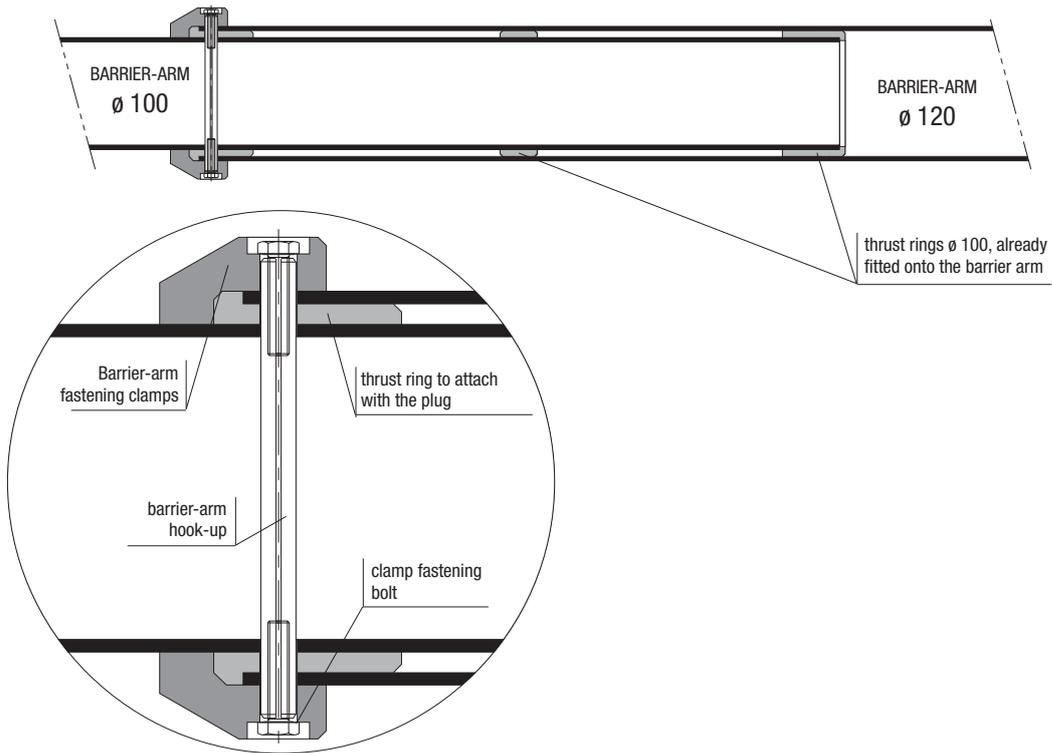
5.5 Installing the automation

1. Pre-assembling the barrier-arm

a) Establish the length LTP of the $\varnothing 100$ mm barrier using the given formula; Cut to measure and fit the end-cap

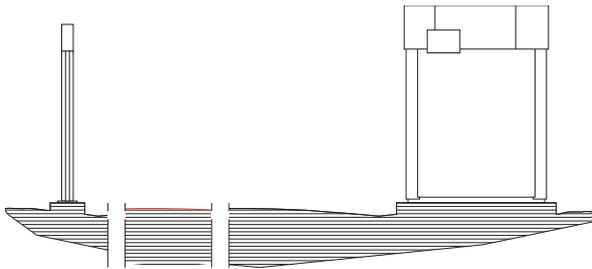


b) Assemble the barrier-arm by fitting the $\varnothing 100$ one into the $\varnothing 120$ mm one (fixed measurement 6200 mm) and inserting the centering plug; fit and fasten the two fastening clamps;

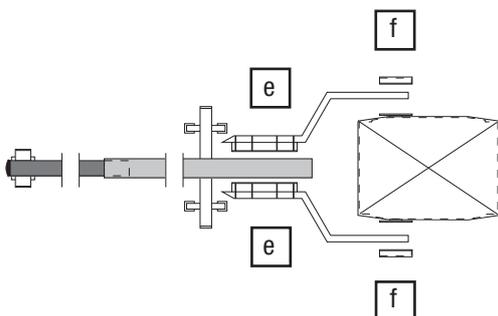


2. Assembling the barrier arm

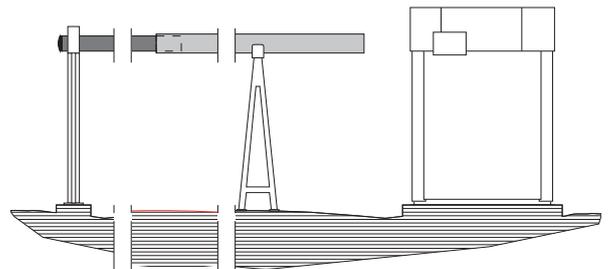
- a) Raise cover and sides, slide them out from the bottom to remove both from the cabinet; clean the cement slabs and free the bolts from the clamp/brackets by removing any protection and the nuts.
- b) Position the cabinet and fasten it against the counter base.
- c) Position and fasten the barrier-arm fixed support, perfectly aligned lengthwise to the cabinet.



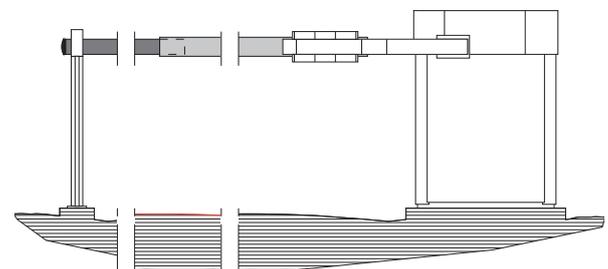
- e) Assemble the v-rest by joining the two tube-clamps on the barrier-arm, leaving the nuts loose.
- f) Fasten the barrier-arm to the shaft's end plates but leave the bolts loose.



d) With the help of a trestle and the

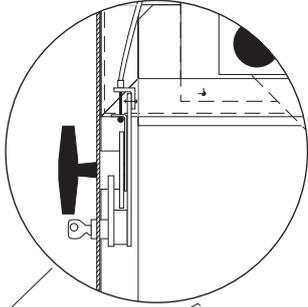


g) Check and adjust any unlevelled parts, then definitively fasten the barrier-arm and v-rest.

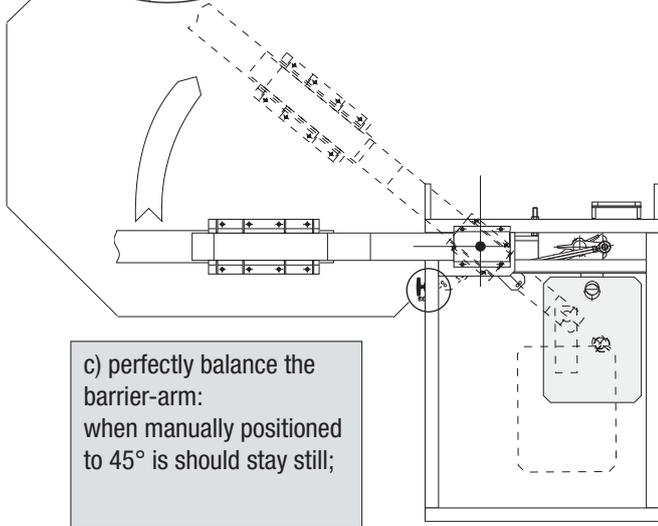
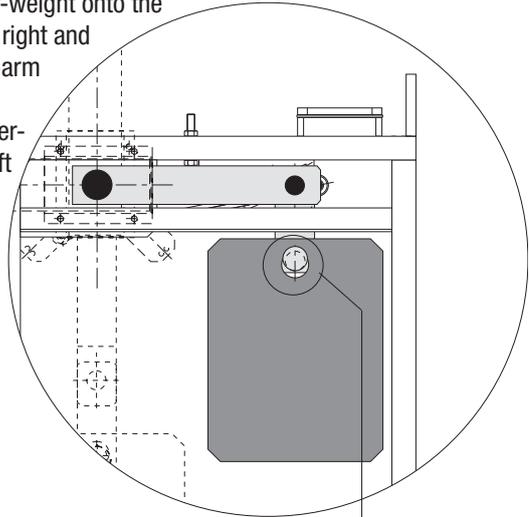


3. Assembling the counter-weights, adjusting the barrier-arm balance

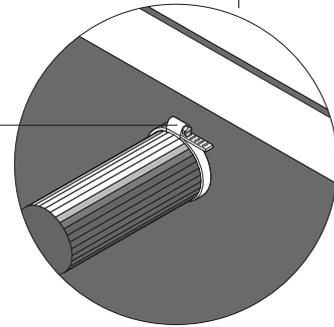
a) assemble the handle; turn the key and the handle to release the gearmotors;



b) place the counter-weight onto the support, alternating right and left until the barrier-arm starts to rise. *
 N.B.: if some counter-weight plates are left unused, you need to fasten them in place with a strip, to prevent them from falling out during movement.

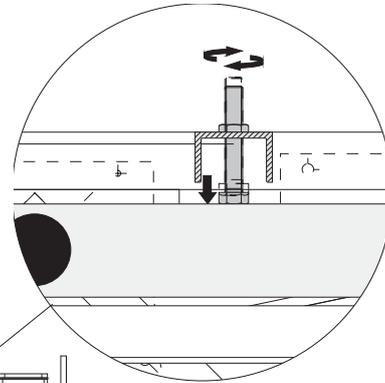


Strip

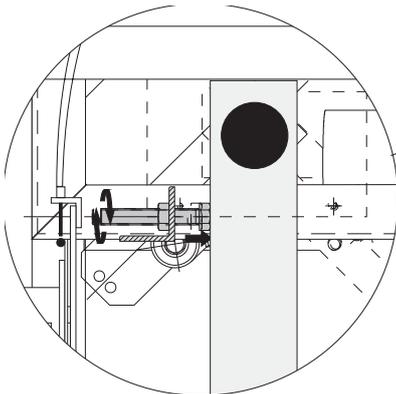


c) perfectly balance the barrier-arm: when manually positioned to 45° it should stay still;

d) set the vertical mechanical stop, by adjusting the barrier arm's opening angle so that it does not extend over 90°;



e) set the horizontal mechanical-stop when the barrier arm is lowered;



* For proper balancing you may need to cut one of the counter-weight plates

6 Description of the control panel

Designed and made by CAME Cancelli Automatici S.p.A. Power supply: 230 V AC, max frequency 50/60 Hz.

the command devices and accessories are powered by 24 V. **Warning!** The accessories must not exceed 40 W overall.

The control panel features an amperometric device which constantly controls the motor-thrust data.

When the barrier arm runs into an obstacle, the amperometric sensor detects an overload in the thrust and acts on the movement:

- when opening: by stopping the arm;
- when closing: the barrier arm inverts its direction of travel until it fully opens, triggering the automatic closing.

Warning! after three consecutive inversions, the barrier-arm stay upright, and excluded the automatic closing: to close, use the transmitter of closing button.

All connections are protected by quick fuses.

The card handles the following features:

- automatic closing after an opening command;
- immediate closing;
- Pre flashing by the flashing light;
- obstacle detections when gate is not moving at any point;
- reopening while closing
- Slave feature;
- increased braking action of the barrier arm.

The available command modes are:

- opening/closing;
- opening/closing with maintained action;
- opening;
- total stop.

Specific trimmers regulate:

- the working time for automatic closing;
- the amperometric device's detection sensitivity;

Optional accessories:

- barrier-arm open light, signals that the barrier-arm is open - switches off at end of closing working-time;
- The LB38 card, is for emergency operation with batteries (three 12 V - 7 Ah) in case of power outages. Once power is restored, it also recharges the batteries (see technical literature).



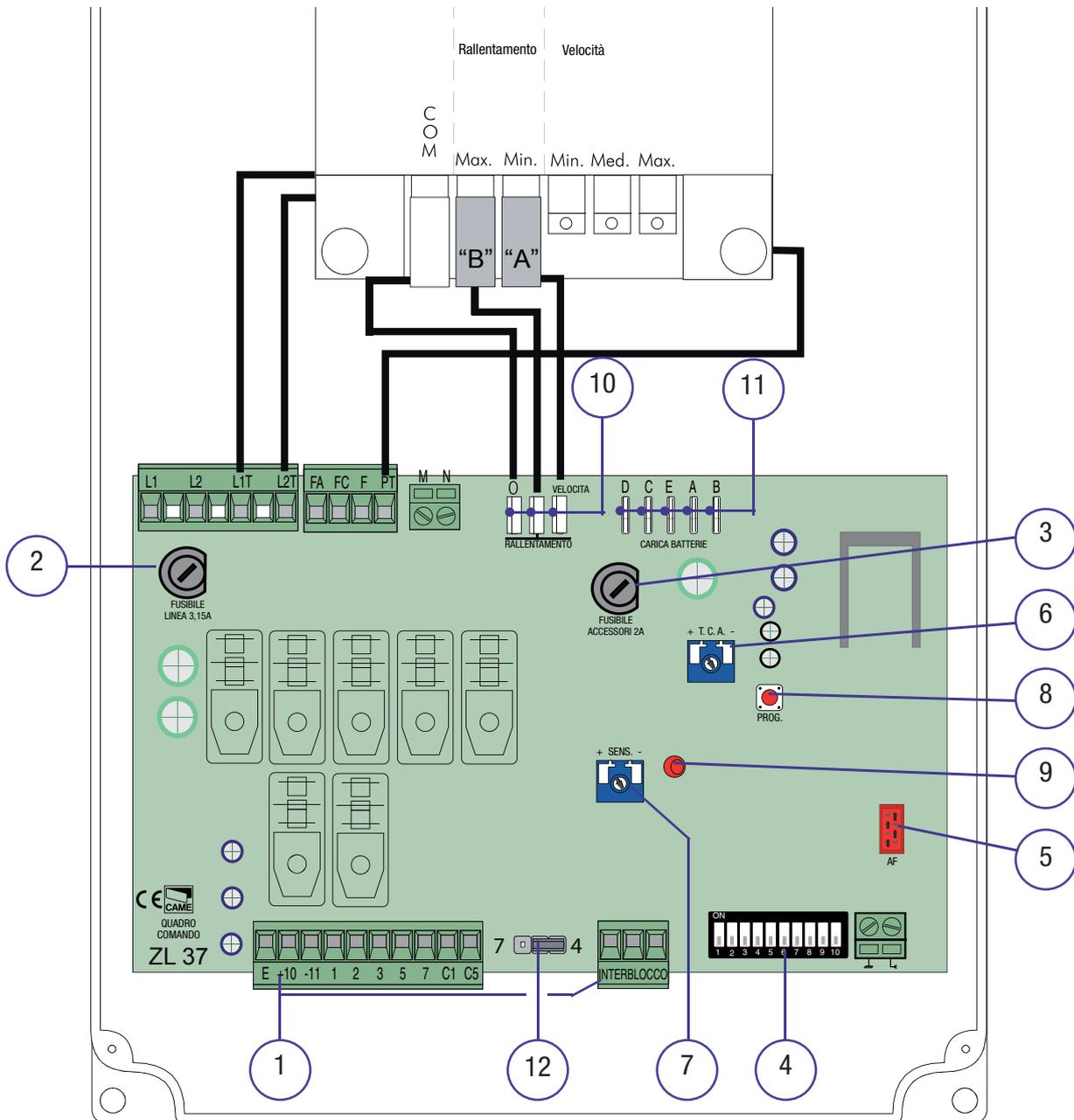
WARNING: before doing any work inside the equipment, cut off the main power supply and disconnect the three 12 V - 3 Ah batteries (if they are connected)

TECHNICAL DATA	
line voltage	230 V - 50/60 Hz
Maximum allowed power load	300 W
power draw	15 A max.
maximum power for 24 V accessories	40 W
circuit insulation class	□
container material	ABS

FUSE TABLE	
to protect:	fuses for:
Electronic board (line)	3.15A
Accessories	A 2
Command devices (control unit)	630 mA-F

6.1 Main components

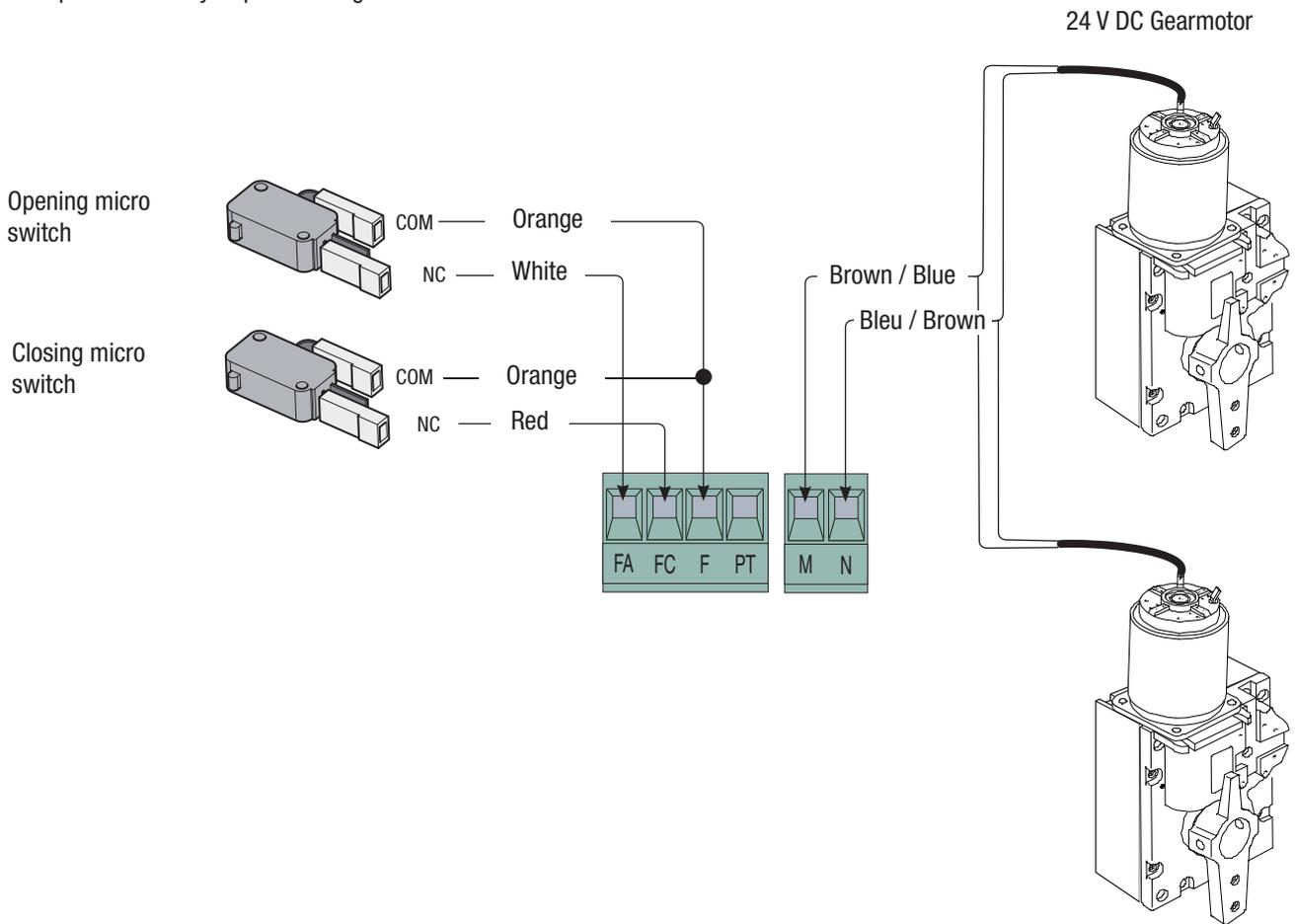
1. Connecting terminals
2. Line fuse
3. Accessories fuse
4. "Select features" dip-switch
5. Radio frequency card socket
6. Trimmer TCA: adjusting automatic closing time
7. Trimmer SENS: adjusting amperometric sensitivity
8. Code memorising button
9. LED for radio code / automatic closing
10. Transformer power supply connectors
11. 002LB38 Card connectors
12. Selection jumper for command type for button on 2-7



6.2 Electrical connections

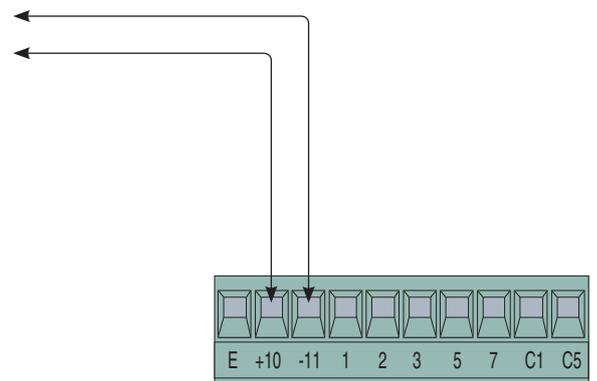
Gearmotor, limit switch

Description of already required wiring connections

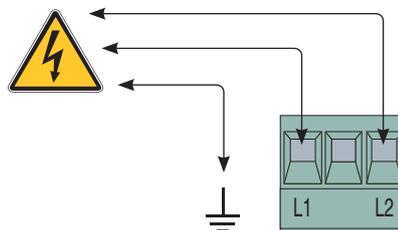


Power supply

Terminals for powering accessories:
 - at 24 V AC with 230 V power supply
 - at 24 V AC with 24 V power supply
 Overall allowed power: 40 W



230 V AC powered, 50 / 60 Hz frequency



24 V-25 W Output

Moving (for example, the flashing light). DIP-SWITCH 3=OFF

Barrier-arm in movement and in closed position. DIP 3 ON

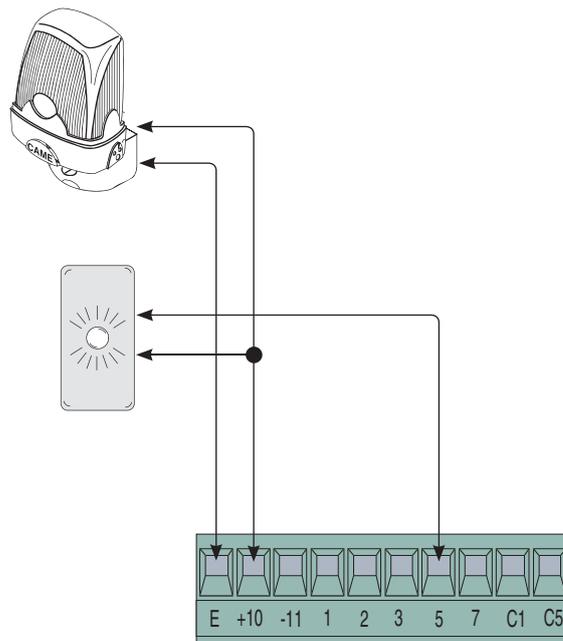
- Flashes while barrier opens and closes.

Moving, during the opening and closing phases and when the

barrier-arm is in the closed position. DIP 3 ON.

Flashing light for open barrier arm Contact rated for: 24 V - 3 W Max.)

- Signals that barrier-arm is raised, and switches off when the barrier-arm is lowered.



Command devices

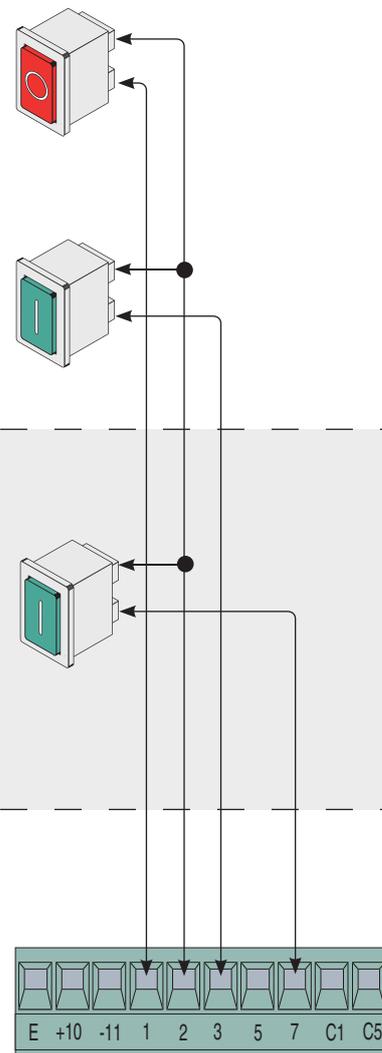
Stop button (N.C. contact.) - Button to stop barrier arm. Excludes automatic closing.

To resume movement press the command button or transmitter key.

if unused, set dip-switch 9 to ON.

Opening button (N.O. contact)

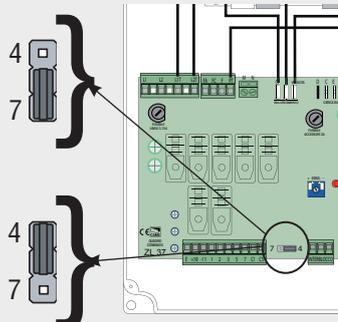
- Barrier-arm opening command.



Radio and / or button connection (N.O. contact).

- Barrier-arm opening and closing command. Pressing the button, inverts the movement of the barrier-arm. Check position of the Jumper (n 12, page 10) as shown in figure.

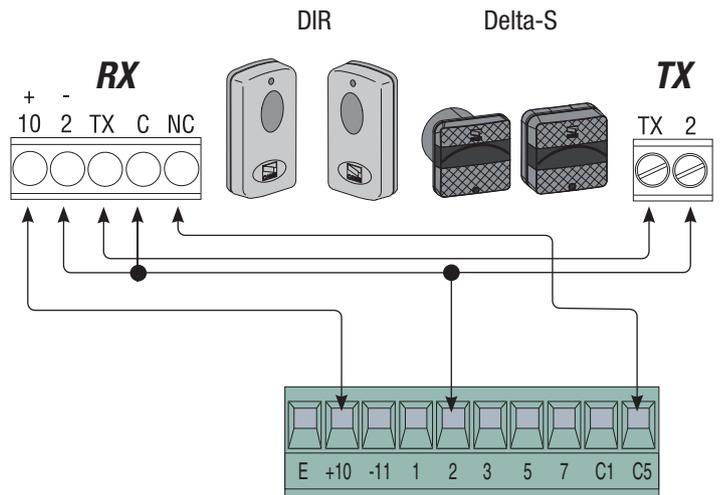
Button operation: close only - Barrier arm closing-command. This command is obligatory with the "maintained action" feature. Position jumper as shown.



Immediate closing (N.C.) Contact

- Automatic closing of barrier arm after obstacle passes within operating range of safety devices.

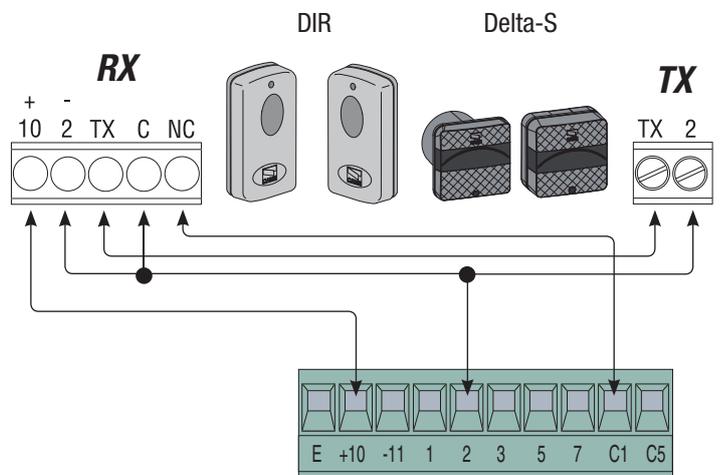
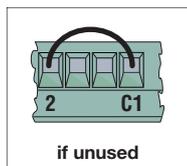
If unused, set dip-switch 8 to ON.



(N.C.) contact.) for reopening while closing

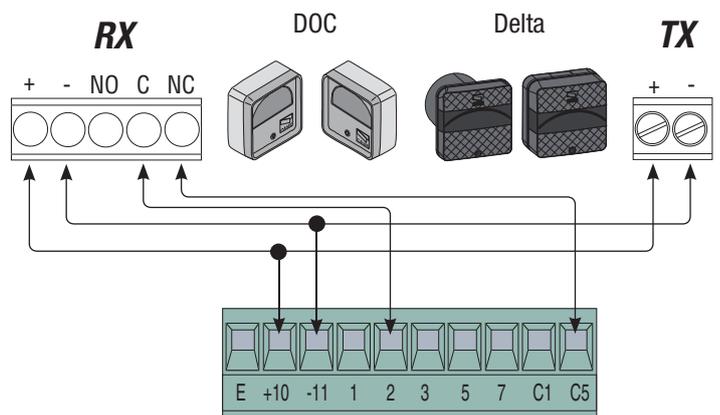
- Input for safety devices like photocells, compliant with law EN 12978. While the barrier is lowering, opening the contact will invert movement until it is fully raised.

If unused, short-circuit the contact 2= C1.



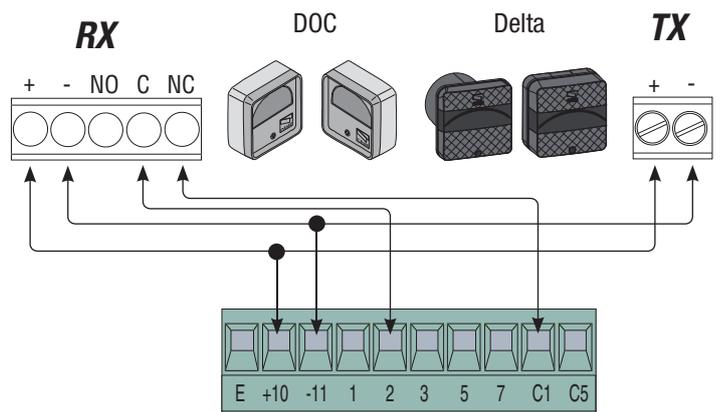
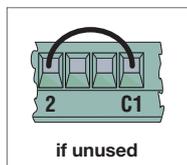
Immediate closing (N.C.) Contact

if unused, set dip-switch 8 to ON.



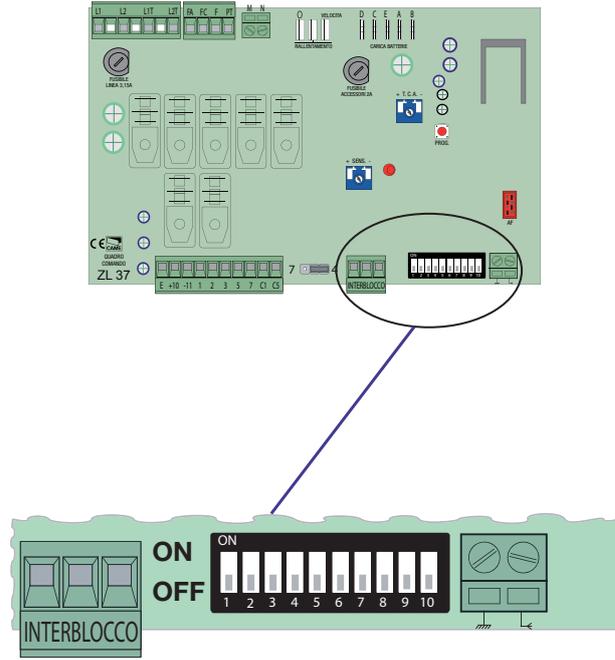
(N.C.) contact.) for reopening while closing

if unused, short-circuit contact 2-C1.



6.3 Selecting features

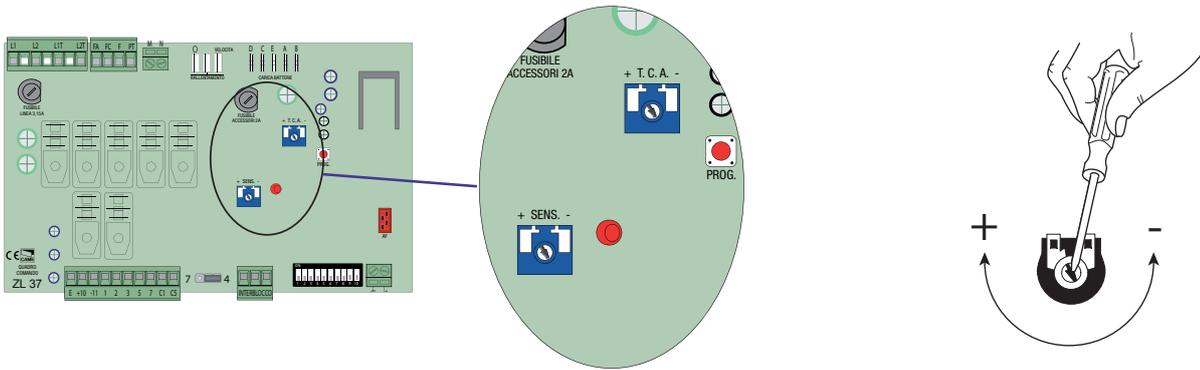
- 1 ON Automatic closing **activated**;
- 2 ON "only open" radio command operation **activated**
- 2 OFF "open-close-invert" radio command operation **activated**
- 3 ON Voltage at 24 V outgoing on terminals 10-E during the movement phases and when barrier-arm is in the closed position. **activated**;
- 3 OFF Voltage at 24 V outgoing on terminals 10-E during the barrier-arm moving phase, **activated**;
- 4 ON Maintained action feature **activated**;
- 5 ON Pre-flashing for 5 seconds when opening and closing **activated**;
- 6 ON Obstacle detection (with motor at end of run) **activated**;
- 7 ON Feature in "slave" mode **activated**;
- 8 OFF Immediate closing feature **activated**; Insert safety device on [2-C5).
- 9 OFF "Stop" button **activated**; Insert safety device on [1-C2);
- 10 ON Barrier arm slow-down enhancement feature **activated**.



the Dip-switches

6.4 Settings

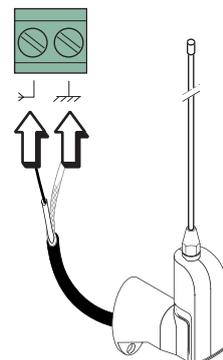
- Trimmer T.C.A.** = Automatic closing time is 1", max. 120".
- Trimmer SENS.** = Sensitivity of the amperometric device (min. / max)
min SENS. = max. FORCE



7 Activating the radio command

Antenna

Connect RG58 antenna cable to the apposite terminals.



Radio frequency card

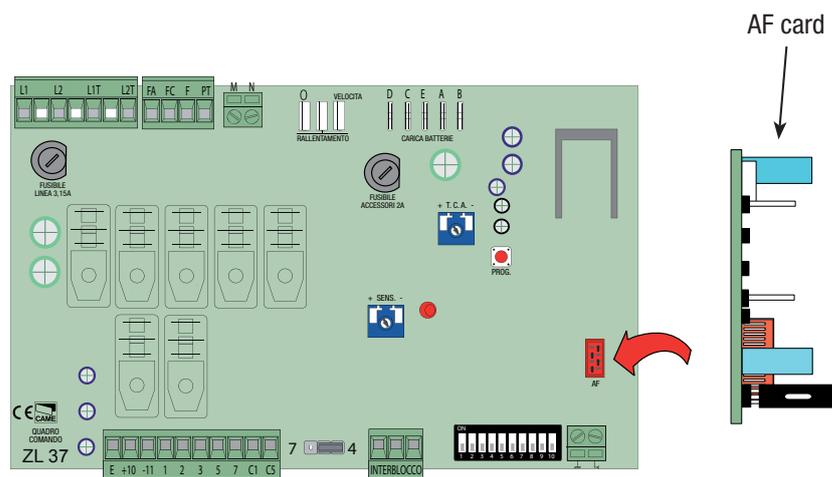
Only for the AF43S / AF43SM radio-frequency cards.

- position jumper as shown depending on the series of transmitters you are using.

Frequency MHz	Card Radio-frequency	Series transmitters
FM 26.995	AF130	TFM
FM 30.900	AF150	TFM
AM 26.995	AF26	TOP
AM 30.900	AF30	TOP
AM 433.92	AF43S / AF43SM	TAM / TOP
AM 433.92	AF43TW	TWIN (KeyBlock)
AM 433.92	AF43SR	ATOMO
AM 40.685	AF40	TOUCH
AM 863.35	AF868	TOP

Plug in the (AF) radio-frequency card onto the electronic board AFTER CUTTING OFF THE MAIN POWER SUPPLY (and disconnecting the emergency batteries).

N.B.: The electronic card recognises the radio-frequency card only when it is powered up.



Transmitters



ATOMO

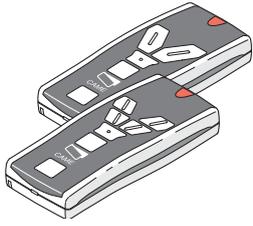
AT01 • AT02
AT04

see instruction sheet in the packaging
of the AF43SR radio-frequency card

see instructions on box

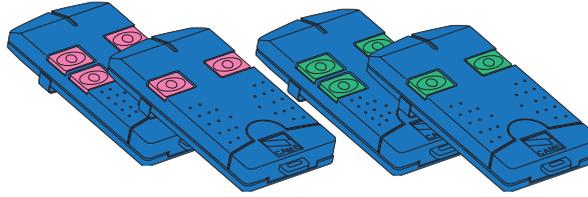
TOUCH

TCH 4024 • TCH 4048



TOP

TOP-432A • TOP-434A
TOP-302A • TOP-304A



TOP

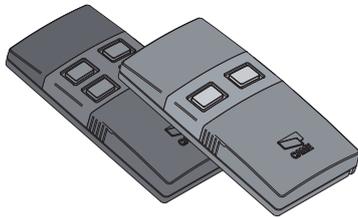
TOP-432NA • TOP-434NA
TOP-862NA • TOP-864NA
TOP-432S



TWIN

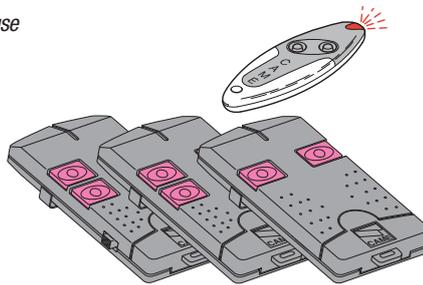
TWIN 2 • TWIN 4

Each coding is identified by a different way of flashing:
1 - In TAM mode coding - two flashes plus one pause
2 - In TOP mode coding - continuous flashing
3 - Key-Block mode coding - three flashes plus one pause



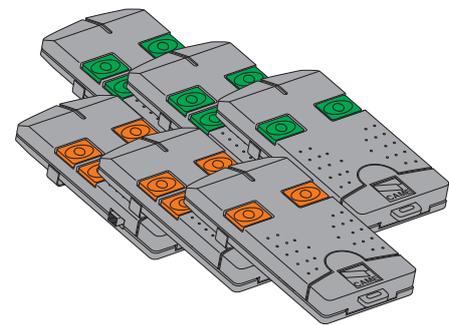
TAM

T432 • T434 • T438
TAM-432SA



TFM

T132 • T134 • T138
T152 • T154 • T158



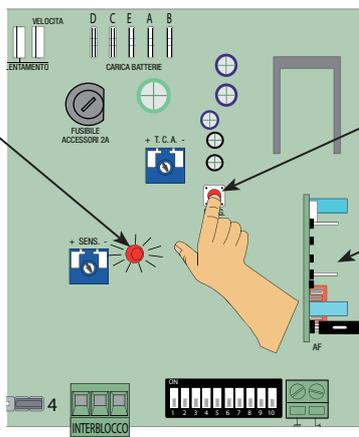
Memorisation

- Keep button pressed **PROG button** on the electronic card. The LED flashes ON and OFF.

- Press the button on the transmitter to be memorised. The LED will stay ON to confirm memorisation is OK.

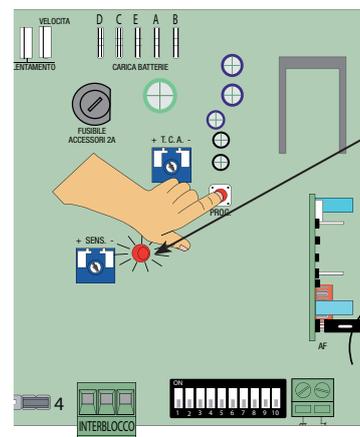
Flashing LED

LED on



PROG button

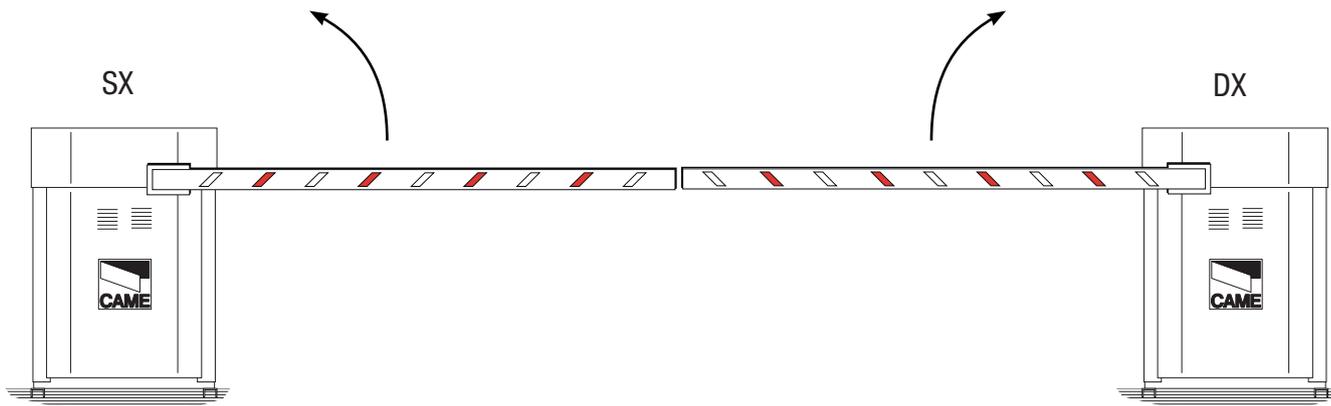
Radio card



N.B.: if you later wish to change code, just repeat the above sequence.

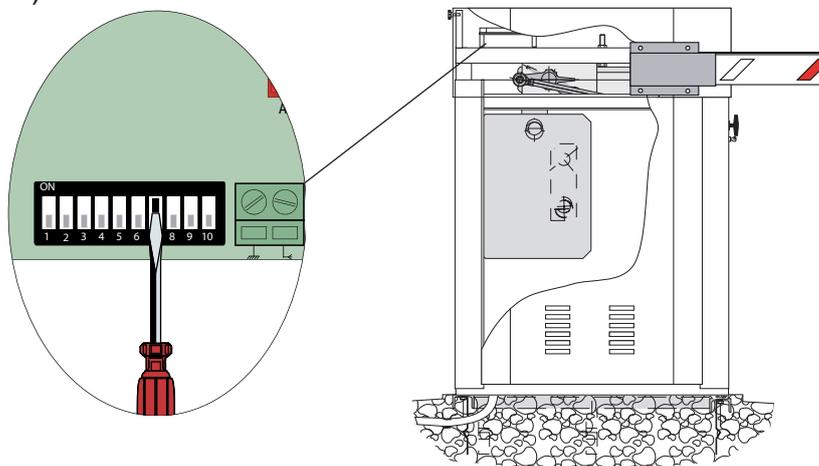
Connecting two barriers joined by a single command

- Establish which barrier will be **Master** and the **Slave**.

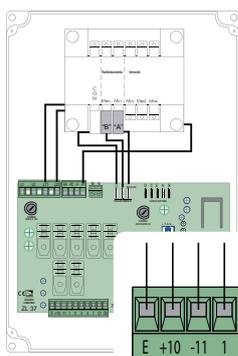


1) - Set Dip-switch 7 to ON to turn the gearmotor into slave.

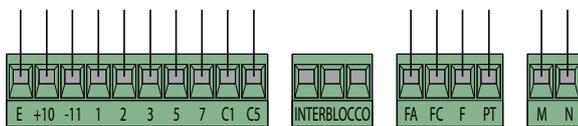
1) 2nd gearmotor control panel



2)



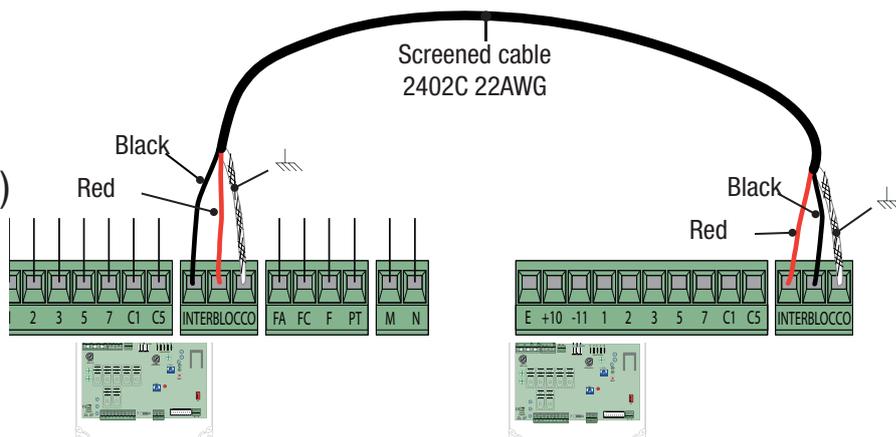
Terminals of the 1st gearmotor (MASTER)



2) - Perform normally required wiring connections only on terminals of the MASTER control panel.

3) - Connect the two control panels via the INTER BLOCK terminals as shown in the figure.

3)



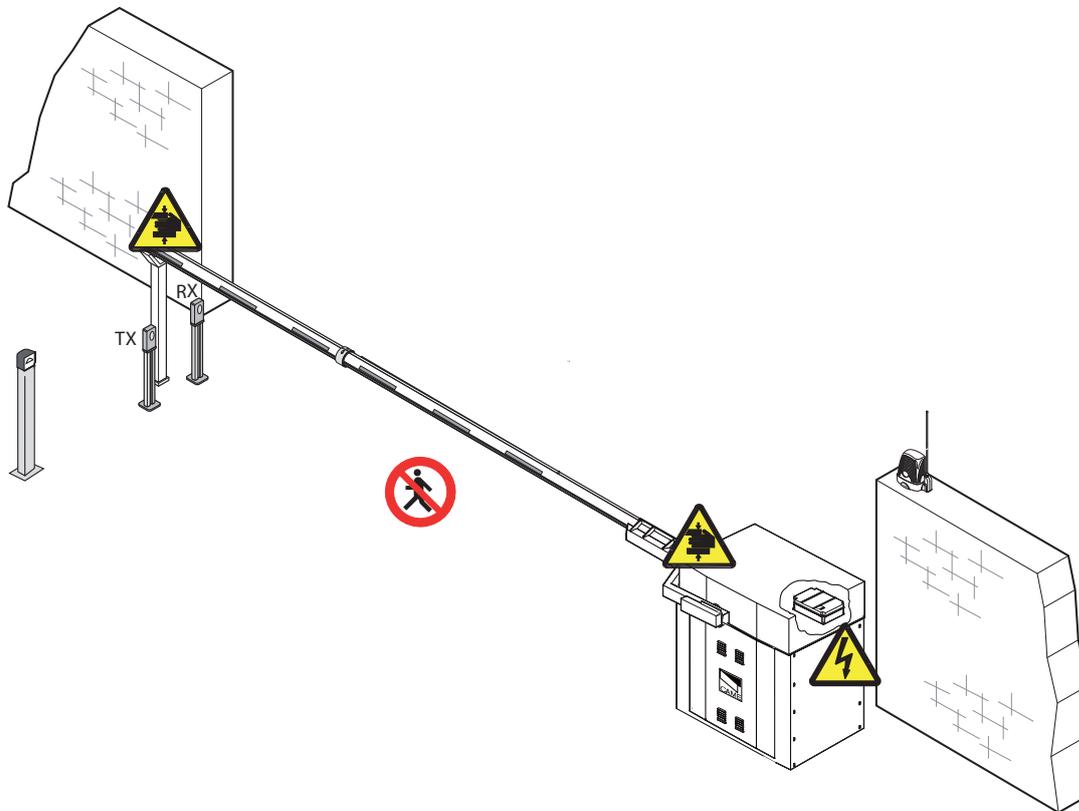
1st MASTER gearmotor terminals

2nd SLAVE gearmotor terminals

8 Safety instructions

Important general safety instructions

This product is only intended to be used for the purpose it was designed. Any other use is therefore improper and dangerous. The manufacturer is not liable for any damage caused by improper, wrongful or unreasonable use. Stay away from working mechanical parts. Stay out of the working range of the moving operator. Do not oppose the movement of the operator as this may result in danger.



Do not allow children to play or loiter within the working range of the operator. Keep transmitters and any other command devices away from children, to prevent the operator from being activated by mistake. Immediately stop using the operator if any anomaly is manifested.



Danger of hand crushing



Danger high voltage



Transit forbidden during operation

9 Maintenance

9.1 Periodic maintenance

 Periodic servicing **performed by end-user** are wiping clean the photocell's glass front pieces and checking for proper working state of safety devices and that the operator is free of any obstacles. We also suggest to periodically check the state of lubrication and tightness of screws on the operator.

- To check the efficiency of the safety devices, wave an object in front of the photocells during closing cycle, if the operator inverts or halts its movement, the photocells are working properly. This is the only maintenance job that can be done when the barrier spring-tension is the loaded.
- Before performing any job we highly recommend to cut off the main power, to prevent any dangerous situations from possible accidental movements by the barrier.
- To wipe clean the photocell glass, use a slightly damp cloth, and do not use any solvents or other chemical products that may ruin the device.
- Check that the photocells are free of any vegetation blocking them, and that there are no obstacles to the free movement of the arm.

Installer's stamp	Product name
	Date of job
	Technician's signature
	Customer's signature
Job carried out _____ _____	

Installer's stamp	Product name
	Date of job
	Technician's signature
	Customer's signature
Job carried out _____ _____	

9.3 Troubleshooting

The solution to the problem is for the professional installer or other competent, qualified person.

PROBLEM	REF.	CHECK
The operator neither opens nor closes	1-2-3-4-6-8-18	1 - Lock the inspection hatch using the key and check the release lock
The operator opens but does not shut.	4-7-10	2 - Deactivate the "maintained action" feature via dip-switch
The operator closes but does not open	4-7-9	3- Check power supply and fuses
The operator does not carry out the automatic closing	11-12-13	4 - The N.C. safety contacts are open
It does not work with the transmitter	2-14-16	6 - Deactivate the master-slave feature
The operator inverts the direction of travel	7-18	7 - Check balancing and tautness of springs
Only one transmitter works	22	8 - Deactivate the Obstacle detection feature via Dip-switch
The photocell does not work	12-23-24	9- Check opening limit-switch
The LED flashes quickly	4	10- Check closing limit-switch
LED stays on	13	11 -Use the dip-switch to activate "automatic closing"
The operator does not fully complete cycle	7	12 - Check for the proper direction of travel
Cannot balance the arm	7-15	13 - Check the command devices
The operator does not decelerate	7-15	14 - Cut off and bring back power to card or check the TOP/TAM jumper on the AF43S card
The operator does not run on the emergency batteries	8-25-26	15 - Check the "Arm length/Applied Accessories" ratio
The operator is slow when starting	7	Memorise the radio code again
		18 - Adjust sensitivity
		22 - Insert or duplicate the same code in all transmitters
		23 - Activate the photocell via Dip-switch
		24 - Connect the photocells in series and not in parallel fashion
		25 - Check the batteries
		26 - Respect the polarities when powering up the photocells

10 Dismantling and disposal



On its premises, CAME Cancelli Automatici S.p.A. implements a certified Environmental Management System in compliance with the UNI EN ISO 14001 standard to ensure environmental protection.

Please help us to safeguard the environment. At CAME we believe this to be one of the fundamentals of our market operations and development strategies. Just follow these short disposal instructions:



DISPOSING OF THE PACKAGING

The components of the packaging (i.e. cardboard, plastic, etc.) are solid urban waste and may be disposed of without much trouble, simply by separating them for recycling.

Before proceeding it is always a good idea to check your local legislation on the matter.

DO NOT DISPOSE OF IN NATURE!



PRODUCT DISPOSAL

Our products are made up of various materials. Most of these (aluminium, plastic, iron, electric cables) are solid urban waste. These can be disposed of at local solid waste management dumps or recycling plants.

Other components (i.e. electronic cards, transmitter batteries, etc.) may contain hazardous substances.

These must therefore be handed over to the specially authorised disposal firms.

Before proceeding it is always a good idea to check your local legislation on the matter.

DO NOT DISPOSE OF IN NATURE!



English - Manual code: 119G56 ver. 3.0 10/2011 © CAME Cancelli Automatici S.p.A.
The data and information in this manual may be changed at any time and without obligation on the part of CAME Cancelli Automatici S.p.A. to notify said changes.

<p>CAME France S.a. 7, Rue Des Haras Z.I. Des Hautes Patures 92737 Nanterre Cedex ☎ (+33) 0 825 825 874 ☎ (+33) 1 46 13 05 00</p>	FRANCE	GERMANY	<p>CAME Gmbh Seefeld Akazienstrasse, 9 16356 Seefeld Bei Berlin ☎ (+49) 33 3988390 ☎ (+49) 33 39883985</p>
<p>CAME Automatismes S.a. 3, Rue Odette Jasse 13015 Marseille ☎ (+33) 0 825 825 874 ☎ (+33) 4 91 60 69 05</p>	FRANCE	U.A.E.	<p>CAME Gulf Fze Office No: S10122a2o210 P.O. Box 262853 Jebel Ali Free Zone - Dubai ☎ (+971) 4 8860046 ☎ (+971) 4 8860048</p>
<p>CAME Automatismos S.a. C/Juan De Mariana, N. 17-local 28045 Madrid ☎ (+34) 91 52 85 009 ☎ (+34) 91 46 85 442</p>	SPAIN	RUSSIA	<p>CAME Rus Umc Rus Lic Ul. Otradnaya D. 2b, Str. 2, office 219 127273, Moscow ☎ (+7) 495 739 00 69 ☎ (+7) 495 739 00 69 (ext. 226)</p>
<p>CAME United Kingdom Ltd. Unit 3 Orchard Business Park Town Street, Sandiacre Nottingham - Ng10 5bp ☎ (+44) 115 9210430 ☎ (+44) 115 9210431</p>	GREAT BRITAIN	PORTUGAL	<p>CAME Portugal Ucj Portugal Unipessoal Lda Rua Liebig, nº 23 2830-141 Barreiro ☎ (+351) 21 207 39 67 ☎ (+351) 21 207 39 65</p>
<p>CAME Group Benelux S.a. Zoning Ouest 7 7860 Lessines ☎ (+32) 68 333014 ☎ (+32) 68 338019</p>	BELGIUM	INDIA	<p>CAME India Automation Solutions Pvt. Ltd A - 10, Green Park 110016 - New Delhi ☎ (+91) 11 64640255/256 ☎ (+91) 2678 3510</p>
<p>CAME Americas Automation Lic 11345 NW 122nd St. Medley, FL 33178 ☎ (+1) 305 433 3307 ☎ (+1) 305 396 3331</p>	U.S.A	ASIA	<p>CAME Asia Pacific 60 Alexandra Terrace #09-09 Block C, The ComTech 118 502 Singapore ☎ (+65) 6275 0249 ☎ (+65) 6274 8426</p>
<p>CAME Gmbh Kornwestheimer Str. 37 70825 Korntal Munchingen Bei Stuttgart ☎ (+49) 71 5037830 ☎ (+49) 71 50378383</p>	GERMANY		

<p>CAME Cancelli Automatici S.p.a. Via Martiri Della Libertà, 15 31030 Dosson Di Casler (Tv) ☎ (+39) 0422 4940 ☎ (+39) 0422 4941 Informazioni Commerciali 800 848095</p>	ITALY	ITALY	<p>CAME Sud s.r.l. Via F. Imparato, 198 Centro Mercato 2, Lotto A/7 80146 Napoli ☎ (+39) 081 7524455 ☎ (+39) 081 7529190</p>
<p>CAME Service Italia S.r.l. Via Della Pace, 28 31030 Dosson Di Casler (Tv) ☎ (+39) 0422 383532 ☎ (+39) 0422 490044 Assistenza Tecnica 800 295830</p>	ITALY	ITALY	<p>CAME Global Utilities s.r.l. Via E. Fermi, 31 20060 Gessate (Mi) ☎ (+39) 02 95380366 ☎ (+39) 02 95380224</p>

